



INDIANA

Special Emphasis Report: Traumatic Brain Injury, 2016

Understanding TBI

Traumatic brain injury (TBI) is a serious public health problem and in the United States. A TBI is caused by a bump, blow, jolt or penetration to the head that disrupts the normal function of the brain. Each year, traumatic brain injuries contribute to a substantial number of deaths and cases of permanent disability.

Impact and Magnitude of TBI

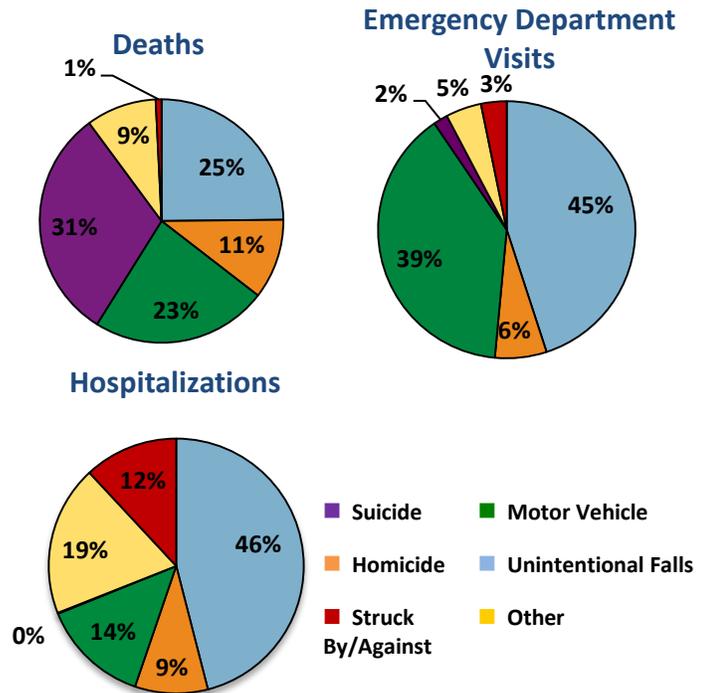
During 2016, more than 35,000 people in Indiana sustained a TBI. In 1,239 (18.6 per 100,000) of those injury cases, TBI was reported as a cause of death on the death certificate alone or in combination with other injuries or conditions. Another 6,726 (101.4 per 100,000), were hospitalized with a TBI alone or in combination with other injuries or conditions, and an additional 23,205 (349.8 per 100,000) were treated and released from emergency departments with a TBI alone or in combination with other injuries or conditions. An unknown number of individuals sustained injuries that were treated in other settings or went untreated.

Causes of TBI

Cause of injury varies across the three levels of severity. Suicide was the leading cause of injury among those who died where TBI was reported as a cause of death on the death certificate alone or in combination with other injuries or conditions. Unintentional falls were the leading cause of injury among those who were hospitalized with a TBI alone or in combination with other injuries or conditions. Unintentional falls were the leading cause of injury among those who were treated and released from emergency departments with a TBI alone or in combination with other injuries or conditions.

Notes: Firearm-related injuries were reported but excluded from the etiology graphic due to overlap with multiple categories (e.g., homicide/assault, suicide). Firearms were related with 596 of deaths, 49 of hospitalizations, and 335 of emergency department visits. Completeness of external-cause coding for TBI-related cases can impact the accuracy of the cause classifications for hospitalizations and emergency department visits.

Figure 1: Percentage of Annual TBI-Related Deaths, Hospitalizations, and Emergency Department Visits, by External Cause, in Indiana, 2016



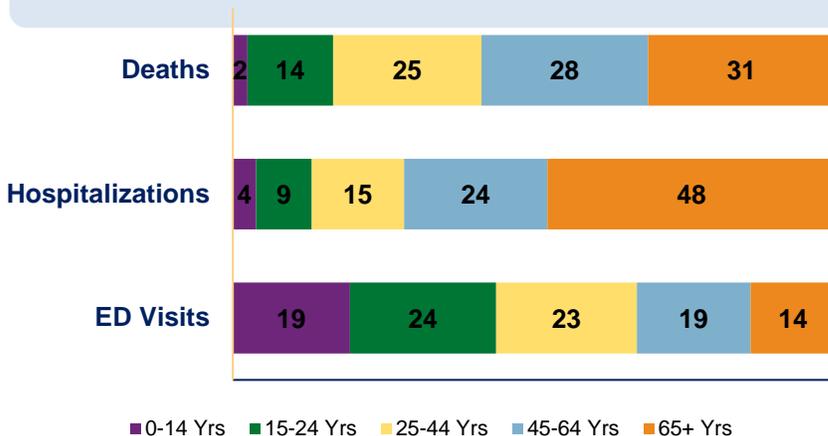
TBI by Age

The highest number of TBI-related deaths* were among persons ages 55-64. Among those with TBI-related hospitalizations,** persons ages 75-84 were most affected. Persons ages 15-24 made the most TBI-related emergency department visits.**

*TBI was reported as a cause of death on the death certificate alone or in combination with other injuries or conditions

** TBI alone or in combination with other injuries or conditions

Figure 2: Percentage of Annual TBI-Related Deaths,* Hospitalizations, and Emergency Department Visits,** by Age, in Indiana, 2016**



Indiana State
Department of Health
Trauma and Injury Prevention

This document was produced in conjunction with CDC's Core Violence and Injury Prevention Program under Cooperative Agreement 11-1101.



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TBI by Gender

Men were more likely to sustain a traumatic brain injury than women. The magnitude of this difference was greatest among those who died. Men accounted for 76% (28.8 per 100,000) of deaths where TBI was reported as a cause of death on the death certificate alone or in combination with other injuries or conditions, 61% (124.7 per 100,000), of hospitalizations for TBI alone or in combination with other injuries or conditions and 54% (405.6 per 100,000) of emergency department visits for TBI alone or in combination with other injuries or conditions.



TBI Prevention Strategies

Center for Disease Control and Prevention's (CDC's) National Center for Injury Prevention and Control (Injury Center) is committed to protecting people against preventable TBI by putting science into action.

- **State Injury Prevention Programs** - The Injury Center's Core Violence and Injury Prevention Program (Core VIPP) funds state health departments to estimate the impact of TBIs and define the groups most affected. www.cdc.gov/injury
- **"Heads Up"** – Injury Center campaigns with free tools for healthcare providers, school administrators, nurses, teachers, coaches and parents to help them recognize and respond to a TBI. www.cdc.gov/traumaticbraininjury
- **Motor Vehicle Safety** – Motor vehicle crashes are a leading cause of death, injury and TBI in the United States. CDC's primary prevention focuses on child passenger safety, seat belt use and reducing impaired driving. www.thecommunityguide.org/mvoi and www.cdc.gov/motorvehiclesafety

Indiana TBI Activities

The **Indiana Trauma Registry** is a repository into which statewide trauma data has been brought together to support three foundational activities: Identification of the trauma population, statewide process improvement activities and research.

Preventing Injuries in Indiana: Injury Prevention Resource Guide mobile app contains 10 injury topics, including TBI, and provides a description of the scope of the problem in Indiana and the United States, how the problem is being addressed and links to resources. The mobile app is intended to provide easily accessible and understandable data and information on the size and scope of specific injury problems in Indiana to allow for implementation of appropriate injury-related interventions.

Apple store: <https://itunes.apple.com/us/app/preventing-injuries-in-indiana/id1037435460?mt=8>

Android store: <https://play.google.com/store/apps/details?id=doh.in.gov.indianaprevention&hl=en>

Child Passenger Safety: Motor vehicle collisions are one of the leading causes of nonfatal injuries and deaths for persons ages 1-24 in the United States. Booster Bash targets ages 4-8 by providing education and assistance from child passenger safety technicians (CPSTs) to parents and caregivers to increase proper child restraint usage.

The Spinal Cord and Brain Injury Fund, per Indiana Code 16-41-42.2, is utilized to: establish and maintain a state medical surveillance registry for TBIs and spinal cord injuries (SCIs), fulfill the duties of the board, fund research related to treatment and cure of TBIs and SCIs, fund post-acute extended treatment and services for individuals or facilities that offer long-term activity based therapy services for SCIs and TBIs requiring extended post-acute care, and develop a statewide trauma system.

Note: TBI-related cases were identified by first limiting the datasets to injury cases based on external cause of injury (deaths), primary diagnosis (hospitalizations), or both (emergency department visits). All fields were then searched for TBI diagnostic codes. Reference to any commercial entity or product or service on this page should not be construed as an endorsement by the Government or the company or its products or services.