Indiana

Special Emphasis Report: Traumatic Brain Injury, 2015

Understanding TBI

Traumatic brain injury (TBI) is a serious public health problem 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

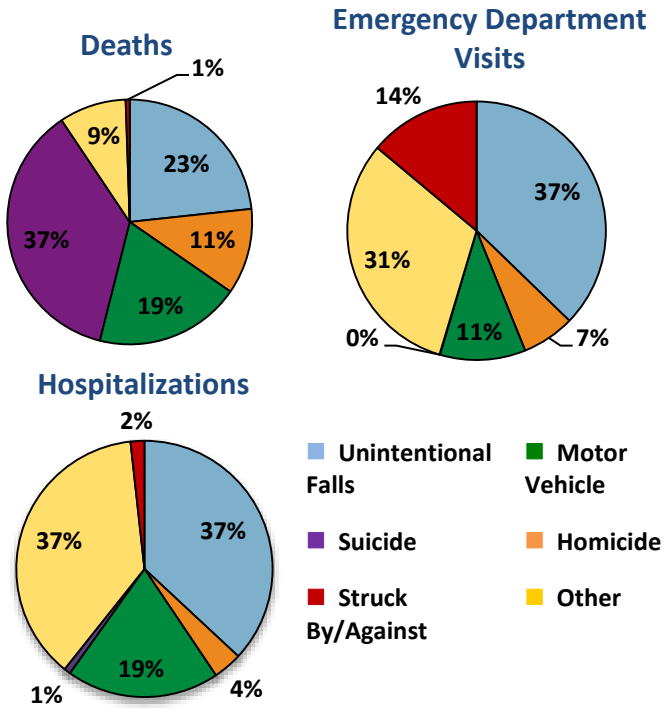
During 2015, a TBI was sustained by more than 50,000 people in Indiana. Among those injured, 1,129 (16.4 per 100,000) died where TBI was reported as a cause of death on the death certificate alone or in combination with other injuries or conditions, another 4,749 (66.8 per 100,000), were hospitalized with a TBI alone or in combination with other injuries or conditions, and an additional 47,103 (713.5 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. Firearms were 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 iniuries 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 45.3% of deaths, 1.2% of hospitalizations, and .08% 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.*

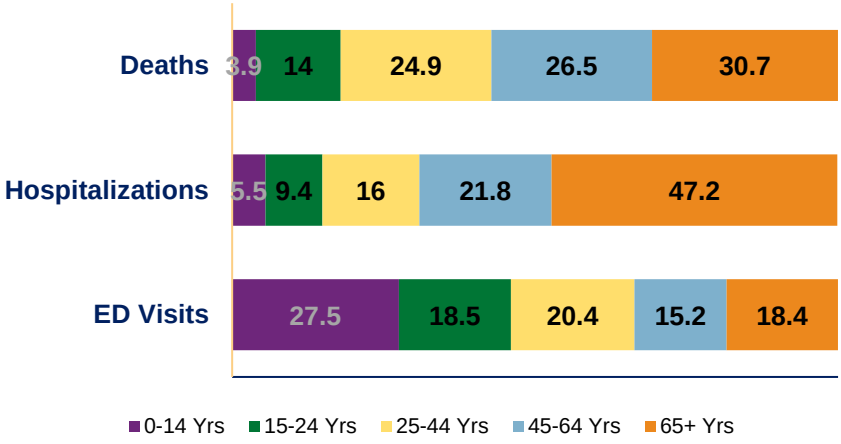
Figure 1: Percentage of Annual TBI-Related Deaths, Hospitalizations, and Emergency Department Visits, by External Cause, Indiana, 2015



TBI by Age

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

Figure 2: Percentage of Annual TBI-Related Deaths,* Hospitalizations, and Emergency Department Visits,** by Age, IN, 2015***



**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*

Indiana State Department of Health
Trauma and Injury Prevention

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TBI by Gender

Men were more likely to sustain a severe traumatic brain injury than women, especially among those who died. Men accounted for 73.3% (25.6 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 and 58% (84.5 per 100,000*)* of hospitalizations for TBI alone or in combination with other injuries or conditions. However, men constituted 49% of emergency department visits for TBI alone or in combination with other injuries or conditions but had a higher age-adjusted rate (719.2 per 100,000 compared to 700.5 per 100,000).

TBI Prevention Strategies

There are many simple ways to reduce the chance of sustaining a TBI, which include:

1. Wear a seat belt every time you drive or ride in a motor vehicle.
2. Buckle your child in the car using a size- and age-appropriate child safety seat, booster seat, or seat belt.
3. Never drive while under the influence of alcohol or drugs or while distracted by cell phones, GPS, or other disruptions.
4. Wear a helmet and make sure your children wear helmets while bicycling and playing contact sports.
5. Talk openly with your doctor about your fall risks and what simple steps you should take to reduce your risk.

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

- ***Heads Up*** – Injury Center campaigns with free tools for health care 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 U.S. CDC's primary prevention focuses on child passenger safety, seat belt use, and reducing impaired driving. www.thecommunityguide.org/mvoi 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 U.S., 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 U.S. 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.

Indiana State Department of Health

Division of Trauma and Injury Prevention

Indianatrauma.org

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