



# Minnesota

## Special Emphasis Report: Traumatic Brain Injury 2012

### Understanding TBI

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

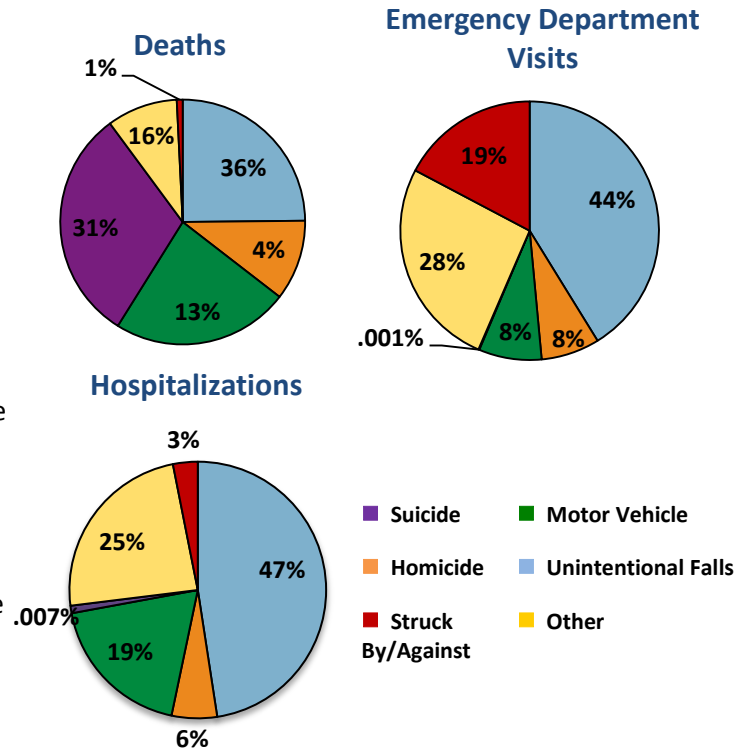
During 2012, a TBI was sustained by 43,061 people in Minnesota. Among those injured, 738 (1.71 per 100,000) died where TBI was reported as a cause of death on the death certificate alone or in combination with other injuries or conditions, another 4,900 (11.38 per 100,000) were hospitalized with a TBI alone or in combination with other injuries or conditions, and an additional 37,423 (86.90 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. Falls 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. Falls was the leading cause of injury among those who were hospitalized with a TBI alone or in combination with other injuries or conditions. And, falls was 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 33% of deaths, 6% of hospitalizations, and <1% 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 Minnesota 2012**



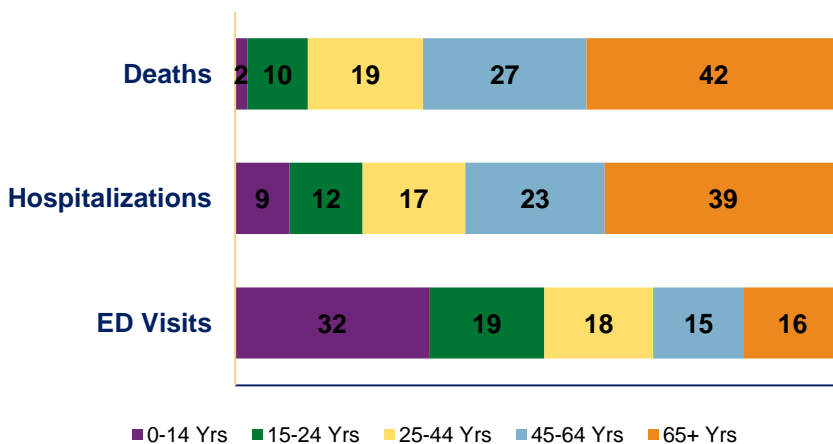
### TBI by Age

The highest number of TBI-related deaths\* and TBI-related hospitalizations\*\* were among persons ages 65+. Persons aged 0-14 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 Minnesota 2012**





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

### 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% (75.74 *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, 62% (61.71 *per 100,000*), of hospitalizations for TBI alone or in combination with other injuries or conditions and 53% (53.83 *per 100,000*) of emergency department visits for TBI alone or in combination with other injuries or conditions.



### TBI Prevention Strategies

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](http://www.cdc.gov/injury)
- **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](http://www.cdc.gov/traumaticbraininjury)
- **Motor Vehicle Safety** – Motor vehicle crashes are a leading cause of death, injury and TBI in the US. CDC's primary prevention focuses on child passenger safety, seat belt use and reducing impaired driving.

[www.thecommunityguide.org/mvoi](http://www.thecommunityguide.org/mvoi)

[www.cdc.gov/motorvehiclesafety](http://www.cdc.gov/motorvehiclesafety)

### Minnesota TBI Activities

**Prevention** Minnesota continues to work collaboratively with state and local partners in efforts to prevent older adult falls, sports-related concussion, suicide, traffic injuries and abusive head trauma.

**Surveillance** The Minnesota Department of Health (MDH) is mandated by state statute to maintain a repository of all hospitalized cases of traumatic brain and spinal cord injury in Minnesota. We have added to this an online reporting system for high school athletic trainers to report sports-related concussions. We recently completed a two year pilot project and have begun to expand it statewide.

The all payer claims data has recently become available for use in approved projects. We are currently in the midst of an application for these data to help us identify cases we may be missing in our registry, and also to give a more complete picture of TBI in Minnesota.

**Partnerships** MDH contracts with the Minnesota Brain Injury Alliance to connect survivors of hospitalized TBI with resources; this is known as Resource Facilitation. Resource Facilitators are available to provide confidential support following a brain injury

TZD: Toward Zero Deaths is a coalition of Minnesota state agencies (including MDH) working toward elimination of deaths in motor vehicle crashes.

INJURY AND VIOLENCE PREVENTION UNIT, MINNESOTA DEPARTMENT OF HEALTH

<http://www.health.state.mn.us/injury/>

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