



MINNESOTA

Special Emphasis Report: Traumatic Brain Injury 2011

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 2011, a TBI was sustained by 40,001 people in Minnesota. Among those with a TBI, 811 (15.2 per 100,000) were fatalities, another 4,420 (82.7 per 100,000), were hospitalized with a TBI alone or in combination with other injuries or conditions, and an additional 34,770 (650.5 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

Unintentional falls were the leading cause of TBI for those who died, were hospitalized, or were treated and released from the emergency department. However, the other ranked causes of TBI vary across the three levels of severity. **Suicides**, those deaths caused by self-directed violence with intent to die, were the second leading cause of TBI mortality. **Motor vehicle traffic crashes**, were the second leading cause of hospitalized TBI. **Sports and recreational activities** were the second leading cause of ED-treated TBI, "hidden" by CDC's official breakdowns; it makes up a large percentage of "Other" causes and a smaller percentage of unintentional falls. Sports-related concussions are now recognized as an issue that needs attention, due to the dangers of repeat concussions in youth athletes.

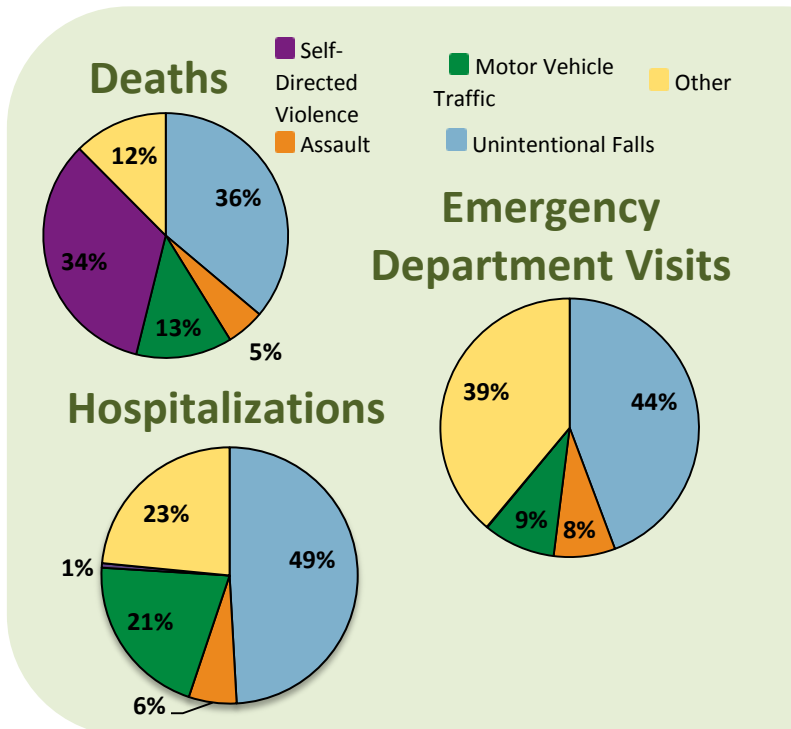


Figure 1: Percentage of Annual TBI-Related Deaths, Hospitalizations, and Emergency Department Visits, by External Cause, in Minnesota, 2011

TBI by Age

The highest number of TBI-related cases, for both deaths and hospitalizations, was among persons ages 65 and older. Persons with ages 0-14 made the most TBI-related emergency department visits.

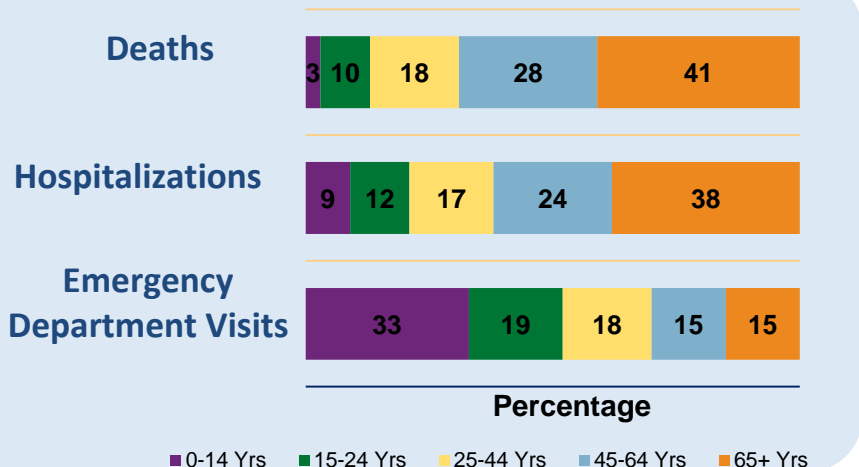


Figure 2: Percentage of Annual TBI-Related Deaths,* Hospitalizations,** and Emergency Department Visits,** by Age, in Minnesota, 2011

Notes:

- *Rates are age-adjusted to the US 2000 Standard Population.
- *Firearm-related injuries were reported but excluded from the etiology graphic due to overlap with multiple categories (e.g., assault, self-directed violence). Firearms were related with 36% of deaths, 0.7% of hospitalizations, and 0.05% of 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



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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 75% (23.1 *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, 60% (100.2 *per 100,000*), of hospitalizations for TBI alone or in combination with other injuries or conditions and 55% (732.3 *per 100,000*) of emergency department visits for TBI alone or in combination with other injuries or conditions.

Note: Rates are age-adjusted to the US 2000 Standard Population.



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
- **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 US. CDC's primary prevention focuses on child passenger safety, seat belt use and reducing impaired driving. www.thecommunityguide.org/mvoi www.cdc.gov/motorvehiclesafety

MINNESOTA TBI Activities

TBI Registry 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. The Injury and Violence Prevention Unit is also required to send a letter to all persons who have been reported, giving them information about resources for traumatic brain injury. The Unit analyzes the data in the registry to describe rates and patterns of injury, help guide appropriate community-specific intervention strategies, and identify service needs and gaps.

TZD: Toward Zero Deaths Until recent years, motor vehicle traffic crashes had been the leading cause of TBI deaths and hospitalizations. [Toward Zero Deaths](#), a coalition of Minnesota state agencies (including MDH) working toward elimination of deaths in motor vehicle crashes, has helped to coordinate the reduction efforts. Driven by data, best practices, and research, TZD works through the integrated application of [education](#), [engineering](#), [enforcement](#), and [emergency medical and trauma services](#).

Resource Facilitation MDH contracts with the Minnesota Brain Injury Alliance (MBIA) 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. Persons with brain injury, their family or friends, and professionals can use this FREE statewide telephone service to answer questions and find brain injury support resources. For more information, call the MBIA at 1-800-669-6442, or go to <http://braininjurymn.org/>. The Minnesota Departments of Corrections, Human Services, and Health are partnering with MBIA to expand Resource Facilitation to offenders with a history of TBI and who are being discharged from prison. The MDH is also partnering with Mayo Clinic in the TBI Model Systems Project to improve Resource Facilitation.

INJURY AND VIOLENCE PREVENTION UNIT, MINNESOTA DEPARTMENT OF HEALTH

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

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