



Oklahoma

Special Emphasis Report: Traumatic Brain Injury 2012

Understanding TBI

Traumatic brain injury (TBI) is a serious public health problem in Oklahoma 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, TBI contributes to a substantial number of deaths and cases of permanent disability.

Impact and Magnitude of TBI

During 2012, a TBI was sustained by 4,365 people in Oklahoma. Among those injured, 841 (21.6 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 3,524 (90.3 per 100,000), were hospitalized with a TBI alone or in combination with other injuries or conditions. An additional 11,429 Medicaid recipients (1,067.9 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 varied 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. Likewise, 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 involved in 47% of deaths, 2% of hospitalizations, and 0.1% 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 2: Percentage of Annual TBI-Related Deaths,* Hospitalizations, and Emergency Department Visits** by Age, in Oklahoma, 2012**

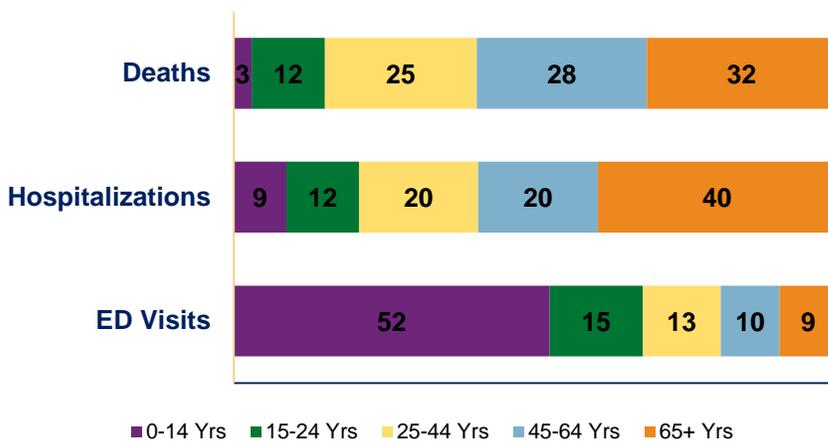
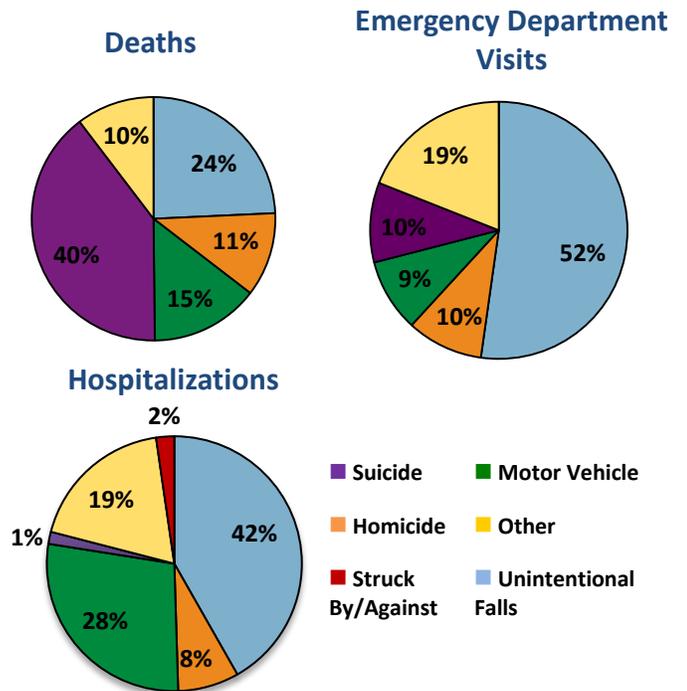


Figure 1: Percentage of Annual TBI-Related Deaths, Hospitalizations, and Emergency Department Visits* by External Cause, in Oklahoma, 2012
(*Visits paid by Medicaid; statewide emergency department data unavailable in OK)



TBI by Age

The highest number of TBI-related deaths* was among persons ages 65 years and older. Among those with TBI-related hospitalizations,** persons ages 65 years and older were most affected. Persons ages 0-14 years 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; emergency department visits include only those paid by Medicaid





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TBI by Gender

Males were more likely to sustain a TBI than females. The magnitude of this difference was greatest among those who died. Males accounted for 72% (32.8 *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, 59% (113.3 *per 100,000*) of hospitalizations for TBI alone or in combination with other injuries or conditions and 49% (1,117.9 *per 100,000*) of emergency department visits for TBI alone or in combination with other injuries or conditions. For all adults and children at least one year of age, males had higher rates of TBI-related injury death when compared to females. Almost half of all TBI-related deaths involving males were due to suicide, compared to approximately one-fourth (22%) of females.



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

Oklahoma TBI Activities

Prevention

- Distribute *Heads Up* materials across the state. Educate middle school, junior high, and high school athletic directors on concussions and the state law requiring school districts to develop policies regarding concussion management.
- Work with community sports groups to assess concussion/return to play policies and educate on TBI prevention.
- Educate interested groups on older adult fall prevention and abusive head trauma prevention.
- Distribute *Information about Concussion* booklets to TBI survivors and hospital emergency departments.

Surveillance

- Collect data on all young people under age 25 hospitalized with a TBI.
 - Special emphasis on sports-related TBI and abusive head trauma.

Partnerships

- Work to expand the *Period of PURPLE Crying*® program to all Oklahoma birthing hospitals to prevent abusive head trauma.
- Collaborate with the Oklahoma State Department of Health home visiting programs to provide basic child safety seat education and abusive head trauma prevention materials.

Accomplishments/Successes

- Trained more than 200 persons as *Tai Chi: Moving for Better Balance* instructors, representing nearly 50 communities, and maintained a list of community Tai Chi classes throughout the state.
- Conducted 14 comprehensive educational trainings on concussions for a variety of audiences, specifically focusing on sports and recreation-related TBI (signs, symptoms, sequelae, prevention).

Oklahoma State Department of Health

<http://ips.health.ok.gov>

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