



Kansas

Special Emphasis Report: Traumatic Brain Injury 2015

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

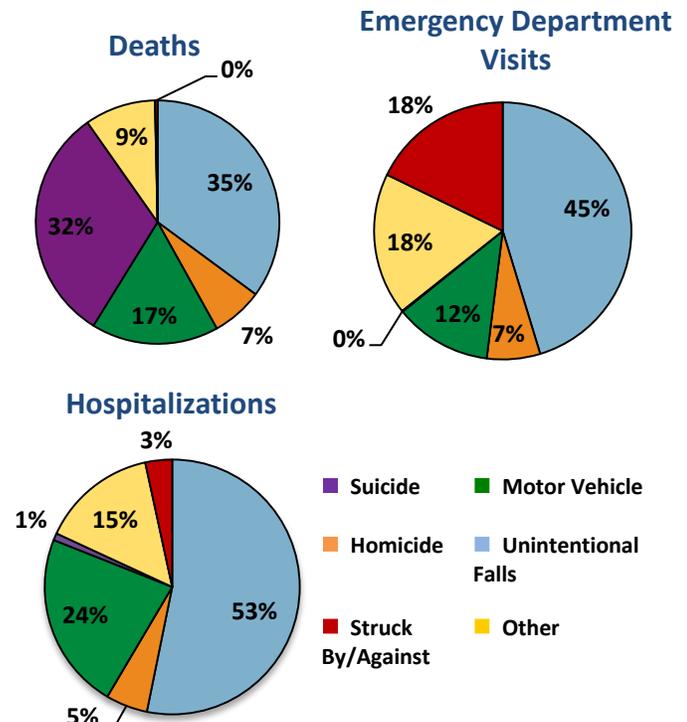
During 2015, a TBI was sustained by 21,187 of people in Kansas. Among those injured, 573 (age-adjusted (AA) rate: 18.7 per 100,000) died where TBI was reported as a cause of death on the death certificate alone or in combination with other injuries or conditions, another 2,526 (AA rate: 80.2 per 100,000), were hospitalized with a TBI alone or in combination with other injuries or conditions, and an additional 18,088 (AA rate: 612.7 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 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 also the leading cause of TBI-related hospital discharges and emergency department visits where TBI was reported alone or in combination with other injuries or conditions (Figure 1).

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 36.5% of TBI deaths, 1.6% of TBI hospitalizations, and 0.1% of TBI 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 Kansas, 2015.

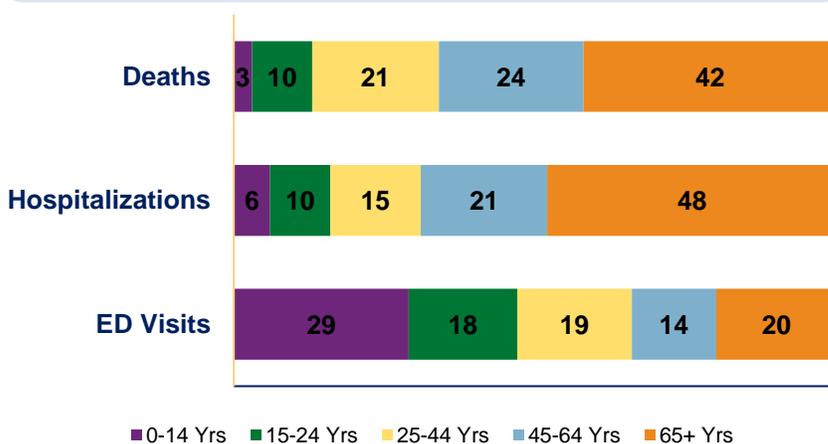


TBI by Age

In 2015, the highest percentage of TBI-related deaths* and hospitalizations** were among Kansas aged 65 years and older. TBI-related emergency department visits*** were most common among children aged 14 years and younger (Figure 2).

*Note: All rates are age-adjusted (AA) to 2000 U.S. Standard Population. Data Sources: *Death: 2015 Kansas Vital Statistics, Bureau of Epidemiology and Public Health Informatics, KDHE. **HD Data: 2015 Kansas Hospital Discharge Database, Kansas Hospital Association ***EDV Data: 2015 Kansas Hospital Emergency Department Database, Kansas Hospital Association. EDV and HD data is for 2015 fiscal year, not calendar year. Federal and specialty hospitals in Kansas do not report their discharges and emergency department visits to the Kansas Hospital Association. Not all nonfederal, short stay community or general hospitals in Kansas report their emergency department visits or hospital discharge data to Kansas Hospital Association; therefore, these databases do not include 100% of emergency department visits and hospital discharges in Kansas.*

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





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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 71.7% (AA rate: 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, 59.7% (AA rate: 103.3 per 100,000), of hospitalizations for TBI alone or in combination with other injuries or conditions and 50.7% (AA rate: 630.9 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
- **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

Kansas TBI Prevention and Control Activities

Prevention

Kansas employs diverse strategies to prevent TBIs including seatbelt and destructive decision laws, the youth sports concussion act, bike helmet distribution programs, fall prevention curriculum and local education initiatives.

Surveillance

Kansas Department of Health and Environment monitors TBI injuries through emergency department visits, hospital discharges, deaths and the Kansas Behavioral Risk Factor Surveillance System.

Partnerships

Kansas collaborates with national, state and local entities to deliver evidence-based and effective programs and messaging to prevent injuries most likely to result in TBI. Partnerships include Kansas Department of Transportation, Kansas Traffic Safety Resource Office, State Farm, Kansas Sports Concussion Partnership, Brain Injury Association of Kansas and Greater Kansas City, Kansas Emergency Nurses' Association, Kansas school nurses, local SAFE Kids coalitions, schools and other local agencies.

Accomplishments/Successes

Stepping On is an empirically based fall prevention curriculum that aims to reduce older adult falls. In 2016, there were 27 *Stepping On* Workshops with 346 participants. In 2016, SAFE Kids Kansas coalitions checked 1,912 car seats, distributed 866 car seats and provided 5,424 bicycle helmets to Kansas children. SAFE Kids local coalitions distributed and fitted an additional 3,103 helmets in 2016. The Kansas School Sports Injury Act, which went into effect July 1, 2011, includes a provision for immediate removal of a student athlete who is suspected of sustaining a head injury or concussion and requires a physician authorize his/her return to practice and play. More than 1900 participants were trained in 7 sports safety clinics that highlighted concussion information and were held by SAFE Kids Kansas coalitions in 2016.

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 alone or in combination with other injuries or conditions. Reference to any commercial entity or product or service on this page should not be construed as an endorsement by the Government of the company or its products or services.

Kansas Department of Health and Environment

http://www.kdheks.gov/idp/core_injury.html

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