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 6,263 people in Washington. Among those injured:

- 1,527 (20.7 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, and
- 4,736 (63.7 per 100,000), were hospitalized 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 two levels of severity. Suicides are the leading cause of TBI deaths alone or in combination with other injuries or conditions. Unintentional falls are the leading cause of injury among those who were hospitalized 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 35.8 percent of deaths and 1.0 percent of hospitalizations. Completeness of external-cause coding for TBI-related cases can impact the accuracy of the cause classifications for hospitalizations and emergency department visits.

TBI by Age

The highest number of TBI-related deaths* were among persons ages 85 years and older. Among those with TBI-related hospitalizations**, persons ages 75 to 84 were most affected.

* 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
TBI by Sex
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 70.4 percent (30.6 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 59.8 percent (81.0 per 100,000), of hospitalizations 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 State Violence and Injury Prevention Program (Core SVIPP) 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)

Washington State TBI Activities

**Prevention**
- The Department of Health provides education and awareness efforts to support the CDC’s Heads Up campaign to prevent, recognize and respond to TBI.
- Older Adult Fall Prevention Coalitions work with local communities to provide resources for falls prevention, and strength and balance exercise classes and programs.
- The LOK-IT-UP campaign raises awareness about the importance of safe firearm storage.
- Law enforcement agencies do regular Click-It-Or-Ticket emphasis patrols that are widely publicized. These patrols emphasize and enforce child passenger safety seat use.
- The Impaired Driving Advisory Council and the Young Driver Task Force both address policy improvements, enforcement, education, and partnership building to reduce crashes and resulting head injuries.

**Surveillance** TBI-related deaths and hospitalizations are tracked on an annual basis by age group and by injury cause or mechanism. TBI data tables are on DOH website.

**Partnerships** Traumatic Brain Injury Council, Department of Social and Health Services, Seattle Children’s Hospital, Safe Kids Coalitions of Washington, Older Adult Fall Prevention Coalitions, Public Health – Seattle & King County, Washington Traffic Safety Commission, and the Brain Injury Alliance of Washington

**Accomplishments/Successes** The Department of Health is using social media to help spread the word about safety in sports and returning to learn and play after sustaining a concussion.