

Transportation-related Traumatic Brain Injuries

Utah, 2013-2014 data



UTAH DEPARTMENT OF
HEALTH
Violence & Injury Prevention Program

Nearly a quarter (21.5%) of all TBI hospitalizations in Utah were due to transportation causes.



Traumatic brain injuries (TBIs) can have a dramatic impact on a person's ability to lead an active, fulfilling life. TBIs can affect an individual's ability to work, their short- and long-term memory, vision, sleep, mood, and movement. By understanding the causes of TBIs, we will be able to better prevent TBIs from occurring.

15-24
Years

Among all Utahns, transportation-related TBIs were the most common among those aged 15-24.



66.7% of transportation-related TBIs occurred among Utah males.



Motor vehicle crashes attributed to 61.1% of TBI-related hospitalizations.



An estimated 16.3% of Utahns who were hospitalized for a transportation-related TBI had alcohol, drugs, or medications in their bodies at the time of their injury.



In 2014, transportation-related TBI hospitalization charges in Utah totaled an estimated \$13.9 million.



TBI Prevalance in Utah

Every day in Utah, 60 people are treated and released from an emergency room due to a TBI. Another seven are hospitalized and one person dies each day from a TBI. **Figure 1** displays the number of TBIs in 2013 and 2014 by severity.



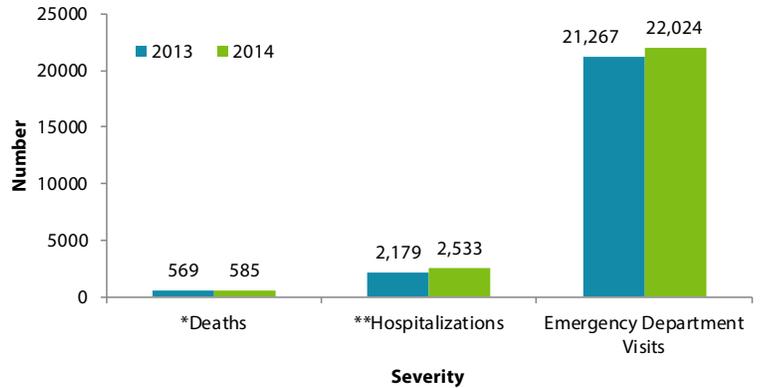
TBI Causes

Of the 1,448 sampled TBI hospitalizations cases, 21.5% were attributed to transportation-related causes. Transportation-related TBIs include: motor vehicle, motorcycle, bicycle, and pedestrians hit by a motor vehicle. Off highway vehicle and all terrain vehicle crashes were included in the sports/recreational-related TBI factsheet which can be found at www.health.utah.gov/vipp/pdf/FactSheets/2011SportsTBI.pdf.

The causes of transportation-related TBI hospitalizations and deaths during Utah in 2013-2014 were (**Figure 2**):

- **Motor vehicle crashes (61.1%)**
- **Motorcycle crashes (17.7%)**
- **Pedestrian (15.4%)**
- **Bicycle crashes (5.8%)**

Figure 1: Number of Traumatic Brain Injuries by Severity, Utah, 2013-2014



*Deaths include deaths with any mention of TBI, not just those with a TBI as the primary cause of death
 **Hospitalizations include those who died in the hospital



Figure 2: Causes of Transportation-related TBI Hospitalizations, Utah, 2013-2014

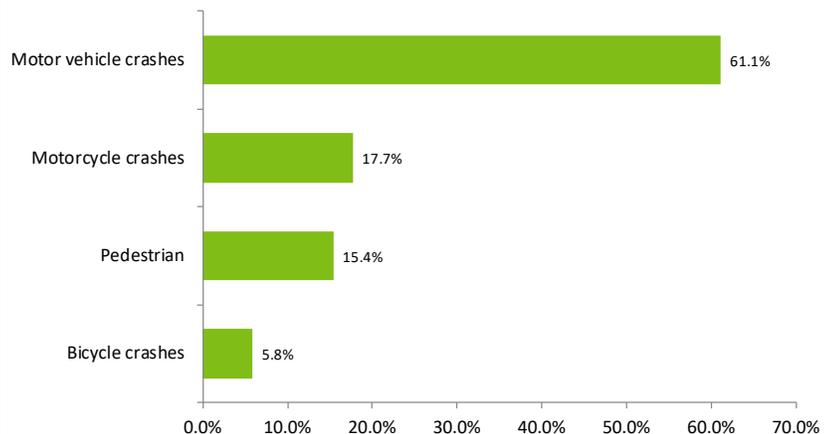
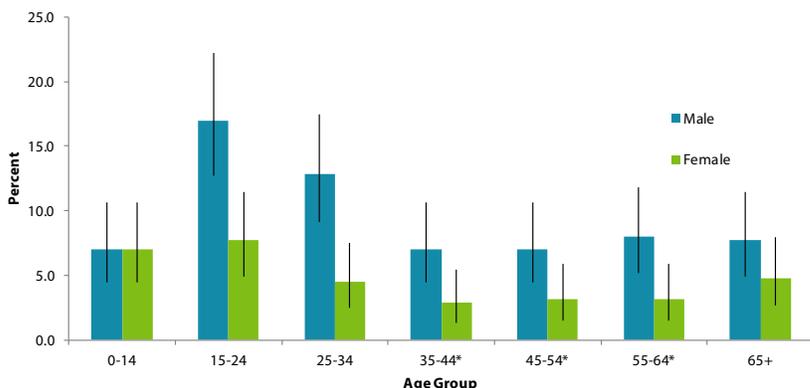
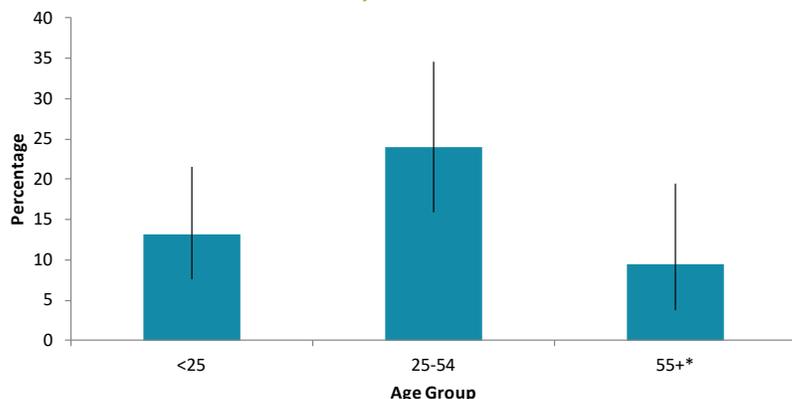


Figure 3: Percent of Transportation-related TBI Hospitalizations by Age and Sex, Utah, 2013-2014



*Insufficient number of cases to meet UDOH standard for data reliability, interpret with caution

Figure 4: Percent of Transportation-related TBI Hospitalizations by Age Group where Alcohol, Drugs, or Medication was Present, Utah, 2013-2014



*Insufficient number of cases to meet UDOH standard for data reliability, interpret with caution

Table 1: Hospitalization Charges for Transportation-related TBIs, Utah, 2014

Cause of TBI	Median	Mean
Pedestrian	\$70,921	\$72,715
Motor vehicle crashes	\$37,023	\$75,796
Motorcycle crashes	\$36,766	\$106,195
Bicycle crashes	\$19,447	\$69,603



15-24 Years

Age and Sex

In 2013-2014, 66.7% of transportation-related TBIs occurred among Utah males. Among Utah males, transportation-related TBIs were the most common among those aged 15-24 (Figure 3).



Substance Use

An estimated 16.3% of Utahns who were hospitalized for a transportation-related TBI in 2013-2014 had alcohol, drugs, or medications in their bodies at the time of their injury. Transportation-related TBIs where alcohol, drugs, or medication was present were the most common among those aged 25-54 (Figure 4).



Cost

Among the 174 sampled cases transportation-related TBI hospitalization charges in Utah totaled an estimated \$13.9 million in 2014. There were 42 hospitalizations with total charges exceeding \$100,000. The maximum total charge for a transportation-related TBI hospitalization was \$498,565. Table 1 lists the median and mean hospitalization charges for 2014 by cause.

Prevention Tips

- Wear a seat belt every time you drive or ride in a car.
- Buckle kids in the back seat of a car using a car seat or booster seat until the child is eight years of age and at least 4 feet 9 inches tall.
- Wear a helmet while riding bicycles, motorcycles, scooters, OHVs/ATVs, and snowmobiles.
- Never drive under the influence of alcohol or drugs.
- Give at least three feet of space when passing a cyclist.
- Drivers must yield the right-of-way to pedestrians crossing at intersections (a crosswalk exists at every intersection regardless of whether or not it is painted).

Resources

- Brain Injury Association of Utah www.biau.org
- CDC Traumatic Brain Injury www.cdc.gov/TraumaticBrainInjury/index.html
- National Association of State Head Injury Administrators www.nashia.org
- TBI Fund www.health.utah.gov/tbi
- UDOH VIPP www.health.utah.gov/vipp/topics/traumatic-brain-injury/

TBI Database

The data presented in this fact sheet come from the Utah TBI Database. Since 1990, the Utah Department of Health has collected data on TBIs through review of hospital discharge data, death certificates, and hospital records. TBIs are included in the database when they result in hospitalization or death with one or more of the following: observed or self-reported unconsciousness or decreased level of consciousness; amnesia; skull fracture; changes in motor function, sensory function, reflexes, or speech; or seizures, hemorrhages, bruising, or other trauma to the brain.

2013-2014 TBI Sample

The information provided in this fact sheet was obtained through analysis of a sampled portion of the total TBI hospitalizations in Utah. The sampled cases for 2013-2014 numbered 1,448 (708 for 2013 and 740 for 2014). The sampled cases represent the total cases, allowing the information reported in this fact sheet to be extrapolated to the total cases.



If your life has been affected by traumatic brain injury, the Utah Department of Health wants to hear from you. Share your story with the Utah Health Story Bank at www.health.utah.gov/bhp/sb/.



Our Mission is to provide trusted and comprehensive data and technical assistance related to violence and injury. This information helps promote partnerships and programs to prevent injuries and improve public health.