SNAPSHOT OF TRAUMATIC BRAIN INJURY, NEVADA RESIDENTS, 2004-2007

Snapshot of Traumatic Brain Injury,

Traumatic Brain Injury (TBI) is an important public health problem in the United States. TBI is frequently referred to as a “silent epidemic” because the complications from TBI, such as changes affecting thinking, sensation, language, or emotions, may not be readily apparent and can cause temporary, long-term, or permanent disability. In addition, awareness about TBI among the general public is limited. An estimated 1.7 million people sustain a TBI annually in the United States. Of them 52,000 die, 275,000 are hospitalized, and 1.365 million, nearly 80%, are treated and released from an emergency department.

A TBI is caused by a bump, blow, or jolt to the head, or a penetrating head injury that disrupts the normal function of the brain. Not all blows or jolts to the head result in a TBI. The severity of a TBI may range from “mild”, i.e., a brief change in mental status or consciousness to “severe”, i.e., an extended period of unconsciousness or amnesia after the injury. The signs and symptoms of a TBI can be subtle. Symptoms of a TBI may not appear until days or weeks following the injury or may even be missed as people may look fine, even though they may act or feel differently.¹

Nevada Facts

This report presents data about TBI-related non-fatal hospitalizations and deaths in Nevada for the years 2004-2007.

How many people are affected by a TBI?

- From 2004-2007, 8,559 Nevada residents were hospitalized due to a TBI and 1,841 Nevada residents died from a TBI.

How is TBI related to all injuries?

- TBIs comprise 0.8% of all hospitalizations. All injury related hospitalizations account for 4.6% of hospital discharges.
- Of all deaths in Nevada, TBI was a contributing factor 2.5% of the time and 9.5% of the time for all injury deaths.
Who is affected by TBI?

- Residents 65 years and older had the highest rates of non-fatal and fatal TBIs. Falls were the leading cause for non-fatal TBIs and firearms were the leading cause for fatal TBIs in this age group.

- Males in every age group had higher rates of non-fatal and fatal TBIs than their female counterparts.

- The highest rates of TBIs for males occurred in the 65 and older age group, followed by 15-24 year olds for non-fatal and fatal TBIs.

- Female TBI rates were highest in the age groups 75 years and older, followed by under one year olds for non-fatal and fatal TBIs.
Between 2004-2007, inpatient hospital discharge data does not identify the race/ethnicity of the patient, therefore data could not be compiled.

White residents had the highest rates of fatal TBIs, followed by African American residents.

Motor vehicle traffic accidents (29%) were the leading external cause, followed by falls (25%) for non-fatal TBIs. Unintentional injury accounted for 65% of all non-fatal cases.

Firearms (57%) were the leading external cause, followed by falls (18%) for fatal TBIs. Suicide intent accounted for 48% of all fatal cases.

Note: External Cause of Injury Codes are used to define the mechanism of death or injury, along with place of occurrence of the event. Due to missing E-Codes in the hospital discharge data sets, many non-fatal cases had an unspecified external cause.
What is the type of injury?

- Intracranial (internal) brain injuries were involved for 64% of non-fatal TBIs and 23% involved a fracture to the vault of the base of the skull.
- Open head wounds accounted for 57% of fatal TBIs and 23% involved other unspecified head injuries.

![Percentage of Non-Fatal TBIs by Type of Injury, Nevada Residents, 2004-2007](chart1)

![Percentage of Fatal TBIs by Type of Injury, Nevada Residents, 2004-2007](chart2)

What are the long-term outcomes of TBI?

TBI can cause a wide range of functional changes affecting thinking, sensation, language, and/or emotions. It can also cause epilepsy and increase the risk of conditions such as Alzheimer’s Disease, Parkinson’s Disease, and other brain disorders that become more prevalent with age.

- People who were hospitalized due to a TBI are primarily discharged home (66%), or secondarily discharged/transferred to a facility to receive additional care (27%).
What is the economic impact of a TBI?

- Residents who were hospitalized due to a TBI from 2004-2007 had a median charge of $27,175-$36,820. The median length of stay was four (4) days.
- Medicare was the primary payer source for 21% of hospitalizations followed by Negotiated Discounts at 20%.

What Counties are affected by TBIs?

- Mineral County had the highest rate of non-fatal TBIs. This was due to motor vehicle accidents and falls.
- Lincoln County had the highest rate of fatal TBIs. This was due to firearms and motor vehicle accidents.
The vision of the Office of Health Statistics and Surveillance is to play a pivotal role in improving the health of all Nevadans by providing data that makes a difference.

Reports on related topics can be obtained from the Nevada State Health Division Website at:
http://health.nv.gov/FP_Publications.htm

For additional information, please contact OHSS at (775) 684-4170 or visit our web-site at:
http://health.nv.gov/NIHDS_HSS.htm

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