Traumatic Brain Injuries in Indiana

Understanding TBI

Traumatic brain injury (TBI) is a serious public health problem in the United States, contributing to more than 68,000 deaths nationally in 2023.[1] 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

In 2023, more than 23,000 TBIs occurred in Indiana, including 1,463 deaths (21.3 per 100,000), 4,442 hospitalizations (64.7 per 100,000), and 17,846 ED visits (260.1 per 100,000).[2] Data are not available to calculate how many people with TBI were treated in other settings or went untreated.

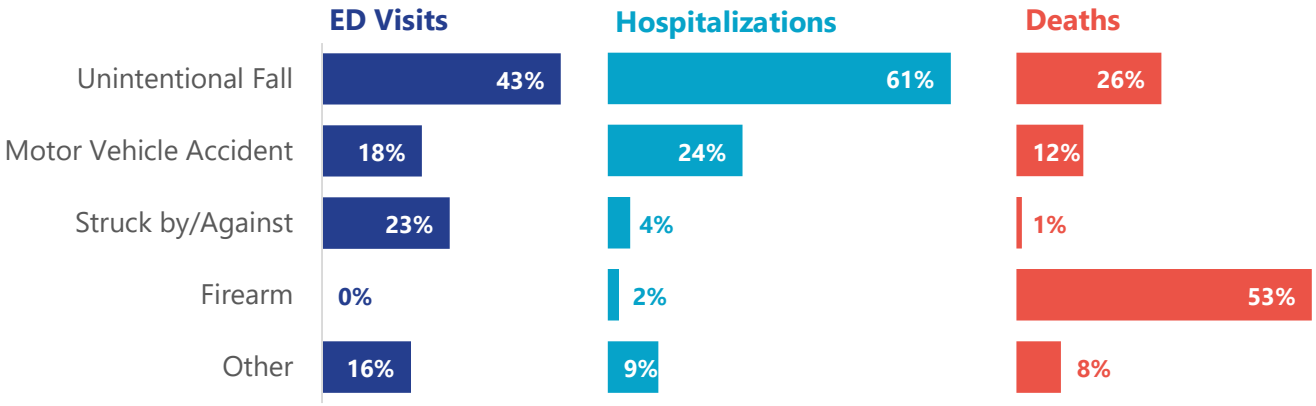
TBIs in Indiana, 2023:

1,463 deaths
4,442 hospitalizations
17,846 ED visits

Causes of TBI

Causes of injury varied among ED visits, hospitalizations, and deaths involving TBI. Unintentional falls were the leading cause of injury in TBI-related ED visits and hospitalizations. In contrast, firearm injury was the leading cause of injury in TBI-related deaths (53%). Among firearm-related TBI deaths, 84% were due to suicide, 12% due to homicide, and the remaining 4% were unintentional or other intent.

Figure 1. Mechanism of injury for TBI ED visits, hospitalizations, and deaths, Indiana, 2023



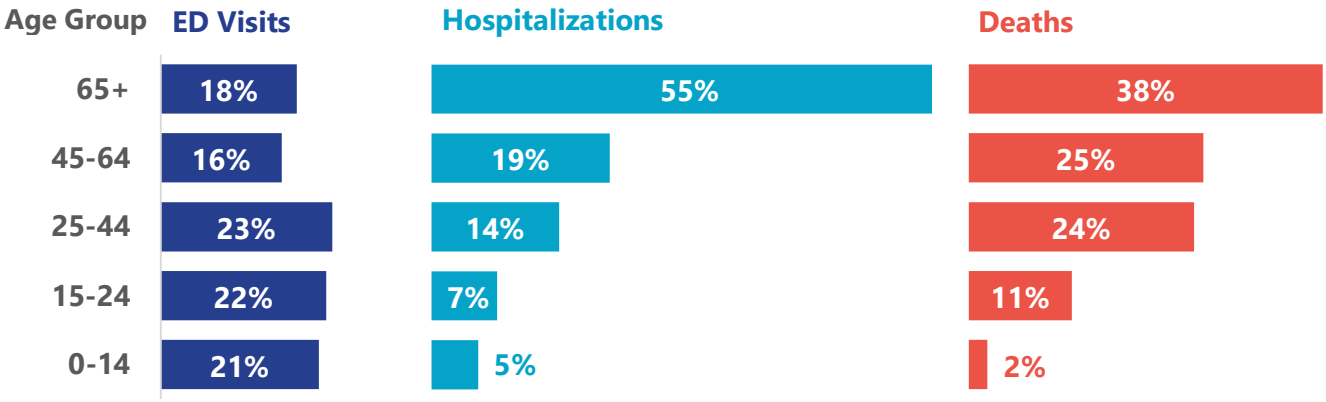
[1] Centers for Disease Control and Prevention. TBI Data. Accessed Jan. 9, 2025, from https://www.cdc.gov/traumatic-brain-injury/data-research/index.html.

[2] TBI-related deaths are from Indiana vital records. Hospitalization and ED visit data are from Indiana hospital discharge data. TBI deaths, hospitalizations, and ED visits were calculated based on definitions from the Centers for Disease Control and Prevention available at: https://stacks.cdc.gov/view/cdc/128417.

TBI by Age Group

The age distribution of patients who were treated in the ED for TBI was relatively uniform across age groups. However, a higher proportion of TBI hospitalizations and deaths were among older age groups. The majority of TBI hospitalizations (55%) and a plurality of TBI deaths (38%) were among people aged 65 and older.

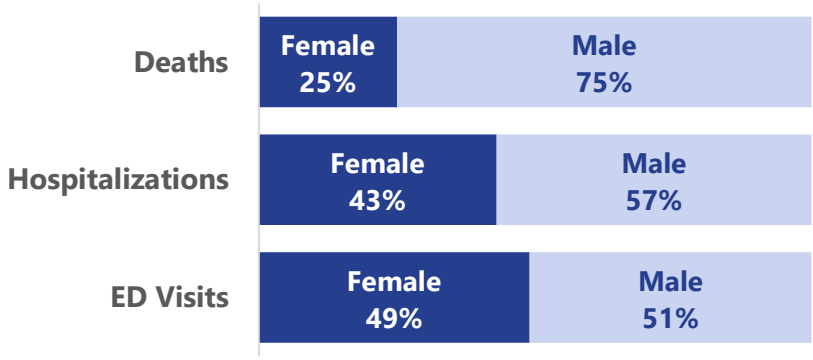
Figure 2. Age distribution of TBI ED visits, hospitalizations, and deaths, Indiana, 2023



TBI by Sex

In 2023, males were more likely to sustain a TBI resulting in hospitalization or death than females. Males accounted for three in four TBI deaths, and the rate of TBI death among males (32.3 per 100,000) was over three times the rate among females (10.6 per 100,000). Additionally, males accounted for the majority (57%) of TBI hospitalizations. TBI ED visits were more evenly split among males (51%) and females (49%).

Figure 3. TBI deaths, hospitalizations, and ED visits by sex, Indiana, 2023



TBI Resources

Additional information about TBI and TBI prevention is available at the links below:

- IDOH injury prevention resources: https://www.in.gov/health/trauma-system/injury-prevention/
- Indiana Spinal Cord and Brain Injury Research Fund: https://www.in.gov/health/trauma-system/spinal-cord-and-brain-injury-fund-research-grant-program/
- Centers for Disease Control and Prevention (CDC) TBI and concussion resources: https://www.cdc.gov/traumatic-brain-injury/index.html