Traumatic Brain Injury

UNDERSTANDING TBI

Traumatic brain injuries (TBI) are 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 2022, there were approximately 3,263 TBI injuries sustained by people in Alaska. This includes fatal injuries, and non-fatal hospital or emergency department discharges. Among those injured, 264 (36 per 100,000 population) people died where TBI was reported as a cause of death. There were 415 (55 per 100,000) non-fatal hospitalization discharges involving a TBI, and an additional 2,584 (354 per 100,000) non-fatal emergency departments visits. In all instances, the TBI could be either the only injury or one of several injuries and/or medical conditions listed.

Causes of TBI

Cause of injury, as measured by rate per 100,000 people, varies by mortality and morbidity outcomes. Firearm discharges (regardless of intent) were the leading cause of TBI related deaths*. Fall was the leading cause of TBI related hospitalizations**. Fall was also the leading cause of TBI related emergency department visits**.

TBI by Age and Sex

The highest number of TBI-related deaths* were among men ages 25-34, as shown in Figure 3. Among those with TBI-related hospitalizations,** persons ages 65-74 were most affected. Persons ages 25-34 made the most

TBI-related emergency department visits.**

Figure 1: Percentage of Annual TBI-Related Deaths, Hospitalizations, and Emergency Department Visits by Cause in 2022

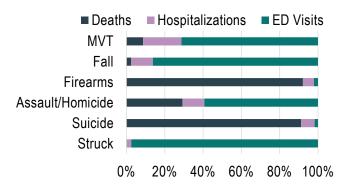


Figure 2: Causes of TBI-Related Deaths by Rate per 100,000 in 2022

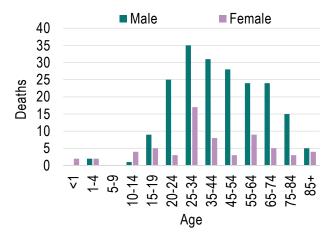
Cause	Count	Rate
Firearms	128	18
Suicide	104	14
Motor Vehicle Transp.	53	7
Fall	34	5
Assault/Homicide	36	5
Struck	1	Statistically Unreliable



^{*}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

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Figure 3: TBI-Related Deaths by Age and Sex in 2022



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.

To Help Older Adults: Make CDC's STEADI Part of Every Medical Practice.

STEADI (Stopping Elderly Accidents, Deaths, and Injuries) is a toolkit to help health care providers incorporate fall risk assessment and individualized fall interventions (e.g., exercise, medication management, and Vitamin D supplementation) into their practice. Learn more at www.cdc.gov/STEADI.

To Help Young Athletes: Get a HEADS UP on Creating a Culture of Concussion Safety in Sports.

HEADS UP educational materials are designed to support individuals (such as coaches and health care providers) and organizations (such as schools and sports programs) with their concussion safety efforts. Learn more at www.cdc.gov/HEADSUP.

To Help Parents and Teen Drivers: "Parents Are the Key" to Teen Driver Safety.

Parents Are the Key materials helps parents, pediatricians, and communities keep teen drivers safe on the road. Parents Are the Key includes evidence-based strategies and can be customized with an organization's logo. Learn more at www.cdc.gov/ParentsAretheKey.

TBI by Race

Certain populations have higher rates of TBI and may need special prevention measures. The highest rates per 100,000 were among American Indian/Alaska Native (AI/AN) people (race alone).

Race	Count	Rate
American Indian/Alaska Native	873	658
Native Hawaiian or Pacific Islander	59	425
White	1,823	389
Black	104	383
Asian	112	230



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TBI Activities

Alaska Injury Prevention and Surveillance Programs

- Alaska Senior and Disability Services, Traumatic and Acquired Brain Injury: https://health.alaska.gov/dsds/Pages/tabi/default.aspx
- Alaska Section of Chronic Disease Prevention and Health Promotion, Injury Prevention Program: https://health.alaska.gov/dph/Chronic/Pages/InjuryPrevention/TBI/default.aspx
- Alaska Section of Epidemiology, Injury Surveillance Program: https://health.alaska.gov/dph/Epi/injury/Pages/default.aspx
- Center for Human Development, Brain Injury State Partnership Program:
 https://www.uaa.alaska.edu/academics/college-of-health/departments/center-for-human-development/brain-injury-partnership-program/index.cshtml
- Center for Safe Alaskans, Injury Prevention Program:
 https://safealaskans.org/our-work/ideas-in-action/injury-prevention/

Alaska Injury Reports, Data, and Statistics

- Alaska Section of Epidemiology, EpiBulletins, Traumatic Brain Injury in Alaska: https://epi.alaska.gov/bulletins/docs/rr2023_02.pdf
- Alaska Health Analytics and Vital Records Section, Death Certificate and Health Facility Discharge Data and Statistics: https://health.alaska.gov/dph/VitalStats/Pages/data/default.aspx
- Alaska Rural and Community Health Systems, Alaska Trauma Registry Data and Statistics: https://health.alaska.gov/dph/Emergency/Pages/trauma/registry.aspx

Mortality data are based on in-state occurrence death certificates from the Alaska Electronic Vital Records System. Morbidity data are based on in-state occurrence non-military hospital and emergency department discharges from the Alaska Health Facilities Data Reporting Program. Rates are age-adjusted using the Year 2000 U.S. Standard Population. Rates based on less than 6 events are statistically unreliable and are not reported. Case definitions for traumatic brain injuries as well as the toolkit used to create this report are available here: https://resources.cste.org/lnjury-Surveillance-Methods-Toolkit/Home/SpecialEmphasisReports.