

TARRANT COUNTY PUBLIC HEALTH DATA BRIEF

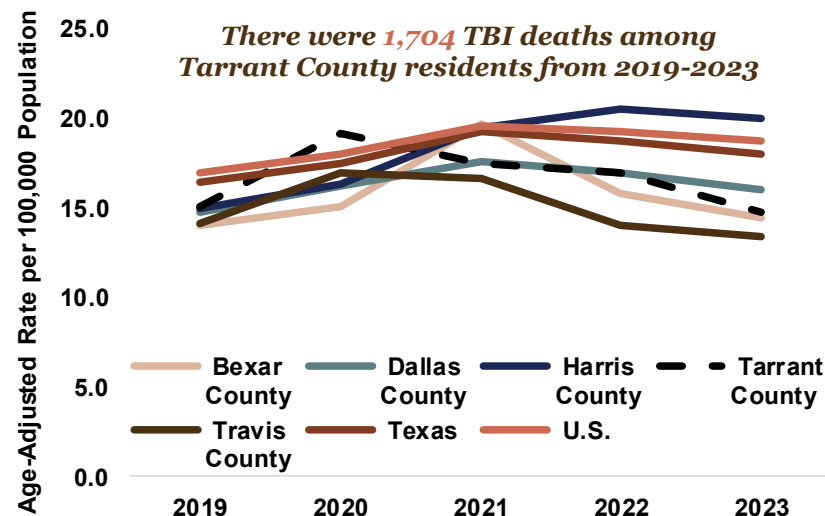


TRAUMATIC BRAIN INJURY (TBI) IN TARRANT COUNTY

Traumatic Brain Injury (TBI) occurs when the head is impacted by external trauma (penetrating injury, bump, jolt, being shaken, blast/explosion, etc.). TBIs can cause physical, cognitive, emotional, and behavioral changes. Signs and symptoms may occur immediately or up to weeks after the trauma occurs. TBIs can be:

- Unintentional or intentional, and occur from a variety of mechanisms (causes of trauma).
- Mild, moderate, or severe depending on the cause and how the brain is affected. A concussion is a mild type of TBI that occurs when the head and brain move back and forth too quickly, damaging brain cells.
- Fatal or non-fatal, and may cause short-term side effects or long-term disabilities.

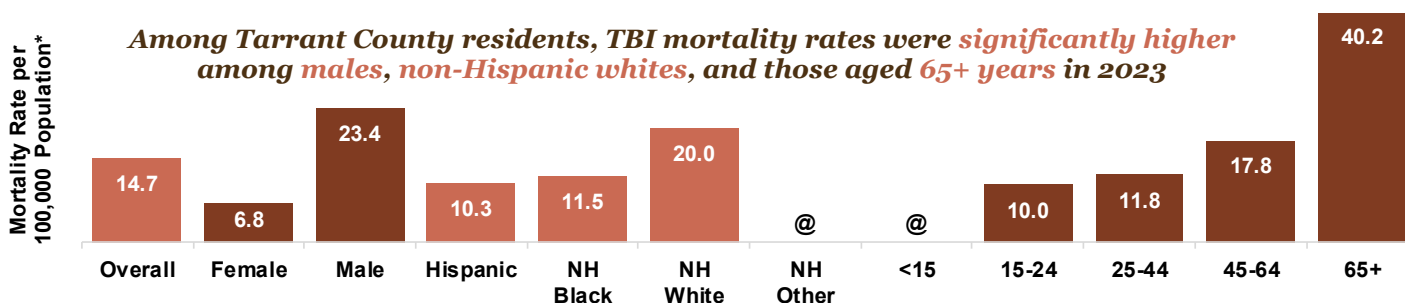
Figure 1. TBI mortality rates by geographic location, 2019-2023



Tarrant County had a **significant increase** in the TBI mortality rate from 2019 to 2020, before **declining significantly** in 2023

In 2023, Tarrant County's TBI mortality rate was **significantly lower** than Harris County, Texas, and the U.S.

Figure 2. Tarrant County TBI mortality rates by gender, race/ethnicity, and age group (in years), 2023



Among Tarrant County Residents in 2023:

- The majority of TBI deaths were **intentional (66%)**
- Among intentional TBI deaths, the majority were **suicides (85%)**

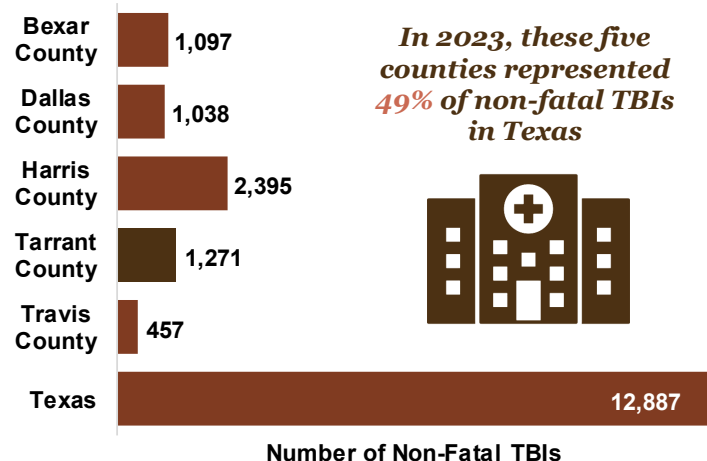
The leading mechanism for

- Suicide TBI deaths was **firearms (100%)**
- Homicide TBI deaths was **firearms (87%)**
- Unintentional TBI deaths was **falls (81%)**

* Age-adjusted rate per 100,000 population for Tarrant County overall, gender, and race/ethnicity & age-specific rate per 100,000 population for age groups; @ = unstable rate; NH = Non-Hispanic; TBI-related deaths were included if the record had an injury-related ICD-10 underlying cause of death code (V01-Y36, Y85-Y87, Y89, U01-U03) and a TBI-related ICD-10 code in one of the 20 multiple cause of death fields (S01, S02.0, S02.1, S02.3, S02.7-S02.9, S04.0, S06, S07.0, S07.1, S07.8, S07.9, S09.7-S09.9, T90.1, T90.2, T90.4, T90.5, T90.8, T90.9); All significant differences detected at the 95% confidence level; Data source: Centers for Disease Control and Prevention; Data Brief provided by: Statistical Analysis Team

In 2021, 12 - 14% of high school students at the national, state, and local level reported they **had a concussion** from playing a sport or being physically active one or more times during the past 12 months**

Figure 3. Non-fatal TBIs by location of reporting hospitals or trauma facilities, 2023



In 2023, non-fatal TBIs reported in **Tarrant County** were more frequently among **males, non-Hispanic whites, and those aged 65+ years**

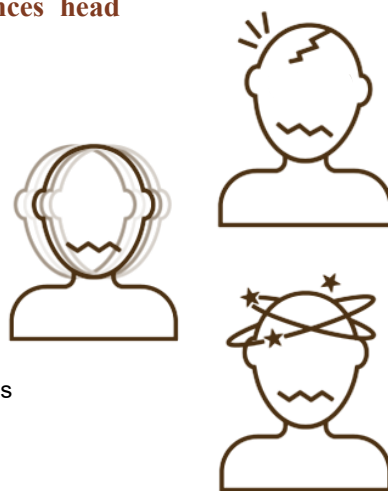
Most non-fatal TBIs reported in Tarrant County in 2023 were:

- **Due to falls (76%)**
- **Unintentional (94%)**

Signs & Symptoms of TBI:

Call 911 or visit an emergency department if you or someone else experiences head trauma and symptoms:

- Loss of consciousness
- Severe headache or head pressure
- Nausea or vomiting
- Dizziness
- Seizures
- Drowsiness or lethargy
- Confusion/Disorientation
- Speech or vision issues
- Sensitivity to light or sound
- Difficulty walking
- Limb numbness, tingling, or weakness
- Fluid draining from ears or nose
- Different pupil sizes
- Unusual behavior or mood
- Loss of appetite, constant crying (children)



Watch for long-term symptoms (days, weeks, months after injury) and visit a doctor if these occur or worsen:

- Work/School performance changes
- Concentration and memory problems
- Delayed thinking and understanding
- Difficulty with planning, judgement, language, and problem solving
- Personality or behavior changes
- Aggression/Irritability
- Anxiety/Depression
- Poor coordination/Balance
- Visual/Spatial problems
- Sensory difficulties (touch, hearing, or vision)
- Ongoing headaches or neck pain
- Poor sleep or fatigue

Education and Prevention

- [biausa.org/brain-injury]
- [brainline.org]
- [cdc.gov/heads-up/]
- [cdc.gov/traumatic-brain-injury/]
- [hhs.texas.gov/services/disability/acquired-brain-injury/]
- [hhs.texas.gov/services/disability/acquired-brain-injury/prevention-resources-risk-populations]
- [navigatelifetexas.org/en/diagnosis-healthcare/traumatic-and-acquired-brain-injury-in-children]

For more information on falls, firearm-related injuries, and suicides, see our other data briefs on these topics:

[tarrantcountytx.gov/en/public-health/public-health-administration/health-data-and-information/injury-and-violence.html]

Resources and Support

- Aging & Disability Resource Center of Tarrant County [tarrantcountyadrc.org]
- Brain Injury Association of America - Texas Chapter [biausa.org/find-bia/states/texas/resources-support]
- Brain Injury Network - Fort Worth [thebind.org/clubhouses/bindfw]
- Concussion Legacy Foundation Helpline [concussionfoundation.org/helpline]
- Hope After Brain Injury [hopeafterbraininjury.org]
- MHMR of Tarrant County [mhmrarrant.org/idd-services/]
- TBI Model Systems Program [msktc.org/TBI]
- Texas Brain Injury Advisory Council [hhs.texas.gov/about/advisory-committees/texas-brain-injury-advisory-council]
- Texas Brain Injury Support Groups [hhs.texas.gov/services/disability/acquired-brain-injury/find-a-support-group]

**Youth Risk Behavior Survey (YRBS) 2021; Non-fatal TBI data based on location of reporting hospitals or trauma facilities; All significant differences detected at the 95% confidence level; Data sources: Texas Department of State Health Services, YRBS 2021 (Centers for Disease Control and Prevention); Data Brief provided by: Statistical Analysis Team