

## FAST FACTS

- From 2007–2017, the number and rate of TBIs have increased.
- In 2017, TBIs contributed to 22.5% of all injury deaths in Ohio.
- Counties in the Appalachian region of Ohio have the highest age-adjusted TBI death rates.
- Males and older adults carry a disproportionate burden of TBI deaths.
- Unintentional falls is the leading mechanism/intent of TBI deaths among females, followed by unintentional motor vehicle traffic crashes.
- Suicide is the leading mechanism/ intent of TBI deaths among males, followed by unintentional falls.

## RESOURCES

Ohio Brain Injury Program  
[www.ohiobraininjury.org](http://www.ohiobraininjury.org)

Brain Injury Association of Ohio  
[www.biaoh.org](http://www.biaoh.org)

Child Injury Action Group  
[www.ohiocia.org/](http://www.ohiocia.org/)

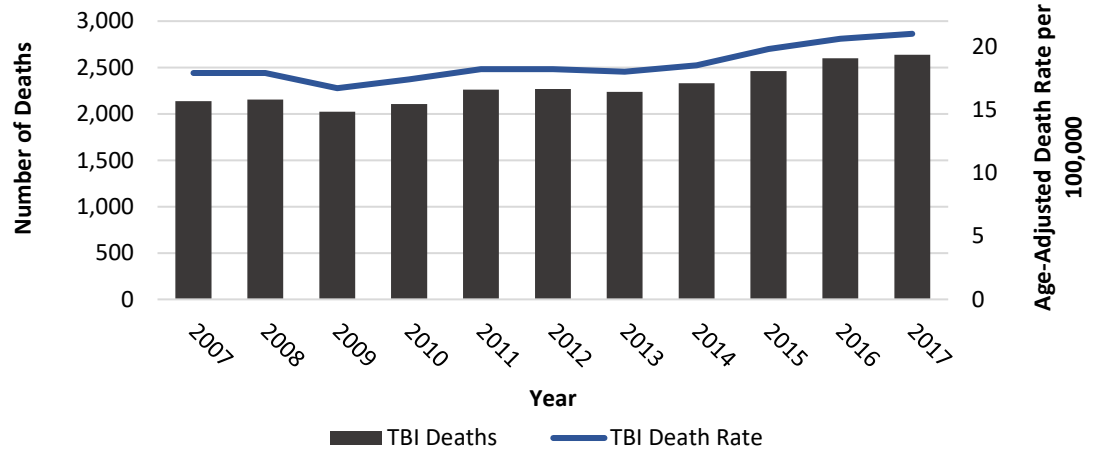
## Traumatic Brain Injury Mortality in Ohio

A traumatic brain injury (TBI) is a disruption in the normal function of the brain which can be caused by a bump, blow, or jolt to the head, or penetrating head injury<sup>1</sup>. TBI is a major cause of death and disability. In 2017, TBIs contributed to 22.5% of all injury deaths in Ohio.

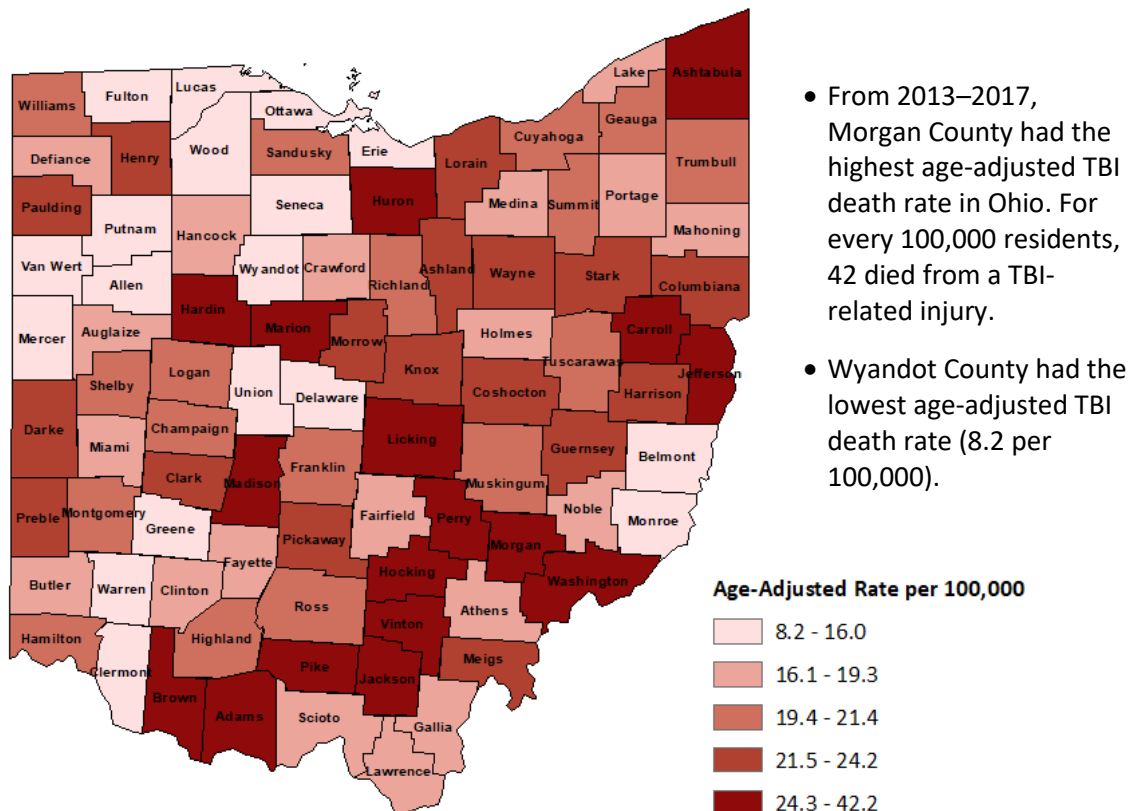
From 2007–2017:

- TBI deaths increased 23.5%, from 2,136 to 2,639.
- The age-adjusted TBI death rate increased 17.3%, from 17.9 to 21.0 deaths per 100,000 people.

**Figure 1. Number and Age-Adjusted Death Rates for TBI by Year, Ohio, 2007–2017**



**Figure 2. Age-Adjusted TBI Death Rates by County, Ohio, 2013–2017**

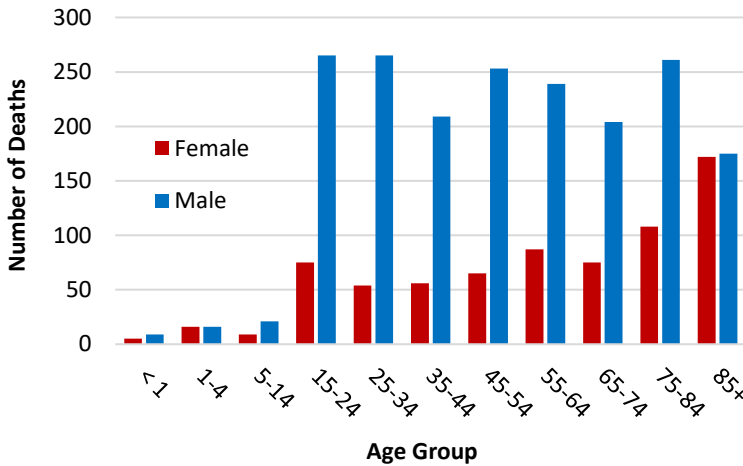


- From 2013–2017, Morgan County had the highest age-adjusted TBI death rate in Ohio. For every 100,000 residents, 42 died from a TBI-related injury.
- Wyandot County had the lowest age-adjusted TBI death rate (8.2 per 100,000).

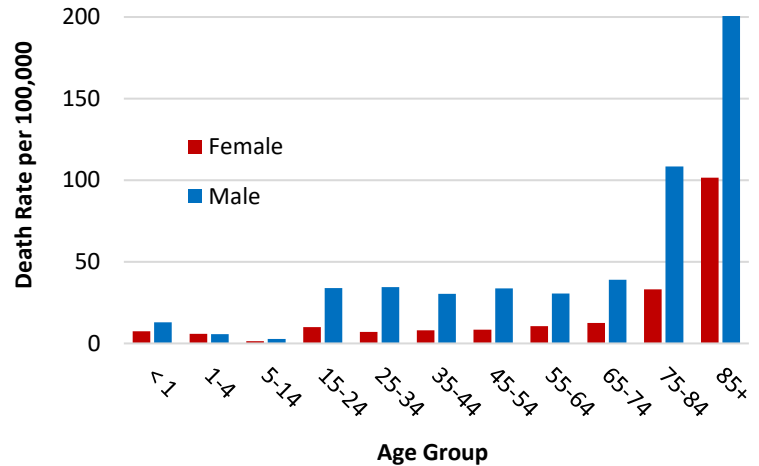
## Age and Sex

- Males are disproportionately burdened by TBI death rates across the lifespan.
- The TBI death rate is highest among older adults and, in both males and females, increases with age for adults 65 and older.

**Figure 3. Number of TBI Deaths by Age and Sex, Ohio, 2017**



**Figure 4. TBI Death Rates by Age and Sex, Ohio, 2017**

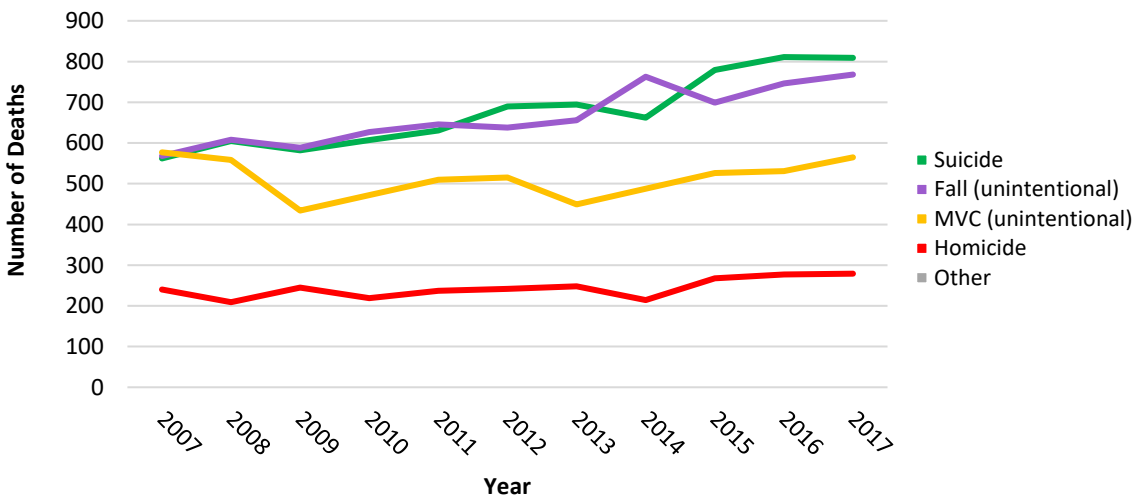


Note: A rate takes into account the underlying population at risk for a TBI death during a given time period, in this case the 2017 Ohio resident population. In 2017, there were 172 and 175 TBI deaths among females and males 85+ years, respectively. There were an estimated 169,211 females and 87,219 males 85+ years living in Ohio. The TBI death rate for females 85+ years =  $(172/169,211) \times 100,000 = 101.6$

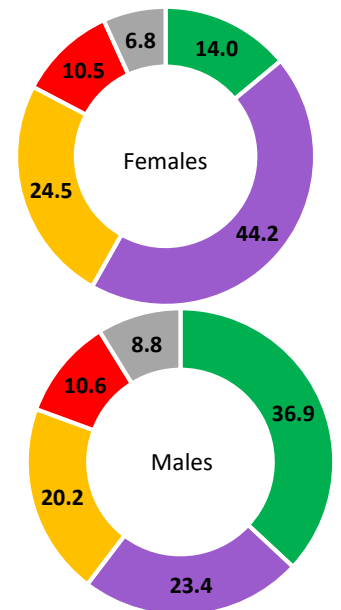
## Mechanism/Intent

- In 2007, unintentional motor vehicle traffic crashes (MVC) was the leading mechanism/intent for TBI deaths among Ohioans. In 2008, it dropped below unintentional falls and suicide.
- From 2007–2017, suicide-related TBI deaths increased 44.0% (from 562 to 809) and unintentional fall-related TBI deaths increased 35.2% (from 568 to 768).
- In 2017, unintentional falls was the leading mechanism/intent of TBI deaths (44.2%) among females. Among males, the largest proportion of TBI deaths (36.9%) were attributed to suicide.

**Figure 5. Number of TBI Deaths by Mechanism/Intent, Ohio, 2007–2017**



**Figure 6. Percent of TBI Deaths by Mechanism/Intent and Sex, Ohio, 2017**



**Data Source:** Ohio Department of Health (ODH) Bureau of Vital Statistics; analysis conducted by ODH Violence and Injury Prevention Section. Analysis includes Ohio residents who had an injury as an underlying cause of death (ICD-10 codes V01-Y36, Y85-Y87, Y89, U01-U03) and a TBI ICD-10 code in any field of the multiple cause of death file (ICD-10 S01.0-S01.9, S02.0, S02.1, S02.3, S02.7-S02.9, S04.0, S06.0-S06.9, S07.0, S07.1, S07.8, S07.9, S09.7-S09.9, T01.0, T02.0, T04.0, T06.0, T90.1, T90.2, T90.4, T90.5, T90.8, T90.9). Rates calculated per 100,000 population. Age-adjusted rates based on the 2000 U.S. Standard Population.

1. Centers for Disease Control and Prevention. Traumatic Brain Injury & Concussion. [https://www.cdc.gov/traumaticbraininjury/get\\_the\\_facts.html](https://www.cdc.gov/traumaticbraininjury/get_the_facts.html)