



## Firearm-Related Deaths in Tennessee

June 26, 2023

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### Key Takeaways

#### Deaths in 2021

- In 2021, gunfire was the 10th leading cause of death in Tennessee, killing 1,569 residents or about 22 of every 100,000 people.<sup>1</sup> It was the leading cause of death for those ages one to 18.
- Our firearm death rate was the 11th highest in the U.S. and 53% (7.8 deaths per 100,000) higher than the national rate. That gap has grown over time.

#### Demographics and Type

- Just over half of firearm deaths were suicides, but homicides accounted for the most among zero to 35-year-olds and black Tennesseans.

#### Trends

- Shooting deaths in the state have been rising for about a decade — largely driven by spikes in homicides. Those under 19 and black Tennesseans had the fastest growth in firearm death rates.
- Over the same period, state crime data show a rise in offenses involving firearms — both fatal and non-fatal — while all other crime rates declined.

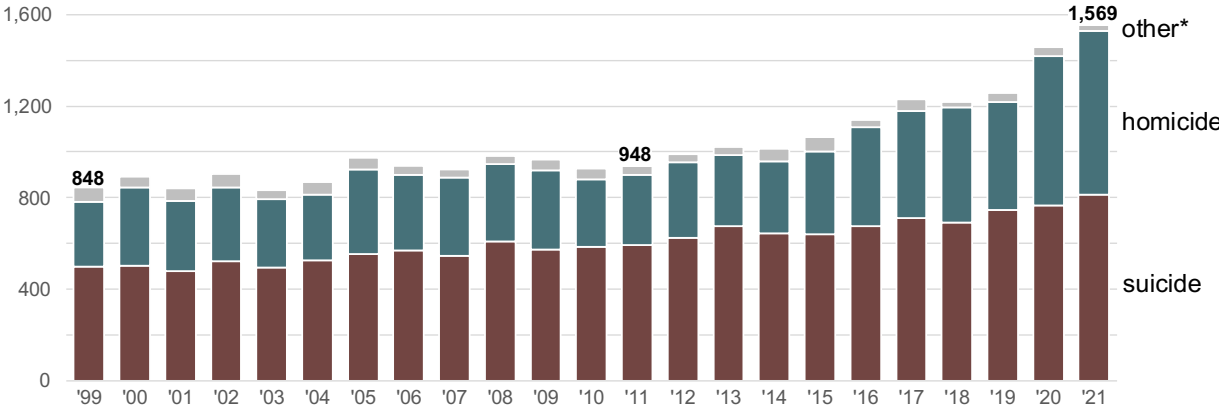
#### Across Tennessee

- From the 2000s to the 2010s, firearm death rates rose in about three-quarters of the 80 counties with available data. The counties with the highest rates are mostly in West Tennessee.
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**Shooting deaths in Tennessee have been rising for about a decade and reached an all-time high in 2021.** (1) This brief breaks these numbers and trends down by demographics and geography and compares them to related crime trends and the rest of the country using the latest available data. Throughout this report, we use the terms firearm death, gunfire death, shooting death, and gun death interchangeably to refer to all reported deaths that were the result of gunfire. See “About the Data” at the end of this report for more information.

# Figure 1. Tennessee’s Gun-Related Deaths Reached Historic Highs in 2021, Growing 66% Over the Last Decade

Number of Firearm Deaths in Tennessee by Type (1999-2021)



\*“Other” includes unintentional firearm deaths or those where the intent was undetermined.

Source: Underlying Causes of Death via CDC WONDER Online Database (2)

## Tennessee Firearm-Related Deaths in 2021

Firearm-related deaths reached record highs in 2021 — claiming the lives of nearly 1,570

Tennesseans, or about 22 deaths for every 100,000 people (Figure 1). For context, the leading cause of death in 2021 — cardiovascular disease — killed over 18,000 Tennesseans or about 265 deaths for every 100,000 people. Gunfire was the 10th leading cause of death in the state (Figure 2). Here’s how those deaths broke down by demographics and type.

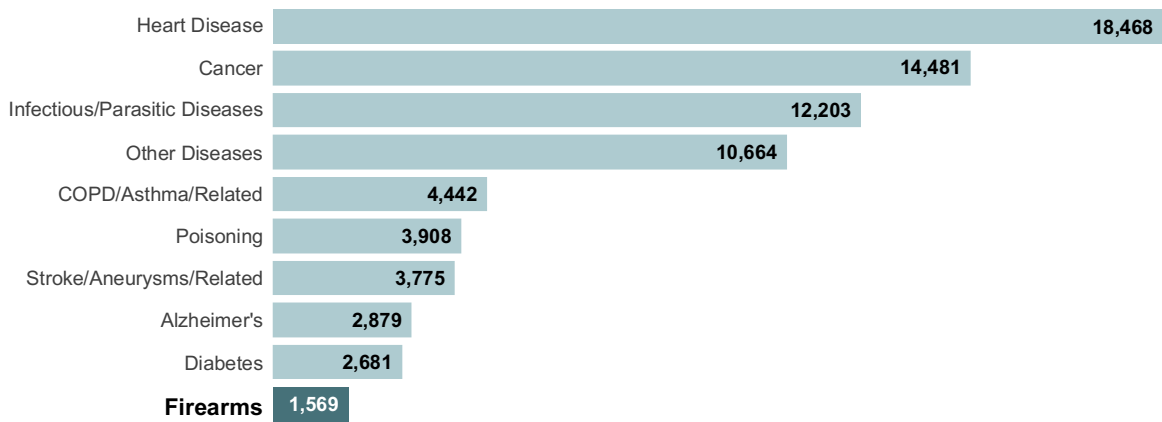
- By Age:** Of all gun deaths in 2021, 42% were among those ages 35-64, and 37% were 19 to 34-year-olds (Figure 3). When adjusted for population size, young adults ages 19 to 34 had the highest rate of gun-related deaths at 39.1 per 100,000 people in that age group.<sup>1</sup> Children and adolescents had the lowest rate at 7.6 deaths per 100,000 (Figure 4). Firearm deaths are much less frequent among minors than any other age group because deaths among this cohort are rare in general. However, gunfire was the leading cause of death for Tennesseans ages one to 18 in 2021 (Figure 5). Those deaths were largely concentrated among teens, with 15 to 18-year-olds making up 77% of shooting deaths among Tennessee children and adolescents during the 2018-2021 period (Figure 6).
- By Type:** Just over half (52%) of all Tennessee firearm deaths in 2021 were by suicide<sup>2</sup> (Figure 3), but this varied by age, gender, and race (Figures 6 and 7).
- By Gender:** Men accounted for over 80% of Tennessee’s firearm deaths in 2021 (Figure 3). In fact, the rate of gun deaths among men was nearly five times higher than the rate among women (Figure 4).

<sup>1</sup> Rates are the number of deaths among a particular demographic group for every 100,000 people in that group.  
<sup>2</sup> Throughout this brief, suicide and homicide rates and numbers refer only to those occurring with a firearm, unless otherwise noted.

- **By Race:** About 60% of shooting deaths were among white Tennesseans (**Figure 3**). However, black Tennesseans had a much higher rate of death by firearm — almost three times higher (**Figure 4**).
- **By Age and Type:** Suicide was most common among Tennesseans age 35+ while homicides account for most firearm-related deaths among those under 35 (**Figure 7**).
- **By Race, Gender, and Type:** Suicides accounted for most firearm deaths among white Tennesseans, while homicides accounted for the majority among black Tennesseans (**Figure 7**). Deaths among men and women split about evenly overall between suicides and homicides. However, white men and women were much more likely to die from suicide and black men and women from homicide.

## Figure 2. Gunfire Was the 10th Leading Cause of Death Among All Tennesseans in 2021

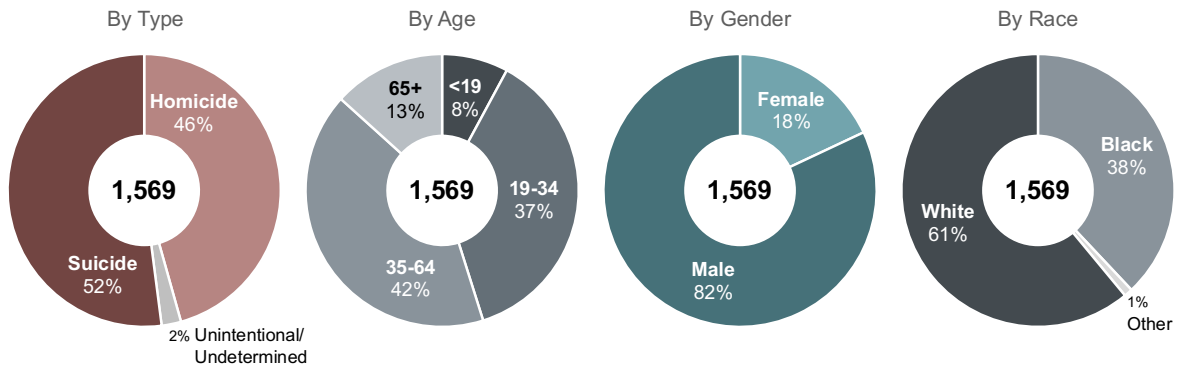
Number of People Killed by the Top 10 Causes of Death in Tennessee (2021)



Source: Underlying Causes of Death via CDC WONDER Online Database (1)

## Figure 3. About 1,570 Tennesseans Died from Gunfire in 2021

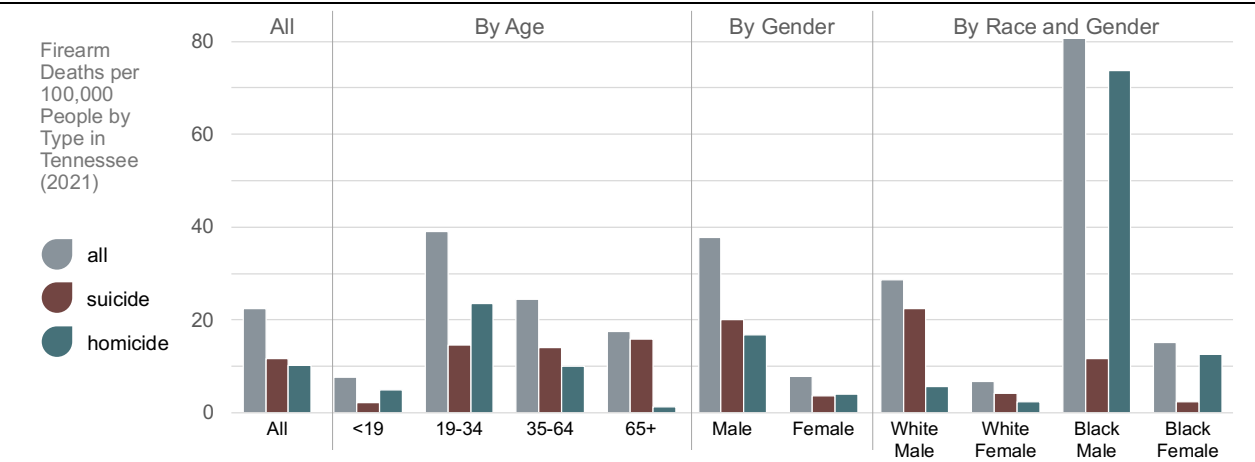
Firearm Deaths in Tennessee (2021)



Note: Some charts may not add up to 100% due to rounding.

Source: Underlying Causes of Death via CDC WONDER Online Database (1)

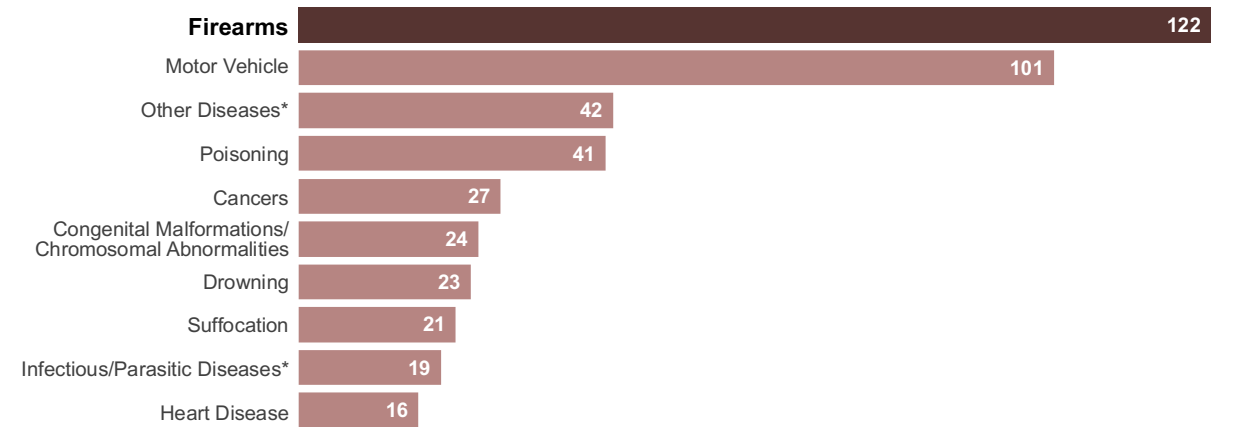
**Figure 4. Black Men and Young Adults Had the Highest Rates of Firearm Deaths in Tennessee in 2021**



Source: Underlying Causes of Death via CDC WONDER Online Database (1)

**Figure 5. Gunfire Was the Leading Cause of Death Among Tennessee Children and Adolescents Over the Age of One in 2021**

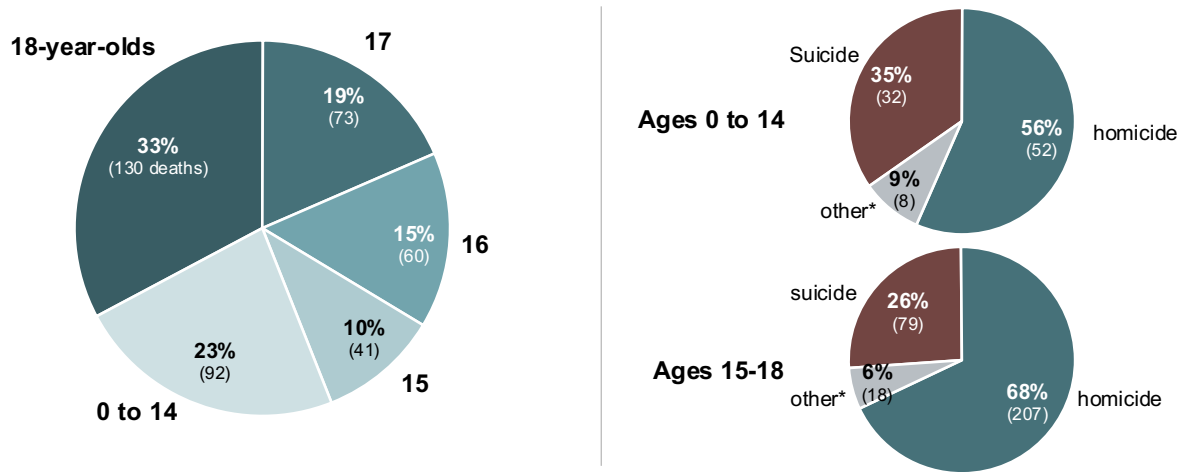
Number of Tennesseans Ages 1-18 Killed by the Top 10 Causes of Death (2021)



\*Excludes heart diseases, flu, pneumonia, and congenital/chromosomal abnormalities, which are counted separately.  
Source: Underlying Causes of Death via CDC WONDER Online Database (1)

## Figure 6. Teens Age 15-18 Accounted for Over 75% of Shooting Deaths Among Tennessee Children and Adolescents

Number of Tennesseans Ages 0-18 Killed by Gunfire by Age and Type (2018-2021)



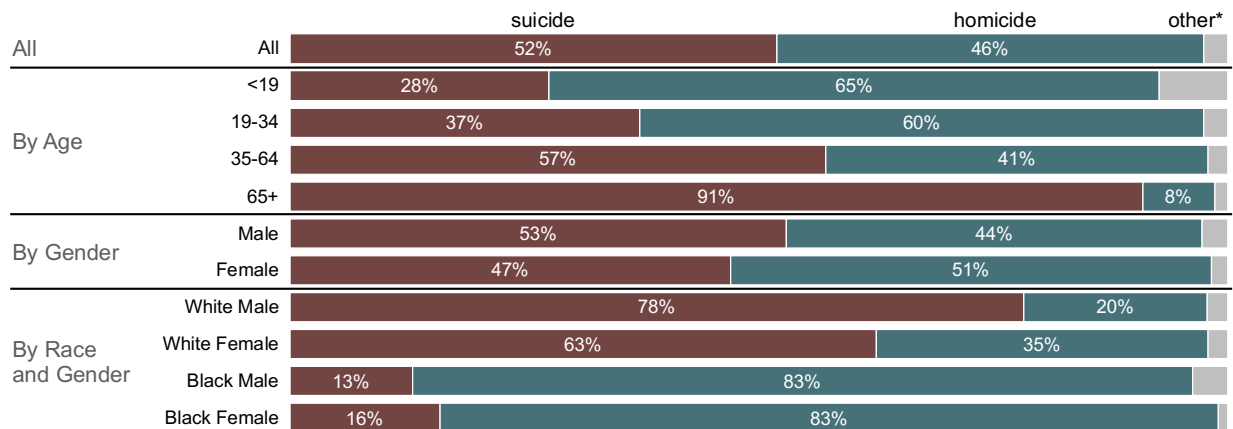
Note: Numbers for most of ages 0-14 years are not reported because the number of deaths was fewer than 10.

\*\*Other\* includes unintentional firearm deaths or those where the intent was undetermined.

Source: Underlying Causes of Death via CDC WONDER Online Database (1)

## Figure 7. Just Over Half of All Tennessee Firearm Deaths Are Suicides, But the Breakdown Varies Widely by Age, Gender, and Race

Distribution of Firearm Deaths by Type in Tennessee (2021)



\*\*Other\* includes unintentional firearm deaths or those where the intent was undetermined.

Source: Underlying Causes of Death via CDC WONDER Online Database (1)

## Trends in Tennessee Firearm-Related Deaths

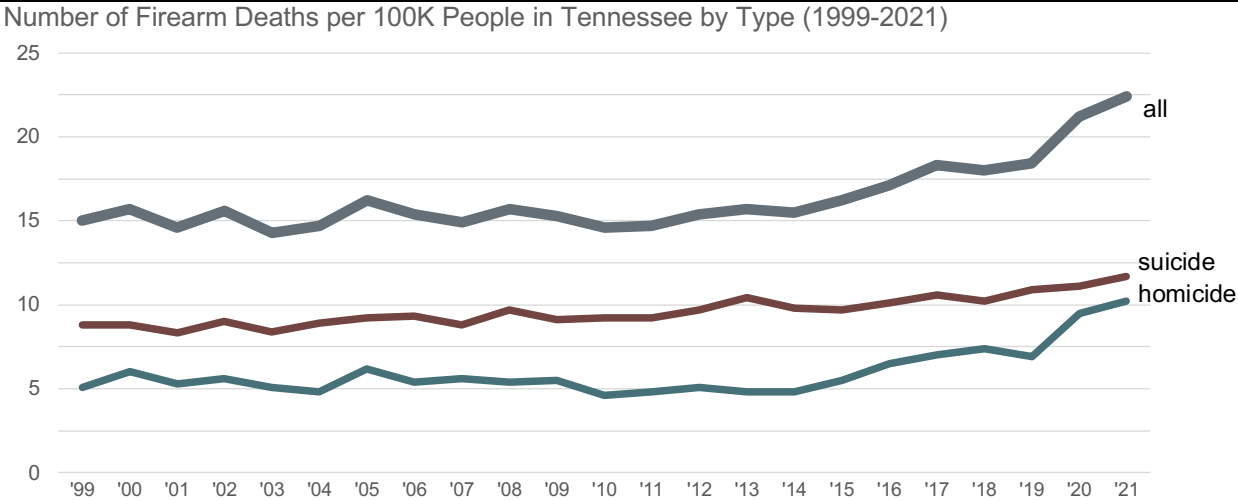
Shooting death rates in Tennessee have been rising for about a decade (Figure 8). From 2011 to 2021, the annual number of firearm deaths in Tennessee increased by 66% or 623 additional deaths each year — compared to a 12% jump or an additional 99 people per year from 2001 to 2011. The rate of

shooting deaths — which accounts for changes in population — rose by 52% or 7.7 deaths per 100,000 people during the most recent decade versus about 1% or 0.1 deaths over the ten years before.<sup>3</sup>

**By age, gun death rates grew the most for young adults but the fastest for minors — overtaking car crashes as the leading cause of death among children and adolescents in 2017 (Figures 9 and 10).** Between 2011 and 2021, the shooting death rate grew by 4.7 deaths (162%) among Tennesseans under 19, 18.8 deaths (93%) among those ages 19 to 34, and 6.2 deaths (34%) among 35 to 64-year-olds. Gunfire caused more deaths among one to 18-year-olds than any other cause in 2017, 2018, 2020, and 2021.<sup>4</sup> Nationally, gunfire became the leading cause of death among one to 18-year-olds in 2020.

**By race and gender, black men and women experienced the largest and fastest increase in firearm death rates between 2011 and 2021 (Figure 11).** The rate of deaths from gunfire rose by 10.0 deaths (196%) among black women, 52.4 deaths (144%) among black men, 2.6 deaths (63%) for white women, and 5.4 deaths (23%) among white men.<sup>1</sup>

**Figure 8. Shooting Death Rates In Tennessee Have Been Rising For About A Decade**



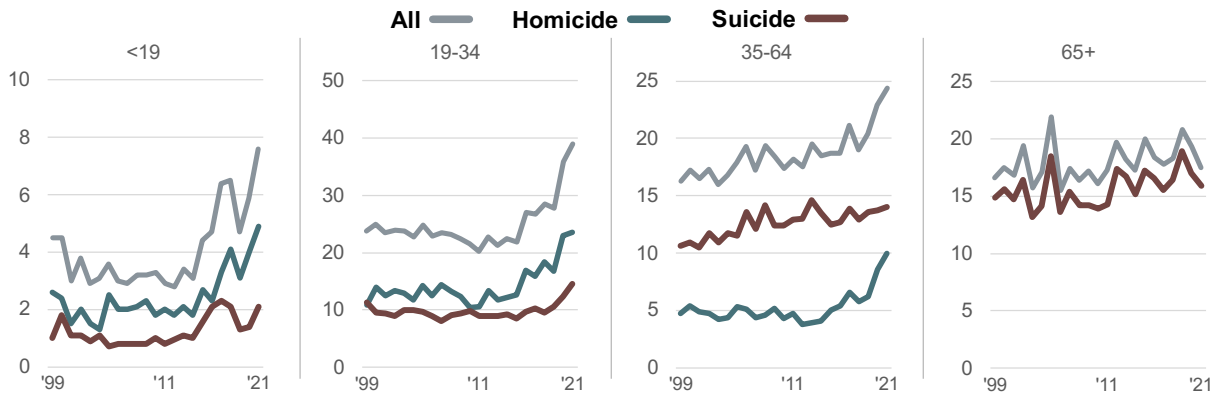
Source: Underlying Causes of Death via CDC WONDER Online Database (1)

<sup>3</sup> To analyze differences in firearm death rates, we report both absolute and relative changes. The absolute change states the difference between two rates. Relative change measures the percentage difference between two rates, and—over time—represents the pace of change. Each comes with limitations. For example, the absolute and relative changes to an initially small value could give very different impressions of the magnitude of change. To illustrate, the absolute increase between a beginning rate of 1.0 death per 100,000 and a later rate of 2.0 deaths per 100,000 is 1.0 deaths. The relative increase is 100%. (14) (15)

<sup>4</sup> For comparisons to other causes of death, we narrowed our age range for minors from under 19 to one through 18 based on similar national analyses. Children under one are typically excluded from these analyses due to high rates of death from causes unique to infants – including birth defects, pre-term birth, low birthweight, sudden infant death syndrome, suffocation, and pregnancy complications. (16) (17) (18)

## Figure 9. Shooting Death Rates Have Grown the Most Among Young Adults but the Fastest Among Children and Adolescents

Number of Firearm Deaths per 100K People in TN by Age and Type (1999-2021)



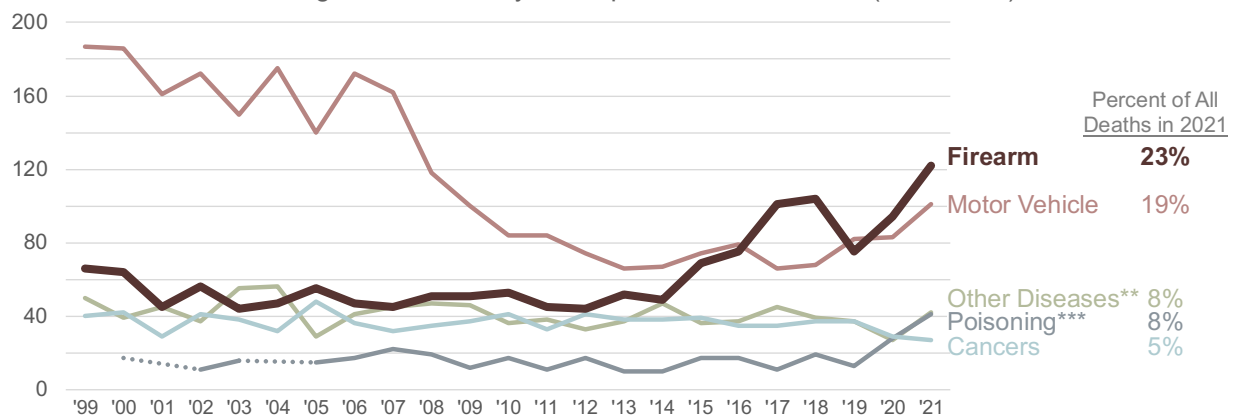
Notes: Other categories include unintentional firearm deaths and those where the intent was undetermined. The rates for each of these are not reported for most years because the number of deaths was fewer than 10. However, these deaths are included in the totals for “All.” Data for homicides are not available for those 65+ due to low numbers. See “About the Data” for more information.

Source: Underlying Causes of Death via CDC WONDER Online Database (1)

These trends were mostly propelled by an increase in homicides<sup>2</sup> (Figures 9 and 11). The annual rate of homicides with guns more than doubled between 2011 and 2021 — growing by 5.4 deaths per 100,000 people. These rates also more than doubled for all individual age groups except for those over 65. During this period, firearm homicide rates rose by 5.4 deaths (113%) overall, 2.9 deaths (145%) for those under 19, 12.9 deaths (122%) for 19 to 34-year-olds, and 5.3 deaths (113%) among those ages 35-64.<sup>1</sup> The number of homicide deaths among those 65+ were too few to be reported. The rate of homicides also more than doubled for each of the race/gender combinations we looked at other than white men (Figure 10).

## Figure 10. Gunfire Overtook Car Accidents as Tennessee’s Top Cause of Death for Kids Older Than One in Recent Years

Number of Tennesseans Ages 1-18 Killed by the Top 5 Causes of Death\* (1999-2021)

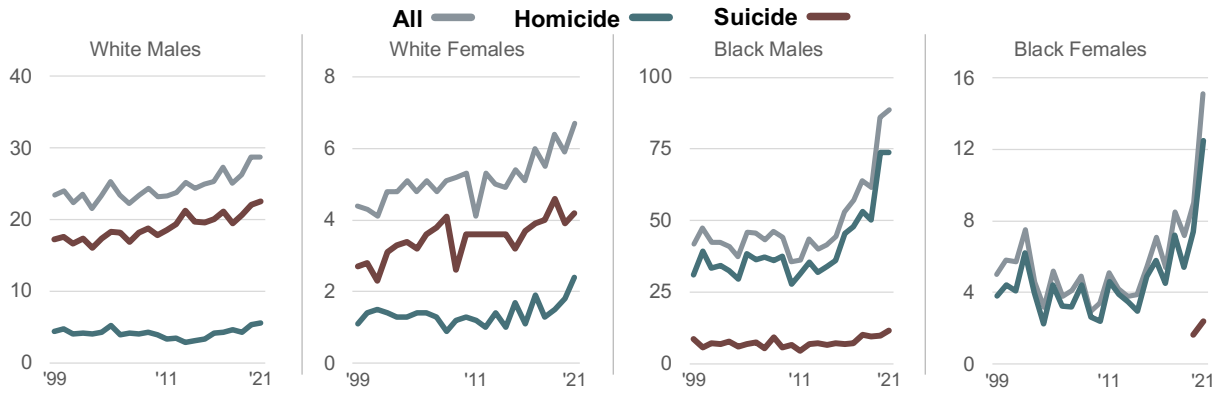


\*Historical data are shown for 2021’s five leading causes. \*\*Excludes heart diseases, flu, pneumonia, and congenital/chromosomal abnormalities, which are counted separately. \*\*\*Data for poisoning deaths are not available for 1999, 2001, and 2004 due to low numbers. See “About the Data” for more information.

Source: Underlying Causes of Death via CDC WONDER Online Database (1)

## Figure 11. Gun Deaths Jumped the Most for Black Men and Women Over the Last Decade — Driven by a Rise in Homicides

Number of Firearm Deaths per 100K People in TN by Type, Race, and Gender (1999-2021)



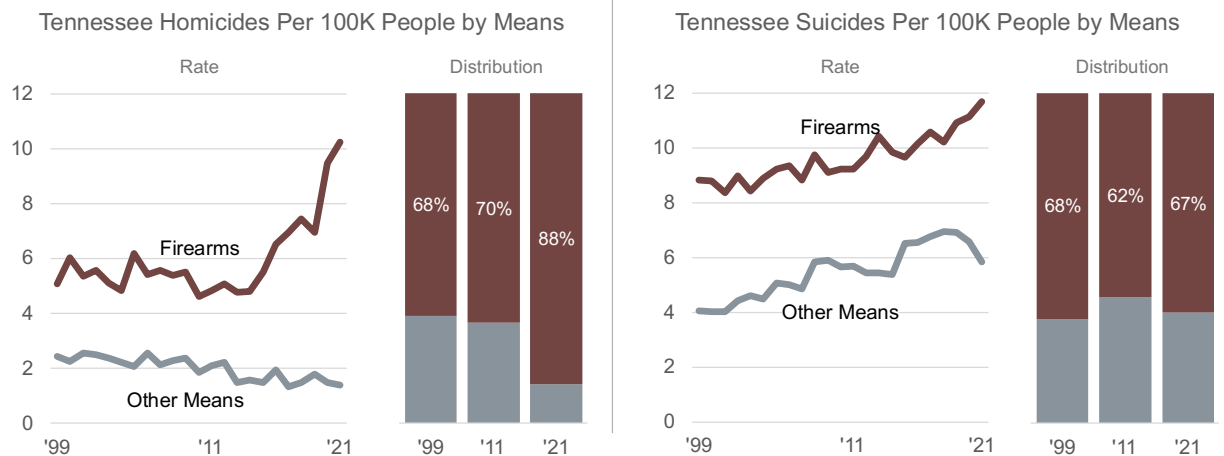
Notes: Other categories include unintentional firearm deaths and those where the intent was undetermined. The rates for each of these are not reported for most years because the number of deaths was fewer than 10. However, these deaths are included in the totals for "All." Data for suicides among black females are not available prior to 2020 due to low numbers. See "About the Data" for more information.

Source: Underlying Causes of Death via CDC WONDER Online Database (1)

### Related Trends

As homicides involving firearms increased during this period, homicides with other weapons and means declined (Figure 12). Between 2011 and 2021, the rate of homicide deaths involving other weapons and means fell by 0.7 deaths (35%) per 100,000 people. As a result, homicides involving a firearm grew from 70% of all homicide deaths in 2011 to 88% ten years later.

## Figure 12. In 2021, Firearms Were Involved in a Greater Share of Tennessee's Homicides and Suicides Than a Decade Prior

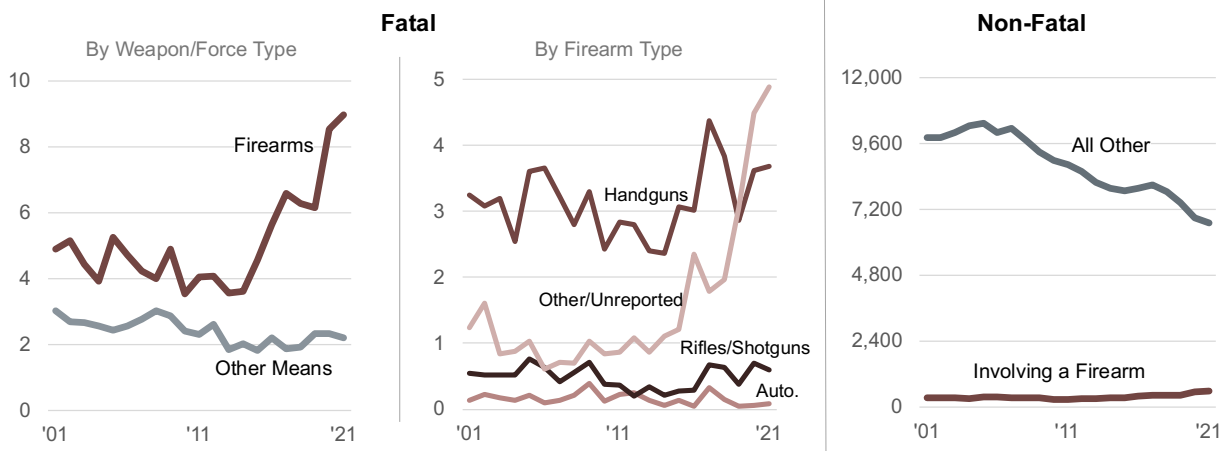


Source: Underlying Causes of Death via CDC WONDER Online Database (1)



### Figure 13. Fatal and Non-Fatal Crimes Involving Firearms Increased in Tennessee Over the Last Decade While Those Without Fell

Number of Crimes in Tennessee Per 100K People (2001-2021)

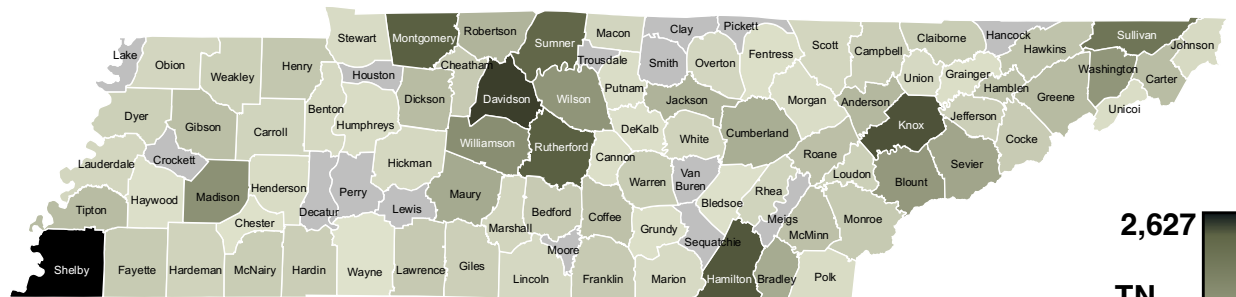


Source: The Sycamore Institute’s analysis of data from TBI Crime Insight (3)

Similarly, state crime data show a rise in offenses involving firearms — both fatal and non-fatal — while all other crime rates declined (Figure 13). Between 2011 and 2021, the rate of fatal crimes involving a firearm rose by 4.9 crimes (122%) per 100,000 people. Meanwhile, the fatal crimes rate involving other means of force fell by 0.1 crimes (-5%). Among non-fatal crimes, the rate of those involving guns grew by 297.1 crimes (104%) — compared with a decline of 2,141.5 (-24%) instances per 100,000 people for all other crimes. (3) Some national studies suggest that many crimes involving a gun are likely committed by people who did not legally possess the firearm, but state-level data to support these findings were not readily available for this report. (4) (5) (6)

### Figure 14. Most Firearm Deaths in Tennessee in the Last Decade Occurred in the State’s Most Populous Counties

Number of Firearm Deaths by County (2012-2021)



**Highest 5 Counties:**

1. Shelby	2,627
2. Davidson	1,171
3. Knox	704
4. Hamilton	604
5. Montgomery	399

**Lowest 5 Counties**

76. DeKalb	30
76. Haywood	30
78. Bledsoe	28
79. Chester	27
80. Wayne	25

\*Data unavailable due to low numbers. See “About the Data” for more information.

Source: Underlying Causes of Death via CDC WONDER Online Database (1)

The rate of suicides with firearms also rose over the last decade, while those involving other means grew rapidly before falling back to near-prior levels in 2021 (Figures 12). Overall, the rate of suicide deaths involving a firearm increased by about one-quarter or 2.4 deaths per 100,000 people between 2011 and 2021. Across all demographic groups, black men had the largest changes in firearm-related suicides with a rate increase of 7.0 deaths (152%) (Figure 11). Suicides involving other means increased from 5.7 deaths per 100,000 people in 2011 to a peak of 7.0 in 2018 before falling back down to 5.9 in 2021 (Figure 12).

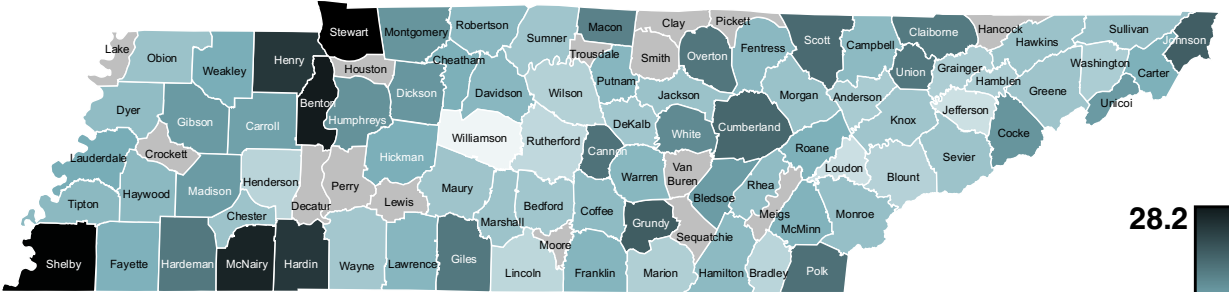
### Shooting Deaths Across Tennessee

Most firearm deaths occur in Tennessee’s most populous counties, but the counties with the highest rates are largely concentrated in West Tennessee (Figure 14 and 15). Because of low numbers, we combined data across multiple years for each of the 80 counties with counts high enough to be reported. In the decade spanning 2012-2021, 43% of the state’s nearly 12,000 shooting deaths occurred in the four largest counties — Shelby, Davidson, Knox, and Hamilton, which together accounted for about 36% of the state’s population during this period (Figure 14). Of these, only Shelby County was also among the counties with the highest rates of death from gunfire (Figure 15). Other counties with the highest rates tended to concentrate in West Tennessee.

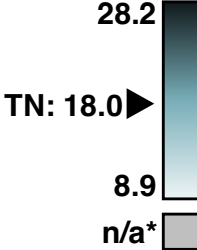
Between the 2000s and the 2010s, gun death rates rose in about three-quarters of the 80 Tennessee counties with available data (Figure 16). Between the 2002-2011 and 2012-2021 periods, the firearm death rate in Tennessee increased by about 19% or 2.9 deaths per 100,000 people. Across the 80 counties with complete data, that change ranged from an increase of 12.2 deaths (131%) in Overton County to a decrease of 16.4 deaths (-52%) in DeKalb County.

### Figure 15. Shooting Death Rates in Tennessee Varied Widely by County in the Last Decade

Number of Firearm Deaths per 100K People by County (2012-2021)



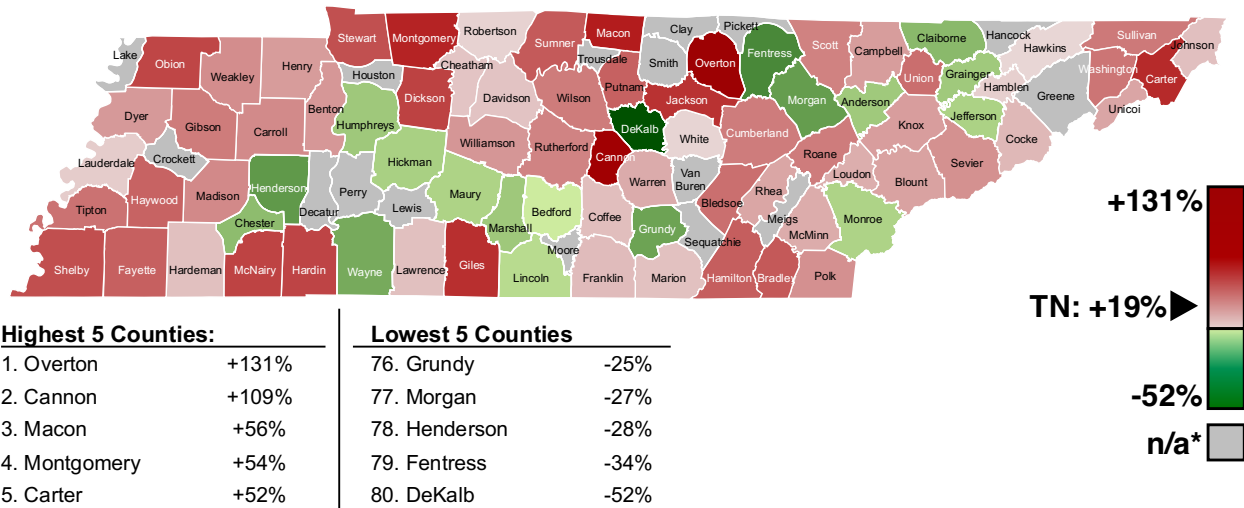
Highest 5 Counties:		Lowest 5 Counties	
1. Stewart	28.2	76. Lincoln	12.9
2. Shelby	28.1	77. Rutherford	12.7
3. Benton	26.7	78. Loudon	11.8
4. McNairy	26.2	79. Jefferson	11.7
5. Henry	25.1	80. Williamson	8.9



\*Data unavailable due to low numbers. See “About the Data” for more information.  
Source: Underlying Causes of Death via CDC WONDER Online Database (1)

## Figure 16. Gun Death Rates Rose in About Three-Quarters of Tennessee Counties Between the 2000s and the 2010s

Change in Number of Firearm Deaths per 100K People by County Between 2002-2011 and 2012-2021



\*Data unavailable due to low numbers. See “About the Data” for more information.  
Source: Underlying Causes of Death via CDC WONDER Online Database (1)

## Tennessee’s Firearm-Related Deaths in Context

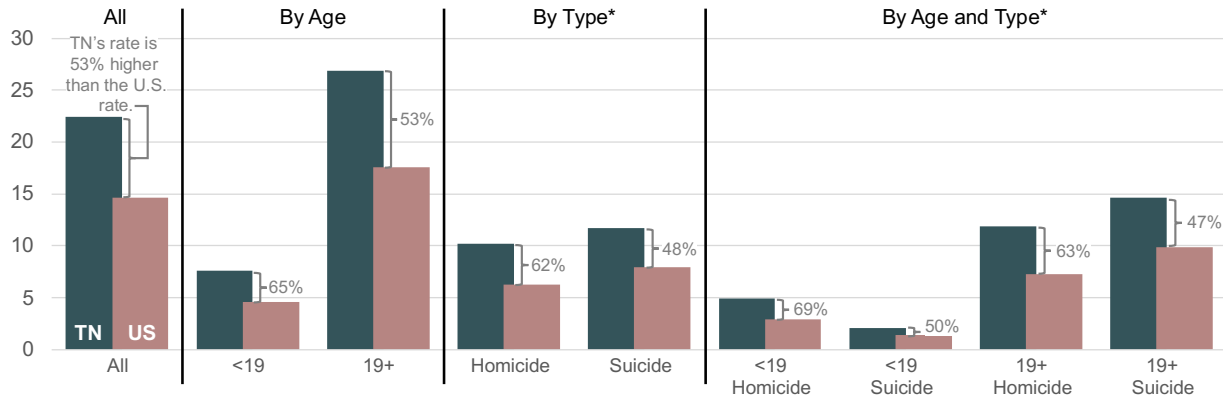
In 2021, Tennessee’s overall firearm death rate was 53% — or 7.8 deaths — higher than the national rate (Figure 17) and the 11th highest in the country (Figure 18). For other measures:

- Tennessee’s rate of homicide deaths involving a firearm was 3.9 deaths (62%) higher than the national rate of 6.3 deaths per 100,000 and tied with Illinois as the 7th highest among the states with available data (Figure 19).
- Suicides involving guns were 3.8 deaths (48%) higher than the national rate and the 18th highest rate among all states (Figure 20).
- Among those under 19, the shooting death rate was 3.0 deaths (65%) higher than the national rate and the 9th highest among the states with available data (Figure 21).
- The largest disparities by age and type between Tennessee and the country as a whole were for the rates of homicides among those 18 and younger (69% or 2.0 deaths) and suicides among adults (47% or 4.7 deaths<sup>1</sup>) (Figure 17).

**Persistent gaps in firearm-related death rates between Tennessee and the U.S. have widened over time, particularly among minors and for homicides (Figure 22).** For example, the rate of gun-related deaths among those under 19 in 2011 was 0.4 deaths (16%) higher in Tennessee than for the nation and 3.0 deaths (65%) higher by 2021. Similarly, Tennessee’s gun homicide rate was about one-third (1.2 deaths) higher than the national rate in 2011 but two-thirds (3.9 deaths) higher by 2021.

## Figure 17. Tennessee's Shooting Death Rates Are Much Higher Than the Nation's as a Whole

Number of Firearm Deaths per 100K People in TN vs. U.S. by Age and Type (2021)

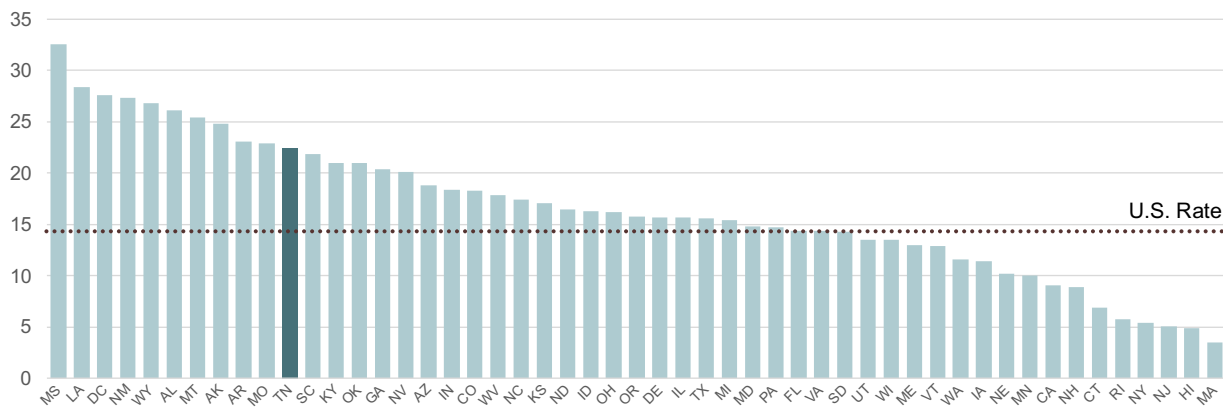


\*Other types include unintentional firearm deaths and those where the intent was undetermined. The rates for each of these are not reported for most years because the number of deaths was fewer than 10. However, these deaths are included in the totals for all gun-related deaths. See "About the Data" for more information.

Source: Underlying Causes of Death via CDC WONDER Online Database (1)

## Figure 18. In 2021, Tennessee Had the Country's 11th Highest Rate of Firearm Deaths

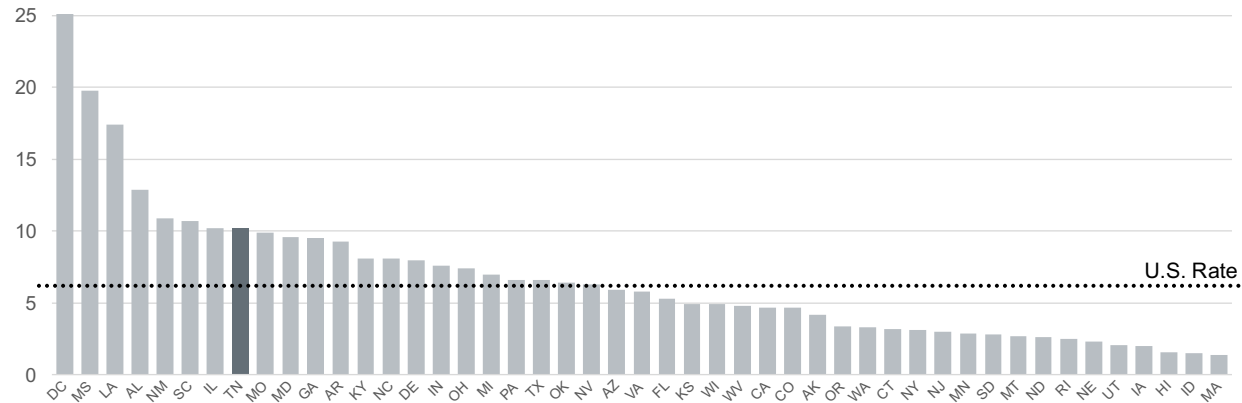
Number of Firearm Deaths per 100K People by State (2021)



Includes 50 states and Washington, DC. Source: Underlying Causes of Death via CDC WONDER Online Database (1)

**Figure 19. In 2021, Tennessee Tied for the 7th Highest Rate of Gun Homicides Among the States With Reported Data**

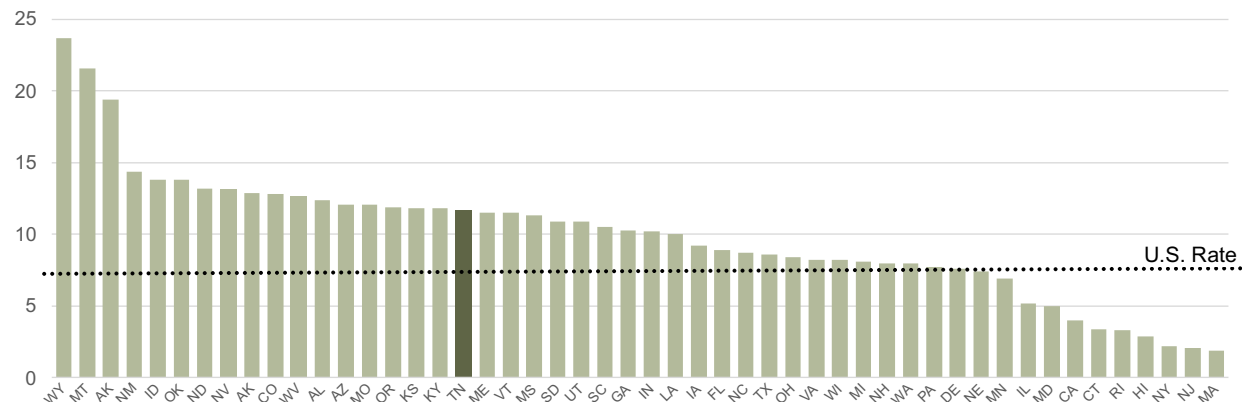
Number of Homicide Deaths Involving Firearms per 100K People by State (2021)



Includes 46 states and Washington, DC. Data for the remaining 4 states were unavailable due to low numbers.  
 Source: Underlying Causes of Death via CDC WONDER Online Database (1)

**Figure 20. In 2021, Tennessee Had the Country’s 18th Highest Rate of Suicides Involving a Firearm**

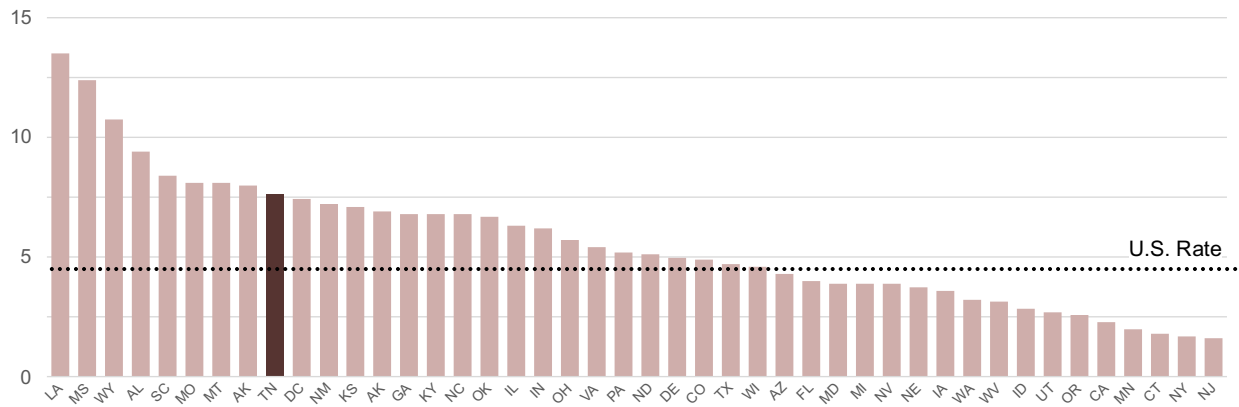
Number of Suicide Deaths Involving a Firearm per 100K People by State (2021)



Includes the 50 states. Data for Washington, DC were unavailable due to low numbers.  
 Source: Underlying Causes of Death via CDC WONDER Online Database (1)

## Figure 21. In 2021, Tennessee Had the 9th Highest Shooting Death Rate for Those Under 19 Among the States With Reported Data

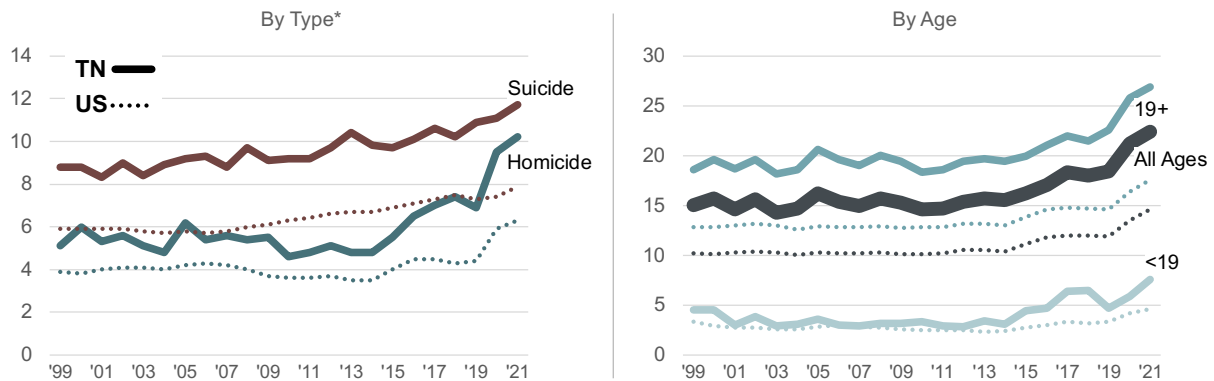
Number of Firearm Deaths Among Minors per 100K Minors by State (2021)



Includes 43 states and Washington, DC. Data for the remaining 7 states were unavailable due to low numbers. Source: Underlying Causes of Death via CDC WONDER Online Database (1)

## Figure 22. Gaps Between Tennessee’s Shooting Death Rates and the Nation’s are Longstanding — With Some Growing Over Time

Number of Firearm Deaths per 100K People (1999-2021)



\*Other types include unintentional firearm deaths and those where the intent was undetermined. The rates for each of these are not reported for most years because the number of deaths was fewer than 10. However, these deaths are included in the chart on the right. See “About the Data” for more information.

Source: Underlying Causes of Death via CDC WONDER Online Database (1)

### About the Data

This analysis draws from the latest state and local death certificate data compiled by the federal government and state crime data reported by the Tennessee Bureau of Investigation (TBI).

### Death Certificate Data

The death certificate data are reported and made available by cause of death, county of residence, race and ethnicity, age, and sex according to the following processes. (7) (8)

- Cause of Death:** Causes of death are determined by the deceased’s attending physician or a county medical examiner. These causes are based on ICD-10 medical diagnosis codes — which

means that, for example, homicides are based on a medical examiner's determination, not a criminal code definition. (7) In the case of suspected suicides, state law lays out specific steps that medical examiners must take that involve additional documentation and involvement of family. (8)

- **Local and State Reporting:** These medical certifications are reported to the deceased's funeral director, who is required to file a death certificate with the Tennessee Department of Health's (TDH) Office of Vital Records. TDH reviews, compiles, and maintains the records. (9) (10) Those data are then reported to the U.S. Centers for Disease Control and Prevention (CDC).
- **Data Availability:** CDC's National Center for Health Statistics compiles data from 57 vital statistics jurisdictions (e.g. states, territories). Data for 1999-2021 are made available to the public through the WONDER database. (11)
- **Data Limitations:** When the number of deaths is fewer than 10 for any specific query (e.g. gun deaths among white 25-year-olds in Davidson County in 2020), the data are not reported. (7) While this protects privacy, it can limit the ability to obtain and analyze information dissected across multiple characteristics (e.g. by race and by age and by geography and by type).

## Crime Data

The crime data are reported and made available by offense type, incident circumstances, and demographics of arrestees, offenders, and victims according to the following processes. (12) (3) (13)

- **Crimes and Other Details:** TBI's Tennessee Incident Based Reporting System (TIBRS) database collects details about 54 specific offenses in 24 crime categories, arrestees and offenders, victims, and the relationship between the individuals involved. Depending on the offense, details about specific crimes include things like the type of weapon or force used, bias motivation, method of entry, types of property, gang involvement, and circumstances (e.g., location, time of day). We constructed our own totals for fatal and non-fatal crimes. Fatal crimes include murder, negligent manslaughter, justifiable homicide, and negligent vehicular manslaughter. Non-fatal includes all other offenses.
- **Reporting:** These data are collected and reported to TBI monthly through the TIBRS database by over 300 state, county, and municipal law enforcement and correctional agencies, courts, and colleges and universities within Tennessee.
- **Data Availability:** TBI compiles the data reported through TIBRS and makes it available to the public through the Crime Insights database. Data are currently available for 2001-2021. TBI also reports TIBRS data to the Federal Bureau of Investigation's (FBI) National Incident Based Reporting System (NIBRS), which is used to report national crime statistics and trends.
- **Data Limitations:** The TBI strongly cautions against using TIBRS data to evaluate or rank law enforcement agencies or locations due to differences in jurisdictions (e.g., population characteristics, economic conditions). Furthermore, the level of detail reported to and available in

Crime Insights does not allow us to answer additional research questions of interest (e.g., What proportion of gun-related crimes involved an illegally possessed firearm?). Finally, due to differences and changes in federal reporting, TIBRS data are not always comparable to FBI-reported trends and statistics.

*\*This report was updated on June 30, 2023, to provide additional data on shooting deaths among minors and clarify the terminology used for this population.*



## References

1. **U.S. Centers for Disease Control and Prevention (CDC), National Center for Health Statistics, National Vital Statistics System.** Underlying Causes of Death for 1999-2021 on CDC WONDER Online Database. 2022. Accessed on April 11, 2023 via <https://wonder.cdc.gov/Deaths-by-Underlying-Cause.html>.
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