

TENNESSEE
Violent
Death
Reporting
System

2023

Homicide Deaths

Annual Report

Table of Contents

Executive Summary	i
I. Overview and Methodology	1
The Tennessee Violent Death Reporting System	
TNVDRS Case Definition	
Analysis Methodology	
Data Use and Requests	
II. Location and Scene Characteristics	5
Geographic Characteristics	
Temporal Characteristics	
Scene Characteristics	
III. Decedent Demographics	14
General Demographics	
Physical and Social Demographics	
Education, Occupation, and Housing	
IV. Mechanism of Injury	23
Method of Death	
Wound Location	
Firearm Circumstances	
Toxicology Analysis	
V. Available Suspect Information	31
Suspect Demographics	
Relationship Circumstances	
Suspect Characteristics	
VI. Circumstances Contributing to Injury	35
Family and Community	
Conflict Leading to Injury	
Criminal and Legal Issues	
VII. Annual Trends, 2020-2023	41
VIII. Acknowledgements	45
IX. References and Resources	46



Executive Summary

The Tennessee Violent Death Reporting System (TNVDRS) is a statewide surveillance system that collects de-identified data on violent deaths where the injury occurred in TN. This CDC-funded program links medical examiner, law enforcement, and vital records data for all homicides, suicides, unintentional firearm deaths, legal intervention deaths, and deaths of undetermined intent. Over 600 unique data elements are collected yearly to provide context on demographics, mechanism of injury, and circumstances of injury from multiple sources with the goal of aiding state and local officials, data partners, and community interest groups in understanding and reducing violent death. This annual report summarizes information collected by TNVDRS about homicide deaths in TN in 2023.

TNVDRS identifies decedents based on location of injury rather than residence. According to this case definition, in 2023, the homicide mortality rate in TN was 10.9 deaths per 100,000 residents, meaning that for every 100,000 TN residents, there were 10.9 homicides where injury occurred within the state. There were 7 counties with 10 or more injuries. While Shelby County experienced a statistically significant change in injury rate from 2022 to 2023, the 2023 injury rate is not different from county rates in years prior to 2022. The majority of decedents were injured in their own county of residence.

The mortality rate of homicide was 4.1 times higher for males than females (17.8 per 100,000 compared to 4.3 per 100,000), as shown in Figure 0.1. Figure 0.1 also shows that black individuals had a higher rate than white individuals (43.5 per 100,000 compared to 3.8 per 100,000). These groupings include Hispanic white and Hispanic black decedents respectively due to the available population groups for rate calculationⁱ. The mortality homicide rate for Hispanic decedents of all races was 8.6 per 100,000.

Figure 0.2 shows the mortality rate by age. Decedents above 75 years had the lowest homicide mortality rate at 2.8 per 100,000, followed by decedents below 12 years at 3.1 per 100,000. For decedents aged 18 or higher at death, the average mortality rate was 12.4, and Figure 0.2 shows that the highest rate is among decedents aged 18 to 24, at 25.4 per 100,000.

Figure 0.1 Homicide Mortality Rate by Sex and Race/Ethnicity, 2023 (N = 777)

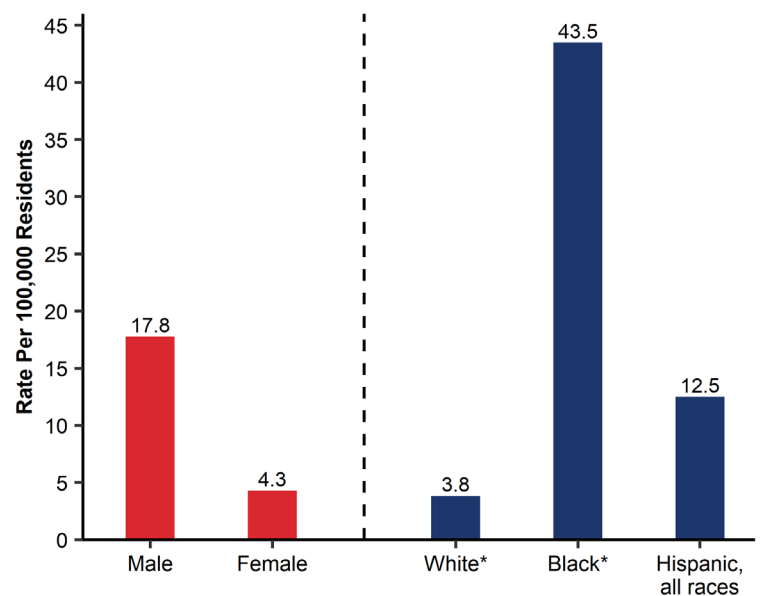
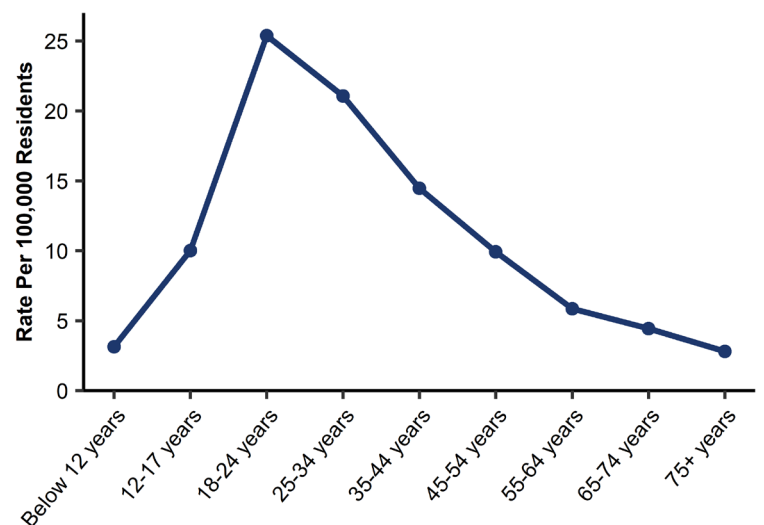


Figure 0.2 Homicide Mortality Rate by Age at Death, 2023 (N = 777)



ⁱ<https://www.tn.gov/health/health-program-areas/statistics/health-data/population.html>

The majority of homicide deaths are due to firearm (84.9%), as shown in Figure 0.3, followed by sharp instrument (5.5%). In 48.3% of firearm homicides, the firearm used was a handgun; the most common handgun was a semi-automatic pistol.

Female homicide decedents who died due to firearm or sharp instrument were more likely to have wounds in the head or face than male homicide decedents. Non-Hispanic black decedents who died due to firearm or sharp instrument were more likely to have wounds on the extremities, thorax, abdomen, or spine than non-Hispanic white decedents.

TNVDRS had available toxicology testing information for 95.6% of homicide decedents in 2023, including individuals who were tested but did not have any substances present. Homicide decedents were likely to have no substances present (21.4%), or to have positive results for marijuana (49.4%) or ethanol (26.2%).

Figure 0.4 shows the most common circumstances associated with each incident; sufficient data to collect circumstance information was available for 95.6% of decedents. Female decedents were more likely to die due to intimate partner violence. Decedents across sex and race/ethnicity were equally likely to have an argument leading to death. Male decedents were more likely to die in an incident precipitated by another serious crime; the most common precipitating crime was assault/homicide. When information about a suspect is known, female decedents are more likely to be killed by a current or former intimate partner, while male decedents are more likely to be killed by a suspect that they have a non-familial relationship with.

For more information about TNVDRS or any of the data contained in this report, please visit our website at <https://www.tn.gov/health/health-program-areas/oscme/tnvdrs.html> or email us at TN.VDRS@tn.gov. TNVDRS data can be complex to interpret due to its collection methodology, and we encourage anyone looking to use information from any of our data products, including this report, to reach out so that we can clarify any necessary details.

Figure 0.3 Method of Death Among Homicide Decedents, 2023 (N = 777)

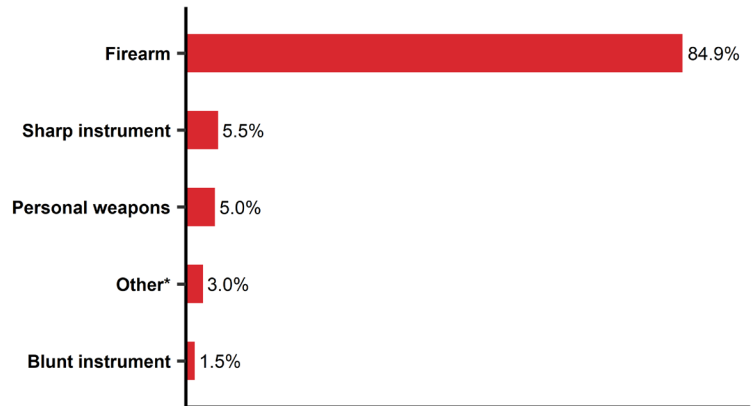
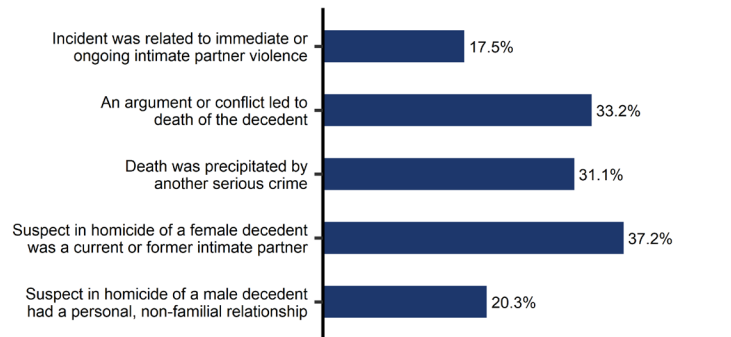


Figure 0.4 Common Circumstances Among Homicide Decedents, 2023 (N = 743)



I. Overview and Methodology

The Tennessee Violent Death Reporting System

The National Violent Death Reporting System (NVDRS) is a surveillance system funded and maintained by the CDC with the goal of collecting de-identified data on violent deaths across the United States¹ [1-2]. The Office of the State Chief Medical Examiner, housed in the TN Department of Health, was awarded an NVDRS grant in 2018 to begin developing a process for implementing this multisource data collection here in Tennessee. The Tennessee Violent Death Reporting System (TNVDRS) has been gathering statewide data on violent deaths since 2020.

Most mortality statistics are gathered primarily using information available on death certificates, which tends to be limited to cause of death and basic demographics such as race, sex, and age. The NVDRS is designed instead to collect information from at least three sources for each incident: death certificates (DC), coroner/medical examiner (CME) reports, and law enforcement (LE) reports. The goal is to build as complete a picture as possible of the circumstances contributing to incidents where violent deaths occur, and as a result, more than **600 variables** are potentially collected in the NVDRS for analysis.

The process by which these various reports are synthesized into a group of variables for each violent death is called **abstraction**. In abstraction, a trained individual called an abstractor reads all of the information available on a single incident where one or more violent deaths have occurred and then fills out the corresponding data elements in the NVDRS user interface. Some of these data elements, such as a decedent's height or weight, are relatively intuitive to complete, but others, such as whether a family stressor contributed to death, are more complex to determine. A comprehensive coding manual provides guidance on how to consistently abstract each data element, and the CDC provides ongoing training and support for all abstractors to ensure proper data quality across all variables in the NVDRS. This manual, in addition to all publications and fact sheets produced by the CDC's NVDRS team, is available on the resources section of the NVDRS website¹.

Incidents in the TNVDRS dataset are grouped by the year in which the death occurred, regardless of the date of injury. For example, if someone was injured in 2017 and subsequently died of those injuries in 2018, they would be included in the 2018 dataset. In order to ensure that the agencies providing information for abstraction on each incident have sufficient time to investigate, the yearly dataset is closed out sixteen months after the end of the calendar year. The 2022 incidents that are the subject of this report were completed by TNVDRS at the beginning of May of 2024. After closeout, TNVDRS works with the CDC to ensure data quality by performing additional checks on all variable fields. Once those checks are complete and the CDC has verified that TNVDRS meets the metrics for inclusion in the national dataset, the data are released for dissemination. TNVDRS has been included in the national dataset in every year of statewide collection.

TNVDRS Case Definition

A **violent death** is defined by NVDRS as *"a death that results from the intentional use of physical force or power, threatened or actual, against oneself, another person, or a group or community."* In practical terms, this definition identifies homicides, suicides, legal intervention deaths, and deaths due to undetermined intent. NVDRS also includes unintentional firearm deaths with the express purpose of providing a complete count of all firearm injuries [1].

¹The NVDRS website is available at <https://www.cdc.gov/nvdrs/about/index.html>

To identify deaths meeting this case definition, TNVDRS considers two aspects:

1. **Cause and manner of death:** The cause of death is a description of the specific injury or medical scenario resulting in death, whereas the manner of death refers to the circumstances surrounding the death. To aid the tabulation of mortality statistics from the cause and manner of death, a system of standardization known as the International Classification of Disease was developed by the World Health Organization (WHO). We currently use the 10th revision of this system in the United States to classify deaths, and it is typically referred to as “ICD-10 coding.” [3]

Once a death certificate is registered, information on the cause and manner of death are used to generate ICD-10 coding. TNVDRS implements a process to identify all deaths with ICD-10 coding corresponding to violent deaths, as shown in Table 1.1. In addition, TNVDRS considers any death with a manner of homicide, suicide, or undetermined intent, regardless of ICD-10 coding. These cases are added to the list of incidents for abstraction, and we then begin requesting additional reports.

Table 1.1 ICD-10 Coding Used in Violent Death Reporting*

Manner of Death	Death within a year of injury	Death more than a year after injury
Intentional self-harm (Suicide) [†]	X60 – X84	Y87.0
Assault (Homicide) [†]	X85 – X99, Y00 – Y09	Y87.1
Event of undetermined intent	Y10 – Y34	Y87.2, Y89.9
Unintentional firearm exposure	W32 – W34	Y86
Legal intervention (excluding executions)	Y35.0 – Y35.4, Y35.6, Y35.7	

* Adapted from the NVDRS Coding Manual, Version 6.1, Revised January 2025

† Additional terrorism ICD-10 codes U01-U03 are also included, regardless of time of injury

As more information about an individual incident is gathered, the abstractor generates a TNVDRS-specific abstractor manner of death based on a review of all available reports. The abstractor manner of death must agree with at least one of the manners stated in other data sources: death certificate, CME reports, or LE reports. We use the abstractor manner of death to classify incidents, as it represents as comprehensive a review of the data sources that we can produce. If at any point during the abstraction process, we receive information indicating that a case no longer meets the definition of a violent death, it is excluded from the final dataset.

2. **Location of injury:** One of the ways in which the NVDRS is a unique public health surveillance program is its geographic case definition. Most public health datasets are based on residency – i.e., where the decedent lived. However, NVDRS collects information based on occurrence – i.e., where the injury occurred. This decision is logical, as the CME and LE agencies investigating each incident do so based on where the scene of injury is located, regardless of the residence of any involved party, and it gives partner agencies who provide reports to NVDRS an opportunity to look at statistics based on jurisdiction. It must always be kept in mind by other groups using NVDRS data that violent death counts may differ from other public health sources. There are also additional statistical caveats regarding rate calculation, as discussed in Analysis Methodology on the next page.

Using the case definition described above, TNVDRS has identified 2,282 violent deaths where injury occurred in Tennessee in 2023. Table 1.2 and the accompanying Figure 1.1 both show the abstractor manners of death for these deaths, comparing 2023 to the previous data years. There was no substantial change in either the overall number of violent deaths or in any of the manners in 2023 compared to previous years. Chi-square significance testing verified no statistical change by year.

Figure 1.1 Abstractor Manner of Death by Incident Year

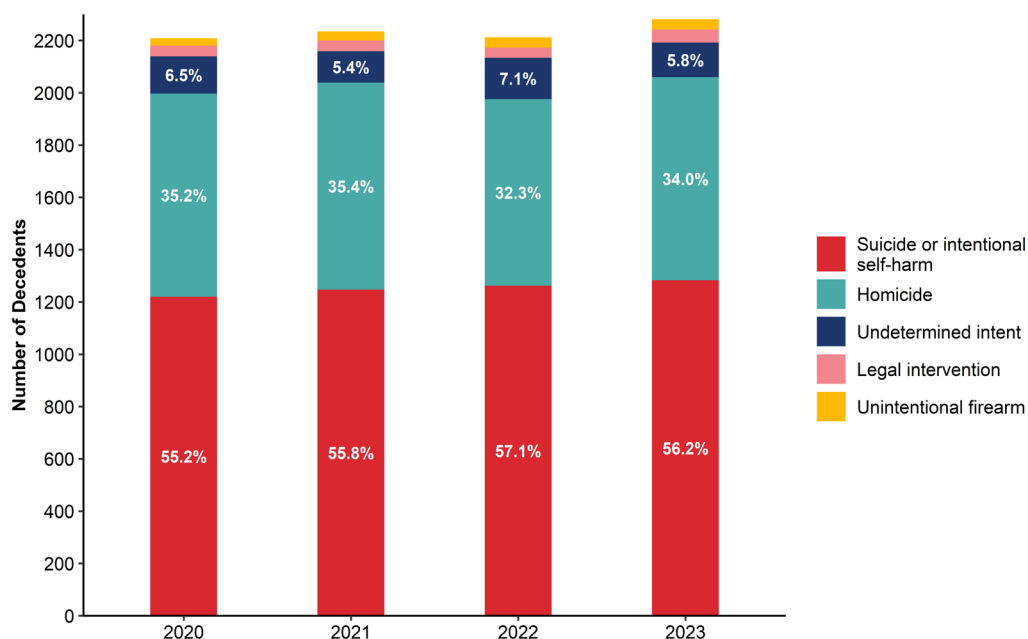


Table 1.2 Abstractor Manner of Death by Incident Year

	2020		2021		2022		2023	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Suicide or intentional self-harm	1220	55.2	1247	55.8	1262	57.1	1283	56.2
Homicide	777	35.2	792	35.4	714	32.3	777	34.0
Undetermined intent	143	6.5	120	5.4	158	7.1	132	5.8
Legal intervention	40	1.8	41	1.8	39	1.8	50	2.2
Unintentional firearm	29	1.3	35	1.6	39	1.8	40	1.8
Total	2209		2235		2212		2282	

For the remainder of this report, we will focus on the 777 decedents with an abstractor manner of death of homicide in 2023, comparing to the decedents with the same manner in previous years when appropriate.

The database classifies decedents by incident, allowing us to distinguish incidents with multiple decedents, such as a suicide following a homicide, or a homicide with multiple victims. TNVDRS is therefore able to determine that these 2,282 violent deaths in TN in 2023 occurred across 2,200 incidents. Incidents with multiple decedents will be described in more detail in Section II, which covers location and scene details.

Analysis Methodology

Statistics in this report are presented in three ways:

- ◆ *Count data*: the number of decedents in the category of interest
- ◆ *Percentage data*: the percentage of decedents grouped by a demographic or year
- ◆ *Crude rate data*: the number of deaths per 100,000 residents in a particular geographic or demographic group

Rates are often preferred in public health data, as they allow comparisons between groups more effectively when there are differences in population sizes. This is particularly useful when studying smaller populations, when it can be difficult to get a sense of the impact of a problem from counts alone. To calculate a rate, the

count is divided by the population of interest. This rate is then commonly multiplied by 100,000, so what is presented is actually a “rate per 100,000.” For example, if a rate is reported as 14.3, that really means that for every 100,000 people in the population of interest, 14.3 are affected by the problem.

There is a robust body of literature on the calculation of mortality rates in particular because of the question of how to determine the population that one uses as the denominator in the above equation. It is not the goal of this report to summarize this complexity, but we note it because NVDRS data presents an additional layer of difficulty in population definitions that must be addressed.

In large-scale mortality statistics, it is standard practice to use the US census population estimate in calculating rates. This is partially why public health datasets collect based on residency; if one has counted the number of residents impacted by a disease in a certain demographic, then using census estimates to calculate a rate makes logical sense. But the NVDRS case definition collects cases based on injury location, meaning that TNVDRS does not have a full resident count – if a TN resident died due to violence outside of Tennessee, they are not captured in TNVDRS and therefore cannot be included in our counts. Additionally, TNVDRS captures out-of-state residents who die due to violence in Tennessee.

We have chosen to include all TNVDRS decedents in our rate calculations and to also use the standard census estimates for the denominator. This allows us to compare violent death rates within the TNVDRS dataset itself as we continue to collect incidents in future years.

Finally, we note that due to the depth of information collected by TNVDRS, many data elements contain counts of 20 or fewer. Counts less than 10 will be suppressed throughout the report due to the potentially identifying nature of these demographics and circumstances, but counts less than 20 can also be challenging to interpret due to the associated large standard error. Essentially, when counts are small, even expected minor fluctuations look statistically more important than they are.

Because the issue of small counts can impact rate calculations more than other statistics shown in this report, we have decided to present 95% confidence intervals beside all rates shown in tables. A confidence interval (CI) is a good way of understanding the uncertainty present in a calculation; the wider the CI, the less accurate that rate likely is. If two confidence intervals overlap, then there is no statistical difference between the two values, which can be helpful for understanding when a change is significant or not.

Data Use and Requests

TNVDRS data can be complex to interpret due to its collection methodology, and we encourage anyone looking to use information from any of our data products, including this report, to reach out via email at TNVDRS@tn.gov so that we can clarify any necessary details. We are also happy to generate custom reports, figures, or tables using TNVDRS data. You can reach us either at the above email or by using the Data Request button on our website (<https://www.tn.gov/health/health-program-areas/oscm/tnvdrs.html>).

If only general information such as yearly counts by county for a specific cause or manner of death is needed, we would encourage you to either contact the TN Office of Vital Records and Statistics (<https://www.tn.gov/health/health-program-areas/statistics/health-data/vital-statistics.html>) or access the CDC WONDER database (<https://wonder.cdc.gov/>). Death certificate data is public record, and the CDC has created a public-use system where anyone can generate basic death statistics. The reason we encourage using systems other than TNVDRS for general mortality statistics is due to the nuances in the differing case definitions described above.

II. Location and Scene Characteristics

Key Findings:

- ◆ The homicide mortality rate in Tennessee in 2023 using TNVDRS data was 10.9 deaths per 100,000 residents, with 7 counties being the location of injury of 10 or more deaths.
- ◆ The largest percentage of decedents who die due to homicide (51.4%) are injured in a house or apartment, but only 53.9% of these are their personal residence.

TNVDRS collects several variables regarding the scene of injury and surrounding environmental circumstances. In this section, we will present information on the injury scene in terms of geography, time, and environment. For all statistics in this section, the denominator of any percentages will be the 777 homicide deaths where injury occurred in Tennessee in 2023². Rates are determined using 2023 US Census estimates published by the TN Division of Policy, Planning, and Assessment (<https://www.tn.gov/health/health-program-areas/statistics/health-data/population.html>).

Geographic Characteristics

Geographic information is available in the TNVDRS on injury location, residence, and death location. While the database enables collection to the census tract level, we have observed that the yearly counts below county level are too small for consistent interpretation³. We also see that county-level counts tend to be concentrated to such a degree that our data suppression rules can lead to an incomplete picture of the geographic distribution of homicide injuries across Tennessee.

Deaths due to homicide, as well as other non-natural manners, are investigated by medical examiners' offices across the state. Each county has its own medical examiner, but autopsy services are typically performed at one of the five regional forensic centers (RFCs), depending on the county ordering the exam. The RFCs are located in Memphis (West), Nashville (Middle), Knoxville (East), Chattanooga (Southeast), and Johnson City (Northeast), which provides TNVDRS a convenient distribution to present geographic data by region. We have chosen this distribution because it correlates well with our case definition, meaning that the county of injury tends to be the county ordering the autopsy from the RFC. This also allows us to show the broad geographic trend of all homicide deaths without data suppression.

Figure 2.1 on the next page shows the geographic distribution of homicide injuries by RFC-defined region; corresponding counts and rates are shown in Table 2.1. Fewer than ten decedents had an unknown county of injury and therefore could not be assigned to an RFC-defined region.

² As shown in Figure 1.1 and Table 1.2 in the previous section, deaths due to legal intervention are not included in this count; TNVDRS tracks these incidents separately

³ Once TNVDRS has enough data years to aggregate counts below county level, we will be pursuing census and zip code level analyses

Figure 2.1 Geographic Distribution of Homicide Deaths by Region in TNVDRS, 2023

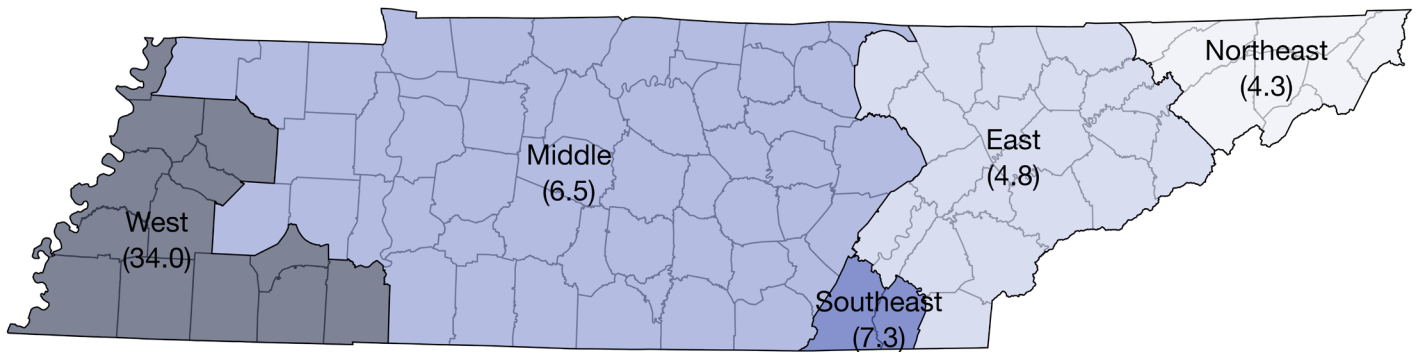


Table 2.1 Homicide Mortality Rate by Region of Injury, 2023 (N = 777)

	Count	Rate	95% CI
East	69	4.8	3.7 - 6.0
Middle	219	6.5	5.6 - 7.4
Northeast	23	4.3	2.7 - 6.5
Southeast	36	7.3	5.1 - 10.1
West	429	34.0	30.8 - 37.3
Tennessee	777	10.9	10.1 - 11.7

We compared regional homicide rates to the prior data year, and we found some nominal statistical fluctuation, but no change was statistically significant.

Figure 2.2 and the corresponding Table 2.2 present the geographic distribution of homicide injuries by county. All counties with rates not shown had fewer than 10 homicide injuries in 2023. When comparing county homicide mortality rates to the prior year, we found that the only county with 10 or more injuries that showed an increase from 2022 to 2023 was Shelby, which had a statistically significant increase from 33.0 homicide injuries per 100,000 residents in 2022 to 44.0 homicide injuries per 100,000 residents in 2023. We note that the 2023 rate is not significantly different from the homicide injury rates in 2020 and 2021.

Forty-seven decedents were out-of-state residents who were injured in Tennessee. Of the remaining 730 TN resident homicide decedents in TNVDRS, 91.0% were injured in their own county of residence.

Figure 2.2 Geographic Distribution of Homicide Deaths by County in TNVDRS, 2023

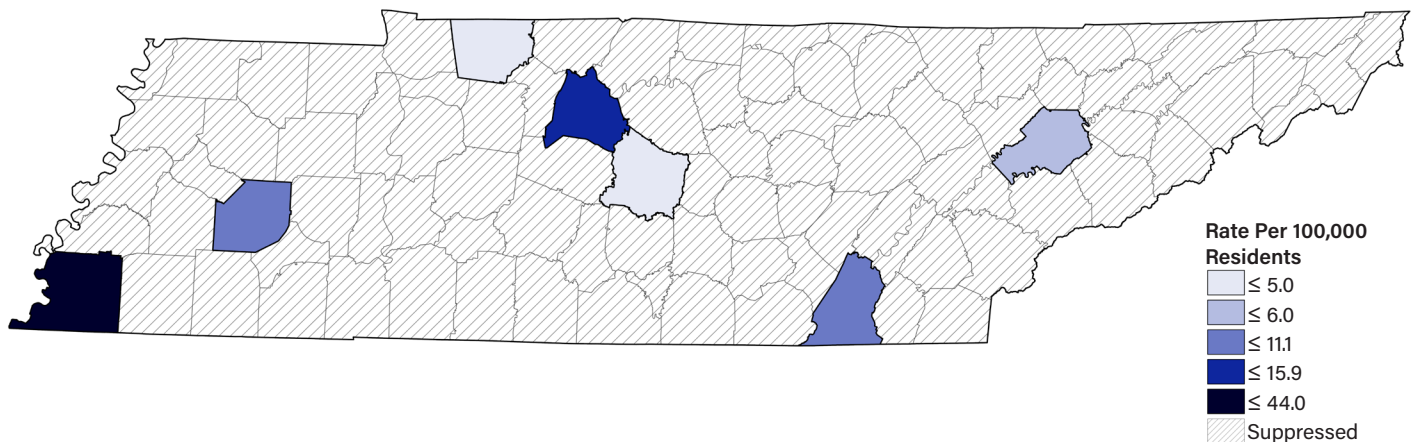


Table 2.2 Homicide Mortality Rate by County of Injury, 2023 (N = 777)

	Count	Rate	95% CI
Davidson	113	15.9	13.1 - 19.1
Hamilton	34	9.0	6.2 - 12.5
Knox	30	6.0	4.0 - 8.6
Madison	11	11.1	5.5 - 19.8
Montgomery	12	5.0	2.6 - 8.7
Rutherford	15	4.1	2.3 - 6.7
Shelby	400	44.0	39.8 - 48.5
Tennessee	777	10.9	10.1 - 11.7

County of death is also collected but not presented in this report. Decedents who were transported to a hospital in a different county where they subsequently died can have a significant impact on death location statistics, which is why we prefer to focus on county of injury instead.

We also looked at the demographics for each of these counties to see if there was any variation by geography in the homicide rate by sex, race, or age, but we did not see enough variation to present demographics by county for a single year. We instead refer the reader to Section III, where statewide demographic trends are described in detail.

Temporal Characteristics

The month and year of injury was available for 765 (98.5%) of decedents. There was no pronounced trend in the time of year in which the incident occurred; there were an average of 62.9 incidents per month in 2023, and more analysis will need to be done in order to determine if the small monthly fluctuations are statistically meaningful. No graphical data are shown here because additional data years are needed to conduct a full trend analysis.

The specific date of injury was available for 717 (92.3%) of decedents. Table 2.3 shows the number of days between injury and death for these incidents. The majority (76.7%) of decedents died the same day injury occurred. For the 448 decedents with a recorded time of injury, 284 (63.4%) were injured between noon and midnight, and 164 (36.6%) were injured between midnight and noon. The time of injury was unknown for 329 (42.3%) of decedents, so we cannot infer any trends from these counts because they are not a sufficient percentage of the total number of decedents.

Table 2.3 Number of Days Between Injury and Death, 2023 (N = 777)

	Count	Percent
0	596	76.7
1	64	8.2
2 - 14	33	4.2
15 - 365	16	2.1
Greater than 365	8	1.0
Unknown	60	7.7

Scene Characteristics

TNVDRS collects several data elements related to the location of injury, in addition to the geographical information discussed above. Table 2.4 on the following page displays specific characteristics of the injury location associated with each incident. The largest percentage of decedents were injured at a house or apartment (51.4%), and for 215 of these, the house/apartment was the decedent's own residence. Almost nineteen percent (18.7%) were injured in a motor vehicle, excluding school buses or public transportation, 4.5% were injured at a service station, 1.7% were injured in a parking lot or public garage, and 1.5% were injured in a bar or nightclub. The remaining injury location categories shown in Table 2.4 are aggregated due to small counts; the footnotes in the table give more detailed specifics about the categories available in TNVDRS.

We also examined these categories of injury location as a function of decedent sex and race, to see if there were any noteworthy variations by demographic. There were not enough differences to display in a table or figure due to small counts, but we note here that females are over-represented in the number of decedents injured at a house or residence. Additionally, the injury location distributions show distinct differences by race; non-Hispanic white decedents are more likely to be injured at a house or residence and non-Hispanic black decedents are more likely to be injured in a motor vehicle or roadside location. Again, the counts are not high enough in a single year to present statistics, but these are trends where aggregation across years may show interesting results.

We also see in this table that the majority of injuries do not occur at the decedent's home (71.2%), and most decedents were not at work or engaged in work when injury occurred. About two percent (2.6%) of decedents were stated as being in public custody when injury occurred. This variable includes being in jail or prison, under arrest without being in jail, injured prior to arrest, in foster care, in a mental hospital or other state institution at time of injury, but the only category endorsed for more than 10 decedents is being in jail or prison. Complete statistics must be suppressed due to small counts.

The information on death location is collected primarily from the death certificate, which has less detailed categories available as those for injury location, but we were able to generate additional categories by analyzing the text in the "Other (Specify)" field on the death certificate. The largest percentage of decedents died in an emergency room setting (31.7%), followed by 16.9% of decedents who died at home. Based on the text field accompanying death location on the certificate, we were able to determine that 10.6% of decedents died at a residence not specified to be the decedent's home, 5.9% died at a roadside location, 5.3% died in an outdoor location (unspecified outdoors, body of water, etc.), 4.0% at a commercial location, 7.6% died in a motor vehicle, and 1.9% died in a parking lot or parking garage. Figure 2.3 provides a graphical representation of these injury location categories to help give the reader a sense of the distribution of these categories.

Table 2.4 Characteristics of the Location of Injury, 2023 (N = 777)

	Count	Percent
Category of Location of Injury		
House, apartment	399	51.4
Motor vehicle (excluding school bus and public transport)	145	18.7
Service station	35	4.5
Parking lot/public parking garage	13	1.7
Bar, nightclub	12	1.5
Aggregated roadside*	62	8.0
Aggregated supervised facility**	20	2.6
Aggregated commercial location***	51	6.6
Aggregated outdoor location****	26	3.3
Aggregated other/unknown*****	14	1.8
Decedent Injured at Home		
Yes	224	28.8
No or unknown	553	71.2
Decedent Injured at Work or While Working		
Yes	20	2.6
No or Unknown	757	97.4
Decedent Injured While In Public Custody		
Yes	13	1.7
No	764	98.3
Category of Location of Death		
Emergency department/outpatient	246	31.7
Home	131	16.9
Hospital inpatient	108	13.9
Other residence	82	10.6
Roadside location	46	5.9
Outdoor location	41	5.3
Commercial location	31	4.0
Motor vehicle	59	7.6
Parking garage or lot	15	1.9
Other or missing†	18	2.3

* Includes street, sidewalk, alley, railroad tracks, bridge, and highway

** Includes jail, prison, medical facility, K-12 school, or supervised residential facility

*** Includes liquor store and other commercial establishment

**** Includes park/playground, natural area, industrial/construction area, and abandoned building

***** Includes religious facility, public transportation/station, hotel/motel, other (not specified), and unknown

† Includes long-term care facilities, jail/prison, religious facility, and hotel/motel

Figure 2.3 Category of the Location of Injury, 2023 (N = 777)

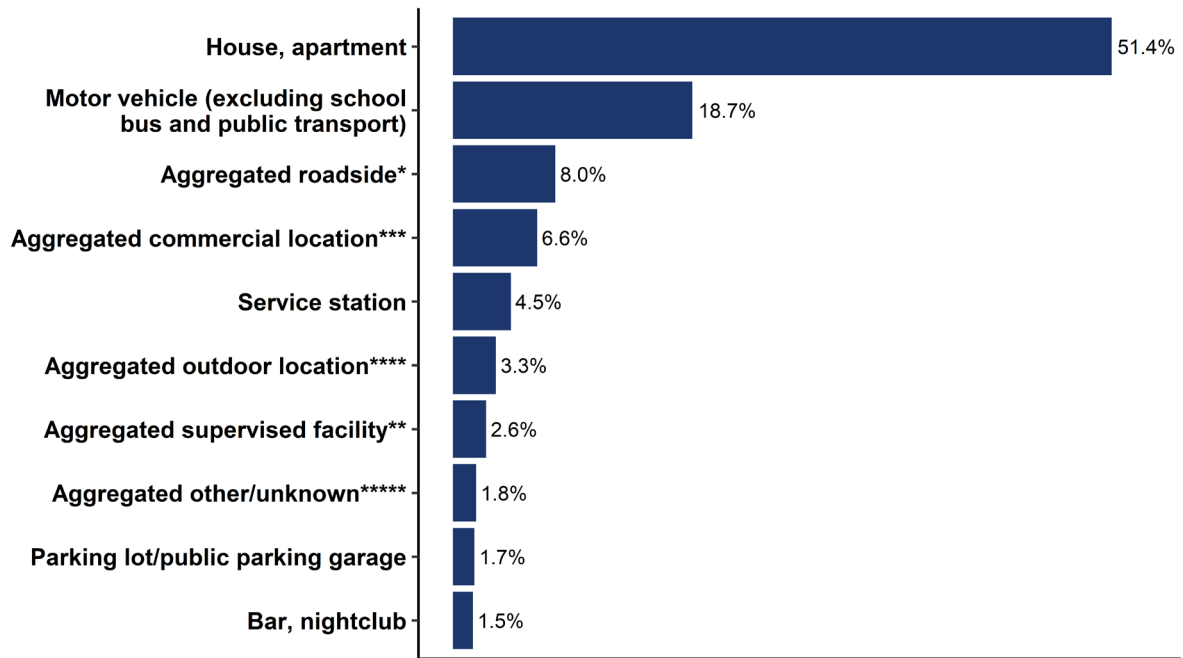


Table 2.5 General Injury Circumstances, 2023 (N = 777)

	Count	Percent
Child(ren) Present and/or Witnessed Incident		
Yes	108	13.9
No or Unknown	669	86.1
Alcohol Use by Decedent Suspected*		
Yes	49	6.3
No or Unknown	728	93.7
Decedent Recently Released from Institutional Setting		
Any facility type	18	2.3
No evidence of recent release	759	97.7
EMS Present at Scene		
Yes	738	95.0
No	39	5.0
Decedent Seen at Hospital Following Incident		
Seen in ED following incident	252	32.4
Seen in ED and then admitted as inpatient	109	14.0
No or Unknown	416	53.5

* This variable is based on witness or investigator reports, or circumstantial evidence and does not use toxicology reports

Table 2.5 displays data elements related more to the environment specific to the scene of injury. In 13.9% of incidents, one or more children were present during the incident. This does not necessarily indicate that they observed the event; the variable seeks to identify children who were present, regardless of whether they are described in reports as witnesses.

We looked at this count as a function of both sex and race, and we observed that female decedents were over-represented in this data element. Of the 156 female decedents in the dataset, children were present at 21.8% of incidents, while of the 621 male decedents in the dataset, children were present at 11.9% of incidents. This difference is present in all previous data years as well. There are many complex factors potentially leading to this difference; more years of data collection are needed for any detailed analysis.

In 6.3% of incidents, the decedent was suspected of using alcohol in the hours preceding the incident. This variable is collected based on witness or investigator reports, or scene evidence, and does not take toxicology information into account. If a witness stated that the decedent “had been drinking,” or if empty bottles are found near the decedent, this variable is endorsed.

In 2.3% of incidents, the decedent had been released from an institutional setting within the month prior to injury. The most common institution indicated in reports was a jail, prison, or detention facility, followed by a hospital or psychiatric hospital; fewer than ten decedents were released from any one type of facility. We collect information about releases from long-term residential health facilities, supervised residential facilities such as sober houses or halfway houses, and release information from other facilities is typically noted in the narrative.

In 95.0% of incidents, emergency medical services (EMS) were at the scene of injury. This simply indicates that they were present and not necessarily that medical services were delivered. Forty-six percent (46.5%) of decedents were seen at a hospital following the incident; slightly less than a third of these were admitted as an inpatient after being seen in the emergency department (ED).

Table 2.6 displays data elements related to the nature of the incident in which injury occurred. In 5.8% of incidents, the homicide is considered to have been committed in legitimate self-defense; this is defined as a homicide committed either by a law enforcement officer in the line of duty or by a civilian in legitimate self-defense or in defense of others⁴. We remind the reader that our dataset does not include legal intervention deaths. In 2.1% of cases, the decedent was a bystander, rather than the intended target of injury.

For 6.4% of decedents, the incident was a targeted attack, such as an ambush, where the suspect (or suspects) approached and fled on foot. About eighteen percent (18.4%) of incidents were considered to be a drive-by shooting, where the suspect(s) approach and flee using a vehicle; these could be cases either where the firearm is used while driving or where the suspect steps out of the vehicle just long enough to use a weapon.

Table 2.6 Incident Circumstances, 2023 (N = 777)

	Count	Percent
Homicide was committed in legitimate self-defense*		
Yes	45	5.8
No or Unknown	732	94.2
Decedent was a bystander, not intended target		
Yes	16	2.1
No or Unknown	761	97.9
Incident was targeted attack, where approach was on foot		
Yes	50	6.4
No or Unknown	727	93.6
Incident was classified as a drive-by shooting		
Yes	143	18.4
No or Unknown	634	81.6

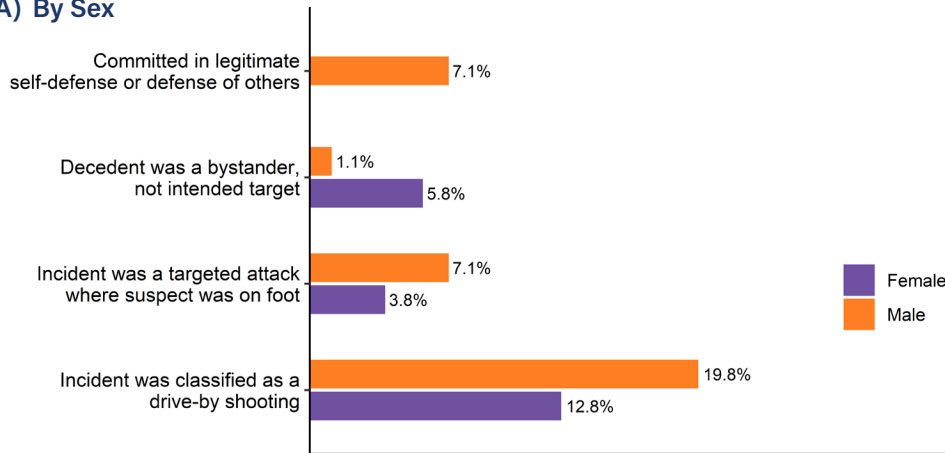
* Defined as a homicide committed either by a law enforcement officer in the line of duty, or a civilian in legitimate self-defense or in defense of others

Figure 2.4 shows the variation in these circumstances by both sex and race. As seen in Figure 2.4(a), a higher percentage of female decedents were bystanders, but a higher percentage of male decedents were involved in self-defense homicides or drive-by shootings or victims of targeted attacks where the suspect was on foot. Figure 2.4(b) shows that a higher percentage of non-Hispanic black decedents were involved in all circumstances shown in Table 2.6. The most significant difference between black and white decedents was that non-Hispanic black decedents were much more likely to be victims of drive-by shootings.

⁴For this variable to be endorsed, the law enforcement report must indicate that law enforcement ruled the death a justifiable homicide.

Figure 2.4 Incident Circumstances by Sex and Race/Ethnicity, 2023 (N = 777)

(A) By Sex



(B) By Race/Ethnicity

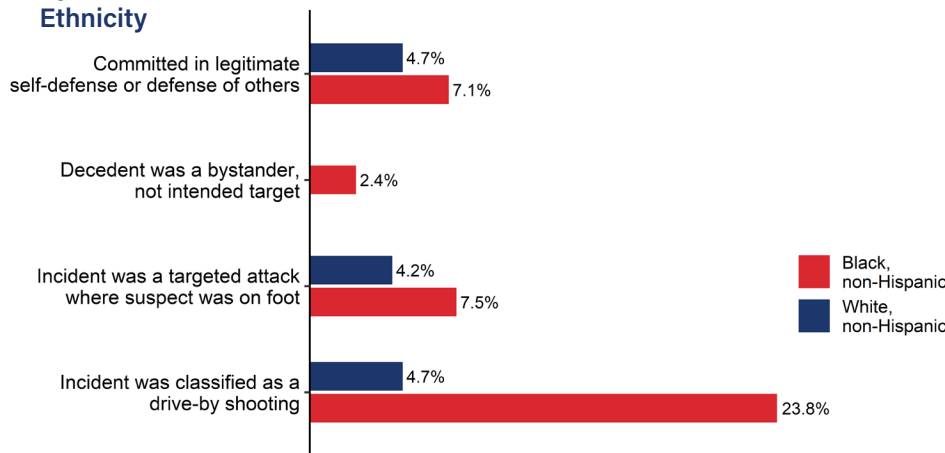


Table 2.7 Type of Homicide Incident, 2023 (N = 728)

	Count	Percent
Single homicide	666	91.5
Multiple homicide*	37	5.1
Single homicide followed by suicide	25	3.4

* Includes multiple homicide, mutual homicide/shootout, multiple deaths – other

Table 2.7 shows information on the type of incident where one or more decedents died due to homicide. The TNVDRS is structured as a dataset of incidents containing one or more decedents⁵ within each incident. This allows us to document more complex scene information, especially when different decedents have different manners of death. The 777 decedents with a manner of death of homicide in 2023 are distributed over 728 incidents. The majority of these incidents are classified as single-homicide incidents (91.5%), 5.1% are classified as multiple homicide, and 3.4% are single homicide incidents followed by suicide.

⁵The NVDRS uses “victim/suspect” language; all decedents are either *victims* or *victim/suspects*, for decedents that perpetrate a homicide and subsequently die by suicide. Suspect data is also collected for homicide deaths and is presented in Section V. In this report, we choose to refer to all victims and victim/suspects as decedents.

III. Decedent Demographics

Key Findings:

- ◆ 65.9% of decedents who died due to homicide in 2023 were non-Hispanic Black individuals
- ◆ 79.9% of decedents who died due to homicide in 2023 were male
- ◆ Decedents aged 18-24 years had the highest homicide mortality rate at 25.4 per 100,000 TN residents
 - ◆ Males had a higher mortality rate than females at all ages above 12 years, although the gap decreased with age after 25 years
 - ◆ Non-Hispanic Black individuals had a higher mortality rate than non-Hispanic White individuals
- ◆ The most common occupations among decedents who died due to homicide in 2023 were in the fields of "Transportation and Material Moving" (20.3%) and "Construction and Extraction" (9.4%)

Many of the standard demographic variables collected by TNVDRS (age, sex, race/ethnicity, pregnancy status, occupation, etc.) come directly from the death certificate. Any difference in counts or rates in the TNVDRS compared to Vital Statistics for these data elements are due to the difference in case definition as described in Section I of this report.

General Demographics

Table 3.1 provides information on the sex, race, ethnicity, and age at death of TNVDRS decedents with a manner of death of homicide in 2023. The homicide mortality rate among males (17.8 per 100,000 TN resident males) is higher than females (4.3 per 100,000 TN resident females), and 79.9% of the decedents in our dataset are male.

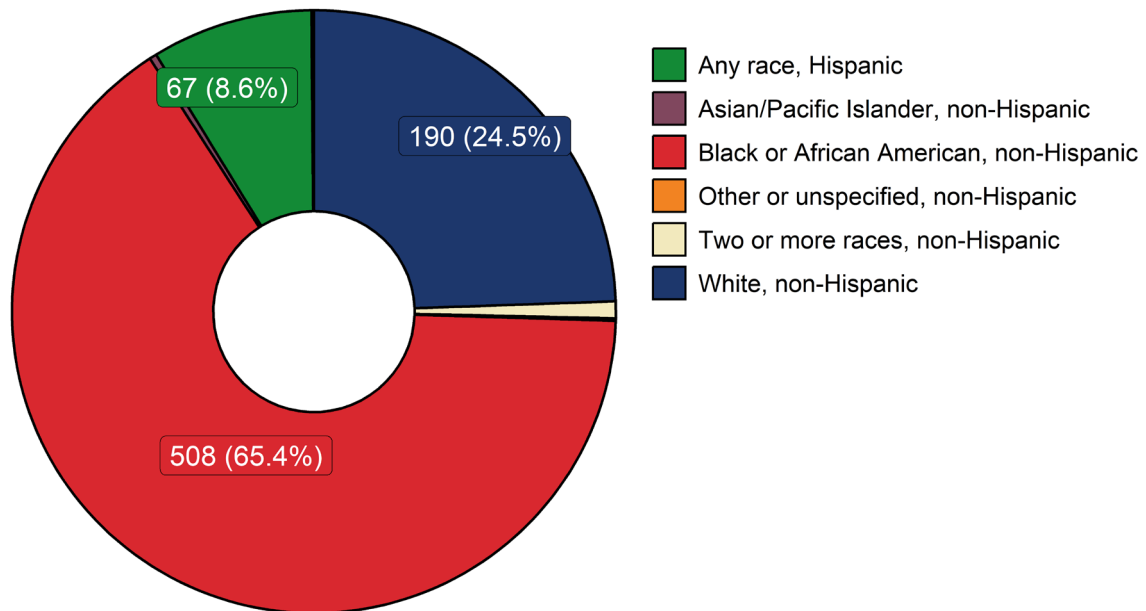
The population information available to the TNVDRS team separates race from ethnicity, so in order to calculate rates in Table 3.1, race and ethnicity are shown as separate categories. Figure 3.1 shows the percentage breakdown of a bridged race/ethnicity field, and we see that the majority of homicide deaths are in the Black or African American, non-Hispanic population (65.4%). We also see the different race/ethnicity categories that TNVDRS collects in this figure; in Table 3.1, racial groups are aggregated to match the population data TNVDRS has available.

Table 3.1 Homicide Mortality Rate by Sex, Race/Ethnicity, and Age, 2023 (N = 777)

	Count	Percent	Rate	95% CI
Sex				
Male	621	79.9	17.8	16.4 - 19.2
Female	156	20.1	4.3	3.6 - 5.0
Race				
White	214	27.5	3.8	3.3 - 4.4
Black or African American	512	65.9	43.5	39.8 - 47.4
Other	51	6.6	14.0	10.4 - 18.4
Ethnicity				
Not Hispanic	710	91.4	10.8	10.0 - 11.6
Hispanic	67	8.6	12.5	9.7 - 15.9
Age at Death				
Below 12 years	32	4.1	3.1	2.1 - 4.4
12-17 years	54	6.9	10.0	7.5 - 13.1
18-24 years	164	21.1	25.4	21.6 - 29.6
25-34 years	208	26.8	21.1	18.3 - 24.1
35-44 years	132	17.0	14.5	12.1 - 17.2
45-54 years	87	11.2	9.9	7.9 - 12.2
55-64 years	53	6.8	5.9	4.4 - 7.7
65-74 years	33	4.2	4.4	3.1 - 6.2
75+ years	14	1.8	2.8	1.5 - 4.7

*Includes Asian/Pacific Islander, Other/Unspecified, and two or more races

Figure 3.1 Decedent Race and Ethnicity, 2023 (N = 777)



Rather than using standard deciles, TNVDRS prefers to break age ranges to reflect the environmental differences between children (infants to 11 years), adolescents (12 to 17 years), and young adults (18 to 24 years). Further pediatric stratification in this dataset is prevented due to small counts.

Because of the small counts among females and among racial/ethnic groups other than non-Hispanic (NH) black and white individuals, there are a limited number of ways we can further stratify general demographic data without applying suppression rules. Table 3.2 stratifies race, ethnicity, and age by sex. We see that black decedents have higher homicide mortality rates for both sexes: black males have a rate of 78.4 per 100,000 residents and black females have a rate of 12.2 per 100,000 residents. The homicide mortality rate for white males is 5.3 per 100,000 residents and white females have a rate of 2.4 per 100,000 residents. The rate for Hispanic males is 20.8 per 100,000 residents, and the count of Hispanic female decedents is too low to calculate a rate.

Figure 3.2 shows the trend in homicide mortality rate by age at death by sex to compare to the numbers in Table 3.2. At all ages over 12 years, males have a higher homicide rate than females, but the difference decreases with age after 25 years. For decedents below 12 years, the rates are similar across sex; we can see in Table 3.2 that the associated confidence intervals overlap for males compared to females, meaning that we cannot conclude that these rates are different.

Table 3.2 Homicide Mortality Rate by Race/Ethnicity and Age, by Sex, 2023

	Male (N = 621)				Female (N = 156)			
	Count	Percent	Rate	95% CI	Count	Percent	Rate	95% CI
Race								
White	147	23.7	5.3	4.5 - 6.3	67	42.9	2.4	1.8 - 3.0
Black or African American	436	70.2	78.4	71.2 - 86.1	76	48.7	12.2	9.6 - 15.3
Other*	38	6.1	21.2	15.0 - 29.1	13	8.3	7.0	3.7 - 12.0
Ethnicity								
Not Hispanic	563	90.7	17.5	16.1 - 19.0	*		*	
Hispanic	58	9.3	20.8	15.8 - 26.9	*		*	
Age at Death								
Below 12 years	13	2.1	2.5	1.3 - 4.3	19	12.2	3.8	2.3 - 5.9
12-17 years	43	6.9	15.5	11.3 - 20.9	11	7.1	4.2	2.1 - 7.5
18-24 years	139	22.4	42.5	35.8 - 50.2	25	16.0	7.8	5.1 - 11.6
25-34 years	184	29.6	37.4	32.2 - 43.3	24	15.4	4.8	3.1 - 7.2
35-44 years	111	17.9	24.6	20.3 - 29.7	21	13.5	4.6	2.8 - 7.0
45-54 years	63	10.1	14.5	11.2 - 18.6	24	15.4	5.4	3.5 - 8.0
55-64 years	39	6.3	8.9	6.3 - 12.2	14	9.0	3.0	1.6 - 5.0
65+ years	29	4.7	5.2	3.5 - 7.5	18	11.5	2.6	1.6 - 4.2

*Includes Asian/Pacific Islander, Other/Unspecified, and two or more races

Figure 3.2 Homicide Mortality Rate by Age by Sex, 2023 (N = 777)

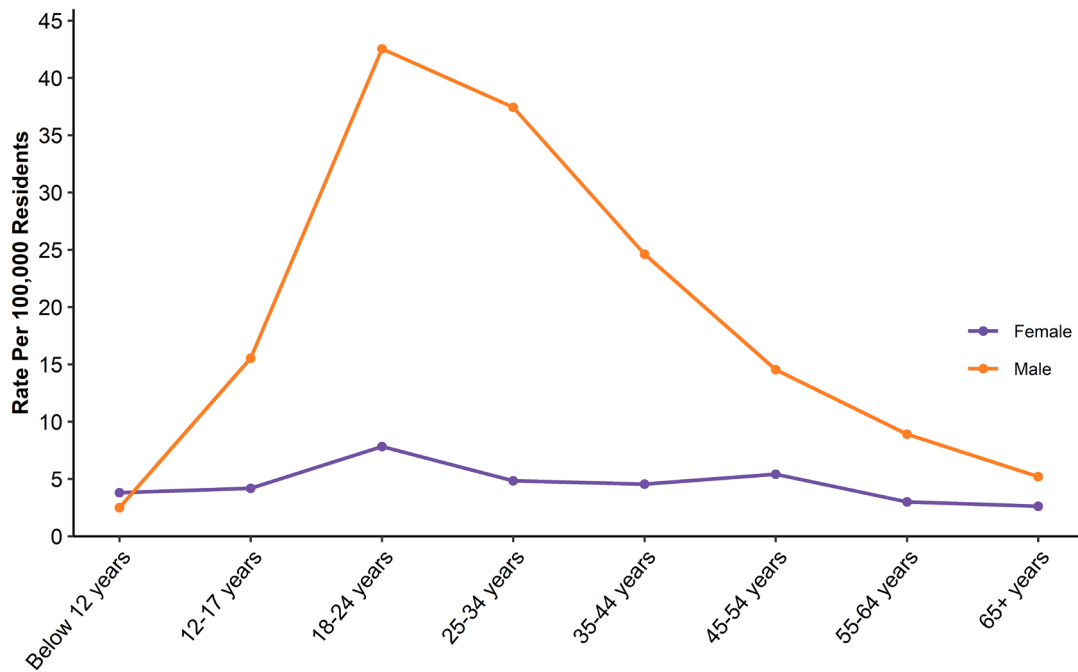


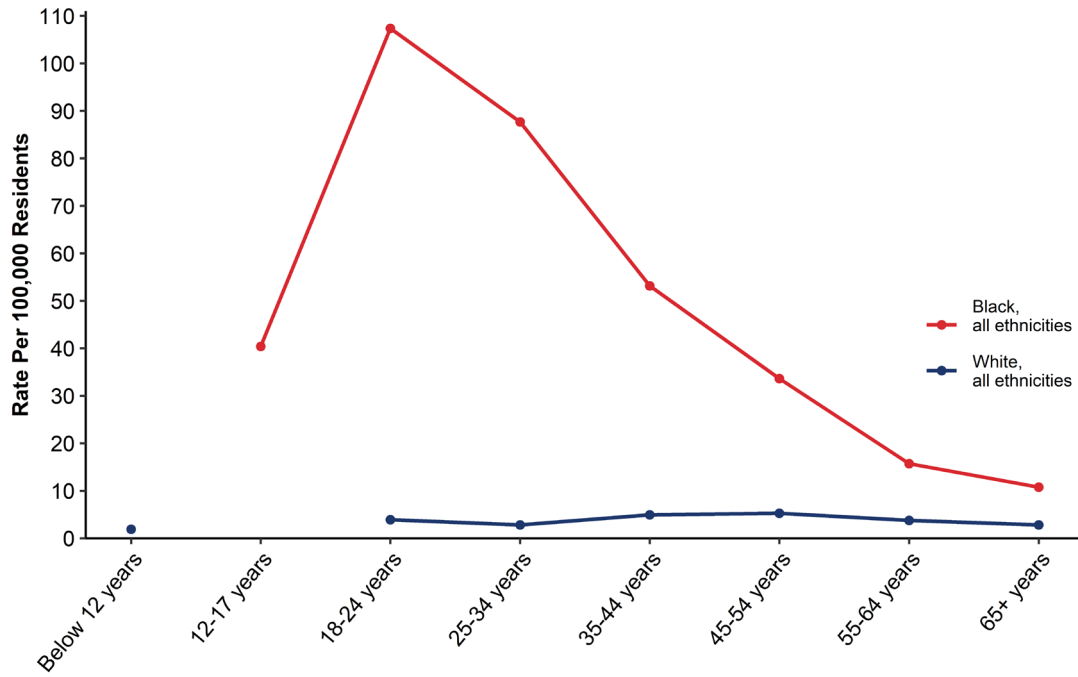
Table 3.3 stratifies sex and age by race. Ethnicity is excluded from this table due to the available population information; Hispanic decedents were included according to the race indicated. Statistics for decedents in racial groups other than white or black are excluded due to small counts.

As we showed in Table 3.2, the homicide mortality rate in the black population is higher than the white population in all stratifications. The confidence intervals shown demonstrate that this difference is statistically significant; a reminder that if the intervals overlap, we cannot conclude that a difference is significant. Figure 3.3 shows the rate by age by race to compare to the numbers in Table 3.3; we also note the change in scale between Figure 3.2 and Figure 3.3, despite the similar trends.

Table 3.3 Homicide Mortality Rate by Sex and Age, by Race, 2023

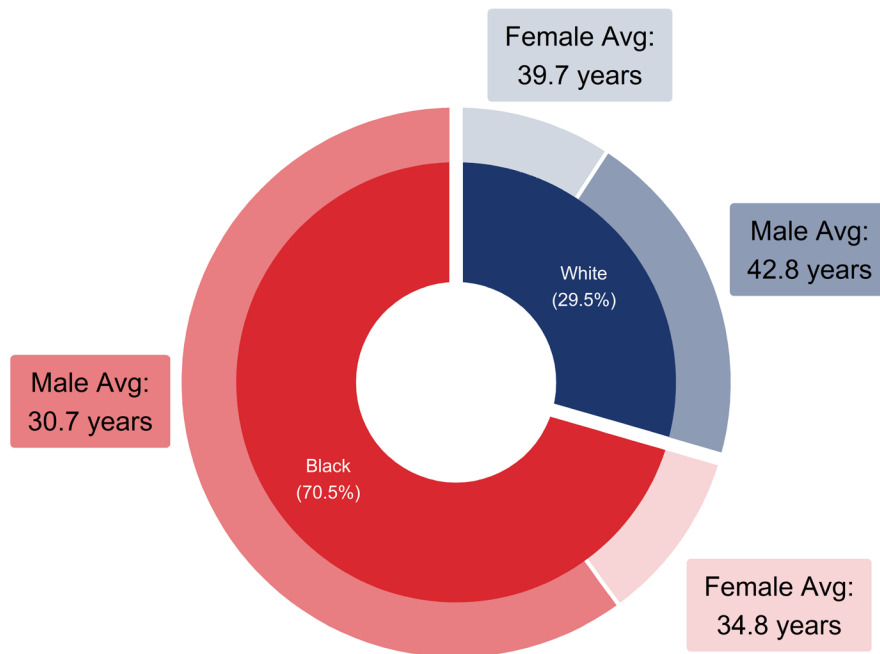
	Black or African American (N = 512)				White (N = 214)			
	Count	Percent	Rate	95% CI	Count	Percent	Rate	95% CI
Sex								
Male	436	85.2	78.4	71.2 - 86.1	147	68.7	5.3	4.5 - 6.3
Female	76	14.8	12.2	9.6 - 15.3	67	31.3	2.4	1.8 - 3.0
Age at Death								
Below 12 years	*		*		18	8.4	2.4	1.4 - 3.9
12-17 years	41	8.0	40.4	29.0 - 54.8	*		*	
18-24 years	130	25.4	108.2	90.4 - 128.5	22	10.3	4.5	2.8 - 6.9
25-34 years	165	32.2	88.2	75.3 - 102.7	28	13.1	3.7	2.5 - 5.4
35-44 years	83	16.2	53.8	42.8 - 66.7	38	17.8	5.3	3.8 - 7.3
45-54 years	46	9.0	33.6	24.6 - 44.9	38	17.8	5.4	3.8 - 7.4
55-64 years	22	4.3	16.4	10.3 - 24.9	31	14.5	4.2	2.8 - 5.9
65+ years	16	3.1	10.8	6.2 - 17.5	30	14.0	2.8	1.9 - 4.0

Figure 3.3 Homicide Mortality Rate by Age by Race, 2023 (N = 777)



We also note that there are variations in the average age at death both by sex and by race. Male decedents have an average age at death of 33.4 years, and female decedents have an average of 35.9 years. The difference is more substantial by race, where black decedents have an average age at death of 31.3 years, and white decedents have an average age at death of 41.8 years. Figure 3.4 shows the variation in average across age and sex.

Figure 3.4 Average Age at Death by Race and Sex, 2023 (N = 777)



Physical and Social Demographics

TNVDRS captures pregnancy status at death from the death certificate, but the counts were not sufficiently high to generate meaningful statistics; for 68.6% of female decedents, it was unknown if the decedent had been pregnant in the year prior to death, and fewer than ten were either pregnant at death or had been pregnant within 42 days of death.

Table 3.4 shows the body mass index (BMI) in kg/m² for decedents, calculated from the height and weight recorded at autopsy. It is important to note that this BMI may not be an accurate physical representation of physical characteristics prior to death; these counts are presented to illustrate a general trend rather than infer any specific conclusions. There was not sufficient information to calculate BMI for fewer than ten decedents, including both sexes.

Table 3.4 Body Mass Index (kg/m²) at Autopsy by Sex, 2023

	Male (N = 621)		Female (N = 156)	
	Count	Percent	Count	Percent
< 18.5	28	4.5	17	10.9
18.5 - 25	276	44.4	47	30.1
25 - 30	162	26.1	37	23.7
> 30	144	23.2	52	33.3
Unknown	11	1.8	*	

Calculated using height and weight collected at autopsy; may not be accurate representation of physical characteristics prior to death

Multiple data elements are collected in TNVDRS regarding the relationship status of the decedent, including marital status, relationship status, sex of current partner, and sexual orientation. Sexual identity cannot be inferred from the sex of the partner, and this is often not information collected in the type of reports available to TNVDRS, so the sexual orientation variable is not well-populated. We instead prefer to present information on the sex of the current partner, if known. Due to low counts, we cannot generate a table, but we observed fewer than ten decedents with same-sex partners based on available reports, 26.3% of decedents had opposite-sex partners, and the sex of 73.3% of decedent intimate partners was either unknown or not applicable due to age of the decedent.

Table 3.5 shows the status of decedent intimate partners by sex, showing the relationship between marital status and relationship status. About seventy-five percent (75.5%) of male decedents were never married, compared to 56.4% of female decedents. Female decedents were more likely to be either divorced, widowed, or separated (21.8%) than male decedents (11.6%). Female decedents were also more likely to be married otherwise in a legal long-term relationship such as common-law marriage or a civil union (21.8%) than male decedents (12.9%). Regardless of marital status, females were more likely to be in a relationship at time of injury – 39.1% of females compared to 23.7% of males.

Table 3.5 Decedent Intimate Partner Status by Sex, 2023

	Male (N = 621)			Female (N = 156)		
	Currently in relationship	Not in relationship	Unknown	Currently in relationship	Not in relationship	Unknown
Married/Civil union/Domestic partnership	80	0	0	34	0	0
Never married or unknown	57	*	411	19	0	69
Widowed, divorced, or separated	10	0	62	*	*	24

Education, Occupation, and Housing

When considering variables such as education status and occupation, it is important to keep in mind that 11.1% of the homicide deaths in TNVDRS for 2023 were under the age of 18, and an additional 21.1% were young adults aged 18-24. We decided to present these counts for all decedents due to the complex nature of when to subset based on age – for example, an 18-year-old may be in the workforce, may be enrolled in college, or both – but we remind the reader to keep in mind that some of the percentages for categories like incomplete high school or individual not in workforce are affected by the presence of young decedents in the dataset.

Table 3.6 Education and Military Status by Sex, 2023

	Male (N = 621)		Female (N = 156)	
	Count	Percent	Count	Percent
Education Level				
8th grade or less	50	8.1	25	16.0
9th to 12th grade, no diploma	178	28.7	25	16.0
HS graduate or GED completed	292	47.0	56	35.9
Some college	53	8.5	18	11.5
Associate's degree	17	2.7	14	9.0
Bachelor's degree	17	2.7	11	7.1
Graduate degree, or unknown	14	2.3	*	
Military Status Per Death Certificate				
Decedent has ever served in the US Armed Forces	33	5.3	*	
No or unknown	588	94.7	*	

Table 3.6 presents information regarding education and military status of the decedent. Both of these variables are collected directly from the death certificate. Forty-seven percent (47.0%) of male decedents and 35.9% of female decedents indicate that the highest level of education achieved is high school graduation or GED completion. For all levels of education higher than high school where statistics can be calculated, female decedents have a higher percentage than male decedents, although we remind the reader that the previous section indicated that female decedents have a higher average age, so that will affect any comparison. We cannot compare graduate degrees because the count of women is too small to calculate a percentage, but we also note that the percentage of men is also small, so we cannot conclude that they are substantially different.

Information on military status in TNVDRS is collected again from the death certificate. This variable is representative of the decedent being in military service at any time prior to death; it does not distinguish between veterans or active-duty personnel. Five percent (5.1%) of decedents overall had a history of military service, with male decedents being more likely to have this field endorsed than female decedents. Fewer than ten female decedents were reported as having a history of military service.

Table 3.7 Decedent Occupation[†], 2023 (N = 777)

	Count	Percent
Arts, Design, Entertainment, Sports, and Media	17	2.2
Building and Grounds Cleaning and Maintenance	44	5.7
Construction and Extraction	73	9.4
Food Preparation and Serving Related	58	7.5
Healthcare Practitioners and Technical	15	1.9
Installation, Maintenance, and Repair	25	3.2
Management	28	3.6
Missing, unknown, inadequate response to code	84	10.8
Not in workforce [‡]	133	17.1
Office and Administrative Support	14	1.8
Personal Care and Service	19	2.4
Production	37	4.8
Protective Service	10	1.3
Sales and Related	35	4.5
Transportation and Material Moving	158	20.3
Other categories (Aggregated)*	27	3.5

[†] 2018 SOC system used to categorize occupations. Documentation available at <https://www.bls.gov/soc/2018/home.htm>

[‡] Includes student, homemaker, volunteers, those unable to work (eg, child, patient, inmate)

* Includes "Architecture and Engineering", "Business and Financial Operations", "Community and Social Service", "Computer and Mathematical", "Educational Instruction and Library", "Healthcare Support", "Legal", "Life, Physical, and Social Science", and "Military"

Table 3.7 presents information regarding occupation. Occupation data is collected on the death certificate, and prior to releasing the dataset to the state, the CDC uses this field to categorize occupations according to the 2018 SOC System⁶, and these are the categories shown in the table.

Twenty percent (20.3%) of decedents worked in positions categorized as "Transportation and Material Moving," and 17.1% of decedents were not in the workforce at the time of death. Almost eleven percent (10.8%) of decedents had missing or uncodable occupation data. The next most common category is "Construction and Extraction," where 9.4% of decedents were classified.

We chose not to display data by sex in this table due to small counts in many categories, and we did not want to suppress so many counts, but we wanted to note that the most common categories by sex were:

Male decedents

- ◆ Transportation and Material Moving: 138 decedents (22.2%)
- ◆ Construction and Extraction: 73 decedents (11.8%)
- ◆ Food Preparation and Serving Related: 49 decedents (7.9%)

Female decedents

- ◆ Transportation and Material Moving: 20 decedents (12.8%)
- ◆ Healthcare Practitioners and Technical: 12 decedents (7.7%)
- ◆ Sales and Related: 12 decedents (7.7%)

For both male and female decedents, "not in workforce" was one of the most common options, but a higher percentage of females (30.8%) than males (13.7%) were categorized in this way. Additionally, occupation data was unable to be coded for 12.1% of males and 5.8% of females.

⁶The CDC generates multiple occupation variables based on the death certificate field. The 2018 SOC categories are presented in this table because they are the most straightforward to categorize and interpret in our opinion. More detailed occupation information is available upon request.

TNVDRS also collects information on housing stability. Only one of the associated data elements had counts above ten decedents: 18 decedents (2.3%) were homeless, defined as having no fixed address and living in a shelter, on the street, in a vehicle, or in makeshift quarters in an outdoor setting. The remaining data elements that are potentially collected when information is available in reports associated with housing stability are:

- ◆ Acute or chronic housing instability appears to have contributed to death
- ◆ Decedent transitioned from an independent or family living situation to an assisted one within the previous 12 months, or such a transition was imminent and contributed to death

IV. Mechanism of Injury

Key Findings:

- ◆ The majority of homicides in TNVDRS in 2023 are firearm deaths; 84.9% of all homicides are due to firearm in this year.
- ◆ Female decedents were more likely to have a wound in the head or on the face; black decedents were more likely to have a wound in the extremities, abdomen, or thorax.
- ◆ In 48.3% of firearm homicides in 2023, the firearm used was a handgun; the most common handgun was a semi-automatic pistol.
- ◆ Homicide decedents most commonly had positive toxicology results for marijuana (49.4%) or ethanol (26.2%). For 21.4% of decedents, no substances were present.

In this section, we will explore the data elements in TNVDRS regarding the details about the mechanism of injury, including method of death, wound and firearm information when applicable, and decedent toxicology analysis.

Method of Death

Table 4.1 provides information on the method of death for each decedent in TNVDRS who died by homicide in 2023. The majority of deaths were due to firearm (84.9%), followed by sharp instrument (5.5%). The TNVDRS allows more than one method to be specified; 11.6% of decedents listed multiple mechanisms. In 66 of the 90 decedents having more than one specified method, all weapons listed were firearms.

Figure 4.1 shows the breakdown of method of death by sex in part (A) and by race in part (B), using percentage instead of counts. Counts fewer than ten are suppressed decedents for several methods. The majority of homicide deaths are due to firearm, regardless of sex, but a higher percentage of male decedents died by firearm (88.4%) compared to female decedents (71.2%). Female decedents had a higher percentage of deaths due to all remaining mechanisms apart from blunt instrument, which was involved in fewer than ten female deaths.

In part (B) of Figure 4.1, we see that the majority of homicide deaths are due to firearm, regardless of race, but a higher percentage of black decedents died by firearm (90.6%) compared to white decedents (72.4%). In all other categories, white decedents had a higher percentage of deaths.

To consider method of death by age group, we observe that for all mechanisms excepting firearm death, the counts are too small for stratification. Figure 4.2 presents the percentage of homicides in each age group that are due to firearm. We can see that for all age groups 12 years and older, a large majority of homicides are due to firearm, and from 12 to 44 years, more than 90% of homicides are due to firearm.

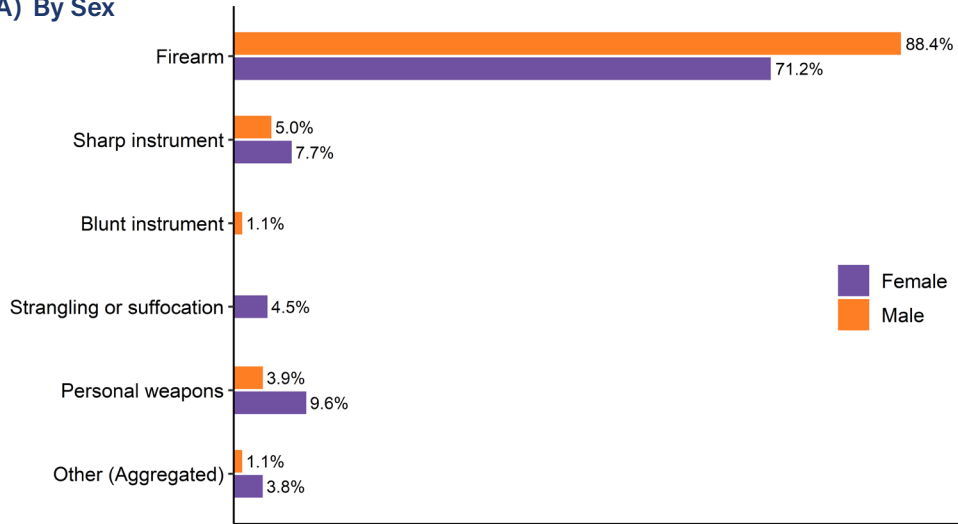
Table 4.1 Method of Death Among Homicide Decedents, 2023 (N = 777)

	Count	Percent
Blunt instrument	12	1.5
Firearm	660	84.9
Personal weapons [†]	39	5.0
Sharp instrument	43	5.5
Strangulation or suffocation	10	1.3
Other (Aggregated)*	13	1.7

† Defined as fists, feet, and hands in actions such as punching, kicking, or hitting
 * Includes fire or burns, shaking, motor vehicle, or neglect

Figure 4.1 Method of Death, 2023 (N = 777)

(A) By Sex



(B) By Race

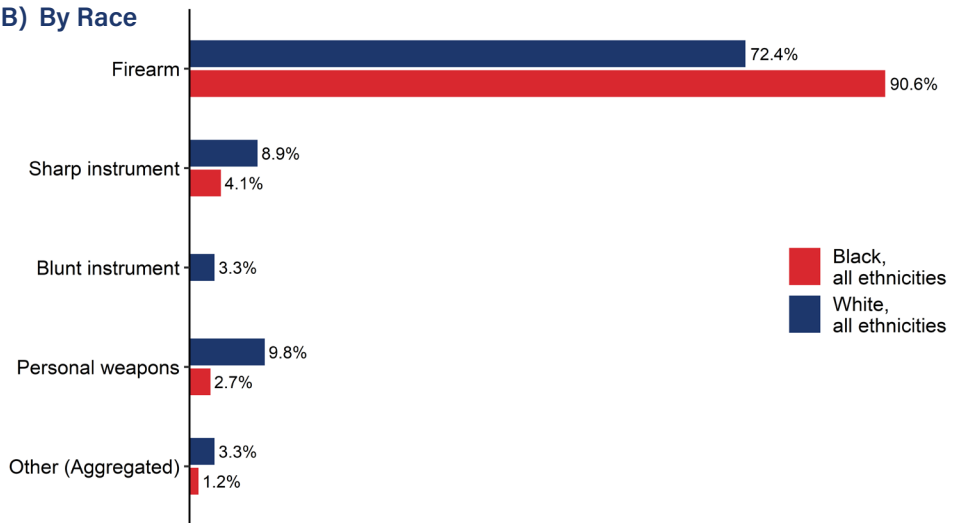
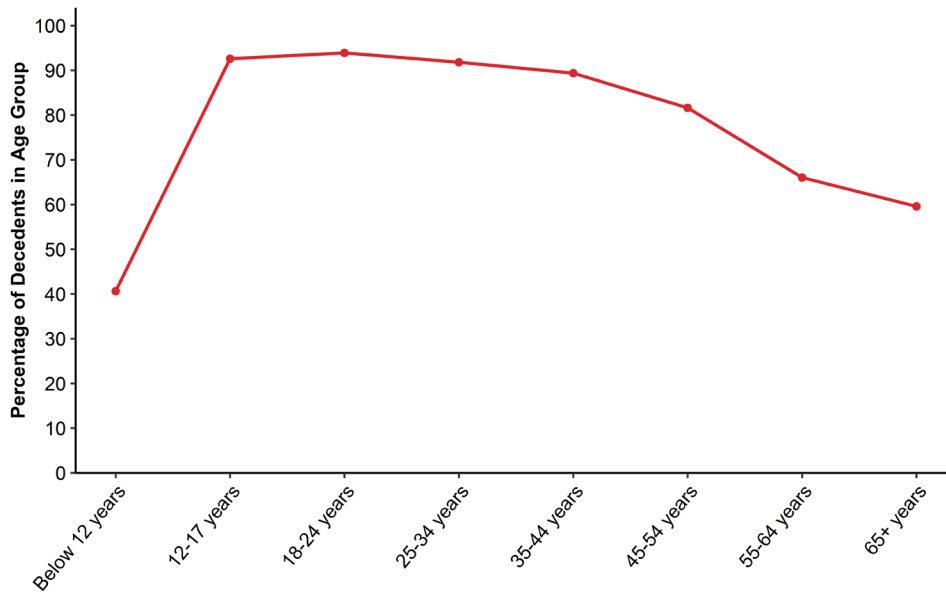


Figure 4.2 Percentage of Firearm Decedents by Age, 2023 (N = 777)



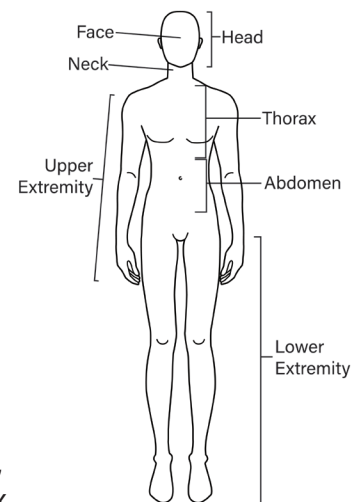
Wound Location

TNVDRS collects information about the number of wounds, number of bullets, and wound location in incidents involving firearms or sharp instruments. Wound count includes both entrance and exit wounds, and if documents refer only to plural *wounds* with no indication of number, abstractors have an option to endorse “multiple, unspecified.” Bullet counts treat shotgun shells as single ‘bullets,’ and there is again an option to endorse “multiple, unspecified” if the number of bullets is not provided. There were 703 decedents with one or more firearm or sharp instrument weapons indicated, and there were 660 decedents with a firearm as either a primary or secondary weapon. Table 4.2 contains information about the number of wounds and bullets for these decedents, calculating percentages using the appropriate denominator.

The largest percentage of decedents had one wound (25.7%). In Table 4.2, numbers are aggregated for readability, but Figure 4.3(a) shows the distribution for the number of wounds present, truncated at 20. A higher proportion of decedents were hit by one bullet (43.0%); we remind the reader that these numbers are counted differently and there should not be an expectation that they would be comparable. Figure 4.3(b) shows the distribution for the number of bullets present, truncated at 19.

We considered differences in the number of wounds or bullets by sex or race. No significant differences were observed between male and female decedents in these variables, but we did see that black decedents were more likely to have multiple wounds than white decedents.

Abstractors are able to indicate eight distinct positions on the body for each wound location, as indicated in the diagram to the right. Only penetrating wounds are endorsed, and if a wound location is described in the source material as being only on the “back” with no further detail, abstractors indicate the location as the thorax. The proportion of decedents with each indicated wound location is shown in Table 4.2. About sixty percent of decedents (60.2%) had at least one wound located on the thorax. The next most common wound location was an upper extremity (35.6%), followed by the head (30.4%). We observed variations in wound location by both sex and race, as shown in Figure 4.4.



Seven of the eight potential wound locations are shown in the diagram. The spine is the only location not shown.

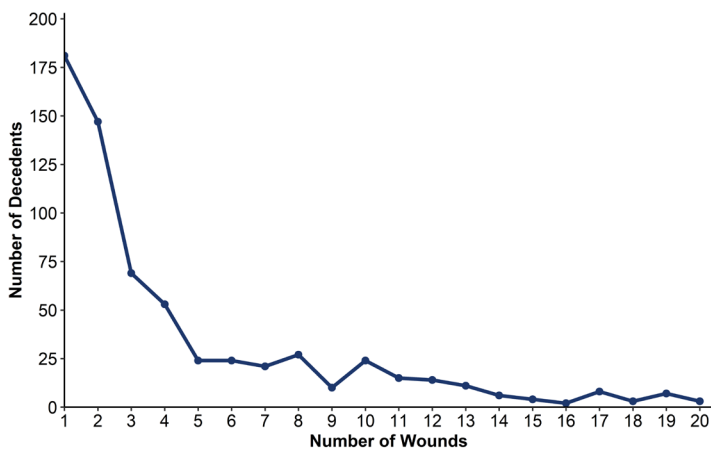
Table 4.2 Wound Information for Firearm or Sharp Instrument Decedents, 2023 (N = 703)

	Count	Percent
Number of Wounds to the Decedent		
1	181	25.7
2	147	20.9
3-4	122	17.4
5-10	130	18.5
More than 10	91	12.9
Multiple, unspecified	32	4.6
Number of Bullets that Hit the Decedent (N = 660*)		
1	284	43.0
2	113	17.1
3-4	92	13.9
5-10	117	17.7
More than 10	22	3.3
Multiple, unspecified	32	4.8
Location of Wound(s) on the Body		
Head	214	30.4
Face	135	19.2
Neck	109	15.5
Upper extremity	250	35.6
Spine	51	7.3
Thorax or upper back	423	60.2
Abdomen or lower back	208	29.6
Lower extremity	161	22.9

* Only decedents with one or more weapon types listed as firearm are included in this count

Figure 4.3 Number of Wounds to Firearm and Sharp Instrument Decedents, 2023 (N = 703)

(A) Number of Wounds



(B) Number of Bullets

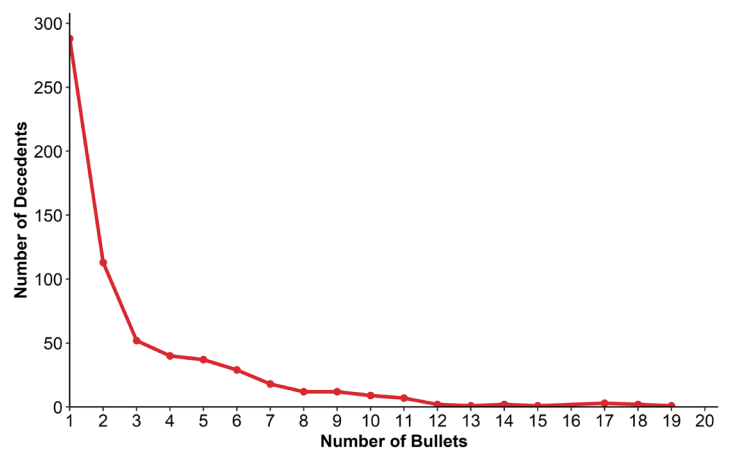
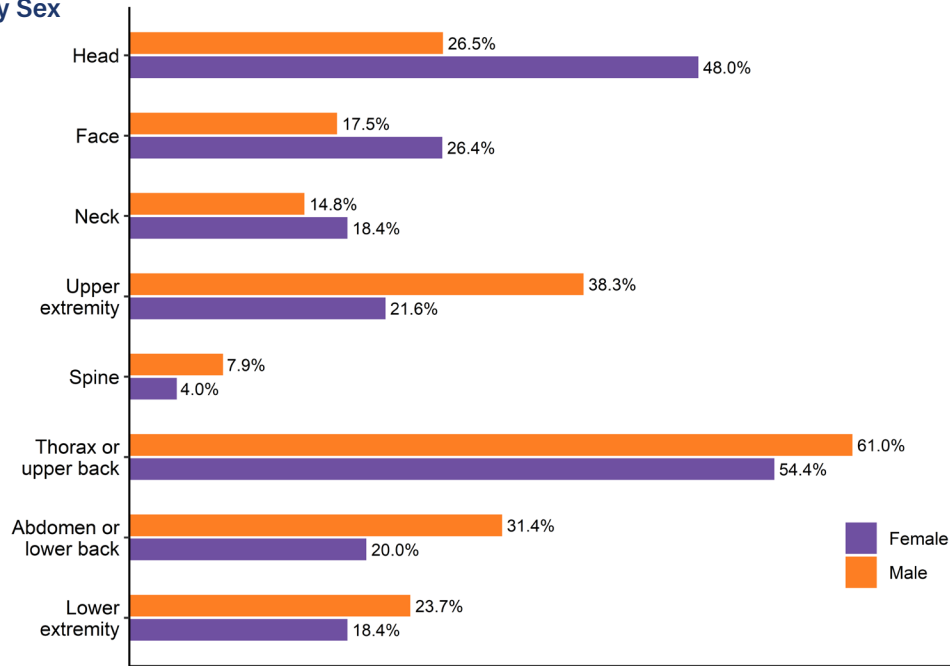
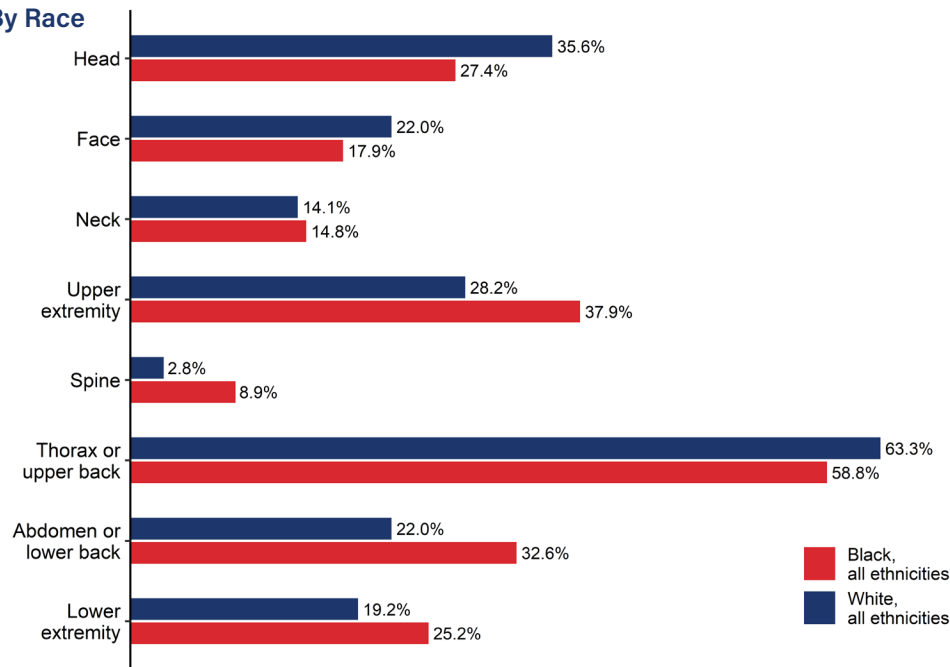


Figure 4.4 Wound Location on Firearm and Sharp Instrument Decedents, 2023 (N = 703)

(A) By Sex



(B) By Race



As observed in Figure 4.4(a), a higher percentage of female decedents have wounds to the head or face. A relatively comparable percentage of both male and female decedents have wounds in the neck. A higher percentage of male decedents have wounds in all other potential locations compared to female decedents.

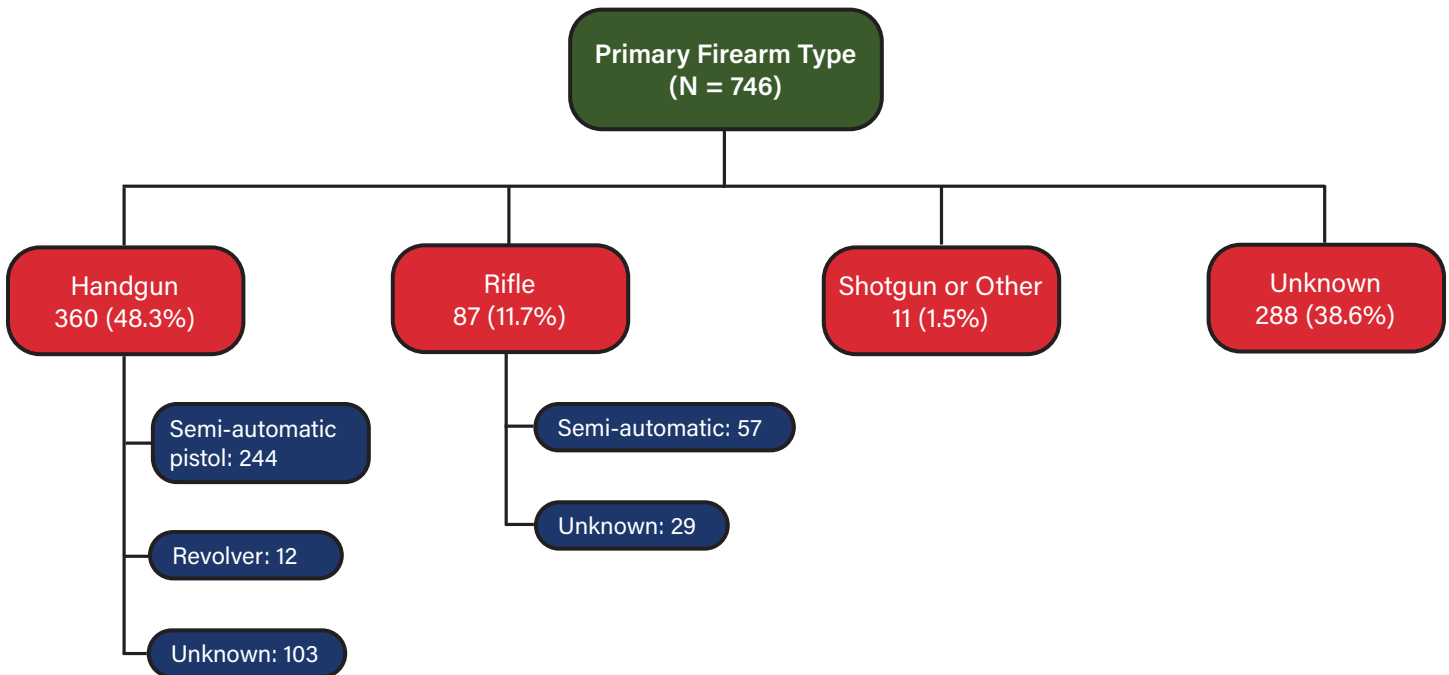
Figure 4.4(b) shows a higher percentage of black decedents have wounds in the extremities (either upper or lower), the spine, or the abdomen or lower back. Relatively comparable percentages of both black and white decedents have wounds in the neck. A higher percentage of white decedents have wounds in all other potential locations compared to black decedents.

Firearm Circumstances

TNVDRS collects multiple data elements related to firearm type, weapon storage, and weapon ownership. Figure 4.5 shows a breakdown of the different firearm types involved in the 660 firearm deaths in the 2023 dataset. Because TNVDRS collects information about all available firearms, we are able to present information on incidents involving multiple firearms; there were 746 firearms listed in these incidents.

Slightly less than half of firearms used were handguns (48.3%), with semi-automatic pistols being the most common type of handgun. About twelve percent (11.7%) of firearms were rifles, with semi-automatic rifles being the most common type. About one percent (1.5%) of firearms were either shotguns or classified as “other,” such as handmade guns or pellet guns. Fewer than ten firearms were of a known type but were unable to be assigned to a sub-category of handgun, rifle, or shotgun/other. The remaining 38.6% of firearms were of unknown type. We observed no differences in the type of firearm used by age, race/ethnicity, or sex.

Figure 4.5 Type of Firearm Used in Homicide Deaths, 2023 (N = 746)



Information about firearm storage and ownership was not reported for the majority of decedents, although TNVDRS provides the option to record whether a firearm was stored locked or stored loaded, whether the firearm was listed or reported as stolen, and who the owner of the firearm was. For the 746 firearms involved in homicide deaths in 2023, it is unknown whether the firearm was stored locked for 48.5% of decedents, unknown whether the firearm was stored loaded for 48.0% of decedents, unknown whether the firearm was reported as stolen for 90.2% of decedents, and the owner of the firearm was unknown for 90.8% of decedents.

For the firearms for which information was available, they tended not to be stored locked, to be stored loaded, not to be reported as stolen, and the most common owner of the firearm was the shooter of the weapon. Statistics are not provided for these variables because they are likely not representative of the entire dataset.

Toxicology Analysis

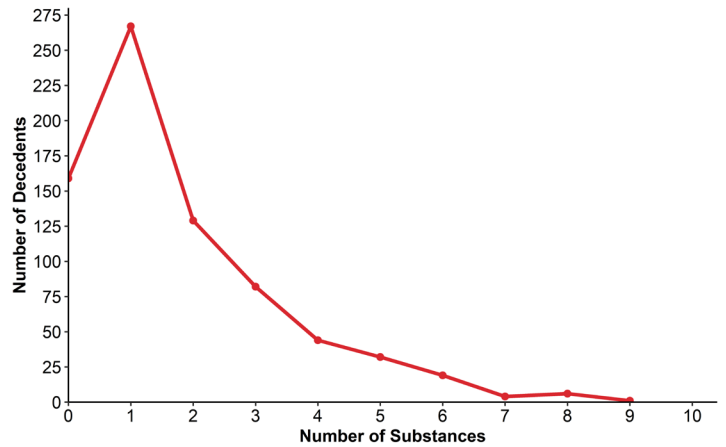
We have toxicology information for 743 (95.6%) of the 777 homicide deaths in the 2023 dataset. We note that information being unavailable to TNVDRS does not necessarily mean toxicology testing was not performed, simply that if testing was done, those reports were not sent to TNVDRS.

Table 4.3 and the accompanying Figure 4.6 show information about the number of positive substances on the toxicology report per decedent. This count includes metabolites, and it should also be noted that a positive toxicology result does not necessarily indicate that the substance level was lethal.

Table 4.3 Number of Substances per Decedent, including Metabolites, 2023 (N = 743)

	Count	Percent
None	159	21.4
1	267	35.9
2	129	17.4
3	82	11.0
4	44	5.9
5	32	4.3
6	19	2.6
7 or more	11	1.5

Figure 4.6 Number of Substances per Decedent, including Metabolites, 2023 (N = 743)



The average number of substances present was 1.76 per decedent. No decedent had more than nine substances present, and 21.4% of deaths had no positive substances indicated in toxicology testing.

To analyze the specific substances present in toxicology data, we perform a de-duplication process by removing metabolites when substances were also detected. For example, if the toxicology shows fentanyl and norfentanyl, these are not two separate opioids. Rather, fentanyl was ingested and partially metabolized to norfentanyl prior to death. Thus, we can “remove” norfentanyl from the list because it is not a distinct substance. Some metabolites are also available in free form. For example, heroin metabolizes into a ratio of codeine and morphine, both of which are also substances that can be ingested separately. In the case that a potential metabolite is also a distinct substance, it is not “removed” from the list because we cannot know that the decedent did not take it as well. Finally, if a metabolite is present on the toxicology but the original substance is not (for example, if only norfentanyl is detected but fentanyl is absent), it is retained and counted as a proxy for the original substance because it cannot be present if the original substance was not taken. This de-duplication process allows us to consider substances by individual in a more representative manner.

Table 4.4 Substances Present in Homicide Decedents, 2023 (N = 743)

	Count	Percent
No substances present	159	21.4
Amphetamine	10	1.3
Benzodiazepine	42	5.7
Carbon monoxide	10	1.3
Cocaine	80	10.8
Ethanol	195	26.2
Fentanyl, including analogs and precursors	63	8.5
Marijuana	367	49.4
Methamphetamine	108	14.5
Prescription opioids	65	8.7
Other substances	43	5.8

Table 4.4 shows the substances present after this de-duplication process. The most common substance was marijuana; 49.4% of decedents tested positive for marijuana. The next most common substance was ethanol (26.2%), followed by methamphetamine (14.5%) and cocaine (10.8%). We note that fewer than five decedents tested positive for fentanyl analogs or precursors, so this count is not shown separately.

The “other substances” category is an aggregation of small-count substances such as antipsychotics, sedatives, and acetaminophen. Fewer than 10 decedents were positive for supplements such as kratom or yohimbine, and fewer than 10 decedents were positive for naloxone.

V. Available Suspect Information

Key Findings:

- ◆ Among suspects with available information, the majority are male (83.6%).
- ◆ Suspects involved in the homicide of a female decedent are more likely to be a current or former intimate partner.

In all incidents involving one or more deaths due to homicide, TNVDRS collects suspect information as well as decedent information, when available. Abstractors have the option to record information about multiple suspects separately. In this section, we will present information on suspect demographics, their relationship(s) to the decedents, and circumstances related to the suspect that impact the incident.

Suspect Demographics

The 777 homicide decedents in the 2023 dataset are associated with 725 suspects; TNVDRS collected demographics about up to five decedents in this data year⁶. Table 5.1 shows the number of suspects per decedent. The majority of decedents (70.9%) are associated with one suspect, but 9.1% of decedents are associated with multiple suspects. Suspect information is unknown for 19.9% of decedents.

Table 5.1 Number of Suspects per Decedent, 2023 (N = 777)

	Count	Percent
None or unknown	155	19.9
1	551	70.9
2	46	5.9
3 or more	25	3.2

Table 5.2 displays demographic information for all suspects. About eighty-four percent (83.6%) of suspects are male, although the sex of 7.0% of suspects is unknown. Almost sixty percent (59.9%) of suspects are black, but we again see that there is a relatively high percentage of suspects of unknown race (15.0%). The largest percentage of suspects are of unknown age (27.7%), but among decedents of known age, the highest proportion is between 18 and 24 years old.

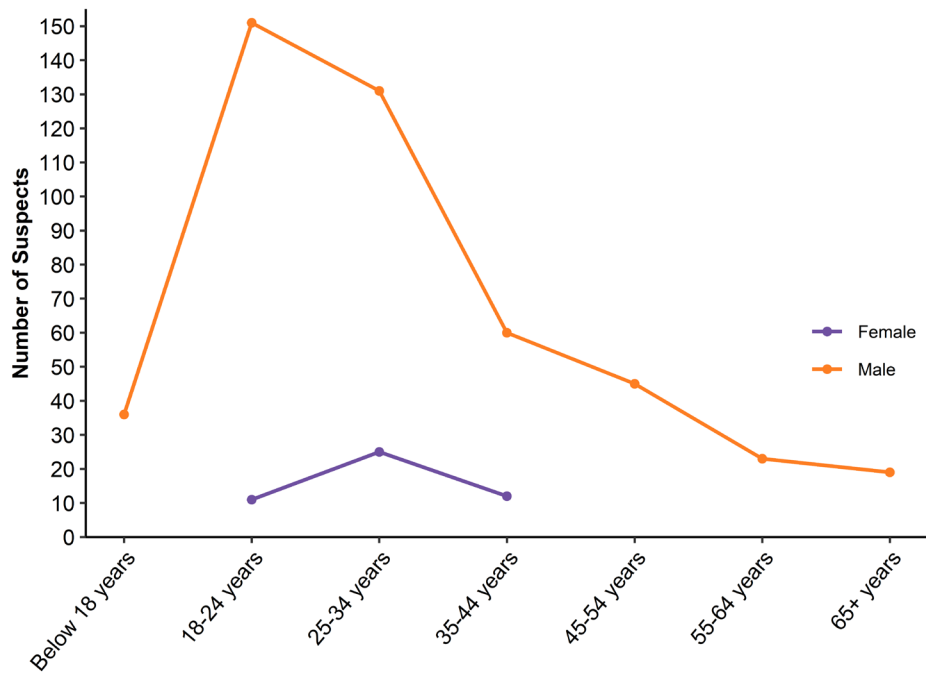
Figure 5.1 shows the age distribution of suspects by sex. Due to small counts, only three age categories are displayed for females, but for male suspects, we can see that they tend to be between 18 and 34 years old.

⁶ While information about more than five suspects can be abstracted into NVDRS, due to the rarity of such incidents, only demographics for the first five suspects are included in the dataset provided to states for analysis.

Table 5.2 Homicide Suspect Sex, Race, and Age, 2023 (N = 725)

	Count	Percent
Sex		
Male	606	83.6
Female	68	9.4
Unknown	51	7.0
Race		
White	177	24.4
Black or African American	434	59.9
Other	*	
Unknown or unspecified	109	15.0
Age		
Below 18 years	36	5.0
18-24 years	162	22.3
25-34 years	156	21.5
35-44 years	72	9.9
45-54 years	52	7.2
55-64 years	24	3.3
65+ years	22	3.0
Unknown	201	27.7

Figure 5.1 Homicide Suspect Age by Sex, 2023 (N = 725)



Relationship Circumstances

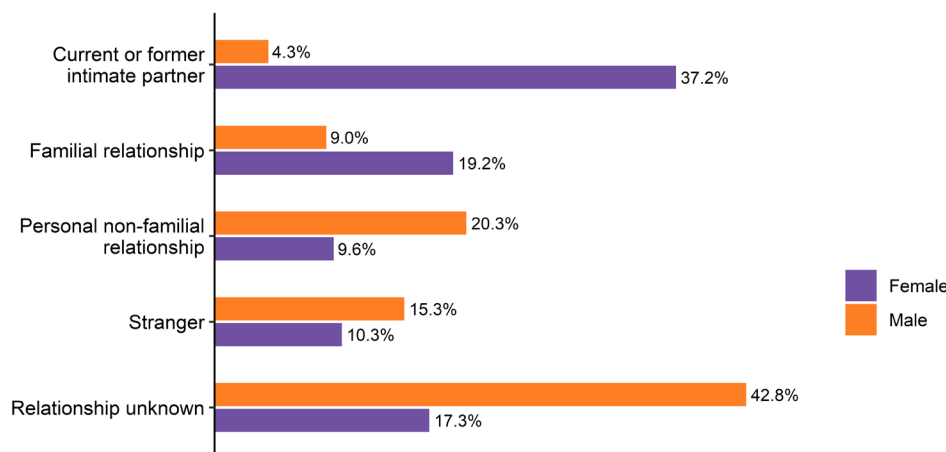
Table 5.3 shows information collected about the nature of the relationship between the suspect and decedent, if known. For 40.4% of suspects, their relationship to the decedent is unknown. Among suspects with sufficient information, the largest percentage (15.3%) were strangers to the decedent, followed by known to the decedent in an unspecified way (9.1%) and acquaintance (6.8%). Fewer than ten suspects had known relationships to the decedent that were too complex to classify with any of the categories in Table 5.3, so we chose to suppress these counts entirely.

Table 5.3 Primary Relationship of Suspect to Decedent, 2023 (N = 725)

	Count	Percent
Spouse or ex-spouse	29	4.0
Girlfriend or boyfriend, current or former	48	6.6
Parent	20	2.8
Child	23	3.2
Other familial relationship	35	4.8
Acquaintance	49	6.8
Friend	14	1.9
Other personal relationship	28	3.9
Known to decedent, unspecified	66	9.1
Stranger	111	15.3
Relationship unknown	293	40.4

Figure 5.2 stratifies the information in Table 5.3 by sex of the decedent; it is well-understood that there are differences in the relationship between a suspect and a female decedent as opposed to a male decedent. A higher percentage of female decedents (37.2%) are killed by current or former intimate partners than male decedents (4.3%). We also see a higher percentage of females (19.2%) killed by a suspect with a familial relationship to them. A higher percentage of male decedents are killed by suspects with a personal, non-familial relationship, by a stranger, or by a suspect with an unknown relationship to them.

Figure 5.2 Relationship of Suspect to Decedent by Sex, 2023 (N = 777)



Suspect Characteristics

TNVDRS collects several variables related to circumstances affecting the suspect at the time of the incident resulting in a homicide. Due to the large percentage of suspects with unknown details, Table 5.4 presents basic counts for the circumstances we were able to collect, but it is likely that these percentages are not fully representative of the entire dataset.

Table 5.4 Circumstances Related to Suspect, 2023 (N = 725)

	Count	Percent
Suspect had contact with law enforcement in the year prior to injury	61	8.4
Suspected alcohol use by the suspect preceding the incident	15	2.1
Suspected substance use by the suspect preceding the incident	45	6.2
Suspect attempted suicide (fatally or non-fatally) after the death of the decedent	41	5.7
History of abuse of decedent by this suspect	25	3.4
Suspect was a caregiver for the decedent	32	4.4
Attack is believed to be the direct result of mental illness	15	2.1

We see some evidence of substance use or alcohol use by the suspect in the hours prior to the incident; these variables are based on scene and witness information, not toxicology evidence. We also see that some percentage of suspects are known to law enforcement. The criteria for defining the recent release of a suspect from an institutional setting are the same for decedents, as described in Table 2.5. As documented in earlier sections, some suspects attempt suicide after the incident; the majority of these suspects are current or former intimate partners of the decedent.

VI. Circumstances Contributing to Injury

Key Findings:

- ◆ 46.8% of female decedents with available circumstance data were classified as homicides due to intimate partner violence.
- ◆ 33.2% of decedents had an argument that led to death; this percentage was relatively consistent across sex and race/ethnicity.
- ◆ 35.5% of male decedents' deaths were precipitated by another serious crime; the most common precipitating crimes were assault/homicide or robbery.

We now turn our attention to the circumstances associated with each incident. Circumstances are collected from CME reports and LE reports separately, but we present the aggregation of circumstance variables here, meaning that if a circumstance is indicated on either CME or LE data or both, it is reported here as being endorsed. We have circumstance information for 743 homicide decedents in this dataset, so the denominator for any percentages calculated here will be 743.

Circumstance variables in TNVDRS are endorsed primarily using a checkbox mechanic, meaning that if the variable is checked, it is "Yes," but there is no distinction between whether a circumstance is unknown or confirmed not to have occurred. Thus, the counts indicate merely the decedents for which the circumstance is reported as having occurred in one or both data sources.

For some circumstances, abstractors have the option of indicating that the circumstance was "in crisis," meaning that a crisis related to the circumstance occurred or was impending within two weeks of injury. For example, if the decedent had an alcohol problem and was known to have relapsed a week prior to death, both the "alcohol problem" and "alcohol problem in crisis" circumstance variables would be endorsed by the abstractor. Chronic circumstances are not coded as being "in crisis." For example, a decedent in the process of a lengthy divorce would have the "civil legal problem" circumstance endorsed, but not the crisis variable, unless there had been a recent change such as an upcoming custody hearing that the decedent was concerned about. Not all circumstances have a crisis option. For example, "anniversary of a traumatic event" does not include a crisis variable.

Family and Community

Table 6.1 presents decedent counts for circumstances related to family and community that were endorsed for ten or more decedents. Circumstances not shown due to low counts include:

- ◆ Prior protective services report on a child decedent's household
- ◆ Substance use in child decedent's household

Table 6.1 Circumstances Related to Family and Community, 2023 (N = 743)

	Count	Percent
Decedent was a perpetrator of violence in the previous month prior to injury	28	3.8
Decedent experienced violence in the previous month prior to injury	17	2.3
Incident was related to immediate or ongoing intimate partner violence	130	17.5
Jealousy or distress over a current or former intimate relationship led to the incident	19	2.6
Relationship problems with a family member other than an intimate partner appear to have contributed	51	6.9
Family relationship problem was a crisis	48	6.5
Problems with a friend or associate appear to have contributed to injury	72	9.7
Incident was related to abuse or neglect by a caregiver	32	4.3
Decedent had a history of abuse as a child	11	1.5
Decedent had contact with or was otherwise known to authorities	282	38.0
Decedent's household had contact with local authorities	29	3.9

Four percent (3.8%) of decedents were a perpetrator of violence within the month prior to injury. This variable is endorsed when the previous violence was distinct from the injury leading to death, and the previous violence does not have to be related to the death of the decedent. Two percent (2.3%) of decedents were a victim of violence in the month prior to injury, again endorsed when the previous violence was distinct from the injury leading to death.

For 17.5% of decedents, the incident was related to immediate or ongoing conflict or violence between current or former intimate partners. This variable is only available in TNVDRS for deaths due to homicide or legal intervention, and it will always be endorsed when a decedent is killed by a current or former partner. For 2.6% of decedents, jealousy or distress over an intimate relationship (current or former) led to the incident; whenever this variable is endorsed, the intimate partner violence variable is also indicated. The implication is that if jealousy over a relationship led to homicide, then the homicide must also be related to violence between partners. This variable is only indicated when two or more individuals involved in the incident have an intimate relationship.

Problems with a family member other than an intimate partner appear to have contributed to injury for 6.9% of decedents; this variable is endorsed when the nature of the problem is relationship-based rather than environmental. For the majority of these decedents, this problem occurred or was impending within two weeks prior to the incident. For 9.7% of decedents, relationship problems with a friend or associate other than an intimate partner or family member appear to have contributed to injury.

About four percent (4.3%) of decedents experienced abuse or neglect by a caregiver that resulted in death. This may be child abuse, elder abuse, or other abuse by a caregiver. Any form of abuse or neglect may be endorsed here: physical, psychological, sexual, or others.

About one percent (1.5%) of decedents had a history of abuse or neglect as a child. As above, any form of abuse or neglect may be endorsed here, but in this circumstance, the abuse could have been perpetrated by any individual. This circumstance is endorsed for any mention of child abuse in the past, regardless of the age of the decedent, and is not selected if the abuse directly precipitated the death. This variable is intended to capture a history of abuse outside of the fatal incident.

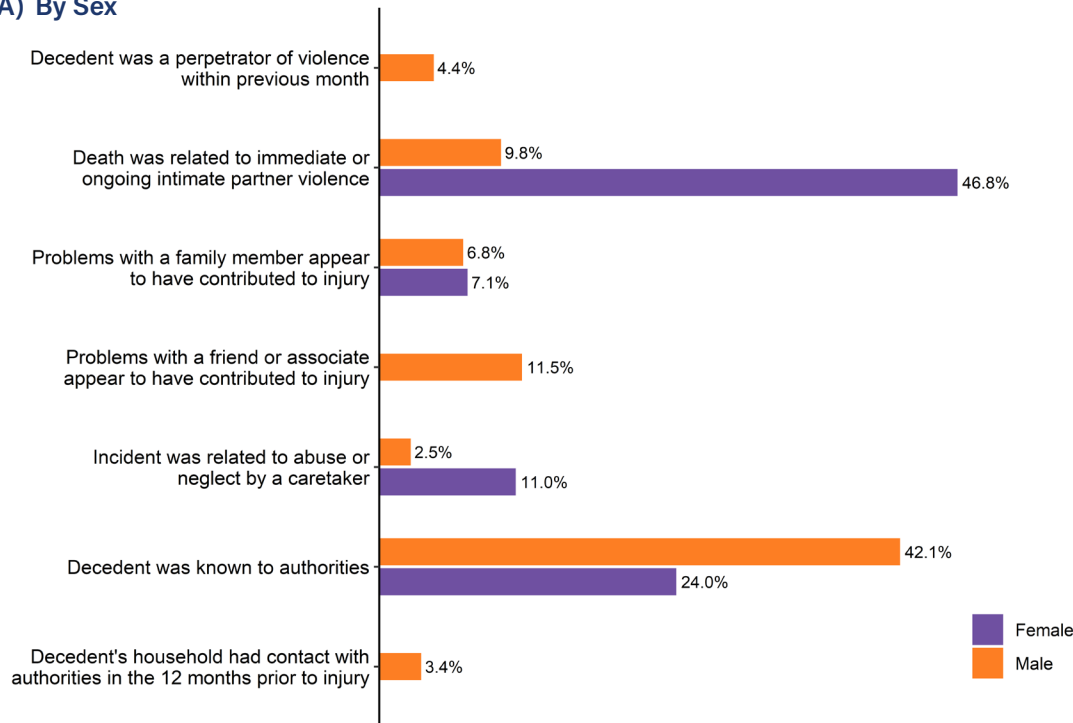
TNVDRS also collects information on whether decedents had interactions with authorities such as law enforcement, child protective services, or first responders. Thirty-eight percent (38.0%) of decedents had contact with or were otherwise known to authorities, and the decedent's household had contact with local authorities for 3.9% of decedents. This second variable is endorsed only when a report confirms that someone in the decedent's household other than the decedent themselves has had previous contact with authorities.

Figure 6.1 shows these circumstances by sex and by race when the counts are sufficiently large to display. A higher percentage of female decedents died due to intimate partner violence (46.8%) than male decedents (9.8%). A higher percentage of male decedents were known to authorities prior to injury (42.1%) than female decedents (24.0%). The other differences shown in Figure 6.1(a) are less substantial but still worth observing.

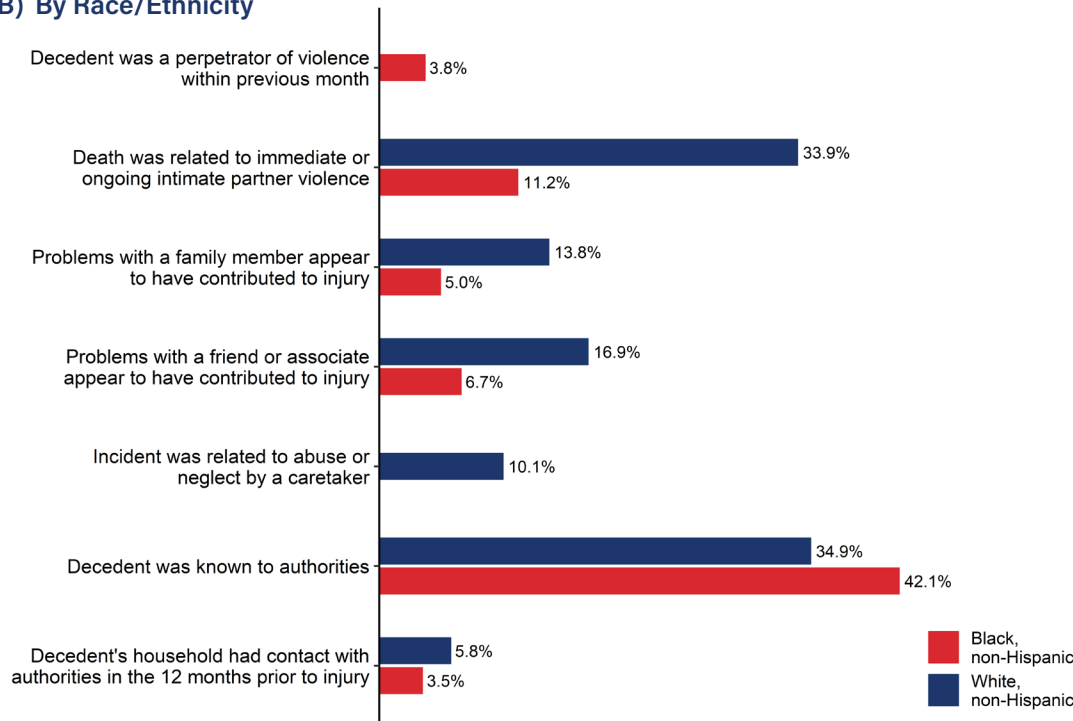
Most of the differences between NH black decedents and NH white decedents involve a higher percentage of NH white decedents having these circumstances endorsed. A much higher percentage of NH white decedents died due to intimate partner violence (33.9%) than NH black decedents (11.2%). A higher percentage of NH black decedents were known to authorities (42.1%) prior to injury than NH white decedents (34.9%).

Figure 6.1 Circumstances Related to Family and Community, 2023 (N = 743)

(A) By Sex



(B) By Race/Ethnicity



Conflict Leading to Injury

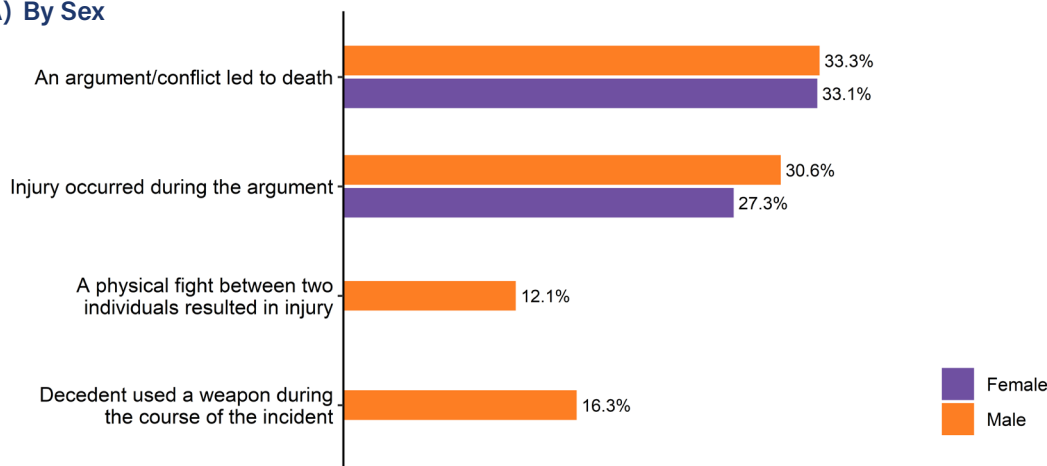
Table 6.2 presents decedent counts for circumstances related to conflict leading to injury that were endorsed for ten or more decedents. The largest percentage of decedents had an argument or conflict leading to death (33.2%); the majority of decedents that endorsed this variable also had the injury occurring during the argument itself. Additionally, 10.8% of decedents were in a physical fight between two individuals that resulted in injury, and 13.9% of decedents used a weapon during the incident. Figure 6.2 stratifies these circumstances by sex and by race.

Table 6.2 Circumstances Related to Conflict Causing Injury, 2023 (N = 743)

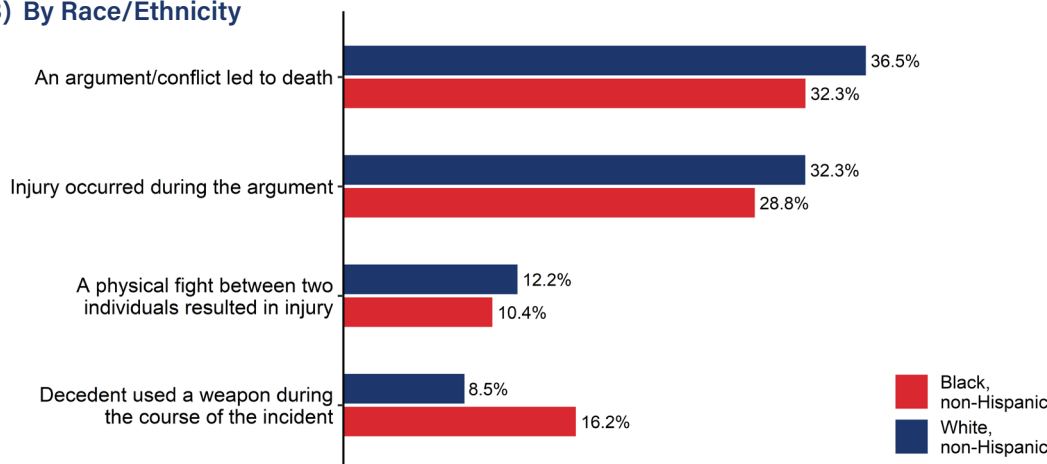
	Count	Percent
An argument or conflict led to death of the decedent	247	33.2
Injury occurred during argument	222	29.9
Injury occurred within 24 hours, but not during argument	18	2.4
A physical fight between two individuals resulted in injury	80	10.8
Decedent used a weapon during the course of the incident	103	13.9

Figure 6.2 Circumstances Related to Conflict Causing Injury, 2023 (N = 743)

(A) By Sex



(B) By Race/Ethnicity



A higher percentage of male decedents used a weapon during the incident or were involved in a physical fight; these circumstances were endorsed for less than ten female decedents. A comparable percentage of both male and female decedents were involved in an argument leading to death, as well as being injured during an argument.

The percentages of NH white and NH black decedents are relatively close for all circumstances shown in Figure 6.2(a), with the exception of using a weapon during the incident, which was higher for NH black decedents.

Criminal and Legal Issues

Table 6.3 presents information about circumstances related to criminal and legal issues. There are several circumstances not shown due to counts fewer than ten:

- ◆ Sex work or activities related to sex work played a precipitating role in the incident
- ◆ Stalking behaviors precipitated the violent incident
- ◆ Decedent was killed, at their own request, out of compassion in order to end his or her pain or distress
- ◆ Homicide was associated with a hate crime
- ◆ Decedent was an intervener other than a law enforcement officer who was killed while assisting a crime victim

About thirty-one percent (31.1%) of decedents' deaths were precipitated by another serious crime, and for 26.2% of decedents, the precipitating crime was in progress when injury occurred. Five percent (5.0%) of incidents were classified as gang-related, being either motivated by gang activity or having suspected gang member involvement. For 10.5% of decedents, drug trade or use is suspected to have played a role in the incident.

Figure 6.3 shows the precipitating crimes associated with the first circumstance in Table 6.3. The most common precipitating crime was assault or homicide (30.7%), followed by robbery (21.2%). In 15.2% of incidents, multiple precipitating crimes were indicated. These percentages are calculated using the 231 incidents where a precipitating crime was listed.

Table 6.3 Circumstances Related to Criminal and Legal Issues, 2023 (N = 743)

	Count	Percent
Death was precipitated by another serious crime	231	31.1
Precipitating crime was in progress at the time of the incident	195	26.2
Death was classified as gang-related	37	5.0
Yes, gang motivated	10	1.3
Yes, suspected gang member involvement	27	3.6
Drug trade or use is suspected to have played a role in the incident	78	10.5

Figure 6.3 Nature of Precipitating Crimes, 2023 (N = 231)

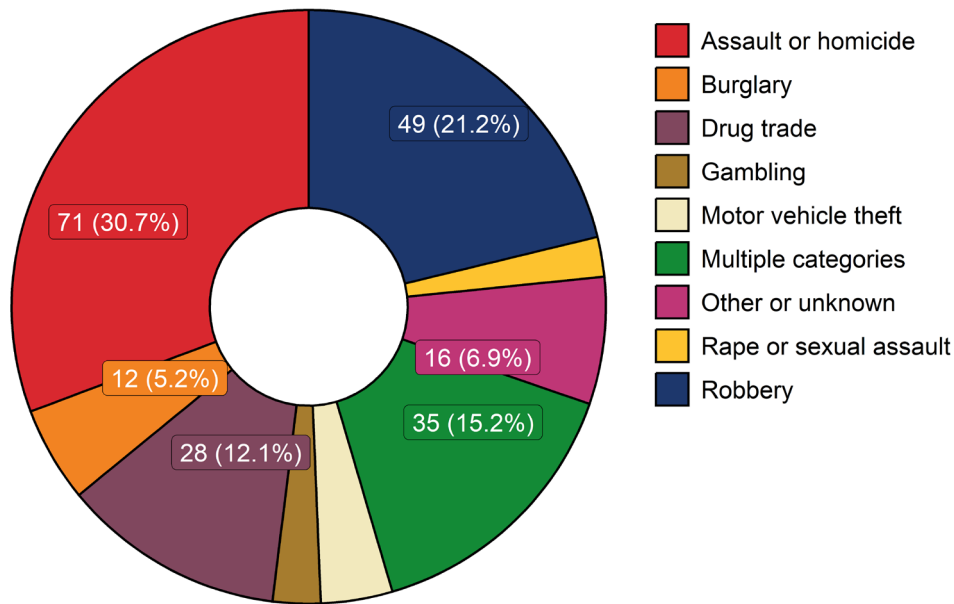
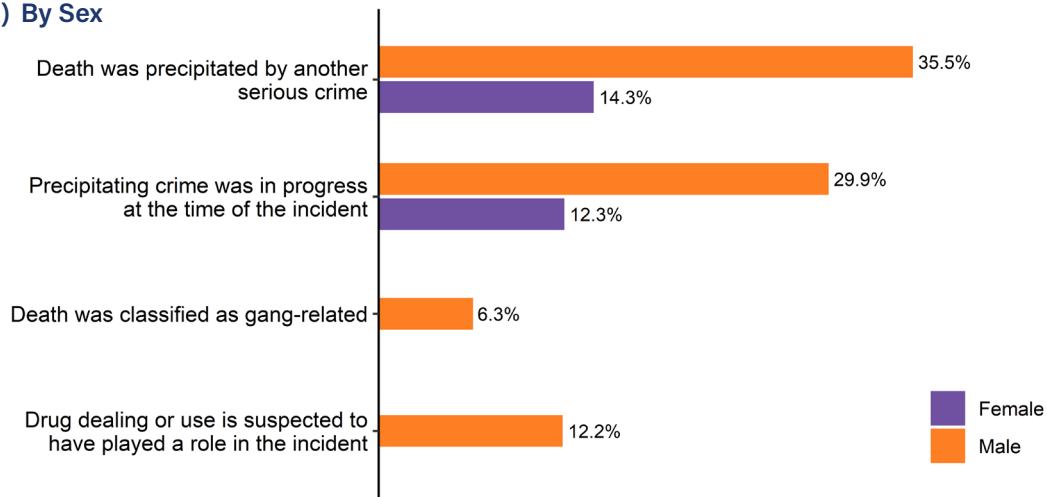


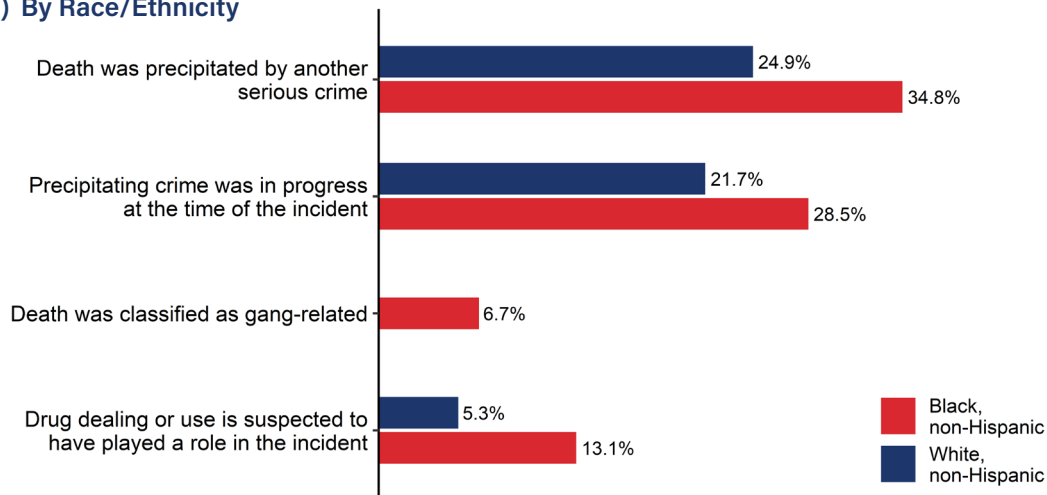
Figure 6.4 stratifies the counts from Table 6.3 by sex and race. A higher percentage of male decedents have these circumstances endorsed compared to female decedents overall. A higher percentage of NH black decedents have these circumstances endorsed compared to NH white decedents overall.

Figure 6.4 Circumstances Related to Criminal and Legal Issues, 2023 (N = 743)

(A) By Sex



(B) By Race/Ethnicity



VII. Annual Trends, 2020-2023

Key Findings:

- ◆ The overall homicide mortality rate in Tennessee from 2020 to 2023 using TNVDRS data is 10.9 deaths per 100,000 residents; there have been no statistical changes in rate in these years
- ◆ 79.5% of decedents who died due to homicide from 2020 to 2023 were male
- ◆ 65.6% of decedents who died due to homicide from 2020 to 2023 were non-Hispanic black individuals
- ◆ 84.5% of homicide deaths from 2020 to 2023 are due to firearm
- ◆ The percentages of decedents with commonly endorsed circumstances are consistent across all currently available data years

As stated in previous sections, the first data year collected by TNVDRS was 2020, meaning that as of the writing of this report, there are four years of data available. Our objective here is to examine trends in key variables including overall mortality rate, basic demographics, and circumstances by incident year. Future reporting will involve a discussion of previous incident years related to the most recent one, and we are taking a preliminary look at these trends in this report.

The total number of homicide deaths reported by TNVDRS each year is shown in Table 7.1, as well as the associated yearly mortality rates. We can see that these rates are very stable.

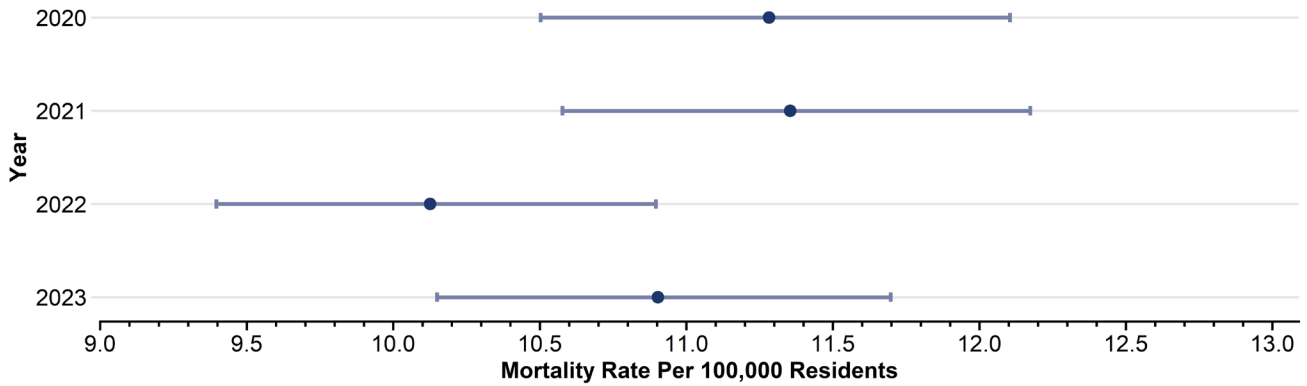
Table 7.1 Homicide Mortality Rate by Incident Year, 2020-2023 (N = 3,060)

	Count	Rate	95% CI
2020	777	11.3	10.5 - 12.1
2021	792	11.4	10.6 - 12.2
2022	714	10.1	9.4 - 10.9
2023	777	10.9	10.1 - 11.7

Figure 7.1 on the next page illustrates the stability of these mortality rates by showing the associated confidence intervals using light blue bars. As we compare years, we can see that the bars overlap substantially. Even though there are slight differences in the calculated rates from 2020 to 2023, this overlap means that we cannot conclude that the difference is statistically significant.

In most figures where rates are shown, confidence intervals are not. This is a choice typically made to keep the graph more readable (i.e., less cluttered), but it is important to always keep in mind that all rates have associated confidence intervals, and to understand whether or not a trend has changed, these intervals should be compared for overlap. Throughout this report, where rates have been shown on figures, we have tried to ensure that confidence intervals are present in the associated tables in order for our readers to make this comparison, but we feel it is particularly important to examine when looking for yearly trends.

Figure 7.1 Homicide Mortality Rate by Incident Year, 2020-2023 (N = 3,060)

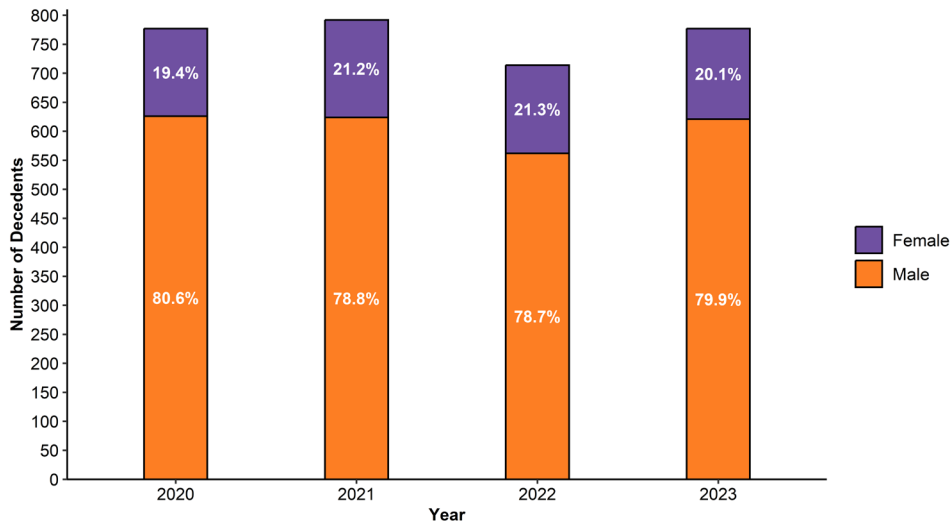


The stability shown in Table 7.1 is observed in TNVDRS suicide data across most variables in our dataset. Table 7.2 below shows the counts and rates associated with deaths due to suicide by sex by year. Overall, 79.5% of decedents in TNVDRS are male, and 20.5% are female. These percentages, along with the associated mortality rates, are again, very stable by year, as shown in the accompanying Figure 7.2.

Table 7.2 Homicide Mortality Rate by Incident Year, by Sex, 2020-2023 (N = 3,060)

	Male (N = 2,433)				Female (N = 627)			
	Count	Percent	Rate	95% CI	Count	Percent	Rate	95% CI
2020	626	80.6	18.6	17.2 - 20.2	151	19.4	4.3	3.6 - 5.0
2021	624	78.8	18.2	16.8 - 19.7	168	21.2	4.7	4.0 - 5.5
2022	562	78.7	16.2	14.9 - 17.6	152	21.3	4.2	3.6 - 5.0
2023	621	79.9	17.8	16.4 - 19.2	156	20.1	4.3	3.6 - 5.0

Figure 7.2 Decedent Sex by Incident Year, 2020-2023 (N = 3,060)



We round out our discussion of basic demographics by presenting rates related to race, shown in Table 7.3. As in Section III, ethnicity is excluded from this table due to the available population information; Hispanic decedents are included according to the race indicated. Statistics for decedents in racial groups other than white or black are excluded due to small counts. Overall, 65.6% of decedents in TNVDRS are identified as black, and 31.5% are identified as white. These percentages, along with the associated mortality rates, are again, very stable by year, as shown in the accompanying Figure 7.3.

Table 7.3 Homicide Mortality Rate by Incident Year, by Race, 2020-2023 (N = 3,060)

	Black or African American (N = 2,007)				White (N = 964)			
	Count	Percent	Rate	95% CI	Count	Percent	Rate	95% CI
2020	519	66.8	44.3	40.6 - 48.3	247	31.8	4.6	4.0 - 5.2
2021	518	65.4	43.8	40.1 - 47.7	268	33.8	4.9	4.3 - 5.5
2022	458	64.1	38.8	35.3 - 42.5	235	32.9	4.3	3.7 - 4.8
2023	512	65.9	43.5	39.8 - 47.4	214	27.5	3.8	3.3 - 4.4

Figure 7.3 Decedent Race by Incident Year, 2020-2023 (N = 3,060)

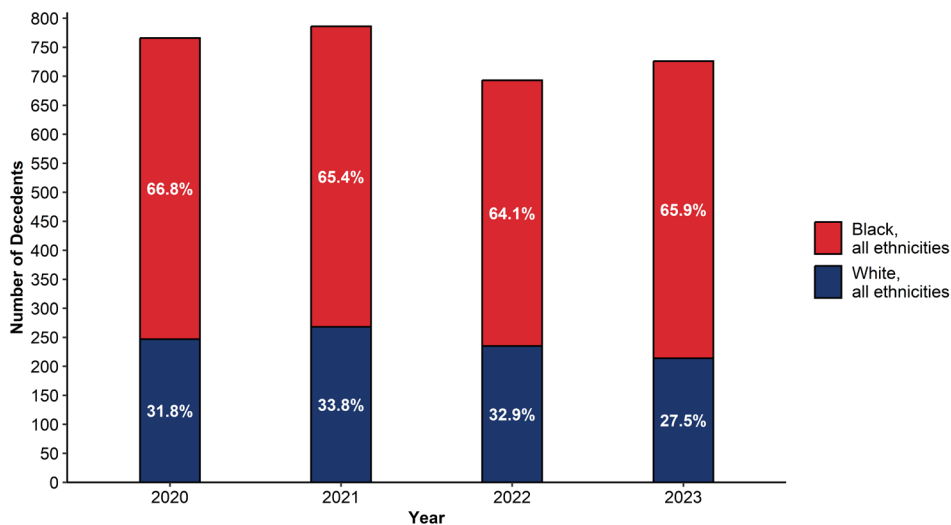


Table 7.4 shows this consistency across data years regarding mechanism of injury in homicide deaths as well. In all years, a majority of suicide injuries were due to firearm, and the next most common mechanism was sharp instrument.

Table 7.4 Mechanism of Injury by Incident Year, 2020-2023 (N = 3,060)

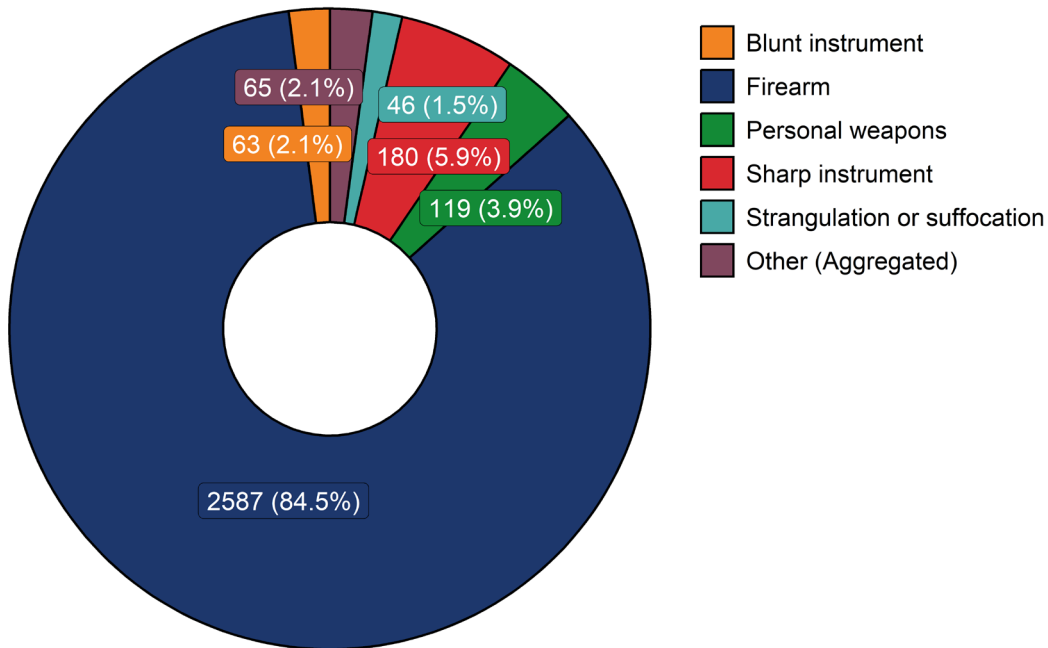
	2020		2021		2022		2023	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Blunt instrument	17	2.2	14	1.8	20	2.8	12	1.5
Firearm	658	84.7	688	86.9	581	81.4	660	84.9
Personal weapons†	26	3.3	24	3.0	30	4.2	39	5.0
Sharp instrument	43	5.5	40	5.1	54	7.6	43	5.5
Strangulation or suffocation	12	1.5	12	1.5	12	1.7	10	1.3
Other (Aggregated)*	21	2.7	14	1.8	17	2.4	13	1.7

† Defined as fists, feet, and hands in actions such as punching, kicking, or hitting

* Includes fire or burns, poisoning, fall, drowning, shaking, motor vehicle, or neglect

Because these percentages are relatively consistent in each data year, we can aggregate counts across all years to show the total distribution in Figure 7.4. Overall, firearm injuries account for 84.5% of homicide deaths in TNVDRS, followed by sharp instrument (5.9%) and personal weapons (3.9%).

Figure 7.4 Mechanism of Injury Among Homicide Decedents, 2020-2023 (N = 3,060)



Finally, we look at the most commonly endorsed circumstances across data years in Table 7.5. Overall, we have available circumstance information for 2,921 (95.5%) of the total 3,060 decedents. It is important to note, however, that the percentage of decedents with available circumstances has increased from 94.9% in 2020 to 95.6% in 2023. This improvement in data collection may also be reflected in the quality of the source documents, meaning that an increase in percentages of any individual circumstance may not necessarily indicate a change in the population.

Table 7.5 Selected Circumstances by Incident Year, 2020-2023 (N = 2,921)

	2020		2021		2022		2023	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Incident was related to immediate or ongoing intimate partner violence	117	15.9	124	16.5	136	19.8	130	17.5
An argument or conflict led to death of the decedent	257	34.9	279	37.1	253	36.8	247	33.2
Death was precipitated by another serious crime	235	31.9	213	28.3	232	33.7	231	31.1
Incident was classified as a drive-by shooting	153	20.8	138	18.3	129	18.8	143	19.2
Suspect in homicide of a female decedent was a current or former intimate partner	44	29.9	61	37.7	65	43.3	58	37.7
Suspect in homicide of a male decedent had a personal, non-familial relationship	152	25.8	158	26.7	173	32.2	126	21.4

VIII. Acknowledgements

TNVDRS is funded by the CDC's National Center for Injury Prevention and Control, award number 5NU17/CE010135-02-00, and operated by the Office of the State Chief Medical Examiner, TN Department of Health. The contents of this report are solely the responsibility of the authors and do not necessarily represent official views of the CDC or TDH.

We would like to acknowledge the ongoing support and assistance of our data partners, including the TN Department of Vital Records and Statistics, Knox County Regional Forensic Center/East TN RFC, Forensic Medical Management Services/Middle TN RFC, William J. Jenkins Forensic Center/Northeast TN RFC, Hamilton County Forensic Center/Southeast TN RFC, and University of Tennessee Health Science Center/West TN RFC. We would also like to thank the TN Bureau of Investigation and the Office of Homeland Security for providing our data abstractors with access to the TN Fusion System's TBI Homeland Online Records System (THOR), and the many local law enforcement agencies throughout the state that provided reports and information to TNVDRS to help create this 2023 dataset:

Adamsville Police Department	Decatur County Sheriff's Office	Johnson County Sheriff's Office
Algood Police Department	DeKalb County Sheriff's Office	Jonesborough Police Department
Anderson County Sheriff's Office	Dickson County Sheriff's Office	Kingsport Police Department
Ashland City Police Department	Dickson Police Department	Kingston Police Department
Atoka Police Department	Dunlap Police Department	Knox County Sheriff's Office
Baileyton Police Department	Dyer County Sheriff's Office	Knoxville Police Department
Bartlett Police Department	Dyersburg Police Department	Lafayette Police Department
Bean Station Police Department	East Ridge Police Department	Lauderdale County Sheriff's Office
Bedford County Sheriff's Office	ETSU Dept of Public Safety	LaVergne Police Department
Benton County Sheriff's Office	Elizabethton Police Department	Lawrence County Sheriff's Office
Blount County Sheriff's Office	Erwin Police Department	Lawrenceburg Police Department
Bolivar Police Department	Fairfield Glade Public Safety	Lebanon Police Department
Bradley County Sheriff's Office	Fairview Police Department	Lenoir City Police Department
Brentwood Police Department	Fayette County Sheriff's Office	Lewis County Sheriff's Office
Brighton Police Department	Fayetteville Police Department	Lewisburg Police Department
Bristol Police Department	Fentress County Sheriff's Office	Lexington Police Department
Brownsville Police Department	Franklin County Sheriff's Office	Loudon County Sheriff's Office
Campbell County Sheriff's Office	Franklin Police Department	Macon County Sheriff's Office
Cannon County Sheriff's Office	Gallatin Police Department	Madison County Sheriff's Office
Carroll County Sheriff's Office	Gatlinburg Police Department	Manchester Police Department
Carter County Sheriff's Office	Germantown Police Department	Marion County Sheriff's Office
Caryville Police Department	Gibson County Sheriff's Office	Marshall County Sheriff's Office
Chattanooga Police Department	Giles County Sheriff's Office	Martin Police Department
Cheatham County Sheriff's Office	Goodlettsville Police Department	Maryville Police Department
Chester County Sheriff's Office	Grainger County Sheriff's Office	Mason Police Department
Church Hill Police Department	Greene County Sheriff's Office	McKenzie Police Department
City of Alcoa Police Department	Greeneville Police Department	McMinn County Sheriff's Office
City of Henderson Police Department	Grundy County Sheriff's Office	McMinnville Police Department
Claiborne County Sheriff's Office	Hamblen County Sheriff's Office	McNairy County Sheriff's Office
Clarksville Police Department	Hamilton County Sheriff's Office	Meigs County Sheriff's Office
Clay County Sheriff's Office	Hardin County Sheriff's Office	Memphis Police Department
Cleveland Police Department	Harriman Police Department	Metro Nashville Police Department
Cocke County Sheriff's Office	Hawkins County Sheriff's Office	Milan Police Department
Coffee County Sheriff's Office	Haywood County Sheriff's Office	Millington Police Department
Collierville Police Department	Henderson County Sheriff's Office	Monroe County Sheriff's Office
Columbia Police Department	Hendersonville Police Department	Montgomery County Sheriff's Office
Cookeville Police Department	Henry County Sheriff's Office	Moore County Sheriff's Office
Coopertown Police Department	Houston County Sheriff's Office	Morgan County Sheriff's Office
Covington Police Department	Humboldt Police Department	Morristown Police Department
Crockett County Sheriff's Office	Huntingdon Police Department	Mosheim Police Department
Crossville Police Department	Jackson Police Department	Mount Carmel Police Department
Cumberland County Sheriff's Office	Jefferson County Sheriff's Office	Mount Juliet Police Department
Dandridge Police Department	Johnson City Police Department	Mount Pleasant Police Department

Munford Police Department
Murfreesboro Police Department
Newport Police Department
Oak Ridge Police Department
Obion County Sheriff's Office
Oliver Springs Police Department
Overton County Sheriff's Office
Paris Police Department
Pickett County Sheriff's Office
Pigeon Forge Police Department
Polk County Sheriff's Office
Portland Police Department
Putnam County Sheriff's Office
Red Bank Police Department
Red Boiling Springs Police Department
Rhea County Sheriff's Office
Robertson County Sheriff's Office
Rocky Top Police Department
Rutherford County Sheriff's Office
Savannah Police Department
Scott County Sheriff's Office

Selmer Police Department
Sequatchie County Sheriff's Office
Sevier County Sheriff's Office
Sevierville Police Department
Sewanee Police Department
Shelby County Sheriff's Office
Shelbyville Police Department
Signal Mountain Police Department
Smith County Sheriff's Office
Smyrna Police Department
Soddy Daisy Police Department
South Pittsburg Police Department
Spring Hill Police Department
Springfield Police Department
Stewart County Sheriff's Office
Sullivan County Sheriff's Office
Sumner County Sheriff's Office
Tennessee Department of Correction
Tennessee Highway Patrol
Tennessee State Park Service
Tipton County Sheriff's Office

Trousdale County Sheriff's Office
Tullahoma Police Department
Unicoi County Sheriff's Office
Union City Police Department
Union County Sheriff's Office
Van Buren County Sheriff's Office
Walters State CC Campus Police
Warren County Sheriff's Office
Washington County Sheriff's Office
Waverly Police Department
Wayne County Sheriff's Office
Weakley County Sheriff's Office
White Bluff Police Department
White County Sheriff's Office
White House Police Department
Williamson County Sheriff's Office
Wilson County Sheriff's Office
Winchester Police Department
Woodbury Police Department

VIII. References and Resources

References

- [1] Paulozzi, L.J., Mercy, J., Frazier, L., Jr, Annet, J. L., & Centers for Disease Control and Prevention (2004). CDC's National Violent Death Reporting System: background and methodology. *Injury Prevention: Journal of the International Society for Child and Adolescent Injury Prevention*, 10(1), 47–52. <https://doi.org/10.1136/ip.2003.003434>
- [2] Liu GS, Nguyen BL, Lyons BH, et al. (2023). Surveillance for Violent Deaths — National Violent Death Reporting System, 48 States, the District of Columbia, and Puerto Rico, 2020. *MMWR Surveill Summ* 2023;72(No. SS-5):1–38. <http://dx.doi.org/10.15585/mmwr.ss7205a1>
- [3] Hirsch, J. A., Nicola, G., McGinty, G., Liu, R. W., Barr, R. M., Chittle, M. D., & Manchikanti, L. (2016). ICD-10: History and Context. *American Journal of Neuroradiology*, 37(4), 596–599. <https://doi.org/10.3174/ajnr.A4696>

Photo on title page courtesy of the Tennessee State Library and Archives. Attribution:
TN State Capitol Building, RG 82: TN Dept of Conservation Photograph Collection, 1937-1976
RG 82, Box 13, File 59, ID #26580

Useful Web Resources

- ◆ TNVDRS Program website and contact information
<https://www.tn.gov/health/health-program-areas/oscme/tnvdrs.html>
TN.VDRS@tn.gov
- ◆ NVDRS Program website (coding manual available on Resources page)
<https://www.cdc.gov/nvdrs/about/index.html>
<https://www.cdc.gov/nvdrs/resources/index.html>
- ◆ CDC WONDER
<https://wonder.cdc.gov>
- ◆ TN Vital Statistics
<https://www.tn.gov/health/health-program-areas/statistics/health-data/vital-statistics.html>
- ◆ TN Population Data
<https://www.tn.gov/health/health-program-areas/statistics/health-data/population.html>