# Tennessee Violent Death Reporting System

# 2021 Homicide Deaths

# Annual Report

TN Department of Health
Office of the State Chief Medical Examiner
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# 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 2021.

TNVDRS identifies decedents based on location of injury rather than residence. According to this case definition, in 2021, the homicide mortality rate in TN was 11.4 deaths per 100,000 residents, meaning that for every 100,000 TN residents, there were 11.4 homicides where injury occurred within the state. There were 6 counties with 10 or more injuries. No county experienced a statistically significant change in injury rate from 2020 to 2021. The majority of decedents were injured in their own county of residence.

The mortality rate of homicide was 3.9 times higher for males than females (18.2 per 100,000 compared to 4.7 per 100,000), as shown in Figure 0.1. Figure 0.1 also shows that black individuals had a higher rate than white individuals (43.8 per 100,000 compared to 4.9 per 100,000). These groupings include Hispanic white and Hispanic black decedents respectively due to the available population groups for rate calculation[i]. The mortality homicide rate for Hispanic decedents of all races was 10.6 per 100,000.

Figure 0.2 shows the mortality rate by age. Decedents below 12 years had the lowest homicide mortality rate at 1.7 per 100,000. For decedents aged 18 or higher at death, the average mortality rate was 13.5, and Figure 0.2 shows that the highest rate is among decedents aged 18 to 24, at 27.5 per 100,000.

**Figure 0.1 Homicide Mortality Rate by Sex and Race/Ethnicity, 2021 (N = 792)**

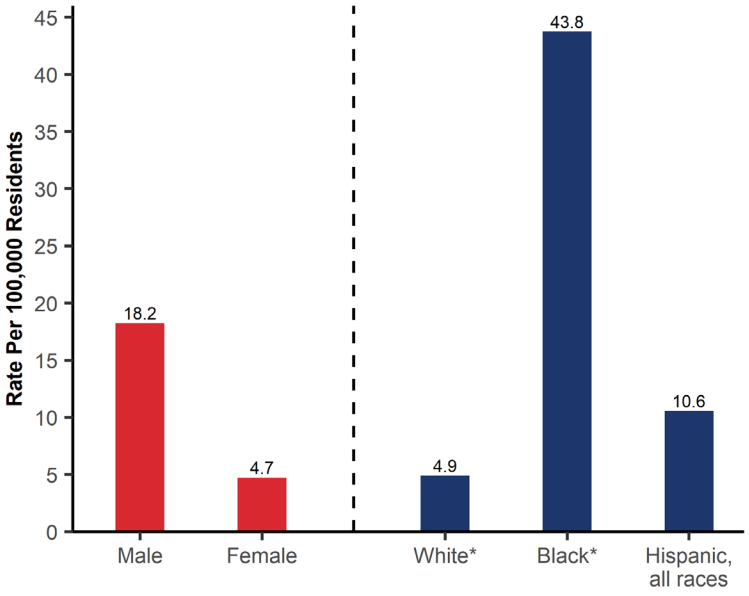
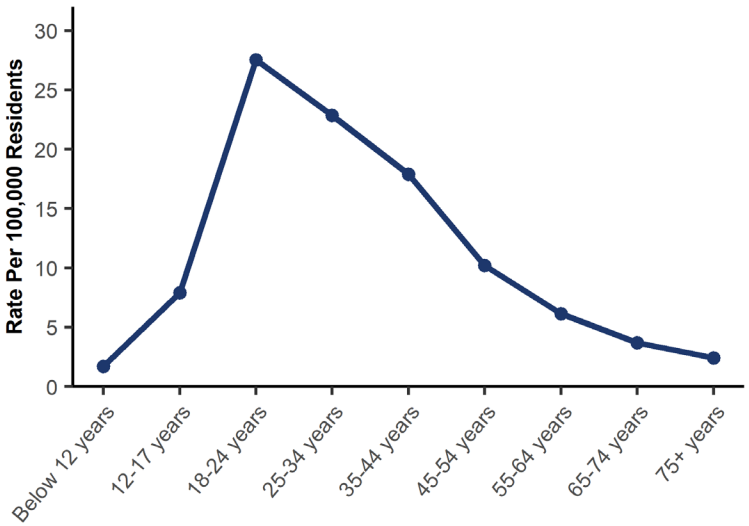



**Figure 0.2 Homicide Mortality Rate by Age at Death, 2021 (N = 792)**




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

The majority of homicide deaths are due to firearm (86.9%), as shown in Figure 0.3, followed by sharp instrument (5.1%). In 50.5% 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 on the head, face, or neck 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 93.8% of homicide decedents in 2021, including individuals who were tested but did not have any substances present. Homicide decedents were likely to have no substances present (17.5%), or to have positive results for marijuana (54.2%) or ethanol (26.9%).

Figure 0.4 shows the most common circumstances associated with each incident; sufficient data to collect circumstance information was available for 95.1% of decedents. Female decedents were more likely to die due to intimate partner violence. Male and female decedents were equally likely to have an argument leading to death, but non-Hispanic white decedents were more likely to have an argument leading to death than non-Hispanic black decedents. 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.

**Figure 0.3 Method of Death Among Homicide Decedents, 2021 (N = 792)**

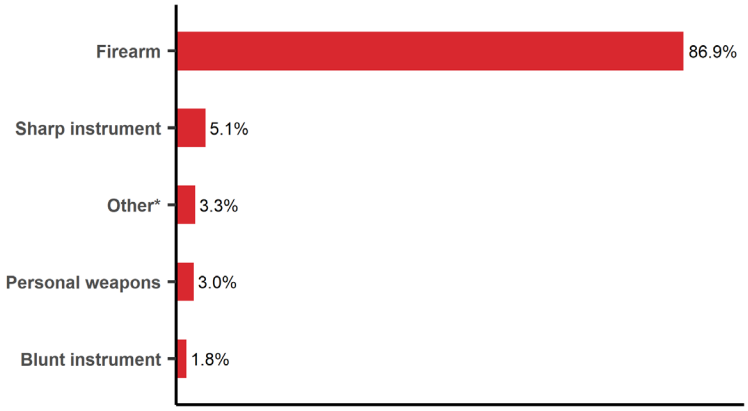
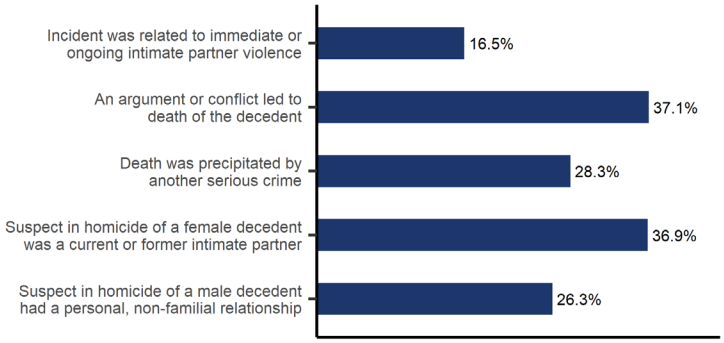



**Figure 0.4 Common Circumstances Among Homicide Decedents, 2021 (N = 753)**




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.

**Click to visit the TNVDRS site!**

# 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 States[1] [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 website[1].

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 2021 incidents that are the subject of this report were completed by TNVDRS at the beginning of May of 2023. 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].

[1]The 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 6.0, Revised January 2022
† 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 2,235 violent deaths where injury occurred in Tennessee in 2021. Table 1.2 and the accompanying Figure 1.1 both show the abstractor manners of death for these deaths, comparing 2021 to the previous data year. There was no substantial change in either the overall number of violent deaths or in any of the manners from 2020 to 2021.

**Figure 1.1 Abstractor Manner of Death by Incident Year**

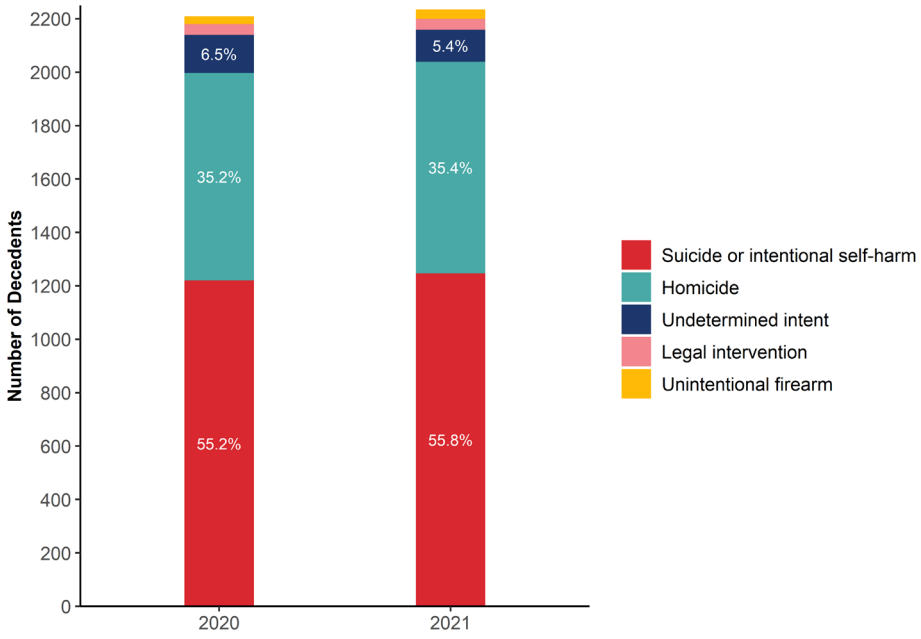



**Table 1.2 Abstractor Manner of Death by Incident Year**

| | 2020 | | 2021 | |
|---|---|---|---|---|
| | Count | Percent | Count | Percent |
| Suicide or intentional self-harm | 1220 | 55.2 | 1247 | 55.8 |
| Homicide | 777 | 35.2 | 792 | 35.4 |
| Undetermined intent | 143 | 6.5 | 120 | 5.4 |
| Legal intervention | 40 | 1.8 | 41 | 1.8 |
| Unintentional firearm | 29 | 1.3 | 35 | 1.6 |
| Total | 2209 | | 2235 | |

For the remainder of this report, we will focus on the 792 decedents with an abstractor manner of death of homicide in 2021, comparing to the 777 decedents with the same manner in 2020 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 2,235 violent deaths in TN in 2021 occurred across 2,158 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 TN.VDRS@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/oscme/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 2021 using TNVDRS data was 11.4 deaths per 100,000 residents, with 6 counties being the location of injury of 10 or more deaths.
- The largest percentage of decedents who die due to homicide (47.2%) are injured in a house or apartment, but only 56.1% 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 792 homicide deaths where injury occurred in Tennessee in 2021[2]. Rates are determined using 2021 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 interpretation[3]. 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.

[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, 2021**

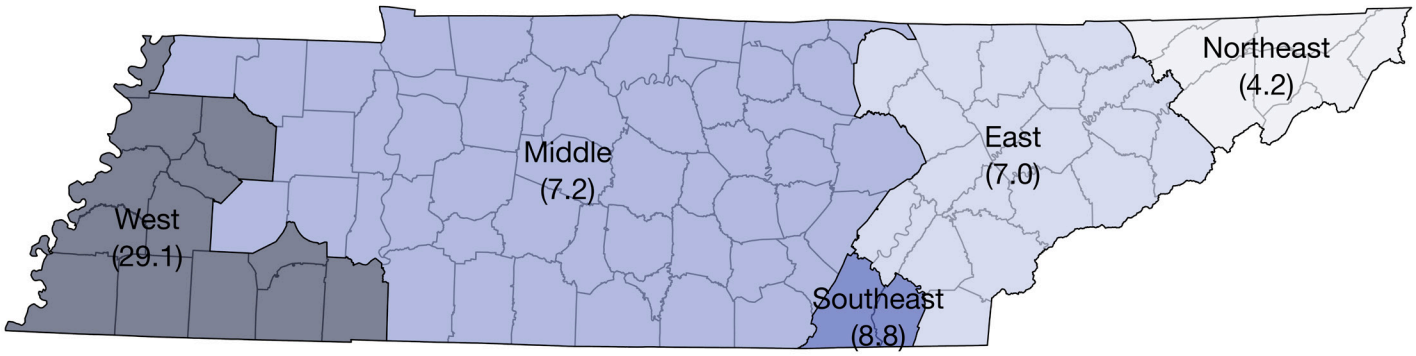



**Table 2.1 Homicide Mortality Rate by Region of Injury, 2021 (N = 792)**

| | Count | Rate | 95% CI |
|---|---|---|---|
| East | 98 | 7.0 | 5.6 - 8.4 |
| Middle | 232 | 7.2 | 6.3 - 8.1 |
| Northeast | 22 | 4.2 | 2.5 - 6.0 |
| Southeast | 42 | 8.8 | 6.1 - 11.4 |
| West | 394 | 29.1 | 26.2 - 32.0 |
| Tennessee | 792 | 11.4 | 10.6 - 12.1 |

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. It should be noted that the county with the highest rate (Madison) has a small total count, so this rate should be interpreted with caution, as illustrated by the extremely wide confidence interval. All counties with rates not shown had fewer than 10 homicide injuries in 2021. When comparing county homicide mortality rates to the prior year, we found that Davidson County had a nominal increase in rate from 2020 to 2021, but it was less than five percent and not statistically significant.

Fifty-one decedents were out-of-state residents who were injured in Tennessee. Of the remaining 690 TN resident homicide decedents in TNVDRS, 94.8% were injured in their own county of residence.

**Figure 2.2 Geographic Distribution of Homicide Deaths by County in TNVDRS, 2021**

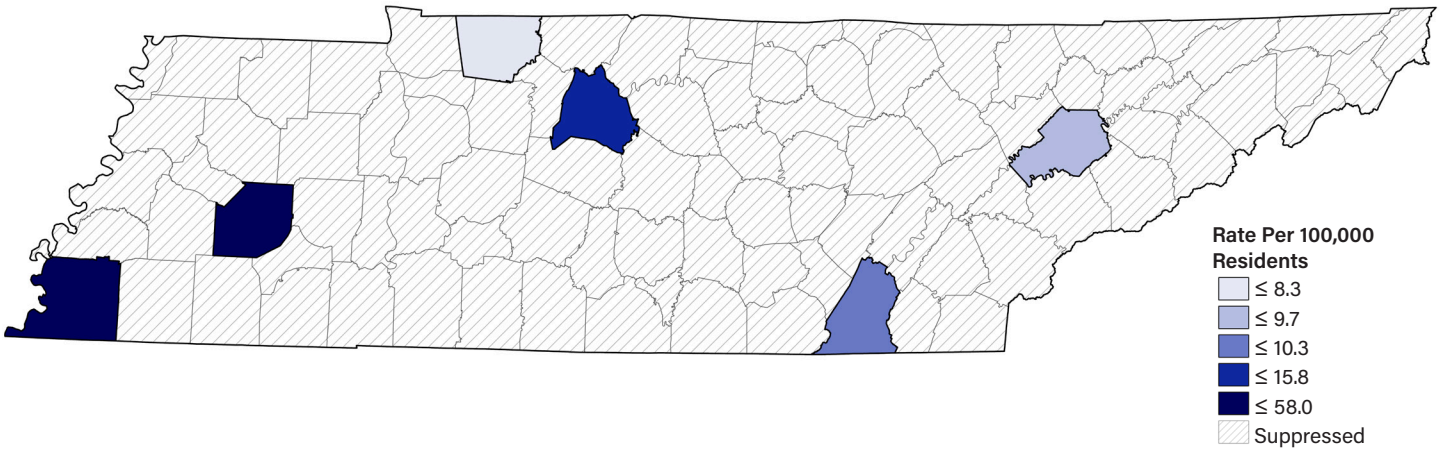


**Table 2.2 Homicide Mortality Rate by County of Injury, 2021 (N = 792)**

| | Count | Rate | 95% CI |
|---|---|---|---|
| Davidson | 111 | 15.8 | 12.8 - 18.7 |
| Hamilton | 38 | 10.3 | 7.0 - 13.6 |
| Knox | 47 | 9.7 | 6.9 - 12.4 |
| Madison | 15 | 58.0 | 28.6 - 87.4 |
| Montgomery | 19 | 8.3 | 4.6 - 12.1 |
| Shelby | 349 | 37.8 | 33.8 - 41.7 |
| Tennessee | 792 | 11.4 | 10.6 - 12.1 |

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 771 (97.3%) 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 2021, 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 715 (90.3%) of decedents. Table 2.3 shows the number of days between injury and death for these incidents. The majority (74.5%) of decedents died the same day injury occurred. For the 376 decedents with a recorded time of injury, 246 (65.4%) were injured between noon and midnight, and 130 (34.6%) were injured between midnight and noon. The time of injury was unknown for 416 (52.5%) 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, 2021 (N = 792)**

| | Count | Percent |
|---|---|---|
| 0 | 590 | 74.5 |
| 1 | 59 | 7.4 |
| 2 – 14 | 43 | 5.4 |
| 15 – 365 | 13 | 1.6 |
| Greater than 365 | 10 | 1.3 |
| Unknown | 77 | 9.7 |

## 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 (47.2%), and for 215 of these, the house/apartment was the decedent's own residence. About twenty-two percent (21.6%) were injured in a motor vehicle, excluding school buses or public transportation, 3.7% were injured at a service station, 3.3% were injured in a parking lot or garage, 2.1% were injured in a bar or nightclub, and 2.1% were injured in a hotel or motel. 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 (71.1%), and most decedents were not at work or engaged in work when injury occurred. Fewer than ten 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 too few decedents had any option endorsed to present statistics.

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 (27.4%), followed by 16.5% of decedents who died at home. Based on the text field accompanying death location on the certificate, we were able to determine that 10.0% of decedents died at a residence not specified to be the decedent's home, 8.0% died in an outdoor location (unspecified outdoors, body of water, etc.), 7.7% died in a motor vehicle, 5.1% died at a roadside location, 4.8% at a commercial location, and 2.8% 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, 2021 (N = 792)

| | Count | Percent |
|---|---|---|
| **Category of Location of Injury** | | |
| House, apartment | 374 | 47.2 |
| Motor vehicle (excluding school bus and public transport) | 171 | 21.6 |
| Service station | 29 | 3.7 |
| Parking lot/public parking garage | 26 | 3.3 |
| Bar, nightclub | 17 | 2.1 |
| Hotel/motel | 17 | 2.1 |
| Aggregated roadside* | 61 | 7.7 |
| Aggregated supervised facility** | 12 | 1.5 |
| Aggregated commercial location*** | 49 | 6.2 |
| Aggregated outdoor location**** | 19 | 2.4 |
| Aggregated other/unknown***** | 17 | 2.1 |
| **Decedent Injured at Home** | | |
| Yes | 217 | 27.4 |
| No | 563 | 71.1 |
| Unknown | 12 | 1.5 |
| **Decedent Injured at Work or While Working** | | |
| Yes | 17 | 2.1 |
| No or Unknown | 775 | 97.9 |
| **Category of Location of Death** | | |
| Emergency Department/outpatient | 217 | 27.4 |
| Home | 131 | 16.5 |
| Hospital inpatient | 106 | 13.4 |
| Other residence | 79 | 10.0 |
| Outdoor location | 63 | 8.0 |
| Motor vehicle | 61 | 7.7 |
| Roadside location | 40 | 5.1 |
| Commercial location | 38 | 4.8 |
| Dead on arrival | 23 | 2.9 |
| Parking garage or lot | 22 | 2.8 |
| Other† | 12 | 1.5 |

* Includes street, sidewalk, alley, highway, and bridge
** Includes jail, prison, supervised residential facility, hospital, or medical facility
*** Includes bank or ATM location, liquor store, office building, and other commercial establishment
**** Includes park/playground, natural area, industrial/construction area, and abandoned building
***** Includes K-12 schools, other (not specified), and unknown

† Includes long-term care facilities, jail/prison, homeless shelter, school, first responder station

## Figure 2.3 Category of the Location of Injury, 2021 (N = 792)

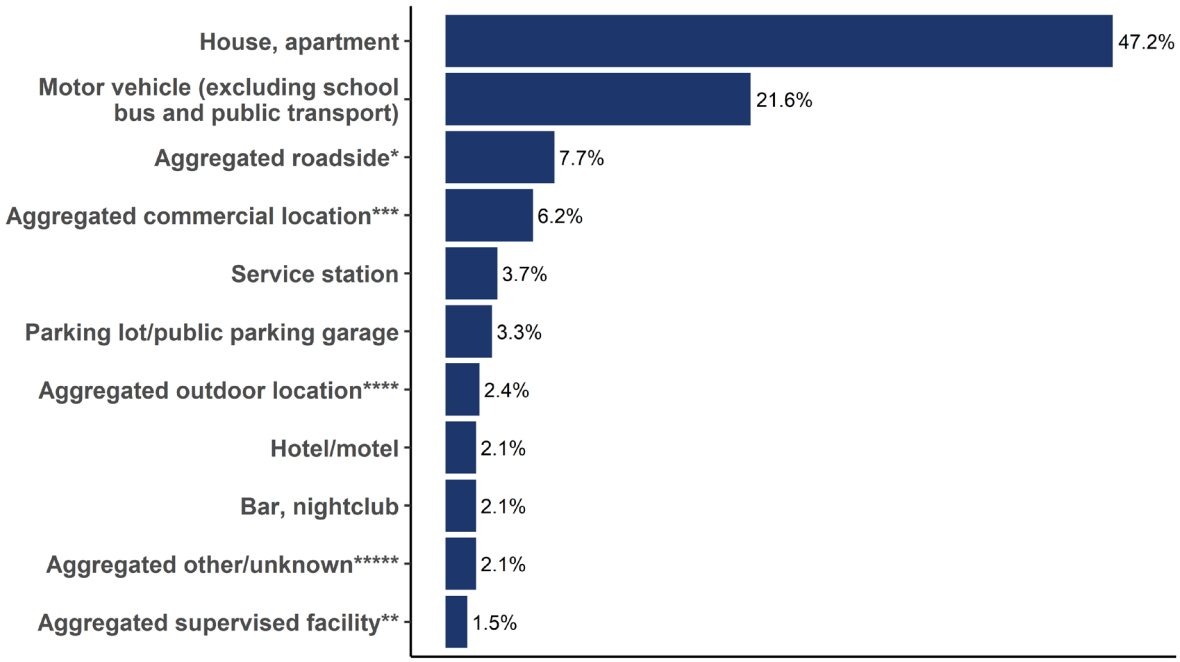


**Table 2.5 General Injury Circumstances, 2021 (N = 792)**

| | Count | Percent |
|---|---|---|
| **Child(ren) Present and/or Witnessed Incident** | | |
| Yes | 131 | 16.5 |
| No or Unknown | 671 | 84.7 |
| **Alcohol Use by Decedent Suspected*** | | |
| Yes | 61 | 7.7 |
| No or Unknown | 731 | 92.3 |
| **Decedent Recently Released from Institutional Setting** | | |
| Any facility type | 17 | 2.1 |
| No evidence of recent release | 775 | 97.9 |
| **EMS Present at Scene** | | |
| Yes | 754 | 95.2 |
| No | 38 | 4.8 |
| **Decedent Seen at Hospital Following Incident** | | |
| Seen in ED following incident | 237 | 29.9 |
| Seen in ED and then admitted as inpatient | 108 | 13.6 |
| No or Unknown | 447 | 56.4 |

* 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 16.5% 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 168 female decedents in the dataset, children were present at 30.4% of incidents, while of the 624 male decedents in the dataset, children were present at 12.8% of incidents. This difference is present in the 2020 dataset as well, and we note that the overall percentage of decedents with this variable endorsed rose from 2020 (9.7%) to 2021 (16.5%). There are many complex factors potentially leading to this difference, as well as the overall increase, including the fact that this variable was only added to NVDRS in November 2020. More years of data collection are needed for any detailed analysis.

In 7.7% 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 2.1% 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 95.2% 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. Almost forty-four percent (43.6%) of decedents were seen at a hospital following the incident; about 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 5.7% 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 others[4]. We remind the reader that our dataset does not include legal intervention deaths. In 3.2% of cases, the decedent was a bystander, rather than the intended target of injury.

For 5.4% of decedents, the incident was a targeted attack, such as an ambush, where the suspect (or suspects) approached and fled on foot. About seventeen percent (17.4%) 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, 2021 (N = 792)**

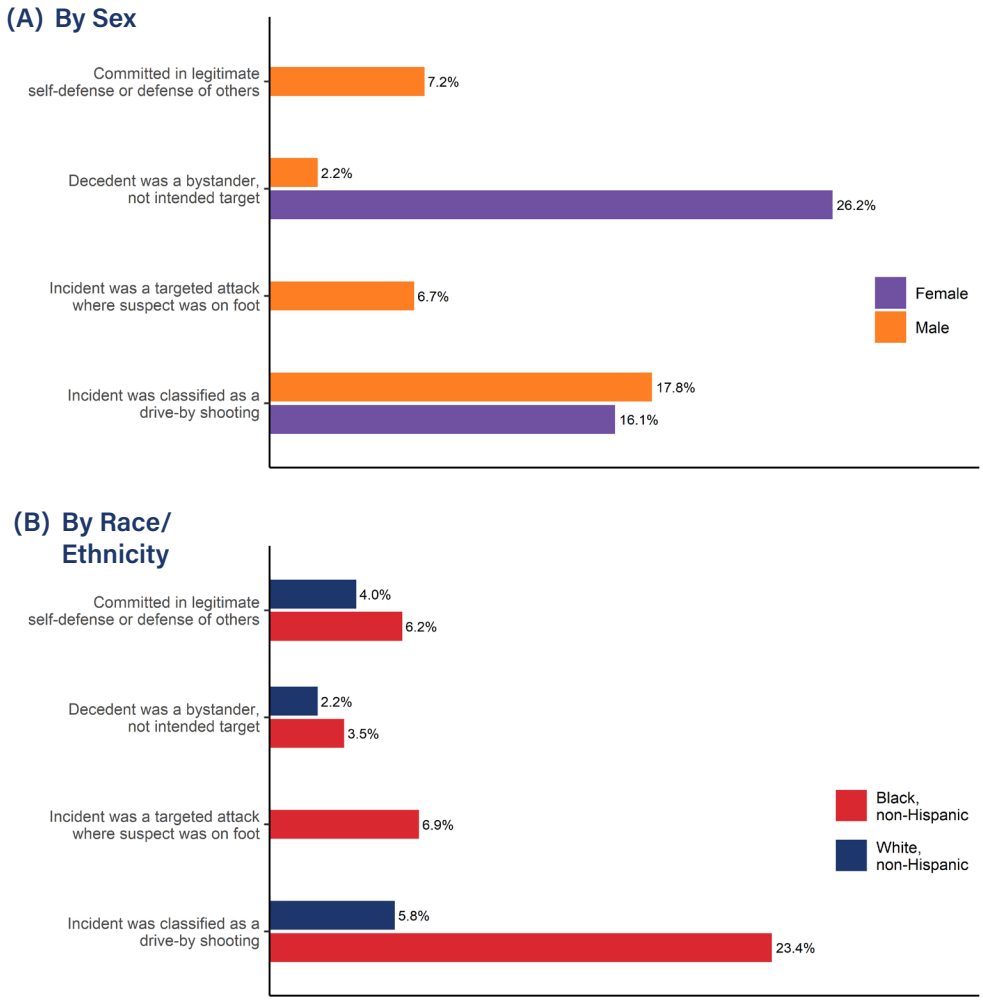
| | Count | Percent |
|---|---|---|
| **Homicide was committed in legitimate self-defense*** | | |
| Yes | 45 | 5.7 |
| No or Unknown | 747 | 94.3 |
| **Decedent was a bystander, not intended target** | | |
| Yes | 25 | 3.2 |
| No or Unknown | 767 | 96.8 |
| **Incident was targeted attack, where approach was on foot** | | |
| Yes | 43 | 5.4 |
| No or Unknown | 749 | 94.6 |
| **Incident was classified as a drive-by shooting** | | |
| Yes | 138 | 17.4 |
| No or Unknown | 654 | 82.6 |

* 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 targeted attacks where the suspect was on foot. Similar percentages of male and female decedents were victims of drive-by shootings. Figure 2.4(b) shows that a higher percentage of non-Hispanic black decedents were involved in all circumstances shown in Table 2.6, although the percentage of non-Hispanic black decedents who were bystanders was relatively similar to the percentage of non-Hispanic white decedents. 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.

[4] For 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, 2021 (N = 792)




## Table 2.7 Type of Homicide Incident, 2021 (N = 747)

| | Count | Percent |
|---|---|---|
| Single homicide | 688 | 92.1 |
| Multiple homicide* | 34 | 4.6 |
| Single or multiple homicide followed by suicide | 25 | 3.3 |

* 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 suicide. The TNVDRS is structured as a dataset of incidents containing one or more decedents[5] within each incident. This allows us to document more complex scene information, especially when different decedents have different manners of death. The 792 decedents with a manner of death of homicide in 2021 are distributed over 747 incidents. The majority of these incidents are classified as single-homicide incidents (92.1%), 4.6% are classified as multiple homicide, and 3.3% are either single or multiple homicide incidents followed by suicide.

[5] The 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:

- 65.4% of decedents who died due to homicide in 2021 were non-Hispanic Black individuals
- 78.8% of decedents who died due to homicide in 2021 were male
- Decedents aged 25-34 years had the highest homicide mortality rate at 27.8 per 100,000 TN residents
  - Males had a higher mortality rate than females at all ages, 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 2021 were in the fields of "Transportation and Material Moving" (20.2%) and "Construction and Extraction" (9.1%)

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 2021. The homicide mortality rate among males (18.2 per 100,000 TN resident males) is higher than females (4.7 per 100,000 TN resident females), and 78.8% of the decedents in our dataset are male.

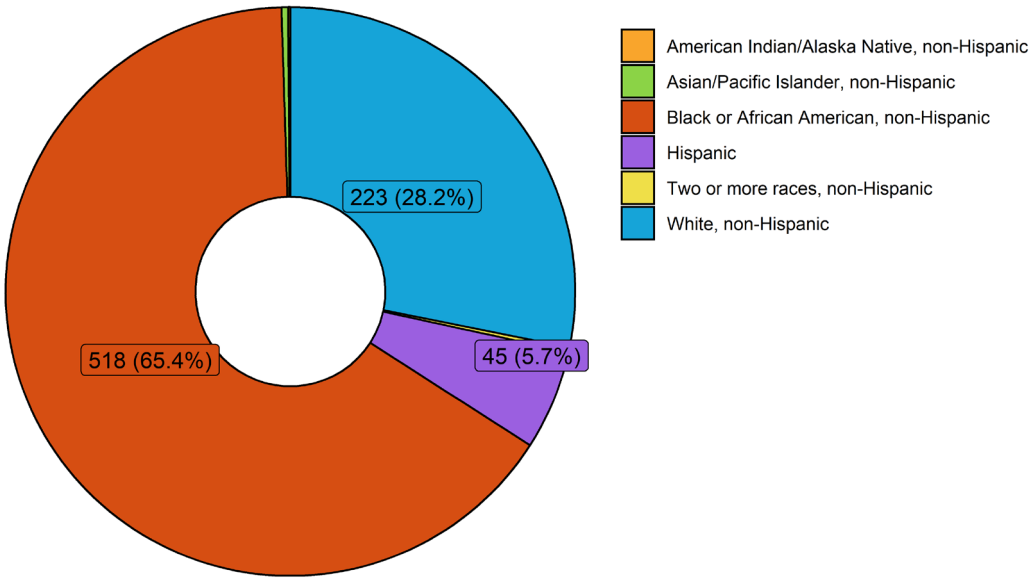
TNVDRS collects information regarding the transgender identity of the decedent, but this variable is not well-populated in any data year to date. Fewer than 10 decedents in our dataset are identified as transgender, but this should be considered a reflection of the fact that gender identity is not generally included in source documents instead of an accurate count.

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, but since fewer than ten decedents were categorized as a race other than white or black, only those two are shown.

## Table 3.1 Homicide Mortality Rate by Sex, Race/Ethnicity, and Age, 2021 (N = 792)

| | Count | Percent | Rate | 95% CI |
|---|---|---|---|---|
| **Sex** | | | | |
| Male | 624 | 78.8 | 18.2 | 16.8 - 19.7 |
| Female | 168 | 21.2 | 4.7 | 4 - 5.4 |
| **Race** | | | | |
| White | 268 | 33.8 | 4.9 | 4.3 - 5.5 |
| Black or African American | 518 | 65.4 | 43.8 | 40 - 47.5 |
| **Ethnicity** | | | | |
| Not Hispanic | 747 | 94.3 | 11.4 | 10.6 - 12.2 |
| Hispanic | 45 | 5.7 | 10.6 | 7.5 - 13.7 |
| **Age at Death** | | | | |
| Below 12 years | 17 | 2.1 | 1.7 | 0.9 - 2.5 |
| 12-17 years | 42 | 5.3 | 7.9 | 5.5 - 10.3 |
| 18-24 years | 172 | 21.7 | 27.5 | 23.4 - 31.6 |
| 25-34 years | 220 | 27.8 | 22.8 | 19.8 - 25.9 |
| 35-44 years | 158 | 19.9 | 17.9 | 15.1 - 20.7 |
| 45-54 years | 89 | 11.2 | 10.2 | 8.1 - 12.3 |
| 55-64 years | 56 | 7.1 | 6.1 | 4.5 - 7.7 |
| 65-74 years | 27 | 3.4 | 3.7 | 2.3 - 5.1 |
| 75+ years | 11 | 1.4 | 2.4 | 1 - 3.8 |

## Figure 3.1 Decedent Race and Ethnicity, 2021 (N = 1,247)



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 77.3 per 100,000 residents and black females have a rate of 13.5 per 100,000 residents. The homicide mortality rate for white males is 6.9 per 100,000 residents and white females have a rate of 3.0 per 100,000 residents. The rate for Hispanic males is 17.1 per 100,000 residents, and the count of Hispanic female decedents is too low to calculate a rate.

We also note that while there are fewer than ten female decedents below 12 years of age and fewer than ten female decedents between 12 and 17 years old at death, there were 14 total female decedents below the age of 18. We will not present a rate calculation because of its lack of comparability to the rates shown in Table 3.2.

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, males have a higher homicide rate than females, but the difference decreases with age after 25 years.

**Table 3.2 Homicide Mortality Rate by Race/Ethnicity and Age, by Sex, 2021**

| | Male (N = 624) | | | | Female (N = 128) | | | |
|---|---|---|---|---|---|---|---|---|
| | Count | Percent | Rate | 95% CI | Count | Percent | Rate | 95% CI |
| **Race** | | | | | | | | |
| White | 185 | 29.6 | 6.9 | 5.9 - 7.9 | 83 | 49.4 | 3.0 | 2.4 - 3.7 |
| Black or African American | 434 | 69.6 | 77.3 | 70 - 84.6 | 84 | 50.0 | 13.5 | 10.6 - 16.4 |
| **Ethnicity** | | | | | | | | |
| Not Hispanic | 586 | 93.9 | 18.3 | 16.8 - 19.8 | * | | * | |
| Hispanic | 38 | 6.1 | 17.1 | 11.7 - 22.5 | * | | * | |
| **Age at Death** | | | | | | | | |
| Below 12 years | 11 | 1.8 | 2.1 | 0.9 - 3.4 | * | | * | |
| 12-17 years | 34 | 5.4 | 12.5 | 8.3 - 16.7 | * | | * | |
| 18-24 years | 143 | 22.9 | 45.4 | 37.9 - 52.8 | 29 | 17.3 | 9.4 | 6 - 12.8 |
| 25-34 years | 181 | 29.0 | 37.8 | 32.3 - 43.3 | 39 | 23.2 | 8.1 | 5.5 - 10.6 |
| 35-44 years | 123 | 19.7 | 28.1 | 23.1 - 33.1 | 35 | 20.8 | 7.9 | 5.3 - 10.5 |
| 45-54 years | 68 | 10.9 | 15.7 | 12 - 19.5 | 21 | 12.5 | 4.8 | 2.7 - 6.8 |
| 55-64 years | 38 | 6.1 | 8.6 | 5.9 - 11.3 | 18 | 10.7 | 3.8 | 2.1 - 5.6 |
| 65+ years | 26 | 4.2 | 4.9 | 3 - 6.8 | 12 | 7.1 | 1.8 | 0.8 - 2.9 |

**Figure 3.2 Homicide Mortality Rate by Age by Sex, 2021 (N = 792)**

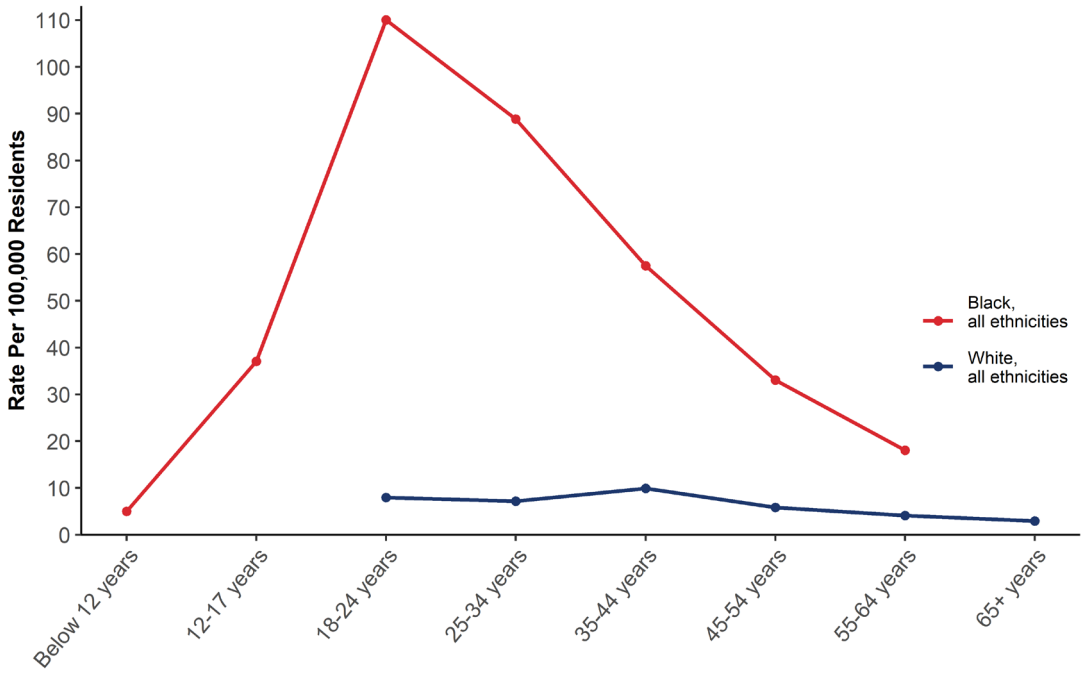

Table 3.3 stratifies sex and age by race. Ethnicity is excluded from this table due to the available population information; Hispanic decedents are included according to the race indicated. Statistics for decedents in racial groups other than white or black are excluded due to small counts.

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, the difference is not 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, 2021**

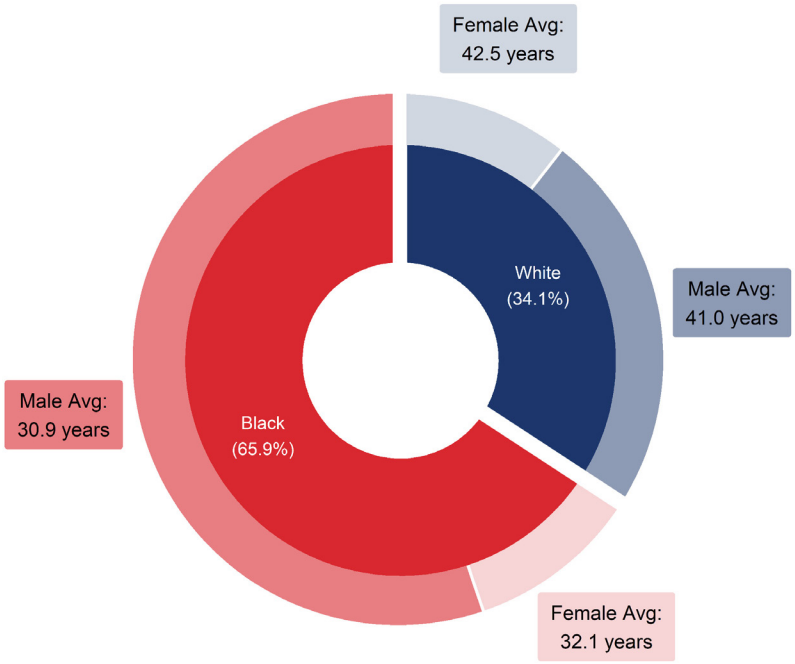
| | Black or African American (N = 518) | | | | White (N = 268) | | | |
|---|---|---|---|---|---|---|---|---|
| | Count | Percent | Rate | 95% CI | Count | Percent | Rate | 95% CI |
| **Sex** | | | | | | | | |
| Male | 434 | 83.8 | 77.3 | 70 - 84.6 | 185 | 69.0 | 6.9 | 5.9 - 7.9 |
| Female | 84 | 16.2 | 13.5 | 10.6 - 16.4 | 83 | 31.0 | 3.0 | 2.4 - 3.7 |
| **Age at Death** | | | | | | | | |
| Below 12 years | 10 | 1.9 | 5.0 | 1.9 - 8.1 | * | | * | |
| 12-17 years | 38 | 7.3 | 37.1 | 25.3 - 48.9 | * | | * | |
| 18-24 years | 135 | 26.1 | 110.1 | 91.5 - 128.6 | 37 | 13.8 | 7.9 | 5.4 - 10.5 |
| 25-34 years | 168 | 32.4 | 88.9 | 75.4 - 102.3 | 52 | 19.4 | 7.2 | 5.2 - 9.1 |
| 35-44 years | 88 | 17.0 | 57.5 | 45.5 - 69.5 | 68 | 25.4 | 9.9 | 7.5 - 12.2 |
| 45-54 years | 46 | 8.9 | 33.1 | 23.5 - 42.6 | 41 | 15.3 | 5.9 | 4.1 - 7.7 |
| 55-64 years | 25 | 4.8 | 18.0 | 11 - 25.1 | 31 | 11.6 | 4.1 | 2.7 - 5.6 |
| 65+ years | * | | * | | 30 | 11.2 | 2.9 | 1.9 - 4 |

**Figure 3.3 Homicide Mortality Rate by Age by Race, 2021 (N = 792)**




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 34.0 years, and female decedents have an average of 37.1 years. The difference is more substantial by race, where Black decedents have an average age at death of 31.1 years, and White decedents have an average age at death of 47.7 years. Figure 3.4 shows the variation in average across age and sex.

**Figure 3.4 Average Age at Death by Race and Sex, 2021 (N = 792)**



## 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 70.8% 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 in the year prior to death.

Table 3.4 shows the body mass index (BMI) in kg/m$^2$ 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 1.8% of male decedents and fewer than ten female decedents.

**Table 3.4 Body Mass Index (kg/m$^2$) at Autopsy by Sex, 2021**

| | Male (N = 624) | | Female (N = 168) | |
|---|---|---|---|---|
| | Count | Percent | Count | Percent |
| < 18.5 | 36 | 5.8 | 14 | 8.3 |
| 18.5 – 25 | 249 | 39.9 | 54 | 32.1 |
| 25 – 30 | 162 | 26.0 | 29 | 17.3 |
| > 30 | 166 | 26.6 | 65 | 38.7 |
| 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, 31.1% of decedents had opposite-sex partners, and the sex of 68.6% 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. Almost seventy-five percent (74.7%) of male decedents were never married, compared to 59.5% of female decedents. Female decedents were more likely to be either divorced, widowed, or separated (20.8%) than male decedents (13.6%). 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 (19.6%) than male decedents (11.7%). Regardless of marital status, females were more likely to be in a relationship at time of injury – 46.4% of females compared to 27.4% of males.

**Table 3.5 Decedent Intimate Partner Status by Sex, 2021**

| | Male (N = 624) | | | Female (N = 168) | | |
|---|---|---|---|---|---|---|
| | Currently in relationship | Not in relationship | Unknown | Currently in relationship | Not in relationship | Unknown |
| Married/Civil union/Domestic partnership | 72 | * | * | 33 | * | * |
| Never married or unknown | 82 | * | 377 | 34 | * | 63 |
| Widowed, divorced, or separated | 17 | * | 66 | 11 | * | 24 |

## Education, Occupation, and Housing

When considering variables such as education status and occupation, it is important to keep in mind that 7.4% of the homicide deaths in TNVDRS for 2021 were under the age of 18, and an additional 27.5% 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, 2021**

| | Male (N = 624) | | Female (N = 168) | |
|---|---|---|---|---|
| | Count | Percent | Count | Percent |
| **Education Level** | | | | |
| 8th grade or less | 28 | 4.5 | 12 | 7.1 |
| 9th to 12th grade, no diploma | 164 | 26.3 | 32 | 19.0 |
| HS graduate or GED completed | 314 | 50.3 | 72 | 42.9 |
| Some college | 74 | 11.9 | 26 | 15.5 |
| Associate's degree | 17 | 2.7 | 12 | 7.1 |
| Bachelor's degree | 15 | 2.4 | 10 | 6.0 |
| Graduate degree, or unknown | 12 | 1.9 | * | |
| **Military Status Per Death Certificate** | | | | |
| Decedent has ever served in the US Armed Forces | 33 | 5.3 | * | |
| No or unknown | 591 | 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. About fifty percent (50.3%) of male decedents and 42.9% 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. About four percent (4.4%) 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†, 2021 (N = 792)**

| | Count | Percent |
|---|---|---|
| Arts, Design, Entertainment, Sports, and Media | 13 | 1.6 |
| Building and Grounds Cleaning and Maintenance | 51 | 6.4 |
| Construction and Extraction | 72 | 9.1 |
| Food Preparation and Serving Related | 53 | 6.7 |
| Healthcare Practitioners and Technical | 11 | 1.4 |
| Installation, Maintenance, and Repair | 31 | 3.9 |
| Management | 41 | 5.2 |
| Missing, unknown, inadequate response to code | 90 | 11.4 |
| Not in workforce‡ | 130 | 16.4 |
| Office and Administrative Support | 19 | 2.4 |
| Personal Care and Service | 11 | 1.4 |
| Production | 36 | 4.5 |
| Protective Service | 10 | 1.3 |
| Sales and Related | 37 | 4.7 |
| Transportation and Material Moving | 160 | 20.2 |
| Other categories (Aggregated)* | 27 | 3.4 |

† 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", "Computer and Mathematical", "Educational Instruction and Library", "Farming, Fishing, and Forestry", "Healthcare Support", 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 System[6], and these are the categories shown in the table.

Twenty percent (20.2%) of decedents worked in positions categorized as "Transportation and Material Moving," and 16.4% of decedents were not in the workforce at the time of death. About eleven percent (11.4%) of decedents had missing or uncodable occupation data. The next most common category is "Construction and Extraction," where 9.1% 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: 144 decedents (23.1%)
- Construction and Extraction: 71 decedents (11.4%)
- Building and Grounds Cleaning and Maintenance: 40 decedents (6.4%)

*Female decedents*

- Sales and Related: 19 decedents (11.3%)
- Transportation and Material Moving: 16 decedents (9.5%)
- Food Preparation and Serving Related: 13 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 (25.0%) than males (14.1%) were categorized in this way. Additionally, occupation data was unable to be coded for 12.0% of males and 8.9% of females.

[6] The 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. None of the associated data elements had counts above ten decedents, but we are noting the variables that were checked because they may be of future interest. Data elements that are collected when information is available in reports associated with housing stability are:

- Whether the decedent was 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
- 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 2021 are firearm deaths; 86.9% of all homicides are due to firearm in this year.
- Female decedents were more likely to have a wound in the head, face, or neck; black decedents were more likely to have a wound in the extremities, abdomen, or thorax.
- In 50.5% of firearm homicides in 2021, 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 (54.2%) or ethanol (26.9%). For 17.5% 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 2021. The majority of deaths were due to firearm (86.9%), followed by sharp instrument (5.1%). The TNVDRS allows more than one method to be specified; 11.1% of decedents listed multiple mechanisms. In 75 of the 88 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 for female 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 (88.5%) compared to female decedents (81.0%). Female decedents had a higher percentage of deaths due to sharp instrument (8.3%) and personal weapons (4.2%). Personal weapons are defined in the coding manual as "fists, feet, and hands in actions such as punching, kicking or hitting."

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 (91.9%) compared to white decedents (78.0%). 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. For decedents below the age of 12 and above the age of 75, fewer than ten deaths were due to firearm, but the percentage is shown on the figure for comparison purposes; these points are blue to illustrate the fact that they are less stable statistically than the other points on the graph. We can see that from 12 to 64 years, a large majority of homicides are due to firearm.

## Table 4.1 Method of Death Among Homicide Decedents, 2021 (N = 792)

| | Count | Percent |
|---|---|---|
| Blunt instrument | 14 | 1.8 |
| Firearm | 688 | 86.9 |
| Personal weapons† | 24 | 3.0 |
| Sharp instrument | 40 | 5.1 |
| Strangulation or suffocation | 12 | 1.5 |
| Other (Aggregated)* | 14 | 1.8 |

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

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

## Figure 4.1 Method of Death, 2021 (N = 792)

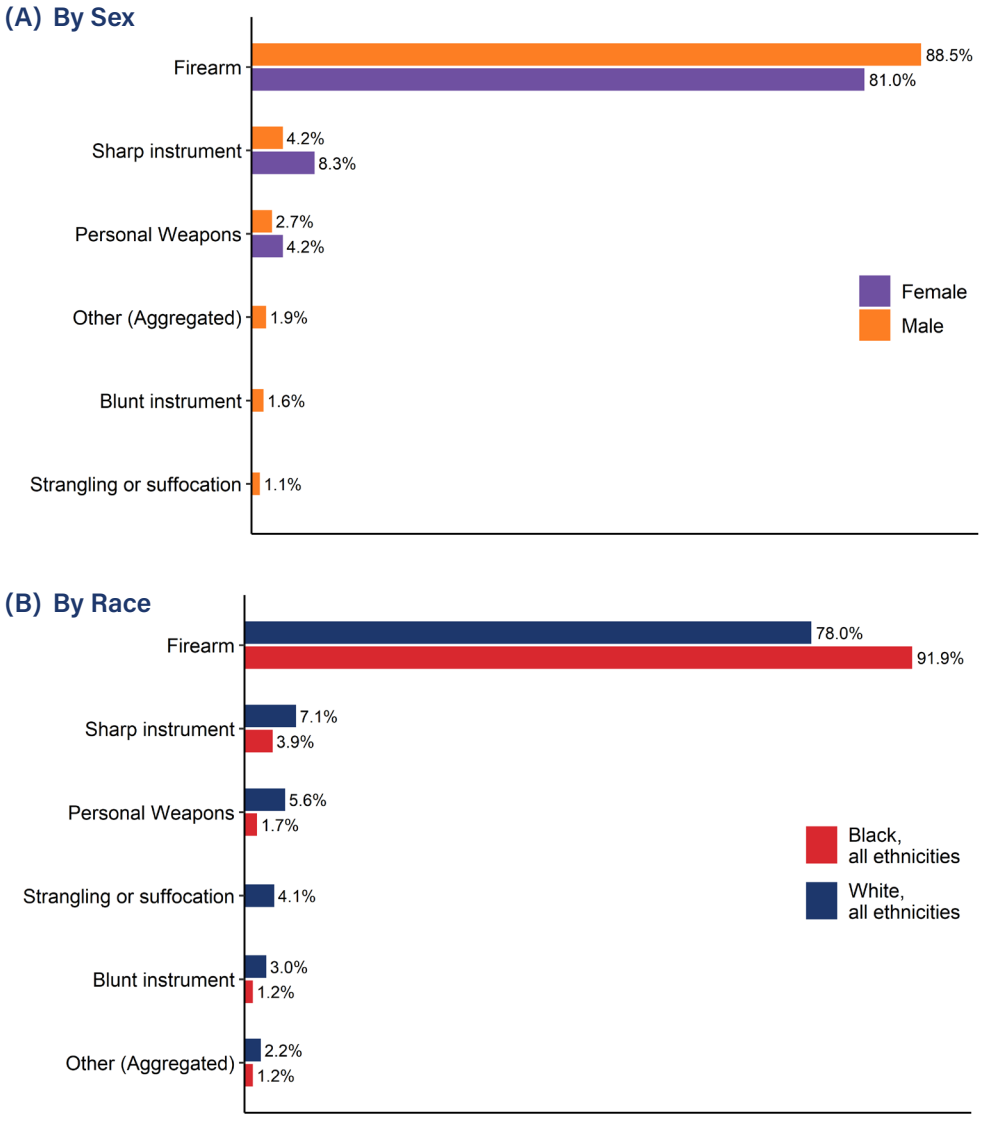
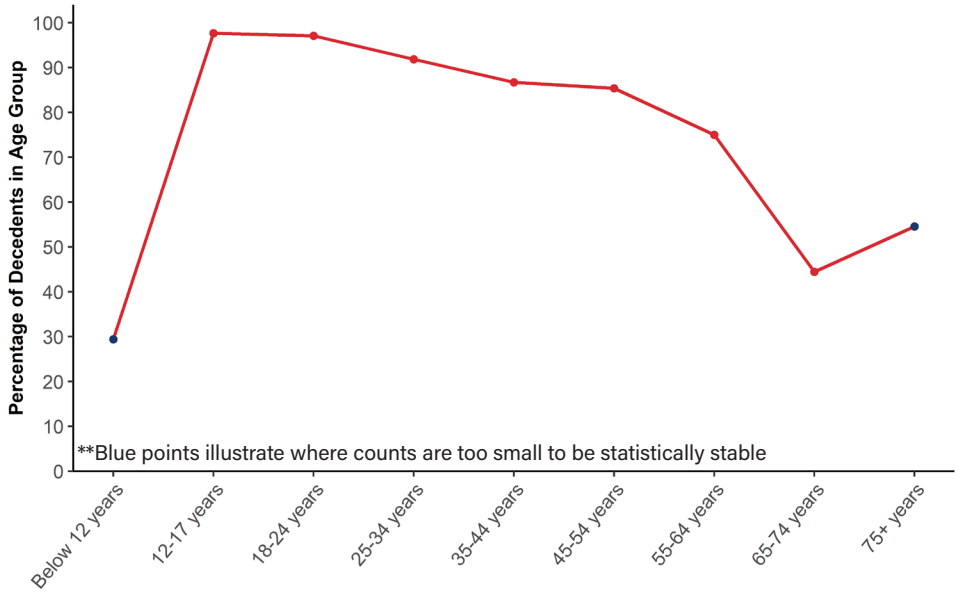


**Figure 4.2 Percentage of Firearm Decedents by Age, 2021 (N = 792)**



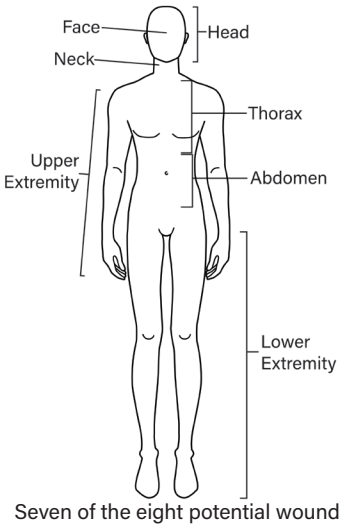

## Wound Location

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 728 decedents with one or more firearm or sharp instrument weapons indicated, and there were 690 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 (27.5%). 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 (45.9%); 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 16.

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 (61.1%) had at least one wound located on the thorax. The next most common wound location was an upper extremity (38.3%), followed by the head (30.6%). 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, 2021 (N = 728)

| | Count | Percent |
|---|---|---|
| **Number of Wounds to the Decedent** | | |
| 1 | 200 | 27.5 |
| 2 | 144 | 19.8 |
| 3-4 | 121 | 16.6 |
| 5-10 | 170 | 23.4 |
| More than 10 | 70 | 9.6 |
| Multiple, unspecified | 23 | 3.2 |
| **Number of Bullets that Hit the Decedent (N = 690*)** | | |
| 1 | 317 | 45.9 |
| 2 | 105 | 15.2 |
| 3-4 | 116 | 16.8 |
| 5-10 | 102 | 14.8 |
| More than 10 | 22 | 3.2 |
| Multiple, unspecified | 28 | 4.1 |
| **Location of Wound(s) on the Body** | | |
| Head | 223 | 30.6 |
| Face | 153 | 21.0 |
| Neck | 135 | 18.5 |
| Upper extremity | 279 | 38.3 |
| Spine | 57 | 7.8 |
| Thorax or upper back | 445 | 61.1 |
| Abdomen or lower back | 190 | 26.1 |
| Lower extremity | 172 | 23.6 |

* 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, 2021 (N = 728)

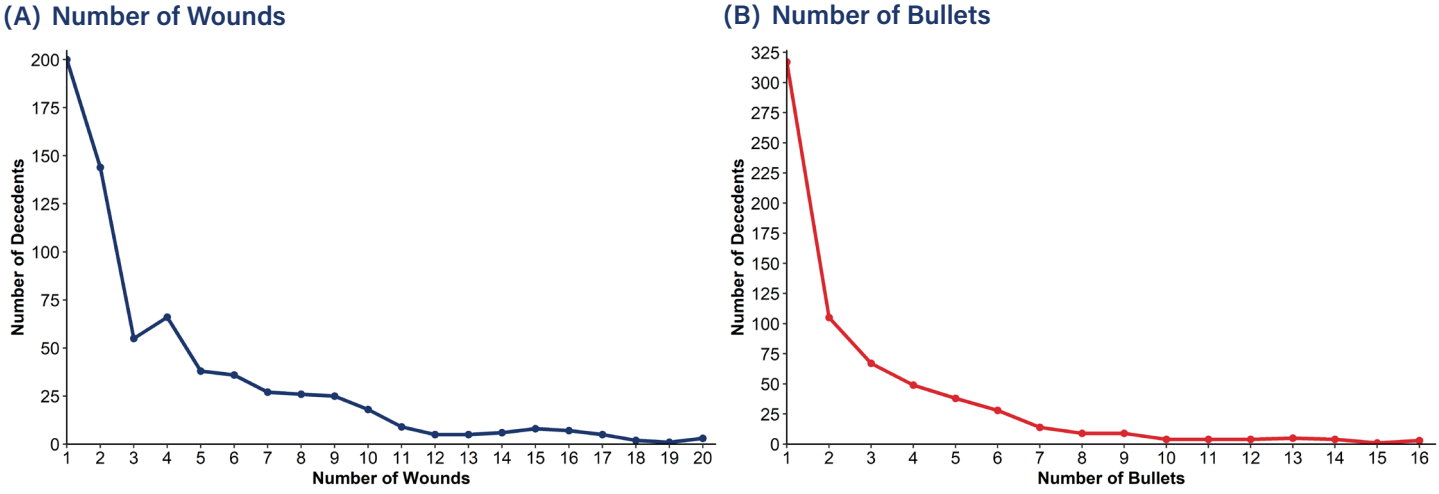
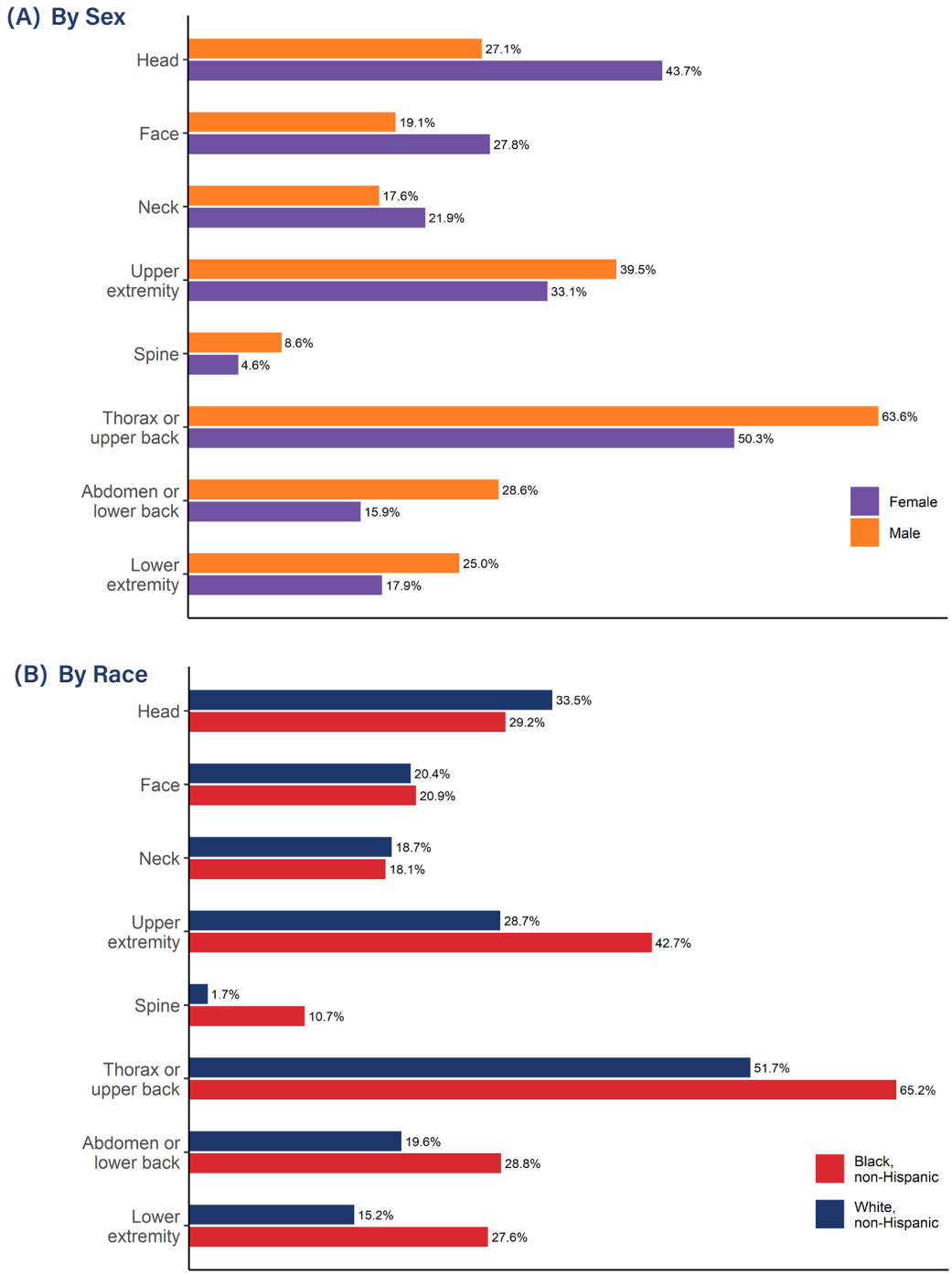


**Figure 4.4 Wound Location on Firearm and Sharp Instrument Decedents, 2021 (N = 728)**




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

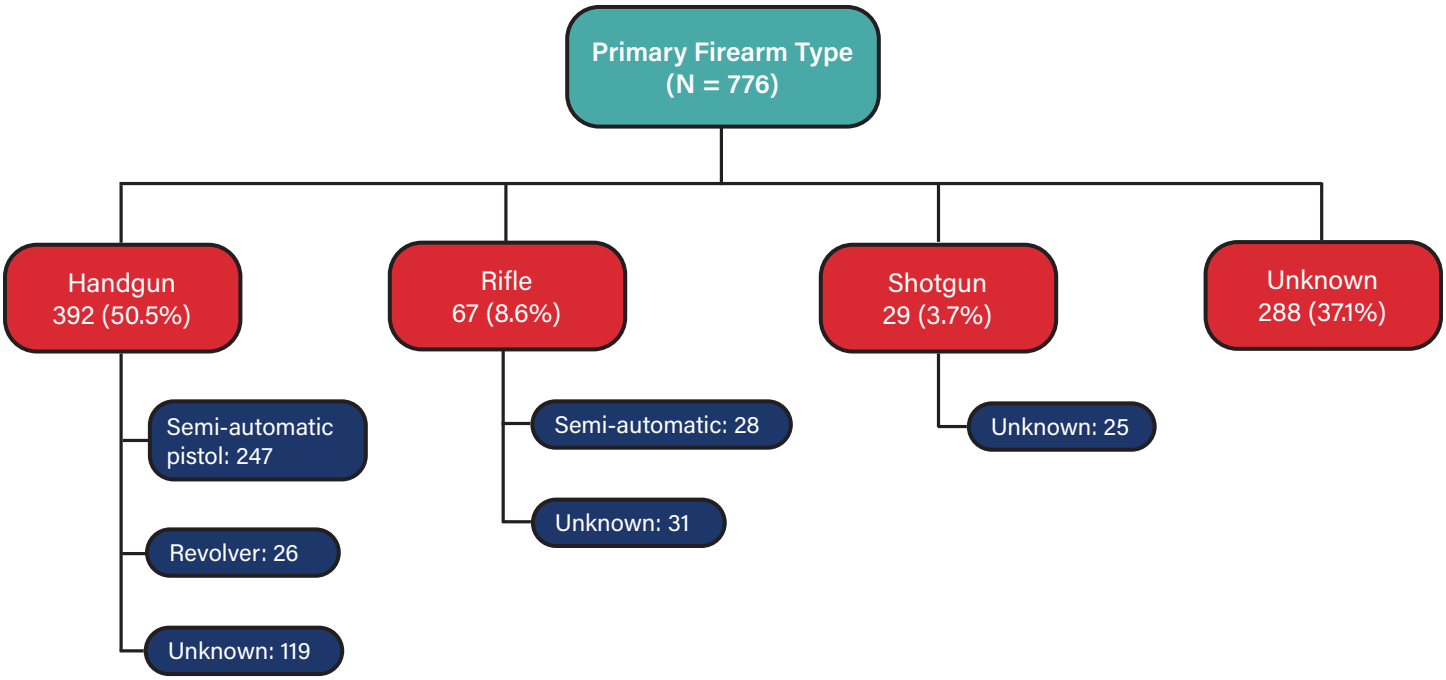
Figure 4.4(b) shows a higher percentage of white decedents having wounds to the head when compared to black decedents, but a higher percentage of black decedents have wounds in the extremities (either upper or lower), the spine, the thorax or upper back, or the abdomen or lower back. Comparable percentages of both black and white decedents have wounds in the face or neck.

## 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 728 firearm deaths in the 2021 dataset. Because TNVDRS collects information about all available firearms, we are able to present information on incidents involving multiple firearms; there were 776 firearms listed in these incidents.

About half of firearms used were handguns (50.5%), with semi-automatic pistols being the most common type of handgun. About nine percent (8.6%) of firearms were rifles, with semi-automatic rifles being the most common type. Another four percent (3.7%) of firearms were shotguns, where the majority were of unknown type. The remaining 37.1% 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, 2021 (N = 776)**




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 776 firearms involved in homicide deaths in 2021, it is unknown whether the firearm was stored locked for 86.6% of decedents, unknown whether the firearm was stored loaded for 85.8% of decedents, unknown whether the firearm was reported as stolen for 89.7% of decedents, and the owner of the firearm was unknown for 89.7% 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

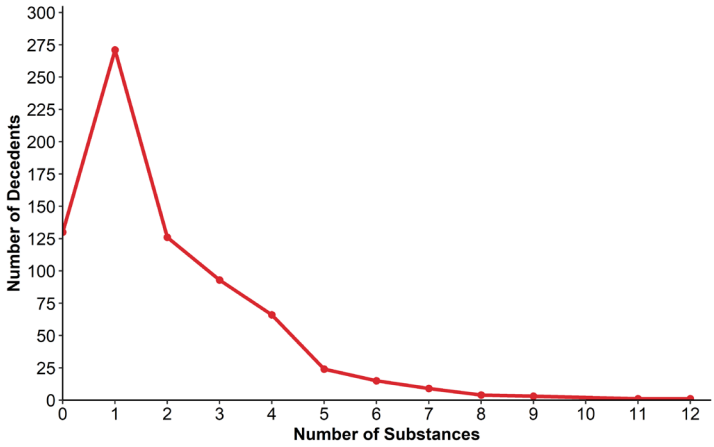
We have toxicology information for 743 (93.8%) of the 792 homicide deaths in the 2021 dataset. We note that information being unavailable to TNVDRS does not necessarily mean toxicology testing was not performed, simply that if testing was done, those reports were not sent to TNVDRS.

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, 2021 (N = 743)**

| | Count | Percent |
|---|---|---|
| None | 130 | 17.5 |
| 1 | 271 | 36.5 |
| 2 | 126 | 17.0 |
| 3 | 93 | 12.5 |
| 4 | 66 | 8.9 |
| 5 | 24 | 3.2 |
| 6 | 15 | 2.0 |
| 7 or more | 18 | 2.4 |

**Figure 4.6 Number of Substances per Decedent, including Metabolites, 2021 (N = 743)**




The average number of substances present was 1.91 per decedent. No decedent had more than twelve substances present, and 17.5% of deaths due to methods other than poisoning 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, 2021 (N = 743)**

| | Count | Percent |
|---|---|---|
| No substances present | 130 | 17.5 |
| Antidepressant | 14 | 1.9 |
| Benzodiazepine | 36 | 4.8 |
| Buprenorphine | 11 | 1.5 |
| Chemical agents* | 13 | 1.7 |
| Cocaine | 78 | 10.5 |
| Ethanol | 200 | 26.9 |
| Fentanyl | 74 | 10.0 |
| Fentanyl analogs and precursors | 18 | 2.4 |
| Hydrocodone | 13 | 1.7 |
| Marijuana | 403 | 54.2 |
| Methamphetamine | 131 | 17.6 |
| Other medications | 60 | 8.1 |
| Oxycodone | 38 | 5.1 |
| Oxymorphone | 21 | 2.8 |
| Prescription opioid, excluding fentanyl | 21 | 2.8 |

* Includes carbon monoxide, acetone, and isopropanol

Table 4.4 shows the substances present after this de-duplication process. The most common substance was marijuana; 54.2% of decedents tested positive for marijuana. The next most common substance was ethanol (26.9%), followed by methamphetamine (17.6%) and cocaine (10.5%). The "other medications" category is an aggregation of small-count substances such as antipsychotics, sedatives, and acetaminophen, and the "chemical agents" category is an aggregation of small-count substances such as carbon monoxide and other volatile agents. 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 (78.6%).
- 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 792 homicide decedents in the 2021 dataset are associated with 807 suspects; TNVDRS collected demographics about up to five decedents in this data year. Table 5.1 shows the number of suspects per decedent. The majority of decedents (72.2%) are associated with one suspect, but 12.1% of decedents are associated with multiple suspects. Suspect information is unknown for 15.7% of decedents.

**Table 5.1 Number of Suspects per Decedent, 2021 (N = 792)**

| | Count | Percent |
|---|---|---|
| None or unknown | 124 | 15.7 |
| 1 | 572 | 72.2 |
| 2 | 65 | 8.2 |
| 3 or more | 31 | 3.9 |

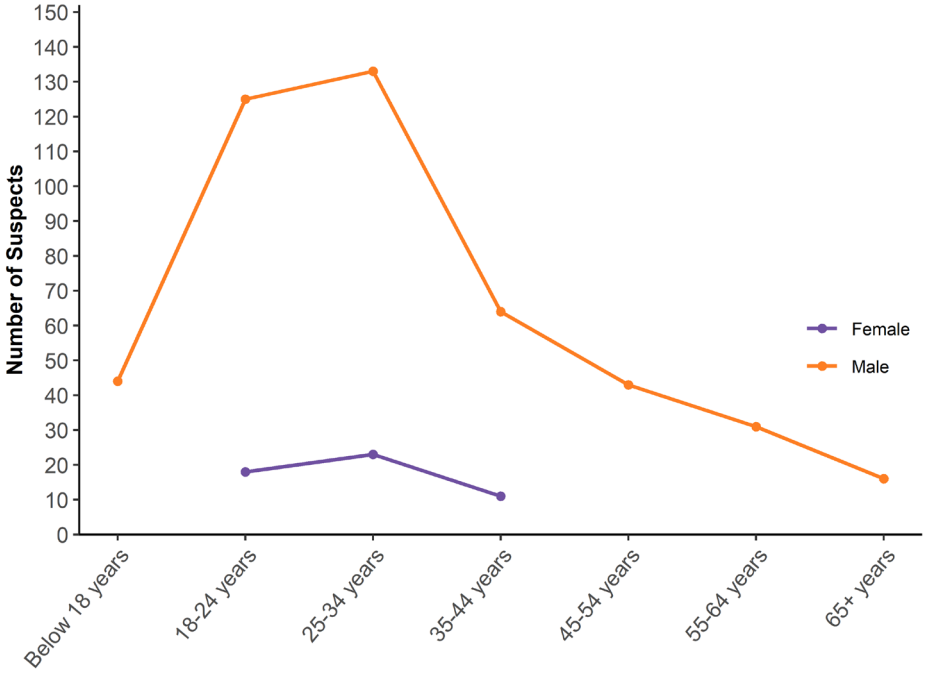
Table 5.2 displays demographic information for all suspects. Almost seventy-nine percent (78.6%) of suspects are male, although the sex of 11.8% of suspects is unknown. Fifty-seven percent (57.1%) of suspects are black, but we again see that there is a relatively high percentage of suspects of unknown race (22.8%). The largest percentage of suspects are of unknown age (35.6%), but among decedents of known age, the highest proportion is between 25 and 34 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.

## Table 5.2 Homicide Suspect Sex, Race, and Age, 2021 (N = 807)

| | Count | Percent |
|---|---|---|
| **Sex** | | |
| Male | 634 | 78.6 |
| Female | 78 | 9.7 |
| Unknown | 95 | 11.8 |
| **Race** | | |
| White | 162 | 20.1 |
| Black or African American | 461 | 57.1 |
| Other or unknown | 184 | 22.8 |
| **Age** | | |
| Below 18 years | 46 | 5.7 |
| 18-24 years | 143 | 17.7 |
| 25-34 years | 156 | 19.3 |
| 35-44 years | 75 | 9.3 |
| 45-54 years | 50 | 6.2 |
| 55-64 years | 34 | 4.2 |
| 65+ years | 16 | 2.0 |
| Unknown | 287 | 35.6 |

## Figure 5.1 Homicide Suspect Age by Sex, 2021 (N = 807)



## Relationship Circumstances

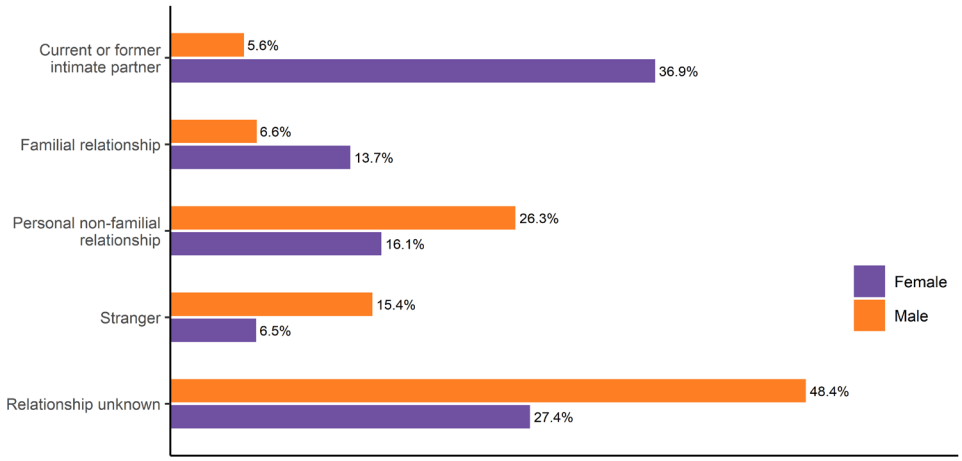
Table 5.3 shows information collected about the nature of the relationship between the suspect and decedent, if known. For 43.1% of suspects, their relationship to the decedent is unknown. Among suspects with sufficient information, the largest percentage (13.3%) were strangers to the decedent, followed by acquaintance (10.3%) and known to the decedent in an unspecified way (8.3%).

**Table 5.3 Primary Relationship of Suspect to Decedent, 2021 (N = 807)**

| | Count | Percent |
|---|---|---|
| Spouse or ex-spouse | 26 | 3.2 |
| Girlfriend or boyfriend, current or former | 56 | 6.9 |
| Parent | 22 | 2.7 |
| Child | 12 | 1.5 |
| Other familial relationship | 30 | 3.7 |
| Acquaintance | 83 | 10.3 |
| Friend | 18 | 2.2 |
| Other personal relationship | 23 | 2.9 |
| Decedent was a current or former partner of suspect's current or former partner | 15 | 1.9 |
| Known to decedent, unspecified | 67 | 8.3 |
| Stranger | 107 | 13.3 |
| Relationship unknown | 348 | 43.1 |

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 (36.9%) are killed by current or former intimate partners than male decedents (5.6%). We also see a higher percentage of females (13.7%) 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, or by strangers. Overall, we also see that male decedents are more likely to be killed by a suspect with an unknown relationship to them.

**Figure 5.2 Relationship of Suspect to Decedent by Sex, 2021 (N = 792)**



## 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, 2021 (N = 807)**

| | Count | Percent |
|---|---|---|
| Suspect had contact with law enforcement in the year prior to injury | 39 | 4.8 |
| Suspected alcohol use by the suspect preceding the incident | 25 | 3.1 |
| Suspected substance use by the suspect preceding the incident | 54 | 6.7 |
| Suspect attempted suicide (fatally or non-fatally) after the death of the decedent | 29 | 3.6 |
| History of abuse of decedent by this suspect | 10 | 1.2 |
| Attack is believed to be the direct result of mental illness | 11 | 1.4 |

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. 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:

- 45.1% of female decedents with available circumstance data were classified as homicides due to intimate partner violence.
- 37.1% of decedents had an argument that lead to death; this percentage was relatively consistent across sex, and higher for NH white decedents than NH black decedents.
- 31.5% 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 circumstances 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 753 homicide decedents in this dataset, so the denominator for any percentages calculated here will be 753.

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:

- Decedent had a history of abuse as a child
- Prior protective services report on a child decedent's household
- Substance abuse in child decedent's household

**Table 6.1 Circumstances Related to Family and Community, 2021 (N = 753)**

| | Count | Percent |
|---|---|---|
| Decedent was a perpetrator of violence in the previous month prior to injury | 26 | 3.5 |
| Decedent experienced violence in the previous month prior to injury | 23 | 3.1 |
| Incident was related to immediate or ongoing intimate partner violence | 124 | 16.5 |
| Jealousy or distress over a current or former intimate relationship led to the incident | 21 | 2.8 |
| Relationship problems with a family member other than an intimate partner appear to have contributed | 50 | 6.6 |
| Family relationship problem was a crisis | 40 | 5.3 |
| Problems with a friend or associate appear to have contributed to injury | 67 | 8.9 |
| Incident was related to abuse or neglect by a caretaker | 18 | 2.4 |
| Decedent had contact with or was otherwise known to authorities | 264 | 35.1 |
| Decedent's household had contact with local authorities | 33 | 4.4 |

Four percent (3.5%) 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. Three percent (3.1%) 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 16.5% 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 2.8% 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 6.6% 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 8.9% of decedents, relationship problems with a friend or associate other than an intimate partner or family member appear to have contributed to injury.

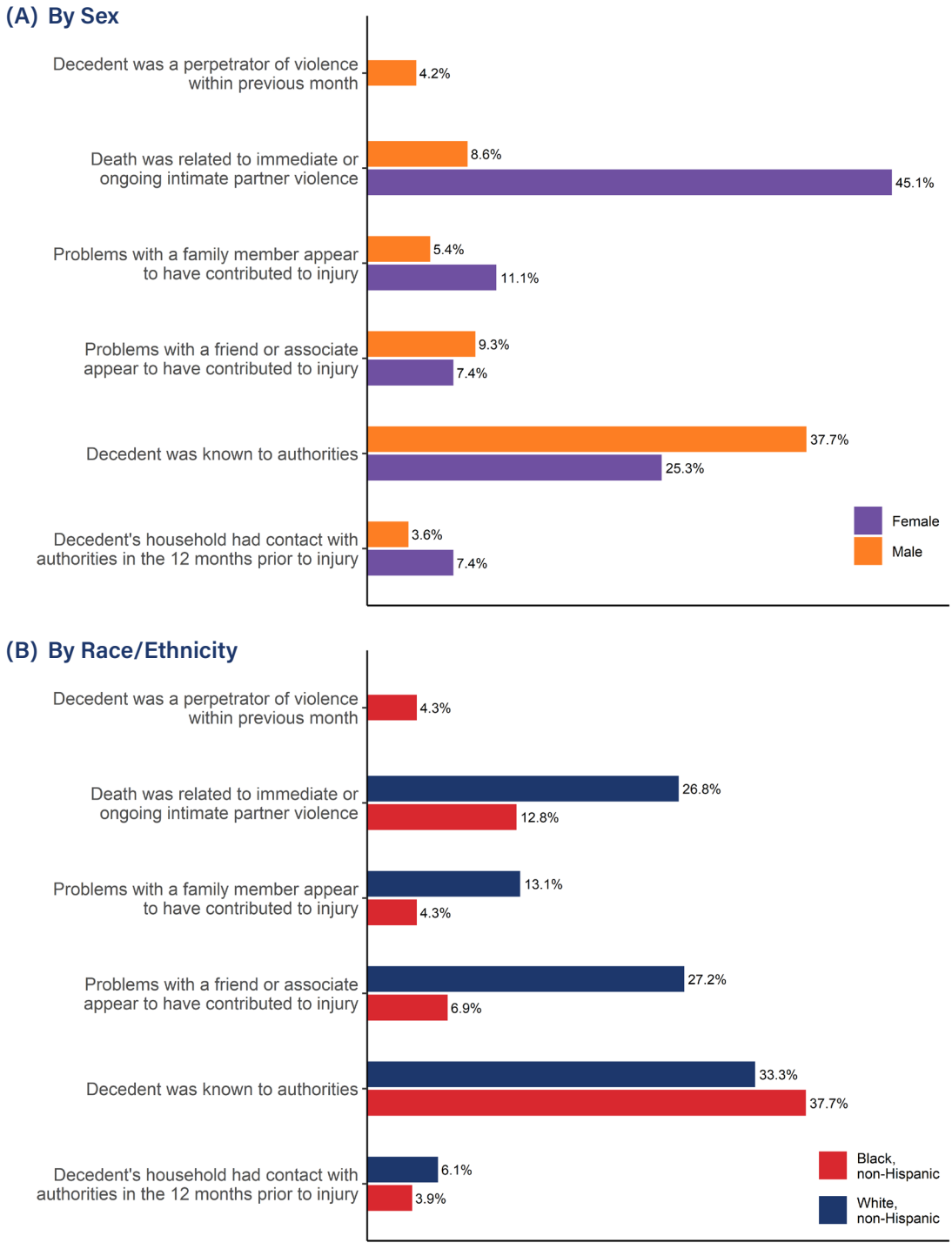
About two percent (2.4%) of decedents experienced abuse or neglect by a caregiver that resulted in death. This may be child abuse, elder abuse, or other abuse by a caretaker. Any form of abuse or neglect may be endorsed here: physical, psychological, sexual, or others.

TNVDRS also collects information on whether decedents had interactions with authorities such as law enforcement, child protective services, or first responders. About thirty-five percent (35.1%) of decedents had contact with or were otherwise known to authorities, and the decedent's household had contact with local authorities for 4.4% 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 (45.1%) than male decedents (8.6%). A higher percentage of male decedents were known to authorities prior to injury (37.7%) than female decedents (25.3%). 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 higher percentage of NH white decedents died due to intimate partner violence (26.8%) than NH black decedents (12.8%). Additionally, problems with both family members and friend/associates were endorsed for a higher percentage of NH decedents. Most other circumstances shown in Figure 6.1(b) have relatively comparable percentages.

**Figure 6.1 Circumstances Related to Family and Community, 2021 (N = 753)**



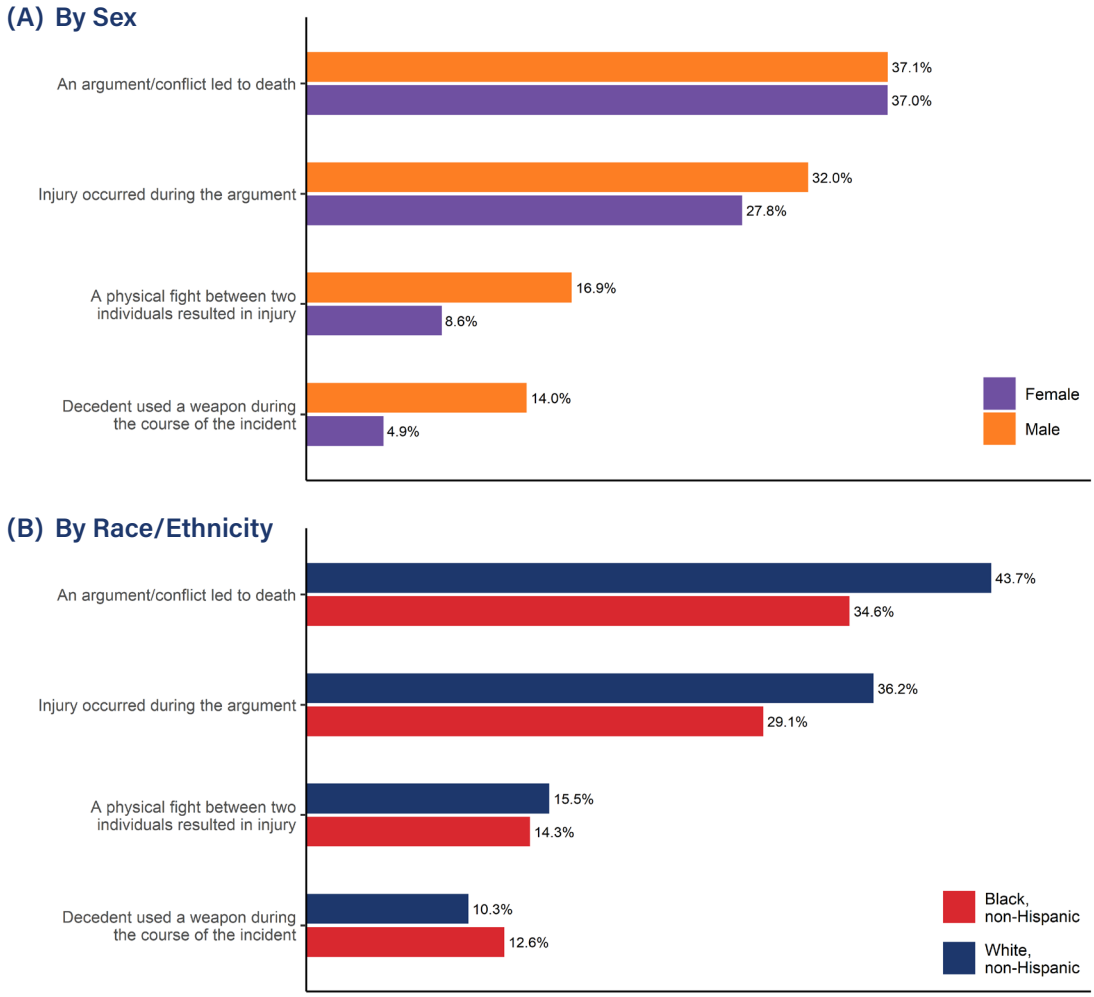
## Conflict Leading to Injury

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 (37.1%); the majority of decedents that endorsed this variable also had the injury occurring during the argument itself. Additionally, 15.1% of decedents were in a physical fight between two individuals that resulted in injury, and 12.1% 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, 2021 (N = 753)**

| | Count | Percent |
|---|---|---|
| An argument or conflict led to death of the decedent | 279 | 37.1 |
| Injury occurred during argument | 234 | 31.1 |
| Injury occurred within 24 hours, but not during argument | 31 | 4.1 |
| Injury occurred more than 24 hours after argument or had unknown timing | 12 | 1.6 |
| A physical fight between two individuals resulted in injury | 114 | 15.1 |
| Decedent used a weapon during the course of the incident | 91 | 12.1 |

**Figure 6.2 Circumstances Related to Conflict Causing Injury, 2021 (N = 753)**



While a higher percentage of male decedents was in a physical fight leading to injury than female decedents, as well as a higher percentage of male decedents using a weapon during the incident, the percentage of male and female decedents having an argument or conflict leading to death was similar. A slightly higher percentage of males experienced injury during the argument itself, but the difference is not as substantial as the other circumstances in Figure 6.2(a).

The percentages of NH white and NH black decedents being in a physical fight or using a weapon during the incident are relatively close. However, the percentage of NH white decedents being in an argument leading to death is higher than the percentage of NH black decedents. It also appears that a higher percentage of NH white decedents were also injured during the argument itself.

## 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 LE officer who was killed while assisting a crime victim

Twenty-eight percent (28.3%) of decedents' deaths were precipitated by another serious crime, and for 21.8% of decedents, the precipitating crime was in progress when injury occurred. About five percent (5.2%) of incidents were classified as gang-related, being either motivated by gang activity or having suspected gang member involvement. For 11.2% of decedents, drug dealing 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 (38.0%), followed by robbery (28.7%). These percentages are calculated using the 171 incidents where a precipitating crime was listed.

**Table 6.3 Circumstances Related to Criminal and Legal Issues, 2021 (N = 753)**

| | Count | Percent |
|---|---|---|
| Death was precipitated by another serious crime | 213 | 28.3 |
| Precipitating crime was in progress at the time of the incident | 164 | 21.8 |
| Death was classified as gang-related | 39 | 5.2 |
| Yes, gang motivated | 11 | 1.5 |
| Yes, suspected gang member involvement | 27 | 3.6 |
| Drug dealing or use is suspected to have played a role in the incident | 84 | 11.2 |

**Figure 6.3 Nature of Precipitating Crimes, 2021 (N = 171)**

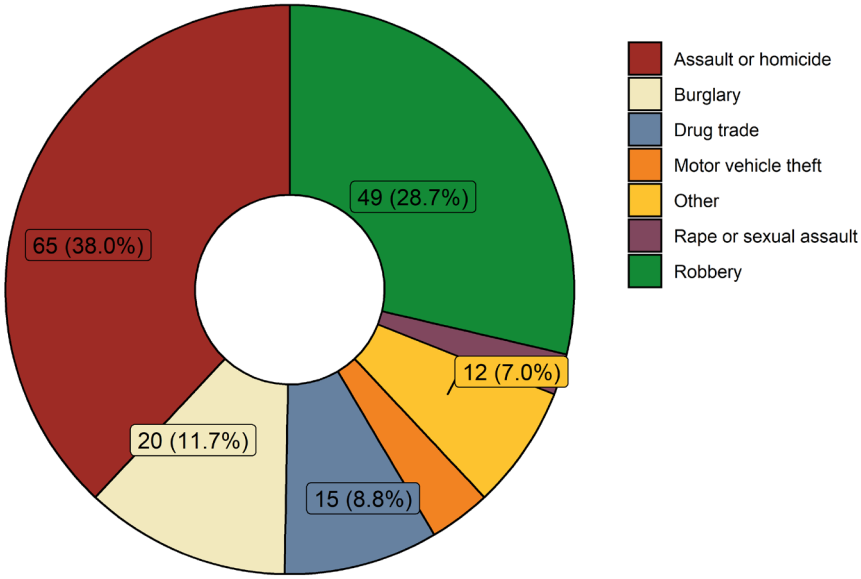
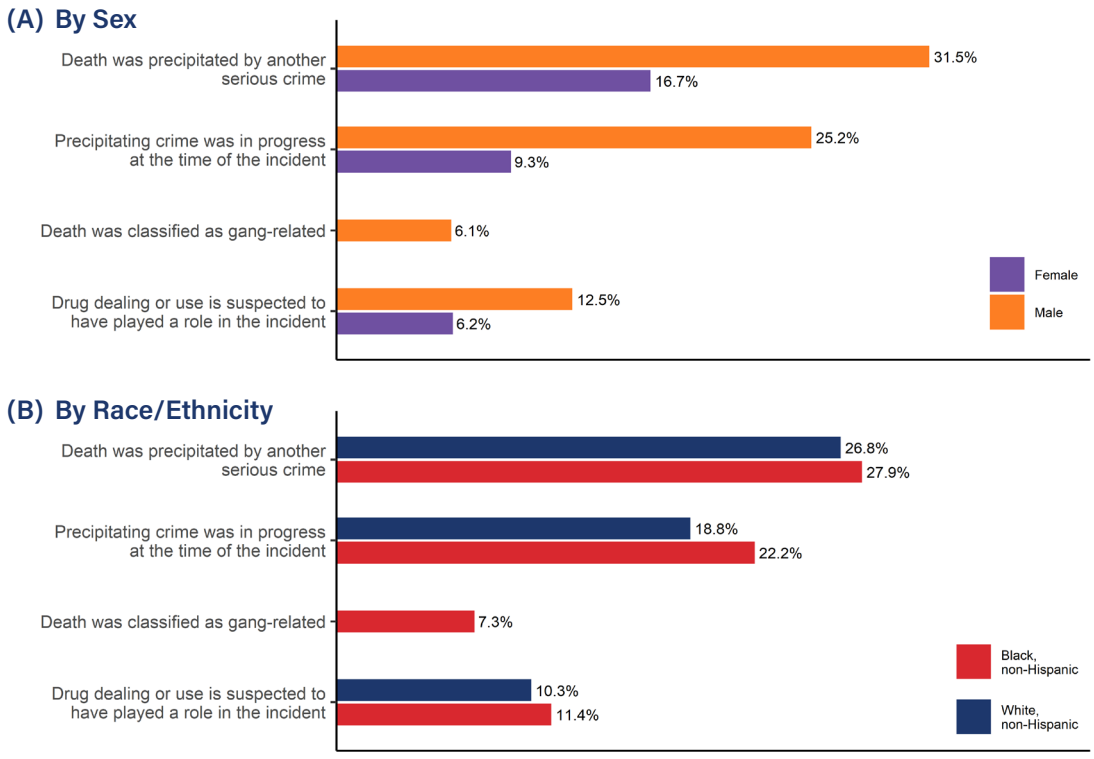



Figure 6.4 stratifies the counts from Table 6.3 by sex and race. A higher percentage of male decedents have these circumstances endorsed compared to female decedents overall. With the exception of death being classified as gang-related, which a higher percentage of NH black decedents have endorsed, the remaining circumstances are endorsed by similar percentages of both NH black and white decedents.

**Figure 6.4 Circumstances Related to Criminal and Legal Issues, 2021 (N = 753)**



# VII. Acknowledgements

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Adamsville Police Department
Anderson County Sheriff's Office
Ashland City Police Department
Bartlett Police Department
Bedford County Sheriff's Office
Benton County Sheriff's Office
Blount County Sheriff's Office
Bolivar Police Department
Bradley County Sheriff's Office
Brentwood Police Department
Brighton Police Department
Bristol Police Department
Brownsville Police Department
Campbell County Sheriff's Office
Cannon County Sheriff's Office
Carroll County Sheriff's Office
Carter County Sheriff's Office
Caryville Police Department
Chattanooga Police Department
Chester County Sheriff's Office
Church Hill Police Department
City of Alcoa Police Department
City of Henderson Police Department
Claiborne County Sheriff's Office
Clarksville Police Department
Clay County Sheriff's Office
Cleveland Police Department
Cocke County Sheriff's Office
Coffee County Sheriff's Office
Collierville Police Department
Columbia Police Department
Cookeville Police Department
Coopertown Police Department
Covington Police Department
Crockett County Sheriff's Office
Crossville Police Department
Cumberland County Sheriff's Office
Decatur County Sheriff's Office
DeKalb County Sheriff's Office
Dickson County Sheriff's Office
Dickson Police Department
Dyer County Sheriff's Office
Dyersburg Police Department
East Ridge Police Department
Elizabethton Police Department
Erwin Police Department
Fayette County Sheriff's Office
Fayetteville Police Department
Fentress County Sheriff's Office
Franklin County Sheriff's Office
Franklin Police Department
Gallatin Police Department
Gatlinburg Police Department
Germantown Police Department
Gibson County Sheriff's Office
Giles County Sheriff's Office
Goodlettsville Police Department
Grainger County Sheriff's Office
Greene County Sheriff's Office
Greeneville Police Department
Grundy County Sheriff's Office
Hamblen County Sheriff's Office
Hamilton County Sheriff's Office
Harriman Police Department
Hawkins County Sheriff's Office
Hendersonville Police Department
Henry County Sheriff's Office
Houston County Sheriff's Office
Humboldt Police Department
Huntingdon Police Department
Jackson Police Department
Jefferson County Sheriff's Office
Johnson City Police Department
Johnson County Sheriff's Office
Jonesborough Police Department
Kingsport Police Department
Knox County Sheriff's Office
Knoxville Police Department
Lauderdale County Sheriff's Office
LaVergne Police Department
Lawrence County Sheriff's Office
Lawrenceburg Police Department
Lebanon Police Department
Lenoir City Police Department
Lewis County Sheriff's Office
Lewisburg Police Department
Lexington Police Department
Loudon County Sheriff's Office
Macon County Sheriff's Office
Madison County Sheriff's Office
Manchester Police Department
Marion County Sheriff's Office
Marshall County Sheriff's Office
Martin Police Department
Maryville Police Department
Mason Police Department
McKenzie Police Department
McMinn County Sheriff's Office
McMinnville Police Department
McNairy County Sheriff's Office
Meigs County Sheriff's Office
Memphis Police Department
Metro Nashville Police Department
Milan Police Department
Millington Police Department
Montgomery County Sheriff's Office
Moore County Sheriff's Office
Morgan County Sheriff's Office
Morristown Police Department
Mosheim Police Department
Mount Juliet 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
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
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
Spring Hill Police Department
Springfield Police Department
Stewart County Sheriff's Office
Sullivan County Sheriff's Office
Sumner County Sheriff's Office
Tennessee Highway Patrol
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
Warren County Sheriff's Office
Washington County Sheriff's Office
Waverly Police Department
Wayne County Sheriff's Office
Weakley County Sheriff's Office
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


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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