



# 2022 Data Report

South Dakota Department of Health

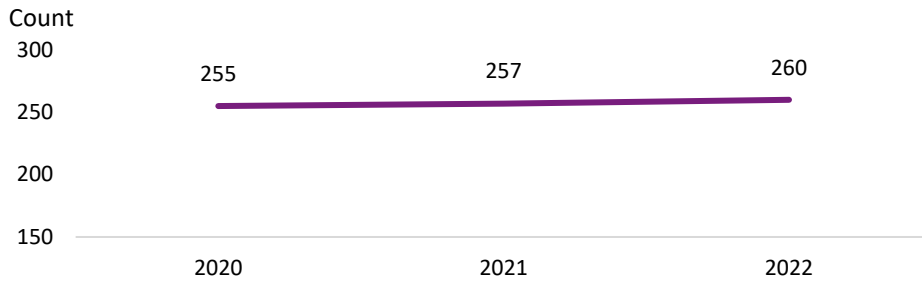
## South Dakota Violent Death Reporting System

The South Dakota Violent Death Reporting System (SD-VDRS) is a Centers for Disease Control and Prevention (CDC)-funded, statewide anonymous surveillance system that collects information on suicides, homicides, legal intervention deaths, deaths of undetermined intent, and unintentional firearm-related deaths. SD-VDRS collects information from death certificates, coroner reports and law enforcement reports. The goal of this system is to understand and aid in the prevention of violent deaths. This report summarizes the occurrence of violent deaths where the injury occurred in South Dakota, regardless of residency, from 2020 to 2022.

### Violent Deaths

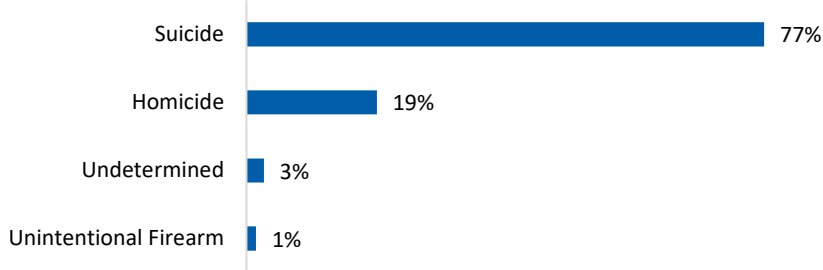
In South Dakota, there were 772 people who died as a result of violence from 2020 to 2022. 2020 was the first year of statewide data collection for SD-VDRS, which there was information collected on 255 violent deaths. In 2022, there were 260 injuries in South Dakota that resulted in a violent death.

**Figure 1: Violent Deaths by Year**

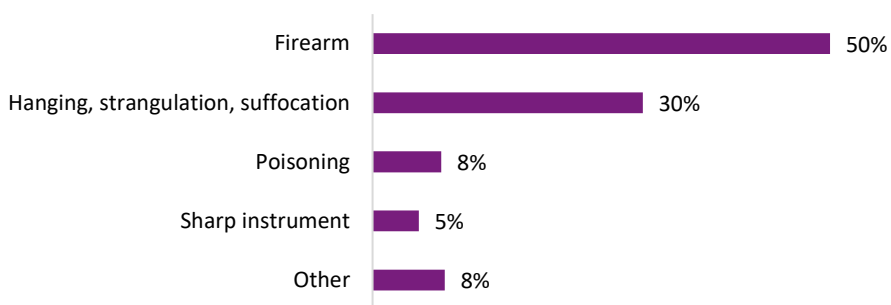


Of the 772 violent deaths, 77% were suicide, 19% homicide, 3% undetermined intent, and 1% were unintentional firearm deaths (Figure 2). Firearms were the leading mechanism of violent deaths (50%), followed by hanging, strangulation, or suffocation (30%), and poisoning (8%) (Figure 3).

**Figure 2: Violent Deaths by Manner, 2020-2022**



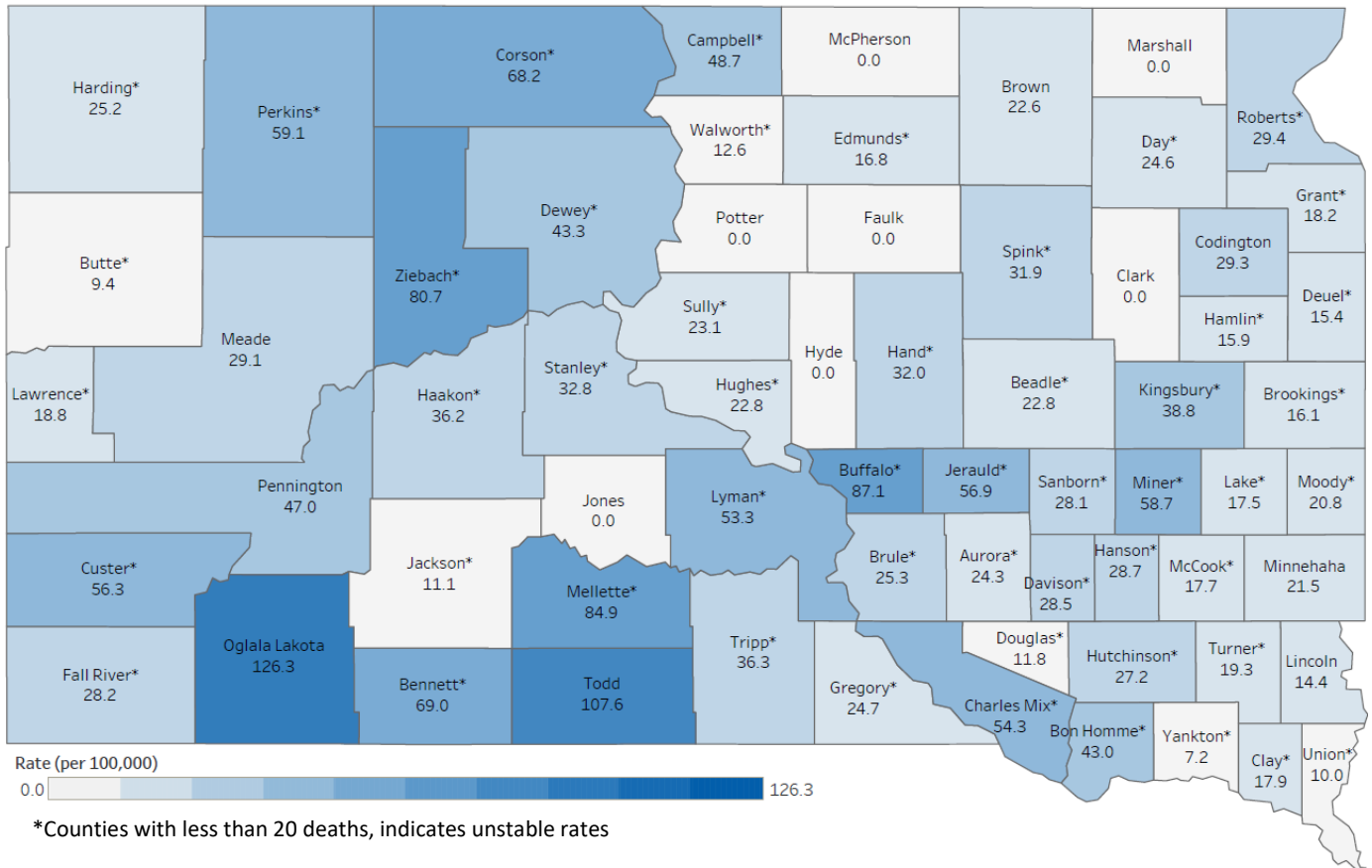
**Figure 3: Violent Deaths by Mechanism, 2020-2022**



### Violent Deaths by County of Injury

The figure below shows violent death rates by county of injury. Among counties with stable rates for comparison (≥20 deaths), the top 5 counties with the highest rates of violent deaths included Oglala Lakota (126.3 per 100,000), Todd (107.6 per 100,000), Pennington (47.0 per 100,000), Codington (29.3 per 100,000), and Meade (29.1 per 100,000).

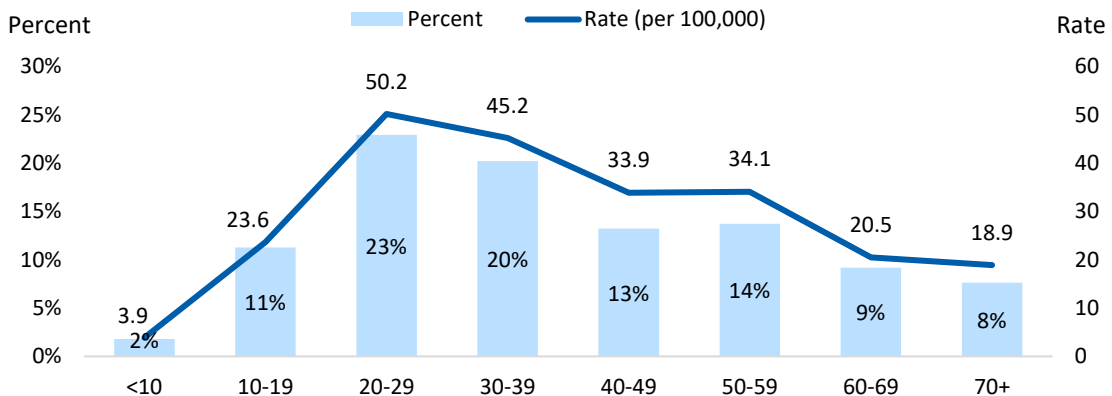
Figure 4: Violent Deaths by County, 2020-2022



### Violent Death Demographics

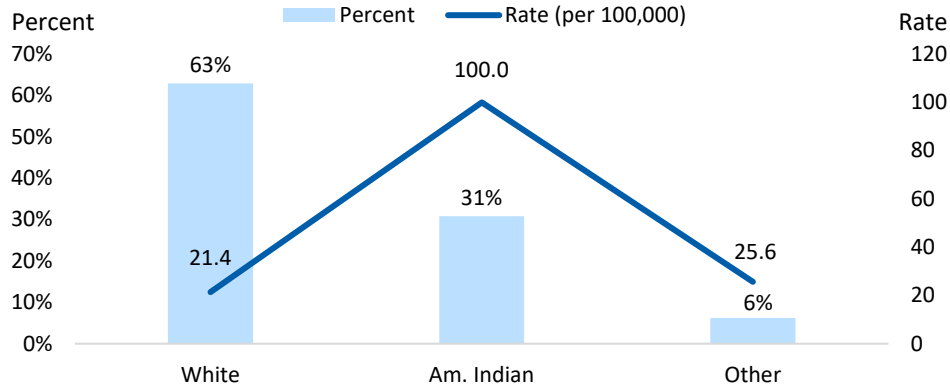
Males made up 77% of violent deaths and were 3.3 times more likely to die from violence as females (43.6 vs 13.2 per 100,000, respectively). South Dakotans aged 20-29 years made up the highest proportion of violent deaths and had the highest violent death rate (50.2 per 100,000) (Figure 5).

Figure 5: Violent Deaths by Age Group, 2020-2022



The largest proportion of violent deaths were among the White population (63%), followed by the American Indian population (31%). The American Indian violent death rate was 4.7 times higher than the White death rate (100.0 vs 21.4 per 100,000, respectively).

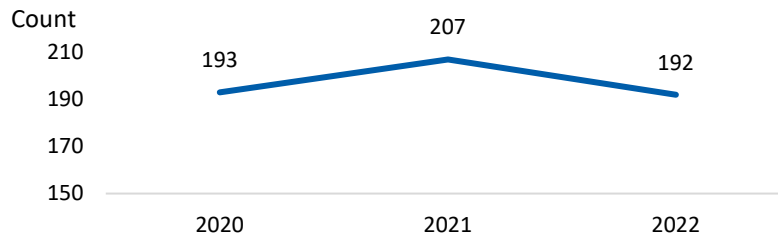
**Figure 6: Violent Deaths by Race, 2020-2022**



### Suicide Deaths

Suicide deaths make up the largest proportion of violent deaths in South Dakota. From 2020 to 2022, there were 592 suicide deaths that were captured in SD-VDRS. Of the 592 suicide deaths, the most common mechanisms were firearms (50%), followed by hanging, strangulation, or suffocation (38%), and poisoning (9%).

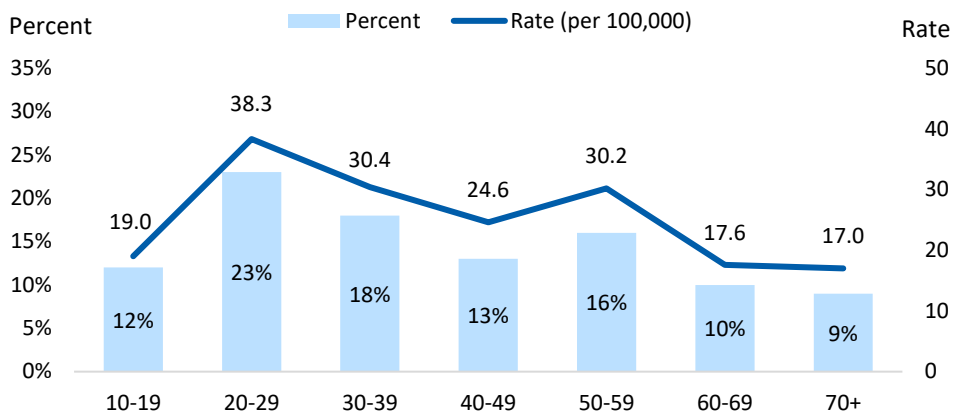
**Figure 7: Suicide Deaths by Year, 2020-2022**



### Suicide Demographics

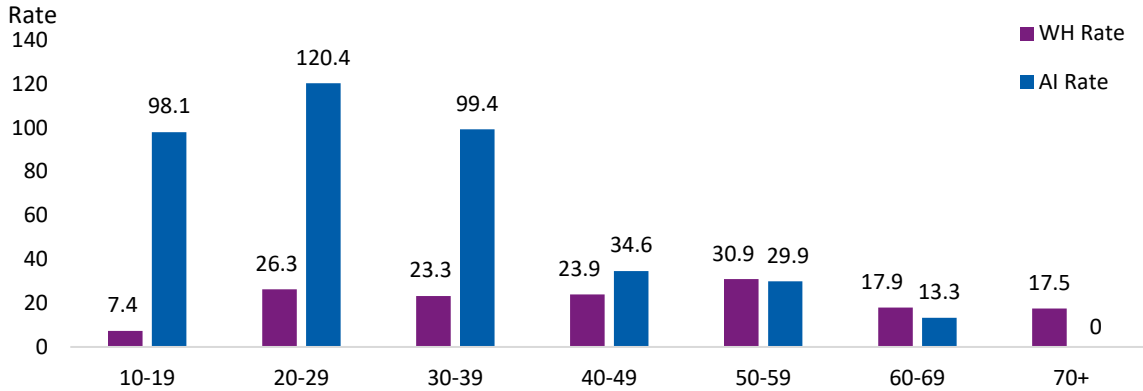
Males made up 78% of suicide deaths and were 3.5 times more likely than females to die by suicide (33.9 vs 9.6 per 100,000, respectively). The age group with the highest rate of suicide deaths were adults aged 20-29 years (38.3 per 100,000).

**Figure 8: Suicide Deaths by Age Group, 2020-2022**



The largest proportion of suicide deaths were among the White population (71%), followed by the American Indian population (23%). The American Indian suicide death rate was 3.2 times higher than the White death rate (58.0 vs 18.4 per 100,000, respectively). Within the American Indian population, 88% of suicide deaths were among individuals aged 39 years and younger and the highest suicide rates were among ages 10-39 years (Figure 9).

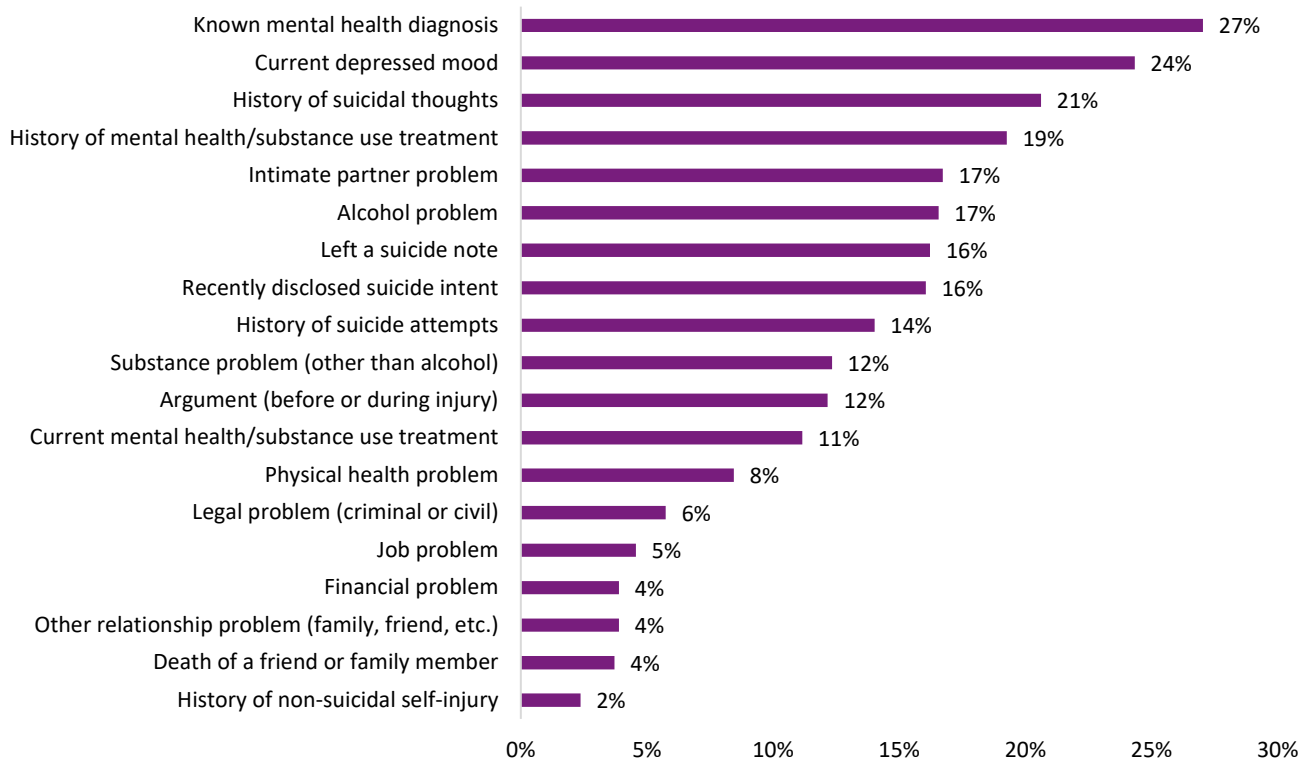
**Figure 9: Age-Specific Suicide Rates (per 100,000) by Race, 2020-2022**



**Circumstances**

SD-VDRS collects information about circumstances that are reported or perceived in the investigative reports as being related to the violent death. Of the 592 suicide deaths, 68% had a circumstance documented by coroners and/or law enforcement. The most common circumstances documented were a known mental health diagnosis (27%), current depressed mood (24%), and a history of suicidal thoughts (21%) (Figure 10). *Please note that persons who died by suicide may have had multiple circumstances and it is possible that circumstances could have been present and not diagnosed, known, or reported.*

**Figure 10: Suicide Circumstances, 2020-2022**



Differences in circumstances reported by demographics can be seen in Table 1. When examining circumstance by sex, a larger percentage of female decedents (43%) had a known mental health diagnosis than male decedents. A larger percentage of female decedents (32%) than male decedents (16%) were known to have received mental health or substance use treatment at some point in their life.

And when examining circumstances by race, a larger percentage of White decedents (33%) had a known mental health diagnosis at time of death. American Indians had a larger percentage of non-suicidal self-injury (6%).

By age group, decedents aged 10-19 years had a larger percentage of school problems reported and a known history of non-suicidal self-injury. Decedents aged 20-29 years had a larger percentage of known history of suicidal thoughts, substance problems, and legal problems. No circumstances were reported higher among the 30-39 age group. Decedents aged 40-49 years had a larger percentage of intimate partner problems reported and known alcohol problems. Decedents aged 50-59 years had a larger percentage of current depressed mood reported and a known mental health diagnosis. Decedents aged 60 years and older had a larger percentage of physical health problems reported compared to all other age groups. Among decedents aged 60 years and older that had a physical health problem circumstance reported, the most common physical health problems were acute or chronic pain (30%), cancer or terminal illness (22%), stroke (11%), Alzheimer's/dementia (7%), other or unknown health problem (41%) (*please note that an individual could have multiple health problems*).

**Table 1: Suicide Circumstances by Demographics, 2020-2022**

Circumstance	Female	Male	White	Am. Indian	10-19 Years	20-29 Years	30-39 Years	40-49 Years	50-59 Years	60+ Years
Known mental health diagnosis	43%	23%	33%	12%	17%	24%	25%	35%	38%	25%
Current depressed mood	28%	23%	28%	12%	16%	25%	27%	27%	32%	18%
Current mental health/substance use treatment	22%	8%	15%	1%	9%	11%	10%	15%	16%	7%
History of mental health/substance use treatment	32%	16%	23%	7%	20%	20%	15%	23%	26%	14%
Alcohol problem	18%	16%	19%	13%	11%	13%	17%	24%	21%	15%
Substance problem (other than alcohol)	14%	12%	11%	16%	11%	21%	19%	16%	4%	1%
Intimate partner problem	20%	16%	18%	9%	11%	21%	24%	27%	13%	5%
Other relationship problem (family, friend, etc.)	9%	2%	5%	1%	3%	2%	4%	8%	5%	3%
Argument (before or during injury)	12%	12%	12%	9%	4%	11%	21%	23%	13%	3%
History of suicide attempt	28%	10%	15%	12%	17%	17%	15%	16%	14%	6%
History of suicidal thoughts	26%	19%	22%	15%	20%	24%	19%	23%	20%	18%
History of non-suicidal self-injury	5%	2%	1%	6%	9%	3%	1%	4%	0%	0%
Recently disclosed suicide intent	20%	15%	18%	12%	14%	19%	11%	22%	17%	13%
Left a suicide note	17%	16%	20%	3%	10%	16%	17%	22%	17%	15%
Legal problem (criminal or civil)	2%	7%	6%	4%	1%	10%	5%	5%	6%	4%
Physical health problem	9%	8%	11%	1%	0%	1%	1%	9%	14%	24%
Job problem	4%	5%	6%	1%	1%	3%	7%	7%	10%	1%
Financial problem	2%	4%	4%	1%	1%	2%	6%	8%	6%	1%
Death of a friend or family member	2%	4%	5%	1%	1%	3%	3%	4%	4%	6%
School problem	2%	1%	1%	1%	6%	2%	0%	0%	0%	0%

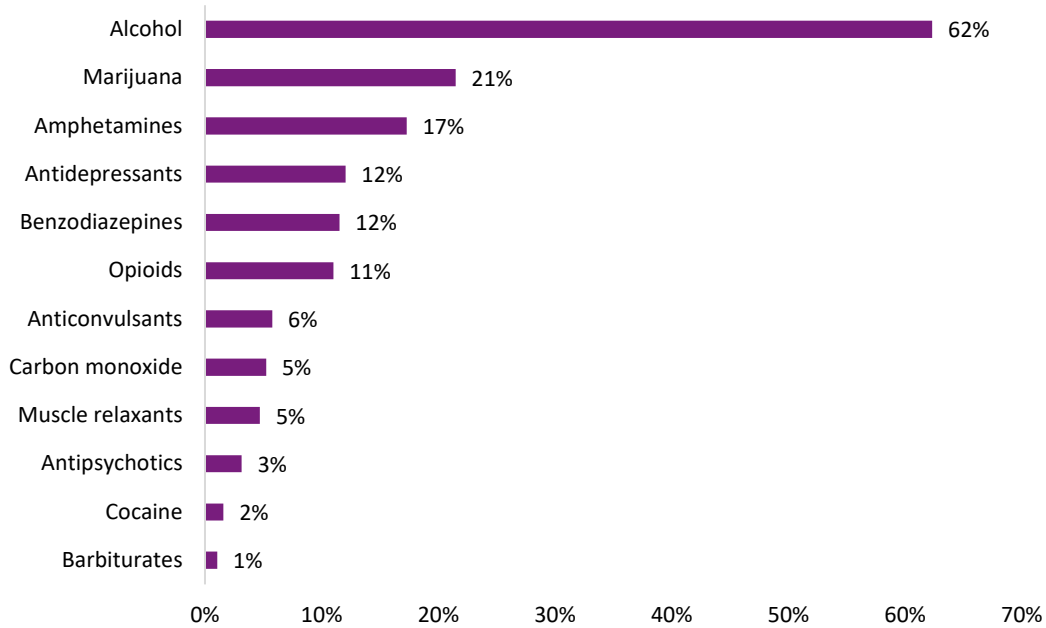
## Mental Health Diagnosis

Of the 592 suicide deaths, 27% had a known mental health diagnosis reported at the time of death. Of the decedents with a known mental health diagnosis, the most common diagnoses were depression (79%), anxiety (19%), bipolar disorder (10%), schizophrenia (6%), post-traumatic stress disorder (9%), and other diagnosis (15%). Please note that individuals could have had multiple diagnosis.

### Toxicology Results

Of the 592 suicide deaths, 51% had an available toxicology report. Of the 302 suicide deaths that had an available toxicology report, 63% had a positive toxicology result for one or more substances. The graph below shows the most common substances present at the time of death for decedents with a positive toxicology (N=191). *Please note that an individual could have more than one substance present.*

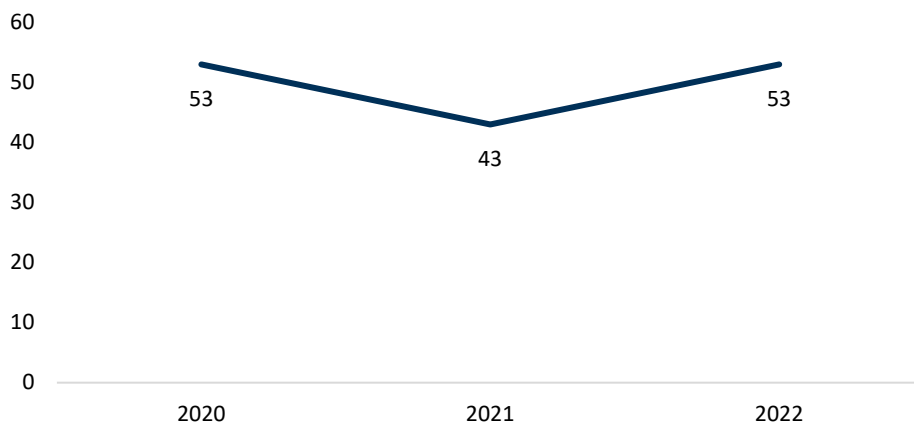
**Figure 11: Positive Toxicology Results, 2020-2022**



### Homicide Deaths

From 2020-2022, there were 149 homicide deaths that were captured in SD-VDRS. In South Dakota, 94% of homicide cases were a single homicide, 3% were multiple homicides, and 3% were a single homicide followed by suicide. Among homicide deaths, the most common weapons used were firearms (52%), sharp instruments (such as knives, razors, and other pointed instruments) (19%), blunt instruments (such as clubs, bats, etc.) (9%), and personal weapons (such as fists, feet, and hands) (9%).

**Figure 12: Homicide Deaths by Year, 2020-2022**

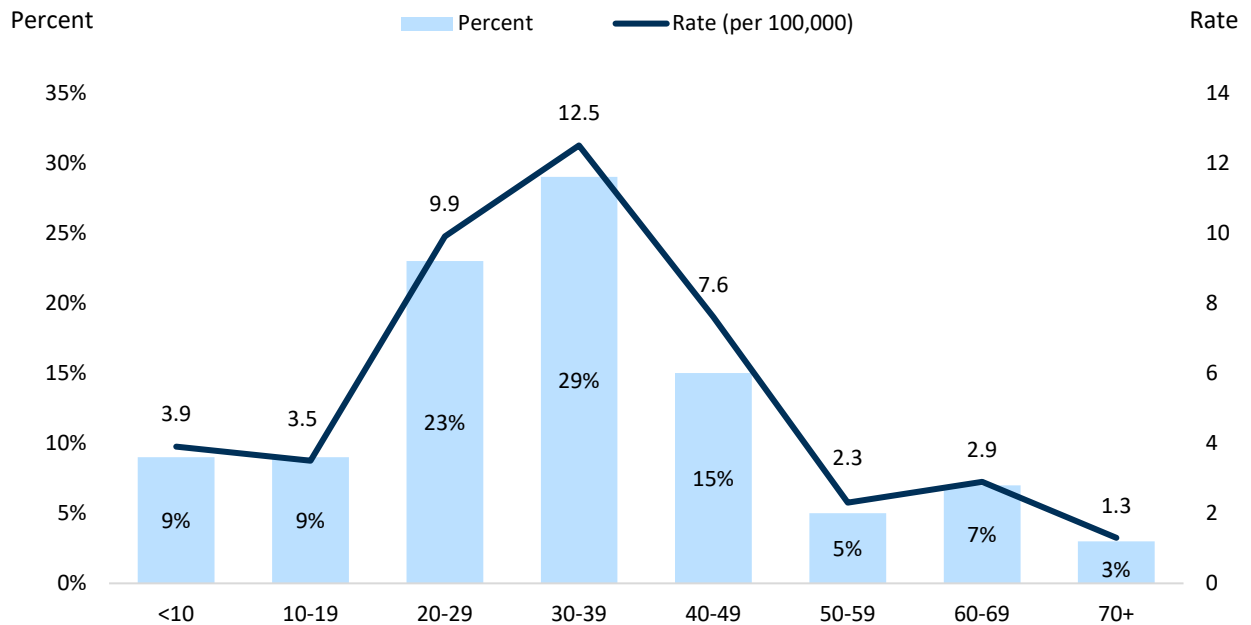


### Homicide Demographics

Males made up 74% of homicide deaths and were 2.8 times more likely than females to die by homicide (8.0 vs 2.9 per 100,000, respectively).

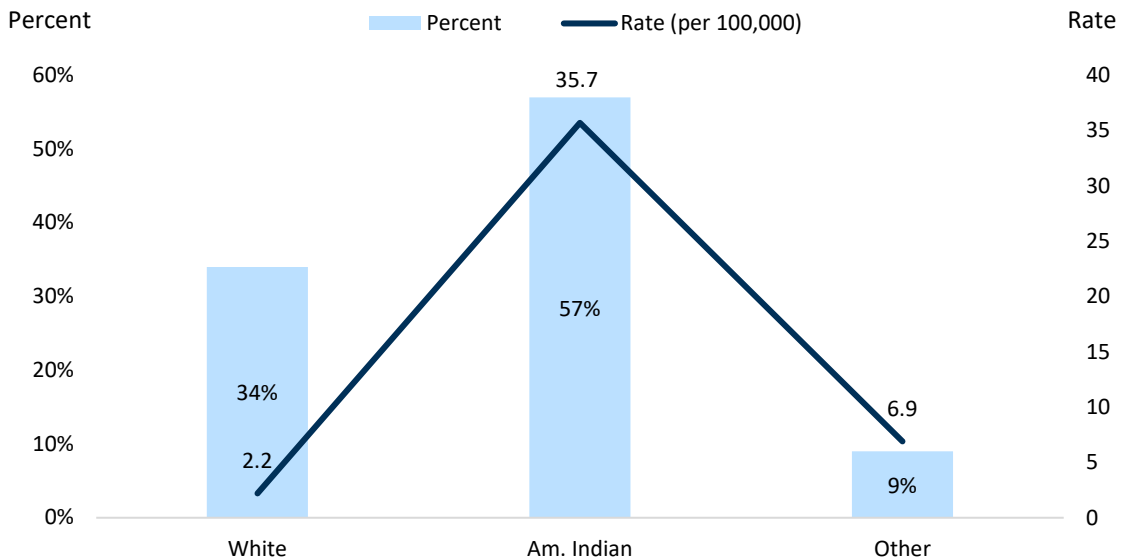
Homicide affects all ages in South Dakota. The largest proportion and highest homicide rates were among individuals aged 30-39-year-olds (12.5 per 100,000) and 20-29-year-olds (9.9 per 100,000) (Figure 13).

**Figure 13: Homicide Deaths by Age Group, 2020-2022**



The largest proportion of homicides were among the American Indian population (57%), followed by the White population (34%). American Indian homicide rates were 16.2 times higher than White homicide rates (35.7 vs 2.2 per 100,000).

**Figure 14: Homicide Deaths by Race, 2020-2022**

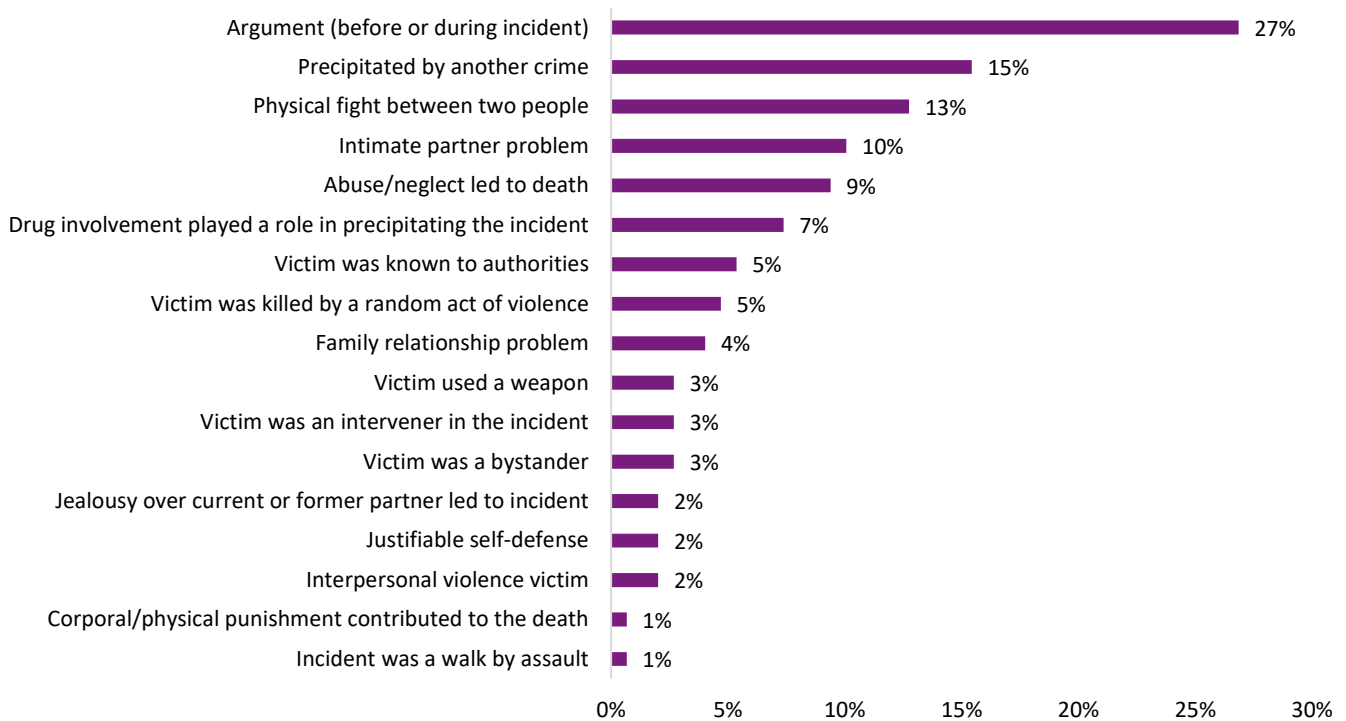




### Circumstances

Of the 149 homicide deaths, 68% had a circumstance documented by coroners and/or law enforcement. The most common circumstances documented were arguments (before or during the incident) (27%), precipitated by another crime (15%), physical fight between two people (13%), intimate partner problem (10%), and abuse/neglect led to death (9%). Precipitated by another crime can include gang-related, robbery, drug trade, stalking, assault/homicide. *Please note that persons who died by homicide may have had multiple circumstances and it is possible that circumstances could have been present and not diagnosed, known, or reported.*

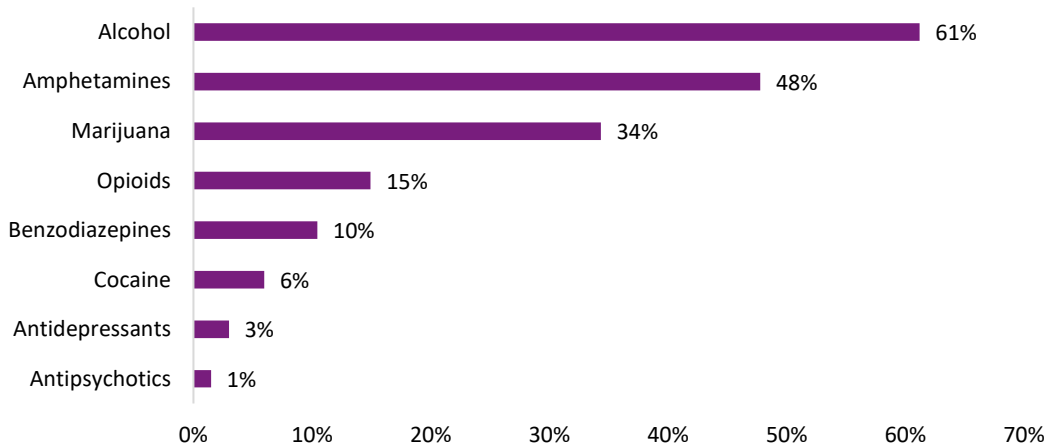
**Figure 15: Homicide Circumstances, 2020-2022**



### Toxicology Results

Of the 149 homicide deaths, 60% had an available toxicology report. Of the 90 homicide deaths that had an available toxicology report, 74% had a positive toxicology result for one or more substance. The graph below shows the most common substances present at the time of death for decedents with a positive toxicology (N=67). *Please note that an individual could have more than one substance present.*

**Figure 16: Positive Toxicology Results: Homicide Victim, 2020-2022**



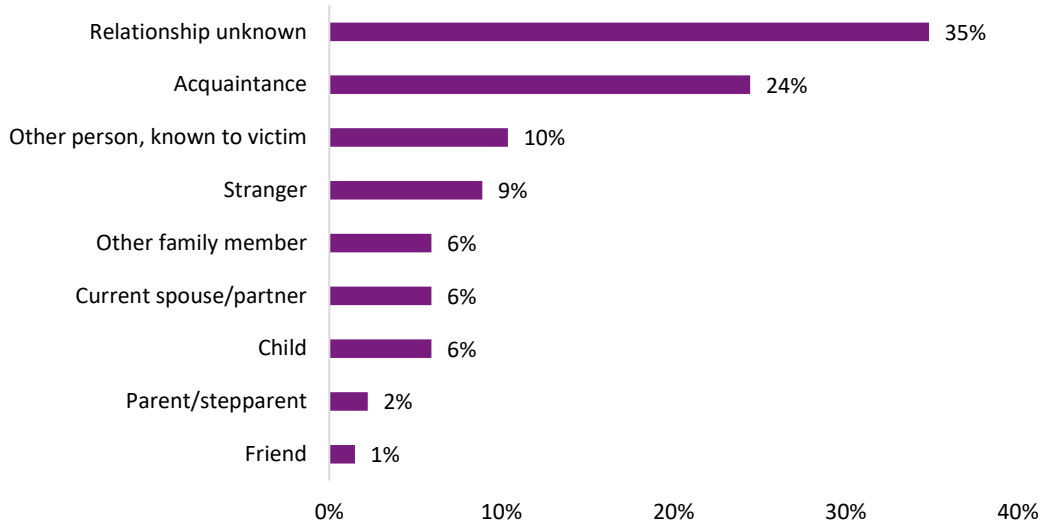
### Suspect Information

Suspect is defined as a person believed to have committed a crime and who was, therefore, being investigated by police. The data in this section will represent the 135 homicide suspects that had information available for homicide cases between 2020 and 2022. *Please note that homicide cases can include more than one suspect and for some homicide cases there was no information available.*

When the suspect-victim relationship was examined, most homicide suspects knew their victim (56%), whereas only 9% were strangers, and 35% were an unknown relationship or the relationship was not specified.

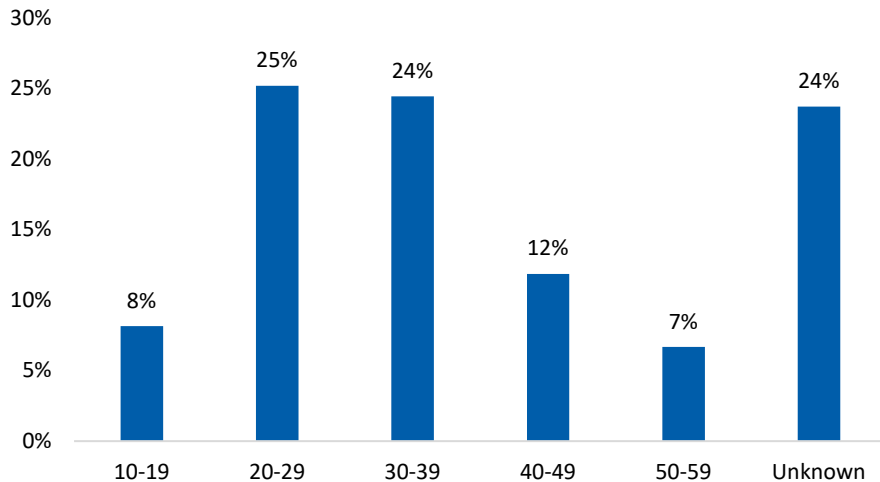
Figure 17 shows the victim to suspect relationship, use the following sentence for understanding the description of the relationship: **“The victim is the \_\_\_\_\_ of the suspect.”**

**Figure 17: Victim to Suspect Relationship, 2020-2022**



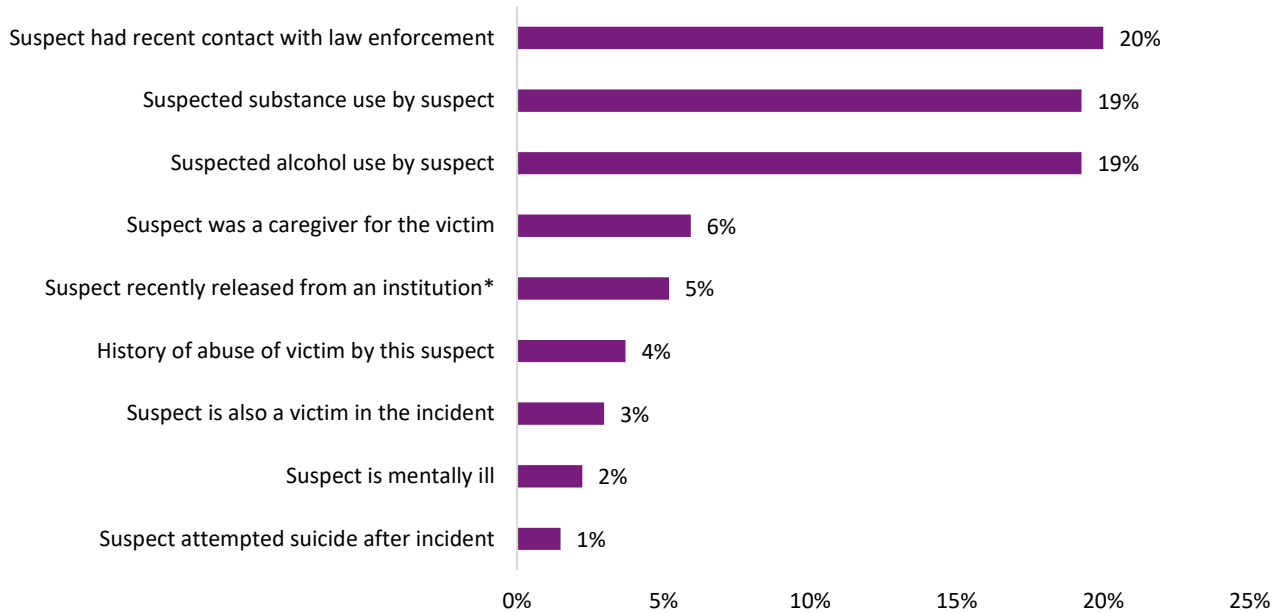
Of the 135 homicide suspects, 71% were male, 10% were female, and 19% were unknown. By race, 39% of homicide suspects were of other or unknown race, 25% were American Indian, 22% were White, and 13% were Black. The largest proportion of suspects were aged 20-29 years (25%), followed by ages 30-39 years (24%) (Figure 18).

**Figure 18: Homicide Suspects by Age Group, 2020-2022**



Additional information was collected around the suspect, which is referred to as suspect circumstances. Some of the most common suspect circumstances were recent contact with law enforcement (in the past 12 months) (20%), suspected substance use by suspect (19%), and suspected alcohol use by suspect (19%). *Please note that suspects may have had multiple circumstances, and it is possible that circumstances could have been present and not diagnosed, known, or reported.*

**Figure 19: Homicide Suspect Circumstances, 2020-2022**



*\*Institution can include jail, prison, detention facility, hospital, psychiatric hospital/institution, or a supervised residential facility (long term health, treatment facility, halfway house, work-release homes, etc.).*

## Methods

This report presents statistics on violent deaths during the period 2020 to 2022. The data set used in this report was generated in September 2024 and reflects the data at that point in time. Changes made to the data set after this time could change the data reported in future reports.

### Case Identification

Violent deaths are identified according to International Classification of Diseases, Tenth Revision (ICD-10) codes and categorized as suicide, homicide, undetermined, unintentional firearm, legal intervention, or terrorism-related death (Table 2). For a violent death to meet case criteria, the initial injury must have occurred in South Dakota, regardless of decedent residency or location of death.

**Table 2: ICD-10 Codes that Define Violent Death Cases**

Manner of Death	ICD-10 Code
Suicide	X60-X84, Y87.0
Homicide	X85-X99, Y00-Y09, Y87.1
Undetermined Intent	Y10-Y34, Y87.2, Y89.9
Unintentional Firearm	W32-W34, Y86
Legal Intervention	Y35.0-Y35.4, Y35.6-Y35.7, Y89.0
Terrorism	U01-U03

### Data Collection and Abstraction

Violent death data are captured by a data abstractor using multiple data sources that include:

- Death Certificates – obtained from the South Dakota Electronic Vital Records System
- Coroner Reports – obtained from the coroner assigned to the death
- Law Enforcement Reports – obtained from the responding law enforcement agencies across the state

Data is requested and received electronically, or a hard copy is obtained. Data is then de-identified and manually entered into the National Violent Death Reporting System (NVDRS) by the abstraction team.

### Data Limitations

The SD-VDRS strives to collect comprehensive and quality data, but there are data collection challenges. These various challenges might result in incomplete information surrounding deaths. Therefore, this report may underestimate some given circumstances or information may be missing/unknown.

### Acknowledgements

The SD-VDRS is funded by the National Center for Injury Prevention and Control at the CDC and is operated by the Office of Injury, Violence, and Overdose Prevention at the South Dakota Department of Health. The contents of this report are solely the responsibility of the authors and do not necessarily represent official views of the CDC.

We deeply appreciate the contributions of coroners and law enforcement professionals throughout South Dakota that have provided information to the SD-VDRS. This work would not be possible without these key partners.