

# Suicide Surveillance Report, South Dakota

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Suicide Hotline: 1-800-273-8255

### Suicide in the United States

In 2018, suicide ranked as the tenth leading cause of death in the United States and it ranked as the second leading cause of death for individuals aged 10-34 years. There were 48,344 deaths classified as suicides in the United States, which translates to one suicide every 10.9 minutes (2018). The crude suicide rate in 2018 was 14.8 per 100,000, which is the highest crude rate observed in the United States since 1938. States with the highest suicide rates (per 100,000) from 2009-2018 include Montana 24.7, Wyoming 24.3, and Alaska 23.8.

Figure 1. Suicide Deaths and Rates (per 100,000), United States 2009-2018

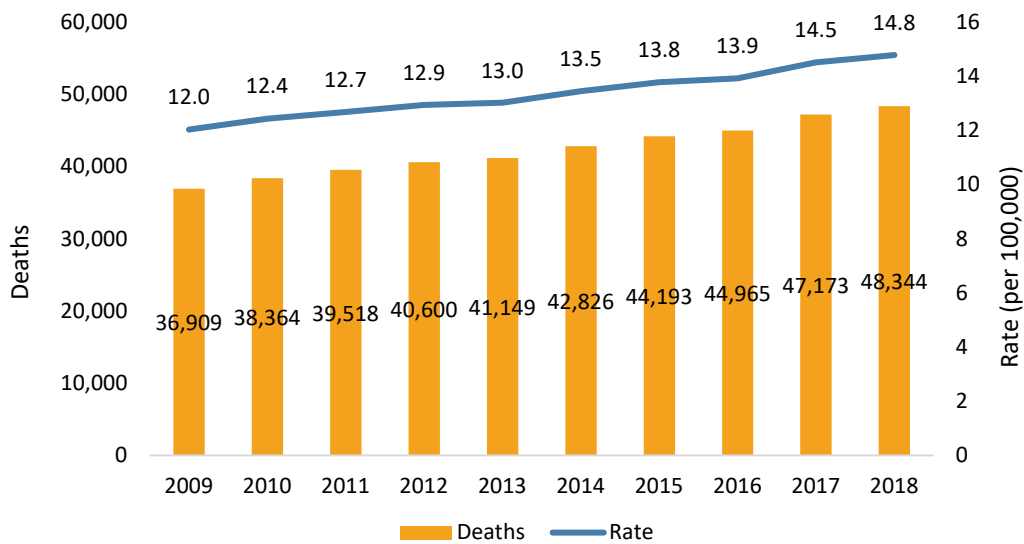


Table 1. Suicide Rates (per 100,000) by State, United States 2009-2018

<u>State</u>	<u>Rate</u>	<u>State</u>	<u>Rate</u>	<u>State</u>	<u>Rate</u>
<b>United States</b>	<b>13.4</b>	Kentucky	16.3	North Dakota	17.2
Alabama	15.2	Louisiana	13.6	Ohio	13.4
Alaska	23.8	Maine	17.3	Oklahoma	18.5
Arizona	18.2	Maryland	9.8	Oregon	18.6
Arkansas	17.4	Massachusetts	9.2	Pennsylvania	14.2
California	10.7	Michigan	13.4	Rhode Island	11.2
Colorado	19.9	Minnesota	12.7	South Carolina	15.0
Connecticut	10.4	Mississippi	13.5	<b>South Dakota</b>	<b>18.0</b>
Delaware	12.5	Missouri	16.7	Tennessee	15.9
Florida	15.4	Montana	24.7	Texas	12.2
Georgia	12.8	Nebraska	12.2	Utah	19.4
Hawaii	13.6	Nevada	20.2	Vermont	17.5
Idaho	20.3	New Hampshire	16.6	Virginia	13.3
Illinois	10.4	New Jersey	8.2	Washington	15.5
Indiana	14.6	New Mexico	21.8	West Virginia	18.1
Iowa	13.7	New York	8.4	Wisconsin	14.2
Kansas	16.1	North Carolina	13.4	Wyoming	24.3

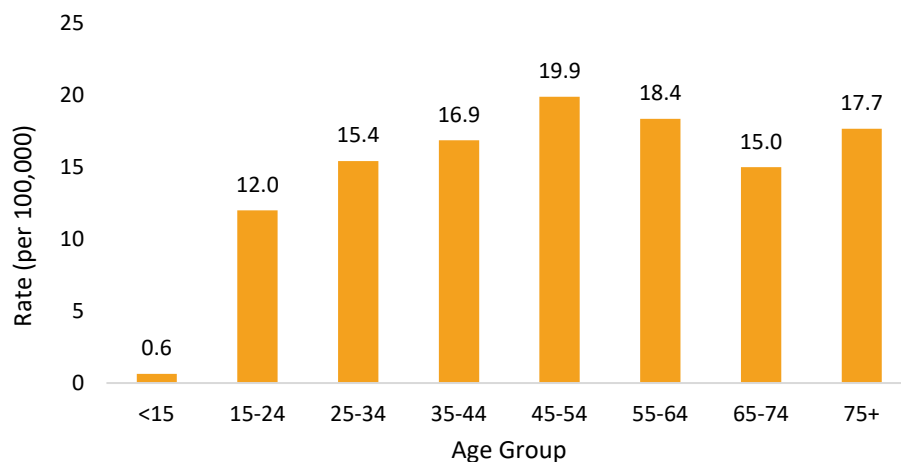
### Suicide Deaths by Sex

From 2009-2018, there were 424,041 suicide deaths in the United States. Of these deaths, 78% were among males and 22% among females. There were approximately 3.6 male suicide deaths for every female death by suicide in 2018.

### Suicide Deaths by Age Group

Nationally, the suicide rates are highest among middle aged adults in the 45-54-year age group, 19.9 per 100,000, 2009-2018.

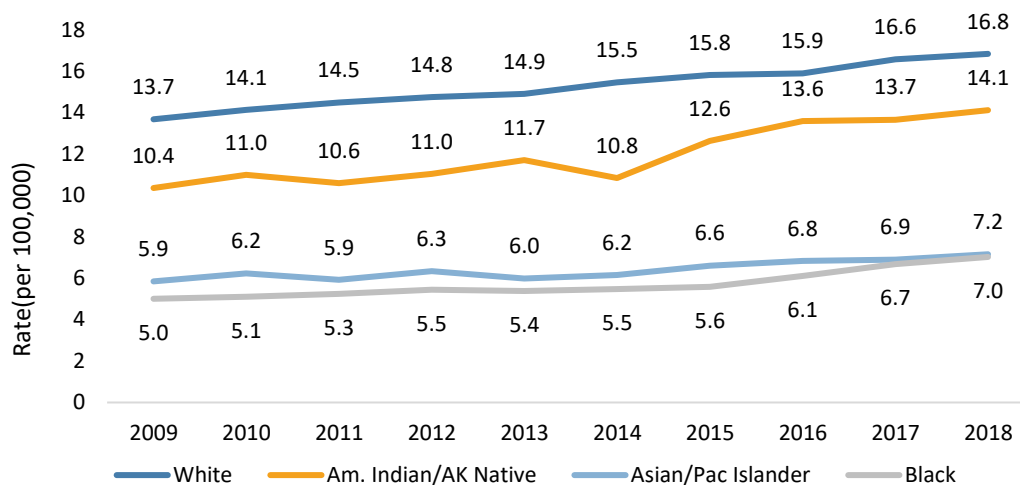
Figure 2. Suicide Rates (per 100,000) by Age Group, United States 2009-2018



### Suicide Deaths by Race

Suicide rates are highest among the White population in the United States, with the American Indian/Alaska Native population having the second highest rate. The Asian/Pacific Islander and Black populations have considerably lower suicide rates compared to other races.

Figure 3. Suicide Rates (per 100,000) by Race, United States 2009-2018



### Suicide Deaths by Method

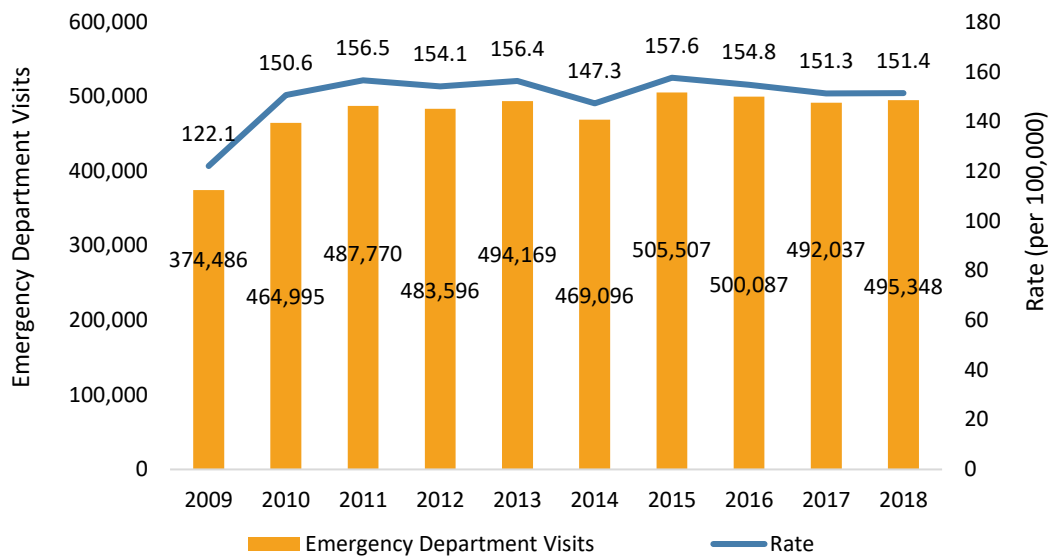
Nationally, firearms remain the most used method accounting for 50.5% of all suicide deaths in 2018. The second most common method in 2018 was suffocation/hanging 28.6%, and poisoning was the third most common method at 12.9%.

### Nonfatal Self-Inflicted Injuries

Approximately 1.2 million suicide attempts occurred in the United States in 2018, translating to one attempt every 26 seconds. Nonfatal suicide attempts are highest among females, with approximately 3 female suicide attempts for every male attempt.

The figure below shows emergency department visits in the United States related to nonfatal self-inflicted injuries. In 2018, there were 495,348 emergency department visits related to nonfatal self-inflicted injuries. From 2009-2018, 59% of self-inflicted emergency department visits were among females, 41% among males. The largest proportion of emergency department visits were among the White non-Hispanic race at 61%. Self-inflicted emergency department visits were highest among individuals aged 15 to 24 years.

Figure 4. Self-Inflicted Emergency Department Visits, United States 2009-2018



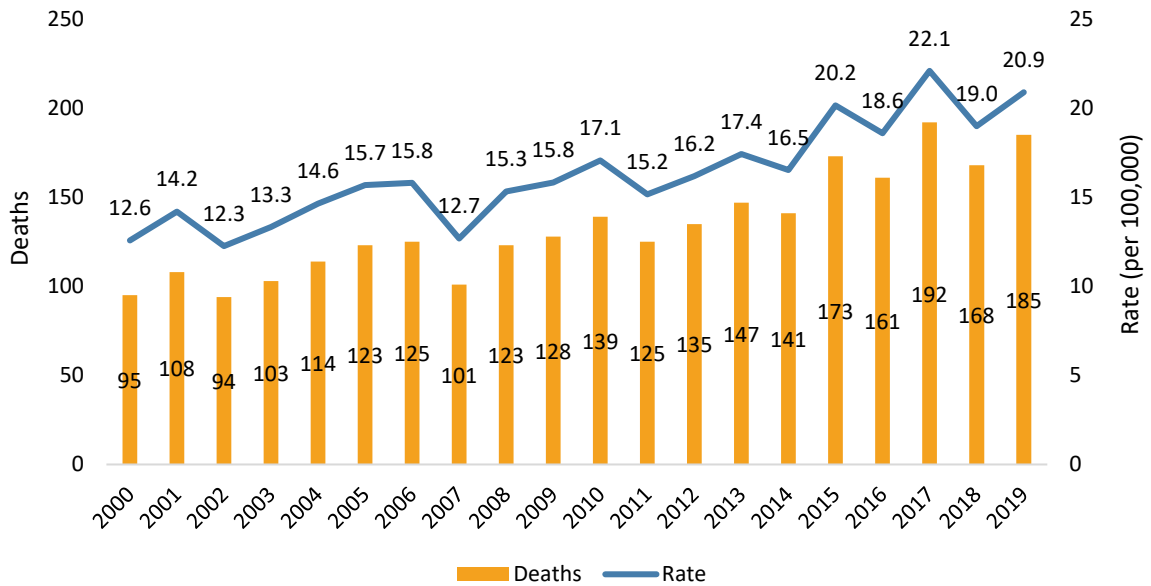
### Suicide in South Dakota

In 2019, suicide ranked as the ninth leading cause of death in South Dakota. Suicide is the leading cause of death for individuals aged 10-19 years and the second leading cause of death for individuals aged 20-39 years.

Figure 5 shows South Dakota suicide deaths and rates over the last 20 years, 2000-2019. Suicide deaths have increased by 95% in the last 20 years. The most deaths and highest rate were in 2017, with 192 suicide deaths and a rate of 22.1 per 100,000. In 2018, South Dakota reported

185 suicide deaths and a suicide rate of 20.9 per 100,000, which was the 19<sup>th</sup> highest suicide rate in the nation.

Figure 5. Suicide Deaths and Rates (per 100,000), South Dakota 2000-2019



The figure and table below show suicide deaths and rates by county. Among counties with stable rates for comparison ( $\geq 20$  deaths), the top five counties include Corson (55.7 per 100,000), Todd (53.1 per 100,000), Oglala Lakota (50.9 per 100,000), Dewey (42.4 per 100,000), and Custer (24.6 per 100,000).

Figure 6. Suicide Rates (per 100,000) by County, South Dakota 2010-2019

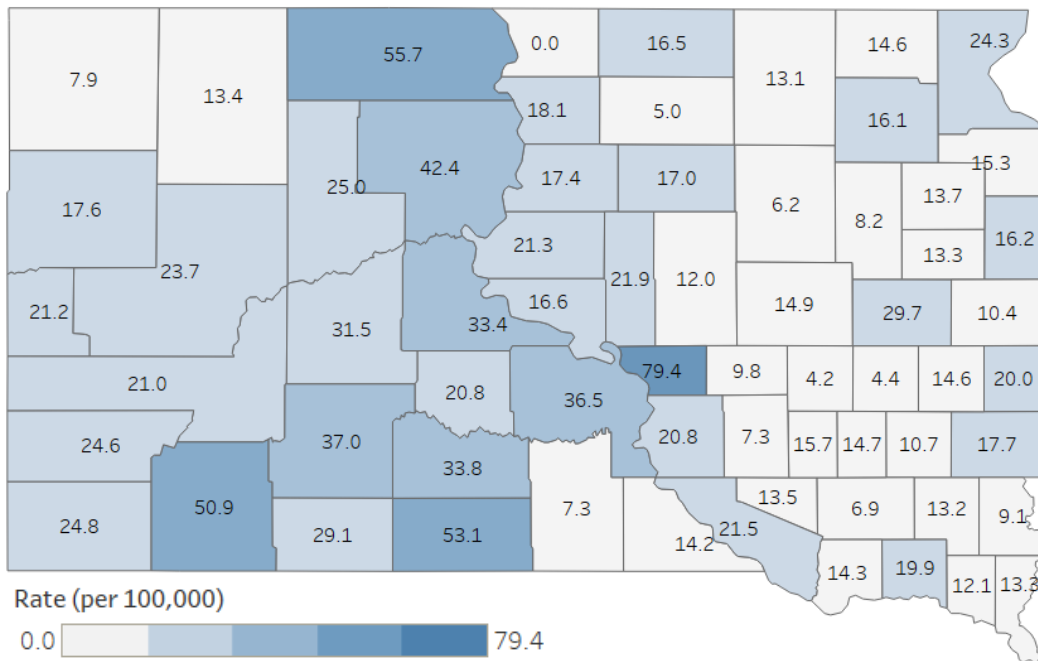


Table 2. County Suicide Deaths and Rates per 100,000, South Dakota 2010-2019

County	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	TOTAL	Rate
Aurora	0	0	0	<5	<5	0	0	0	0	0	<5	†
Beadle	<5	0	<5	<5	<5	<5	5	<5	<5	5	27	14.9
Bennett	<5	0	<5	<5	0	<5	0	<5	0	<5	10	29.1*
Bon Homme	<5	<5	<5	<5	0	<5	<5	0	<5	<5	10	14.3*
Brookings	<5	<5	<5	<5	<5	5	5	5	5	<5	35	10.4
Brown	5	<5	5	9	<5	5	<5	9	<5	6	50	13.1
Brule	0	<5	<5	<5	<5	0	<5	<5	0	<5	11	20.8*
Buffalo	<5	0	<5	0	0	<5	6	<5	<5	<5	16	79.4*
Butte	<5	<5	6	<5	<5	0	0	<5	<5	<5	18	17.6*
Campbell	0	0	0	0	0	0	0	0	0	0	0	0.0
Charles Mix	<5	0	<5	<5	<5	7	<5	<5	0	<5	20	21.5
Clark	0	0	<5	<5	0	<5	0	0	0	0	<5	†
Clay	<5	<5	5	<5	0	<5	<5	<5	<5	<5	17	12.1*
Codington	5	<5	<5	<5	<5	<5	<5	0	<5	8	38	13.7
Corson	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	23	55.7
Custer	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	21	24.6
Davison	<5	<5	<5	0	5	<5	<5	0	<5	6	31	15.7
Day	0	0	<5	<5	<5	0	<5	0	<5	<5	9	16.1*
Deuel	<5	0	0	0	<5	0	<5	0	0	<5	7	16.2*
Dewey	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	24	42.4
Douglas	<5	0	0	0	0	0	<5	0	0	<5	<5	†
Edmunds	0	0	0	0	0	0	<5	<5	0	0	<5	†
Fall River	0	<5	<5	<5	<5	<5	<5	<5	5	0	17	24.8*
Faulk	0	0	0	0	<5	<5	0	0	<5	0	<5	†
Grant	0	<5	0	<5	<5	<5	<5	<5	0	<5	11	15.3*
Gregory	<5	0	0	0	0	<5	<5	<5	0	<5	6	14.2*
Haakon	0	0	0	<5	0	0	0	<5	<5	<5	6	31.5*
Hamlin	0	<5	0	<5	<5	<5	<5	0	<5	<5	8	13.3*
Hand	0	0	0	0	<5	<5	0	0	0	<5	<5	†
Hanson	0	0	0	0	<5	0	<5	0	0	<5	5	14.7*
Harding	0	0	0	0	0	0	0	<5	0	0	<5	†
Hughes	<5	<5	<5	<5	5	<5	<5	<5	<5	<5	29	16.6
Hutchinson	<5	0	<5	0	0	<5	0	<5	0	<5	5	6.9*
Hyde	0	0	<5	<5	0	0	<5	0	0	0	<5	†
Jackson	<5	<5	0	<5	<5	<5	<5	<5	0	<5	12	37.0*
Jerauld	0	0	<5	0	0	0	0	0	0	<5	<5	†
Jones	0	<5	0	<5	0	0	0	0	0	0	<5	†
Kingsbury	<5	<5	<5	<5	<5	<5	0	<5	<5	<5	15	29.7*
Lake	<5	<5	0	<5	<5	<5	<5	<5	<5	<5	18	14.6*
Lawrence	6	6	<5	<5	<5	7	<5	11	8	<5	53	21.2
Lincoln	5	<5	8	<5	<5	<5	5	7	7	7	48	9.1
Lyman	0	<5	0	0	<5	<5	<5	<5	<5	<5	14	36.5*
McCook	0	<5	0	<5	<5	<5	<5	0	0	<5	6	10.7*
McPherson	0	0	0	0	<5	<5	<5	0	0	0	<5	†
Marshall	0	0	<5	<5	<5	0	<5	0	0	0	7	14.6*
Meade	7	6	5	13	6	<5	<5	8	6	7	64	23.7
Mellette	<5	0	<5	<5	0	0	0	<5	<5	0	7	33.8*
Miner	0	0	0	0	0	0	0	<5	0	0	<5	†
Minnehaha	26	33	27	29	30	34	32	46	34	33	324	17.7
Moody	<5	<5	<5	<5	<5	<5	<5	<5	0	<5	13	20.0*
Pennington	21	17	18	12	19	25	24	26	31	33	226	21.0
Perkins	<5	0	<5	<5	0	0	0	0	0	<5	<5	†
Potter	0	<5	0	0	0	0	<5	<5	0	0	<5	†
Roberts	<5	<5	0	<5	<5	<5	<5	5	<5	<5	25	24.3
Sanborn	0	0	0	0	0	0	0	<5	0	0	<5	†
Oglala Lakota	7	5	7	6	6	13	5	9	8	6	72	50.9
Spink	0	<5	0	0	0	<5	0	<5	0	<5	<5	†
Stanley	0	0	<5	<5	<5	<5	<5	0	0	<5	10	33.4*
Sully	0	0	<5	<5	0	0	0	0	<5	0	<5	†
Todd	5	<5	6	<5	5	8	10	0	8	<5	53	53.1
Tripp	0	<5	<5	0	0	0	0	0	<5	<5	<5	†
Turner	<5	<5	0	5	0	0	0	<5	0	0	11	13.2*
Union	<5	0	<5	<5	<5	0	<5	<5	<5	<5	20	13.3
Walworth	0	<5	<5	0	<5	0	<5	<5	<5	0	10	18.1*
Yankton	6	6	5	<5	<5	<5	<5	8	<5	<5	45	19.9
Ziebach	0	0	0	0	0	<5	0	<5	<5	<5	7	25.0*
<b>TOTAL</b>	<b>139</b>	<b>125</b>	<b>135</b>	<b>147</b>	<b>141</b>	<b>173</b>	<b>161</b>	<b>192</b>	<b>168</b>	<b>185</b>	<b>1566</b>	<b>18.4</b>

†Suppressed rate due to fewer than 5 deaths.

\*Unstable rate due to fewer than 20 deaths. Interpret with caution.

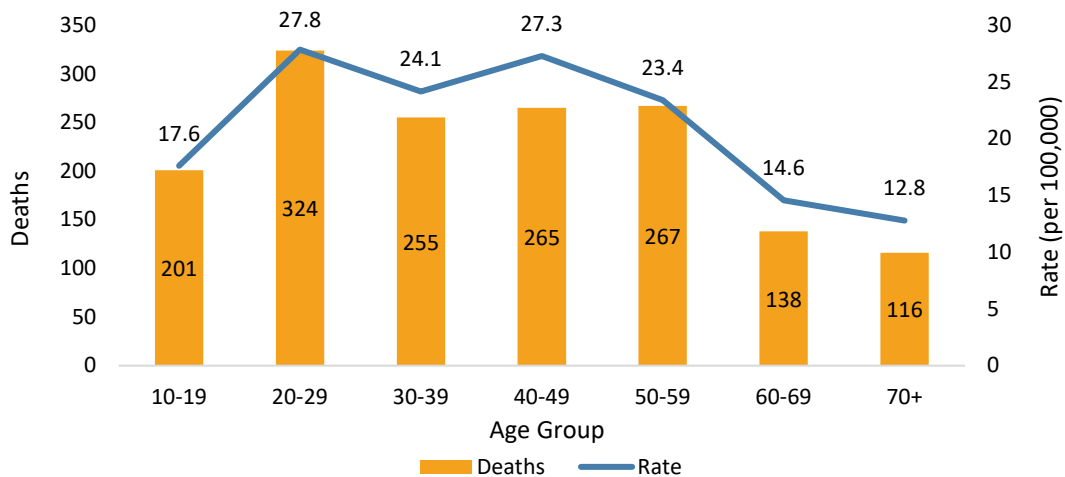
### Suicide Deaths by Sex

From 2010-2019, there were 1,566 suicide deaths in South Dakota. Of these death, 78% were males and 22% were females. During this time, the rate of male suicides was 28.6 per 100,000, which was 3.6 times higher than the female rate of 8.0 per 100,000.

### Suicide Deaths by Age Group

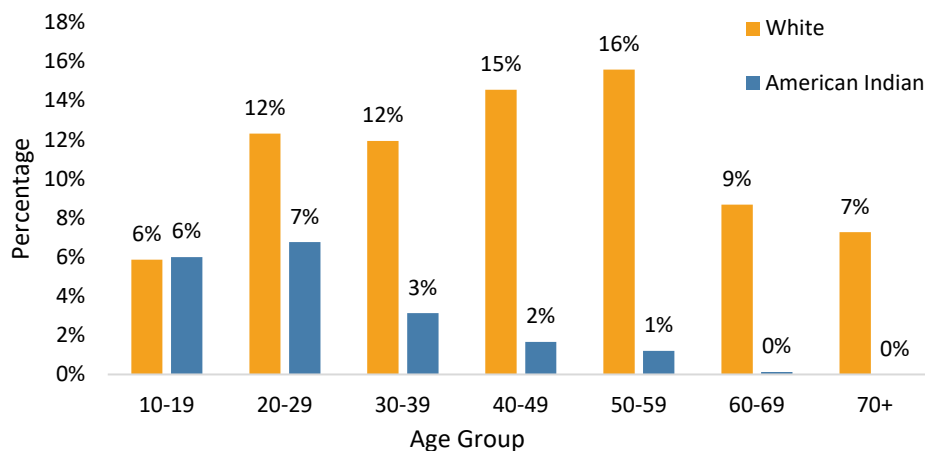
In South Dakota, suicide deaths and rates are highest among young adults aged 20-29 years, which accounts for 21% of suicides from 2010-2019. Suicide deaths and rates are also high among South Dakotans aged 30-59 years, accounting for approximately 50% of suicides from 2010-2019.

Figure 7. Suicide Deaths and Rates (per 100,000) by Age Group, South Dakota 2010-2019



The figure below shows the percent of South Dakota race-specific (single race) suicides by age group from 2010-2019. American Indian suicides peaked among youth and young adults aged 10-29 years. Whereas, White race suicides peaked among middle aged adults aged 40-59 years.

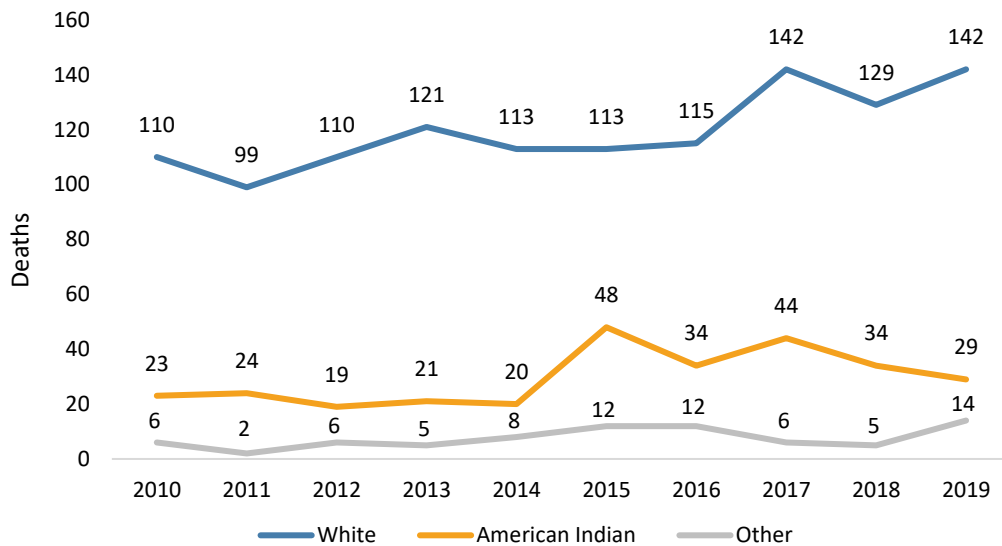
Figure 8. Suicide Deaths by Age Group and Race, South Dakota 2010-2019



### Suicide Deaths by Race

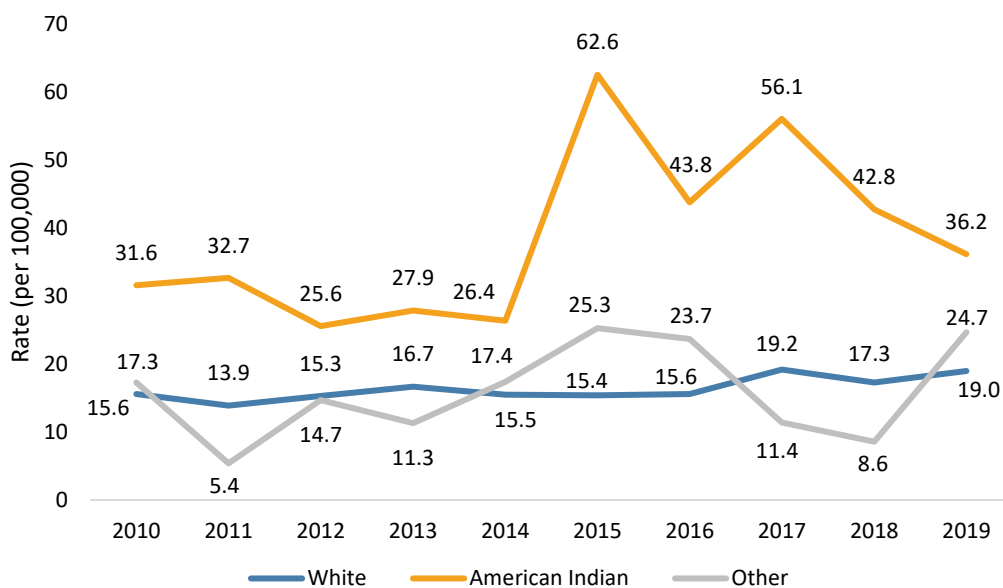
The figure below shows the number of suicide deaths for South Dakota’s White, American Indian, and “Other” race groups (“Other” includes multi race, Asian, Black, and unknown race).

Figure 9. Suicide Deaths by Race (Single Race), South Dakota 2010-2019



The figure below displays South Dakota’s suicide rates (per 100,000) for White, American Indian, and “Other” race groups (“Other” includes multi race, Asian, Black, and unknown race). The mean American Indian suicide rate (38.6 per 100,000) was 2.4-times higher than the White mean suicide rate (16.4 per 100,000).

Figure 10. Suicide Rates (per 100,000) by Race (Single Race), South Dakota 2010-2019

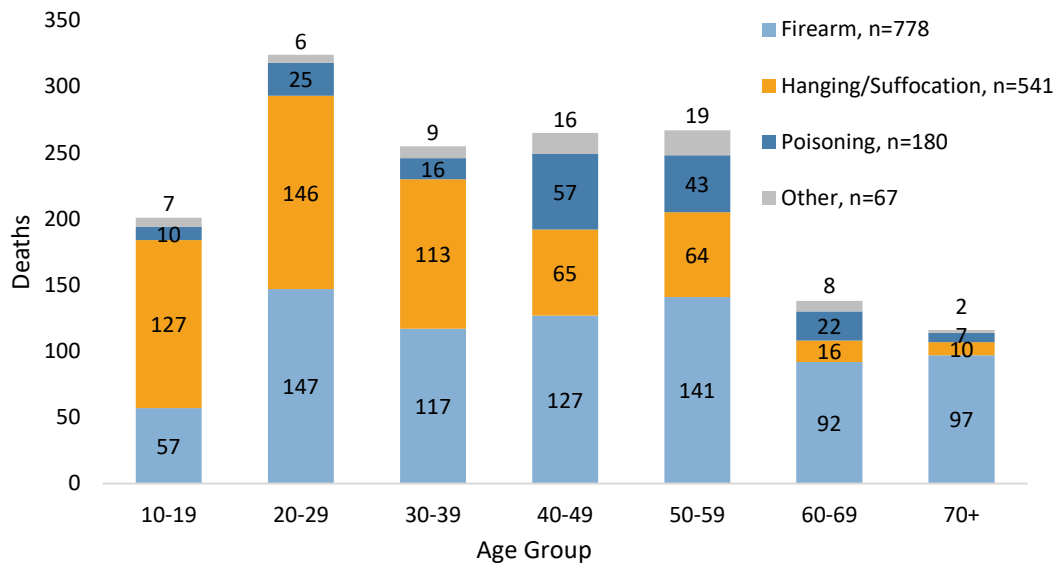




### Suicide Deaths by Method

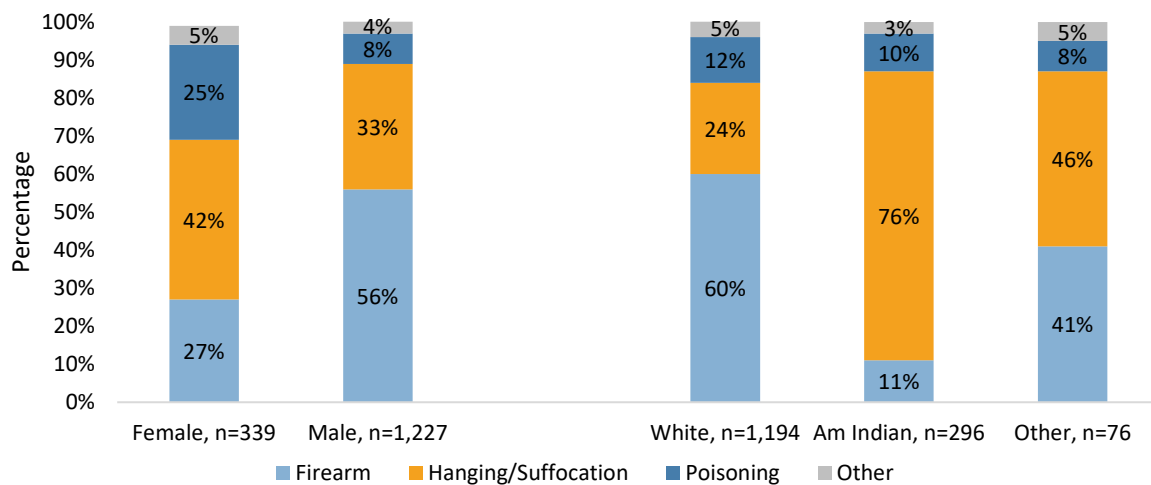
In South Dakota, firearms are the most common method accounting for 50% of all suicide deaths, followed by hanging/suffocation 35%, poisoning 11%, and all other methods 4%. Firearms were the most common method in all age groups, except for youth aged 10-19 years, among whom hanging was the most prevalent method.

Figure 11. Suicide Methods by Age Group, South Dakota 2010-2019



Hanging/Suffocation suicides were most common among females, whereas firearm suicides were most prevalent among males. Suicide methods varied by race group. Firearms were most common among Whites and hanging/suffocation was the most common method among the American Indian race.

Figure 12. Suicide Methods by Sex and Race (Single Race), South Dakota 2010-2019



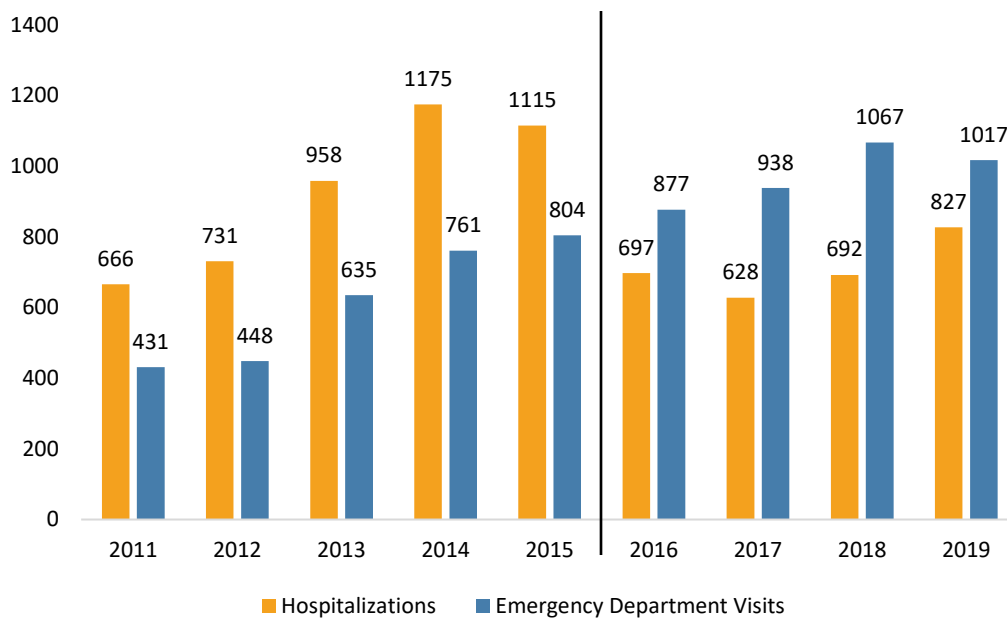
Note: Percentage totals may not add up to 100% due to rounding up the percentages.

### Nonfatal Self-Inflicted Injuries

During 2011-2019, there were 7,489 hospitalizations for nonfatal self-inflicted injuries among South Dakota residents. Of these, 63% were among females and 37% were among males. Among persons hospitalized, 63% were White, 28% American Indian, and 9% were Other race (Other race includes Black, Asian, Native Hawaiian/Other Pacific Islander, Hispanic, Multiracial, and Unknown).

During 2011-2019, there were 6,978 emergency department visits for nonfatal self-inflicted injuries reported among South Dakota residents. Of these, 60% were among females and 40% were among males. Among persons visiting the emergency department, 56% were White, 34% American Indian, and 10% were Other race (Other race includes Black, Asian, Native Hawaiian/Other Pacific Islander, Hispanic, Multiracial, and Unknown).

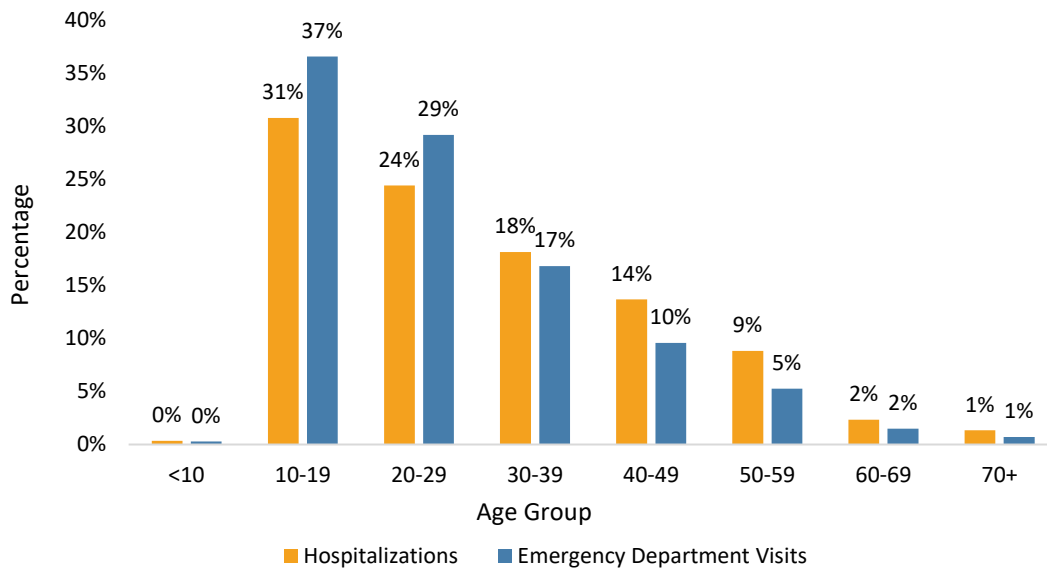
Figure 13. Self-Inflicted Injury Hospitalizations and Emergency Department Visits, South Dakota 2011-2019



Starting fourth quarter 2015, the International Classification of Diseases was updated to the 10<sup>th</sup> revision, Clinical Modification (ICD-10-CM), and data after this time should not be compared to previous years.

The figure below displays self-inflicted injury hospitalizations and emergency department visits by age. Over 50% of the self-inflicted injury visits were among youth and young adults aged 10-29 years. The largest proportion of hospitalizations and emergency department visits among South Dakotans 10-19 years, followed by individuals aged 20-29 years.

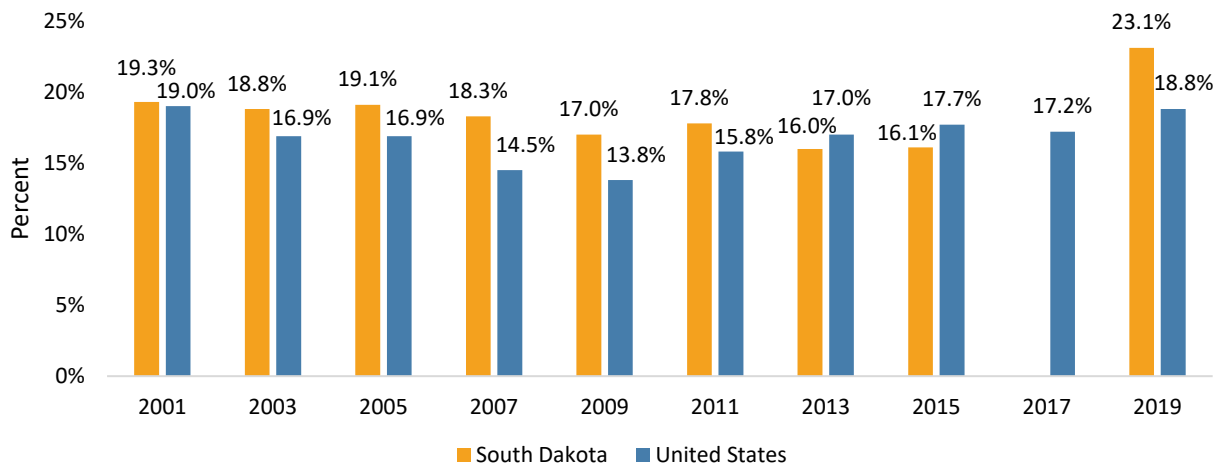
Figure 14. Self-Inflicted Injury Hospitalizations and Emergency Department Visits by Age Group, South Dakota 2011-2019



### Youth Risk Behavior Survey

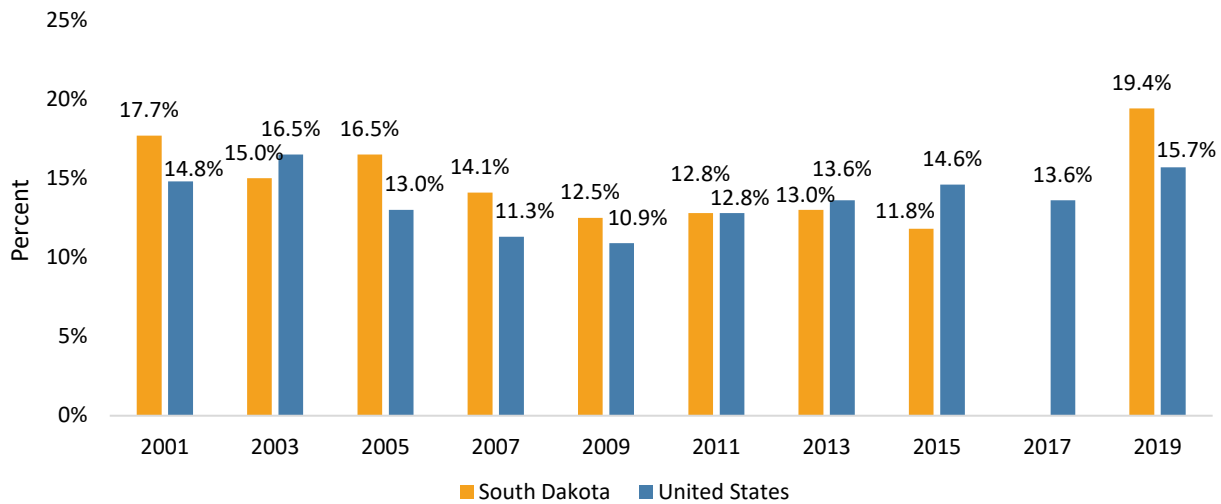
During 2019, 23.1% of South Dakota high school students had seriously considered attempting suicide in the past 12 months, which was an increase from 16.1% in 2015. The national percentage of high school students who had seriously considered suicide was 18.8% in 2019.

Figure 15. Percentage of Students Who Seriously Considered Attempting Suicide, South Dakota and United States 2001-2019



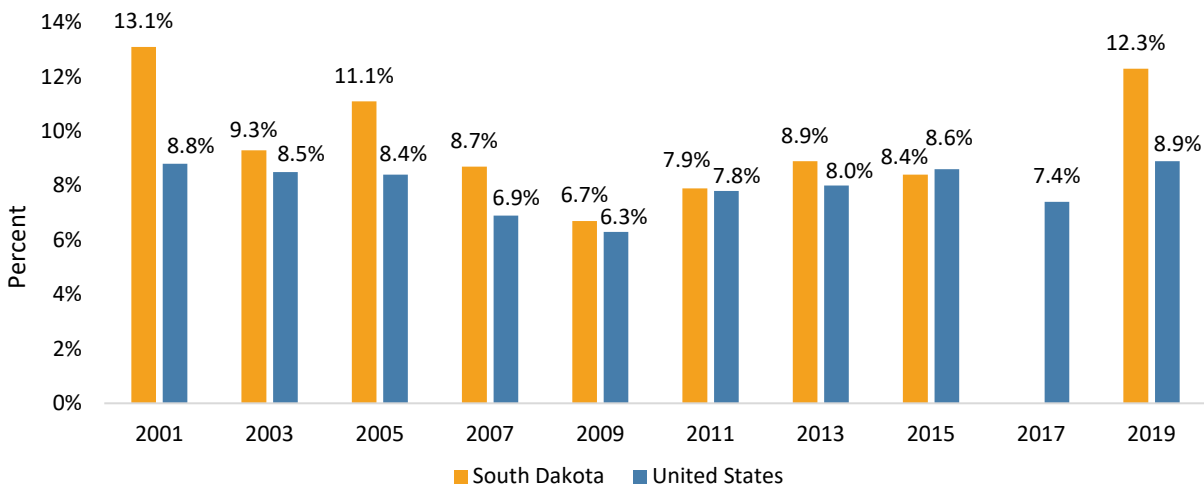
In the most recent year of YRBS data, 19.4% of South Dakota high school students made a plan about how they would attempt suicide during the past 12 months, which increased from 11.8% in 2015. The national percentage of high school students who made a plan about how they would attempt suicide was 15.7% in 2019.

Figure 16. Percentage of Students Who Made a Plan About How They Would Attempt Suicide, South Dakota and United States 2001-2019



In the most recent year of YRBS data, 12.3% of South Dakota high school students actually attempted suicide one or more times during the past 12 months, which increased from 8.4% in 2015. The national percentage of high school students who actually attempted suicide was 8.9% in 2019.

Figure 17. Percentage of Students Who Actually Attempted Suicide One or More Times, South Dakota and United States 2001-2019



## Methods and Data Sources

The numbers in this report may differ from other data reports due to data sources used and how the data was analyzed. See below for data sources and analysis methods.

### Mortality Data

National mortality data used in this report comes from the Centers for Disease Control and Prevention (CDC) Web-based Injury Statistics Query and Reporting System (WISQARS). South Dakota mortality data comes from the South Dakota Department of Health (DOH) Vital Statistics. South Dakota mortality data is representative of South Dakota residents.

South Dakota death records from the years 2010-2019 are analyzed for the presence of a suicide-related death codes in the cause of death field. Suicide fatality codes utilized in this report includes: U03, X60-X84, Y87.0. National data is pulled from CDC WISQARS. Suicide fatality codes utilized for national data includes: U03, X60-X84, Y87.0.

### Hospital and Emergency Department Data

National emergency department data used in this report comes from CDC WISQARS. South Dakota hospital and emergency department data comes from the South Dakota Association of Healthcare Organizations (SDAHO).

Data from SDAHO does not include cases from Indian Health Services and Veterans Affairs. South Dakota self-inflicted injury hospitalization and emergency department visit data in this report does not include deaths. South Dakota data reflects the number of inpatient and outpatient visits by South Dakota residents by year of discharge. Self-inflicted injury codes used in this report includes ICD-9-CM codes (E950-E958) and ICD-10-CM codes (T36-T65 and X71-X83).

### Survey Data

National suicide attempt information came from the National Survey on Drug Use and Health (NSDUH), which is directed by the Substance Abuse and Mental Health Services Administration. The NSDUH began in 1971 and is conducted every year in all 50 states.

Youth Risk Behavior Survey (YRBS) data comes from the Youth Risk Behavior Surveillance System (YRBSS), which was developed by the Center for Disease Control and Prevention. Since 1991, The YRBS has been conducted in odd numbered years and administered to students in grades 9<sup>th</sup> through 12<sup>th</sup> at randomly selected high schools across the state. The survey is voluntary and anonymous. South Dakota has secured weighted data every year it administered the survey except for 2017. Weighted data is important as the results can then be generalized to all South Dakota high school students.