SOUTH DAKOTA DEPARTMENT OF HEALTH

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2023 Vital Statistics Report: A Comparison of Leading Health Indicators

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Preface

2023 South Dakota Vital Statistics Report: A Comparison of Leading Health Indicators was prepared by the South Dakota Department of Health.

This report contains leading health indicators for vital statistics. The report is divided into eight main sections: Overview, Natality, Infant Mortality, Fetal Mortality, Mortality, Marriage and Divorce, and Infectious Disease. Each section contains written analysis plus tables and figures. There is also a technical notes section that provides additional information regarding the sources of data, data limitations, geographic allocation, populations, rates, and definitions.

Any questions concerning the data, or request for additional statistics, may be directed to the following agency within the South Dakota Department of Health.

Office of Health Statistics
615 East 4th St.
Pierre, SD 57501
Phone: (605) 773-3361
Internet: http://doh.sd.gov/a-z-reports/

For specific information or questions on Infectious Disease contact:

Office of Disease Prevention
615 East 4th St.
Pierre, SD 57501
Phone: (605) 773-3737

The following Health Department personnel were the main contributors to the development of this report:

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Overview

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OVERVIEW

RESIDENT LIVE BIRTHS

Number of live births	11,170
Rate per 1,000 population	12.2

INFANT DEATHS

Number of infant deaths	71
Rate per 1,000 live births	6.4

FETAL DEATHS

Number of fetal deaths	75
Rate per 1,000 live births + fetal deaths	6.7

RESIDENT DEATHS

Number of resident deaths	8,500
Rate per 100,000 population	924.6

MARRIAGES

Number of marriages	5,471
Rate per 1,000 population	6.0

DIVORCES

Number of divorces	2,113
Rate per 1,000 population	2.3

This report contains selected health statistics that the Department of Health, other government agencies, and the public widely use. This information has proven useful in determining trends in health status, planning health care services and making decisions about public health programs. It also fulfills diverse requirements in the business community and academic research.

Vital statistics data are compiled and maintained under the direction of the Administrator of the Office of Health Statistics (OHS). The data are analyzed by staff from the OHS and can be found in the following sections: Natality, Infant Mortality, Fetal Mortality, Mortality, and Marriage and Divorce. When referring to divorce throughout this report, please note that annulments are included in the Divorce category. Induced Abortion data are now a separate report available online July 1 of each year.

Infectious disease data are collected, compiled, and analyzed within the Office of Disease Prevention. Data on communicable diseases can be found in the Infectious Disease section of the report.

The contacts listed in the Preface welcome suggestions for additional changes that would make the next compilation even more useful to those involved in improving the health of South Dakotans.

Table 1

Selected Records in Vital Statistics,

South Dakota, 2023

NATALITY

Oldest Father:	65	Oldest Mother:	48
Youngest Father:	16	Youngest Mother:	13
Smallest Live Birth:	1 lb. 2 oz.		
Largest Live Birth:	12 lbs. 3 oz.		

Most Popular Names for Infants

Boy's Names	Number	Girl's Names	Number
1. Oliver	54	1. Nora	42
2. Henry	48	2. Ava	41
Hudson	48	3. Amelia	38
4. Owen	44	4. Olivia	36
5. Theodore	43	5. Evelyn	35
6. Liam	37	6. Charlotte	34
William	37	Lainey	34
Grayson	37	8. Harper	33
9. Noah	35	9. Emma	29
James	35	Mia	29
Maverick	35		

MORTALITY

Oldest Male Decedent:	106	Oldest Female Decedent:	113

DIVORCE

Longest Duration of a Marriage Ending in a Divorce: 56 Years

HISTORICAL COMPARISON OF THE MOST POPULAR NAMES FOR SOUTH DAKOTA INFANTS

Table 2
Top Ten Boy's Names, 2023

	1993	2003	2013	2023
Oliver	1	5	31	54
Henry	2	7	31	48
Hudson	0	4	26	48
Owen	0	25	48	44
Theodore	1	1	10	43
Liam	0	8	83	37
William	36	45	53	37
Grayson	1	7	23	37
Noah	2	50	65	35
James	38	31	41	35
Maverick	1	3	12	35

Table 3
Top Ten Girl's Names, 2023

	1993	2003	2013	2023
Nora	0	4	15	42
Ava	0	15	51	41
Amelia	4	10	26	38
Olivia	15	64	53	36
Evelyn	2	6	26	35
Charlotte	3	0	15	34
Lainey	0	4	4	34
Harper	0	0	52	33
Emma	12	82	67	29
Mia	1	13	18	29

Table 4
Top Ten Boy's Names. 1993

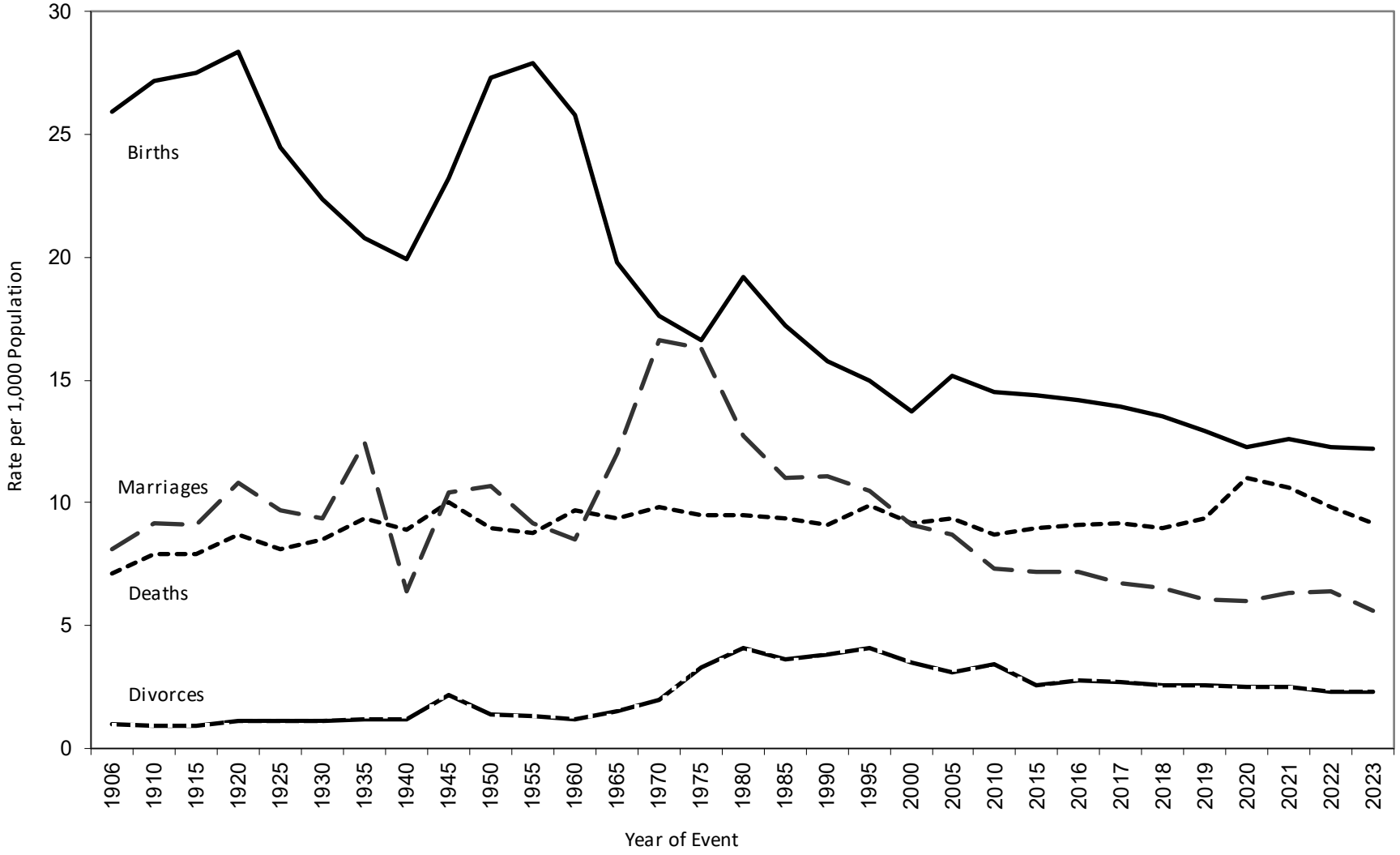
	1993	2003	2013	2023
Tyler	132	43	12	1
Austin	124	47	22	3
Michael	103	51	39	25
Zachary	96	45	20	4
Cody	94	24	6	4
Jacob	91	78	44	15
Joshua	91	38	20	5
Matthew	89	36	11	11
Nicholas	76	36	9	5
Jordan	74	21	15	7

Table 5
Top Ten Girl's Names, 1993

	1993	2003	2013	2023
Ashley	104	25	4	4
Samantha	89	38	10	5
Taylor	86	50	16	7
Jessica	84	26	3	1
Emily	80	68	26	12
Megan	73	36	5	2
Kelsey	65	13	6	0
Amanda	65	6	0	0
Sarah	62	22	11	5
Rachel	57	23	6	6

Figure 1

Birth, Death, Marriage, and Divorce Rates for South Dakota, 1906-2023



Source: South Dakota Department of Health, Office of Health Statistics

NATALITY

OVERVIEW 2023

Total Resident Live Births	11,170
Crude Birth Rate per 1,000 Population	12.2
Median Live Birth Weight (Grams)	3,340
Low Weight Births (Less than 2,500 grams)	804
Percent Low Birth Weight	7.2%
Median Age of Mother	29
No Prenatal Care	2.5%

There were 11,170 births to South Dakota residents in 2023, for a crude birth rate of 12.2 per 1,000 South Dakota resident population. **This is the lowest crude birth rate ever.**

Resident births decreased 0.2 percent from 2022 when there were 11,193 births. In 2023, 52.1 percent of the babies born were male and 47.9 percent were female.

The low birth weight rate per 1,000 live births increased from 71.0 in 2022 to 72.0 in 2023. **This is the highest rate since 1968.**

Table 6, below, displays the live births and crude birth rates for the United States and South Dakota for the past 15 years. South Dakota's birth rate remains above the national average even though the last five years have been the lowest ever.

Table 6
Resident Live Births and Crude Birth Rates, South Dakota and United States, 2009-2023

Year	United States		South Dakota	
	Number	Crude Rate	Number	Crude Rate
2023	3,596,017*	10.8*	11,170	12.2
2022	3,667,758	11.0	11,193	12.3
2021	3,664,292	11.0	11,304	12.6
2020	3,613,647	11.0	10,951	12.3
2019	3,747,540	11.4	11,448	12.9
2018	3,791,712	11.6	11,890	13.5
2017	3,855,500	11.8	12,128	13.9
2016	3,945,875	12.2	12,270	14.2
2015	3,978,497	12.4	12,323	14.4
2014	3,988,076	12.5	12,281	14.4
2013	3,932,181	12.4	12,243	14.5
2012	3,952,841	12.6	12,092	14.5
2011	3,953,590	12.7	11,834	14.4
2010	3,999,386	13.0	11,795	14.5
2009	4,130,665	13.5	11,930	14.7

Note: * 2023 U.S. data are provisional at time of publication.
Crude birth rates are per 1,000 population.
Sources: National Center for Health Statistics and South Dakota Department of Health, Office of Health Statistics

BIRTHS BY RACE

Race is assigned based on standards set forth by the National Center for Health Statistics and the US Census Bureau, for South Dakota's race data to be comparable to other areas. All race data in this section are categorized in the following manner:

- white
- American Indian
- black
- Hispanic
- American Indian & white

The remaining categories (Asian, Pacific Islander, multi-racial) are included in the totals but are not necessarily shown specifically in any tables.

Table 7, below, shows the number and percent of resident births by mother's race since 2014. In 2023, the percent of births to white, American Indian, and Black all decreased. Hispanic births increased by 16.9 percent.

Table 7
South Dakota Resident Live Births by Mother's Race/Ethnicity, 2014-2023

Births		White		American Indian		Hispanic		Black		American Indian & white	
Year	Num	Num	%	Num	%	Num	%	Num	%	Num	%
2023	11,170	7,961	71.5	1,359	12.2	842	7.6	344	3.1	245	2.2
2022	11,193	7,988	71.6	1,463	13.1	726	6.5	359	3.2	247	2.2
2021	11,304	8,049	71.4	1,514	13.4	691	6.1	383	3.4	283	2.5
2020	10,951	7,712	70.7	1,499	13.7	662	6.1	383	3.5	276	2.5
2019	11,448	8,141	71.3	1,607	14.1	641	5.6	414	3.6	268	2.3
2018	11,890	8,474	71.5	1,644	13.9	659	5.6	410	3.5	303	2.6
2017	12,128	8,610	71.1	1,806	14.9	624	5.2	398	3.3	292	2.4
2016	12,270	8,827	72.1	1,782	14.6	634	5.2	360	2.9	251	2.0
2015	12,323	8,821	71.9	1,921	15.7	559	4.6	266	2.2	267	2.2
2014	12,281	8,898	72.8	1,812	14.8	602	4.9	295	2.4	257	2.1

Note: Failure of races to add to the total is due to other and unknown races included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

MARITAL STATUS

In 2023, 35.1 percent of infants were born to single mothers. **This is the lowest since 2003.** When looking at the data by race, American Indian women have consistently had the highest percentage of births out of wedlock with 86.2 percent in 2023.

Table 8

South Dakota Resident Births Out of Wedlock by Year of Birth and Race/Ethnicity, 2014-2023

	All Races		White		American Indian		Hispanic		Black		American Indian & white	
Year	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
2023	3,924	35.1	1,827	22.9	1,170	86.2	479	56.9	131	38.1	157	64.1
2022	4,010	35.8	1,859	23.3	1,278	87.1	397	54.7	136	37.9	159	64.4
2021	4,065	36.0	1,867	23.2	1,327	87.6	395	57.2	154	40.2	187	66.1
2020	3,947	36.1	1,772	23.0	1,318	87.5	375	56.6	146	38.0	186	67.4
2019	4,145	36.2	1,954	24.0	1,371	85.2	355	55.4	148	35.7	176	65.7
2018	4,287	36.1	2,008	23.7	1,400	85.0	357	54.3	158	38.5	220	72.6
2017	4,506	37.2	2,155	25.0	1,523	84.2	327	52.5	172	43.2	195	66.8
2016	4,519	36.8	2,505	25.0	1,513	84.9	349	55.1	156	43.3	156	62.2
2015	4,571	37.1	2,213	25.1	1,606	83.5	322	57.6	105	39.5	173	64.8
2014	4,623	37.7	2,303	25.9	1,533	84.2	331	55.0	135	45.8	178	69.3

Note: Failure of races to add to the total is due to other and unknown races included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

BIRTH WEIGHT

Table 9 compares low birth weight babies by race of mother. In 2023, 525 (6.6%) low birth weight babies were born to white women. For American Indian women, there were 109 (8.0%) low birth weight babies, and for black women, there were 40 (11.6%) low birth weight babies. From 2022 to 2023, there was an increase in low birth weight babies for white and black births. **The 7.2% overall is the highest since 1968.**

Table 9

South Dakota Resident Low Birth Weight Births by Race of Mother, 2014-2023

Year	Mother's Race/Ethnicity					
	Total	White	American Indian	Hispanic	Black	American Indian & white
2023	7.2%	6.6%	8.0%	7.2%	11.6%	6.5%
2022	7.1%	6.3%	9.7%	8.4%	7.8%	7.3%
2021	7.1%	6.6%	8.5%	5.9%	10.7%	12.4%
2020	6.9%	6.5%	8.0%	6.2%	7.6%	9.1%
2019	7.0%	6.6%	7.7%	6.6%	11.4%	6.7%
2018	6.7%	6.1%	7.5%	7.6%	8.3%	8.3%
2017	6.9%	6.7%	7.9%	5.6%	10.5%	6.8%
2016	6.8%	6.2%	8.0%	6.0%	10.3%	6.8%
2015	6.2%	5.7%	7.3%	5.5%	6.0%	8.6%
2014	6.6%	6.3%	7.1%	7.3%	10.2%	6.2%

Note: Failure of races to add to the total is due to other and unknown races included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

Table 10 displays resident births by year of birth and weeks of gestation. In 2023 we saw the lowest percentage of births ever at 40 or more weeks of gestation at only 17.6 percent. **The 12.4 percent that were less than 37 weeks was the highest since before 1990.** Prior to that year, gestational age was not published in the annual report for comparison.

Table 10
South Dakota Resident Births by Year of Birth and Weeks of Gestation, 2014-2023

Year	Total		<35		35-36		37-39		40+		Unknown	
	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
2023	11,170	100	474	4.2	920	8.2	7,799	69.9	1,965	17.6	12	-
2022	11,193	100	417	3.7	740	6.6	7,797	69.7	2,225	19.9	14	-
2021	11,304	100	421	3.7	762	6.7	7,636	67.6	2,478	21.9	7	-
2020	10,951	100	389	3.6	641	5.9	7,259	66.4	2,646	24.2	16	-
2019	11,448	100	409	3.6	686	6.0	7,403	64.7	2,946	25.7	4	-
2018	11,890	100	410	3.5	709	6.0	7,442	62.7	3,313	27.9	16	-
2017	12,128	100	432	3.6	693	5.7	7,333	60.5	3,657	30.2	13	-
2016	12,270	100	399	3.3	699	5.7	7,366	60.1	3,796	31.0	10	-
2015	12,323	100	385	3.1	665	5.4	7,268	59.1	3,990	32.4	15	-
2014	12,281	100	416	3.4	622	5.1	7,310	59.7	3,894	31.8	39	-

Source: South Dakota Department of Health, Office of Health Statistics

TOBACCO USE

Table 11 displays the percentage of mothers who smoked cigarettes for each of the past 10 years. In 2023, 9.1 percent stated they smoked cigarettes three months prior to pregnancy, and 6.4 percent smoked cigarettes anytime during their pregnancy, which is the lowest this has ever been.

Table 11
South Dakota Resident Live Births by Cigarette Smoking Status, 2014-2023

Year	Mother's Cigarette Smoking Status				
	Three Months Prior to Pregnancy	First Trimester	Second Trimester	Third Trimester	Anytime During Pregnancy
2023	9.1%	6.1%	4.7%	4.2%	6.4%
2022	10.7%	7.2%	5.5%	5.0%	8.3%
2021	13.4%	8.9%	7.0%	6.3%	9.2%
2020	14.9%	9.8%	7.8%	7.3%	10.1%
2019	15.9%	10.5%	8.2%	7.5%	10.7%
2018	17.2%	11.4%	8.9%	8.1%	11.8%
2017	18.1%	12.2%	9.7%	8.8%	12.6%
2016	19.5%	13.2%	10.1%	9.2%	13.6%
2015	20.9%	13.6%	10.4%	9.5%	14.0%
2014	21.7%	14.4%	11.1%	10.2%	14.8%

Table 12, on the next page, displays the percentage of mothers who smoked cigarettes before pregnancy by their cigarette smoking status during pregnancy since 2014. The largest percentage of women stated they never quit smoking cigarettes during their pregnancy with 43.0 percent in 2023.

Table 12

South Dakota Resident Births to Mothers Who Smoked Cigarettes Prior to Pregnancy by Cigarette Smoking Status During Pregnancy, 2014-2023

Year	Quit before becoming pregnant	Quit before second trimester	Quit before third trimester	Never quit	Stopped at some point during pregnancy, but started again before giving birth
2023	32.8%	15.3%	6.9%	43.0%	2.1%
2022	31.6%	16.0%	6.5%	43.2%	2.7%
2021	32.3%	13.9%	7.1%	43.8%	2.9%
2020	32.9%	13.6%	4.9%	45.9%	2.7%
2019	33.4%	13.8%	6.1%	44.8%	1.9%
2018	32.3%	15.0%	6.0%	44.8%	2.1%
2017	32.0%	13.5%	6.4%	45.8%	2.2%
2016	31.5%	15.8%	6.4%	44.3%	2.1%
2015	33.9%	15.0%	6.1%	42.9%	2.2%
2014	32.3%	15.5%	5.5%	44.4%	2.3%

Source: South Dakota Department of Health, Office of Health Statistics

MOTHER'S AGE AND RACE

Table 13 shows that women aged 25 to 29 accounted for the largest percentage of South Dakota resident births in 2023 at 32.3 percent. The median age at birth for whites was 29, Hispanics was 27, American Indians was 25, Blacks was 30, and American Indian/white was 28.

Table 13

South Dakota Resident Live Births by Mother's Age and Race, 2023

Age of Mother	Total		Race of Mother									
			White		American Indian		Hispanic		Black		American Indian & white	
	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
Less than 18	145	1.3	40	0.5	67	4.9	27	3.2	5	1.5	3	1.5
18-19 Years	369	3.3	144	1.8	141	10.4	52	6.2	9	2.6	11	4.5
20-24 Years	2,022	18.1	1,231	15.5	399	29.4	200	23.8	54	15.7	64	26.1
25-29 Years	3,610	32.3	2,703	34.0	359	26.4	250	29.7	90	26.2	76	31.0
30-34 Years	3,350	30.0	2,608	32.8	247	18.2	200	23.8	107	31.1	60	24.5
35-39 Years	1,389	12.4	1,039	13.1	120	8.8	89	10.6	56	16.3	26	10.6
40 & over	285	2.6	196	2.5	26	1.9	24	2.9	23	6.7	5	2.0
Total	**11,170**	**100**	**7,961**	**100**	**1,359**	**100**	**842**	**100**	**344**	**100**	**245**	**100**

Note: Failure of the races to add to the total is due to other and unknown races included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

Table 14, on the next page, displays the mother's age for births in the past 10 years. Overall, the percentage of births is highest in women 25-34 years old. **In 2023, the number of births to women 17 years or younger (145) was the lowest since before 1963.** Prior to that year, the number of births to women 17 years or younger was not published in the annual report for comparison. As recently as 2009 there were 313 births in this age category for comparison.

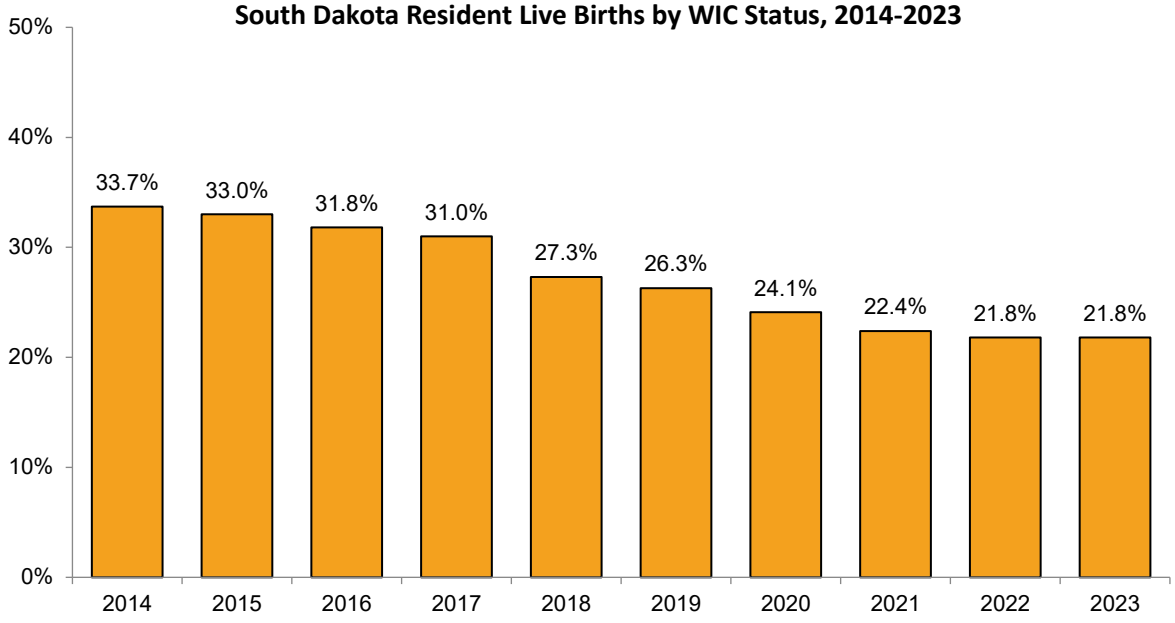
Table 14
South Dakota Resident Live Births by Mother's Age and Year of Birth, 2014-2023

Year	Total Births		Age of Mother													
			< 18		18-19		20-24		25-29		30-34		35-39		40+	
	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
2023	11,170	100	145	1.3	369	3.3	2,022	18.1	3,610	32.3	3,350	30.0	1,389	12.4	285	2.6
2022	11,193	100	146	1.3	372	3.3	2,062	18.4	3,657	32.7	3,259	29.1	1,436	12.8	261	2.3
2021	11,304	100	159	1.4	347	3.1	2,100	18.6	3,704	32.8	3,336	29.5	1,413	12.5	245	2.2
2020	10,951	100	154	1.4	386	3.5	2,063	18.8	3,677	33.6	3,153	28.8	1,282	11.7	235	2.1
2019	11,448	100	147	1.3	393	3.4	2,197	19.2	3,801	33.2	3,356	29.3	1,349	11.8	205	1.8
2018	11,890	100	166	1.4	403	3.4	2,329	19.6	4,016	33.8	3,435	28.9	1,336	11.2	205	1.7
2017	12,128	100	155	1.3	467	3.9	2,493	20.6	4,023	33.2	3,401	28.0	1,342	11.1	247	2.0
2016	12,270	100	208	1.7	481	3.9	2,615	21.3	4,166	34.0	3,312	27.0	1,255	10.2	233	1.9
2015	12,323	100	161	1.3	565	4.6	2,746	22.3	4,172	33.9	3,331	27.0	1,130	9.2	218	1.8
2014	12,281	100	223	1.8	519	4.2	2,778	22.6	4,161	33.9	3,251	26.5	1,148	9.3	201	1.6

Note: Failure of ages to add to total births is due to unknown mother's ages included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

Figure 2 displays the percent of South Dakota resident live births on the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) for the past 10 years. In 2023, 21.8 percent of mothers were on WIC during their pregnancy.

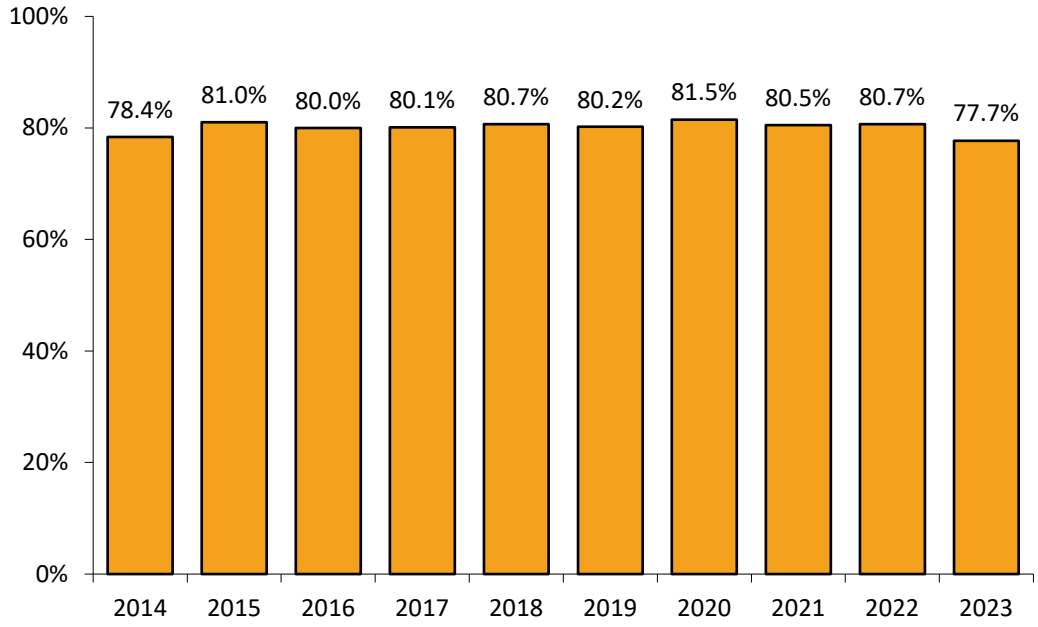
Figure 2
South Dakota Resident Live Births by WIC Status, 2014-2023



Source: South Dakota Department of Health, Office of Health Statistics

Figure 3, on the following page, displays the percentage of mothers breastfeeding at the time of hospital discharge. The percentage of women who were breastfeeding at the time of discharge decreased from 80.7 percent in 2022 to 77.7 percent in 2023. **This was the lowest since 2013.**

Figure 3
South Dakota Resident Live Births by Breastfeeding Status at Time of Discharge, 2014-2023



Source: South Dakota Department of Health, Office of Health Statistics

Table 15 displays South Dakota resident teen births (15 to 17 years old) by race from 2014 to 2023. In 2023, the teen birth rate was 7.2-**the lowest it's been since before 1963**. Prior to that year, the number of teen births was not published in the annual report for comparison. When looking at race, the white teen birth rate was 2.7 compared to a teen birth rate of 27.4 for American Indians and 20.8 for Hispanics in 2023.

Table 15
South Dakota Resident Teen Births and Rates by Year and Mother's Race/Ethnicity, 2014-2023

Year	Total		White		American Indian		Hispanic		Black	
	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate
2023	137	7.2	37	2.7	63	27.4	26	20.8	5	9.3
2022	140	7.7	50	3.8	57	25.6	21	18.3	1	2.0
2021	154	8.6	41	3.2	66	27.2	23	21.8	7	14.2
2020	147	8.6	37	3.0	61	26.6	27	26.7	3	7.0
2019	143	8.6	39	3.2	67	30.5	23	24.7	4	10.3
2018	162	9.9	37	3.1	86	40.2	18	21.3	7	19.3
2017	147	9.1	41	3.4	80	37.3	13	16.6	1	3.1
2016	200	12.5	60	5.0	93	44.6	23	29.7	4	13.5
2015	153	9.5	44	3.7	76	36.0	18	23.4	2	7.3
2014	216	13.2	87	7.1	86	41.4	19	23.3	8	19.8

Note: Rates are per 1,000 female population ages 15-17.
Failure of races to add to the total is due to other and unknown races included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

PRENATAL CARE

Table 16 shows the number of South Dakota resident live births by when the mother started prenatal care in 2023. Just over three-fourths (75.7%) of mothers started care in the first trimester – 83.9 percent of white mothers, 42.8 percent of American Indian mothers, 57.4 percent of black mothers, and 62.5 percent of Hispanic mothers. Overall, 2.5 percent of mothers failed to obtain prenatal care at all - the **highest recorded since collecting data in the current manner in 2006.**

When looking at race, the number of white mothers who had no prenatal care was 0.7 percent while American Indian mothers who had no prenatal care was 10.6 percent.

Table 16
South Dakota Resident Live Births by Trimester Prenatal Care Began and Mother's Race/Ethnicity, 2023

Trimester Prenatal Care Began	Total		Race/Ethnicity of Mother									
			White		American Indian		Hispanic		Black		American Indian & white	
	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
First	8,396	75.7	6,654	83.9	68	42.8	519	62.5	197	57.4	152	63.1
Second	1,848	16.7	1,024	12.9	407	30.7	191	23.0	85	24.8	63	26.1
Third	570	5.1	199	2.5	212	16.0	92	11.1	23	6.7	17	7.1
None	280	2.5	58	0.7	140	10.6	29	3.5	38	11.1	9	3.7
Unknown	76	-	26	-	32	-	11	-	1	-	4	-
Total	**11,170**	**100**	**7,961**	**100**	**1,359**	**100**	**842**	**100**	**343**	**100**	**245**	**100**

Note: Failure of the races to add to the total is due to unknown races contained in the total birth column.
Source: South Dakota Department of Health, Office of Health Statistics

Table 17 shows the number of mothers who began prenatal care by trimester for the past 10 years. Prenatal care in the first trimester has remained steady over the past 10 years.

Table 17
South Dakota Resident Live Births by Trimester Prenatal Care Began, 2014-2023

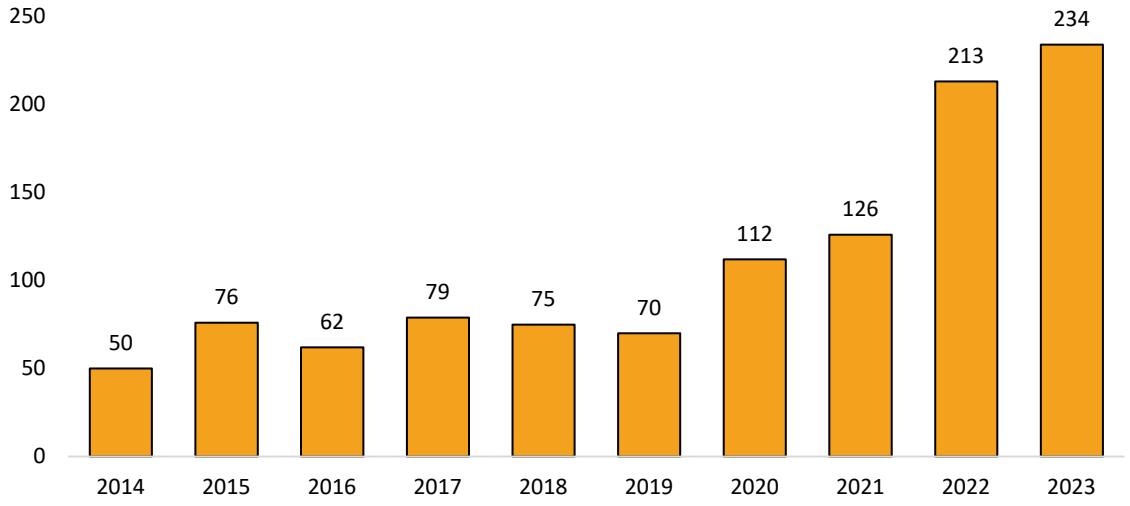
Year	Total		First		Second		Third		No Prenatal Care		Not Stated	
	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
2023	11,170	100	8,396	75.7	1,848	16.7	570	5.1	280	2.5	76	-
2022	11,193	100	8,414	75.8	1,914	17.3	553	5.0	213	1.9	99	-
2021	11,304	100	8,530	76.2	1,913	17.1	587	5.2	168	1.5	109	-
2020	10,951	100	8,256	76.0	1,956	18.0	533	4.9	118	1.1	88	-
2019	11,448	100	8,605	75.9	2,094	18.5	533	4.7	105	0.9	111	-
2018	11,890	100	8,864	75.4	2,212	18.8	561	4.8	119	1.0	134	-
2017	12,128	100	8,853	74.0	2,360	19.7	622	5.2	129	1.1	164	-
2016	12,270	100	9,160	75.5	2,248	18.5	629	5.2	98	0.8	135	-
2015	12,323	100	9,128	75.3	2,292	18.9	588	4.9	107	0.9	208	-
2014	12,281	100	9,089	75.4	2,236	18.5	637	5.3	98	0.8	221	-

Source: South Dakota Department of Health, Office of Health Statistics

HOME BIRTHS

Figure 4 displays the number of intended home births for South Dakota residents in the past 10 years. In 2023 South Dakota saw the largest number of intended home births since this started being tracked in 2006.

Figure 4
South Dakota Resident Intended Home Births, 2014-2023



Source: South Dakota Department of Health, Office of Health Statistics

METHODS OF DELIVERY

Table 18 displays the method of delivery for the past five years. Vaginal birth was the primary method of delivery for South Dakota residents for the past five years. C-section rates have remained steady over the past five years.

Table 18
South Dakota Resident Births by Method of Delivery and Year of Birth, 2019-2023

	2019		2020		2021		2022		2023	
	Num	%	Num	%	Num	%	Num	%	Num	%
Vaginal (Total)	**8,647**	**75.5**	**8,252**	**75.4**	**8,527**	**75.4**	**8,513**	**76.1**	**8,449**	**75.6**
Vaginal with no previous C-section	8,321	72.7	7,939	72.5	8,189	72.4	8,173	73.0	8,086	72.4
Vaginal after previous C-section	324	2.8	308	2.8	334	3.0	329	2.9	345	3.1
Vaginal (unknown previous types)	2	0.0	5	0.1	4	0.0	11	0.1	18	0.2
C-Section (Total)	**2,801**	**24.5**	**2,698**	**24.6**	**2,777**	**24.6**	**2,679**	**23.9**	**2,721**	**24.4**
Primary C-section	1,548	13.5	1,524	13.9	1,622	14.3	1,627	14.5	1,571	14.1
Repeat C-section	1,253	10.9	1,174	10.7	1,154	10.2	1,051	9.4	1,147	10.3
C-section (unknown previous types)	0	0.0	0	0.0	1	0.0	1	0.0	3	0.0

Source: South Dakota Department of Health, Office of Health Statistics

INFANT MORTALITY

OVERVIEW 2023

Infant Deaths
- Number 71
- Rate per 1,000 live births 6.4

Neonatal Deaths
- Number 44
- Rate per 1,000 Live Births 3.9

Postneonatal Death
- Number 27
- Rate per 1,000 Live Births 2.4

During 2023, there were 71 South Dakota resident infant deaths reported for an infant mortality rate of 6.4 per 1,000 live births. In comparison, there were 87 infant deaths in 2022, with an infant mortality rate of 7.8 per 1,000 live births.

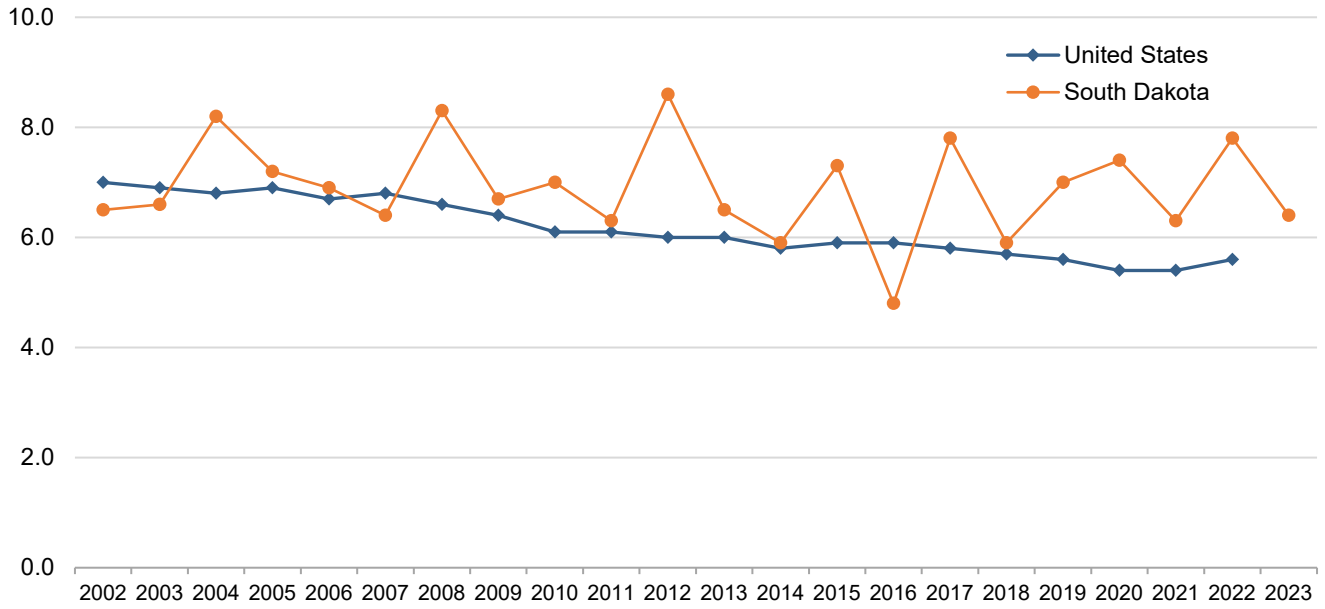
Caution should be used when comparing these annual rates because the number of South Dakota resident births creates a relatively small denominator for determining infant mortality rates; a small change in the number of infant deaths can result in a relatively large rate change. Infant mortality rates should be monitored over time.

Table 19
Resident Infant Deaths and Infant Mortality Rates, South Dakota and United States, 2002-2023

Year	United States		South Dakota	
	Number	Mortality Rate	Number	Mortality Rate
2023	*NA	*NA	71	6.4
2022	20,577	5.6	87	7.8
2021	19,928	5.4	71	6.3
2020	19,578	5.4	81	7.4
2019	20,921	5.6	80	7.0
2018	21,498	5.7	70	5.9
2017	22,341	5.8	94	7.8
2016	23,161	5.9	59	4.8
2015	23,455	5.9	90	7.3
2014	23,215	5.8	73	5.9
2013	23,446	6.0	80	6.5
2012	23,629	6.0	104	8.6
2011	23,985	6.1	75	6.3
2010	24,586	6.1	83	7.0
2009	26,412	6.4	80	6.7
2008	28,059	6.6	100	8.3
2007	29,138	6.8	79	6.4
2006	28,527	6.7	82	6.9
2005	28,440	6.9	82	7.2
2004	27,936	6.8	93	8.2
2003	28,025	6.9	73	6.6
2002	28,034	7.0	70	6.5

Note: * 2023 U.S. data are not available at time of publication. Infant Mortality rates are per 1,000 live births.
Sources: National Center for Health Statistics and South Dakota Department of Health, Office of Health Statistics

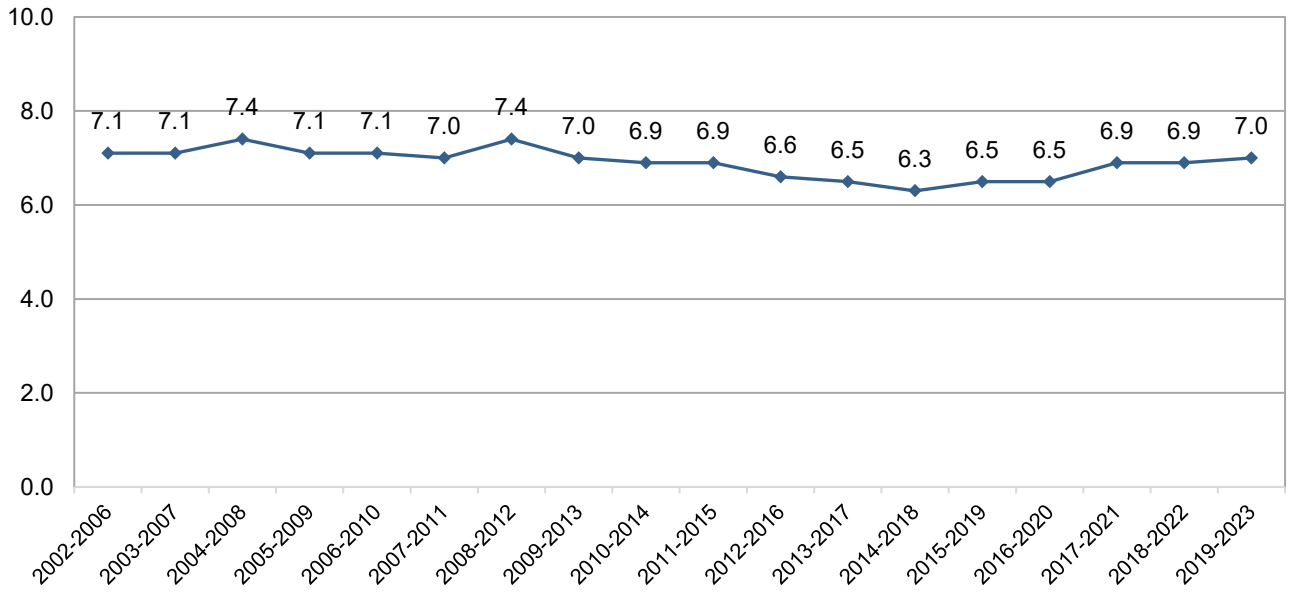
Figure 5
Resident Infant Mortality Rates, South Dakota and United States, 2002-2023



Note: Rate Per 1,000 Live Births. U.S. 2023 data are not available at time of publication.
Source: National Center for Health Statistics and South Dakota Department of Health, Office of Health Statistics

Figure 6 displays South Dakota's infant mortality rate grouped in five-year increments. The current five-year rate (7.0) is the highest in the past 10 years.

Figure 6
Resident Infant Mortality Rates for South Dakota, 2002-2023



Note: Rate Per 1,000 Live Births.
Source: South Dakota Department of Health, Office of Health Statistics

Table 20 lists the overall leading causes of infant death in 2019-2023. The leading causes of infant death can be broken down as follows: congenital malformations, 24.9 percent, short gestation and low birth weight with 11.0 percent, and sudden infant death syndrome with 7.9 percent.

Table 20

South Dakota Resident Leading Causes of Infant Death, 2019-2023

	Total	2019	2020	2021	2022	2023
Total Deaths	**390**	**80**	**81**	**71**	**87**	**71**
1. Congenital malformations, deformations, & chromosomal abnormalities (Q00-Q99)	97	27	13	20	21	16
Chromosomal abnormalities (Q90-Q99)	22	6	2	7	3	4
Edward's syndrome (Trisomy 18) (Q91.0-Q91.3)	17	5	1	5	2	4
Congenital malformations of the heart (Q20-Q24)	19	6	3	3	6	1
Congenital malformations of the nervous system (Q00-Q07)	16	4	4	4	2	2
Anencephaly and similar malformations (Q00)	8	4	2	0	1	1
Congenital malformations and deformations of the musculoskeletal system, limbs and integument (Q65-Q85)	11	3	0	3	3	2
Congenital diaphragmatic hernia (Q79.0)	7	1	0	2	2	2
Congenital malformations of the genitourinary system (Q50-Q64)	8	1	0	1	4	2
2. Disorders related to short gestation and low birth weight (P07)	43	10	11	8	8	6
3. Sudden infant death syndrome (SIDS) (R95)	31	1	6	6	7	11
4. Accidental suffocation and strangulation in bed (W75)	30	7	8	6	6	3
5. Undetermined cause of death (R96-R99)	24	8	11	3	1	1
6. Newborn affected by premature rupture of membranes (P01.1)	10	2	1	2	5	0
T7. Homicide (X85-Y09)	7	1	1	1	3	1
T7. Hydrops fetalis not due to hemolytic disease (P83.2)	7	1	3	0	2	1
T9. Brain injury due to lack of oxygen or blood (P91.6)	6	2	2	1	0	1
T9. Respiratory distress of newborn (P22)	6	1	2	0	2	1
All other causes	129	20	23	24	32	30

Source: South Dakota Department of Health, Office of Health Statistics

INFANT DEATHS AND UNSAFE SLEEP ENVIRONMENT

Table 21 shows the causes of death related to an unsafe sleep environment over the past five years. Out of the total 390 infant deaths, 17 percent had an unsafe sleep environment noted on the death certificate. Of the 30 infant deaths caused by accidental suffocation and strangulation in bed, 100 percent involved an unsafe sleep environment.

Table 21

South Dakota Resident Leading Causes of Infant Death by Sleep Environment, 2019-2023

Cause of Death	Total	Unsafe sleep environment noted on the death certificate
Total	390	65 (17%)
Accidental suffocation and strangulation in bed (W75)	30	30 (100%)
Sudden infant death syndrome (R95)	31	18 (58%)
Undetermined cause of death (R96-R99)	24	13 (54%)

Source: South Dakota Department of Health, Office of Health Statistics

INFANT MORTALITY BY RACE

All race/ethnicity data in this section are shown for White, American Indian, Black, and Hispanic. The remaining categories (Asian, Pacific Islander, and Multi-Racial) are included in the totals but are not shown specifically in any tables.

Table 22 indicates that from 2022 to 2023, the rate of South Dakota resident infant deaths decreased for American Indian and white infants while it increased for black and Hispanic infants. Table 23 displays infant mortality grouped by five-year increments.

Table 22
South Dakota Resident Infant Deaths and Mortality Rates by Infant's Race, 2014-2023

Year	Race of Infant								Total	
	White		American Indian		Black		Hispanic			
	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate
2023	34	4.3	21	15.5	6	17.4	6	7.1	71	6.4
2022	47	5.9	30	20.5	2	5.6	5	6.9	87	7.8
2021	31	3.9	26	17.2	7	18.3	3	4.3	71	6.3
2020	43	5.6	22	14.7	4	10.4	5	7.6	81	7.4
2019	50	6.1	18	11.2	5	12.1	4	6.2	80	7.0
2018	44	5.2	14	8.5	2	4.9	4	6.1	70	5.9
2017	61	7.1	15	8.3	7	17.6	3	4.8	94	7.8
2016	33	3.7	21	11.8	3	8.3	1	1.6	59	4.8
2015	52	5.9	24	12.5	3	11.3	3	5.4	90	7.3
2014	36	4.0	23	12.7	3	10.2	4	6.6	73	5.9

Note: Infant mortality rates are per 1,000 live births.
Failure of races to add to the total is due to other and unknown races included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

Table 23
South Dakota Resident Infant Deaths and Mortality Rates by Infant's Race, Five-Year Increments, 2010-2023

Year	Race of Infant												Total	
	White		American Indian		Black		Hispanic		American Indian & white		Black & white			
	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate
2019-2023	205	5.1	117	15.7	24	12.7	23	6.5	4	3.0	7	20.1	390	7.0
2018-2022	215	5.3	110	14.2	20	10.3	21	6.2	5	3.6	7	23.0	389	6.9
2017-2021	229	5.6	95	11.8	25	12.6	19	5.8	8	5.6	7	24.4	396	6.9
2016-2020	231	5.5	90	10.8	21	10.7	17	5.3	8	5.8	7	26.0	384	6.5
2015-2019	240	5.6	92	10.5	20	10.8	15	4.8	9	6.5	5	19.2	393	6.5
2014-2018	226	5.2	97	10.8	18	10.4	15	4.9	12	8.8	5	19.8	386	6.3
2013-2017	228	5.2	105	11.4	20	12.5	13	4.4	12	9.3	5	20.7	396	6.5
2012-2016	220	5.0	114	12.3	16	10.9	19	6.6	10	8.0	8	36.2	406	6.6
2011-2015	229	5.2	117	12.5	16	11.9	18	6.5	13	10.7	8	40.2	422	6.9
2010-2014	229	5.2	112	12.1	14	10.7	18	6.7	17	14.9	6	34.7	415	6.9

Note: Infant mortality rates are per 1,000 live births.
Failure of races to add to the total is due to other and unknown races included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

When analyzed by race, Table 24 indicates that the South Dakota resident neonatal mortality rate per 1,000 live births increased for blacks and Hispanics from 2022 to 2023. Whites and American Indians decreased from 2022 to 2023. In Table 25 neonatal mortality is grouped in five-year increments.

Table 24
South Dakota Resident Neonatal Deaths and Mortality Rates by Infant's Race, 2014-2023

Year	Race of Infant								Total	
	White		American Indian		Black		Hispanic			
	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate
2023	26	3.3	11	8.1	2	5.8	3	3.6	44	3.9
2022	28	3.5	18	12.3	2	5.6	2	2.8	50	4.5
2021	18	2.2	12	7.9	5	13.1	1	1.4	37	3.3
2020	23	3.0	10	6.6	4	10.4	3	4.5	43	3.9
2019	30	3.7	6	3.7	5	12.1	3	4.7	46	4.0
2018	24	2.8	7	4.3	1	2.4	3	4.6	36	3.0
2017	46	5.3	10	5.5	6	15.1	2	3.2	67	5.5
2016	22	2.5	8	4.5	0	0.0	0	0.0	31	2.5
2015	36	4.1	15	7.8	3	11.3	2	3.6	59	4.8
2014	25	2.8	8	4.4	1	3.4	4	6.6	42	3.4

Note: Neonatal mortality rates are per 1,000 live births.
Failure of races to add to the total is due to other and unknown races included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

Table 25
South Dakota Resident Neonatal Deaths and Mortality Rates by Infant's Race, Five-Year Increments, 2010-2023

Year	Race of Infant										Total	
	White		American Indian		Black		Hispanic		American Indian & white			
	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Rate	Rate
2019-2023	125	3.1	57	7.7	18	9.6	12	3.4	0	0.0	220	3.9
2018-2022	123	3.0	53	6.9	17	8.7	12	3.6	1	0.7	212	3.7
2017-2021	141	3.4	45	5.6	21	10.6	12	3.7	2	1.4	229	4.0
2016-2020	145	3.5	41	4.9	16	8.1	11	3.4	2	1.4	223	3.8
2015-2019	158	3.7	46	5.3	15	8.1	10	3.2	2	1.4	239	4.0
2014-2018	153	3.5	48	5.4	11	6.4	11	3.6	5	3.6	235	3.9
2013-2017	160	3.6	50	5.4	14	8.8	9	3.1	5	3.9	247	4.0
2012-2016	153	3.5	54	5.8	9	6.1	13	4.5	5	4.0	249	4.1
2011-2015	160	3.6	56	6.0	11	8.2	13	4.7	7	5.7	264	4.3
2010-2014	159	3.6	55	6.0	8	6.1	14	5.2	9	7.9	261	4.3

Note: Neonatal mortality rates are per 1,000 live births.
Failure of races to add to the total is due to other and unknown races included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

Table 26 shows that the American Indian postneonatal mortality rate has been consistently higher than the white rate for each year since 2014. Table 27 postneonatal mortality is grouped in five-year increments.

Table 26
South Dakota Resident Postneonatal Deaths and Mortality Rates by Infant's Race, 2014-2023

Year	Total					
	White		American Indian		Total	
	Num	Rate	Num	Rate	Num	Rate
2023	8	1.0	10	7.4	27	2.4
2022	19	2.4	12	8.2	37	3.3
2021	13	1.6	14	9.2	34	3.0
2020	20	2.6	12	8.0	38	3.5
2019	20	2.5	12	7.5	34	3.0
2018	20	2.4	7	4.3	34	2.9
2017	15	1.7	5	2.8	27	2.2
2016	11	1.2	13	7.3	28	2.3
2015	16	1.8	9	4.7	31	2.5
2014	11	1.2	15	8.3	31	2.5

Note: Postneonatal mortality rates are per 1,000 live births.
Failure of races to add to the total is due to other and unknown races included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

Table 27
South Dakota Resident Postneonatal Deaths and Mortality Rates by Infant's Race, Five-Year Increments, 2010-2023

Year	Race of Infant										Total	
	White		American Indian		Black		Hispanic		American Indian & white			
	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate
2019-2023	80	2.0	60	8.1	6	3.2	11	3.1	4	3.0	170	3.0
2018-2022	92	2.3	57	7.4	3	1.5	9	2.7	4	2.9	177	3.1
2017-2021	88	2.1	50	6.2	4	2.0	7	2.1	6	4.2	167	2.9
2016-2020	86	2.1	49	5.9	5	2.5	6	1.9	6	4.3	161	2.7
2015-2019	82	1.9	46	5.3	5	2.7	5	1.6	7	5.1	154	2.6
2014-2018	73	1.7	49	5.5	7	4.0	4	1.3	7	5.1	151	2.5
2013-2017	68	1.5	55	6.0	6	3.8	4	1.4	7	5.4	149	2.4
2012-2016	67	1.5	60	6.5	7	4.8	6	2.1	5	4.0	157	2.6
2011-2015	69	1.6	61	6.5	5	3.7	5	1.8	6	4.9	158	2.6
2010-2014	70	1.6	57	6.2	6	4.6	4	1.5	8	7.0	154	2.6

Note: Postneonatal mortality rates are per 1,000 live births.
Failure of races to add to the total is due to other and unknown races included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

Table 28 shows the leading causes of infant death from 2019 to 2023. The overall leading cause of infant death for South Dakota residents was congenital malformations, deformations, and chromosomal abnormalities, which accounted for 24.9 percent of all infant deaths in South Dakota from 2019 to 2023.

The second leading cause of death was disorders related to short gestation and low birth weight with 11.0 percent.

Table 28

South Dakota Resident Infant Deaths by Cause of Death and Race, 2019-2023

	Total		Race							
			White		American Indian		Black		Hispanic	
	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate
Total Deaths	**390**	**7.0**	**205**	**5.1**	**117**	**15.7**	**24**	**12.7**	**23**	**6.5**
1. Congenital malformations, deformations, & chromosomal abnormalities (Q00-Q99)	**97**	**1.7**	**59**	**1.5**	**20**	**2.7**	**7**	**3.7**	**3**	**0.8**
Chromosomal abnormalities (Q90-Q99)	22	0.4	11	0.3	3	0.4	3	1.6	3	0.8
Edward's syndrome (Trisomy 18) (Q91.0-Q91.3)	17	0.3	9	0.2	3	0.4	1	0.5	2	0.6
Congenital malformations of the heart (Q20-Q24)	19	0.3	13	0.3	4	0.5	1	0.5	0	0.0
Congenital malformations of the nervous system (Q00-Q07)	16	0.3	12	0.3	3	0.4	0	0.0	0	0.0
Anencephaly and similar malformations (Q00)	8	0.1	6	0.2	1	0.1	0	0.0	0	0.0
Congenital malformations and deformations of the musculoskeletal system, limbs, and integument (Q65-Q85)	11	0.2	8	0.2	3	0.4	0	0.0	0	0.0
Congenital diaphragmatic hernia (Q79.0)	7	0.1	4	0.1	3	0.4	0	0.0	0	0.0
Congenital malformations of the genitourinary system (Q50-Q64)	8	0.1	3	0.1	3	0.4	2	1.1	0	0.0
2. Disorders related to short gestation and low birth weight (P07)	**43**	**0.8**	**21**	**0.5**	**15**	**2.0**	**6**	**3.2**	**1**	**0.3**
3. Sudden infant death syndrome (SIDS) (R95)	**31**	**0.6**	**11**	**0.3**	**12**	**1.6**	**2**	**1.1**	**4**	**1.1**
4. Accidental suffocation and strangulation in bed (W75)	**30**	**0.5**	**14**	**0.4**	**9**	**1.2**	**2**	**1.1**	**2**	**0.6**
5. Undetermined cause of death (R96-R99)	**24**	**0.4**	**17**	**0.4**	**5**	**0.7**	**1**	**0.5**	**1**	**0.3**
6. Newborn affected by premature rupture of membranes (P01.1)	**10**	**0.2**	**5**	**0.1**	**4**	**0.5**	**0**	**0.0**	**1**	**0.3**
T7. Homicide (X85-Y09)	**7**	**0.1**	**4**	**0.1**	**2**	**0.3**	**0**	**0.0**	**0**	**0.0**
T7. Hydrops fetalis not due to hemolytic disease (P83.2)	**7**	**0.1**	**6**	**0.2**	**0**	**0.0**	**0**	**0.0**	**1**	**0.3**
T9. Brain injury due to lack of oxygen or blood (P91.6)	**6**	**0.1**	**5**	**0.1**	**1**	**0.1**	**0**	**0.0**	**0**	**0.0**
T9. Respiratory distress of newborn (P22)	**6**	**0.1**	**6**	**0.2**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**
All Other Causes	**129**	**2.3**	**57**	**1.4**	**49**	**0.6**	**6**	**3.2**	**10**	**2.8**

Source: South Dakota Department of Health, Office of Health Statistics

Note: Failure of races to add to the total is due to other and unknown races included in the total

FETAL MORTALITY

OVERVIEW 2023

Fetal Deaths

Number	75
Rate per 1,000 live births + fetal deaths	6.7

During 2023, there were 75 South Dakota resident fetal deaths reported for a fetal mortality rate of 6.7 per 1,000 live births. In comparison, there were 52 fetal deaths in 2022, with a fetal mortality rate of 4.6 per 1,000 live births. Please see the Technical Notes section at the end of this report to define fetal death.

Caution should be used when comparing these annual rates because the number of South Dakota resident births creates a relatively small denominator for determining fetal mortality rates; a small change in the number of fetal deaths can result in a relatively large rate change. Fetal mortality rates should be monitored over time.

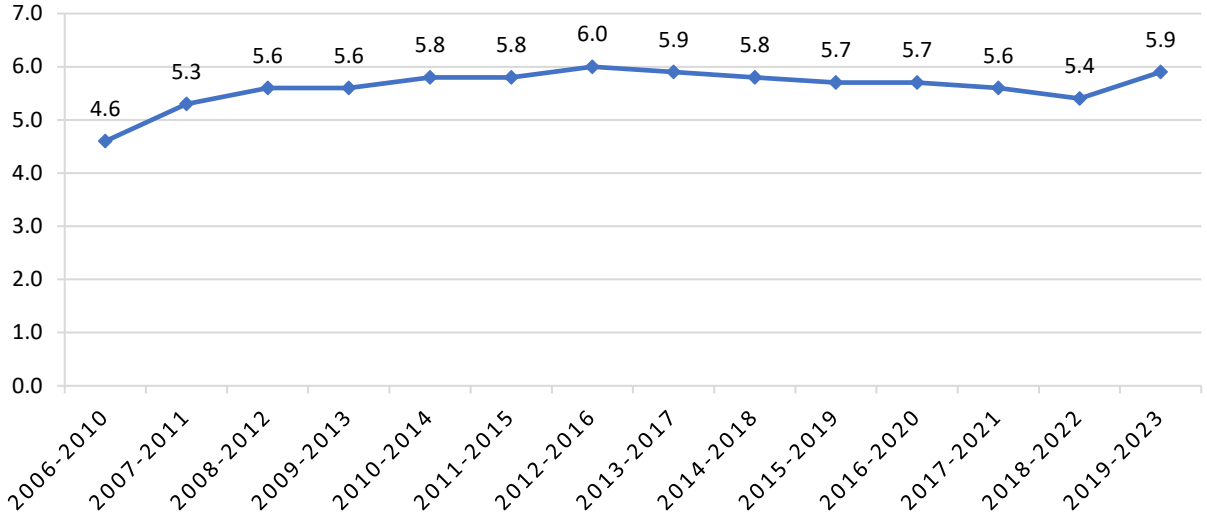
Table 29
Resident Fetal Deaths and Fetal Mortality Rates,
South Dakota and United States, 2002-2023

Year	United States		South Dakota	
	Number	Mortality Rate	Number	Mortality Rate
2023	*NA	*NA	75	6.7
2022	*NA	*NA	52	4.6
2021	*NA	*NA	72	6.3
2020	20,854	5.7	66	6.0
2019	21,478	5.7	66	5.7
2018	22,459	5.9	51	4.3
2017	22,827	5.9	68	5.6
2016	23,880	6.0	84	6.8
2015	23,776	5.9	76	6.1
2014	23,980	6.0	77	6.2
2013	23,595	6.0	60	4.9
2012	24,073	6.1	72	5.9
2011	24,289	6.1	71	6.0
2010	25,258	6.0	73	6.2
2009	24,872	6.0	62	5.2
2008	26,335	6.2	61	5.0
2007	26,893	6.1	53	4.3
2006	25,972	6.1	30	2.5

Note: *2021-2023 U.S. data are not available at time of publication.
Fetal Mortality rates are per 1,000 live births + fetal deaths.
Sources: National Center for Health Statistics and South Dakota Department of Health, Office of Health Statistics

Figure 7 displays South Dakota's fetal mortality rate grouped in five-year increments. The five-year rate is 5.9, up from 5.4 in 2018-2022. South Dakota's lowest fetal mortality rate was 4.6 in 2016-2010.

Figure 7
Resident Fetal Mortality Rates for South Dakota, 2006-2023



Note: Rate Per 1,000 Live Births.
Source: South Dakota Department of Health, Office of Health Statistics

FETAL MORTALITY BY RACE

Table 30

South Dakota Resident Fetal Deaths and Mortality Rates by Race, Five-Year Increments, 2006-2023

Year	All Races		Race of Mother									
			White		American Indian		Hispanic		Black		American Indian & White	
	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate
2019-2023	331	5.9	210	5.2	73	9.7	18	5.0	9	4.8	8	6.0
2018-2022	307	5.4	189	4.7	65	8.3	19	5.6	15	7.6	7	5.1
2017-2021	323	5.6	195	4.7	69	8.5	22	6.7	18	9.0	7	4.9
2016-2020	335	5.7	197	4.7	84	10.0	23	7.1	17	8.6	4	2.9
2015-2019	345	5.7	209	4.9	81	9.2	21	6.7	21	11.2	4	2.9
2014-2018	356	5.8	212	4.8	85	9.4	21	6.8	22	12.6	6	4.4
2013-2017	365	5.9	217	4.9	89	9.6	21	7.1	17	10.5	10	7.7
2012-2016	369	6.0	221	5.0	91	9.7	19	6.6	17	11.4	9	7.1
2011-2015	356	5.8	217	4.9	84	8.9	18	6.5	17	12.5	10	8.1
2010-2014	353	5.8	212	4.8	90	9.7	17	6.3	13	9.9	8	7.0
2009-2013	338	5.6	217	4.9	78	8.4	13	5.0	13	10.5	7	6.4
2008-2012	339	5.6	229	5.1	77	8.2	10	4.0	11	9.6	3	2.8
2007-2011	320	5.3	219	4.9	73	7.7	9	3.7	8	7.6	2	2.0
2006-2010	279	4.6	200	4.4	58	6.1	6	2.6	6	6.0	1	1.1

Note: Fetal mortality rates are per 1,000 live births.

Failure of races to add to the total is due to other and unknown races included in the total.

Source: South Dakota Department of Health, Office of Health Statistics

FETAL MORTALITY BY MOTHER'S AGE

Table 31

South Dakota Resident Fetal Deaths and Mortality Rates by Mother's Age, Five-Year Increments, 2006-2023

Year	Age of Mother															
	All Races		< 18		18-19		20-24		25-29		30-34		35-39		40+	
	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate
2019-2023	331	5.9	2	2.7	10	5.3	52	5.0	104	5.6	98	5.9	50	7.2	15	12.0
2018-2022	307	5.4	3	3.9	11	5.8	49	4.5	92	4.9	91	5.5	46	6.7	15	12.9
2017-2021	323	5.6	3	3.8	13	6.5	55	4.9	91	4.7	93	5.5	53	7.8	15	13.0
2016-2020	335	5.7	4	4.8	18	8.4	57	4.8	105	5.3	81	4.8	57	8.6	13	11.4
2015-2019	345	5.7	4	4.8	16	6.9	64	5.1	104	5.1	79	4.7	63	9.7	15	13.4
2014-2018	356	5.8	3	3.3	19	7.7	72	5.5	98	4.7	88	5.2	60	9.6	16	14.3
2013-2017	365	5.9	6	6.1	16	6.0	78	5.7	95	4.6	92	5.6	62	10.2	16	14.3
2012-2016	369	6.0	7	6.4	17	6.0	78	5.6	98	4.7	93	5.8	57	10.0	19	17.8
2011-2015	356	5.8	9	7.9	17	5.5	77	5.4	89	4.3	96	6.3	50	9.2	18	16.9
2010-2014	353	5.8	15	11.9	18	5.6	78	5.4	90	4.4	88	6.0	47	8.9	17	16.4
2009-2013	338	5.6	18	13.3	17	4.9	72	4.8	96	4.7	78	5.6	42	8.3	15	14.3
2008-2012	339	5.6	17	11.4	21	5.7	72	4.7	105	5.2	77	5.7	33	6.7	14	13.4
2007-2011	320	5.3	16	10.3	25	6.5	70	4.5	95	4.7	74	5.7	29	5.9	11	10.8
2006-2010	279	4.6	14	8.6	18	4.6	66	4.1	88	4.4	58	4.6	25	5.1	10	10.1

Note: Fetal mortality rates are per 1,000 live births.

Source: South Dakota Department of Health, Office of Health Statistics

MORTALITY

OVERVIEW 2023

Total South Dakota Resident Deaths	8,500
Crude Death Rates per 100,000 Population	
South Dakota	924.6
United States (2022)	984.1
Age-Adjusted Death Rates per 100,000 Population	
South Dakota	749.2
United States (2022)	798.8

South Dakota resident deaths decreased from 8,955 in 2022 to 8,500 in 2023. Table 32 displays the deaths, crude death rates, and age-adjusted death rates for the United States and South Dakota residents for the past 17 years.

All race data in this section are shown for White and American Indian. The remaining categories (Black, Asian, Pacific Islander, Hispanic, and Multi-Racial) are included in the totals but are not shown specifically in any tables.

Table 32
Resident Deaths, Crude Death Rates, and Age-Adjusted Death Rates, South Dakota and United States, 2007-2023

Year	United States			South Dakota		
	Number	Crude Rate	Age-Adjusted Rate	Number	Crude Rate	Age-Adjusted Rate
2023	NA*	NA*	NA*	8,500	924.6	749.2
2022	3,279,857	984.1	798.8	8,955	984.3	796.0
2021	3,464,231	1,043.8	879.7	9,183	1,025.6	858.2
2020	3,383,729	1,027.0	835.4	9,857	1,104.2	867.4
2019	2,854,838	869.7	715.2	8,273	935.2	739.6
2018	2,839,205	867.8	723.6	7,971	903.5	715.7
2017	2,813,503	863.8	731.9	7,991	918.9	736.1
2016	2,744,248	849.3	728.8	7,838	905.7	718.6
2015	2,712,630	844.0	733.1	7,724	899.7	714.9
2014	2,626,418	823.7	724.6	7,500	879.1	709.9
2013	2,596,993	821.5	731.9	7,079	837.9	677.4
2012	2,543,279	810.2	732.8	7,283	873.9	706.8
2011	2,515,458	807.3	741.3	7,271	882.3	716.1
2010	2,468,435	799.5	747.0	7,087	870.4	713.4
2009	2,437,163	794.5	749.6	6,913	851.1	688.6
2008	2,471,984	813.0	758.3	7,056	877.0	712.1
2007	2,423,712	803.6	760.2	6,800	853.2	695.1

Note: *U.S. 2023 data were unavailable at publication time.
Crude death rates are per 100,000 population.
Age-adjusted rates are computed with the 2000 standard.
Source: National Center of Health Statistics
South Dakota Department of Health, Office of Health Statistics

LEADING CAUSES OF DEATH 2023

The five leading causes of death in 2023 for South Dakota residents were heart disease, cancer, chronic lower respiratory disease, Alzheimer's disease, and stroke.

Heart disease was again the leading cause of death in South Dakota in 2023 accounting for 21.0 percent of all South Dakota resident deaths.

Cancer was the second leading cause of death in 2023 and accounted for 20.5 percent of South Dakota resident deaths. Lung cancer accounted for the most cancer deaths.

Chronic lower respiratory diseases were the third leading cause of death and accounted for 5.0 percent of 2023 South Dakota resident deaths. Chronic obstructive pulmonary disease (COPD) accounted for the most chronic lower respiratory disease deaths.

Alzheimer's disease was the fourth leading cause of death accounting for 4.7 percent of all South Dakota resident deaths in 2023.

Stroke was the fifth leading cause of death accounting for 4.5 percent of all South Dakota resident deaths in 2023.

Table 33, on the next page, lists South Dakota resident leading causes of death for the last five years. Heart disease has been the overall leading cause of death for four of the past five years. Cancer was the leading cause in 2021 with heart disease second.

COVID-19 dropped out of the top ten leading causes of death in 2023.

Alzheimer's disease was the 4th leading cause in 2023, but the 5th leading cause over the last five years.

Chronic lower respiratory diseases were the 5th leading cause in 2022 but were the 3rd leading cause in 2023.

Dementia became the 7th leading cause of death in 2023 compared to the previous year when it was the 10th leading cause.

Table 33

South Dakota Resident Leading Causes of Death, 2019-2023

Cause of Death	2019-2023			2019			2020			2021			2022			2023		
	Rank	Deaths	%	Rank	Deaths	%	Rank	Deaths	%	Rank	Deaths	%	Rank	Deaths	%	Rank	Deaths	%
South Dakota (All Deaths)		44,768	100		8,273	100		9,857	100		9,183	100		8,955	100		8,500	100
Heart Disease (I00-I09, I11, I13, I20-I51)	1	8,968	20.0	1	1,840	22.2	1	1,819	18.5	2	1,691	18.4	1	1,835	20.5	1	1,783	21.0
Cancer (C00-C97)	2	8,630	19.3	2	1,736	21.0	2	1,728	17.5	1	1,740	18.9	2	1,687	18.8	2	1,739	20.5
COVID-19 (U07)	3	2,873	6.4	*	*	*	3	1,497	15.2	3	776	8.5	3	448	5.0	*	*	*
Chronic Lower Respiratory Diseases (J40-J47)	4	2,253	5.0	3	521	6.3	5	429	4.4	4	464	5.1	5	415	4.6	3	424	5.0
Alzheimer's Disease (G30)	5	2,214	4.9	4	496	6.0	4	488	5.0	5	396	4.3	4	436	4.9	4	398	4.7
Stroke (I60-I69)	6	1,964	4.4	5	373	4.5	6	426	4.3	6	391	4.3	6	393	4.4	5	381	4.5
Diabetes (E10-E14)	7	1,521	3.4	6	287	3.5	7	329	3.3	8	306	3.3	7	336	3.8	6	263	3.1
Chronic Liver Disease and Cirrhosis (K70 & K73-K74)	8	1,234	2.8	10	154	1.9	8	235	2.4	7	329	3.6	8	281	3.1	8	235	2.8
Accidental Falls (W00-W19)	9	1,057	2.4	7	203	2.5	9	217	2.2	9	229	2.5	9	219	2.4	9	189	2.2
Dementia (F00-F03)	10	990	2.2	*	*	*	10	194	2.0	*	*	*	10	199	2.2	7	255	3.0
Suicide (U03, X60-X84, Y87.0)	*	*	*	9	185	2.2	*	*	*	10	202	2.2	*	*	*	10	180	2.1
Influenza and Pneumonia (J09-J18)	*	*	*	8	189	2.3	*	*	*	*	*	*	*	*	*	*	*	*
All Other Causes	-	13,064	29.2	-	2,289	27.7	-	2,495	25.3	-	2,659	29.0	-	2,706	30.2		2,653	31.2

Note: Letter/number combinations following cause of death are ICD-10 codes.
*This cause was not one of the 10 leading causes of death for the given year.
Due to rounding disease-specific percentages may not sum to 100.
Source: South Dakota Department of Health, Office of Health Statistics

Table 34
South Dakota Resident Leading Causes of Death by Race, 2023

Cause of Death	All Races					White					American Indian				
	Rank	Deaths	%	Crude Rate	Age-Adjusted Rate	Rank	Deaths	%	Crude Rate	Age-Adjusted Rate	Rank	Deaths	%	Crude Rate	Age-Adjusted Rate
South Dakota (All Deaths)		**8,500**	**100**	**924.6**	**749.2**		**7,417**	**100**	**1,002.5**	**696.7**		**859**	**100**	**1,218.8**	**1,628.5**
Heart Disease (I00-I09, I11, I13, I20-I51)	1	1,783	21.0	193.9	151.7	1	1,628	21.9	220.1	147.2	2	115	13.4	163.2	238.7
Cancer (C00-C97)	2	1,739	20.5	189.2	147.1	2	1,579	21.3	213.4	144.1	1	118	13.7	167.4	235.4
Chronic Lower Respiratory Diseases (J40-J47)	3	424	5.0	46.1	35.6	3	404	5.4	54.6	36.3	T10	14	1.6	19.9	31.8
Alzheimer's Disease (G30)	4	398	4.7	43.3	34.0	4	386	5.2	52.2	34.6	*	*	*	*	*
Stroke (I60-I69)	5	381	4.5	41.4	32.3	5	359	4.8	48.5	32.4	*	*	*	*	*
Diabetes (E10-E14)	6	263	3.1	28.6	22.7	7	197	2.7	26.6	18.2	4	61	7.1	86.5	127.2
Dementia (F00-F03)	7	255	3.0	27.7	21.6	6	242	3.3	32.7	21.6	*	*	*	*	*
Chronic Liver Disease and Cirrhosis (K70 & K73-K74)	8	235	2.8	25.6	26.0	*	*	*	*	*	3	107	12.5	151.8	187.1
Accidental Falls (W00-W19)	9	189	2.2	20.6	16.4	8	165	2.2	22.3	15.2	T10	14	1.6	19.9	28.3
Suicide (U03, X60-X84, Y87.0)	10	180	2.1	19.6	20.6	10	128	1.7	17.3	17.7	5	42	4.9	59.6	60.2
Motor Vehicle Accidents	*	*	*	*	*	*	*	*	*	*	6	41	4.8	58.2	59.8
Homicide (X85-Y09, Y87.1)	*	*	*	*	*	*	*	*	*	*	7	30	3.5	42.6	42.1
Accidental Drug Overdose (X40-X44)	*	*	*	*	*	*	*	*	*	*	8	29	3.4	41.1	44.4
COVID-19 (U07)	*	*	*	*	*	9	139	1.9	18.8	12.5	*	*	*	*	*
Septicemia (A40-A41)	*	*	*	*	*	*	*	*	*	*	9	25	2.9	35.5	51.3
All Other Causes	-	2,653	31.2	-	-	-	2,190	29.5	-	-	-	263	30.6	-	-

Note: Letter/number combinations following cause of death are ICD-10 codes. Due to rounding, disease-specific percentages may not sum to 100.
* This cause was not one of the 10 leading causes of death for the given race.
Source: South Dakota Department of Health, Office of Health Statistics

RACE

Table 34, on the previous page, shows South Dakota resident leading causes of death by race as well as crude death rates and age-adjusted death rates.

In 2023, patterns for the 10 leading causes of death varied by race. Only six of the 10 leading causes were the same for whites and American Indians. For example, Alzheimer's disease, stroke, COVID-19, and dementia were in the top 10 for whites, but not American Indians.

At the same time, chronic liver disease and cirrhosis, motor vehicle accidents, accidental drug overdose, homicides, and septicemia were in the top 10 for American Indians, but not whites.

Heart disease was the leading cause of death for whites, while cancer was the leading cause for American Indians.

GENDER

Table 35, on the following page, presents South Dakota resident leading causes of death by gender as well as crude death rates and age-adjusted death rates.

In 2023 patterns for the 10 leading causes of death in South Dakota also varied by gender. Eight of the 10 leading causes were the same for South Dakota's men and women, but they differed in rank. For example, Alzheimer's disease was the third leading cause for women, but only the seventh leading cause for men. Dementia was the sixth leading cause for women but was not a leading cause for men.

Heart disease was the leading cause of death for men, but cancer was the leading cause for women.

Suicide and motor vehicle accidents were among the 10 leading causes of death for South Dakota's men, but not for women. At the same time, dementia and COVID-19 were both in the top ten for women, but not for men.

Table 35
South Dakota Resident Leading Causes of Death by Gender, 2023

Cause of Death	Total					Male					Female				
	Rank	Deaths	%	Crude Rate	Age-Adjusted Rate	Rank	Deaths	%	Crude Rate	Age-Adjusted Rate	Rank	Deaths	%	Crude Rate	Age-Adjusted Rate
South Dakota (All Deaths)		**8,500**	**100**	**924.6**	**749.2**		**4,495**	**100**	**961.7**	**894.5**		**4,005**	**100**	**886.2**	**629.8**
Heart Disease (I00-I09, I11, I13, I20-I51)	1	1,783	21.0	193.9	151.7	1	1,058	23.5	226.4	208.9	2	725	18.1	160.4	105.9
Cancer (C00-C97)	2	1,739	20.5	189.2	147.1	2	927	20.6	198.3	171.4	1	812	20.3	179.7	129.8
Chronic Lower Respiratory Diseases (J40-J47)	3	424	5.0	46.1	35.6	3	218	4.8	46.6	42.2	T4	206	5.1	45.6	31.6
Alzheimer's Disease (G30)	4	398	4.7	43.3	34.0	7	135	3.0	28.9	30.0	3	263	6.6	58.2	36.3
Stroke (I60-I69)	5	381	4.5	41.4	32.3	4	175	3.9	37.4	35.0	T4	206	5.1	45.6	30.2
Diabetes (E10-E14)	6	263	3.1	28.6	22.7	5	150	3.3	32.1	28.7	7	113	2.8	25.0	17.9
Dementia (F00-F03)	7	255	3.0	27.7	21.6	*	*	*	*	*	6	164	4.1	36.3	22.5
Chronic Liver Disease and Cirrhosis (K70 & K73-K74)	8	235	2.8	25.6	26.0	8	133	3.0	28.5	27.6	8	102	2.5	22.6	24.5
Accidental Falls (W00-W19)	9	189	2.2	20.6	16.4	10	97	2.2	20.8	20.2	9	92	2.3	20.4	13.4
Suicide (U03, X60-X84, Y87.0)	10	180	2.1	19.6	20.6	6	136	3.0	29.1	30.2	*	*	*	*	*
Motor Vehicle Accidents	*	*	*	*	*	9	108	2.4	23.1	23.0	*	*	*	*	*
COVID-19 (U07)	*	*	*	*	*	*	*	*	*	*	10	77	1.9	17.0	11.5
All Other Causes	-	2,653	31.2	-	-	-	1,358	30.2	-	-	-	1,245	31.1	-	-

Note: Letter/number combinations following the cause of death are ICD-10 codes. Due to rounding, disease-specific percentages may not sum to 100.
*This cause was not one of the 10 leading causes of death for this gender.
Source: South Dakota Department of Health, Office of Health Statistics

Table 36
South Dakota Resident Five Leading Causes of Death by Age Group, 2019-2023

Deaths per Year

Rank	All Ages	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90 & over
1	Heart Disease 1,794	Motor Vehicle Accidents 3	Suicide 22	Suicide 43	Chronic Liver Disease and Cirrhosis 41	Chronic Liver Disease and Cirrhosis 53	Cancer 156	Cancer 406	Cancer 509	Heart Disease 492	Heart Disease 436
2	Cancer 1,726	Accidental Drowning 3	Motor Vehicle Accidents 16	Motor Vehicle Accidents 26	Suicide 34	Heart Disease 49	Heart Disease 126	Heart Disease 283	Heart Disease 384	Cancer 423	Alzheimer's Disease 200
3	COVID-19 (2020-2023) 718	Homicide 3	Homicide 4	Accidental Drug Overdose 15	Motor Vehicle Accidents 25	Cancer 44	Chronic Liver Disease and Cirrhosis 62	COVID-19 (2020-2023) 113	COVID-19 (2020-2023) 169	COVID-19 (2020-2023) 205	Cancer 163
4	Chronic Lower Respiratory Diseases 451	Congenital Malformations, Deformations, and Chromosomal Abnormalities 2	Accidental Drug Overdose 2	Chronic Liver Disease and Cirrhosis 11	Accidental Drug Overdose 23	Suicide 27	COVID-19 (2020-2023) 51	Chronic Lower Respiratory Disease 69	Chronic Lower Respiratory Disease 144	Alzheimer's Disease 185	COVID-19 (2020-2023) 146
5	Alzheimer's Disease 443	Cancer 2	Cancer 2	Homicide 10	Cancer 18	Motor Vehicle Accidents 21	Diabetes 33	Diabetes 58	Diabetes 83	Chronic Lower Respiratory Disease 149	Stroke 112

Source: South Dakota Department of Health, Office of Health Statistics

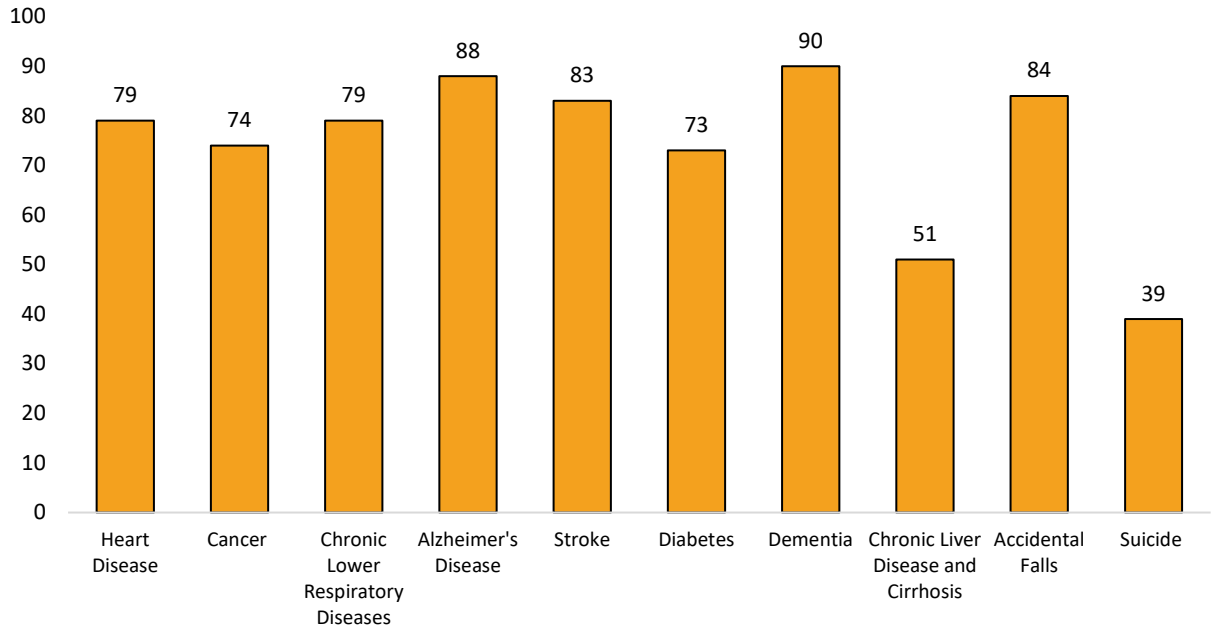
AGE

Table 36, on the previous page, lists the five leading causes of death by age group for the last five years combined. Motor vehicle accidents, accidental drowning, and homicide were tied for the leading cause of deaths for 1-9 year olds. Suicides were the leading cause of death for 10-29 year olds. Chronic liver disease and cirrhosis was the leading cause for 30-49 year olds. The leading cause of death for persons 50-79 was cancer. Heart disease was the leading cause of death for persons aged 80 and older.

MEDIAN AGE

Figure 8 presents data on the median age at death for the 10 leading causes of death for South Dakota residents in 2023. The median age for the 10 leading causes of death in 2023 ranged from 39 for suicide to 90 for dementia.

Figure 8
Median Age at Death for South Dakota Residents for the Leading Causes of Death, 2023



Source: South Dakota Department of Health, Office of Health Statistics

Table 37 shows the median age at death for the given years by race and gender. When looking at race, American Indians have a much lower median age at death at 56, while whites' median age at death was 79. The median age at death for males was 75, while females was 81.

Table 37
Median Age at Death for South Dakota Residents by Race, Gender, and Year of Death, 2005-2023

Year of Death	Total Median Age	White	American Indian	Male	Female
2023	77	79	56	75	81
2022	77	79	55	74	80
2021	76	78	55	73	80
2020	79	81	60	75	82
2015	80	81	56	76	83
2010	80	81	58	77	84
2005	80	81	58	76	83

Source: South Dakota Department of Health, Office of Health Statistics

Table 38 shows the median age at death for South Dakota residents for the leading causes of death by race and gender. In 2023, the median age at death for whites ranged from 43 for suicide to 90 for dementia. The range for American Indians was 28 for suicides to 74 for chronic lower respiratory diseases. For males the range in 2023 was 41 for suicide to 86 for Alzheimer's disease. The range for females was 49 for chronic liver disease and cirrhosis to 91 for dementia.

Table 38
Median Age at Death for South Dakota Residents for the Leading Causes of Death by Race and Gender, 2023

Cause of Death	Median Age at Death in Years				
	All	Race		Gender	
	Total Deaths	White	American Indian	Male	Female
South Dakota (All Deaths)	**77**	**79**	**56**	**75**	**81**
Heart Disease (I00-I09, I11, I13, I20-I51)	79	81	64	76	84
Cancer (C00-C97)	74	75	67	74	74
Chronic Lower Respiratory Diseases (J40-J47)	79	79	74	79	80
Alzheimer's Disease (G30)	88	88	*	86	89
Stroke (I60-I69)	83	83	*	77	85
Diabetes (E10-E14)	73	75	66	73	73
Dementia (F00-F03)	90	90	*	*	91
Chronic Liver Disease and Cirrhosis (K70 & K73-K74)	51	*	45	53	49
Accidental Falls (W00-W19)	84	86	60	81	88
Suicide (U03, X60-X84, Y87.0)	39	43	28	41	*
COVID-19 (U07)	*	84	*	*	85
Motor Vehicle Accidents	*	*	32	42	*
Homicide (X85-Y09, Y87.1)	*	*	32	*	*
Accidental Drug Overdose (X40-X44)	*	*	31	*	*
Septicemia (A40-A41)	*	*	55	*	*

Note: Letter/number combinations following the cause of death are ICD-10 codes. *This cause was not one of the 10 leading causes of death for this race or gender.
Source: South Dakota Department of Health, Office of Health Statistics

UNINTENTIONAL INJURIES

Table 39, on the following page, displays the breakdown of deaths due to unintentional injuries for each of the past five years.

The highest number of deaths in 2023 for this category was accidental falls at 189 deaths. Motor vehicle accidents accounted for 145 deaths with car accidents involved in the most deaths in this category at 59 deaths.

The third highest number of deaths due to unintentional injury in 2023 was accidental drug overdose with 73 deaths.

Table 39

South Dakota Resident Leading Causes of Death Due to Unintentional Injuries, 2019-2023

	Total	Year of Death				
		2019	2020	2021	2022	2023
Total Deaths	**2,760**	**502**	**559**	**590**	**586**	**523**
1. Accidental Falls (W00-W19)	**1,056**	**202**	**217**	**229**	**219**	**189**
2. Motor Vehicle Accidents	**765**	**130**	**153**	**172**	**165**	**145**
Occupant of Car (V40-V49)	313	51	56	78	69	59
Occupant of Pick-Up or Van (V50-V59)	122	28	26	21	28	19
Pedestrian (V01-V09)	94	11	17	21	21	24
Motorcycle rider (V20-V29)	67	13	18	13	10	13
Occupant of special all-terrain Vehicle (V86)	52	6	13	9	11	13
Occupant of Heavy Transport Vehicle (V60-V69)	13	1	2	3	2	5
Pedal Cyclist (V10-V19)	7	0	1	3	3	0
All Other Motor Vehicle Accidents	5	1	0	1	3	0
Motor Vehicle Accident with Unspecified Details	92	19	20	23	18	12
3. Accidental Drug Overdose (X40-X44)	**383**	**71**	**70**	**86**	**83**	**73**
4. Accidental Poisoning by and Exposure to Alcohol (X45)	**71**	**12**	**23**	**15**	**11**	**10**
5. Accidental Exposure to Smoke, Fire, and Flames (X00-X09)	**63**	**11**	**11**	**19**	**12**	**10**
6. Accidental Drowning (W65-W74)	**56**	**12**	**13**	**13**	**12**	**6**
7. Exposure to Excessive Natural Cold (X31)	**51**	**10**	**8**	**9**	**15**	**9**
8. Choking on Food (W79)	**36**	**7**	**3**	**5**	**8**	**13**
T9. Choking on any object except food (W80)	**17**	**0**	**5**	**3**	**2**	**7**
T9. Accidental discharge of firearms (W32-W34)	**17**	**0**	**5**	**0**	**7**	**5**
All Other Causes of Unintentional Injury	245	47	51	39	52	56

Source: South Dakota Department of Health, Office of Health Statistics

TOBACCO USE

On the death certificate, the certifier was instructed to check “yes” or “probably” if in their opinion, the use of tobacco contributed to death or check “no” if in their clinical judgment tobacco use did not contribute to the death. There was also the option of “unknown” if the certifier was unsure if tobacco use contributed to death.

On 1,430 deaths, or 18.6 percent, the certifier indicated “yes” or “probably” that tobacco use contributed to the natural death. Conversely, on 4,204 deaths, or 54.8 percent, the certifier indicated that tobacco use did not contribute to the natural death.
In the remaining 2,038 deaths, or 26.6 percent, the certifier was unsure if tobacco use contributed to the natural death.

Table 40, on the following page, displays the 10 leading causes of natural death where the certifier said “yes” or “probably” that tobacco use contributed to the death.

Tobacco use contributed to death in 73.3 percent, or 22 out of the 30 emphysema deaths in 2023. In 65.5 percent, or 239 lung, trachea, and bronchus cancer deaths the certifier said “yes” or “probably” that tobacco use contributed to the death.

Table 40

South Dakota Resident Leading Causes of Natural Death as They Relate to Tobacco Use, 2023

(Did Tobacco Use Contribute to Death)

Cause of Death	Yes/Probably		Total Natural Deaths	
	Number	Percent	Number	Percent
Total	**1,430**	**18.6**	**7,672**	**100**
Cancer (C00-C97)	**423**	**24.3**	**1,739**	**100**
Lung, trachea, and bronchus cancer (C33-C34)	239	65.5	365	100
Esophagus cancer (C15)	18	34.0	53	100
Heart disease (I00-I09, I11, I13, I20-I51)	**301**	**16.9**	**1,782**	**100**
Coronary artery disease (I20-I25)	211	20.1	1,048	100
Acute myocardial infarction (I21-I22)	139	22.3	623	100
Atherosclerotic heart disease (I25.1)	56	17.4	321	100
Hypertensive heart disease (I11)	26	16.0	162	100
Chronic lower respiratory diseases (J40-J47)	**264**	**62.3**	**424**	100
Chronic obstructive pulmonary disease, unspecified (J44.9)	179	63.0	284	100
Chronic obstructive pulmonary disease with acute lower respiratory infection (J44.0)	29	50.0	58	100
Chronic obstructive pulmonary disease with acute exacerbation (J44.1)	27	69.2	39	100
Emphysema (J43)	22	73.3	30	100
Stroke (I60-I69)	**43**	**11.3**	**381**	**100**
Diabetes (E10-E14)	**42**	**16.0**	**263**	**100**
Chronic liver disease and cirrhosis (K70 & K73-K74)	**36**	**15.3**	**235**	**100**
Alcoholic liver disease (K70)	34	17.6	193	100
COVID-19 (U07)	**31**	**20.5**	**151**	**100**
Chronic alcohol abuse (F10)	**18**	**31.0**	**58**	**100**
Hypertension (I10, I12, I15)	**17**	**16.7**	**102**	**100**
High cholesterol/triglycerides (E78)	**17**	**25.0**	**68**	**100**

Note: Table does not include infant deaths.

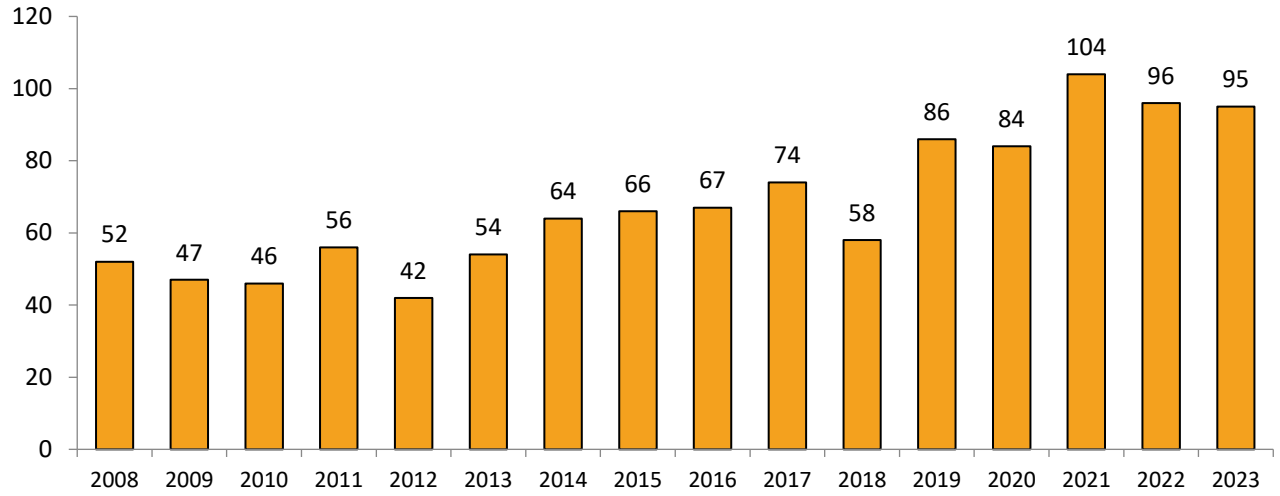
Source: South Dakota Department of Health, Office of Health Statistics

DRUG OVERDOSE DEATHS

Figures 9-10 and Tables 41-42 on the following pages break down the drug overdose deaths for South Dakota residents for the past 16 years by the manner of death, year of death, and type of drug.

As shown in Figure 9 there were 95 drug overdose deaths in 2023, down slightly from 96 drug overdose deaths in 2022. Table 41 shows that of the 95 drug overdose deaths in 2023, 73 deaths were unintentional, 20 deaths were suicides, and two deaths where the intent was undetermined. The definition of drug overdose deaths is located at the back of this report within the Technical Notes section.

Figure 9
South Dakota Resident Deaths Due to Drug Overdoses, 2008-2023



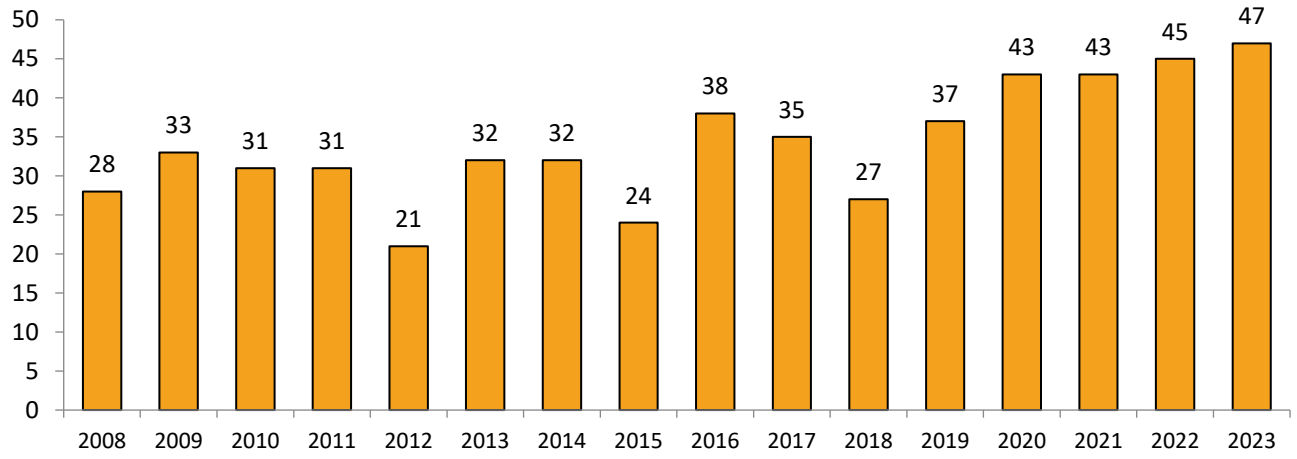
Source: South Dakota Department of Health, Office of Health Statistics

Table 41
South Dakota Resident Deaths Due to Drug Overdose by Manner of Death and Year of Death for All Drugs, 2008-2023

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total	52	47	46	56	42	54	64	66	67	74	58	86	84	104	96	95
Unintentional	30	26	19	41	24	34	46	44	52	54	43	71	70	86	84	73
Suicide	13	12	16	11	11	15	12	19	12	18	11	10	10	17	9	20
Homicide	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0
Undetermined Intent	9	8	11	4	7	4	6	3	2	2	4	5	3	1	3	2

Source: South Dakota Department of Health, Office of Health Statistics

Figure 10
South Dakota Resident Deaths Due to All Opioid Poisoning, 2008-2023



Source: South Dakota Department of Health, Office of Health Statistics

Table 42
South Dakota Resident Deaths Due to Drug Overdose by Manner of Death and Year of Death for All Opioid Poisoning, 2008-2023

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total	28	33	31	31	21	32	32	24	38	35	27	37	43	43	45	47
Unintentional	18	22	15	26	15	21	27	19	31	28	22	32	41	35	40	40
Suicide	4	6	8	3	2	9	2	4	6	7	3	3	1	8	3	5
Homicide	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Undetermined Intent	6	4	8	2	4	2	3	1	1	0	1	2	1	0	2	2

Source: South Dakota Department of Health, Office of Health Statistics

The following tables (43 and 44) show the specific drugs involved in drug overdose deaths for 2023 and for the past 10 years. Out of the 95 total drug deaths in 2023, 39 of those involved fentanyl and 30 involved methamphetamine. Of those 39 involving fentanyl, 21 listed fentanyl as the only drug, while the other 18 deaths involved at least one other drug. For methamphetamine, 20 of the 30 deaths only involved methamphetamine, while the other 10 involved at least one other drug.

The following is an explanation of what is represented regarding "Drugs Involved" in deaths due to a drug overdose:

- Please note that just because a drug is involved in a drug overdose death doesn't necessarily mean the overdose was due to that specific drug. It just means that drug was mentioned on the death certificate of a drug overdose death. Sometimes we have no way of knowing which drug caused the overdose in cases where multiple drugs are listed.
- Please be aware that when more than one drug is "involved" in a drug overdose, each drug is counted separately. For example, if methamphetamine and heroin are both listed on the death certificate, each drug will be counted once even though it's just one death.
- Also, if something like Vicodin, which is a combination of drugs, is listed on the death certificate, each drug will be counted and "involved" in the overdose.
- Analogs of fentanyl are included in the total for fentanyl.

Table 43
South Dakota Resident Deaths Due to Drug Overdose by Drugs Involved, 2023

Drugs Involved	Number of Deaths	Number of Specific Drugs Listed on Death Certificate	
		Only Drug Involved	Other Drugs Involved
1. Fentanyl (Includes analogs)	39	21	18
2. Methamphetamine	30	20	10
3. Cocaine (Benzoylecgonine)	11	4	7
4. Hydroxyzine	5	1	4
T5. Dextromethorphan	3	0	3
T5. Diphenhydramine (Benadryl)	3	3	0
T5. Hydrocodone (Vicodin)	3	3	0
T5. Tramadol	3	3	0

Note: ICD -10 Codes: X40-X44, X60-X64, X85, Y10-Y14

Source: South Dakota Department of Health, Office of Health Statistics

Table 44
South Dakota Resident Deaths Due to Drug Overdose by Drugs Involved and Year of Death, 2014-2023

Drugs Involved and Number of Specific Drugs on Death Certificate	Total	Year of Death									
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Methamphetamine	**268**	**14**	**13**	**18**	**22**	**13**	**31**	**30**	**52**	**45**	**30**
Only Drug Involved	179	10	8	10	12	10	25	19	39	26	20
Other Drugs Involved	89	4	5	8	10	3	6	11	13	19	10
Fentanyl (Includes Analogs)	**201**	**7**	**7**	**7**	**12**	**12**	**23**	**30**	**29**	**35**	**39**
Only Drug Involved	111	4	6	2	6	8	18	11	15	20	21
Other Drugs Involved	90	3	1	5	6	4	5	19	14	15	18
Oxycodone (Oxycontin, Percocet, Percodan)	**52**	**8**	**2**	**9**	**5**	**7**	**4**	**6**	**7**	**3**	**1**
Only Drug Involved	22	5	2	2	2	4	1	2	2	1	1
Other Drugs Involved	30	3	0	7	3	3	3	4	5	2	0
Cocaine (Benzoylecgonine)	**49**	**0**	**3**	**3**	**3**	**8**	**5**	**5**	**6**	**5**	**11**
Only Drug Involved	17	0	0	0	1	4	2	2	2	2	4
Other Drugs Involved	32	0	3	3	2	4	3	3	4	3	7
Hydrocodone (Vicodin)	**41**	**5**	**7**	**10**	**4**	**2**	**2**	**3**	**4**	**1**	**3**
Only Drug Involved	16	2	2	5	2	1	0	1	0	0	3
Other Drugs Involved	25	3	5	5	2	1	2	2	4	1	0
Morphine	**38**	**11**	**1**	**7**	**3**	**1**	**8**	**4**	**1**	**1**	**1**
Only Drug Involved	12	6	0	2	1	0	1	0	1	1	0
Other Drugs Involved	26	5	1	5	2	1	7	4	0	0	1
Heroin	**37**	**2**	**3**	**8**	**8**	**5**	**3**	**6**	**2**	**0**	**0**
Only Drug Involved	14	0	1	4	3	2	1	2	1	0	0
Other Drugs Involved	23	2	2	4	5	3	2	4	1	0	0
Bupropion (Wellbutrin)	**24**	**2**	**0**	**1**	**3**	**3**	**5**	**2**	**3**	**3**	**2**
Only Drug Involved	16	2	0	0	1	2	4	1	2	2	2
Other Drugs Involved	8	0	0	1	2	1	1	1	1	1	0
Diphenhydramine (Benadryl)	**24**	**2**	**4**	**2**	**1**	**2**	**3**	**1**	**3**	**3**	**3**
Only Drug Involved	13	2	2	1	1	1	1	0	1	1	3
Other Drugs Involved	11	0	2	1	0	1	2	1	2	2	0

Table 44 (continued)
South Dakota Resident Deaths Due to Drug Overdose by Drugs Involved and Year of Death, 2014-2023

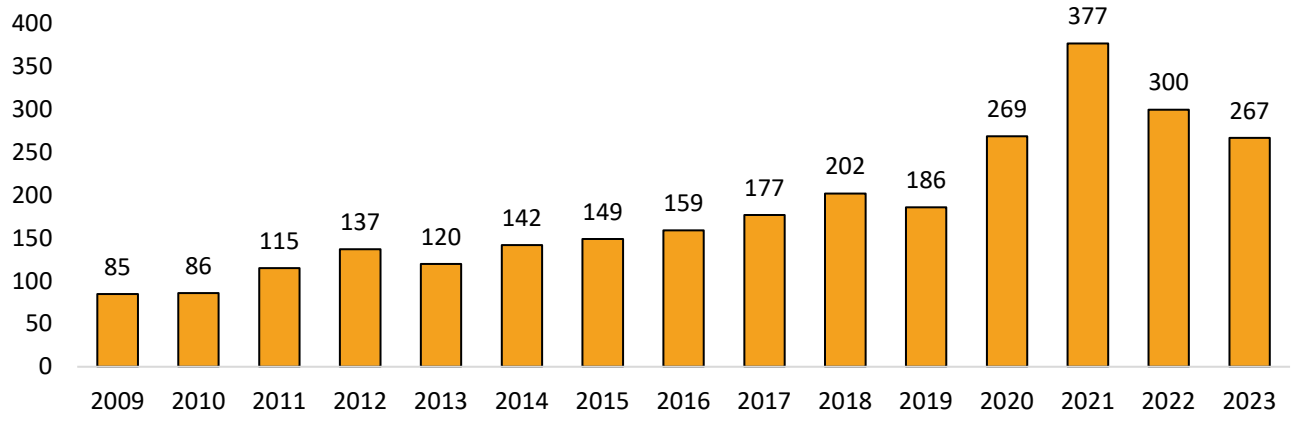
Drugs Involved and Number of Specific Drugs on Death Certificate	Total	Year of Death									
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Amphetamine (Adderall)	**22**	**2**	**2**	**1**	**3**	**0**	**1**	**3**	**3**	**6**	**1**
Only Drug Involved	5	0	0	0	1	0	1	1	0	2	0
Other Drugs Involved	17	2	2	1	2	0	0	2	3	4	1
Methadone (Methadose)	**22**	**6**	**4**	**4**	**4**	**3**	**1**	**0**	**0**	**0**	**0**
Only Drug Involved	10	3	3	1	1	2	0	0	0	0	0
Other Drugs Involved	12	3	1	3	3	1	1	0	0	0	0
Acetaminophen (Darvocet, Excedrin, Percocet, Tylenol, Vicodin)	**18**	**2**	**3**	**2**	**1**	**0**	**0**	**2**	**3**	**3**	**2**
Only Drug Involved	9	2	2	0	0	0	0	0	1	2	2
Other Drugs Involved	9	0	1	2	1	0	0	2	2	1	0
Amitriptyline	**18**	**1**	**1**	**4**	**3**	**2**	**2**	**2**	**3**	**0**	**0**
Only Drug Involved	2	0	0	0	1	0	0	0	1	0	0
Other Drugs Involved	16	1	1	4	2	2	2	2	2	0	0
Tramadol	**17**	**0**	**2**	**3**	**1**	**0**	**2**	**1**	**4**	**1**	**3**
Only Drug Involved	7	0	1	0	0	0	1	0	1	1	3
Other Drugs Involved	10	0	1	3	1	0	1	1	3	0	0
Citalopram (Celexa)	**17**	**3**	**0**	**0**	**2**	**1**	**2**	**3**	**4**	**1**	**1**
Only Drug Involved	1	0	0	0	0	0	0	1	0	0	0
Other Drugs Involved	16	3	0	0	2	1	2	2	4	1	1
Quetiapine (Seroquel)	**15**	**0**	**0**	**3**	**4**	**1**	**3**	**1**	**1**	**1**	**1**
Only Drug Involved	5	0	0	1	1	1	0	1	0	1	0
Other Drugs Involved	10	0	0	2	3	0	3	0	1	0	1
Gabapentin	**13**	**0**	**0**	**1**	**1**	**1**	**2**	**1**	**4**	**2**	**1**
Only Drug Involved	1	0	0	0	0	1	0	0	0	0	0
Other Drugs Involved	12	0	0	1	1	0	2	1	4	2	1
Hydroxyzine	**10**	**1**	**0**	**0**	**1**	**0**	**2**	**0**	**1**	**0**	**5**
Only Drug Involved	1	0	0	0	0	0	0	0	0	0	1
Other Drugs Involved	9	1	0	0	1	0	2	0	1	0	4
Fluoxetine (Prozac)	**10**	**1**	**0**	**2**	**1**	**0**	**0**	**2**	**1**	**2**	**1**
Only Drug Involved	2	0	0	0	1	0	0	0	0	0	1
Other Drugs Involved	8	1	0	2	0	0	0	2	1	2	0
Alprazolam (Xanax)	**10**	**1**	**0**	**1**	**0**	**3**	**1**	**1**	**3**	**0**	**0**
Only Drug Involved	1	1	0	0	0	0	0	0	0	0	0
Other Drugs Involved	9	0	0	1	0	3	1	1	3	0	0

Note: ICD-10 CODES X40-X44, X60-X64, X85, Y10-Y14
Source: South Dakota Department of Health, Office of Health Statistics

ALCOHOL-INDUCED DEATHS

Figure 11 shows the alcohol induced deaths for South Dakota residents for the past 15 years. The definition of alcohol-induced deaths is located in the back of this report within the technical notes section.

Figure 11
South Dakota Resident Alcohol-Induced Deaths, 2009-2023

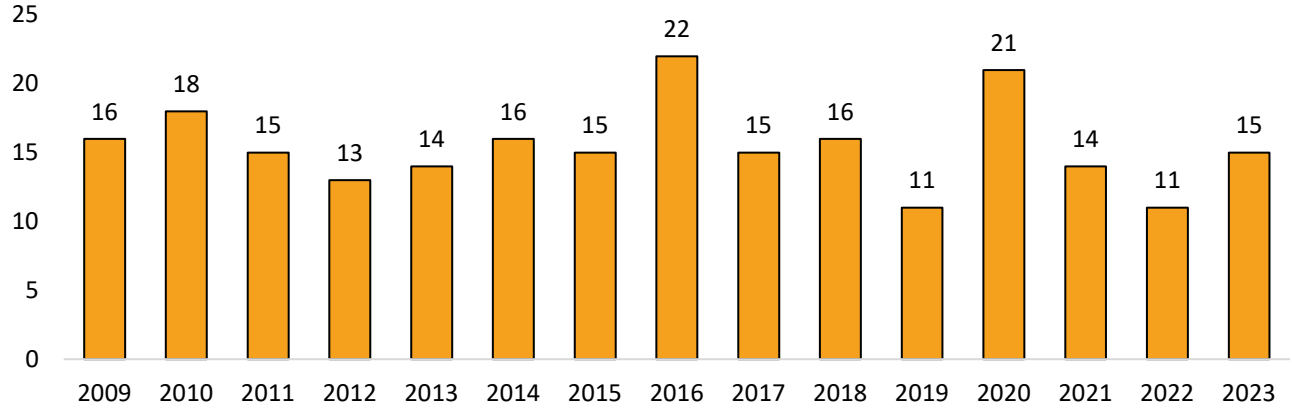


Source: South Dakota Department of Health, Office of Health Statistics

FARM ACCIDENT DEATHS

Figure 12 shows the number of South Dakota resident deaths due to farm accidents for the past 15 years. The definition of farm accident deaths is located in the back of this report within the technical notes section.

Figure 12
South Dakota Resident Deaths Due to Farm Accidents, 2009-2023



Source: South Dakota Department of Health, Office of Health Statistics

MATERNAL MORTALITY

Table 45 shows maternal mortality deaths for the past 10 years. Specific definitions are located in the notes below the table.

Table 45
South Dakota Resident Deaths Occurring in South Dakota to Women Who Were Pregnant at the Time of Death or Within One Year After Delivery, 2014-2023

Year	Any Death While Pregnant, or Within One Year After Delivery	Pregnancy-Related	Pregnancy Associated, But Not Pregnancy-Related
2023	8	*	*
2022	15	*	*
2021	13	*	*
2020	8	1	7
2019	6	0	6
2018	8	1	7
2017	5	1	4
2016	6	2	4
2015	5	2	3
2014	5	1	4

Source: South Dakota Department of Health, Office of Health Statistics

Note: Pregnancy-related: Death resulting from: 1) complications of the pregnancy itself, or 2) the chain of events initiated by the pregnancy that led to death, or 3) aggravation of an unrelated condition by the physiologic or pharmacologic effects of the pregnancy that subsequently caused death during pregnancy or within one calendar year of termination of pregnancy, regardless of the duration or anatomical site of pregnancy. This designation comes from the CDC as part of the Pregnancy Mortality Surveillance System (PMSS). *--The latest year they have reviewed for South Dakota is 2020.

Pregnancy-associated, but not pregnancy-related: Death of a woman from any cause, while she is pregnant or within one calendar year of termination of pregnancy, regardless of the duration or anatomical site of pregnancy, but not pregnancy related (see above). This designation comes from the CDC as part of the Pregnancy Mortality Surveillance System (PMSS). *--The latest year they have reviewed for South Dakota is 2020.

Table 46 shows the external causes contributing to death while pregnant within one year after delivery. The top three causes for the past ten years combined were accidental drug overdose, motor vehicle accidents, and suicides.

Table 46
South Dakota Resident Leading Causes of External Death While Pregnant or Within One Year After Delivery by Cause of Death, 2014-2023

External Cause of Death	Total
Accidental drug overdose (X40-X44)	12
Motor vehicle accidents	12
Suicide (X60-X84, Y87.0)	12
Homicide (X85-Y09, Y87.1)	5

Source: South Dakota Department of Health, Office of Health Statistics

Table 47 shows the causes contributing to a pregnancy death. The top two causes for the past ten years were kidney disease and respiratory failure.

Table 47
Contributing Causes of Natural Death While Pregnant or Within One Year of Giving Birth, 2014-2023

Cause of Death	Total
Kidney disease (N00-N07, N17-N19, N25-N27)	5
Respiratory failure (J96)	5
Influenza and pneumonia (J09-J18)	4
COVID-19 (U07)	4
Cancer (C00-C97)	3
Heart disease (I00-I09, I11, I13, I20-I51)	3
Cerebrovascular disease (I60-I69)	3

Source: South Dakota Department of Health, Office of Health Statistics

FIREARM DEATHS

Table 48 shows firearm deaths for South Dakota residents for the past 10 years. The definition of firearm deaths is located in the back of this report within the Technical Notes section.

Table 48
South Dakota Resident Deaths Due to Firearms, 2014-2023

Year	Total Firearm Deaths	Manner of Death				
		Suicide	Homicide	Accident	Legal Intervention	Undetermined Intent
2023	112	89	11	5	4	3
2022	138	96	27	7	7	1
2021	128	98	25	0	4	1
2020	120	87	27	5	1	0
2019	113	101	10	0	2	0
2018	117	91	16	7	3	0
2017	102	83	12	2	4	1
2016	107	83	14	5	5	0
2015	95	73	14	5	2	1
2014	90	76	9	2	3	0

Source: South Dakota Department of Health, Office of Health Statistics

MARRIAGE & DIVORCE

OVERVIEW 2023

Marriages:	
Number Occurring in S.D.	5,471
S.D. Rate per 1,000 Population	6.0
U.S. Rate per 1,000 Population	6.2*
****Divorces:**	
Number Occurring in S.D.	2,113
S.D. Rate Per 1,000 Population	2.3
U.S. Rate per 1,000 Population	2.4*
Years Married Before Termination in S.D.	
Mean	11
Median	9
Mode	2
Range	
Lower	Less Than 1
Upper	56

Source: National Center for Health Statistics and South Dakota Department of Health, Office of Health Statistics
Note: *The U.S. marriage and divorce rates are provisional from 2022.
The U.S. divorce rate only includes 45 reporting states and the District of Columbia.
** Divorces include annulments.

MARRIAGES

In 2023, the South Dakota marriage rate decreased to 6.0, down from 6.4 in 2022. **The marriage rate in 2023 was the lowest ever in South Dakota.** Table 49 provides the United States and South Dakota marriage rates from 2009 through 2023.

Table 49
Marriages and Marriage Rates by Occurrence, South Dakota and United States, 2009-2023

Year	United States*		South Dakota	
	Number	**Crude Rate**	**Number**	**Crude Rate**
2023	NA**	NA**	5,471	6.0
2022	2,065,905	6.2	5,826	6.4
2021	1,985,072	6.0	5,636	6.3
2020	1,676,911	5.1	5,359	6.0
2019	2,015,603	6.1	5,403	6.1
2018	2,132,853	6.5	5,757	6.5
2017	2,236,496	6.9	5,862	6.7
2016	2,251,411	7.0	6,271	7.2
2015	2,221,579	6.9	6,195	7.2
2014	2,140,272	6.9	6,040	7.1
2013	2,081,301	6.8	5,919	7.0
2012	2,131,000	6.8	6,236	7.5
2011	2,118,000	6.8	6,145	7.5
2010	2,096,000	6.8	5,939	7.3
2009	2,080,000	6.8	5,887	7.2

Note: *The marriage data for the United States are provisional for all years. **2023 data are not available at the time of publication. Crude marriage rates are per 1,000 population. The 2013 and 2014 U.S. number and rate excludes data from Georgia.
Source: National Center for Health Statistics and South Dakota Department of Health, Office of Health Statistics

Table 50 displays marriages by month over the past five years. The most common time to have a wedding for most years is from June to October.

Table 50
Month of Marriages Occurring in South Dakota, 2019-2023

	2019		2020		2021		2022		2023	
Year	Num	%	Num	%	Num	%	Num	%	Num	%
Total	5,403	100	5,359	100	5,636	100	5,826	100	5,471	100
January	204	3.8	209	3.9	212	3.8	212	3.6	183	3.3
February	207	3.8	276	5.2	199	3.5	303	5.2	176	3.2
March	229	4.2	220	4.1	238	4.2	236	4.1	249	4.6
April	245	4.5	217	4.0	282	5.0	300	5.1	270	4.9
May	459	8.5	333	6.2	524	9.3	495	8.5	469	8.6
June	816	15.1	587	11.0	774	13.7	740	12.7	757	13.8
July	584	10.8	545	10.2	710	12.6	653	11.2	610	11.1
August	771	14.3	803	15.0	655	11.6	702	12.0	601	11.0
September	771	14.3	789	14.7	775	13.8	831	14.3	899	16.4
October	538	10.0	761	14.2	658	11.7	727	12.5	614	11.2
November	290	5.4	295	5.5	286	5.1	320	5.5	324	5.9
December	289	5.3	324	6.0	323	5.7	307	5.3	319	5.8

Source: South Dakota Department of Health, Office of Health Statistics

DIVORCES IN SOUTH DAKOTA

Table 51 lists the divorce rates for South Dakota and the United States. The 2023 South Dakota divorce rate was 2.3 divorces per 1,000 population, which is the lowest divorce rate since 1972.

Table 51
Number and Rate of Divorces by Occurrence,
South Dakota and United States, 2009-2023

Year	United States*		South Dakota	
	Number	Crude Rate	Number	Crude Rate
2023	NA**	NA**	2,113	2.3
2022	673,989	2.4	2,113	2.3
2021	689,308	2.5	2,211	2.5
2020	630,505	2.3	2,226	2.5
2019	746,971	2.7	2,308	2.6
2018	782,038	2.9	2,265	2.6
2017	787,251	2.9	2,340	2.7
2016	776,288	3.0	2,400	2.8
2015	800,909	3.1	2,252	2.6
2014	813,862	3.2	2,374	2.8
2013	832,157	3.3	2,450	2.9
2012	851,000	3.4	2,550	3.1
2011	877,000	3.6	2,694	3.3
2010	872,000	3.6	2,774	3.4
2009	840,000	3.5	2,686	3.3

Note: *The U.S. data are provisional for all years. Crude divorce rates are per 1,000 population. **2023 data are not available at time of publication. The years 2017, 2018, 2019, 2020, 2021, and 2022 excludes data from California, Hawaii, Indiana, Minnesota, and New Mexico. The year 2016 excludes data for California, Georgia, Hawaii, Indiana, Minnesota, and New Mexico. The years 2013-2015 exclude California, Georgia, Hawaii, Indiana, and Minnesota. The years 2009-2012 exclude data for California, Georgia, Hawaii, Indiana, Louisiana, and Minnesota.
Source: National Center for Health Statistics and South Dakota Department of Health, Office of Health Statistics

For South Dakota, the mean or average duration of the marriages ending in divorce during 2023 was 11 years, the median duration was nine years, and the modal duration was two years. The length of time before terminating the marriage ranged from less than one year to 56 years for South Dakota divorces in 2023.

Table 52 displays the duration of marriages ending in divorce for the past 10 years. In 2023, zero to four years and five to nine years is the length most marriages lasted with 28.4 and 24.9 percent, respectively.

Table 52

Duration of Marriage Ending in Divorce Occurring in South Dakota, 2014-2023

	0-4 Years		5-9 Years		10-14 Years		15-19 Years		20-24 Years		25-29 Years		30+ Years	
Year	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
2023	600	28.4	527	24.9	345	16.3	229	10.8	187	8.8	104	4.9	121	5.7
2022	573	27.1	553	26.2	352	16.7	222	10.5	169	8.0	101	4.8	143	6.8
2021	653	29.5	524	23.7	371	16.8	243	11.0	165	7.5	114	5.2	141	6.4
2020	646	29.0	583	26.2	354	15.9	240	10.8	185	8.3	92	4.1	126	5.7
2019	658	28.5	560	24.3	410	17.8	259	11.2	169	7.3	100	4.3	152	6.6
2018	692	30.6	563	24.9	368	16.2	276	12.2	165	7.3	98	4.3	103	4.5
2017	719	30.8	543	23.2	374	16.0	278	11.9	178	7.6	115	4.9	131	5.6
2016	791	33.0	553	23.0	386	16.1	253	10.5	175	7.3	105	4.4	137	5.7
2015	735	32.6	528	23.4	355	15.8	231	10.3	182	8.1	94	4.2	127	5.6
2014	755	31.8	591	24.9	359	15.1	235	9.9	193	8.1	114	4.8	127	5.3

Table 53 displays the number of children involved in divorces for the past 10 years. Over half (53.6%) of all divorces in 2023 did not include children.

Table 53

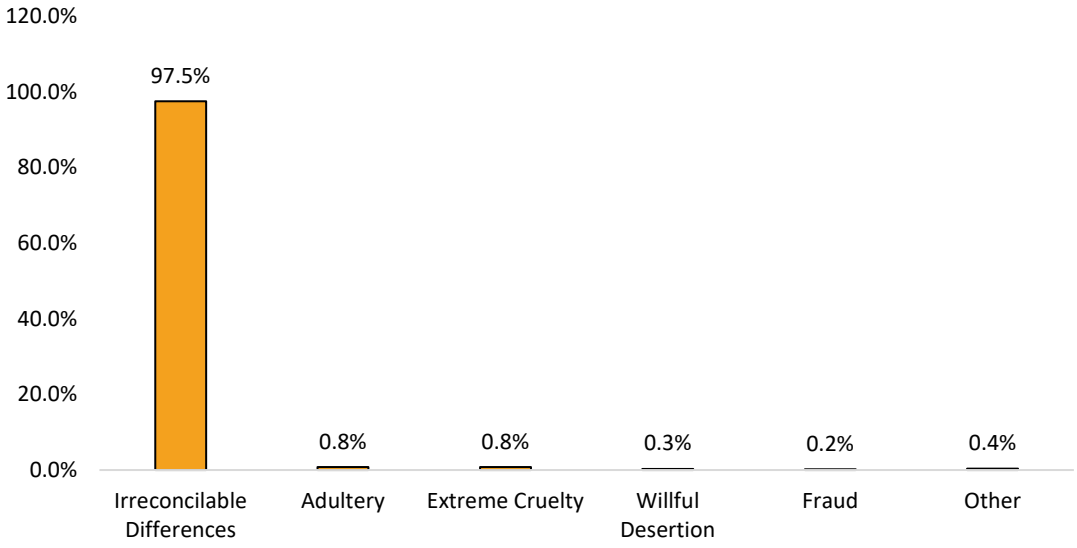
Number of Children Involved in Divorce Occurring in South Dakota, 2014-2023

	Total		No Children Involved		1 Child Involved		2 Children Involved		3 Children Involved		4 or More Children Involved		Not Stated	
Year	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
2023	2,113	100	1,133	53.6	406	19.2	361	17.1	164	7.8	49	2.3	0	-
2022	2,113	100	1,126	53.3	373	17.7	413	19.5	144	6.8	57	2.7	0	-
2021	2,211	100	1,198	54.2	402	18.2	382	17.3	161	7.3	68	3.1	0	-
2020	2,226	100	1,174	52.7	420	18.9	404	18.1	179	8.0	49	2.2	0	-
2019	2,308	100	1,204	52.2	443	19.2	423	18.3	186	8.1	52	2.3	0	-
2018	2,265	100	1,164	51.4	412	18.2	446	19.7	179	7.9	64	2.8	0	-
2017	2,340	100	1,227	52.4	410	17.5	485	20.7	159	6.8	59	2.5	0	-
2016	2,400	100	1,298	54.1	459	19.1	432	18.0	166	6.9	43	1.8	2	-
2015	2,252	100	1,190	52.8	444	19.7	404	17.9	166	7.4	48	2.1	0	-
2014	2,374	100	1,256	52.9	502	21.2	414	17.4	156	6.6	45	1.9	1	-

Source: South Dakota Department of Health, Office of Health Statistics

Figure 13, on the next page, displays causes for the divorce. Most divorces in 2023 stated irreconcilable differences with 97.5 percent.

Figure 13
Causes for Divorce Occurring in South Dakota, 2023



Source: South Dakota Department of Health, Office of Health Statistics

INFECTIOUS DISEASES IN SOUTH DAKOTA, 2023

The South Dakota Department of Health (SDDOH) strives to promote healthy living and to protect the health of all South Dakotans. A core public health function is the surveillance of infectious diseases in the state.

Infectious disease surveillance monitors patterns of disease occurrence and assesses the health status of South Dakota's population. Surveillance can detect sudden changes in disease occurrence, such as an outbreak, or identify long-term disease trends or new and emerging diseases. Surveillance activities are linked to public health actions, such as investigation, control and prevention, evaluation, or planning and allocating resources to address the diseases affecting the population.

SDDOH is authorized by South Dakota Codified Law 34-22-12 and Administrative Rules Article 44:20 to receive and process mandatory reports of communicable diseases by physicians, hospitals, laboratories, and institutions, and to establish public health measures to control and prevent disease transmission.

This report provides an overview of disease surveillance conducted by SDDOH in 2023. It highlights important statistics and shows key trends on selected reportable diseases in the state. To view the most current infectious disease data, please visit the monthly interactive dashboard on our website: https://doh.sd.gov/health-data-reports/data-dashboards/infectious-disease-dashboard/.

Table 54 Reportable Diseases in South Dakota, 2014-2023 (Calendar years)

Reportable diseases	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Babesiosis	1	0	0	0	0	0	1	0	0	**1**	**3**
Botulism	0	0	0	0	0	0	0	0	0	**0**	**0**
Brucellosis	0	0	0	1	0	0	0	0	0	**0**	**1**
Campylobacteriosis	307	346	450	395	532	524	324	310	307	**455**	**3950**
Carbapenem-resistant Enterobacterales (CRE)	3	37	58	64	48	40	27	39	50	**40**	**406**
Chicken Pox (Varicella)	23	27	32	24	31	26	18	9	14	**16**	**220**
Chlamydia	4129	3967	4336	4439	4441	4545	4007	4858	5166	**4891**	**44779**
Coccidioidomycosis	NR	NR	5	6	3	8	7	6	8	**7**	**50**
Coronavirus Disease 2019 (COVID-19)	-	-	-	-	-	-	99984	81626	90750	**25818**	**298178**
Cryptosporidiosis	151	248	158	163	177	167	76	127	97	**161**	**1525**
Cyclosporiasis	0	0	3	4	30	10	22	16	2	**5**	**92**
Dengue	0	2	2	0	1	1	2	0	0	**4**	**12**
Ehrlichiosis and Anaplasmosis	0	0	1	1	4	0	2	3	1	**5**	**17**
Giardiasis	131	129	116	104	114	92	66	71	65	**80**	**968**
Gonorrhea	880	1055	1271	1291	1694	2170	2399	3261	3076	**2330**	**19427**
Hantavirus	0	0	0	1	0	2	1	0	1	**0**	**5**
Hepatitis A	3	2	1	1	1	8	1	1	2	**4**	**24**
Hepatitis B, chronic	58	52	60	52	46	37	53	36	30	**38**	**462**
Hepatitis B, acute	3	2	2	2	1	5	4	4	3	**3**	**29**
Hepatitis C, chronic	516	570	714	563	545	583	723	847	694	**582**	**6337**
Hepatitis C, acute	0	0	22	20	19	31	10	5	21	**10**	**138**
Haemophilus influenzae, invasive	NR	NR	20	21	30	30	14	17	25	**28**	**185**
Hemolytic uremic syndrome	1	1	1	0	0	5	2	6	6	**7**	**29**
HIV and AIDS	24	20	35	28	21	31	32	27	44	**52**	**314**
Legionellosis	9	10	9	15	33	23	10	21	24	**17**	**171**

Reportable diseases	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Leprosy (Hansen's disease)	0	0	0	0	0	0	0	1	0	**0**	**1**
Listeriosis	0	0	0	2	1	0	2	1	2	**2**	**10**
Lyme disease	2	5	11	12	7	10	8	16	12	**7**	**90**
Malaria	5	4	4	8	9	6	2	8	2	**4**	**52**
Measles	8	2	0	0	0	0	0	0	0	**0**	**10**
Meningococcal disease	2	1	1	0	0	0	0	1	1	**0**	**6**
Mpox	NR	NR	NR	NR	NR	NR	NR	NR	3	**0**	**3**
Multisystem inflammatory syndrome	NR	NR	NR	NR	NR	NR	6	9	6	**0**	**21**
Mumps	0	0	2	0	0	12	0	0	0	**0**	**14**
Pertussis	109	16	15	9	163	147	34	1	1	**51**	**546**
Q fever	5	5	4	5	12	11	8	5	6	**7**	**68**
Rabies, animal	21	29	27	22	15	16	10	15	9	**20**	**184**
Salmonellosis	164	230	305	226	227	166	179	220	250	**249**	**2216**
Shiga toxin-producing *E. coli*	41	62	84	91	204	136	97	96	88	**113**	**1012**
Shigellosis	616	285	28	29	26	9	12	17	17	**53**	**1092**
Spotted fever rickettsiosis	3	2	6	13	14	10	7	7	1	**2**	**65**
Methicillin-resistant *Staph aureus* (MRSA), invasive	124	159	144	115	173	156	169	178	148	**145**	**1511**
Strep. pneumoniae, invasive	88	110	129	135	106	101	71	95	109	**125**	**1069**
Syphilis (primary, secondary, and early non-primary non-secondary)	76	48	41	52	50	56	101	787	1504	**1390**	**4105**
Syphilis, congenital	3	0	2	3	1	3	4	16	40	**54**	**126**
Toxic shock syndrome	0	3	1	0	1	0	0	0	1	**0**	**6**
Tularemia	5	25	14	13	9	17	10	14	0	**8**	**115**
Tuberculosis	8	17	12	14	12	16	16	12	10	**14**	**131**
Typhoid and paratyphoid fever	0	1	2	0	0	0	0	1	2	**1**	**7**
West Nile fever	45	29	117	46	122	11	9	29	35	**48**	**491**
West Nile neuroinvasive	12	11	35	27	47	0	11	19	36	**46**	**244**
Vibriosis	NR	NR	5	12	9	3	3	9	4	**5**	**50**

*NR = not reportable

Source: South Dakota Department of Health. Minor variances from past reports reflect differences between MMWR year and calendar year, cross-year deduplication and recategorization.

Table 55 Reportable Diseases by County of Residence, South Dakota, 2023 (Calendar years)

County of residence	Campylobacteriosis	Chlamydia	Cryptosporidiosis	Giardiasis	Gonorrhea	Hepatitis B, chronic	Hepatitis C, chronic	Legionellosis	MRSA, invasive	Pertussis	Salmonella	Shigellosis	*Strep. pneumo*, invasive	Shiga Toxin-Prod *E. coli*	Tularemia	Varicella (Chicken pox)	West Nile disease
TOTAL	**455**	**4891**	**161**	**80**	**2330**	**38**	**582**	**17**	**145**	**51**	**249**	**53**	**125**	**113**	**8**	**16**	**94**
Incidence*	49.5	532.0	17.5	8.7	253.4	4.1	63.3	1.8	15.8	5.5	27.1	5.8	13.6	12.3	0.9	1.7	10.2
Aurora	<5	8	0	<5	0	0	0	0	0	0	0	0	0	0	0	0	0
Beadle	9	80	5	0	8	<5	7	0	<5	0	<5	0	<5	0	0	<5	<5
Bennett	<5	48	0	0	14	0	<5	0	<5	0	0	0	<5	0	0	0	0
Bon Homme	<5	16	0	<5	5	0	<5	0	0	11	<5	0	0	0	0	0	<5
Brookings	7	111	14	<5	8	<5	<5	0	<5	<5	7	<5	0	<5	0	<5	<5
Brown	23	123	10	<5	14	<5	7	0	<5	0	9	<5	<5	<5	0	<5	9
Brule	7	20	<5	0	20	0	5	0	<5	<5	<5	<5	<5	<5	0	0	0
Buffalo	<5	45	0	0	39	0	28	0	<5	0	0	0	0	0	0	0	<5
Butte	6	25	0	<5	9	0	<5	0	0	0	9	0	<5	0	0	0	0
Campbell	<5	<5	0	0	0	0	0	0	0	0	0	0	<5	0	0	0	<5

County of residence	Campylobacteriosis	Chlamydia	Cryptosporidiosis	Giardiasis	Gonorrhea	Hepatitis B, chronic	Hepatitis C, chronic	Legionellosis	MRSA, invasive	Pertussis	Salmonella	Shigellosis	*Strep. pneumo*, invasive	Shiga Toxin-Prod *E. coli*	Tularemia	Varicella (Chicken pox)	West Nile disease
Charles Mix	6	58	<5	<5	35	<5	15	0	<5	5	5	0	<5	0	0	0	0
Clark	7	7	0	<5	<5	0	0	0	0	0	0	<5	<5	0	0	0	<5
Clay	<5	71	<5	<5	14	0	<5	<5	<5	0	9	0	<5	0	0	0	0
Codington	9	76	9	5	9	<5	<5	0	<5	0	6	0	<5	6	0	0	<5
Corson	0	41	0	0	21	0	26	0	<5	0	<5	0	<5	<5	0	0	<5
Custer	<5	15	0	0	<5	0	<5	<5	0	0	<5	0	<5	<5	0	0	0
Davison	11	65	<5	<5	22	0	<5	0	8	<5	<5	<5	5	0	0	0	<5
Day	<5	8	0	0	0	0	<5	0	0	0	<5	<5	<5	<5	0	0	<5
Deuel	6	12	7	0	0	0	0	0	0	0	<5	0	<5	<5	0	0	<5
Dewey	5	146	0	0	97	0	45	0	<5	0	<5	0	5	0	0	0	<5
Douglas	8	<5	0	0	0	0	<5	0	<5	0	<5	0	<5	<5	0	0	0
Edmunds	6	5	<5	0	<5	0	<5	0	0	0	<5	0	0	0	0	0	<5
Fall River	10	18	0	0	<5	0	8	0	<5	0	0	0	0	<5	0	0	<5
Faulk	<5	0	<5	0	0	0	0	0	0	0	0	<5	0	0	0	0	<5
Grant	5	6	<5	0	<5	<5	0	0	<5	0	<5	0	0	0	0	0	0
Gregory	10	9	0	<5	<5	0	0	0	<5	0	<5	0	0	<5	0	0	0
Haakon	<5	<5	0	0	0	0	0	0	0	0	<5	0	0	<5	0	0	0
Hamlin	6	8	8	<5	0	0	0	0	0	<5	<5	0	0	<5	0	0	<5
Hand	<5	<5	<5	0	0	0	0	0	<5	0	<5	0	0	0	0	0	<5
Hanson	<5	6	0	0	<5	0	0	0	<5	0	<5	0	0	0	0	0	0
Harding	<5	0	0	0	<5	0	0	0	0	0	<5	0	0	0	0	0	0
Hughes	11	83	<5	<5	55	0	23	0	<5	0	<5	0	5	0	0	0	5
Hutchinson	<5	5	<5	0	6	0	<5	0	0	0	<5	<5	<5	<5	0	0	<5
Hyde	0	8	<5	0	<5	0	<5	0	0	0	0	0	0	0	0	0	0
Jackson	<5	38	0	0	26	0	<5	0	0	0	0	0	0	<5	0	0	0
Jerauld	<5	<5	<5	0	0	0	0	0	0	0	0	0	<5	0	0	0	<5
Jones	<5	<5	0	0	<5	0	0	0	0	0	0	0	0	0	0	0	0
Kingsbury	<5	8	<5	0	0	0	0	0	<5	0	<5	0	0	6	0	0	<5
Lake	<5	28	<5	<5	<5	0	<5	<5	0	0	<5	0	<5	5	0	0	<5
Lawrence	11	86	10	<5	12	<5	9	0	<5	0	5	<5	<5	<5	0	0	0
Lincoln	27	210	11	7	50	<5	9	<5	7	12	21	0	<5	<5	<5	<5	5
Lyman	<5	45	0	0	27	0	14	0	<5	0	<5	0	<5	0	0	0	<5
Marshall	<5	<5	<5	0	0	0	<5	0	0	0	<5	0	<5	<5	0	0	<5
McCook	<5	9	0	0	<5	0	<5	0	0	<5	<5	0	0	<5	0	0	<5
McPherson	<5	0	0	0	0	0	<5	0	0	5	<5	0	0	<5	0	0	0
Meade	13	108	<5	<5	19	<5	9	<5	<5	0	13	<5	<5	<5	<5	0	<5
Mellette	<5	23	0	0	18	0	<5	<5	0	0	<5	0	<5	0	0	0	0
Miner	0	7	<5	0	<5	0	<5	0	<5	0	<5	0	0	0	0	0	<5
Minnehaha	63	1447	41	26	756	22	117	5	35	0	40	9	19	23	<5	6	11
Moody	<5	23	0	0	15	0	<5	0	0	0	0	0	<5	<5	0	<5	<5
Oglala Lakota	6	373	0	<5	229	<5	35	0	7	0	<5	0	9	0	<5	0	5
Pennington	46	781	<5	<5	498	<5	80	0	20	0	28	<5	27	14	<5	0	5
Perkins	<5	<5	<5	<5	0	<5	<5	0	0	0	<5	0	0	0	0	0	<5
Potter	0	6	0	0	<5	0	<5	0	0	0	0	0	0	0	0	0	0
Roberts	11	59	<5	0	11	0	6	0	<5	0	<5	<5	<5	5	0	0	0
Sanborn	8	<5	0	<5	0	0	<5	0	0	0	<5	0	<5	<5	<5	0	<5
Spink	6	8	0	0	0	0	0	0	<5	0	<5	0	<5	<5	0	0	<5
Stanley	<5	10	0	0	<5	0	0	0	0	0	<5	0	<5	0	0	0	0
Sully	0	<5	0	0	0	0	0	0	0	0	0	0	<5	0	0	0	0
Todd	11	284	<5	8	196	0	55	<5	8	<5	<5	26	<5	<5	<5	0	0
Tripp	8	25	<5	0	23	0	<5	0	<5	0	5	0	<5	<5	0	0	0
Turner	7	17	<5	<5	<5	0	0	0	<5	0	<5	0	0	<5	0	<5	0
Union	5	25	0	0	<5	<5	<5	0	<5	6	<5	0	<5	0	0	0	<5
Walworth	<5	20	0	0	11	0	6	0	<5	0	<5	<5	0	0	0	0	<5

County of residence	Campylobacteriosis	Chlamydia	Cryptosporidiosis	Giardiasis	Gonorrhea	Hepatitis B, chronic	Hepatitis C, chronic	Legionellosis	MRSA, invasive	Pertussis	Salmonella	Shigellosis	*Strep. pneumo*, invasive	Shiga Toxin-Prod *E. coli*	Tularemia	Varicella (Chicken pox)	West Nile disease
Yankton	6	69	<5	0	14	0	12	<5	8	0	5	0	<5	<5	<5	0	<5
Ziebach	<5	35	0	0	14	0	<5	0	<5	0	<5	0	0	0	0	0	0

*Incidence: cases per 100,000 population
Individual county events of 1, 2, 3 or 4 are published as <5

Table 56 Reportable Diseases by Gender, Race and Age, South Dakota, 2023 (Calendar years)

	Campylobacteriosis	Chlamydia	CRE	Cryptosporidiosis	Giardiasis	Gonorrhea	Hepatitis B, chronic	Hepatitis C, chronic	HIV and AIDS	Pertussis	Salmonellosis	Shiga Toxin-Producing *E. coli*	Shigellosis	*Strep. pneumo*, invasive	Syphilis (P, S, E non-P non-S)	Tuberculosis	Tularemia	Varicella (Chicken pox)	West Nile disease
Total	**455**	**4891**	**40**	**161**	**80**	**2330**	**38**	**582**	**52**	**51**	**249**	**113**	**53**	**125**	**1390**	**14**	**8**	**16**	**94**
Incidence*	49.5	532.0	4.4	17.5	8.7	253.4	4.1	63.3	5.7	5.5	27.1	12.3	5.8	13.6	151.2	1.5	0.9	1.7	10.2
Gender																			
Female	202	3275	22	79	37	1287	14	240	19	28	124	63	28	53	737	5	4	6	35
Male	253	1616	18	82	43	1043	24	342	33	23	125	50	25	72	653	9	4	10	59
Race																			
White	370	1882	37	151	61	441	6	172	24	46	198	104	18	72	134	6	6	10	79
Am.Indian	58	2255	1	7	14	1548	3	360	14	1	33	5	29	46	1191	2	2	1	12
Black	8	403	1	1	3	231	19	19	11	0	4	0	3	5	37	2	0	1	0
Asian	3	35	1	1	0	9	8	2	3	0	2	0	1	1	5	4	0	1	0
Other	5	62	0	1	1	33	1	18	0	0	3	1	1	0	17	0	0	2	0
Unknown	11	254	0	0	1	68	1	11	0	4	9	3	1	1	6	0	0	1	3
Age group																			
<1 yr	5	3	0	0	2	1	0	0	0	16	5	1	2	2	0	0	0	5	0
1-4 yrs	38	1	0	19	29	1	1	0	0	9	17	26	15	5	0	0	1	5	0
5-14 yrs	28	47	1	18	9	13	0	2	0	16	24	9	10	2	3	0	0	3	2
15-24 yrs	59	2707	1	27	3	770	7	56	5	5	22	17	2	2	302	2	0	1	4
25-39 yrs	108	1806	1	43	15	1182	13	246	37	1	36	24	9	14	814	7	3	1	8
40-64 yrs	140	318	8	40	17	345	14	235	9	4	93	20	10	50	265	2	4	1	47
≥65 yrs	77	7	29	14	5	16	3	43	1	0	52	16	5	50	6	3	0	0	33

Total cases reported on this table may differ slightly from column totals due to incomplete case information.
*Incidence: cases per 100,000 population

CAMPYLOBACTERIOSIS

Campylobacter is a bacterium that can cause diarrhea, often bloody, abdominal pain, vomiting, fever, nausea, and malaise. Most cases of campylobacteriosis are relatively mild, lasting one to two days. Some cases, however, are more severe and relapses occur in about 20 percent of patients. Complications may include convulsions, septicemia, extra-intestinal infection, arthritis, and one in 1,000 campylobacteriosis cases leads to Guillain-Barré syndrome. *Campylobacter*-associated deaths are rare.

Campylobacteriosis has been the most commonly reported enteric bacterial pathogen in South Dakota since 2001. In 2023, there were 455 cases of *Campylobacter* infection reported, a 40 percent increase from the five-year median (median: 324). South Dakota's rate of campylobacteriosis ranks high nationally, usually double the rate of states receiving enhanced funding for conducting active surveillance for foodborne disease (FoodNet). Eighty-two cases (21%) were hospitalized. Of the *Campylobacter* cases that were culture confirmed, the species identified were *C. jejuni* (127 cases), *C. coli* (17), *C. ureolyticus* (1), *C. fetus* (1), and *C. upsaliensis* (1). Thirty-eight percent of campylobacteriosis cases reported contact with cattle.

Figure 14

Campylobacteriosis Incidence by County of Residence: South Dakota, 2023

(cases per 100,000)

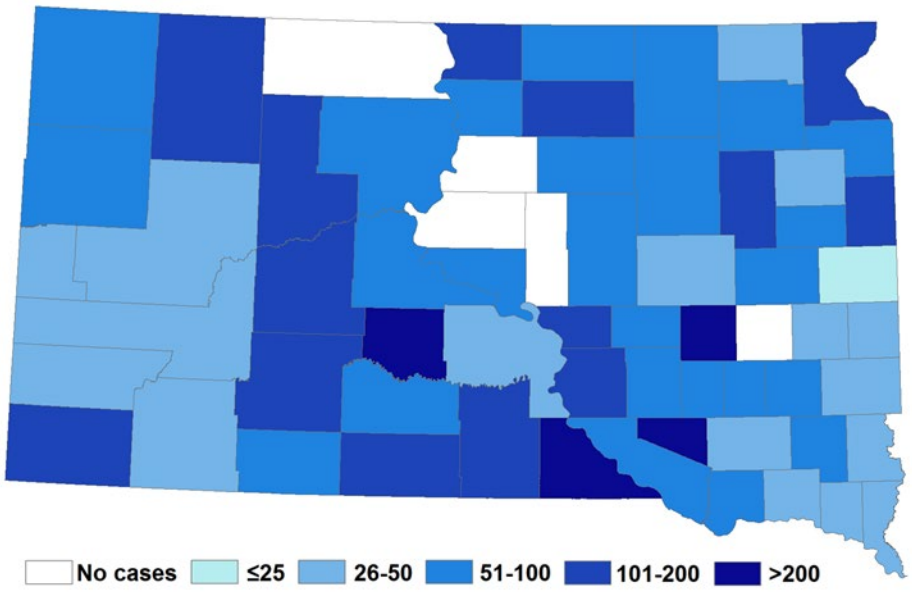
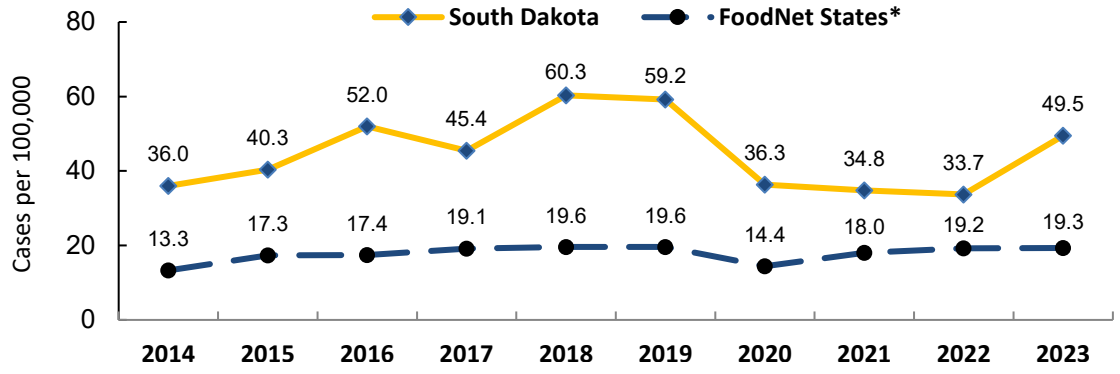


Figure 15

Campylobacteriosis Incidence, South Dakota & U.S. (FoodNet States*), 2014-2023

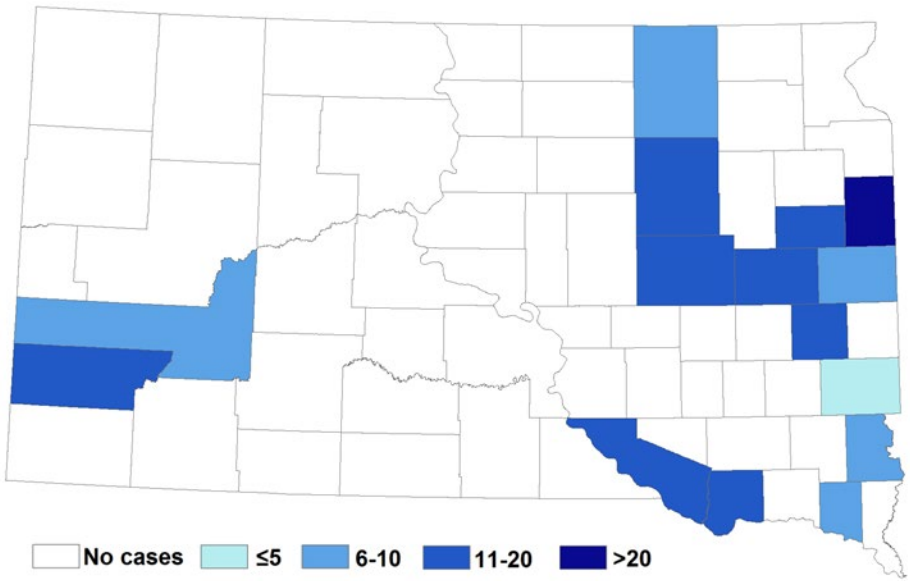


*FoodNet states include CA, CO, CT, GA, MD, MN, NM, NY, OR, and TN.

CARBAPENEM-RESISTANT ENTEROBACTERALES (CRE)

Carbapenem-resistant Enterobacterales (CRE) are a family of bacteria that are difficult to treat because they are highly resistant to group of antibiotics called carbapenems. CRE are an important emerging threat to public health. Common bacteria in the Enterobacterales order include *Klebsiella* species, *Enterobacter* species, and *Escherichia coli*. These bacteria are typically found in the human gastrointestinal tract. However, they can spread outside the gut and cause serious infections, such as urinary tract infections, bloodstream infections, wound infections, and pneumonia. Enterobacterales can cause infections in people in both healthcare and community settings. In South Dakota, 40 cases of CRE were reported in 2023. The statewide incidence was 4.4 cases per 100,000 population.

Figure 16
CRE Incidence by County of Residence: South Dakota, 2023
(cases per 100,000)



CHLAMYDIA

Chlamydia is a common sexually transmitted disease (STD) caused by the bacterium *Chlamydia trachomatis* which can infect both men and women. Chlamydia transmission occurs during contact with mucus membrane secretions of infected individuals – almost always during sexual activity. Neonatal transmission occurs when an infant is born to an infected mother and may then cause pneumonia or conjunctivitis in the newborn. Most female infections are asymptomatic or mild, but can cause mucus-pus discharges, pelvic inflammatory disease, infertility, and ectopic pregnancy. Men experience urethral discharge, epididymal pain, and sexually reactive arthritis.

In 2023, there were 4,891 cases of chlamydia reported in South Dakota, an eight percent increase from the five-year median (median: 4,545). Counties with the highest incidence (cases per 100,000 population) included Todd (3,087.3), Dewey (2,803.4), Oglala Lakota (2,776.5), and Buffalo (2,388.5). Youth in the 15−24 year age group had the highest rate of disease. The number of chlamydia cases has been increasing over the past decade in South Dakota.

Figure 17
Chlamydia Incidence, South Dakota & United States, 2014-2023

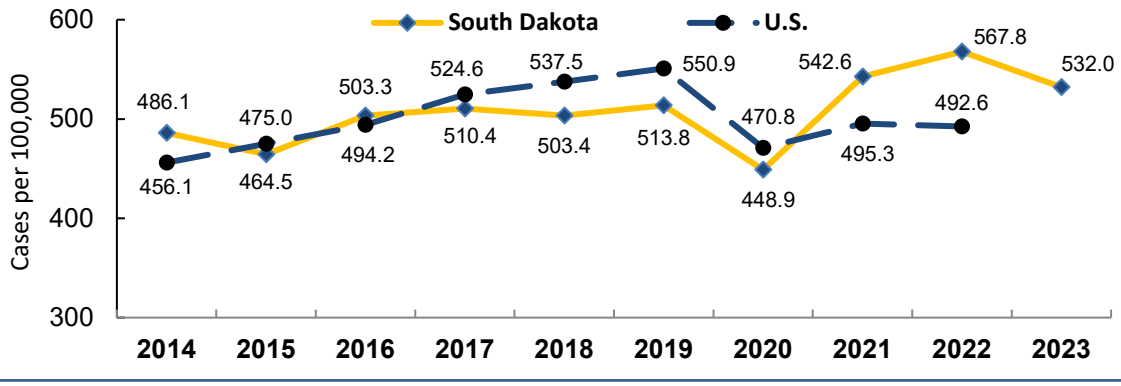
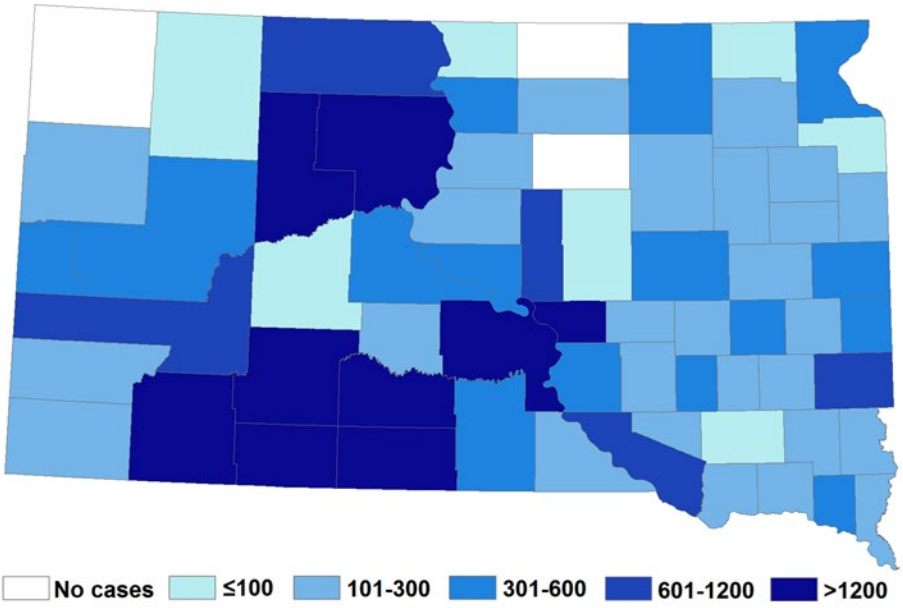


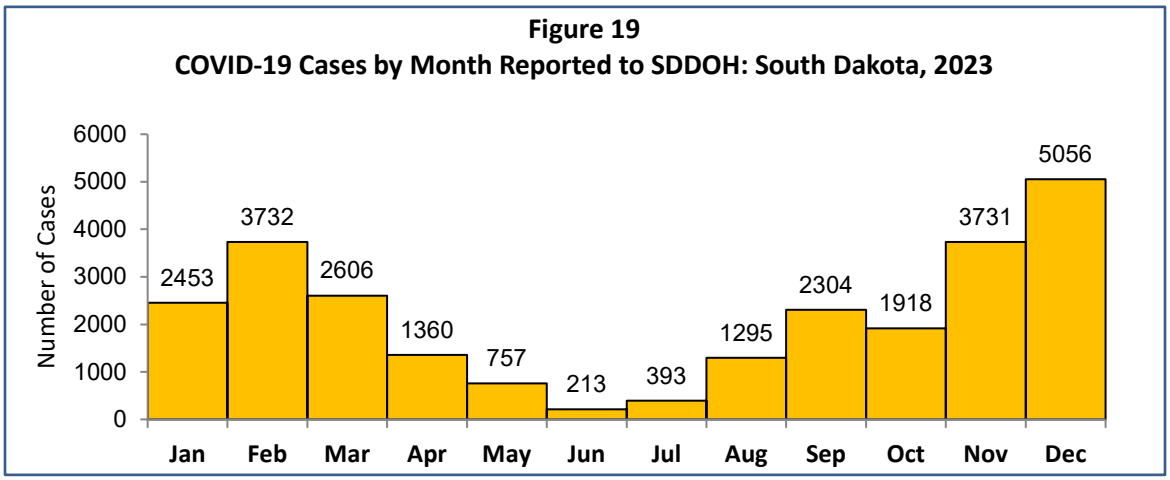
Figure 18
Chlamydia Incidence by County of Residence: South Dakota, 2023
(cases per 100,000)



CORONAVIRUS DISEASE 2019 (COVID-19)

COVID-19 is a respiratory disease caused by the SARS-CoV-2 virus first identified in December 2019. From January 2020 until May 2023, COVID-19 was a federal public health emergency in the United States. COVID-19 is transmitted when an infected person breathes out aerosolized droplets that contain the virus. Symptoms of COVID-19 may include cough, runny nose, sore throat, fever, and new loss of taste or smell.

In 2023, a total of 25,818 cases of COVID-19 were reported in South Dakota, resulting in 1,448 hospitalizations and 184 deaths.



CRYPTOSPORIDIOSIS

Cryptosporidiosis is a diarrheal disease caused by a chlorine-tolerant protozoan parasite transmitted by cattle or human feces through contaminated food or water or by direct person-to-person or animal-to-person contact. South Dakota's cryptosporidiosis rate has been consistently higher than the national rate over the past decade. In 2023, 161 cases of cryptosporidiosis were reported in South Dakota.

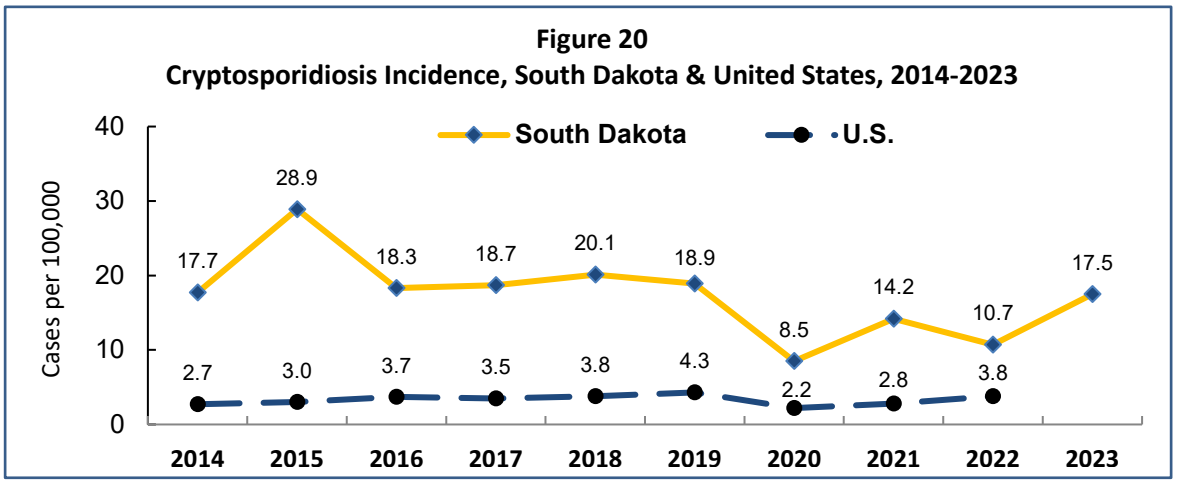
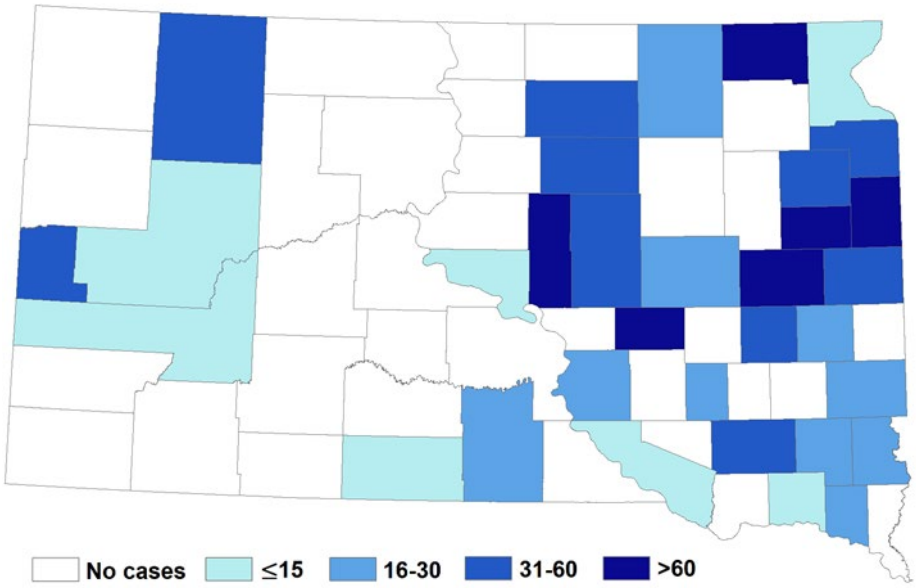


Figure 21
Cryptosporidiosis Incidence by County of Residence: South Dakota, 2023
(cases per 100,000)



ESCHERICHIA COLI, SHIGA TOXIN-PRODUCING (STEC)

Shiga-toxin producing *E. coli* (STEC) often causes severe bloody diarrhea and abdominal pain. The illness usually resolves in five to 10 days. In some individuals, however, complications may involve severe hemorrhagic colitis, hemolytic uremic syndrome, thrombotic thrombocytopenic purpura, and even death. STEC is transmitted by meat, water, fresh vegetables, or other foods contaminated by feces of cattle, sheep, deer, and other animals. Person-to-person transmission can also occur. Proper slaughtering and processing methods can prevent human infection, adequate cooking of meats, proper kitchen hygiene, pasteurization of dairy products and fruit juices, and handwashing after contact with cattle or their feces. Individuals with STEC infections are restricted from commercial food handling, child daycare, or patient health care until two successive negative fecal samples are produced.

Culture-independent diagnostic testing (CIDTs) is now commonly used by clinical laboratories in the state for detecting STEC infections. The STEC surveillance case definition used by SDDOH to classify and report cases was updated in 2018. Individuals testing positive by CIDT (but not subsequently confirmed by culture) have been included in the reported case count totals since 2018.

In 2023, 113 cases of STEC were reported in South Dakota (12.3 cases per 100,000 population). South Dakota's STEC rate has been greater than two times the national rate over the past decade. There were 36 cases (32%) that occurred in children less than 15 years of age. Twenty-nine cases (26%) were hospitalized, and seven cases of hemolytic uremic syndrome (HUS) associated with STEC infection were reported. Of the 113 total STEC cases, 43 were culture-confirmed *E. coli* and 70 were only positive by a CIDT. Culture-confirmed cases included the following serogroups: O157 (13 cases), O111 (6), O26 (5), O121 (4), and O103 (4).

Figure 22
STEC Incidence by County of Residence: South Dakota, 2023
(cases per 100,000)

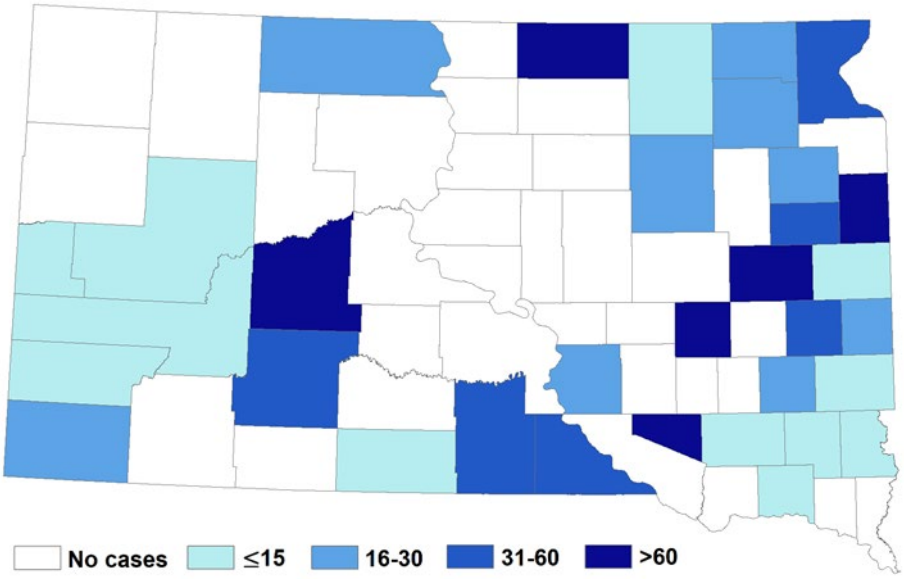
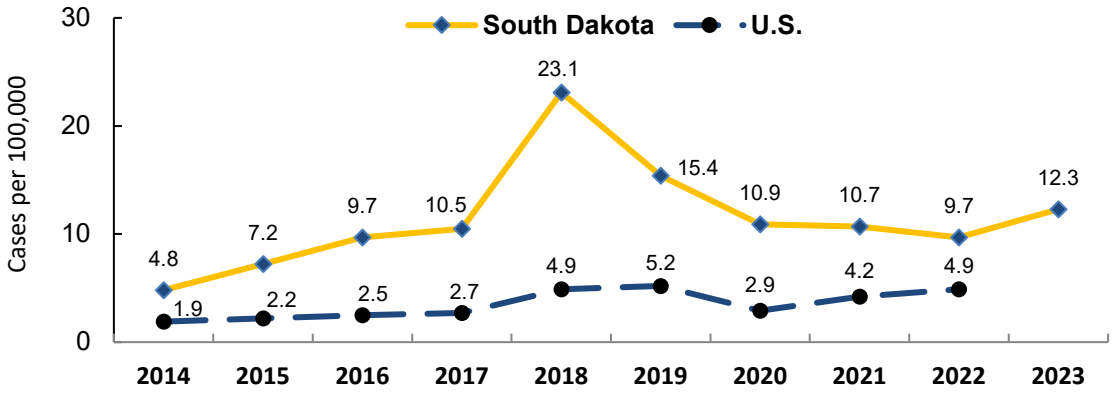


Figure 23
STEC Incidence, South Dakota & United States, 2014-2023



GIARDIASIS

Giardiasis is a gastrointestinal disease involving diarrhea and abdominal cramps that is caused by a protozoan parasite called *Giardia lamblia* (*G. intestinalis*, *G. doudenalis*). Giardiasis is transmitted person-to-person or by contaminated water, or in some cases animal-to-human. In 2023, 80 cases of *Giardia* infection were reported in South Dakota residents (8.7 cases per 100,000 population), which was slightly above the five-year median (median: 71). South Dakota's giardiasis rate has been more than double the national rate over the past decade.

Figure 24
Giardiasis Incidence by County of Residence: South Dakota, 2023
(cases per 100,000)

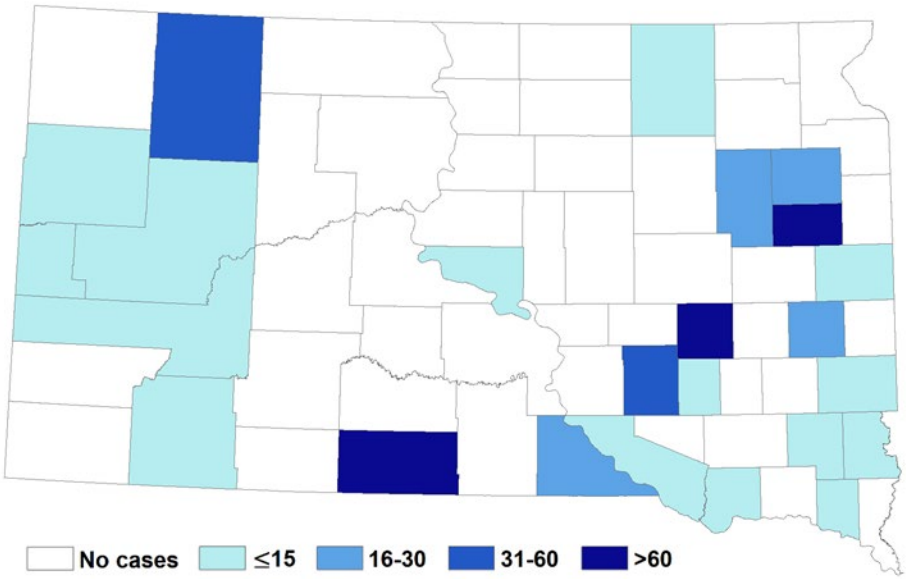
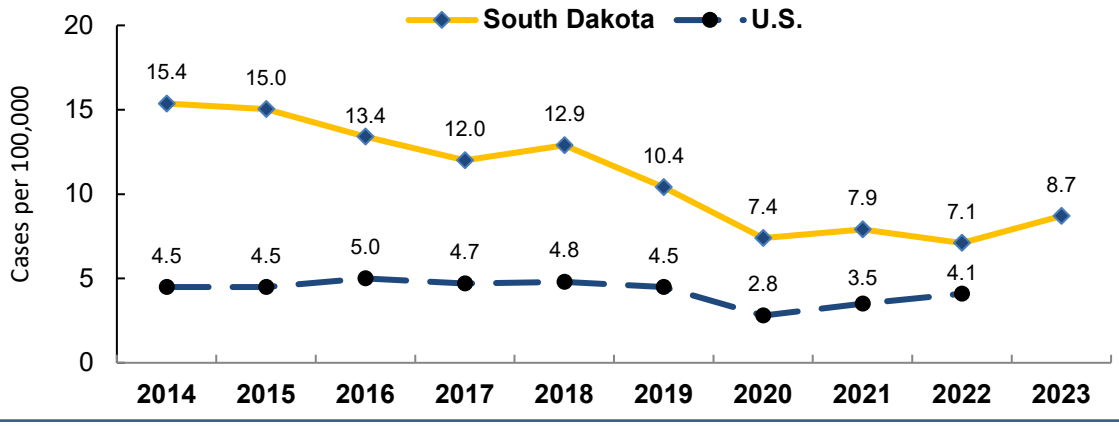


Figure 25
Giardiasis Incidence, South Dakota & United States, 2014-2023



GONORRHEA

Gonorrhea is a sexually transmitted disease (STD) that can cause infections in the genitals, rectum, and throat, and less commonly as an invasive, disseminated disease. Gonorrhea is most common among young people ages 15-24 years. Although gonorrhea may be asymptomatic, untreated gonorrhea can cause serious and permanent health problems in both women and men. In women, untreated gonorrhea can cause pelvic inflammatory disease with complications such as scar tissue in fallopian tubes, ectopic pregnancy, infertility, and long-term pelvic/abdominal pain. In men gonorrhea may infect the tubes attached to the testicles which may cause sterility.

Gonorrhea has been increasing over the past decade in South Dakota. In 2023, there were 2,330 cases reported, which is a rate of 253.4 cases per 100,000 population. The median age of cases was 29 years old (range: 0 to 89). Females accounted for 55 percent of cases.

Figure 26
Gonorrhea Incidence by County of Residence: South Dakota, 2023
(cases per 100,000)

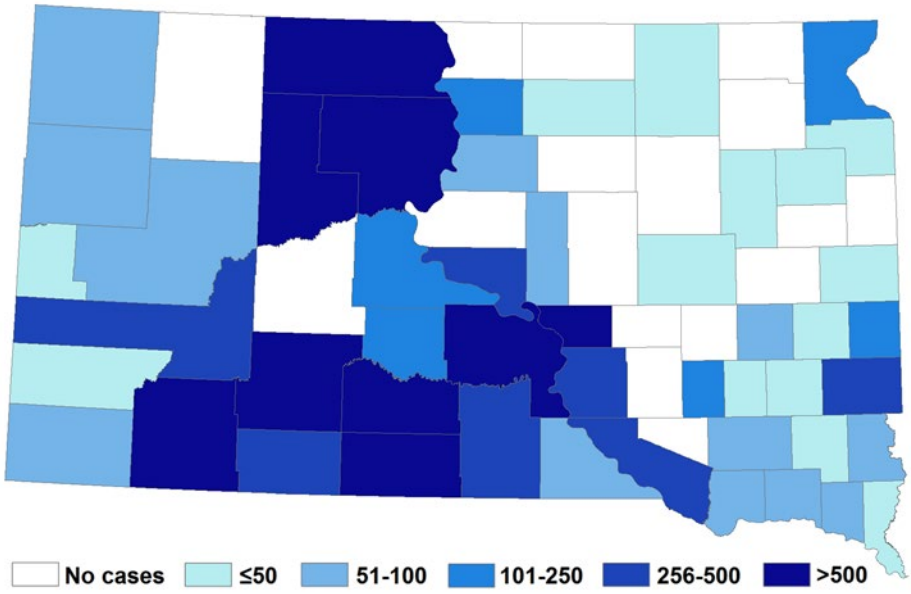
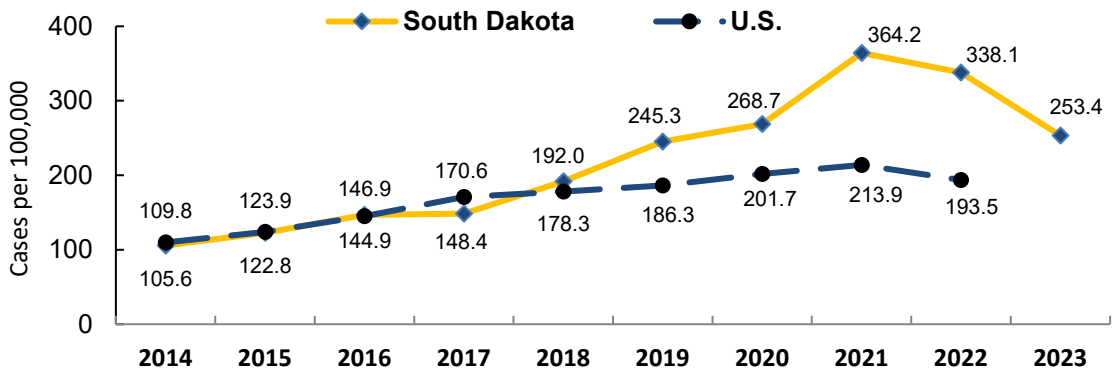
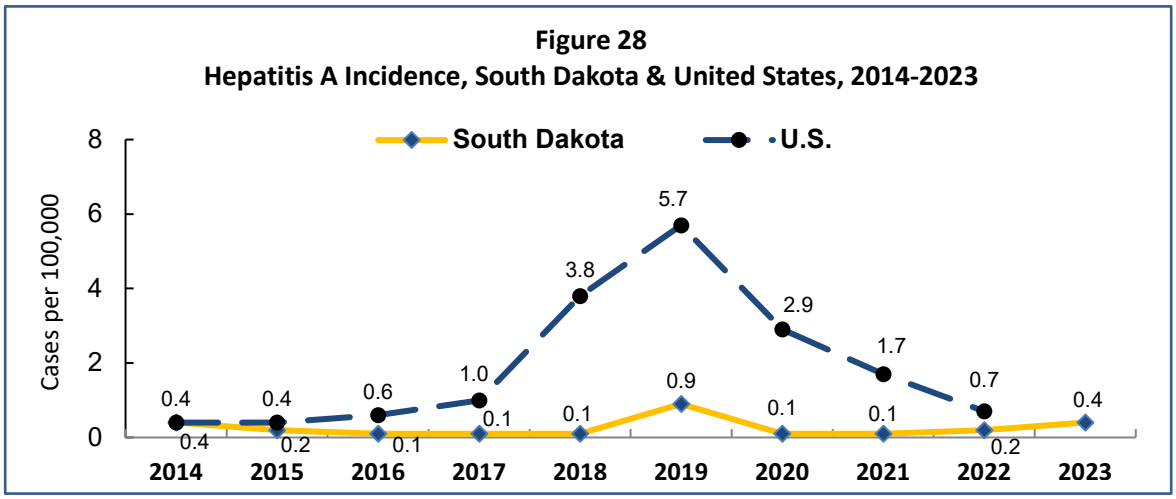


Figure 27
Gonorrhea Incidence, South Dakota & United States, 2014-2023



HEPATITIS A, ACUTE

Hepatitis A is a liver disease caused by the hepatitis A virus (HAV), which infects humans through fecal-oral transmission. Since the licensure of the hepatitis A vaccine in 1995-1996, rates of infection have declined significantly. In South Dakota, there were four cases of hepatitis A reported in 2023. Two cases (50%) had recent international travel.



HEPATITIS B, ACUTE AND CHRONIC

Hepatitis B is a liver disease caused by the hepatitis B virus (HBV). This virus is transmitted when blood and other body fluid from an infected person enters the body of someone who is not infected during sexual contact; sharing needles, syringes, or other drug-injection equipment; or from mother to baby at birth. For some individuals, hepatitis B is an acute, or short-term, illness but for others, it can become a long-term, chronic infection. Risk for HBV chronic infection is related to age at infection: approximately 90 percent of infected infants become chronically infected, compared with 2-6 percent of adults. Chronic hepatitis B can lead to serious health issues like cirrhosis or liver cancer. The best way to prevent hepatitis B is by getting vaccinated. HBV vaccine is now recommended at birth and for children and adolescents who did not complete vaccination as infants. HBV vaccination is not mandatory for school entry in South Dakota.

In 2023, there were three cases of acute hepatitis B and 38 cases of chronic hepatitis B reported in South Dakota. The median age of cases was 36 years (range: 3 to 83) and 63 percent were male.

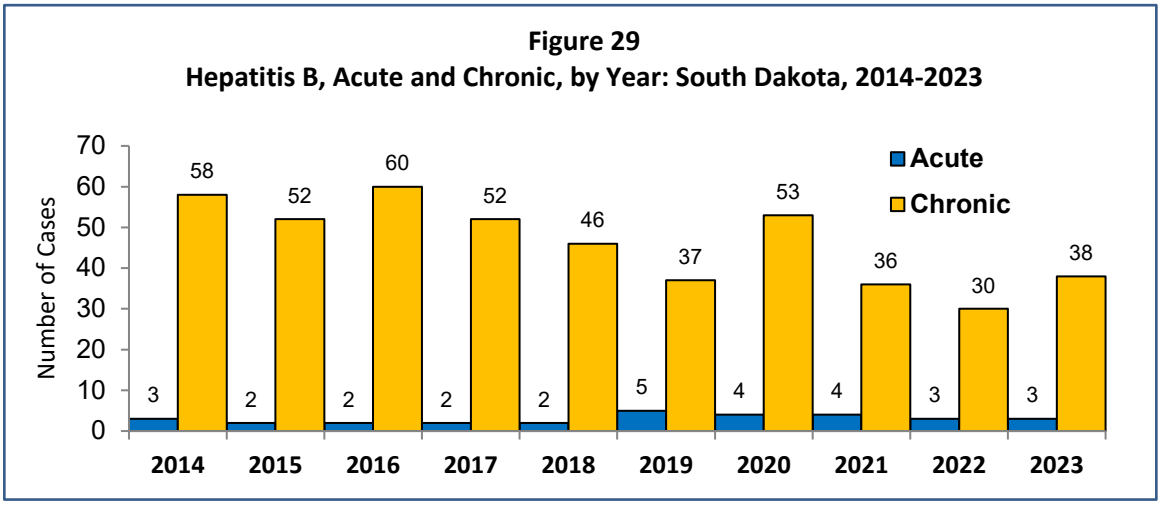
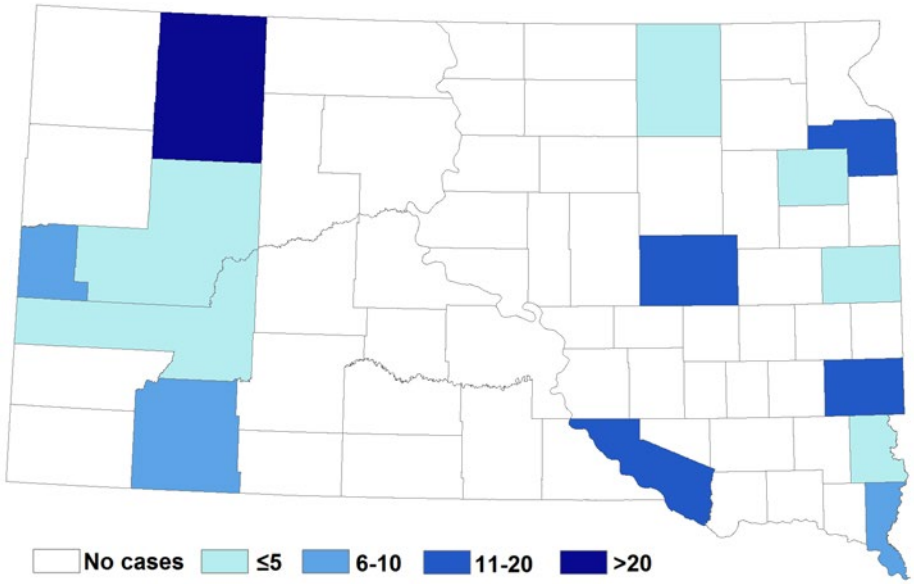


Figure 30
Chronic Hepatitis B Incidence by County of Residence: South Dakota, 2023
(cases per 100,000)



HEPATITIS C, ACUTE AND CHRONIC

Hepatitis C causes liver disease. For most people, hepatitis C is a long-term, chronic infection and may cause long-term health problems resulting in death. The majority (70-80%) of persons might not be aware of their infection because they do not become clinically ill. There is no vaccine available for hepatitis C. Hepatitis C is a blood-borne virus and the greatest risk for infection is among persons who inject drugs.

In 2023, there were 10 cases of acute hepatitis C and 582 cases of chronic hepatitis C reported in South Dakota. The counties with the highest incidence of chronic hepatitis C (cases per 100,000 population) were Buffalo (1486.2), Dewey (864.1), Corson (687.5), and Todd (597.9).

Figure 31
Hepatitis C, Acute and Chronic, by Year: South Dakota, 2014-2023

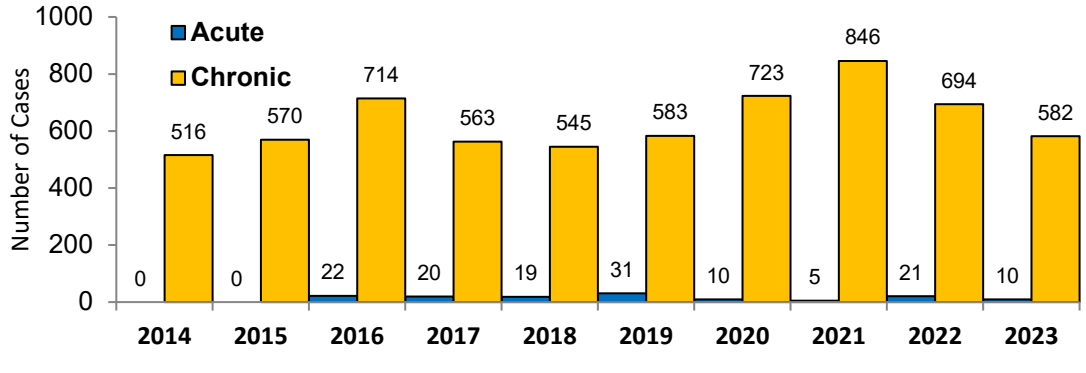
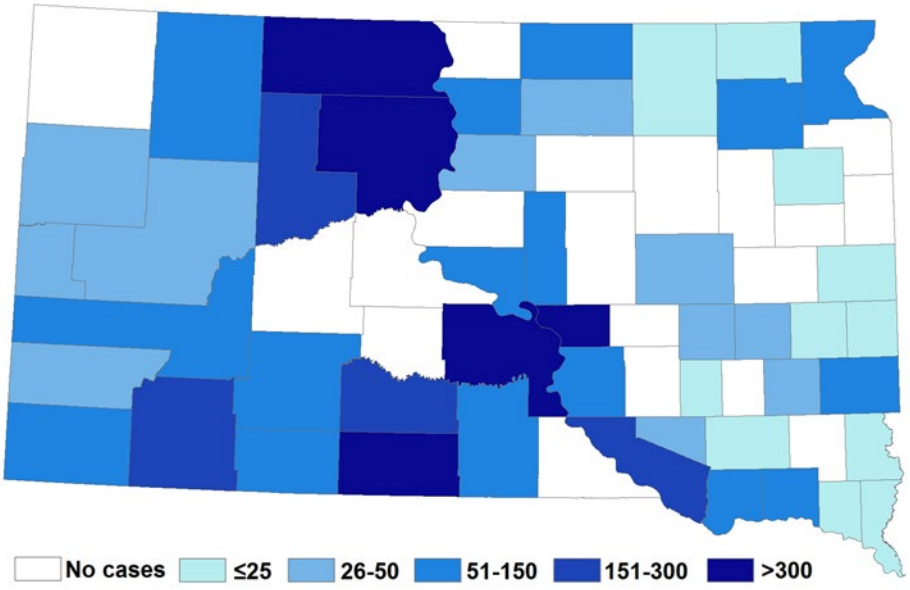


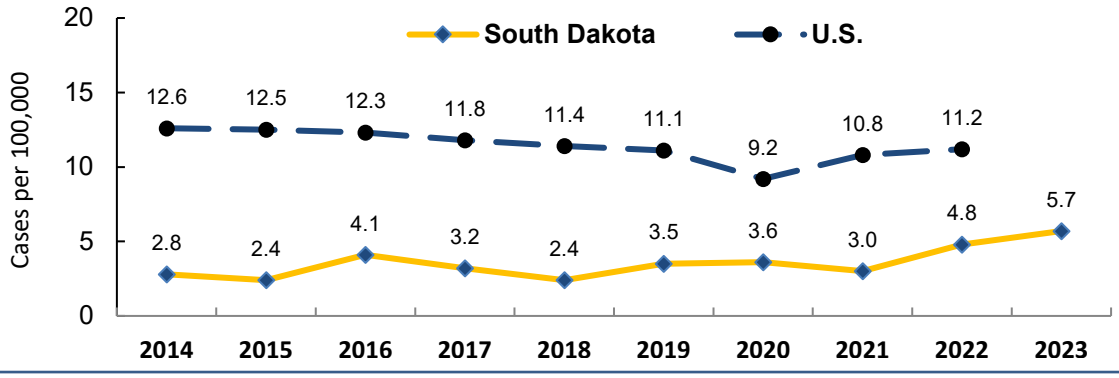
Figure 32
Chronic Hepatitis C Incidence by County of Residence: South Dakota, 2023
(cases per 100,000)



HIV AND AIDS

Human immunodeficiency virus (HIV) infection may lead to acquired immunodeficiency syndrome, or AIDS. HIV is spread mainly by having sex with or sharing drug injection needles and syringes with someone who is already infected with HIV. The only way to know for sure if you have HIV infection is to get tested. In 2023, there were 52 new HIV/AIDS cases reported in South Dakota.

Figure 33
Rate of HIV Diagnosis, South Dakota & United States, 2014-2023



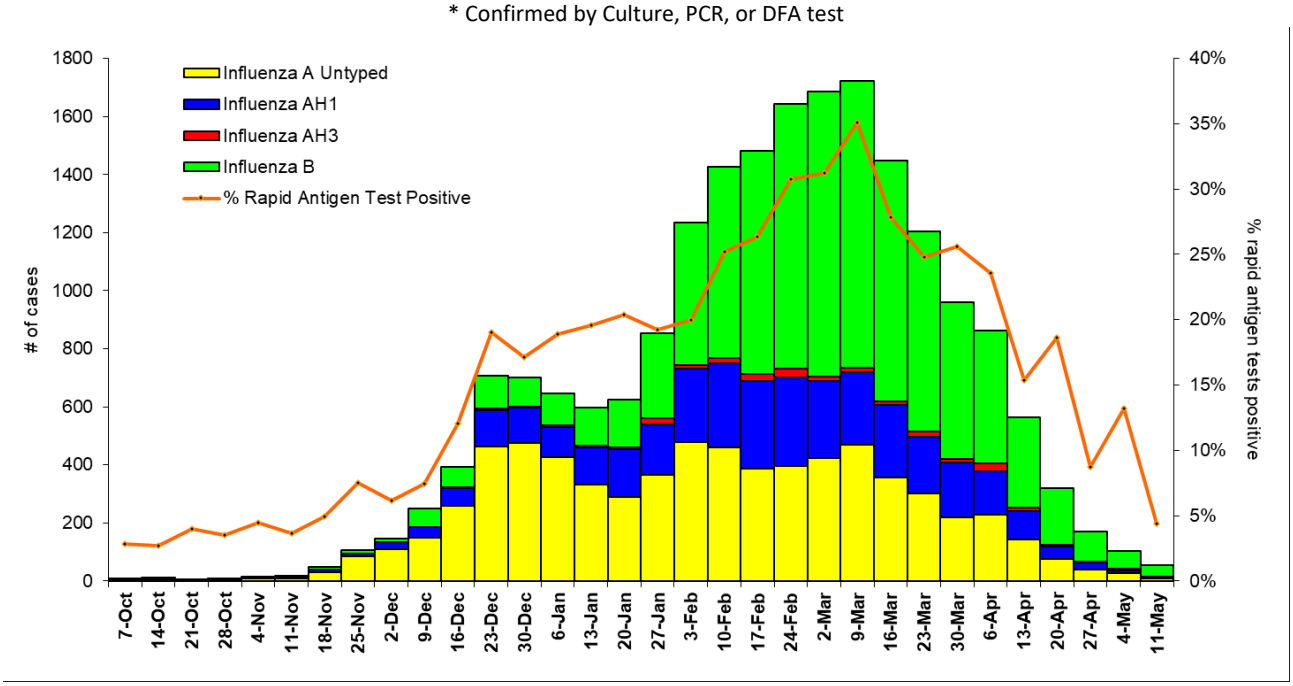
INFLUENZA

The 2023–2024 influenza season was a moderately severe season in South Dakota. A total of 20,180 confirmed influenza cases were reported to SDDOH, including 11,018 (55%) influenza A and 9,162 (45%) influenza B. Additionally, 16,813 rapid antigen influenza tests were performed with 3,147 positive results (19%); 1,492 (47%) positive for influenza A and 1,655 (53%) positive for influenza B. There were also 855 hospitalizations and 48 deaths reported during the 2023–2024 influenza season.

Table 57
Influenza Cases by Age Group, South Dakota, 2023-2024

Lab Confirmed Influenza Cases (by Culture, PCR, or DFA)		**Influenza Associated Hospitalizations**	**Influenza Associated Deaths**
Age Group	# Cases (%)	# Hosp (%)	Deaths (%)
0-4	2658 (13%)	70 (8%)	0 (0%)
5-18	7779 (39%)	87 (10%)	1 (2%)
19-49	6357 (32%)	169 (20%)	4 (8%)
50-64	1713 (8%)	151 (18%)	4 (8%)
> 64	1673 (8%)	378 (44%)	39 (81%)
Total	**20,180**	**855**	**48**

Figure 34
2023-2024 Influenza Season Lab Confirmed Cases* and % Rapid Antigen Test Positive by Week – South Dakota
* Confirmed by Culture, PCR, or DFA test



LEGIONELLOSIS

Legionellosis includes two diseases, Legionnaires' disease and Pontiac fever, caused by exposure to *Legionella* bacteria. Legionnaires' disease causes pneumonia, while Pontiac fever causes a milder illness with fever and muscle aches. *Legionella* is naturally found in the environment, usually in water. People can get legionellosis after breathing in water droplets that contain the bacteria. In 2023, there were 17 cases of legionellosis reported in South Dakota, a 26 percent decrease from the five-year median (median: 23).

LYME DISEASE

Lyme disease is caused by the spirochete *Borrelia burgdorferi* and is transmitted to humans by bites from *Ixodes scapularis*, commonly known as the blacklegged tick or deer tick. Currently, *I. scapularis* has only been found and documented in a few locations in eastern South Dakota, so the risk of exposure to Lyme disease in South Dakota is low. In 2023, there were seven cases of Lyme disease reported in South Dakota residents, a 30 percent decrease from the five-year median (median: 10).

METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA), INVASIVE

Methicillin-resistant *Staphylococcus aureus* (MRSA) is a bacterium resistant to most commonly used antibiotics. Most MRSA infections are skin infections, but may cause life-threatening bloodstream infections, pneumonia, and surgical site infections. In 2023, there were 145 cases of invasive MRSA reported in South Dakota. The highest rate of disease was among the elderly, ages 65 years and older.

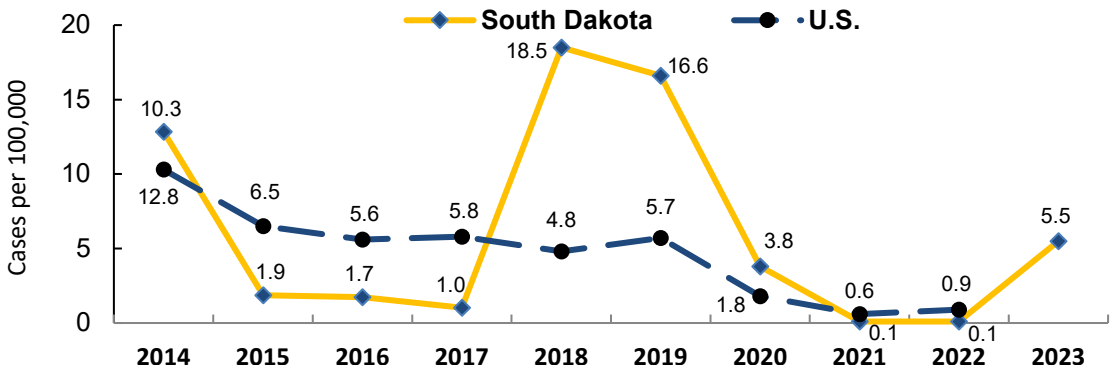
MULTISYSTEM INFLAMMATORY SYNDROME (MIS)

Multisystem inflammatory syndrome (MIS) is a rare but serious inflammatory condition in children (MIS-C) and young adults (MIS-A) that affects multiple organ systems, almost always requiring hospitalization. It appears to be linked to infection with SARS-CoV-2, the virus which causes COVID-19. In 2023, there were no cases of MIS reported in South Dakota.

PERTUSSIS (WHOOPING COUGH)

Pertussis, commonly called whooping cough, is an acute infectious bacterial disease caused by *Bordetella pertussis*. The bacteria produce toxins that inflame and paralyze respiratory cilia causing severe coughing. Pertussis is transmitted by aerosolized droplets of respiratory secretions from infected individuals. Infants and young children are at higher risk of pertussis-associated complications, hospitalization, and death. The most common complication is secondary bacterial pneumonia. Youth and adults infected with pertussis may expose unprotected infants who are at risk of severe disease and complications. In 2023, there were 51 cases of pertussis reported in South Dakota, a 50 percent increase from the five-year median (median: 34). The median age of cases was 5 years (range: 0 to 58). One death occurred in an infant under 1 year of age.

Figure 35
Pertussis Incidence, South Dakota & United States 2014-2023

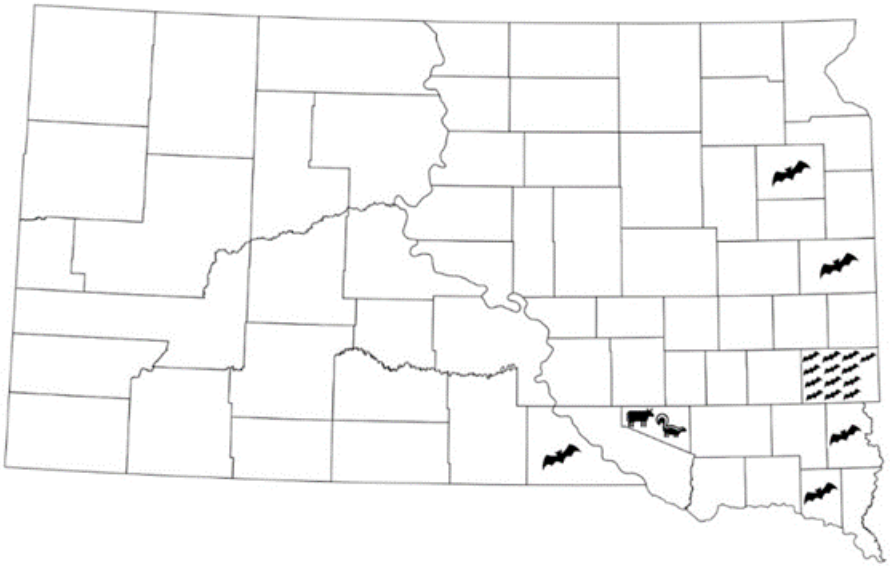


RABIES, ANIMAL

Rabies is a viral disease affecting the central nervous system. All mammals, including humans, are susceptible to the rabies virus. Bites from infected animals constitute the primary route of transmission. Rabies is a fatal disease and cannot be treated once symptoms appear. Fortunately, rabies is successfully prevented by using post-exposure prophylaxis in people exposed to the rabies virus. While the last human rabies case in South Dakota occurred in 1970, substantial resources are spent managing potential exposures to rabies because of its constant presence in the state. Skunks (*Memphitis mephitis)* are the primary rabies reservoir in South Dakota. Over the past decade, 44 percent of skunks tested have been rabid. Bat rabies is also enzootic in South Dakota with four percent of bats being tested positive.

A total of 20 animals tested positive for rabies in 2023, a 33 percent increase from the five-year median (median: 15). The rabid animals included 18 bats, 1 skunk, and 1 cow. No human rabies was reported.

Figure 36
Animal Rabies by County: South Dakota, 2023



SALMONELLOSIS

Salmonella is a bacterium that can cause diarrhea, fever, and abdominal cramps between 12 and 72 hours after infection. The illness usually lasts four to seven days, and most individuals recover without treatment, but in some with diarrhea, infection may spread from the intestines to the blood stream, and then to other body sites. In severe cases, infection may cause death. The elderly, infants, and those with impaired immune systems are more likely to have a severe illness.

In 2023, 249 cases of salmonellosis were reported in South Dakota. The *Salmonella* serotypes most commonly identified were *S.* Enteritidis (57 cases), *S.* Typhimurium (39), *S.* Newport (16), *S.* I 4:i:- (15), and *S.* Infantis (10). Older adults had the highest rate of infection; 41 percent of reported cases were over 50 years of age. Sixty-four cases (26%) were hospitalized. Twenty-seven cases (11%) reported international travel.

Figure 37
Salmonellosis Incidence, South Dakota & United States, 2014-2023

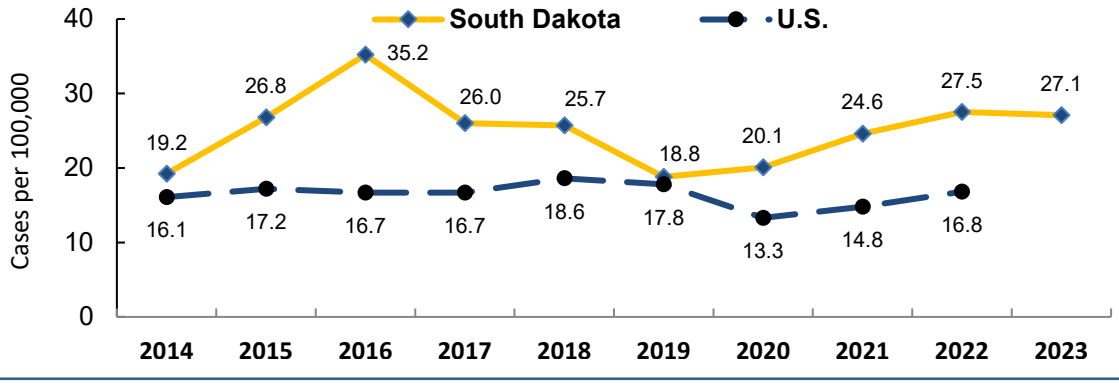
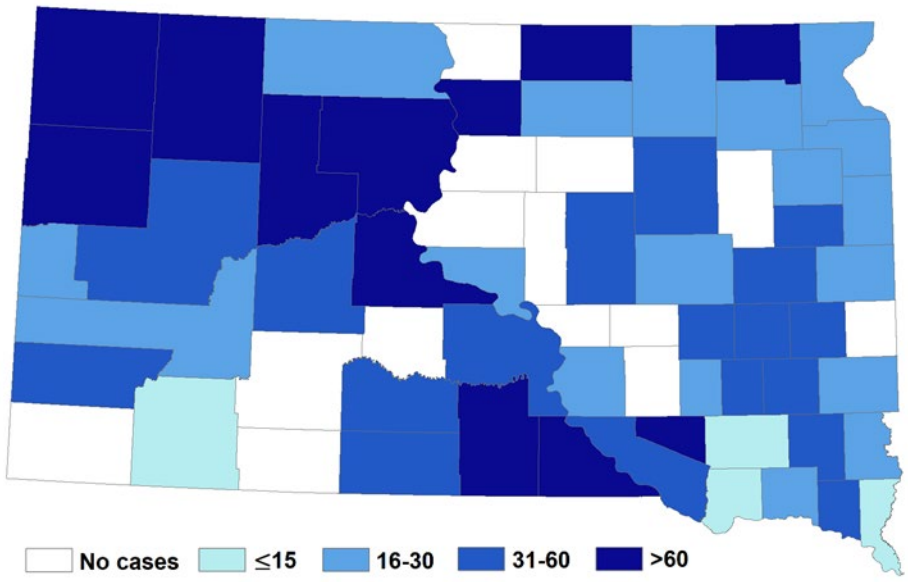


Figure 38
Salmonellosis Incidence by County of Residence: South Dakota, 2023
(cases per 100,000)

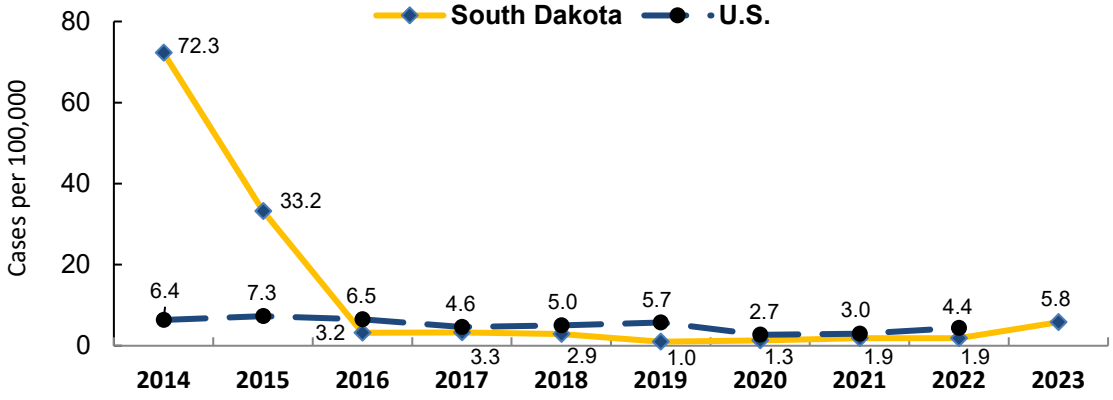


SHIGELLOSIS

Shigellosis is an intestinal infection causing diarrhea, fever, nausea, vomiting, and abdominal cramps. Complications, such as severe dehydration or seizures, may occur, especially among young children. *Shigella* bacteria are transmitted by the fecal-oral route (human feces). Following exposure, illness usually occurs within one to four days. Transmission is typically person-to-person within families, child day care centers, and adult residential living situations. Food may be contaminated by people not washing their hands properly.

In 2023, there were 53 cases of shigellosis reported in South Dakota, a 211 percent increase above the five-year median (median: 17). South Dakota experienced a protracted multi-county outbreak from October 2013 to November 2015, largely in childcare settings. In 2023, thirty-eight cases (72%) were in children less than 15 years of age. Eleven cases (21%) were hospitalized.

Figure 39
Shigellosis Incidence, South Dakota & United States, 2014-2023



STREPTOCOCCUS PNEUMONIAE, INVASIVE

Pneumococcal disease is an infection caused by the bacteria *Streptococcus pneumoniae*, also referred to as pneumococcus. Invasive *Streptococcus pneumoniae* can cause many types of illnesses, including bacteremia, pneumonia, ear infections, and meningitis. There are vaccines to prevent pneumococcal disease for both children and adults. In 2023, there were 125 cases of invasive pneumococcal disease reported in South Dakota. The majority (80%) of cases occurred in adults 40 years of age and older.

SYPHILIS (PRIMARY, SECONDARY, EARLY NON-PRIMARY NON-SECONDARY, AND CONGENITAL)

Syphilis is a sexually transmitted disease that can cause long-term complications if not treated promptly and correctly. Symptoms in adults are divided into stages: primary, secondary, early latent, and late latent syphilis. The primary, secondary, and early latent stages are infectious to others. Syphilis is spread by direct contact with a syphilis sore during vaginal, anal, or oral sex. Syphilis can also be spread from an infected mother to her unborn baby, i.e., congenital syphilis.

In South Dakota, there were 1,390 cases of early syphilis (primary, secondary, and early non-primary non-secondary) reported in 2023, a 1,276 percent increase from the five-year median (median: 101). Fifty-four cases of congenital syphilis were also reported. Five counties (Pennington, Oglala Lakota, Minnehaha, Dewey, and Todd) accounted for 73 percent of the state's early syphilis cases.

TUBERCULOSIS

Tuberculosis (TB) is caused by the *Mycobacterium tuberculosis* bacteria. *M. tuberculosis* usually infects the lungs but can attack any part of the body such as the kidney, spine, and brain. If not treated properly, TB disease can be fatal. Tuberculosis is spread through the air from one person to another when an infectious person coughs, sneezes, speaks, talks, or sings.

There were 14 cases of TB reported in South Dakota in 2023. The median age of cases was 32 years (range: 20 to 76). American Indians have historically reported the highest percentage of TB cases by race, but this trend has decreased in recent years. In 2023, American Indians represented 14 percent of the total TB cases. Seventy-nine percent of TB cases reported were foreign-born.

TULAREMIA

Tularemia is a bacterial disease caused by *Francisella tularensis* and is typically found in rodents but can infect insects as well. Infection can occur from a tick or deerfly bite, handling sick or dead animals, eating contaminated food, or inhaling airborne organisms. Depending on how a person is infected, symptoms can range from skin ulcers, inflamed eyes, sore throat and diarrhea to fever, chills, headache, and muscle aches. There are six main clinical forms of disease: ulceroglandular, glandular, pneumonic, oropharyngeal, oculoglandular, and typhoidal. If left untreated, tularemia may be fatal.

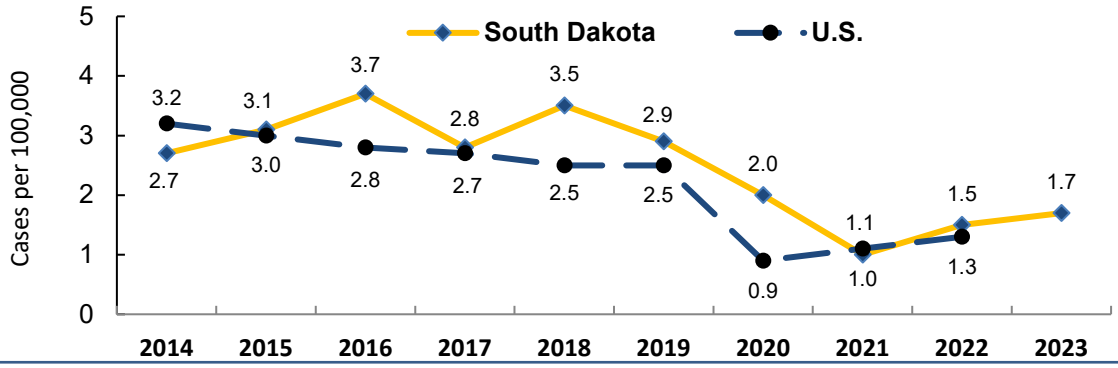
In 2023, there were eight cases of tularemia reported in South Dakota (5 ulceroglandular, 1 glandular, 1 oropharyngeal, and 1 pneumonic). The median age of cases was 40 years old (range: 1 to 61).

VARICELLA (CHICKEN POX)

Varicella (chicken pox) is a highly contagious disease consisting of a blistery rash, itching, and fever caused by varicella-zoster virus. Chicken pox can be a serious disease, especially in babies and people with weakened immune systems. Varicella is spread through the air by the cough or sneeze of an infected person. It can also be spread by touching or breathing in the virus particles that come from chicken pox blisters. The best way to prevent chicken pox is to get the varicella vaccine. Varicella vaccination is mandated for school entry in South Dakota.

In 2023, there were 16 cases of chicken pox reported in South Dakota. Among cases with known vaccination status, eighty-one percent were unvaccinated or too young to have been vaccinated. The median age of cases was 2 years old (range: 0 to 42).

Figure 40
Varicella (chicken pox) Incidence, South Dakota & United States 2014-2023

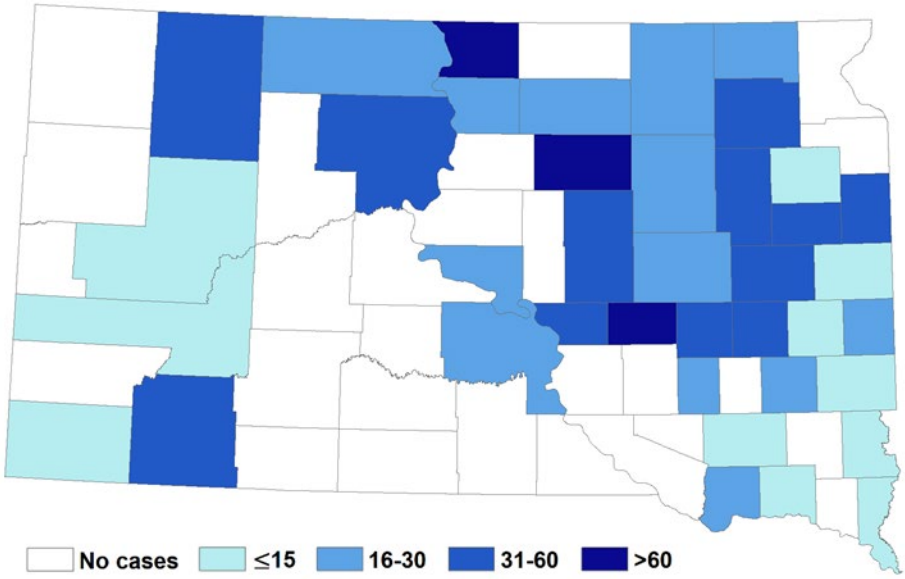


WEST NILE VIRUS (WNV)

West Nile disease is a viral mosquito-borne illness that emerged in South Dakota in 2002. About 20 percent of WNV infected individuals develop fever with other symptoms such as headache, body aches, joint pains, vomiting, diarrhea, or rash. Most people with this type of West Nile virus disease recover completely, but fatigue and weakness can last for weeks or months. Less than one percent of infected individuals develop a serious neurologic illness such as encephalitis (infection of the brain) or meningitis (infection of the spinal cord). The symptoms of neurologic illness can include headache, high fever, neck stiffness, disorientation, coma, tremors, seizures, or paralysis. Neuroinvasive WNV infection may take several weeks or months to recover. Some of the neurologic effects may be permanent. The death rate for WNV neurologic disease is about 10 percent.

In South Dakota, there were 94 human cases of WNV disease (46 neuroinvasive and 48 non-neuroinvasive) reported in 2023. The overall incidence of WNV was 10.2 cases per 100,000 population. Fifty-four cases (57%) were hospitalized, including four deaths. Additionally, 11 persons were identified to have WNV infection through blood donation screenings.

Figure 41
Human WNV Disease Incidence by County of Residence: South Dakota, 2023
(cases per 100,000)



OTHER INFECTIOUS DISEASES

Other infectious diseases reported in South Dakota during 2023 include: 28 cases of invasive *Haemophilus influenzae*, seven cases each of coccidioidomycosis and Q fever, five cases each of cyclosporiasis and vibriosis, four cases each of dengue, ehrlichiosis, and malaria, two cases each of listeriosis and spotted fever rickettsiosis, and one case each of anaplasmosis, babesiosis, and paratyphoid fever.

Technical Notes for Vital Statistics

A. SOURCES OF DATA

VITAL EVENTS

Birth, death, and marriage certificates, and reports of fetal deaths were the source documents for data on vital events of South Dakota during the 2023 calendar year. Divorce data were compiled from transcripts that were received from each county.

The cut-off date for 2023 data in this report was August 31, 2024. Any data pertaining to a 2023 event for which a certificate was filed after August 31, 2024 were not included in this report. Because the number of records received after that date is so small, in most instances, it is of little significance for the purpose of analysis.

Births, deaths, and fetal deaths relating to South Dakota residents that occurred in another state were included in this report. The inclusion of these data is made possible by an agreement among all registration areas in the United States for resident exchange of copies of certificates.

Birth and fetal death records are the responsibility of the person in attendance; however, the records are usually completed by medical records personnel who are not necessarily present at the delivery. Death records are the responsibility of the funeral director. The medical certification of the cause of death is completed by a physician or coroner.

Marriage records are created by the Register of Deeds using information provided by each spouse and completed with information provided by the individual solemnizing the record. Divorce records are submitted via a transcript from the Clerk of Courts.

United States data were obtained from publications produced by the Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Hyattsville, Maryland.

POPULATIONS

The populations used to develop the South Dakota rates were based on the given year's estimate. For example, rates for 2023 were calculated using the 2023 vintage population estimate from the US Census Bureau. Each intercensal year's rates are based on the given year's vintage population estimate. The only years that did not use these estimates were 2000, 2010, and 2020 which used the actual census totals for each of the given years.

RATES

Absolute counts of births and deaths do not readily lend themselves to analysis and comparison between years and various geographic areas because of population differences. These demographic differences include total number, age, sex distributions, and ethnic or racial differentials. In order to assess the health status of a particular population at a specified time, the absolute number of events is converted to a relative number such as the probability of living or dying, a rate, a ratio, or an index. This conversion is made by relating the crude number of events to the living population at risk in a particular area at a specified time.

RELIABILITY OF RATES

All rates are subject to variation, and this variation is inversely related to the number of events used to calculate the rate. The smaller the number of events, the higher the variability. Rates based on a small number of events over a specified time or for small populations vary considerably and should be viewed with caution. South Dakota contains many counties with sparse or small populations. Therefore, when calculating health status indicators for these sparsely populated counties, there will always be the possibility that the rate is just a chance variation. For instance, in a five-year period a county with a small population could have annual infant mortality rates of 0, 0, 0, 0, and 25. While rates for 4 of the years are 0, the fifth year

rate of 25, taken alone, is probably not a true indicator of the county's health status.

To attempt to minimize chance variation the report uses five-year averages. Thus, in the example above the infant mortality rate would have been approximately five for the five-year period, which is probably a more accurate depiction of the county's health status. Despite these precautions, using five-year averages for the most sparsely populated counties will still not reduce chance variation significantly for some of the indicators due to the small number of events.

B. DATA LIMITATIONS

QUALITY

The quality of data presented in this report is directly related to the completeness and accuracy of the information contained on the certificates.

MEDICAL CERTIFICATION

Causes of death on death certificates are coded according to the tenth revision of the *International Classification of Disease* (ICD-10). This classification as adopted by the World Health Organization in 1999 is used throughout the world for selecting the underlying cause of death and classifying the cause.

Starting in 2001, the National Center for Health Statistics introduced categories *U01-*U03 for classifying and coding deaths caused by acts of terrorism. Please note *U01 was added to intentional self-harm (suicide) and *U02-*U03 was added to assault (homicide).

Starting in 2020, U07 was introduced for classifying and coding deaths caused by COVID-19.

RACE/ETHNICITY

The race or ethnicity reported on the vital records reflects the opinion of the informant and does not follow any prescribed rules for the reporting of race or ethnicity.

Birth data were tabulated using the race or ethnicity of the mother. No attempt is made to determine the race or ethnicity of the child from the race or ethnicity shown for the father and the mother.

Race is assigned based on standards set forth by the National Center for Health Statistics and the US Census Bureau in order for South Dakota's race data to be comparable to other areas. Race/ethnicity data in this report are categorized in the following manner:

- White
- American Indian
- Black
- Hispanic

Due to space constraints and small numbers, some race categories (Asian, Pacific Islander, and Multi-Racial) are included in the total, but are not shown individually.

C. GEOGRAPHIC ALLOCATION

In South Dakota, registration of vital events is classified geographically in two ways. The first way is by place of occurrence, i.e., the actual state and county in which the birth or death took place. The second and more customary way is by place of residence, i.e., the state or county stated to be the usual residence of the decedent in the case of deaths or of the mother in the case of a newborn.

Fetal deaths and infant deaths, in cases where the child was never discharged from the hospital, are classified to the residence of the mother.

Occurrence statistics have administrative value and statistical significance, especially when calculating accident statistics. Residence statistics are useful in determining health indices for planning and evaluation purposes. The statistics provided in this report are residence data unless otherwise stated.

Allocation of vital events by place of residence is sometimes difficult because classification depends entirely on the statement of the usual place of residence furnished by the informant at the time the original certificate is completed. For

various reasons, this statement may be incorrect or incomplete. For example, mailing addresses very often differ from the actual geographic residence.

D. DEFINITIONS

Age-Adjusted Death Rate (Direct Method) – Age-specific death rates for a selected population are applied to a standard population in order to calculate what rate would be expected if the selected population had the same age distribution as the standard. The total of expected deaths divided by the total of the standard population and multiplied by 100,000 yields the age-adjusted death rate per 100,000. (It is important to use the same standard population in the computation of each age-adjusted rate to achieve comparability. Age-adjusted death rates should never be compared with any other types of death rate or be used as absolute measurements of mortality.)

Age-Adjusted Death Rate – Absolute counts of deaths or crude death rates do not readily lend themselves to analysis and comparison between years and various geographic areas. For example, the older a population, the more people die. Statistically, South Dakota has a high percentage of elderly; therefore, if crude rates of death, based on population, in South Dakota were compared with those of the United States, it would appear that South Dakota had a high rate of mortality. The comparison would be misleading.

Consequently, a mortality rate that has been adjusted for age has been devised to allow more refined measurement with which to compare deaths over geographic areas or time periods. This is referred to as an age-adjusted death rate.

Age-Specific Birth Rate – Number of live births to women in a specific age group per 1,000 female population in that age group.

Age-Specific Death Rate – Number of deaths in a specific age group per 100,000 population in that age group.

Annulment – A judicial pronouncement declaring a marriage invalid.

Birth Weight – The first weight of the fetus or newborn obtained after birth. This weight should be measured, preferably, within the first hour of delivery before significant postnatal weight loss has occurred. Low birth weight babies are those born alive who weigh less than 2,500 grams (about 5 pounds 9 ounces).

Birth Weight in Grams – In order to provide data comparable to that published for the United States and other countries, birth weight is reported in grams for this report. The equivalents of the gram intervals in pounds and ounces are as follows:

499 grams or less	= 1 lb. 1 oz. or less
500 - 999 grams	= 1 lb. 2 ozs. – 2 lbs. 3 ozs.
1,000 - 1,499 grams	= 2 lbs. 4 ozs. – 3 lbs. 4 ozs.
1,500 - 1,999 grams	= 3 lbs. 5 ozs. – 4 lbs. 6 ozs.
2,000 - 2,499 grams	= 4 lbs. 7 ozs. – 5 lbs. 8 ozs.
2,500 - 2,999 grams	= 5 lbs. 9 ozs. – 6 lbs. 9 ozs.
3,000 - 3,499 grams	= 6 lbs. 10 ozs. – 7 lbs. 11 ozs.
3,500 - 3,999 grams	= 7 lbs. 12 ozs. – 8 lbs. 12 ozs.
4,000 - 4,499 grams	= 8 lbs. 13 ozs. – 9 lbs. 14 ozs.
4,500 - 4,999 grams	= 9 lbs. 15 ozs. – 11 lbs. 0 ozs.
5,000 grams or more	= 11 lbs. 1 oz. or more

Cause Specific Death Rate – The number of resident deaths due to a specific cause divided by the total resident population X 100,000.

Crude Birth Rate – The number of resident live births divided by the total resident population X 1,000.

Crude Death Rate – The number of resident deaths divided by the total resident population X 100,000.

Divorce – The legal dissolution of a marriage.

Fetal Death – Death before the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy. The death is indicated by the fact that after such expulsion or extraction, the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. South Dakota requires the reporting of any fetus of at least 20 weeks gestation.

Fetal Death Rate – The number of fetal deaths divided by the total number of live births and fetal deaths X 1,000.

Gestation – Weeks of pregnancy as reported on the certificate of live birth. In this report, the obstetric estimate of gestation is used to determine the length of gestation rather than the date of the last normal menstrual cycle. The obstetric estimate of gestation is determined by the physician certifying the birth.

Infant Death – Death of a live born infant less than one year (365 days) of age. Infant deaths equal the sum of neonatal plus postneonatal deaths.

Infant Mortality Rate – The number of infant deaths divided by the total number of live births X 1,000.

Live Birth – The complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy, which, after such expulsion or extraction, breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

Low Birth Weight – A birth weight under 2,500 grams or 5 pounds, 9 ounces.

Marriage – The legal union of two people.

Mean – The arithmetic average of a set of values or the sum of all the values divided by the number of values in the group.

Median – The value or number that divides a population into two halves. The value that falls exactly in the middle of the entire range of values ranked in order from low to high such that 50 percent of the values fall above it and 50 percent fall below it. If the number of values is even, a value halfway between the two values nearest the middle is used.

Mode – The most frequently occurring value in a distribution.

Neonatal Mortality Rate – (Neonatal Death = Death occurring to infants from birth through 27 days old). The number of neonatal deaths is divided by the total number of live births X 1,000.

Neonatal Period – The period of infancy from the first through the 27th day of life.

Place of Occurrence and Residence – In South Dakota, registration of vital events is classified geographically in two ways. The first way is by place of occurrence, i.e., the actual county in which the event took place. The second, and more customary way, is by place of residence, i.e., the county stated to be the usual residence of the decedent in the case of deaths or of the mother in the case of a newborn. Births and deaths relating to South Dakota residents which occurred in another state are included in this report. The inclusions of these data are made possible by an agreement among all registration areas in the United States for resident exchange of copies of certificates.

Postneonatal Mortality Rate – (Postneonatal Death = Death occurring to infants 28 days to 1 year of age). The number of postneonatal deaths divided by the total number of live births X 1,000.

Postneonatal Period – The period of infancy from 28 days to less than one year old.

Significance – Most of the health status indicators in South Dakota's counties are not significantly different from the state's averages. This means that although a county's calculated rate may be higher or lower than the state average, the small number of events in the county makes the rate vary considerably from year to year. For example, if in 2021, County A had 100 babies born and none died, the infant mortality rate would be 0.0. But if in 2022, County A had another 100 babies born and one died, the infant mortality rate would be 10.0.

When there are a small number of events and the probability of such an event is small, a mathematical formula is used to calculate whether the difference in rates is statistically significant or due more to chance.

E. MORTALITY CODING

Codes for alcohol-induced deaths - Causes of death attributable to alcohol-induced mortality include ICD–10 codes: E24.4, Alcohol-induced pseudo-Cushing's syndrome; F10, Mental and behavioral disorders due to alcohol use; G31.2, Degeneration of nervous system due to alcohol; G62.1, Alcoholic polyneuropathy; G72.1, Alcoholic myopathy; I42.6, Alcoholic cardiomyopathy; K29.2, Alcoholic gastritis; K70, Alcoholic liver disease; K85.2, Alcohol-induced acute pancreatitis; K86.0, Alcohol-induced chronic pancreatitis; R78.0, Finding of alcohol in blood; X45, Accidental poisoning by and exposure to alcohol; X65, Intentional self-poisoning by and exposure to alcohol; and Y15, Poisoning by and exposure to alcohol, undetermined intent. Alcohol-induced causes exclude accidents, homicides, and other causes indirectly related to alcohol use, as well as newborn deaths associated with maternal alcohol use.

Codes for farm accident deaths - Causes of death attributable to farm accident mortality include ICD–10 code: W30, Contact with agricultural machinery; or if the decedent was doing agricultural work at the time of the injury; or if the location of the injury was on a farm. Farm accidents exclude suicides and homicides.

Codes for firearm deaths - Causes of death attributable to firearm mortality include ICD–10 codes *U01.4, Terrorism involving firearms (homicide); W32–W34, Accidental discharge of firearms; X72–X74, Intentional self-harm (suicide) by discharge of firearms; X93–X95, Assault (homicide) by discharge of firearms; Y22–Y24, Discharge of firearms, undetermined intent; and Y35.0, Legal intervention involving firearm discharge. Deaths from injury by firearms exclude deaths due to explosives and other causes indirectly related to firearms.

CODES FOR DRUG OVERDOSE DEATHS -

Category	ICD-10 Codes[1]	
	Underlying Cause	**Contributing Cause**
All Drug poisoning	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T36 T37 T38 T39 T40 T41 T42 T43 T44 T45 T46 T47 T48 T49 T50
Illicit drug poisoning	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T40.1 T40.5 T40.7 T40.8 T40.9 T43.6
Pharmaceutical poisoning[2]	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T36 T37 T38 T39 T40.2 T40.3 T40.4 T41 T42 T43.0 T43.1 T43.2. T43.3 T43.4 T43.5 T43.8 T43.9 T44 T45 T46 T47 T48 T49 T50.0 T50.1 T50.2 T50.3 T50.4 T50.5 T50.6 T50.7 T50.8
Prescription opioid poisoning	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T40.2 T40.3 T40.4
Illicit opioid poisoning (opium and heroin)	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T40.0 T40.1
All opioid poisoning (illicit and prescription)	X40 X41 X42 X43 X44 X60 X61 X62 X63 X64 X85 Y10 Y11 Y12 Y13 Y14	T40.0 T40.1 T40.2 T40.3 T40.4

[1] For ICD-10, the death must have an underlying cause code from among those shown. Contributing cause codes can then indicate the specific type of drug involved, but they do not specify intent.

[2] "Pharmaceutical" is used as opposed to "prescription" drugs because a small number of codes include both prescription and over-the-counter drugs.

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