SOUTH DAKOTA DEPARTMENT OF HEALTH

Injuries in South Dakota

NOVEMBER 2024

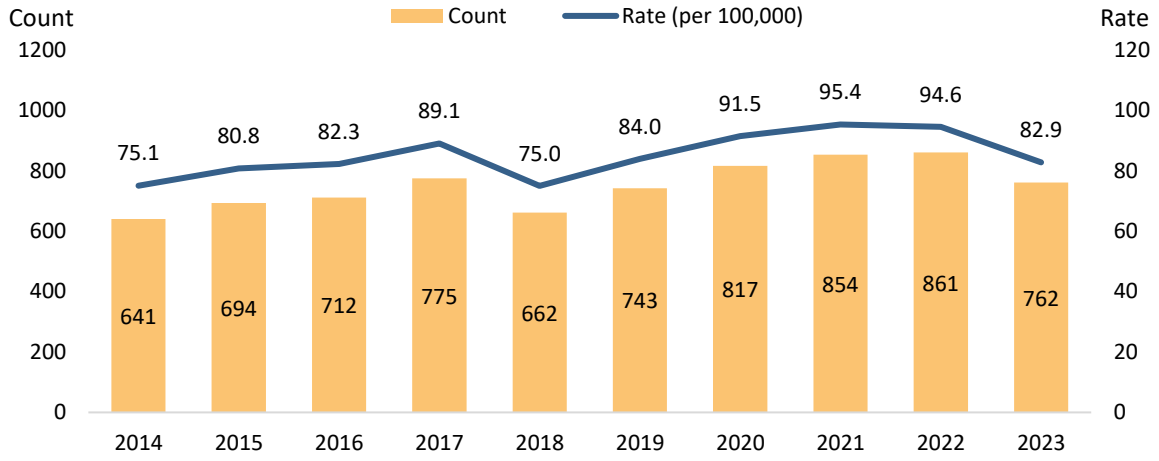
SOUTH DAKOTA DEPARTMENT OF HEALTH

Injury is physical harm or damage to the body that can result in the impairment or destruction of health. Injuries can be the result of intentional or unintentional events such as falls, motor vehicle accidents, firearms, poisoning, drowning, or suffocation (for terminology see page 8). Injuries are a serious public health problem that can have a lifelong impact. Understanding the prevalence of injuries is a key part of protecting South Dakotans from injury so individuals, families, and communities can be safe, healthy, and thriving.

Fatal Injuries

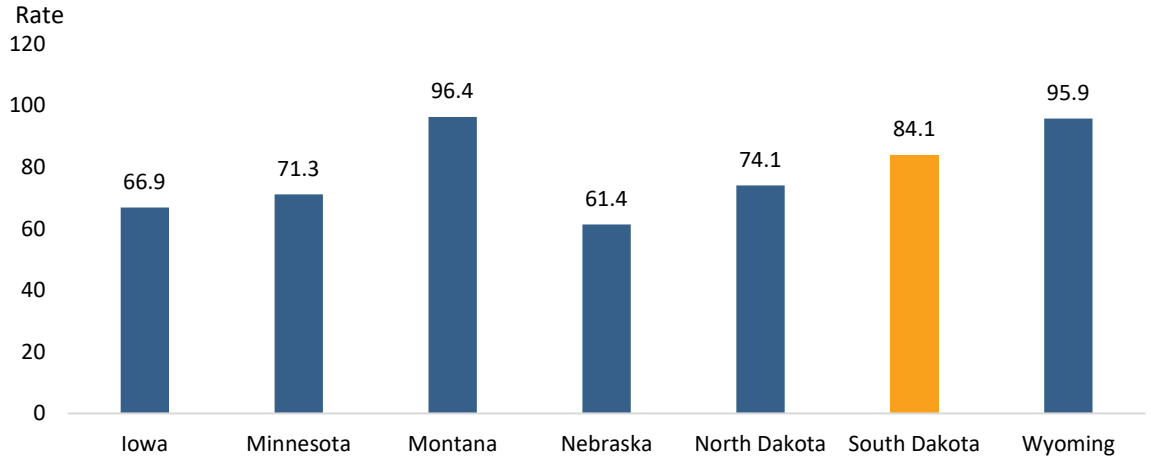
From 2014 to 2023, there were 7,521 injury-related deaths in South Dakota. Fatal injuries increased 19% from 641 deaths in 2014 to 762 deaths in 2023.

Figure 1: Fatal Injury Counts and Rates (per 100,000), South Dakota



South Dakota ranked 28th in the nation for age-adjusted injury death rates with a rate of 84.1 per 100,000, compared to the national rate of 79.7 per 100,000 (2018-2022). Figure 2 compares the South Dakota age-adjusted rate to neighboring states.

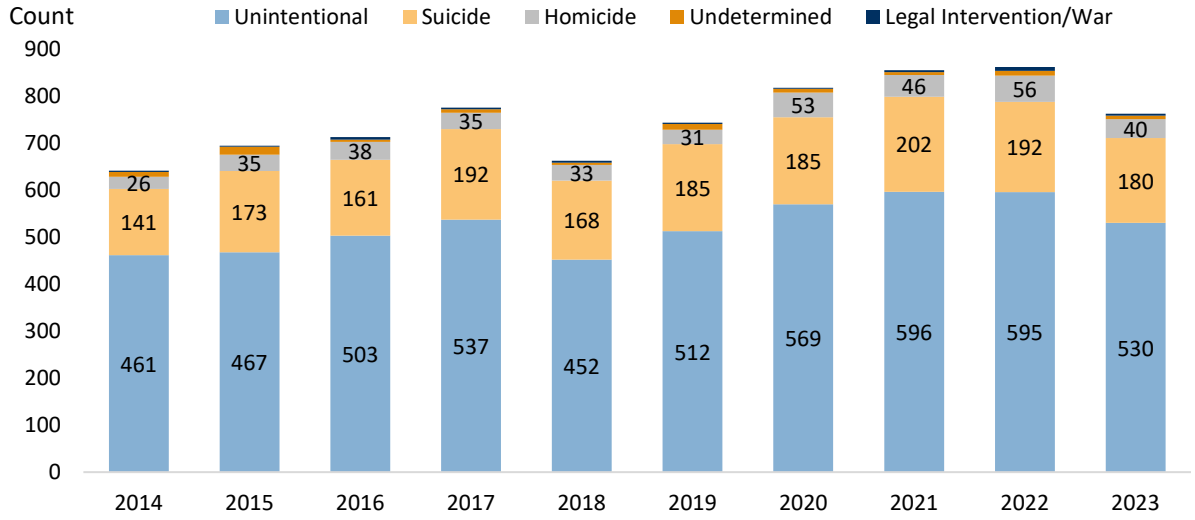
Figure 2: Age-Adjusted Injury Death Rates (per 100,000), Selected States, 2018-2022



69%
of fatal injuries were
unintentional

Of the 7,521 injury-related deaths, 69% were unintentional, 24% were suicides, 5% were homicides, 1% were undetermined, and 1% were legal intervention or war-related (LI/War). Figure 3 shows the breakdown of intent by year.

Figure 3: Fatal Injuries by Intent



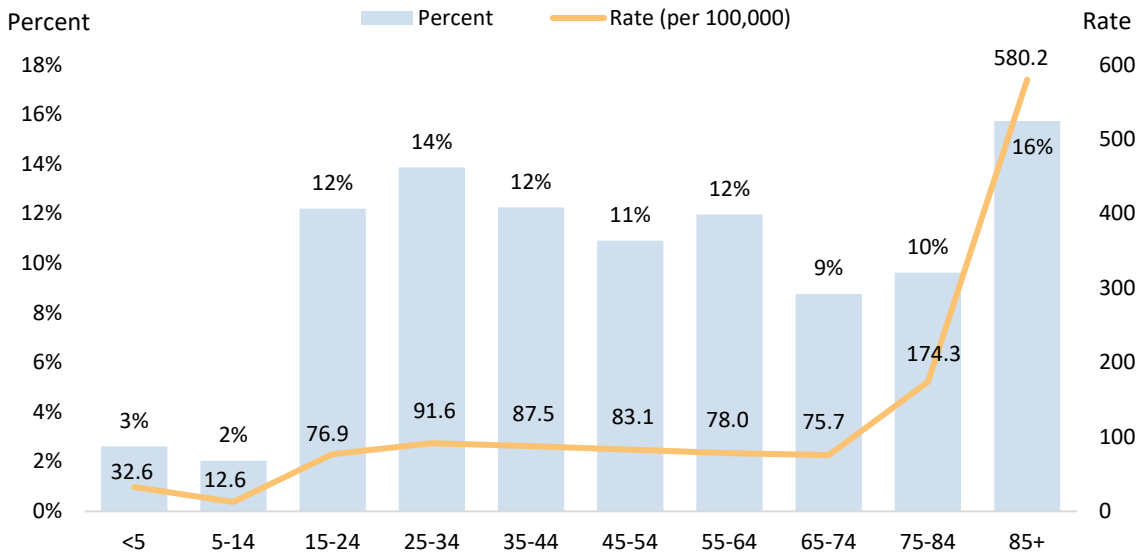
The top three mechanisms of injury-related deaths for all intents were falls, motor vehicle traffic accidents, and firearms. Table 1 shows the number of injury-related deaths by intent and mechanism.

Table 1: Fatal Injuries by Intent and Mechanism of Death (2014-2023)

	Intent of Death					
Mechanism of Death	**All Injury**	**Unintentional**	**Suicide**	**Homicide**	**Undetermined**	**LI/War**
All Injury	7,521	5,222	1,779	393	88	39
Cut/Pierce	114	<5	27	81	<5	--
Drowning	117	103	10	<5	<5	--
Fall	1,953	1,938	13	<5	<5	--
Fire/Burn	126	115	5	<5	<5	--
Firearm	1,122	38	877	165	7	35
Machinery	43	43	--	--	--	--
Motor Vehicle Traffic (MVT)	1,433	1,433	--	--	--	--
Pedal Cyclist, Non-MVT	7	7	--	--	--	--
Pedestrian, Non-MVT	20	20	--	--	--	--
Other Transportation	131	112	10	7	<5	--
Natural/Environmental	145	145	--	--	--	--
Overexertion	6	6	--	--	--	--
Poisoning	1,014	792	188	<5	32	--
Struck By/Against	51	26	--	25	--	--
Suffocation	905	242	633	20	10	--
Other Specified	211	155	14	30	8	<5
Unspecified	123	43	<5	56	22	--

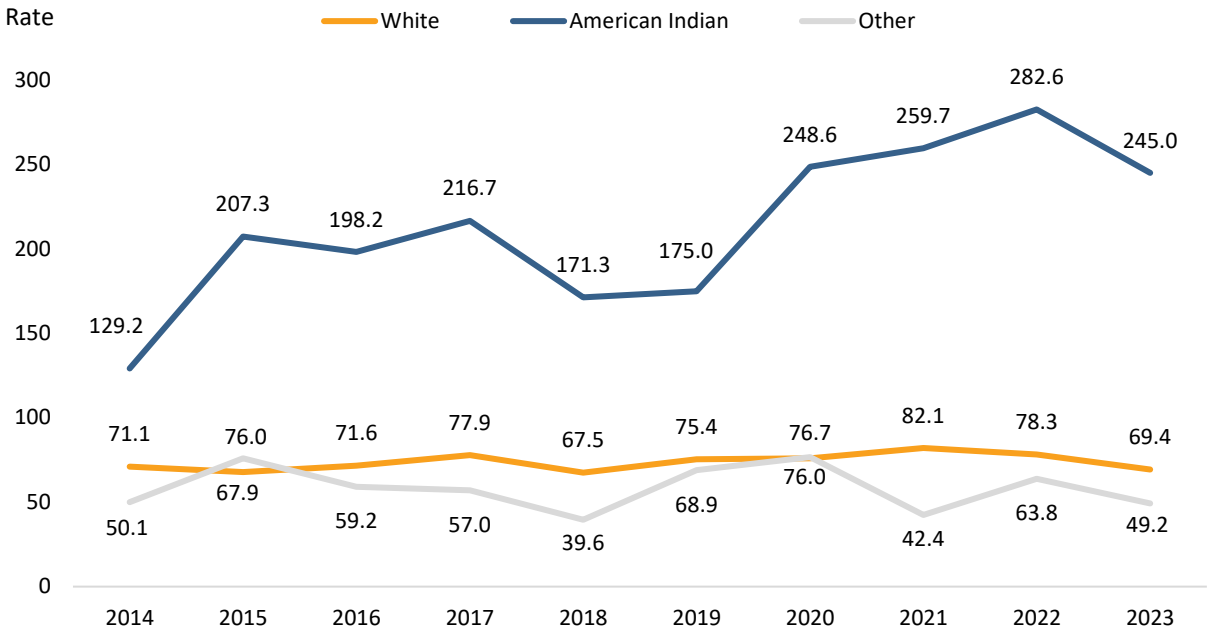
Males made up 65% of fatal injuries and were 1.9 times more likely to die from injuries than females (110.3 vs 59.5 per 100,000, respectively). South Dakotans aged 85 years and older made up the largest proportion and had the highest fatal injury rates by age group (580.2 per 100,000).

Figure 4: Fatal Injuries by Age Group (2014-2023)



From 2014 to 2023, 73% of fatal injuries were White, 22% were American Indian and 4% were another race (Black, Asian, multiracial, Hispanic, and unknown). American Indian injury death rates were 2.9 times higher than White death rates (213.6 vs 73.7 per 100,000). Figure 5 shows injury death rates by race from 2014 to 2023.

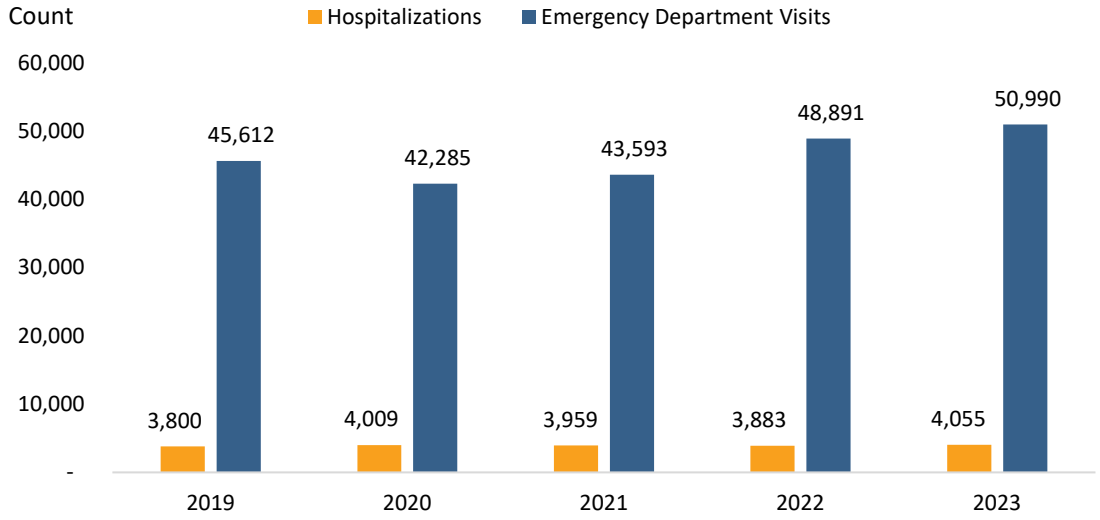
Figure 5: Fatal Injury Rates by Race (2014-2023)



Nonfatal Injuries

From 2019 to 2023, there were 251,077 nonfatal injury-related hospitalizations and emergency department visits in South Dakota. In 2023 alone, there were 4,055 hospitalizations and 50,990 emergency department visits related to injuries.

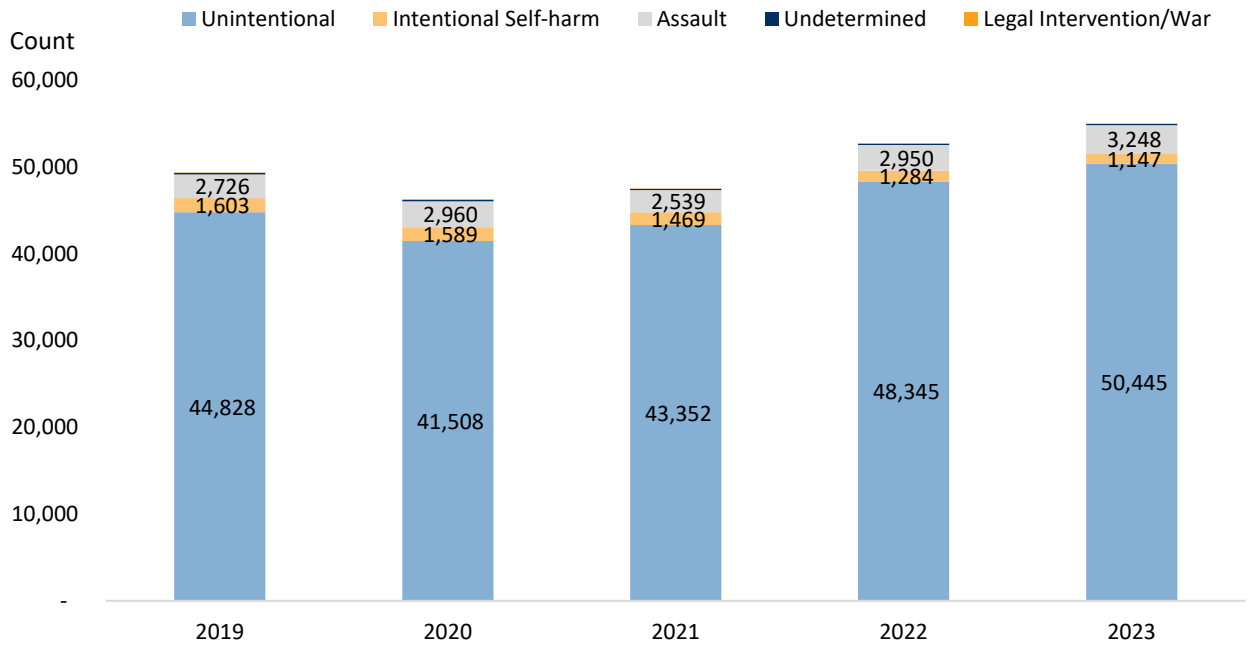
Figure 6: Nonfatal Injury Hospitalizations and Emergency Department Visits by Year



91%
of nonfatal injuries were **unintentional**

By intent, 91% of visits were unintentional, 6% were assault, 3% were intentional self-harm, 0.3% were undetermined, and 0.1% were legal intervention or war. Figure 5 shows the breakdown of intent by year.

Figure 7: Nonfatal Injuries by Intent



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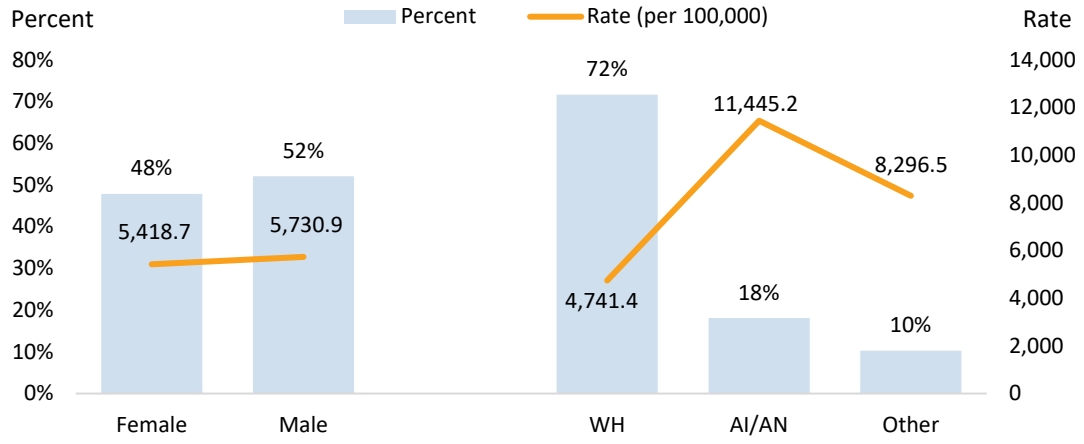
The top three mechanisms of injury-related hospitalizations and emergency department visits for all intents were falls, struck by or against, and cut or pierced. Table 2 shows the number of injury-related visits by intent and mechanism.

Table 2: Nonfatal Injuries by Intent and Mechanism, South Dakota (2019-2023)

Mechanism of Injury	All Injury	Unintentional	Intentional Self-harm	Assault	Undetermined	LI/War
All Injury	251,077	228,478	7,092	14,423	833	251
Cut/Pierce	23,563	20,886	1,597	1,009	67	<5
Drowning	111	34	<5	--	76	--
Fall	94,443	94,403	13	9	18	--
Fire/Burn	2,637	2,603	14	10	10	--
Firearm	675	481	47	115	16	16
Machinery	2,010	2,010	--	--	--	--
Motor Vehicle Traffic (MVT)	17,026	16,996	14	15	<5	--
Motor Vehicle, Nontraffic	3,921	3,921	--	--	--	--
Pedal Cyclist, Non-MVT	1,978	1,978	--	--	--	--
Pedestrian, Non-MVT	381	381	--	--	--	--
Other Transportation	2,825	2,825	--	--	--	--
Natural/Environmental	10,141	10,138	<5	--	--	--
Overexertion	12,091	12,091	--	--	--	--
Poisoning, Drug	8,077	3,170	4,422	12	473	--
Poisoning, Non-Drug	2,729	2,453	194	10	72	--
Struck By/Against	34,296	25,005	5	9,131	38	117
Suffocation	365	164	185	11	5	--
Foreign Body	6,721	6,721	--	--	--	--
Abuse/Neglect	1,867	--	--	1,867	--	--
Other Specified	7,628	6,492	217	399	57	83
Unspecified	17,592	15,726	380	1,835	--	31

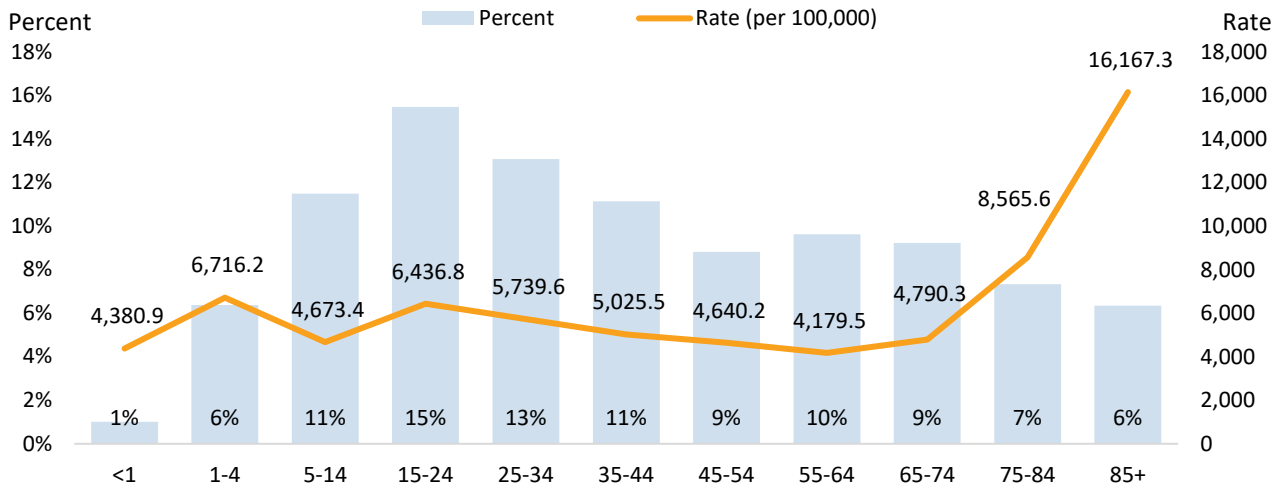
Of the 251,077 nonfatal injuries, males made up 52% and females made up 48%. The largest proportion of nonfatal injuries were among the White (WH) population (72%), followed by American Indian/Alaska Native (AI/AN) population (18%). The AI/AN rate of nonfatal injuries was 2.4 times higher than the White injury rate (11,445.2 vs 4,741.4 per 100,000).

Figure 6: Nonfatal Injuries by Sex and Race (2019-2023)



All South Dakotans are at risk for an injury. Individuals aged 15-24 years made up the largest proportion of nonfatal visits. Adults aged 85 years and older (16,167.3 per 100,000), followed by adults aged 75-84 years (8,565.6 per 100,000), had the highest nonfatal injury rates by age group.

Figure 7: Nonfatal Injuries by Age Group (2019-2023)



Injuries by County

Counties with the highest rate of fatal injuries includes Buffalo, Oglala Lakota, Todd, Corson, and Dewey (2014-2023). Counties with the highest rate of hospitalizations (hosp.) includes Oglala Lakota, Todd, Buffalo, Jackson, and Gregory (2019-2023). Counties with the highest rate of emergency department (ED) visits includes Buffalo, Corson, Bennett, Jackson, and Lyman (2019-2023).

Table 3: Fatal and Nonfatal Injury Counts and Rates (per 100,000) by County

County	Death Count	Death Rate	Hosp. Count	Hosp. Rate	ED Visit Count	ED Visit Rate
Aurora	21	152.5	50	363.2	650	4721.8
Beadle	145	152.5	282	296.7	4233	4453.3
Bennett	49	291.5	122	725.7	1852	11016.6
Bon Homme	71	203.5	182	521.6	2053	5884.2
Brookings	158	89.4	429	242.7	8382	4741.4
Brown	267	139.5	861	449.9	12907	6744.1
Brule	44	166.5	137	518.4	2113	7996.2
Buffalo	57	594.6	94	980.6	1273	13279.8
Butte	83	156.4	193	363.7	3299	6217.5
Campbell	17	249.1	11	161.2	197	2886.4
Charles Mix	128	277.2	272	589.1	3352	7260.1
Clark	24	124.7	79	410.3	990	5142.1
Clay	68	91.7	224	302.0	3129	4218.3
Codington	214	150.4	625	439.2	10199	7166.5
Corson	90	459.3	65	331.7	2601	13272.4
Custer	103	230.3	140	313.1	2411	5391.2
Davison	163	164.0	402	404.6	6007	6045.7
Day	57	210.2	128	472.1	1956	7214.3
Deuel	28	129.2	104	479.8	1125	5190.3

County	Death Count	Death Rate	Hosp. Count	Hosp. Rate	ED Visit Count	ED Visit Rate
Dewey	113	414.3	216	791.9	751	2753.4
Douglas	32	224.4	63	441.7	677	4746.9
Edmunds	33	166.7	73	368.7	1019	5146.2
Fall River	93	262.8	210	593.5	3108	8783.1
Faulk	23	208.7	63	571.7	182	1651.7
Grant	60	164.0	174	475.6	1917	5239.6
Gregory	39	191.5	165	810.4	1427	7008.5
Haakon	20	215.7	54	582.4	651	7021.1
Hamlin	36	114.4	104	330.6	1814	5766.8
Hand	24	153.3	65	415.1	780	4980.8
Hanson	27	155.4	33	189.9	390	2244.1
Harding	14	212.4	19	288.3	124	1881.6
Hughes	137	155.9	333	379.0	5738	6530.0
Hutchinson	69	187.8	227	617.8	2352	6400.7
Hyde	17	274.7	44	711.1	304	4912.7
Jackson	59	389.7	139	918.1	1358	8969.6
Jerauld	17	190.1	43	480.8	489	5467.4
Jones	5	112.1	21	471.0	190	4261.0
Kingsbury	53	206.3	140	545.0	1838	7155.1
Lake	65	111.8	209	359.5	3162	5438.7
Lawrence	211	158.1	448	335.6	7527	5638.3
Lincoln	250	74.4	908	270.0	8599	2557.4
Lyman	53	282.8	103	549.7	1663	8874.5
Marshall	33	144.2	63	275.3	1096	4788.7
McCook	42	147.9	153	539.0	1109	3906.6
McPherson	22	185.0	49	412.1	529	4448.7
Meade	213	143.2	434	291.8	6524	4386.0
Mellette	35	357.1	79	806.0	317	3234.4
Miner	22	194.4	65	574.4	595	5258.0
Minnehaha	1428	142.7	5059	505.7	46612	4659.4
Moody	48	149.0	121	375.6	1904	5910.3
Oglala Lakota	374	543.7	771	1120.9	2591	3766.8
Pennington	1028	179.8	2385	417.1	30942	5410.7
Perkins	17	120.1	28	197.8	58	409.8
Potter	27	231.9	59	506.8	771	6622.6
Roberts	144	280.9	136	265.3	4231	8254.5
Sanborn	23	194.0	58	489.1	550	4638.2
Spink	59	188.1	184	586.6	2217	7068.4
Stanley	27	176.6	57	372.7	792	5178.8
Sully	5	69.2	20	276.9	250	3461.2
Todd	235	487.6	498	1033.3	945	1960.8
Tripp	56	203.1	185	670.9	2208	8007.8
Turner	80	184.6	232	535.3	2011	4639.7
Union	83	99.7	165	198.2	1235	1483.6
Walworth	50	188.3	73	274.9	2122	7991.6
Yankton	191	165.0	542	468.3	6850	5918.3
Ziebach	39	311.8	36	287.8	123	983.3

Note: Rates based on counts less than 20 are considered unstable and should be viewed with caution.

Terminology

Injury Intent: Intent, or manner of injury, describes whether an injury was deliberate and carried out by oneself or by another person.

- **Unintentional:** Injury that is not inflicted by deliberate means (an accident).
- **Intentional:** Injuries that are inflicted deliberately, by oneself or by another person, with the goal of injuring or killing. Includes suicide, self-harm, homicide, and assault.
- **Undetermined:** Injuries where intent cannot be determined.
- **Legal intervention or war:** Injuries caused by police or other legal authorities during law enforcement activities. It also includes injuries to military personnel or civilians caused by war or civil insurrection.

Injury Mechanism: Mechanism, or cause of injury, is how a person sustains an injury or the process by which the injury occurred.

- **Cut/Pierce:** Injury resulting from an incision, slash, perforation, or puncture by a pointed or sharp instrument.
- **Drowning:** Suffocation (asphyxia) resulting from submersion in water or another liquid.
- **Fall:** Injury received when a person descends abruptly due to the force of gravity and strikes a surface at the same or lower level.
- **Fire/Burn:** Severed exposure to flames, heat, or chemicals that leads to tissue damage in the skin or places deeper in the body; injury from smoke inhalation to the upper airway, lower airway, or lungs.
- **Firearm:** A penetrating force injury resulting from a bullet or other projectile shot from a powder-charged gun. This category includes gunshot wounds from powder-charged handguns, shotguns, and rifles.
- **Machinery:** Injury that involves operating machinery, such as forklifts and jackhammers.
- **Transportation:** Injury involving modes of transportation, such as cars, motorcycles, bicycles, and trains. This category is divided into subcategories according to the person injured and whether the injury occurred in traffic.
- **Natural/Environmental:** Injury resulting from exposure to adverse natural and environmental conditions (such as severe heat, severe cold, lightning, sunstroke, large storms, and natural disasters) as well as lack of food or water.
- **Overexertion:** Working the body or a body part too hard, causing damage to muscle, tendon, ligament, cartilage, joint, or peripheral nerve. This category includes overexertion from lifting, pushing, pulling, or from excessive force.
- **Poisoning:** Ingestion, inhalation, absorption through the skin, or injection of a drug, toxin, or other chemical that a harmful effect results, such as drug overdoses.
- **Struck by/Against:** Injury resulting from being struck by or striking against a human, animal, or inanimate object or force other than a vehicle or machinery.
- **Suffocation:** Injury that causes a threat to breathe. This includes suffocation due to hanging, strangulation, or objects that block the airway.
- **Foreign Body:** Injury that occurs when an object that's not meant to be in the body ends up there.
- **Abuse/Neglect:** Actions that intentionally causes harm or injures another person.
- **Other Specified:** Injury associated with any other specified causes that does not fit another category.
- **Unspecified:** Injury for which there is not enough information to describe the cause of injury.

Injury Resources

To view additional data reports and learn about available injury resources, visit https://doh.sd.gov/health-data-reports/injury-prevention/

Data Sources and Methods

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

Mortality Data

Mortality data used in this report comes from the South Dakota Department of Health (DOH) Office of Vital Statistics. The completeness of mortality data depends on how thoroughly the death certificate is completed, which can affect how a death is categorized and how much data is available to analyze. Mortality data is representative of South Dakota residents. National comparison data comes from CDC Web-based Injury Statistics Query and Reporting System (WISQARS).

Hospital and Emergency Department Data

Hospital and Emergency Department data comes from the South Dakota Association of Healthcare Organizations (SDAHO). Data from SDAHO does not include cases from Indian Health Services and Veterans Affairs. Injury hospitalization and emergency department visit data in this report does not include deaths, and the data reflects the number of inpatient and outpatient visits by South Dakota residents by year of discharge. Principle diagnosis codes are used to identify an injury record and external cause of injury codes (E-Codes) are used to classify visits by intent and mechanism of the injury. The first valid ICD-10-CM code is used for categorization (some records may have multiple valid ICD-10-CM codes). Some records are missing a valid E-Code, which can lead to an underestimation of the number of nonfatal injuries that occurred in South Dakota. This report reflects the number of inpatient and outpatient visits by South Dakota residents by year of discharge.

Data Analysis Methods

The State Injury Indicators Report and the Council for State and Territorial Epidemiologists (CSTE) ICD-10-CM Injury Surveillance Toolkit were used as the standardized guides to measure injury mortality and morbidity. Click the links below to view the guidance reports.

- State Injury Indicators Report: https://www.cdc.gov/injury-core-sipp/media/pdfs/2024/06/CORRECTED-2022-Injury-Indicator-Instructions.pdf
- CSTE ICD-10-CM Injury Surveillance Toolkit: https://resources.cste.org/Injury-Surveillance-Methods-Toolkit