

In this issue:	Packaging and shipping infectious substances	page 3
	Hospital discharge survey, South Dakota 2000-2009	page 4
	South Dakota rabies surveillance, 2010	page 30
	2011 child and adolescent immunization schedules	page 35
	Selected morbidity report, January - February 2011	page 38

Colorectal Cancer in South Dakota

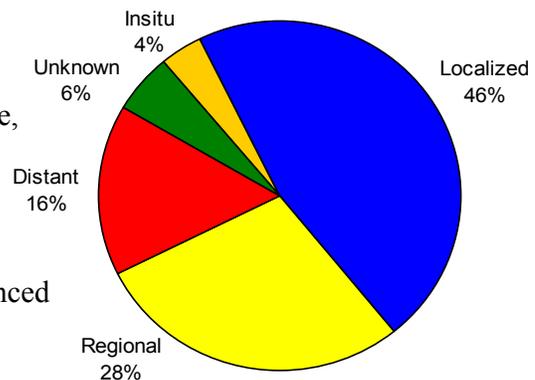
By the South Dakota Cancer Registry, South Dakota Department of Health

The South Dakota Cancer Registry has released the 2008 colorectal cancer data. For 2004-2008, the average number of new colorectal cancer cases per year was 433 and the average number of annual deaths due to colorectal cancer was 160.

Incidence 2008		Mortality 2008	
Number of cases		Number of deaths	
Total	425	Total	153
Males	226	Males	79
Females	199	Females	74
White	396	White	138
American Indian	24	American Indian	13
Median age at diagnosis	72 yrs	Median age at death	73 yrs
Mode	76 yrs	Mode	63 yrs
Age range at diagnosis	31-102 yrs	Age range at death	39-104 yrs
SD age-adjusted incidence rate	51.9	SD age-adjusted death rate	18.3
US SEER age-adjusted incidence rate (2007)	*45.5	US SEER age-adjusted death rate (2007)	*16.7

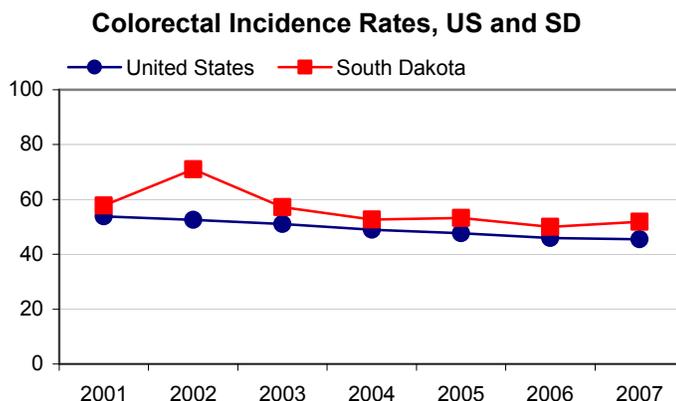
Rates per 100,000 US 2000 standard population
 * 2008 US SEER age-adjusted rates not available
 Source: South Dakota Department of Health

The graph at the right displays the SEER (Surveillance, Epidemiology, and End Results) Summary Stage at diagnosis for 2008 colorectal cancer cases. As shown, almost half of the cases were diagnosed at the more advanced stages of regional and distant. Patient survival rates decline when diagnosed at a more advanced stage.



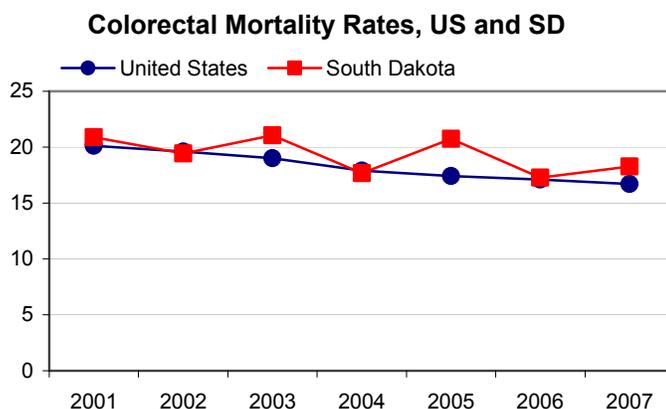
Source: South Dakota Department of Health

See below for the age-adjusted colorectal cancer incidence rates for the United States and South Dakota for 2001-2007. Except for 2002, South Dakota rates have been close to the national rates.



Sources: SEER and South Dakota Department of Health

The age-adjusted colorectal cancer mortality rates are shown below for the United States and South Dakota for 2001-2007.



Sources: SEER and South Dakota Department of Health

Colorectal Cancer Screening Program in South Dakota

To increase colorectal cancer screening, the South Dakota Department of Health implemented a colorectal screening program June 1, 2010. While the program focus is to raise awareness for all South Dakotans, the program provides direct colorectal screening services through participating medical providers for patients that qualify.

Colorectal Cancer Screening Program eligibility criteria are based on the following:

- Age: 50 and older
- Income: 200% of the Federal Poverty Guideline
- Insurance: Underinsured or uninsured for colorectal cancer screening

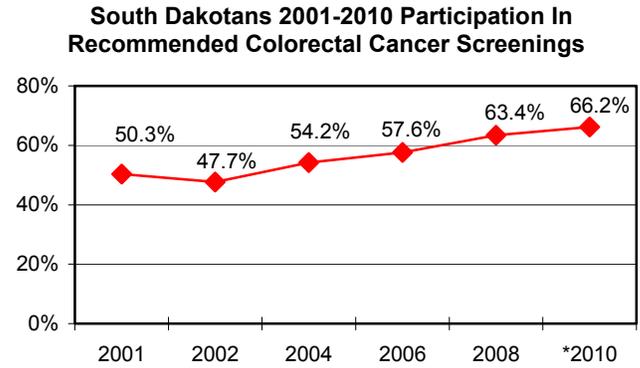
BRFSS Colorectal Cancer Screening Data

The recommendation for colorectal cancer screening is a blood stool test every year or a sigmoidoscopy/ colonoscopy every ten years for persons age 50 years of age or older. For

Behavioral Risk Factor Surveillance System (BRFSS) data, see below for percentages of colorectal cancer screening in South Dakota. As shown, a third of South Dakotans do not participate in screening.

South Dakotans 2010 Participation In Recommended Colorectal Cancer Screenings

Participated in Screening		No Participation in Screening
Blood Stool Test Only	2.7%	33.8%
Sigmoidoscopy/Colonoscopy Only	55.8%	
Both – Blood Stool Test and Sigmoidoscopy/Colonoscopy	7.7%	
Total	66.2%	



Source: Behavior Risk Factor Surveillance System 2001-2002, 2004, 2006, 2008 *2010 (*2010 data is provisional)

For additional information, please contact Kay Dosch, SD Cancer Registry Coordinator, at 605-773-6345 or 800-592-1861 or see the website at <http://getscreened.sd.gov/registry/> for the entire colorectal cancer monograph.

Packaging and Shipping Infectious Substances Class Offered

The South Dakota Public Health Laboratory is offering a 2011 update training on packaging and shipping infectious substances. Instructors for the course are from the Hazardous Materials Division of the U.S. Department of Transportation Safety Institute.

The course will cover an overview of federal Hazardous Materials Regulations (49 CFR Parts 100-185); definition of infectious substances; exceptions; packaging; documentation; marking, labeling, and placarding; emergency response information; training; and ICAO/IATA.

There is no cost for the course but registration is required as class size is limited to 20 students per location. Classes will be held April 26 in Chamberlain, April 27 in Brookings and April 29 in Rapid City and run from 8 a.m. to 5 p.m. Registration information is available at <http://doh.sd.gov/Lab/>.

Hospital Discharge Survey, South Dakota, 2000-2009

This report summarizes a decade of South Dakota hospital discharge data from 2000 through 2009. These inpatient data are presented as numbers, percentages and population-based rates for the overall state, four geographic sub-regions, gender, race groups and age groups.

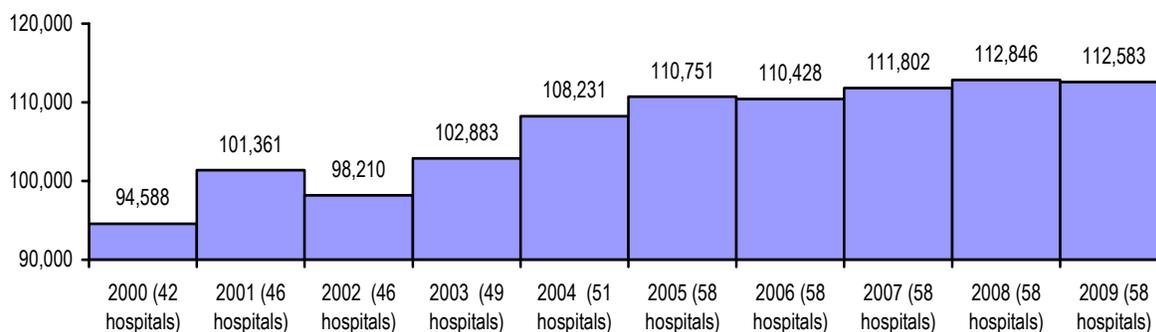
The principal diagnosis hospital discharge data were collected, coded and submitted by South Dakota community and specialty hospitals to the South Dakota Association for Healthcare Association (SDAHO). The data were purchased by the South Dakota Department of Health from SDAHO including admission date, age, sex race, county of residence, and diagnosis codes grouped by principal diagnosis based on the International Classification of Diseases 9th Revision (ICD-9). The datasets contained no identifiable patient or hospital-specific information. Federal hospitals did not submit discharge data, i.e., Veterans Administration and Indian Health Service hospitals, and neither did the South Dakota Human Services Center. South Dakota residents who were hospitalized out of state are not included. The data analysis is done by the South Dakota Department of Health using SAS Enterprise Guide (Version 4.2, SAS Institute, Inc., Cary, NC).

The 4 regions include the following counties which are grouped according to patient county-of-residence and the rates were calculated using the 2009 population estimates as denominators:

1. **Northeast** (population 199,771; 25%): Beadle, Brookings, Brown, Campbell, Clark, Codington, Day, Deuel, Edmunds, Faulk, Grant, Hamlin, Hand, Hughes, Hyde, Kingsbury, Marshall, McPherson, Potter, Roberts, Spink, Sully, Walworth.
2. **Northwest** (population 78,166; 10%): Corson, Butte, Dewey, Haakon, Harding, Lawrence, Meade, Perkins, Stanley, Ziebach.
3. **Southeast** (population 376,092; 46%): Aurora, Bon Homme, Brule, Buffalo, Charles Mix, Clay, Davison, Douglas, Gregory, Hanson, Hutchinson, Jerauld, Lake, Lincoln, McCook, Miner, Minnehaha, Moody, Sanborn, Turner, Union, Yankton.
4. **Southwest** (population 158,354; 19%): Bennett, Custer, Fall River, Jackson, Jones, Lyman, Mellette, Pennington, Shannon, Todd, Tripp.



Figure 1. Number of principal hospital discharges reported, South Dakota, 2000-2009



In the decade 2000-2009 there were 1,063,683 principal hospital discharges, including newborns, reported. Of these 86% were residents of South Dakota and 14% were residents of other states who received health care in South Dakota hospitals. The hospitalization numbers ranged from 94,588 in 2000 to 112,846 in 2008 (Figure 1). During the decade the number of hospitals reporting increased from 42 hospitals in 2000 to 58 in 2005 and thereafter.

The overall discharge rate was 11,284 per 100,000 population per year for South Dakota residents. Fifty-nine percent of the hospitalizations were of female patients and 41% male patients. Females had higher hospitalization rates than males in all disease groups, except congenital anomalies, conditions in the perinatal period, and diseases of the circulatory system.

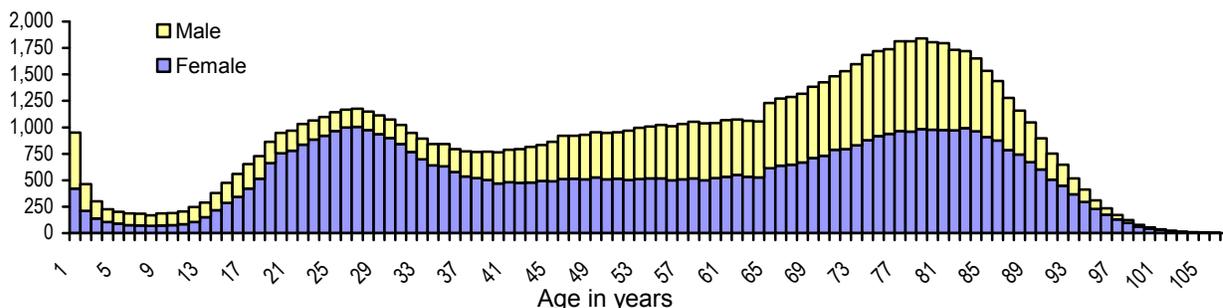
Eighty-one percent of hospitalizations were White race patients, 8% American Indian patients, and less than 1% for any of the other race groups, but 9% of patient's race were unknown or not reported (Table 1). The rate of American Indian patients is not representative of the full state, since Indian Health Service hospitals did not submit discharge data.

Table 1. Race of hospitalizations, South Dakota, 2000-2009

Race	Number	Percent
White	864,623	81%
American Indian	87,798	8%
African American / Black	6,745	<1%
Asian	3,589	<1%
Hispanic of any Race	798	<1%
Hawaiian/Pacific Islander	11	<1%
Multiracial	821	<1%
Declined	20	<1%
Unknown	99,278	9%
TOTAL	1,063,683	100%

The hospitalization numbers vary by life-stage of the patients (Figure 2 and Table 2). The first year of life has the most hospitalizations with 12% overall and an average of 12,836 per year (infants <1 year not shown in Figure 2). The first day of life (i.e., birth day) accounted 111,057 hospitalizations, which were 10% of all hospitalizations, and 86% of first-year hospitalizations. The elderly age group, 65 years and older, account for 40% of all hospitalizations, followed by middle age adults ages 40-64 years accounting for 22% of hospitalizations.

Figure 2. Average annual hospitalizations by age and sex, South Dakota, 2000-2009 (infants <1 yr not included)



Males were hospitalized at a higher rate than females from birth through age 12 years, thereafter female hospitalization was higher in all age groups, especially during the peak childbearing period, 18-38 years, when the female hospitalization rates were double to nearly six-times the male hospitalization rates. The female hospitalizations were also highly increased over males in the advanced elderly group, 90+ years, likely due to the fewer males remaining in the population. Between ages 12 - 18 years there is a rapid increase in hospitalization due to three causes: mental health disorders in both sexes; complications of pregnancy, childbirth and puerperium among females; and injuries among males. The peak at age 27 years is due to child-bearing. At age 65 years there is a 16.5% increase in hospitalization over the 64 year olds, supposedly due to Medicare accessibility. At age 79 years hospitalizations peaked at an average 1,841 per year. Subsequently, hospitalizations decrease for each age-year until age 107 years. The rarest hospitalizations were among 8-year old girls children with 68 average hospitalizations per year.

Table 2. Age and gender of hospitalizations, South Dakota, 2000-2009

Age group	Male		Female		Total	Percent
	Male	Percent	Female	Percent		
Infants, <12 months	67,133	52%	61,226	48%	128,359	12%
Pre-school, 1-4 years	10,661	55%	8,714	45%	19,375	2%
School-age, 5-14 years	12,267	55%	10,095	45%	22,362	2%
Youth, 15-24 years	19,861	24%	64,009	76%	83,870	8%
Adults, 25-39 years	29,801	21%	114,945	79%	144,746	14%
Mid-age, 40-64 years	112,111	47%	127,038	53%	239,149	22%
Elderly, ≥65 years	186,305	44%	239,451	56%	425,756	40%
TOTAL	438,139	41%	625,478	59%	1,063,617	100%

The overall leading cause of hospitalization was live birth, including cesarean and non-cesarean delivery, which included 10% of all hospitalizations (Table 3). The next leading causes of hospitalizations were pneumonia and coronary atherosclerosis.

Table 3. Top specific conditions of hospitalization, South Dakota, 2000-2009

Name (ICD-9 code)	Number	Percent
Single liveborn, without mention of cesarean delivery (V30.00)	79,192	7.5%
Pneumonia, organism unspecified (486)	38,820	3.7%
Single liveborn, cesarean delivery (V30.01)	26,474	2.5%
Coronary atherosclerosis of native coronary artery (414.01)	21,628	2.0%
Congestive heart failure (428.0)	20,062	1.9%
Osteoarthritis, localized, not specified whether primary or secondary, lower leg (715.36)	19,887	1.9%
Care involving rehabilitation procedures, other (V57.89)	12,715	1.2%
Obstructive chronic bronchitis with (acute) exacerbation (491.21)	11,352	1.1%
Previous cesarean delivery, delivered with or without mention of antepartum condition (654.21)	10,778	1.0%

The top 10 leading causes of hospitalizations stratified by age group and gender are shown in Table 4. Throughout the age groups females have an appreciably higher numbers of genitourinary system diseases than males. Males however have considerably higher numbers of hospitalizations related to injury and poisoning than females. In the middle adult group, 40-64 years of age, men had over double the hospitalizations due to diseases of the circulatory system, whereas women had over twice as many cancer hospitalizations than men.

Table 4. Top conditions of hospitalization by age and gender, South Dakota, 2000-2009

Infants <1 year of age	Female	Percent	Male	Percent	TOTAL
Supplementary classification of factors (V01-V89)*	53,319	49%	56,35	51%	109,675
Diseases of the respiratory system (460-519)	2,853	40%	4,285	60%	7,138
Certain conditions originating in perinatal period (760-779)	1,824	43%	2,416	57%	4,240
Symptoms, signs and ill-defined conditions (780-799)	646	45%	787	55%	1,433
Infectious and parasitic diseases (001-139)	603	45%	726	55%	1,329
Congenital anomalies (740-759)	360	32%	765	68%	1,125
Diseases of the digestive system (520-579)	450	42%	630	58%	1,080
Endocrine, nutritional and metabolic, immunity (240-279)	399	46%	477	54%	876
Injury and poisoning (800-999)	144	41%	211	59%	355
Diseases of the genitourinary system (580-629)	266	76%	86	24%	352
Pre-school children 1-4 years of age	Female	Percent	Male	Percent	TOTAL
Diseases of the respiratory system (460-519)	3,874	42%	5,278	58%	9,152
Endocrine, nutritional and metabolic, immunity (240-279)	1,019	50%	1,030	50%	2,049
Infectious and parasitic diseases (001-139)	749	46%	880	54%	1,629
Symptoms, signs and ill-defined conditions (780-799)	684	47%	780	53%	1,464
Injury and poisoning (800-999)	481	41%	684	59%	1,165
Diseases of the digestive system (520-579)	450	47%	509	53%	959
Diseases of the skin and subcutaneous tissue (680-709)	260	52%	242	48%	502
Congenital anomalies (740-759)	206	43%	271	57%	477
Diseases of nervous system & sense organs (320-389)	213	46%	254	54%	467
Diseases of the genitourinary system (580-629)	360	81%	85	19%	445

<u>School-age children 5-14 years of age</u>	<u>Female</u>	<u>Percent</u>	<u>Male</u>	<u>Percent</u>	<u>TOTAL</u>
Mental disorders (290-319)	3,361	44%	4,272	56%	7,633
Diseases of the respiratory system (460-519)	1,458	45%	1,811	55%	3,269
Injury and poisoning (800-999)	974	37%	1,661	63%	2,635
Diseases of the digestive system (520-579)	901	44%	1,158	56%	2,059
Endocrine, nutritional and metabolic, immunity (240-279)	649	51%	619	49%	1,268
Symptoms, signs and ill-defined conditions (780-799)	477	48%	515	52%	992
Infectious and parasitic diseases (001-139)	394	47%	450	53%	844
Diseases of the genitourinary system (580-629)	464	68%	218	32%	682
Diseases of nervous system & sense organs (320-389)	269	52%	246	48%	515
Diseases of the skin and subcutaneous tissue (680-709)	177	38%	283	62%	460
<u>Youth 15-24 years of age</u>	<u>Female</u>	<u>Percent</u>	<u>Male</u>	<u>Percent</u>	<u>TOTAL</u>
Complications of pregnancy, childbirth & puerperium (630-679)	42,589	100%	0	0%	42,589
Mental disorders (290-319)	8,498	55%	7,069	45%	15,567
Injury and poisoning (800-999)	2,716	35%	5,023	65%	7,739
Diseases of the digestive system (520-579)	2,166	54%	1,824	46%	3,990
Diseases of the respiratory system (460-519)	1,241	53%	1,097	47%	2,338
Diseases of genitourinary system (580-629)	1,664	84%	316	16%	1,980
Endocrine, nutritional and metabolic, immunity (240-279)	1,094	60%	717	40%	1,811
Symptoms, signs and ill-defined conditions (780-799)	1,000	61%	645	39%	1,645
Infectious and parasitic diseases (001-139)	611	53%	543	47%	1,154
Supplementary classification of factors (V01-V89)*	491	46%	585	54%	1,076
<u>Adults 25-39 years of age</u>	<u>Female</u>	<u>Percent</u>	<u>Male</u>	<u>Percent</u>	<u>TOTAL</u>
Complications of pregnancy, childbirth & puerperium (630-679)	74,351	100%	0	0%	74,351
Mental disorders (290-319)	8,525	55%	7,044	45%	15,569
Injury and poisoning (800-999)	3,920	41%	5,670	59%	9,590
Diseases of the digestive system (520-579)	4,723	56%	3,689	44%	8,412
Diseases of the genitourinary system (580-629)	6,618	88%	940	12%	7,558
Diseases of musculoskeletal system & connective tissue	2,137	48%	2,282	52%	4,419
Symptoms, signs and ill-defined conditions (780-799)	2,314	56%	1,807	44%	4,121
Endocrine, nutritional and metabolic, immunity (240-279)	2,812	70%	1,219	30%	4,031
Diseases of the respiratory system (460-519)	2,082	56%	1,614	44%	3,696
Diseases of the circulatory system (390-459)	1,416	44%	1,788	56%	3,204
<u>Mid-age 40-64 years of age</u>	<u>Female</u>	<u>Percent</u>	<u>Male</u>	<u>Percent</u>	<u>TOTAL</u>
Diseases of the circulatory system (390-459)	13,561	34%	25,81	66%	39,378
Diseases of the digestive system (520-579)	13,774	52%	12,47	48%	26,244
Diseases of musculoskeletal system & connective tissue	13,984	55%	11,56	45%	25,545
Injury and poisoning (800-999)	10,238	46%	12,08	54%	22,324
Neoplasms (140-239)	12,753	67%	6,249	33%	19,002
Mental disorders (290-319)	10,108	54%	8,727	46%	18,835
Diseases of the respiratory system (460-519)	10,218	55%	8,427	45%	18,645
Diseases of the genitourinary system (580-629)	13,853	77%	4,094	23%	17,947
Symptoms, signs and ill-defined conditions (780-799)	8,404	52%	7,841	48%	16,245
Endocrine, nutritional and metabolic, immunity (240-279)	6,034	60%	3,966	40%	10,000
<u>Elderly ≥65 years of age</u>	<u>Female</u>	<u>Percent</u>	<u>Male</u>	<u>Percent</u>	<u>TOTAL</u>
Diseases of the circulatory system (390-459)	54,161	51%	53,08	49%	107,246
Diseases of the respiratory system (460-519)	29,211	51%	28,24	49%	57,458
Diseases of musculoskeletal system & connective tissue	26,505	63%	15,35	37%	41,864
Diseases of the digestive system (520-579)	24,265	59%	17,17	41%	41,443
Injury and poisoning (800-999)	25,062	64%	14,10	36%	39,164
Symptoms, signs and ill-defined conditions (780-799)	14,448	59%	9,845	41%	24,293
Neoplasms (140-239)	12,674	53%	11,07	47%	23,752
Supplementary classification of factors (V01-V89)*	13,482	60%	9,016	40%	22,498
Diseases of the genitourinary system (580-629)	11,350	55%	9,247	45%	20,597
Endocrine, nutritional and metabolic, immunity (240-279)	8,158	63%	4,770	37%	12,928

*Supplementary classifications of factors influencing health status and contact with health service.

Table 5. Hospital discharge disease groups by region, gender, race and age group, South Dakota 2000-2009

Disease group	Total	Regions				Gender		Race			Age group						
		NE	NW	SE	SW	Male	Female	White	Amer Indian	Other	0 yr	1-4 yr	5-14 yr	15-24 yr	25-39 yr	40-64 yr	≥65 yr
Circulatory system	151,047	38,956	9,202	56,136	19,997	81,351	69,691	134,691	7,044	785	164	124	173	753	3,204	39,380	107,249
Musculoskeletal system & connective tissue	73,420	15,519	4,797	26,610	9,522	30,063	43,352	53,810	2,237	331	31	155	459	942	4,420	25,546	41,867
Injury and poisoning	82,975	16,541	5,578	30,927	13,526	39,437	43,535	66,903	8,079	737	355	1,165	2,635	7,739	9,590	22,324	39,167
Endocrine, nutritional, metabolic, & immunity disorders	32,963	7,219	2,090	14,825	4,388	12,798	20,165	27,337	2,807	353	876	2,049	1,268	1,811	4,031	10,000	12,928
Infectious & parasitic diseases	21,538	5,254	1,218	9,163	3,405	10,066	11,472	17,153	2,161	292	1,329	1,629	844	1,154	1,809	5,111	9,662
Neoplasms	46,291	10,995	2,763	17,772	5,960	18,210	28,080	41,136	1,603	305	37	124	193	528	2,654	19,003	23,752
Digestive system	84,188	19,921	5,652	35,959	12,146	37,458	46,729	70,545	6,609	693	1,081	959	2,059	3,990	8,412	26,244	41,443
Mental disorders	65,191	10,096	4,041	27,986	14,590	30,075	35,109	49,829	9,975	1,153	4	129	7,634	15,569	15,570	18,838	7,447
Blood & blood-forming organs	6,653	1,552	555	2,729	986	2,765	3,888	5,532	546	121	66	325	376	304	406	1,592	3,584
Genitourinary system	49,562	11,398	3,371	19,695	7,328	14,986	34,575	41,286	2,704	359	352	445	682	1,980	7,558	17,948	20,597
Nervous system & sense organs	13,635	2,761	723	6,017	2,026	5,941	7,694	11,610	1,079	157	303	467	515	591	1,512	3,662	6,585
Respiratory system	101,699	25,405	6,794	45,083	15,331	50,759	50,937	82,577	9,744	952	7,138	9,152	3,270	2,338	3,697	18,645	57,459
Congenital anomalies	3,145	570	184	1,174	549	1,759	1,386	2,441	390	49	1,125	477	307	188	188	502	358
Pregnancy, childbirth & the puerperium	119,285	24,775	11,100	52,021	20,998	N/A	119,285	90,058	12,943	2,536	2	0	86	42,589	74,351	2,257	0
Skin and subcutaneous tissue	15,464	3,266	961	6,908	2,750	7,535	7,929	12,029	2,123	110	149	502	460	671	1,695	5,111	6,876
Certain conditions originating in the perinatal period	4,289	894	343	1,116	713	2,438	1,849	2,798	704	91	4,242	41	0	4	1	0	1
Symptoms, signs, & ill-defined conditions	50,195	11,536	3,622	21,582	7,882	22,220	27,973	41,965	4,143	485	1,433	1,464	992	1,646	4,121	16,245	24,294
Factors influencing health status & contact with health services	142,143	31,081	11,757	62,087	23,567	70,278	71,829	112,923	12,907	2,455	109,709	168	411	1,076	1,531	6,749	22,499
TOTAL*	1,063,683	237,739	74,751	437,790	165,664	438,139	625,478	864,623	87,798	11,964	128,396	19,375	22,364	83,873	144,750	239,157	425,768

*Subtotals may not add up to total due to missing or unknown gender or race values, or out-of-state region residence.

The overall rate of hospitalization for South Dakota residents was 0.11 hospitalizations per person per year. Generally, the county's number of hospitalizations (Table 6 and map below) is in direct relation to the size of the population, with Minnehaha and Pennington counties having the most hospitalizations. There is variation in hospitalization rates with Gregory and Buffalo counties having the highest rates (0.23 hospitalizations per person per year) and Perkins County having a nearly 10-times lower hospitalization rate. The counties with the highest hospitalization rates are in the central swath of the state. The counties with the lowest hospitalization rates (Perkins, Campbell, Corson and Union) are all counties without hospitals and bordering other states. Some of the county numbers maybe lower than expected because their local hospital did not submit discharge data to SDAHO for all 10 years, or an IHS facility may be the main hospital in their area.

Table 6. Hospitalization numbers and rates* by county, South Dakota 2000-2009.

County	Discharges	Population	Rate*	County	Discharges	Population	Rate*
Aurora	3,820	2,710	0.14	Jackson	3,265	3,031	0.11
Beadle	12,657	17,398	0.07	Jerauld	2,915	2,071	0.14
Bennett	4,788	3,431	0.14	Jones	1,113	1,006	0.11
BonHomme	10,284	7,070	0.15	Kingsbury	7,579	5,148	0.15
Brookings	26,291	31,965	0.08	Lake	12,706	11,200	0.11
Brown	45,903	36,531	0.13	Lawrence	21,191	24,097	0.09
Brule	7,393	5,255	0.14	Lincoln	31,871	44,828	0.07
Buffalo	4,362	1,912	0.23	Lyman	5,472	3,755	0.15
Butte	9,351	10,110	0.09	Marshall	6,454	4,656	0.14
Campbell	722	1,466	0.05	McCook	7,318	5,618	0.13
Charles Mix	18,613	9,129	0.20	McPherson	3,392	2,459	0.14
Clark	4,746	3,691	0.13	Meade	25,405	25,434	0.10
Clay	12,236	13,864	0.09	Mellette	2,162	2,048	0.11
Codington	30,340	27,227	0.11	Miner	3,635	2,389	0.15
Corson	2,029	4,050	0.05	Minnehaha	205,764	169,468	0.12
Custer	7,639	8,216	0.09	Moody	8,877	6,486	0.14
Davison	28,334	19,504	0.15	Pennington	104,557	100,948	0.10
Day	7,090	5,710	0.12	Perkins	731	2,982	0.02
Deuel	6,075	4,364	0.14	Potter	4,228	2,329	0.18
Dewey	7,554	5,301	0.14	Roberts	9,816	10,149	0.10
Douglas	5,597	3,002	0.19	Sanborn	3,443	2,355	0.15
Edmunds	5,560	4,071	0.14	Shannon	11,774	13,586	0.09
Fall River	8,119	7,094	0.11	Spink	11,454	6,415	0.18
Faulk	4,458	2,364	0.19	Stanley	3,107	2,966	0.10
Grant	8,498	7,356	0.12	Sully	1,344	1,373	0.10
Gregory	9,778	4,271	0.23	Todd	8,574	9,612	0.09
Haakon	2,961	1,937	0.15	Tripp	8,950	5,644	0.16
Hamlin	6,939	5,903	0.12	Turner	11,932	8,347	0.14
Hand	5,339	3,431	0.16	Union	7,406	14,399	0.05
Hanson	3,053	3,331	0.09	Walworth	7,430	5,438	0.14
Harding	758	1,255	0.06	Yankton	25,915	22,438	0.12
Hughes	19,328	17,022	0.11	Ziebach	1,664	2,801	0.06
Hutchinson	12,538	7,343	0.17				
Hyde	2,096	1,420	0.15				
				South Dakota	916,715	814,180	0.11

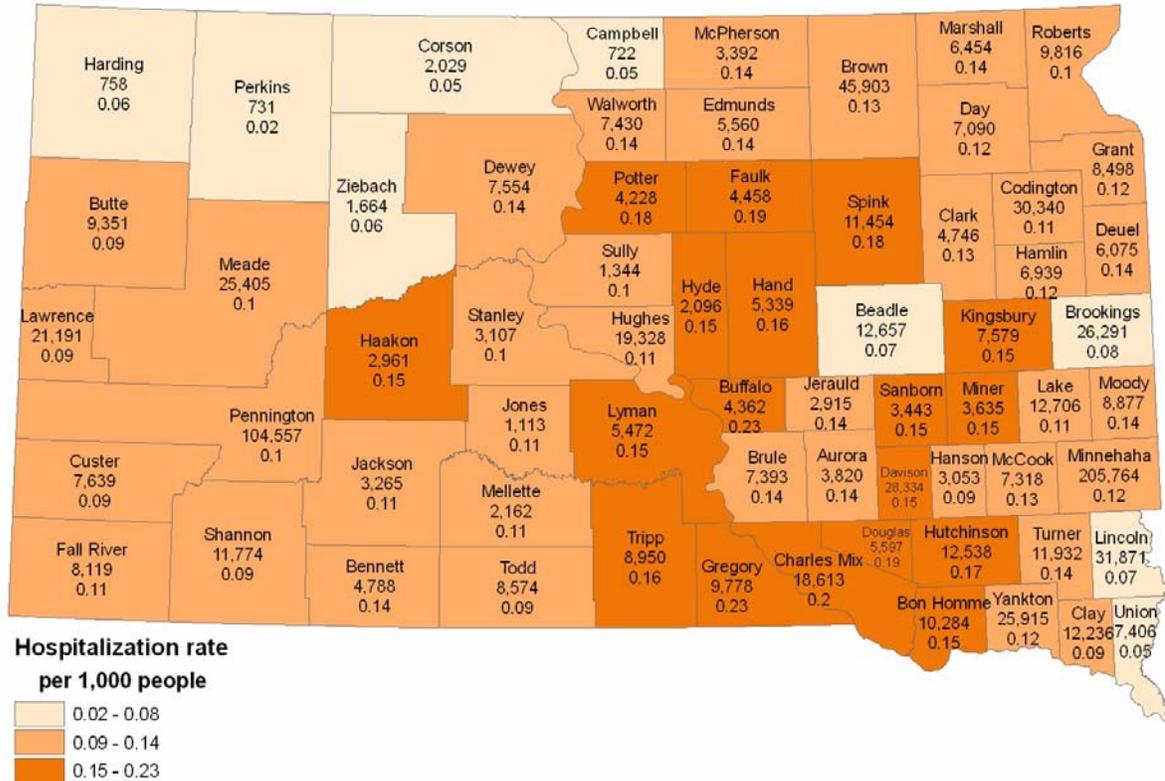
*Rate: hospital discharges per person per year calculated using 2010 census counts.

Table 7. Average length of stay in days of patient hospital discharges, South Dakota, 2000-2009

Disease - Condition	Mean (SD)	N
All conditions	4.4 (7.1)	1,063,683
Infectious and parasitic diseases	5.9 (7.5)	21,538
Septicemia	8.9 (11.1)	793
Neoplasms	5.5 (7.5)	46,291
Malignant neoplasms	6.2 (8.2)	35,491
Benign neoplasms	3.0 (2.9)	9,612
Endocrine, nutritional and metabolic, immunity	3.8 (5.6)	32,963
Diabetes mellitus	5.0 (28.2)	431
Volume depletion	3.1 (2.7)	4,085
Diseases of the blood and blood-forming organs	4.4 (5.1)	6,653
Anemias	4.2 (5.3)	3,849
Mental disorders	5.1 (9.6)	65,191
Psychoses	5.6 (7.0)	32,989
Schizophrenic disorders	6.0 (5.7)	5,430
Diseases of the nervous system and sense organs	6.2 (19.4)	13,635
Diseases of the circulatory system	4.3 (6.0)	151,047
Essential hypertension	3.7 (6.5)	1,880
Heart disease	4.9 (6.3)	18,348
Acute myocardial infarction	4.7 (5.1)	21,004
Coronary atherosclerosis	3.5 (4.4)	24,414
Other ischemic heart disease	4.9 (5.1)	24
Cardiac dysrhythmias	3.3 (3.5)	19,544
Congestive heart failure	4.9 (7.7)	20,062
Cerebrovascular disease	4.8 (7.3)	24,620
Diseases of the respiratory system	5.0 (5.9)	101,699
Acute bronchitis and bronchiolitis	3.3 (2.8)	6,384
Pneumonia	4.7 (4.4)	50,686
Chronic bronchitis	4.7 (4.1)	12,851
Asthma	3.4 (3.0)	6,334
Diseases of the digestive system	4.6 (6.2)	84,188
Appendicitis	3.8 (4.9)	85,456
Intestinal obstruction	5.8 (5.9)	10,028
Diverticula of intestine	5.2 (4.5)	7,385
Cholelithiasis	3.7 (3.6)	8,474
Acute pancreatitis	6.1 (9.6)	4,765
Diseases of the genitourinary system	3.3 (4.2)	49,562
Calculus of kidney and ureter	2.0 (2.4)	4,899
Urinary tract infection	4.2 (4.5)	7,805
Complications of pregnancy, childbirth & puerperium	2.5 (2.7)	119,285
Diseases of the skin and subcutaneous tissue	5.9 (8.5)	15,464
Cellulitis and abscess	4.9 (4.8)	11,906
Diseases of the musculoskeletal system & connective tissue	3.7 (3.9)	73,420
Osteoarthritis and allied disorders	3.6 (2.5)	32,553
Intervertebral disc disorder	2.6 (2.9)	13,405
Congenital anomalies	5.1 (11.4)	3,145
Certain conditions originating in the perinatal period	10.6 (19.5)	4,289
Symptoms, signs and ill-defined conditions	3.1 (5.1)	50,195
Injury and poisoning	5.0 (6.5)	82,975
Fractures, all sites	4.8 (6.9)	25,010
Fracture of neck of femur	5.8 (4.0)	12,421
Poisonings	2.2 (3.0)	5,365
Certain complications of surgical and medical care	5.6 (6.9)	22,294
Factors influencing health status & contact with health services	5.0 (9.9)	142,143
Females with deliveries	3.2 (8.1)	105,666

SD: standard deviation of length of stay in days.

Map 2: Hospitalization numbers and rates by county, South Dakota 2000-2009.



The average length of stay for all conditions was 4.4 days (standard deviation 7.1 days). The longest average stay was 10.6 days for certain conditions originating in the perinatal period, followed by septicemia (8.9 days) and malignant neoplasms (6.2 days). The shortest average stay was 3.2 days for calculus of kidney and ureter.

On the following pages are summary pages for the 18 major diagnostic categories.

Reference:

National Hospital Discharge Survey: 2007 summary. MJ Hall, CJ DeFrances, SN Williams, A Golosinskiy, A Schwartzman. National health statistics reports; Number 29. Hyattsville, MD: National Center for Health Statistics. 2010. www.cdc.gov/nchs/data/nhsr/nhsr029.pdf

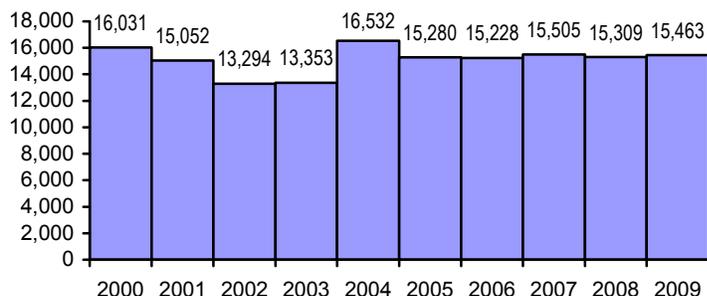
Acknowledgements:

Thanks to those who contributed to this summary report: Nato Tarkhashvili, Lon Kightlinger, Everett Putnam, South Dakota Department of Health (SD-DOH); Gilbert Johnson South Dakota Association of Healthcare Organizations (SDAHO). Particular thanks to those who made the diagnoses and the many people who assigned and entered the ICD-9 codes.

Diseases of the Circulatory System (ICD-9 390-459)

Diseases of the circulatory system are the leading causes of death nationwide and in South Dakota. During 2000–2009 there were 151,047 hospitalizations due to diseases of the circulatory system in South Dakota (average 15,105 per year).

Diseases of the Circulatory System, SD, 2000-2009



The northeast region had the highest rate of hospitalization (higher than the state rate of 1,541). Male were affected more than females (54% vs. 46%). Disease frequency was increased with advanced age (71% of hospitalizations in population aged ≥ 65 years). Out-of-state residents accounted for 18% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	38,956	3,960	1,982
Northwest residents	9,202	896	1,146
Southeast residents	56,136	5,722	1,521
Southwest residents	20,095	1,978	1,249
South Dakota total	124,393	12,516	1,541
Out-of-state residents	26,654	2,790	

Gender and Race	Number of discharges	Percent
Male	81,351	53.9%
Female	69,691	46.1%
White	134,691	89.2%
American Indian	7,044	4.7%
Other race	785	0.5%
Unknown race	8,527	5.7%

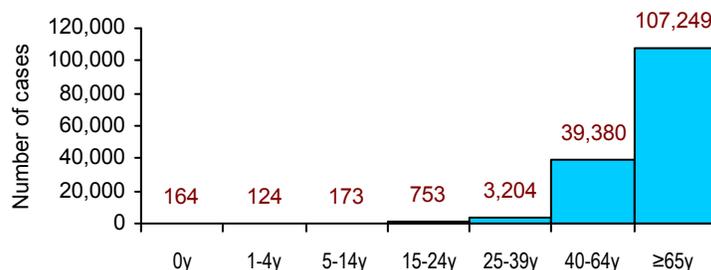
Coronary atherosclerosis of native coronary artery was the most frequent cause of hospitalization for diseases of the circulatory system, followed by congestive heart failure.

Leading diseases of the circulatory system

ICD-9 code: Name, Number (Percent)

- 414.01: Coronary atherosclerosis of native coronary artery, 21,628 (14%)
 - 428.0: Congestive heart failure, 20,062 (13%)
 - 427.31: Atrial fibrillation, 10,453 (7%)
 - 410.71: Acute subendocardial infarction, initial episode of care, 9,763 (6%)
 - 434.91: Cerebral artery occlusion, unspecified, with cerebral infarction, 6,999 (5%)
 - 433.10: Occlusion and stenosis of carotid artery without mention of cerebral infarction, 4,127 (3%)
 - 415.19: Pulmonary embolism and infarction, other, 3,909 (3%)
 - 435.9: Unspecified transient cerebral ischemia, 3,762 (2%)
 - 410.41: Acute myocardial infarction of other inferior wall, initial episode of care, 3,467 (2%)
 - 427.89: Other specified cardiac dysrhythmias, other, 2,922 (2%)
 - 410.11: Acute myocardial infarction of other anterior wall, initial episode of care, 2,586 (2%)
 - 410.91: Acute myocardial infarction, unspecified site, initial episode of care, 2,449 (2%)
 - 436: Acute, but ill-defined, cerebrovascular disease, 2,422 (2%)
 - 427.81: Sinoatrial node dysfunction, 2,278 (2%)
 - 453.8: Other venous embolism and thrombosis of other specified veins, 2,151 (1%)
 - 440.21: Atherosclerosis of the extremities with intermittent claudication, 1,907 (1%)
 - 441.4: Abdominal aneurism without mention of rupture, 1,808 (1%)
 - 411.1: Other acute and subacute forms of ischemic heart disease, intermediate coronary syndrome, 1,783 (1%)
 - 414.00: Coronary atherosclerosis of unspecified type of vessel, native or graft, 1,671 (1%)
 - 431: Intracerebral hemorrhage, 1,537 (1%)
- All others <1%

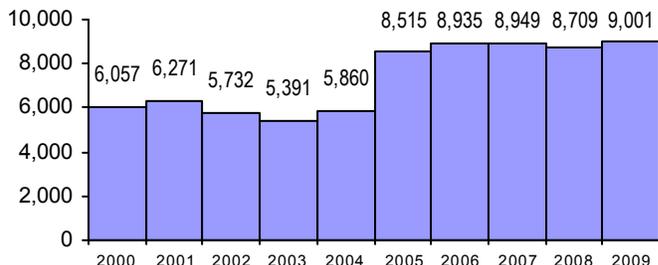
Diseases of the circulatory system by age



Diseases of the Musculoskeletal System and Connective Tissue (ICD-9 710–739)

During 2000–2009 there were 73,420 hospitalizations due to diseases of the musculoskeletal system and connective tissue in the state (average 7,342 per year).

Diseases of Musculoskeletal System and Connective Tissue, SD, 2000-2009



The northeast region had the highest rate of hospitalization (higher than the state rate of 707). Out-of-state residents accounted for 23% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	15,519	1,514	758
Northwest residents	4,797	494	631
Southeast residents	26,610	2,660	707
Southwest residents	9,560	986	622
South Dakota total	56,487	5,741	707
Out-of-state residents	16,933	1,607	

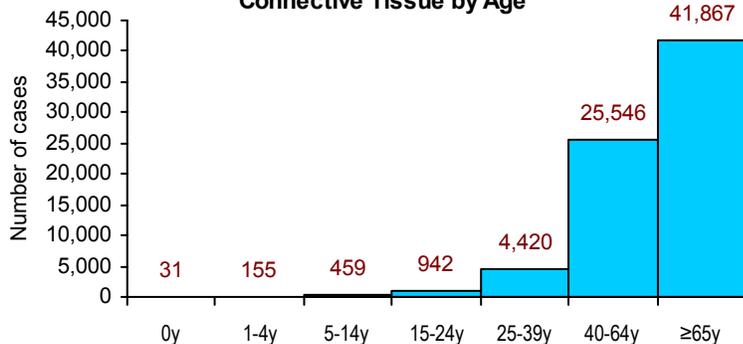
Gender and Race	Number of discharges	Percent
Male	30,063	41%
Female	43,352	59%
White	53,810	73.3%
American Indian	2,237	3.1%
Other race	331	0.5%
Unknown race	17,042	23.2%

Leading diseases of the musculoskeletal system and connective tissue

ICD-9 code: Name, Number (Percent)

- 715.36: Osteoarthritis, localized, not specified whether primary or secondary, lower leg, 19,887 (27%)
 - 715.35: Osteoarthritis, localized, not specified whether primary or secondary, pelvic region or thigh, 8,857 (12%)
 - 722.10: Lumbar intervertebral disc without myelopathy, 5,794 (8%)
 - 724.02: Spinal stenosis, other than cervical, lumbar region, 3,842 (5%)
 - 722.52: Degeneration of lumbar or lumbosacral intervertebral disc, 3,596 (5%)
 - 733.13: Pathologic fracture of vertebrae, 2,462 (3%)
 - 722.0: Displacement of cervical intervertebral disc without myelopathy, 1,162 (3%)
 - 724.2: Lumbago, 1,693 (2%)
 - 721.3: Lumbosacral spondylosis without myelopathy, 1,217 (2%)
 - 715.31: Osteoarthritis, localized, not specified whether primary or secondary, shoulder region, 1,025 (1%)
 - 738.4: Acquired spondylolisthesis, 1,023 (1%)
 - 724.5: Backache, unspecified, 929 (1%)
- All others <1%

Diseases of the Musculoskeletal System and Connective Tissue by Age

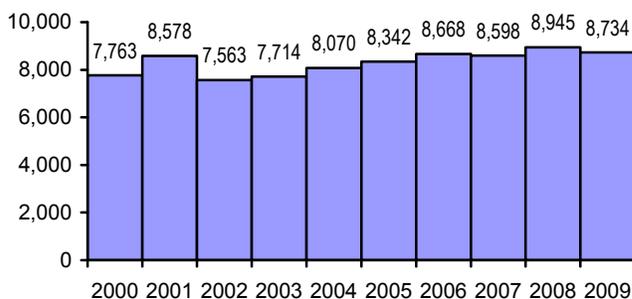


Disease frequency increased with advanced age with 57% of patients (41,867 hospitalizations) among the individuals aged ≥65 years). Women were more affected than men (59% vs. 41%). Osteoarthritis was the most common cause of hospitalizations for diseases of the musculoskeletal system and connective tissue.

Injury and Poisoning (ICD-9 800–999)

During 2000–2009 there were 82,975 hospitalizations due to injury and poisoning in the state (average 8,298 per year). The southwest region had the highest rate of injury and poisoning (higher than the state rate of 830).

Injury and Poisoning, SD, 2000-2009



Out-of-state residents accounted for 20% of all hospitalizations. The female population was affected more than males.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	16,541	1657	829
Northwest residents	5,578	548	700
Southeast residents	30,927	3190	848
Southwest residents	13,579	1,362	860
South Dakota total	66,628	6,746	830
Out-of-state residents	16,347	1,663	N/A

Gender and Race	Number of discharges	Percent
Male	39,437	47.5%
Female	43,535	52.5%
White	66,903	80.6%
American Indian	8,079	9.7%
Other race	737	1%
Unknown race	7,256	9%

Leading Injury and poisoning

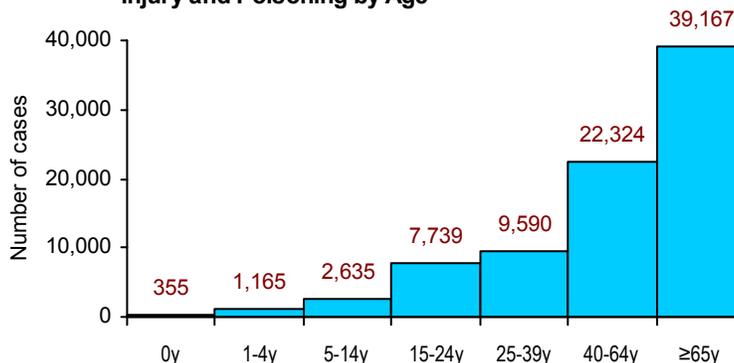
ICD-9 code, Name, Number, (Percent)

- 820.21 Pterochanteric fracture, closed, intertrochanteric section, 5,142 (6%)
 - 998.59 Other postoperative infection, 3,815 (5%)
 - 820.8 Fracture of unspecified part of neck of femur, closed, 3,693 (4%)
 - 820.09 Fracture of neck of femur, other, 2,297 (3%)
 - 996.4 Mechanical complication of internal orthopedic device, implant and graft, 1,876 (2%)
 - 805.4 Fracture of vertebral column without mention of spinal cord injury, lumbar, closed, 1,645 (2%)
 - 997.4 Digestive system complications, 1,439 (2%)
 - 808.2 Fracture of pubis, closed, 1,400 (2%)
 - 805.2 Fracture of vertebral column without mention of spinal cord injury, dorsal [thoracic], closed, 1,229 (1%)
 - 824.4 Fracture of ankle, bimalleolar, closed, 1,168 (1%)
 - 996.62 Infection and inflammatory reaction due to other vascular device, implant and graft, 1,124 (1%)
 - 824.8 Fracture of ankle, unspecified, closed, 1,025 (1%)
 - 821.01 Shaft of unspecified part, closed, shaft, 974 (1%)
 - 840.4 Sprains and strains of shoulder and upper arm, rotar cuff (capsule), 963 (1%)
 - 998.11 Hemorrhage complicating a procedure, 874 (1%)
- All others <1%

Pterochanteric fracture was the most common cause of hospitalization for injury followed by fracture of femur. Disease frequency was increased with advanced age with 39,167 hospitalizations (47%) in persons aged 65 years and older).

The most common poisonings were due to aromatic analgesics, antidepressants and benzodiazepine-based tranquilizers.

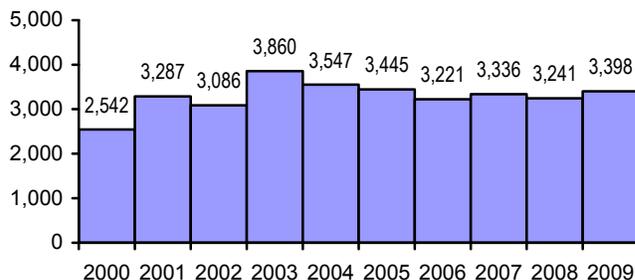
Injury and Poisoning by Age



Diseases of the Endocrine, Nutritional, Metabolic & Immunity Disorders (ICD-9 240–279)

Endocrine diseases, in particular diabetes mellitus, are among of the most commonly reported chronic conditions nationwide. During 2000–2009 there were 32,963 hospitalizations due to diseases of the endocrine, nutritional, metabolic, and immunity disorders in the state (average 3,296 per year).

Diseases of the Endocrine, Nutritional, Metabolic, and Immunity Disorders, SD, 2000-2009

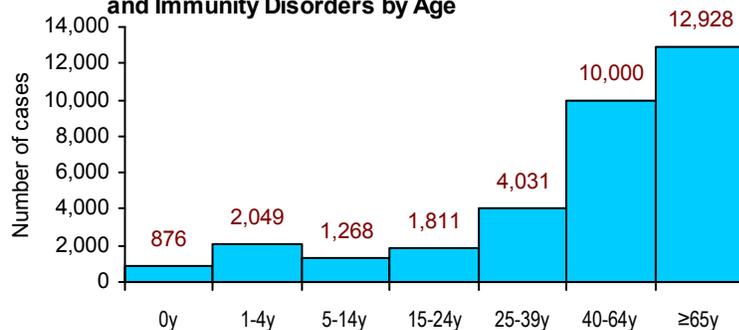


The Southeast region had the highest rate of hospitalization (higher than the state rate of 353). Out-of-state residents accounted for 13% of all hospitalizations. Hospitalization of females was considerably higher than males.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	7,219	738	369
Northwest residents	2,090	203	260
Southeast residents	14,825	1,452	386
Southwest residents	4,411	433	273
South Dakota total	28,545	2,868	353
Out-of-state residents	4,418	453	
Gender and Race	Number of discharges	Percent	
Male	12,798	38.8%	
Female	20,165	61.2%	
White	27,337	82.9%	
American Indian	2,807	8.5%	
Other race	353	1.1%	
Unknown race	2,466	7.5%	

Volume depletion was the most common cause of hospitalization in this category followed by morbid obesity. Thirty-nine percent of hospitalizations were among the elderly 65 years and older.

Diseases of the Endocrine, Nutritional, Metabolic, and Immunity Disorders by Age



Leading Diseases of the endocrine, nutritional, metabolic, immune systems

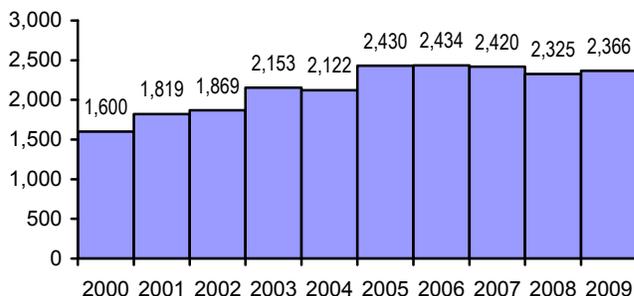
ICD-9 code, Name, Number, (Percent)

- 276.5 Volume depletion, 6,077 (18%)
 - 278.01 Morbid obesity, 4,875 (15%)
 - 276.51 Dehydration, 3,985 (12%)
 - 276.1 Hyposmolality and/or hyponatremia, 1,978 (6%)
 - 250.80 Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled, 1,715 (5%)
 - 250.13 Diabetes with ketoacidosis, type I, uncontrolled, 1,129 (3%)
 - 250.02 Diabetes mellitus without mention of complication, Type II, or unspecified type, uncontrolled, 831 (3%)
 - 250.70 Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled, 804 (2%)
 - 250.11 Diabetes with ketoacidosis, type I, not stated as uncontrolled, 762 (2%)
 - 276.8 Hypopotassemia, 577 (2%)
 - 250.60 Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled, 547 (2%)
 - 250.40 Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled, 535 (2%)
 - 276.7 Hyperpotassemia, 526 (2%)
 - 250.01 Diabetes mellitus without mention of complication, type I, not stated as uncontrolled, 487 (1%)
 - 250.00 Diabetes mellitus without mention of complication, Type II, or unspecified type, not stated as uncontrolled, 431 (1%)
 - 250.82 Diabetes with other specified manifestations, type II or unspecified type, uncontrolled, 405 (1%)
 - 250.12 Diabetes with ketoacidosis, type II, or unspecified type, uncontrolled, 336 (1%)
- All others <1%

Infectious and Parasitic Diseases (ICD-9 001–139)

During the past several decades the incidence of infectious and parasitic diseases has been reduced dramatically in the US. During 2000–2009 there were 21,538 hospitalizations due to infectious and parasitic diseases in the state (average 2,154 per year).

Infectious and parasitic diseases, SD, 2000-2009



The secular trend suggests an increase of hospitalizations due to infectious and parasitic diseases. Since 2000 incidence increased 1.5-times. The northeast region had the highest hospitalization rate. Out-of-state residents accounted for 12% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	5,254	532	267
Northwest residents	1,218	117	150
Southeast residents	9,163	926	246
Southwest residents	3,420	360	227
South Dakota total	19,055	1,975	243
Out-of-state residents	2,483	270	

Gender and Race	Number of discharges	Percent
Male	10,066	46.7%
Female	11,472	53.3%
White	17,153	79.6%
American Indian	2,161	10%
Other race	292	1.4%
Unknown race	1,932	9%

Leading Infectious and parasitic diseases

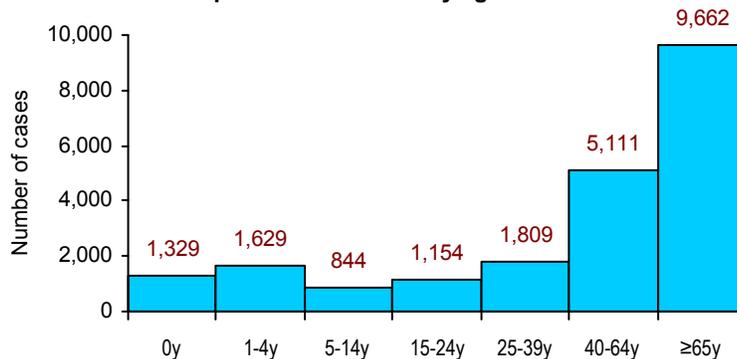
ICD-9 code, Name, Number, (Percent)

- 038.9 Unspecified septicemia, 3,582 (17%)
 - 008.8 Enteritis due to specified virus, other organism, not elsewhere classified, 1,892 (9%)
 - 008.45 Intestinal infections due to *Clostridium difficile*, 1,784 (8%)
 - 038.42 Septicemia due to *Escherichia coli* (*E. coli*), 1,363 (6%)
 - 079.99 Unspecified viral infection, 1,157 (5%)
 - 008.61 Rotavirus, 909 (4%)
 - 038.11 *Staphylococcus aureus* septicemia, 852 (4%)
 - 047.9 Unspecified viral meningitis, 818 (4%)
 - 038.0 Streptococcal septicemia, 793 (4%)
 - 038.49 Septicemia due to other gram-negative organisms, other, 442 (2%)
 - 038.2 Pneumococcal septicemia (*Streptococcus pneumoniae* septicemia), 395 (2%)
 - 075 Infectious mononucleosis, 392 (2%)
 - 079.6 Respiratory syncytial virus, 365 (2%)
 - 034.0 Streptococcal sore throat, 363 (2%)
 - 053.9 Herpes zoster without mention of complication, 296 (1%)
 - 038.19 Other staphylococcal septicemia, 264 (1%)
 - 042 HIV disease, 228 (1%)
 - 090 Congenital syphilis, 218 (1%)
- All others <1%

Unspecified septicemia was the most frequent cause of hospitalizations for infectious and parasitic diseases followed by viral enteritis. The elderly were most commonly affected with 45% of all hospitalizations due to infectious diseases.

The leading 27 causes of hospitalizations were all viral or bacterial infections. The leading fungal infection was aspergillosis (n=122) and giardiasis (n=69) was the leading parasitic disease causing hospitalization. Interestingly, there were 218 congenital syphilis patients, and although this is a mandatorily reportable disease, none had been reported to the Department of Health.

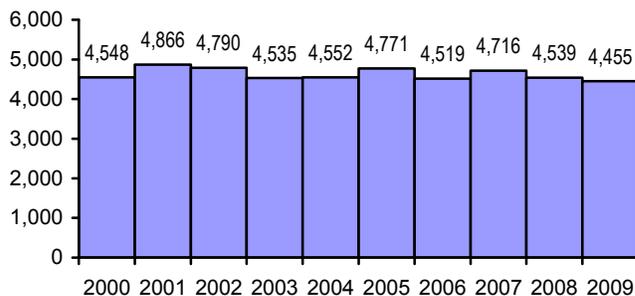
Infectious and parasitic diseases by age



Neoplasms (ICD-9 140-239)

Cancer is the second leading cause of death nationwide and in South Dakota. During 2005–2009 cancer accounted for 22% of all deaths in South Dakota and ranked second in the list of the most common causes of death in the state. During 2000–2009 there were 46,291 hospitalizations due to neoplasms in the state (average 4,629 per year).

Neoplasms, SD, 2000-2009



The northeast region had the highest hospitalization rate. Out-of-the-state residents accounted for 19% of all hospitalizations. Females were more affected than males (61% vs. 39%).

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	10,995	1,111	556
Northwest residents	2,763	273	349
Southeast residents	17,772	1,799	478
Southwest residents	5,999	596	376
South Dakota total	37,530	3,760	463
Out-of-state residents	8,761	870	

Gender and Race	Number of discharges	Percent
Male	18,210	39.3%
Female	28,080	60.7%
White	41,136	88.9%
American Indian	1,603	3.5%
Other race	305	1%
Unknown race	3,247	7%

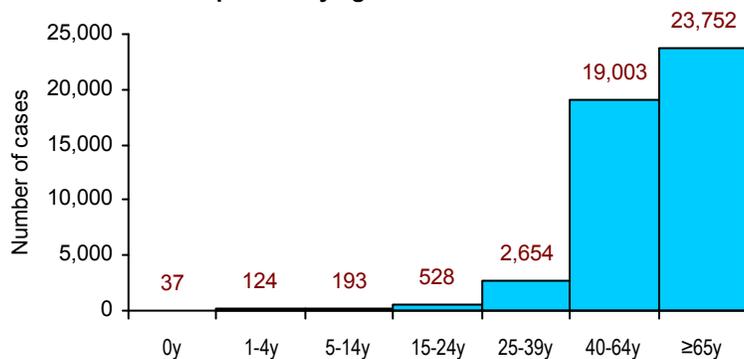
Leiomyoma of uterus was the most common cause of hospitalization for neoplasms followed by malignant neoplasms of prostate.

Leading Neoplasms

ICD-9 code, Name, Number, (Percent)

- 218.9 Leiomyoma of uterus, 3,375, (7%)
 - 185 Malignant neoplasms of prostate, 3,169 (7%)
 - 174.9 Malignant neoplasms of breast (female) unspecified, 1,797 (4%)
 - 162.9 Malignant neoplasms of bronchus and lung, unspecified, 1,757 (4%)
 - 182.0 Malignant neoplasms of corpus uteri, except isthmus, 1,398 (3%)
 - 189.0 Malignant neoplasms of kidney, except pelvis, 1,167 (3%)
 - 198.3 Secondary malignant neoplasms of brain and spinal cord, 1,019 (2%)
 - 198.5 Secondary malignant neoplasms of bone and bone marrow, 1,018 (2%)
 - 218.1 Intramural leiomyoma of uterus, 1,004 (2%)
 - 220 Benign neoplasms of ovary, 991 (2%)
 - 211.3 Benign neoplasms of colon, 975 (2%)
 - 162.3 Malignant neoplasms of upper lobe, bronchus or lung, 954 (2%)
 - 154.1 Malignant neoplasms of rectum, 843 (2%)
 - 183.0 Malignant neoplasms of ovary, 773 (2%)
 - 153.6 Benign neoplasms of ascending colon, 742 (2%)
 - 153.3 Benign neoplasms of sigmoid colon, 709 (2%)
 - 197.7 Secondary malignant neoplasms of liver, specified as secondary, 666 (1%)
 - 153.4 Malignant neoplasms of cecum, 636 (1%)
 - 197.2 Secondary malignant neoplasms of pleura, 617 (1%)
 - 193 Malignant neoplasms of thyroid gland, 614 (1%)
 - 174.4 Malignant neoplasms of breast (female) upper outer quadrant, 562 (1%)
 - 203.00 Multiple myeloma, without mention of remission, 555 (1%)
 - 162.5 Malignant neoplasms of lower lobe, bronchus or lung, 538 (1%)
 - 153.9 Benign neoplasms of colon, unspecified, 519 (1%)
 - 174.8 Malignant neoplasms of other specified sites of female breast, 519 (1%)
 - 205.00 Myeloid leukemia, acute, without mention of remission, 513 (1%)
 - 154.0 Malignant neoplasm of rectosigmoid junction, 485 (1%)
 - 188.9 Malignant neoplasm of bladder, part unspecified, 468 (1%)
- All others <1%

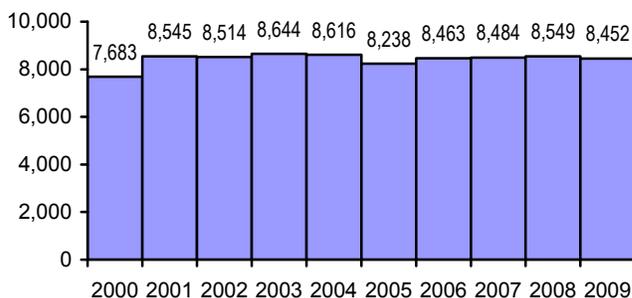
Neoplasms by age



Diseases of the Digestive System (ICD-9 520–579)

During 2000–2009 there were 84,188 hospitalizations due to diseases of the digestive system (average 8,419 per year). Secular trend was stable.

Diseases of the Digestive System, SD, 2000-2009



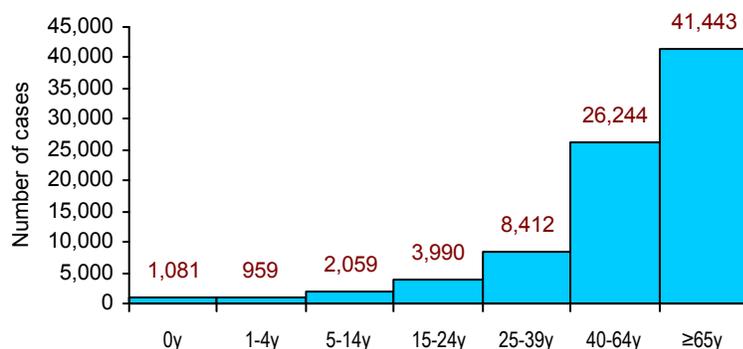
The northeast region had the highest rate of hospitalization (higher than the state rate of 909). Females were affected more than males (56% vs. 44%). Out-of-state residents accounted for 12% of hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	19,921	1,985	994
Northwest residents	5,652	558	713
Southeast residents	35,959	3,648	970
Southwest residents	12,209	1,220	770
South Dakota total	73,742	7,381	909
Out-of-state residents	10,446	1056	

Gender and Race	Number of discharges	Percent
Male	37,458	44.5%
Female	46,729	55.5%
White	70,545	83.8%
American Indian	6,609	7.9%
Other race	693	0.8%
Unknown race	6,341	7.5%

Unspecified noninfectious gastroenteritis and colitis were the most common causes of hospitalization for diseases of the digestive system followed by diverticulitis of colon.

Diseases of the Digestive System by age



Disease of the digestive system

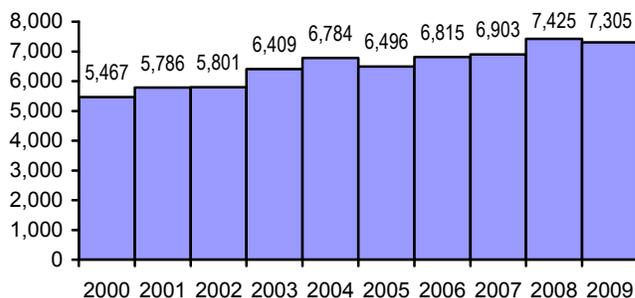
ICD-9 code, Name, Number, (Percent)

- 558.9 Other and unspecified noninfectious gastroenteritis and colitis, 5,574, (7%)
 - 562.11 Diverticulitis of colon (without mention of hemorrhage), 5,307 (6%)
 - 577.0 Acute pancreatitis, 4,765 (6%)
 - 560.9 Unspecified intestinal obstruction, 4,462 (5%)
 - 578.9 Hemorrhage of gastrointestinal tract, unspecified, 4,389 (5%)
 - 540.9 Acute appendicitis without mention of peritonitis, 3,601 (4%)
 - 574.00 Calculus of gallbladder with acute cholecystitis without mention of obstruction, 2,799 (3%)
 - 574.10 Calculus of gallbladder with other cholecystitis without mention of obstruction, 2,688 (3%)
 - 530.81 Esophageal reflux, 2,205 (3%)
 - 560.1 Paralytic ileus, 2,188 (3%)
 - 560.81 Intestinal or peritoneal adhesions with obstruction (postoperative), (postinfection), 2,144 (3%)
 - 531.40 Gastric ulcer, chronic or unspecified with hemorrhage without mention of obstruction, 1,597 (2%)
 - 553.21 Ventral hernia, incisional, 1,577 (2%)
 - 540.0 Acute appendicitis with generalized peritonitis, 1,501 (2%)
 - 562.12 Diverticulosis of colon with hemorrhage, 1,120 (1%)
 - 578.1 Blood in stool, 1,045 (1%)
 - 540.1 Acute appendicitis with peritoneal abscess, 1,006 (1%)
 - 532.40 Duodenal ulcer, chronic or unspecified with hemorrhage without mention of obstruction, 987 (1%)
- All others, <1%

Mental Disorders (ICD-9 290–319)

During 2000–2009 there were 65,191 hospitalizations due to mental disorders in the state (average 6,519 per year). The secular trend indicates an increase.

Mental disorders, SD, 2000–2009

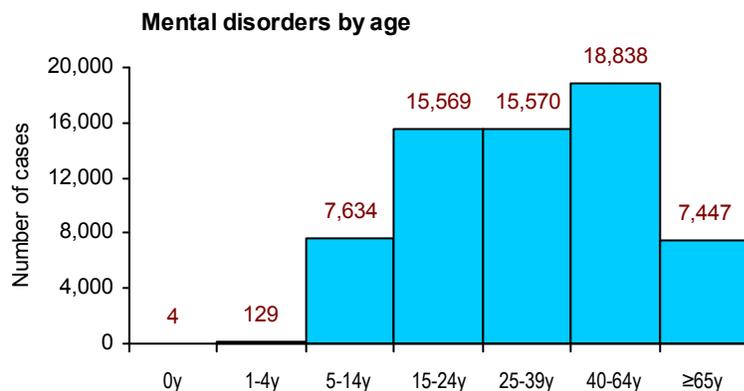


The southwest region had the highest hospitalization rate (higher than the state rate of 704). Females were affected more than males (54% vs. 46%). Out-of-state residents accounted for 13% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	10,096	1,012	506
Northwest residents	4,041	412	527
Southeast residents	27,986	2,802	745
Southwest residents	14,633	1,537	971
South Dakota total	56,761	5,722	704
Out-of-state residents	8,430	871	

Gender and Race	Number of discharges	Percent
Male	30,075	46.1%
Female	35,109	53.9%
White	49,829	76.4%
American Indian	9,975	15.3%
Other race	1,153	1.8%
Unknown race	4,234	6.5%

Depressive disorders are the most common causes of hospitalizations for mental disorders. Young to middle-aged adults had the highest burden of mental disorders.



Mental disorders

ICD-9 code, Name, Number, (Percent)

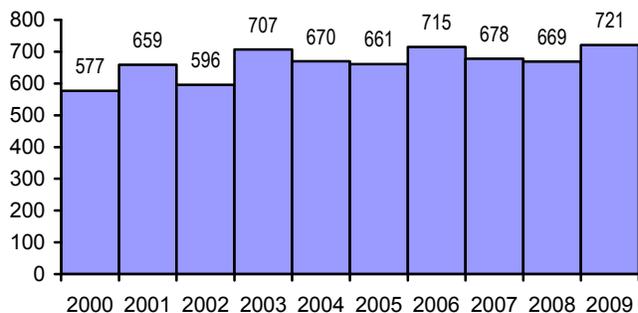
1. 311 Depressive disorder, not elsewhere classified, 576 (0.9%)
2. 296.30 Major depressive disorder, recurrent episode, unspecified, 4,693 (7.2%)
3. 296.33 Major depressive disorder, recurrent episode, severe, without mention of psychotic behavior, 3,799 (5.8%)
4. 296.20 Major depressive disorder, single episode, unspecified, 2,841 (4.3%)
5. 295.70 Schizoaffective disorder, unspecified, 2,668 (4.1%)
6. 309.0 Adjustment disorder with depressed mood, 2,618 (4.0%)
7. 314.01 Attention deficit disorder with hyperactivity, 1,920 (2.9%)
8. 298.9 Unspecified psychosis, 1,819 (2.8%)
9. 296.89 Other and unspecified bipolar disorders, other, 1,583 (2.4%)
10. 300.4 Dysthymic disorder, 1,515 (2.3%)
11. 294.8 Other persistent mental disorders due to conditions classified elsewhere, 1,319 (2.0%)
12. 291.81 Alcohol withdrawal, 1,215 (1.9%)
13. 296.7 Bipolar I disorder, most recent episode (or current), unspecified, 1,184 (1.8%)
14. 296.90 Unspecified episodic mood disorder, 1,183 (1.8%)
15. 296.23 Major depressive disorder, single episode, severe, without mention of psychotic behavior, 1,182 (1.8%)
16. 296.32 Major depressive disorder, recurrent episode, moderate, 1,153 (1.8%)
17. 309.28 Adjustment disorder with mixed anxiety and depressed mood, 1,141 (1.8%)
18. 296.80 Bipolar disorder, unspecified, 1,072 (1.6%)
19. 309.4 Adjustment disorder with mixed disturbance of emotions and conduct, 1,071 (1.6%)
20. 296.50 Bipolar I disorder, most recent episode (or current), depressed, unspecified, 1,027 (1.6%)
21. 309.81 Posttraumatic stress disorder, 993 (1.5%)
22. 295.32 Schizophrenic disorders, paranoid type, chronic, 984 (1.5%)
23. 296.34 Major depressive disorder, recurrent episode, severe, specified as with psychotic behavior, 964 (1.5%)
24. 303.00 Acute alcoholic intoxication, unspecified, 814 (1.2%)
25. 295.30 Schizophrenic disorders, paranoid type, unspecified, 804 (1.2%)
26. 303.01 Acute alcoholic intoxication, continuous, 775 (1.2%)
27. 296.40 Bipolar I disorder, most recent episode (or current) manic, unspecified, 655 (1.0%)

All others <1%

Diseases of the Blood and Blood-forming Organs (ICD-9 280–289)

During 2000–2009 there were 6,653 hospitalizations due to diseases of the blood and blood-forming organs in the state (average 665 per year).

Diseases of the blood and blood-forming organs, SD, 2000-2009



The northeast region had the highest rate of hospitalization per year (higher than the state rate of 73). Females were more affected than males (58% vs. 42%). Out-of-state residents accounted for 12% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	1,552	157	79
Northwest residents	555	51	65
Southeast residents	2,729	281	75
Southwest residents	995	96	60
South Dakota total	5,831	596	73
Out-of-state residents	822	82	

Gender and Race	Number of discharges	Percent
Male	2,765	41.6%
Female	3,888	58.4%
White	5,532	83.2%
American Indian	546	8.2%
Other race	121	1.8%
Unknown race	454	6.8%

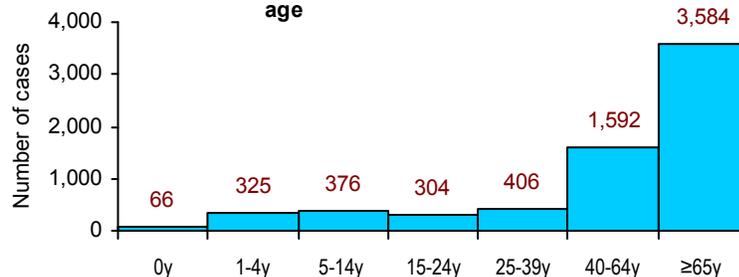
Unspecified anemia was the most frequent cause of hospitalization for diseases of the blood and blood-forming organs followed by agranulocytosis and iron deficiency anemia. People aged 65 years and older were most likely to be hospitalized.

Diseases of the blood and blood-forming organs

ICD-9 code, Name, Number, (Percent)

1. 285.9 Anemia, unspecified, 985 (15%)
 2. 288.0 Agranulocytosis, 790 (12%)
 3. 280.9 Iron deficiency anemia, unspecified, 649 (10%)
 4. 280.0 Iron deficiency anemia, secondary to blood loss (chronic) 503 (8%)
 5. 284.8 Other specified aplastic anemias, 401 (6%)
 6. 285.1 Acute posthemorrhagic anemia, 377 (6%)
 7. 288.00 Neutropenia, unspecified, 370 (6%)
 8. 287.3 Primary thrombocytopenia, 270 (4%)
 9. 287.31 Immune thrombocytopenic purpura, 208 (3%)
 10. 287.5 Thrombocytopenia, unspecified, 147 (2%)
 11. 288.8 Other specified disease of white blood cells, 142 (2%)
 12. 289.2 Nonspecific mesenteric lymphadenitis, 118 (2%)
 13. 283.0 Autoimmune hemolytic anemias, 86 (2%)
 14. 284.1 Pancytopenia, 116 (2%)
 15. 288.03 Drug induced neutropenia, 95 (1%)
 16. 289.59 Other diseases of spleen, 90 (1%)
 17. 285.29 Anemia of other chronic illness, 88 (1%)
 18. 285.22 Anemia in neoplastic disease, 78 (1%)
 19. 287.4 Secondary thrombocytopenia, 78 (1%)
 20. 288.60 Leukocytosis, unspecified, 78 (1%)
 21. 285.21 Anemia in end-stage renal disease, 75 (1%)
 22. 283.11 Hemolytic-uremic syndrome, 69 (1%)
 23. 287.0 Allergic purpura, 68 (1%)
- All others, <1%

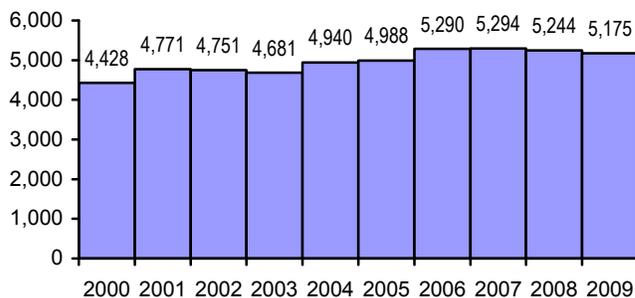
Diseases of the blood and blood-forming organs by age



Diseases of the Genitourinary System (ICD-9 580–629)

There were 49,562 hospitalizations due to diseases of the genitourinary system in the state during 2000–2009 (average 4,956 per year). Annual trend shows an increasing number of hospitalizations.

Diseases of the Genitourinary System, SD, 2000-2009



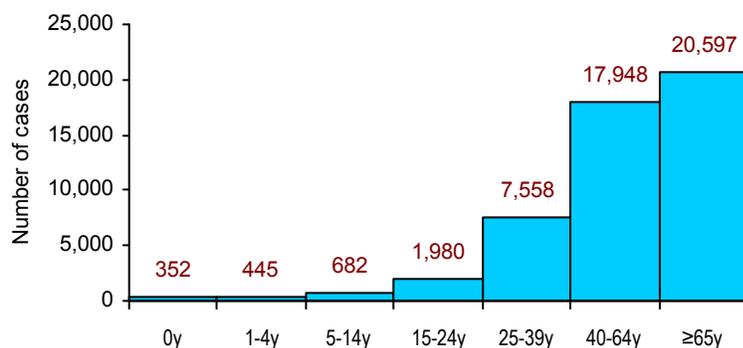
The northeast region had the highest rate of hospitalizations (higher than the state rate of 520). Females were hospitalized considerably more often than males (70% vs. 30%). Out-of-state residents accounted for 16% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	11,398	1,145	573
Northwest residents	3,371	348	445
Southeast residents	19,695	1,970	524
Southwest residents	7,364	732	462
South Dakota total	41,830	4,222	520
Out-of-state residents	7,732	758	

Gender and Race	Number of discharges	Percent
Male	14,986	30.2%
Female	34,575	69.8%
White	41,286	83.3%
American Indian	2,704	5.5%
Other race	359	0.7%
Unknown race	5,213	10.5%

Urinary tract infection was the most common cause of hospitalization for diseases of the genitourinary system followed by acute renal failure and excessive menstruation.

Diseases of the genitourinary system by age



Diseases of the genitourinary system

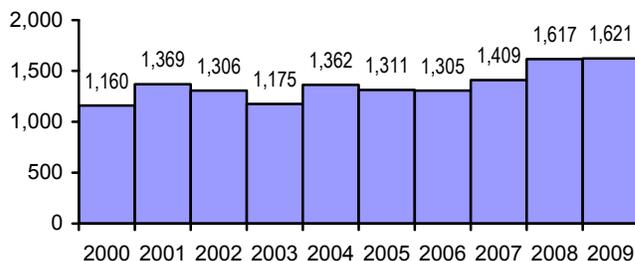
ICD-9 code, Name, Number, (Percent)

- 599.0 Urinary tract infection, site not specified, 7,805, (16%)
- 584.9 Acute renal failure, 4,803 (10%)
- 626.2 Excessive or frequent menstruation, 3,715 (8%)
- 592.1 Calculus of ureter, 3,456 (7%)
- 590.80 Pyelonephritis, unspecified, 1,774 (4%)
- 618.4 Uterovaginal prolapse, unspecified, 1,524 (3%)
- 590.10 Acute pyelonephritis without lesion of renal medullary necrosis, 1,506 (3%)
- 617.0 Endometriosis of uterus, 1,487 (3%)
- 592.0 Calculus of kidney, 1,408 (3%)
- 600.01 Hypertrophy (benign) of prostate with urinary obstruction and other lower urinary tract symptoms, 1,099 (2%)
- 618.5 Prolapse of vaginal vault after hysterectomy, 966 (2%)
- 620.2 Other and unspecified ovarian cyst, 809 (2%)
- 625.3 Dysmenorrhea, 784 (2%)
- 626.8 Disorders of menstruation and other abnormal bleeding from female genital tract, other, 763 (2%)
- 600.0 Hypertrophy (benign) of prostate, 722 (1%)
- 618.2 Uterovaginal prolapse, incomplete, 719 (1%)
- 625.9 Unspecified symptom associated with female genital organs, 709 (1%)
- 625.6 Stress incontinence, female, 701 (1%)
- 618.0 Prolapse of vaginal walls without mention of uterine prolapse, 603 (1%)
- 618.3 Uterovaginal prolapse, complete, 582 (1%)
- All others, <1%

Diseases of the Nervous System and Sense Organs (ICD-9 320–389)

Alzheimer's disease is one of the leading causes of death nationwide. During 2005–2009 Alzheimer's accounted for 5% of all deaths in South Dakota and ranked sixth in the list of the most common causes of death in the state. During 2000–2009 there were 13,635 hospitalizations due to diseases of the nervous system and sense organs in the state (average 1,364 per year).

Diseases of the nervous system and sense organs, SD, 2000–2009



Southeast region had the highest rate of hospitalization (higher than the state rate of 140). Out-of-state residents accounted for 15% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	2,761	280	140
Northwest residents	723	68	88
Southeast residents	6,017	610	162
Southwest residents	2,033	202	128
South Dakota total	11,534	1,141	140
Out-of-state residents	2,101	200	

Gender and Race	Number of discharges	Percent
Male	5,941	43.6%
Female	7,694	56.4%
White	11,610	85.2%
American Indian	1,079	7.9%
Other race	157	1.2%
Unknown race	789	5.8%

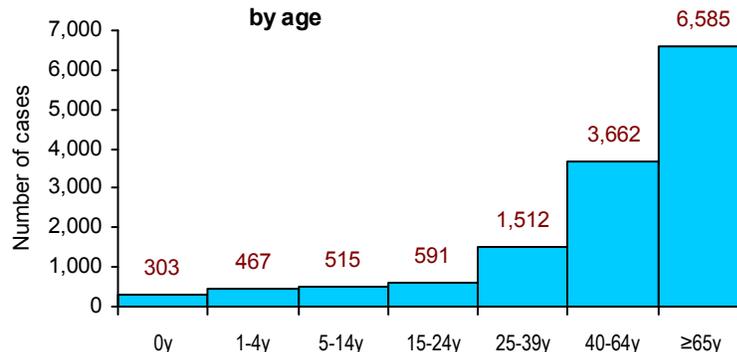
Females were hospitalized at a higher rate and the elderly were most commonly affected. Alzheimer's disease was the most common cause of hospitalization for diseases of the nervous system and sense organs followed by labyrinthitis and migraines.

Diseases of the nervous system and sense organs

ICD-9 code, Name, Number, (Percent)

- 331.0 Alzheimer's disease, 1,925, (14%)
 - 386.30 Labyrinthitis, unspecified, 670 (5%)
 - 346.90 Migraine, unspecified without mention of intractable migraine, 521 (4%)
 - 345.90 Epilepsy, unspecified, without mention of intractable epilepsy, 439 (3%)
 - 332.0 Parkinson's disease, paralysis agitans, 431 (3%)
 - 345.3 Epilepsy, grand mal status, 407 (3%)
 - 340 Multiple sclerosis, 405 (3%)
 - 386.11 Benign paroxysmal positional vertigo, 248 (2%)
 - 331.3 Communicating hydrocephalus, 222 (2%)
 - 357.0 Acute infective polyneuritis, 216 (2%)
 - 346.91 Migraine, unspecified with intractable migraine, so stated, 207 (2%)
 - 350.1 Trigeminal neuralgia, 203 (1%)
 - 382.9 Unspecified otitis media, 199 (1%)
 - 331.4 Obstructive hydrocephalus, 195 (2%)
 - 331.82 Dementia with Lewy bodies, 195 (1%)
 - 338.3 Neoplasm related pain, 188 (1%)
 - 338.18 Other acute postoperative pain, 173, (1%)
 - 353.0 Brachial plexus lesions, 171 (1%)
 - 348.30 Encephalopathy, unspecified, 169 (1%)
 - 386.12 Vestibular neuronitis, 156 (1%)
 - 376.01 Orbital cellulites, 147 (1%)
 - 345.10 Generalized convulsive intractable epilepsy, 146 (1%)
 - 348.4 Compression of brain, 142 (1%)
- All others, <1%

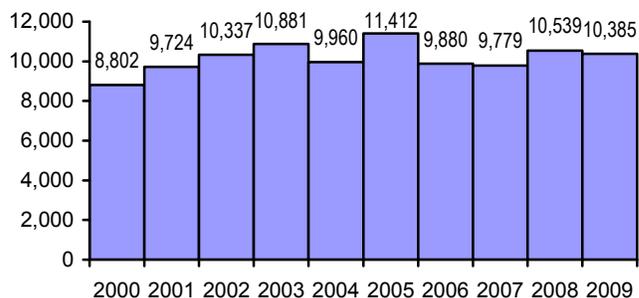
Diseases of the nervous system and sense organs by age



Diseases of the Respiratory System (ICD-9 460–519)

During 2000–2009 there were 101,699 hospitalizations due to diseases of the respiratory system in the state (average 10,170 per year).

Diseases of the respiratory system, SD, 2000-2009



Annual trend remained unchanged. The northeast region had the highest rate of hospitalization due to respiratory illness (higher than the state rate of 1,137). Female and male populations were affected equally. Out-of-state residents accounted for 9% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	25,405	2,502	1,253
Northwest residents	6,794	658	842
Southeast residents	45,083	4,480	1,191
Southwest residents	15,398	1,530	966
South Dakota total	92,681	9,238	1,137
Out-of-state residents	9,018	912	

Gender and Race	Number of discharges	Percent
Male	50,759	49.9%
Female	50,937	50.1%
White	82,577	81.20
American Indian	9,744	9.6%
Other race	952	0.9%
Unknown race	8,426	8.3%

Pneumonia with unspecified organism was the most frequent cause of hospitalization for diseases of the respiratory system followed by obstructive chronic bronchitis with (acute) exacerbation.

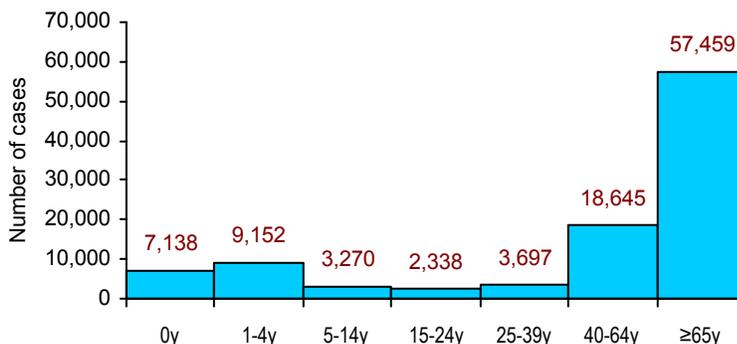
Diseases of the respiratory system

ICD-9 code, Name, Number, (Percent)

- 486 Pneumonia, organism unspecified, 38,820 (38%)
- 491.21 Obstructive chronic bronchitis with (acute) exacerbation, 11,352 (11%)
- 518.81 Acute respiratory failure, 4,131 (4%)
- 507.0 Pneumonitis due to inhalation of food or vomitus, 3,665 (4%)
- 466.11 Acute bronchiolitis due to respiratory syncytial virus, 2,965 (3%)
- 493.92 Asthma, unspecified with (acute) exacerbation, 2,806 (3%)
- 481 Pneumococcal pneumonia [*Streptococcus pneumoniae* pneumonia], 2,274 (2%)
- 480.1 Pneumonia due to respiratory syncytial virus, 2,168 (2%)
- 466.0 Acute bronchitis, 2,038 (2%)
- 487.1 Influenza with other respiratory manifestations, 1,820 (2%)
- 487.0 Influenza with pneumonia, 1,680 (2%)
- 493.22 Chronic obstructive asthma with (acute) exacerbation, 1,536 (2%)
- 466.19 Acute bronchiolitis due to other infectious organisms, 1,381 (1%)
- 511.9 Unspecified pleural effusion, 1,351 (1%)
- 490 Bronchitis not specified as acute or chronic, 1,269 (1%)
- 496 Chronic airway obstruction, not elsewhere classified, 1,256 (1%)
- 482.41 Pneumonia due to *Staphylococcus aureus*, 1,067 (1%)
- 491.22 Obstructive chronic bronchitis, unspecified 1,031 (1%)

All others <1%

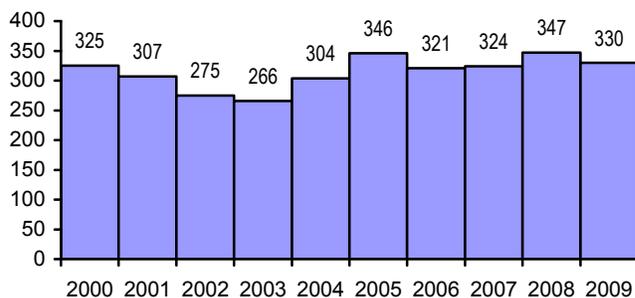
Diseases of the respiratory system by age



Congenital Anomalies (ICD-9 740–759)

During 2000–2009 there were 3,145 hospitalizations due to congenital anomalies in the state (average 314 per year).

Diseases of the Congenital Anomalies, SD, 2000-2009



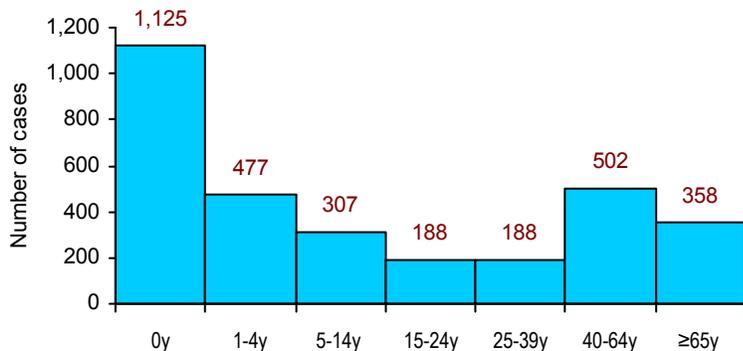
The southwest region had the highest hospitalization rate (higher than the state rate of 30). Males were more affected than female (56% vs. 44%). Out-of-state residents accounted for 21% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	570	58	29
Northwest residents	184	16	20
Southeast residents	1,174	114	30
Southwest residents	553	57	36
South Dakota total	2,481	248	30
Out-of-state residents	664	68	

Gender and Race	Number of discharges	Percent
Male	1,759	55.9%
Female	1,386	44.1%
White	2,441	77.6%
American Indian	390	12.4%
Other race	49	1.6%
Unknown race	265	8.4%

As expected, infants (children aged <1 year old) were the most affected age group in this category. Congenital hypertrophic pyloric stenosis was the most common cause of hospitalization for congenital anomalies followed by ostium secundum type atrial defect.

Congenital anomalies by age



Congenital anomalies

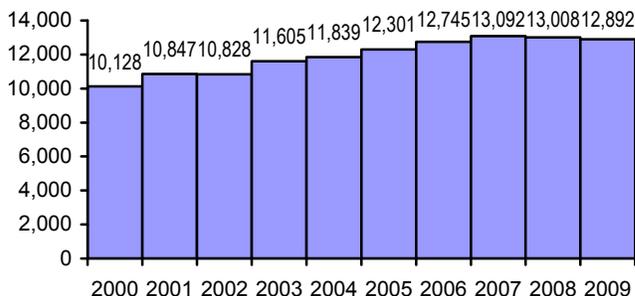
ICD-9 code, Name, Number, (Percent)

1. 750.5 Congenital hypertrophic pyloric stenosis, 304 (10%)
 2. 745.5 Ostium secundum type atrial defect, 267 (8%)
 3. 756.12 Spondylolisthesis, 245 (8%)
 4. 749.00 Cleft palate unspecified, 87 (3%)
 5. 756.0 Anomalies of skull and face bones, 80 (3%)
 6. 749.24 Cleft palate with cleft lip, bilateral, incomplete, 77 (2%)
 7. 751.0 Meckel's diverticulum, 75 (2%)
 8. 755.63 Other congenital deformity of hip (joint), 63 (2%)
 9. 753.21 Congenital obstruction of ureteropelvic junction, 62 (2%)
 10. 749.04 Cleft palate, bilateral, incomplete, 55 (2%)
 11. 749.22 Cleft palate with cleft lip, unilateral, incomplete, 55 (2%)
 12. 747.10 Coarctation of aorta (preductal) (postductal), 54 (2%)
 13. 745.5 Ostium secundum type atrial septal defect, 51 (2%)
 14. 748.3 Other anomalies of larynx, trachea, and bronchus, 50 (2%)
 15. 746.4 Congenital insufficiency of aortic valve, 48 (2%)
 16. 749.20 Cleft palate with cleft lip, unspecified, 48 (2%)
 17. 745.2 Tetralogy of Fallot, 44 (1%)
 18. 746.85 Coronary artery anomaly, 44 (1%)
 19. 751.4 Anomalies of intestinal fixation, 43 (1%)
 20. 749.12 Cleft lip, unilateral, incomplete, 41 (1%)
 21. 749.21 Cleft palate with cleft lip, unilateral, complete, 39 (1%)
 22. 750.29 Other specified anomalies of pharynx, 36 (1%)
 23. 742.3 Congenital hydrocephalus, 35 (1%)
 24. 747.61 Gastrointestinal vessel anomaly, 33 (1%)
- All others, <1%

Complications of Pregnancy, Childbirth and the Puerperium (ICD-9 630–679)

During 2000–2009 there were 119,285 hospitalizations due to complications of pregnancy, childbirth and the puerperium in the state (average 11,928 per year).

Complications of pregnancy, childbirth and the puerperium, SD, 2000-2009



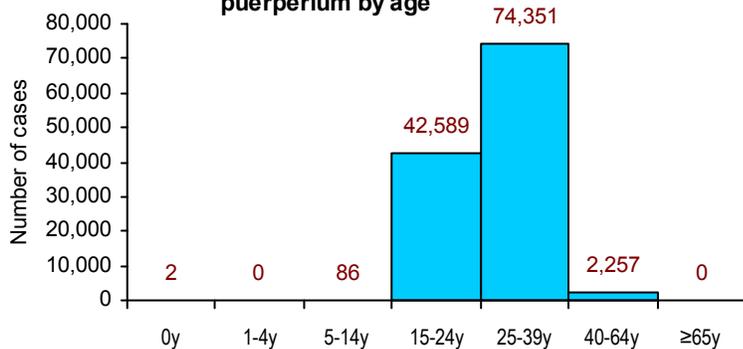
Annual trend shows an increase of hospitalizations. The northwest region had the highest hospitalization rate. Out-of-state residents accounted for 9% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	24,775	2,413	1,208
Northwest residents	11,100	1,128	1,442
Southeast residents	52,021	5,314	1,413
Southwest residents	21,073	2,106	1,330
South Dakota total	108,971	10,996	1,354
Out-of-state residents	10,314	1,070	

Gender and Race	Number of discharges	Percent
Male	N/A	N/A
Female	119,285	100%
White	90,058	75.5%
American Indian	12,943	10.8%
Other race	2,536	2.1%
Unknown race	13,748	11.5%

Previous cesarean delivery was the most common cause of complications of pregnancy, childbirth and the puerperium followed by second degree perineal laceration.

Complications of pregnancy, childbirth and the puerperium by age



Complications of pregnancy, childbirth and the puerperium

ICD-9 code, Name, Number, (Percent)

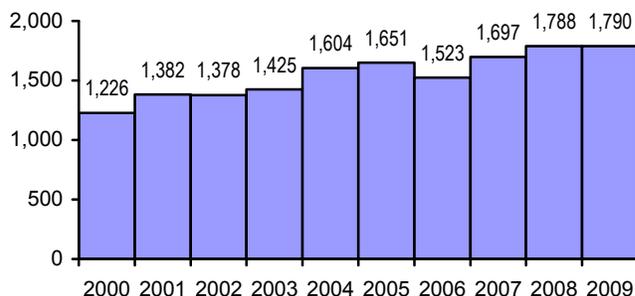
- 654.21 Previous cesarean delivery, delivered with or without mention of antepartum condition, 10,778 (9%)
- 664.11 Second degree perineal laceration, delivered with or without mention of antepartum condition, 9,914 (8%)
- 650 Normal delivery, 8,157 (7%)
- 664.01 First degree perineal laceration, unspecified as to episode of care or not applicable, 7,207 (6%)
- 659.71 Abnormality in fetal heart rate or rhythm, delivered with or without mention of antepartum condition, 6,664 (6%)
- 663.31 Other and unspecified cord entanglement, without mention of compression, delivered with or without mention of antepartum condition, 5,174 (4%)
- 645.11 Post term pregnancy, delivered with or without mention of antepartum condition, 4,498 (4%)
- 644.21 Early onset of delivery, delivered with or without mention of antepartum condition, 4,176 (4%)
- 648.91 Other current conditions classifiable elsewhere, delivered with or without mention of antepartum condition, 4,050 (3%)
- 644.03 Threatened premature labor, antepartum condition or complication, 2,563 (2%)
- 642.31 Transient hypertension of pregnancy, delivered with or without mention of antepartum condition, 2,330 (2%)
- 652.21 Breech presentation without mention of version, delivered with or without mention of antepartum condition, 2,076 (2%)
- 642.41 Mild or unspecified pre-eclampsia, delivered with or without mention of antepartum condition, 1,850 (2%)
- 661.21 Other and unspecified uterine inertia, delivered with or without mention of antepartum condition, 1,785 (2%)
- 648.81 Abnormal glucose tolerance, delivered with or without mention of antepartum condition, 1,691 (1%)
- 658.11 Premature rupture of membranes, delivered with or without mention of antepartum condition, 1,639 (1%)
- 658.01 Oligohydramnios, delivered with or without mention of antepartum condition, 1,542 (1%)
- 664.21 Third-degree perineal laceration, delivered with or without mention of antepartum condition, 1,522 (1%)
- 663.11 Cord around neck, with compression, delivered with or without mention of antepartum condition, 1,448 (1%)
- 665.51 Other injury of pelvic organs, delivered with or without mention of antepartum condition, 1,414 (1%)
- 661.31 Precipitate labor, delivered with or without mention of antepartum condition, 1,405 (1%)
- 661.01 Primary uterine inertia, delivered with or without mention of antepartum condition, 1,381 (1%)
- 648.93 Other current conditions classifiable elsewhere, antepartum condition or complication, 1,261 (1%)
- 656.61 Excessive fetal growth, delivered with or without mention of antepartum condition, 1,242 (1%)

All others <1%

Diseases of the Skin and Subcutaneous Tissue (ICD-9 680–709)

During 2000–2009 there were 15,464 hospitalizations due to diseases of the skin and subcutaneous tissue in the state (average 1,546 per year).

Diseases of the skin and subcutaneous tissue, SD, 2000–2009



Annual trend shows an increase of hospitalizations. The southeast region had the highest hospitalization rate (higher than the state rate of 172). Females and males were affected almost equally. The elderly were most often affected. Out-of-state residents accounted for 10% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	3,266	354	177
Northwest residents	961	97	124
Southeast residents	6,908	676	180
Southwest residents	2,760	275	174
South Dakota total	13,895	1,394	172
Out-of-state residents	1,569	162	

Gender and Race	Number of discharges	Percent
Male	7,535	48.7%
Female	7,929	51.3%
White	12,029	77.8%
American Indian	2,123	13.7%
Other race	110	0.7%
Unknown race	1,202	7.8%

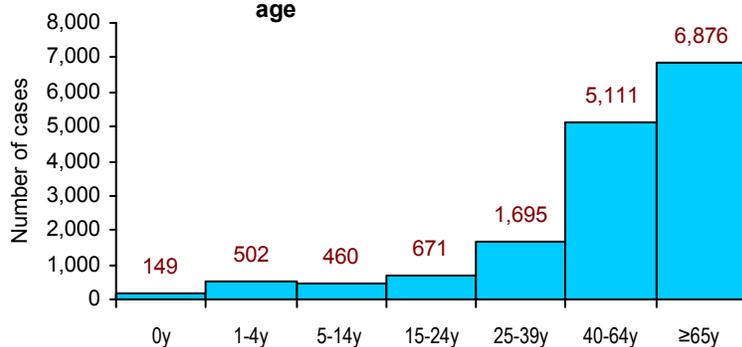
Diseases of the skin and subcutaneous tissue

ICD-9 code, Name, Number, (Percent)

- 682.6 Cellulitis and abscess of leg, except foot, 6,300 (41%)
 - 682.7 Cellulitis and abscess of leg, except toes, 1,251 (8%)
 - 682.3 Cellulitis and abscess of upper arm and forearm, 1,023 (7%)
 - 682.2 Cellulitis and abscess of trunk, 873 (6%)
 - 682.0 Cellulitis and abscess of face, 744 (5%)
 - 682.4 Cellulitis and abscess of hand, except fingers and thumb, 531 (3%)
 - 707.0 Decubitus ulcer, 514 (3%)
 - 681.10 Cellulitis and abscess of toe, unspecified, 338 (2%)
 - 707.03 Decubitus ulcer, lower back, 277 (2%)
 - 682.5 Cellulitis and abscess of buttock, 261 (2%)
 - 707.15 Ulcer of other part of foot, 251 (2%)
 - 681.00 Cellulitis and abscess of finger, unspecified, 229 (1%)
 - 682.1 Cellulitis and abscess of neck, 194 (1%)
 - 707.19 Ulcer of other part of lower limb, 156 (1%)
- All others, <1%

Cellulitis and abscess of leg were the most frequent causes of hospitalization for disease of the skin and subcutaneous tissue, followed by cellulitis and abscess of arm.

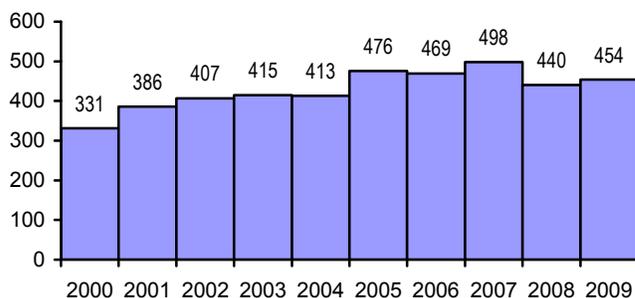
Diseases of the skin and subcutaneous tissue by age



Certain Conditions Originating in the Perinatal Period (ICD-9 760–779)

During 2000–2009 there were 4,289 hospitalizations due to conditions in the perinatal period in the state (average 429 per year).

Conditions in the perinatal period, SD, 2000-2009



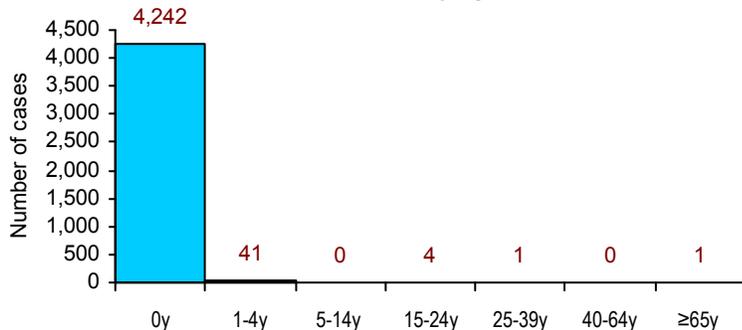
Annual trend shows an increase in hospitalizations. The northeast region had the highest hospitalization rate (higher than the state rate of 38). Out-of-state residents accounted for 29% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	894	92	46
Northwest residents	343	34	43
Southeast residents	1,116	110	29
Southwest residents	713	69	44
South Dakota total	3,066	312	38
Out-of-state residents	1,223	125	

Gender and Race	Number of discharges	Percent
Male	2,438	56.8%
Female	1,849	43.1%
White	2,798	65.2%
American Indian	704	16.4%
Other race	91	2.1%
Unknown race	696	16.2%

Males were more affected than females (57% vs. 43%). Unspecified fetal and neonatal jaundice was the most common cause of hospitalization for conditions in the perinatal period followed by respiratory distress syndrome.

Conditions in the perinatal period by age



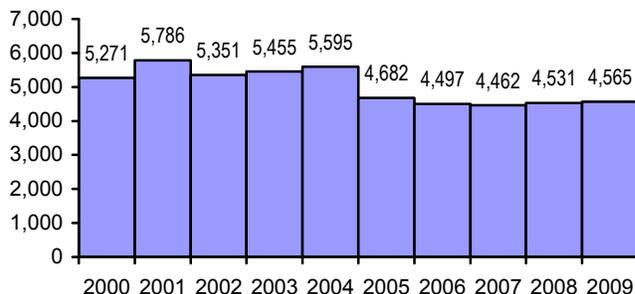
Conditions in the perinatal period ICD-9 code, Name, Number, (Percent)

- 774.6 Unspecified fetal and neonatal jaundice, 797, (19%)
 - 769 Respiratory distress syndrome, 296 (7%)
 - 770.89 Other respiratory problems after birth, 283 (7%)
 - 770.6 Transitory tachypnea of newborn, 260 (6%)
 - 770.8 Other respiratory problems after birth, 208 (5%)
 - 779.89 Other specified conditions originating in the perinatal period, 187 (4%)
 - 771.81 Septicemia [sepsis] of newborn, 177 (4%)
 - 765.19 Other preterm infants, 2,500 grams and over, 164 (4%)
 - 770.81 Primary apnea of newborn, 143 (3%)
 - 765.18 Other preterm infants, 2,000-2,499 grams, 129 (3%)
 - 770.2 Interstitial emphysema and related conditions, 118 (3%)
 - 770.0 Congenital pneumonia, 91 (2%)
 - 779.3 Feeding problems in newborn, 82 (2%)
 - 778.4 Other disturbances of temperature regulation of newborn, 73 (2%)
 - 779.0 Convulsions in newborn, 73 (2%)
 - 770.84 Respiratory failure of newborn, 70 (2%)
 - 765.17 Other preterm infants, 1,750-1,999 grams, 64 (1%)
 - 773.1 Hemolytic disease due to ABO isoimmunization, 64 (1%)
 - 770.7 Chronic respiratory disease arising in the perinatal period, 62 (1%)
 - 770.1 Fetal and newborn aspiration, 58 (1%)
 - 771.8 Other infection specific to the perinatal period, 55 (1%)
 - 774.39 Neonatal jaundice due to delayed conjugation from other causes, 55 (1%)
 - 765.16 Other preterm infants, 1,500-1,749 grams, 48 (1%)
 - 774.2 Neonatal jaundice associated with preterm delivery, 46 (1%)
- All others. <1%

Symptoms, Signs, and Ill-defined Conditions (ICD-9 780–799)

During 2000–2009 there were 50,195 hospitalizations due to symptoms, signs, and ill-defined conditions in the state (average 5,020 per year).

Symptoms, signs, and ill-defined conditions, SD, 2000–2009



The southeast region had the highest rate per 100,000 residents per year in this category (higher than the state rate of 550). The female population was affected more than male (56% vs. 44%). Out-of-state residents accounted for 11% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	11,536	1,148	575
Northwest residents	3,622	367	470
Southeast residents	21,582	2,174	578
Southwest residents	7,937	743	469
South Dakota total	44,678	4,467	550
Out-of-state residents	5,517	556	

Gender and Race	Number of discharges	Percent
Male	22,220	44.3%
Female	27,973	55.7%
White	41,965	83.6%
American Indian	4,143	8.3%
Other race	485	1%
Unknown race	3,602	7.2%

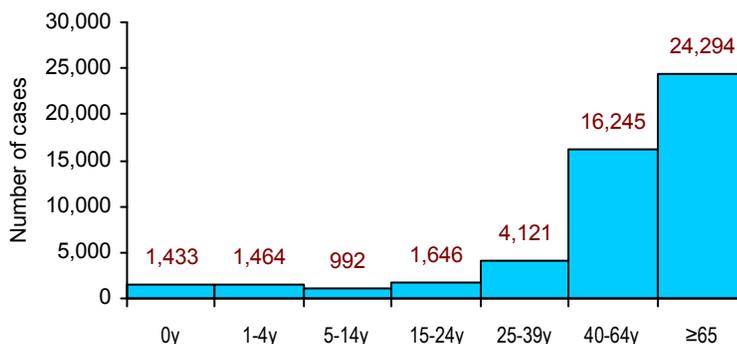
Symptoms, signs, and ill-defined conditions

ICD-9 code, Name, Number, (Percent)

1. 786.50 Chest pain, unspecified, 7,655 (15%)
 2. 786.59 Chest pain, other, 6,933 (14%)
 3. 780.2 Syncope and collapse, 4,643 (9%)
 4. 780.39 Other convulsions, 3,367 (7%)
 5. 789.00 Abdominal pain, unspecified site, 2,465 (5%)
 6. 780.6 Fever, 2,187 (4%)
 7. 780.79 Other malaise and fatigue, 2,101 (4%)
 8. 787.01 Nausea with vomiting, 1,736 (3%)
 9. 780.4 Dizziness and giddiness, 1,223 (2%)
 10. 787.91 Diarrhea, 1,011 (2%)
 11. 784.0 Headache, 1,003 (2%)
 12. 789.09 Abdominal pain, other specified site, 923 (2%)
 13. 789.03 Abdominal pain, right lower quadrant, 835 (2%)
 14. 789.06 Abdominal pain, epigastric, 807 (2%)
 15. 786.52 Painful respiration, 781 (2%)
 16. 790.7 Bacteremia, 650 (1%)
 17. 789.01 Abdominal pain, right upper quadrant, 634 (1%)
 18. 780.09 General symptoms, other, 631 (1%)
 19. 786.09 Symptoms involving respiratory system and other chest symptoms, other, 570 (1%)
- All others, <1%

Unspecified chest pain was the most common cause of hospitalizations for symptoms, signs, and ill-defined conditions.

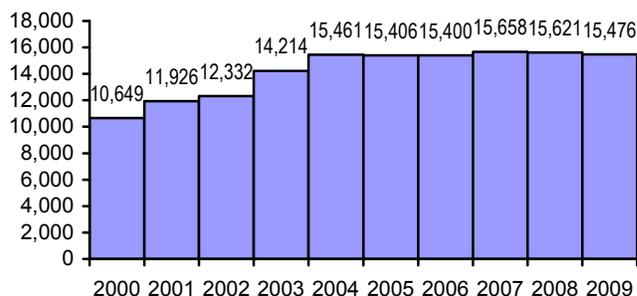
Symptoms, signs, and ill-defined conditions by age



Factors Influencing Health Status and Contact with Health Services (ICD-9 V01-V89)

During 2000–2009 there were 142,143 hospitalizations due to factors influencing health status and contact with health services in the state (average 14,214 per year).

Factors influencing health status and contact with health services, SD, 2000-2009

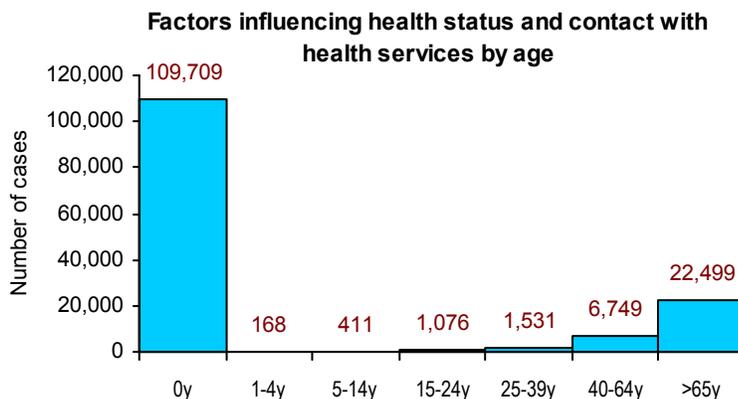


The southeast region had the highest hospitalization rate (higher than the state rate of 1,721). Males and females were almost equally affected (49% vs. 50%). Out-of-state residents accounted for 10% of all hospitalizations.

Region	Number of discharges	Median	Rate per 100,000
Northeast residents	31,081	3,436	1,720
Northwest residents	11,757	1,222	1,563
Southeast residents	62,087	6,702	1,782
Southwest residents	23,681	2,491	1,573
South Dakota total	128,607	1,3978	1,721
Out-of-state residents	13,536	1,409	
Gender and Race	Number of discharges	Percent	
Male	70,278	49.4%	
Female	71,829	50.5%	
White	112,923	79.4%	
American Indian	12,907	9.1%	
Other race	2,455	1.7%	
Unknown race	13,858	9.8%	

- Factors influencing health status and contact with health services
ICD-9 code, Name, Number, (Percent)
- V30.00 Single liveborn, born in hospital, delivered without mention of cesarean delivery, 79,192 (56%)
 - V30.01 Single liveborn, delivered in hospital, delivered by cesarean delivery, 26,474 (19%)
 - V57.89 Other specified rehabilitation procedure, other, 12,715 (9%)
 - V57.1 Other physical therapy, 8,361 (6%)
 - V31.01 Twin, mate liveborn, born in hospital, delivered by cesarean delivery, 2,294 (2%)
 - V58.1 Encounter for antineoplastic chemotherapy and immunotherapy, 1,699 (1%)
 - V58.11 Encounter for antineoplastic chemotherapy, 1,546 (1%)
- All others, <1%

Single liveborn, born in hospital was the most common cause of hospitalizations for factors influencing health status and contact with health services.



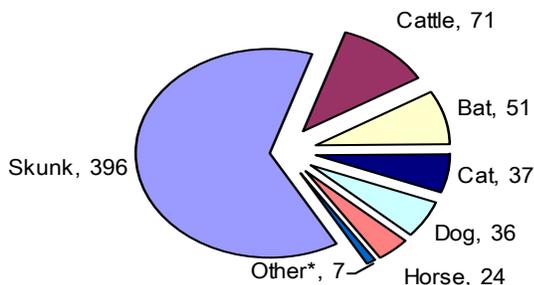
Rabies Surveillance, South Dakota, 2010

Rabies is an enzootic fatal viral disease and a serious public health concern in South Dakota. In 2010, 671 animals were tested for rabies with 32 animals testing positive. This is a 40% decrease from the previous year. The 32 rabid animals included 23 wild animals (20 skunks and 3 bats) and 9 domestic animals (5 cattle 3 cats and 1 dog). South Dakota's last human rabies case was in 1970.

In 2010, 665 animals tested negative for rabies, including 199 cats, 138 dogs, 107

bats, 68 cattle, 31 skunks, 28 raccoons, 13 horses, 10 deer, 8 squirrels, 5 sheep, 5 goats, 5 muskrats, 3 gophers, 2 each elk, donkeys, fox, moles, rabbits and rats, and 1 each badger, coyote, ferret, hamster, mouse, pig and woodchuck.

Rabid animals, South Dakota 2001-2010

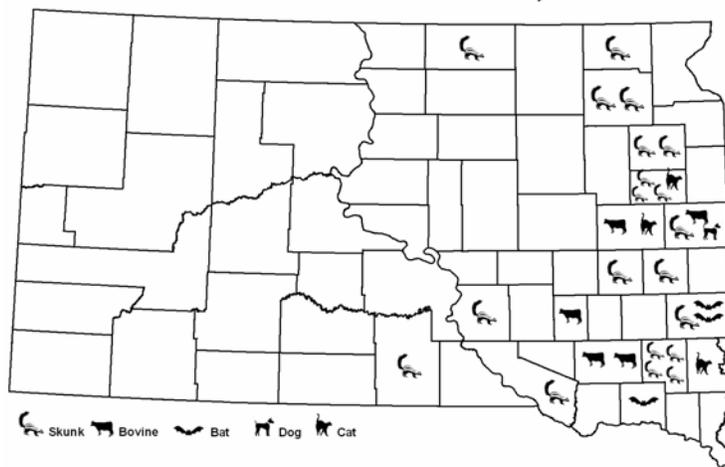


*Others include goat 4, fox 1, raccoon 1, woodchuck 1.

During 2010 rabid animals were detected in 18 South Dakota counties (see map and table). Animals were submitted for testing from all counties except Bennett, Campbell, Lyman, Mellette, Sully and Ziebach.

During the 10-year period (2001-2010) 622 of 8,462 (7%) animals tested were

Animal Rabies in South Dakota, 2010



Animals tested and confirmed rabies cases, SD, 2001-2010

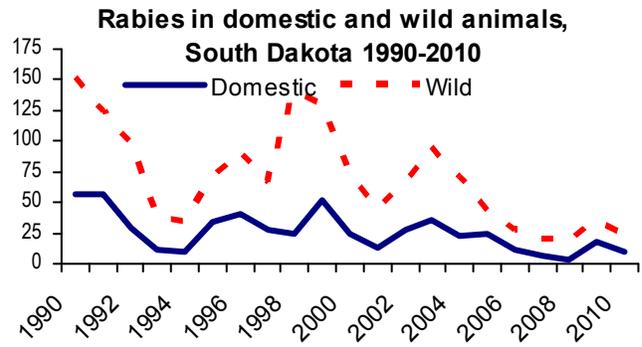
Animal	2010		2001 - 2010		
	Pos	Total tested	Pos	Total tested	% Pos
Skunk	20	51	396	647	61%
Cattle	5	73	71	909	8%
Bat	3	110	51	1792	3%
Cat	3	202	37	2381	2%
Dog	1	139	36	1615	2%
Horse	0	13	24	250	10%
Goat	0	5	4	25	16%
Raccoon	0	28	1	351	0%
Fox	0	2	1	32	3%
Woodchuck	0	1	1	17	6%
Deer, elk, donkey,	0	14	0	86	0%
Squirrel, chipmunk	0	8	0	80	0%
Rodents, other*	0	7	0	71	0%
Sheep	0	5	0	51	0%
Muskrat	0	5	0	35	0%
Opossum	0	0	0	29	0%
Coyote, wolf	0	1	0	26	0%
Weasel, ferret, mink	0	1	0	25	0%
Rabbit, hare	0	2	0	13	0%
Pig	0	1	0	6	0%
Badger	0	1	0	4	0%
Bison	0	0	0	4	0%
Shrew, mole	0	2	0	4	0%
Mountain lion	0	0	0	3	0%
Bobcat, bear	0	0	0	1	0%
Other animals	0	0	0	5	0%
TOTAL	32	671	622	8462	7%

*Rodents: rat, mouse, prairie dog, gopher, ground squirrel, hamster, beaver, porcupine, vole

Animal rabies by SD County, 2001-2010					
County	2010		2001-2010		
	Pos	Neg	Pos	Neg	%Pos
Aurora	0	7	7	36	16%
Beadle	0	8	13	120	10%
Bennett	0	0	0	4	0%
BonHomme	0	1	8	37	18%
Brookings	3	33	28	381	7%
Brown	0	22	42	291	13%
Brule	1	14	8	64	11%
Buffalo	0	1	1	6	14%
Butte	0	12	3	141	2%
Campbell	0	0	4	9	31%
CharlesMix	1	12	24	139	15%
Clark	0	4	16	78	17%
Clay	0	10	8	75	10%
Codington	2	26	15	211	7%
Corson	0	3	1	9	10%
Custer	0	1	2	27	7%
Davison	1	28	16	241	6%
Day	2	8	23	84	21%
Deuel	0	3	12	93	11%
Dewey	0	2	2	17	11%
Douglas	0	1	5	31	14%
Edmunds	0	5	5	48	9%
Fall River	0	8	2	82	2%
Faulk	0	6	6	39	13%
Grant	0	6	7	75	9%
Gregory	0	3	11	57	16%
Haakon	0	4	0	22	0%
Hamlin	4	4	24	100	19%
Hand	0	4	7	49	13%
Hanson	0	1	5	20	20%
Harding	0	1	3	14	18%
Hughes	0	14	11	195	5%
Hutchinson	2	16	21	187	10%
Hyde	0	5	5	54	8%
Jackson	0	5	1	36	3%
Jerauld	0	1	5	27	16%
Jones	0	3	1	10	9%
Kingsbury	2	6	21	116	15%
Lake	1	15	23	165	12%
Lawrence	0	7	3	91	3%
Lincoln	1	17	6	147	4%
Lyman	0	0	1	32	3%
Marshall	1	7	12	63	16%
McCook	0	7	17	86	17%
McPherson	1	3	10	56	15%
Meade	0	11	9	120	7%
Mellette	0	0	1	5	17%
Miner	1	5	9	62	13%
Minnehaha	3	137	48	1,979	2%
Moody	0	11	12	90	12%
Pennington	0	34	10	717	1%
Perkins	0	2	1	18	5%
Potter	0	4	1	14	7%
Roberts	0	12	10	129	7%
Sanborn	0	4	12	42	22%
Shannon	0	2	0	35	0%
Spink	0	4	12	56	18%
Stanley	0	5	2	19	10%
Sully	0	0	1	2	33%
Todd	0	1	0	42	0%
Tripp	1	11	11	84	12%
Turner	4	19	16	172	9%
Union	0	4	5	77	6%
Walworth	0	19	12	214	5%
Yankton	1	10	5	98	5%
Ziebach	0	0	0	0	na
South Dakota	32	639	622	7,840	7%

positive for rabies. During the decade animals were tested from all counties, except Ziebach, and rabid animals were found in all counties except Bennett, Haakon, Shannon, Todd, and Ziebach. The most animals were submitted for testing from Minnehaha County.

In the 10 years since 2001, 28% of rabies cases in South Dakota have been domestic animals. There were 37 rabid cats and 36 rabid dogs many of which were unvaccinated strays or barn cats. Rabid livestock since 2010 included 71 cattle, 23 horses and 4 goats.

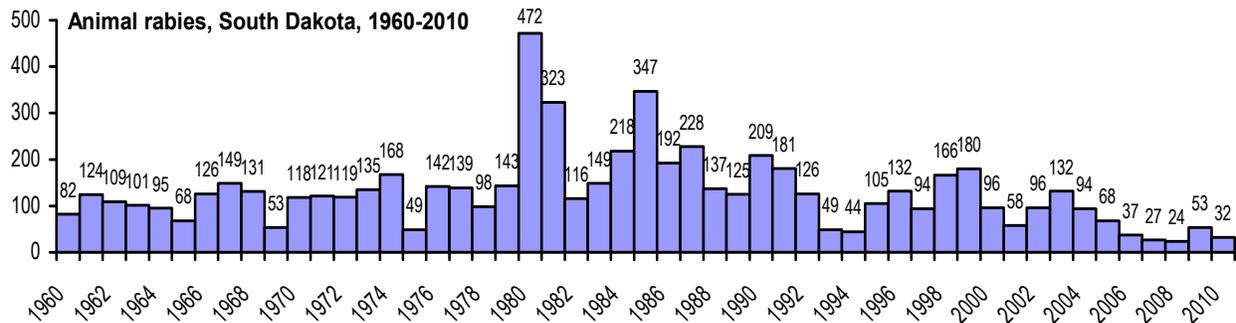


Skunks (*Mephitis mephitis*) are the enzootic rabies reservoir in South Dakota. Since 2001, 61% of tested skunks have been rabid. Bat rabies is also enzootic in South Dakota with 51 of 1,741 (3%) bats testing positive over the past 10 years.

Although rabies is not enzootic in other wild animals in South Dakota, during the past 10 years rabies has been detected in 1 fox, 1 raccoon, and 1 woodchuck. These other wild animals are likely spillover rabies following exposure to rabid skunks. Although raccoon rabies is common in eastern United States, rabid raccoons are rare in South Dakota. Since 1990, 998 raccoons have been tested for rabies in South Dakota and 3 of these were positive (0.3%).

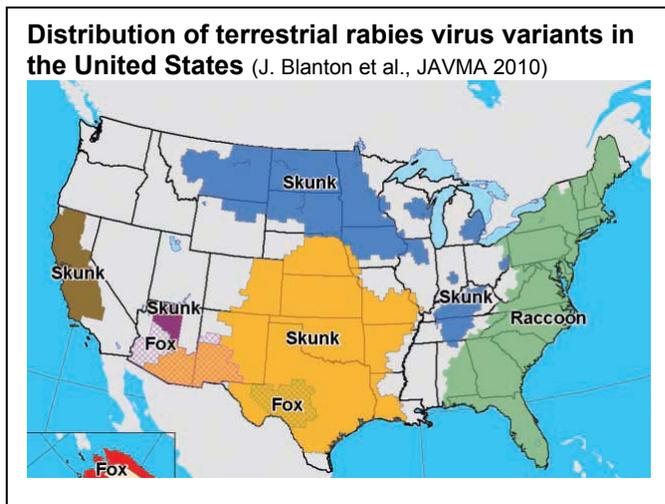
During the past 50 years animal rabies has been reported every year in South Dakota (see figure below). The most cases were reported in 1980 with 472 rabid animals and the fewest were reported in 2008 with 24 rabid animals.

Nationally from 2000 through 2009, there were 31 human rabies cases, including 29 deaths and 2 survivals. Twenty-two of the human cases (71%) were associated with bat-rabies virus, 7 (23%) had dog rabies virus (all foreign imports) and 1 each raccoon and fox exposure. These 27 human rabies cases were from Arkansas, California (7), Florida, Georgia, Indiana (2), Iowa, Michigan, Minnesota (2), Mississippi, Missouri, New York, Oklahoma, Puerto Rico, Tennessee, Texas (5), Virginia (2) and Wisconsin (2).



The most recent national animal rabies surveillance data reported are for 2009 (Blanton, et. al., 2010). Nationally, there was a 2% decrease from the previous year with 6,690 cases of animal rabies reported (92% wild and 8% domestic animals) in 2009. Nationally, rabid domestic animals included 300 cats, 81 dogs, 74 cattle, 41 horses/mules, 8 goats/sheep, and 1 ferret. Nationally, wild animals testing positive for rabies included 2,327 raccoons, 1,625 bats, 1,603 skunks, 504 foxes, 34 mongooses, 32 groundhogs, 30 bobcats, 11 coyotes, 3 fishers, 3 opossums, 2 beavers, 2 deer, 2 otters, 2 squirrels, and 1 each cougar, muskrat, rabbit, ringtail and wolf.

Two laboratories provide rabies tests in South Dakota: (1) the Animal Disease Research



Diagnostic Laboratory (ADRDL) in Brookings, and (2) the State Public Health Laboratory (SDPHL) in Pierre. Both laboratories use the direct fluorescent antibody (DFA) technique. The case definition of a confirmed animal rabies case is a positive DFA test, performed preferably on central nervous system tissue, or isolation of the rabies virus in cell culture or in a laboratory animal. Human serum rabies antibody titers on previously vaccinated people may be ordered through SDPHL.

Rabies consultations are available from the Office of Disease Prevention, South Dakota Department of Health, 7 days a week. Consultations are based on current Centers for Disease Control and Prevention (CDC) recommendations*. We strive to recommend appropriate rabies prevention measures and to minimize unnecessary and inappropriate post-exposure testing and prophylactic treatment.

References and resources

*CDC. Human rabies prevention – United States, 2008: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2008; 57 (RR-3). www.cdc.gov/mmwr/preview/mmwrhtml/rr5703a1.htm

CDC. Compendium of animal rabies prevention and control, 2008: National Association of State Public Health Veterinarians. MMWR 2008; 57 (RR-2). www.cdc.gov/mmwr/preview/mmwrhtml/rr5702a1.htm

CDC. Compendium of measures to prevent disease associated with animals in public settings, 2009: National Association of State Public Health Veterinarians. MMWR 2009; 58 (RR-5). <http://www.cdc.gov/mmwr/pdf/rr/rr5805.pdf>

Blanton, JD, D Palmer and CE Rupprecht. 2010. Rabies surveillance in the United States during 2009. Journal of the American Veterinary Medical Association 235: 646-657. <http://avmajournals.avma.org/doi/pdf/10.2460/javma.237.6.646>

Addresses, telephone numbers and websites

Department of Health (rabies consultations)

615 East Fourth Street

Pierre, SD 57501-1700

Phone: 1-800-592-1861 or 605-773-3737; after hours 605-280-4810

<http://doh.sd.gov/DiseaseFacts/Rabies.aspx>

Department of Health, Public Health Laboratory (rabies testing)

615 East Fourth Street

Pierre, SD 57501-1700

Phone: 1-800-592-1861 or 605-773-3368

<http://doh.sd.gov/Lab/rabies.aspx>

Animal Disease Research and Diagnostic Laboratory (rabies testing)

Box 2175, North Campus Drive

South Dakota State University

Brookings, SD 57007-1396

Phone: 605-688-5171

www.sdstate.edu/vs/adrdl

SD Animal Industry Board (livestock and other animal veterinary and regulatory issues)

441 S. Fort Street, Pierre, SD 57501

Phone: 605-773-3321

<http://aib.sd.gov>

CDC Rabies:

www.cdc.gov/rabies

South Dakota Bat Working Group

<http://sdbwg.org>

2009 US Animal Rabies State Cases

State Cases

Alabama 81
Alaska 14
Arizona 273
Arkansas 47
California 227
Colorado 104
Connecticut 153
Delaware 15
DC 57
Florida 162
Georgia 404
Hawaii 0
Idaho 8
Illinois 83
Indiana 40
Iowa 35
Kansas 78
Kentucky 46
Louisiana 5
Maine 62
Maryland 384
Massachusetts 130
Michigan 69
Minnesota 69
Mississippi 4
Missouri 66
Montana 24
Nebraska 90
Nevada 12
New Hampshire 34
New Jersey 288
New Mexico 26
New York 468
North Carolina 492
North Dakota 16
Ohio 47
Oklahoma 50
Oregon 12
Pennsylvania 453
Rhode Island 45
South Carolina 153
South Dakota 53
Tennessee 88
Texas 830
Utah 13
Vermont 67
Virginia 572
Washington 14
West Virginia 123
Wisconsin 25
Wyoming 40
Puerto Rico 43

Rabies is a viral infection that affects the nervous system of mammals. Rabies is usually transmitted by a bite from an infected animal, scratch or exposure to saliva with symptoms usually starting 3 - 8 weeks later. Symptoms may include headache, behavior changes, fever, malaise, sensory changes, and paralysis. Rabies is almost always fatal. Prompt vaccination following a bite prevents rabies in humans. *If a human is exposed to rabies they must have anti-rabies shots.*

South Dakota Rabies Control Laws

RABIES CONTROL STATUTE: Chapter 40-12 (Section 12-1, 2, 3, 4, 5, 6)

40-12-1. Confinement of animals required in localities where rabies exists -- Neglect as misdemeanor. In localities where rabies exists, the animal industry board may require that any animal deemed likely to spread such disease shall be muzzled, caged, tied or confined in any manner that may be deemed necessary. It is a Class 1 misdemeanor for any owner or person in charge of any animal so ordered to be muzzled, caged, tied or confined, to refuse or neglect to carry out such order.

40-12-2. Destruction of rabid animal required. If the animal industry board determines that rabies exists in any animal, the board may kill such animal and any animal there is reason to believe has been bitten by any animal affected with rabies.

40-12-4. Definition of terms. Terms used in this chapter mean:

- (1) "Department," the department of health;
- (2) "Owner," any person who has a right of property in a pet, keeps or harbors a pet or who has it in his care or acts as its custodian, or permits a pet to remain on or about any premises occupied by him;
- (3) "Pet," any dog, cat or other species of carnivore kept for domestication or display.

40-12-5. Confinement of pet after attack upon person -- Violation as misdemeanor. The department may serve written notice upon the owner of any dog or cat which has attacked or bitten a person to confine the animal at the owner's expense upon his premises or at a city pound or other place designated in the notice for a period of at least ten days after the animal has attacked or bitten any person. The department may examine the animal at any time within the ten-day period of confinement to determine whether such animal shows symptoms of rabies. In the case of any pet other than a dog or cat, which has attacked or bitten a person, the department may serve written notice upon the owner of such animal that the owner shall have the animal euthanized immediately and submit the brain to an approved laboratory for rabies examination. Any owner who fails to comply with a written notice served pursuant to this section is guilty of a Class 1 misdemeanor.

40-12-6. Confinement of pet bitten by animal suspected of having rabies -- Violation as misdemeanor. The department may serve written notice upon the owner of a dog or cat known to have been bitten by an animal known or suspected of being affected by rabies, requiring the owner to confine such dog or cat for a period of not less than six months. However, if such dog or cat had been properly treated with an antirabic vaccine, confinement shall be for a period of not less than three months. In the case of any pet other than a dog or cat, the department may serve written notice upon the owner of such animal that the owner shall have the animal euthanized immediately. Any owner who fails to comply with a written notice served pursuant to this section is guilty of a Class 1 misdemeanor.

SHERIFF: Chapter 7-12 (Section 7-12-29) Taking and holding animal suspected of being dangerous -- Formal determination -- Disposal of dangerous animal. The sheriff may take possession of any animal suspected of being dangerous. The sheriff may hold such animal until a formal determination can be made of the extent of the danger such animal poses. If the animal has attacked or bitten a human or an animal pet, the formal determination shall include consultation with the Department of Health for the purposes of rabies control. The sheriff may dispose of any animal so determined to be dangerous.

REPORTABLE DISEASES: Administrative Rule 44:20:01:03 Category I reportable diseases have a potential for epidemic spread or require rapid application of public health measures to prevent a serious threat to public health or safety. Category I reportable diseases include: Rabies, human and animal.

CONTROL MEASURES: Administrative Rule 44:20:03:10 Application of public health measures to animals. The department may instruct a person who owns or is in possession of an animal known or suspected to be a carrier of an infectious agent in public health measures for preventing infection and spread of disease. If the department knows or has reason to believe, because of testing or epidemiological information, that an animal is infected with an infectious agent and is a threat to the public health, it may issue a public health notice directing the person who owns or is in possession of the animal to take one or more of the following actions:

- (1) To examine or test the animal to determine whether it is infected with an infectious agent capable of causing human disease
- (2) To report to an authorized department representative for counseling on methods for preventing transmission of the infectious agent;
- (3) To confine or quarantine the animal for the duration of the incubation period or contagious period;
- (4) To destroy the animal or provide treatment until it is cured or free from the infection and to follow measures for preventing reinfection;
- (5) To cease from specific activities involving the infected animal that endanger the health of others;
- (6) To cooperate with the department in implementation of reasonable public health measures.

Health requirements for dogs and cats on exhibit: Administrative Rule 12:02:10:03 All dogs for exhibition must be accompanied by a health certificate signed by a licensed accredited veterinarian within 30 days before entry to the South Dakota State Fair. The health certificate shall indicate the dates of vaccination for rabies, canine distemper, and canine parvovirus. All vaccines must be current. All cats for exhibition must be accompanied by a health certificate signed by a licensed accredited veterinarian within 30 days before entry to the South Dakota State Fair. The health certificate shall indicate the dates of vaccination for rabies and feline distemper. All vaccines must be current.

Health certificate for imported cats and dogs: Administrative Rule 12:68:06:09 Any cat or dog imported into South Dakota must be accompanied by a health certificate as described in SDCL 40-14-2 issued by a state or federal government veterinary official of the originating state or by a licensed veterinarian. The certificate must state that the animal has not been exposed to rabies, that it is free from signs of any contagious or communicable disease, that it has been currently vaccinated by a licensed veterinarian, the date of vaccination, the type of vaccine used, and the date the animal is due for boosting for rabies immunization.

Recommended Immunization Schedule for Persons Aged 0 Through 6 Years—United States • 2011

For those who fall behind or start late, see the catch-up schedule

Vaccine ▼	Age ►	1 month	2 months	4 months	6 months	12 months	15 months	18 months	19–23 months	2–3 years	4–6 years
Hepatitis B ¹		HepB	HepB		HepB		HepB				
Rotavirus ²			RV	RV	RV ²						
Diphtheria, Tetanus, Pertussis ³			DTaP	DTaP	DTaP	see footnote ³	DTaP			DTaP	
<i>Haemophilus influenzae</i> type b ⁴			Hib	Hib	Hib ⁴		Hib				
Pneumococcal ⁵			PCV	PCV	PCV		PCV			PPSV	
Inactivated Poliovirus ⁶			IPV	IPV	IPV		IPV				IPV
Influenza ⁷							Influenza (Yearly)				
Measles, Mumps, Rubella ⁸							MMR	see footnote ⁸			MMR
Varicella ⁹							Varicella	see footnote ⁹			Varicella
Hepatitis A ¹⁰							HepA (2 doses)				HepA Series
Meningococcal ¹¹											MCV4

Range of recommended ages for all children

Range of recommended ages for certain high-risk groups

This schedule includes recommendations in effect as of December 21, 2010. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Considerations should include provider assessment, patient preference, and the potential for adverse events. Providers should consult the relevant Advisory Committee on Immunization Practices statement for detailed recommendations: <http://www.cdc.gov/vaccines/pubs/acip-list.htm>. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS) at <http://www.vaers.hhs.gov> or by telephone, **800-822-7967**.

1. Hepatitis B vaccine (HepB). (Minimum age: birth)

At birth:

- Administer monovalent HepB to all newborns before hospital discharge.
- If mother is hepatitis B surface antigen (HBsAg)-positive, administer HepB and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth.
- If mother's HBsAg status is unknown, administer HepB within 12 hours of birth. Determine mother's HBsAg status as soon as possible and, if HBsAg-positive, administer HBIG (no later than age 1 week).

Doses following the birth dose:

- The second dose should be administered at age 1 or 2 months. Monovalent HepB should be used for doses administered before age 6 weeks.
- Infants born to HBsAg-positive mothers should be tested for HBsAg and antibody to HBsAg 1 to 2 months after completion of at least 3 doses of the HepB series, at age 9 through 18 months (generally at the next well-child visit).
- Administration of 4 doses of HepB to infants is permissible when a combination vaccine containing HepB is administered after the birth dose.
- Infants who did not receive a birth dose should receive 3 doses of HepB on a schedule of 0, 1, and 6 months.
- The final (3rd or 4th) dose in the HepB series should be administered no earlier than age 24 weeks.

2. Rotavirus vaccine (RV). (Minimum age: 6 weeks)

- Administer the first dose at age 6 through 14 weeks (maximum age: 14 weeks 6 days). Vaccination should not be initiated for infants aged 15 weeks 0 days or older.
- The maximum age for the final dose in the series is 8 months 0 days
- If Rotarix is administered at ages 2 and 4 months, a dose at 6 months is not indicated.

3. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP). (Minimum age: 6 weeks)

- The fourth dose may be administered as early as age 12 months, provided at least 6 months have elapsed since the third dose.

4. *Haemophilus influenzae* type b conjugate vaccine (Hib). (Minimum age: 6 weeks)

- If PRP-OMP (PedvaxHIB or Comvax [HepB-Hib]) is administered at ages 2 and 4 months, a dose at age 6 months is not indicated.
- Hibrix should not be used for doses at ages 2, 4, or 6 months for the primary series but can be used as the final dose in children aged 12 months through 4 years.

5. Pneumococcal vaccine. (Minimum age: 6 weeks for pneumococcal conjugate vaccine [PCV]; 2 years for pneumococcal polysaccharide vaccine [PPSV])

- PCV is recommended for all children aged younger than 5 years. Administer 1 dose of PCV to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.
- A PCV series begun with 7-valent PCV (PCV7) should be completed with 13-valent PCV (PCV13).
- A single supplemental dose of PCV13 is recommended for all children aged 14 through 59 months who have received an age-appropriate series of PCV7.
- A single supplemental dose of PCV13 is recommended for all children aged 60 through 71 months with underlying medical conditions who have received an age-appropriate series of PCV7.

- The supplemental dose of PCV13 should be administered at least 8 weeks after the previous dose of PCV7. See *MMWR* 2010;59(No. RR-11).

- Administer PPSV at least 8 weeks after last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant.

6. Inactivated poliovirus vaccine (IPV). (Minimum age: 6 weeks)

- If 4 or more doses are administered prior to age 4 years an additional dose should be administered at age 4 through 6 years.
- The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.

7. Influenza vaccine (seasonal). (Minimum age: 6 months for trivalent inactivated influenza vaccine [TIV]; 2 years for live, attenuated influenza vaccine [LAIV])

- For healthy children aged 2 years and older (i.e., those who do not have underlying medical conditions that predispose them to influenza complications), either LAIV or TIV may be used, except LAIV should not be given to children aged 2 through 4 years who have had wheezing in the past 12 months.
- Administer 2 doses (separated by at least 4 weeks) to children aged 6 months through 8 years who are receiving seasonal influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.
- Children aged 6 months through 8 years who received no doses of monovalent 2009 H1N1 vaccine should receive 2 doses of 2010–2011 seasonal influenza vaccine. See *MMWR* 2010;59(No. RR-8):33–34.

8. Measles, mumps, and rubella vaccine (MMR). (Minimum age: 12 months)

- The second dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the first dose.

9. Varicella vaccine. (Minimum age: 12 months)

- The second dose may be administered before age 4 years, provided at least 3 months have elapsed since the first dose.
- For children aged 12 months through 12 years the recommended minimum interval between doses is 3 months. However, if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.

10. Hepatitis A vaccine (HepA). (Minimum age: 12 months)

- Administer 2 doses at least 6 months apart.
- HepA is recommended for children aged older than 23 months who live in areas where vaccination programs target older children, who are at increased risk for infection, or for whom immunity against hepatitis A is desired.

11. Meningococcal conjugate vaccine, quadrivalent (MCV4). (Minimum age: 2 years)

- Administer 2 doses of MCV4 at least 8 weeks apart to children aged 2 through 10 years with persistent complement component deficiency and anatomic or functional asplenia, and 1 dose every 5 years thereafter.
- Persons with human immunodeficiency virus (HIV) infection who are vaccinated with MCV4 should receive 2 doses at least 8 weeks apart.
- Administer 1 dose of MCV4 to children aged 2 through 10 years who travel to countries with highly endemic or epidemic disease and during outbreaks caused by a vaccine serogroup.
- Administer MCV4 to children at continued risk for meningococcal disease who were previously vaccinated with MCV4 or meningococcal polysaccharide vaccine after 3 years if the first dose was administered at age 2 through 6 years.

The Recommended Immunization Schedules for Persons Aged 0 Through 18 Years are approved by the Advisory Committee on Immunization Practices (<http://www.cdc.gov/vaccines/recs/acip>), the American Academy of Pediatrics (<http://www.aap.org>), and the American Academy of Family Physicians (<http://www.aafp.org>).

Department of Health and Human Services • Centers for Disease Control and Prevention

Recommended Immunization Schedule for Persons Aged 7 Through 18 Years—United States • 2011

For those who fall behind or start late, see the schedule below and the catch-up schedule

Vaccine ▼	Age ►	7–10 years	11–12 years	13–18 years
Tetanus, Diphtheria, Pertussis ¹			Tdap	Tdap
Human Papillomavirus ²	see footnote ²		HPV (3 doses)(females)	HPV series
Meningococcal ³		MCV4	MCV4	MCV4
Influenza ⁴			Influenza (Yearly)	
Pneumococcal ⁵			Pneumococcal	
Hepatitis A ⁶			HepA Series	
Hepatitis B ⁷			Hep B Series	
Inactivated Poliovirus ⁸			IPV Series	
Measles, Mumps, Rubella ⁹			MMR Series	
Varicella ¹⁰			Varicella Series	

Range of recommended ages for all children

Range of recommended ages for catch-up immunization

Range of recommended ages for certain high-risk groups

This schedule includes recommendations in effect as of December 21, 2010. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Considerations should include provider assessment, patient preference, and the potential for adverse events. Providers should consult the relevant Advisory Committee on Immunization Practices statement for detailed recommendations: <http://www.cdc.gov/vaccines/pubs/acip-list.htm>. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS) at <http://www.vaers.hhs.gov> or by telephone, **800-822-7967**.

- 1. Tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap).** (Minimum age: 10 years for Boostrix and 11 years for Adacel)

 - Persons aged 11 through 18 years who have not received Tdap should receive a dose followed by Td booster doses every 10 years thereafter.
 - Persons aged 7 through 10 years who are not fully immunized against pertussis (including those never vaccinated or with unknown pertussis vaccination status) should receive a single dose of Tdap. Refer to the catch-up schedule if additional doses of tetanus and diphtheria toxoid-containing vaccine are needed.
 - Tdap can be administered regardless of the interval since the last tetanus and diphtheria toxoid-containing vaccine.
 - 2. Human papillomavirus vaccine (HPV).** (Minimum age: 9 years)

 - Quadrivalent HPV vaccine (HPV4) or bivalent HPV vaccine (HPV2) is recommended for the prevention of cervical precancers and cancers in females.
 - HPV4 is recommended for prevention of cervical precancers, cancers, and genital warts in females.
 - HPV4 may be administered in a 3-dose series to males aged 9 through 18 years to reduce their likelihood of genital warts.
 - Administer the second dose 1 to 2 months after the first dose and the third dose 6 months after the first dose (at least 24 weeks after the first dose).
 - 3. Meningococcal conjugate vaccine, quadrivalent (MCV4).** (Minimum age: 2 years)

 - Administer MCV4 at age 11 through 12 years with a booster dose at age 16 years.
 - Administer 1 dose at age 13 through 18 years if not previously vaccinated.
 - Persons who received their first dose at age 13 through 15 years should receive a booster dose at age 16 through 18 years.
 - Administer 1 dose to previously unvaccinated college freshmen living in a dormitory.
 - Administer 2 doses at least 8 weeks apart to children aged 2 through 10 years with persistent complement component deficiency and anatomic or functional asplenia, and 1 dose every 5 years thereafter.
 - Persons with HIV infection who are vaccinated with MCV4 should receive 2 doses at least 8 weeks apart.
 - Administer 1 dose of MCV4 to children aged 2 through 10 years who travel to countries with highly endemic or epidemic disease and during outbreaks caused by a vaccine serogroup.
 - Administer MCV4 to children at continued risk for meningococcal disease who were previously vaccinated with MCV4 or meningococcal polysaccharide vaccine after 3 years (if first dose administered at age 2 through 6 years) or after 5 years (if first dose administered at age 7 years or older).
 - 4. Influenza vaccine (seasonal).**

 - For healthy nonpregnant persons aged 7 through 18 years (i.e., those who do not have underlying medical conditions that predispose them to influenza complications), either LAIV or TIV may be used.
 - Administer 2 doses (separated by at least 4 weeks) to children aged 6 months through 8 years who are receiving seasonal influenza vaccine for the first
- time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.
- Children 6 months through 8 years of age who received no doses of monovalent 2009 H1N1 vaccine should receive 2 doses of 2010–2011 seasonal influenza vaccine. See *MMWR* 2010;59(No. RR-8):33–34.
- 5. Pneumococcal vaccines.**

 - A single dose of 13-valent pneumococcal conjugate vaccine (PCV13) may be administered to children aged 6 through 18 years who have functional or anatomic asplenia, HIV infection or other immunocompromising condition, cochlear implant or CSF leak. See *MMWR* 2010;59(No. RR-11).
 - The dose of PCV13 should be administered at least 8 weeks after the previous dose of PCV7.
 - Administer pneumococcal polysaccharide vaccine at least 8 weeks after the last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant. A single revaccination should be administered after 5 years to children with functional or anatomic asplenia or an immunocompromising condition.
 - 6. Hepatitis A vaccine (HepA).**

 - Administer 2 doses at least 6 months apart.
 - HepA is recommended for children aged older than 23 months who live in areas where vaccination programs target older children, or who are at increased risk for infection, or for whom immunity against hepatitis A is desired.
 - 7. Hepatitis B vaccine (HepB).**

 - Administer the 3-dose series to those not previously vaccinated. For those with incomplete vaccination, follow the catch-up schedule.
 - A 2-dose series (separated by at least 4 months) of adult formulation Recombivax HB is licensed for children aged 11 through 15 years.
 - 8. Inactivated poliovirus vaccine (IPV).**

 - The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.
 - If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age.
 - 9. Measles, mumps, and rubella vaccine (MMR).**

 - The minimum interval between the 2 doses of MMR is 4 weeks.
 - 10. Varicella vaccine.**

 - For persons aged 7 through 18 years without evidence of immunity (see *MMWR* 2007;56[No. RR-4]), administer 2 doses if not previously vaccinated or the second dose if only 1 dose has been administered.
 - For persons aged 7 through 12 years, the recommended minimum interval between doses is 3 months. However, if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.
 - For persons aged 13 years and older, the minimum interval between doses is 4 weeks.

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age

PERSONS AGED 4 MONTHS THROUGH 6 YEARS

Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
Hepatitis B ¹	Birth	4 weeks	8 weeks (and at least 16 weeks after first dose)	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months	6 months ²
Rotavirus ²	6 wks	4 weeks	4 weeks ²		
Diphtheria, Tetanus, Pertussis ³	6 wks	4 weeks	4 weeks	6 months	6 months ³
<i>Haemophilus influenzae</i> type b ⁴		4 weeks	4 weeks ⁴		
		8 weeks (as final dose) if first dose administered at younger than age 12 months No further doses needed if first dose administered at age 15 months or older	8 weeks (as final dose) ⁴ if current age is younger than 12 months administered at younger than age 12 months and second dose administered at younger than 15 months No further doses needed if previous dose administered at age 15 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months	
Pneumococcal ⁵	6 wks	4 weeks	4 weeks	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age	6 months ⁵
Inactivated Poliovirus ⁶	6 wks	4 weeks	4 weeks	6 months ⁵	
Measles, Mumps, Rubella ⁷	12 mos	8 weeks (as final dose for healthy children) if first dose administered at age 12 months or older or current age 24 through 59 months	8 weeks (as final dose for healthy children) if current age is 12 months or older No further doses needed for healthy children if previous dose administered at age 24 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age	6 months ⁵
Varicella ⁸	12 mos	4 weeks	4 weeks		
Hepatitis A ⁹	12 mos	3 months	3 months		
		6 months	6 months		

PERSONS AGED 7 THROUGH 18 YEARS

Tetanus, Diphtheria/ Tetanus, Diphtheria, Pertussis ¹⁰	7 yrs ¹⁰	4 weeks	4 weeks if first dose administered at younger than age 12 months 6 months if first dose administered at 12 months or older	6 months if first dose administered at younger than age 12 months 6 months ¹¹ if first dose administered at 12 months or older
Human Papillomavirus ¹¹	9 yrs	6 months		
Hepatitis A ⁹	12 mos	4 weeks	4 weeks	
Hepatitis B ¹	Birth	4 weeks	4 weeks	
Inactivated Poliovirus ⁶	6 wks	4 weeks	4 weeks	
Measles, Mumps, Rubella ⁷	12 mos	3 months	3 months	
Varicella ⁸	12 mos	4 weeks	4 weeks	
		3 months if person is younger than age 13 years 4 weeks if person is aged 13 years or older		

1. Hepatitis B vaccine (HepB).

- Administer the 3-dose series to those not previously vaccinated.
- The minimum age for the third dose of HepB is 24 weeks.
- A 2-dose series (separated by at least 4 months) of adult formulation Recombivax HB is licensed for children aged 11 through 15 years.

2. Rotavirus vaccine (RV).

- The maximum age for the first dose is 14 weeks 6 days. Vaccination should not be initiated for infants aged 15 weeks 0 days or older.
- The maximum age for the final dose in the series is 8 months 0 days.
- If Rotarix was administered for the first and second doses, a third dose is not indicated.

3. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP).

- The fifth dose is not necessary if the fourth dose was administered at age 4 years or older.

4. Haemophilus influenzae type b conjugate vaccine (Hib).

- 1 dose of Hib vaccine should be considered for unvaccinated persons aged 5 years or older who have sickle cell disease, leukemia, or HIV infection, or who have had a splenectomy.
- If the first 2 doses were PRP-OMP (PedvaxHIB or Comvax), and administered at age 11 months or younger, the third (and final) dose should be administered at age 12 through 15 months and at least 8 weeks after the second dose.
- If the first dose was administered at age 7 through 11 months, administer the second dose at least 4 weeks later and a final dose at age 12 through 15 months.

5. Pneumococcal vaccine.

- Administer 1 dose of 13-valent pneumococcal conjugate vaccine (PCV13) to all healthy children aged 24 through 59 months with any incomplete PCV schedule (PCV7 or PCV13).
- For children aged 24 through 71 months with underlying medical conditions, administer 1 dose of PCV13 if 3 doses of PCV were received previously or administer 2 doses of PCV13 at least 8 weeks apart if fewer than 3 doses of PCV were received previously.
- A single dose of PCV13 is recommended for certain children with underlying medical conditions through 18 years of age. See age-specific schedules for details.
- Administer pneumococcal polysaccharide vaccine (PPSV) to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant, at least 8 weeks after the last dose of PCV. A single revaccination should be administered after 5 years to children with functional or anatomic asplenia or an immunocompromising condition. See *MMWR* 2010;59(No. RR-11).

6. Inactivated poliovirus vaccine (IPV).

- The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.
- A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months following the previous dose.
- In the first 6 months of life, minimum age and minimum intervals are only recommended if the person is at risk for imminent exposure to circulating poliovirus (i.e., travel to a polio-endemic region or during an outbreak).

7. Measles, mumps, and rubella vaccine (MMR).

- Administer the second dose routinely at age 4 through 6 years. The minimum interval between the 2 doses of MMR is 4 weeks.

8. Varicella vaccine.

- Administer the second dose routinely at age 4 through 6 years.
- If the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.

9. Hepatitis A vaccine (HepA).

- HepA is recommended for children aged older than age 23 months who live in areas where vaccination programs target older children, or who are at increased risk for infection, or for whom immunity against hepatitis A is desired.

10. Tetanus and diphtheria toxoids (Td) and tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap).

- Doses of Tdap are counted as part of the Td/Tdap series.
- Tdap should be substituted for a single dose of Td in the catch-up series for children aged 7 through 10 years or as a booster for children aged 11 through 18 years; use Td for other doses.

11. Human papillomavirus vaccine (HPV).

- Administer the series to females at age 13 through 18 years if not previously vaccinated or have not completed the vaccine series.
- Quadrivalent HPV vaccine (HPV4) may be administered in a 3-dose series to males aged 9 through 18 years to reduce their likelihood of genital warts.
- Use recommended routine dosing intervals for series catch-up (i.e., the second and third doses should be administered at 1 to 2 and 6 months after the first dose). The minimum interval between the first and second doses is 4 weeks. The minimum interval between the second and third doses is 12 weeks, and the third dose should be administered at least 24 weeks after the first dose.

**South Dakota Department of Health
Infectious Disease Surveillance**

Morbidity Report, 1 January – 28 Feb 2011

(provisional numbers) see <http://doh.sd.gov/ID/site.aspx>

Disease		2011 year- to-date	5-year median	Percent change
Vaccine-Preventable Diseases	Diphtheria	0	0	n/a
	Tetanus	0	0	n/a
	Pertussis	1	4	-75%
	Poliomyelitis	0	0	n/a
	Measles	0	0	n/a
	Mumps	0	2	n/a
	Rubella	0	0	n/a
	<i>Haemophilus influenzae</i> type b	0	0	n/a
Sexually Transmitted Infections and Blood-borne Diseases	HIV infection	4	5	-20%
	Hepatitis B, acute	0	0	0%
	Chlamydia	490	446	+10%
	Gonorrhea	64	51	+25%
	Syphilis, early	0	0	0%
Tuberculosis	Tuberculosis	2	2	0%
Invasive Bacterial Diseases	<i>Neisseria meningitidis</i>	1	0	+100%
	Invasive Group A <i>Streptococcus</i>	6	4	+50%
Enteric Diseases	<i>E. coli</i> , Shiga toxin-producing	0	1	-100%
	Campylobacteriosis	16	19	-16%
	Salmonellosis	9	25	-64%
	Shigellosis	1	11	-90%
	Giardiasis	9	11	-18%
	Cryptosporidiosis	4	7	-43%
	Hepatitis A	2	0	n/a
Vector-borne Diseases	Animal Rabies	6	3	+100%
	Tularemia	0	0	n/a
	Rocky Mountain Spotted Fever	0	0	n/a
	Malaria (imported)	0	0	n/a
	Hantavirus Pulmonary Syndrome	0	0	n/a
	Lyme disease	0	0	0%
	West Nile Virus disease	0	0	n/a
Other Diseases	Legionellosis	1	0	+100%
	<i>Streptococcus pneumoniae</i> , drug-resistant	0	0	n/a
	Additionally, the following were reported: Chicken Pox (2); Hepatitis B, chronic (4); MRSA, invasive (7), Strep B, invasive (3)			

Communicable diseases are obligatorily reportable by physicians, hospitals, laboratories, and institutions.

The **Reportable Diseases List** is found at <http://doh.sd.gov/Disease/report.aspx> or upon request.

Diseases are reportable by telephone, fax, mail, website, or courier.

Secure website: www.state.sd.us/doh/diseasereport

Telephones: 24 hour answering device 1-800-592-1804; for a live person at any time call 1-800-592-1861; after hours emergency 605-280-4810. **Fax** 605-773-5509.

Mail in a sealed envelope addressed to the DOH, Office of Disease Prevention, 615 E. 4th Street, Pierre, SD 57501, marked "Confidential Medical Report". **Secure website:** www.state.sd.us/doh/diseasereport.htm.