Infectious Diseases in South Dakota, 2014

Introduction

The South Dakota Department of Health strives to promote healthy living and protect the health of all South Dakotans. Disease surveillance is the ongoing collection, analysis, interpretation and dissemination of health data and is a tool used to study disease trends, monitor new and emerging diseases, and develop disease prevention policy.

Disease surveillance includes investigations, control and prevention, evaluation, planning, and allocating resources to address the diseases affecting the population. An important surveillance component is sharing infectious disease data with health care providers, public health agencies, the general population, academia, and public health and medical policy makers at local, state, tribal and national levels. Surveillance assessment reports should serve to inform and motivate.

This report provides an overview of disease surveillance that is conducted by the South Dakota Department of Health. It highlights important statistics and shows key trends for diseases that impact the South Dakota population.

Table 78 Reportable Diseases in South Dakota, 2005-2014 (Calendar years)

Reportable diseases	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL
Babesiosis	0	0	0	0	0	0	0	0	1	1	**2**
Botulism	1	0	0	0	0	0	0	0	0	0	**1**
Brucellosis	0	0	0	0	0	0	0	0	1	0	**1**
Campylobacteriosis	241	217	231	262	300	297	301	276	296	307	**2,728**
Chicken Pox (Varicella)	135	116	82	55	53	62	67	32	43	23	**668**
Chlamydia	2702	2624	2612	2919	3015	3187	3412	3925	3947	4129	**32472**
Carbapenem-resistant Enterobacteriaceae	NR	NR	NR	NR	NR	NR	NR	NR	12	3	**15**
Cryptosporidiosis	30	86	169	88	137	108	143	113	175	151	**1200**
Cyclosporiasis	0	0	0	1	0	0	0	0	1	0	**2**
Ehrlichiosis and Anaplasmosis	0	0	0	1	0	0	4	1	1	0	**7**
Giardiasis	115	98	103	137	113	102	110	144	111	131	**1164**
Gonorrhea	356	363	254	382	345	467	602	707	789	880	**5145**
Hantavirus pulmonary syndrome	2	2	1	0	0	0	1	1	0	0	**7**
Hepatitis A	1	9	7	3	3	1	2	0	4	3	**33**
Hepatitis B, chronic	34	17	36	48	33	51	51	51	80	58	**459**
Hepatitis B, acute	8	6	6	0	4	2	2	2	5	3	**38**
Hepatitis C, chronic	212	352	309	364	384	350	356	392	406	516	**3641**
Hepatitis C, acute	0	0	0	0	1	0	0	4	1	0	**6**
Haemophilus influenzae type b	0	0	0	0	0	0	1	0	3	0	**4**
Hemolytic uremic syndrome	2	1	1	3	3	2	0	0	0	1	**13**
Legionellosis	21	5	4	3	2	9	2	9	8	9	**72**
HIV and AIDS	33	34	25	34	21	35	21	29	36	31	**229**
Leprosy	0	0	0	1	0	0	0	0	0	0	**1**
Listeriosis	0	2	2	1	1	3	1	0	0	0	**10**
Lyme disease	2	1	0	3	1	1	4	4	4	2	**22**
Malaria	1	0	1	0	1	3	2	5	7	5	**25**
Measles	0	0	0	0	0	0	0	0	0	8	**8**
Mumps	0	295	6	1	2	2	0	0	0	0	**306**
Meningococcal disease	4	4	3	3	5	0	3	0	4	2	**28**
Pertussis	166	28	59	67	56	32	37	71	67	109	**692**
Q fever	2	2	1	1	9	4	1	2	4	5	**31**

Reportable diseases	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL
Rabies, animal	68	38	27	24	53	32	40	60	28	21	**391**
Rocky Mountain spotted fever	5	0	5	3	0	0	1	1	7	3	**25**
Salmonellosis	163	133	173	154	197	186	162	170	183	164	**1685**
Methicillin-resistant *Staphylococcus aureus (MRSA)*, invasive	47	51	88	77	94	98	91	89	94	124	**853**
Shigellosis	133	388	118	76	4	7	6	11	190	616	**1549**
Strep. pneumoniae, invasive	NR	NR	NR	NR	NR	NR	42	97	99	88	**326**
Shiga toxin-producing E. coli	33	50	47	53	71	35	41	48	42	41	**461**
Streptococcus A, invasive	24	10	12	23	29	44	22	NR	NR	NR	**164**
Streptococcus B, invasive	26	15	18	22	27	37	18	NR	NR	NR	**163**
Syphilis, primary, secondary and early latent	1	19	11	4	2	4	0	21	49	76	**187**
Syphilis, congenital	0	0	0	0	0	0	0	0	0	3	**3**
Toxic shock syndrome	2	0	0	1	0	0	0	0	0	0	**3**
Tularemia	8	4	7	10	5	11	8	5	7	5	**70**
Tuberculosis	16	14	13	16	18	15	15	19	9	8	
Typhoid fever	0	1	0	2	2	1	0	0	3	0	**9**
TOTAL	**1422**	**1897**	**1506**	**1485**	**1552**	**1470**	**1481**	**1529**	**1859**	**2384**	**16585**

*NR= not reportable
Source: South Dakota Department of Health, Office of Disease Prevention, Maven report by calendar year. Minor variances from past reports reflect differences between MMWR year and calendar year, cross-year deduplication and recategorization.
Individual counties events of 1 or 2 in a single year are published as ≤2.

Shiga toxin-producing *E. coli* (STEC)

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

During 2014 there were 41 cases of STEC reported. Counties with the highest incidence over the past 10 years include Sanborn, Brule and McPherson counties. Young children in the 1-4 years age group had the highest rate of STEC infection.

Table 79 Shiga Toxin Producing *E. coli* by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	0	0	0	3	≤2	0	0	0	0	≤2	6	0	22.1
Beadle	0	3	≤2	4	≤2	0	0	0	0	≤2	10	1	5.7
Bennett	0	0	0	0	0	0	≤2	0	≤2	0	2	0	5.8
Bon Homme	3	0	≤2	0	0	3	≤2	≤2	≤2	2	12	1	17.0
Brookings	0	4	≤2	3	≤2	0	≤2	≤2	≤2	0	14	1	4.4
Brown	≤2	≤2	4	4	≤2	0	3	≤2	≤2	0	18	2	4.9
Brule	0	4	0	0	18	0	0	0	0	0	22	0	41.9

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Buffalo	0	0	0	≤2	0	0	0	0	0	0	1	0	5.2
Butte	0	≤2	0	0	0	0	0	0	0	0	1	0	1.0
Campbell	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Charles Mix	0	≤2	0	6	≤2	≤2	0	≤2	≤2	0	14	1	15.3
Clark	0	0	0	≤2	0	0	0	0	≤2	0	2	0	5.4
Clay	0	0	0	≤2	0	≤2	0	0	≤2	0	3	0	2.2
Codington	≤2	4	5	≤2	≤2	0	5	0	≤2	0	18	1	6.6
Corson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Custer	0	0	≤2	0	≤2	≤2	0	0	≤2	0	4	0	4.9
Davison	≤2	≤2	4	≤2	3	5	≤2	0	≤2	≤2	20	2	10.3
Day	0	0	0	≤2	0	≤2	0	0	0	0	2	0	3.5
Deuel	3	0	0	≤2	0	0	0	0	0	0	4	0	9.2
Dewey	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Douglas	0	0	0	0	0	0	0	≤2	0	≤2	2	0	6.7
Edmunds	0	≤2	0	≤2	0	0	0	0	0	0	2	0	4.9
Fall River	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Faulk	0	0	0	≤2	0	0	0	≤2	0	0	2	0	8.5
Grant	≤2	0	0	0	0	0	0	0	0	0	1	0	1.4
Gregory	≤2	≤2	≤2	0	≤2	0	0	0	0	0	4	0	9.4
Haakon	0	0	0	0	0	0	≤2	0	0	0	1	0	5.2
Hamlin	0	0	0	≤2	0	0	≤2	0	0	0	2	0	3.4
Hand	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hanson	0	≤2	0	0	0	0	≤2	0	0	≤2	4	0	12.0
Harding	0	0	0	0	0	≤2	0	0	0	≤2	3	0	23.9
Hughes	0	0	0	0	≤2	0	≤2	0	0	0	4	0	2.3
Hutchinson	0	≤2	≤2	0	0	5	0	0	≤2	0	9	0	12.3
Hyde	0	≤2	0	0	0	0	0	0	0	0	1	0	7.0
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jerauld	0	0	0	0	≤2	0	0	0	0	0	2	0	9.7
Jones	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Kingsbury	0	0	0	0	≤2	0	0	0	≤2	≤2	4	0	7.8
Lake	0	0	≤2	≤2	0	0	0	0	≤2	0	3	0	2.7
Lawrence	≤2	0	0	≤2	0	0	0	0	0	≤2	5	0	2.1
Lincoln	0	0	≤2	5	3	≤2	≤2	≤2	≤2	3	20	2	4.5
Lyman	0	0	0	0	≤2	0	0	0	0	0	2	0	5.3
Marshall	≤2	0	≤2	0	4	0	0	0	0	≤2	8	0	17.2
McCook	0	≤2	0	0	≤2	≤2	≤2	≤2	0	0	8	1	14.2
McPherson	≤2	0	2	≤2	0	0	≤2	≤2	≤2	0	8	1	32.5
Meade	≤2	0	0	0	0	0	5	≤2	0	0	7	0	2.8
Mellette	0	0	0	0	0	0	0	0	≤2	0	1	0	4.9
Miner	0	0	0	0	0	0	≤2	0	0	0	1	0	4.2
Minnehaha	8	12	9	4	9	5	5	13	10	7	82	9	4.8
Moody	0	≤2	0	0	0	0	0	0	0	0	1	0	1.5
Oglala Lakota	0	0	0	0	0	0	0	0	0	≤2	1	0	0.7
Pennington	0	≤2	≤2	0	2	0	4	7	6	5	26	2	2.6
Perkins	0	≤2	≤2	0	≤2	≤2	0	0	0	0	5	0	16.8
Potter	0	≤2	0	0	0	0	0	0	0	0	2	0	8.6
Roberts	0	0	0	0	0	0	0	0	≤2	≤2	3	0	3.0
Sanborn	3	≤2	≤2	≤2	0	0	0	≤2	0	≤2	10	1	42.5
Spink	≤2	0	≤2	4	4	0	0	≤2	≤2	0	13	1	20.3
Stanley	0	0	0	0	0	≤2	0	0	0	0	2	0	6.7
Sully	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Todd	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Tripp	≤2	≤2	4	0	≤2	≤2	≤2	3	0	0	13	1	23.0
Turner	≤2	≤2	0	0	≤2	0	0	0	0	≤2	4	0	4.8
Union	0	0	0	≤2	≤2	≤2	≤2	≤2	0	≤2	9	1	6.3
Walworth	0	0	0	≤2	0	0	0	≤2	≤2	≤2	5	0	9.2
Yankton	4	3	3	≤2	≤2	≤2	≤2	6	5	≤2	28	3	12.5
Ziebach	0	0	0	0	0	0	0	0	0	0	0	0	0.0
TOTAL	**33**	**50**	**47**	**53**	**71**	**35**	**41**	**48**	**42**	**41**	**461**	**45**	**5.7**

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	18	32	27	29	42	15	22	23	23	20	251	23	6.2
Male	15	18	20	24	29	20	19	25	18	21	209	20	5.1
TOTAL	**33**	**50**	**47**	**53**	**71**	**35**	**41**	**48**	**41**	**41**	**460**	**44**	**5.6**

Missing Frequency = 1

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	32	43	38	48	65	34	37	45	35	36	413	38	5.9
Am Indian	0	6	≤2	≤2	6	0	≤2	≤2	4	3	24	2	2.9
Black, Af Am	≤2	0	3	≤2	0	0	0	0	0	0	5	0	3.4
Asian	0	0	0	≤2	0	0	≤2	0	0	0	2	0	2.8
Other	0	0	0	≤2	0	0	0	0	≤2	0	2	0	1.9
Unknown	0	0	3	0	0	≤2	≤2	0	≤2	≤2	7	1	na
TOTAL	**33**	**49**	**45**	**52**	**71**	**35**	**40**	**47**	**41**	**40**	**453**	**43**	**5.6**

Missing Frequency = 8

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	1	3	2	0	4	4	1	2	1	1	19	2	15.9
1-4 years	7	17	18	17	27	5	6	10	9	9	125	10	26.2
5-14 years	9	13	12	15	10	9	13	15	5	8	109	11	10.0
15-24 years	3	4	8	5	13	3	9	5	6	9	65	6	5.6
25-39 years	0	3	3	6	2	6	5	7	4	6	42	5	2.8
40-64 years	10	7	2	6	8	6	6	7	9	5	66	7	2.5
≥65 years	3	3	1	3	7	2	1	2	8	3	33	3	2.8
TOTAL	**33**	**50**	**46**	**52**	**71**	**35**	**41**	**48**	**42**	**41**	**459**	**44**	**5.6**

Missing Frequency = 2

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1 or 2 in a single year are published as ≤2.

Salmonellosis

Salmonella causes diarrhea, fever, and abdominal cramps between 12 and 72 hours after infection. The illness usually lasts four to seven days, and most individuals recover without treatment, but in some with diarrhea infection may spread from the intestines to the blood stream, and then to other body sites. In severe cases, infection may cause death. The elderly, infants, and those with impaired immune systems are more likely to have a severe illness. In 2014 there were 164 cases of salmonellosis reported in South Dakota. During the past decade the highest rates were in Haakon, Buffalo, Faulk and Douglas counties, and young children in 1-4 years age group had the highest rate.

Table 80 Salmonellosis by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	0	0	0	0	≤2	≤2	0	≤2	0	0	3	0	11.1
Beadle	5	5	3	3	4	≤2	5	≤2	3	4	35	4	20.1
Bennett	0	≤2	0	0	0	0	0	0	0	0	1	0	2.9
Bon Homme	0	≤2	0	≤2	≤2	≤2	≤2	3	0	≤2	12	1	17.0
Brookings	4	7	10	≤2	7	6	4	7	6	0	53	6	16.6
Brown	3	7	10	12	15	36	6	9	8	3	109	9	29.8
Brule	≤2	0	0	≤2	0	≤2	3	≤2	≤2	5	14	1	26.6
Buffalo	0	≤2	≤2	≤2	0	0	≤2	2	5	≤2	13	1	68.0
Butte	≤2	≤2	≤2	≤2	≤2	≤2	≤2	0	≤2	≤2	13	1	12.9
Campbell	0	0	≤2	0	0	0	≤2	0	0	≤2	4	0	27.3
Charles Mix	≤2	0	3	7	≤2	≤2	0	5	4	3	26	3	28.5
Clark	0	0	≤2	0	≤2	0	0	≤2	0	≤2	6	0	16.3
Clay	3	4	≤2	≤2	3	4	3	6	5	≤2	33	3	23.8
Codington	4	≤2	≤2	4	3	3	4	3	≤2	3	29	3	10.7
Corson	≤2	≤2	0	3	0	≤2	≤2	0	≤2	≤2	10	1	24.7
Custer	≤2	0	≤2	≤2	≤2	≤2	≤2	0	0	0	8	1	9.7
Davison	6	5	6	5	6	3	4	5	11	4	55	5	28.2

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Day	≤2	≤2	≤2	≤2	0	4	≤2	0	≤2	≤2	12	1	21.0
Deuel	0	0	≤2	0	≤2	≤2	0	≤2	≤2	≤2	8	1	18.3
Dewey	3	0	≤2	4	0	6	0	≤2	0	≤2	18	2	34.0
Douglas	4	3	3	≤2	0	≤2	≤2	0	4	0	19	2	63.3
Edmunds	0	3	≤2	4	≤2	0	3	≤2	≤2	≤2	19	2	46.7
Fall River	≤2	0	≤2	0	≤2	≤2	0	4	0	3	12	1	16.9
Faulk	3	≤2	≤2	0	≤2	≤2	4	0	≤2	≤2	15	1	63.5
Grant	0	0	0	≤2	≤2	≤2	≤2	≤2	≤2	3	11	1	15.0
Gregory	0	≤2	0	0	≤2	0	≤2	≤2	3	4	11	1	25.8
Haakon	≤2	≤2	0	≤2	8	≤2	≤2	0	≤2	≤2	18	1	92.9
Hamlin	0	0	≤2	≤2	≤2	≤2	0	0	0	≤2	6	1	10.2
Hand	≤2	0	0	0	0	0	0	0	0	0	1	0	2.9
Hanson	≤2	0	≤2	0	0	≤2	≤2	3	≤2	0	10	1	30.0
Harding	0	0	≤2	0	0	0	0	0	0	0	1	0	8.0
Hughes	3	≤2	0	5	≤2	6	≤2	0	3	4	25	3	14.7
Hutchinson	0	≤2	0	≤2	≤2	≤2	3	6	3	≤2	20	2	27.2
Hyde	0	0	0	0	0	0	0	0	0	≤2	1	0	7.0
Jackson	≤2	≤2	0	0	0	0	0	0	≤2	≤2	6	0	19.8
Jerauld	0	≤2	≤2	≤2	0	0	≤2	0	≤2	0	6	1	29.0
Jones	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Kingsbury	0	≤2	0	≤2	4	0	0	3	5	0	15	1	29.1
Lake	4	0	0	4	8	≤2	0	3	3	≤2	24	2	21.4
Lawrence	7	≤2	≤2	5	5	≤2	≤2	0	3	3	29	3	12.0
Lincoln	7	3	13	6	13	9	11	7	7	7	83	7	18.5
Lyman	≤2	≤2	≤2	0	0	0	≤2	≤2	0	≤2	8	1	21.3
Marshall	≤2	≤2	≤2	≤2	0	0	≤2	≤2	≤2	≤2	10	1	21.5
McCook	0	0	0	≤2	≤2	0	≤2	≤2	≤2	≤2	9	1	16.0
McPherson	≤2	0	3	0	0	0	0	≤2	≤2	3	9	1	36.6
Meade	3	≤2	4	4	3	≤2	3	3	≤2	≤2	25	3	9.8
Mellette	≤2	≤2	0	0	0	0	0	0	≤2	0	4	0	19.5
Miner	5	0	0	0	3	0	0	0	0	≤2	9	0	37.7
Minnehaha	50	25	31	23	55	36	29	35	43	32	359	34	21.2
Moody	0	≤2	0	≤2	≤2	≤2	6	0	0	≤2	11	1	17.0
Oglala Lakota	≤2	5	≤2	4	3	5	≤2	10	6	4	41	4	30.2
Pennington	9	11	28	18	12	15	13	11	9	16	142	13	14.1
Perkins	≤2	0	≤2	4	≤2	0	0	0	0	≤2	8	1	26.8
Potter	0	≤2	0	0	0	0	0	0	≤2	0	3	0	12.9
Roberts	0	≤2	4	4	3	0	3	0	4	≤2	22	3	21.7
Sanborn	0	0	0	0	4	0	5	0	≤2	0	10	0	42.5
Spink	7	≤2	≤2	0	≤2	5	0	3	≤2	≤2	21	1	32.7
Stanley	≤2	0	0	0	≤2	≤2	0	0	≤2	≤2	5	1	16.9
Sully	0	0	0	0	0	0	0	0	0	≤2	≤2	0	7.3
Todd	≤2	12	3	0	4	4	≤2	0	3	≤2	30	3	31.2
Tripp	0	≤2	≤2	≤2	0	≤2	≤2	4	≤2	≤2	13	1	23.0
Turner	3	≤2	10	4	≤2	3	0	9	8	4	43	4	51.5
Union	4	7	4	≤2	4	≤2	3	≤2	4	4	35	4	24.3
Walworth	0	≤2	0	≤2	≤2	0	7	≤2	≤2	≤2	15	1	27.6
Yankton	5	≤2	5	4	3	5	12	7	3	10	55	5	24.5
Ziebach	≤2	0	0	0	0	≤2	0	0	0	≤2	3	0	10.7
TOTAL	**163**	**133**	**173**	**154**	**197**	**186**	**162**	**170**	**183**	**164**	**1685**	**167**	**20.7**

Missing Frequency = 2

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	86	65	94	90	104	94	77	81	82	85	858	86	21.1
Male	77	67	79	64	93	92	85	89	100	79	825	82	20.3
TOTAL	**163**	**132**	**173**	**154**	**197**	**186**	**162**	**170**	**182**	**164**	**1683**	**167**	**20.7**

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	141	98	147	132	173	162	138	124	156	135	1406	140	20.1
Am Indian	11	21	13	20	15	19	16	28	20	19	182	19	22.2
Black, Af Am	≤2	≤2	≤2	0	4	≤2	≤2	6	3	≤2	22	2	15.0
Asian	≤2	≤2	0	0	≤2	≤2	5	4	0	0	14	1	19.4
Other	0	0	0	0	0	0	0	≤2	0	≤2	2	0	1.9
Unknown	7	12	7	1	2	2	1	1	3	6	42	3	na
TOTAL	**161**	**133**	**169**	**153**	**196**	**186**	**162**	**164**	**182**	**162**	**1668**	**163**	**20.5**

Missing Frequency = 17

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	11	8	5	10	11	7	10	12	11	9	94	10	78.8
1-4 years	19	22	11	16	26	13	14	22	20	16	179	18	37.5
5-14 years	19	14	20	23	33	39	29	25	24	19	245	24	22.4
15-24 years	20	25	25	22	23	30	14	20	27	24	230	24	20.0
25-39 years	33	25	31	27	37	33	40	18	29	33	306	32	20.2
40-64 years	33	28	56	36	48	42	34	53	54	42	426	42	16.3
≥65 years	18	8	21	17	16	22	20	20	17	21	180	19	15.4
TOTAL	**153**	**130**	**169**	**151**	**194**	**186**	**161**	**170**	**182**	**164**	**1660**	**167**	**20.4**

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1 or 2 in a single year are published as ≤2.

Shigellosis

In 2013 there were 616 cases of shigellosis reported, which was the most cases since 2001. The highest rates were in Todd, Buffalo and Oglala Lakota counties over the past decade. Young children in the 1-4 years age group had the highest rate of shigellosis.

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

Table 81 Shigellosis by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	0	0	0	0	0	0	0	0	≤2	0	1	0	3.7
Beadle	0	0	0	0	0	0	≤2	0	0	0	1	0	0.6
Bennett	0	≤2	0	0	0	0	0	0	0	≤2	3	0	8.7
Bon Homme	≤2	0	0	0	0	0	0	0	0	0	1	0	1.4
Brookings	0	0	5	0	0	0	0	0	0	4	9	0	2.8
Brown	0	≤2	0	≤2	0	0	0	≤2	0	0	4	0	1.1
Brule	0	≤2	0	0	0	0	0	0	≤2	5	7	0	13.3
Buffalo	0	19	0	0	0	0	0	0	0	21	40	0	209.2
Butte	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Campbell	0	0	0	0	0	0	0	0	0	6	6	0	40.9
Charles Mix	55	7	0	0	0	0	0	0	≤2	11	75	0	82.2
Clark	0	0	0	0	≤2	0	0	0	0	0	1	0	2.7
Clay	≤2	0	0	0	0	0	0	0	≤2	0	3	0	2.2
Codington	7	0	0	0	0	0	0	0	0	6	13	0	4.8
Corson	0	≤2	0	56	≤2	0	0	0	0	3	61	0	150.6
Custer	0	≤2	0	0	0	0	0	0	≤2	≤2	3	0	3.7
Davison	≤2	≤2	≤2	0	0	≤2	≤2	0	0	≤2	8	1	4.1

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Day	0	0	0	0	0	0	0	0	0	10	10	0	17.5
Deuel	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Dewey	0	13	≤2	≤2	0	0	≤2	0	0	19	36	1	67.9
Douglas	≤2	≤2	0	0	0	0	0	≤2	0	0	4	0	13.3
Edmunds	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Fall River	0	0	0	0	0	0	0	0	0	≤2	2	0	2.8
Faulk	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Grant	0	0	0	0	0	0	0	3	0	0	3	0	4.1
Gregory	≤2	≤2	0	0	0	0	0	0	0	0	3	0	7.0
Haakon	0	0	0	0	0	0	0	0	0	≤2	2	0	10.3
Hamlin	0	0	0	0	0	0	0	0	0	≤2	1	0	1.7
Hand	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hanson	0	0	0	0	0	0	0	0	0	≤2	2	0	6.0
Harding	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hughes	≤2	31	66	0	0	0	0	0	3	9	110	1	64.6
Hutchinson	0	0	0	0	0	0	0	0	0	≤2	1	0	1.4
Hyde	0	0	≤2	0	0	0	0	0	0	≤2	2	0	14.1
Jackson	≤2	0	4	0	≤2	0	0	0	0	0	6	0	19.8
Jerauld	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jones	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Kingsbury	0	≤2	0	0	0	0	0	0	≤2	0	3	0	5.8
Lake	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Lawrence	3	≤2	3	0	0	0	0	0	0	0	7	0	2.9
Lincoln	≤2	0	0	0	0	0	0	0	≤2	≤2	4	0	0.9
Lyman	0	44	0	0	0	0	0	0	0	18	62	0	165.1
Marshall	0	0	0	0	0	0	0	0	0	≤2	1	0	2.1
McCook	0	0	0	0	0	0	0	0	0	0	0	0	0.0
McPherson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Meade	0	≤2	0	0	0	0	0	≤2	0	≤2	4	0	1.6
Mellette	≤2	6	0	0	0	0	0	0	5	8	20	0	97.7
Miner	0	≤2	0	0	0	0	0	0	0	0	1	0	4.2
Minnehaha	3	≤2	5	4	≤2	3	3	3	≤2	14	40	3	2.4
Moody	0	0	0	0	0	3	0	0	0	0	3	0	4.6
Oglala Lakota	13	55	6	0	0	0	0	0	7	186	267	3	196.5
Pennington	4	29	≤2	≤2	0	0	0	0	6	39	82	2	8.1
Perkins	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Potter	0	≤2	0	0	0	0	0	≤2	0	0	2	0	8.6
Roberts	0	≤2	≤2	0	0	0	0	0	0	120	123	0	121.2
Sanborn	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Spink	0	0	0	0	0	0	0	0	0	≤2	2	0	3.1
Stanley	≤2	≤2	5	0	0	0	0	0	0	≤2	9	0	30.3
Sully	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Todd	25	146	15	≤2	0	0	0	0	135	70	393	9	408.9
Tripp	3	10	≤2	0	0	0	0	0	10	29	53	1	93.9
Turner	0	≤2	0	0	0	0	0	0	0	0	1	0	1.2
Union	≤2	0	0	0	0	0	0	0	13	≤2	16	0	11.1
Walworth	0	≤2	≤2	10	0	0	0	0	0	≤2	14	0	25.7
Yankton	7	0	0	0	0	0	0	0	0	14	21	0	9.4
Ziebach	0	2	0	0	0	0	0	0	0	≤2	3	0	10.7
TOTAL	**133**	**388**	**118**	**76**	**4**	**7**	**6**	**11**	**190**	**616**	**1549**	**97**	**19.0**

Missing Frequency = 4

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	75	201	61	37	1	4	3	7	108	321	818	49	20.1
Male	58	184	57	39	3	3	3	4	82	294	727	48	17.8
TOTAL	**133**	**385**	**118**	**76**	**4**	**7**	**6**	**11**	**190**	**615**	**1545**	**97**	**19.0**

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	46	43	52	11	≤2	5	≤2	8	33	105	306	22	4.4
Am Indian	83	334	60	63	≤2	0	≤2	0	151	499	1193	62	145.4
Black, Af Am	≤2	0	≤2	0	0	≤2	≤2	3	0	≤2	10	≤2	6.8
Asian	0	≤2	0	≤2	0	0	≤2	0	0	0	3	0	4.2
Other	0	≤2	0	0	0	0	≤2	0	≤2	0	4	0	3.7
Unknown	1	9	4	0	0	0	0	0	4	8	26	1	na
TOTAL	**131**	**388**	**117**	**75**	**4**	**7**	**6**	**11**	**190**	**613**	**1542**	**96**	**18.9**

Missing Frequency = 7

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	7	21	8	3	0	0	0	0	4	12	55	4	46.1
1-4 years	44	155	51	31	1	2	2	0	52	194	532	38	111.5
5-14 years	31	101	29	22	1	2	1	5	86	245	523	26	47.8
15-24 years	10	35	5	3	0	1	2	1	12	38	107	4	9.3
25-39 years	18	36	19	9	0	2	1	3	22	75	185	14	12.2
40-64 years	7	21	5	6	0	0	0	1	8	39	87	6	3.3
≥65 years	4	4	0	0	2	0	0	1	3	8	22	2	1.9
TOTAL	**121**	**373**	**117**	**74**	**4**	**7**	**6**	**11**	**187**	**611**	**1511**	**96**	**18.6**

Missing Frequency = 38

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1 or 2 in a single year are published as ≤2.

Campylobacteriosis

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

Campylobacter has been the most commonly reported enteric bacterial pathogen in South Dakota since 2001. In 2014, there were 307 cases of campylobacteriosis, which was the most ever reported in one year. Counties with the highest 10-year average incidence (cases per 100,000 population) included Douglas (180), Aurora (162), Tripp (108) and Gregory (103). Children in the 1-4 year age group had the highest rate of disease.

TABLE 82 Campylobacteriosis by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	5	4	7	≤2	3	8	≤2	3	≤2	8	44	4	162.4
Beadle	5	10	8	6	10	4	10	4	9	≤2	68	7	39.1
Bennett	0	0	≤2	6	≤2	0	0	≤2	4	≤2	16	1	46.6
Bon Homme	≤2	≤2	≤2	4	6	8	4	≤2	≤2	7	37	3	52.3
Brookings	12	4	11	5	17	13	13	11	11	8	105	11	32.8
Brown	18	14	9	7	9	21	17	13	7	14	129	14	35.3
Brule	≤2	5	≤2	5	3	4	3	8	7	4	42	4	79.9
Buffalo	3	0	0	≤2	≤2	0	≤2	0	0	0	7	0	36.6
Butte	≤2	≤2	0	≤2	5	≤2	5	0	≤2	≤2	18	1	17.8
Campbell	0	≤2	≤2	0	≤2	≤2	0	4	≤2	0	11	1	75.0
Charles Mix	6	4	6	11	6	7	11	6	12	15	84	7	92.0
Clark	0	0	0	≤2	0	3	0	3	3	3	13	1	35.2
Clay	0	0	≤2	3	0	3	3	13	9	8	41	3	29.6
Codington	≤2	≤2	0	9	9	3	5	6	9	8	52	6	19.1
Corson	3	≤2	≤2	4	≤2	3	3	≤2	0	≤2	19	2	46.9
Custer	0	0	≤2	≤2	≤2	≤2	≤2	≤2	≤2	3	13	1	15.8

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Davison	10	9	13	6	11	17	9	13	10	8	106	10	54.3
Day	4	≤2	≤2	≤2	4	≤2	≤2	3	9	4	30	3	52.5
Deuel	≤2	0	0	≤2	≤2	6	≤2	≤2	≤2	3	19	2	43.5
Dewey	≤2	0	2	3	3	4	7	≤2	≤2	3	26	3	49.0
Douglas	3	10	5	6	4	9	4	5	≤2	7	54	5	179.9
Edmunds	4	4	3	≤2	5	3	4	3	5	≤2	33	4	81.1
Fall River	0	0	≤2	≤2	≤2	0	≤2	≤2	0	≤2	8	1	11.3
Faulk	≤2	5	≤2	≤2	4	≤2	4	≤2	0	3	23	2	97.3
Grant	≤2	6	3	3	3	6	5	0	≤2	≤2	32	3	43.5
Gregory	≤2	≤2	4	7	5	5	5	3	9	≤2	44	5	103.0
Haakon	0	≤2	0	≤2	≤2	4	5	0	≤2	≤2	17	2	87.8
Hamlin	4	≤2	≤2	4	≤2	≤2	7	≤2	5	≤2	29	2	49.1
Hand	≤2	4	5	0	0	≤2	≤2	0	≤2	0	15	1	43.7
Hanson	≤2	≤2	≤2	3	≤2	3	≤2	8	≤2	5	29	2	87.1
Harding	0	0	0	6	≤2	0	≤2	0	≤2	0	9	0	71.7
Hughes	≤2	≤2	≤2	2	≤2	4	3	≤2	3	8	29	2	17.0
Hutchinson	≤2	3	8	1	3	6	7	3	9	4	46	4	62.6
Hyde	3	≤2	0	3	0	0	0	0	0	0	7	0	49.3
Jackson	≤2	≤2	≤2	≤2	6	3	≤2	≤2	≤2	≤2	21	2	69.3
Jerauld	3	≤2	≤2	≤2	≤2	≤2	≤2	≤2	3	0	17	2	82.1
Jones	≤2	≤2	0	0	0	0	0	0	≤2	0	3	0	29.8
Kingsbury	≤2	≤2	3	6	6	5	5	5	5	6	45	5	87.4
Lake	7	≤2	6	8	9	5	4	≤2	≤2	5	50	5	44.6
Lawrence	3	4	3	3	≤2	≤2	0	≤2	≤2	≤2	22	2	9.1
Lincoln	9	8	12	9	10	8	9	11	8	19	103	9	23.0
Lyman	0	≤2	≤2	≤2	4	≤2	≤2	≤2	≤2	0	13	1	34.6
Marshall	≤2	3	6	≤2	≤2	3	3	7	4	5	35	3	75.2
McCook	5	5	≤2	5	6	≤2	6	4	6	3	42	5	74.8
McPherson	≤2	≤2	≤2	≤2	≤2	3	3	≤2	0	≤2	18	2	73.2
Meade	3	3	≤2	4	6	4	7	4	3	≤2	37	4	14.5
Mellette	≤2	0	0	4	≤2	0	7	0	≤2	0	15	1	73.2
Miner	≤2	≤2	≤2	3	3	≤2	≤2	≤2	5	≤2	22	2	92.1
Minnehaha	44	26	42	32	40	38	32	53	43	36	386	39	22.8
Moody	≤2	4	3	2	4	5	6	4	5	5	40	4	61.7
Oglala Lakota	3	≤2	0	0	0	≤2	≤2	0	≤2	≤2	11	1	8.1
Pennington	13	19	8	21	20	8	17	8	12	17	143	15	14.2
Perkins	≤2	0	1	≤2	8	5	2	4	1	0	24	2	80.5
Potter	0	≤2	0	0	0	3	0	≤2	0	≤2	8	0	34.3
Roberts	5	5	4	4	4	10	5	≤2	5	16	61	5	60.1
Sanborn	≤2	≤2	≤2	3	≤2	0	3	3	4	≤2	20	2	84.9
Spink	4	≤2	6	≤2	4	5	5	7	4	5	43	5	67.0
Stanley	≤2	≤2	0	0	≤2	≤2	≤2	0	≤2	≤2	9	1	30.3
Sully	0	≤2	0	0	≤2	0	0	0	0	0	2	0	14.6
Todd	0	0	8	4	≤2	≤2	≤2	4	4	3	27	3	28.1
Tripp	7	8	4	5	10	6	4	5	7	5	61	6	108.1
Turner	6	5	≤2	5	4	5	5	6	4	≤2	44	5	52.7
Union	4	4	≤2	4	4	4	5	8	10	8	52	4	36.1
Walworth	≤2	0	3	≤2	3	6	9	≤2	1	3	31	3	57.0
Yankton	6	3	5	6	6	5	6	4	9	13	63	6	28.1
Ziebach	0	0	0	≤2	0	0	0	0	≤2	≤2	4	0	14.3
TOTAL	**241**	**217**	**231**	**262**	**300**	**297**	**301**	**276**	**295**	**307**	**2727**	**286**	**33.5**

*Incidence: average annual cases per 100,000 population

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	108	86	92	100	103	91	95	104	108	118	1005	102	24.7
Male	133	131	139	162	197	206	206	172	188	189	1723	180	42.3
TOTAL	**241**	**217**	**231**	**262**	**300**	**297**	**301**	**276**	**296**	**307**	**2728**	**286**	**33.5**

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	219	163	195	230	277	254	256	255	260	242	2351	248	33.6
Am Indian	12	17	16	20	16	21	24	17	19	34	196	18	23.9
Black, Af Amer	≤2	0	≤2	3	≤2	7	3	≤2	3	≤2	24	2	16.3
Asian	0	0	0	≤2	≤2	≤2	0	0	0	4	7	0	9.7
Other	≤2	0	0	≤2	≤2	≤2	0	≤2	≤2	≤2	10	1	9.3
Unknown	2	34	16	3	3	11	12	0	8	7	96	8	na
TOTAL		**236**	**214**	**229**	**258**	**300**	**295**	**295**	**275**	**292**	**290**	**2684**	**283**

Missing Frequency = 44

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	7	6	9	12	9	8	8	9	5	5	78	8	65.4
1-4 years	35	28	29	35	44	36	45	39	28	37	356	36	74.6
5-14 years	23	28	26	34	44	37	43	22	48	38	343	36	31.3
15-24 years	42	39	45	45	50	41	55	49	50	34	450	45	39.1
25-39 years	53	47	37	44	57	82	44	63	57	74	558	55	36.9
40-64 years	59	53	62	65	67	68	80	64	76	89	683	66	26.1
≥65 years	20	16	19	22	25	25	25	28	32	30	242	25	20.8
TOTAL	**241**	**217**	**231**	**262**	**300**	**297**	**301**	**276**	**296**	**307**	**2728**	**286**	**33.5**

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1 or 2 in a single year are published as ≤2.

Cryptosporidiosis

Cryptosporidiosis is a diarrheal disease caused by a chlorine-tolerant protozoan parasite transmitted by cattle or human feces through contaminated food or water or by direct person-to-person or animal-to-person contact.

In 2014 there were 151 cases reported. Counties with the highest average annual 10-year incidence include Yankton (94 cases per 100,000 population per year), Faulk (51) and Bon Homme (41). Children in the 1-4 year age group have the highest rate of disease.

TABLE 83 Cryptosporidiosis by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	0	0	0	≤2	0	0	≤2	0	0	≤2	4	0	14.8
Beadle	≤2	4	8	≤2	5	≤2	10	7	7	4	50	5	28.7
Bennett	0	0	0	0	0	0	0	0	≤2	0	1	0	2.9
Bon Homme	3	≤2	3	≤2	6	≤2	≤2	4	5	3	29	3	41.0
Brookings	≤2	≤2	8	7	5	4	4	3	2	6	42	4	13.1
Brown	≤2	11	31	29	11	3	9	10	5	12	122	11	33.4
Brule	0	≤2	≤2	0	≤2	≤2	0	≤2	≤2	≤2	10	1	19.0
Buffalo	0	0	≤2	0	0	0	0	0	0	5	6	0	31.4
Butte	0	0	0	0	0	0	0	0	≤2	0	1	0	1.0
Campbell	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Charles Mix	0	≤2	5	≤2	≤2	3	5	0	≤2	4	22	2	24.1
Clark	0	0	0	0	≤2	≤2	≤2	≤2	0	≤2	6	1	16.3
Clay	≤2	≤2	≤2	≤2	4	5	4	≤2	11	≤2	36	2	26.0
Codington	≤2	3	4	3	5	23	7	9	17	6	78	6	28.6
Corson	0	0	0	0	≤2	0	0	0	≤2	0	2	0	4.9
Custer	0	≤2	0	0	0	≤2	0	≤2	0	0	3	0	3.7
Davison	0	≤2	9	4	7	5	9	0	8	12	56	6	28.7
Day	0	0	0	0	3	0	≤2	5	≤2	3	13	1	22.8
Deuel	0	≤2	≤2	0	0	0	≤2	≤2	≤2	≤2	9	1	20.6
Dewey	0	0	0	0	0	0	0	≤2	0	7	8	0	15.1
Douglas	0	0	≤2	0	0	0	0	0	0	≤2	4	0	13.3
Edmunds	0	≤2	3	≤2	0	≤2	≤2	≤2	0	0	8	1	19.7
Fall River	0	0	0	0	0	0	0	≤2	0	0	2	0	1.4
Faulk	0	≤2	0	0	≤2	≤2	≤2	4	≤2	≤2	12	1	50.8

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Grant	≤2	0	3	0	≤2	≤2	≤2	0	0	0	8	1	10.9
Gregory	0	≤2	≤2	≤2	≤2	3	≤2	0	≤2	≤2	11	1	25.8
Haakon	0	0	≤2	0	0	0	0	0	0	0	1	0	5.2
Hamlin	0	0	≤2	0	≤2	≤2	≤2	≤2	5	4	17	2	28.8
Hand	0	0	0	≤2	0	0	≤2	0	0	0	≤2	0	5.8
Hanson	0	0	≤2	0	0	≤2	3	0	≤2	≤2	8	1	24.0
Harding	0	0	0	0	0	≤2	0	≤2	0	0	1	0	15.9
Hughes	0	0	≤2	0	0	0	≤2	0	≤2	3	6	0	3.5
Hutchinson	0	3	≤2	≤2	0	0	4	≤2	6	4	22	2	30.0
Hyde	0	0	0	0	0	0	0	0	≤2	0	1	0	7.0
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jerauld	0	0	0	3	0	≤2	≤2	≤2	0	0	6	0	29.0
Jones	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Kingsbury	0	0	≤2	4	0	0	≤2	3	≤2	≤2	12	1	23.3
Lake	0	0	≤2	2	≤2	0	4	0	≤2	≤2	10	1	8.9
Lawrence	0	0	0	0	0	0	0	0	7	0	7	0	2.9
Lincoln	≤2	≤2	8	0	4	≤2	3	≤2	8	≤2	31	2	6.9
Lyman	0	0	0	0	0	0	0	0	≤2	0	1	0	2.7
Marshall	≤2	≤2	0	0	0	0	3	0	0	≤2	7	0	15.0
McCook	0	0	≤2	≤2	≤2	3	3	≤2	≤2	≤2	15	2	26.7
McPherson	0	≤2	0	0	0	≤2	0	≤2	≤2	0	5	0	20.3
Meade	0	≤2	0	0	0	0	0	0	7	0	8	0	3.1
Mellette	0	0	0	0	0	3	0	0	0	0	3	0	14.6
Miner	0	0	≤2	0	≤2	0	0	0	0	0	1	0	8.4
Minnehaha	3	9	36	10	40	11	16	14	15	11	165	13	9.7
Moody	3	0	≤2	0	0	0	0	5	≤2	≤2	12	1	18.5
Oglala Lakota	0	≤2	0	≤2	0	0	0	0	0	≤2	3	0	2.2
Pennington	0	≤2	2	≤2	4	≤2	3	≤2	9	9	32	2	3.2
Perkins	0	0	0	≤2	0	0	≤2	0	0	0	2	0	6.7
Potter	0	0	0	0	0	0	≤2	0	0	0	1	0	4.3
Roberts	≤2	0	0	0	0	5	≤2	0	0	0	7	0	6.9
Sanborn	0	0	0	0	0	≤2	0	≤2	≤2	≤2	6	0	25.5
Spink	0	≤2	3	≤2	6	≤2	0	3	≤2	≤2	17	1	26.5
Stanley	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sully	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Todd	0	0	0	0	0	0	≤2	≤2	≤2	≤2	4	0	4.2
Tripp	0	≤2	0	0	3	0	0	0	0	0	4	0	7.1
Turner	0	0	0	≤2	0	0	≤2	0	≤2	≤2	6	0	7.2
Union	0	≤2	0	≤2	0	≤2	0	4	≤2	≤2	12	1	8.3
Walworth	0	0	3	0	0	≤2	≤2	3	0	≤2	11	1	20.2
Yankton	10	31	21	5	21	15	34	16	31	26	210	21	93.6
Ziebach	0	0	0	0	0	0	0	0	0	0	0	0	0.0
TOTAL	**30**	**86**	**169**	**88**	**137**	**108**	**143**	**113**	**175**	**151**	**1200**	**125**	**14.7**

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	18	42	83	47	70	53	71	67	88	74	613	69	15.1
Male	12	44	86	41	66	55	72	46	87	77	586	61	14.4
TOTAL	**30**	**86**	**169**	**88**	**136**	**108**	**143**	**113**	**175**	**151**	**1199**	**125**	**14.7**

Missing frequency = 1

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	30	79	154	83	125	94	132	103	153	120	1073	112	15.3
Am Indian	0	≤2	6	≤2	5	6	5	5	12	24	66	5	8.0
Black, Afr Am	0	0	≤2	≤2	3	0	≤2	≤2	≤2	≤2	12	1	8.2
Asian	0	0	0	0	≤2	≤2	≤2	≤2	0	≤2	5	1	6.9
Other	0	0	0	≤2	≤2	0	0	0	≤2	≤2	4	0	3.7
Unknown	0	4	5	0	2	5	3	1	7	2	29	3	na
TOTAL	**30**	**85**	**167**	**87**	**137**	**106**	**143**	**111**	**174**	**149**	**1189**	**124**	**14.6**

Missing frequency = 1

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	0	4	7	3	1	3	3	1	4	8	34	3	28.5
1-4 years	5	24	50	21	30	21	31	16	39	30	267	27	56.0
5-14 years	9	14	39	16	18	27	30	18	36	23	230	21	21.0
15-24 years	5	11	16	11	16	12	17	18	23	23	152	16	13.2
25-39 years	6	15	30	16	33	22	24	17	38	26	227	23	15.0
40-64 years	1	9	20	19	20	9	24	29	25	21	177	20	6.8
≥65 years	4	9	7	2	19	14	14	14	10	20	113	12	9.7
TOTAL	**30**	**86**	**169**	**88**	**137**	**108**	**143**	**113**	**175**	**151**	**1200**	**125**	**14.7**

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1 or 2 in a single year are published as ≤2.

Giardiasis

Giardiasis is a gastrointestinal disease involving diarrhea and abdominal cramps that is caused by a protozoan parasite called *Giardia lamblia* (*G. intestinali*s, *G. doudenalis*), which is transmitted person-to-person or by contaminated water, or in some cases animal-to-human. During the 10-year period 2005-2014 a median of 112 cases were reported annually in South Dakota residents. Children in the 1-4 years age group had the highest incidence of disease.

TABLE 84 Giardiasis by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	0	0	0	0	≤2	0	≤2	0	0	0	2	0	7.4
Beadle	0	≤2	0	0	≤2	0	3	3	≤2	6	16	1	9.2
Bennett	≤2	≤2	≤2	0	0	0	0	≤2	≤2	0	6	1	17.5
Bon Homme	≤2	≤2	0	≤2	≤2	≤2	0	0	≤2	0	9	1	12.7
Brookings	0	5	≤2	3	0	6	3	3	4	8	33	3	10.3
Brown	9	≤2	6	5	3	4	5	4	≤2	8	47	5	12.9
Brule	0	≤2	0	0	0	≤2	≤2	0	≤2	0	5	0	9.5
Buffalo	0	0	0	≤2	≤2	≤2	0	≤2	≤2	15	24	2	125.5
Butte	≤2	5	≤2	≤2	0	≤2	≤2	4	≤2	≤2	20	2	19.8
Campbell	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Charles Mix	≤2	≤2	3	3	4	≤2	0	≤2	0	≤2	16	1	17.5
Clark	0	0	0	0	≤2	≤2	0	4	0	0	8	0	21.7
Clay	0	≤2	≤2	0	3	≤2	0	≤2	0	≤2	12	2	8.7
Codington	5	≤2	≤2	4	≤2	10	5	6	5	≤2	40	5	14.7
Corson	0	≤2	0	0	≤2	0	0	≤2	0	0	4	0	9.9
Custer	0	0	0	≤2	≤2	≤2	0	≤2	0	≤2	6	1	7.3
Davison	5	4	≤2	≤2	≤2	≤2	≤2	7	5	≤2	29	2	14.9
Day	0	≤2	0	0	0	0	≤2	0	0	≤2	5	0	8.8
Deuel	0	0	≤2	0	0	0	≤2	0	0	0	2	0	4.6
Dewey	0	0	0	≤2	0	0	0	0	0	≤2	3	0	5.7
Douglas	0	0	0	≤2	0	0	0	0	0	0	1	0	3.3
Edmunds	≤2	≤2	3	0	≤2	0	≤2	0	0	3	10	1	24.6
Fall River	0	0	≤2	≤2	≤2	0	0	≤2	0	0	4	0	5.6
Faulk	4	0	0	≤2	≤2	0	0	0	0	≤2	8	0	33.8
Grant	≤2	≤2	≤2	0	0	0	0	≤2	0	0	6	0	8.2
Gregory	0	≤2	0	0	0	0	0	≤2	0	≤2	3	0	7.0
Haakon	0	0	≤2	0	0	≤2	≤2	0	0	0	3	0	15.5
Hamlin	≤2	0	7	≤2	0	≤2	4	≤2	≤2	≤2	18	1	30.5
Hand	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hanson	0	3	0	0	0	0	0	≤2	0	0	4	0	12.0
Harding	0	0	0	≤2	≤2	≤2	≤2	0	0	0	5	0	39.8
Hughes	≤2	3	≤2	0	0	≤2	3	≤2	9	≤2	22	2	12.9
Hutchinson	0	≤2	0	0	0	≤2	≤2	≤2	≤2	0	7	1	9.5
Hyde	0	0	0	≤2	0	0	0	0	0	0	1	0	7.0
Jackson	0	0	0	0	1	0	0	0	0	≤2	2	0	6.6
Jerauld	0	0	0	3	0	0	0	0	≤2	0	4	0	19.3

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Jones	0	0	0	0	0	0	0	≤2	0	0	1	0	9.9
Kingsbury	0	0	0	0	0	≤2	0	0	0	0	1	0	1.9
Lake	4	≤2	≤2	0	≤2	≤2	≤2	0	0	0	9	1	8.0
Lawrence	≤2	5	5	9	5	≤2	4	6	5	0	42	5	17.4
Lincoln	9	≤2	8	8	6	7	10	17	11	8	86	8	19.2
Lyman	0	0	0	≤2	0	≤2	0	≤2	≤2	0	6	0	16.0
Marshall	0	0	0	≤2	2	0	0	3	≤2	≤2	8	1	17.2
McCook	≤2	0	≤2	≤2	0	0	≤2	3	0	≤2	9	1	16.0
McPherson	≤2	≤2	0	0	≤2	0	0	0	0	0	4	0	16.3
Meade	4	≤2	≤2	8	3	≤2	≤2	≤2	≤2	3	27	2	10.6
Mellette	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Miner	0	0	≤2	0	0	≤2	0	0	0	0	2	0	8.4
Minnehaha	26	22	17	39	44	22	29	31	26	26	282	26	16.6
Moody	0	≤2	≤2	≤2	≤2	4	0	0	3	0	12	1	18.5
Oglala Lakota	≤2	≤2	4	≤2	≤2	≤2	≤2	≤2	0	3	18	2	13.2
Pennington	10	6	10	18	4	10	10	11	13	14	106	10	10.5
Perkins	0	≤2	≤2	0	0	0	0	0	0	≤2	3	0	10.1
Potter	0	0	2	0	0	0	0	0	0	≤2	3	0	12.9
Roberts	≤2	≤2	≤2	≤2	0	0	0	5	≤2	≤2	14	1	13.8
Sanborn	0	≤2	≤2	≤2	≤2	≤2	0	3	0	0	9	1	38.2
Spink	≤2	≤2	≤2	0	0	≤2	≤2	0	0	≤2	11	2	17.1
Stanley	≤2	0	0	0	0	0	0	0	≤2	≤2	4	0	13.5
Sully	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Todd	≤2	≤2	≤2	0	≤2	0	≤2	≤2	0	≤2	9	1	9.4
Tripp	≤2	0	0	0	≤2	0	≤2	0	≤2	0	6	0	10.6
Turner	≤2	0	≤2	0	≤2	3	≤2	4	≤2	≤2	14	1	16.8
Union	0	3	≤2	≤2	0	≤2	≤2	≤2	≤2	≤2	13	1	9.0
Walworth	0	0	0	≤2	0	0	≤2	0	≤2	0	3	0	5.5
Yankton	12	8	8	11	10	3	6	6	5	7	76	8	33.9
Ziebach	0	0	0	0	≤2	0	0	0	0	0	1	0	3.6
TOTAL	**115**	**98**	**103**	**137**	**113**	**102**	**110**	**144**	**111**	**131**	**1164**	**112**	**14.3**

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	48	48	47	67	51	44	53	74	52	61	545	52	13.4
Male	66	50	56	70	62	58	57	70	59	70	618	61	15.2
TOTAL	**114**	**98**	**103**	**137**	**113**	**102**	**110**	**144**	**111**	**131**	**1163**	**112**	**14.3**

Missing frequency = 1

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	97	80	85	118	94	83	90	117	92	87	943	91	13.5
American Indian	11	10	14	14	11	10	7	10	5	25	117	11	14.3
Black, Afric Amer	≤2	≤2	≤2	≤2	6	7	7	13	4	5	47	5	32.0
Asian	0	≤2	0	≤2	≤2	0	3	≤2	3	8	19	1	26.3
Other	0	0	0	0	0	≤2	0	≤2	0	≤2	3	0	2.8
Unknown	3	4	2	1	1	1	1	2	5	2	22	2	na
TOTAL	**112**	**97**	**102**	**136**	**113**	**102**	**108**	**144**	**109**	**128**	**1151**	**111**	**14.1**

Missing frequency = 13

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	5	2	3	6	1	2	2	2	2	5	30	2	25.2
1-4 years	31	26	32	50	32	27	26	34	29	30	317	31	66.5
5-14 years	12	17	13	14	20	14	17	25	16	22	170	17	15.5
15-24 years	7	6	8	4	6	10	10	7	3	8	69	7	6.0
25-39 years	31	17	20	28	28	20	24	33	25	28	254	27	16.8
40-64 years	20	22	19	23	24	22	25	27	21	24	227	23	8.7
≥65 years	3	8	6	5	2	7	6	15	15	14	81	7	6.9
TOTAL	**109**	**98**	**101**	**130**	**113**	**102**	**110**	**143**	**111**	**131**	**1148**	**111**	**14.1**

Missing frequency = 16

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1 or 2 in a single year are published as ≤2.

Tuberculosis

Tuberculosis (TB) is caused by the *Mycobacterium tuberculosis* bacteria. The TB usually infects the lungs, but can attack any part of the body such as the kidney, spine, and brain. If not treated properly, TB disease can be fatal. Tuberculosis is spread through the air from one person to another when an infectious person coughs, sneezes, speaks, talks or sings. Eight cases of TB were reported in South Dakota in 2014. Counties with the highest TB incidence over the past decade were Ziebach and Charles Mix.

Table 85 Active Tuberculosis by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Beadle	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Bennett	1	0	0	0	0	1	0	0	0	0	2	0	5.8
Bon Homme	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Brookings	0	0	0	2	0	0	2	0	0	0	4	0	1.3
Brown	0	0	0	0	0	0	1	0	0	0	1	0	0.3
Brule	1	0	0	0	0	0	0	0	0	0	1	0	1.9
Buffalo	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Butte	0	0	0	0	1	0	0	0	1	0	2	0	2.0
Campbell	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Charles Mix	0	0	3	0	3	7	3	2	1	0	19	2	20.8
Clark	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Clay	0	0	0	0	0	1	0	0	0	0	1	0	0.7
Codington	0	1	0	0	0	0	0	0	0	0	1	0	0.4
Corson	1	0	0	0	0	0	0	0	0	0	1	0	2.5
Custer	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Davison	0	0	0	0	1	0	0	0	1	1	3	0	1.5
Day	0	0	0	0	0	0	1	0	0	0	1	0	1.8
Deuel	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Dewey	1	1	0	0	0	0	0	1	0	0	3	0	5.7
Douglas	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Edmunds	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Fall River	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Faulk	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Gregory	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Haakon	0	0	1	0	0	0	0	0	0	0	1	0	5.2
Hamlin	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hand	0	0	0	0	0	0	0	1	0	0	1	0	2.9
Hanson	0	0	0	0	0	1	0	0	0	0	1	0	3.0
Harding	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hughes	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hutchinson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hyde	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jackson	1	0	0	1	0	0	0	0	0	0	2	0	6.6
Jerauld	0	0	0	0	1	0	0	0	0	0	1	0	4.8
Jones	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Kingsbury	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Lake	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Lawrence	0	0	1	0	0	0	0	0	0	0	1	0	0.4
Lincoln	0	0	0	0	0	0	0	1	0	0	1	0	0.2
Lyman	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Marshall	0	0	0	0	0	0	0	0	0	0	0	0	0.0
McCook	0	0	0	0	0	0	0	0	0	0	0	0	0.0
McPherson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Meade	1	1	0	0	0	0	0	0	0	0	2	0	0.8
Mellette	1	0	0	0	0	0	0	1	0	0	2	0	9.8
Miner	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Minnehaha	7	5	3	10	7	3	4	9	3	3	54	5	3.2
Moody	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Oglala Lakota	1	1	1	0	2	1	0	0	1	0	7	1	5.2

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Pennington	1	4	0	0	0	0	3	2	1	2	13	1	1.3
Perkins	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Potter	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Roberts	0	0	0	0	1	0	0	0	0	0	1	0	1.0
Sanborn	0	0	0	0	0	0	1	0	0	0	1	0	4.2
Spink	0	0	1	0	1	0	0	0	0	0	2	0	3.1
Stanley	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sully	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Todd	0	1	1	0	1	1	0	2	0	0	6	1	6.2
Tripp	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Turner	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Union	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Walworth	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Yankton	0	0	0	1	0	0	0	0	0	0	1	0	0.4
Ziebach	0	0	2	2	0	0	0	0	1	2	7	0	25.0
TOTAL	**16**	**14**	**13**	**16**	**18**	**15**	**15**	**19**	**9**	**8**	**143**	**15**	**1.8**

#TB cases are listed by county for infection control risk assessment.

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	9	6	6	10	7	8	6	13	6	3	74	7	1.8
Male	7	8	7	6	11	7	9	6	3	5	69	7	1.7
TOTAL	**16**	**14**	**13**	**16**	**18**	**15**	**15**	**19**	**9**	**8**	**143**	**15**	**1.8**

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	4	1	3	1	6	2	5	6	1	3	32	3	0.5
Am Indian	6	6	7	4	7	11	5	8	5	3	62	6	7.6
Black, Af Am	3	4	2	10	4	2	2	3	2	2	34	3	23.1
Asian	3	3	1	1	1	0	3	2	1	0	15	1	20.8
Other	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	na
TOTAL	**16**	**14**	**13**	**16**	**18**	**15**	**15**	**19**	**9**	**8**	**143**	**15**	**1.8**

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	0	0	0	2	0	1	0	0	0	0	3	0	2.5
1-4 years	0	0	0	4	0	0	1	2	0	1	8	0	1.7
5-14 years	0	1	0	2	0	3	0	0	0	0	6	0	0.5
15-24 years	2	2	0	2	2	3	4	1	1	3	20	2	1.7
25-39 years	3	3	1	4	5	2	3	4	1	2	28	3	1.9
40-64 years	8	5	9	0	9	3	4	8	6	1	53	6	2.0
≥65 years	**3**	**3**	**3**	**2**	**2**	**3**	**3**	**4**	**1**	**1**	25	3	2.1
TOTAL	**16**	**14**	**13**	**16**	**18**	**15**	**15**	**19**	**9**	**8**	**143**	**15**	**1.8**

*Average annual incidence (cases per 100,000 population per year)

Pertussis (whooping cough)

Pertussis, commonly called whooping cough, is an acute infectious bacterial disease caused by *Bordetella pertussis*. The bacteria produce toxins that inflame and paralyze respiratory cilia causing severe coughing. Pertussis is transmitted by aerosolized droplets of respiratory secretions from infected individuals. Infants and young children are at higher risk of pertussis-associated complications, hospitalization and death. The most common complication is secondary bacterial pneumonia. Pertussis infected youth and adults may expose unprotected infants who are at risk of severe disease and complications. During 2014, 109 cases of pertussis were reported in South Dakota. Over the past decade Kingsbury and Tripp counties have had the highest incidence.

Table 86 Pertussis by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	0	0	0	≤2	≤2	0	0	0	0	0	2	0	7.4
Beadle	0	≤2	0	11	≤2	0	0	0	0	0	15	0	8.6
Bennett	0	0	0	0	0	0	0	0	≤2	0	2	0	5.8
Bon Homme	3	0	0	0	0	0	0	0	≤2	0	4	0	5.7
Brookings	0	7	≤2	7	3	4	≤2	10	≤2	≤2	36	3	11.3
Brown	7	0	0	0	0	0	17	0	≤2	14	39	0	10.7
Brule	8	0	0	0	0	≤2	0	0	≤2	2	12	0	22.8
Buffalo	≤2	0	0	≤2	0	0	3	0	0	0	5	0	26.2
Butte	0	0	0	0	0	0	0	0	4	4	8	0	7.9
Campbell	0	0	0	≤2	0	0	0	0	0	0	1	0	6.8
Charles Mix	0	0	≤2	≤2	0	0	0	4	0	0	6	0	6.6
Clark	0	0	0	0	≤2	0	0	≤2	≤2	0	4	0	10.8
Clay	0	5	0	0	≤2	≤2	0	≤2	3	0	13	1	9.4
Codington	0	0	0	0	≤2	0	0	≤2	0	0	2	0	0.7
Corson	≤2	0	0	0	0	0	0	≤2	8	≤2	13	0	32.1
Custer	≤2	0	0	0	≤2	0	0	≤2	≤2	≤2	7	1	8.5
Davison	0	0	0	0	3	≤2	≤2	0	≤2	≤2	9	1	4.6
Day	4	0	0	0	0	0	0	≤2	0	0	5	0	8.8
Deuel	0	0	0	3	0	0	0	0	0	0	3	0	6.9
Dewey	≤2	0	0	0	0	0	0	0	≤2	0	2	0	3.8
Douglas	0	0	0	0	≤2	0	0	0	≤2	0	2	0	6.7
Edmunds	0	0	≤2	0	0	0	0	0	0	8	9	0	22.1
Fall River	≤2	0	0	0	0	≤2	0	0	≤2	0	3	0	4.2
Faulk	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Grant	≤2	0	0	0	0	0	0	0	0	≤2	2	0	2.7
Gregory	0	0	0	0	0	0	0	0	3	0	3	0	7.0
Haakon	0	0	0	0	0	0	0	0	3	0	3	0	15.5
Hamlin	0	0	≤2	0	0	3	0	≤2	0	0	7	0	11.9
Hand	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hanson	0	0	0	≤2	0	0	0	0	0	0	1	0	3.0
Harding	0	0	0	≤2	≤2	≤2	0	0	0	0	5	0	39.8
Hughes	18	0	0	0	0	0	0	4	0	0	22	0	12.9
Hutchinson	0	0	0	≤2	0	0	0	0	≤2	≤2	4	0	5.4
Hyde	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jerauld	0	0	0	0	≤2	0	≤2	0	0	0	2	0	9.7
Jones	≤2	0	0	0	0	0	0	0	≤2	0	2	0	19.9
Kingsbury	0	0	3	25	0	≤2	0	≤2	0	0	31	0	60.2
Lake	0	0	0	0	0	≤2	0	0	0	≤2	2	0	1.8
Lawrence	≤2	0	0	0	0	0	0	≤2	≤2	17	20	0	8.3
Lincoln	20	0	≤2	0	≤2	3	≤2	4	≤2	8	40	2	8.9
Lyman	2	0	0	0	0	0	0	0	0	0	2	0	5.3
Marshall	0	0	0	0	0	0	≤2	0	0	0	2	0	4.3
McCook	0	0	0	0	0	0	0	3	0	0	3	0	5.3
McPherson	0	0	0	0	0	0	0	0	0	≤2	1	0	4.1
Meade	≤2	0	≤2	≤2	3	0	≤2	≤2	0	≤2	11	1	4.3
Mellette	≤2	0	0	0	0	0	0	0	0	0	1	0	4.9
Miner	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Minnehaha	41	4	39	≤2	22	9	5	7	≤2	24	154	8	9.1
Moody	0	≤2	≤2	0	0	0	0	0	0	≤2	3	0	4.6
Oglala Lakota	11	0	0	5	0	0	0	0	3	≤2	20	0	14.7
Pennington	9	6	≤2	3	8	4	≤2	18	14	6	72	6	7.1
Perkins	0	0	0	0	0	0	0	2	0	0	2	0	6.7
Potter	0	3	0	0	0	0	0	0	0	0	3	0	12.9
Roberts	≤2	0	0	0	0	0	0	0	0	0	1	0	1.0
Sanborn	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Spink	0	0	0	0	0	0	0	0	0	3	3	0	4.7
Stanley	≤2	0	0	0	0	0	0	≤2	0	0	2	0	6.7
Sully	0	0	0	0	0	0	0	0	0	0	0	0	0.0

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Todd	2	0	7	0	0	0	0	≤2	0	0	10	0	10.4
Tripp	23	0	0	0	0	0	0	0	6	0	29	0	51.4
Turner	≤2	0	0	0	0	0	≤2	0	0	6	8	0	9.6
Union	≤2	0	0	0	≤2	0	≤2	≤2	0	0	6	0	4.2
Walworth	≤2	0	0	≤2	0	0	0	0	≤2	0	5	0	9.2
Yankton	0	0	0	0	≤2	0	0	0	≤2	0	3	0	1.3
Ziebach	0	0	0	0	≤2	0	0	0	0	4	5	0	17.9
TOTAL	**166**	**28**	**59**	**67**	**56**	**32**	**37**	**71**	**67**	**109**	**692**	**63**	**8.5**

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	90	18	27	45	31	19	15	40	38	68	391	35	9.6
Male	76	10	32	22	25	13	22	31	29	41	301	27	7.4
TOTAL	**166**	**28**	**59**	**67**	**56**	**32**	**37**	**71**	**67**	**109**	**692**	**63**	**8.5**

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	126	23	49	54	51	30	31	56	43	96	559	50	8.0
Am Indian	39	0	6	10	4	≤2	4	12	19	9	104	8	12.7
Black, Af Am	0	0	3	≤2	0	≤2	0	0	0	≤2	7	0	4.8
Asian	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Unknown	1	5	1	0	≤2	0	1	1	1	1	12	1	na
TOTAL	**166**	**28**	**59**	**66**	**56**	**32**	**36**	**69**	**63**	**107**	**682**	**61**	**8.4**

Missing Frequency = 3

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	28	1	7	12	12	7	8	11	13	9	108	10	90.6
1-4 years	32	2	6	4	9	2	5	9	8	21	98	7	20.5
5-14 years	38	15	22	19	14	7	11	25	19	43	213	19	19.5
15-24 years	18	4	6	12	8	6	6	7	12	11	90	8	7.8
25-39 years	18	0	6	8	4	3	3	7	5	9	63	6	4.2
40-64 years	28	5	7	10	7	3	3	10	5	11	89	7	3.4
≥65 years	3	0	3	2	2	4	1	2	4	5	26	3	2.2
TOTAL	**165**	**27**	**57**	**67**	**56**	**32**	**37**	**71**	**66**	**109**	687	**62**	**8.4**

Missing Frequency = 1

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1 or 2 in a single year are published as ≤2.

Gonorrhea

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

Gonorrhea has been increasing over the past decade in South Dakota. In 2014 there were 880 cases. During the past 10 years the highest average annual rates were in Dewey, Oglala Lakota and Corson counties, and youth age group 15-24 years had the highest rate.

Table 87 Gonorrhea by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	0	0	0	0	0	0	0	≤5	0	0	≤5	0	7.4
Beadle	≤5	≤5	0	0	≤5	0	≤5	0	≤5	≤5	17	2	9.8
Bennett	≤5	≤5	0	≤5	≤5	8	8	11	7	9	49	5	142.8
Bon Homme	0	0	≤5	0	0	0	0	0	≤5	0	≤5	0	4.2

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Brookings	≤5	6	≤5	≤5	≤5	≤5	≤5	6	≤5	≤5	38	4	11.9
Brown	8	6	≤5	10	0	7	9	≤5	11	10	69	8	18.9
Brule	0	≤5	0	≤5	0	0	≤5	≤5	≤5	≤5	11	1	20.9
Buffalo	≤5	≤5	0	0	0	≤5	≤5	≤5	7	8	29	2	151.7
Butte	≤5	≤5	≤5	0	≤5	0	≤5	0	0	≤5	8	1	7.9
Campbell	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Charles Mix	37	16	6	≤5	≤5	0	6	9	13	46	139	8	152.3
Clark	0	0	0	0	0	0	0	≤5	≤5	0	≤5	0	5.4
Clay	0	12	6	0	≤5	≤5	≤5	≤5	6	≤5	39	3	28.1
Codington	0	≤5	≤5	9	≤5	≤5	21	11	≤5	10	66	4	24.2
Corson	13	≤5	6	≤5	6	12	44	29	53	35	208	13	513.6
Custer	≤5	0	≤5	0	≤5	≤5	≤5	≤5	≤5	≤5	13	1	15.8
Davison	≤5	≤5	≤5	0	≤5	≤5	≤5	15	12	7	48	3	24.6
Day	≤5	≤5	0	≤5	≤5	0	≤5	≤5	0	0	10	1	17.5
Deuel	≤5	0	0	0	0	0	0	0	0	0	≤5	0	2.3
Dewey	42	44	22	32	51	17	26	45	75	39	393	41	741.4
Douglas	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Edmunds	0	0	0	0	≤5	0	0	0	0	0	≤5	0	2.5
Fall River	0	0	0	≤5	≤5	≤5	≤5	0	≤5	0	8	1	11.3
Faulk	0	0	≤5	0	0	0	0	0	≤5	0	≤5	0	8.5
Grant	0	≤5	0	≤5	≤5	0	≤5	≤5	≤5	0	13	1	17.7
Gregory	≤5	≤5	≤5	≤5	0	0	0	≤5	0	≤5	9	1	21.1
Haakon	0	0	0	0	0	0	0	0	0	≤5	≤5	0	5.2
Hamlin	0	0	0	0	0	0	0	≤5	0	0	≤5	0	1.7
Hand	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hanson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Harding	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hughes	≤5	≤5	7	≤5	≤5	≤5	6	9	9	23	71	5	41.7
Hutchinson	0	0	0	≤5	0	0	≤5	0	≤5	0	≤5	0	6.8
Hyde	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jackson	≤5	≤5	0	≤5	0	≤5	≤5	≤5	≤5	10	28	2	92.4
Jerauld	0	0	0	0	0	0	0	0	0	≤5	≤5	0	4.8
Jones	0	0	0	0	0	0	0	0	0	≤5	≤5	0	29.8
Kingsbury	0	0	≤5	0	0	0	≤5	≤5	≤5	≤5	6	1	11.7
Lake	0	≤5	9	≤5	0	0	≤5	0	≤5	0	16	1	14.3
Lawrence	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	8	29	3	12.0
Lincoln	≤5	0	≤5	≤5	≤5	≤5	≤5	≤5	9	10	38	3	8.5
Lyman	0	≤5	0	10	≤5	≤5	9	13	≤5	8	49	3	130.5
Marshall	0	0	0	0	0	0	0	0	≤5	0	≤5	0	4.3
McCook	0	0	≤5	0	0	0	0	≤5	≤5	≤5	7	0	12.5
McPherson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Meade	≤5	≤5	≤5	≤5	≤5	10	≤5	7	≤5	8	50	5	19.7
Mellette	0	≤5	≤5	0	≤5	≤5	≤5	0	≤5	7	13	1	63.5
Miner	0	0	0	0	0	0	0	0	≤5	0	≤5	0	4.2
Minnehaha	85	138	86	159	131	119	86	140	195	257	1396	135	82.4
Moody	≤5	0	0	≤5	≤5	0	≤5	≤5	≤5	6	16	1	24.7
Oglala Lakota	42	34	43	48	23	97	137	124	117	118	783	73	576.3
Pennington	47	37	30	41	53	118	148	183	122	121	900	86	89.2
Perkins	0	≤5	≤5	0	0	0	0	0	0	0	≤5	0	10.1
Potter	0	≤5	0	0	≤5	0	0	0	0	0	≤5	0	8.6
Roberts	6	9	0	≤5	≤5	6	≤5	≤5	12	≤5	49	5	48.3
Sanborn	0	0	0	0	0	0	0	0	0	≤5	≤5	0	4.2
Spink	≤5	0	0	0	0	0	≤5	≤5	0	≤5	6	0	9.4
Stanley	0	0	≤5	0	0	0	≤5	≤5	≤5	≤5	7	1	23.6
Sully	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Todd	26	11	≤5	25	16	23	31	44	39	79	297	26	309.0
Tripp	0	0	0	0	0	≤5	≤5	≤5	≤5	0	11	0	19.5
Turner	≤5	0	0	0	0	≤5	0	≤5	0	≤5	≤5	0	6.0
Union	0	≤5	≤5	0	≤5	≤5	≤5	≤5	8	8	29	2	20.1

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Walworth	≤5	≤5	0	≤5	≤5	≤5	10	≤5	12	≤5	44	4	80.9
Yankton	0	≤5	≤5	≤5	6	6	≤5	≤5	9	8	44	4	19.6
Ziebach	≤5	≤5	0	6	7	≤5	≤5	≤5	10	11	48	4	171.4
Total	**352**	**362**	**254**	**382**	**345**	**467**	**602**	**707**	**789**	**880**	**5140**	**425**	**63.1**

Missing Frequency = 5

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	201	212	151	248	191	287	400	447	468	550	3155	268	77.6
Male	155	151	103	134	154	179	202	260	321	330	1989	167	48.8
TOTAL	356	363	254	382	345	466	602	707	789	880	5144	424	63.2

Missing Frequency = 1

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	80	119	93	115	76	113	116	147	174	197	1230	116	17.6
Am Indian	235	194	122	205	202	277	401	470	510	565	3181	256	387.6
Black, Af Am	36	34	28	44	37	42	42	55	77	86	481	42	327.1
Asian	0	≤5	0	0	≤5	0	4	0	≤5	≤5	10	1	13.9
Other	3	6	≤5	6	≤5	≤5	≤5	7	8	9	48	6	44.5
Unknown	0	8	8	11	24	18	24	24	18	21	156	18	na
TOTAL	**354**	**362**	**253**	**381**	**341**	**451**	**592**	**703**	**789**	**880**	**5106**	**416**	**62.7**

Missing Frequency =39

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	0	0	0	0	0	0	0	0	0	1	1	0	0.8
1-4 years	0	0	0	0	0	0	0	0	0	1	1	0	0.2
5-14 years	1	5	3	4	2	3	6	9	6	10	49	5	4.5
15-24 years	232	234	172	222	200	273	321	403	412	448	2917	254	253.2
25-39 years	111	107	69	141	125	168	233	266	321	347	1888	155	124.9
40-64 years	12	16	8	14	17	22	39	29	47	72	276	20	10.5
≥65 years	0	0	0	0	0	1	2	0	3	1	7	0	0.6
TOTAL	**356**	**362**	**252**	**381**	**344**	**467**	**601**	**707**	**789**	**880**	**5139**	**424**	**63.1**

Missing Frequency = 6

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1-5 in a single year are published as ≤5.

Chlamydia

Chlamydia is a common STD that can infect both men and women. Chlamydia can cause serious, permanent damage to a woman's reproductive system, making it difficult or impossible for her to get pregnant later on. Chlamydia can also cause a potentially fatal ectopic pregnancy. Chlamydia is spread almost exclusively through sexual contact. Infection during pregnancy may result in eye and lung infection of the newborn.

The number of chlamydia cases has been increasing over the past decade in South Dakota. In 2014 there were 4,129 cases. Over the past decade the highest average annual incidence was in Dewey, Oglala Lakota and Todd counties, and youth age group 15-24 years had the highest rate.

Table 88 Chlamydia by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	≤5	≤5	≤5	0	≤5	≤5	≤5	≤5	≤5	≤5	21	2	77.5
Beadle	32	34	47	46	62	73	75	84	70	70	593	66	340.8
Bennett	20	27	15	25	17	19	24	26	36	29	238	25	693.7
Bon Homme	≤5	7	7	6	11	12	≤5	8	10	15	83	8	117.4
Brookings	73	76	49	83	76	85	75	102	98	116	833	80	260.6
Brown	74	111	85	84	88	158	128	111	106	107	1052	107	288.0
Brule	18	8	15	9	13	17	15	17	10	12	134	14	255.0
Buffalo	18	16	14	28	32	25	24	32	41	32	262	27	1370.3
Butte	11	9	15	23	24	20	22	17	23	17	181	19	179.0

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Campbell	0	0	≤5	0	≤5	0	≤5	0	≤5	≤5	8	1	54.6
Charles Mix	73	59	57	58	66	47	61	66	80	102	669	64	732.8
Clark	0	0	≤5	≤5	0	0	≤5	10	≤5	≤5	26	2	70.4
Clay	29	33	39	50	35	40	63	47	58	45	439	43	316.6
Codington	54	52	63	69	78	99	118	102	90	92	817	84	300.1
Corson	48	40	62	48	43	59	81	84	86	113	664	61	1639.5
Custer	12	16	14	16	28	35	33	25	35	34	248	27	301.9
Davison	49	46	55	53	55	69	62	72	71	66	598	59	306.6
Day	14	16	9	16	7	10	9	8	14	14	117	12	204.9
Deuel	≤5	≤5	8	≤5	≤5	≤5	≤5	8	≤5	≤5	45	4	103.1
Dewey	157	127	114	132	142	119	116	124	125	147	1303	126	2458.0
Douglas	≤5	≤5	0	≤5	≤5	≤5	≤5	≤5	0	0	17	1	56.6
Edmunds	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	27	3	66.3
Fall River	6	10	7	11	9	8	12	10	11	16	100	10	141.0
Faulk	≤5	≤5	≤5	0	≤5	≤5	≤5	0	≤5	≤5	19	2	80.4
Grant	≤5	≤5	≤5	11	9	≤5	13	12	8	9	78	9	106.0
Gregory	6	6	≤5	6	≤5	7	7	9	≤5	7	60	6	140.5
Haakon	≤5	0	≤5	0	0	≤5	0	0	≤5	≤5	13	1	67.1
Hamlin	≤5	≤5	≤5	6	≤5	6	≤5	≤5	6	7	46	4	77.9
Hand	0	0	0	≤5	≤5	≤5	≤5	≤5	≤5	≤5	15	1	43.7
Hanson	≤5	0	≤5	≤5	≤5	≤5	≤5	≤5	≤5	0	19	2	57.0
Harding	≤5	0	≤5	0	0	0	≤5	≤5	≤5	≤5	10	1	79.7
Hughes	48	69	54	77	66	61	69	71	79	67	661	68	388.3
Hutchinson	≤5	≤5	6	8	≤5	≤5	≤5	≤5	6	13	59	5	80.3
Hyde	0	0	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	16	2	112.7
Jackson	36	12	12	15	14	15	23	16	24	32	199	16	656.5
Jerauld	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	≤5	26	2	125.5
Jones	≤5	0	0	≤5	≤5	0	0	0	≤5	6	14	1	139.2
Kingsbury	≤5	≤5	6	≤5	≤5	≤5	≤5	16	≤5	9	53	4	103.0
Lake	10	21	20	21	25	18	27	20	29	20	211	21	188.4
Lawrence	62	62	71	72	57	58	59	101	81	88	711	67	295.1
Lincoln	17	12	23	30	42	49	72	84	101	97	527	46	117.6
Lyman	23	13	13	35	34	28	26	32	19	29	252	27	671.1
Marshall	7	≤5	≤5	≤5	≤5	≤5	8	8	6	6	54	6	116.0
McCook	≤5	≤5	≤5	≤5	≤5	7	9	9	≤5	11	63	5	112.1
McPherson	≤5	0	≤5	0	0	0	≤5	≤5	≤5	≤5	11	1	44.7
Meade	33	44	35	28	42	44	59	76	110	83	554	44	217.8
Mellette	9	≤5	9	7	≤5	7	6	10	8	14	79	8	385.7
Miner	≤5	≤5	≤5	≤5	8	8	≤5	≤5	≤5	≤5	40	4	167.4
Minnehaha	620	620	662	747	800	725	780	948	939	1038	7879	764	464.9
Moody	11	17	8	20	13	13	18	21	19	23	163	18	251.3
Oglala Lakota	273	213	271	293	234	282	277	400	374	380	2997	280	2205.9
Pennington	412	411	419	414	448	482	548	649	600	573	4956	465	490.9
Perkins	≤5	≤5	≤5	≤5	≤5	≤5	0	≤5	≤5	≤5	15	1	50.3
Potter	0	≤5	≤5	≤5	≤5	≤5	0	0	6	≤5	18	1	77.3
Roberts	61	73	49	45	52	71	54	94	128	95	722	66	711.4
Sanborn	0	≤5	≤5	≤5	≤5	7	≤5	≤5	8	7	36	3	152.9
Spink	≤5	≤5	8	7	11	5	15	≤5	≤5	13	76	6	118.5
Stanley	8	≤5	7	≤5	6	8	18	14	16	7	93	8	313.6
Sully	0	≤5	0	≤5	0	0	≤5	≤5	≤5	≤5	10	1	72.8
Todd	211	203	123	158	185	195	185	175	197	229	1861	190	1936.1
Tripp	7	9	9	8	20	16	18	22	17	17	143	17	253.4
Turner	≤5	8	≤5	9	≤5	11	≤5	15	≤5	7	71	6	85.1
Union	10	12	8	15	15	14	20	16	24	30	164	15	113.9
Walworth	13	26	19	27	30	17	29	24	28	37	250	27	459.7
Yankton	29	19	38	47	26	61	74	64	61	80	499	54	222.4
Ziebach	15	13	16	13	24	22	17	19	23	24	186	18	664.0
TOTAL	**2670**	**2612**	**2611**	**2917**	**3009**	**3175**	**3409**	**3925**	**3947**	**4129**	**32404**	**3092**	**398.0**

Missing Frequency = 68

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	1,922	1,917	1,897	2,153	2,211	2,297	2,487	2,801	2,810	2,917	23,412	2,254	575.5
Male	779	706	714	763	787	879	918	1,124	1,137	1,212	9,019	833	221.4
TOTAL	**2701**	**2623**	**2611**	**2916**	**2998**	**3176**	**3405**	**3925**	**3,947**	**4,129**	**32,431**	**3,087**	**398.3**

Missing Frequency = 41

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	1,290	1,311	1,322	1,418	1,270	962	1,099	1,515	1,582	1,567	13,333	1317	190.6
Am Indian	1,285	1,150	1,127	1,237	1,287	1,243	1,305	1,551	1,646	1,711	13,542	1286	1650.0
Black, Af Am	88	89	67	110	126	118	137	163	163	202	1,263	122	858.9
Asian	0	≤5	≤5	≤5	9	9	13	24	25	29	116	9	160.8
Other	9	18	14	23	13	10	17	28	42	73	247	18	228.8
Unknown	19	42	68	111	131	124	593	566	489	547	2,690	128	na
TOTAL	**2,691**	**2,612**	**2,601**	**2,901**	**2,833**	**2,466**	**3,164**	**3,847**	**3,947**	**4,129**	**31,191**	**2867**	**383.1**

Missing Frequency =1281

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	0	1	0	1	0	0	1	0	0	1	4	0	3.4
1-4 years	0	0	0	0	0	0	0	0	0	0	0	0	0.0
5-14 years	50	38	38	30	39	31	36	43	50	39	394	39	36.0
15-24 years	1,996	1,897	1,932	2,115	2,141	2,308	2,400	2,784	2,682	2,720	22,975	2,225	1993.9
25-39 years	610	598	593	727	758	798	904	1,017	1,127	1,252	8384	778	554.5
40-64 years	34	73	44	39	65	46	60	78	86	116	641	63	24.5
≥65 years	0	0	0	1	1	1	0	3	2	1	9	1	0.8
TOTAL	**2,690**	**2,607**	**2,607**	**2,913**	**3,004**	**3,184**	**3,401**	**3,925**	**3,947**	**4,129**	**32,407**	**3,094**	**398.0**

Missing Frequency = 65

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1-5 in a single year are published as ≤5.

Syphilis, Primary and Secondary, Early Latent (P, S, EL) and Congenital

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

In 2014 South Dakota experience its largest syphilis outbreak in over 40 years. Seventy-six cases of early syphilis (primary and secondary, early latent) reported in 2014, and 187 cases during the past decade.

Table 89 Syphilis (P, S, EL) by County, Gender, Race, and Age, South Dakota 2005-2014

Syphilis	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Primary, Secondary, Early latent	1	19	11	4	2	4	0	21	49	76	187	7.5	2.3
Congenital	0	0	0	0	0	0	0	0	0	3	3	--	--

COUNTY	TOTAL	Incidence*
Aurora	0	0.0
Beadle	0	0.0
Bennett	0	0.0
BonHomme	0	0.0
Brookings	≤5	nd
Brown	0	0.0
Brule	0	0.0
Buffalo	0	0.0
Butte	0	0.0
Campbell	0	0.0
Charles Mix	≤5	2.2
Clark	0	0.0
Clay	0	0.0
Codington	≤5	nd
Corson	53	130.9
Custer	0	0.0
Davison	≤5	nd
Day	≤5	nd
Deuel	0	0.0
Dewey	9	17.0
Douglas	≤5	nd
Edmunds	0	0.0
Fall River	0	0.0
Faulk	0	0.0
Grant	0	0.0
Gregory	0	0.0
Haakon	0	0.0
Hamlin	0	0.0
Hand	0	0.0
Hanson	0	0.0
Harding	0	0.0
Hughes	0	0.0
Hutchinson	0	0.0
Hyde	0	0.0

COUNTY	TOTAL	Incidence*
Jackson	0	0.0
Jerauld	≤5	nd
Jones	0	0.0
Kingsbury	0	0.0
Lake	0	0.0
Lawrence	≤5	nd
Lincoln	≤5	nd
Lyman	≤5	nd
Marshall	≤5	nd
McCook	0	0.0
McPherson	0	0.0
Meade	≤5	nd
Mellette	0	0.0
Miner	0	0.0
Minnehaha	80	4.7
Moody	0	0.0
Oglala Lakota	9	6.6
Pennington	6	0.6
Perkins	0	0.0
Potter	0	0.0
Roberts	0	0.0
Sanborn	0	0.0
Spink	0	0.0
Stanley	0	0.0
Sully	0	0.0
Todd	≤5	nd
Tripp	0	0.0
Turner	≤5	nd
Union	≤5	nd
Walworth	7	12.9
Yankton	≤5	nd
Ziebach	0	0.0
TOTAL	**187**	**2.0**

GENDER	TOTAL	Incidence*
Female	69	1.7
Male	117	2.9
TOTAL	**186**	**2.3**

Missing Frequency = 1

RACE	TOTAL	Incidence*
White	68	1.0
Am Indian	107	13.0
Black, Af Am	7	4.8
Asian	0	0
Other	≤5	nd
Unknown	2	Na
TOTAL	**187**	**2.3**

AGE GROUP	TOTAL	Incidence*
<1 year	0	0
1-4 years	0	0
5-14 years	0	0
15-24 years	49	4.3
25-39 years	70	4.6
40-64 years	63	2.4
≥65 years	4	0.3
TOTAL	**186**	**2.3**

Missing Frequency = 1

*Average annual incidence (cases per 100,000 population per year)

HIV and AIDS

Human immunodeficiency virus (HIV) infection may lead to acquired immunodeficiency syndrome, or AIDS. HIV is spread mainly by having sex with or sharing drug injection needles and syringes with someone who is already infected with HIV. The only way to know for sure if you have HIV infection is to get tested.

TABLE 90 HIV and AIDS by County, Gender, Race, and Age, South Dakota 2005-2014

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Cases reported	33	34	25	34	21	35	21	29	36	31	229	32	2.5

COUNTY	Cases reported 1985-2014	Incidence*
Aurora	0	0.0
Beadle	13	7.5
Bennett	≤5	nd
Bon Homme	7	9.9
Brookings	10	3.1
Brown	12	3.3
Brule	≤5	nd
Buffalo	≤5	nd
Butte	6	5.9
Campbell	0	0.0
Charles Mix	≤5	nd

COUNTY	Cases reported 1985-2014	Incidence*
Clark	≤5	nd
Clay	16	11.5
Codington	9	3.3
Corson	6	14.8
Custer	≤5	nd
Davison	8	4.1
Day	≤5	nd
Deuel	≤5	nd
Dewey	≤5	nd
Douglas	0	0.0
Edmunds	0	0.0

COUNTY	Cases reported 1985-2014	Incidence*
Fall River	≤5	nd
Faulk	0	0.0
Grant	≤5	nd
Gregory	≤5	nd
Haakon	≤5	nd
Hamlin	0	0.0
Hand	0	0.0
Hanson	0	0.0
Harding	0	0.0
Hughes	12	7.0
Hutchinson	≤5	nd
Hyde	0	0.0
Jackson	≤5	nd
Jerauld	0	0.0
Jones	≤5	nd
Kingsbury	≤5	nd
Lake	≤5	nd
Lawrence	15	6.2
Lincoln	6	1.3
Lyman	≤5	nd
Marshall	≤5	nd
McCook	≤5	nd
McPherson	0	0.0
Meade	14	5.5
Mellette	≤5	nd
Miner	0	0.0
Minnehaha	310	18.3
Moody	6	9.3
Oglala Lakota	30	22.1
Pennington	160	15.8
Perkins	0	0.0
Potter	≤5	nd
Roberts	≤5	nd
Sanborn	≤5	nd
Spink	≤5	nd
Stanley	0	0.0
Sully	0	0.0

COUNTY	Cases reported 1985-2014	Incidence*
Todd	8	8.3
Tripp	≤5	nd
Turner	≤5	nd
Union	7	4.9
Walworth	≤5	nd
Yankton	30	13.4
Ziebach	0	0.0
TOTAL	**761**	**9.3**

nd: not disclosed

Cases reported 2005-2014

GENDER	TOTAL	Incidence*
Female	105	2.6
Male	193	4.7
TOTAL	**298**	**3.7**

RACE	TOTAL	Incidence*
White	122	1.7
Am Indian	71	8.7
Black, Af Am	87	59.2
Asian	6	8.3
Hispanic	12	11.1
TOTAL	**298**	**3.7**

AGE GROUP	TOTAL	Incidence*
<1 year	5	4.2
1-4 years	1	0.2
5-14 years	2	0.2
15-24 years	24	2.1
25-39 years	119	7.9
40-64 years	144	5.5
≥65 years	3	0.3
TOTAL	**298**	**3.7**

*Average annual incidence (cases per 100,000 population per year)

Hepatitis B, chronic

Hepatitis B is a liver infection caused by the Hepatitis B virus (HBV). This virus is transmitted when blood and other body fluid from an infected person enters the body of someone who is not infected during sexual contact; sharing needles, syringes, or other drug-injection equipment; or from mother to baby at birth. For some individuals, hepatitis B is an acute, or short-term, illness but for others, it can become a long-term, chronic infection. Risk for HBV chronic infection is related to age at infection: approximately 90 percent of infected infants become chronically infected, compared with 2%-6 percent of adults. Chronic Hepatitis B can lead to serious health issues, like cirrhosis or liver cancer. The best way to prevent Hepatitis B is by getting vaccinated. HBV vaccine is now recommended at birth and for children and adolescents who did not complete vaccination as infants. HBV vaccination is not mandatory for school entry in South Dakota. Adults who should consider HBV vaccination include: people who have more than one sex partner in six months, men who have sex with other men, sex contacts of infected people, people who inject illegal drugs, health care and public safety workers who might be exposed to infected blood or body fluids, household contacts of persons with chronic HBV infection and hemodialysis patients.

Three cases of acute hepatitis B and 58 cases of chronic hepatitis B were reported in 2014. In South Dakota Beadle County has the highest rate of chronic Hepatitis B over the past decade.

Table 91 Hepatitis B, Chronic, by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Beadle	0	0	≤2	≤2	3	10	12	5	24	15	72	4	41.4
Bennett	0	0	0	≤2	0	0	0	0	0	0	1	0	2.9
BonHomme	≤2	0	0	0	0	0	≤2	0	0	0	2	0	2.8
Brookings	0	0	0	≤2	0	3	≤2	≤2	3	3	13	1	4.1
Brown	≤2	≤2	0	≤2	≤2	≤2	0	≤2	3	6	15	1	4.1
Brule	0	0	0	0	0	≤2	0	≤2	0	≤2	4	0	7.6
Buffalo	0	0	0	0	0	0	0	0	≤2	0	1	0	5.2
Butte	≤2	0	≤2	0	0	0	0	≤2	0	≤2	4	0	4.0
Campbell	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Charles Mix	0	0	0	≤2	0	0	0	0	0	0	1	0	1.1
Clark	0	0	0	0	0	0	≤2	0	0	0	1	0	2.7
Clay	0	0	≤2	0	0	0	0	≤2	≤2	≤2	5	0	3.6
Codington	0	0	0	0	≤2	0	≤2	≤2	0	0	3	0	1.1
Corson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Custer	0	0	≤2	0	≤2	0	0	0	0	0	2	0	2.4
Davison	0	0	≤2	0	≤2	0	≤2	0	0	≤2	4	0	2.1
Day	0	≤2	0	0	0	0	0	0	≤2	0	2	0	3.5
Deuel	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Dewey	0	0	0	0	0	0	0	0	0	≤2	1	0	1.9
Douglas	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Edmunds	≤2	0	0	0	≤2	0	0	0	0	0	2	0	4.9
Fall River	0	0	0	0	0	0	0	0	≤2	≤2	2	0	2.8
Faulk	0	0	0	≤2	0	0	0	0	0	0	1	0	4.2
Grant	≤2	0	0	0	0	0	0	0	0	0	1	0	1.4
Gregory	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Haakon	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hamlin	0	0	≤2	0	0	0	≤2	0	≤2	0	3	0	5.1
Hand	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hanson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Harding	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hughes	0	0	0	0	0	0	≤2	0	≤2	0	2	0	1.2
Hutchinson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hyde	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jerauld	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jones	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Kingsbury	0	0	0	0	0	0	0	0	0	≤2	1	0	1.9
Lake	0	0	0	0	0	0	≤2	0	0	≤2	2	0	1.8
Lawrence	≤2	≤2	0	≤2	0	≤2	≤2	0	0	≤2	8	1	3.3
Lincoln	0	0	≤2	≤2	0	≤2	0	0	≤2	0	5	0	1.1
Lyman	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Marshall	0	0	0	0	0	0	0	0	≤2	0	1	0	2.1
McCook	0	0	0	0	0	0	0	0	0	0	0	0	0.0
McPherson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Meade	≤2	0	≤2	≤2	≤2	0	0	0	≤2	0	6	1	2.4
Mellette	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Miner	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Minnehaha	20	7	22	33	20	28	25	30	33	21	239	24	14.1
Moody	0	≤2	0	0	0	0	0	0	0	0	1	0	1.5
Oglala Lakota	0	0	0	0	0	0	≤2	0	0	0	1	0	0.7
Pennington	3	6	3	≤2	4	4	4	7	5	≤2	39	4	3.9
Perkins	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Potter	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Roberts	≤2	0	0	0	0	≤2	0	0	0	0	2	0	2.0
Sanborn	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Spink	0	0	0	0	0	0	0	0	0	0	0	0	0.0

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Stanley	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sully	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Todd	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Tripp	0	0	0	≤2	0	0	0	0	0	0	1	0	1.8
Turner	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Union	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Walworth	≤2	0	0	≤2	0	0	0	0	0	0	2	0	3.7
Yankton	≤2	0	≤2	≤2	0	≤2	0	≤2	≤2	≤2	9	1	4.0
Ziebach	0	0	0	0	0	0	0	0	0	0	0	0	0.0
TOTAL	**34**	**17**	**36**	**48**	**33**	**51**	**51**	**51**	**80**	**58**	**459**	**50**	**5.6**

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	11	6	14	20	17	22	18	26	29	25	188	19	4.6
Male	23	11	22	28	16	29	33	25	51	33	271	27	6.7
TOTAL	**34**	**17**	**36**	**48**	**33**	**51**	**51**	**51**	**80**	**58**	**459**	**50**	**5.6**

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	12	8	12	8	7	7	13	10	13	9	99	10	1.4
Am Indian	3	0	0	≤2	0	≤2	≤2	≤2	≤2	0	9	1	1.1
Black, Af Am	5	≤2	9	8	11	17	16	12	39	27	146	12	99.3
Asian	11	≤2	14	26	9	20	13	18	21	17	150	16	207.9
Other	0	0	0	3	≤2	0	≤2	4	≤2	≤2	12	1	11.1
Unknown	2	5	1	0	1	2	3	2	2	2	20	2	na
TOTAL	**33**	**16**	**36**	**46**	**30**	**47**	**48**	**47**	**77**	**56**	**436**	**47**	**5.4**

Missing Frequency =23

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1-4 years	0	1	0	3	1	0	0	0	0	0	5	0	1.0
5-14 years	4	0	2	1	0	1	3	2	0	1	14	1	1.3
15-24 years	7	1	8	12	9	10	9	7	12	13	88	9	7.6
25-39 years	10	5	13	20	14	20	20	18	34	22	176	19	11.6
40-64 years	10	9	12	11	8	16	16	21	32	19	154	14	5.9
≥65 years	3	1	1	1	1	4	3	3	2	3	22	3	1.9
TOTAL	**34**	**17**	**36**	**48**	**33**	**51**	**51**	**51**	**80**	**58**	**459**	**50**	**5.6**

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1 or 2 in a single year are published as ≤2.

Hepatitis C, chronic

Hepatitis C causes liver disease. For most people Hepatitis C is a long-term, chronic infection and may cause long-term health problems, and can be fatal. The majority of infected persons might not be aware of their infection because they are not clinically ill. There is no vaccine available for Hepatitis C. Hepatitis C is a blood-borne virus and best way to prevent infection is by not injecting illegal or misused drugs. There were 516 cases of Hepatitis C reported during 2014 in South Dakota, which are the most cases ever reported in a single year in the state. The counties with the highest rates were Corson, Bon Homme and Buffalo.

Table 92 Hepatitis C by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	≤2	≤2	0	0	0	0	0	0	0	0	2	0	7.4
Beadle	≤2	3	5	4	5	4	5	11	13	8	59	5	33.9
Bennett	≤2	≤2	0	3	3	≤2	≤2	0	≤2	≤2	16	2	46.6
Bon Homme	4	24	13	15	8	9	7	10	11	13	114	11	161.2
Brookings	≤2	5	7	0	3	4	6	3	6	6	41	5	12.8
Brown	9	18	6	11	7	10	9	14	6	10	100	10	27.4
Brule	0	≤2	≤2	≤2	≤2	≤2	≤2	≤2	4	≤2	13	1	24.7

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Buffalo	≤2	0	0	≤2	≤2	≤2	4	≤2	4	7	23	2	120.3
Butte	≤2	≤2	4	5	5	4	3	4	5	≤2	35	4	34.6
Campbell	≤2	0	≤2	0	0	0	0	0	0	≤2	4	0	27.3
Charles Mix	5	4	6	6	7	10	7	8	11	15	79	7	86.5
Clark	0	0	≤2	3	≤2	0	0	≤2	≤2	0	9	1	24.4
Clay	≤2	0	3	0	2	3	≤2	5	3	3	23	3	16.6
Codington	4	4	6	7	8	9	6	≤2	5	3	54	6	19.8
Corson	≤2	3	3	0	5	11	5	8	12	43	92	5	227.2
Custer	≤2	4	7	6	≤2	6	3	0	3	6	38	4	46.3
Davison	3	≤2	11	3	5	5	5	7	6	12	59	5	30.3
Day	0	0	0	0	≤2	0	≤2	≤2	≤2	≤2	6	1	10.5
Deuel	0	≤2	≤2	≤2	≤2	≤2	0	0	≤2	≤2	9	1	20.6
Dewey	4	≤2	≤2	5	6	≤2	3	≤2	8	9	41	4	77.3
Douglas	0	≤2	0	≤2	0	≤2	≤2	≤2	0	≤2	7	1	23.3
Edmunds	0	≤2	0	0	0	0	0	0	3	0	4	0	9.8
Fall River	≤2	7	≤2	6	8	3	10	5	6	4	53	6	74.7
Faulk	0	0	≤2	≤2	0	0	0	≤2	≤2	≤2	5	1	21.2
Grant	≤2	≤2	≤2	0	3	0	≤2	≤2	≤2	3	13	1	17.7
Gregory	0	≤2	≤2	0	≤2	0	≤2	0	≤2	0	6	1	14.0
Haakon	≤2	0	0	≤2	≤2	0	0	0	0	0	3	0	15.5
Hamlin	0	≤2	≤2	0	≤2	0	0	0	0	≤2	5	0	8.5
Hand	0	0	0	0	≤2	0	≤2	0	0	0	3	0	8.7
Hanson	0	≤2	0	0	0	0	0	0	≤2	0	3	0	9.0
Harding	0	0	0	0	0	0	0	0	≤2	0	1	0	8.0
Hughes	8	4	4	6	6	5	≤2	11	10	15	71	6	41.7
Hutchinson	≤2	0	≤2	≤2	0	≤2	0	0	≤2	0	8	1	10.9
Hyde	0	≤2	0	0	0	0	≤2	0	0	0	2	0	14.1
Jackson	0	≤2	0	≤2	0	0	0	≤2	0	≤2	5	0	16.5
Jerauld	0	≤2	0	0	0	≤2	≤2	≤2	≤2	0	6	1	29.0
Jones	0	0	0	0	≤2	≤2	≤2	≤2	0	0	4	0	39.8
Kingsbury	≤2	0	0	≤2	0	4	0	0	≤2	≤2	10	1	19.4
Lake	0	≤2	3	≤2	5	3	3	3	0	≤2	22	3	19.6
Lawrence	4	9	8	10	12	10	4	8	13	15	93	10	38.6
Lincoln	3	5	3	8	11	7	9	8	4	≤2	60	6	13.4
Lyman	0	0	0	≤2	0	≤2	4	0	≤2	13	21	1	55.9
Marshall	0	0	0	≤2	0	≤2	≤2	≤2	0	3	9	1	19.3
McCook	0	0	≤2	≤2	0	0	≤2	≤2	≤2	0	7	1	12.5
McPherson	0	≤2	0	≤2	0	≤2	0	0	≤2	0	4	0	16.3
Meade	6	6	10	10	4	≤2	4	4	13	6	65	6	25.6
Mellette	≤2	0	1	0	0	0	0	≤2	≤2	0	4	0	19.5
Miner	0	≤2	0	0	0	≤2	0	0	0	0	2	0	8.4
Minnehaha	64	121	91	120	139	125	113	130	106	138	1147	121	67.7
Moody	≤2	3	4	≤2	5	≤2	4	6	5	3	35	4	54.0
Oglala Lakota	12	6	7	10	9	11	11	17	6	15	104	11	76.5
Pennington	38	69	62	64	65	51	73	64	71	93	650	65	64.4
Perkins	0	≤2	0	≤2	0	0	≤2	0	≤2	≤2	7	1	23.5
Potter	0	0	0	≤2	0	≤2	≤2	0	0	≤2	4	0	17.2
Roberts	3	2	9	8	≤2	4	5	6	8	18	65	6	64.0
Sanborn	0	≤2	≤2	≤2	0	3	≤2	0	≤2	0	9	1	38.2
Spink	≤2	5	≤2	3	2	≤2	≤2	≤2	≤2	≤2	19	2	29.6
Stanley	0	0	0	≤2	0	≤2	≤2	4	≤2	≤2	10	1	33.7
Sully	0	≤2	0	0	≤2	0	0	0	0	0	2	0	14.6
Todd	4	5	≤2	6	6	7	8	6	10	11	65	6	67.6
Tripp	0	≤2	0	0	0	0	0	≤2	≤2	0	3	0	5.3
Turner	≤2	0	0	≤2	≤2	3	3	≤2	0	≤2	15	2	18.0
Union	≤2	5	7	≤2	6	3	7	6	7	4	47	6	32.6
Walworth	≤2	0	0	3	≤2	≤2	3	5	≤2	4	22	2	40.5
Yankton	10	10	8	16	17	8	9	14	20	9	121	10	53.9
Ziebach	0	0	0	0	0	0	0	0	0	≤2	2	0	7.1
TOTAL	**212**	**352**	**309**	**364**	**383**	**350**	**356**	**392**	**406**	**516**	**3640**	**360**	**44.7**

Missing Frequency =1

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	73	115	115	127	139	143	125	155	177	236	1405	133	34.5
Male	139	236	193	237	245	207	231	237	229	280	2234	234	54.8
TOTAL	**212**	**351**	**308**	**364**	**384**	**350**	**356**	**392**	**406**	**516**	**3639**	**360**	**44.7**

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	109	135	152	232	251	189	174	187	159	153	1741	167	24.9
Am Indian	49	26	45	81	76	82	81	66	76	115	697	76	84.9
Black, Af Am	6	6	4	4	6	12	12	8	11	8	77	7	52.4
Asian	≤2	≤2	≤2	≤2	3	≤2	3	6	5	≤2	26	2	36.0
Other	4	≤2	≤2	≤2	≤2	≤2	≤2	6	4	10	33	2	30.6
Unknown	35	173	89	21	30	50	68	71	73	33	643	59	na
TOTAL	**205**	**343**	**292**	**341**	**368**	**337**	**339**	**344**	**328**	**320**	**3217**	**338**	**39.5**

Missing Frequency =424

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1-4 years	0	0	1	0	1	0	0	1	0	0	10	0	2.1
5-14 years	0	2	0	3	0	0	1	0	0	0	6	0	0.5
15-24 years	14	20	11	8	15	16	13	30	27	44	192	16	16.7
25-39 years	59	83	67	62	84	94	81	109	121	177	929	84	61.4
40-64 years	132	235	222	282	266	227	243	237	242	278	2374	240	90.6
≥65 years	6	5	8	9	17	13	18	15	16	17	130	14	11.2
TOTAL	**211**	**345**	**309**	**364**	**383**	**350**	**356**	**392**	**406**	**516**	**3641**	**360**	**44.7**

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1 or 2 in a single year are published as ≤2.

Varicella (chicken pox)

Varicella (chicken pox) is a highly contagious disease of blistery rash, itching and fever caused by varicella-zoster virus. Chicken pox can be a serious disease, especially in babies and people with weakened immune systems. Varicella is spread through the air by coughing or sneezing. It can also be spread by touching or breathing in the virus particles that come from chicken pox blisters. The best way to prevent chicken pox is to get the varicella vaccine. Over the past decade varicella has decreased 83 percent from 135 cases reported in 2005 to 23 cases in 2014. Varicella vaccination is mandated for school entry in South Dakota.

Table 93 Varicella by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	0	≤2	0	0	0	0	0	≤2	≤2	0	4	0	14.8
Beadle	6	0	≤2	0	0	≤2	9	3	≤2	≤2	23	1	13.2
Bennett	0	≤2	0	0	0	0	≤2	0	0	0	2	0	5.8
Bon Homme	≤2	≤2	0	≤2	0	0	0	0	≤2	0	5	0	7.1
Brookings	≤2	0	0	≤2	≤2	≤2	3	0	0	≤2	9	1	2.8
Brown	9	0	0	6	0	≤2	4	≤2	0	≤2	23	1	6.3
Brule	0	0	0	≤2	6	0	≤2	≤2	0	0	9	0	17.1
Buffalo	0	4	0	0	0	≤2	≤2	≤2	0	0	8	0	41.8
Butte	0	0	0	0	0	2	0	0	0	0	2	0	2.0
Campbell	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Charles Mix	≤2	≤2	6	≤2	≤2	3	≤2	0	0	0	15	1	16.4
Clark	≤2	0	0	0	0	0	0	0	0	0	1	0	2.7
Clay	0	≤2	≤2	0	≤2	0	0	3	0	0	6	0	4.3
Codington	3	≤2	≤2	0	≤2	≤2	≤2	0	0	0	10	1	3.7
Corson	0	0	3	0	0	0	0	0	3	≤2	7	0	17.3
Custer	≤2	3	≤2	0	≤2	≤2	≤2	≤2	0	0	9	1	11.0
Davison	0	≤2	0	3	≤2	0	0	0	0	≤2	6	0	3.1
Day	0	≤2	0	0	0	≤2	0	0	0	0	2	0	3.5
Deuel	0	0	0	0	≤2	0	0	0	0	0	1	0	2.3

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Dewey	≤2	0	≤2	0	0	≤2	0	0	≤2	0	7	0	13.2
Douglas	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Edmunds	0	0	0	0	0	0	0	0	0	≤2	2	0	4.9
Fall River	0	0	≤2	0	0	0	0	0	0	0	1	0	1.4
Faulk	0	0	0	3	0	0	0	0	0	0	3	0	12.7
Grant	0	0	0	≤2	0	0	0	0	0	0	1	0	1.4
Gregory	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Haakon	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hamlin	0	0	0	0	3	0	0	0	0	0	3	0	5.1
Hand	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hanson	0	0	0	0	0	≤2	0	0	0	0	1	0	3.0
Harding	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hughes	11	4	6	≤2	6	≤2	≤2	≤2	≤2	0	35	2	20.6
Hutchinson	0	0	0	0	0	0	0	0	≤2	0	2	0	2.7
Hyde	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jerauld	0	≤2	0	0	0	0	0	0	0	0	1	0	4.8
Jones	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Kingsbury	≤2	0	0	≤2	5	0	0	0	0	0	8	0	15.5
Lake	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Lawrence	≤2	≤2	3	≤2	≤2	4	≤2	≤2	4	≤2	20	2	8.3
Lincoln	11	≤2	5	≤2	≤2	≤2	0	0	≤2	≤2	22	1	4.9
Lyman	10	0	0	≤2	0	0	0	0	0	0	11	0	29.3
Marshall	0	0	0	0	0	0	0	0	0	0	0	0	0.0
McCook	0	0	≤2	≤2	0	0	0	0	0	0	2	0	3.6
McPherson	0	0	0	0	4	0	0	0	0	0	4	0	16.3
Meade	≤2	≤2	0	7	≤2	23	22	≤2	≤2	0	60	2	23.6
Mellette	0	≤2	0	0	0	0	0	0	0	0	2	0	9.8
Miner	0	0	≤2	0	0	0	0	0	0	0	1	0	4.2
Minnehaha	49	26	30	12	7	8	14	≤2	5	6	159	10	9.4
Moody	3	0	≤2	≤2	0	0	0	0	0	0	4	0	6.2
Oglala Lakota	≤2	3	0	0	0	0	0	0	0	0	5	0	3.7
Pennington	9	52	13	7	8	6	6	5	12	5	123	8	12.2
Perkins	≤2	0	0	≤2	0	0	0	0	0	0	3	0	10.1
Potter	≤2	0	≤2	0	0	0	0	0	0	0	2	0	8.6
Roberts	≤2	≤2	0	≤2	0	≤2	0	≤2	0	0	6	1	5.9
Sanborn	≤2	0	0	0	0	0	0	0	0	0	2	0	8.5
Spink	0	0	0	0	0	0	0	≤2	3	0	4	0	6.2
Stanley	0	0	≤2	0	≤2	0	0	0	≤2	0	3	0	10.1
Sully	0	0	≤2	0	0	0	0	0	≤2	0	2	0	14.6
Todd	≤2	0	0	≤2	0	0	0	≤2	3	≤2	9	1	9.4
Tripp	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Turner	0	0	≤2	≤2	0	0	0	0	0	0	2	0	2.4
Union	0	6	≤2	0	0	≤2	0	≤2	0	0	10	0	6.9
Walworth	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Yankton	0	0	0	0	≤2	≤2	0	≤2	0	0	5	0	2.2
Ziebach	0	0	0	0	0	0	0	0	≤2	0	1	0	3.6
TOTAL	**135**	**116**	**82**	**55**	**53**	**62**	**67**	**32**	**43**	**23**	**668**	**59**	**8.2**

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	71	55	38	26	30	26	32	20	24	13	335	28	8.2
Male	63	58	44	29	23	36	35	12	19	10	329	32	8.1
TOTAL	**134**	**113**	**82**	**55**	**53**	**62**	**67**	**32**	**43**	**23**	**664**	**59**	**8.2**

Missing Frequency = 4

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	102	67	57	44	42	47	50	16	19	11	455	46	6.5
Am Indian	21	18	15	7	8	12	6	7	8	7	109	8	13.3
Black, Af Am	≤2	≤2	≤2	0	≤2	≤2	0	≤2	0	0	8	1	5.4
Asian	≤2	0	≤2	3	0	0	≤2	≤2	≤2	0	9	1	12.5
Other	0	8	0	0	≤2	0	0	≤2	0	0	10	0	9.3
Unknown	10	21	7	0	1	2	7	2	15	3	68	5	na
TOTAL	**135**	**116**	**81**	**54**	**53**	**62**	**65**	**29**	**43**	**21**	**659**	**58**	**8.1**

Missing Frequency = 9

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	12	3	5	12	0	5	2	7	7	2	55	5	46.1
1-4 years	42	11	14	10	13	11	6	15	12	11	145	12	30.4
5-14 years	74	98	57	25	30	30	45	5	17	6	387	30	35.3
15-24 years	2	2	3	8	9	13	9	3	3	4	56	4	4.9
25-39 years	1	0	1	0	0	3	4	2	4	0	15	1	1.0
40-64 years	2	0	1	0	0	0	0	0	0	0	3	0	0.1
≥65 years	0	0	1	0	0	0	0	0	0	0	1	0	0.1
TOTAL	**133**	**114**	**82**	**55**	**52**	**62**	**66**	**32**	**43**	**23**	**662**	**59**	**8.1**

Missing Frequency = 6

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1 or 2 in a single year are published as ≤2.

Methicillin-resistant Staphylococcus aureus, invasive

Methicillin-resistant *Staphylococcus aureus* (MRSA) is a bacteria resistant to most commonly used antibiotics. Most MRSA infections are skin infections, but may cause life-threatening bloodstream infections, pneumonia and surgical site infections. In 2014 there were 124 cases of invasive MRSA reported in South Dakota, the most ever in one year. Counties with the highest average annual rates over the past decade were Dewey, Corson and Todd. The highest rate of disease was among the elderly, ages 65 years and older.

Table 94 Methicillin-resistant Staph Aureus, Invasive by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	≤2	≤2	≤2	0	0	0	0	0	0	0	4	0	14.8
Beadle	≤2	3	≤2	≤2	≤2	3	≤2	0	≤2	≤2	15	1	8.6
Bennett	0	≤2	0	≤2	0	0	≤2	≤2	0	≤2	6	1	17.5
Bon Homme	0	0	≤2	0	0	≤2	≤2	0	≤2	0	4	0	5.7
Brookings	≤2	≤2	≤2	≤2	0	3	4	3	≤2	≤2	18	2	5.6
Brown	0	≤2	≤2	0	3	3	≤2	≤2	≤2	9	21	1	5.7
Brule	≤2	≤2	≤2	≤2	≤2	0	0	3	≤2	≤2	13	1	24.7
Buffalo	0	≤2	0	0	0	0	≤2	0	≤2	≤2	4	0	20.9
Butte	0	0	≤2	≤2	≤2	0	0	≤2	≤2	≤2	7	1	6.9
Campbell	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Charles Mix	≤2	3	3	3	≤2	≤2	≤2	0	0	≤2	16	2	17.5
Clark	≤2	0	0	0	0	0	0	0	0	0	1	0	2.7
Clay	≤2	0	≤2	≤2	≤2	≤2	0	≤2	0	≤2	9	1	6.5
Codington	≤2	3	≤2	≤2	0	0	≤2	0	≤2	3	13	1	4.8
Corson	0	0	≤2	3	0	5	≤2	≤2	3	≤2	18	2	44.4
Custer	0	0	0	0	0	0	≤2	0	0	≤2	2	0	2.4
Davison	3	0	7	≤2	4	4	5	7	3	≤2	35	4	17.9
Day	0	≤2	0	≤2	≤2	0	0	≤2	≤2	0	7	1	12.3
Deuel	≤2	≤2	≤2	≤2	0	0	0	0	≤2	0	7	1	16.0
Dewey	0	≤2	≤2	5	3	≤2	≤2	3	4	7	28	3	52.8
Douglas	0	0	≤2	0	≤2	0	0	0	≤2	0	4	0	13.3
Edmunds	0	0	0	0	0	0	0	0	≤2	≤2	3	0	7.4
Fall River	0	0	0	0	≤2	0	≤2	≤2	≤2	0	6	0	8.5
Faulk	0	0	0	0	0	≤2	≤2	0	0	≤2	3	0	12.7
Grant	0	≤2	≤2	0	0	0	0	0	≤2	0	3	0	4.1

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Gregory	≤2	0	≤2	≤2	≤2	0	0	0	0	≤2	5	1	11.7
Haakon	0	0	0	0	0	0	0	0	≤2	0	1	0	5.2
Hamlin	0	2	0	0	0	0	3	0	0	≤2	6	0	10.2
Hand	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hanson	0	≤2	0	0	≤2	0	0	0	0	0	2	0	6.0
Harding	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hughes	0	≤2	≤2	0	0	≤2	0	0	0	≤2	5	0	2.9
Hutchinson	0	0	3	0	≤2	0	0	0	4	≤2	9	0	12.3
Hyde	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jackson	0	0	0	0	≤2	0	≤2	0	0	≤2	4	0	13.2
Jerauld	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jones	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Kingsbury	≤2	0	0	≤2	≤2	≤2	0	0	≤2	0	6	1	11.7
Lake	0	0	≤2	≤2	≤2	≤2	≤2	≤2	0	≤2	8	1	7.1
Lawrence	0	0	0	≤2	0	3	≤2	0	0	≤2	8	0	3.3
Lincoln	≤2	≤2	4	0	≤2	≤2	≤2	0	≤2	≤2	14	1	3.1
Lyman	0	0	2	0	0	0	0	≤2	0	≤2	4	0	10.7
Marshall	0	0	0	0	0	≤2	0	0	0	0	2	0	4.3
McCook	≤2	≤2	≤2	3	≤2	0	≤2	≤2	0	0	10	1	17.8
McPherson	0	0	≤2	0	0	≤2	0	0	≤2	≤2	4	0	16.3
Meade	0	0	≤2	3	≤2	≤2	4	4	0	≤2	17	2	6.7
Mellette	0	0	≤2	0	0	0	≤2	≤2	0	0	4	0	19.5
Miner	≤2	0	0	0	0	0	0	0	0	0	1	0	4.2
Minnehaha	21	17	20	22	21	25	19	20	18	19	202	20	11.9
Moody	0	0	0	≤2	≤2	0	0	≤2	0	0	3	0	4.6
Oglala Lakota	0	0	≤2	5	6	5	7	7	5	5	42	5	30.9
Pennington	0	0	7	6	9	18	14	11	16	18	99	10	9.8
Perkins	0	0	≤2	0	0	0	≤2	0	0	0	2	0	6.7
Potter	0	≤2	0	0	≤2	≤2	0	0	0	0	3	0	12.9
Roberts	≤2	0	3	≤2	5	5	4	≤2	≤2	4	29	3	28.6
Sanborn	≤2	0	0	0	0	0	0	0	0	≤2	3	0	12.7
Spink	0	0	≤2	0	4	≤2	≤2	≤2	0	≤2	10	1	15.6
Stanley	0	0	0	0	0	0	0	0	0	≤2	1	0	3.4
Sully	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Todd	≤2	≤2	4	0	5	≤2	≤2	5	8	8	36	3	37.5
Tripp	≤2	0	≤2	≤2	0	≤2	≤2	≤2	0	≤2	8	1	14.2
Turner	0	≤2	≤2	≤2	≤2	0	≤2	≤2	≤2	≤2	11	1	13.2
Union	0	≤2	≤2	0	≤2	≤2	≤2	≤2	≤2	≤2	10	1	6.9
Walworth	0	≤2	≤2	3	≤2	≤2	≤2	0	≤2	≤2	12	1	22.1
Yankton	0	0	≤2	≤2	≤2	3	≤2	3	4	6	22	2	9.8
Ziebach	0	0	0	0	≤2	≤2	0	0	0	≤2	3	0	10.7
TOTAL	**47**	**51**	**88**	**77**	**94**	**98**	**91**	**89**	**94**	**124**	**853**	**90**	**10.5**

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	20	24	36	31	46	50	45	47	39	63	401	42	9.9
Male	27	27	52	46	48	48	46	42	55	61	452	47	11.1
TOTAL	**47**	**51**	**88**	**77**	**94**	**98**	**91**	**89**	**94**	**124**	**853**	**90**	**10.5**

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	41	36	56	50	65	62	64	57	58	76	565	58	8.1
Am Indian	5	6	17	21	20	27	25	23	27	39	210	22	25.6
Black, Af Am	0	0	0	0	≤2	≤2	0	≤2	0	≤2	7	0	4.8
Asian	0	0	0	0	≤2	0	0	0	0	0	1	0	1.4
Other	0	≤2	≤2	0	≤2	0	0	≤2	2	≤2	10	1	9.3
Unknown	0	7	11	1	3	7	1	3	4	1	38	3	na
TOTAL	**46**	**50**	**86**	**72**	**92**	**97**	**90**	**87**	**91**	**120**	**831**	**89**	**10.2**

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	0	0	3	0	1	1	0	1	4	4	14	1	11.7
1-4 years	1	0	1	1	4	1	0	0	0	3	11	1	2.3
5-14 years	1	1	2	2	1	2	5	2	4	5	25	2	2.3
15-24 years	1	1	0	2	2	2	2	1	0	4	15	2	1.3
25-39 years	2	4	5	6	7	7	9	5	11	8	64	7	4.2
40-64 years	9	20	28	36	32	40	29	40	32	53	319	32	12.2
≥65 years	28	23	48	30	47	45	46	40	43	47	397	44	34.1
TOTAL	**42**	**49**	**87**	**77**	**94**	**98**	**91**	**89**	**94**	**124**	**845**	**90**	**10.4**

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1 or 2 in a single year are published as ≤2.

Streptococcus pneumoniae, invasive

Pneumococcal disease is an infection caused by bacteria, also referred to as pneumococcus. Invasive *Streptococcus pneumoniae* can cause many types of illnesses, including ear infections and meningitis. There are vaccines to prevent pneumococcal disease in children and adults.

Table 95 Streptococcus Pneumoniae (Invasive) by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	nr	nr	nr	nr	nr	nr	≤2	0	0	0	0	0	0.0
Beadle	nr	nr	nr	nr	nr	nr	0	≤2	≤2	≤2	5	2	2.9
Bennett	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Bon Homme	nr	nr	nr	nr	nr	nr	0	≤2	≤2	0	2	1	2.8
Brookings	nr	nr	nr	nr	nr	nr	≤2	5	≤2	≤2	11	2	3.4
Brown	nr	nr	nr	nr	nr	nr	0	≤2	3	6	11	3	3.0
Brule	nr	nr	nr	nr	nr	nr	≤2	≤2	0	≤2	3	1	5.7
Buffalo	nr	nr	nr	nr	nr	nr	0	≤2	≤2	0	3	1	15.7
Butte	nr	nr	nr	nr	nr	nr	0	0	≤2	0	1	0	1.0
Campbell	nr	nr	nr	nr	nr	nr	0	≤2	0	0	1	0	6.8
Charles Mix	nr	nr	nr	nr	nr	nr	0	0	3	3	6	2	6.6
Clark	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Clay	nr	nr	nr	nr	nr	nr	0	0	3	≤2	5	1	3.6
Codington	nr	nr	nr	nr	nr	nr	0	6	≤2	0	7	1	2.6
Corson	nr	nr	nr	nr	nr	nr	≤2	≤2	≤2	≤2	5	1	12.3
Custer	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Davison	nr	nr	nr	nr	nr	nr	0	≤2	≤2	≤2	6	2	3.1
Day	nr	nr	nr	nr	nr	nr	0	≤2	3	0	5	1	8.8
Deuel	nr	nr	nr	nr	nr	nr	0	≤2	0	≤2	2	1	4.6
Dewey	nr	nr	nr	nr	nr	nr	≤2	3	3	≤2	8	2	15.1
Douglas	nr	nr	nr	nr	nr	nr	0	0	0	≤2	1	0	3.3
Edmunds	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Fall River	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Faulk	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Grant	nr	nr	nr	nr	nr	nr	0	≤2	0	0	1	0	1.4
Gregory	nr	nr	nr	nr	nr	nr	≤2	0	≤2	0	2	1	4.7
Haakon	nr	nr	nr	nr	nr	nr	0	0	0	≤2	1	0	5.2
Hamlin	nr	nr	nr	nr	nr	nr	≤2	0	0	≤2	2	1	3.4
Hand	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Hanson	nr	nr	nr	nr	nr	nr	0	0	0	≤2	1	0	3.0
Harding	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Hughes	nr	nr	nr	nr	nr	nr	0	0	0	3	3	0	1.8
Hutchinson	nr	nr	nr	nr	nr	nr	0	0	≤2	≤2	2	1	2.7
Hyde	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Jackson	nr	nr	nr	nr	nr	nr	0	0	0	≤2	1	0	3.3
Jerauld	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Jones	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Kingsbury	nr	nr	nr	nr	nr	nr	0	≤2	0	0	2	0	3.9
Lake	nr	nr	nr	nr	nr	nr	0	≤2	≤2	≤2	3	1	2.7
Lawrence	nr	nr	nr	nr	nr	nr	0	≤2	≤2	0	2	1	0.8

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Lincoln	nr	nr	nr	nr	nr	nr	≤2	8	5	3	18	4	4.0
Lyman	nr	nr	nr	nr	nr	nr	≤2	0	≤2	≤2	4	1	10.7
Marshall	nr	nr	nr	nr	nr	nr	0	0	0	≤2	1	0	2.1
McCook	nr	nr	nr	nr	nr	nr	0	≤2	≤2	≤2	5	2	8.9
McPherson	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Meade	nr	nr	nr	nr	nr	nr	≤2	≤2	3	≤2	8	2	3.1
Mellette	nr	nr	nr	nr	nr	nr	0	0	0	≤2	1	0	4.9
Miner	nr	nr	nr	nr	nr	nr	0	≤2	0	0	1	0	4.2
Minnehaha	nr	nr	nr	nr	nr	nr	15	27	19	22	83	21	4.9
Moody	nr	nr	nr	nr	nr	nr	0	0	0	≤2	1	0	1.5
Oglala Lakota	nr	nr	nr	nr	nr	nr	3	5	6	≤2	16	4	11.8
Pennington	nr	nr	nr	nr	nr	nr	3	10	11	9	33	10	3.3
Perkins	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Potter	nr	nr	nr	nr	nr	nr	0	0	0	≤2	1	0	4.3
Roberts	nr	nr	nr	nr	nr	nr	3	3	4	≤2	11	3	10.8
Sanborn	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Spink	nr	nr	nr	nr	nr	nr	0	0	0	≤2	1	0	1.6
Stanley	nr	nr	nr	nr	nr	nr	0	0	≤2	≤2	2	1	6.7
Sully	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
Todd	nr	nr	nr	nr	nr	nr	≤2	3	5	≤2	11	3	11.4
Tripp	nr	nr	nr	nr	nr	nr	≤2	0	≤2	≤2	4	1	7.1
Turner	nr	nr	nr	nr	nr	nr	≤2	≤2	0	≤2	5	2	6.0
Union	nr	nr	nr	nr	nr	nr	≤2	≤2	≤2	≤2	6	2	4.2
Walworth	nr	nr	nr	nr	nr	nr	≤2	≤2	0	≤2	5	2	9.2
Yankton	nr	nr	nr	nr	nr	nr	0	0	6	≤2	7	1	3.1
Ziebach	nr	nr	nr	nr	nr	nr	0	0	0	0	0	0	0.0
TOTAL	**nr**	**nr**	**nr**	**nr**	**nr**	**nr**	**42**	**97**	**99**	**88**	**326**	**93**	**4.0**

GENDER	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Female	0	0	0	0	0	0	20	47	45	45	157	0	3.9
Male	0	0	0	0	0	0	22	50	54	43	169	0	4.1
TOTAL	**nr**	**nr**	**nr**	**nr**	**nr**	**nr**	**42**	**97**	**99**	**88**	**326**	**93**	**4.0**

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	nr	nr	nr	nr	nr	nr	25	61	66	67	219	64	3.1
Am Indian	nr	nr	nr	nr	nr	nr	15	19	20	12	66	17	8.0
Black, Af Am	nr	nr	nr	nr	nr	nr	≤2	4	4	3	12	4	8.2
Asian	nr	nr	nr	nr	nr	nr	≤2	≤2	0	0	2	1	2.8
Other	nr	nr	nr	nr	nr	nr	0	≤2	≤2	≤2	5	2	4.6
Unknown	nr	nr	nr	nr	nr	nr	0	4	7	2	13	3	na
TOTAL	**nr**	**nr**	**nr**	**nr**	**nr**	**nr**	**42**	**91**	**99**	**85**	**317**	**88**	**3.9**

Missing Frequency = 9

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	nr	nr	nr	nr	nr	nr	7	2	5	4	18	5	15.1
1-4 years	nr	nr	nr	nr	nr	nr	7	9	5	1	22	6	4.6
5-14 years	nr	nr	nr	nr	nr	nr	1	1	0	4	6	1	0.5
15-24 years	nr	nr	nr	nr	nr	nr	2	1	1	2	6	2	0.5
25-39 years	nr	nr	nr	nr	nr	nr	3	7	6	4	20	5	1.3
40-64 years	nr	nr	nr	nr	nr	nr	13	50	47	39	149	43	5.7
≥65 years	nr	nr	nr	nr	nr	nr	9	27	35	34	105	31	9.0
TOTAL	**nr**	**nr**	**nr**	**nr**	**nr**	**nr**	**42**	**97**	**99**	**88**	**326**	**93**	**4.0**

*Average annual incidence (cases per 100,000 population per year). Individual counties events of 1 or 2 in a single year are published as ≤2.

West Nile virus (WNV) disease

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

Table 96 West Nile Disease by County, Gender, Race, and Age, South Dakota 2005-2014

Syndrome	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
WNV Fever	194	75	160	28	15	16	2	141	92	45	768	60	18.9
WNV Neuro-invasive	35	38	48	11	6	4	0	62	57	12	273	24	6.7
TOTAL	**229**	**113**	**208**	**39**	**21**	**20**	**2**	**203**	**149**	**57**	**1041**	**85**	**12.8**

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Aurora	2	0	0	0	1	0	0	4	0	0	7	0	25.8
Beadle	6	2	5	2	1	0	0	12	8	1	37	2	21.3
Bennett	1	0	3	1	1	0	0	0	0	0	6	0	17.5
BonHomme	3	1	1	0	1	0	0	1	0	0	7	1	9.9
Brookings	6	6	2	0	0	0	0	10	7	0	31	1	9.7
Brown	43	17	34	7	2	1	0	36	23	7	170	12	46.5
Brule	1	1	3	0	0	0	0	0	3	0	8	0	15.2
Buffalo	1	1	0	0	0	0	0	0	2	0	4	0	20.9
Butte	4	1	7	0	1	1	0	0	1	0	15	1	14.8
Campbell	2	0	1	0	0	0	0	0	1	0	4	0	27.3
CharlesMix	6	1	3	1	1	0	0	2	3	2	19	2	20.8
Clark	0	1	3	1	0	0	0	2	4	0	11	1	29.8
Clay	5	1	5	0	1	1	0	1	2	0	16	1	11.5
Codington	5	0	6	0	0	1	0	8	4	5	29	3	10.7
Corson	1	0	1	1	0	0	0	0	2	0	5	0	12.3
Custer	1	0	1	0	0	0	0	1	0	0	3	0	3.7
Davison	30	2	5	2	3	0	0	10	3	0	55	3	28.2
Day	1	2	6	0	0	0	0	4	3	1	17	1	29.8
Deuel	1	0	1	0	0	0	0	1	1	0	4	0	9.2
Dewey	1	0	2	2	0	1	0	1	2	2	11	1	20.8
Douglas	2	0	0	0	0	1	0	1	1	0	5	0	16.7
Edmunds	1	0	4	2	0	1	0	3	1	2	14	1	34.4
FallRiver	1	1	1	0	1	1	0	0	0	0	5	1	7.0
Faulk	1	1	0	0	0	0	0	2	2	1	7	1	29.6
Grant	3	2	2	1	0	0	0	5	0	2	15	2	20.4
Gregory	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Haakon	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Hamlin	3	0	4	0	0	1	0	4	1	3	16	1	27.1
Hand	2	0	5	0	0	0	0	0	0	1	8	0	23.3
Hanson	6	1	2	0	0	0	0	3	0	1	13	1	39.0
Harding	0	0	2	0	0	0	0	0	0	1	3	0	23.9
Hughes	4	3	7	1	1	1	0	6	6	4	33	4	19.4
Hutchinson	5	2	2	0	0	0	0	2	1	0	12	1	16.3
Hyde	0	0	0	0	0	0	0	2	0	0	2	0	14.1
Jackson	1	0	1	0	0	0	0	0	1	1	4	0	13.2
Jerauld	2	0	0	0	0	0	0	2	1	0	5	0	24.1
Jones	0	2	0	0	0	0	0	0	4	0	6	0	59.6
Kingsbury	2	2	3	2	0	0	0	8	0	0	17	1	33.0
Lake	2	6	5	1	0	1	0	6	1	0	22	1	19.6
Lawrence	2	1	3	0	0	0	0	1	1	1	9	1	3.7

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
Lincoln	5	3	6	1	0	1	0	6	4	2	28	3	6.2
Lyman	1	1	1	0	0	0	0	0	1	0	4	0	10.7
Marshall	3	6	4	0	0	0	0	11	1	1	26	1	55.8
McCook	3	2	2	0	0	0	0	1	2	0	10	1	17.8
McPherson	1	0	0	1	0	0	0	3	1	1	7	1	28.5
Meade	1	2	8	2	0	0	0	0	3	2	18	2	7.1
Mellette	1	1	1	0	0	0	0	0	1	0	4	0	19.5
Miner	0	0	2	1	0	0	0	1	1	0	5	0	20.9
Minnehaha	13	10	5	1	3	3	1	16	9	5	66	5	3.9
Moody	2	1	1	0	0	0	0	2	2	0	8	1	12.3
Oglala Lakota	1	1	3	0	0	0	0	0	1	2	8	1	5.9
Pennington	7	3	20	1	1	3	0	2	11	1	49	3	4.9
Perkins	4	0	2	0	0	0	0	0	2	0	8	0	26.8
Potter	0	1	2	0	0	0	0	1	0	0	4	0	17.2
Roberts	3	4	5	0	0	0	0	3	2	0	17	1	16.8
Sanborn	3	0	3	0	1	0	0	3	2	1	13	1	55.2
Spink	5	2	1	0	0	1	0	5	6	1	21	1	32.7
Stanley	3	0	1	1	0	0	0	0	0	0	5	0	16.9
Sully	0	1	0	1	0	0	0	1	1	0	4	0	29.1
Todd	2	1	4	0	1	0	0	0	0	0	8	0	8.3
Tripp	1	3	2	2	0	0	0	1	3	1	13	1	23.0
Turner	6	6	2	1	0	1	0	1	1	1	19	1	22.8
Union	2	2	0	1	1	0	0	3	1	3	13	1	9.0
Walworth	1	0	3	2	0	0	0	1	2	1	10	1	18.4
Yankton	4	3	0	0	0	0	1	4	3	0	15	1	6.7
Ziebach	0	3	0	0	0	0	0	0	0	0	3	0	10.7
TOTAL	**229**	**113**	**208**	**39**	**21**	**20**	**2**	**203**	**149**	**57**	**1041**	**85**	**12.8**

#WNV cases are listed by county for mosquito control risk assessment.

RACE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
White	212	98	181	37	17	18	0	196	133	51	943	75	13.5
Am Indian	12	8	18	2	2	2	0	2	14	6	66	4	8.0
Black, Afri Am	0	0	1	0	0	0	0	1	0	0	2	0	1.4
Other	2	0	1	0	0	0	0	0	0	0	3	0	na
Unknown	3	7	7	0	2	0	2	4	2	0	27	2	na
TOTAL	**229**	**113**	**208**	**39**	**21**	**20**	**2**	**203**	**149**	**57**	**1041**	**85**	**12.8**

AGE GROUP	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median	Incidence*
<1 year	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1-4 years	2	0	2	0	0	0	0	0	0	0	4	0	0.8
5-14 years	8	2	10	0	1	0	0	8	5	5	39	4	3.6
15-24 years	35	15	17	6	4	2	0	10	11	7	107	9	9.3
25-39 years	46	27	50	9	5	7	2	41	21	15	223	18	14.7
40-64 years	108	53	95	22	6	6	0	99	68	21	478	38	18.2
≥65 years	28	16	34	2	5	5	0	45	44	9	188	13	16.1
TOTAL	**227**	**113**	**208**	**39**	**21**	**20**	**2**	**203**	**149**	**57**	**1039**	**85**	**12.8**

Missing Frequency = 2

*Average annual incidence (cases per 100,000 population per year)

Other diseases

The following diseases are legally reportable in South Dakota, but have been reported in low numbers not permitting county-level stratification.

Table 97 Low Incidence Infectious Diseases by Year, Gender, Race, and Age, South Dakota 2005-2014

DISEASE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median
Anthrax	0	0	0	0	0	0	0	0	0	0	0	0
Botulism	1	0	0	0	0	0	0	0	0	0	1	0

DISEASE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median
Brucellosis	0	0	0	0	0	0	0	0	1	0	1	0
Chikungunya	0	0	0	0	0	0	0	0	0	2	2	0
Cholera	0	0	0	0	0	0	0	0	0	0	0	0
Carbapenem-resistant Enterobacteriaceae (CRE)	NR	NR	NR	NR	NR	NR	NR	NR	12	3	15	--
Cyclospora	0	0	0	1	0	0	0	0	1	0	2	0
Dengue fever	1	0	3	0	0	1	0	2	3	0	10	1
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0
Ehrlichiosis and Anaplasmosis	0	0	0	1	0	0	4	1	1	0	7	0
Haemophilus influenzae type b	0	0	0	0	0	0	1	0	3	0	4	0
Hantavirus pulmonary syndrome	2	2	1	0	0	0	1	1	0	0	7	1
Hepatitis A	1	9	7	3	3	1	2	0	4	3	33	3
Hepatitis B, acute	8	6	6	0	4	2	2	2	5	3	38	4
Legionellosis	21	5	4	3	2	9	2	9	8	9	72	6
Leprosy	0	0	0	0	0	0	0	0	0	0	0	0
Listeriosis	0	2	2	1	1	3	1	0	0	0	10	1
Lyme disease	2	1	0	3	1	1	4	4	4	2	22	2
Malaria	1	0	1	0	1	3	2	5	7	5	25	2
Measles	0	0	0	0	0	0	0	0	0	8	8	0
Meningococcal disease	4	4	3	3	5	0	3	0	4	2	28	3
Mumps	0	295	6	1	2	2	0	0	0	0	306	1
Plague	0	0	0	0	0	0	0	0	0	0	0	0
Q fever	2	2	1	1	9	4	1	2	4	5	31	2
Rabies, human	0	0	0	0	0	0	0	0	0	0	0	0
Rocky Mountain Spotted Fever	5	0	5	3	0	0	1	1	7	3	25	2
Rubella	0	0	0	0	0	0	0	0	0	0	0	0
Streptococcus, Group B, invasive	26	15	18	22	27	37	18	nr	nr	nr	163	22
Tetanus	0	0	0	0	0	0	0	0	0	0	0	0
Toxic shock syndrome	2	0	0	1	0	0	0	0	0	0	3	0
Tularemia	8	4	7	10	5	11	8	5	7	5	70	7
Typhoid fever	0	1	0	2	2	1	0	0	3	0	9	1

GENDER	CRE	Dengue fever	Hepatitis A	Hepatitis B, acute	Legionellosis	Listeriosis	Lyme disease	Malaria	Meningococcal disease	Mumps	Q fever	Rocky Mountain Spotted Fever	Streptococcal disease, Group B, invasive	Tularemia
Female	12	5	18	12	22	5	10	6	13	195	8	7	89	37
Male	11	5	15	26	50	5	12	19	15	111	23	18	77	33
TOTAL	**23**	**10**	**33**	**38**	**72**	**10**	**22**	**25**	**28**	**306**	**31**	**25**	**166**	**70**

RACE	CRE	Dengue fever	Hepatitis A	Hepatitis B, acute	Legionellosis	Listeriosis	Lyme disease	Malaria	Meningococcal disease	Mumps	Q fever	Rocky Mountain Spotted Fever	Streptococcal disease, Group B, invasive	Tularemia
White	14	7	28	28	57	8	20	7	22	218	26	16	115	22
Am Indian	3	1	0	6	3	0	0	1	5	29	2	7	36	46
Black, Af Am	0	0	1	1	1	0	0	16	0	2	0	0	1	0
Asian	0	0	1	3	0	2	1	0	0	3	0	1	0	0
Other	0	0	2	0	1	0	0	1	0	0	0	0	0	0
Unknown	3	2	1	0	10	0	0	0	1	51	0	1	9	1
TOTAL	**20**	**10**	**33**	**38**	**72**	**10**	**21**	**25**	**28**	**303**	**28**	**25**	**161**	**69**

AGE GROUP	CRE	Dengue fever	Hepatitis A	Hepatitis B, acute	Legionellosis	Listeriosis	Lyme disease	Malaria	Meningococcal disease	Mumps	Q fever	Rocky Mountain Spotted Fever	Streptococcal disease, Group B, invasive	Tularemia
<1 year	0	0	0	0	0	1	0	0	0	0	0	0	3	0
1-4 years	0	0	5	0	0	0	1	1	4	19	0	2	7	19
5-14 years	0	1	3	0	0	0	5	0	1	31	0	2	5	34
15-24 years	0	1	4	1	0	1	1	4	6	85	0	1	7	2
25-39 years	1	3	5	16	6	1	5	12	3	92	4	5	14	2
40-64 years	6	4	8	20	36	1	9	8	5	63	20	12	58	8
≥65 years	16	1	5	1	30	6	1	0	9	16	7	3	69	5
TOTAL	**23**	**10**	**33**	**38**	**72**	**10**	**22**	**25**	**28**	**306**	**31**	**25**	**163**	**70**

Influenza

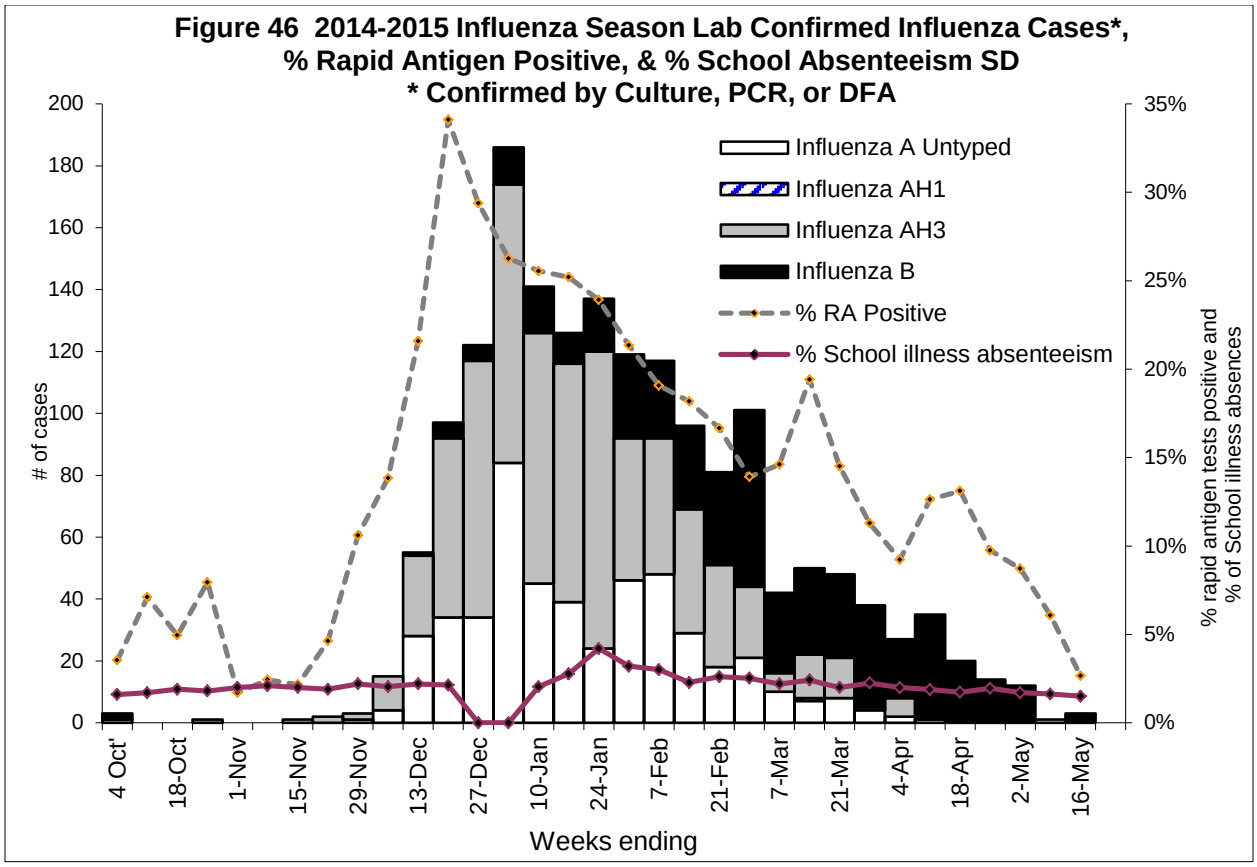
During the 2014-2015 influenza season the predominant virus was influenza A (H3N2). The peak of the season was the first week in January 2015 with A(H3N2) and Influenza B viruses circulating. There were 1,703 confirmed influenza cases reported during the 2014-15 season, including A(H3N2) 760 cases (45%), A(H1N1) 1 case (<1%), A-not subtyped 490 cases (29%), and 452 cases (27%) of influenza B. Additionally, 68,588 rapid antigen influenza tests were reported with 13,744 positive (20%), stratified as 11,496 (17%) positive for influenza A, and 2,248 (3%) positive for influenza B.

There were 793 individuals reported hospitalized during the 2014-2015 influenza season and there were 63 influenza-associated deaths reported.

Other viral respiratory pathogen reports included 113 adenovirus, 105 coronavirus OC43, 16 coronavirus 229E, 19 chlamydiophila pneumonia, 1,126 human Metapneumovirus, 21 parainfluenza-1, 82 parainfluenza-2, 209 parainfluenza-3, 27 parainfluenza-4, 334 respiratory syncytial virus, and 627 rhino/enterovirus.

Table 98 Ages of Laboratory Confirmed Influenza Cases, Influenza Associated Hospitalizations and Deaths, South Dakota 2014-2105 Influenza Season

Lab Confirmed Influenza Cases (by DFA, PCR, or culture)		Influenza Associated Hospitalizations	Influenza Associated Deaths
Age Group	# Cases (%)	# Hospitalized (%)	# Deaths (%)
0-4	242 (14%)	68 (9%)	2 (3%)
5-18	317 (19%)	28 (4%)	0
19-49	315 (18%)	80 (10%)	3 (5%)
50-64	243 (14%)	108 (14%)	3 (5%)
> 64	586 (34%)	509 (64%)	55 (87)
Total	1703	793	63



Immunization

Immunization requirements for school entrance in South Dakota include: four doses of diphtheria, tetanus, pertussis vaccine (DTaP), and four doses of poliovirus vaccine, and two doses of measles, mumps, and rubella vaccine (MMR), and two doses of chicken pox vaccine. Child vaccination coverage rates are estimated by the National Immunization Survey (NIS). The NIS provides vaccination coverage estimates for children aged 19-35 months for each of the 50 states, including South Dakota.

Table 99 Children 19-35 Months, Percent Vaccinated, South Dakota 2003-2014 (NIS)

Vaccine	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
4+DTaP	86.4	90.3	89.7	85.5	88.7	84.3	82.4	80.1	75.8	79.2	86.5	87.8
3+Polio	90.7	92.5	94.1	97.4	97.7	94.5	96.2	94.7	92.9	93.0	93.4	97.9
1+MMR	91.3	93.7	94.4	94.3	95.0	93.7	92.8	92.1	89.2	93.3	93.1	94.1
3+Hib	95.2	94.9	94.1	96.7	96.9	95.0	92.3	89.2	91.1	95.0	92.5	97.7
1+Varicella	68.4	79.4	85.7	82.8	85.3	90.1	87.3	91.0	84.8	92.6	92.5	92.6
4:3:1*	83.4	89.2	88.4	84.1	87.4	82.6	81.4	77.9	74.9	76.9	84.4	85.7
4:3:1:3:3:1:4*	--	--	--	--	--	--	42.8	48.7	--	63.6	73.8	76.3

*4:3:1 ≥4 doses of DTaP, ≥3 doses of polio and ≥1 doses of MMR vaccine

#4+ DTaP, 3+ polio, 1+ MMR, 3 or 4 doses Hib, depending on vaccine type, 3+ HepB, 1+ varicella, and 4+ PCV.

http://www.cdc.gov/vaccines/imz-managers/coverage/nis/child/index.html

Rabies, animal

Rabies is an enzootic, nearly-always fatal, viral disease and a serious public health concern in South Dakota. In 2014, 588 animals were tested for rabies with 21 testing positive, 3.6 percent, a -25 percent decrease from the previous year. The 21 rabid animals included three domestic animals (one each: bovine, cat, and goat), and 18 wild animals (12 skunks and six bats). 2014 had the fewest rabid animals reported since 1960. No human rabies was reported. South Dakota's last human rabies case was in 1970 when a 3 year old Brule County child was bitten by a rabid skunk. Four years earlier, in 1966, a 10 year old Hamlin County boy also died from skunk rabies.

During 2014, 567 animals tested negative for rabies, including 161 bats, 154 cats, 90 dogs, 80 cattle, 24 raccoons, 13 skunks, 10 horses, nine deer, four mice, three each coyotes, goats and opossums, two each woodchucks, muskrats, rabbits and squirrels, and one each llama, rat, sheep, shrew and weasel. Over the past decade 6,817 animals were tested and 391 (5.7%) were rabid.

Table 100 Rabies by County, Gender, Race, and Age, South Dakota 2005-2014

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median
Aurora	0	0	0	0	1	0	0	0	0	0	**1**	0
Beadle	3	0	1	0	0	0	1	0	1	0	**6**	0
Bennett	0	0	0	0	0	0	0	2	3	0	**5**	0
Bon Homme	2	2	1	0	0	0	0	0	0	1	**6**	0
Brookings	6	2	2	1	1	3	1	4	1	1	**22**	2
Brown	2	5	4	2	3	0	0	0	1	0	**17**	2
Brule	0	1	0	0	0	1	0	1	0	0	**3**	0
Buffalo	0	0	0	0	0	0	0	0	0	0	**0**	0
Butte	0	0	0	0	0	0	2	2	0	1	**5**	0
Campbell	1	0	0	0	0	0	0	0	0	0	**1**	0
Charles Mix	2	0	0	0	2	1	2	3	1	0	**11**	1
Clark	2	2	3	3	2	0	0	0	0	0	**12**	1
Clay	1	3	0	0	1	0	1	0	0	0	**6**	0
Codington	1	0	1	0	2	2	1	1	0	0	**8**	1
Corson	0	0	0	0	0	0	0	2	0	0	**2**	0
Custer	0	0	0	0	0	0	0	0	0	0	**0**	0
Davison	2	1	0	0	0	1	0	1	1	1	**7**	1
Day	2	1	0	2	2	2	0	2	2	1	**14**	2
Deuel	5	1	1	0	0	0	0	1	0	0	**8**	0
Dewey	0	0	0	0	0	0	0	1	2	0	**3**	0
Douglas	1	0	0	0	1	0	0	0	0	0	**2**	0
Edmunds	0	0	1	1	0	0	0	2	0	1	**5**	0
Fall River	0	0	0	0	0	0	0	1	0	0	**1**	0
Faulk	2	1	1	0	0	0	1	0	0	0	**5**	0
Grant	1	0	0	1	1	0	3	1	1	0	**8**	1
Gregory	2	0	0	2	1	0	1	2	0	0	**8**	1
Haakon	0	0	0	0	0	0	0	4	0	0	**4**	0
Hamlin	1	2	2	2	0	4	1	0	1	1	**14**	1
Hand	1	0	0	0	1	0	0	0	0	0	**2**	0
Hanson	0	1	0	0	1	0	0	0	0	0	**2**	0
Harding	0	0	0	0	2	0	2	1	0	0	**5**	0
Hughes	3	1	0	0	1	0	1	0	0	0	**6**	0
Hutchinson	3	0	0	1	3	2	0	3	0	0	**12**	1
Hyde	1	0	0	0	1	0	0	0	1	0	**3**	0
Jackson	0	0	1	0	0	0	0	0	0	0	**1**	0
Jerauld	0	1	0	0	0	0	0	0	1	0	**2**	0
Jones	0	0	0	0	0	0	0	0	0	0	**0**	0
Kingsbury	0	1	1	0	2	2	0	2	2	1	**11**	1
Lake	3	0	0	1	6	1	0	1	0	0	**12**	1
Lawrence	0	0	0	0	0	0	1	0	0	1	**2**	0
Lincoln	1	0	0	0	1	1	1	0	0	0	**4**	0
Lyman	0	0	1	0	0	0	2	0	0	0	**3**	0
Marshall	2	1	0	1	0	1	1	1	0	0	**7**	1

COUNTY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL	Median
McCook	0	1	0	2	0	0	1	0	0	0	**4**	0
McPherson	0	0	1	0	3	1	0	0	1	0	**6**	0
Meade	0	1	3	2	2	0	0	2	1	1	**12**	1
Mellette	0	1	0	0	0	0	2	0	0	0	**3**	0
Miner	0	1	0	0	0	1	1	0	1	0	**4**	0
Minnehaha	5	3	0	3	4	3	5	2	2	3	**30**	3
Moody	3	1	0	0	0	0	0	0	0	0	**4**	0
Oglala Lakota	0	0	0	0	0	0	0	0	0	0	**0**	0
Pennington	0	0	0	0	2	0	1	0	0	1	**4**	0
Perkins	0	0	0	0	0	0	0	0	3	2	**5**	0
Potter	0	0	0	0	0	0	0	0	0	0	**0**	0
Roberts	0	0	0	0	1	0	0	2	0	2	**5**	0
Sanborn	2	0	0	0	0	0	1	0	0	0	**3**	0
Spink	2	0	0	0	3	0	0	1	0	0	**6**	0
Stanley	1	1	0	0	0	0	0	1	0	0	**3**	0
Sully	0	0	0	0	0	0	0	0	0	1	**1**	0
Todd	0	0	0	0	0	0	0	0	1	0	**1**	0
Tripp	1	0	1	0	0	1	6	10	0	1	**20**	1
Turner	2	0	0	0	3	4	1	0	0	0	**10**	0
Union	0	2	1	0	0	0	0	0	0	0	**3**	0
Walworth	2	1	1	0	0	0	0	3	0	1	**8**	1
Yankton	0	0	0	0	0	1	0	1	1	0	**3**	0
Ziebach	0	0	0	0	0	0	0	0	0	0	**0**	0
TOTAL	**68**	**38**	**27**	**24**	**53**	**32**	**40**	**60**	**28**	**21**	**391**	**35**

Table 101 Animals Tested and Confirmed Rabid Cases, South Dakota

	2014		2005 - 2014		
Animal	**Positive**	**Total tested**	**Positive**	**Total tested**	**Percent Positive**
Skunk	12	25	234	455	51.4%
Cattle	1	81	57	815	7.0%
Bat	6	167	39	1,214	3.2%
Cat	1	155	24	2,100	1.1%
Dog	0	90	17	1,343	1.3%
Horse	0	10	15	134	11.2%
Goat	1	4	3	26	11.5%
Raccoon	0	24	2	327	0.6%
Deer, elk, moose	0	10	0	88	0%
Rodents*	0	5	0	60	0%
Squirrel	0	2	0	45	0%
Muskrat	0	2	0	44	0%
Sheep	0	1	0	37	0%
Opossum	0	3	0	25	0%
Ferret/Weasel	0	1	0	22	0%
Coyote	0	3	0	21	0%
Fox	0	0	0	19	0%
Woodchuck	0	2	0	15	0%
Rabbit	0	2	0	7	0%
Badger	0	0	0	6	0%
Shrew, mole	0	1	0	5	0%
Beaver	0	0	0	3	0%
Donkey	0	0	0	3	0%
Pig	0	0	0	3	0%
Kangaroo	0	0	0	2	0%
Mountain lion	0	0	0	2	0%
Other animals**	0	0	0	4	0%
TOTAL	**21**	**588**	**391**	**6,825**	**5.7%**

*mice 24, rats 16, gopher 11, porcupine 2,prairie dog 2, gerbil 1, ground squirrel 1, guinea pig 1, hamster 1, vole 1.
**bison, llama, otter, tiger, wolf.

Table 102 South Dakota Population Denominators Used In This Report (2010 Census).

COUNTY	Population
Aurora	2,710
Beadle	17,398
Bennett	3,431
Bon Homme	7,070
Brookings	31,965
Brown	36,531
Brule	5,255
Buffalo	1,912
Butte	10,110
Campbell	1,466
Charles Mix	9,129
Clark	3,691
Clay	13,864
Codington	27,227
Corson	4,050
Custer	8,216
Davison	19,504
Day	5,710
Deuel	4,364
Dewey	5,301
Douglas	3,002
Edmunds	4,071
Fall River	7,094
Faulk	2,364
Grant	7,356
Gregory	4,271
Haakon	1,937
Hamlin	5,903
Hand	3,431
Hanson	3,331
Harding	1,255
Hughes	17,022
Hutchinson	7,343
Hyde	1,420
Jackson	3,031
Jerauld	2,071
Jones	1,006
Kingsbury	5,148
Lake	11,200
Lawrence	24,097
Lincoln	44,828
Lyman	3,755
Marshall	4,656
McCook	5,618
McPherson	2,459
Meade	25,434
Mellette	2,048
Miner	2,389
Minnehaha	169,468
Moody	6,486
Pennington	100,948
Perkins	2,982
Potter	2,329
Roberts	10,149
Sanborn	2,355
Oglala Lakota	13,586
Spink	6,415
Stanley	2,966
Sully	1,373
Todd	9,612
Tripp	5,644
Turner	8,347
Union	14,399
Walworth	5,438
Yankton	22,438
Ziebach	2,801
TOTAL	**814,180**

GENDER	Population
Female	406,799
Male	407,381
TOTAL	**814,180**

RACE	Population
White	699,392
American Indian	82,073
Black, Afr Amer	14,705
Asian	7,216
Other	10,794
TOTAL	**814,180**

AGE GROUP	Population
<1 year	11,924
1-4 years	47,697
5-14 years	109,491
15-24 years	115,224
25-39 years	151,195
40-64 years	262,068
≥65 years	116,581
TOTAL	**814,180**