

Health and Disease Summary

March 2018

South Dakota Infectious Disease Summary 2018

Disease/Agent	Cases YTD	Rate	5-Year Median YTD	Percent change
Campylobacter	60	6.9	33	+82%
Carbapenem-resistant Enterobacteriaceae	6	0.7‡	8	-25%
Chlamydia	1,129	129	1,075	+4%
Cryptosporidiosis	15	1.7‡	24	-38%
E. coli, shiga toxin-producing	15	1.7‡	6	+150%
Giardiasis	19	2.2‡	24	-21%
Gonorrhea	354	40.9	264	+34%
Haemophilus influenzae	6	0.7‡	--	--
Hepatitis B, chronic	5	0.6‡	17	-71%
Hepatitis C, acute and chronic	130	15.0	145	-10%
HIV, including Stage III (AIDS)	5	0.6‡	11	-55%
Legionellosis	2	0.2‡	1	+100%
MRSA, invasive	39	4.5	29	+34%
Pertussis	9	1.0‡	6	+50%
Pneumococcal disease, invasive	32	3.7	39	-18%
Rabies, animal	3	NA	3	+0%

YTD: Year-to-Date Rate: Cases per 100,000 population 5-Year Median: 2013–2017

‡ Unstable rate based on <20 observations

South Dakota Infectious Disease Summary 2018

Disease/Agent	Cases YTD	Rate	5-Year Median YTD	Percent change
Salmonella	41	4.7	40	+3%
Shigella	9	1.0‡	5	+80%
Syphilis, early	12	1.4‡	16	-25%
Toxic shock syndrome	1	0.1‡	--	--
Tuberculosis	2	0.2‡	4	-50%
Varicella	1	0.1‡	10	-90%
Vibriosis	3	0.3‡	--	--

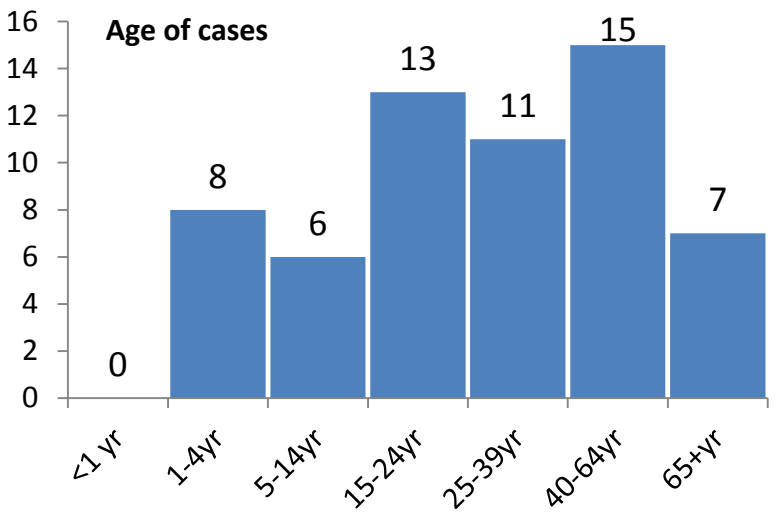
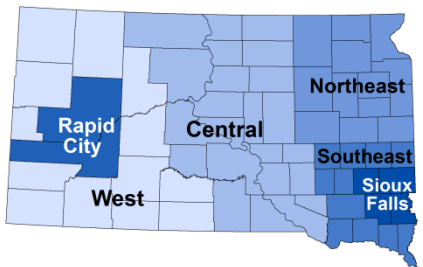
YTD: Year-to-Date Rate: Cases per 100,000 population 5-Year Median: 2013–2017

‡ Unstable rate based on <20 observations

Campylobacteriosis

Symptoms include diarrhea, cramping, abdominal pain, and fever within 2–5 days after exposure.

Regions	Cases	Rate†
Sioux Falls MSA	10	3.9‡
Rapid City MSA	8	5.8‡
Northeast	16	9.3‡
Southeast	9	7.9‡
Central	11	11.8‡
West	6	6.4‡
South Dakota	60	6.9

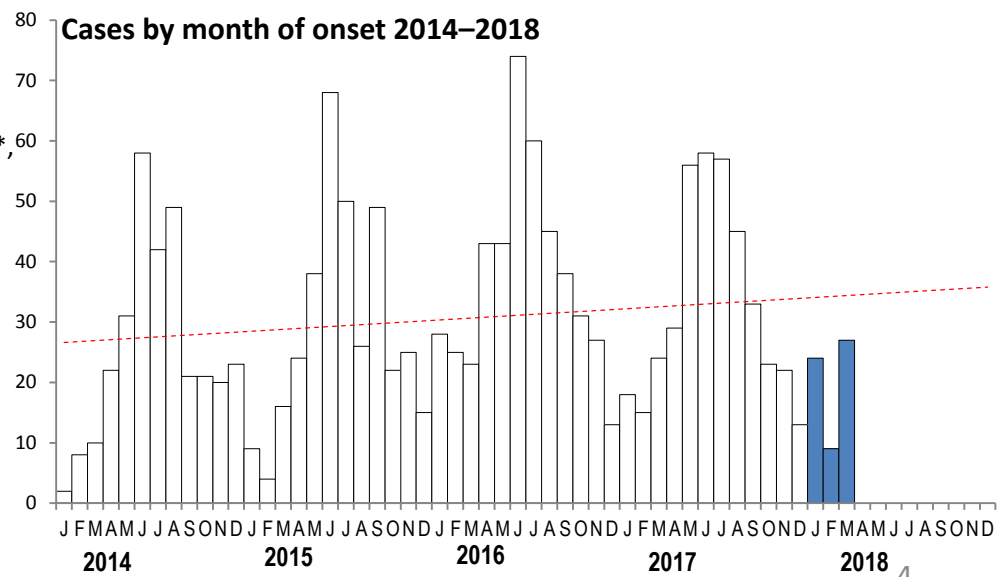


†Rate: cases per 100,000 population.

MSA: Metropolitan Statistical Area.

Counties with cases (* for <5 cases):

Aurora*, Bon Homme*, Brookings*, Brown*, Butte*, Campbell*, Charles Mix*, Clark*, Codington*, Davison*, Deuel*, Douglas*, Fall River*, Gregory*, Hamlin*, Hanson*, Hughes*, Hutchinson*, Kingsbury*, Lake*, Lincoln*, Meade*, Miner*, Minnehaha 5, Moody*, Oglala Lakota*, Pennington 6, Perkins*, Spink*, Turner*, Yankton*.

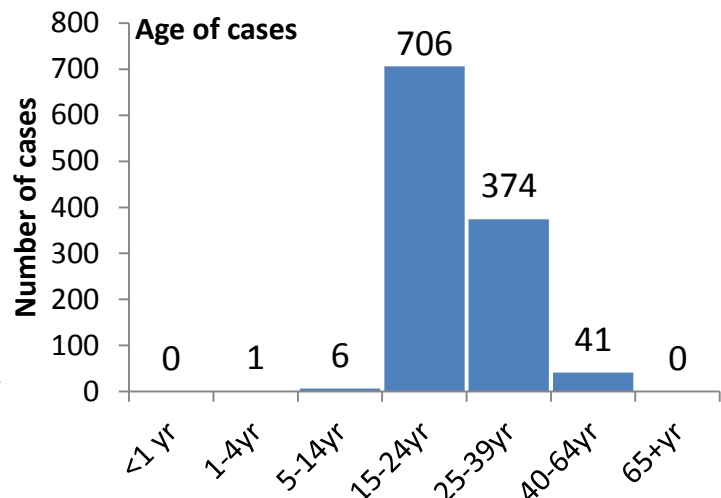
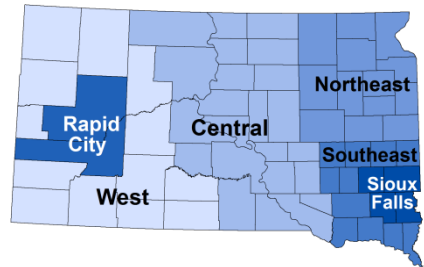


‡ Unstable rates based on <20 observations

Chlamydia

Most people who have chlamydia don't know it since the disease often has no symptoms. Chlamydia is the most commonly reported STD in the United States and South Dakota.

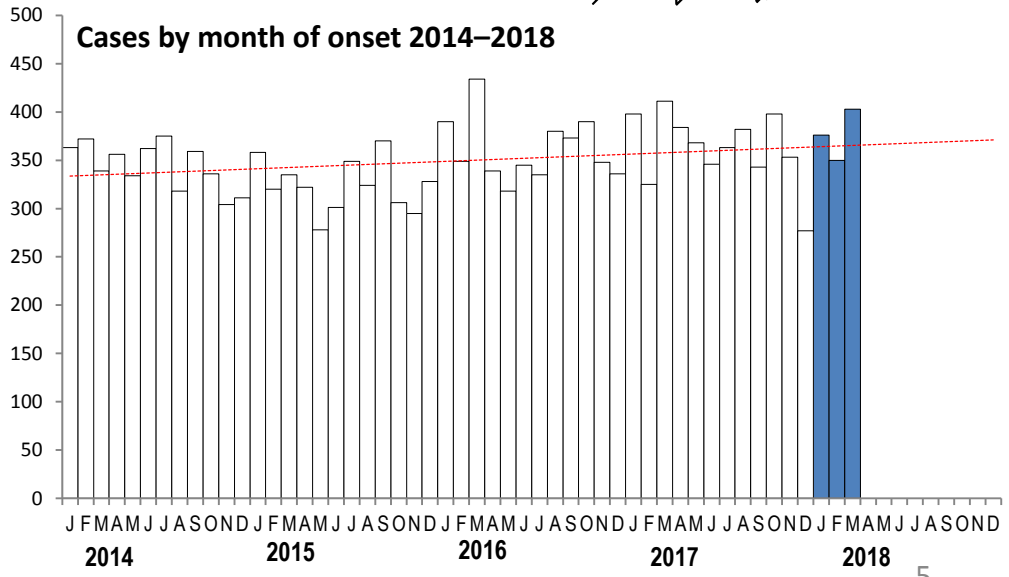
Regions	Cases	Rate†
Sioux Falls MSA	336	131
Rapid City MSA	161	118
Northeast	172	100
Southeast	77	68
Central	142	152
West	227	243
South Dakota	1,115	129



†Rate: cases per 100,000 population.
MSA: Metropolitan Statistical Area.

Counties with cases (* for <5 cases):

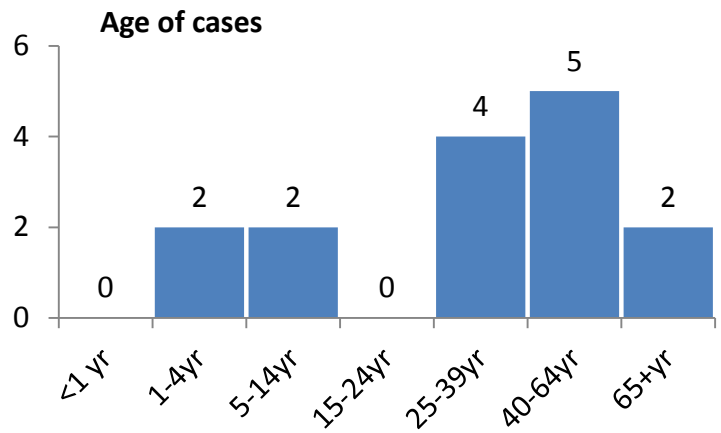
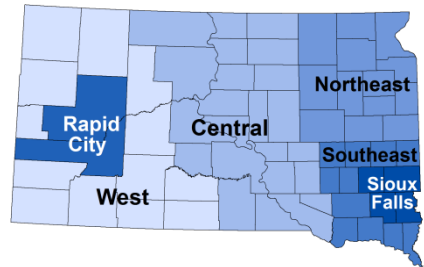
Aurora 6, Beadle 14, Bennett*, Bon Homme*, Brookings 48, Brown 38, Brule 5, Buffalo 9, Butte 12, Campbell*, Charles Mix 19, Clark*, Clay 22, Codington 24, Corson 8, Custer 5, Davison 14, Day 8, Deuel*, Dewey 43, Fall River 5, Grant*, Gregory*, Haakon*, Hamlin 5, Hughes 16, Jackson 8, Kingsbury*, Lake*, Lawrence 25, Lincoln 29, Lyman 10, Marshall*, McCook*, Meade 15, Mellette 7, Miner*, Minnehaha 302, Moody 7, Oglala Lakota 85, Pennington 146, Perkins*, Potter*, Roberts 23, Sanborn*, Spink*, Stanley*, Todd 70, Tripp 11, Turner*, Union*, Walworth 7, Yankton 20, Ziebach*.



Cryptosporidiosis

Cryptosporidiosis is a diarrheal disease caused by microscopic parasites that can live in the intestine of humans and animals and is passed in the stool of an infected person or animal.

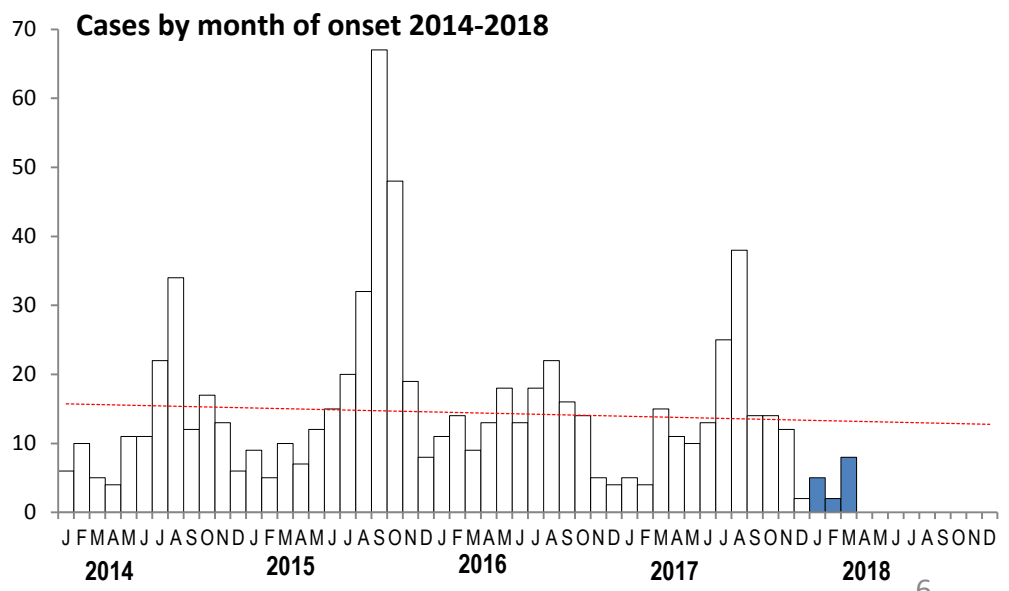
Regions	Cases	Rate†
Sioux Falls MSA	6	2.3‡
Rapid City MSA	0	--
Northeast	7	4.1‡
Southeast	1	0.9‡
Central	1	1.1‡
West	0	--
South Dakota	15	1.7‡



†Rate: cases per 100,000 population.
MSA: Metropolitan Statistical Area.

Counties with cases (* for <5 cases):

Beadle*, Brookings*, Brown*, Codington*, Hamlin*, Jerauld*, Lincoln*, Minnehaha*, Yankton*

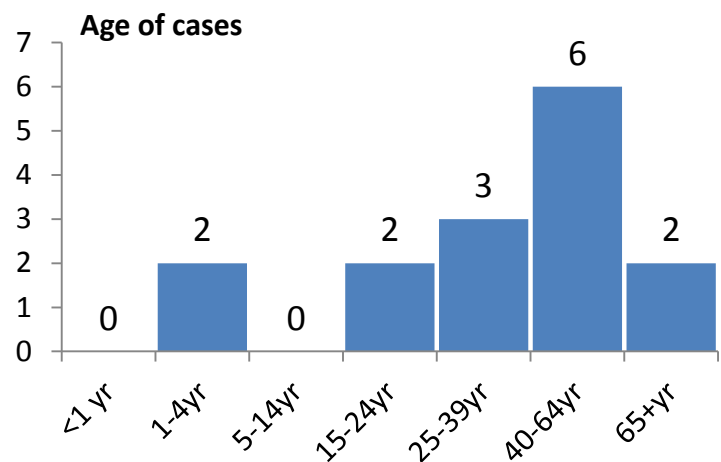
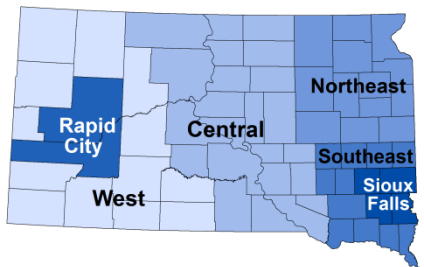


‡ Unstable rates based on <20 observations

E. coli, shiga toxin-producing (STEC)

Infections often include severe stomach cramps, diarrhea (often bloody), and vomiting, some may develop severe illness and hemolytic uremic syndrome (HUS).

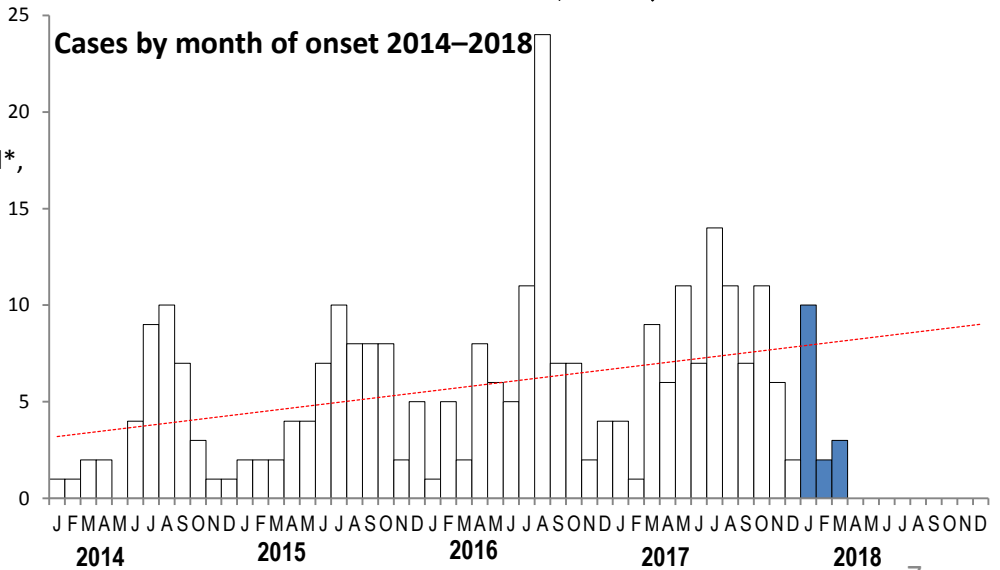
Regions	Cases	Rate†
Sioux Falls MSA	5	2.0‡
Rapid City MSA	1	0.7‡
Northeast	3	1.7‡
Southeast	5	4.4‡
Central	1	1.1‡
West	0	--
South Dakota	15	1.7‡



†Rate: cases per 100,000 population.
MSA: Metropolitan Statistical Area.

Counties with cases (* for <5 cases):

Brookings*, Clark*, Davison*, Douglas*, Hutchinson*, Lincoln*, Marshall*, Pennington*, Turner*.

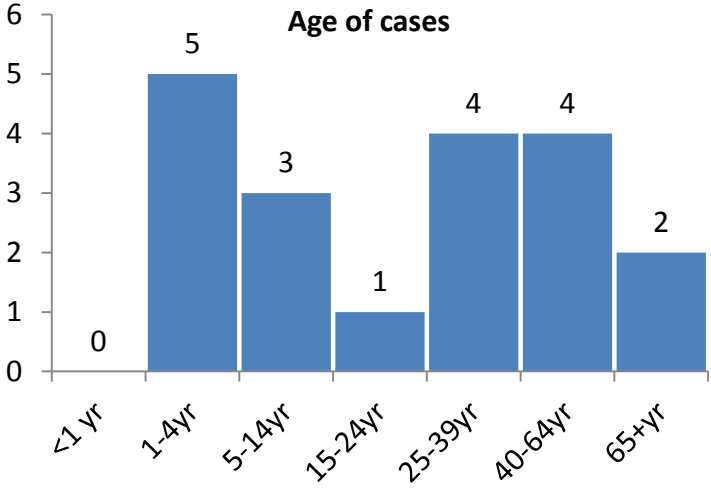
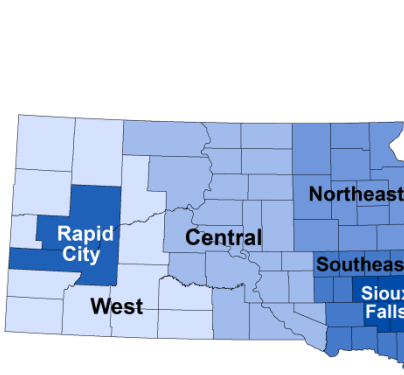


‡ Unstable rates based on <20 observations

Giardiasis

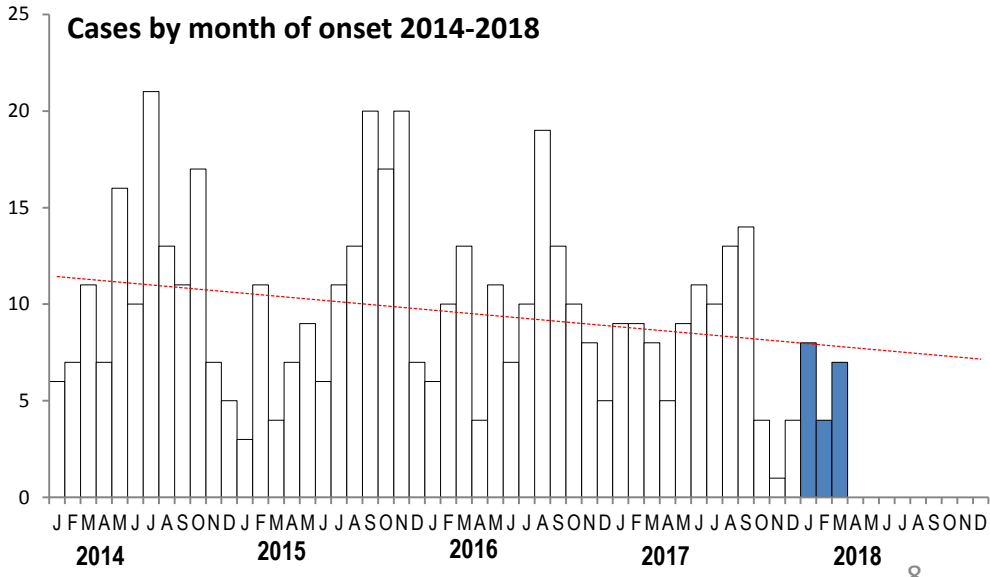
Symptoms include: diarrhea, gas, flatulence, greasy stool that can float, abdominal cramps, upset stomach or nausea, dehydration.

Regions	Cases	Rate†
Sioux Falls MSA	3	1.2‡
Rapid City MSA	2	1.5‡
Northeast	3	1.7‡
Southeast	5	4.4‡
Central	3	3.2‡
West	3	3.2‡
South Dakota	19	2.2‡



†Rate: cases per 100,000 population.
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Counties with cases (* for <5 cases):
 Beadle*, Brule*, Clay*, Codington*, Dewey*,
 Edmunds*, Lawrence*, Lincoln*, Minnehaha*, Oglala
 Lakota*, Pennington*, Roberts*, Union*, Yankton*

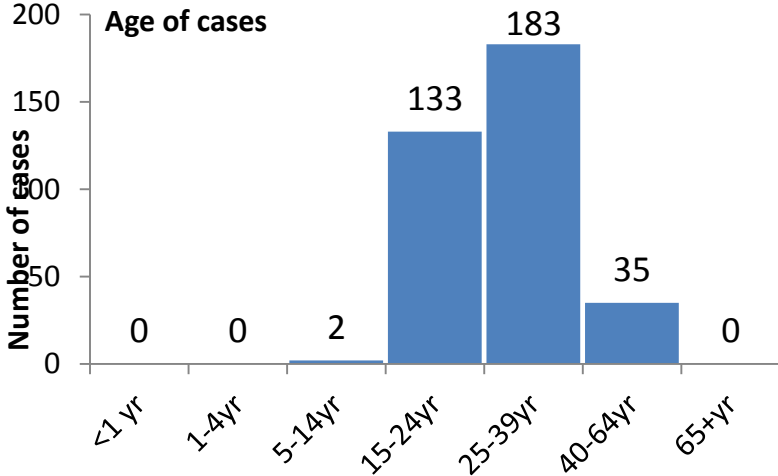
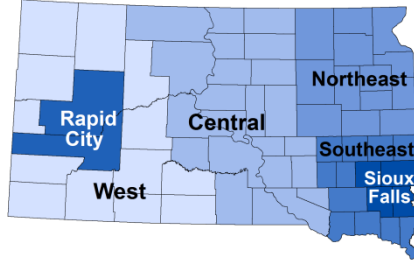


‡ Unstable rates based on <20 observations

Gonorrhea

Symptoms vary depending on what part of the body is infected (anus, eyes, mouth, genitals, or throat). Gonorrhea can impact an individual’s ability to have children if left untreated.

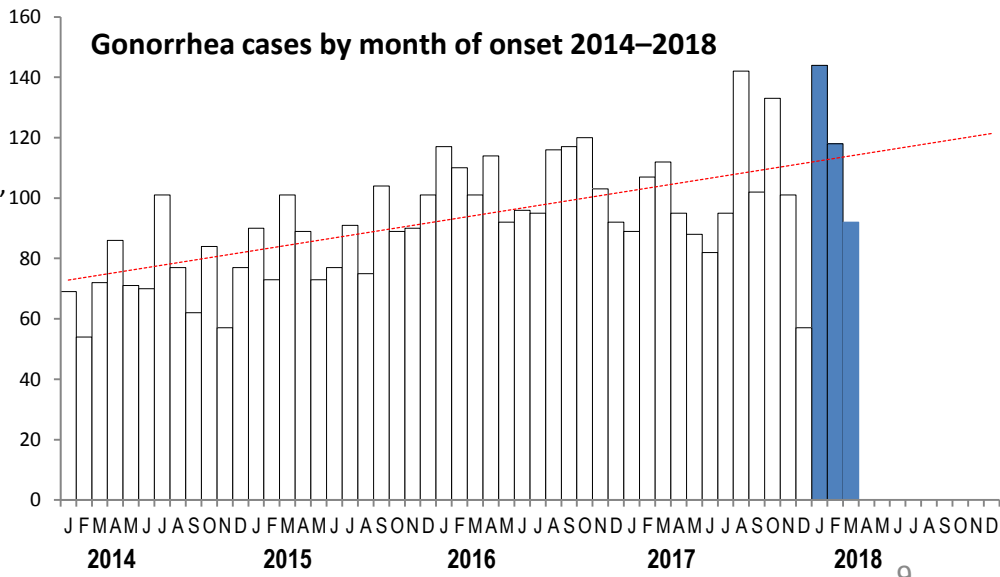
Regions	Cases	Rate†
Sioux Falls MSA	104	40.7
Rapid City MSA	87	63.5
Northeast	12	7.0‡
Southeast	26	22.9
Central	58	62.1
West	66	70.7
South Dakota	353	40.8



†Rate: cases per 100,000 population.
MSA: Metropolitan Statistical Area.

Counties with cases (* for <5 cases):

- Aurora*, Beadle*, Bennett*, Bon Homme*, Brookings*, Brown*, Buffalo*, Butte*, Charles Mix 9, Clay*, Codington*, Corson 7, Davison 10, Dewey 22, Fall River*, Hughes*, Hutchinson*, Jackson*, Lake*, Lawrence*, Lincoln 6, Lyman 5, Meade*, Minnehaha 98, Moody*, Oglala Lakota 37, Pennington 85, Spink*, Todd 20, Tripp*, Union*, Walworth 5, Yankton*, Ziebach*.

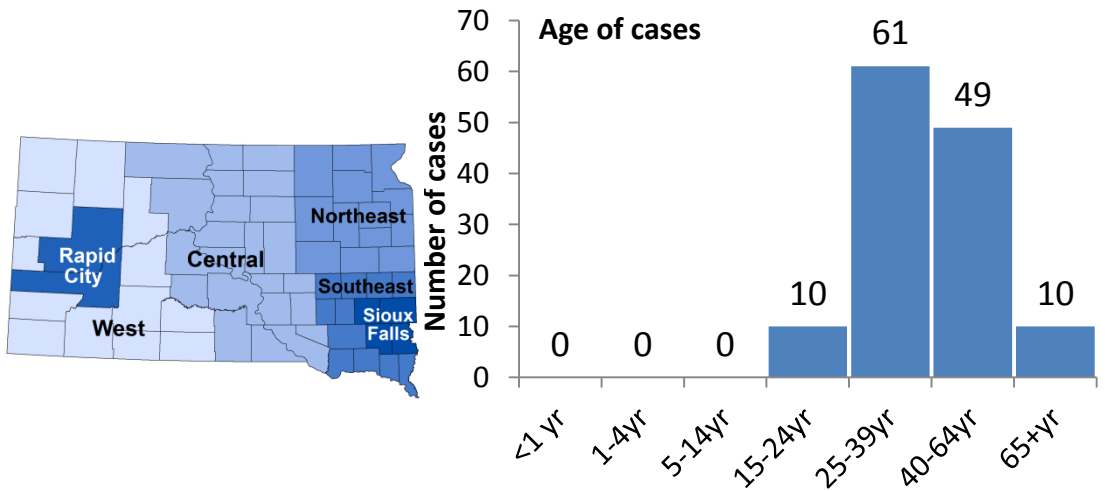


‡ Unstable rates based on <20 observations SD STD: <http://doh.sd.gov/diseases/infectious/std/>

Hepatitis C, acute and chronic

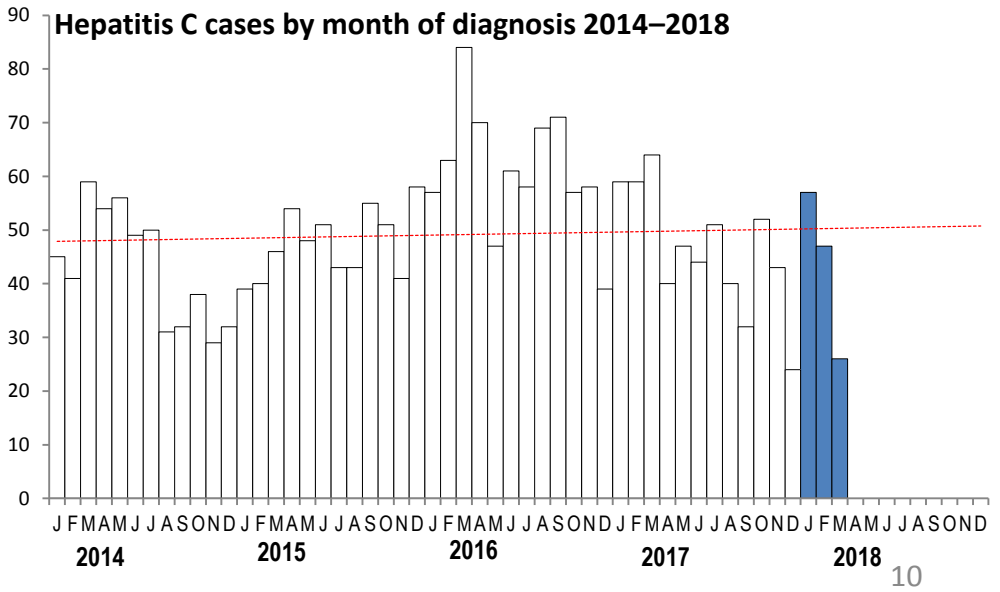
Hepatitis C virus infection is the most common bloodborne infection in the United States and South Dakota.

Regions	Cases	Rate†
Sioux Falls MSA	46	18.0
Rapid City MSA	16	11.7‡
Northeast	9	5.2‡
Southeast	13	11.5‡
Central	33	35.3
West	13	13.9‡
South Dakota	130	15.0



†Rate: cases per 100,000 population.
MSA: Metropolitan Statistical Area.

Counties with cases (* for <5 cases):
Bon Homme*, Brookings*, Brown*, Brule*, Buffalo*, Butte*, Charles Mix*, Codington*, Corson 9, Custer*, Davison 5, Day*, Deuel*, Dewey*, Hand*, Hughes 5, Hutchinson*, Lawrence*, Lincoln*, Lyman 6, Meade*, Minnehaha 44, Moody*, Oglala Lakota*, Pennington 12, Roberts*, Spink*, Todd*, Turner*, Union*, Ziebach*.

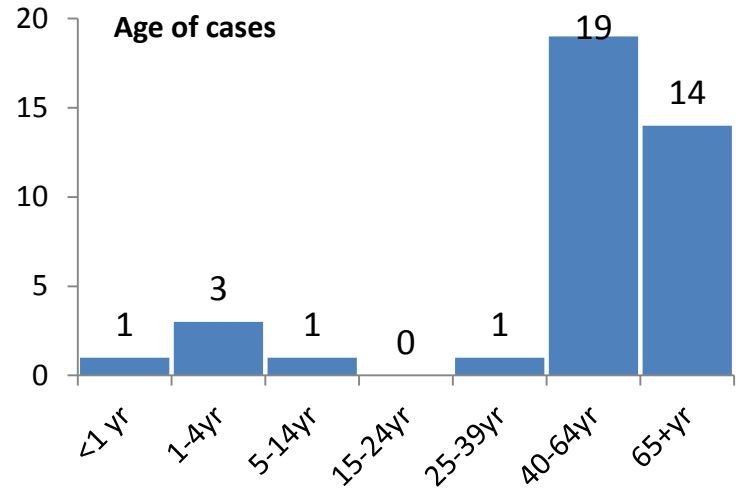
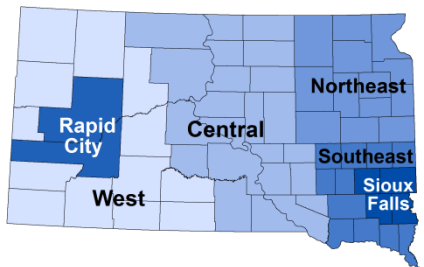


‡ Unstable rates based on <20 observations

MRSA, invasive

Invasive methicillin-resistant *Staphylococcus aureus*

Regions	Cases	Rate†
Sioux Falls MSA	13	5.1‡
Rapid City MSA	4	2.9‡
Northeast	8	4.6‡
Southeast	3	2.6‡
Central	5	5.4‡
West	6	6.4‡
South Dakota	39	4.5

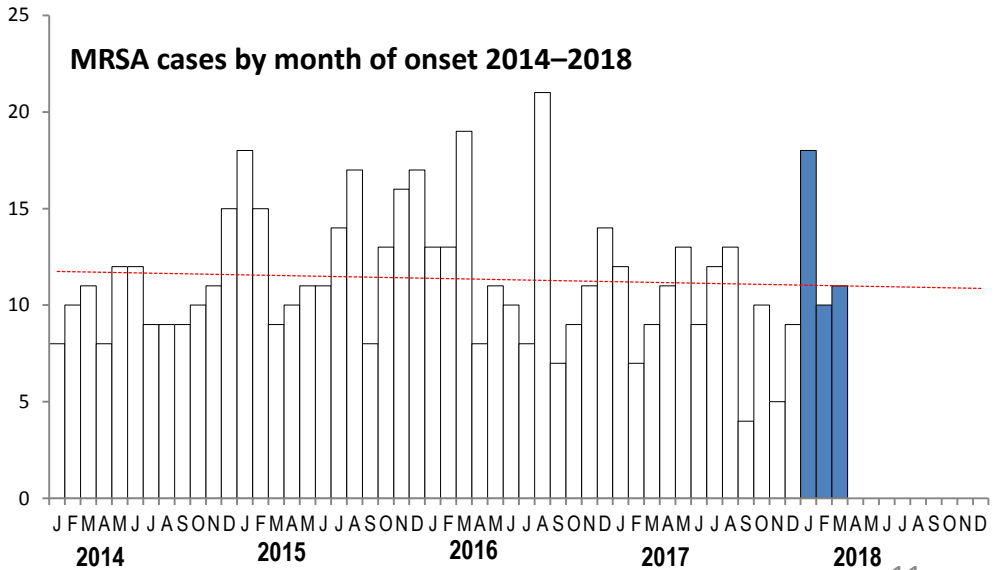


†Rate: cases per 100,000 population.

MSA: Metropolitan Statistical Area.

Counties with cases (* for <5 cases):

Beadle*, Brown*, Brule*, Codington*, Davison*, Day*, Deuel*,
Edmunds*, Hamlin*, Hughes*, Jackson*, Lincoln*, Meade*, Mellette*,
Minnehaha 10, Moody*, Oglala Lakota*, Pennington*, Potter*, Spink*,
Todd*, Turner*.

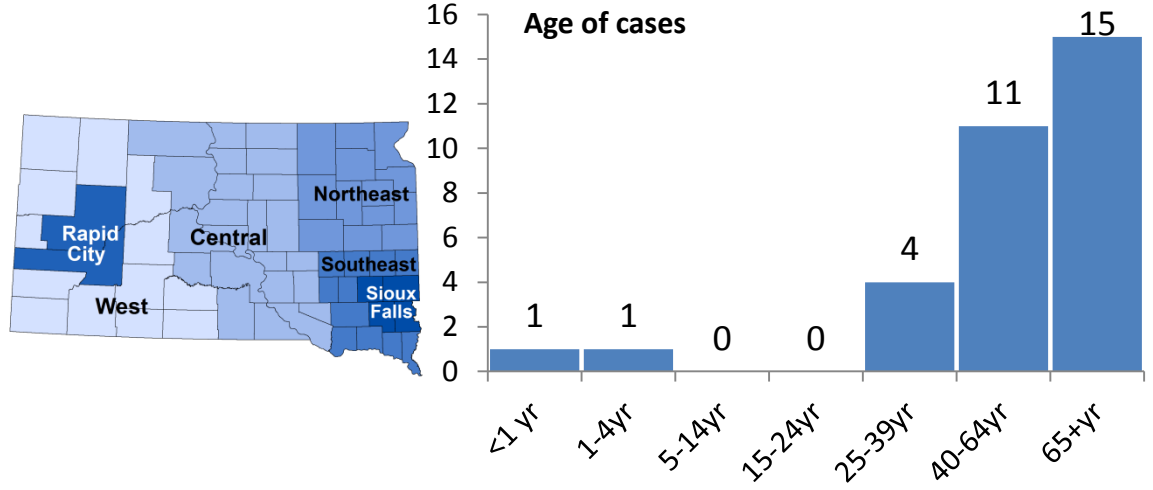


‡ Unstable rates based on <20 observations

Pneumococcal Disease, invasive

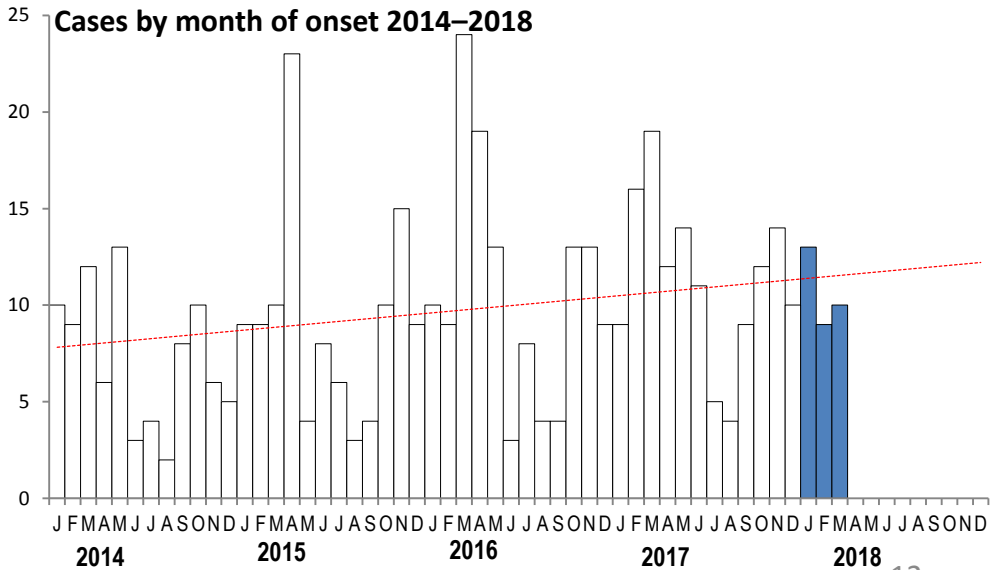
Death occurs in 14% of hospitalized adults with invasive disease.
 Neurologic sequelae and learning disabilities can occur in meningitis patients.

Regions	Cases	Rate†
Sioux Falls MSA	8	3.1‡
Rapid City MSA	3	2.2‡
Northeast	9	5.2‡
Southeast	4	3.5‡
Central	6	6.4‡
West	2	2.1‡
South Dakota	32	3.7



†Rate: cases per 100,000 population.
 MSA: Metropolitan Statistical Area.

Counties with cases (* for <5 cases):
 Aurora*, Brookings*, Brown*, Brule*, Butte*, Corson*, Fall River*,
 Hughes*, Kingsbury*, Lake*, Lincoln*, McCook*, Minnehaha*,
 Pennington*, Roberts*, Spink*, Stanley*, Union*, Walworth*, Yankton*.

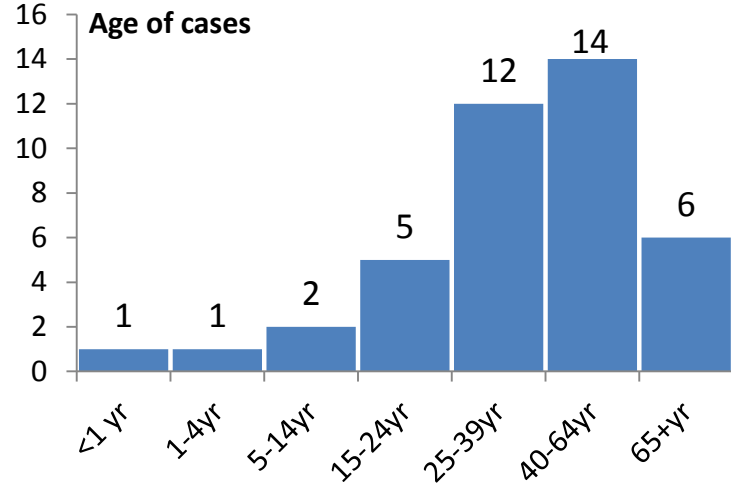
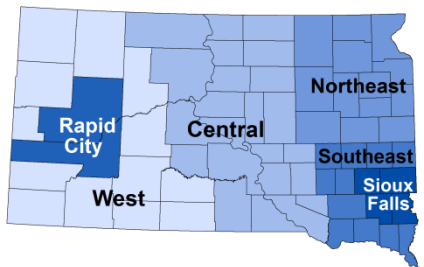


‡ Unstable rates based on <20 observations

Salmonella

Most persons develop diarrhea, fever, and abdominal cramps 12 to 72 hours after infection.
 The illness usually lasts 4 to 7 days, and most persons recover without treatment.

Regions	Cases	Rate†
Sioux Falls MSA	17	6.6‡
Rapid City MSA	2	1.5‡
Northeast	6	3.5‡
Southeast	6	5.3‡
Central	3	3.2‡
West	7	7.5‡
South Dakota	41	4.7

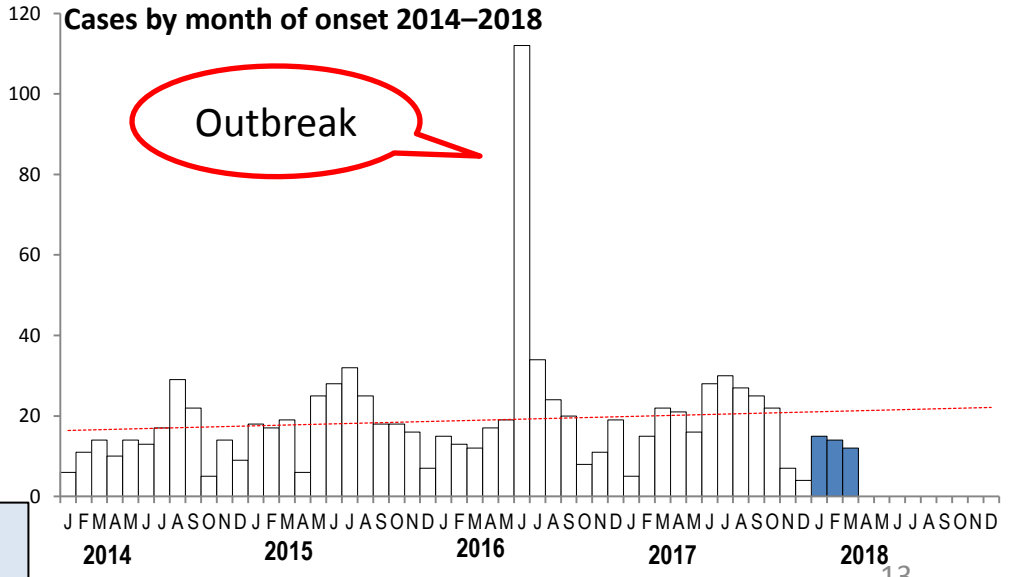


†Rate: cases per 100,000 population.
 MSA: Metropolitan Statistical Area.

Counties with cases (* for <5 cases):
 Aurora*, Brookings*, Brown*, Campbell*, Codington*, Davison*, Day*,
 Haakon*, Harding*, Jackson*, Lake*, Lawrence*, Lincoln 7, McPherson*,
 Meade*, Minnehaha 10, Oglala Lakota*, Pennington*, Roberts*, Spink*,
 Union*.

‡ Unstable rates based on <20 observations

Salmonella serotypes: Typhimurium 8, Enteritidis 8, Montevideo 5,
 Infantis 3, Other or unknown serotypes 17



Healthcare Associated Infections, South Dakota

- 14 South Dakota hospitals and 19 long-term care facilities participate in the National Healthcare Safety Network (NHSN) report to the SD Dept of Health
- 4 target areas:
 - *Clostridium difficile* infections;
 - Bloodstream MRSA (methicillin-resistant *Staphylococcus aureus*);
 - Central line associated bloodstream infections (CLABSI);
 - Surgical site infection.
- Reports 1 January – 31 March 2018:
 - *C. difficile*: 134 cases (37 hospital onset)
 - MRSA (bloodstream): 32 (27 hospital onset)
 - CLABSI: 5 cases
 - SSI: 2 cases (2 colon, 0 hysterectomy)
 - 19 long-term care facilities report *C. difficile* to NHSN: 5 events

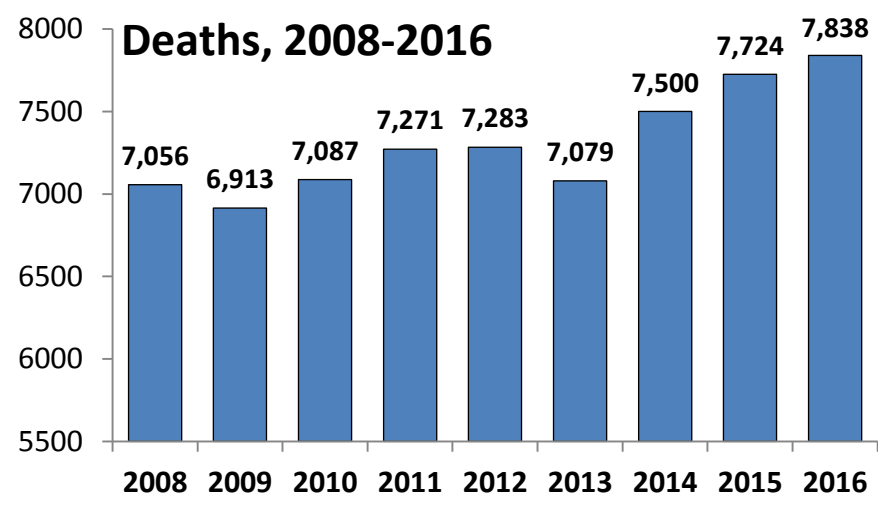
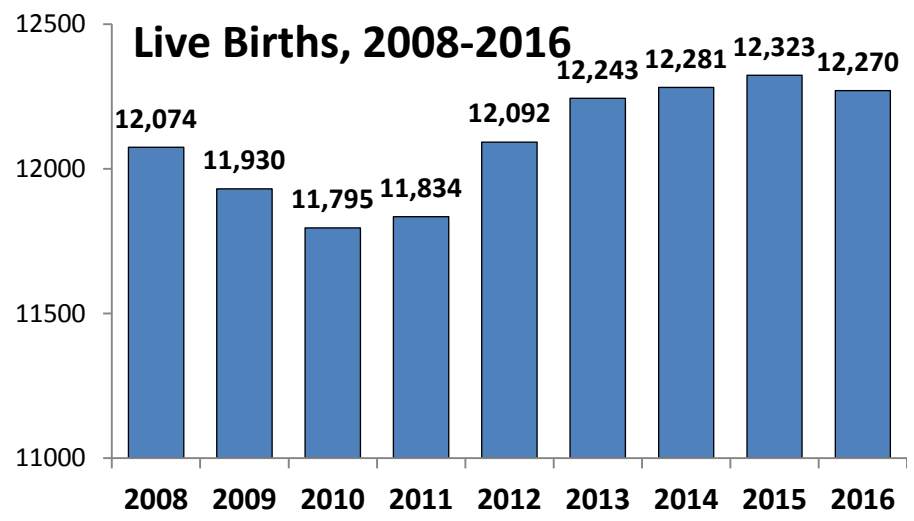
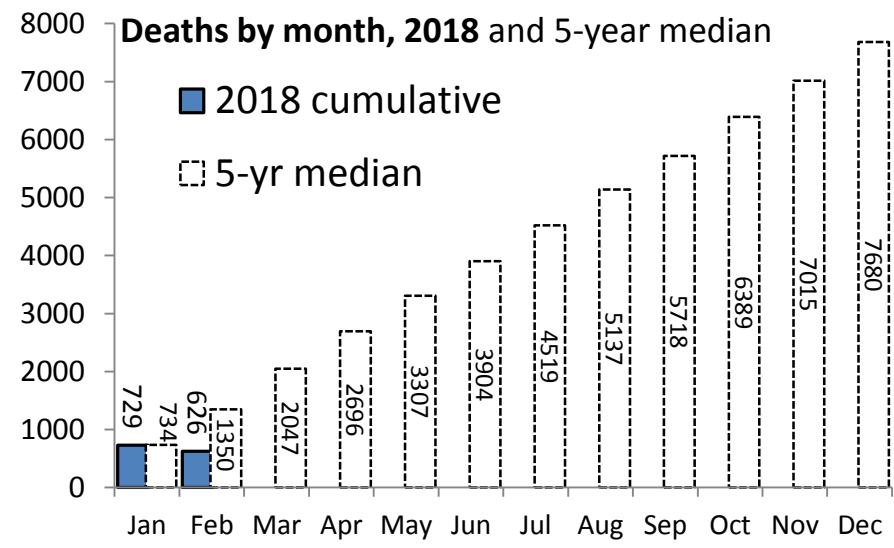
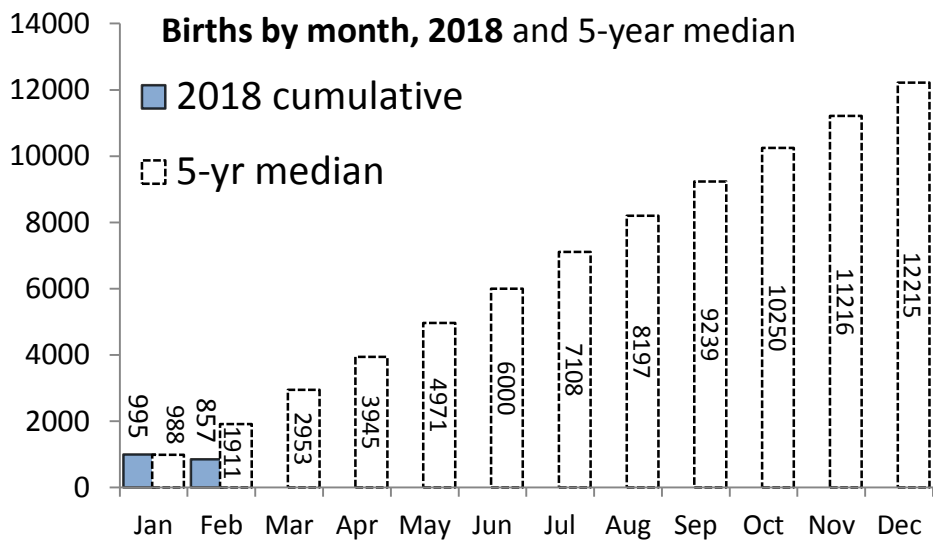
MRSA: methicillin-resistant
staphylococcus aureus
CLABSI: central line-associated
bloodstream infections
SSI: surgical site infection

Please see CDC: www.cdc.gov/nhsn

South Dakota healthcare associated infections: <http://doh.sd.gov/diseases/hai/>



Births and Deaths, South Dakota, 2018



Infectious Diseases, South Dakota 2006-2016

Reportable diseases	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Median	TOTAL
Babesiosis	0	0	0	0	0	0	0	1	1	0	0	0	2
Bruceellosis	0	0	0	0	0	0	0	1	0	0	0	0	1
Campylobacteriosis	217	231	262	300	297	301	276	296	307	346	447	297	3,280
Chicken Pox (Varicella)	116	82	55	53	62	67	32	43	23	27	32	53	592
Chlamydia	2,624	2,612	2,919	3,015	3,187	3,412	3,925	3,947	4,129	3,877	4,337	3412	37,984
Carbapenem-resist Enter(CRE)	NR	NR	NR	NR	NR	NR	NR	12	3	37	58	24.5	110
Cryptosporidiosis	86	169	88	137	108	143	113	175	151	248	158	143	1,576
Cyclosporiasis	0	0	1	0	0	0	0	1	0	0	3	0	5
E. coli, shiga toxin-producing	50	47	53	71	35	41	48	42	41	62	83	48	573
Ehrlichiosis, Anaplasmosis	0	0	1	0	0	4	1	1	0	0	1	0	8
Dengue	0	3	0	0	1	0	2	3	0	2	1	1	12
Giardiasis	98	103	137	113	102	110	144	111	131	129	116	113	1,294
Gonorrhoea	363	254	382	345	467	602	707	789	880	1,055	1,273	602	7,117
Hantavirus pulmonary synd	2	1	0	0	0	1	1	0	0	0	0	0	5
Hepatitis A	9	7	3	3	1	2	0	4	3	2	2	3	36
Hepatitis B, chronic	17	36	48	33	51	51	51	80	58	52	60	51	537
Hepatitis B, acute	6	6	0	4	2	2	2	5	3	2	2	2	34
Hepatitis C, chronic	352	309	364	384	350	356	392	406	516	570	713	384	4,712
Hepatitis C, acute	0	0	0	1	0	0	4	1	0	0	22	0	28
Haemophilus influenzae b	0	0	0	0	0	1	0	3	0	1	1	0	6
Hemolytic uremic syndrome	1	1	3	3	2	0	0	0	1	1	1	1	13
Legionellosis	5	4	3	2	9	2	9	8	9	10	9	8	70
HIV and AIDS	34	25	34	21	35	21	29	36	31	24	47	31	337
Leprosy	0	0	1	0	0	0	0	0	0	0	0	0	1
Listeriosis	2	2	1	1	3	1	0	0	0	0	0	1	10
Lyme disease	1	0	3	1	1	4	4	4	2	5	11	3	36
Malaria	0	1	0	1	3	2	5	7	5	4	4	3	32
Measles	0	0	0	0	0	0	0	0	8	2	0	0	10
MRSA, invasive	51	88	77	94	98	91	89	94	124	159	144	94	1,109
Mumps	295	6	1	2	2	0	0	0	0	0	2	1	308
Meningococcal disease	4	3	3	5	0	3	0	4	2	1	1	3	26
Pertussis	28	59	67	56	32	37	71	67	109	16	14	56	556
Pneumococcal disease, invasive	NR	NR	NR	NR	NR	42	97	99	88	110	129	98	565
Q fever	2	1	1	9	4	1	2	4	5	5	4	4	38
Rabies, animal	38	27	24	53	32	40	60	28	21	29	27	29	379
Salmonellosis	133	173	154	197	186	162	170	183	164	230	303	173	2,055
Shigellosis	388	118	76	4	7	6	11	190	616	285	28	76	1,729
Spotted fever rickettsiosis	0	5	3	0	0	1	1	7	3	2	6	2	28
Syphilis, Prim, Sec, E Lat	19	11	4	2	4	0	21	49	76	48	42	19	276
Syphilis, congenital	0	0	0	0	0	0	0	0	3	0	2	0	5
Toxic shock syndrome	0	0	1	0	0	0	0	0	0	3	1	0	5
Tularemia	4	7	10	5	11	8	5	7	5	25	14	7	101
Tuberculosis	14	13	16	18	15	15	19	9	8	17	12	15	156
Typhoid fever	1	0	2	2	1	0	0	3	0	1	2	1	12
West Nile fever	75	160	28	15	16	2	141	92	45	29	116	45	719
West Nile neuroinvasive	38	48	11	6	4	0	62	57	12	11	35	12	284
TOTAL	5,073	4,612	4,836	4,956	5,128	5,531	6,494	6,869	7,583	7,427	8,262	5,516	66,778

South Dakota Department of Health

doh.sd.gov/strategicplan

Vision **Healthy** People
Healthy Communities
Healthy South Dakota

Mission **To promote, protect and improve the health of every South Dakotan**

Guiding Principles

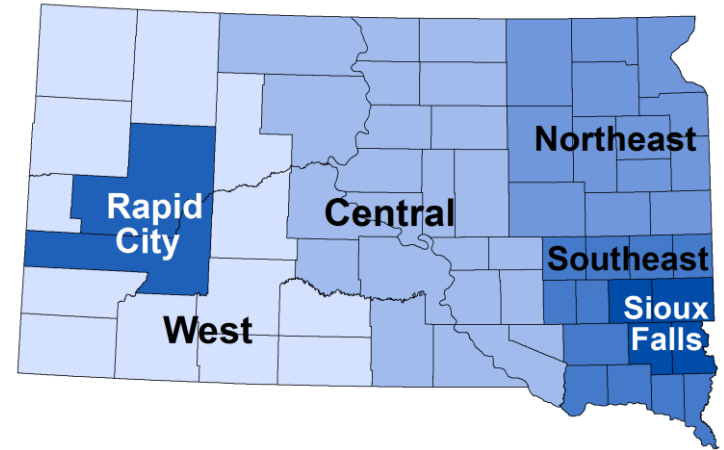
- Serve** with integrity
- Eliminate** health disparities
- Demonstrate** leadership and accountability
- Focus** on prevention and outcomes
- Leverage** partnerships
- Promote** innovation



SOUTH DAKOTA
DEPARTMENT OF HEALTH

South Dakota Regions

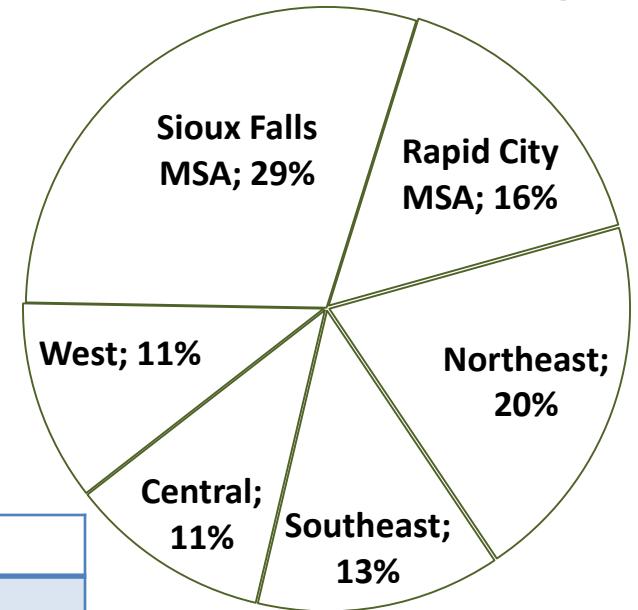
Region	Population	%	Area (sq miles)	Density (people per sq mile)
Sioux Falls MSA*	255,729	29.5%	3,141	81.4
Rapid City MSA*	137,065	15.8%	6,247	21.9
Northeast	172,538	19.9%	12,277	14.1
Southeast	113,356	13.1%	5,863	19.3
Central	93,423	10.8%	24,860	3.8
West	93,343	10.8%	23,508	4.0
South Dakota	865,454	100%	75,896	11.4



*Metropolitan Statistical Area

Age Group	Population	%
<1 year	12,217	1%
1–4 years	49,152	6%
5–14 years	118,319	14%
15–24 years	118,204	14%
25–39 years	165,123	19%
40–64 years	263,634	30%
>65 years	138,805	16%

Region	Population
East River	607,695
West River	257,759



Reportable Diseases List

<https://doh.sd.gov/diseases/infectious/reporting.aspx>

Monthly surveillance reports

<http://doh.sd.gov/statistics/surveillance>

How to report infectious diseases

1. Secure disease reporting website: <http://sd.gov/diseasereport>
2. Telephone: **1-800-592-1804** confidential recorder; or
1-800-592-1861 or **605-773-3737** After hours for Category I diseases or during normal business hours.
3. Fax: **605-773-5509**
4. Mail or courier: Office of Disease Prevention, SD Department of Health, 615 East 4th Street, Pierre, SD 57501; marked "*Confidential Disease Report*"

Department of Health publications

- **Public Health Bulletin:** <http://doh.sd.gov/resources/bulletin.aspx>
- **Adult Risk Behaviors:** <http://doh.sd.gov/statistics/>
- **Youth Risk Behaviors** (Dept of Education): <http://doh.sd.gov/statistics/YRBS.aspx>
- **PRAMS** (Pregnancy risk assessment monitoring system) <https://doh.sd.gov/statistics/prams.aspx>