State of Wyoming



Department of Health

Summary of Reportable Diseases 2017 Annual Report

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State of Wyoming Department of Health

Summary of Reportable Diseases 2017 Annual Report

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Executive Summary

The Wyoming Department of Health (WDH) Infectious Disease Surveillance System is a collaborative effort among personnel in Wyoming Department of Health Infectious Disease Epidemiology Program, Wyoming Public Health Laboratory (WPHL), local health departments, other state agencies, clinical laboratories, and healthcare providers in Wyoming and elsewhere. These groups work together to identify, investigate, and mitigate the effects of infectious diseases in the State of Wyoming.

Data presented in this report were collected by the Wyoming Department of Health Infectious Disease Epidemiology Program through the Reportable Diseases and Conditions surveillance system and through public health case follow-up. Disease surveillance databases contain information on reportable diseases and the public health investigations carried out on these disease occurrences. The databases contain information regarding the etiology, patient demographics, geographic location, clinical laboratory results, exposure histories, and public health control measures on each reported occurrence. Data were analyzed by state-level epidemiologists and additional retrospective case review was performed to verify actual case counts.

This report provides an overview of descriptive epidemiology of certain reportable diseases and conditions from January 1, 2017 to December 31, 2017.

Methods

Definitions

- <u>Crude incidence rate</u> Incidence is defined as the number of *new* cases diagnosed during a set time period in a defined population. Incidence is not a representation of risk. Therefore, a crude incidence rate is the number of new cases of a disease within the specified population. A crude incidence rate has not been adjusted for age or other confounding variables. All crude incidence rates in this document are calculated using the 2016 Wyoming population and reported as the number of cases per 100,000 population.
- <u>Age-adjusted incidence rate</u> Statewide age-adjusted rates reported in this document were standardized against the 2016 Wyoming population using specified age groups and are reported as the number of cases per 100,000 population. Age-adjustment allows rates to be compared over time and allows rates from one geographic area (e.g., state) to be compared with rates from another geographic area that may have differences in age distributions. Any observed differences in age-adjusted incidence rates are not due to differing age structures.
- <u>Outbreak</u> An outbreak is defined as a greater than expected increase in the number of individuals experiencing similar illness, two or more persons from different households experiencing illness who report the same exposure, or two or more persons with laboratory results indicating infection with a genetically identical etiologic agent.

2017

Fremont County Gastrointestinal Illness

In November, 2017 the Wyoming Department of Health (WDH) was notified by a healthcare provider of several children experiencing bloody diarrhea who attended local childcare facilities in Fremont County. Simultaneously, investigators received reports of gastrointestinal illness circulating among high school sports team members and long-term care facility residents. Investigations of the three reported gastrointestinal clusters were initiated to determine relatedness and the source of illness.

Childcare Facility Salmonella Outbreak

To determine the source of illness among childcare attendees in Fremont County, WDH initiated an investigation with The Wyoming Department of Agriculture and Wyoming Department of Family Services who conducted inspections at each facility involved in the outbreak. Sanitation, disinfection, and exclusion recommendations were made to all facilities. Stool samples from 10 ill individuals tested positive for *Salmonella* I 4, [5], 12:i:-. The source of the outbreak was likely a sick child who introduced Salmonella into a childcare facility. Person-to-person transmission propagated the outbreak. Several children attended more than one childcare facility, including daycare and preschool along with having siblings in the same household who also attended different facilities. This contributed to the transmission of *Salmonella* among attendees at different facilities.

High School Sports Team

Investigators learned that high school sports team members became ill after eating food prepared by parents during a team dinner. Two stool samples were collected and tested for bacteria, viruses, parasites and bacterial toxins, however no infectious agent was identified. Safe food handling materials were provided to the school to share with parents. The median incubation from dinner to time of illness onset was 9.5 hours and median duration of illness was 1.75 days. The short incubation period (range: 8-13 hours) along with 100% of cases experiencing diarrhea and little vomiting, suggests the etiologic agent may have been a bacterial toxin such as *Clostridium perfringens*. The samples were tested for *C. perfringens* type A enterotoxin at the Wyoming Public Health Laboratory, however tests were negative. Sample collection and testing may have been performed too late after illness onset to detect this toxin.

Long-Term Care Facility GI Outbreak

The outbreak at the Fremont County long-term care facility was determined not to be related to other reports of illness in the community. Although no stool samples were submitted for testing, viral gastroenteritis was the most likely cause of illness. The symptoms reported by ill residents including nausea, vomiting, and diarrhea, and short duration of illness ranging from one to two days were consistent with viral gastroenteritis.

2017

Natrona County Hepatitis A Outbreak

In 2017, the incidence of Hepatitis A increased significantly in Wyoming due to an outbreak in Natrona County where 11 cases were reported. The outbreak is ongoing with cases continuing to be reported in 2018. Injection drug use was identified as a significant risk factor among cases. Several outbreaks of Hepatitis A have been reported throughout the US among those experiencing homelessness and injection drug use. Testing revealed that the strain of hepatitis A circulating in Natrona County matches strains involved in other larger outbreaks in the US. This strain of hepatitis A was most likely introduced into Natrona County from someone who traveled to these affected areas. Several outbreak control measures have been implemented in Natrona County to reduce transmission of the virus among high risk populations including vaccination for inmates at local correctional institutions, participants of drug treatment programs, and individuals at the local homeless shelter.

Chronic Wasting Disease Research

Chronic wasting disease (CWD) is a prion disease that affects deer, elk, and moose in Wyoming. To date, there have been no reported cases of CWD infection in people. However, animal studies that were released this year suggest CWD poses a risk to some types of non-human primates, like monkeys, that eat meat from CWD-infected animals or come in contact with brain or body fluids from infected deer or elk. These studies raise concerns that there may also be a risk to people.

WDH continues to participate in a study with CDC to determine if there is any connection between CWD and the human prion disease, Creutzfeldt-Jakob Disease (CJD). Since hunters are the group most likely to be in contact with CWD-infected animals, we analyze whether hunters are affected by prion disease at a greater rate than the general population. To date, we have not found any evidence that hunters have an increased risk of contracting prion disease.

Teton County Research Facility Group Bat Exposure

In August 2017, WDH was notified of 20 persons who slept overnight in a bat colonized building at a National Park research facility in Teton County from July 30–August 2. The facility was open for the summer to researchers studying cultural, social and natural sciences. A total of 11 research groups stayed overnight at the facility during the

summer, however bat exposure was not reported until August. WDH, in partnership with the Centers for Disease Control and Prevention (CDC) and other state health departments, conducted rabies risk assessments among individuals who stayed at the research facility to identify those at high risk for rabies, recommend rabies postexposure prophylaxis (PEP), and determine if those categorized as high risk received rabies PEP. Data collected by investigators revealed that 186 persons were potentially exposed to rabies while staying in the bat infested facility. Among those, 21 persons were identified as high risk and 14 received PEP. Interviews with park employees identified lack of rabies risk awareness and concerns with repercussions from reporting as contributing factors to underreporting of possible bat exposures at the facility. Rabies education and building mitigation was conducted at the National Park research facility.



In 2017, 34 outbreaks or clusters (excluding multistate outbreaks) were reported to WDH. An outbreak is defined as a greater than expected increase in the number of individuals experiencing similar illness, two or more persons from different households experiencing illness who report the same exposure, or two or more persons with laboratory results indicating infection with a genetically identical etiologic agent. Outbreaks, or clusters of illness, in Wyoming are required to be reported to WDH by state statute and are detected from a variety of sources including case follow-up, notifications from healthcare providers, calls to the emergency hotline, foodborne illness complaints, syndromic surveillance, and laboratory detection. The majority of outbreaks investigated in 2017 occurred in long-term care facilities (74%) from viral pathogens where the primary mode of transmission identified was person-to-person (P2P).

Outbreak Setting



Outbreak Etiology



Outbreak Transmission Mode



*Person-to-person





Outbreak Summary

	Category	Total # of Outbreaks	Total #III	# Hospitalized
	Waterborne	0	-	-
	Enteric Foodborne	3	23	4
	Enteric Person-to-Person	16	494	14
Enteric	Enteric Animal Contact- associated Disease	0	-	-
	Enteric Environmental Exposure-associated	0	-	-
	Other Enteric outbreaks of unknown transmission	0	-	-
Pesniratory	Influenza	15	70	N/A
Respiratory	Pertussis	0	-	-
Maataubauraa	Mosquitoborne	0	-	-
vectorborne	Tickborne	0	-	-
Select Vaccine-Preve	entable Diseases ¹	0	-	-
Select Healthcare-As	ssociated Infections ²	0	-	-
Total		34	587	18

1. Diphtheria, Hib, Measles, Meningitis, Mumps, Rubella and Varicella

2. Healthcare Acquired methicillin-resistant Staphylococcus aureus, Clostridium difficile, and Carbapenem-resistant Enterobacteriaceae, Central line-associated bloodstream infections (CLABSI) catheter-associated urinary tract infections (CAUTI), and Surgical site infections (SSI)



Number of Outbreaks by Etiology and Month of First Illness

* Other category includes outbreaks of Hepatitis A, Salmonella, STEC, and undetermined etiology

Multistate Outbreaks

Wyoming residents were part of four multistate outbreak investigations that included ill residents from multiple states. *Salmonella* was the etiology for three outbreak investigations. Contact with baby poultry, chicken meat, and raw milk were identified as the most likely cause of illness in these outbreaks. *Campylobacter* was the etiology of one outbreak associated with contact with infected puppies.

Multistate Outbreaks in the News

Campylobacter Jejuni Linked to Puppies

Three case patients from Wyoming were linked to a national outbreak of multidrug-resistant *Campylobacter*. Infected puppies were identified as the source of the outbreak. In total, 113 cases were reported from 17 states.



Baby Poultry Salmonella Outbreak

In 2017, a significant increase in the number of baby poultry outbreak-related cases was reported in Wyoming. Ten Wyoming residents were part of a large national outbreak of *Salmonella* associated with baby poultry. 2017 was a record year nationally for baby poultry outbreaks also with 1120 cases reported.

https://www.cdc.gov/salmonella/live-poultry-06-17/index.html

In 2017, 206 (91 laboratory-confirmed and 115 probable) cases of campylobacteriosis were reported. 2017, the incidence In of campylobacteriosis in Wyoming was 35.18 cases per 100,000 per year. Wyoming incidence remained above the estimated national incidence of 16.18. The national health objective for campylobacteriosis is 8.5 per 100,000 persons per year. The median age of cases of campylobacteriosis in Wyoming was 39 years (range: 2-94). Persons aged 40-64 years had the highest age-adjusted incidence rate (9.90 cases per 100,000 per year).

AnimalFoodForeign
TravelMultipleImage: Stress of the stress of

*Based on protocol, follow up conducted with 116 cases

Campylobacteriosis Cases by Age Group and Sex



Incidence of Campylobacteriosis by Year, Wyoming and the US, 2007-2017



Crude Incidence of Campylobacteriosis by County of Residence, per 100,000



Campylobacteriosis Cases by Month of Onset



Month Reported

Probable Exposure Reported by Cases*

The *Enterobacteriaceae* are a large family of Gramnegative bacilli found in the human gastrointestinal tract. Commonly encountered species include *Escherichia coli, Klebsiella* spp. and *Enterobacter* spp. Carbapenem-resistant *Enterobacteriaceae* (CRE) are not susceptible to carbapenem antibiotics. They are broadly categorized based on the mechanism of their resistance as carbapenemase producers (CP-CRE) and non-carbapenemase producers.

Carbapenems are broad-spectrum antibiotics typically used to treat severe healthcare-associated infections (HAIs) caused by highly drug-resistant bacteria. Currently available carbapenems include imipenem, meropenem, ertapenem and doripenem. Loss of susceptibility to carbapenems is a serious problem because few safe treatment alternatives remain against such resistant bacteria.

In 2017, CRE was added to the Reportable Disease List. CRE are defined as any *Enterobacteriaceae* that are resistant to any carbapenem antibiotic or produce a carbapenemase enzyme. The Wyoming State Public Health Laboratory offers specialized testing to determine whether reported CRE are carbapenemase producers.

Six cases of CRE infection or colonization were reported among Wyoming residents in 2017. The median case age was 73 (range 67-91 years) and three (50%) were female. All isolates collected were from urine and *Enterobacter* spp. accounted for 50% of all isolates. Two cases were CP-CRE and both produced *Klebsiella pneumoniae* carbapenemase (KPC).

We have no indication CP-CRE are spreading in Wyoming. For more information see our <u>CRE</u> toolkit.

Crude Incidence of CRE by County of Residence, per 100,000



Incidence of CRE by Age and Sex; Wyoming, 2017



Carbapenem-resistant *Enterobacteriaceae* by Species



In 2017, 24 laboratory-confirmed cases of cryptosporidiosis were reported. The incidence of cryptosporidiosis in Wyoming was 4.09 cases per 100,000 per year. Wyoming incidence was higher than the estimated national incidence of 2.90 cases per 100,000 per year. The median age of cases of cryptosporidiosis was 34.5 years (range: 4-81). Persons aged 40-64 years had the highest age-adjusted incidence rate (0.90 per 100,000 persons).

Incidence of Cryptosporidiosis by Year, Wyoming and the US, 2007-2017



Probable Exposure Reported by Cases



Cryptosporidiosis Cases by Age Group and Sex



Crude Incidence of Cryptosporidiosis by County of Residence, per 100,000



Cryptosporidiosis Cases by Month of Onset



In 2017, 48 laboratory-confirmed cases of giardiasis were reported. The incidence of giardiasis in Wyoming was 8.20 cases per 100,000. Wyoming incidence remained greater than the estimated national incidence of 3.44 in 2017. The median age of cases of giardiasis was 34.5 years (range: 1-87). Persons aged 25-39 years had the highest age-adjusted incidence rate (2.22 per 100,000 persons).

Incidence of Giardiasis by Year, Wyoming and the US, 2007-2017



Crude Incidence of Giardiasis by County of Residence, per 100,000



Giardiasis Cases by Month of Onset



Probable Exposure Reported by Cases



Giardiasis Cases by Age Group and Sex



In 2017, 18 cases of Hepatitis A were reported. The incidence of Hepatitis A in Wyoming was 3.07 cases per 100,000 per year and increased 501% from 2016. The significant increase in the number of reported cases in 2017 is related to an outbreak of Hepatis A in Natrona County linked to person-to-person transmission of the virus. Wyoming incidence remained above the estimated national incidence of 0.6. The median age of cases of Hepatitis A in Wyoming was 40 years (range: 6-64). Persons aged 40-64 years had the highest age-adjusted incidence rate (1.80 cases per 100,000 per year).

Incidence of Hepatitis A by Year, Wyoming and the US, 2007-2017



Crude Incidence of Hepatitis A by County of Residence, per 100,000



Hepatitis A Cases by Month of Onset



Month Reported

Probable Exposure Reported by Cases



Hepatitis A Cases by Age Group and Sex



In 2017, 34 cases of invasive pneumococcal disease (IPD) were reported. Drug-resistant *Streptococcus pneumonia* were the cause of eight of the 34 IPD cases. Sixteen of the cases presented with bacteremia with clinical pneumonia. Vaccination status was known for 76% of the cases, and of those known only nine individuals were immunized. The mean age of cases was 53 years (range: 1-79) and 47% of cases were female.

Vaccination Status of IPD Cases



Incidence of IPD by Age Group and Sex, 2017



Incidence of IPD by Year, Wyoming and the US, 2010-2017*



*US rate not available prior to 2010

Crude Incidence of IPD by County of Residence, per 100,000



IPD Cases by Clinical Manifestation

Bacteremia + pneumonia	16
Bacteremia/Sepsis	9
Pneumonia	5
Meningitis	3
Peritonitis	1

In 2017, 18 confirmed cases of pertussis were reported (crude incidence rate: 3.07 cases per 100,000 per year). The incidence rate of pertussis in Wyoming was lower than the estimated national incidence (4.85 cases per 100,000 per year). The median age of cases of pertussis was 11 years (range: 3-48).

Vaccine Status among Cases



Pertussis Cases by Age Group and Sex



Incidence of Pertussis by Year, Wyoming and the US, 2007-2017



Crude Incidence of Pertussis by County of Residence, per 100,000



Pertussis Cases by Month of Onset



Updated March 2017

In 2017, 32 rabies positive animals were reported: 20 skunks and 12 bats. A total of 636 animals captured or located in Wyoming were tested for rabies at the Wyoming State Veterinary Laboratory, with approximately 5% of animals testing positive. As a result of contact with animals that either tested positive, or were suspected of having rabies, a total of 18 reported people received rabies post-exposure prophylaxis (PEP).

Animal Rabies Cases by Species



Number	of	Humans	who	Received	Rabies	PEP
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Contact with a BAT suspected rabid	7
Contact with a CAT suspected rabid	3
Contact with a DOG suspected rabid	10
Contact with a FOX suspected rabid	2





Number of Animal Rabies Cases by County of Capture



In 2017, 100 (90 laboratory-confirmed and 10 probable) cases of salmonellosis were reported. The incidence of salmonellosis in Wyoming was 17.08 cases per 100,000 per year and increased 49% from 2016. Wyoming incidence in 2017 was greater than the estimated national incidence of 13.6 cases per 100,000 per year. The national health objective for salmonellosis is 11.4 per 100,000 persons per year. The median age of cases of salmonellosis was 31.5 years (range: 0-91). Persons aged 40-64 years had the highest age-adjusted incidence rate (4.5 per 100,000 persons).

Incidence of Salmonellosis by Year, Wyoming and the US, 2007-2017



Crude Incidence of Salmonellosis by County of Residence, per 100,000



Salmonellosis Cases by Month of Onset



Probable Exposure Reported by Cases



Salmonellosis Cases by Age Group and Sex



In 2017, 24 laboratory-confirmed cases of shiga toxin-producing Escherichia coli (STEC) were reported. The incidence of STEC in Wyoming was 4.1 cases per 100,000 per year and increased 26% from 2016. Wyoming incidence was higher than the estimated national incidence of 1.90 cases per 100,000 per year. In Wyoming, incidence of non-O157:H7 STEC was higher compared to incidence of O157:H7 STEC (3.4 vs. 0.68 per 100,000 persons). The national health objective for STEC O157 is 0.6 per 100,000 persons per year. The median age of cases of STEC was 22 years (range: 1-77). Persons aged 15-24 and 25-39 years had the highest age-adjusted incidence rate (1.02 per 100,000 persons).

Probable Exposure Reported by Cases



STEC Cases by Age Group and Sex



Incidence of STEC by Year, Wyoming and the US, 2007-2017



Crude Incidence of STEC by County of Residence, per 100,000



STEC Cases by Month of Onset



In 2017, seven laboratory-confirmed cases of shigellosis were reported. The incidence rate of shigellosis in Wyoming was 1.20 cases per 100,000 per year and increased 76% from 2016. Wyoming incidence in 2017 was less than the estimated national incidence of 3.6 cases per 100,000 per year. The median age of cases of shigellosis was 22 years (range: 1-41). Persons aged 0-4, 15-24, and 25-39 years had an equivalent age-adjusted incidence rate (0.34 per 100,000 persons).

Probable Exposure Reported by Cases



Shigellosis Cases by Age Group and Sex



Incidence of Shigellosis by Year, Wyoming and the US, 2007-2017



Crude Incidence of Shigellosis by County of Residence, per 100,000



Shigellosis Cases by Month of Onset



In 2017, seven human cases of West Nile virus (WNV) were reported including three West Nile Fever (WNF) and four West Nile Neuroinvasive Disease (WNND). Numerous bird species, horses and mosquito pools also tested positive for WNV. The first human case was reported in late July and the last case was reported at the end of September. The incidence of WNND was 0.68 per 100,000 people, which decreased from 1.9 in 2016. The incidence of WNND in Wyoming was higher than the estimated national incidence of 0.40 cases per 100,000 people.

Incidence of WNND , Wyoming and the US, 2007-2017



Other WNV Positive Species



West Nile Virus (WNV) Human Cases in Wyoming, 2017



Crude Incidence of WNND by County of Residence, per 100,000



Probable Location of Exposure Among WNF and WNND Cases

	WNF	WNND
In-State	3	3
Out-of-State	0	0
Multiple Exposures	0	0
Undetermined	0	1

In 2017, Zika virus disease was added to the Nationally Notifiable Disease List by the CDC. In Wyoming, two Zika virus disease cases were reported in 2017. The mean age of Zika cases was 42.5 years. Both reported cases were male.

In July 2017, the CDC changed testing recommendation to no longer include testing asymptomatic pregnant women. This decision was based on declining prevalence of Zika virus disease in the World Health Organization's Region of the Americas. Testing people when there is a lower occurrence of disease could lead to a higher proportion of false-positive test results. WDH sent out a Health Alert Notice to healthcare providers with the updated testing recommendations. Subsequently, requests for Zika virus disease testing at the WPHL have dropped significantly.

Number of Zika Virus Cases by County, Wyoming, 2017



Additional Case Information



Probable Location of Exposure Among Zika Virus Cases

US Travel	0
Foreign Travel	2

Wyoming Morbidity Report 2017	Albany	Big Horn	Campbell	Carbon	Converse	Crook	Fremont	Goshen	Hot Springs	Johnson	Laramie	Lincoln	Natrona	Niobrara	Park	Platte	Sheridan	Sublette	Sweetwater	Teton	Uinta	Washakie	Weston	Total
Babesiosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Brucellosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Campylobacteriosis	5	7	8	2	5	5	11	5	1	1	72	10	8	0	19	4	14	4	4	8	5	1	7	206
Coccidioidomycosis	0	2	0	0	0	0	2	0	0	0	3	0	0	0	1	0	1	0	0	1	1	0	0	11
Colorado Tick Fever	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
Creutzfeldt-Jacob Disease (CJD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Cryptosporidiosis	0	0	2	1	2	1	1	0	0	0	6	2	4	1	0	0	2	0	1	1	0	0	0	24
Cyclosporasis	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	4
Giardiasis	5	1	7	1	2	2	4	0	0	1	4	0	12	0	2	0	1	1	1	3	0	0	1	48
Group A Streptococcus, invasive	1	0	0	1	1	0	3	0	0	0	0	0	4	0	0	0	1	1	1	2	0	0	0	15
Group B Streptococcus, invasive	1	0	1	0	0	0	0	0	0	1	1	0	4	0	0	0	0	0	1	1	0	0	0	10
Haemophilus influenzae, invasive	0	0	0	0	0	0	0	0	0	0	2	0	4	0	1	0	0	0	0	0	0	0	0	7
Hantavirus pulmonary syndrome	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hepatitis A	0	0	1	0	0	0	0	0	0	0	6	0	11	0	0	0	0	0	0	0	0	0	0	18
Hepatitis E	0										1	0	0	0	0	0	0	0	0	0	0	0	0	1
Legionellosis	0	0	0	1	0	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	7
Lyme disease	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	4
Pertussis	6	0	0	0	0	0	2	0	0	0	3	0	1	0	0	0	1	0	5	0	0	0	0	18
Q Fever	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	3
Rabies, animal	0	0	0	0	0	0	2	0	1	1	13	1	0	0	0	0	11	0	0	2	0	0	1	32

Wyoming Morbidity Report 2017 Continued	Albany	Big Horn	Campbell	Carbon	Converse	Crook	Fremont	Goshen	Hot Springs	uosuųor	Laramie	Lincoln	Natrona	Niobrara	Park	Platte	Sheridan	Sublette	Sweetwater	Teton	Uinta	Washakie	Weston	Total
Salmonellosis	2	3	9	2	6	0	16	2	0	2	14	3	13	1	6	5	4	2	7	1	0	0	2	100
Shiga toxin-producing Escherichia coli (STEC)	1	0	5	0	0	1	0	0	0	0	7	0	4	0	0	2	1	1	1	1	0	0	0	24
Shigellosis	0	0	0	0	0	0	0	0	1	0	4	0	2	0	0	0	0	0	0	0	0	0	0	7
Rocky Mountain Spotted Fever Rickettsiosis	0	0	0	0	1	0	0	0	0	0	2	0	1	0	0	0	1	0	1	0	0	0	0	6
Streptococcal toxic-shock syndrome	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Streptococcus pneumoniae, invasive disease (IPD)	0	0	3	0	1	2	1	2	0	1	10	0	6	0	0	0	2	0	2	1	3	0	0	34
Tularemia	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Varicella (Chickenpox)	0	0	1	0	0	0	1	0	0	1	3	1	0	0	1	1	1	0	0	1	0	0	0	11
Vibriosis	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
West Nile Virus	0	1	0	0	0	0	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Yersiniosis	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Zika Virus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2

Disease	2017	2016	2015	2014	2013
Anaplasma/Ehrlichiosis	0	1	0	0	0
Anthrax (Bacillus anthracis)	0	0	0	0	0
Babesiosis (Babesia sp)	1	0	0	0	0
Botulism (<i>Clostridium botulinum</i>)	0	1	1	0	0
Brucellosis (<i>Brucella</i> sp)	1	0	0	0	0
California Serogroup Virus (Jamestown Canyon, La Crosse, others)	0	0	1	0	0
Carbapenem-resistant Enterobacteriaceae	6	*	*	*	*
Cholera (Vibrio cholerae)	0	0	0	0	0
Coccidioidomycosis (Coccidioides immitis)	11	2	14	2	5
Colorado Tick Fever	3	0	7	4	4
Creutzfeldt-Jacob Disease	1	2	3	0	1
Cyclosporiasis (Cyclospora cayetanensis)	4	1	0	0	1
Dengue Fever	0	0	0	0	0
Diptheria (Corynebacterium diphtheriae)	0	0	0	0	0
Eastern Equine Encephalitis Virus	0	0	0	0	0
Haemophilus influenzae (sterile site)	7	7	5	6	6
Hansen's Disease (<i>Mycobacterium leprae</i>)	0	0	0	0	0
Hantaviral Disease	1	1	1	1	0
Hemorrhagic Fever Viruses	0	0	0	0	0
Hemolytic Uremic Syndrome	0	0	0	0	1
Hepatitis A	18	0	3	1	0
Hepatitis E	1	0	0	0	0
Legionellosis (<i>Legionella</i> sp)	7	3	4	2	1
Leptospirosis (<i>Leptospira interrogans</i>)	0	0	0	0	0
Listeriosis (Listeria monocytogenes)	0	0	0	0	0
Lyme Disease (Borrelia burgdorferi)	4	1	1	3	3
Malaria (<i>Plasmodium</i> sp)	0	4	1	0	0
Measles	0	0	0	0	0
Meningococcal Disease (Neisseria meningitidis)	0	0	1	0	2
Mumps	0	0	0	0	0
Plague (Yersinia pestis)	0	0	0	0	0
Poliomyelitis/Poliovirus Infection	0	0	0	0	0
Powassan Virus (neuro- and non-neuro invasive)	0	0	0	0	0

Diseases of low Incidence

Disease	2017	2016	2015	2014	2013
Psittacosis (Chlamydophila psittaci)	0	0	0	0	0
Q-Fever (<i>Coxiella burnetii</i>)	2	0	0	0	1
Relapsing Fever (Borrelia sp)	0	0	0	0	0
Reyes Syndrome	0	0	0	0	0
Rocky Mountain Spotted Fever (Rickettsia rickettsii)	6	1	1	0	2
Rubella	0	0	0	0	0
Severe Acute Respiratory Syndrome (SARS)	0	0	0	0	0
St. Louis Encephalitis Virus (neuro- and non-neuro invasive)	0	0	0	0	0
Smallpox	0	0	0	0	0
Group A Streptococcus, invasive	15	16	8	7	7
Group B Streptococcus, invasive	10	11	7	8	2
Tetanus (Clostridium tetani)	0	0	0	0	0
Toxic-Shock Syndrome (Streptococcal, Staphylococcal)	2	2	1	1	0
Trichinellosis (<i>Trichinella</i> sp)	0	0	0	0	0
Tularemia (Francisella tularensis)	2	7	21	1	2
Typhoid Fever (<i>Salmonella typhi</i>)	0	0	0	0	0
Typhus (<i>Rickettsia</i> sp)	0	0	0	0	0
Vancomycin-Intermediate Staphylococcus aureus (VISA)	0	0	0	1	0
Vancomycin-Resistant Staphylococcus aureus (VRSA)	0	0	0	0	0
Varicella (chickenpox only)	11	14	14	11	9
Vibrio sp (including non-cholera)	1	1	0	1	0
Western Equine Encephalitis Virus	0	0	0	0	0
Yellow Fever	0	0	0	0	0
Yersiniosis (Y. enterocolitica, Y. pseudotuberculosis)	3	3	3	1	1
Zika Virus	2	2	0	0	0

*This condition was not reportable before 2017