

Utah communicable disease report, 2019

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1 Introduction

The **Utah communicable disease report 2019** is a web-based report; this is the PDF version and lacks some features of the web-based report, but all critical information is retained. You can navigate through the different chapters by using the table of contents at the top of the document.

1.1 Acknowledgements

The Utah Department of Health and Human Services (DHHS) recognizes the efforts of local health department (LHD) personnel throughout the state who play a critical role in data collection and case investigation; their work allows for accurate and timely reporting of communicable disease data.

DHHS also recognizes the efforts of other reporting partners, including laboratories, healthcare facilities, healthcare providers, and the public, in the provision of communicable disease data that have contributed to this report.

Reportable communicable disease data for Utah are published by the Utah Department of Health and Human Services, Office of Communicable Diseases

Please direct questions or comments to:

DHHS Office of Communicable Disease
PO Box 142104
Salt Lake City, Utah 84114
Phone: (801) 538-6191
Email: epi@utah.gov
Website: www.health.utah.gov/epi

1.2 Preface

The Communicable disease annual report for Utah, 2019 contains data related to Utah's reportable diseases and conditions reported in Utah for 2019. The data reported are collected from Utah's local health departments (LHDs), laboratories, healthcare providers, hospitals, and other healthcare facilities. The Utah Department of Health and Human Services (DHHS) tracks more than 75 communicable diseases in Utah annually. Each case of disease is investigated in collaboration with the LHDs.

The **Highlights** section presents noteworthy epidemiologic information from 2019 for selected diseases and additional information to aid in the interpretation of surveillance data. Incidence data (new cases of reportable conditions in 2019), historical 5-year averages, and the incidence rates are presented in State Disease Activity table. In addition, a summary of cases of reportable disease by

LHD is presented in the Jurisdiction disease activity section, and historical case counts and rates are presented in **Yearly disease comparison** section. Cases are counted by the year the disease occurred as determined by the Morbidity and Mortality Weekly Report (MMWR) week assigned by the Centers for **Disease Control and Prevention (CDC)**.

1.3 Important note about influenza

Throughout this report, influenza data are presented in the year the influenza season **ended**, and represent data for the **CDC defined influenza season**. Influenza season typically begins in October and surveillance extends through May of the following year. For example, data presented for the year 2019 is indicative of data collected from the 2018–2019 influenza season. This type of data presentation provides accurate measures for annual influenza activity. Sporadic cases of influenza that occur outside of the traditional influenza season are assigned to the previous season (i.e., an influenza case reported in August of 2019 would be assigned to the 2017–2018 influenza season). This report reflects activity for the 2018–2019 influenza season. More information on influenza activity in Utah can be found [here](#).

1.4 Background

Utah Established a multidisciplinary approach to communicable disease control and includes prompt reporting, data analysis, data interpretation, case investigation, identification of common risk factors, treatment, and implementation of disease prevention interventions. The successes of medicine and public health have dramatically reduced the risk of illnesses, hospitalizations, and deaths due to infectious agents during the 20th century. However, emergence of new diseases and the rapid spread of diseases globally, made possible by advances in transportation, trade, food production, and other factors, highlight the continual threat to health from infectious diseases. Attention to these threats and cooperation among all healthcare providers, government agencies, and other entities who are partners in protecting the public's health are crucial to maintain and improve the health of Utah's citizens.¹

The CDC expresses the important role surveillance plays in protection of the public's health as follows:

“Case-reporting of reportable diseases at the local level protects the public's health by ensuring the proper identification and follow-up of

¹Utah Division of Administrative Rules. Utah Administrative Code Rule R386-702, Communicable Disease Rule. Available at: <https://rules.utah.gov/publicat/code/r386/r386-702.htm>

cases. Public health workers ensure that persons who are already ill receive appropriate treatment; trace contacts who need vaccines, treatment, quarantine, or education; investigate and halt outbreaks; eliminate environmental hazards; and close premises where spread may occur. Surveillance of notifiable conditions helps public health authorities monitor the effect of notifiable conditions, measure disease trends, assess the effectiveness of control and prevention measures, identify populations or geographic areas at high risk, allocate resources appropriately, formulate prevention strategies, and develop public health policies. Monitoring surveillance data enables public health authorities to detect sudden changes in disease occurrence and distribution, identify changes in agents and host factors, and detect changes in health-care practices.”²

Reportable communicable diseases in Utah, 2019³

Acinetobacter species with resistance to carbapenems

Acute flaccid myelitis

Acquired immunodeficiency syndrome (AIDS)

Adverse event resulting from smallpox vaccination

Anaplasmosis

Anthrax

Arbovirus infection, including Saint Louis encephalitis and West Nile virus

Babesiosis

Botulism

Botulism, infant

Brucellosis

Campylobacteriosis

Chancroid

Chickenpox

²Centers for Disease and Prevention (2014). Summary of Notifiable Diseases–United States, 2012. Morbidity and Mortality Weekly Report (MMWR), 61 (53). Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6153a1.htm>

³Disease reporting is mandated by state legislation and administrative code. This list reflects the diseases, illnesses, and conditions to be of concern to the public health and reportable as specified in the Utah Administrative Code Rule R386-702, and required or authorized by Section 26-6-6 and Title 26, Chapter 23b of the Utah Health Code for the year 2019. The list of reportable diseases and conditions in Utah is revised periodically. A disease may be added to the list as a new public health threat emerges, or a disease may be removed as its incidence declines.

Chlamydia trachomatis infection

Cholera

Coccidioidomycosis

Colorado tick fever

Creutzfeldt-Jacob disease and other transmissible human spongiform encephalopathies

Cryptosporidiosis

Cyclosporiasis

Dengue fever

Diphtheria

Ehrlichiosis, human granulocytic, human monocytic, or unspecified

Encephalitis

Enterobacter species with resistance or intermediate resistance to carbapenems

Escherichia coli with resistance or intermediate resistance to carbapenems

Giardiasis

Gonorrhea

Haemophilus influenzae, invasive disease

Hansen's disease (Leprosy)

Hantavirus pulmonary syndrome

Hemolytic uremic syndrome, post-diarrheal

Hepatitis A

Hepatitis B, cases and carriers

Hepatitis C, acute and chronic

Hepatitis, other viral

Human immunodeficiency virus (HIV) infection

Influenza-associated hospitalization

Influenza-associated pediatric death

Klebsiella species with resistance or intermediate resistance to carbapenems

Legionellosis

Listeriosis

Lyme disease

Malaria

Measles

Meningitis (aseptic, bacterial, fungal, parasitic, protozoan, and viral)

Meningococcal disease

Mumps

Mycobacteria other than tuberculosis

Norovirus

Pertussis (whooping cough)

Plague

Poliomyelitis, paralytic

Poliovirus infection, nonparalytic

Pregnancy associated with hepatitis B, hepatitis C, HIV, Listeria, rubella, syphilis, or Zika virus infection

Psittacosis

Q fever

Rabies, human and animal

Relapsing fever, tick-borne and louse-borne

Rubella

Rubella, congenital syndrome

Salmonellosis

Severe acute respiratory syndrome (SARS)

Shiga toxin-producing Escherichia coli (STEC) infection

Shigellosis

Smallpox

Spotted fever rickettsioses, including Rocky Mountain spotted fever

Staphylococcus aureus with resistance (VRSA)

Streptococcal disease, invasive, including: *Streptococcus pneumoniae* and groups A, B, C, and G

streptococci isolated from a normally sterile site

Syphilis, all stages and congenital

Tetanus

Toxic-shock syndrome, staphylococcal or streptococcal

Trichinellosis

Tuberculosis



Tularemia

Typhoid, cases and carriers

Vibriosis

Viral hemorrhagic fevers, including Ebola, Lassa, Marburg, and Nipah virus-related illnesses

Yellow fever

Zika virus

2 Highlights

The following are summaries for selected communicable diseases which highlight conditions that had notable incidence, outbreaks, or other factors.

2.1 Influenza-associated hospitalization

Seasonal influenza outbreaks are a major cause of morbidity (disease) and mortality (death) each winter influenza season. Influenza-associated hospitalization is a reportable condition in Utah and includes people who have been hospitalized (for any length of time) and have a positive influenza diagnostic test. This report contains information for the 2018–2019 influenza season that ran from October 6, 2018 to May 18, 2019. During the 2018–2019 season, influenza activity peaked during early February, 2019. The total number of influenza-associated hospitalizations, 1,791, was second-highest out of the previous 5 years, behind the 2017–2018 season. Adults older than 65 had the highest percentage of influenza-associated hospitalizations (40.4%). Rates of Influenza-associated hospitalizations per 100k population were highest among adults 65 and older (216), followed by 50–64 (83) and 0–4 (83). The 2018–2019 was also above average in reported outpatient influenza-like illness, which also peaked in early February 2019 and was the second highest in the previous 5 years. The predominant influenza virus early was influenza A H1N1 from October 6 to February 10. After February 10, influenza A H3N2 was the predominant virus, making this an unusually long influenza season.

2.2 Botulism, foodborne

In January 2019, the Utah Department of Health and Human Services (DHHS) was notified of a case of foodborne botulism. Upon further investigation, it was determined the patient also had a family member who likely had botulism in November 2018 but was misdiagnosed and did not receive antitoxin. Both patients had eaten home canned green beans that later tested positive for botulism toxin. These were the first cases of foodborne botulism in Utah since 2015.

2.3 Typhoid fever

Typhoid fever is a rare but serious condition most often acquired outside of the United States. Utah typically sees 1 to 2 cases of typhoid fever per year. In 2019, DHHS identified 7 cases of typhoid fever. Investigators determined 6 of the 7



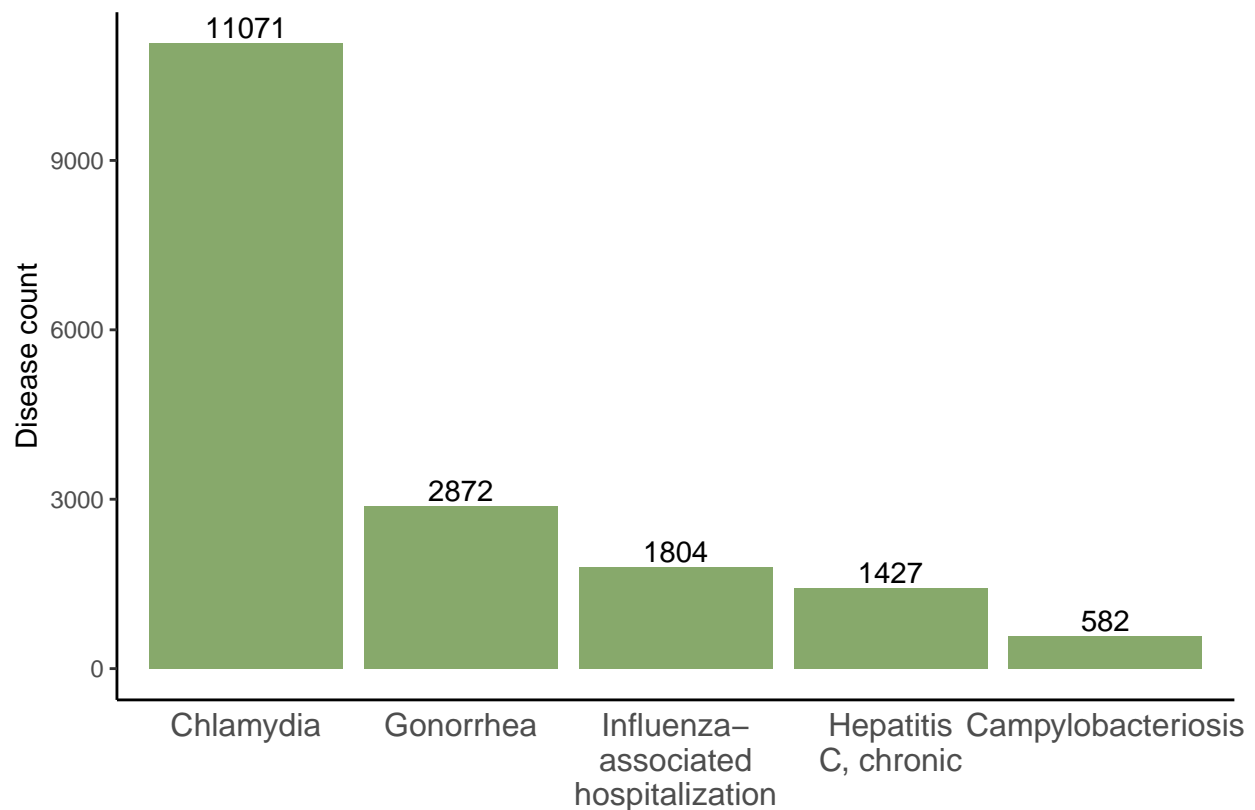
cases were most likely due to travel in Central or South America. No source of infection was identified for the last case.

3 Overall state disease activity

3.1 Top diseases of 2019

The top 5 highest disease counts in the state of Utah were:

1. **Chlamydia** with **11,071** cases.
2. **Gonorrhea** with **2,872** cases.
3. **Influenza-associated hospitalization** with **1,804** cases.
4. **Hepatitis C, chronic** with **1,427** cases.
5. **Campylobacteriosis** with **582** cases.



3.2 2019 State disease table

The State Disease Table includes the 2019 Count⁴, Previous 5-Year Count Average⁵, Utah 2019 Rate⁶, and the Disease Trend⁷.

Disease	2019 count	Previous 5 year count average	Utah 2019 Rate	Trend
Acinetobacter species resistant to carbapenems	32	7.6	1	Increasing
Acute flaccid myelitis	1	1.4	0	Consistent
Adverse event resulting from smallpox vaccination	0	0.2	0	Consistent
Anthrax	0	0	0	Not enough information
Arbovirus infection (not including West Nile, Dengue, or Yellow fever)	0	1.4	0	Consistent
Babesiosis	0	0.4	0	Consistent
Botulism, total	5	4.8	0.2	Consistent
Botulism, foodborne	1	0.6	0	Consistent
Botulism, infant	4	4.0	0.1	Consistent
Botulism, other (wound/unspecified)	0	0.2	0	Consistent
Brucellosis	2	0.6	0.1	Consistent
Campylobacteriosis	582	532	18.2	Consistent
Chagas disease	2	0.4	0.1	Increasing
Chancroid	0	0.2	0	Consistent
Chickenpox	165	222.2	5.1	Decreasing
Chlamydia	11,071	9,396.2	345.3	Consistent
Cholera	0	0	0	Not enough information
Coccidioidomycosis	51	57.2	1.6	Consistent
Colorado tick fever	1	0.4	0	Consistent

⁴Count is the total disease count in 2019. For influenza, count is the total disease count in the 2018–2019 influenza season

⁵The average disease counts for the 5 years prior to 2019

⁶The Rate indicates infections per 100,000 population. Caution should be used when interpreting rates in italics; the estimate has a relative standard error greater than 30% and does not meet DHHS standards for reliability.

⁷Changes in Trend are based on statistical significance (using a p-value of 0.10), i.e., higher or lower than the 5-year average.

(continued)

Disease	2019 Count	Previous 5 Year Count Average	Utah 2019 Rate	Trend
Creutzfeldt-Jakob disease and other transmissible human spongiform encephalopathies	3	5.2	0.12	Consistent
Cryptosporidiosis	198	148.2	6.2	Consistent
Cyclosporiasis	22	9.2	0.7	Consistent
Dengue	10	4.8	0.3	increasing
Diphtheria	0	0	0	Not enough information
Ehrlichiosis/anaplasmosis	0	1	0	Consistent
Encephalitis	9	6.2	0.3	Consistent
Enterobacter species resistant to carbapenems	0	1	0	Consistent
Escherichia coli resistant to carbapenems	6	1.6	0.2	Consistent
Giardiasis	195	208.2	6.1	Consistent
Gonorrhea	2,872	2,107.2	89.6	Consistent
HIV infection	134	123.4	4.2	Consistent
Haemophilus influenzae, all ages, invasive disease	55	54	1.7	Consistent
nonserotype B, age <5 years	15	7.2	0.5	Consistent
serotype B, age <5 years	0	0.4	0	Consistent
unknown serotype, age <5 years	1	0.4	0	Consistent
Hansen's disease (Leprosy)	1	1	0	Consistent
Hantavirus infection	1	2.2	0	Consistent
Hemolytic uremic syndrome, post-diarrheal	8	8.4	0.2	Consistent
Hepatitis A	20	64.6	0.6	Consistent
Hepatitis B, acute	31	16.4	1	consistent
Hepatitis B, chronic	268	155.4	8.4	Increasing
Hepatitis C, acute	165	82.2	5.1	Consistent
Hepatitis C, chronic	1,427	1,532.6	44.5	Consistent
Hepatitis, other viral	0	1.2	0	Consistent
Influenza-associated hospitalization	1,804	1,404.4	56.3	Consistent

(continued)

Disease	2019 Count	Previous 5 Year Count Average	Utah 2019 Rate	Trend
Influenza-associated pediatric mortality	6	1.6	0.2	Increasing
Klebsiella species resistant to carbapenems	6	5	0.2	Consistent
Legionellosis	39	31	1.2	Increasing
Leptospirosis	3	1	0.1	Increasing
Listeriosis	2	4.2	0.1	Consistent
Lyme disease	20	19.6	0.6	Consistent
Malaria	10	7.6	0.3	Consistent
Measles	0	1.4	0	Consistent
Meningitis, aseptic	48	60.8	1.5	Consistent
Meningitis, bacterial, other	40	25	1.2	Consistent
Meningitis, viral	76	68.2	2.4	Consistent
Meningococcal disease (Neisseria meningitidis)	3	2.2	0.1	Consistent
Mumps	26	11.4	0.8	Consistent
Pertussis	405	520.4	12.6	Consistent
Plague	0	0.2	0	Consistent
Poliomyelitis, paralytic and nonparalytic	0	0	0	Not enough information
Psittacosis	0	0.2	0	Consistent
Q fever	3	3.6	0.1	Consistent
Rabies, animal	12	19.6	0.4	Consistent
Rabies, human	0	0.2	0	Consistent
Relapsing fever, tick-borne and louse-borne	1	0.8	0	Consistent
Rubella	0	0.2	0	Consistent
Rubella, congenital syndrome	0	0	0	Not enough information
Salmonellosis	325	383	10.1	Consistent
Severe acute respiratory syndrome (SARS)	0	0	0	Not enough information
Shiga toxin-producing Escherichia coli (STEC) infection	185	120.6	5.8	Consistent
Shigellosis	66	52.6	2.1	Consistent

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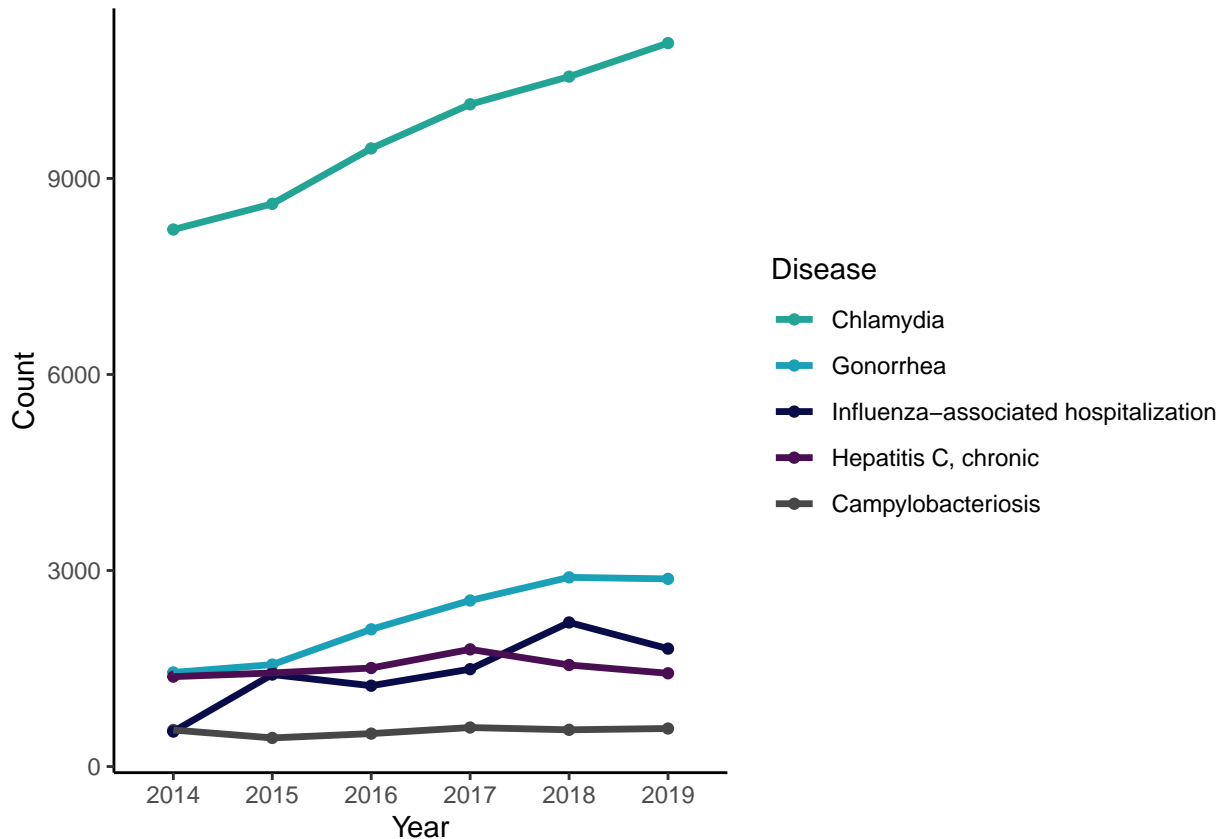
Disease	2019 Count	Previous 5 Year Count Average	Utah 2019 Rate	Trend
Smallpox	0	0	0	Not enough information
Spotted fever rickettsiosis (including Rocky Mountain spotted fever)	10	7.4	0.3	Consistent
Streptococcal disease, invasive, group A	236	193.4	7.4	Consistent
Streptococcal disease, invasive, group B	248	193.8	7.7	Consistent
Streptococcal disease, invasive, other	384	365.4	12	Consistent
Streptococcus pneumoniae, invasive disease	221	231.4	6.9	Consistent
age <5 years	16	20.2	0.5	Consistent
Syphilis, congenital	4	0.2	0.1	Increasing
Syphilis, early (infection < 12 months)	138	99	4.3	Consistent
primary and secondary	138	99.4	4.3	consistent
early latent	103	55.6	3.3	Increasing
Syphilis, latent (infection > 12 months)	0	101	0	decreasing
Tetanus	0	0	0	Not enough information
Toxic shock syndrome (staphylococcal or streptococcal)	26	27.4	0.8	Consistent
Trichinellosis	0	0.4	0	Consistent
Tuberculosis, active	27	27	0.8	Consistent
Tularemia	0	3.6	0	Consistent
Typhoid fever	7	1.4	0.2	Increasing
Vancomycin-resistant Staphylococcus aureus (VRSA)	0	0	0	Not enough information
Vibriosis	21	11	0.7	Consistent
Viral hemorrhagic fevers	0	0	0	Not enough information
West Nile virus, total	21	19.2	0.7	Consistent

(continued)

Disease	2019 Count	Previous 5 Year Count Average	Utah 2019 Rate	Trend
Yellow fever	0	0	0	Not enough information
Zika virus, congenital infection	0	0	0	Not enough information
Zika virus disease	9	10	0.2	Consistent

4 Yearly disease comparison

4.1 Top 5 disease trends by count



4.2 Yearly disease counts⁸

Disease	2014	2015	2016	2017	2018	2019
Acinetobacter species resistant to carbapenems	2	4	4	2	26	32
Acute flaccid myelitis	0	1	3	2	1	1
Adverse event resulting from smallpox vaccination	0	0	0	1	0	0
Anthrax	0	0	0	0	0	0
Arbovirus infection (not including West Nile, Dengue, or Yellow fever)	3	4	1	0	0	0

⁸Note about hepatitis B and hepatitis C: From 2014–2016, only confirmed cases were reported; in 2017–2019 confirmed and probable cases were reported.

(continued)

Disease	2014	2015	2016	2017	2018	2019
Babesiosis	0	0	0	1	1	0
Botulism, total	6	8	6	1	3	5
Botulism, foodborne	0	2	0	0	1	1
Botulism, infant	6	6	5	1	2	4
Botulism, other (wound/unspecified)	0	0	1	0	0	0
Brucellosis	0	3	0	0	0	2
Campylobacteriosis	559	438	504	597	562	582
Chagas disease	1	1	0	0	0	2
Chancroid	1	0	0	0	0	0
Chickenpox	216	217	229	253	196	165
Chlamydia	8,218	8,611	9,459	10,135	10,558	11,071
Cholera	0	0	0	0	0	0
Coccidioidomycosis	54	56	42	80	54	51
Colorado tick fever	0	0	1	0	1	1
Creutzfeldt-Jakob disease and other transmissible human spongiform encephalopathies	3	9	2	7	5	3
Cryptosporidiosis	73	176	170	125	197	198
Cyclosporiasis	1	8	2	14	21	22
Dengue	3	2	7	6	6	10
Diphtheria	0	0	0	0	0	0
Ehrlichiosis/anaplasmosis	0	2	0	2	1	0
Encephalitis	5	4	8	8	6	9
Enterobacter species resistant to carbapenems	0	2	2	0	1	0
Escherichia coli resistant to carbapenems	1	0	0	1	6	6
Giardiasis	228	205	161	214	233	195
Gonorrhea	1,440	1,560	2,100	2,541	2,895	2,872
HIV infection	119	124	138	116	120	134
Haemophilus influenzae, all ages, invasive disease	59	51	40	64	56	55
nonserotype B, age <5 years	1	9	8	10	8	15
serotype B, age <5 years	1	0	1	0	0	0
unknown serotype, age <5 years	0	0	0	1	1	1
Hansen's disease (Leprosy)	2	0	0	1	2	1
Hantavirus infection	3	2	3	2	1	1

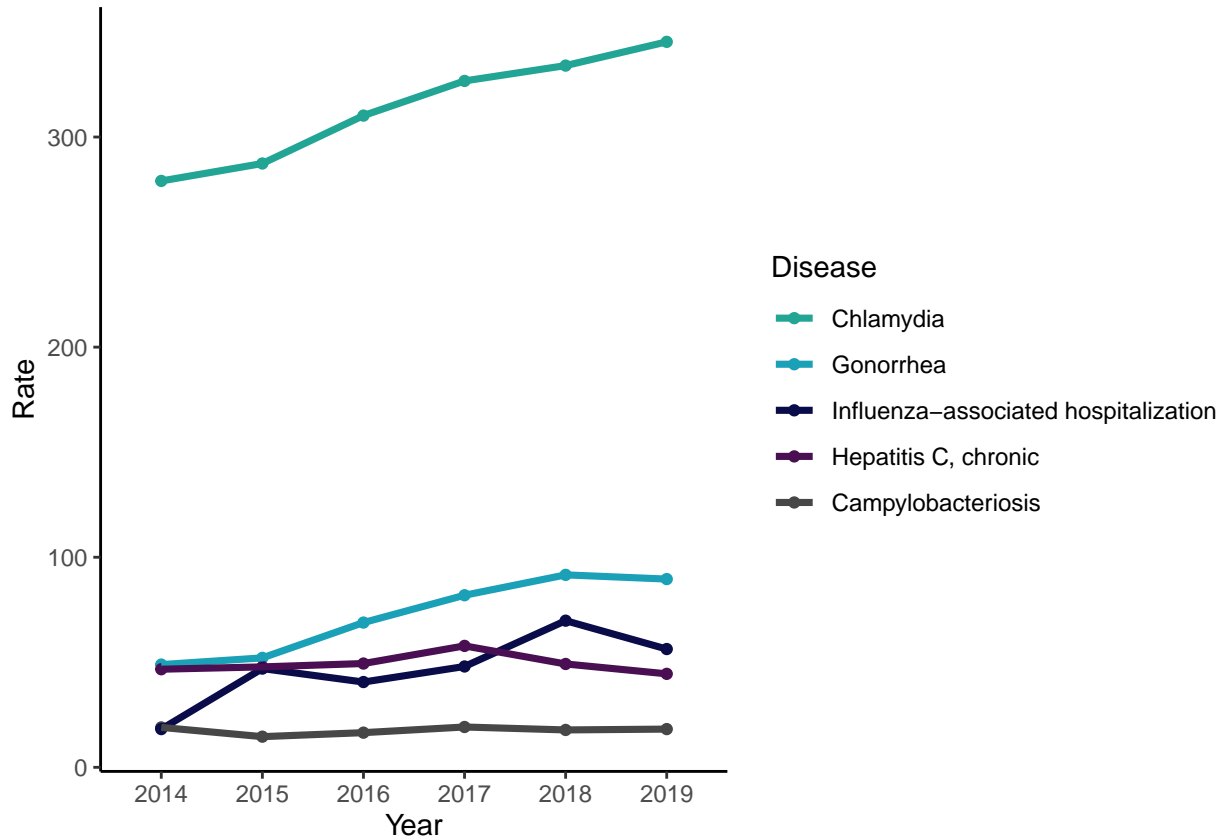
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Disease	2014	2015	2016	2017	2018	2019
Hemolytic uremic syndrome, post-diarrheal	8	4	6	12	12	8
Hepatitis A	8	8	12	160	135	20
Hepatitis B, acute	11	11	5	19	36	31
Hepatitis B, chronic	37	63	74	299	304	268
Hepatitis C, acute	42	32	81	101	155	165
Hepatitis C, chronic	1,376	1,432	1,508	1,793	1,554	1,427
Hepatitis, other viral	1	1	0	1	3	0
Influenza-associated hospitalization	535	1,408	1,237	1,490	2,205	1,804
Influenza-associated pediatric mortality	2	2	1	0	1	6
Klebsiella species resistant to carbapenems	1	8	5	7	4	6
Legionellosis	30	30	30	31	34	39
Leptospirosis	1	0	1	1	2	3
Listeriosis	9	0	4	6	2	2
Lyme disease	13	12	19	26	28	20
Malaria	5	6	8	9	10	10
Measles	3	1	0	3	0	0
Meningitis, aseptic	40	29	49	96	90	48
Meningitis, bacterial, other	16	15	12	39	43	40
Meningitis, viral	34	60	77	94	76	76
Meningococcal disease (Neisseria meningitidis)	1	2	3	2	3	3
Mumps	2	0	2	40	13	26
Pertussis	944	507	268	448	435	405
Plague	0	1	0	0	0	0
Poliomyelitis, paralytic and nonparalytic	0	0	0	0	0	0
Psittacosis	0	0	0	1	0	0
Q fever	9	0	2	2	5	3
Rabies, animal	22	21	18	23	14	12
Rabies, human	0	0	0	0	1	0
Relapsing fever, tick-borne and louse-borne	1	0	0	3	0	1
Rubella	1	0	0	0	0	0
Rubella, congenital syndrome	0	0	0	0	0	0
Salmonellosis	371	460	332	388	364	325

(continued)

Disease	2014	2015	2016	2017	2018	2019
Severe acute respiratory syndrome (SARS)	0	0	0	0	0	0
Shiga toxin-producing Escherichia coli (STEC) infection	91	97	78	140	197	185
Shigellosis	40	36	79	44	64	66
Smallpox	0	0	0	0	0	0
Spotted fever rickettsiosis (including Rocky Mountain spotted fever)	8	5	5	10	9	10
Streptococcal disease, invasive, group A	115	169	217	222	244	236
Streptococcal disease, invasive, group B	132	156	200	224	257	248
Streptococcal disease, invasive, other	287	368	421	433	319	384
Streptococcus pneumoniae, invasive disease	205	191	246	268	247	221
age <5 years	24	14	24	17	22	16
Syphilis, congenital	0	0	0	0	1	4
Syphilis, early (infection < 12 months)	53	66	93	117	168	138
primary & secondary	51	66	93	117	168	138
early latent	53	42	36	61	86	103
Syphilis, latent (infection > 12 months)	66	90	106	97	146	0
Tetanus	0	0	0	0	0	0
Toxic shock syndrome (staphylococcal or streptococcal)	14	24	34	31	34	26
Trichinellosis	1	1	0	0	0	0
Tuberculosis, active	31	37	20	29	18	27
Tularemia	1	5	5	7	0	0
Typhoid fever	3	1	1	0	2	7
Vancomycin-resistant Staphylococcus aureus (VRSA)	0	0	0	0	0	0
Vibriosis	3	9	11	16	16	21
Viral hemorrhagic fevers	0	0	0	0	0	0
West Nile virus, total	2	8	13	62	11	21
Yellow fever	0	0	0	0	0	0
Zika virus, congenital infection	0	0	0	0	0	0
Zika virus disease	0	1	29	9	11	9

4.3 Top 5 disease trends by rate per 100,000 people



4.4 Yearly disease rates per 100,000 people

Rates are defined as infections per 100,000 population. Caution should be used when interpreting rates listed in *italics*. The estimate has a relative standard error greater than 30% and does not meet the DHHS standards for reliability.

Note about hepatitis B and hepatitis C: From 2014–2016, only confirmed cases were reported; in 2017–2019 confirmed and probable cases were reported.

Disease	2014	2015	2016	2017	2018	2019
Acinetobacter species resistant to carbapenems	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	0.8	1
Acute flaccid myelitis	0	0	<i>0.1</i>	<i>0.1</i>	0	0
Adverse event resulting from smallpox vaccination	0	0	0	0	0	0
Anthrax	0	0	0	0	0	0

(continued)

Disease	2014	2015	2016	2017	2018	2019
Arbovirus infection (not including West Nile, Dengue, or Yellow fever)	0.1	0.1	0	0	0	0
Babesiosis	0	0	0	0	0	0
Botulism, total	0.2	0.3	0.2	0	0.1	0.2
Botulism, foodborne	0	0.1	0	0	0	0
Botulism, infant	0.2	0.2	0.2	0	0.1	0.1
Botulism, other (wound/unspecified)	0	0	0	0	0	0
Brucellosis	0	0.1	0	0	0	0
Campylobacteriosis	19	14.6	16.5	19.2	17.8	18.2
Chagas disease	0	0	0	0	0	0.1
Chancroid	0	0	0	0	0	0
Chickenpox	7.3	7.2	7.5	8.2	6.2	5.1
Chlamydia	279.1	287.4	310.2	326.7	334	345.3
Cholera	0	0	0	0	0	0
Coccidioidomycosis	1.8	1.9	1.4	2.6	1.7	1.6
Colorado tick fever	0	0	0	0	0	0
Creutzfeldt-Jakob disease and other transmissible human spongiform encephalopathies	0.1	0.3	0.1	0.2	0.2	0.1
Cryptosporidiosis	2.5	5.9	5.6	4	6.2	6.2
Cyclosporiasis	0	0.3	0.1	0.5	0.7	0.7
Dengue	0.1	0.1	0.2	0.2	0.2	0.3
Diphtheria	0	0	0	0	0	0
Ehrlichiosis/anaplasmosis	0	0.1	0	0.1	0	0
Encephalitis	0.1	0.1	0.2	0.2	0.2	0.2
Enterobacter species resistant to carbapenems	0	0.1	0.1	0	0	0
Escherichia coli resistant to carbapenems	0	0	0	0	0.2	0.2
Giardiasis	7.7	6.8	5.3	6.9	7.4	6.1
Gonorrhea	48.9	52.1	68.9	81.9	91.6	89.6
HIV infection	4	4.1	4.5	3.7	3.8	4.2
Haemophilus influenzae, all ages, invasive disease	2	1.7	1.3	2.1	1.8	1.7
nonserotype B, age <5 years	0	0.3	0.3	0.3	0.3	0.5
serotype B, age <5 years	0	0	0	0	0	0
unknown serotype, age <5 years	0	0	0	0	0	0
Hansen's disease (Leprosy)	0.1	0	0	0	0.1	0
Hantavirus infection	0.1	0.1	0.1	0.1	0	0
Hemolytic uremic syndrome, post-diarrheal	0.3	0.1	0.2	0.4	0.4	0.2

(continued)

Disease	2014	2015	2016	2017	2018	2019
Hepatitis A	0.3	0.3	0.4	5.2	4.3	0.6
Hepatitis B, acute	0.4	0.4	0.2	0.6	1.1	0.9
Hepatitis B, chronic	1.3	2.1	2.4	9.6	9.6	8.4
Hepatitis C, acute	1.4	1.1	2.7	3.3	4.9	5.1
Hepatitis C, chronic	46.7	47.7	49.3	58	49.3	44.6
Hepatitis, other viral	0	0	0	0	0	0.1
Influenza-associated hospitalization	18.2	47	40.6	48	69.8	56.3
Influenza-associated pediatric mortality	0.1	0.1	0	0	0	0.2
Klebsiella species resistant to carbapenems	0	0.3	0.2	0.2	0.1	0.2
Legionellosis	1	1	1	1	1.1	1.2
Leptospirosis	0	0	0	0	0.1	0.1
Listeriosis	0.3	0	0.1	0.2	0.1	0.1
Lyme disease	0.4	0.4	0.6	0.8	0.9	0.6
Malaria	0.2	0.2	0.3	0.3	0.3	0.3
Measles	0.1	0	0	0.1	0	0
Meningitis, aseptic	1.4	0.7	1.6	3	2.6	1.3
Meningitis, bacterial, other	0.5	0.4	0.4	1.2	1.3	1.1
Meningitis, viral	1.2	2	2.5	3	2.4	2.4
Meningococcal disease (Neisseria meningitidis)	0	0.1	0.1	0.1	0.1	0.1
Mumps	0.1	0	0.1	1.3	0.4	0.8
Pertussis	32.1	16.9	8.8	14.4	13.8	12.6
Plague	0	0	0	0	0	0
Poliomyelitis, paralytic and nonparalytic	0	0	0	0	0	0
Psittacosis	0	0	0	0	0	0
Q fever	0.3	0	0.1	0.1	0.2	0.1
Rabies, animal	0.7	0.7	0.6	0.7	0.4	0.4
Rabies, human	0	0	0	0	0	0
Relapsing fever, tick-borne and louse-borne	0	0	0	0.1	0	0
Rubella	0	0	0	0	0	0
Rubella, congenital syndrome	0	0	0	0	0	0
Salmonellosis	12.6	15.4	10.9	12.5	11.5	10.1
Severe acute respiratory syndrome (SARS)	0	0	0	0	0	0
Shiga toxin-producing Escherichia coli (STEC) infection	3.1	3.2	2.6	4.5	6.2	5.8
Shigellosis	1.4	1.2	2.6	1.4	2	2.1

(continued)

Disease	2014	2015	2016	2017	2018	2019
Smallpox	0	0	0	0	0	0
Spotted fever rickettsiosis (including Rocky Mountain spotted fever)	0.3	0.2	0.2	0.3	0.3	0.3
Streptococcal disease, invasive, group A	3.9	5.6	7.1	7.2	7.7	7.4
Streptococcal disease, invasive, group B	4.5	5.2	6.6	7.2	8.1	7.7
Streptococcal disease, invasive, other	9.7	12.3	13.8	13.9	10.1	12
Streptococcus pneumoniae, invasive disease	7	6.4	8.1	8.6	7.8	6.9
age <5 years	0.8	0.5	0.8	0.5	0.7	0.5
Syphilis, congenital	0	0	0	0	0	0.1
Syphilis, early (infection < 12 months) primary & secondary	1.7	2.2	3	3.8	5.3	4.3
early latent	0	0	0	0	0	0
Syphilis, latent (infection > 12 months)	2.2	3	3.5	3.1	4.6	0
Tetanus	0	0	0	0	0	0
Toxic shock syndrome (staphylococcal or streptococcal)	0.5	0.8	1.1	1	1.1	0.8
Trichinellosis	0	0	0	0	0	0
Tuberculosis, active	1.1	1.2	0.7	0.9	0.6	0.8
Tularemia	0	0.2	0.2	0.2	0	0
Typhoid fever	0.1	0	0	0	0.1	0.2
Vancomycin-resistant Staphylococcus aureus (VRSA)	0	0	0	0	0	0
Vibriosis	0.1	0.3	0.4	0.5	0.5	0.7
Viral hemorrhagic fevers	0	0	0	0	0	0
West Nile virus, total	0.1	0.3	0.4	2	0.3	0.7
Yellow fever	0	0	0	0	0	0
Zika virus, congenital infection	0	0	0	0	0	0
Zika virus disease	0	0	1	0.3	0.3	0.3

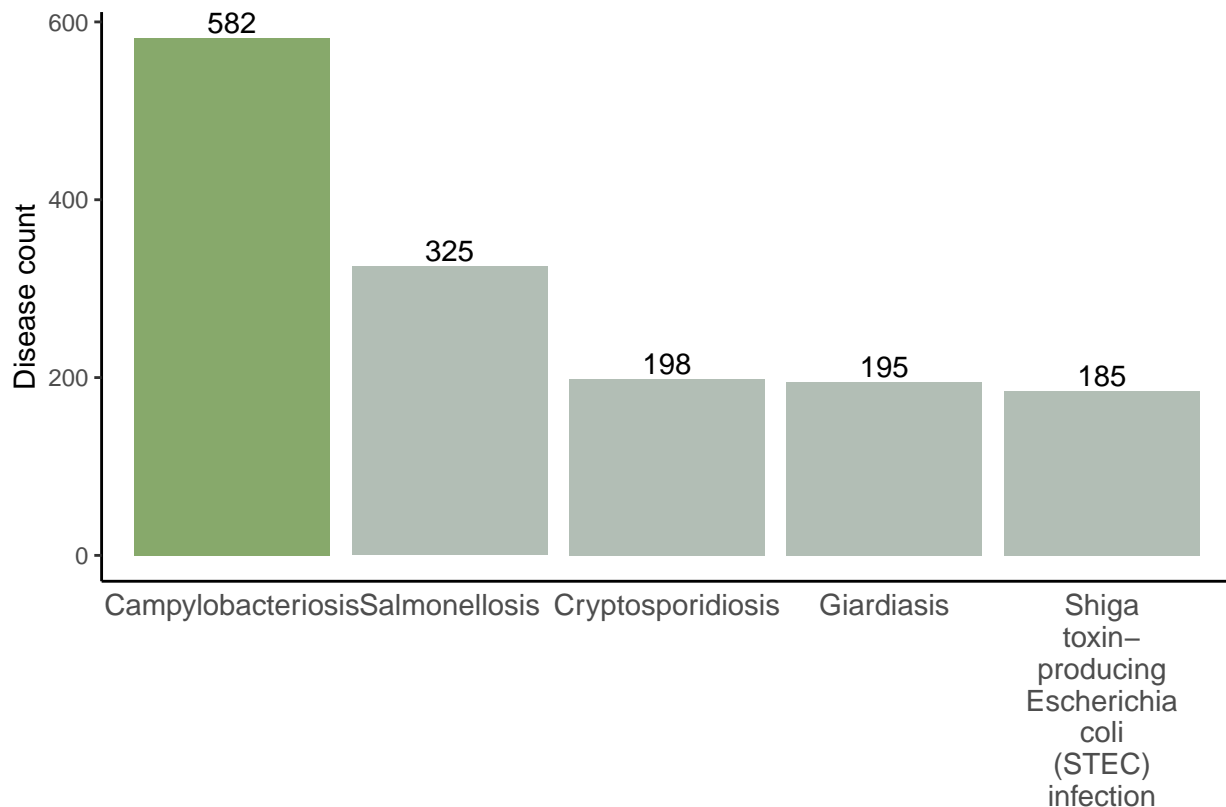
5 Diseases by type

5.1 Enteric (intestinal) diseases

Enteric diseases are infections commonly caused by micro-organisms that enter the body through the mouth through contaminated food or water, contact with animals or their environments, or contact with the feces of another infected human. For more information about enteric diseases, see [the CDC website](#).

5.1.1 The top five enteric diseases, 2019

Diseases highlighted in green indicate those diseases that were also in the top five confirmed cases across all reportable communicable diseases in Utah.

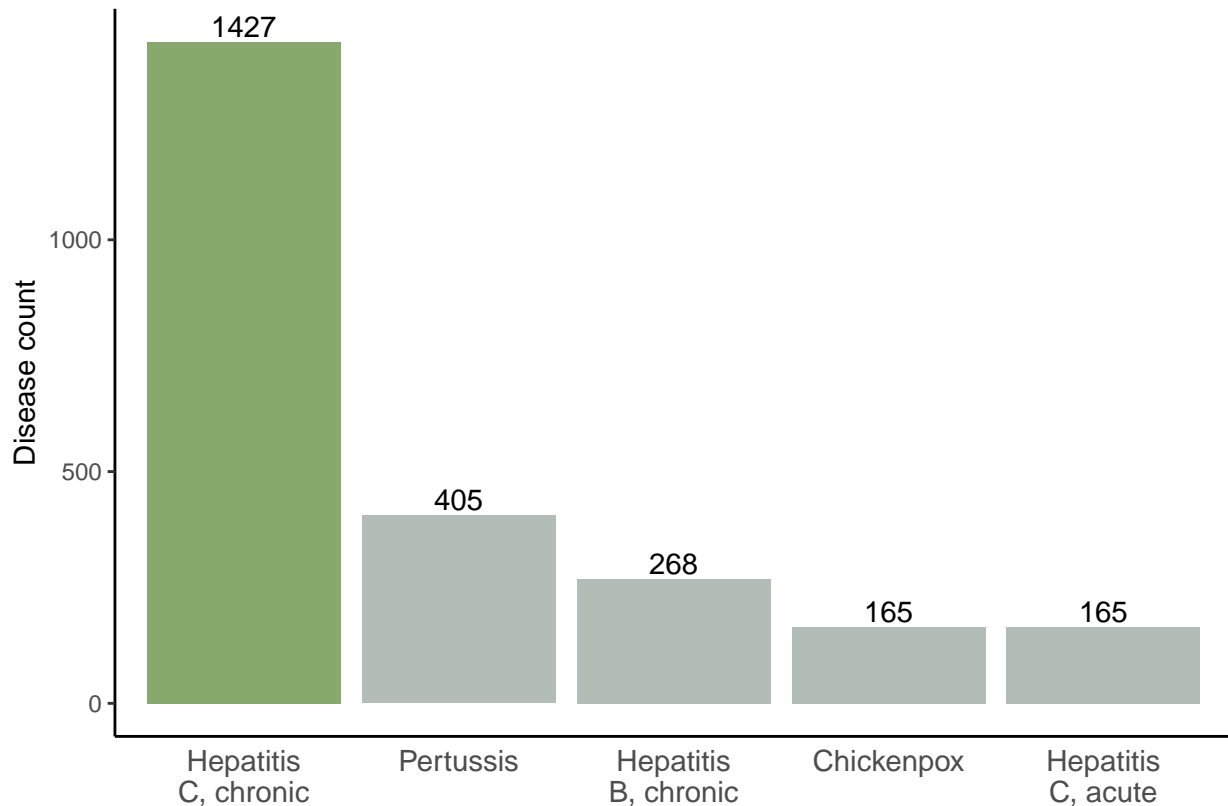


5.2 Vaccine-preventable diseases & viral hepatitis

Vaccine-preventable Diseases (VPD) are infectious diseases that can be prevented by vaccines. For more information on VPDs, see [the CDC webpage](#). Hepatitis is inflammation of the liver and is often caused by a virus. For more information, see [the CDC webpage](#) for viral hepatitis.

5.2.1 The top 5 VPDs/hepatitis infections, 2019

Diseases highlighted in green indicate those diseases that were also in the top 5 confirmed cases across all reportable communicable diseases in Utah.

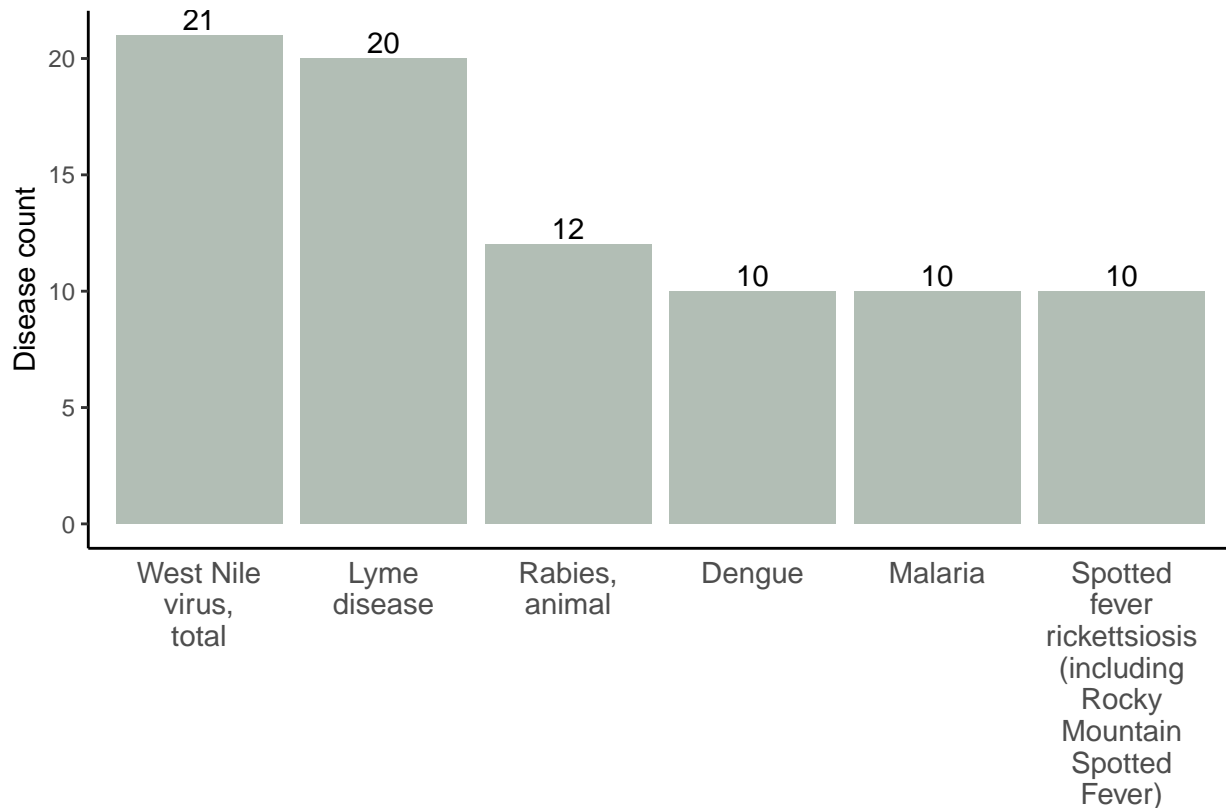


5.3 Zoonotic diseases

Zoonotic diseases are caused by infectious organisms (bacteria, viruses, parasites) spread to humans from animals, often through vectors such as ticks and mosquitoes. More information can be found on the [CDC zoonotic webpage](#).

5.3.1 The top 5 zoonotic diseases, 2019

Diseases highlighted in green indicate those diseases that were also in the top 5 confirmed cases across all reportable communicable diseases in Utah.

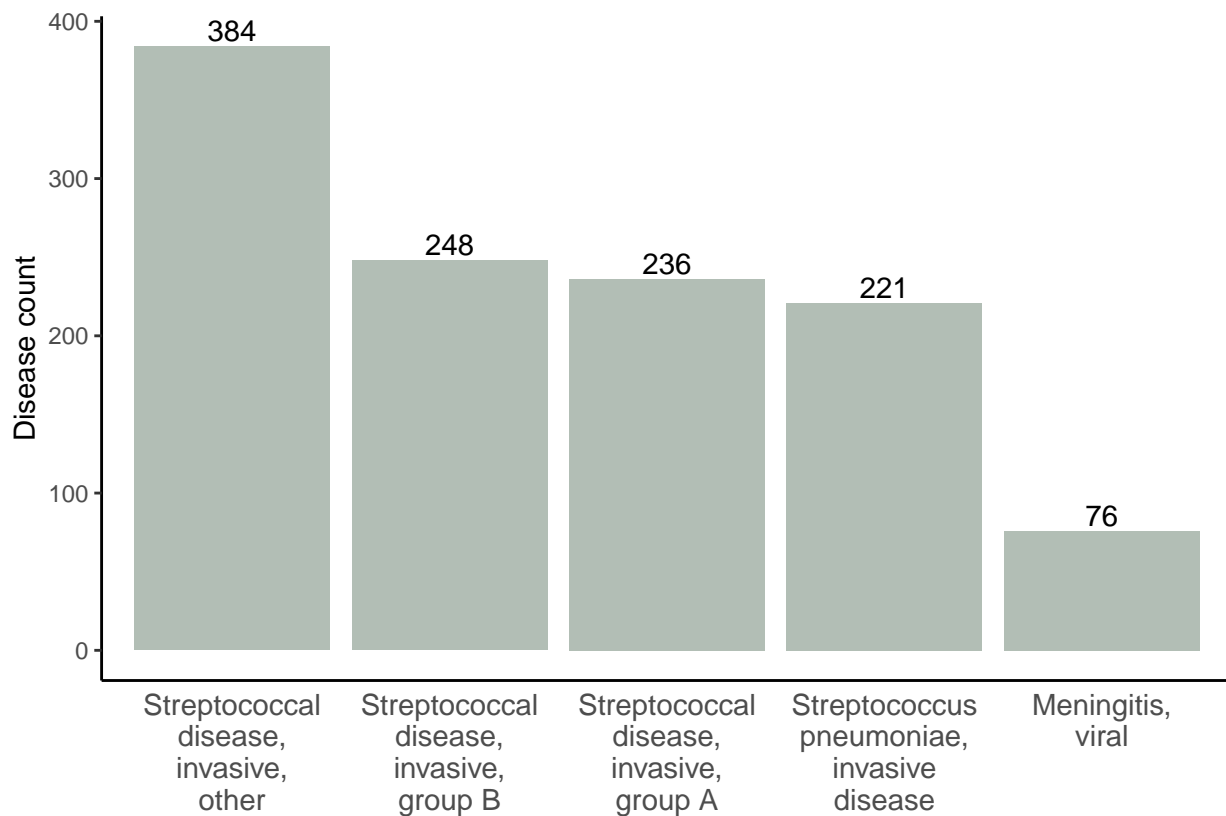


5.4 Invasive diseases and general reportable diseases

Invasive diseases are those in which the infectious agents (eg. bacteria) infect parts of the body normally free from germs, such as the bloodstream or cerebrospinal fluid. For more information, see the [CDC webpage](#)

5.4.1 The top 5 invasive and other diseases, 2019

Diseases highlighted in green indicate those diseases that were also in the top 5 confirmed cases across all reportable communicable diseases in Utah.

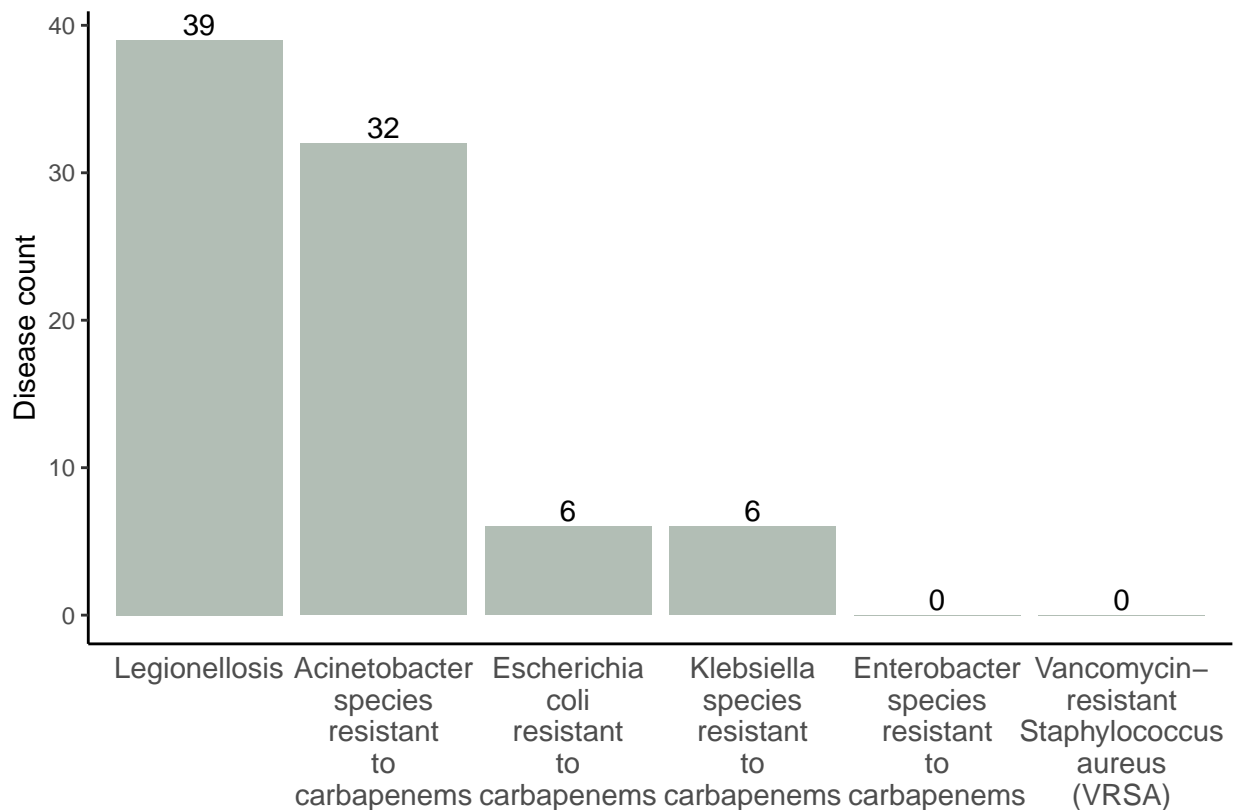


5.5 Healthcare-associated infections

Healthcare-associated infections (HAIs) include illnesses such as central line-associated bloodstream infections, catheter-associated urinary tract infections, and ventilator-associated pneumonia. Infections may also occur at surgical sites. The DHHS works with healthcare facilities to monitor and prevent these infections and improve patient safety.

5.5.1 The top 5 healthcare-associated infections, 2019

Diseases highlighted in green indicate those diseases that were also in the top 5 confirmed cases across all reportable communicable diseases in Utah⁹.



⁹Includes community-acquired and healthcare-associated cases of legionellosis

5.6 Sexually transmitted diseases

Sexually transmitted diseases (STDs) are very common and are passed from 1 person to another through sexual activity including vaginal, oral, and anal sex.

5.6.1 The top 5 sexually transmitted diseases of 2019

Diseases highlighted in green indicate those diseases that were also in the top 5 reported cases across all reportable communicable diseases in Utah.

