

UTAH DEPARTMENT OF HEALTH

**UTAH ANNUAL COMMUNICABLE
DISEASE REPORT**

2015



UTAH DEPARTMENT OF
HEALTH
Bureau of Epidemiology

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Preface

The *Communicable Disease Annual Report – Utah, 2015* contains data for Utah's reportable diseases and conditions for 2015. 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 (UDOH) 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 2015 for selected diseases and additional information to aid in the interpretation of surveillance data. Incidence data, which are new cases of reportable conditions in 2015, historical 5-year averages, and the incidence rates are presented in Table 1. In addition, a summary of cases of reportable disease by LHD is presented in Table 2, and historical case counts and rates are presented in Table 3. 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).

Background

A multidisciplinary approach to communicable disease control has been established in Utah 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 that are partners in protecting the public's health are crucial to maintaining and improving the health of Utah's citizens.¹

The important role that disease surveillance plays in protecting the public's health has been expressed by the CDC 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 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

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

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>

Reportable Communicable Diseases in Utah, 2015*

<i>Acinetobacter</i> species with resistance or intermediate resistance to carbapenems	<i>Klebsiella</i> species with resistance or intermediate resistance to carbapenems
Acquired Immunodeficiency Syndrome (AIDS)	Legionellosis
Adverse event resulting from smallpox vaccination	Listeriosis
Amebiasis	Lyme disease
Anthrax	Malaria
Arbovirus infection, including Saint Louis encephalitis and West Nile virus	Measles
Babesiosis	Meningitis (aseptic, bacterial, fungal, parasitic, protozoan, and viral)
Botulism	Meningococcal disease
Brucellosis	Mumps
Campylobacteriosis	Norovirus
Chancroid	Pertussis (“whooping cough”)
Chickenpox	Plague
<i>Chlamydia trachomatis</i> infection	Poliomyelitis, paralytic
Cholera	Poliovirus infection, nonparalytic
Coccidioidomycosis	Psittacosis
Colorado tick fever	Q Fever
Creutzfeldt-Jacob disease and other transmissible human spongiform encephalopathies	Rabies, human and animal
Cryptosporidiosis	Relapsing fever, tick-borne and louse-borne
<i>Cyclospora</i> infection	Rubella
Dengue fever	Rubella, congenital syndrome
Diphtheria	Salmonellosis
Echinococcosis	Severe acute respiratory syndrome (SARS)
Ehrlichiosis, human granulocytic, human monocytic, or unspecified	Shiga toxin-producing <i>Escherichia coli</i> (STEC) infection
Encephalitis	Shigellosis
<i>Escherichia coli</i> with resistance or intermediate resistance to carbapenems	Smallpox
Giardiasis	Spotted fever rickettsioses, including Rocky Mountain spotted fever
Gonorrhea	<i>Staphylococcus aureus</i> with resistance (VRSA) or Intermediate resistance (VISA) to vancomycin
<i>Haemophilus influenzae</i> , invasive disease	Streptococcal disease, invasive, including <i>Streptococcus pneumoniae</i> and Groups A, B, C, and G streptococci isolated from a normally sterile site
Hansen's disease (Leprosy)	Syphilis, all stages and congenital
Hantavirus pulmonary syndrome	Tetanus
Hemolytic uremic syndrome, post-diarrheal	Toxic-shock syndrome, staphylococcal or streptococcal
Hepatitis A	Trichinosis
Hepatitis B, cases and carriers	Tuberculosis
Hepatitis C, acute and chronic	Tularemia
Hepatitis, other viral	Typhoid, cases and carriers
Human Immunodeficiency Virus (HIV) infection	Vibriosis
Influenza-associated hospitalization	Viral hemorrhagic fevers
Influenza-associated pediatric death	Yellow fever

*Disease 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 2015. 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.

Highlights for 2015

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

Chlamydia

The number of chlamydia cases increased slightly in Utah in 2015, with 8,636 cases reported, compared to 8,225 in 2014. The rate increased from 279.3 cases per 100,000 person/year in 2014 to 288.3 cases per 100,000 person/year in 2015.

¿Podría infectarme de clamidia al compartir un helado?

This sexually transmitted infection continues to be the most frequently reported communicable disease both nationally and in Utah. Chlamydia primarily affects younger populations, and the majority of infected individuals experience no signs or symptoms. Testing is the only way to know for sure if a person is infected. Untreated chlamydia can lead to infertility.

Hepatitis C

In Utah, the 2015 incidence rate for hepatitis C increased by 20.5% from 2014, making it the second most frequently reported



communicable disease in 2015. There is currently no vaccine to protect against hepatitis C, although curative treatments have become available. These treatments have proven to be very effective, prompting more people to get tested and seek treatment. The CDC recommends that persons born between 1945

and 1965, and those at an increased risk of coming in contact with blood get tested for hepatitis C at least once.

Campylobacter

Campylobacteriosis is the most common cause of bacterial food-borne illness in the United



States. In 2015, there were 432 reported cases in Utah, which is a sharp decrease from 2014. The decrease was due to fewer and smaller outbreaks occurring in 2015. Children age 4 years and younger

have the highest rates of disease. One severe consequence of *Campylobacter* infection may include Guillain-Barré syndrome (GBS). Common sources of exposure include unpasteurized (raw) milk, improperly cooked poultry, and untreated water.

Acinetobacter

Acinetobacter species are a group of bacteria commonly found in soil and water. These organisms can also be found on the skin of healthy people, especially healthcare personnel. While there are many species of *Acinetobacter* that can cause human disease, *Acinetobacter baumannii* accounts for about 80% of reported infections. Hospitalized patients (especially very ill patients on a ventilator, those with a prolonged hospital stay, or those who have open wounds) are at greater risk for *Acinetobacter* infections. *Acinetobacter* can be spread to susceptible persons by person-to-person contact, contact with contaminated surfaces, or exposure in the environment. Data from January through December 2015 indicate

that *Acinetobacter* infections were the most common carbapenem nonsusceptible organisms reported in Utah (66%). Fortunately, the reported number of cases is still minimal in Utah, as there were just 59 reported cases in total statewide in 2015. Healthcare facilities in Utah have implemented practices to reduce the spread of *Acinetobacter* within their facilities and to other facilities when a patient is transferred. These practices and other preventive strategies are helping to reduce *Acinetobacter* infections in Utah healthcare facilities.

Gonorrhea

Gonorrhea is a sexually transmitted disease that has increased every year in Utah since 2011. The 2015 rate of gonorrhea increased 6.7% from 2014, resulting in a rate of 52.1 per 100,000 person/year. The largest increase has been among females. From 2011 to 2015, infections among males increased 369%, while infections among females increased 623%. Analysis of reported case data suggests a shift in the affected populations, from primarily men who have sex with men (MSM), to the heterosexual population. Gonorrhea is a difficult disease to manage, as infections are commonly asymptomatic and re-infection after treatment is possible. UDOH and Utah's LHDs are closely monitoring the increase.

Salmonellosis

Salmonellosis is a bacterial infection usually acquired through contaminated food or exposure to live animals (especially reptiles and poultry).



Most cases of salmonellosis present as self-limited gastrointestinal illness, however, in some cases the bacteria invade the bloodstream, resulting in sepsis or other invasive disease. In 2015, a

total of 460 cases of salmonellosis were reported in Utah, an increase of more than 22% compared to 2014. This increase was primarily due to a large, nation-wide outbreak of *Salmonella* Poona caused by contaminated cucumbers. In Utah, 76 cases of salmonellosis were linked to the outbreak -- more than 16% of the total salmonellosis cases reported during the year.

Ebola Monitoring Events

The Ebola virus is the cause of a viral hemorrhagic fever disease. Symptoms of fever, headache, joint and muscle aches, weakness, diarrhea, vomiting, stomach pain, lack of appetite, and abnormal bleeding may appear anywhere from 2-21 days after exposure to Ebola virus. Fruit bats of the *Pteropodidae* family are

thought to be the natural Ebola virus hosts. Person-to-person transmission of Ebola virus occurs through direct contact with infected blood, urine,

vomit, diarrhea, other infected secretions or organs, or semen. The Ebola outbreak that started in Africa in March of 2014 is the largest and most complex outbreak of the disease documented since Ebola virus was first discovered in 1976. During this outbreak, the CDC recommended public health monitoring for certain groups of travelers who may be exposed to Ebola virus during their work in Guinea, Liberia, or Sierra Leone through direct active monitoring, or active monitoring, for 21 days after the last potential exposure. In Utah, a total of 60 travelers were monitored by local and state public health in 2015.

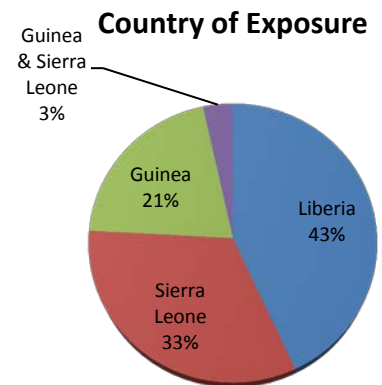


Table 1. Frequency* and incidence rate† of reportable diseases, Utah and United States, 2015

Disease/Condition	2015 Count	Previous 5-year Count Average	Utah 2015 Rate
<i>Acinetobacter</i> species with resistance or intermediate resistance to carbapenems**	59	21.2	2
Adverse event resulting from smallpox vaccination**	—	—	—
Amebiasis**	—	6.6	—
Anthrax	—	—	—
Arbovirus infection (not including West Nile, Dengue, or Yellow Fever)	1	0.6	—
Babesiosis	—	0.2	—
Botulism, total	8	6	0.3
Botulism, foodborne	2	1.6	0.1
Botulism, infant	6	4.4	11.8
Botulism, other (wound/unspecified)	—	—	—
Brucellosis	3	0.8	0.1
Campylobacteriosis	435	490.8	14.5
Chancroid	—	—	—
Chickenpox	217	297.4	7.2
Chlamydia	8636	7427.4	288.3
Cholera	—	—	—
Coccidioidomycosis	55	54.2	1.8
Colorado tick fever**	—	0.2	—
Creutzfeldt-Jakob disease and other transmissible human spongiform encephalopathies**	8	2.6	0.3
Cryptosporidiosis	175	101.2	5.8
Cyclosporiasis	8	0.2	0.3
Dengue	1	4.8	0
Diphtheria	—	—	—
Echinococcosis**	—	1	—
Ehrlichiosis/Anaplasmosis	2	0.6	0.1
Encephalitis	2	4.4	0.1
<i>Escherichia coli</i> with resistance or intermediate resistance to carbapenems**	10	1.6	0.3
Giardiasis	201	265.2	6.7
Gonorrhea	1562	692.4	52.1
HIV infection	120	107	4.0
<i>Haemophilus influenzae</i> , all ages, invasive disease	50	41.8	1.7
nonserotype B, age <5 years	4	0.2	1.6
serotype B, age <5 years	—	0.2	—
unknown serotype, age <5 years	5	—	2
Hansen's disease (Leprosy)	1	1	0
Hantavirus pulmonary syndrome	1	1.2	0
Hemolytic uremic syndrome, post-diarrheal	4	5.6	0.1
Hepatitis A	8	8.8	0.3
Hepatitis B, acute	11	9.4	0.4
Hepatitis B, chronic	306	262.6	10.2
Hepatitis C, acute	33	15.4	1.1
Hepatitis C, chronic	1855	1261	61.9
Hepatitis, other viral**	1	1	0

Table 1. (con't) Frequency* and incidence rate† of reportable diseases, Utah and United States, 2015

Disease/Condition	2015 Count	Previous 5-year Count Average	Utah 2015 Rate
Influenza-associated hospitalization**	588	756	19.6
Influenza-associated pediatric mortality	2	1.8	0.1
<i>Klebsiella</i> species with resistance or intermediate resistance to carbapenems**	19	1.4	0.6
Legionellosis	31	24.6	1
Listeriosis	—	4.4	—
Lyme disease	7	10	0.2
Malaria	6	7.4	0.2
Measles	1	3.6	0
Meningitis, aseptic**	21	44.4	0.7
Meningitis, bacterial, other**	13	14.8	0.4
Meningitis, viral**	60	33.4	2
Meningococcal disease (<i>Neisseria meningitidis</i>)	2	5.2	0.1
Mumps	—	2	—
Norovirus infection**	15	76.6	0.5
Pertussis	502	969.4	16.8
Plague	1	—	0
Poliomyelitis, paralytic and nonparalytic	—	—	—
Psittacosis	—	—	—
Q fever	—	3.4	—
Rabies, animal	21	13.2	0.7
Rabies, human	—	—	—
Relapsing fever, tick-borne and louse-borne**	—	0.8	—
Rubella	—	0.2	—
Rubella, congenital syndrome	—	—	—
Salmonellosis	460	329	15.4
Severe acute respiratory syndrome (SARS)	—	—	—
Shiga toxin-producing <i>Escherichia coli</i> (STEC) infection	97	100.2	3.2
Shigellosis	36	40.8	1.2
Smallpox	—	—	—
Spotted fever rickettsiosis (including Rocky Mountain Spotted Fever)	7	6.8	0.2
Streptococcal disease, invasive, group A**	168	107	5.6
Streptococcal disease, invasive, group B**	154	114.2	5.1
Streptococcal disease, invasive, other**	363	298.4	12.1
<i>Streptococcus pneumoniae</i> , invasive disease	190	207.6	6.3
age <5 years	14	27	5.6
Syphilis, congenital	—	—	—
Syphilis, early (infection <12 months)	96	74.8	3.2
primary & secondary	65	49.2	2.2
early latent	31	25.8	1
Syphilis, latent (infection >12 months)	78	52.8	2.6
Tetanus	—	—	—
Toxic shock syndrome (staphylococcal or streptococcal)	23	17.8	0.8

Table 1. (con't) Frequency* and incidence rate† of reportable diseases, Utah and United States, 2015

Disease/Condition	2015 Count	Previous 5-year Count Average	Utah 2015 Rate
Trichinellosis	1	0.2	0
Tuberculosis, active	37	31	1.2
Tularemia	5	1.6	0.2
Typhoid fever	1	1.8	0
Vancomycin-intermediate <i>Staphylococcus aureus</i> (VISA)	0	0.4	—
Vancomycin-resistant <i>Staphylococcus aureus</i> (VRSA)	—	—	—
Vibriosis	9	1.8	0.3
Viral hemorrhagic fevers	—	—	—
West Nile virus, total	8	3.8	0.3
neuroinvasive disease	5	2	0.2
nonneuroinvasive disease	3	1.8	0.1
Yellow fever	—	—	—

*2015 frequency counts were determined using print criteria outlined in the Centers for Disease Control and Prevention (CDC) *Nationally Notifiable Diseases and Other Conditions of Public Health Importance*, 2015, and represent totals reported to the Utah Department of Health as of October, 2016.

†Per 100,000 population. Utah population estimates obtained from Utah's Indicator-Based Information System for Public Health. Available at: lhis.health.utah.gov.

U: Unavailable.

—: No reported cases

Table 2. Frequency* and incidence rate† of reportable diseases by local health district, Utah, 2015

Disease/Condition	Bear River		Central		Davis County		Salt Lake County		San Juan		Southeastern		Southwest	
	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)
<i>Acinetobacter</i> species with resistance or intermediate resistance to carbapenems	2	1.1	1	1.3	9	2.7	33	3	-	-	-	-	1	0.4
Arbovirus infection (not including West Nile, Dengue, or Yellow Fever)	-	-	-	-	1	0.3	-	-	-	-	-	-	-	-
Botulism, total	-	-	-	-	2	0.6	4	0.4	-	-	-	-	-	-
Botulism, foodborne	-	-	-	-	-	-	2	0.2	-	-	-	-	-	-
Botulism, infant	-	-	-	-	2	34.4	2	11.2	-	-	-	-	-	-
Brucellosis	-	-	-	-	-	-	1	0.1	-	-	-	-	-	-
Campylobacteriosis	45	25.7	12	15.5	45	13.4	161	14.5	-	-	3	7.4	38	17.1
Chickenpox	11	6.3	25	32.4	15	4.5	93	8.4	-	-	-	-	9	4
Chlamydia	348	198.6	91	117.9	890	264.8	4588	414.3	56	355.1	69	170.9	419	188.3
Coccidioidomycosis	1	0.6	1	1.3	7	2.1	17	1.5	-	-	-	-	20	9
Creutzfeldt-Jakob disease and other transmissible human spongiform encephalopathies	1	0.6	1	1.3	1	0.3	1	0.1	-	-	-	-	-	-
Cryptosporidiosis	4	2.3	9	11.7	25	7.4	62	5.6	-	-	-	-	1	0.4
Cyclosporiasis	-	-	-	-	-	-	5	0.5	-	-	-	-	-	-
Dengue	-	-	-	-	-	-	1	0.1	-	-	-	-	-	-
Ehrlichiosis/Anaplasmosis	-	-	-	-	1	0.3	1	0.1	-	-	-	-	-	-
Encephalitis	-	-	-	-	1	0.3	1	0.1	-	-	-	-	-	-
<i>Escherichia coli</i> with resistance or intermediate resistance to carbapenems	-	-	-	-	-	-	5	0.5	-	-	-	-	-	-
Giardiasis	9	5.1	4	5.2	23	6.8	88	7.9	-	-	2	5	7	3.1
Gonorrhea	17	9.7	8	10.4	92	27.4	1049	94.7	4	25.4	6	14.9	55	24.7
HIV infection	2	1.1	1	1.3	11	3.3	75	6.8	-	-	3	7.4	9	4
<i>Haemophilus influenzae</i> , all ages, invasive disease	-	-	2	2.6	2	0.6	29	2.6	-	-	-	-	3	1.3
nonserotype B, age <5 years	-	-	-	-	-	-	3	3.4	-	-	-	-	-	-
unknown serotype, age <5 years	-	-	-	-	1	3.4	3	3.4	-	-	-	-	-	-
Hansen's disease (Leprosy)	-	-	-	-	-	-	1	0.1	-	-	-	-	-	-
Hantavirus pulmonary syndrome	-	-	-	-	-	-	-	-	-	-	1	2.5	-	-
Hemolytic uremic syndrome, post-diarrheal	-	-	-	-	-	-	1	0.1	-	-	-	-	-	-
Hepatitis A	-	-	-	-	-	-	4	0.4	-	-	-	-	2	0.9
Hepatitis B, acute	-	-	2	2.6	-	-	7	0.6	-	-	-	-	1	0.4
Hepatitis B, chronic	4	2.3	4	5.2	18	5.4	165	14.9	1	6.3	1	2.5	7	3.1
Hepatitis C, acute	1	0.6	-	-	-	-	18	1.6	-	-	-	-	3	1.3
Hepatitis C, chronic	22	12.6	27	35	89	26.5	1080	97.5	3	19	15	37.2	118	53
Hepatitis, other viral	-	-	-	-	1	0.3	-	-	-	-	-	-	-	-
Influenza-associated hospitalization	30	17.1	11	14.2	61	18.2	275	24.8	-	-	-	-	66	29.7
Influenza-associated pediatric mortality	-	-	-	-	-	-	2	0.2	-	-	-	-	-	-
<i>Klebsiella</i> species with resistance or intermediate resistance to carbapenems	-	-	-	-	1	0.3	7	0.6	-	-	-	-	-	-
Legionellosis	1	0.6	-	-	3	0.9	19	1.7	-	-	-	-	2	0.9
Lyme disease	-	-	-	-	-	-	3	0.3	-	-	-	-	-	-

Table 2 (cont'd). Frequency* and incidence rate† of reportable diseases by local health district, Utah, 2015

Disease/Condition	Summit County		Tooele County		TriCounty		Utah County		Wasatch County		Weber-Morgan		Unknown	Total
	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)		
<i>Acinetobacter</i> species with resistance or intermediate resistance to carbapenems	1	2.5	2	3.2	1	1.7	1	0.2	-	-	2	0.8	6	59
Arbovirus infection (not including West Nile, Dengue, or Yellow Fever)	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Botulism, total	-	-	-	-	-	-	-	-	-	-	2	0.8	-	8
Botulism, foodborne	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Botulism, infant	-	-	-	-	-	-	-	-	-	-	2	51.2	-	6
Brucellosis	-	-	-	-	-	-	-	-	-	-	2	0.8	-	3
Campylobacteriosis	11	27.8	4	6.4	11	18.4	59	10.3	3	10.3	26	10.2	17	435
Chickenpox	1	2.5	-	-	-	-	40	7	4	13.7	17	6.7	2	217
Chlamydia	89	224.6	165	262.1	119	198.7	975	169.5	30	102.9	797	312.9	-	8636
Coccidioidomycosis	-	-	2	3.2	1	1.7	1	0.2	-	-	3	1.2	2	55
Creutzfeldt-Jakob disease and other transmissible human spongiform encephalopathies	1	2.5	-	-	-	-	3	0.5	-	-	-	-	-	8
Cryptosporidiosis	1	2.5	2	3.2	13	21.7	23	4	7	24	22	8.6	6	175
Cyclosporiasis	1	2.5	-	-	-	-	-	-	2	6.9	-	-	-	8
Dengue	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Ehrlichiosis/Anaplasmosis	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Encephalitis	-	-	-	-	-	-	-	-	-	-	-	-	-	2
<i>Escherichia coli</i> with resistance or intermediate resistance to carbapenems	-	-	-	-	-	-	4	0.7	-	-	-	-	1	10
Giardiasis	5	12.6	1	1.6	3	5	31	5.4	3	10.3	18	7.1	7	201
Gonorrhea	10	25.2	29	46.1	12	20	130	22.6	3	10.3	147	57.7	-	1562
HIV infection	1	2.5	1	1.6	1	1.7	12	2.1	-	-	4	1.6	0	120
<i>Haemophilus influenzae</i>, all ages, invasive disease	-	-	-	-	-	-	6	1	-	-	5	2	3	50
nonserotype B, age <5 years	-	-	-	-	-	-	1	1.8	-	-	-	-	-	4
unknown serotype, age <5 years	-	-	-	-	-	-	-	-	-	-	1	5	-	5
Hansen's disease (Leprosy)	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Hantavirus pulmonary syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Hemolytic uremic syndrome, post-diarrheal	-	-	-	-	-	-	2	0.3	-	-	1	0.4	-	4
Hepatitis A	-	-	-	-	-	-	2	0.3	-	-	-	-	-	8
Hepatitis B, acute	-	-	-	-	-	-	1	0.2	-	-	-	-	-	11
Hepatitis B, chronic	4	10.1	3	4.8	2	3.3	32	5.6	-	-	14	5.5	51	306
Hepatitis C, acute	-	-	-	-	-	-	6	1	-	-	5	2	-	33
Hepatitis C, chronic	8	20.2	16	25.4	22	36.7	172	29.9	2	6.9	151	59.3	130	1855
Hepatitis, other viral	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Influenza-associated hospitalization	16	40.4	4	6.4	9	15	54	9.4	4	13.7	52	20.4	6	588
Influenza-associated pediatric mortality	-	-	-	-	-	-	-	-	-	-	-	-	-	2
<i>Klebsiella</i> species with resistance or intermediate resistance to carbapenems	-	-	-	-	-	-	3	0.5	-	-	-	-	8	19
Legionellosis	1	2.5	-	-	-	-	2	0.3	-	-	3	1.2	-	31
Lyme disease	1	2.5	-	-	-	-	2	0.3	-	-	-	-	1	7

Table 2 (cont'd). Frequency* and incidence rate† of reportable diseases by local health district, Utah, 2015

Disease/Condition	Bear River		Central		Davis County		Salt Lake County		San Juan	Cases	Southeastern		Southwest	
	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	Cases	(Rate)		(Rate)	Cases	(Rate)	Cases
Malaria	-	-	-	-	2	0.6	2	0.2	-	-	-	-	-	-
Measles	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meningitis, aseptic	1	0.6	-	-	5	1.5	8	0.7	-	-	-	-	-	-
Meningitis, bacterial, other	-	-	-	-	2	0.6	7	0.6	-	-	-	-	-	-
Meningitis, viral	4	2.3	-	-	6	1.8	32	2.9	-	-	-	-	3	1.3
Meningococcal disease (<i>Neisseria meningitidis</i>)	-	-	-	-	-	-	1	0.1	-	-	-	-	1	0.4
Norovirus infection	-	-	-	-	4	1.2	11	1	-	-	-	-	-	-
Pertussis	4	2.3	12	15.5	66	19.6	189	17.1	-	-	-	-	11	4.9
Plague	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rabies, animal	2	1.1	-	-	5	1.5	3	0.3	-	-	-	-	1	0.4
Salmonellosis	41	23.4	12	15.5	58	17.3	149	13.5	2	5	2	5	29	13
Shiga toxin-producing <i>Escherichia coli</i> (STEC) infection	9	5.1	3	3.9	15	4.5	26	2.3	2	5	2	5	6	2.7
Shigellosis	1	0.6	1	1.3	15	4.5	12	1.1	-	-	-	-	1	0.4
Spotted fever rickettsiosis (including Rocky Mountain Spotted Fever)	-	-	1	1.3	1	0.3	2	0.2	-	-	-	-	-	-
Streptococcal disease, invasive, group A	4	2.3	3	3.9	12	3.6	96	8.7	-	-	-	-	5	2.2
Streptococcal disease, invasive, group B	6	3.4	2	2.6	12	3.6	71	6.4	-	-	-	-	14	6.3
Streptococcal disease, invasive, other	9	5.1	17	22	37	11	167	15.1	-	-	-	-	9	4
<i>Streptococcus pneumoniae</i> , invasive disease	10	5.7	4	5.2	19	5.7	82	7.4	-	-	-	-	7	3.1
age <5 years	1	6.5	-	-	1	3.4	5	5.7	-	-	-	-	-	-
Syphilis, early (infection <12 months)	2	1.1	-	-	7	2.1	72	6.5	1	2.5	-	-	1	0.4
primary & secondary	1	0.6	-	-	5	1.5	49	4.4	-	-	-	-	1	0.4
early latent	1	0.6	-	-	2	0.6	23	2.1	1	2.5	-	-	-	-
Syphilis, latent (infection >12 months)	4	2.3	-	-	8	2.4	53	4.8	-	-	1	2.5	2	0.9
Toxic shock syndrome (staphylococcal or streptococcal)	-	-	-	-	2	0.6	14	1.3	-	-	-	-	-	-
Trichinellosis	-	-	-	-	-	-	1	0.1	-	-	-	-	-	-
Tuberculosis, active	1	0.6	-	-	-	-	29	2.6	-	-	-	-	1	0.4
Tularemia	-	-	1	1.3	-	-	2	0.2	-	-	-	-	-	-
Typhoid fever	-	-	-	-	-	-	1	0.1	-	-	-	-	-	-
Vibriosis	1	0.6	1	1.3	1	0.3	4	0.4	-	-	-	-	-	-
West Nile virus, total	-	-	-	-	-	-	5	0.5	1	2.5	1	2.5	-	-
neuroinvasive disease	-	-	-	-	-	-	4	0.4	1	2.5	1	2.5	-	-
nonneuroinvasive disease	-	-	-	-	-	-	1	0.1	-	-	-	-	-	-

Table 2 (cont'd). Frequency* and incidence rate† of reportable diseases by local health district, Utah, 2015

Disease/Condition	Summit County		Tooele County		TriCounty		Utah County		Wasatch County		Weber-Morgan		Unknown	Total
	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)		
Malaria	-	-	-	-	-	-	1	0.2	-	-	-	-	1	6
Measles	-	-	-	-	-	-	1	0.2	-	-	-	-	-	1
Meningitis, aseptic	1	2.5	-	-	-	-	-	-	-	-	6	2.4	-	21
Meningitis, bacterial, other	-	-	-	-	-	-	2	0.3	-	-	1	0.4	1	13
Meningitis, viral	-	-	1	1.6	2	3.3	2	0.3	-	-	9	3.5	1	60
Meningococcal disease (<i>Neisseria meningitidis</i>)	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Norovirus infection	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Pertussis	42	106	4	6.4	2	3.3	86	15	6	20.6	60	23.6	10	502
Plague	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Rabies, animal	2	5	-	-	-	-	3	0.5	-	-	3	1.2	2	21
Salmonellosis	6	15.1	9	14.3	3	5	98	17	5	17.1	42	16.5	2	460
Shiga toxin-producing <i>Escherichia coli</i> (STEC) infection	1	2.5	2	3.2	7	11.7	16	2.8	1	3.4	7	2.7	2	97
Shigellosis	-	-	-	-	-	-	4	0.7	-	-	2	0.8	-	36
Spotted fever rickettsiosis (including Rocky Mountain Spotted Fever)	-	-	-	-	1	1.7	1	0.2	-	-	-	-	1	7
Streptococcal disease, invasive, group A	2	5	-	-	-	-	25	4.3	-	-	16	6.3	5	168
Streptococcal disease, invasive, group B	2	5	2	3.2	-	-	24	4.2	1	3.4	17	6.7	3	154
Streptococcal disease, invasive, other	2	5	2	3.2	2	3.3	77	13.4	2	6.9	25	9.8	14	363
<i>Streptococcus pneumoniae</i> , invasive disease	2	5	4	6.4	-	-	33	5.7	3	10.3	20	7.9	6	190
age <5 years	-	-	-	-	-	-	6	10.5	-	-	1	5	-	14
Syphilis, early (infection <12 months)	1	2.5	-	-	-	-	8	1.4	-	-	3	1.2	1	96
primary & secondary	-	-	-	-	-	-	6	1	-	-	3	1.2	-	65
early latent	1	2.5	-	-	-	-	2	0.3	-	-	-	-	1	31
Syphilis, latent (infection >12 months)	-	-	-	-	-	-	5	0.9	2	6.9	2	0.8	1	78
Toxic shock syndrome (staphylococcal or streptococcal)	-	-	-	-	-	-	5	0.9	-	-	2	0.8	-	23
Trichinellosis	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tuberculosis, active	-	-	-	-	-	-	3	0.5	2	6.9	1	0.4	-	37
Tularemia	-	-	-	-	-	-	1	0.2	-	-	-	-	-	5
Typhoid fever	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Vibriosis	-	-	-	-	-	-	2	0.3	-	-	-	-	-	9
West Nile virus, total	-	-	-	-	1	1.7	-	-	-	-	-	-	1	8
neuroinvasive disease	-	-	-	-	-	-	-	-	-	-	-	-	-	5
nonneuroinvasive disease	-	-	-	-	1	1.7	-	-	-	-	-	-	1	3

*2015 frequency counts were determined using print criteria outlined in the Centers for Disease Control and Prevention Nationally Notifiable Diseases and Other Conditions of Public Health Importance 2015, and represent totals reported to the Utah Department of Health as of October, 2016.

†Per 100,000 population. Utah population estimates obtained from Utah's Indicator-Based Information System for Public Health. Available at: ibis.health.utah.gov.

—: No reported cases

Table 3. Historical communicable disease counts and rates, Utah, 2011 – 2015

Disease/Condition	2011		2012		2013		2014		2015	
	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates
<i>Acinetobacter</i> species with resistance or intermediate resistance to carbapenems	U	U	U	U	42	1.4	37	1.3	59	2
Amebiasis	12	0.4	8	0.3	2	0.1	-	-	-	-
Arbovirus infection (not including West Nile, Dengue, or Yellow Fever)	-	-	-	-	-	-	3	0.1	1	0
Babesiosis	1	0	-	-	-	-	-	-	-	-
Botulism, total	12	0.4	9	0.3	2	0.1	6	0.2	8	0.3
Botulism, foodborne	8	0.3	-	-	-	-	-	-	2	0.1
Botulism, infant	4	0.1	9	0.3	2	0.1	6	0.2	6	0.2
Brucellosis	3	0.1	1	0	-	-	-	-	3	0.1
Campylobacteriosis	457	16.2	523	18.3	506	17.4	559	19	435	14.5
Chickenpox	399	14.2	312	10.9	227	7.8	216	7.3	217	7.2
Chlamydia	7078	251.3	7616	266.6	7535	259.5	8225	279.3	8636	288.3
Coccidioidomycosis	67	2.4	59	2.1	44	1.5	54	1.8	55	1.8
Colorado tick fever	-	-	1	0	-	-	-	-	-	-
Creutzfeldt-Jakob disease and other transmissible human spongiform encephalopathies	3	0.1	4	0.1	-	-	3	0.1	8	0.3
Cryptosporidiosis	67	2.4	204	7.1	90	3.1	72	2.4	175	5.8
Cyclosporiasis	-	-	-	-	-	-	1	0	8	0.3
Dengue	3	0.1	5	0.2	8	0.3	3	0.1	1	0
Echinococcosis	1	0	1	0	1	0	2	0.1	-	-
Ehrlichiosis/Anaplasmosis	1	0	1	0	1	0	-	-	2	0.1
Encephalitis	2	0.1	6	0.2	2	0.1	4	0.1	2	0.1
<i>Escherichia coli</i> with resistance or intermediate resistance to carbapenems	U	U	U	U	3	0.1	5	0.2	10	0.3
Giardiasis	263	9.3	289	10.1	231	8	227	7.7	201	6.7
Gonorrhea	277	9.8	483	16.9	953	32.8	1439	48.9	1562	52.1
HIV infection	106	3.8	118	4.1	105	3.6	118	4	120	4
<i>Haemophilus influenzae</i> , all ages, invasive disease	42	1.5	33	1.2	42	1.4	59	2	50	1.7
nonserotype B, age <5 years	6	1.9	6	1.9	12	3.9	3	1	4	1.3
serotype B, age <5 years	2	0.6	3	1	4	1.3	4	1.3	-	-
unknown serotype, age <5 years	3	1	4	1.3	2	0.6	9	3	5	1.7
Hansen's disease (Leprosy)	1	0	1	0	-	-	2	0.1	1	0
Hantavirus pulmonary syndrome	-	-	2	0.1	-	-	3	0.1	1	0
Hemolytic uremic syndrome, post-diarrheal	5	0.2	5	0.2	3	0.1	8	0.3	4	0.1
Hepatitis A	8	0.3	4	0.1	12	0.4	8	0.3	8	0.3
Hepatitis B, acute	10	0.4	13	0.5	5	0.2	11	0.4	11	0.4
Hepatitis B, chronic	236	8.4	254	8.9	259	8.9	301	10.2	306	10.2
Hepatitis C, acute	7	0.2	15	0.5	11	0.4	33	1.1	33	1.1
Hepatitis C, chronic	1326	47.1	1224	42.9	1078	37.1	1511	51.3	1855	61.9
Hepatitis, other viral	-	-	2	0.1	1	0	1	0	1	0
Influenza-associated hospitalization	497	17.6	622	21.8	1036	35.7	1414	48	588	19.6
Influenza-associated pediatric mortality	-	-	1	0	5	0.2	2	0.1	2	0.1
<i>Klebsiella</i> species with resistance or intermediate resistance to carbapenems	U	U	U	U	2	0.1	3	0.1	19	0.6
Legionellosis	18	0.6	28	1	22	0.8	28	1	31	1
Listeriosis	5	0.2	2	0.1	3	0.1	9	0.3	-	-
Lyme disease	10	0.4	5	0.2	17	0.6	13	0.4	7	0.2
Malaria	6	0.2	14	0.5	7	0.2	5	0.2	6	0.2
Measles	14	0.5	1	0	-	-	3	0.1	1	0
Meningitis, aseptic	45	1.6	52	1.8	38	1.3	40	1.4	21	0.7
Meningitis, bacterial, other	12	0.4	8	0.3	25	0.9	16	0.5	13	0.4
Meningitis, viral	35	1.2	22	0.8	25	0.9	34	1.2	60	2
Meningococcal Disease (<i>Neisseria meningitidis</i>)	11	0.4	4	0.1	9	0.3	1	0	2	0.1
Mumps	-	-	3	0.1	2	0.1	2	0.1	-	-

Table 3. (con't) Historical communicable disease counts and rates, Utah, 2011 – 2015

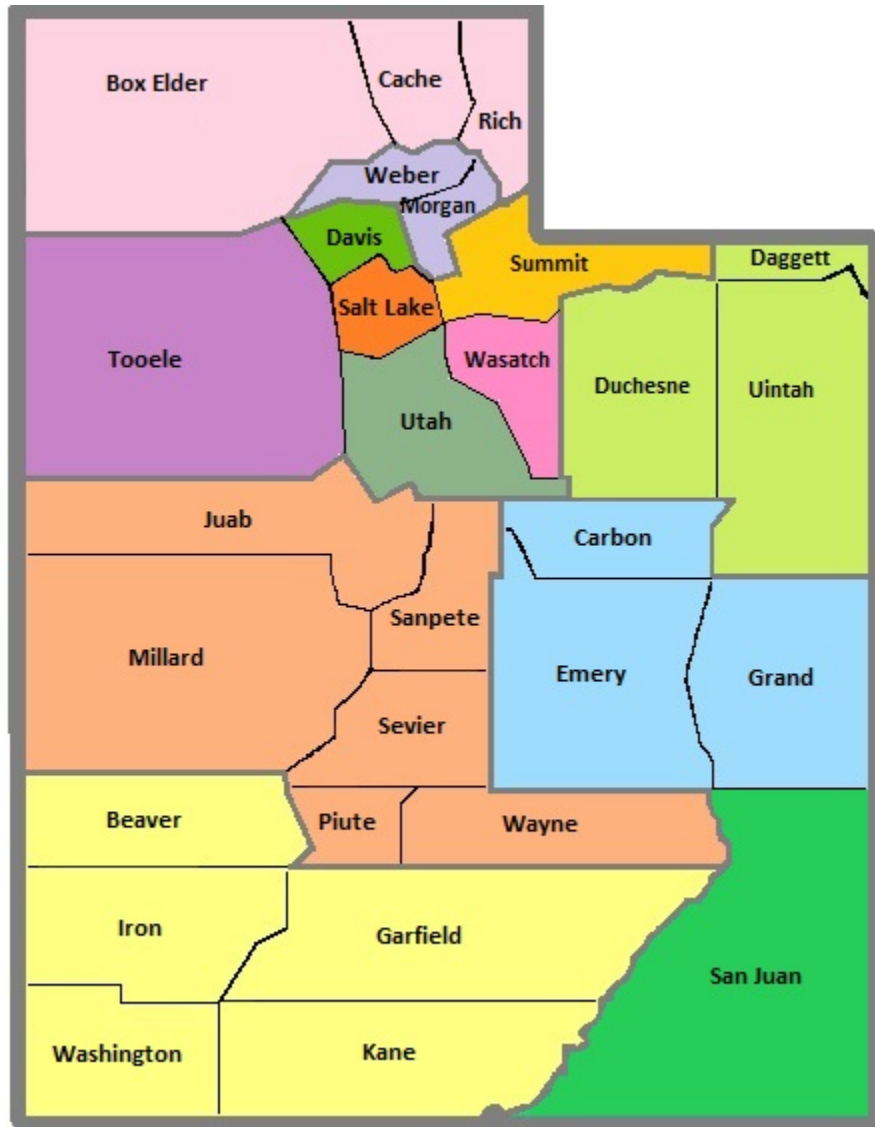
Disease/Condition	2011		2012		2013		2014		2015	
	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates
Pertussis	649	23	1592	55.7	1307	45	944	32.1	502	16.8
Plague	-	-	-	-	-	-	-	-	1	0
Q fever	-	-	5	0.2	3	0.1	9	0.3	-	-
Rabies, animal	7	0.2	15	0.5	12	0.4	22	0.7	21	0.7
Relapsing fever, tick-borne and louse-borne	1	0	1	0	-	-	1	0	-	-
Rubella	-	-	-	-	-	-	1	0	-	-
Salmonellosis	339	12	261	9.1	324	11.2	372	12.6	460	15.4
Shiga toxin-producing <i>Escherichia coli</i> (STEC) infection	146	5.2	106	3.7	83	2.9	91	3.1	97	3.2
Shigellosis	55	2	34	1.2	25	0.9	40	1.4	36	1.2
Spotted fever rickettsiosis (including Rocky Mountain Spotted Fever)	9	0.3	7	0.2	5	0.2	8	0.3	7	0.2
Streptococcal disease, invasive, group A	82	2.9	94	3.3	120	4.1	115	3.9	168	5.6
Streptococcal disease, invasive, group B	91	3.2	130	4.6	129	4.4	132	4.5	154	5.1
Streptococcal disease, invasive, other	334	11.9	309	10.8	295	10.2	287	9.7	363	12.1
<i>Streptococcus pneumoniae</i> , invasive disease	209	7.4	183	6.4	205	7.1	205	7	190	6.3
age <5 years	28	1	23	0.8	25	0.9	25	0.8	14	0.5
Syphilis, early (infection <12 months)	24	0.9	51	1.8	125	4.3	88	3	96	3.2
primary & secondary	14	0.5	42	1.5	76	2.6	48	1.6	65	2.2
early latent	10	0.4	9	0.3	49	1.7	40	1.4	31	1
Syphilis, latent (infection >12 months)	21	0.7	48	0.3	17	0.6	64	2.2	73	2.4
Toxic shock syndrome (staphylococcal or streptococcal)	17	0.6	20	0.3	12	0.4	14	0.5	23	0.8
Trichinellosis	-	-	-	0.3	-	-	1	0	1	0
Tuberculosis, active	34	1.2	37	0.3	33	1.1	31	1.1	37	1.2
Tularemia	1	0	2	0.3	2	0.1	1	0	5	0.2
Typhoid fever	-	-	2	0.3	1	0	3	0.1	1	0
Vancomycin-intermediate <i>Staphylococcus aureus</i> (VISA)	1	0	-	0.3	-	-	1	0	-	-
Vibriosis	1	0	1	0.3	2	0.1	3	0.1	9	0.3
West Nile virus, total	3	0.1	5	0.3	7	0.2	2	0.1	8	0.3
neuroinvasive disease	1	0	3	0.3	4	0.1	1	0	5	0.2
nonneuroinvasive disease	2	0.1	2	0.3	3	0.1	1	0	3	0.1

*Influenza surveillance in Utah involves multiple components, and activity is best summarized on a season-wide, not annual, basis. Detailed information on these seasons can be found at <http://health.utah.gov/epi/diseases/influenza/>.

U: Unavailable

—: No reported cases

Appendix A - Map of local health districts and counties, Utah, 2015



Local Health District	Counties in Service Area
Bear River Health Department	Box Elder, Cache, Rich
Central Utah Public Health Department	Juab, Millard, Piute, Sanpete, Sevier, Wayne
Davis County Health Department	Davis
Salt Lake County Health Department	Salt Lake
San Juan Public Health Department	San Juan
Southeastern Utah District Health Department	Carbon, Emery, Grand
Southwest Utah Public Health Department	Beaver, Garfield, Iron, Kane, Washington
Summit County Health Department	Summit
Tooele County Health Department	Tooele
TriCounty Health Department	Daggett, Duchesne, Uintah
Utah County Health Department	Utah
Wasatch County Health Department	Wasatch
Weber-Morgan Health Department	Morgan, Weber