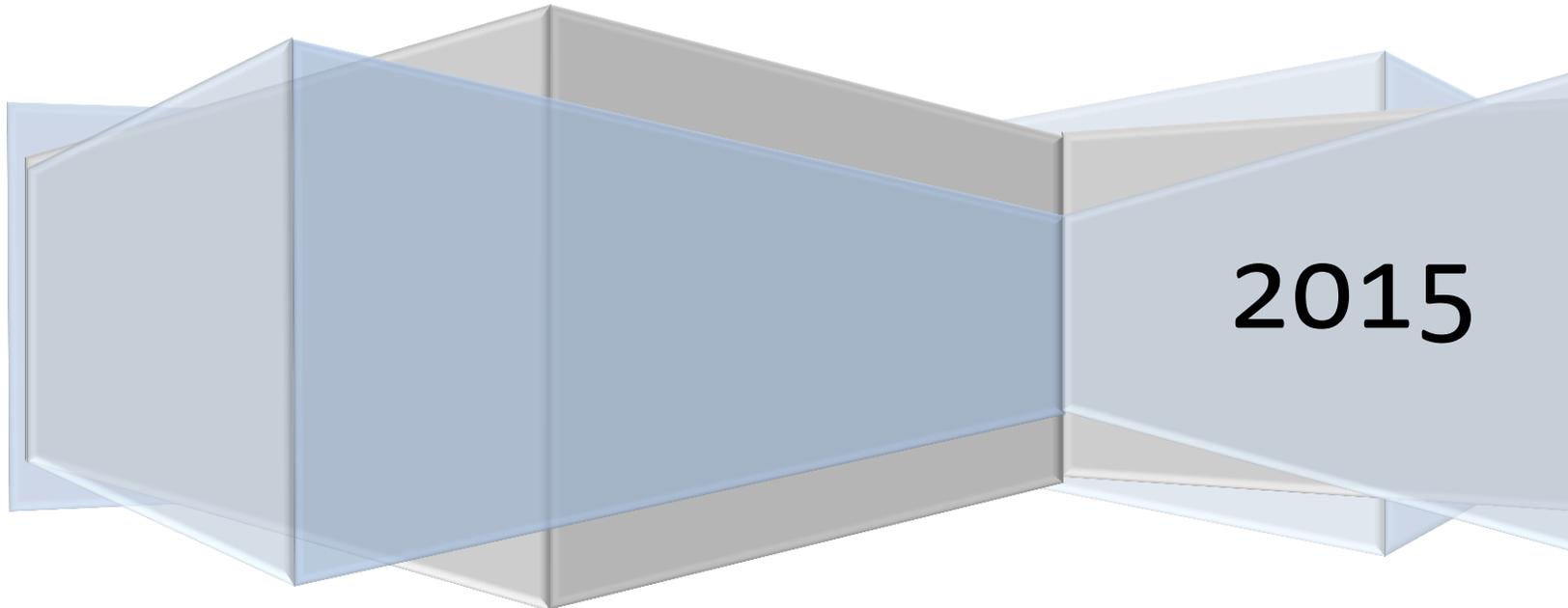


**Utah Department of Health**

**UTAH COMMUNICABLE  
DISEASE ANNUAL REPORT**



**2015**

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Reportable communicable disease data for Utah are published by the Utah Department of Health, Bureau of Epidemiology.

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## Preface

The *Communicable Disease Annual Report – Utah, 2014* contains data for Utah's reportable diseases and conditions for 2014. 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 these diseases is investigated in collaboration with the LHDs.

The "Highlights" section presents noteworthy epidemiologic information from 2014 for selected diseases and additional information to aid in the interpretation of surveillance data. Incidence data for reportable conditions occurring during 2014 are presented in Table 1. The number of cases reported, incidence rates, comparisons to national data, and historical 5-year averages in Utah are also provided. In addition, a summary of cases of reportable disease by LHD is presented in Table 2, and historical data 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).<sup>1</sup>

## 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.<sup>2</sup>

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 has occurred. 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."<sup>3</sup>

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<sup>1</sup>Centers for Disease Control and Prevention (2014). MMWR Weeks. Available at: [http://wwwn.cdc.gov/nndss/document/MMWR\\_week\\_overview.pdf](http://wwwn.cdc.gov/nndss/document/MMWR_week_overview.pdf).

<sup>2</sup>Utah Division of Administrative Rules (2014). Utah Administrative Code Rule R386-702, Communicable Disease Rule. Available at: <http://www.rules.utah.gov/publicat/code/r386/r386-702.htm>.

<sup>3</sup>Centers 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, 2014\*

*Acinetobacter* species with resistance or intermediate resistance to carbapenems  
Acquired Immunodeficiency Syndrome (AIDS)  
Adverse event resulting from smallpox vaccination  
Amebiasis  
Anthrax  
Arbovirus infection, including Saint Louis encephalitis and West Nile virus  
Babesiosis  
Botulism  
Brucellosis  
Campylobacteriosis  
Chancroid  
Chickenpox  
*Chlamydia trachomatis* infection  
Cholera  
Coccidioidomycosis  
Colorado tick fever  
Creutzfeldt-Jacob disease and other transmissible human spongiform encephalopathies  
Cryptosporidiosis  
*Cyclospora* infection  
Dengue fever  
Diphtheria  
Echinococcosis  
Ehrlichiosis, human granulocytic, human monocytic, or unspecified  
Encephalitis  
*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  
Norovirus  
Pertussis (Whooping Cough)  
Plague  
Poliomyelitis, paralytic  
Poliovirus infection, nonparalytic  
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) or Intermediate resistance (VISA) to vancomycin  
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  
Trichinosis  
Tuberculosis  
Tularemia  
Typhoid, cases and carriers  
Vibriosis  
Viral hemorrhagic fevers  
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 2014. 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 2014

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

### Chlamydia

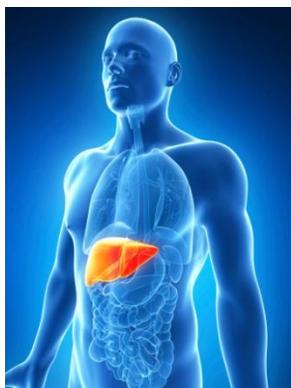
The number of chlamydia cases increased slightly in Utah in 2014, with 8,223 cases reported, compared to 7,535 in 2013. The rate increased from 259.7 cases per 100,000 persons in 2013 to 279.4 cases per 100,000 in 2014.

**¿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

Hepatitis C rates increased from 37.7 cases per 100,000 population in 2013 to 51.1 cases per 100,000 in 2014, making it the second most frequently reported communicable disease in 2014. 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.

### Gonorrhea

Rates of gonorrhea increased nearly 50% from 32.8 cases per 100,000 persons in 2013 to 48.9 cases per 100,000 persons in 2014. Reported rates of gonorrhea have increased every year in Utah since 2011. Analysis of this increase suggests a shift in affected populations. Historically, gonorrhea was associated more closely with men who have sex with men (MSM), but an extended gonorrhea questionnaire conducted in 2014 revealed that the heterosexual population is largely affected now as well. From 2011 to 2014, the number of gonorrhea infections among males increased 296%, while infections among females increased 714%; the largest increase has been among females who identify as heterosexual. UDOH and Utah's LHDs continue to closely monitor the increase.

### Campylobacter

Campylobacteriosis is the most common cause of bacterial food-borne illness in the United States. In 2014, there were 559 cases reported in Utah, which exceeded the previous 5-year average of 441. This increase was due to an outbreak associated with raw milk consumption that sickened over 100 people. Both nationally and in Utah, the highest rates of disease are seen in those 4 years of age and younger. The disease can be severe in immunocompromised individuals, occasionally spreading to the bloodstream and causing a life-threatening infection. Common sources of exposure include unpasteurized (raw) milk, improperly cooked poultry, and untreated water.



## HIV

In 2014, there were 118 cases of newly-diagnosed HIV reported. This is a slight increase from 2013, which saw 105 cases reported. In 2014, 90% of newly-diagnosed HIV cases were reported along the Wasatch



Front and 75% of newly-diagnosed HIV cases were reported in Salt Lake County alone. New diagnoses of HIV disproportionately affect males in Utah. From 2005-2014, cumulatively, males accounted for 85% of newly diagnosed cases. The majority of cases were reported in those 15-44 years old. Due to how HIV is acquired, the transmission category varies significantly by sex. In 2014, 57% of males reported MSM status. For females, 65% reported no identified risk. Fifty-five percent (65 cases) of new HIV diagnoses reported in Utah were among white non-Hispanic individuals.

## 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 May 2013 through December 2014,

indicate that *Acinetobacter* infections are the most common carbapenem nonsusceptible organisms reported in Utah. Fortunately, the reported number of cases is still very small. In 2013, 42 cases were reported statewide; in 2014, the number of reported cases decreased to 35. 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.

## Rabies in Animals

In 2014, Utah saw its first non-bat mammal rabies case since 2007, which occurred in a skunk in Davis County. The number of reported rabid animals nearly doubled from 2013 to 2014, from 12 bats to 21 bats and 1 skunk, respectively. In 2014, most of the positive rabies cases in animals came from the Wasatch Front, with only 2 rabid bats originating from very rural areas. In 2014, there were 73 bats submitted to the Utah Public Health Laboratory (UPHL); of these, 21



(29%) were identified as rabies-positive. Approximately one-third of the positive animals were identified as having had contact with humans or animals, who then subsequently received post-exposure prophylaxis. Overall, UPHL tested 286 animals for rabies, the majority of them being unvaccinated dogs and cats. It is important to keep companion animals (dogs, cats, ferrets, etc.) up-to-date on rabies vaccine to avoid quarantine or euthanasia.

**Table 1. Frequency\* and incidence rate† of reportable diseases, Utah and United States, 2014**

Disease/Condition	2014 Count	Previous 5-year Average	Utah - 2014 Incidence	U.S. - 2014 Incidence <sup>§</sup>
<i>Acinetobacter</i> species with resistance or intermediate resistance to carbapenems**	35	U	1.2	**
Adverse event resulting from smallpox vaccination**	—	—	—	**
Amebiasis**	—	8.0	—	**
Anthrax	—	—	—	—
Arbovirus infection (not including West Nile, Dengue, or Yellow Fever)	3	—	0.1	0.04
Babesiosis	—	0.2	—	0.6
Botulism, total	6	5.0	0.2	0.1
foodborne	—	1.6	—	—
infant	6	3.4	0.2	0.04
other (wound/unspecified)	—	—	—	0.01
Brucellosis	—	0.8	—	0.03
Campylobacteriosis**	559	441.4	19.0	**
Chancroid	—	—	—	0.00
Chickenpox	216	362.6	7.3	3.2
Chlamydia	8,223	7,011.8	278.8	452.2
Cholera	—	—	—	—
Coccidioidomycosis	48	51.4	1.6	2.6
Colorado tick fever**	—	0.4	—	**
Creutzfeldt-Jakob disease and other transmissible human spongiform encephalopathies**	3	2.4	0.1	**
Cryptosporidiosis	70	94.2	2.4	2.7
Cyclosporiasis	1	—	0.03	0.1
Dengue	3	4.6	0.1	0.2
Diphtheria	—	—	—	—
Echinococcosis**	2	0.6	0.1	**
Ehrlichiosis/Anaplasmosis	—	0.6	—	1.4
Encephalitis**	4	5.4	0.1	**
<i>Escherichia coli</i> species with resistance or intermediate resistance to carbapenems**	5	U	0.2	**
Giardiasis	226	283.6	7.7	4.6
Gonorrhea	1,441	472.0	48.9	109.8
HIV infection	118	106.8	4.0	11.2
<i>Haemophilus influenzae</i> , all ages, invasive disease	59	37.4	2.0	1.1
non-serotype b, age <5 years	3	U	1.2	0.03
serotype b, age <5 years	3	U	1.2	0.01
unknown serotype, age <5 years	6	U	2.3	0.1
Hansen's disease (Leprosy)	2	0.8	0.1	0.03
Hantavirus pulmonary syndrome	3	0.8	0.1	0.01
Hemolytic uremic syndrome, post-diarrheal	8	5.2	0.3	0.1
Hepatitis A	8	8.6	0.3	0.4
Hepatitis B, acute	11	8.2	0.4	0.9
Hepatitis B, chronic	299	U	10.1	3.9
Hepatitis C, acute	35	11.0	1.2	0.7

See footnotes on page 8.

**Table 1 (cont'd). Frequency\* and incidence rate† of reportable diseases, Utah and United States, 2014**

Disease/Condition	2014 Count	Previous 5-year Average	Utah - 2014 Incidence	U.S. - 2014 Incidence <sup>§</sup>
Hepatitis C, past or present	1,507	U	51.1	51.1
Hepatitis, other viral**	1	0.8	0.03	**
Influenza-associated hospitalization**	1,414	670.2	47.9	**
Influenza-associated pediatric mortality	2	2.4	0.1	0.04
<i>Klebsiella</i> species with resistance or intermediate resistance to carbapenems**	3	U	0.1	**
Legionellosis	28	24.6	0.9	1.6
Listeriosis	9	3.0	0.3	0.2
Lyme disease	13	9.4	0.4	10.5
Malaria	5	7.2	0.2	0.5
Measles	3	3.0	0.1	0.2
Meningitis, aseptic**	40	55.6	1.4	**
Meningitis, bacterial, other**	16	13.0	0.5	**
Meningitis, viral**	34	38.8	1.2	**
Meningococcal disease ( <i>Neisseria meningitidis</i> )	1	5.6	0.03	0.1
Mumps	2	2.4	0.1	0.4
Norovirus infection**	99	59.4	3.4	**
Pertussis	943	825.4	32.0	10.3
Plague	—	0.2	—	—
Poliomyelitis, paralytic and non-paralytic	—	—	—	—
Psittacosis	—	—	—	0.00
Q fever	9	1.6	0.3	0.1
Rabies, animal	22	11.4	U	U
Rabies, human	—	—	—	—
Relapsing fever, tick-borne and louse-borne**	1	1.0	0.03	**
Rubella	1	—	0.03	—
Rubella, congenital syndrome	—	—	—	—
Salmonellosis	370	319.0	12.5	16.1
Severe Acute Respiratory Syndrome (SARS)	—	—	—	—
Shiga toxin-producing <i>Escherichia coli</i> (STEC) infection	91	103.8	3.1	1.9
Shigellosis	41	37.8	1.4	6.5
Smallpox	—	—	—	—
Spotted fever rickettsiosis (including Rocky Mountain Spotted Fever)	6	5.2	0.2	1.1
Streptococcal disease, invasive, group A**	115	101.0	3.9	**
Streptococcal disease, invasive, group B**	132	107.4	4.5	**
Streptococcal disease, invasive, other**	287	290.0	9.7	**
<i>Streptococcus pneumoniae</i> , invasive disease	204	178.8	6.9	4.8
age <5 years	25	U	9.7	0.3
Syphilis, congenital	—	—	—	0.1
Syphilis, early (infection <12 months)	88	64.8	3.0	††
primary & secondary	47	45.8	1.6	6.3
early latent	41	19.0	1.4	††
Syphilis, latent (infection >12 months)	61	20.6	2.1	††
Tetanus	—	0.2	—	0.01

See footnotes on page 8.

**Table 1 (cont'd). Frequency\* and incidence rate† of reportable diseases, Utah and United States, 2014**

Disease/Condition	2014 Count	Previous 5-year Average	Utah - 2014 Incidence	U.S. - 2014 Incidence <sup>§</sup>
Toxic-shock syndrome (staphylococcal or streptococcal)	14	17.4	0.5	0.02
Trichinellosis	1	—	0.03	0.00
Tuberculosis, active	31	32.2	1.1	3.0
Tularemia	1	1.4	0.03	0.6
Typhoid fever	4	1.6	0.1	0.1
Vancomycin-intermediate <i>Staphylococcus aureus</i> (VISA)	1	0.2	0.03	0.7
Vancomycin-resistant <i>Staphylococcus aureus</i> (VRSA)	—	—	—	—
Vibriosis	3	1.4	0.1	0.4
Viral hemorrhagic fevers	—	—	—	0.00
West Nile virus, total	2	3.8	0.1	0.7
neuroinvasive disease	1	2.0	0.03	0.4
non-neuroinvasive disease	1	1.8	0.03	0.3
Yellow fever	—	—	—	—

\* 2014 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, 2014*, and represent totals reported to the Utah Department of Health as of August 13, 2015.

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

§ U.S. incidence based on case counts and population estimates found in the CDC *Final 2014 Reports of Nationally Notifiable Infectious Diseases*. MMWR Weekly, 64(36); 1019-1033. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6436a8.htm>.

\*\* Not a nationally notifiable disease/condition.

†† National incidence data for 2014 not currently available as of publication of this report.

U: Unavailable.

—: No reported cases.

**Table 2. Frequency\* and incidence rate† of reportable diseases by local health district, Utah, 2014**

Disease/Condition	Bear River		Central		Davis County		Salt Lake County		Southeastern		Southwest		Summit County	
	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	1	0.6	—	—	5	1.5	19	1.7	1	1.8	4	1.8	—	—
Arbovirus infection (not including West Nile, Dengue, or Yellow Fever)	—	—	—	—	—	—	3	0.3	—	—	—	—	—	—
Botulism, total	—	—	—	—	1	0.3	1	0.1	—	—	—	—	—	—
Infant	—	—	—	—	1	0.3	1	0.1	—	—	—	—	—	—
Campylobacteriosis	50	28.9	38	49.0	68	20.8	164	14.9	1	1.8	17	7.8	10	25.6
Chickenpox	9	5.2	3	3.9	33	10.1	78	7.1	—	—	10	4.6	5	12.8
Chlamydia	267	154.5	109	140.6	953	291.0	4,280	389.9	126	221.1	434	200.0	91	232.6
Coccidioidomycosis	—	—	—	—	3	0.9	6	0.5	—	—	30	13.8	1	2.6
Creutzfeldt-Jakob disease and other transmissible human spongiform encephalopathies	—	—	—	—	1	0.3	1	0.1	—	—	—	—	—	—
Cryptosporidiosis	2	1.2	2	2.6	13	4.0	21	1.9	—	—	2	0.9	—	—
Cyclosporiasis	—	—	—	—	—	—	1	0.1	—	—	—	—	—	—
Dengue	—	—	—	—	—	—	1	0.1	—	—	—	—	—	—
Echinococcosis	—	—	1	1.3	—	—	1	0.1	—	—	—	—	—	—
Encephalitis	—	—	—	—	—	—	2	0.2	—	—	—	—	—	—
<i>Escherichia coli</i> with resistance or intermediate resistance to carbapenems	—	—	—	—	—	—	3	0.3	—	—	—	—	1	2.6
Giardiasis	6	3.5	9	11.6	16	4.9	101	9.2	1	1.8	17	7.8	9	23.0
Gonorrhea	35	20.3	7	9.0	104	31.8	1,004	91.5	7	12.3	23	10.6	9	23.0
HIV infection	1	0.6	1	1.3	8	2.4	88	8.1	1	1.8	6	2.8	1	2.6
<i>Haemophilus influenzae</i> , all ages, invasive disease	3	1.7	3	3.9	4	1.2	28	2.6	—	—	4	1.8	—	—
non-serotype b, age<5 years	—	—	—	—	—	—	2	0.2	—	—	—	—	—	—
serotype b, age<5 years	—	—	—	—	—	—	2	0.2	—	—	1	0.5	—	—
unknown serotype, age<5 years	—	—	—	—	—	—	6	0.5	—	—	—	—	—	—
Hansen's disease (Leprosy)	—	—	—	—	1	0.3	—	—	—	—	—	—	—	—
Hantavirus pulmonary syndrome	—	—	1	1.3	—	—	1	0.1	—	—	1	0.5	—	—
Hemolytic uremic syndrome, post-diarrheal	—	—	4	5.2	—	—	—	—	—	—	—	—	—	—
Hepatitis A	—	—	—	—	1	0.3	3	0.3	1	1.8	1	0.5	—	—
Hepatitis B, acute	—	—	—	—	—	—	6	0.5	—	—	—	—	—	—
Hepatitis B, chronic	11	6.4	3	3.9	28	8.6	147	13.4	3	5.3	12	5.5	—	—
Hepatitis C, acute	—	—	—	—	3	0.9	20	1.8	—	—	2	0.9	—	—
Hepatitis C, past or present	21	12.2	21	27.1	76	23.2	939	85.5	25	43.9	51	23.5	10	25.6
Hepatitis, other viral	—	—	—	—	—	—	1	0.1	—	—	—	—	—	—
Influenza-associated hospitalization	48	27.8	27	34.8	149	45.5	698	63.6	5	8.8	99	45.6	19	48.6
Influenza-associated pediatric mortality	—	—	—	—	1	0.3	1	0.1	—	—	—	—	—	—
<i>Klebsiella</i> species with resistance or intermediate resistance to carbapenems	1	0.6	—	—	—	—	1	0.1	1	1.8	—	—	—	—
Legionellosis	1	0.6	—	—	2	0.6	13	1.2	—	—	3	1.4	3	7.7
Listeriosis	—	—	—	—	1	0.3	6	0.5	—	—	—	—	—	—
Lyme disease	—	—	1	1.3	2	0.6	4	0.4	—	—	—	—	1	2.6

See footnotes on page 12.

**Table 2 (cont'd). Frequency\* and incidence rate† of reportable diseases by local health district, Utah, 2014**

Disease/Condition	Tooele County		TriCounty		Utah County		Wasatch Co.		Weber-Morgan		Unknown	Total
	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)		
<i>Acinetobacter</i> species with resistance or intermediate resistance to carbapenems	1	1.6	—	—	1	0.2	—	—	1	0.4	2	35
Arbovirus infection (not including West Nile, Dengue, or Yellow Fever)	—	—	—	—	—	—	—	—	—	—	—	3
Botulism, total	1	1.6	—	—	3	0.5	—	—	—	—	—	6
Infant	1	1.6	—	—	3	0.5	—	—	—	—	—	6
Campylobacteriosis	4	6.5	15	25.9	88	15.7	6	22.3	78	30.8	20	559
Chickenpox	1	1.6	—	—	52	9.3	3	11.2	17	6.7	5	216
Chlamydia	143	231.5	136	234.8	940	167.5	35	130.2	705	278.8	4	8,223
Coccidioidomycosis	—	—	1	1.7	5	0.9	—	—	1	0.4	1	48
Creutzfeldt-Jakob disease and other transmissible human spongiform encephalopathies	—	—	—	—	1	0.2	—	—	—	—	—	3
Cryptosporidiosis	1	1.6	6	10.4	13	2.3	—	—	10	4.0	—	70
Cyclosporiasis	—	—	—	—	—	—	—	—	—	—	—	1
Dengue	—	—	—	—	2	0.4	—	—	—	—	—	3
Echinococcosis	—	—	—	—	—	—	—	—	—	—	—	2
Encephalitis	—	—	—	—	—	—	—	—	2	0.8	—	4
<i>Escherichia coli</i> with resistance or intermediate resistance to carbapenems	—	—	—	—	—	—	1	3.7	—	—	—	5
Giardiasis	2	3.2	2	3.5	45	8.0	—	—	15	5.9	3	226
Gonorrhea	22	35.6	7	12.1	97	17.3	2	7.4	124	49.0	—	1,441
HIV infection	2	3.2	—	—	5	0.9	—	—	5	2.0	6	118
<i>Haemophilus influenzae</i> , all ages, invasive disease	—	—	—	—	12	2.1	1	3.7	4	1.6	—	59
nonserotype B, age<5 years	—	—	—	—	1	0.2	—	—	—	—	—	3
serotype b, age<5 years	—	—	—	—	—	—	—	—	—	—	—	3
unknown serotype, age<5 years	—	—	—	—	—	—	—	—	—	—	—	6
Hansen's disease (Leprosy)	—	—	—	—	1	0.2	—	—	—	—	—	2
Hantavirus pulmonary syndrome	—	—	—	—	—	—	—	—	—	—	—	3
Hemolytic uremic syndrome, post-diarrheal	—	—	—	—	2	0.4	—	—	2	0.8	—	8
Hepatitis A	—	—	—	—	2	0.4	—	—	—	—	—	8
Hepatitis B, acute	1	1.6	—	—	2	0.4	1	3.7	1	0.4	—	11
Hepatitis B, chronic	4	6.5	1	1.7	31	5.5	1	3.7	23	9.1	35	299
Hepatitis C, acute	1	1.6	1	1.7	4	0.7	—	—	4	1.6	—	35
Hepatitis C, past or present	24	38.9	25	43.2	88	15.7	8	29.8	138	54.6	80	1,506
Hepatitis, other viral	—	—	—	—	—	—	—	—	—	—	—	1
Influenza-associated hospitalization	11	17.8	28	48.3	196	34.9	8	29.8	120	47.5	6	1,414
Influenza-associated pediatric mortality	—	—	—	—	—	—	—	—	—	—	—	2
<i>Klebsiella</i> species with resistance or intermediate resistance to carbapenems	—	—	—	—	—	—	—	—	—	—	—	3
Legionellosis	1	1.6	—	—	1	0.2	—	—	3	1.2	1	28
Listeriosis	—	—	—	—	2	0.4	—	—	—	—	—	9
Lyme disease	—	—	—	—	3	0.5	—	—	—	—	2	13

See footnotes on page 12.

**Table 2. Frequency\* and incidence rate† of reportable diseases by local health district, Utah, 2014**

Disease/Condition	Bear River		Central		Davis County		Salt Lake County		Southeastern		Southwest		Summit County	
	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)
Malaria	—	—	—	—	—	—	3	0.3	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	—	1	1.8	—	—	—	—
Meningitis, aseptic	1	0.6	—	—	15	4.6	17	1.5	—	—	3	1.4	—	—
Meningitis, bacterial, other	1	0.6	1	1.3	3	0.9	8	0.7	—	—	1	0.5	—	—
Meningitis, viral	1	0.6	—	—	7	2.1	15	1.4	1	1.8	2	0.9	—	—
Meningococcal disease ( <i>Neisseria meningitidis</i> )	—	—	—	—	1	0.3	—	—	—	—	—	—	—	—
Mumps	1	0.6	—	—	—	—	1	0.1	—	—	—	—	—	—
Norovirus infection	6	3.5	—	—	26	7.9	45	4.1	2	3.5	—	—	—	—
Pertussis	52	30.1	37	47.7	104	31.8	299	27.2	5	8.8	8	3.7	7	17.9
Q fever	1	0.6	1	1.3	—	—	2	0.2	—	—	3	1.4	—	—
Rabies, animal	—	—	3	3.9	3	0.9	5	0.5	—	—	—	—	—	—
Relapsing fever, tick-borne and louse-borne	—	—	—	—	—	—	1	0.1	—	—	—	—	—	—
Rubella	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Salmonellosis	31	17.9	13	16.8	34	10.4	152	13.8	5	8.8	26	12.0	2	5.1
Shiga toxin-producing <i>Escherichia coli</i> (STEC) infection	6	3.5	4	5.2	9	2.7	27	2.5	1	1.8	2	0.9	1	2.6
Shigellosis	3	1.7	—	—	8	2.4	18	1.6	—	—	2	0.9	—	—
Spotted fever rickettsiosis (including Rocky Mountain spotted fever)	—	—	—	—	—	—	4	0.4	1	1.8	—	—	—	—
Streptococcal disease, invasive, group A	3	1.7	2	2.6	10	3.1	51	4.6	—	—	11	5.1	—	—
Streptococcal disease, invasive, group B	10	5.8	3	3.9	10	3.1	47	4.3	1	1.8	13	6.0	—	—
Streptococcal disease, invasive, other	9	5.2	12	15.5	26	7.9	114	10.4	4	7.0	4	1.8	1	2.6
<i>Streptococcus pneumoniae</i> , invasive disease	15	8.7	9	11.6	18	5.5	78	7.1	5	8.8	12	5.5	4	10.2
age <5 years	4	2.3	3	3.9	1	0.3	8	0.7	—	—	1	0.5	—	—
Syphilis, early (infection <12 months)	—	—	—	—	5	1.5	70	6.4	—	—	—	—	1	2.6
primary & secondary	—	—	—	—	2	0.6	39	3.6	—	—	—	—	—	—
early latent	—	—	—	—	3	0.9	31	2.8	—	—	—	—	1	2.6
Syphilis, latent (infection >12 months)	—	—	—	—	9	2.7	39	3.6	—	—	1	0.5	—	—
Toxic shock syndrome (staphylococcal or streptococcal)	—	—	—	—	1	0.3	7	0.6	—	—	1	0.5	—	—
Trichinellosis	—	—	—	—	—	—	1	0.1	—	—	—	—	—	—
Tuberculosis, active	1	0.6	1	1.3	—	—	24	2.2	—	—	3	1.4	—	—
Tularemia	—	—	1	1.3	—	—	—	—	—	—	—	—	—	—
Typhoid fever	—	—	—	—	—	—	4	0.4	—	—	—	—	—	—
Vancomycin-intermediate <i>Staphylococcus aureus</i> (VISA)	—	—	—	—	1	0.3	—	—	—	—	—	—	—	—
Vibriosis	—	—	—	—	—	—	—	—	—	—	1	0.5	—	—
West Nile virus, total	—	—	—	—	—	—	2	0.2	—	—	—	—	—	—
neuroinvasive disease	—	—	—	—	—	—	1	0.1	—	—	—	—	—	—
non-neuroinvasive disease	—	—	—	—	—	—	1	0.1	—	—	—	—	—	—

See footnotes on page 12.

**Table 2 (cont'd). Frequency\* and incidence rate† of reportable diseases by local health district, Utah, 2014**

Disease/Condition	Tooele County		TriCounty		Utah County		Wasatch County		Weber-Morgan		Unknown	Total
	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)	Cases	(Rate)		
Malaria	—	—	—	—	1	0.2	—	—	—	—	1	5
Measles	—	—	—	—	2	0.4	—	—	—	—	—	3
Meningitis, aseptic	—	—	—	—	—	—	1	3.7	3	1.2	—	40
Meningitis, bacterial, other	—	—	—	—	1	0.2	—	—	1	0.4	—	16
Meningitis, viral	—	—	2	3.5	2	0.4	—	—	4	1.6	—	34
Meningococcal disease ( <i>Neisseria meningitidis</i> )	—	—	—	—	—	—	—	—	—	—	—	1
Mumps	—	—	—	—	—	—	—	—	—	—	—	2
Norovirus infection	3	4.9	3	5.2	3	0.5	—	—	11	4.4	—	99
Pertussis	5	8.1	3	5.2	209	37.2	19	70.7	156	61.7	39	943
Q fever	1	1.6	—	—	—	—	—	—	1	0.4	—	9
Rabies, animal	—	—	1	1.7	4	0.7	—	—	2	0.8	4	22
Relapsing fever, tick-borne and louse-borne	—	—	—	—	—	—	—	—	—	—	—	1
Rubella	—	—	1	1.7	—	—	—	—	—	—	—	1
Salmonellosis	9	14.6	14	24.2	57	10.2	3	11.2	24	9.5	—	370
Shiga toxin-producing <i>Escherichia coli</i> (STEC) infection	1	1.6	4	6.9	32	5.7	—	—	4	1.6	—	91
Shigellosis	1	1.6	—	—	4	0.7	—	—	5	2.0	—	41
Spotted fever rickettsiosis (including Rocky Mountain spotted fever)	—	—	—	—	—	—	—	—	1	0.4	—	6
Streptococcal disease, invasive, group A	—	—	1	1.7	23	4.1	—	—	14	5.5	—	115
Streptococcal disease, invasive, group B	1	1.6	—	—	27	4.8	2	7.4	18	7.1	—	132
Streptococcal disease, invasive, other	8	13.0	—	—	76	13.5	3	11.2	26	10.3	4	287
Streptococcus pneumoniae, invasive disease	3	4.9	1	1.7	38	6.8	1	3.7	19	7.5	1	204
age <5 years	2	3.2	—	—	3	0.5	—	—	2	0.8	1	25
Syphilis, early (infection <12 months)	—	—	—	—	6	1.1	—	—	4	1.6	2	88
primary & secondary	—	—	—	—	2	0.4	—	—	2	0.8	2	47
early latent	—	—	—	—	4	0.7	—	—	2	0.8	—	41
Syphilis, latent (infection >12 months)	—	—	—	—	8	1.4	—	—	4	1.6	—	61
Toxic shock syndrome (staphylococcal or streptococcal)	—	—	—	—	2	0.4	—	—	3	1.2	—	14
Trichinellosis	—	—	—	—	—	—	—	—	—	—	—	1
Tuberculosis, active	—	—	1	1.7	—	—	—	—	1	0.4	—	31
Tularemia	—	—	—	—	—	—	—	—	—	—	—	1
Typhoid fever	—	—	—	—	—	—	—	—	—	—	—	4
Vancomycin-intermediate <i>Staphylococcus aureus</i> (VISA)	—	—	—	—	—	—	—	—	—	—	—	1
Vibriosis	1	1.6	—	—	1	0.2	—	—	—	—	—	3
West Nile virus, total	—	—	—	—	—	—	—	—	—	—	—	2
neuroinvasive disease	—	—	—	—	—	—	—	—	—	—	—	1
non-neuroinvasive disease	—	—	—	—	—	—	—	—	—	—	—	1

\* 2014 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 2014, and represent totals reported to the Utah Department of Health as of August 13, 2015.

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

—: No reported cases .

**Table 3. Historical communicable disease totals, Utah, 2004 – 2013**

Disease/Condition	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<i>Acinetobacter</i> species with resistance or intermediate resistance to carbapenems	U	U	U	U	U	U	U	U	U	43
Amebiasis	6	13	6	4	11	6	11	12	8	2
Babesiosis	—	—	—	—	—	—	—	1	—	—
Botulism, total	2	4	3	2	6	1	1	12	9	2
foodborne	—	—	—	—	—	—	—	8	—	—
infant	2	4	3	2	6	1	1	4	9	2
Brucellosis	1	1	—	—	1	—	—	3	1	—
Campylobacteriosis	329	302	271	327	372	311	409	457	523	505
Chancroid	1	—	—	—	—	—	—	—	—	—
Chickenpox	497	573	1,015	827	750	549	334	399	312	227
Chlamydia	3,858	4,602	5,090	5,720	6,019	6,145	6,682	7,075	7,615	7,535
Coccidioidomycosis	26	25	58	69	13	38	47	67	59	44
Colorado tick fever	1	3	—	3	1	1	—	—	1	—
Creutzfeldt-Jakob disease and other transmissible human spongiform encephalopathies	—	2	1	1	4	2	3	3	4	—
Cryptosporidiosis	6	25	17	1,952	46	42	73	67	203	88
Dengue	5	3	6	17	6	2	5	3	5	8
Echinococcosis	—	2	1	—	—	—	—	1	1	1
Ehrlichiosis/Anaplasmosis	—	—	—	—	—	1	—	1	1	1
Encephalitis	6	12	7	5	8	11	8	2	6	2
<i>Escherichia coli</i> with resistance or intermediate resistance to carbapenems	U	U	U	U	U	U	U	U	U	3
Giardiasis	378	423	455	470	360	312	317	263	287	231
Gonorrhea	602	727	888	821	477	341	311	277	480	951
HIV infection	127	123	126	118	129	128	87	94	109	105
<i>Haemophilus influenzae</i> , all ages, invasive disease	20	13	19	43	41	34	33	42	33	42
non-serotype b, age <5 years	U	U	U	U	U	U	1	5	6	8
serotype b, age <5 years	U	U	U	U	U	U	3	2	2	3
unknown serotype, age <5 years	U	U	U	U	U	U	1	4	3	2
Hansen's disease (Leprosy)	1	—	1	—	2	1	1	1	1	—
Hantavirus pulmonary syndrome	1	—	—	—	1	1	1	—	2	—
Hemolytic uremic syndrome, post-diarrheal	—	1	15	8	9	7	7	5	5	3
Hepatitis A	36	22	13	9	13	7	12	8	4	12
Hepatitis B, acute	50	38	26	15	13	5	8	10	13	5
Hepatitis B, past or present	U	U	U	U	U	U	264	236	252	259
Hepatitis C, acute	8	4	11	6	11	7	11	10	16	11
Hepatitis C, chronic	U	U	U	U	U	U	1,170	1,343	1,231	1,093
Hepatitis, other viral	—	—	—	1	1	—	1	—	2	1
Influenza-associated hospitalization†	U	577	217	286	508	1,531	211	497	622	1,036
Influenza-associated pediatric mortality†	U	U	U	3	—	5	1	—	1	5
<i>Klebsiella</i> species with resistance or intermediate resistance to carbapenems	U	U	U	U	U	U	U	U	U	2
Legionellosis	22	17	27	20	31	29	27	18	28	22
Listeriosis	2	5	2	3	2	2	3	5	2	3
Lyme disease	7	4	5	17	7	13	4	10	5	17
Malaria	8	6	19	12	5	4	5	6	14	7
Measles	—	1	—	—	—	—	—	14	1	—
Meningitis, aseptic	45	191	153	145	132	106	47	45	52	38
Meningitis, bacterial, other	6	13	37	15	16	7	13	12	8	25
Meningitis, viral	117	83	84	136	57	63	51	35	22	25
Meningococcal disease ( <i>Neisseria meningitidis</i> )	8	16	7	15	8	4	1	11	4	9
Mumps	2	7	5	2	3	4	3	—	3	2
Norovirus infection	6	27	11	28	8	14	66	73	46	99
Pertussis	302	665	741	373	186	226	355	649	1,592	1,307
Plague	—	—	1	—	—	1	—	—	—	—
Psittacosis	1	—	—	—	—	—	—	—	—	—

See footnotes on page 14.

**Table 3 (cont'd). Historical communicable disease totals, Utah, 2004-2013**

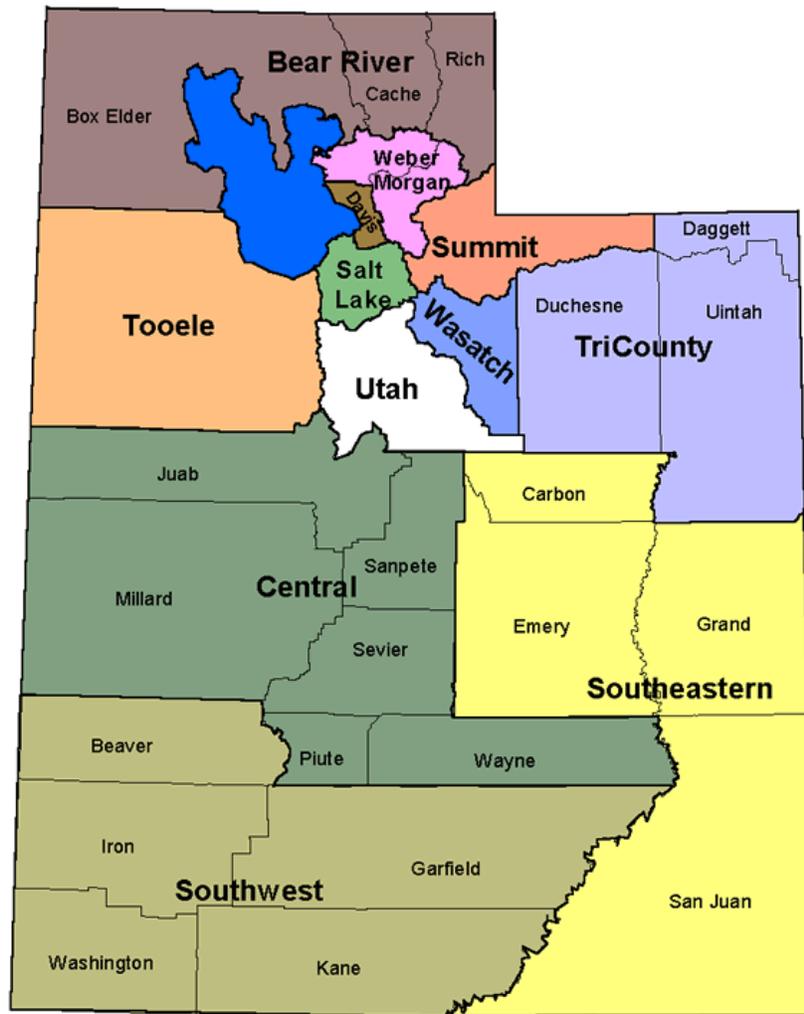
Disease/Condition	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Q fever	—	—	—	1	—	—	—	—	5	3
Rabies, animal	9	15	11	15	14	13	10	7	15	12
Relapsing fever, tick-borne and louse-borne	—	—	—	—	—	2	1	1	1	—
Rubella, congenital syndrome	2	—	—	—	—	—	—	—	—	—
Salmonellosis	248	394	284	294	374	318	350	339	261	323
Shiga toxin-producing <i>Escherichia coli</i> (STEC) infection	71	72	154	129	88	111	76	146	106	83
Shigellosis	48	50	75	44	41	25	50	55	34	25
Spotted fever rickettsiosis (including Rocky Mountain spotted fever)	9	12	20	4	7	1	4	9	7	5
Streptococcal disease, invasive, group A	44	69	66	92	59	87	124	82	94	120
Streptococcal disease, invasive, group B	5	35	96	80	88	96	89	91	130	129
Streptococcal disease, invasive, other	U	U	275	236	295	244	268	334	309	295
<i>Streptococcus pneumoniae</i> , invasive disease	25	67	202	229	250	267	236	209	183	205
age <5 years	U	U	U	U	U	U	34	28	23	25
Syphilis, congenital	U	U	2	—	—	—	1	—	—	—
Syphilis, early (infection <12 months)	13	10	28	22	35	38	86	24	51	123
primary & secondary	13	10	21	20	25	31	65	14	42	75
early latent	U	U	7	2	10	7	21	10	9	48
Syphilis, latent (infection >12 months)	U	U	38	23	5	17	12	22	48	15
Tetanus	—	—	1	—	—	1	—	—	—	—
Toxic-shock syndrome (staphylococcal or streptococcal)	4	13	11	10	13	12	26	17	20	12
Tuberculosis, active	36	29	34	39	27	37	20	34	37	33
Tularemia	2	1	3	12	8	—	2	1	2	2
Typhoid fever	1	2	1	4	1	—	3	—	2	3
Vancomycin-intermediate <i>Staphylococcus aureus</i> (VISA)	U	U	—	—	1	—	—	1	—	—
Vibriosis	1	—	8	—	—	1	2	1	1	2
West Nile virus, total	11	53	174	69	26	2	2	3	5	7
neuroinvasive disease	U	U	56	28	6	1	1	1	3	4
non-neuroinvasive disease	U	U	102	42	20	1	1	2	2	3

† 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, 2014



In 2014, there were 12 LHDs in the state of Utah, with 6 multi-county districts and 6 single-county districts.

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
Southeastern Utah District Health Department	Carbon, Emery, Grand, San Juan
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

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