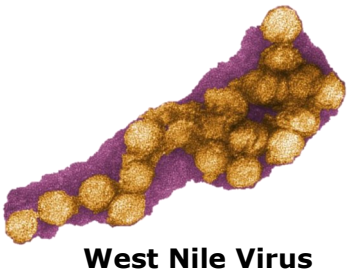
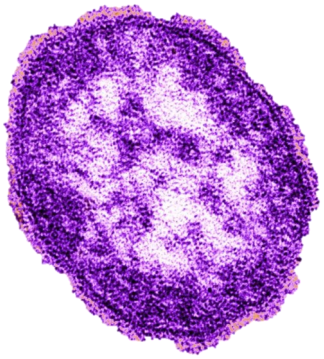
Washington State
COMMUNICABLE DISEASE REPORT 2014

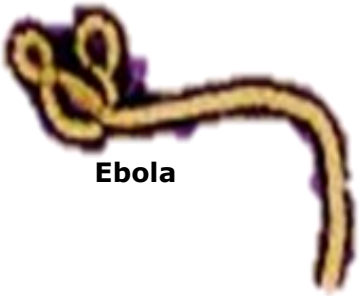
Washington State Department of Health



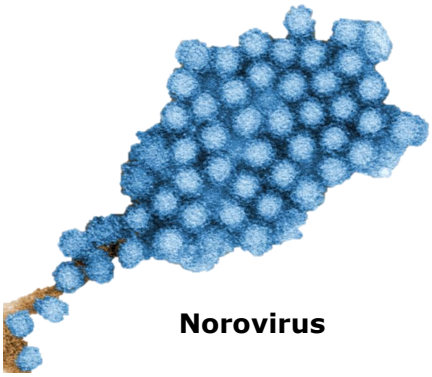
West Nile Virus



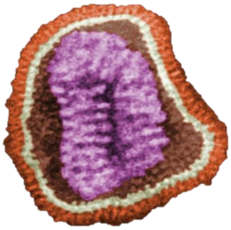
Measles Virus



Ebola



Norovirus



Influenza Virus

"Public health - always working for a safer and healthier Washington."

For additional copies of this document or to obtain this document in an alternative format please contact:

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COMMUNICABLE DISEASE REPORT 2014

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This report represents Washington State communicable disease surveillance: the ongoing collection, analysis and dissemination of morbidity and mortality data to prevent and control communicable disease. In addition to the contributors listed on the previous page, we would like to recognize the staff of the Washington State Public Health Laboratories, the staff of Washington's local health jurisdictions who contribute to surveillance, investigation, and prevention of communicable diseases in our state, and the thousands of people in clinics, hospitals and clinical laboratories throughout Washington whose disease reports constitute the basis for this document.

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Executive Summary – 2014

This report summarizes notifiable communicable diseases reported by local health jurisdictions to the Washington State Department of Health (DOH) in 2014. The most common case reports continued to be sexually transmitted conditions, infections caused by enteric pathogens, pertussis, and tuberculosis. Rare conditions of public health significance that were reported include African tick bite fever, babesiosis, coccidioidomycosis, Creutzfeldt-Jakob disease (CJD), and cryptococcosis.

Technical Notes

Washington Administrative Code (WAC) Chapters 246-100 and 246-101 outline disease surveillance requirements: healthcare providers and facilities, laboratories, veterinarians, food service establishments, childcare facilities, and schools must report certain notifiable conditions including communicable diseases to the local health jurisdiction or DOH. Local health jurisdictions report to the DOH electronically via the Public Health Issue Management System (PHIMS).

Cases of communicable notifiable conditions were included in this annual report if they met the following criteria (these criteria do not apply to HIV, chronic hepatitis, sexually transmitted diseases, or tuberculosis):

1. Resident of Washington.
2. Onset dates during the 2014 CDC Year (December 29, 2013 to January 3, 2015).
3. Case report entered into PHIMS by March 1, 2015 if the condition is common (>10 cases per year).
4. Case report entered into PHIMS prior to May 15, 2015 if the condition is rare (≤10 cases per year).
5. Very rare conditions (zero to two cases per year) reported to DOH after the previous year's deadline (if not reported in a previous annual report).
6. Given a valid DOH case classification by DOH (as described in the guidelines for each condition: http://www.doh.wa.gov/PublicHealthandHealthcareProviders/NotifiableConditions/ListofNotifiableConditions.aspx).

Depending on the condition, it is likely only a fraction of the actual number of cases will be reported to a surveillance system. Case patients may not be aware of being infected, are symptomatic but do not contact a health care provider, are not tested by the provider with appropriate laboratory tests, or are not reported after the diagnostic testing.

Disease summary tables in Appendix I reflect historical years when data are reliable. Population estimates used in rate calculations come from the Washington State Office of Financial Management: http://www.ofm.wa.gov/pop/asr/default.asp. Previously reported disease rates for 2000 through 2010 were updated using new population estimates based on the 2010 decennial census. Rates are not provided for fewer than five cases and are not age-adjusted due to the small numbers of cases for almost all conditions.

This report is available online at: http://www.doh.wa.gov/DataandStatisticalReports/DiseasesandChronicConditions/CommunicableDiseaseSurveillanceData/AnnualCDSurveillanceReports

Monthly Washington State disease surveillance data are available online at: http://www.doh.wa.gov/DataandStatisticalReports/DiseasesandChronicConditions/CommunicableDiseaseSurveillanceData/MonthlyCDSurveillanceReport.aspx.

Additional information on communicable disease surveillance and case investigation in Washington is available at: http://www.doh.wa.gov/PublicHealthandHealthcareProviders/NotifiableConditions/ListofNotifiableConditions.aspx.

For other information or to request the report in an alternate format, contact:
Washington State Department of Health
Office of Communicable Disease Epidemiology
1610 NE 150th Street, MS K17-9
Shoreline, WA 98155
206-418-5500

Reporting a Notifiable Condition

In accordance with Washington State rule (http://www.doh.wa.gov/PublicHealthandHealthcareProviders/NotifiableConditions.aspx), public health and health care professionals should report most notifiable conditions to the local health jurisdiction in the county of the patient's residence. Disease reporting telephone numbers for each local health jurisdiction are provided at http://www.doh.wa.gov/Portals/1/Documents/1200/LHJ%20Agency%20Directory.pdf. If no one is available at the local health jurisdiction and a condition is immediately notifiable or is notifiable to the Department of Health, please call the 24-hour reporting line: 877-539-4344. For a complete list of notifiable conditions for health care providers, hospitals, laboratories and veterinarians, please refer to http://www.doh.wa.gov/PublicHealthandHealthcareProviders/NotifiableConditions/HowToReport.aspx.

Notifiable Conditions & the Health Care Provider

Washington State Department of Health

The following conditions are notifiable to public health authorities in accordance with **WAC 246-101**

- Report to the local health jurisdiction of the patient's residence within the timeframe indicated by footnote (except for conditions followed by a reporting phone number)
- **Immediately notifiable conditions (Bold [Imm]) must be reported as soon as clinically suspected**

Acquired immunodeficiency syndrome (AIDS) [3d] (including AIDS in persons previously reported with HIV infection) [3d]
Animal bites (when human exposure to rabies is suspected) [Imm]
Anthrax [Imm]
Arboviral disease [3d] (West Nile virus disease, dengue, Eastern & Western equine encephalitis, St Louis encephalitis, and Powassan) [3d]
Asthma, occupational (suspected or confirmed) [Mo] **1-888-66SHARP**
Birth Defects [Mo]: autism spectrum disorders, cerebral palsy, alcohol related birth defects [Mo] **360-236-3533**
Botulism (foodborne, wound and infant) [Imm]
Brucellosis (*Brucella* species) [24h]
***Burkholderia mallei* (Glanders) [Imm] and *pseudomallei* (Melioidosis) [Imm]**
Campylobacteriosis [3d]
Chancroid [3d]
Chlamydia trachomatis infection [3d]
Cholera [Imm]
Cryptosporidiosis [3d]
Cyclosporiasis [3d]
Diphtheria [Imm]
Disease of suspected bioterrorism origin [Imm]
Domoic acid poisoning [Imm]
***E. coli* - Refer to "Shiga toxin producing *E. coli* [Imm]**
Emerging condition with Outbreak potential [Imm]
Giardiasis [3d]
Gonorrhea [3d]
Granuloma inguinale [3d]
***Haemophilus influenzae* (invasive disease, children < age 5) [Imm]**
Hantavirus pulmonary syndrome [24h]
Hepatitis A, acute infection [24h]
Hepatitis B, acute [24h]
Hepatitis B, chronic (initial diagnosis/previously unreported cases) [Mo]
Hepatitis B, surface antigen positive pregnant women [3d]
Hepatitis C, acute [3d] and chronic [Mo] (initial diagnosis only)
Hepatitis D (acute and chronic infections) [3d]
Hepatitis E (acute infection) [24h]
Herpes simplex, neonatal and genital (initial infection only) [3d]
HIV infection [3d]
Immunization reactions [3d] (severe, adverse)
Influenza, novel or unsubtypable strain [Imm]
Influenza-associated death (lab confirmed) [3d]
Legionellosis [24h]
Leptospirosis [24h]
Listeriosis [24h]
Lyme disease [3d]
Lymphogranuloma venereum [3d]
Malaria [3d]
Measles (rubeola) acute disease only [Imm]
Meningococcal disease (invasive) [Imm]
Monkeypox [Imm]
Mumps (acute disease only) [24h]
Outbreaks of suspected foodborne origin [Imm]
Outbreaks of suspected waterborne origin [Imm]
Paralytic shellfish poisoning [Imm]
Pertussis [24h]
Pesticide poisoning 1-800-222-1222
Hospitalized, fatal, or cluster [Imm]
Pesticide poisoning, all other [3d]
Plague [Imm]
Poliomyelitis [Imm]
Prion disease [3d]
Psittacosis [24h]
Q fever [24h]
Rabies (confirmed human or animal) [Imm]
Rabies, suspected human exposure [Imm]
Relapsing fever (borreliosis) [24h]
Rubella (include congenital rubella syndrome) [Imm] (acute disease only)
Salmonellosis [24h]
SARS [Imm]
Shiga toxin-producing *E. coli* infections [Imm] (enterohemorrhagic *E. coli* including, but not limited to, *E. coli* 0157:H7; also includes post-diarrheal hemolytic uremic syndrome)
Shigellosis [24h]
Smallpox [Imm]
Syphilis (including congenital) [3d]
Tetanus [3d]
Trichinosis [3d]
Tuberculosis [Imm]
Tularemia [Imm]
Vaccinia transmission [Imm]
Vancomycin-resistant *Staphylococcus aureus* [24h] (not to include vancomycin intermediate)
Varicella-associated death [3d]
Vibriosis [24h]
Viral hemorrhagic fever [Imm]
Yellow fever [Imm]
Yersiniosis [24h]
Other rare diseases of public health significance [24h]
Unexplained critical illness or death [24h]

CODE LEGEND

[Imm] **Immediately – Requires a phone call to reach a live person at the local health jurisdiction, 24/7**
[24h] Within 24 hours – Requires a phone call if reporting after normal public health business hours
[3d] Within 3 business days
[Mo] Monthly

Phone numbers by county:
http://www.doh.wa.gov/Portals/1/Documents/1200/LHJ%20Agency%20Directory.pdf
If no one is available at the local health jurisdiction, call **1-877-539-4344**

For more information, see WAC 246-101 or http://www.doh.wa.gov/PublicHealthandHealthcareProviders/NotifiableConditions.aspx

Notifiable Conditions & Washington's Health Care Facilities

Washington State Department of Health

The following conditions are notifiable to public health authorities in accordance with WAC 246-101
When a condition occurs in or is treated by the health care facility:

- Report to the local health jurisdiction of the patient's residence within the timeframe indicated by footnote (except for conditions followed by a reporting phone number)
- **Immediately notifiable conditions (Bold [Imm]) must be reported as soon as clinically suspected**

Hospital laboratories should refer to *Notifiable Conditions & Washington's Laboratories.*

Acquired immunodeficiency syndrome (AIDS) [3d] (including AIDS in persons previously reported with HIV infection)
Animal bites (when human exposure to rabies is suspected) [Imm]
Anthrax [Imm]
Arboviral disease [3d] (acute disease only: West Nile virus, dengue, Eastern & Western equine encephalitis, etc.)
Asthma, occupational (suspected or confirmed) [Mo] **1-888-66SHARP**
Birth Defects [Mo] **360-236-3533**
(abdominal wall defects, autism spectrum disorders, cerebral palsy, Down syndrome, alcohol-related birth defects, hypospadias, limb reductions, neural tube defects, oral clefts)
Botulism [Imm] (foodborne, infant, and wound)
Brucellosis [24h]
***Burkholderia mallei* (Glanders) [Imm] and *pseudomallei* (Melioidosis) [Imm]**
Campylobacteriosis [3d]
Chancroid [3d]
Chlamydia trachomatis [3d]
Cholera [Imm]
Cryptosporidiosis [3d]
Cyclosporiasis [3d]
Diphtheria [Imm]
Disease of suspected bioterrorism origin [Imm]
Domoic acid poisoning [Imm]
***E. coli* – Refer to "Shiga toxin-producing *E. coli* [Imm]**
Emerging condition with outbreak potential [Imm]
Giardiasis [3d]
Gonorrhea [3d]
Granuloma inguinale [3d]
Gunshot Wounds [Mo] **360-236-2867**
***Haemophilus influenzae* (invasive disease, children < age 5) [Imm]**
Hantavirus pulmonary syndrome [24h]
Hepatitis A, acute [24h]
Hepatitis B, acute [24h]
Hepatitis B, chronic (initial diagnosis/previously unreported cases) [Mo]
Hepatitis B, surface antigen positive pregnant women [3d]
Hepatitis C, acute [3d]; chronic [Mo] (initial diagnosis only)
Hepatitis D, acute and chronic [3d]
Hepatitis E, acute [24h]
HIV infection [3d]
Immunization reactions [3d] (severe, adverse)
Influenza, novel or unsubtypable strain [Imm]
Influenza-associated death (laboratory confirmed) [3d]
Legionellosis [24h]
Leptospirosis [24h]
Listeriosis [24h]
Lyme disease [3d]
Lymphogranuloma venereum [3d]
Malaria [3d]
Measles (rubeola) acute disease only [Imm]
Meningococcal disease (invasive) [Imm]
Monkeypox [Imm]
Mumps (acute disease only) [24h]
Outbreaks of disease that occur or are treated in the health care facility [Imm]
Outbreak of suspected foodborne origin [Imm]
Outbreak of suspected waterborne origin [Imm]
Paralytic shellfish poisoning [Imm]
Pertussis [24h]
Pesticide poisoning 1-800-222-1222
Hospitalized, fatal, or cluster [Imm]
Pesticide poisoning, all other [3d]
Plague [Imm]
Poliomyelitis [Imm]
Prion disease [3d]
Psittacosis [24h]
Q fever [24h]
Rabies (confirmed human or animal) [Imm]
Rabies, suspected human exposure [Imm]
Relapsing fever (borreliosis) [24h]
Rubella (include congenital rubella syndrome) [Imm] (acute disease only)
Salmonellosis [24h]
SARS [Imm]
Shiga toxin-producing *E. coli* infections [Imm] (enterohemorrhagic *E. coli* including, but not limited to, *E. coli* 0157:H7; also includes post-diarrheal hemolytic uremic syndrome)
Shigellosis [24h]
Smallpox [Imm]
Syphilis (including congenital) [3d]
Tetanus [3d]
Trichinosis [3d]
Tuberculosis [Imm]
Tularemia [Imm]
Vaccinia transmission [Imm]
Vancomycin-resistant *Staphylococcus aureus* [24h] (not to include vancomycin intermediate)
Varicella-associated death [3d]
Vibriosis [24h]
Viral hemorrhagic fever [Imm]
Yellow fever [Imm]
Yersiniosis [24h]
Other rare diseases of public health significance [24h]
Unexplained critical illness or death [24h]

CODE LEGEND

[Imm] **Immediately – Requires a phone call to reach a live person at the local health jurisdiction 24/7**
[24h] Within 24 hours – Requires a phone call if reporting after normal public health business hours
[3d] Within 3 business days
[Mo] Monthly

Phone numbers by county: http://www.doh.wa.gov/Portals/1/Documents/1200/LHJ%20Agency%20Directory.pdf
If no one is available at the local health jurisdiction, call **1-877-539-4344**

For more information, see WAC 246-101 or http://www.doh.wa.gov/PublicHealthandHealthcareProviders/NotifiableConditions.aspx

Notifiable Conditions & Washington's Laboratories

Washington State Department of Health

The following laboratory results (preliminary or confirmed) are notifiable to public health authorities in Washington in accordance with WAC 246-101. Timeframes and report recipients are indicated in the footnotes. **Immediately notifiable results are indicated in bold**. Information provided must include: specimen type; name and telephone number of laboratory; date specimen collected; date specimen received; requesting health care provider's name and telephone number; test result; and name of patient. Also required when available in the lab database are: patient sex, date of birth or age, and full address (or zip code at a minimum)

Arboviruses [2d *]
(West Nile virus, eastern and western equine encephalitis, dengue, St. Louis encephalitis, La Crosse encephalitis, Japanese encephalitis, Powassan, California serogroup, Chikungunya)
Acute: IgM positivity, PCR positivity, viral isolation
***Bacillus anthracis* (Anthrax)** [Imm * !]
Blood lead level (elevated) [2d &i]
Blood lead level (non-elevated) [Mo &i]
*Bordetella pertussis (*Pertussis*)* [24h * !]
*Borrelia burgdorferi (*Lyme disease*)* [2d*]
Borrelia hermsii or *recurrentis* (Relapsing fever, tick- or louseborne) [24h *]
Brucella species (Brucellosis) [24h * !]
Burkholderia mallei* and *pseudomallei [Imm * !]
Campylobacter species (Campylobacteriosis) [2d *]
CD4 + (T4) lymphocyte counts and/or CD4 + (T4) [Mo &ii]
(patients aged thirteen or older)
Chlamydia psittaci (Psittacosis) [24h *]
Chlamydia trachomatis [2d *]
***Clostridium botulinum* (Botulism)** [Imm * !]
***Corynebacterium diphtheriae* (Diphtheria)** [Imm * !]
Coxiella burnetii (Q fever) [24h * !]
Cryptococcus non *v.neoformans* [2d !]
Cryptosporidium (Cryptosporidiosis) [2d *]
*Cyclospora cayetanensis (*Cyclosporiasis) [2d * !]
E. coli [Imm * !] ***(refer to* "Shiga toxin-producing *E. coli*")**
***Francisella tularensis (*Tularemia)** [Imm * !]
Giardia lamblia (Giardiasis) [2d *]
***Haemophilus influenzae* (children < 5 years)** [Imm * !]
Hantavirus [24h *]
Hepatitis A virus (acute) by IgM positivity [24h *]
(Hepatocellular enzyme levels to accompany report)
Hepatitis B virus (acute) by IgM positivity [24h *]
Hepatitis B virus, by:
HBsAg (Surface antigen); HBeAg (E antigen); HBV DNA [Mo *]

Hepatitis C virus [Mo *]
Hepatitis D virus [2d *]
Hepatitis E virus [24h *]
Human immunodeficiency virus (HIV) infection [2d &ii]
(for example, positive Western blot assays, P24 antigen or viral culture tests)
Human immunodeficiency virus (HIV) infection [Mo &ii]
(All viral load detection test results - detectable and undetectable)
Influenza virus, novel or unsubtypable strain [Imm * !]
Legionella species (Legionellosis) [24h * !]
Leptospira species (Leptospirosis) [24h *]
Listeria monocytogenes (Listeriosis) [24h * !]
Measles virus (rubeola) [Imm * !]**, acute, by: IgM positivity, PCR positivity**
Mumps virus, acute, by IgM positivity; PCR positivity [24h * !]
Mycobacterium tuberculosis (Tuberculosis) [2d &iii ! @]
Neisseria gonorrhoeae (Gonorrhea) [2d *]
***Neisseria meningitidis* (Meningococcal disease)** [Imm * !]
Plasmodium species (Malaria) [2d *]
Poliovirus [Imm * !]**, acute, by: IgM positivity, PCR positivity**
Rabies virus (human or animal) [Imm * !]
Salmonella species (Salmonellosis) [24h * !]
SARS-associated coronavirus [Imm * !]
Shiga toxin-producing *E. coli* [Imm * !] **(enterohemorrhagic *E.coli* including, but not limited to, *E. coli* O157:H7)**
Shigella species (Shigellosis) [24h * !]
Treponema pallidum (Syphilis) [2d * !]
Trichinella species [2d *]
Vancomycin-resistant *Staphylococcus aureus* [24h * !]
Variola virus (smallpox) [Imm * !]
***Vibrio cholerae* O1 or O139 (Cholera)** [Imm * !]
Vibrio species (Vibriosis) [24h * !]
Viral hemorrhagic fever [Imm * !]
Arenaviruses, Bunyaviruses, Filoviruses, Flaviviruses
Yellow fever virus [Imm * !]
Yersinia enterocolitica or *pseudotuberculosis* [24h *]
Yersinia pestis (Plague) [Imm * !]

CODE LEGEND

Imm	**Immediately notifiable - Requires a phone call to reach a live person at the local health jurisdiction, 24/7**
24h	Notifiable within 24 hours - Requires a phone call if reporting after normal public health business hours
2d	Notifiable within 2 business days
Mo	Notifiable on a monthly basis
*	Notifiable to the local health jurisdiction (LHJ) of the patient's residence. If unknown, notify the LHJ of the health care provider that ordered the diagnostic test
&i	Notifiable to DOH Lead Program **360-236-3359**
&ii	Notifiable to DOH IDRH Assessment **360-236-3419**
&iii	Notifiable to DOH TB Reporting Line **360-236-3397** or TB Reporting Fax Line **360-236-3405**
!	Specimen submission required (submission upon request for all others)
@	Antibiotic sensitivity testing (first isolates only)

Phone numbers by county are posted at: **http://www.doh.wa.gov/Portals/1/Documents/1200/LHJ%20Agency%20Directory.pdf**

If no one is available at your local health jurisdiction, please call **1-877-539-4344**

For more information, see WAC 246-101 or http://www.doh.wa.gov/PublicHealthandHealthcareProviders/NotifiableConditions.aspx

Last Updated July 17, 2013

Notifiable Conditions & the Veterinarian

Washington State Department of Health

Veterinarians, including those working in private practices, laboratories, academic settings, zoos, wildlife centers, animal shelters and government agencies, have an important public health role in the identification and control of zoonotic and vector-borne diseases.

The Washington State Administrative Code (WAC 246-101-405) outlines these responsibilities for veterinarians:

A. Notify the local health officer of the jurisdiction in which the human resides of any suspected human case or suspected human outbreak based on the human's exposure to a confirmed animal case of any disease listed in Table

B. Cooperate with public health authorities in the investigation of cases, suspected cases, outbreaks, and suspected outbreaks of zoonotic disease.

C. Cooperate with public health authorities in the implementation of infection control measures including isolation and quarantine.

D. Comply with requirements in chapter 16-70 WAC for submitting positive specimens and isolates for specific diseases, and provide information requested by the Washington State Department of Health or local health jurisdiction.

Notifiable Condition (report suspected human cases)	Report Immediately	Report within 24 hours
Anthrax	X	
Arboviral disease		X
Brucellosis (*Brucella* species)		X
Burkholderia mallei (Glanders)	X	
Disease of suspected bioterrorism origin (including but not limited to anthrax)	X	
E. coli – Refer to "Shiga toxin-producing *E. coli*"	X	
Emerging condition with outbreak potential	X	
Influenza virus, novel or unsubtypable strain	X	
Leptospirosis		X
Plague	X	
Psittacosis		X
Q Fever		X
Rabies (suspected human case or exposure or animal case)	X	
Shiga toxin-producing *E. coli* infections (enterohemorrhagic *E. coli* including, but not limited to, *E. coli* O157:H7)	X	
Tularemia	X	

IMPORTANT NOTE: Selected animal diseases, especially in livestock and poultry, must be reported to the Washington State Department of Agriculture, State Veterinarian's Office. These include eradicated diseases (e.g., tuberculosis, brucellosis), suspected foreign animal diseases (e.g., foot and mouth disease, exotic Newcastle disease, hog cholera) and certain domestic diseases (e.g., anthrax, rabies). See: http://app.leg.wa.gov/WAC/default.aspx?cite=16-70.

*A list of local health departments can be found at http://www.doh.wa.gov/AboutUs/PublicHealthSystem/LocalHealthJurisdictions.aspx.

Communicable Disease Summary

Arboviral Disease

Cause: Various viruses transmitted by arthropods. Arthropod-borne viral (arboviral) diseases include West Nile virus disease and yellow fever (both discussed separately below), chikungunya virus disease, Colorado tick fever, dengue fever, eastern and western equine encephalitis, St. Louis encephalitis, Japanese encephalitis, and others.

Illness and treatment: There are four main clinical forms: central nervous system (CNS) illnesses; fevers of short duration with or without rash; hemorrhagic fevers; and polyarthritis and rash with or without fevers. Treatment is supportive.

Sources: Transmission is most commonly by the bite of arthropods (e.g., mosquitoes, sandflies, ticks). Rare transmission occurs through blood transfusions or organ transplantations.

Prevention: Avoid arthropod bites by wearing appropriate clothing and using insect repellents. If traveling to risk areas, consult with a travel clinic or the CDC Travelers' Health website regarding additional measures, including vaccination for Japanese encephalitis or yellow fever.

Recent Washington trends: Prior to 2013, 10 to 20 cases of travel-associated dengue and a few travel-associated chikungunya cases were reported annually. In late 2013, the first local transmission of chikungunya virus was identified in the Caribbean; local transmission has now been identified in many countries in Central and South America, and the number of reported chikungunya cases increased greatly. Rare reports of other travel-associated arboviral diseases include Colorado tick fever and Japanese encephalitis in 2008, and St. Louis encephalitis and Toscana virus in 2009. Other than West Nile virus, the last reported human arboviral infection acquired in the state was western equine encephalitis in 1988. St. Louis encephalitis infections occurred in the past, primarily east of the Cascade Mountains.

2014: Nine cases of dengue fever and 13 cases of Chikungunya were reported following travel.

West Nile Virus (WNV) Disease

Cause: West Nile virus.

Illness and treatment: About 80 percent of those infected are asymptomatic, around 20 percent have WNV fever (fever, headache, rash), and less than 1 percent develop WNV neuroinvasive disease (meningitis, encephalitis, paralysis). Treatment is supportive.

Sources: Many bird species are reservoirs. Mosquitoes are the vectors, transmitting the virus through bites to humans and other mammals such as horses. WNV can be transfused, so donated blood is screened and presumptive viremic donors are reported as possible cases.

Prevention: Avoid mosquito bites by wearing appropriate clothing and using insect repellents. Make sure windows and doors are "bug tight." Maintain window screens. Eliminate breeding sites by draining standing water such as in pots or tires.

Recent Washington trends: Infected birds and horses were first detected in 2002. The first locally acquired human infections were reported in 2006. In 2009, Washington had the highest number of cases to date with 38 cases and two presumptive viremic donors. Of these cases, 36 infections were known to be endemically acquired within Washington.

2014: Twelve cases were reported; 10 with in-state exposure and two travel-associated cases. One travel-associated asymptomatic viremic blood donor was also reported.

Yellow Fever

Cause: Yellow fever virus.

Illness and treatment: Early symptoms include fever, headache, muscle aches, and vomiting. Later signs include jaundice, gum bleeding, and bloody vomit in addition to liver and organ failure. Twenty to 50 percent of jaundiced cases are fatal. Treatment is supportive.

Sources: Yellow fever occurs in tropical areas of Africa and South America. Transmission is by the bite of an infected mosquito. There are two transmission cycles, a jungle cycle involving non-human primates and an urban cycle involving humans.

Prevention: When in endemic countries, avoid mosquito bites by wearing appropriate clothing, using insect repellents, using bed nets, and making sure windows and doors are "bug tight." Consult with a travel clinic or the CDC Travelers' Health website for recommendations about vaccination.

Recent Washington trends: No cases, with the exception of a vaccine-associated infection in 2002, have been reported in over 50 years of surveillance.

2014: No cases were reported.

Botulism

Cause: Bacterial toxin from *Clostridium botulinum*, mainly types A, B, and E.

Illness and treatment: Forms are foodborne botulism (ingested toxin), wound botulism (toxin production in an infected wound), infant botulism (toxin produced in the intestine of a child under one year of age), adult colonization botulism (toxin produced in the intestine of an adult), and inhalational botulism (inhaling toxin, which does not happen naturally). Paralysis starts with facial muscles and often progresses to involve the breathing muscles. Infants may have a weak cry, difficulty feeding leading to weight loss, and weakness. Treatment is supportive care plus either human-derived botulism hyperimmune globulin (BIG-IV) for infants or botulism antitoxin for older children and adults. In addition, antibiotics are given for wound botulism.

Sources: *C. botulinum* spores are common in soil. No consistent exposure is known for infants. Most foodborne cases are due to inadequately processed home-canned foods. Wound botulism is usually associated with injecting black-tar heroin into the skin ("skin popping") or muscle, or sometimes with deep contaminated injuries.

Additional risks: Infant botulism cases usually occur in babies under three months old (almost always under six months), both breast fed and formula fed.

Prevention: Follow safe home canning procedures. Boil risky home-canned foods (i.e., low acidic, non-pickled foods) before consumption. Clean any deep puncture wounds promptly.

Recent Washington trends: Each year there are zero to four reports of foodborne botulism, zero to nine reports of infant botulism and zero to seven reports of wound botulism. Almost all are type A.

2014: Zero cases of foodborne botulism, three cases of infant botulism (all type A) and zero cases of wound botulism were reported.

Brucellosis

Cause: Bacteria in the genus *Brucella.*

Illness and treatment: Symptoms include fever, profuse sweating, fatigue, loss of appetite, chills, weight loss, headache, and joint pain. Treatment is with antibiotics.

Sources: Infection results from broken or damaged skin contacting animal tissues (particularly placentas or aborted fetuses) and animal fluids, or by consuming unpasteurized dairy products from infected species (mainly cattle, goats, sheep and swine). Airborne infection can occur in laboratories handling *Brucella* cultures.

Prevention: Avoid unpasteurized dairy foods. Veterinarians, farmers and hunters should wear gloves when handling sick or dead animals or when assisting an animal giving birth. Laboratory workers should handle all specimens under appropriate biosafety conditions.

Recent Washington trends: Although brucellosis has been eradicated from cattle in the state since 1988, there are 0 to 4 reports of human brucellosis infections each year, primarily due to consumption of raw dairy products in foreign countries.

2014: Four cases, all travel associated, were reported. These cases reported animal contact in India, consumption of dairy in Mexico, animal contact in Uzbekistan, and consumption of raw dairy in Kenya.

Campylobacteriosis

Cause: Bacteria in the genus *Campylobacter*, most commonly *C. jejuni*.

Illness and treatment: Symptoms include diarrhea, sometimes containing blood, abdominal pain, fatigue, fever, and vomiting. Most persons will recover without treatment; however, serious complications can occur.

Sources: Transmission is fecal-oral, through ingestion of contaminated food that was inadequately cooked or mishandled, or through direct contact with animals. Reservoirs are animals such as cattle, puppies, kittens, swine, sheep, rodents and birds. Person-to-person transmission is uncommon. Commonly recognized exposures include: handling or eating undercooked/raw poultry, meat, unpasteurized (raw) milk or dairy products; drinking contaminated and inadequately treated water; and having contact with animals, especially young animals with diarrhea and poultry.

Additional risks: Those with weakened immune systems are at increased risk for infection.

Prevention: Avoid eating undercooked poultry and unpasteurized dairy products. Thoroughly clean cutting boards and counters used for raw meat or poultry to prevent contamination of other foods. Wash hands after handling animals, bird feces, or raw meat, particularly poultry.

Recent Washington trends: Campylobacteriosis is the most commonly reported enteric illness in Washington with 1,000 to 1,500 reports a year. Outbreaks involving person-to-person transmission are uncommon.

2014: 1,591 cases were reported.

Chlamydia Infection

Cause: Bacterium *Chlamydia trachomatis*.

Illness and treatment: Asymptomatic infection is common. There may be pain during urination or abnormal genital discharge. Females can have abdominal pain due to pelvic inflammatory disease, which can cause infertility or ectopic pregnancy. The patient and sexual partners should take appropriate antibiotics. Treated patients should be retested in three months or when they next present for medical care.

Sources: Chlamydial infection is sexually transmitted or may be acquired at birth.

Additional risks: Disease rates are highest among sexually active adolescents and young adults. Perinatal infection can result in neonatal conjunctivitis or pneumonia.

Prevention: Use safe sexual practices to reduce transmission. Screen sexually active women at risk to detect infection in asymptomatic patients. Test and treat all recent sexual partners of a person diagnosed with chlamydia infection to stop ongoing transmission.

Recent Washington trends: Recently over 25,000 cases are reported each year.

2014: 26,246 cases were reported (376.7 cases/100,000 population).

Cholera

Cause: Bacterial toxin from *Vibrio cholerae* serogroup O1 or O139. Other *V. cholerae* do not produce toxin and cause milder illness notifiable as Vibriosis.

Illness and treatment: Illness ranges from mild symptoms to severe sudden profuse watery diarrhea leading to life-threatening dehydration. Treatment is fluid replacement and antibiotics.

Sources: The bacteria are carried in the human intestine and spread mainly through fecally contaminated food or water. The only environmental reservoir in the United States is the Gulf of Mexico where raw seafood may be contaminated.

Additional risks: Unsafe drinking water, poor hygiene, poor sanitation and crowded living conditions can cause epidemics, particularly in urban areas of developing countries and in refugee situations in Asia, Africa and Latin America. Persons with reduced stomach acid are at increased risk.

Prevention: If traveling to risk areas, consult with a travel clinic or the CDC Travelers' Health website for recommendations about vaccination and other measures.

Recent Washington trends: A case was reported in 2002 following travel to the Philippines.

2014: No cases were reported.

Cryptosporidiosis

Cause: Various species of the protozoan *Cryptosporidium*, which form resistant oocysts.

Illness and treatment: Symptoms may be prolonged and include watery diarrhea, abdominal pain, nausea, vomiting, weight loss and fever. An anti-protozoal drug is available for persistent symptoms.

Sources: Cryptosporidia are common in animals. In this country oocysts are found in most surface waters tested. Transmission is by ingesting fecally contaminated water, milk or food, or by direct contact with infected animals or humans. Those with asymptomatic infections may infect others. Outbreaks have occurred in water parks, swimming pools and child care facilities.

Additional risks: For persons with weakened immune systems, especially those with advanced HIV infection, the disease can be severe and persistent. Cryptosporidia resist standard chemical disinfectants and may occur in municipal water systems, home filtered water, or bottled water.

Prevention: Wash hands thoroughly after using the toilet or contact with animals, particularly calves or animals with diarrhea. Avoid swallowing water during water recreation. Do not drink untreated surface water. Boil untreated drinking water for one minute or use other appropriate water treatment.

Recent Washington trends: After an increase in case reporting during 2005, following changed treatment and diagnostic practices, case rates have stabilized to between 88 and 139 cases per year.

2014: Seventy-five cases were reported (1.1 cases/100,000 population).

Cyclosporiasis

Cause: Protozoan *Cyclospora cayetanensis.*

Illness and treatment: Symptoms include persistent watery diarrhea, nausea, loss of appetite, abdominal pain, fatigue and weight loss. Antibiotics are available to treat persistent symptoms.

Sources: Cyclospora are common in many developing countries. Transmission occurs through ingestion of contaminated water or food, often fresh fruit or vegetables. Outbreaks in the United States have been attributed to imported produce such as raspberries, basil and lettuce. Tests for Cyclospora must be specifically requested at many diagnostic laboratories in addition to O&P testing.

Additional risks: Diarrhea may persist with immunosuppression.

Prevention: Wash produce thoroughly before it is eaten. If traveling to risk areas, consult with a travel clinic or the CDC Travelers' Health website.

Recent Washington trends: Most years zero to 11 cases are reported, mainly after international travel.

2014: Two cases were reported.

Diphtheria

Cause: Toxigenic strains of the bacterium *Corynebacterium diphtheriae.*

Illness and treatment: Classic diphtheria is an upper-respiratory tract illness characterized by sore throat, low-grade fever, and an adherent membrane of the tonsil(s), pharynx, and/or nose, sometimes with neck swelling. Diphtheria can involve almost any mucous membrane and may also be cutaneous. Treatment is with antitoxin, antibiotics, and supportive care.

Sources: Humans are the reservoir. Transmission from asymptomatic carriers can occur. Transmission is by respiratory droplets, but may occur from skin lesions or articles soiled with discharges from an infected person including raw milk which has served as a vehicle.

Additional risks: Susceptible travelers to areas where routine immunization is lacking are at higher risk for diphtheria infection, especially if an epidemic is in progress.

Prevention: Universal immunization including booster doses prevents infection. Respiratory and hand hygiene prevent transmission.

Recent Washington trends: The last recorded case was in 1981.

2014: No cases were reported.

Giardiasis

Cause: Protozoan *Giardia lamblia*, also known as *G. intestinalis* or *G. duodenalis*.

Illness and treatment: Infection may be asymptomatic or may cause diarrhea, abdominal pain, nausea, fatigue, and weight loss. Illness may be self-limited or be prolonged with persistent pale and greasy stools due to fat malabsorption. Anti-protozoal drugs are available.

Sources: Humans and both wild and domestic animals are reservoirs. Exposures include untreated surface water, shallow well water, recreational water, or, less commonly, food contaminated by feces. Person-to-person transmission occurs, such as in child care facilities or by oral-anal sexual contact.

Additional risks: Children under five years of age are infected more frequently than adults. Concentrations of chlorine used in routine water treatment may not kill *Giardia* cysts, especially if the water is cold. Giardiasis is one of the most common waterborne diseases in the country.

Prevention: Wash hands thoroughly after using the toilet or contact with animals, particularly animals with diarrhea. Avoid swallowing water during water recreation. Do not drink untreated surface water. Boil untreated drinking water for one minute or use other appropriate water treatment.

Recent Washington trends: Reported cases have been declining somewhat over the past decade. Incidence is highest in the summer and fall months. Most frequently reported exposures include recreational water and international travel. Outbreaks are uncommon.

2014: 548 cases were reported.

Gonorrhea

Cause: Bacterium *Neisseria gonorrhoeae.*

Illness and treatment: Many women and some men have no symptoms with infection. When symptoms occur, urethral discharge and painful urination are typical of genital infections. Complications include pelvic inflammatory disease in women, producing a risk of infertility, or epididymitis in men. There can be conjunctivitis, pharyngitis, proctitis, or rarely sepsis. Due to increasing drug resistance, treatment with two antibiotics is recommended. Treated patients should be retested in three months or when they next present for medical care.

Sources: Gonorrhea is sexually transmitted or may be acquired at birth.

Additional risks: Disease rates are highest among men and sexually active younger adults. Perinatal infection can result in neonatal conjunctivitis or sepsis.

Prevention: Use safe sexual practices to reduce transmission. Screening to detect asymptomatic patients is only recommended for women at increased risk for infection. If gonorrhea is found, also test for other sexually transmitted infections including HIV. Test and treat all recent sexual partners of a person diagnosed with gonorrhea to stop ongoing transmission.

Recent Washington trends: After several year of a steady decrease, the gonorrhea cases sharply increased every year since 2011. The gonorrhea incidence rate increased over 100 percent from 2011 to 2014.

2014: 6,136 cases were reported (88.1 cases/100,000 population).

Haemophilus influenzae (Invasive Disease, Under Age 5 Years)

Cause: Bacterium *Haemophilus influenzae.* Invasive disease due to any of the 6 capsular types, including type b (Hib), in a child under five years of age is reportable.

Illness and treatment: Invasive syndromes can include meningitis, bacteremia, epiglottitis, pneumonia, or bone and joint infections. Symptoms of meningitis include fever, headache, stiff neck, vomiting, light sensitivity and confusion. About 10 percent of cases surviving *H. influenzae* meningitis (due to any capsular type) have permanent neurological damage; however, among cases surviving meningitis due to Hib, 15-30 percent have hearing impairment or permanent neurologic damage. Treatment is with antibiotics.

Sources: Humans, including asymptomatic carriers, are the reservoir. Transmission is through respiratory droplets or direct contact with respiratory secretions.

Additional risks: Unimmunized or under-immunized infants and children are at risk for Hib, especially when they are taken into crowded settings.

Prevention: Immunize all infants to prevent *H. influenzae* type b infection. Respiratory and hand hygiene reduces transmission of all serotypes.

Recent Washington trends: Four to 13 cases (due to all serotypes) are reported annually in children less than five years of age. Among 60 cases reported in this age group during 2005 through 2013, only 10 (16.7 percent) were due to serotype b (Hib). In both Washington and nationwide, there has been a recent increase in the proportion of isolates from invasive disease cases that are non-typeable over the past decade.

Number of *H. influenzae* Cases Among Children <5 Years Old by Serotype, Washington State, 2005-2014

Year	Total	Not tested	B	non-B	Not typeable	%B	% Not typeable
2005	5	1	1	3	0	20%	0%
2006	5	0	1	3	1	20%	20%
2007	6	0	3	2	1	50%	17%
2008	2	0	0	0	2	0%	100%
2009	9	3	1	3	2	11%	22%
2010	10	0	0	3	7	0%	70%
2011	8	0	1	3	4	13%	50%
2012	4	0	1	1	2	25%	50%
2013	11	0	2	2	7	18%	64%
2014	9	0	4	2	3	45%	33%
Total	**69**	**4**	**14**	**22**	**29**	**20%**	**42%**

2014: Nine cases in children under five years were reported with no deaths.

Hantavirus [Includes Hantavirus Pulmonary Syndrome (HPS) and Non-HPS Hantavirus infection]

Cause: Sin Nombre virus in western United States, other viruses elsewhere.

Illness and treatment: Fever and mild flu-like symptoms can progress to acute respiratory distress syndrome (ARDS) with respiratory failure and shock. Treatment is supportive.

Sources: The deer mouse (*Peromyscus maniculatus*) is the major reservoir for Sin Nombre virus. Exposure occurs by inhaling aerosolized virus excreted in mouse urine, feces or saliva, particularly during improper cleaning of deer mouse infested areas.

Prevention: Keep rodents out of the home and workplace. When cleaning rodent-infested areas, use appropriate safety precautions.

Recent Washington trends: Since the recognition of hantavirus in 1993, 46 cases were reported through 2014 with 16 (35 percent) associated deaths (including a retrospectively identified case from 1985). In recent years there are usually 1 to 3 cases, predominantly exposed in eastern counties.

2014: One case was reported with no deaths.

Hepatitis A

Cause: Hepatitis A virus.

Illness and treatment: Onset is usually abrupt with fever, nausea, and abdominal pain followed by jaundice. Cases may be asymptomatic, particularly in children. Almost all cases recover but rare infections are fatal or require liver transplantation. Treatment is supportive.

Sources: Acutely infected humans shed virus in the feces and transmit directly (fecal-oral spread) or through fecally contaminated food (produce, shellfish, uncooked items), water, and environment, often encountered during international travel. Recent outbreaks in this country have been associated with imported produce. Bloodborne transmission is very rare.

Additional risks: Infected young children may have no symptoms but can be communicable. Transmission can occur within groups having poor hygiene or fecal-oral sexual practices.

Prevention: To prevent infection, immunize all children and any adults with risks for exposure, including travel to endemic areas including for adoption.

Recent Washington trends: Since 1989 when there were 3,273 cases, with increased vaccination hepatitis A incidence has decreased to fewer than 100 cases a year.

2014: Twenty-six cases (0.4 cases/100,000 population) were reported with no deaths. 13 cases were related to international travel, four associated with travel to Mexico, three to India, two to Ethiopia, two to the Philippines, one to Cambodia, and one to Iraq and Jordan.

Hepatitis B

Cause: Hepatitis B virus.

Illness and treatment: Acute infection may be asymptomatic or have abrupt onset with fever, abdominal pain, and jaundice. Chronic infection is typically asymptomatic until complications such as liver damage or cancer develop after decades. Surface antigen positivity (contagious) during pregnancy from acute or more typically chronic infection gives a risk of transmitting the virus during delivery. Perinatal infection is typically asymptomatic but infants infected at birth carry a high risk for later complications. A specialist can determine treatment options for hepatitis B virus infections.

Sources: Transmission is by contact with the blood, semen or vaginal secretions of an infected person, and can occur with minor exposures or during childbirth.

Additional risks: After acute infection, about 30 percent of children under five years will become chronically infected compared to about 5 percent of adults. Infants born to surface antigen positive women are at extremely high risk (90 percent) of becoming chronically infected, and for developing later complications including liver cancer.

Prevention: To prevent infection, routine hepatitis B immunization of all infants and children is recommended starting at birth. Adults at high risk are also recommended to get hepatitis B vaccine, including household and sexual contacts, healthcare workers, men who have sex with men, persons with HIV infection, and adults with diabetes aged 19 to 59 years. The vaccine can also be administered during pregnancy to those at risk. Routine testing is recommended for those born in Asia, Africa, and other regions with ≥ two percent prevalence of chronic infections. For infants born to hepatitis B positive women, hepatitis B vaccine and one dose of hepatitis B immune globulin (HBIG) administered within 12 hours after birth are 85 to 95 percent effective in preventing both acute HBV infection and chronic infection.

Recent Washington trends: Since 1987 when there were 1,126 acute cases, hepatitis B incidence has recently decreased to fewer than 50 acute cases per year with increased vaccination. On average, 1,131 cases of chronic hepatitis B were reported per year between 2005 and 2014. Between 2005 and 2013 3,060 babies born to HBsAg positive women were reported to local health jurisdictions. Of these (98 percent) received treatment within one day of birth and only 20 infants receiving all recommended treatment and follow-up testing developed chronic hepatitis B infections.

2014: Forty-four acute cases (0.6 cases/100,000 population) and no deaths were reported. Among 326 infants born to surface antigen positive women three perinatal infections were reported. A total of 1,149 chronic hepatitis B cases (16.5 cases/100,000 population) were reported in 2014.

Hepatitis C

Cause: Hepatitis C virus, which has 6 genotypes.

Illness and treatment: Most acute infections are asymptomatic but about 20 percent of cases have abrupt onset with fever, abdominal pain, and jaundice. Chronic infection is typically asymptomatic until complications such as liver damage or cancer develop after decades. A specialist can determine treatment options for hepatitis C virus infections.

Sources: Transmission is usually by contact with blood, particularly while sharing drug paraphernalia, or less commonly with semen or vaginal secretions of an infected person.

Additional risks: Chronic infection follows acute infection in 75 to 85 percent of cases and is more likely for males, those infected after 25 years of age, or the immunosuppressed including HIV co-infection.

Prevention: Use safe sexual practices, avoid sharing drug paraphernalia, and screen blood and tissue products

to prevent transmission. Routine testing is recommended for those with any bloodborne transmission risk and once for those born 1945 to 1965.

Recent Washington trends: Each year fewer than 30 acute cases are reported. On average, 5,457 cases of chronic hepatitis C were reported per year between 2005 and 2014.

2014: Eighty-three acute cases (1.2 cases/100,000 population) were reported, increased over 2013 and the highest rate since 1996. The youngest was age 16 years. 62 of 72 cases with information had injection drug use as a risk factor. A total of 6,593 chronic hepatitis C cases (94.6 cases/100,000 population) were reported in 2014.

Hepatitis D or E

Cause: Hepatitis D virus and hepatitis E virus. Hepatitis D virus infection always occurs with hepatitis B infection, either with a chronic hepatitis B infection (superinfection) or as two simultaneous new infections (coinfection).

Illness and treatment: Hepatitis D and E typically have abrupt onset of fever, nausea, and abdominal pain followed by jaundice. Hepatitis D may progress to chronic hepatitis.

Sources: Humans are the reservoir for hepatitis D, which is usually transmitted by blood or body fluids, particularly shared drug paraphernalia. Although risk factor are not well understood, humans and animals (swine) are the likely reservoirs for hepatitis E, with transmission through fecally contaminated food and water.

Additional risks: Pregnant women have higher risk for hepatitis E complications. Japan has reported more virulent hepatitis E strains.

Prevention: To avoid hepatitis B infection, and therefor hepatitis D infection, immunize all infants and children as well as any adult with risks for exposure. Use safe sexual practices, avoid sharing drug paraphernalia, and screen blood and tissue products to prevent hepatitis D transmission. Use precautions while traveling to ensure safe food and water to avoid hepatitis E infection.

Recent Washington trends: Reports are rare. Cases of hepatitis D are typically associated with injection drug use. Cases of hepatitis E are typically travel-associated.

2014: Three cases of hepatitis D were reported, two with known exposure through injection drug use, and four cases of hepatitis E were reported, one each associated with travel to India and Ethiopia.

Herpes Simplex, Initial Genital and Neonatal

Cause: Herpes simplex virus serotypes HSV-1 and HSV-2.

Illness and treatment: Genital infection is life-long, ranging from no symptoms to recurring episodes of mild to painful genital ulcers. Antiviral medications partially control the frequency and severity of the episodes but are not a cure. Neonatal infection may be severe, involving the liver or brain; or mild, involving the skin, eyes, and mouth.

Sources: Herpes infection is sexually transmitted or acquired at birth.

Additional risks: Disease rates are higher in younger women.

Prevention: Use safe sexual practices to reduce transmission. During the third trimester, pregnant women without herpes should abstain from sexual contact with partners known or suspected of having herpes.

Recent Washington trends: Recently about 2,000 cases reported each year.

2014: 2,082 cases of initial genital HSV infection (29.9 cases/100,000 population) and one case of neonatal infection was reported.

HIV/AIDS

Cause: HIV disease is caused by the human immunodeficiency virus (HIV). After HIV enters the body, it infects and kills white blood cells (CD4+ T-cell lymphocytes). This weakens the body's immune system, and can eventually cause a person to develop Acquired Immune Deficiency Syndrome (AIDS).

Illness and treatment: AIDS is defined by a person's CD4+ T-cell count being below 200 cells/mL and/or the existence of one or more of a broad range of opportunistic illnesses that are specific to HIV disease. The presence of AIDS is usually an indication that a person has been infected with HIV for many years.

Sources and spread: HIV enters the body as a result of direct contact with blood, semen, vaginal fluid, or breast milk from a person with HIV infection. Most HIV cases are the result of unprotected sex with an HIV positive partner.

Additional risks: Groups at increased risk for HIV include injection drug users, people who use illegal stimulants such as methamphetamines or cocaine, people who have concurrent sexual relationships, and people recently diagnosed with other sexually-transmitted infections.

Prevention: Wear condoms during sex. Use clean needles and other equipment used to inject drugs. Do not have a sexual relationship with more than one person at a time.

Recent Washington trends: Statewide, annual HIV case counts have gradually declined over the past several years. Between 450 and 500 people are newly diagnosed with HIV infection each year. About one in three cases is diagnosed late in the course of his or her HIV illness, or develops AIDS within 12 months of HIV diagnosis. HIV rates are highest among gay and bisexual men, as well as racial or ethnic minorities.

2014: 446 cases were reported (6.4/100,000 population).

Legionellosis

Cause: Bacteria in the genus *Legionella*, commonly *L. pneumophila* serogroup 1 but also other serogroups or other species such as *L. micdadei*, *L. bozemanii*, and *L. longbeachae*.

Illness and treatment: There are two clinically and epidemiologically distinct illnesses. Legionnaires' disease presents with fever, muscle aches, cough, and pneumonia. Pontiac fever is a milder illness without pneumonia. Treatment is with antibiotics.

Sources: The organism is ubiquitous. Hot water systems (showers), air conditioning cooling towers, evaporative condensers, humidifiers, whirlpool spas, respiratory therapy devices, decorative fountains, and potting soil have been implicated epidemiologically in outbreaks.

Additional risks: Illness is more common with age over 50 years, smoking, diabetes, chronic lung disease, or immunosuppression (particularly due to corticosteroids or organ transplant).

Prevention: Maintain cooling towers properly. Do not use tap water in respiratory therapy devices.

Recent Washington trends: The number of cases each year varies from less than ten to over 50; each year, there are generally one to five deaths.

2014: Sixty-three cases (0.9 cases/100,000 population) were reported with eight deaths. This is the highest count of Legionellosis cases on record for Washington State. Nationwide, Legionellosis incidence is on an upward trend, though reasons for the increase are unclear; increased testing may be a factor.

Leptospirosis

Cause: Spiral shaped bacteria (spirochetes) in the genus *Leptospira*.

Illness and treatment: Symptoms include fever, headache, and severe muscle aches. Jaundice, kidney failure, or meningitis can develop. Treatment is with antibiotics.

Sources: The disease affects wild and domestic animals, including pets. Urine and tissues are infective. Transmission occurs by skin or mucous membrane contact with urine or tissues from an infected animal or exposure to contaminated water, food, or soil, or inhalation of aerosolized fluids during recreational activities or farm work.

Prevention: Avoid contact with urine from infected animals and with water or soil potentially contaminated with animal urine.

Recent Washington trends: Generally zero to five cases are reported. Most infections relate to recreational water exposure in Washington or during travel.

2014: No cases were reported.

Listeriosis

Cause: Bacterium *Listeria monocytogenes*.

Illness and treatment: Symptoms depend on the host. Immunocompromised, neonatal, and elderly persons usually present with sepsis and meningitis. In pregnant women, listeriosis may cause a flu-like illness (i.e., fever, headache, and muscle aches) and may cause miscarriages, preterm births, or stillbirths. Immunocompetent persons may have acute febrile gastroenteritis. While diarrhea can occur, standard stool culture methods usually do not detect *Listeria*. Severe infections are treated with antibiotics.

Sources: The organism occurs in soil, water, and the intestines of animals and humans. Transmission is mainly through food, such as unpasteurized milk, cheese, processed meats, deli salads, fruits and vegetables. Food can be contaminated during or after processing.

Additional risks: Unlike most foodborne pathogens, *Listeria* can multiply in refrigerated foods. Illness may be severe for newborns, the elderly, and persons with weakened immune systems. Pregnant women with listeriosis may have few symptoms but have fetal loss or premature birth.

Prevention: If pregnant or immunocompromised, avoid soft cheeses made with unpasteurized milk, processed ready-to-eat foods, and smoked fish. Thoroughly cook all foods from animal sources, wash raw produce thoroughly, and heat leftovers, hot dogs and deli meats until steaming before eating.

Recent Washington trends: Each year there are 11 to 29 reports with zero to five deaths.

2014: Twenty-four cases were reported (0.3 cases/100,000 population) with five deaths.

Lyme Disease

Cause: Spiral shaped bacterium (spirochete) *Borrelia burgdorferi*.

Illness and treatment: The classic sign of early Lyme disease is erythema migrans, an expanding, target-shaped (bulls-eye) rash apparent in 70-80 percent of cases. Systemic symptoms such as fatigue, headache, fever, and muscle and joint aches can also occur in early infection. Disseminated infection can manifest as recurrent joint swelling (typically of the knees or other large joints), peripheral or central nervous system involvement (e.g., Bell's palsy, radiculoneuropathy, lymphocytic meningitis, encephalomyelitis), or heart complications (atrioventricular heart block). Treatment with two to four weeks antibiotics clears infection.

Some patients may experience post-treatment Lyme disease syndrome, in which symptoms linger after treatment and clearance of *B. burgdorferi*. Current scientific evidence does support the effectiveness of prolonged antibiotic treatment for a diagnosis of chronic Lyme disease.

Sources: *B. burgdorferi* is maintained in an enzootic cycle involving *Ixodes* ticks and mammal reservoirs, especially mice and other small mammals. Deer are not a reservoir but can be an important host for adult ticks. In the Pacific Coastal United States, the primary vector is *Ixodes pacificus* (western blacklegged tick), which lives in wooded or brushy areas. In Washington, *I. pacificus* is found in the western half of the state and along the eastern slopes of the Cascade Mountains. In the northeastern and Upper Midwest regions of the United States, the tick vector is *I. scapularis* (blacklegged or "deer" tick). Ticks must be attached for at least 24-36 hours to transmit *B. burgdorferi*.

Prevention: During outdoor activities in *Ixodes* tick habitat, avoid tick bites by tucking pants into socks (to route ticks onto the outside of clothing so that they can be seen and picked off before they attach), wearing light-colored clothing (to spot ticks more easily), and using repellents containing DEET or permethrin. Check the body thoroughly for ticks. Be alert for rash, fever, or other symptoms of Lyme disease during the month after a known tick bite or spending time in tick habitat; if symptoms develop, see a health care provider.

Recent Washington trends: Each year, seven to 23 Lyme disease cases are reported in Washington. Most Washington cases result from a tick bite that occurred out-of-state. The few endemic cases have tick exposures predominantly on the west side of the Cascade Mountains, reflecting the known distribution of the *Ixodes* vector ticks. Low levels of *B. burgdorferi* have been found in ticks collected from Washington State.

2014: Fifteen cases (0.2 cases/100,000 population) were reported.

Malaria

Cause: *Plasmodium* species, commonly *P. vivax*, *P. falciparum*, *P. ovale*, and *P. malariae*.

Illness and treatment: Classic malaria involves recurrent bouts of fever, chills, sweats, and headache. Many other symptoms can occur, affecting the gastrointestinal, respiratory, muscular, and neurological systems. Treatment is with antimalarial drugs and supportive care.

Sources: Transmission occurs by the bite of infected anopheline mosquitoes.

Additional risks: Although rarely seen in the United States, transmission can occur through blood contact (e.g., transfusions or needle-sharing).

Prevention: When traveling in risk areas avoid mosquito bites, take medication to avoid malaria, and receive proper treatment if infected.

Recent Washington trends: Each year there are 20 to 40 reports among tourists, military personnel, business travelers, mission workers, immigrants and refugees. Report a first diagnosis in this country.

2014: Forty-one cases (0.6 cases/100,000 population) were reported. Fifteen were *P. falciparum*, 13 *P. vivax*, two *P. malariae,* seven *P. ovale*, no co-infections*,* and six were unknown *Plasmodium* species. Travel exposures were mainly in Africa and Asia.

Measles

Cause: Measles virus, family Paramyxoviridae, genus *Morbillivirus*.

Illness and treatment: Typical measles includes a two to four day prodrome that includes fever up to 105°F and cough, conjunctivitis, or runny nose, followed by a maculopapular rash which typically starts at the hairline and extends downward to cover the entire body. The rash lasts five to six days or longer. Complications are more common among children under five and adults over 20 years of age and can include diarrhea, ear infection, pneumonia, acute encephalitis, and even death. Rarely, measles can occur in a person known to have received a vaccination for measles. The illness in these cases may not be typical. The case fatality rate for measles in this country is 0.1–0.3 percent but higher in parts of the world with poor nutrition and limited access to health care. Treatment is supportive.

Sources: Humans are the reservoir. Measles is highly contagious with transmission occurring primarily through respiratory droplets, though airborne transmission has been documented in closed areas for up to two hours after a person with measles was present.

Additional risks: Measles in the United States is mainly related to international travel by susceptible persons to countries where measles is endemic or where outbreaks are occurring. Transmission to additional persons that are not vaccinated can occur leading to outbreaks. In developing countries, malnutrition increases the risk of severe complications and death.

Prevention: Universal immunization prevents infection. Aggressive follow-up with exposed persons, along with respiratory hygiene and isolation of contagious individuals, can prevent further transmission.

Recent Washington trends: Each year there are typically fewer than five cases reported, although outbreaks with seven to 19 cases occurred in Washington in 2001, 2004, and 2008. In 2014, three outbreaks, with six to 16 cases in each outbreak plus three additional non-outbreak cases resulted in the highest number of measles cases (33) reported in Washington since 1996 when 36 cases were reported, most related to a large outbreak at Western Washington University.

2014: Thirty-three cases (0.5 case/100,000 population) were reported.

Meningococcal Disease (Invasive)

Cause: *Neisseria meningitidis*, mainly serogroups B, C, Y, and W135 in the United States, and serogroup A elsewhere. Invasive disease is reportable.

Illness and treatment: Invasive meningococcal disease most commonly manifests as meningitis with symptoms of fever, headache, stiff neck, vomiting, light sensitivity and confusion, or as bloodstream infections (meningococcemia) which can cause fever and septic shock as well as a rash (bruise-like skin lesions) and often lead to severe outcomes such as permanent disability due to loss of limbs or even death. A person may have both syndromes. Pneumonia and joint infections can also occur. Even with appropriate antibiotic treatment and supportive care, overall case fatality rate for invasive disease is nine to 12 percent.

Sources: Humans, including asymptomatic carriers, are the reservoir. Transmission is through respiratory droplets or direct contact with respiratory secretions. Secondary cases are rarely documented, though outbreaks can occur.

Additional risks: Rates are highest for infants under 12 months. An increasing proportion of cases are in adolescents and young adults. Crowded living conditions such as dormitories, recent history of an upper respiratory illness, and tobacco smoke exposure may increase risk, as do certain immune deficiencies including asplenia.

Prevention: Universal immunization is recommended for all adolescents aged 11 to 18 years and some persons aged two to 55 years at increased risk for this disease (e.g., persons with HIV, complement disorder or asplenia, as well as microbiologists and travelers at prolonged increased risk for disease exposure). Prophylactic antibiotics are usually advised for persons with recent close contact with a confirmed case. Good respiratory hygiene can reduce transmission.

2014: Seventeen cases (0.2 cases/100,000 population) were reported with two deaths.

Number of Meningococcal Disease Cases by Serogroup, Washington State, 2005-2014

Year	Total	Not Tested*	B	C	Y	W135	Other	% Vaccine serogroup	% B
2005	34	3	20	6	5	0	0	32%	59%
2006	43	8	19	9	7	0	0	37%	44%
2007	28	1	13	4	10	0	0	50%	46%
2008	31	3	11	5	9	2	1	52%	35%
2009	25	2	13	2	8	0	0	40%	52%
2010	29	2	7	7	12	1	0	69%	24%
2011	22	0	12	2	7	1	0	45%	55%
2012	24	0	9	4	8	0	3	50%	38%
2013	20	3	9	2	3	2	1	35%	45%
2014	17	0	6	5	4	1	1	59%	35%
Total	**273**	**22**	**119**	**46**	**73**	**7**	**6**	**45%**	**44%**

Mumps

Cause: Mumps virus, a paramyxovirus.

Illness and treatment: Mumps causes inflammation of glandular tissue, most commonly the salivary glands (parotitis occurs in 30 to 40 percent of infected persons). Up to 20 percent of infections have no symptoms and an additional 40 to 50 percent have mild, nonspecific, or primarily respiratory symptoms. Complications include inflammation of testes (orchitis) or ovaries (oophoritis), encephalitis or aseptic meningitis (occasionally resulting in deafness), pancreatitis, and myocarditis. Treatment is supportive.

Sources: Humans, including persons with asymptomatic infection, are the reservoir. Transmission is mainly through direct contact with infected respiratory droplets or saliva.

Additional risks: The average age of reported mumps cases has gradually increased, with a majority of cases now occurring in persons 15 years of age and older. A large outbreak of mumps occurred in 2006 in nine Midwestern states; the majority of cases were college-aged persons and adults in their 20s. Outbreaks in college settings have continued to occur since that time. Another outbreak in 2009-10 involved a religious community with many of the cases in immunized adolescent males who attended private schools and spent many hours face to face each day.

Prevention: Recommendations for universal childhood immunization have greatly reduced the number of infections. Two doses of mumps-containing vaccine are now recommended for school aged-children, college students, and health care workers born in or after 1957. Respiratory and hand hygiene can also reduce transmission.

Recent Washington trends: Between 1992 and 2005 the rate of reported mumps infections was up to 0.5 per 100,000 persons (zero to 26 cases per year). Due to the increased awareness of mumps following the 2006 outbreak in the Midwest, 42 and 53 cases were reported in 2006 and 2007, respectively. A change in the national reporting criteria was made in 2008 and the rate of reported mumps returned to pre-2006 levels.

2014: Ten cases were reported.

Pertussis

Cause: Bacterium *Bordetella pertussis*.

Illness and treatment: Classic pertussis symptoms include initial cold-like manifestations followed by an extended cough illness with spasms of severe coughing (paroxysms) that may be followed by a gasp, whoop, or vomiting and which can last for weeks. Infants with pertussis may have feeding difficulties and often become apneic. Treatment is with antibiotics and supportive care.

Sources: Humans. Older adolescents and adults with mild symptoms not recognized as pertussis often serve as a reservoir in the community. Pertussis is transmitted through respiratory droplets or direct contact.

Additional risks: Complications, which occur most often in very young infants, can include pneumonia, seizures, encephalopathy and death.

Prevention: Recommended universal childhood immunization with a booster dose for adolescents and adults can reduce the risk of infection and generally prevents severe illness in most age groups. Very young infants (under two months of age) too young to be immunized can be protected by vaccinating the mothers during the last trimester of pregnancy, as well as assuring that others who will have close contact with the infant have been vaccinated. Respiratory and hand hygiene can reduce transmission. Any person with a cough illness should avoid contact with pregnant women and young infants.

Recent Washington trends: The number of cases reported each year varies considerably, ranging from 184 to 4,916 (during the 2012 outbreak) cases a year since 1995. There is also variation in the rate of reported disease among health jurisdictions, reflecting local outbreaks.

2014: 601 cases (8.6 cases/100,000 population) were reported.

Plague

Cause: Bacterium *Yersinia pestis.*

Illness and treatment: Plague causes three clinical syndromes: bubonic (fever, headache, nausea and unilateral lymph node swelling); septicemic (bacteremia and multi-organ system failure); and pneumonic (pneumonia). A patient may have several syndromes. About 11 percent of plague cases in the United States are fatal. Treatment is with antibiotics and supportive care.

Sources: Wild rodent populations are the natural reservoir where plague is maintained by fleas. Humans are infected through flea bites, handling tissues from infected animals, or respiratory droplet spread from animals or people with pneumonic plague.

Prevention: Avoid contact with sick or dead wild animals, rodent-proof houses, prevent pets from contracting fleas, and use repellents on skin and clothing when outdoors.

Recent Washington trends: Testing of 8,139 wildlife (mostly coyote) serum specimens collected July 1975 to July 2011 in Washington found 226 (2.8 percent) seropositive, a measure of previous exposure, not necessarily current disease. Human infections are rare. The last reported case was an animal trapper in Yakima exposed while skinning a bobcat in 1984. In neighboring Oregon, five people have been diagnosed with plague between 2010 and 2012, along with a positive cat in 2012.

2014: No human cases of plague were reported.

Polio

Cause: Poliovirus, a member of the enterovirus subgroup, family Picornaviridae. Three serotypes, P1, P2, and P3 (and the related live oral vaccine strains), can cause disease.

Illness and treatment: Over 90 percent of infections are asymptomatic and four to eight percent result in only minor illnesses. Non-paralytic aseptic meningitis with full recovery occurs in one to two percent of infections. Less than one percent of infections result in flaccid paralysis. Treatment is supportive.

Sources: Humans are the reservoir. Transmission is mainly through the fecal-oral route. Virus may be present in the stool of an infected person for at least three to six weeks.

Additional risks: Travel by susceptible persons to the few countries where polio is still endemic or to countries still routinely using oral polio vaccine can increase the risk of becoming infected.

Prevention: Universal childhood immunization prevents infection. Only inactivated polio vaccine – which can prevent paralysis, but does not provide intestinal immunity – is now used in this country. There is no recommendation for routine immunization of adult residents of the United States.

Recent Washington trends: The last naturally acquired infection with wild-type polio virus was in 1977. In 1993, a case of vaccine-associated paralytic polio occurred in a state resident after a family member had received live oral polio vaccine (the use of which has since been discontinued in the United States).

2014: No cases were reported.

Psittacosis

Cause: Bacterium *Chlamydophila* (previously *Chlamydia*) *psittaci*.

Illness and treatment: Abrupt onset of fever, chills, headache, and nonproductive cough which may progress to shortness of breath and pneumonia. Treatment is with antibiotics.

Sources: Birds in the parrot family are common sources, with poultry, pigeons, canaries, and sea birds being less common sources. Infection usually occurs when a person inhales organisms excreted in aerosolized dried feces or respiratory tract secretions of infected birds.

Prevention: Avoid purchasing or selling birds that appear ill, practice preventive husbandry, and wear protective clothing when cleaning cages or handling infected birds. If respiratory or influenza-like symptoms occur after bird caretaking, seek medical attention and report bird contact.

Recent Washington trends: Each year there are zero to four reports commonly associated with indoor exposure to pet birds and less commonly farm or wild birds.

2014: One case of psittacosis was reported, associated with occupational exposure to wild birds.

Q Fever

Cause: Bacterium *Coxiella burnetii.*

Illness and treatment: Acute Q fever symptoms are fever, cough, chills, retrobulbar headache, malaise, weakness, nausea, and severe sweats. Chronic Q fever manifests primarily as endocarditis. Treatment is with antibiotics.

Sources: The most common reservoirs are sheep, cattle, and goats. Infected animals are usually asymptomatic; they shed the organism in highest concentration in birthing products but also in urine, feces, and milk. A common exposure mechanism is inhalation of dust from premises contaminated by placental tissues, birth fluids, or excreta of infected animals.

Additional risks: Pregnant women, persons with pre-existing heart valvulopathies, and immunosuppressed persons are at increased risk of developing chronic infection.

Prevention: Consume only pasteurized milk and dairy products. Appropriately dispose of animal birth products. Restrict access to barns and facilities housing potentially infected animals. Compost manure in a covered area instead of spreading it in fields. Persons with risk factors should not assist in animal birthing. Limit visitors during kidding season and advise them about high risk groups.

Recent Washington trends: In most years there are zero to three cases. A notable exception occurred in 2011, when eight cases were linked to a goat-associated outbreak.

2014: One case was reported.

Rabies (Human)

Cause: Rabies virus.

Illness and treatment: Initial neurologic symptoms include abnormal skin sensation or pain, often affecting the site of the bite, and subtle personality changes. Later neurologic symptoms include seizures, excess salivation, fear of water, delirium, agitation, and paralysis. Symptomatic illness is considered to be universally fatal with a few notable exceptions: experimental treatment in this country saved one young girl in Wisconsin (2005); Texas reported a case of presumptive abortive human rabies (2009); and California reported a recovery of a patient with clinical rabies (2011).

Sources: Rabies virus is carried by mammals. In Washington, bats are the primary reservoir of rabies virus. Skunks, raccoons, and foxes are additional reservoirs elsewhere in this country. In some countries, dogs are the main reservoirs.

Although bats are Washington's primary known reservoir, other mammals can acquire rabies virus from a bat, and importation of rabies from other regions could also occur. Rabies virus is most often transmitted via a bite from a rabid animal, but can also be spread if saliva or other infectious material (e.g., brain tissue) contaminates broken skin or mucosa. Person-to-person transmission is documented only by tissue/organ transplantation.

Prevention: Obtain post-exposure prophylaxis after exposure to a rabid or potentially rabid animal. Certain high risk groups, such as veterinary staff or persons who frequently handle wild mammals, should have pre-exposure vaccination. Keep vaccinations up-to-date for all dogs, cats and ferrets, avoid contact with unfamiliar animals, and keep bats out of the home.

Recent Washington trends: Two human cases due to infection with the bat rabies variant of rabies virus were reported in the past 50 years, one in 1995 and one in 1997.

2014: No human rabies cases were reported.

Rabies, Suspected Human Exposure

Information about rabies post-exposure prophylaxis (PEP) is available from the Advisory Committee on Immunization Practices available from CDC (www.cdc.gov/rabies/). Also see Rabies (Human).

Recent Washington trends: In previous years, PEP administration was tracked, with typically 240 to 290 persons receiving PEP per year. A WAC revision in February 2011 changed this condition to "suspected rabies exposure," which should include all PEP as well as instances where PEP was advised but declined by the patient. In 2013, 287 suspected rabies exposures were reported. Of bats tested in Washington, five to 10 percent are identified as rabid each year. Since 1987, only four rabid domestic animals have been identified, two with bat variant virus (Table 1).

2014: 243 reports of suspected rabies exposure were reported, a 17 percent decrease from 2013. The most common exposures were bats (81 percent) and dogs (nine percent). Fifteen (five percent) of 276 of tested bats were rabid (Table 2). No animals tested in Washington were rabid other than bats (Table 3).

Table 1. Rabid Non-Bat Animals and Rabies Strains, Washington, 1987–2014

Year	Animal type (County)	Rabies strain
2002	Cat (Walla Walla)	Bat-variant
1994	Llama (King)	Bat-variant
1992	Horse (Franklin)	Unknown
1987	Dog (Pierce)*	Unknown, but history of bat exposure

* Infection was not confirmed at CDC

Table 2. Washington State Bats Tested for Rabies, 2010-2014

	2010		2011		2012		2013		2014		County Total	
Counties	Positive	Tested	Positive	Tested	Positive	Tested	Positive	Tested	Positive	Tested	Positive	Tested
Adams	0	0	0	1	0	0	0	0	0	1	0	2
Asotin	1	2	0	1	0	0	0	3	0	0	1	6
Benton	0	4	0	0	0	1	0	2	0	1	0	8
Chelan	0	2	1	1	1	13	0	2	0	6	2	24
Clallam	0	1	1	7	0	1	1	6	1	5	3	20
Clark	1	11	0	11	0	9	0	18	0	16	1	65
Columbia	0	0	0	0	0	0	0	0	0	0	0	0
Cowlitz	1	5	0	5	1	3	0	14	0	13	2	40
Douglas	0	1	0	1	0	1	0	0	0	0	0	3
Ferry	1	1	0	1	0	2	0	0	0	1	1	5
Franklin	0	1	0	0	0	1	1	1	0	0	1	3
Garfield	0	0	0	0	0	0	0	0	0	0	0	0
Grant	0	2	0	1	0	3	0	1	0	3	0	10
Grays Harbor	0	0	0	1	1	3	0	1	0	0	1	5
Island	0	6	1	10	1	9	0	10	1	10	3	45
Jefferson	0	2	0	1	0	5	1	4	0	6	1	18
King	2	45	1	45	1	47	4	64	4	64	12	265
Kitsap	1	10	0	15	0	10	1	27	3	19	5	81
Kittitas	1	2	0	0	0	2	1	3	0	4	2	11
Klickitat	0	3	0	1	0	3	0	0	2	3	2	10
Lewis	0	10	1	9	0	9	0	11	0	13	1	52
Lincoln	0	0	0	0	0	0	0	1	0	1	0	2
Mason	0	4	0	2	0	9	0	4	0	11	0	30
Okanogan	0	0	0	0	0	1	0	2	0	3	0	6
Pacific	0	3	0	1	0	7	0	4	0	4	0	19
Pend Oreille	0	0	0	3	0	1	0	0	0	0	0	4
Pierce	1	12	1	10	0	10	0	13	0	8	2	53
San Juan	0	2	0	3	0	2	0	1	0	1	0	9
Skagit	0	5	0	2	1	8	0	5	1	8	2	28
Skamania	0	0	0	0	0	0	0	0	0	2	0	2
Snohomish	3	24	1	15	1	16	0	22	1	21	6	98
Spokane	0	8	0	7	0	9	0	19	0	12	0	55
Stevens	0	4	0	2	0	2	0	6	0	3	0	17
Thurston	2	16	2	37	0	18	0	11	0	13	4	95
Wahkiakum	0	1	0	2	1	1	0	2	0	1	1	7
Walla Walla	0	2	1	1	0	1	0	1	0	0	1	5
Whatcom	0	10	1	5	1	12	3	22	2	19	7	68
Whitman	0	1	0	2	0	0	0	2	0	0	0	5
Yakima	0	0	0	1	0	2	0	2	0	4	0	9
Total	14	200	11	204	9	221	12	284	15	276	61	1185

Table 3: Washington State Animals Tested for Rabies, 1988-2014 (Rabid animals in parentheses)

Year	Bat	Cat	Dog	Ferret	Raccoon	Skunk	Rodent	Lagomorph	Other Wild	Other Domestic	Total
1988	69 (4)	165	110	15	16	3	12	2	5	3	400 (4)
1989	102 (9)	124	91	20	9	4	8	1	9	4	372 (9)
1990	63 (4)	104	82	5	7	5	5	1	14	4	290 (4)
1991	90 (9)	105	96	13	8	3	13	0	19	2	349 (9)
1992	73 (6)	132	90	16	14	2	12	0	14	6 (1)*	359 (7)
1993	68 (1)	122	95	8	4	8	16	2	10	13	346 (1)
1994	58 (14)	105	90	7	4	3	15	0	16	14 (1)^	312 (15)
1995	263 (15)	140	114	12	8	1	23	3	15	18	597 (15)
1996	257 (13)	104	101	8	9	2	14	3	20	12	530 (13)
1997	780 (51)	155	118	7	17	4	15	2	18	11	1127 (51)
1998	447 (27)	126	109	8	11	1	6	0	19	16	743 (27)
1999	334 (25)	103	71	3	11	3	8	1	14	13	561 (25)
2000	330 (23)	105	60	1	2	4	6	1	9	4	522 (23)
2001	263 (22)	111	93	2	3	1	8	0	4	5	490 (22)
2002	186 (12)	99 (1)	53	7	2	2	9	1	8	9	376 (13)
2003	229 (23)	137	72	0	11	1	4	1	9	10	474 (23)
2004	311 (20)	141	70	3	13	6	11	0	6	10	571 (20)
2005	245 (15)	132	66	3	12	2	5	1	10	4	480 (15)
2006	273 (15)	105	70	4	13	1	2	1	8	5	482 (15_
2007	315 (22)	132	97	1	16	3	5	0	9	3	581 (22)
2008	337 (17)	143	76	1	10	2	5	1	9	11	595 (17)
2009	311 (14)	133	90	1	12	5	4	1	7	9	573 (14)
2010	200 (14)	103	63	0	14	1	6	1	9	10	407 (14)
2011	204 (11)	87	51	1	9	1	2	0	8	5	368 (11)
2012	221 (9)	98	54	2	7	0	4	0	7	9	402 (9)
2013	284 (12)	80	65	0	13	0	3	0	5	9	459 (12)
2014	276 (15)	75	65	0	12	0	1	1	6	11	435 (15)
Total 1988-2014	6,589 (422)	3,166 (1)	2,200	148	267	68	222	24	287	230 (2)	13,201(425)

* Horse
^ Llama

Rodents include: beaver, chinchilla, chipmunk, degu, gerbil, gopher, hamster, marmot, mouse, muskrat, nutria, porcupine, prairie dog, rat, squirrel, vole, woodchuck

Lagomorphs include: rabbit and pika
Other domestic include: burro, cattle, goat, horse, llama, mule, pig, sheep, zebra

Other wild include: badger, bear, bison, bobcat, cougar, coyote, deer, fox, kinkajou, lynx, marten, mink, mole, monkey/non-human primate, ocelot, opossum, otter, seal, shrew, sugar glider, weasel, wolf, wolf-hybrid, zorilla (striped polecat)

Rare Diseases of Public Health Significance

Rare diseases of public health significance are defined as diseases or conditions of general public health concern, which are not commonly diagnosed in Washington residents.

Anaplasmosis/Ehrlichiosis

Cause: *Anaplasma phagocytophilum* (cause of human granulocytic anaplasmosis, formerly called human granulocytic ehrlichiosis) and several *Ehrlichia* species (causes of ehrlichiosis). All are closely related bacteria that infect white blood cells. The terms "anaplasmosis" and "ehrlichiosis" are sometimes used interchangeably, and antibodies can be cross-reactive on serologic testing.

Illness and treatment: Illnesses with anaplasmosis and ehrlichiosis are very similar. Signs and symptoms can include fever, headache, muscle pain, and fatigue. Thrombocytopenia (low platelets), leukopenia (low white blood cells), anemia (low red blood cells or hemoglobin), and elevated liver enzymes may also be present. Anaplasmosis and ehrlichiosis are treated with antibiotics, typically doxycycline.

Sources: *A. phagocytophilum*, the cause of anaplasmosis, is maintained in an enzootic cycle involving *Ixodes* ticks and mammal reservoirs, a cycle similar to that of *Borrelia burgdorferi* (the cause of Lyme disease). In the Pacific Coastal United States, the primary vector is *Ixodes pacificus* (western blacklegged tick), which lives in wooded or brushy areas; in the northeastern and Upper Midwest regions of the United States, the tick vector is *I. scapularis* (blacklegged or "deer" tick). *Ehrlichia chaffeensis* and *E. ewingii*, both causes of ehrlichiosis, are transmitted by *Amblyomma americanum* (Lone star tick), found in south central and southeastern states. The newly-identified *E. muris*-like agent, also a cause of ehrlichiosis, is transmitted by *I. scapularis* in the Upper Midwest. Rarely, *A. phagocytophilum* and *Ehrlichia* species can also be transmitted via blood transfusion or solid organ transplant.

Prevention: During outdoor activities in tick habitat, avoid tick bites by tucking pants into socks (to route ticks onto the outside of clothing so that they can be seen and picked off before biting), wearing light-colored clothing (to spot ticks more easily), and using repellents containing DEET or permethrin. Check the body thoroughly for ticks. Be alert for sudden onset of fever; if signs or symptoms develop, see a health care provider.

Recent Washington trends: From 2004 to 2013, four cases of anaplasmosis were reported, two with exposure in the Upper Midwest (both in 2013) and two with exposures in the northeastern United States (2004, 2007). One case of ehrlichiosis due to *E. chaffeensis* was reported in 2011, associated with travel to the southeastern United States.

2014: No cases of anaplasmosis or ehrlichiosis were reported. To date, no locally-exposed Washington cases of anaplasmosis have been reported; however, very low levels of *A. phagocytophilum* have been found in *Ixodes* ticks collected from Washington State.

Babesiosis

Cause: *Babesia* species, including *Babesia microti*, *B. duncani*, and other rare species. Like *Plasmodium* (the cause of malaria), *Babesia* are protozoan parasites that infect red blood cells.

Illness and treatment: Malaria-like illness ranging from flu-like symptoms such as fever, chills, sweats, and body aches to severe, life-threatening disease in people who are elderly, asplenic (lack a spleen), or have other forms of immune compromise. Illness can involve severe anemia. Treatment is with antibiotics. Healthy persons may have asymptomatic infections, which can last weeks to months.

Sources: *Babesia* parasites are transmitted by infected ticks. *B. duncani* (formerly "WA1") and the *B. divergens*-like agent have been transmitted within Washington, but their tick vectors are unknown. *B. microti* is the mostly commonly identified *Babesia* species in the United States and is transmitted by *Ixodes scapularis* (blacklegged or "deer" tick) in the Upper Midwest and northeastern United States. *Babesia* parastites may also

be transmitted via blood transfusion from infected, asymptomatic blood donors. Transmission from mother to infant during pregnancy or delivery can also occur.

Prevention: During outdoor activities in endemic areas, wear appropriate clothing, use repellents, and check the body for ticks.

Recent Washington trends: From 1990 to 2013, seven babesiosis cases were reported. Four of these cases were exposed to *Babesia* in Washington: three cases caused by *B. duncani* (one in 1991 and two in 1994, in a blood transfusion recipient and associated donor); and one caused by the *B. divergens*-like organism (2002). The other three babesiosis cases were associated with travel to the Upper Midwest or northeastern United States and were likely or confirmed *B. microti* (2004, 2008, 2013).

2014: Four babesiosis cases were reported. One case acquired *B. microti* from a transfusion of blood donated by a case exposed outside of Washington (Connecticut). The two other cases were also associated with travel to the northeastern United States (New York, Maine). To date, tick surveillance has not identified *Babesia*-positive ticks in Washington.

Coccidioidomycosis (Valley Fever)

Cause: The soil-dwelling fungi *Coccidioides immitis* and *C. posadasii.*

Illness and treatment: If symptomatic, a pneumonia or flu-like illness with fever, cough, headache, rash, and muscle aches. Disseminated infections occur. Treatment is with antifungals.

Sources: Exposure to airborne spores. The fungi are found in soil in semi-arid climates in the southwestern United States and parts of Central and South America. New evidence (2014) documented the presence of *C. immitis* in soil in south-central Washington State.

Prevention: Avoid exposure to dusty environments in endemic regions.

Recent Washington trends: Coccidioidomycosis was made reportable as a rare disease of public health significance in 2014. Prior to 2014, up to six travel-associated cases were reported each year. During 2010-2014, nine cases with exposure in south-central Washington State were reported.

2014: Twenty-one cases were reported; of these, 18 were travel-related and three were exposed in south-central Washington.

Creutzfeldt-Jakob Disease (CJD)

Cause: Prions, or "proteinaceous infectious particles," in which normal cellular prion proteins in the brain fold into abnormal, pathologic forms, causing a fatal neurodegenerative disease known as prion disease or transmissible spongiform encephalopathy (TSE). TSEs are a family of disorders in animals and humans, of which Creutzfeldt-Jakob disease (CJD) is one type. CJD includes classic and variant forms.

Illness and treatment: Classic CJD is characterized by rapidly progressing dementia, poor balance, visual changes, and/or muscle jerks. Variant CJD has more prominent psychiatric and behavioral symptoms with a delay in neurologic sings. All cases are fatal, and treatment is supportive.

Sources: Classic CJD includes forms that are sporadic (85 percent of cases; unknown cause), familial (10 to 15 percent of cases; inherited), and iatrogenic (acquired through contaminated surgical instruments, dura mater or corneal transplants, or human growth hormone supplements). Variant CJD is associated with ingesting cattle products contaminated with the prion that causes bovine spongiform encephalopathy ("mad cow disease"). Variant CJD was discovered in 1996, with most cases in the United Kingdom and some cases in other European countries, the Middle East, Asia, and North America. To date, five variant CJD cases have been diagnosed in North America, all of which were acquired overseas.

Prevention: Since most cases are sporadic (unknown cause), few personal precautions can be advised. If traveling for prolonged periods of time in Europe, risk might be reduced by avoiding beef products, especially

brain parts or other non-muscle meat; however, transmission risk is very low.

Recent Washington trends: During 2006 to 2013, the median number of cases per year was nine (range, five to 17 cases).

2014: Twelve cases of CJD were reported, all sporadic or familial.

Cryptococcosis

Cause: Fungus *Cryptococcus*. Notifiable condition surveillance is only for *C. gattii*.

Illness and treatment: Symptoms include severe cough with shortness of breath, chills, night sweats, and loss of appetite. Typical presentations are meningitis and pneumonia. Treatment is with antifungals.

Sources: *C. gattii* is an environmental fungus that has been isolated from native trees, soil, and air in the Pacific Northwest. Exposure is through inhalation of spores from the environment.

Prevention: There are no specific precautions.

Recent Washington trends: Since 2005, 59 animal cases have been identified in the state, including porpoises, cats, dogs, a sheep, an elk, a horse, and a bird. *C. gattii* has been found in a few surface swabs, including investigators' shoes and vehicle wheel wells, a fence post and a parking lot in northwestern counties. Since 2006, one to seven human cases are reported each year, some with presumed in-state exposure. The case fatality rate among all cases is 14 percent. The majority of the cases occur in residents of northwestern counties, alhough cases can occur anywhere in the state following travel to an endemic area.

2014: Six cases were reported, including one death.

Spotted Fever Rickettsioses

Cause: Bacteria of the spotted fever group *Rickettsia*, including *Rickettsia rickettsii* (Rocky Mountain spotted fever) (RMSF), *R. africae* (African tick bite fever), *R. conorii* (Mediterranean spotted fever or Boutonneuse fever), and numerous other disease-causing *Rickettsia* species.

Illness and treatment: Spotted fever rickettsioses are characterized by fever plus a rash and/or scab-like skin wound ("eschar"); other signs and symptoms can include headache, fatigue, muscle aches, and swollen lymph nodes. Patients may also have anemia, thrombocytopenia, or high liver enzyme levels. RMSF is the most commonly reported spotted fever rickettsiosis in the United States and often begins with fever followed in two to five days by a spotty rash that typically begins on the wrists and hands before spreading to the rest of the body, including palms and soles. Many of the other spotted fever rickettsioses, including African tick bite fever and Mediterranean spotted fever, can involve blackened or crusted skin at the site of one or more tick bites. Severe complications can occur in some spotted fever rickettsioses. Antibiotic treatment (tetracycline) for spotted fever rickettsioses should be initiated immediately after clinical suspicion and should not await laboratory confirmation.

Sources: In the United States, RMSF tick vectors include *Dermacentor variabilis* (American dog tick) and *D. andersoni* (American wood tick), both of which are found in Washington State, and *Rhipicephalus sanguineus* (brown dog tick). Other spotted fever group *Rickettsia* are transmitted by various hard tick species vectors, which may involve different vertebrate reservoirs.

Prevention: During outdoor activities in endemic areas, wear appropriate clothing, use repellents, and check the body for ticks.

Recent Washington trends: RMSF was reported at greater numbers in the first half of the twentieth century than in recent years, e.g., 90 cases during 1920 to 1949 (median annual cases, two; range, zero to nine), in contrast to 8eight cases during 2004 to 2013 (median cases per year, zero; range, zero to three). About half of RMSF cases in the past decade likely acquired their infections in Washington, in eastern and central counties. African tick bite fever was reported in seven Washington residents from 2005 to 2013, all of whom acquired their infections in South Africa (two in 2005 and one in each year for 2007, 2008, 2010, 2012, and 2013). Mediterranean spotted fever was reported in one case with travel to South Africa in 2011. In 2013 one spotted fever rickettsiosis case of undetermined etiology was reported in a case with exposure in Southeast Asia.

2014: No RMSF cases were reported. Two African tick bite fever cases were reported with travel to Africa.

Typhus

Cause: Bacterium *Rickettsia prowazekii* causes epidemic typhus, and *Rickettsia typhi* and *Rickettsia felis* cause endemic typhus

Illness and treatment: Endemic typhus symptoms include rash, fever, nausea, diarrhea and vomiting, while epidemic typhus has similar but more severe symptoms including delirium, hypotension, and internal bleeding and can be fatal.

Sources: Transmitted to humans by lice (mainly epidemic typhus) and fleas (mainly endemic).

Prevention: Clean living quarters to reduce exposure to rats, mice and other animals that harbor lice and fleas.

Recent Washington trends: Other than one case in 2013, no cases reported in the last decade.

2014: No typhus cases were reported.

Vaccinia Transmission

Cause: Vaccinia (smallpox vaccine) virus.

Illness and treatment: Symptoms are pustules where the vaccine virus was inadvertently inoculated. Treatment is supportive; special medications may be needed for severe infections.

Sources: Rare transmission from vaccinated military personnel to a secondary case through close contact (e.g., sexual partner, parent-infant, sports); tertiary cases have occurred.

Prevention: A smallpox vaccine site should be covered until fully healed, and the scab located and discarded. Unvaccinated persons should avoid contact with a fresh vaccine site or scab.

Recent Washington trends: One secondary case occurred in each of 2010 and 2012.

2014: No cases were reported.

Rare Sexually Transmitted Diseases

Cause: Bacterium *Haemophilus ducreyi* causes chancroid. Bacterium *Calymmatobacterium granulamatis* causes granuloma inguinale. L1, L2 and L3 serovars of bacterium *Chlamydia trachomatis* cause lymphogranuloma venereum.

Illness and treatment: These are three rare genital ulcer diseases. Treatment recommendations are available from CDC.

Sources: The infections are sexually transmitted.

Additional risks: These diseases are endemic in some tropical and subtropical regions.

Prevention: Use safe sexual practices to reduce transmission.

Recent Washington trends: In the past decade, there were two chancroid cases, no granuloma inguinale cases, and 14 lymphogranuloma venereum cases.

2014: No lymphogranuloma venereum cases, no chancroid cases, and no granuloma inguinale cases were reported.

Relapsing Fever

Cause: Spiral-shaped bacteria (spirochetes): *Borrelia hermsii* (tick-borne relapsing fever) (TBRF) and *B. recurrentis* (louse-borne relapsing fever).

Illness and treatment: A typical sign is a fever lasting two to seven days cycling with afebrile periods of four to 14 days, with one to 10 cycles if untreated. Along with fever, other signs and symptoms can include shaking chills, sweats, headache, muscle or joint pain, or sometimes a rash. Treatment is with antibiotics.

Sources: For TBRF, the most common reservoirs in Washington appear to be wild rodents, with the bacteria transmitted by *Ornithodoros hermsi*, a soft tick typically found in eastern parts of the state at higher altitudes (1500-8000 feet). The ticks live in rodent nests and inflict painless bites at night that are often unnoticed. Louse-borne relapsing fever is not endemic to the United States but may occur in travelers if an infected body louse contaminates a wound or mucous membranes.

Prevention: Avoid sleeping in rodent-infested buildings. Rodent-proof structures to prevent future colonization by rodents and their soft ticks.

Recent Washington trends: Each year, one to 12 TBRF cases are reported. Most are associated with overnight stays in rustic summer cabins, but some are exposed in their primary homes. Louse-borne relapsing fever is rare, even in travelers; no cases have been reported in recent years.

2014: Seven cases of TBRF were reported.

Rubella

Cause: Rubella virus, family Togaviridae, genus *Rubivirus*.

Illness and treatment: Acquired rubella is a mild illness that usually includes fever and a maculopapular rash that starts on the face and spreads downward to include the entire body. The rash usually lasts three days and may itch. However, up to 50 percent of infections can be sub-clinical or inapparent. Older children and adults may have malaise, lymph node swelling, and upper respiratory symptoms before the rash. Arthritis and arthralgia frequently accompany the disease in adults, especially in women. Complications including encephalitis (1 in 6000 cases) are uncommon and occur more often in adults. Congenital rubella syndrome (CRS) can result if a woman acquires rubella during pregnancy, especially in the first trimester. The virus may cause a variety of congenital malformations, the most common of which is deafness. Fetal death, spontaneous abortion, or premature delivery may occur.

Sources: Humans are the reservoir. Transmission is through droplet (or less commonly airborne) spread of the respiratory secretions of infected persons, including those with asymptomatic or subclinical infections. Infants with CRS can shed virus for extended periods, but a true carrier state does not occur.

Additional risks: Since 2004, rubella is no longer considered endemic in the United States. Most reported rubella cases in the country are now among adults born in areas where rubella vaccine was not routinely used, or in unimmunized persons who travel outside the United States to areas where rubella is still endemic.

Prevention: Universal childhood immunization has been effective in preventing infection and eliminating endemic circulation of rubella in this country. Respiratory and hand hygiene can also reduce the risk of transmission. Pregnant women are routinely tested at the initial prenatal visit to verify immunity to rubella.

Recent Washington trends: Since 2000 only zero to two cases of acquired rubella have been reported annually. In 2000, an infant with CRS was born in Washington to a Hispanic mother born outside the United States. This was the only CRS case reported in the state in the past 20 years.

2014: No cases were reported.

Salmonellosis (Non-Typhoid)

Cause: Myriad serotypes in the bacterial genus *Salmonella*, excluding *S.* Typhi (see Typhoid).

Illness and treatment: Typical symptoms are fever, headache, diarrhea, nausea, and abdominal pain, with or without vomiting. Most persons recover without treatment. Occasionally bacteria enter the bloodstream and infect internal organs. Treatment for severe cases is with antibiotics.

Sources: Healthy animals, especially reptiles, chickens, cattle, dogs, and cats, can carry *Salmonella* without illness and be a direct source for human infection. Most human cases result from contaminated food. Common food exposures include contaminated eggs, unpasteurized milk, poultry, and produce. Person-to-person transmission can occur.

Additional risks: Illness including serious dehydration may be severe in the very young, the elderly, or those with chronic diseases. Incidence is highest in infants and young children.

Prevention: Use good food handling and personal hygiene practices, including thorough handwashing after contact with animals. Prevent contact between young children or persons with weakened immune systems and reptiles, farm animals, or birds.

Recent Washington trends: Salmonellosis is the second most common notifiable enteric infection with 589 to 850 cases reported per year. Infections occur year round with some increase during the spring and summer months. Many serotypes are reported (Table 4).

2014: 739 cases were reported (10.6 cases/100,000 population) with one death.

Table 4. *Salmonella* Serotypes, 2014

Serotype (*n*=717)	Count
Enteritidis	217
I 4,5,12:i:-	67
Typhimurium	67
Heidelberg	31
Saintpaul	23
Thompson	23
Newport	21
Infantis	19
Montevideo	17
Muenchen	16
Oranienburg	16
I 4 5 12:b:-	13
Unknown	9
Anatum	8
Braenderup	8
Dublin	8
Hadar	8
Stanley	8
Javiana	7
Paratyphi A	7
Agona	6
Poona	6

Two to Five Cases Each: Clackamas, Panama, Paratyphi B tar + Java, Sandiego, Mbandaka, Monschaui, Albany, Gaminara, Havana, Litchfield, Schwarzengrund, Berta, Brandenburg, Chester, Cotham, Daytona, Durban, Eastbourne, I 4,12:i:-, IV 48:g,z51:-, Kentucky, Michigan, Portland, Senftenberg, Uganda, Virchow.

One Case Each: 61:1,v:1,5,7:(z57), Agoueve, Amager, Bahrenfeld, Bareilly, Bredeney, Carrau, Derby, Ealing, Farmsen, Gatuni, I 3,10:-:1,5, I 4,5;12, IIb 60:r:e,n,x,z15, IIIb 35:k:e,n,x,z,15, IIIb 50:k:z, IIIb 52:NM, IIIb 61:1,v,z13:1,5, IIIb 61:c:z35, Irumu, IV 48 :g,z51:-, IV 50:g z51:-, IV 50:z4 z23:-, Kiambu, Larochelle, Liverpool, Minnesota, Molade, Paratyphi B, Pomona, Potsdam, Putten, Richmond, Rissen, Rubislaw, Serovar I Rough:nonmotile, Tennessee, Urbana, Worthington.

Note: Serotype data are only available for confirmed cases.

Shellfish Poisoning, Paralytic, Domoic Acid or Diarrhetic

Cause: Saxitoxin from the phytoplankton *Alexandrium catenella* causes paralytic shellfish poisoning (PSP). Domoic acid from the diatom *Pseudo-nitzschia* causes domoic acid poisoning (DAP). Diarrhetic toxin from dinoflagellates *Pseudo-niszschia* causes diarrhetic shellfish poisoning (DSP).

Illness and treatment: PSP symptoms begin minutes or hours after consumption with numbness of the mouth and limbs. Severe poisoning progresses rapidly to paralysis and respiratory arrest. With DAP, gastrointestinal symptoms of vomiting, diarrhea and abdominal cramps begin within 24 hours of shellfish ingestion and there may be later confusion, seizures and permanent short-term memory loss. DSP begins in 30 minutes to 36 hours, with severe diarrhea and sometimes vomiting. There are no anti-toxins. Acute supportive care may be needed.

Sources: Bivalve mollusks such as clams, oysters, mussels, and geoduck concentrate the PSP toxin. Razor clams, other clams, Dungeness crab, mussels, and oysters concentrate the DAP toxin. There is no person-to-person spread for either.

Additional risks: PSP is only rarely associated with reddish discoloration of the water, although the term "red tide" is popularly used. PSP or DAP can be present in dangerous amounts even when the harvest site water looks clean. Cooking does not destroy either toxin.

Prevention: Before harvesting shellfish check the Marine Biotoxin Hotline (1-800-562-5632) or website for updates on affected sites and site closures, which may not always have signs posted.

Recent Washington trends: Three clusters of PSP have been reported during the past 20 years (seven reports in 2012, seven reports in 2000, and five reports in 1998). There are no recent DAP cases reported. A DSP cluster in 2011 was from mussels gathered in Puget Sound.

2014: No cases reported.

Shiga Toxin-producing *Escherichia coli* (STEC)

Cause: Shiga toxin-producing *E. coli* strains (STEC) including *E. coli* O157:H7.

Illness and treatment: Symptoms include abdominal cramping and severe or bloody diarrhea, usually without fever. Serious complications include hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP). Most persons will recover without treatment. Treating STEC diarrhea with antibiotics may increase the risk of developing HUS.

Sources: Cattle are the most important source, although other herbivores also may carry STEC. Other known sources are unpasteurized milk, undercooked ground beef and contaminated raw produce. There can be person-to-person and animal-to-person transmission, but most cases are due to ingesting contaminated food or water.

Additional risks: Children under five years of age are diagnosed most frequently and are at the greatest risk of developing HUS.

Prevention: Wash hands thoroughly after contact with farm animals, visiting farm environments, and handling raw meat. Thoroughly cook ground beef and venison and wash preparation areas to avoid contaminating other foods. Wash produce thoroughly before eating.

Recent Washington trends: For the past several years there have been 150 to 250 reports each year. STEC has a seasonal pattern. Most cases occur during summer and fall months.

2014: A total of 299 STEC cases were reported (4.3 cases/100,000 population) with two deaths.

Table 5. *STEC* Serotypes, 2014

Serotypes (*n*=263)	Count
O157:H7	94
O26	68
O121	22
O103	21
O111	13
O157:NM	7
O145	5
O121:H19	3
O26:H11	3
O undetermined:H undetermined	2
O119	2
O157:H undetermined	2
O5:NM	2
O80:H2	2

One Case Each: O rough:H45, O rough:H7, O undetermined:H7, O undetermined: H19, O undetermined: H17, O undetermined: H25, O undetermined: H28, O undetermined: H49, O125ac, O156:NM, O165:NM, O186:H2, O39:h49, O86,)91:NM, O9:H21, O77:H45.

Note: Serotype data are only available for confirmed cases.

Shigellosis

Cause: Bacteria in the genus *Shigella*, typically *S. sonnei* or S. *flexneri*. Other species including *S. boydii and S. dysenteriae* are more common in developing countries.

Illness and treatment: Symptoms include fever, watery or bloody diarrhea, abdominal pain, fatigue and headache. Most persons will recover without treatment. Antibiotics may be used to shorten the duration of intestinal excretion of the organism.

Sources: Humans are the only reservoir, transmitting through feces-contaminated food or water or through person-to-person transmission, including oral-anal sex. Outbreaks are occasionally associated with child care or food service facilities, and very rarely with swimming.

Additional risks: Ingesting very few organisms can cause infection. Outbreaks occur under conditions of crowding and poor hygiene, putting institutions for children, mental hospitals, and prisons at additional risk for outbreaks.

Prevention: Wash hands carefully including cleaning under the nails with soap and water after defecation or changing diapers and before food handling.

Recent Washington trends: Each year there are 100 to 185 reports.

2014: 157 cases were reported (2.3 cases/100,000 population).

Syphilis

Cause: Spirochete bacterium *Treponema pallidum*.

Illness and treatment: The disease has four stages. Primary syphilis involves a painless ulcer at the site of infection. Secondary syphilis involves fever, diffuse rash, headache, hair loss, and muscle aches. Latent syphilis is asymptomatic and not transmitted sexually. Late syphilis can result in damage to the brain, heart, or other organs. Congenital syphilis may result in organ damage and bone deformities. Antibiotics treat a syphilis infection but any damage to organs is permanent.

Sources: Syphilis is sexually transmitted or acquired before birth.

Additional risks: Disease rates are highest among men, with a higher incidence among men who have sex with men.

Prevention: Use safe sexual practices to reduce transmission. If syphilis is found, also test for other sexually transmitted infections including HIV. Test and treat all recent sexual partners of a person diagnosed with the early stages of syphilis to stop ongoing transmission.

Recent Washington trends: Rates have increased since 1996, when nine cases were reported. Over the last five years, approximately 300 primary and secondary cases have been reported annually.

2014: 337 cases of primary and secondary syphilis were reported (4.8 cases/100,000 population).

Tetanus

Cause: Neurotoxin produced by the bacterium *Clostridium tetani*.

Illness and treatment: Of the four types of known tetanus presentation, by far the majority of cases present as generalized tetanus which is characterized by descending rigidity and painful spasms of the skeletal muscles beginning with jaw and neck spasms (commonly referred to as "lockjaw.") Spasms can continue for three to four weeks and progress to total body spasms known as "opisthotonos." Complications include bone fractures and abnormal heart rhythms. Complete recovery can take months. Case fatality rate for generalized tetanus is 10 percent or higher, depending on available care, with more deaths occurring in infants and elderly persons.

Neonatal tetanus is a form of generalized tetanus that occurs in newborn infants born without protective passive immunity, because the mother was not immune.

Local tetanus and cephalic tetanus are less common presentations which often progress to generalized tetanus. Treatment includes tetanus immune globulin (TIG), wound care, and supportive care including pharmacotherapy to control spasms. Antibiotics may theoretically reduce bacterial multiplication in the wound and therefore prevent further toxin production. Active immunization should be undertaken soon as the person is medically stable.

Sources: Spores are widely distributed in soil and in the intestinal tracts (and feces) of animals and humans. The spores can also be found on skin and in contaminated heroin. *C. tetani* usually enters the body through a wound (which may or may not be apparent) and grows best deep within damaged tissue in an anaerobic environment. Tetanus is not transmitted person to person.

Additional risks: Almost all reported cases of tetanus are in persons with either no history of vaccination with tetanus toxoid, or without a vaccine booster in the preceding decade. Any person presenting with a wound that has fewer than threedocumented doses of tetanus toxoid should be considered at risk for tetanus. Injection drug use, especially intramuscular and subcutaneous use, can lead to individual cases and occasionally to outbreaks in specific populations.

Prevention: Universal childhood immunization with regular booster doses for adolescents and adults is effective in preventing of tetanus.

Recent Washington trends: A case was reported in 2012 in a person not up-to-date for vaccine with an outdoor injury. Before that, one case was reported in each 2006 and 2000.

2014: Three cases were reported, one in a toddler who was never vaccinated. A death occurred in an elderly adult whose most recent booster was received 8.5 years prior to onset.

Trichinosis (Trichinellosis)

Cause: Intestinal roundworm *Trichinella spiralis.*

Illness and treatment: Ingested larvae migrate and become encapsulated in muscle. Infection ranges from asymptomatic to severe, depending on the dose. Diarrhea may occur first. There is usually sudden onset of muscle pain, swelling of the upper eyelids, and recurring fever. Death can result from damage to heart muscle. Treatment depends on the stage of illness at diagnosis.

Sources: The infection is caused by ingesting raw or insufficiently cooked meat from infected animals. Historically, undercooked pork was a risk. Wild game is now the most likely exposure in North America. There is no person-to-person spread.

Additional risks: Freezing meat will not necessarily inactivate larvae of arctic strains.

Prevention: Cook or irradiate all wild game to reliably kill larvae. Regulations to prevent trichinosis require the cooking of garbage and offal fed to swine.

Washington trends: In the past decade only two cases have been reported. Exposures were bear and cougar meat eaten raw or undercooked.

2014: Two cases were reported.

Tuberculosis

Cause: Bacterium *Mycobacterium tuberculosis*.

Illness and treatment: Tuberculosis (TB) usually affects the lungs, but can also affect lymph nodes, bones, joints, as well as other parts of the body. When contained by a mature, strong immune system, infection with TB most often never causes symptoms and remains non-infectious. However, TB infection may also progress to active TB disease that can be infectious and must be treated. Typical symptoms of active TB disease include persistent cough, bloody sputum, fever, unexplained weight loss, night sweats, and chest pain. Persons experiencing any of these symptoms should consult a medical provider or local health department immediately.

Effective medical treatments are available to prevent TB infection from developing into active TB disease, and to cure active TB disease if it develops. Persons infected with TB should consider treatment to prevent the development of active TB disease. Patients with active TB disease must complete a full course of appropriate treatment with multiple drugs.

Sources and spread: TB is spread person-to-person through the air. When a person with infectious active TB disease of the lungs or throat coughs, sneezes or sings bacteria are spread into the air which then may be breathed in by others.

Additional risks: Approximately 75 to 80 percent of all cases in Washington are among foreign-born persons, originating from countries other than the United States where rates of TB are typically higher and risk of becoming infected is greater. If infected with TB, persons with an immature, weakened or over-burdened immune system—for example young children, people infected with HIV, diabetics, organ transplant recipients and the elderly—are at increased risk of developing active TB disease.

Prevention: Prompt diagnosis of active TB disease with proper isolation during the initial infectious period and completion of effective treatment are each vital to minimizing the spread TB. In addition, risk-based screening for TB infection along with completion of appropriate treatment if infected also aid in preventing the future spread of TB.

Washington trends: From 2010 through 2014 between 185 and 234 cases of active TB disease were diagnosed in Washington annually. For 2014 the state rate of 2.8 cases per 100,000 population fell below the national rate of 3.0, while nearly matching Washington's lowest recorded rate of 2.7 set in 2012.

2014: Washington State reported 196 cases of active TB disease, for a crude case rate of 2.8 per 100,000. Only eight of Washington's 39 counties reported five or more cases, together accounting for 90 percent of all state cases along with 76 percent of the state's total population. King County reported 101 cases, thus representing 52 percent of all Washington cases while resulting in a county rate of 5.0 per 100,000.

Tularemia

Cause: Bacterium *Francisella tularensis*.

Illness and treatment: Symptoms reflect the route of transmission and can include fever, malaise, swollen lymph nodes, skin ulcers, eye infection, sore throat, abdominal pain, diarrhea, and pneumonia; any infection can cause sepsis. Treatment is with antibiotics.

Sources: The reservoir is wild mammals (especially rabbits, hares, voles, squirrels, muskrats, beavers). Infection can occur through direct contact with an infected animal, bite from an arthropod (e.g., tick, deerfly), ingestion of contaminated raw meat or water, or inhalation, including during outdoor work or with improper handling of cultures in laboratories.

Prevention: Wear gloves if skinning wild game and keep hands or gloves away from the eyes. Drink only treated water when in wilderness areas. Avoid tick and insect bites.

Recent Washington trends: There are generally one to 10 reports annually. Exposures include insect and animal bites, contaminated water, exposure to wild rabbits or rodents, and inhalation while farming or landscaping with power tools. In 2004 to 2005 a statewide serosurvey of 370 outdoor pet cats and dogs found 0.6 percent positive overall but 4.5 percent positive in southwest counties.

2014: Four cases were reported, all exposed in Washington state.

Typhoid Fever

Cause: Bacterium *Salmonella* Typhi.

Illness and treatment: Symptoms include fever, headache, rash, constipation or diarrhea, and lymph node swelling. Severity ranges from mild febrile illness to severe disease with multiple complications. Treatment is with antibiotics.

Sources: Humans are the reservoir and transmit through fecal contamination of food, water or milk, or directly person-to-person.

Additional risks: There can be a prolonged intestinal carrier state, sometimes due to gallbladder infection; reculture patients after antibiotic treatment to confirm clearance of the infection.

Prevention: If traveling to risk areas, consult with a travel clinic or the CDC Travelers' Health website for recommendations about vaccination and other measures.

Recent Washington trends: Cases occur mainly after international travel, most commonly to Asia. Case counts are variable, ranging from fiveto 22 reports each year.

2014: Fifteen cases were reported.

Vibriosis (Non-Cholera)

Cause: Bacteria in the family *Vibrionaceae*, including *Vibrio parahaemolyticus*, *V. vulnificus*, non-toxin-producing *V. cholera,* other less common *Vibrio* species, and *Grimontia hollisae*. Infections caused by toxin-producing *V. cholerae* (serotypes O1 or O139) are notifiable as Cholera.

Illness and treatment: Symptoms include abdominal pain, watery diarrhea, vomiting, headache, and fever. Skin infections can occur. *V. vulnificus*, a species occurring mainly in the Gulf of Mexico, but recently found in Washington marine waters, can cause life-threatening septicemia in persons with weakened immune systems. Most persons recover without treatment but antibiotics may be needed for severe cases.

Sources: *V. parahaemolyticus* occur naturally in Pacific coastal waters, especially during warmer months. Transmission of vibriosis usually occurs through ingesting raw or undercooked oysters or through skin injuries exposed to seawater.

Additional risks: Persons with liver disease, alcoholics, and others with weakened immune systems should be warned not to eat raw or undercooked seafood.

Prevention: Keep shellfish cold throughout the transport from harvest to preparation. To lessen risk of illness, consume raw or undercooked shellfish only from approved harvest areas and only during cooler months of the year.

Recent Washington trends: Two large outbreaks occurred in years when environmental conditions favored growth of *Vibrio* (1997 and 2006). Annual case counts are variable, ranging from nine to 80 cases reported, with a mixture of locally acquired and travel associated exposures. Cases among out of state residents associated with consumption of Washington shellfish are not included in these counts.

2014: Ninety-two cases (1.3 cases/100,000 population) were reported.

Waterborne Outbreaks

Cause: Many infectious agents including viruses, bacteria, and parasites. Common agents are norovirus, *Giardia, Cryptosporidium*, and *Legionella.* Bacterial agents are less commonly implicated, but some can be waterborne.

Illness and treatment: Illness depends on the etiologic agent, e.g., gastrointestinal, dermatologic, or respiratory. Treatment also depends on the involved agent.

Sources: Sources vary with the agent. Exposure can occur through various means, such as ingestion, skin contact, or inhalation. Waterborne outbreaks can occur from exposure to drinking water, recreational water, or other water sources. Drinking water sources include water intended for drinking, such as bottled water or community or private water systems. Recreational sources include treated water (e.g., swimming pools, interactive fountains, hot tubs) and untreated water (e.g., lakes, rivers). Other sources can include water not intended for drinking or recreation, such as cooling towers, ornamental water, misters, etc.

Additional risks: Risks vary with the agent.

Prevention: Test private wells every year for coliform bacteria and nitrate, as well as after potential contamination such as floods. Shower thoroughly with soap before entering recreational water. If ill with diarrhea, do not enter recreational water, pools, or interactive fountains. Check infants' diapers frequently when using recreational water.

Recent Washington trends: Waterborne outbreaks are often difficult to detect or investigate. From 2007 to 2013, zero to three outbreaks were reported each year (median, one outbreak per year). Distinct outbreaks have ranged in size from very small (two cases) to very large (hundreds of cases) (Table 6).

Table 6. Waterborne Outbreaks, 1991-2014*

Year	Agent	Site Type (County)	Cases
1991	*Giardia*	Lake (Clark)	4
	Unknown	Lake (Thurston)	4
1992	Hepatitis A	Home well (Klickitat)	10
1993	*Norovirus*	Lake (Thurston)	604
	Cryptosporidium	River (Yakima)	7
	Giardia	River (Clark)	6
1994	*Cryptosporidium*	River (Yakima)	4
	Cryptosporidium/Giardia	Well (Walla Walla)	86
1996	*Cryptosporidium*	Well (Yakima)	18
1997	STEC	Well (Yakima)	2
1998	Suspect viral	Lake (Kitsap)	248
	Suspect viral	Lake (Snohomish)	58
	Unknown	Creek (Lincoln)	46
1999	*E. coli* O157:H7	Lake (Clark)	36
	Suspect viral	Well (Spokane)	68
2003	*Campylobacter*	Well (Walla Walla)	12
2007	Suspect viral	Well (Okanogan)	58
	Cryptosporidium	Lake (Clark)	18
	Cryptosporidium	Pool (Whatcom)	14
2011	*Legionella*	City water (Spokane)	3
2012	*Shigella sonnei*	Lake (Chelan)	3
2013	*Norovirus*	Pool (King)	11
2014	*Norovirus*	Lake (Kitsap)	260+
	Norovirus	River (Clark)	20

*Excluding spa-associated folliculitis outbreaks and illness outbreaks associated with harmful algal blooms

Yersiniosis

Cause: Bacteria in the genus Y*ersinia*, usually *Y. enterocolitica* or *Y. pseudotuberculosis*.

Illness and treatment: Symptoms are acute fever, diarrhea and abdominal pain that may mimic appendicitis. Complications are uncommon. Antibiotics may be used for severe cases.

Sources: Wild and domestic animals, particularly pigs, are reservoirs. Transmission occurs by ingesting contaminated food or water, or by direct contact with animals. Raw or undercooked pork and pork products, such as chitterlings, have been particularly associated with the illness. Person-to-person transmission appears to be rare.

Additional risks: Illness is more severe in children. *Yersinia* can multiply under refrigeration.

Prevention: Do not eat undercooked or raw pork or unpasteurized milk. Wash hands thoroughly after touching animals or raw pork and before eating. Dispose of animal feces in a sanitary way.

Recent Washington trends: Rates have been stable with 15 to 30 reports each year.

2014: Thirty-six cases were reported (0.5 cases/100,000 population).

APPENDIX I

Disease Incidence and Mortality Rates

ARBOVIRAL DISEASE TYPES

Year	Total Cases	Chikungunya	Colorado Tick Fever	Dengue	Japanese Encephalitis	St. Louis Encephalitis	West Nile Virus	Yellow Fever	Other/ Unknown flavivirus
2002	1	0	0	0	0	0	0	1^{V}	0
2003	8	0	0	0	0	0	8^{T}	0	0
2004	3	0	0	1^{T}	1^{T}	0	1^{T}	0	0
2005	6	0	0	3^{T}	0	0	3^{T}	0	0
2006	13	1^{T}	0	4^{T}	0	0	8 (5^{T}, 3^{E})	0	0
2007	16	0	0	10^{T}	0	0	5^{T}	0	1^{T}
2008	19	0	1^{T}	14^{T}	1^{T}	0	3^{E}	0	0
2009	52	0	0	11^{T}	0	1^{T}	38 (36^{E}, 2^{U})	0	2 (1^{T}, 1^{E})
2010	24	3^{T}	0	19^{T}	0	0	2 (1^{E}, 1^{T})	0	0
2011	9	0	0	9^{T}	0	0	0	0	0
2012	20	0	0	16^{T}	0	0	4 (2^{E}, 2^{T})	0	0
2013	15	0	0	14^{T}	0	0	1^{T}	0	0
2014	34	13^{T}	0	9^{T}	0	0	12 (10^{E}, 2^{T})	0	0

^{V} Vaccine-associated

^{T} Travel-associated

^{E} Endemically acquired

^{U} Unknown exposure location

BOTULISM

Year	Food	Infant	Wound	Combined Rate*	Deaths
1985	5	4	0	0.2	0
1986	2	4	0	0.1	0
1987	1	1	1	0.1	0
1988	3	4	0	0.2	0
1989	10	0	0	0.2	0
1990	1	0	0	0.0	0
1991	0	3	0	0.1	0
1992	0	2	0	0.0	0
1993	4	5	0	0.2	0
1994	3	2	0	0.1	0
1995	4	2	0	0.1	0
1996	2	0	2	0.1	0
1997	0	1	2	0.1	0
1998	2	4	0	0.1	0
1999	2	4	1	0.1	0
2000	1	4	0	0.1	0
2001	1	6	0	0.1	0
2002	1	1	4	0.1	0
2003	1	3	7	0.2	0
2004	1	3	5	0.1	0
2005	0	2	4	0.1	0
2006	0	9	1	0.2	0
2007	1	1	2	0.1	1
2008	0	1	2	0.0	0
2009	4	2	4	0.1	1
2010	0	3	1	0.1	0
2011	0	3	4	0.1	0
2012	1	4	2	0.1	1
2013	2	4	4	0.1	0
2014	0	3	0	0.0	0

*All rates are cases per 100,000 population.

BRUCELLOSIS

Year	Cases	Rate*	Deaths
1986	1	0.0	0
1987	1	0.0	0
1988	1	0.0	0
1989	1	0.0	0
1990	0	0.0	0
1991	3	0.1	0
1992	1	0.0	0
1993	0	0.0	0
1994	0	0.0	0
1995	0	0.0	0
1996	2	0.0	0
1997	3	0.1	0
1998	3	0.1	0
1999	0	0.0	0
2000	0	0.0	0
2001	0	0.0	0
2002	2	0.0	0
2003	1	0.0	0
2004	2	0.0	0
2005	0	0.0	0
2006	0	0.0	0
2007	1	0.0	0
2008	1	0.0	0
2009	1	0.0	0
2010	0	0.0	0
2011	1	0.0	0
2012	0	0.0	0
2013	1	0.0	0
2014	4	0.1	0

*All rates are cases per 100,000 population.

CAMPYLOBACTERIOSIS

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	4	*	9	47.5	4	*	3	*	4	*
Asotin	1	*	1	*	3	*	2	*	2	*
Benton	41	23.4	29	16.3	31	17.2	41	22.4	33	18.0
Chelan	15	20.7	9	12.4	5	6.8	10	13.6	15	20.2
Clallam	13	18.2	5	7.0	4	*	3	*	2	*
Clark	110	25.9	118	27.6	83	19.2	97	22.3	87	19.6
Columbia	2	*	0	0.0	0	0.0	2	*	2	*
Cowlitz	23	22.5	38	37.0	24	23.3	22	21.3	18	17.4
Douglas	6	15.6	3	*	6	15.4	4	*	8	20.2
Ferry	2	*	1	*	2	*	2	*	2	*
Franklin	19	24.3	23	28.6	11	13.3	21	24.8	11	12.7
Garfield	0	0.0	1	*	0	0.0	0	0.0	2	*
Grant	17	19.1	30	33.3	25	27.5	15	16.3	19	20.5
Grays Harbor	12	16.5	11	15.1	13	17.8	14	19.1	14	19.1
Island	11	14.0	10	12.7	18	22.7	8	10.0	16	20.0
Jefferson	6	20.1	7	23.3	5	16.6	21	69.4	18	58.6
King	304	15.7	403	20.7	447	22.8	455	23.0	487	24.1
Kitsap	33	13.1	45	17.7	34	13.4	41	16.1	40	15.6
Kittitas	6	14.7	8	19.4	14	33.7	7	16.7	10	23.8
Klickitat	2	*	7	34.1	2	*	9	43.5	6	28.8
Lewis	25	33.1	27	35.5	26	34.1	27	35.4	29	38.0
Lincoln	0	0.0	0	0.0	0	0.0	1	*	1	*
Mason	7	11.5	13	21.3	19	30.9	14	22.7	9	14.5
Okanogan	6	14.6	5	12.1	7	16.9	5	12.0	5	12.0
Pacific	5	23.9	13	62.2	4	*	5	23.8	8	37.9
Pend Oreille	1	*	2	*	4	*	0	0.0	2	*
Pierce	103	13.0	132	16.5	221	27.3	253	31.3	217	26.4
San Juan	2	*	5	31.4	3	*	4	25.0	1	*
Skagit	24	20.5	21	17.9	27	22.9	34	28.7	29	24.3
Skamania	0	0.0	2	*	2	*	0	0.0	0	*
Snohomish	172	24.1	219	30.5	159	22.0	180	24.6	190	25.6
Spokane	73	15.5	54	11.4	70	14.7	42	8.8	57	11.8
Stevens	2	*	7	16.1	4	*	8	18.3	3	*
Thurston	57	22.6	60	23.6	68	26.5	49	18.8	58	22.0
Wahkiakum	0	0.0	1	*	0	0.0	0	0.0	0	*
Walla Walla	8	13.6	11	18.7	11	18.6	20	33.6	14	23.3
Whatcom	74	36.8	86	42.6	77	37.8	56	27.2	59	28.4
Whitman	8	17.9	1	*	9	19.6	3	*	5	10.8
Yakima	121	49.7	121	49.4	109	44.3	153	61.9	108	43.4
STATEWIDE TOTAL	1,315	19.6	1,538	22.7	1,551	22.7	1,631	23.7	1,591	22.8

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

CAMPYLOBACTERIOSIS STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1980	8	0.2	0
1981	106	2.5	0
1982	299	7.0	0
1983	149	3.5	0
1984	146	3.4	1
1985	250	5.7	0
1986	347	7.8	0
1987	420	9.3	1
1988	709	15.4	1
1989	899	19.0	0
1990	899	18.5	0
1991	930	18.5	4
1992	1,060	20.6	1
1993	1,051	20.0	0
1994	1,050	19.6	0
1995	1,050	19.2	4
1996	1,139	20.5	1
1997	1,150	20.3	0
1998	901	15.7	1
1999	950	16.3	2
2000	1,006	17.1	2
2001	991	16.6	0
2002	1,032	17.0	1
2003	943	15.4	0
2004	861	13.9	0
2005	1,045	16.6	0
2006	993	15.5	0
2007	1,020	15.6	0
2008	1,069	16.2	0
2009	1,030	15.4	1
2010	1,315	19.6	2
2011	1,538	22.7	0
2012	1,551	22.7	3
2013	1,631	23.7	6
2014	1,591	22.8	0

*All rates are cases per 100,000 population.

CHLAMYDIA TRACHOMATIS

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rates	Cases	Rates
Adams	64	341.7	56	295.5	64	336.0	78	406.3	76	391.8
Asotin	76	351.5	59	272.5	80	368.7	80	367.0	81	369.0
Benton	585	333.9	596	335.0	597	331.7	672	366.4	648	347.5
Chelan	170	234.6	170	233.8	247	337.4	256	347.8	287	386.3
Clallam	164	229.7	165	230.4	172	238.9	188	259.9	162	223.5
Clark	1,347	316.7	1,490	348.1	1,382	320.5	1,419	325.8	1,534	346.4
Columbia	7	171.7	2	*	7	170.7	6	+	8	+
Cowlitz	327	319.3	380	370.0	439	426.0	292	282.7	426	410.8
Douglas	83	216.0	114	295.0	128	329.0	135	343.7	146	367.8
Ferry	15	198.6	29	381.6	32	418.3	26	339.9	26	339.4
Franklin	268	342.9	298	370.2	319	386.7	413	487.0	416	480.4
Garfield	4	*	1	*	1	*	0	+	5	+
Grant	288	323.2	286	317.4	329	361.5	383	417.2	392	422.0
Grays Harbor	155	212.9	137	187.9	176	240.6	171	233.6	205	279.7
Island	200	254.8	216	274.1	206	259.6	205	257.2	232	290.0
Jefferson	58	194.2	40	133.1	50	165.7	78	257.6	77	250.8
King	5,945	307.8	6,406	329.8	6,763	345.6	6,828	344.5	7,332	363.5
Kitsap	780	310.6	824	324.5	1,075	422.4	895	352.4	920	359.5
Kittitas	130	317.7	142	343.8	189	455.4	163	389.0	168	399.1
Klickitat	36	177.2	45	219.5	29	140.8	33	159.4	55	263.8
Lewis	157	208.1	226	297.4	233	305.4	261	342.5	252	330.3
Lincoln	15	141.9	10	94.3	13	121.8	6	+	5	+
Mason	137	225.7	161	263.5	153	249.0	177	286.4	198	319.4
Okanogan	117	284.5	115	279.1	136	328.3	130	313.3	77	184.7
Pacific	30	143.4	17	81.3	30	143.1	28	133.3	34	161.1
Pend Oreille	21	161.5	16	123.1	22	167.9	20	152.1	23	174.1
Pierce	3,815	479.7	4,159	518.5	4,293	531.2	4,298	527.7	4,372	532.3
San Juan	8	50.7	20	125.8	15	94.2	11	+	20	124.2
Skagit	324	277.2	320	272.6	342	290.0	409	344.9	335	280.3
Skamania	25	225.9	25	224.2	30	266.1	29	256.6	25	219.9
Snohomish	1,729	242.4	1,760	245.5	1,871	258.8	1,880	257.4	2,006	270.7
Spokane	1,617	343.2	1,780	376.6	1,923	404.3	2,037	424.4	2,142	442.1
Stevens	56	128.6	73	167.4	85	194.5	129	294.5	103	234.6
Thurston	663	262.8	958	377.0	906	352.8	919	353.3	890	337.1
Wahkiakum	9	226.2	5	125.0	4	*	1	+	2	+
Walla Walla	164	279.0	201	341.8	191	323.2	209	351.3	190	315.9
Whatcom	571	283.9	555	274.6	593	291.4	580	281.8	570	274.6
Whitman	131	292.6	156	348.2	173	376.5	189	410.9	302	649.5
Yakima	1,110	456.4	1,224	500.2	1,302	529.3	1,379	557.7	1,504	604.5
STATEWIDE TOTAL	21,401	318.3	23,237	343.3	24,600	360.8	25,013	363.4	26,246	376.7

All incidence rates are cases per 100,000 population.
*For 2010-2012, incidence rates not calculated for <5 cases.
+For 2013-2014, incidence rates suppressed for counts <20 and rates with residual standard error (RSE) >30% due to statistical instability.

CHLAMYDIA TRACHOMATIS
STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1988	12,534	271.5	0
1989	10,865	229.8	0
1990	12,709	261.1	0
1991	12,917	257.2	0
1992	11,762	228.8	0
1993	10,331	196.2	0
1994	10,575	197.1	0
1995	9,463	173.0	0
1996	9,237	165.9	0
1997	9,523	168.1	0
1998	10,998	191.3	0
1999	11,964	205.2	0
2000	13,066	221.7	0
2001	13,631	228.3	0
2002	14,936	246.5	0
2003	16,796	274.1	0
2004	17,635	284.0	0
2005	18,617	295.6	0
2006	17,819	277.5	0
2007	19,123	293.1	0
2008	21,327	322.7	0
2009	21,178	317.4	0
2010	21,401	318.3	0
2011	23,237	343.3	0
2012	24,600	360.8	0
2013	25,013	363.4	0
2014	26,246	376.7	0

*All rates are cases per 100,000 population.

**First year reported, July - December

Note: Data prior to 2009 are based on year reported rather than year diagnosed.

CHOLERA

Year	Cases	Rate*	Deaths
1985	0	0.0	0
1986	0	0.0	0
1987	0	0.0	0
1988	0	0.0	0
1989	0	0.0	0
1990	0	0.0	0
1991	0	0.0	0
1992	2	0.0	0
1993	0	0.0	0
1994	0	0.0	0
1995	0	0.0	0
1996	0	0.0	0
1997	0	0.0	0
1998	0	0.0	0
1999	0	0.0	0
2000	0	0.0	0
2001	0	0.0	0
2002	1	0.0	0
2003	0	0.0	0
2004	0	0.0	0
2005	0	0.0	0
2006	0	0.0	0
2007	0	0.0	0
2008	0	0.0	0
2009	0	0.0	0
2010	0	0.0	0
2011	0	0.0	0
2012	0	0.0	0
2013	1	0.0	0
2014	0	0.0	0

*All rates are cases per 100,000 population.

CRYPTOSPORIDIOSIS

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Benton	1	*	0	0.0	1	*	2	*	2	*
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Clallam	4	*	8	11.2	4	*	1	*	3	*
Clark	13	3.1	9	2.1	14	3.2	8	1.8	5	1.1
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Cowlitz	7	6.8	3	*	2	*	4	*	3	*
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Franklin	1	*	1	*	0	0.0	0	0.0	1	*
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Grant	0	0.0	0	0.0	0	0.0	1	*	0	*
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Island	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Jefferson	8	26.8	7	23.3	7	23.2	3	*	1	*
King	17	0.9	13	0.7	23	1.2	18	0.9	19	0.9
Kitsap	0	0.0	0	0.0	2	*	0	0.0	1	*
Kittitas	0	0.0	0	0.0	0	0.0	1	*	0	*
Klickitat	0	0.0	0	0.0	1	*	0	0.0	0	*
Lewis	0	0.0	0	0.0	0	0.0	1	*	0	*
Lincoln	0	0.0	1	*	0	0.0	1	*	0	*
Mason	0	0.0	1	*	1	*	0	0.0	1	*
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Pacific	0	0.0	0	0.0	1	*	0	0.0	0	*
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Pierce	32	4.0	39	4.9	22	2.7	24	3.0	18	2.2
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Skagit	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Snohomish	8	1.1	1	*	10	1.4	7	1.0	3	*
Spokane	4	*	1	*	3	*	4	*	2	*
Stevens	1	*	0	0.0	0	0.0	0	0.0	0	*
Thurston	1	*	2	*	3	*	2	*	7	2.7
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Walla Walla	0	0.0	1	*	1	*	2	*	1	*
Whatcom	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Whitman	1	*	0	0.0	1	*	1	*	0	*
Yakima	4	*	1	*	5	2.0	3	*	7	2.8
STATEWIDE TOTAL	102	1.5	88	1.3	101	1.5	84	1.2	75	1.1

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

CRYPTOSPORIDIOSIS STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
2001	73	1.2	0
2002	62	1.0	0
2003	65	1.1	0
2004	63	1.0	0
2005	94	1.5	0
2006	95	1.5	0
2007	139	2.1	0
2008	99	1.5	0
2009	102	1.5	0
2010	102	1.5	0
2011	88	1.3	0
2012	101	1.5	0
2013	84	1.2	0
2014	75	1.1	0

*All rates are cases per 100,000 population.

CYCLOSPORIASIS‡

Year	Cases	Rate*	Deaths
2002	5	0.1	0
2003	0	0.0	0
2004	11	0.2	0
2005	5	0.1	0
2006	1	0.0	0
2007	1	0.0	0
2008	1	0.0	0
2009	0	0.0	0
2010	2	0.0	0
2011	4	0.1	0
2012	0	0.0	0
2013	0	0.0	0
2014	2	0.0	0

‡Cyclosporiasis first became a notifiable condition in Washington in 12/2000.
*All rates are cases per 100,000 population.

DIPHTHERIA

Year	Cases	Rate*	Deaths
1985	0	0.0	0
1986	0	0.0	0
1987	0	0.0	0
1988	0	0.0	0
1989	0	0.0	0
1990	0	0.0	0
1991	0	0.0	0
1992	0	0.0	0
1993	0	0.0	0
1994	0	0.0	0
1995	0	0.0	0
1996	0	0.0	0
1997	0	0.0	0
1998	0	0.0	0
1999	0	0.0	0
2000	0	0.0	0
2001	0	0.0	0
2002	0	0.0	0
2003	0	0.0	0
2004	0	0.0	0
2005	0	0.0	0
2006	0	0.0	0
2007	0	0.0	0
2008	0	0.0	0
2009	0	0.0	0
2010	0	0.0	0
2011	0	0.0	0
2012	0	0.0	0
2013	0	0.0	0
2014	0	0.0	0

*All rates are cases per 100,000 population.

GIARDIASIS

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	*	1	*	1	*	0	0.0	0	*
Asotin	1	*	0	0.0	1	*	3	*	4	*
Benton	5	2.9	3	*	3	*	8	4.4	6	3.3
Chelan	8	11.0	7	9.6	1	*	7	9.5	4	*
Clallam	7	9.8	4	*	7	9.7	6	8.3	5	6.9
Clark	56	13.2	47	11.0	30	7.0	25	5.7	32	7.2
Columbia	0	0.0	1	*	0	0.0	1	*	1	*
Cowlitz	2	*	2	*	5	4.9	6	5.8	3	*
Douglas	1	*	0	0.0	1	*	3	*	0	*
Ferry	1	*	0	0.0	0	0.0	1	*	0	*
Franklin	1	*	0	0.0	4	*	3	*	6	6.9
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Grant	5	5.6	1	*	3	*	3	*	4	*
Grays Harbor	6	8.2	9	12.3	4	*	1	*	3	*
Island	10	12.7	7	8.9	6	7.6	13	16.3	4	*
Jefferson	9	30.1	6	20.0	9	29.8	6	19.8	7	22.8
King	110	5.7	156	8.0	170	8.7	195	9.8	188	9.3
Kitsap	16	6.4	18	7.1	23	9.0	23	9.0	16	6.3
Kittitas	4	*	4	*	4	*	1	*	5	11.9
Klickitat	1	*	0	0.0	1	*	2	*	3	*
Lewis	8	10.6	6	7.9	7	9.2	7	9.2	5	6.6
Lincoln	0	0.0	1	*	0	0.0	0	0.0	0	*
Mason	7	11.5	8	13.1	7	11.4	4	*	4	*
Okanogan	4	*	4	*	2	*	7	16.9	5	12.0
Pacific	2	*	0	0.0	3	*	2	*	3	*
Pend Oreille	3	*	0	0.0	1	*	0	0.0	1	*
Pierce	37	4.7	42	5.2	48	5.9	46	5.7	41	5.0
San Juan	0	0.0	1	*	2	*	1	*	0	*
Skagit	11	9.4	9	7.7	3	*	6	5.1	7	5.9
Skamania	0	0.0	2	*	4	*	0	0.0	0	*
Snohomish	59	8.3	67	9.3	52	7.2	60	8.2	43	5.8
Spokane	47	10.0	31	6.6	39	8.2	24	5.0	47	9.7
Stevens	2	*	2	*	3	*	0	0.0	6	13.7
Thurston	22	8.7	37	14.6	33	12.9	27	10.4	19	7.2
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	*
Walla Walla	1	*	5	8.5	4	*	7	11.8	5	8.3
Whatcom	44	21.9	29	14.3	19	9.3	35	17.0	18	8.7
Whitman	3	*	2	*	2	*	3	*	2	*
Yakima	27	11.1	17	6.9	10	4.1	12	4.9	18	7.2
STATEWIDE TOTAL	521	7.7	529	7.8	512	7.5	548	8.0	515	7.4

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

GIARDIASIS STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1980	840	20.3	0
1981	547	12.9	0
1982	956	22.4	0
1983	706	16.4	0
1984	710	16.3	0
1985	779	17.6	0
1986	811	18.2	0
1987	827	18.3	0
1988	851	18.4	0
1989	980	20.7	0
1990	792	16.3	0
1991	876	17.4	1
1992	860	16.7	1
1993	747	14.2	0
1994	722	13.5	0
1995	855	15.6	0
1996	668	12.0	0
1997	738	13.0	0
1998	740	12.9	1
1999	560	9.6	1
2000	622	10.6	1
2001	512	8.6	0
2002	510	8.4	0
2003	435	7.1	0
2004	444	7.2	0
2005	437	6.9	0
2006	451	7.0	0
2007	590	9.0	0
2008	486	7.4	0
2009	467	7.0	0
2010	521	7.7	0
2011	529	7.8	0
2012	512	7.5	0
2013	548	8.0	0
2014	515	7.4	0

*All rates are cases per 100,000 population.

GONORRHEA

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	2	*	1	*	8	42.0	3	+	9	+
Asotin	5	23.1	6	27.7	0	0.0	2	+	3	+
Benton	16	9.1	30	16.9	49	27.2	88	48.0	152	81.5
Chelan	2	*	8	11.0	10	13.7	10	+	13	17.5
Clallam	21	29.4	15	20.9	2	*	8	+	13	17.9
Clark	170	40.0	159	37.1	151	35.0	148	34.0	208	47.0
Columbia	1	*	0	0.0	2	*	0	+	1	+
Cowlitz	35	34.2	19	18.5	26	25.2	21	20.3	33	31.8
Douglas	2	*	7	18.1	3	*	9	+	8	+
Ferry	2	*	1	*	2	*	2	+	1	+
Franklin	19	24.3	18	22.4	24	29.1	73	86.1	98	113.2
Garfield	1	*	0	0.0	1	*	0	+	1	+
Grant	17	19.1	21	23.3	59	64.8	34	37.0	80	86.1
Grays Harbor	5	6.9	12	16.5	5	6.8	12	16.4	34	46.4
Island	13	16.6	6	7.6	19	23.9	24	30.1	25	31.3
Jefferson	2	*	3	*	1	*	3	+	21	68.4
King	1,568	81.2	1,376	70.8	1,527	78.0	1771	89.4	2,219	110.0
Kitsap	48	19.1	54	21.3	57	22.4	109	42.9	183	71.5
Kittitas	8	19.6	9	21.8	8	19.3	5	+	16	38.0
Klickitat	1	*	1	*	3	*	1	+	3	+
Lewis	10	13.3	6	7.9	12	15.7	21	27.6	16	21.0
Lincoln	1	*	0	0.0	1	*	0	+	0	+
Mason	7	11.5	6	9.8	15	24.4	14	22.7	38	61.3
Okanogan	3	*	8	19.4	5	12.1	12	28.9	10	+
Pacific	1	*	2	*	3	*	15	71.4	11	+
Pend Oreille	0	0.0	0	0.0	4	*	6	+	1	+
Pierce	414	52.1	424	52.9	657	81.3	966	118.6	1,271	154.8
San Juan	4	*	1	*	4	*	1	+	3	+
Skagit	17	14.5	16	13.6	22	18.7	41	34.6	55	46.0
Skamania	4	*	4	*	1	*	1	+	1	+
Snohomish	191	26.8	169	23.6	165	22.8	251	34.4	402	54.3
Spokane	137	29.1	158	33.4	181	38.1	329	68.5	530	109.4
Stevens	5	11.5	2	*	1	*	16	36.5	9	+
Thurston	49	19.4	57	22.4	88	34.3	114	43.8	146	55.3
Wahkiakum	0	0.0	0	0.0	0	0.0	0	+	1	+
Walla Walla	9	15.3	3	*	9	15.2	27	45.4	46	76.5
Whatcom	30	14.9	18	8.9	49	24.1	60	29.2	58	27.9
Whitman	11	24.6	11	24.6	26	56.6	13	28.3	11	+
Yakima	34	14.0	99	40.5	82	33.3	180	72.8	406	163.2
STATEWIDE TOTAL	2,865	42.6	2,730	40.3	3,282	48.1	4,390	63.8	6,136	88.1

All incidence rates are cases per 100,000 population.
*For 2010-2012, incidence rates not calculated for <5 cases.
+For 2013-2014, incidence rates suppressed for counts <20 and rates with residual standard error (RSE) >30% due to statistical instability.

GONORRHEA STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1981	13,204	312.2	0
1982	11,381	266.1	0
1983	9,895	229.7	0
1984	9,158	210.3	0
1985	10,073	228.1	0
1986	9,848	220.7	0
1987	8,909	196.8	0
1988	7,154	155.0	0
1989	6,369	134.7	0
1990	5,009	102.9	0
1991	4,441	88.4	0
1992	4,169	81.1	0
1993	3,740	71.0	0
1994	2,893	53.9	0
1995	2,765	50.5	0
1996	2,020	36.3	0
1997	1,955	34.5	0
1998	1,948	33.9	0
1999	2,132	36.6	0
2000	2,419	41.0	0
2001	2,991	50.1	0
2002	2,925	48.3	0
2003	2,754	44.9	0
2004	2,810	45.3	0
2005	3,738	59.3	0
2006	4,231	65.9	0
2007	3,646	55.9	0
2008	3,116	47.2	0
2009	2,268	34.0	0
2010	2,865	42.6	0
2011	2,730	40.3	0
2012	3,282	48.1	0
2013	4,390	63.8	0
2014	6,136	88.1	0

*All rates are cases per 100,000 population.

Note: Data prior to 2009 are based on year reported rather than year diagnosed.

HAEMOPHILUS INFLUENZAE INVASIVE DISEASE

Year	Cases	Rate*	Deaths
1980	126	3.0	0
1981	156	3.7	0
1982	149	3.5	6
1983	123	2.9	5
1984	110	2.5	5
1985	153	3.5	6
1986	319	7.1	11
1987	271	6.0	6
1988	200	4.3	0
1989	163	3.4	2
1990	123	2.5	6
1991	51	1.0	0
1992	22	0.4	1
1993	17	0.3	0
1994	10	0.2	0
1995	11	0.2	3
1996	10	0.2	0
1997	6	0.1	0
1998	11	0.2	1
1999	5	0.1	1
2000	8	0.1	0
2001*	7	1.8	0
2002*	5	1.2	0
2003*	13	3.2	1
2004*	4	1.0	0
2005*	5	1.2	0
2006*	5	1.2	0
2007*	6	1.4	0
2008*	2	0.5	0
2009*	9	2.1	0
2010*	10	2.3	1
2011*	8	1.8	1
2012*	4	0.9	0
2013*	11	2.4	0
2014*	9	2.0	0

*All rates are cases per 100,000 population. Rates for 2001-2014 are for population aged 0-4 years.

HANTAVIRUS PULMONARY SYNDROME‡

Year	Cases	Rate*	Deaths
1985**	2	0.0	1
1994	4	0.1	2
1995	4	0.1	2
1996	3	0.1	1
1997	2	0.0	0
1998	5	0.1	1
1999	1	0.0	0
2000	1	0.0	0
2001	1	0.0	0
2002	2	0.0	1
2003	2	0.0	0
2004	1	0.0	0
2005	3	0.0	2
2006	2	0.0	0
2007	2	0.0	1
2008	2	0.0	1
2009	3	0.0	1
2010	2	0.0	0
2011	2	0.0	1
2012	2	0.0	2
2013	0	0.0	0
2014	1	0.0	0

‡ Hantavirus Pulmonary Syndrome first became a notifiable condition in Washington in 12/2000.
*All rates are cases per 100,000 population.
** One retrospective case from 1985 was reported.

HEPATITIS A, ACUTE

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	1	*	1	*	0	0.0	1	*	0	0.0
Benton	0	0.0	0	0.0	1	*	0	0.0	1	*
Chelan	0	0.0	1	*	1	*	4	*	0	0.0
Clallam	1	*	0	0.0	0	0.0	1	*	0	0.0
Clark	1	*	0	0.0	1	*	2	*	3	*
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	1	*	0	0.0	2	*	1	*	0	0.0
Douglas	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	1	*	0	0.0	1	*	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	*	1	*	1	*	2	*	0	0.0
Grays Harbor	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Island	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	1	*	0	0.0	0	0.0
King	7	0.4	16	0.8	10	0.5	13	0.7	6	0.3
Kitsap	2	*	2	*	0	0.0	2	*	0	0.0
Kittitas	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Lewis	0	0.0	0	0.0	1	*	1	*	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	2	*	2	*	1	*	1	*	4	*
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	2	*	1	*	0	0.0	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	2	*	2	*	1	*	9	1.2	6	0.8
Spokane	0	0.0	0	0.0	0	0.0	1	*	3	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	0	0.0	0	0.0	2	*	1	*	0	0.0
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	1	*	3	*	1	*	1	*	1	*
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	0	0.0	0	0.0	2	*	4	*	0	0.0
STATEWIDE TOTAL	21	0.3	31	0.5	29	0.4	45	0.7	26	0.4

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

HEPATITIS A, ACUTE STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1980	554	13.4	2
1981	791	18.7	0
1982	494	11.6	1
1983	268	6.2	1
1984	373	8.6	0
1985	702	15.9	2
1986	1,385	31.0	1
1987	2,589	57.2	1
1988	2,669	57.8	7
1989	3,273	69.2	5
1990	1,380	28.4	1
1991	608	12.1	3
1992	865	16.8	1
1993	926	17.6	1
1994	1,119	20.9	2
1995	937	17.1	9
1996	1,001	18.0	3
1997	1,019	18.0	1
1998	1,037	18.0	2
1999	505	8.7	1
2000	298	5.1	1
2001	184	3.1	0
2002	162	2.7	0
2003	50	0.8	0
2004	69	1.1	0
2005	63	1.0	1
2006	52	0.8	2
2007	60	0.9	0
2008	51	0.8	0
2009	42	0.6	1
2010	21	0.3	0
2011	31	0.5	1
2012	29	0.4	1
2013	45	0.7	1
2014	26	0.4	0

*All rates are cases per 100,000 population.

HEPATITIS B, ACUTE

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	0	0.0	1	*	1	*	0	0.0
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Clallam	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Clark	3	*	3	*	0	0.0	0	0.0	0	0.0
Columbia	1	*	0	0.0	0	0.0	0	0.0	1	*
Cowlitz	2	*	4	*	1	*	2	*	1	*
Douglas	0	0.0	0	0.0	1	*	1	*	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	1	*	1	*	0	0.0	1	*
Grays Harbor	0	0.0	1	*	1	*	1	*	5	6.8
Island	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	13	0.7	15	0.8	11	0.6	10	0.5	10	0.5
Kitsap	0	0.0	2	*	1	*	0	0.0	0	0.0
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	1	*	0	0.0	0	0.0	1	*
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	2	*	1	*	1	*	3	*	0	0.0
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	1	*	0	0.0	0	0.0	1	*	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	8	1.1	3	*	5	0.7	0	0.0	8	1.1
Spokane	12	2.5	1	*	4	*	13	2.7	13	2.7
Stevens	1	*	0	0.0	1	*	0	0.0	0	0.0
Thurston	3	*	2	*	1	*	1	*	0	0.0
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Whatcom	3	*	0	0.0	3	*	1	*	1	*
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
STATEWIDE TOTAL	50	0.7	35	0.5	34	0.5	34	0.5	44	0.6

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

HEPATITIS B, ACUTE STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1980	257	6.2	6
1981	345	8.2	11
1982	358	8.4	2
1983	307	7.1	3
1984	317	7.3	2
1985	484	11.0	6
1986	989	22.2	8
1987	1,126	24.9	4
1988	979	21.2	6
1989	1,055	22.3	9
1990	616	12.7	7
1991	470	9.4	5
1992	399	7.8	1
1993	247	4.7	0
1994	255	4.8	2
1995	226	4.1	2
1996	158	2.8	1
1997	114	2.0	2
1998	136	2.4	0
1999	111	1.9	1
2000	132	2.2	5
2001	171	2.9	0
2002	83	1.4	0
2003	90	1.5	1
2004	64	1.0	1
2005	80	1.3	0
2006	80	1.2	2
2007	71	1.1	1
2008	56	0.8	0
2009	48	0.7	0
2010	50	0.7	1
2011	35	0.5	0
2012	34	0.5	1
2013	34	0.5	1
2014	44	0.6	0

*All rates are cases per 100,000 population.

HEPATITIS B, CHRONIC

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Asotin	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Benton	1	*	0	0.0	0	0.0	0	0.0	5	2.7
Chelan	6	8.3	4	*	0	0.0	4	*	1	*
Clallam	2	*	0	0.0	1	*	1	*	1	*
Clark	64	15.0	61	14.3	60	13.9	62	14.2	86	19.4
Columbia	0	0.0	1	*	0	0.0	1	*	0	0.0
Cowlitz	10	9.8	10	9.7	14	13.6	11	10.6	10	9.6
Douglas	3	*	1	*	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	0	0.0	0	0.0	2	*
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	4	*	4	*	1	*	0	0.0	3	*
Grays Harbor	2	*	0	0.0	3	*	0	0.0	2	*
Island	12	15.3	12	15.2	7	8.8	4	5.0	7	8.8
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	1	*
King	656	34.0	537	27.6	631	32.2	479	24.2	591	29.3
Kitsap	37	14.7	28	11.0	26	10.2	20	7.9	19	7.4
Kittitas	4	*	0	0.0	1	*	3	*	2	*
Klickitat	2	*	3	*	0	0.0	0	0.0	0	0.0
Lewis	2	*	3	*	3	*	2	*	1	*
Lincoln	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	3	*	3	*	1	*
Okanogan	0	0.0	0	0.0	1	*	0	0.0	1	*
Pacific	1	*	0	0.0	1	*	3	*	0	0.0
Pend Oreille	2	*	1	*	0	0.0	1	*	1	*
Pierce	105	13.2	92	11.5	114	14.1	†	-	120	14.6
San Juan	2	*	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	6	5.1	6	5.1	3	*	7	5.9	1	*
Skamania	1	*	0	0.0	1	*	0	0.0	0	0.0
Snohomish	166	23.3	138	19.2	159	22.0	160	22.3	176	23.8
Spokane	72	15.3	52	11.0	45	9.5	58	12.1	56	11.6
Stevens	3	*	2	*	3	*	3	*	1	*
Thurston	27	10.7	31	12.2	30	11.7	33	12.7	36	13.6
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	1	*	5	8.5	3	*	1	*	0	0.0
Whatcom	17	8.5	12	5.9	17	8.4	9	4.4	11	5.3
Whitman	9	20.1	6	13.4	5	10.9	0	0.0	0	0.0
Yakima	5	2.1	3	*	1	*	3	*	8	3.2
Unspecified**	5	-	6	-	6	-	6	-	5	-
STATEWIDE TOTAL‡	1,229	18.3	1,018	15.0	1,139	16.7	874	12.7	1,149	16.5

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

† Unable to appropriately classify cases submitted to Washington State Department of Health by Tacoma-Pierce County Health Department (TPCHD) in 2013 using current methodologies.

**Includes cases diagnosed within Department of Corrections (DOC) facilities and cases entered at the state level into the Public Health Issue Management System (PHIMS). Unable to calculate incidence rates due to the inability to assign county of residence for cases.

‡ Statewide data represent cases classified as confirmed or probable based on laboratory data and established classification criteria.

HEPATITIS B, CHRONIC STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
2000	613	10.4	72
2001	1,077	18.0	57
2002	978	16.1	54
2003	947	15.5	49
2004	941	15.2	55
2005	1,032	16.4	50
2006	1,117	17.4	42
2007	1,127	17.3	50
2008	1,439	21.8	56
2009	1,188	17.8	65
2010	1,229	18.3	50
2011	1,018	15.0	55
2012	1,139	16.7	49
2013	874	12.7	60
2014	1,149	16.5	58

*All rates are cases per 100,000 population.

HEPATITIS C, ACUTE

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Clallam	0	0.0	3	*	2	*	2	*	3	*
Clark	3	*	1	*	2	*	2	*	3	*
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Grays Harbor	0	0.0	0	0.0	0	0.0	1	*	1	*
Island	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	3	*	2	*
King	8	0.4	7	0.4	5	0.3	18	0.9	21	1.0
Kitsap	0	0.0	0	0.0	0	0.0	1	*	1	*
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	2	*	1	*	3	*	7	0.9	16	1.9
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	1	*	4	*	4	*	1	*	3	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	1	*	3	*	1	*	3	*	2	*
Spokane	4	*	10	2.1	13	2.7	14	2.9	16	3.3
Stevens	0	0.0	1	*	2	*	1	*	0	0.0
Thurston	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	2	*	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	4	*	8	4.0	19	9.3	9	4.4	11	5.3
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	0	0.0	0	0.0	2	*	0	0.0	2	*
STATEWIDE TOTAL	25	0.4	41	0.6	54	0.8	63	0.9	83	1.2

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

HEPATITIS C, ACUTE STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1981	54	1.3	8
1982	94	2.2	0
1983	151	3.5	1
1984	131	3.0	2
1985	145	3.3	1
1986	167	3.7	7
1987	207	4.6	1
1988	232	5.0	2
1989	208	4.4	4
1990	141	2.9	6
1991	164	3.3	4
1992	186	3.6	1
1993	219	4.2	1
1994	294	5.5	0
1995	234	4.3	1
1996	66	1.2	1
1997	42	0.7	0
1998	29	0.5	0
1999	24	0.4	0
2000	44	0.7	0
2001	31	0.5	0
2002	27	0.4	0
2003	21	0.3	0
2004	23	0.4	1
2005	21	0.3	0
2006	23	0.4	0
2007	18	0.3	0
2008	25	0.4	0
2009	22	0.3	0
2010	25	0.4	0
2011	41	0.6	0
2012	54	0.8	0
2013	63	0.9	0
2014	83	1.2	0

*All rates are cases per 100,000 population.

HEPATITIS C, CHRONIC

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	3	*	0	0.0	7	36.7	0	0.0	7	36.1
Asotin	20	92.5	20	92.4	19	87.6	19	87.2	17	77.4
Benton	3	*	5	2.8	11	6.1	35	19.1	52	27.9
Chelan	44	60.7	32	44.0	18	24.6	15	20.4	32	43.1
Clallam	53	74.2	40	55.9	33	45.8	32	44.2	77	106.2
Clark	422	99.2	445	104.0	472	109.4	410	94.1	618	139.6
Columbia	2	*	5	122.0	6	146.3	2	*	7	171.6
Cowlitz	144	140.6	137	133.4	190	184.4	169	163.6	289	278.7
Douglas	16	41.6	12	31.0	9	23.1	7	17.8	7	17.6
Ferry	10	132.4	8	105.3	13	169.9	4	*	12	156.7
Franklin	3	*	0	0.0	9	10.9	6	7.1	12	13.9
Garfield	1	*	0	0.0	1	*	0	0.0	5	223.2
Grant	60	67.3	52	57.7	46	50.5	24	26.1	17	18.3
Grays Harbor	79	108.5	99	135.8	88	120.3	78	106.6	151	206.0
Island	53	67.5	42	53.3	38	47.9	43	54.0	64	80.0
Jefferson	21	70.3	27	89.9	10	33.1	12	39.6	26	84.7
King	1568	81.2	1341	69.0	1167	59.6	957	48.3	1298	64.3
Kitsap	212	84.4	197	77.6	201	79.0	193	76.0	254	99.3
Kittitas	30	73.3	14	33.9	10	24.1	14	33.4	39	92.6
Klickitat	19	93.5	16	78.0	20	97.1	12	58.0	11	52.8
Lewis	49	64.9	40	52.6	63	82.6	74	97.1	116	152.0
Lincoln	5	47.3	3	*	1	*	5	46.8	6	56.1
Mason	71	117.0	59	96.6	64	104.1	63	101.9	97	156.5
Okanogan	25	60.8	7	17.0	18	43.5	13	31.3	7	16.8
Pacific	20	95.6	24	114.8	22	104.9	22	104.8	47	222.7
Pend Oreille	9	69.2	12	92.3	10	76.3	3	*	22	166.5
Pierce	584	73.4	436	54.4	400	49.5	297	36.5	478	58.2
San Juan	14	88.8	3	*	7	44.0	9	56.3	15	93.2
Skagit	138	118.0	89	75.8	104	88.2	106	89.4	170	142.3
Skamania	10	90.4	8	71.7	4	*	1	*	0	0.0
Snohomish	492	69.0	494	68.9	522	72.2	548	75.0	851	114.8
Spokane	405	85.9	509	107.7	565	118.8	597	124.4	674	139.1
Stevens	37	85.0	39	89.4	49	112.1	28	63.9	58	132.1
Thurston	245	97.1	197	77.5	175	68.1	188	72.3	293	111.0
Wahkiakum	0	0.0	4	*	5	124.2	0	0.0	0	0.0
Walla Walla	24	40.8	33	56.1	37	62.6	24	40.3	35	58.2
Whatcom	252	125.3	246	121.7	244	119.9	296	143.8	306	147.4
Whitman	14	31.3	19	42.4	14	30.5	3	*	5	10.8
Yakima	157	64.5	75	30.6	0	0.0	11	4.4	255	102.5
Unspecified**	364	-	332	-	214	-	232	-	163	-
STATEWIDE TOTAL‡	5,678	84.4	5,121	75.7	4,886	71.7	4,552	66.1	6,593	94.6

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

**Includes cases diagnosed in correctional facilities and cases entered at the state level into the Public Health Issue Management System (PHIMS). Unable to calculate incidence rates due to the inability to assign county of residence for cases.

‡ Statewide data represent cases classified as confirmed or probable based on laboratory data and established classification criteria.

HEPATITIS C, CHRONIC STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
2000	3,395	57.6	268
2001	6,131	102.7	303
2002	5,281	87.2	343
2003	4,192	68.4	312
2004	4,745	77.4	375
2005	4,777	75.8	334
2006	5,357	83.4	372
2007	5,540	84.9	456
2008	6,522	98.7	495
2009	5,547	83.1	568
2010	5,678	84.4	579
2011	5,121	75.7	595
2012	4,886	71.7	622
2013	4,552	66.1	611
2014	6,593	94.6	663

*All rates are cases per 100,000 population.

HERPES SIMPLEX

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	3	*	3	*	3	*	3	+	1	+
Asotin	4	*	7	32.3	4	*	6	+	3	+
Benton	33	18.8	50	28.1	44	24.4	50	27.3	62	33.2
Chelan	13	17.9	20	27.5	21	28.7	9	+	6	+
Clallam	16	22.4	10	14.0	12	16.7	20	27.6	18	24.8
Clark	82	19.3	67	15.7	90	20.9	153	35.1	193	43.6
Columbia	0	0.0	0	0.0	1	*	2	+	0	+
Cowlitz	41	40.0	32	31.2	53	51.4	31	30.0	57	55.0
Douglas	7	18.2	11	28.5	6	15.4	7	+	4	+
Ferry	0	0.0	1	*	0	0.0	4	+	4	+
Franklin	10	12.8	14	17.4	13	15.8	18	21.2	27	31.2
Garfield	0	0.0	0	0.0	0	0.0	1	+	0	+
Grant	16	18.0	12	13.3	16	17.6	9	+	14	15.1
Grays Harbor	18	24.7	19	26.1	11	15.0	23	31.4	26	35.5
Island	38	48.4	35	44.4	31	39.1	34	42.7	28	35.0
Jefferson	10	33.5	9	30.0	5	16.6	2	+	6	+
King	601	31.1	632	32.5	742	37.9	633	31.9	385	19.1
Kitsap	74	29.5	71	28.0	67	26.3	71	28.0	78	30.5
Kittitas	12	29.3	14	33.9	17	41.0	8	+	17	40.4
Klickitat	2	*	1	*	3	*	2	+	2	+
Lewis	19	25.2	22	28.9	31	40.6	27	35.4	11	+
Lincoln	0	0.0	0	0.0	0	0.0	1	+	1	+
Mason	15	24.7	16	26.2	19	30.9	6	+	7	+
Okanogan	10	24.3	15	36.4	9	21.7	20	48.2	7	+
Pacific	2	*	1	*	1	*	5	+	9	+
Pend Oreille	1	*	6	46.2	1	*	2	+	1	+
Pierce	248	31.2	327	40.8	346	42.8	364	44.7	400	48.7
San Juan	4	*	2	*	3	*	0	*	1	+
Skagit	40	34.2	34	29.0	21	17.8	26	21.9	27	22.6
Skamania	3	*	0	0.0	1	*	1	+	0	+
Snohomish	280	39.3	297	41.4	228	31.5	282	38.6	274	37.0
Spokane	174	36.9	185	39.1	134	28.2	132	27.5	201	41.5
Stevens	4	*	3	*	8	18.3	11	+	1	+
Thurston	93	36.9	77	30.3	103	40.1	91	35.0	71	26.9
Wahkiakum	2	*	1	*	0	0.0	3	+	0	+
Walla Walla	23	39.1	17	28.9	17	28.8	14	23.5	18	29.9
Whatcom	75	37.3	62	30.7	66	32.4	71	34.5	54	26.0
Whitman	5	11.2	2	*	10	21.8	9	+	8	+
Yakima	50	20.6	74	30.2	60	24.4	56	22.7	60	24.1
STATEWIDE TOTAL	2,028	30.2	2,149	31.8	2,197	32.2	2,207	32.1	2,082	29.9

All incidence rates are cases per 100,000 population.
*For 2010-2012, incidence rates not calculated for <5 cases.
+For 2013-2014, incidence rates suppressed for counts <20 and rates with residual standard error (RSE) >30% due to statistical instability.

HERPES SIMPLEX STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
2002	1,914	31.6	0
2003	2,073	33.8	0
2004	2,153	34.7	0
2005	2,331	37.0	0
2006	2,446	38.1	0
2007	1,952	29.9	0
2008	2,009	30.4	0
2009	1,875	28.1	0
2010	2,028	30.2	0
2011	2,149	31.8	0
2012	2,197	32.2	0
2013	2,207	32.1	0
2014	2,082	29.9	0

*All rates are cases per 100,000 population.

Note: Data prior to 2009 are based on year reported rather than year diagnosed.

HUMAN IMMUNODEFICIENCY VIRUS (HIV)[§]

County	2010 Cases	2010 Rate	2011 Cases	2011 Rate	2012 Cases	2012 Rate	2013 Cases	2013 Rate	2014 Cases	2014 Rate
Adams	0	*	1	*	0	*	0	*	0	*
Asotin	2	*	1	*	0	*	1	*	0	*
Benton	7	*	12	6.8	5	*	7	*	6	*
Chelan	5	*	4	*	3	*	3	*	4	*
Clallam	1	*	3	*	4	*	3	*	1	*
Clark	31	7.3	29	6.8	27	6.3	26	6.0	21	4.7
Columbia	0	*	0	*	0	*	0	*	0	*
Cowlitz	5	*	3	*	4	*	2	*	4	*
Douglas	2	*	1	*	0	*	1	*	0	*
Ferry	0	*	0	*	0	*	0	*	1	*
Franklin	4	*	1	*	2	*	0	*	1	*
Garfield	0	*	0	*	0	*	0	*	0	*
Grant	3	*	3	*	3	*	0	*	0	*
Grays Harbor	5	*	4	*	7	*	1	*	3	*
Island	3	*	1	*	3	*	2	*	3	*
Jefferson	0	*	0	*	1	*	1	*	2	*
King	325	16.8	270	13.9	288	14.7	257	13.0	281	13.9
Kitsap	2	*	6	*	11	*	7	*	7	*
Kittitas	0	*	0	*	0	*	2	*	1	*
Klickitat	0	*	0	*	1	*	0	*	0	*
Lewis	0	*	5	*	1	*	1	*	1	*
Lincoln	0	*	0	*	0	*	0	*	0	*
Mason	11	*	7	*	9	*	3	*	1	*
Okanogan	0	*	1	*	3	*	0	*	0	*
Pacific	0	*	0	*	2	*	0	*	1	*
Pend Oreille	0	*	0	*	0	*	0	*	0	*
Pierce	61	7.7	57	7.1	53	6.6	60	7.4	44	5.4
San Juan	2	*	0	*	0	*	2	*	1	*
Skagit	4	*	5	*	4	*	9	*	4	*
Skamania	0	*	0	*	0	*	0	*	0	*
Snohomish	33	4.6	32	4.5	39	5.4	29	4.0	33	4.5
Spokane	24	5.1	25	5.3	25	5.3	22	4.6	6	*
Stevens	0	*	1	*	0	*	3	*	0	*
Thurston	12	4.8	7	*	4	*	9	*	5	*
Wahkiakum	0	*	0	*	0	*	1	*	1	*
Walla Walla	0	*	0	*	3	*	0	*	0	*
Whatcom	1	*	7	*	4	*	8	*	5	*
Whitman	1	*	1	*	0	*	0	*	1	*
Yakima	17	7.0	8	*	7	*	7	*	8	*
STATEWIDE TOTAL	561	8.3	495	7.3	513	7.5	467	6.8	446	6.4

§ Cases are presented by year of initial HIV diagnosis, regardless of diagnostic status (HIV or AIDS), and by county of residence at time of diagnosis. Data from years 2010-2013 have been adjusted since previous editions of this report. Data describe cases reported through 7/31/15.

*All rates are cases per 100,000 population. New HIV case rates not calculated for 11 or fewer cases.

People Living with HIV Disease and Related Deaths

STATEWIDE BY YEAR

Year	Cases[α]	Rate*	Deaths**
2001	8,054	134.9	145
2002	8,539	140.9	143
2003	8,953	146.1	180
2004	9,408	151.5	142
2005	9,818	155.9	165
2006	10,272	160.0	122
2007	10,705	164.1	114
2008	11,052	167.3	110
2009	11,392	170.7	134
2010	11,754	174.8	108
2011	11,756	173.7	118
2012	11,903	174.6	101
2013	12,281	178.4	89
2014**	12,671	181.8	---

[α] Includes resident cases of HIV disease that have been reported to the health department and are presumed living in Washington at a specific point in time, regardless of where each case was diagnosed. This methodology accounts for in-migration as well as out-migration, which results in a slower increase of people living with HIV in Washington over time.

*All rates are cases per 100,000 population.

**Includes only deaths attributed to HIV or AIDS. The number of HIV deaths in 2014 was unavailable at the time of this report.

LEGIONELLOSIS

Year	Cases	Rate*	Deaths
1985	7	0.2	2
1986	15	0.3	8
1987	24	0.5	3
1988	29	0.6	4
1989	30	0.6	5
1990	18	0.4	4
1991	15	0.3	5
1992	15	0.3	5
1993	12	0.2	2
1994	13	0.2	2
1995	22	0.4	6
1996	7	0.1	2
1997	11	0.2	0
1998	15	0.3	2
1999	21	0.4	4
2000	19	0.3	1
2001	10	0.2	1
2002	8	0.1	3
2003	14	0.2	1
2004	15	0.2	4
2005	18	0.3	1
2006	20	0.3	1
2007	24	0.4	2
2008	19	0.3	1
2009	29	0.4	2
2010	35	0.5	4
2011	43	0.6	4
2012	30	0.4	5
2013	52	0.8	5
2014	63	0.9	8

*All rates are cases per 100,000 population.

LEPTOSPIROSIS

Year	Cases	Rate*	Deaths
1986	0	0.0	0
1987	0	0.0	0
1988	0	0.0	0
1989	0	0.0	0
1990	0	0.0	0
1991	0	0.0	0
1992	0	0.0	0
1993	0	0.0	0
1994	0	0.0	0
1995	0	0.0	0
1996	2	0.0	0
1997	2	0.0	0
1998	0	0.0	0
1999	0	0.0	0
2000	0	0.0	0
2001	4	0.1	0
2002	0	0.0	0
2003	1	0.0	0
2004	0	0.0	0
2005	4	0.1	0
2006	1	0.0	0
2007	5	0.1	0
2008	1	0.0	0
2009	0	0.0	0
2010	1	0.0	0
2011	0	0.0	0
2012	2	0.0	0
2013	0	0.0	0
2014	0	0.0	0

*All rates are cases per 100,000 population.

LISTERIOSIS

Year	Cases	Rate*	Deaths
1985	21	0.5	1
1986	37	0.8	5
1987	36	0.8	6
1988	38	0.8	4
1989	21	0.4	2
1990	22	0.5	3
1991	18	0.4	6
1992	13	0.3	0
1993	21	0.4	2
1994	13	0.2	3
1995	24	0.4	1
1996	11	0.2	3
1997	17	0.3	1
1998	12	0.2	3
1999	19	0.3	5
2000	12	0.2	2
2001	15	0.3	1
2002	11	0.2	0
2003	13	0.2	3
2004	13	0.2	3
2005	14	0.2	3
2006	18	0.3	3
2007	25	0.4	2
2008	29	0.4	3
2009	24	0.4	4
2010	24	0.4	1
2011	19	0.3	2
2012	26	0.4	5
2013	21	0.3	1
2014	24	0.3	5

*All rates are cases per 100,000 population.

LYME DISEASE

Year	Cases	Rate*	Deaths
1986	1	0.0	0
1987	10	0.2	0
1988	12	0.3	0
1989	37	0.8	0
1990	33	0.7	0
1991	7	0.1	0
1992	14	0.3	0
1993	9	0.2	0
1994	4	0.1	0
1995	10	0.2	0
1996	18	0.3	0
1997	10	0.2	0
1998	7	0.1	0
1999	14	0.2	0
2000	9	0.2	0
2001	9	0.2	0
2002	12	0.2	0
2003	7	0.1	0
2004	14	0.2	0
2005	13	0.2	0
2006	8	0.1	0
2007	12	0.2	0
2008	23	0.3	0
2009	16	0.2	0
2010	16	0.2	0
2011	19	0.3	0
2012	15	0.2	0
2013	21	0.3	0
2014	15	0.2	0

*All rates are cases per 100,000 population.

MALARIA

Year	Cases	Rate*	Deaths
1981	30	0.7	0
1982	24	0.6	0
1983	15	0.3	0
1984	20	0.5	0
1985	34	0.8	0
1986	35	0.8	0
1987	28	0.6	0
1988	24	0.5	0
1989	44	0.9	0
1990	33	0.7	0
1991	29	0.6	0
1992	21	0.4	0
1993	41	0.8	0
1994	45	0.8	0
1995	23	0.4	0
1996	41	0.7	0
1997	49	0.9	0
1998	30	0.5	0
1999	43	0.7	0
2000	43	0.7	0
2001	19	0.3	0
2002	26	0.4	0
2003	34	0.6	0
2004	24	0.4	0
2005	24	0.4	0
2006	43	0.7	1
2007	30	0.5	0
2008	32	0.5	0
2009	26	0.4	1
2010	39	0.6	0
2011	24	0.4	0
2012	26	0.4	0
2013	30	0.4	0
2014	41	0.6	0

*All rates are cases per 100,000 population.

MEASLES

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clallam	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clark	0	0.0	3	*	0	0.0	0	0.0	0	0.0
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	1	1.4
Island	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	1	*	0	0.0	0	0.0	4	*	13	0.6
Kitsap	0	0.0	1	*	0	0.0	0	0.0	1	0.4
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	0	0.0	0	0.0	0	0.0	0	0.0	3	0.4
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	7	43.5
Skagit	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Spokane	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	0	0.0	0	0.0	0	0.0	0	0.0	6	2.9
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
STATEWIDE TOTAL	1	0.0	4	0.1	0	0.0	4	0.1	33	0.5

All rates are cases per 100,000 population.
*Incidence rates not calculated for <5 cases.

MEASLES STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1980	178	4.3	0
1981	3	0.1	0
1982	42	1.0	0
1983	43	1.0	0
1984	178	4.1	0
1985	178	4.0	0
1986	176	3.9	0
1987	47	1.0	0
1988	7	0.2	0
1989	56	1.2	0
1990	357	7.3	2
1991	67	1.3	0
1992	11	0.2	0
1993	0	0.0	0
1994	5	0.1	0
1995	17	0.3	0
1996	38	0.7	0
1997	2	0.0	0
1998	1	0.0	0
1999	5	0.1	0
2000	3	0.1	0
2001	15	0.3	0
2002	1	0.0	0
2003	0	0.0	0
2004	7	0.1	0
2005	1	0.0	0
2006	1	0.0	0
2007	3	0.0	0
2008	19	0.3	0
2009	1	0.0	0
2010	1	0.0	0
2011	4	0.1	0
2012	0	0.0	0
2013	4	0.1	0
2014	33	0.5	0

*All rates are cases per 100,000 population.

MENINGOCOCCAL DISEASE

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	2	*	0	0.0	1	*	0	0.0
Chelan	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Clallam	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Clark	4	*	1	*	0	0.0	2	*	2	*
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	1	*	1	*	1	*
Douglas	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	2	*	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Grays Harbor	1	*	0	0.0	2	*	0	0.0	0	0.0
Island	1	*	0	0.0	0	0.0	0	0.0	1	*
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	8	0.4	8	0.4	4	*	3	*	1	*
Kitsap	0	0.0	1	*	0	0.0	2	*	0	0.0
Kittitas	0	0.0	0	0.0	2	*	1	*	0	0.0
Klickitat	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Lewis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Mason	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	3	*	1	*	3	*	1	*	4	*
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Skagit	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	5	0.7	5	0.7	2	*	2	*	1	*
Spokane	2	*	0	0.0	2	*	2	*	2	*
Stevens	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Thurston	2	*	0	0.0	1	*	0	0.0	2	*
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0/0	0	0.0
Walla Walla	1	*	0	0.0	1	*	0	0.0	0	0.0
Whatcom	0	0.0	2	*	1	*	0	0.0	0	0.0
Whitman	3	*	0	0.0	2	*	0	0.0	0	0.0
Yakima	2	*	0	0.0	2	*	0	0.0	1	*
STATEWIDE TOTAL	33	0.5	22	0.3	24	0.4	20	0.3	17	0.2

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

MENINGOCOCCAL DISEASE STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1980	67	1.6	2
1981	78	1.8	3
1982	56	1.3	2
1983	48	1.1	3
1984	56	1.3	3
1985	67	1.5	6
1986	62	1.4	5
1987	87	1.9	4
1988	76	1.6	3
1989	96	2.0	12
1990	80	1.6	5
1991	73	1.5	8
1992	92	1.8	5
1993	97	1.8	6
1994	111	2.1	7
1995	126	2.3	7
1996	116	2.1	10
1997	115	2.0	11
1998	77	1.3	7
1999	93	1.6	4
2000	71	1.2	6
2001	71	1.2	6
2002	76	1.3	8
2003	61	1.0	7
2004	42	0.7	4
2005	53	0.8	4
2006	45	0.7	1
2007	32	0.5	8
2008	40	0.6	4
2009	26	0.4	3
2010	33	0.5	3
2011	22	0.3	0
2012	24	0.4	1
2013	20	0.3	3
2014	17	0.2	2

*All rates are cases per 100,000 population.

MUMPS

Year	Cases	Rate*	Deaths
1980	166	4.0	0
1981	165	3.9	0
1982	102	2.4	0
1983	55	1.3	0
1984	56	1.3	0
1985	42	1.0	0
1986	30	0.7	0
1987	70	1.5	0
1988	44	1.0	0
1989	59	1.2	0
1990	66	1.4	0
1991	178	3.5	0
1992	18	0.4	0
1993	14	0.3	0
1994	23	0.4	0
1995	16	0.3	0
1996	26	0.5	0
1997	21	0.4	0
1998	11	0.2	0
1999	2	0.0	0
2000	10	0.2	0
2001	2	0.0	0
2002	0	0.0	0
2003	11	0.2	0
2004	2	0.0	0
2005	3	0.0	0
2006	42	0.7	0
2007	53	0.8	0
2008	14	0.2	0
2009	6	0.1	0
2010	7	0.1	0
2011	2	0.0	0
2012	2	0.0	0
2013	2	0.0	0
2014	9	0.1	0

*All rates are cases per 100,000 population.

PERTUSSIS

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	3	*	2	*	15	78.7	2	*	11	56.7
Asotin	3	*	0	0.0	4	*	1	*	1	*
Benton	9	5.1	4	*	85	47.2	8	4.4	7	3.8
Chelan	1	*	2	*	46	62.8	7	9.5	3	*
Clallam	2	*	4	*	25	34.7	13	18.0	20	27.6
Clark	92	21.6	94	22.0	326	75.6	59	13.5	59	13.3
Columbia	2	*	0	0.0	1	*	1	*	0	0.0
Cowlitz	26	25.4	71	69.1	72	69.9	5	4.8	10	9.6
Douglas	0	0.0	0	0.0	10	25.7	3	*	0	0.0
Ferry	1	*	0	0.0	7	91.5	0	0.0	0	0.0
Franklin	0	0.0	5	6.2	45	54.5	5	5.9	4	*
Garfield	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Grant	25	28.1	30	33.3	53	58.2	58	63.2	35	37.7
Grays Harbor	2	*	3	*	24	32.8	1	*	0	0.0
Island	13	16.6	30	38.1	46	58.0	0	0.0	6	7.5
Jefferson	2	*	2	*	25	82.9	0	0.0	1	*
King	69	3.6	124	6.4	785	40.1	113	5.7	151	7.5
Kitsap	31	12.3	16	6.3	92	36.1	7	2.8	43	16.8
Kittitas	19	46.4	9	21.8	34	81.9	8	19.1	0	0.0
Klickitat	3	*	2	*	6	29.1	2	*	2	*
Lewis	41	54.3	6	7.9	71	93.1	6	7.9	16	21.0
Lincoln	0	0.0	1	*	2	*	1	*	0	0.0
Mason	2	*	0	0.0	14	22.8	7	11.3	0	0.0
Okanogan	6	14.6	2	*	22	53.1	15	36.1	3	*
Pacific	0	0.0	1	*	7	33.4	0	0.0	0	0.0
Pend Oreille	10	76.9	0	0.0	4	*	0	0.0	1	*
Pierce	84	10.6	129	16.1	783	96.9	116	14.2	86	10.5
San Juan	17	107.8	38	239.0	14	87.9	0	0.0	3	*
Skagit	4	*	5	4.3	559	473.9	18	15.2	18	15.1
Skamania	0	0.0	2	*	3	*	0	0.0	0	0.0
Snohomish	46	6.4	268	37.4	549	75.9	52	7.1	25	3.4
Spokane	7	1.5	18	3.8	198	41.6	48	10.0	26	5.4
Stevens	13	29.9	1	*	42	96.1	3	*	0	0.0
Thurston	36	14.3	10	3.9	63	24.5	43	16.5	13	4.9
Wahkiakum	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Walla Walla	1	*	2	*	55	93.1	1	*	15	24.9
Whatcom	25	12.4	68	33.6	333	163.6	35	17.0	24	11.6
Whitman	1	*	2	*	2	*	8	17.4	1	*
Yakima	11	4.5	11	4.5	493	200.4	101	40.8	17	6.8
STATEWIDE TOTAL	607	9.0	962	14.2	4,916	72.1	748	10.9	601	8.6

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

PERTUSSIS STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1980	77	1.9	0
1981	58	1.4	1
1982	36	0.8	1
1983	20	0.5	0
1984	326	7.5	1
1985	92	2.1	0
1986	163	3.7	2
1987	110	2.4	0
1988	130	2.8	1
1989	201	4.3	0
1990	227	4.7	0
1991	149	3.0	0
1992	241	4.7	0
1993	96	1.8	0
1994	140	2.6	0
1995	491	9.0	0
1996	830	14.9	1
1997	481	8.5	0
1998	406	7.1	1
1999	739	12.7	0
2000	458	7.8	1
2001	184	3.1	0
2002	575	9.5	0
2003	844	13.8	0
2004	842	13.6	0
2005	1,026	16.3	0
2006	377	5.9	1
2007	482	7.4	0
2008	460	7.0	1
2009	291	4.4	0
2010	607	9.0	2
2011	962	14.2	2
2012	4,916	72.1	0
2013	748	10.9	0
2014	601	8.6	0

*All rates are cases per 100,000 population.

PLAGUE

Year	Cases	Rate*	Deaths
1986	0	0.0	0
1987	0	0.0	0
1988	0	0.0	0
1989	0	0.0	0
1990	0	0.0	0
1991	0	0.0	0
1992	0	0.0	0
1993	0	0.0	0
1994	0	0.0	0
1995	0	0.0	0
1996	0	0.0	0
1997	0	0.0	0
1998	0	0.0	0
1999	0	0.0	0
2000	0	0.0	0
2001	0	0.0	0
2002	0	0.0	0
2003	0	0.0	0
2004	0	0.0	0
2005	0	0.0	0
2006	0	0.0	0
2007	0	0.0	0
2008	0	0.0	0
2009	0	0.0	0
2010	0	0.0	0
2011	0	0.0	0
2012	0	0.0	0
2013	0	0.0	0
2014	0	0.0	0

*All rates are cases per 100,000 population.

POLIO

Year	Cases	Rate*	Deaths
1985	0	0.0	0
1986	0	0.0	0
1987	1‡	0.0	0
1988	1‡	0.0	0
1989	0	0.0	0
1990	0	0.0	0
1991	1‡	0.0	0
1992	1‡	0.0	0
1993	1‡	0.0	0
1994	0	0.0	0
1995	0	0.0	0
1996	0	0.0	0
1997	0	0.0	0
1998	0	0.0	0
1999	0	0.0	0
2000	0	0.0	0
2001	0	0.0	0
2002	0	0.0	0
2003	0	0.0	0
2004	0	0.0	0
2005	0	0.0	0
2006	0	0.0	0
2007	0	0.0	0
2008	0	0.0	0
2009	0	0.0	0
2010	0	0.0	0
2011	0	0.0	0
2012	0	0.0	0
2013	0	0.0	0
2014	0	0.0	0

*All rates are cases per 100,000 population.

‡Vaccine-associated cases.

PSITTACOSIS

Year	Cases	Rate*	Deaths
1985	3	0.1	1
1986	7	0.2	0
1987	12	0.3	0
1988	8	0.2	0
1989	4	0.1	1
1990	5	0.1	0
1991	6	0.1	0
1992	13	0.3	0
1993	4	0.1	0
1994	4	0.1	0
1995	7	0.1	0
1996	4	0.1	0
1997	0	0.0	0
1998	3	0.1	0
1999	0	0.0	0
2000	1	0.0	0
2001	0	0.0	0
2002	0	0.0	0
2003	0	0.0	0
2004	0	0.0	0
2005	1	0.0	0
2006	0	0.0	0
2007	0	0.0	0
2008	0	0.0	0
2009	0	0.0	0
2010	0	0.0	0
2011	0	0.0	0
2012	0	0.0	0
2013	0	0.0	0
2014	1	0.0	0

*All rates are cases per 100,000 population.

Q FEVER

Year	Cases	Rate*	Deaths
1986	2	0.0	0
1987	1	0.0	1
1988	1	0.0	0
1989	0	0.0	0
1990	2	0.0	0
1991	0	0.0	0
1992	1	0.0	0
1993	0	0.0	0
1994	0	0.0	0
1995	1	0.0	0
1996	0	0.0	0
1997	0	0.0	0
1998	0	0.0	0
1999	1	0.0	0
2000	0	0.0	0
2001	0	0.0	0
2002	0	0.0	0
2003	0	0.0	0
2004	0	0.0	0
2005	2	0.0	0
2006	0	0.0	0
2007	1	0.0	0
2008	0	0.0	0
2009	1	0.0	0
2010	3	0.0	1
2011	8	0.1	0
2012	3	0.0	2
2013	3	0.0	0
2014	1	0.0	0

*All rates are cases per 100,000 population.

RABIES (HUMAN)

Year	Cases	Rate*	Deaths
1985	0	0.0	0
1986	0	0.0	0
1987	0	0.0	0
1988	0	0.0	0
1989	0	0.0	0
1990	0	0.0	0
1991	0	0.0	0
1992	0	0.0	0
1993	0	0.0	0
1994	0	0.0	0
1995	1	0.0	1
1996	0	0.0	0
1997	1	0.0	1
1998	0	0.0	0
1999	0	0.0	0
2000	0	0.0	0
2001	0	0.0	0
2002	0	0.0	0
2003	0	0.0	0
2004	0	0.0	0
2005	0	0.0	0
2006	0	0.0	0
2007	0	0.0	0
2008	0	0.0	0
2009	0	0.0	0
2010	0	0.0	0
2011	0	0.0	0
2012	0	0.0	0
2013	0	0.0	0
2014	0	0.0	0

*All rates are cases per 100,000 population.

RARE SEXUALLY TRANSMITTED DISEASES

Statewide Total Cases

Year	Total	Chancroid	Granuloma inguinale	Lymphogranuloma venereum
1986	1	1	0	0
1987	7	1	1	5
1988	1	0	0	1
1989	13	6	0	7
1990	3	1	1	1
1991	7	3	2	2
1992	4	2	0	2
1993	4	0	0	4
1994	4	1	0	3
1995	6	5	0	1
1996	2	1	0	1
1997	2	2	0	0
1998	1	1	0	0
1999	0	0	0	0
2000	1	0	0	1
2001	0	0	0	0
2002	1	1	0	0
2003	1	0	0	1
2004	0	0	0	0
2005	3	0	0	3
2006	0	0	0	0
2007	1	0	0	1
2008	5	1	0	4
2009	2	0	0	2
2010	3	1	0	2
2011	1	0	0	1
2012	0	0	0	0
2013	0	0	0	0
2014	0	0	0	0

Note: Data prior to 2009 are based on year reported rather than year diagnosed

RELAPSING FEVER

Year	Cases	Rate*	Deaths
1986	2	0.0	0
1987	7	0.2	1
1988	5	0.1	0
1989	5	0.1	0
1990	4	0.1	0
1991	6	0.1	0
1992	6	0.1	0
1993	2	0.0	0
1994	9	0.2	0
1995	12	0.2	0
1996	8	0.1	0
1997	4	0.1	0
1998	5	0.1	0
1999	3	0.1	0
2000	5	0.1	1
2001	1	0.0	0
2002	7	0.1	0
2003	6	0.1	0
2004	6	0.1	0
2005	6	0.1	0
2006	2	0.0	0
2007	9	0.1	0
2008	4	0.1	0
2009	5	0.1	0
2010	7	0.1	0
2011	11	0.2	0
2012	6	0.1	0
2013	4	0.1	0
2014	7	0.1	0

*All rates are cases per 100,000 population.

RUBELLA

Year	Cases	Rate*	Deaths
1981	108	2.6	0
1982	58	1.4	0
1983	10	0.2	0
1984	2	0.0	0
1985	16	0.4	0
1986	15	0.3	0
1987	2	0.0	0
1988	0	0.0	0
1989	2	0.0	0
1990	6	0.1	0
1991	8	0.2	0
1992	8	0.2	0
1993	3	0.1	0
1994	0	0.0	0
1995	2	0.0	0
1996	15	0.3	0
1997	5	0.1	0
1998	5	0.1	0
1999	5	0.1	0
2000	8	0.1	0
2001	0	0.0	0
2002	2	0.0	0
2003	0	0.0	0
2004	0	0.0	0
2005	1	0.0	0
2006	0	0.0	0
2007	0	0.0	0
2008	0	0.0	0
2009	0	0.0	0
2010	1	0.0	0
2011	2	0.0	0
2012	0	0.0	0
2013	1	0.0	0
2014	0	0.0	0

*All rates are cases per 100,000 population.

SALMONELLOSIS

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	3	*	3	*	2	*	3	*	1	*
Asotin	5	23.1	2	*	1	*	1	*	2	*
Benton	25	14.3	12	6.7	30	16.7	27	14.7	23	12.5
Chelan	9	12.4	8	11.0	6	8.2	2	*	5	6.7
Clallam	2	*	0	0.0	3	*	5	6.9	4	*
Clark	63	14.8	50	11.7	156	36.2	46	10.6	58	13.1
Columbia	1	*	2	*	0	0.0	0	0.0	1	*
Cowlitz	5	4.9	7	6.8	16	15.5	9	8.7	14	13.5
Douglas	3	*	3	*	4	*	2	*	0	*
Ferry	0	0.0	2	*	5	65.4	0	0.0	2	*
Franklin	13	16.6	8	9.9	7	8.5	15	17.7	10	11.5
Garfield	2	*	1	*	0	0.0	0	0.0	1	*
Grant	12	13.5	4	*	15	16.5	14	15.3	12	12.9
Grays Harbor	9	12.4	6	8.2	7	9.6	7	9.6	5	6.8
Island	10	12.7	3	*	7	8.8	7	8.8	7	8.8
Jefferson	3	*	1	*	4	*	5	16.5	1	*
King	224	11.6	193	9.9	219	11.2	199	10.0	228	11.3
Kitsap	27	10.8	25	9.8	16	6.3	19	7.5	29	11.3
Kittitas	1	*	3	*	7	16.9	5	11.9	2	*
Klickitat	1	*	5	24.4	0	0.0	2	*	4	*
Lewis	11	14.6	10	13.2	6	7.9	5	6.6	12	15.7
Lincoln	1	*	1	*	1	*	2	*	0	0.0
Mason	7	11.5	3	*	3	*	9	14.6	6	9.7
Okanogan	5	12.2	1	*	0	0.0	1	*	4	*
Pacific	3	*	0	0.0	2	*	2	*	0	0.0
Pend Oreille	1	*	0	0.0	8	61.1	1	*	1	*
Pierce	71	8.9	53	6.6	75	9.3	74	9.2	76	9.3
San Juan	1	*	0	0.0	2	*	0	0.0	2	*
Skagit	17	14.5	3	*	15	12.7	15	12.6	9	7.5
Skamania	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Snohomish	77	10.8	77	10.7	67	9.3	64	8.8	89	12.0
Spokane	46	9.8	39	8.3	63	13.2	33	6.9	30	6.2
Stevens	3	*	1	*	6	13.7	6	13.7	5	11.4
Thurston	27	10.7	13	5.1	34	13.2	32	12.3	22	8.3
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	4	*	11	18.7	3	*	8	13.4	2	*
Whatcom	24	11.9	19	9.4	14	6.9	16	7.8	15	7.2
Whitman	11	24.6	2	*	12	26.1	2	*	4	*
Yakima	53	21.8	18	7.4	26	10.6	31	12.5	53	21.3
STATEWIDE TOTAL	780	11.6	589	8.7	842	12.4	670	9.7	739	10.6

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

SALMONELLOSIS STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1980	462	11.2	0
1981	574	13.6	5
1982	749	17.5	0
1983	739	17.2	0
1984	515	11.8	0
1985	565	12.8	0
1986	783	17.5	2
1987	660	14.6	1
1988	612	13.3	0
1989	630	13.3	2
1990	634	13.0	6
1991	791	15.8	1
1992	609	11.8	1
1993	830	15.8	0
1994	863	16.1	0
1995	691	12.6	0
1996	734	13.2	0
1997	675	11.9	0
1998	703	12.2	2
1999	792	13.6	2
2000	659	11.2	1
2001	681	11.4	2
2002	655	10.8	0
2003	699	11.4	1
2004	660	10.6	2
2005	626	9.9	0
2006	627	9.8	3
2007	758	11.6	2
2008	846	12.8	3
2009	820	12.3	2
2010	780	11.6	3
2011	589	8.7	2
2012	842	12.4	0
2013	671	9.7	1
2014	739	10.6	1

*All rates are cases per 100,000 population.

SHELLFISH POISONING, PARALYTIC, DOMOIC ACID OR DIARRHETIC

Year	Cases	Rate*	Deaths
1985	3	0.1	0
1986	0	0.0	0
1987	0	0.0	0
1988	7	0.2	0
1989	0	0.0	0
1990	0	0.0	0
1991	0	0.0	0
1992	0	0.0	0
1993	0	0.0	0
1994	0	0.0	0
1995	0	0.0	0
1996	0	0.0	0
1997	0	0.0	0
1998	5	0.1	0
1999	0	0.0	0
2000	7	0.1	0
2001	0	0.0	0
2002	0	0.0	0
2003	0	0.0	0
2004	0	0.0	0
2005	1	0.0	0
2006	1	0.0	0
2007	0	0.0	0
2008	0	0.0	0
2009	0	0.0	0
2010	0	0.0	0
2011	0	0.0	0
2012	9	0.1	0
2013	0	0.0	0
2014	0	0.0	0

*All rates are cases per 100,000 population.

SHIGA TOXIN-PRODUCING *ESCHERICHIA COLI* (STEC)

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	1	5.2
Asotin	0	0.0	0	0.0	2	*	2	*	1	4.6
Benton	1	*	6	3.4	2	*	12	6.5	9	4.9
Chelan	2	*	0	0.0	3	*	5	6.8	3	4.0
Clallam	3	*	0	0.0	2	*	2	*	0	0.0
Clark	34	8.0	12	2.8	27	6.3	51	11.7	27	6.1
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	3	*	1	*	7	6.8	0	0.0	3	*
Douglas	0	0.0	2	*	0	0.0	0	0.0	0	0.0
Ferry	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	2	*	2	*	1	*	4	*	6	6.9
Garfield	0	0.0	1	*	0	0.0	0	0.0	1	*
Grant	1	*	7	7.8	7	7.7	6	6.5	5	5.4
Grays Harbor	0	0.0	1	*	1	*	2	*	5	6.8
Island	2	*	0	0.0	1	*	6	7.5	2	*
Jefferson	1	*	1	*	4	*	0	0.0	0	0.0
King	45	2.3	56	2.9	71	3.6	72	3.6	93	4.6
Kitsap	2	*	0	0.0	6	2.4	1	*	9	3.5
Kittitas	35	85.5	6	14.5	6	14.5	6	14.3	7	16.6
Klickitat	1	*	2	*	3	*	1	*	2	*
Lewis	4	*	1	*	2	*	6	7.9	8	10.5
Lincoln	0	0.0	0	0.0	0	0.0	1	*	1	*
Mason	2	*	0	0.0	1	*	2	*	1	*
Okanogan	3	*	1	*	1	*	2	*	2	*
Pacific	1	*	1	*	0	0.0	0	0.0	0	0.0
Pend Oreille	1	*	0	0.0	1	*	0	0.0	0	0.0
Pierce	11	1.4	22	2.7	11	1.4	14	1.7	16	1.9
San Juan	1	*	0	0.0	0	0.0	2	*	0	0.0
Skagit	3	*	2	*	4	*	9	7.6	11	9.2
Skamania	0	0.0	1	*	1	*	0	0.0	0	0.0
Snohomish	23	3.2	27	3.8	21	2.9	42	5.7	22	3.0
Spokane	11	2.3	14	3.0	13	2.7	19	4.0	16	3.3
Stevens	1	*	0	0.0	3	*	4	*	1	*
Thurston	6	2.4	11	4.3	13	5.1	20	7.7	14	5.3
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	2	*	1	*	0	0.0	2	*	1	*
Whatcom	10	5.0	11	5.4	14	6.9	15	7.3	17	8.2
Whitman	4	*	2	*	3	*	0	0.0	0	0.0
Yakima	10	4.1	12	4.9	8	3.3	22	8.9	15	6.0
STATEWIDE TOTAL	226	3.4	203	3.0	239	3.5	330	4.8	299	4.3

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

SHIGA TOXIN-PRODUCING *ESCHERICHIA COLI (STEC)* STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1988	167	3.6	0
1989	157	3.3	1
1990	220	4.5	0
1991	164	3.3	0
1992	300	5.8	2
1993	741	14.1	3
1994	174	3.2	2
1995	140	2.6	1
1996	187	3.4	1
1997	149	2.6	0
1998	144	2.5	0
1999	186	3.2	0
2000	237	4.0	0
2001	150	2.5	0
2002	166	2.7	0
2003	128	2.1	0
2004	153	2.5	3
2005	149	2.4	0
2006	162	2.5	0
2007	141	2.2	0
2008	189	2.9	1
2009	206	3.1	0
2010	226	3.4	1
2011	203	3.0	1
2012	239	3.5	0
2013	330	4.8	3
2014	299	4.3	2

*All rates are cases per 100,000 population.

SHIGELLOSIS

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	20	104.2	4	20.6
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	3	*	5	2.8	2	*	3	*
Chelan	2	*	0	0.0	2	*	1	*	2	*
Clallam	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clark	7	1.6	12	2.8	14	3.2	11	2.5	14	3.2
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	1	*	5	6.2	2	*	2	2.4	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	2	*	0	0.0	1	*	9	9.9	1	*
Grays Harbor	1	*	1	*	3	*	1	*	0	0.0
Island	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	2	*	0	0.0	0	0.0	0	0.0
King	44	2.3	41	2.1	74	3.8	43	2.2	71	3.5
Kitsap	0	0.0	0	0.0	1	*	3	*	2	*
Kittitas	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Lewis	2	*	0	0.0	0	0.0	1	*	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	1	*	2	*	1	*	0	0.0
Okanogan	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	7	0.9	2	*	5	0.6	4	*	6	0.7
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Skagit	5	4.3	8	6.8	1	*	0	0.0	4	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	13	1.8	9	1.3	16	2.2	8	1.1	13	1.8
Spokane	3	*	4	*	1	*	3	*	11	2.3
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	2	*	1	*	2	*	1	*	5	1.9
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	2	*	0	0.0	0	0.0
Whatcom	18	8.9	2	*	1	*	5	2.4	4	*
Whitman	1	*	0	0.0	0	0.0	1	*	1	*
Yakima	2	*	11	4.5	1	*	6	2.4	15	6.0
STATEWIDE TOTAL	112	1.7	104	1.5	133	2.0	122	1.8	157	2.3

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

SHIGELLOSIS STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1980	287	6.9	0
1981	426	10.1	1
1982	284	6.6	0
1983	370	8.6	0
1984	224	5.1	0
1985	144	3.3	0
1986	321	7.2	0
1987	318	7.0	0
1988	306	6.6	0
1989	232	4.9	0
1990	278	5.7	0
1991	405	8.1	0
1992	439	8.5	0
1993	797	15.1	0
1994	478	8.9	0
1995	426	7.8	0
1996	333	6.0	1
1997	318	5.6	0
1998	277	4.8	0
1999	172	2.9	0
2000	501	8.5	0
2001	236	4.0	0
2002	230	3.8	0
2003	188	3.1	0
2004	133	2.1	0
2005	185	2.9	0
2006	170	2.6	0
2007	159	2.4	0
2008	116	1.8	0
2009	153	2.3	0
2010	112	1.7	0
2011	104	1.5	0
2012	133	2.0	0
2013	122	1.8	0
2014	157	2.3	0

*All rates are cases per 100,000 population.

SYPHILIS (PRIMARY AND SECONDARY)

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	+	2	+
Asotin	0	0.0	0	0.0	0	0.0	0	+	0	+
Benton	2	*	1	*	0	0.0	7	+	18	9.7
Chelan	1	*	0	0.0	0	0.0	0	+	0	+
Clallam	0	0.0	0	0.0	0	0.0	0	+	1	+
Clark	6	1.4	5	1.2	23	5.3	22	5.1	20	4.5
Columbia	0	0.0	0	0.0	0	0.0	0	+	1	+
Cowlitz	1	*	0	0.0	1	*	1	+	8	+
Douglas	0	0.0	0	0.0	0	0.0	0	+	0	+
Ferry	0	0.0	0	0.0	0	0.0	0	+	0	+
Franklin	2	*	5	6.2	3	*	4	+	6	+
Garfield	0	0.0	0	0.0	0	0.0	0	+	0	+
Grant	0	0.0	2	*	1	*	1	+	4	+
Grays Harbor	0	0.0	0	0.0	0	0.0	0	+	3	+
Island	1	*	0	0.0	0	0.0	2	+	1	+
Jefferson	1	*	0	0.0	0	0.0	0	+	0	+
King	212	11.0	235	12.1	210	10.7	174	8.8	173	8.6
Kitsap	4	*	5	2.0	5	2.0	4	+	6	+
Kittitas	0	0.0	1	*	1	*	3	+	1	+
Klickitat	0	0.0	0	0.0	0	0.0	0	+	0	+
Lewis	0	0.0	1	*	0	0.0	0	+	1	+
Lincoln	0	0.0	0	0.0	0	0.0	0	+	0	+
Mason	0	0.0	0	0.0	2	*	0	+	0	+
Okanogan	0	0.0	0	0.0	0	0.0	0	+	0	+
Pacific	0	0.0	0	0.0	0	0.0	0	+	0	+
Pend Oreille	0	0.0	0	0.0	0	0.0	0	+	0	+
Pierce	9	1.1	27	3.4	22	2.7	28	3.4	30	3.7
San Juan	0	0.0	0	0.0	0	0.0	0	+	0	+
Skagit	0	0.0	0	0.0	1	*	2	+	2	+
Skamania	0	0.0	1	*	0	0.0	0	+	1	+
Snohomish	10	1.4	16	2.2	12	1.7	13	1.8	27	3.6
Spokane	4	*	14	3.0	5	1.1	2	+	11	+
Stevens	1	*	1	*	0	0.0	0	+	0	+
Thurston	1	*	3	*	2	*	3	+	2	+
Wahkiakum	0	0.0	0	0.0	0	0.0	0	+	0	+
Walla Walla	0	0.0	0	0.0	0	0.0	0	+	1	+
Whatcom	0	0.0	3	*	4	*	5	+	2	+
Whitman	0	0.0	0	0.0	2	*	0	+	1	+
Yakima	6	2.5	9	3.7	6	2.4	14	5.7	15	6.3
STATEWIDE TOTAL	261	3.9	329	4.9	300	4.4	285	4.1	337	4.8

All incidence rates are cases per 100,000 population.
*For 2010-2012, incidence rates not calculated for <5 cases.
+For 2013-2014, incidence rates suppressed for counts <20 and rates with residual standard error (RSE) >30% due to statistical instability.

SYPHILIS PRIMARY AND SECONDARY STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1981	167	3.9	2
1982	172	4.0	0
1983	196	4.6	0
1984	158	3.6	2
1985	115	2.6	2
1986	194	4.3	0
1987	176	3.9	0
1988	265	5.7	0
1989	461	9.8	0
1990	354	7.3	0
1991	178	3.5	0
1992	85	1.7	0
1993	67	1.3	0
1994	36	0.7	0
1995	17	0.3	0
1996	9	0.2	0
1997	17	0.3	0
1998	44	0.8	0
1999	77	1.3	0
2000	66	1.1	0
2001	57	1.0	0
2002	70	1.2	0
2003	82	1.3	0
2004	150	2.4	0
2005	152	2.4	0
2006	182	2.8	0
2007	168	2.6	0
2008	181	2.7	0
2009	135	2.0	0
2010	261	3.9	0
2011	329	4.9	0
2012	300	4.4	0
2013	285	4.1	0
2014	337	4.8	0

*All rates are cases per 100,000 population.

Note: Data prior to 2009 are based on year reported rather than year diagnosed.

TETANUS

Year	Cases	Rate*	Deaths
1985	0	0.0	0
1986	0	0.0	0
1987	1	0.0	0
1988	1	0.0	0
1989	1	0.0	0
1990	1	0.0	0
1991	1	0.0	0
1992	3	0.1	0
1993	1	0.0	0
1994	1	0.0	0
1995	0	0.0	0
1996	1	0.0	0
1997	1	0.0	0
1998	0	0.0	0
1999	0	0.0	0
2000	1	0.0	0
2001	0	0.0	0
2002	0	0.0	0
2003	0	0.0	0
2004	0	0.0	0
2005	1	0.0	0
2006	0	0.0	0
2007	0	0.0	0
2008	0	0.0	0
2009	0	0.0	0
2010	0	0.0	0
2011	0	0.0	0
2012	1	0.0	0
2013	0	0.0	0
2014	3	0.0	1

*All rates are cases per 100,000 population.

TRICHINOSIS

Year	Cases	Rate*	Deaths
1986	0	0.0	0
1987	0	0.0	0
1988	0	0.0	0
1989	2	0.0	0
1990	1	0.0	0
1991	0	0.0	0
1992	1	0.0	0
1993	1	0.0	0
1994	0	0.0	0
1995	0	0.0	0
1996	0	0.0	0
1997	0	0.0	0
1998	0	0.0	0
1999	0	0.0	0
2000	1	0.0	0
2001	0	0.0	0
2002	0	0.0	0
2003	0	0.0	0
2004	0	0.0	0
2005	0	0.0	0
2006	1	0.0	0
2007	0	0.0	0
2008	0	0.0	0
2009	0	0.0	0
2010	0	0.0	0
2011	0	0.0	0
2012	0	0.0	0
2013	0	0.0	0
2014	2	0.0	0

*All rates are cases per 100,000 population.

TUBERCULOSIS

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	*	0	-	0	-	1	*	0	-
Asotin	0	-	0	-	0	-	0	-	0	-
Benton	3	*	0	-	0	-	1	*	2	*
Chelan	3	*	0	-	0	-	2	*	0	-
Clallam	0	-	2	*	0	-	1	*	0	-
Clark	22	5.1	10	2.3	7	1.6	5	1.1	15	3.4
Columbia	1	*	0	-	0	-	0	-	0	-
Cowlitz	0	-	1	*	0	-	2	*	3	*
Douglas	1	*	0	-	0	-	1	*	0	-
Ferry	0	-	0	-	0	-	0	-	0	-
Franklin	4	*	3	*	3	*	2	*	4	*
Garfield	0	-	0	-	0	-	0	-	0	-
Grant	1	*	0	-	1	*	0	-	1	*
Grays Harbor	0	-	1	*	2	*	1	*	0	-
Island	2	*	2	*	0	-	1	*	0	-
Jefferson	0	-	0	-	0	-	0	-	0	-
King	114	5.9	106	5.5	108	5.5	114	5.8	101	5.0
Kitsap	0	-	2	*	4	*	1	*	5	2.0
Kittitas	0	-	0	-	0	-	0	-	0	-
Klickitat	1	*	0	-	0	-	0	-	0	-
Lewis	1	*	0	-	0	-	0	-	0	-
Lincoln	0	-	0	-	0	-	0	-	0	-
Mason	2	*	1	*	2	*	3	*	0	-
Okanogan	0	-	0	-	0	-	2	*	1	*
Pacific	0	-	0	-	0	-	0	-	1	*
Pend-Oreille	0	-	0	-	0	-	0	-	0	-
Pierce	15	1.8	25	3.1	19	2.4	22	2.7	13	1.6
San Juan	1	*	0	-	0	-	1	*	0	-
Skagit	1	*	2	*	3	*	4	*	2	*
Skamania	0	-	0	-	0	--	1	*	1	*
Snohomish	26	3.7	23	3.2	18	2.5	26	3.6	19	2.6
Spokane	4	*	8	1.7	7	1.5	7	1.5	6	1.2
Stevens	0	-	0	-	0	-	0	-	0	-
Thurston	13	5.2	5	2.0	5	1.9	5	1.9	7	2.7
Wahkiakum	0	-	0	-	0	-	0	-	0	-
Walla Walla	2	*	0	-	0	-	1	*	0	-
Whatcom	6	3.1	2	*	1	*	4	*	4	*
Whitman	1	*	0	-	0	-	0	-	0	-
Yakima	9	3.8	6	2.5	5	2.0	2	*	11	4.4
STATEWIDE TOTAL	234	3.5	199	2.9	185	2.7	210	3.1	196	2.8

*All rates are reported as cases per 100,000 population. Incidence rates are suppressed for case

TUBERCULOSIS STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1980	424	10.3	13
1981	401	9.5	15
1982	301	7.0	6
1983	239	5.5	10
1984	207	4.8	6
1985	220	5.0	5
1986	218	4.9	3
1987	255	5.6	10
1988	236	5.1	9
1989	248	5.2	4
1990	284	5.8	12
1991	309	6.2	7
1992	306	6.0	7
1993	286	5.4	7
1994	264	4.9	6
1995	278	5.1	2
1996	285	5.1	3
1997	305	5.4	6
1998	265	4.6	5
1999	258	4.4	5
2000	258	4.4	2
2001	261	4.4	6
2002	252	4.2	4
2003	250	4.1	11
2004	244	3.9	9
2005	254	4.0	14
2006	262	4.1	18
2007	291	4.5	12
2008	228	3.5	2
2009	255	3.8	6
2010	234	3.5	6
2011	199	2.9	7
2012	185	2.7	5
2013	210	3.1	5
2014	196	2.8	3

*All rates are reported as cases per 100,000 population.

Tuberculosis-related deaths include:

1. Cases deceased at diagnosis for whom tuberculosis was reported among cause(s) of death; and
2. Cases alive at diagnosis stopping treatment prematurely, for whom the reason for treatment stoppage was reported as being TB-related death.

Note: TB-related death events are reported here as per the year of death in the TB surveillance record, and may have occurred in a year other than that of diagnosis. Death data above as generated from TB surveillance data may differ from comparable data sourced from vital records mortality data.

TULAREMIA

Year	Cases	Rate*	Deaths
1986	1	0.0	0
1987	4	0.1	0
1988	1	0.0	0
1989	2	0.0	0
1990	4	0.1	0
1991	2	0.0	0
1992	2	0.0	0
1993	2	0.0	0
1994	1	0.0	0
1995	4	0.1	0
1996	2	0.0	0
1997	2	0.0	0
1998	8	0.1	0
1999	2	0.0	0
2000	2	0.0	0
2001	5	0.1	0
2002	3	0.0	0
2003	2	0.0	0
2004	4	0.1	0
2005	10	0.2	0
2006	1	0.0	0
2007	1	0.0	0
2008	4	0.1	0
2009	5	0.1	1
2010	3	0.0	0
2011	5	0.1	0
2012	5	0.1	0
2013	5	0.1	0
2014	4	0.1	0

*All rates are cases per 100,000 population.

TYPHOID FEVER

Year	Cases	Rate*	Deaths
1985	3	0.1	0
1986	3	0.1	0
1987	9	0.2	0
1988	13	0.3	0
1989	11	0.2	0
1990	22	0.5	0
1991	10	0.2	0
1992	11	0.2	0
1993	8	0.2	0
1994	12	0.2	0
1995	4	0.1	0
1996	4	0.1	0
1997	7	0.1	0
1998	8	0.1	0
1999	8	0.1	0
2000	6	0.1	0
2001	7	0.1	0
2002	7	0.1	0
2003	4	0.1	0
2004	6	0.1	0
2005	11	0.2	0
2006	7	0.1	0
2007	7	0.1	0
2008	15	0.2	0
2009	4	0.1	0
2010	22	0.3	0
2011	9	0.1	0
2012	11	0.2	0
2013	11	0.2	0
2014	15	0.2	0

*All rates are cases per 100,000 population.

VIBRIOSIS

Year	Cases	Rate*	Deaths
1985	4	0.1	0
1986	7	0.2	0
1987	18	0.4	0
1988	11	0.2	0
1989	4	0.1	0
1990	30	0.6	0
1991	4	0.1	0
1992	7	0.1	0
1993	33	0.6	0
1994	9	0.2	0
1995	6	0.1	0
1996	3	0.1	0
1997	58	1.0	0
1998	41	0.7	0
1999	21	0.4	0
2000	20	0.3	0
2001	9	0.2	0
2002	25	0.4	0
2003	18	0.3	0
2004	28	0.5	0
2005	20	0.3	0
2006	80	1.2	0
2007	25	0.4	0
2008	29	0.4	0
2009	48	0.7	0
2010	59	0.9	0
2011	45	0.7	0
2012	67	1.0	0
2013	90	1.3	0
2014	92	1.3	0

*All rates are cases per 100,000 population.

YERSINIOSIS

	2010		2011		2012		2013		2014	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Benton	1	*	1	*	1	*	2	*	0	0.0
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clallam	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Clark	1	*	1	*	0	0.0	1	*	5	1.1
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Island	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	8	0.4	5	0.3	23	1.2	14	0.7	17	0.8
Kitsap	1	*	2	*	1	*	1	*	5	2.0
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Klickitat	0	0.0	0	0.0	0	0.0	2	*	0	0.0
Lewis	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0	2	*	0	0.0
Okanogan	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	1	*	1	*
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	1	*	2	*	1	*	0	0.0	0	0.0
San Juan	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Skagit	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	5	0.7	5	0.7	4	*	4	*	3	*
Spokane	2	*	0	0.0	1	*	0	0.0	1	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	1	*	1	*	1	*	1	*	0	0.0
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	0	0.0	1	*	2	*	2	*	1	*
Whitman	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Yakima	3	*	1	*	1	*	2	*	0	0.0
STATEWIDE TOTAL	25	0.4	21	0.3	36	0.5	34	0.5	36	0.5

*All rates are cases per 100,000 population. Incidence rates not calculated for <5 cases.

YERSINIOSIS STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1988	15	0.3	0
1989	40	0.8	0
1990	37	0.8	0
1991	28	0.6	0
1992	34	0.7	0
1993	50	0.9	0
1994	40	0.7	0
1995	50	0.9	0
1996	37	0.7	0
1997	30	0.5	0
1998	39	0.7	0
1999	32	0.5	0
2000	33	0.6	0
2001	23	0.4	0
2002	26	0.4	0
2003	28	0.5	0
2004	34	0.5	0
2005	19	0.3	0
2006	22	0.3	0
2007	28	0.4	0
2008	19	0.3	1
2009	15	0.2	0
2010	25	0.4	0
2011	21	0.3	0
2012	36	0.5	0
2013	34	0.5	0
2014	36	0.5	0

*All rates are cases per 100,000 population.

APPENDIX II

Special Topics

Ebola Outbreak 2014-2015

Ebola virus disease is a viral hemorrhagic fever endemic to several areas of Africa. First recognized during an outbreak in 1976, Ebola virus has caused in outbreaks in Democratic Republic of Congo (Zaire), and Gabon. In 2013 unrecognized Ebola virus disease cases occurred in Guinea with subsequent spread to other countries in West Africa. The countries most affected have been Guinea, Liberia, and Sierra Leone and through September 2015 there were 28,453 cases and 11,312 deaths reported.

Following the death of a traveler from Ebola virus disease in Dallas in October 2014, travelers from affected countries were screened on entry to the United States. Each arrival was evaluated for risk level based on exposure to ill persons and degree of protective equipment used. Travelers were provided thermometers for temperature monitoring and the appropriate public health agencies were informed of each travelers' ultimate destination. Through September 2015, Washington State received information about 397 travelers from affected countries. Of these 28 were considered at some risk, requiring daily real-time contact with the monitoring local health jurisdiction. Three persons, all low risk travelers, became symptomatic and were tested for Ebola virus disease with negative results.

Nationally, state and local health jurisdictions monitored over 18,672 persons. The majority of monitoring was done in New York City, Maryland, Pennsylvania, Georgia, and Virginia. No cases of Ebola virus disease have been detected during monitoring.

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6425a1.htm?s_cid=mm6425a1_e

Highly Antibiotic Resistant Bacterial Surveillance

Carbapenem-resistant Enterobacteriaceae (CRE)

In 2012 the Washington State Department of Health (DOH) began tracking carbapenem-resistant Enterobacteriaceae (CRE). Goals of surveillance were to learn how common these organisms are in Washington, to determine the proportion of CRE that produce a carbapenemase (an enzyme inactivating certain antibiotics), and to educate healthcare providers and facilities regarding infection prevention interventions to limit the spread of CRE in Washington.

CRE are highly antibiotic resistant bacteria that are important causes of healthcare-associated infections. CRE that produce a carbapenemase, such as *Klebsiella pneumoniae* carbapenemase (KPC), New Delhi metallo-b-lactamases (NDM), Verona integron-encoded metallo-b-lactamases (VIM), imipenemase (IMP), and oxacillinase-48-like (OXA-48), are considered epidemiologically important because they can spread exponentially in healthcare settings, as evidenced by the rapid increase in CRE in the United States over the past decade.

The 2014 state CRE surveillance case definition was:

> *E. coli* and *Klebsiella* species resistant to all third generation cephalosporins and non-susceptible to one or more carbapenem (if isolate is only non-susceptible to ertapenem, it must be resistant to ertapenem with MIC >=2 mcg/ml or zone <=18 mm);
>
> AND
>
> Any other Enterobacteriaceae meeting above susceptibility profile AND obtained from a patient hospitalized outside of Washington or Oregon within prior six months.

Healthcare facilities submit suspect CRE isolates for further testing. Isolates that met the above criteria after confirmatory antimicrobial sensitivity testing at the Washington State Public Health Laboratories (PHL), as well as isolates that were Modified Hodge Test positive, underwent polymerase chain reaction (PCR) testing to detect presence of carbapenemase.

This report includes all reported CRE that were collected in 2014. PHL tested 97 CRE submitted by clinical laboratories. Of these, 78 (81 percent) were confirmed to meet the CRE surveillance case definition by confirmatory antimicrobial sensitivity testing at PHL, and 25 of 78 (32 percent) tested positive by PCR for carbapenemase. These 25 carbapenemase producing CRE (CP-CRE) isolates were from 20 unique patients; two patients had isolates testing positive for more than one type of carbapenemase.

Table 7. Carbapenemase-producing CRE Isolates Identified by Notifiable Condition Reporting, by Species and Carbapenemase Type, Washington 2014

Genus and species: / **Carbapenemase**	*Enterobacter cloacae* (*n*=1)	*Escherichia coli* (*n*=3)	*Klebsiella pneumoniae* (*n*=16)
KPC only	1 (100%)	0	14 (88%)
NDM only	0	2 (67%)	0
OXA-48 only	0	1 (33%)	0
NDM and OXA-48	0	0	2 (12%)

Of the 20 patients identified with CP-CRE, 12 were male (60 percent). The age range was 31 to 91 years with a median of 62. All but two (90 percent) had chronic illness; of the two without known underlying conditions, one used IV illicit drugs, and the other was a household contact of a chronically ill person. Fourteen cases (70 percent) had urinary tract infections, two (10 percent) wound infections, two (10 percent) pneumonia, and two (10 percent) were colonized and were identified by surveillance screening.

Of the 15 patients with KPC carbapenemase, three (20 percent) had received out-of-state healthcare and the remaining 12 (89 percent) were not known to have had healthcare outside of Washington. Of the five patients with NDM and/or OXA-48 carbapenemase, four (80 percent) had received international healthcare, either on the Indian subcontinent or in the Middle East. These surveillance findings suggest that KPC carbapenemase producing isolates are circulating in the state and that other types of carbapenemases are more likely associated with international healthcare.

Carbapenemases in Species other than Enterobacteriaceae

In 2014, no carbapenemases identified in species other than Enterobacteriaceae were reported to the Washington State Department of Health.

FOODBORNE DISEASE OUTBREAKS, 2014

Foodborne disease outbreaks are caused by a variety of agents including viruses, bacteria, toxins and parasites. A foodborne disease outbreak is defined as the occurrence of two or more cases of the same illness resulting from the ingestion of a common food where food is implicated as the source of illness. Outbreaks of foodborne disease are reportable to Department of Health (DOH) as outlined in WAC 246-101-510. In Washington, there are typically 25 to 50 outbreaks of foodborne disease reported every year.

In 2014, 45 outbreaks of foodborne disease were reported to DOH (Table 8). Foodborne disease outbreaks are detected through public health surveillance and investigation of cases of notifiable conditions (e.g., bacterial agents such as *Salmonella* and *E. coli*) or by notification from members of the public or food establishments (mainly viral gastroenteritis and bacterial toxin outbreaks).

Table 8. Foodborne Disease Outbreaks, 2007 – 2014

Year	Cases	Outbreaks
2007	722	43
2008	564	46
2009	307	27
2010	344	37
2011	371	30
2012	552	27
2013	437	37
2014	432	45

Outbreaks occurred in a wide range of settings in 2014. Restaurants were the most frequently reported setting, accounting for two-thirds of outbreaks. Other settings included catered meals, commercially distributed products, markets, and private residences. The agents associated with foodborne disease outbreaks in 2014 are shown in Table 8.

Table 9. Agents associated with Foodborne Disease Outbreaks, 2014

Agent	**Outbreaks**	**Cases**
Bacterial		
Campylobacter	2	27
Salmonella	8	65
Listeria monocytogenes	3	6
STEC	1	11
Vibrio parahaemolyticus	1	2
Viral		
Confirmed *Norovirus*	6	160
Suspect *Norovirus*	14	130
Toxins		
Bacterial toxin (suspect)	6	24
Scombroid	2	3
Unknown Agent	2	4

Each outbreak of foodborne illness is investigated to determine contributing factors. A contributing factor is a fault or circumstance that singly or in combination led to the outbreak of foodborne illness. Contributing factors may include food handling practices which lead to the contamination of a food, and/or the proliferation, amplification or survival of an agent. A single outbreak may have multiple contributing factors identified during an investigation.

In 2014 there were 20 foodborne disease outbreaks confirmed or suspected to be due to *Norovirus*. Typically, outbreaks of *Norovirus* involve factors related to a suspected infectious individual who had contact with food. These factors included evidence of inadequate handwashing practices and/or bare hand contact with ready-to-eat foods.

In 2014 there were 15 bacterial outbreaks. Contributing factors most frequently associated with bacterial outbreaks included cross-contamination of raw and cooked ingredients, and food that was intended to be consumed after a kill step (e.g. heating to kill bacteria) that was inadequate.

Additionally, six outbreaks suspected to be associated with bacterial toxins were reported in 2014. Contributing factors associated with bacterial toxin outbreaks included improper hot holding, insufficient time/temperature during reheating, improper slow cooling and lack of control on time/temperature of the implicated food.

Foodborne outbreaks reported in Washington during 2014 are summarized in Table 10.

Table 10. Foodborne Disease Outbreaks Reported to Washington State Department of Health, 2014

#	Local Health Jurisdiction	Month	Illness Agent	# Confirmed Cases	# Probable Cases	Total # Cases	Exposure Source	Contributing Factors	Setting
1	King	January	*Norovirus* (suspect)	0	4	4	Unknown	Bare-hand contact	Private home
2	King	January	*Norovirus* (suspect)	0	3	3	Unknown	Other source of contamination	Restaurant
3	King	January	*Norovirus* (suspect)	0	3	3	Unknown	Bare-hand contact	Restaurant
4	Whatcom	February	*Norovirus*	4	56	60	Unknown	Glove-hand contact by food handler suspected to be infectious, storage in contaminated environment	Restaurant
5	King	February	*Norovirus* (suspect)	0	2	2	Unknown	Bare and glove-hand contact by food handler suspected to be infectious	Restaurant
6	King	March	*Norovirus* (suspect)	0	7	7	Raw oysters	Contaminated raw product	Private home
7	King	March	*Norovirus*	5	45	50	Unknown	Bare and glove-hand contact by food handler suspected to be infectious	Restaurant
8	Pierce	March	Scombroid	0	1	1	Fish (mackerel)	Toxic substance part of the tissue	Banquet facility
9	King	March	Bacterial toxin (suspect)	0	3	3	Unknown	Cross-contamination of ingredients	Restaurant
10	King	April	*Norovirus*	1	3	4	Unknown	Glove-hand contact by food handler suspected to be infectious	Restaurant
11	King	April	Unknown enteric	0	2	2	Unknown	Improper cold holding	Restaurant
12	Multistate	May	*E. coli* O121	11	0	11	Raw clover sprouts	Contaminated raw product	Restaurant
13	King	May	*Salmonella* I 4,[5],12:i:-	1	1	2	Unknown	Cross-contamination of ingredients	Restaurant
14	Pierce	May	*Salmonella* Enteritidis	3	0	3	Unknown	Cross-contamination of ingredients, bare-hand contact by food handler suspected to be infectious, other source of contamination	Restaurant
15	Pierce	May	*Salmonella* Enteritidis	6	1	7	Unknown	Contaminated raw product	Restaurant
16	Skagit	May	*Norovirus* (suspect)	0	7	7	Unknown	Bare-hand contact by food handler suspected to be infectious	Restaurant
17	Clark	May	*Salmonella* Thompson	2	0	2	Unknown	Cross-contamination of ingredients, other source of contamination	Restaurant
18	King	May	*C. perfringens* (suspect)	0	4	4	Unknown	Inadequate temperature control	Restaurant
19	King	June	Unknown enteric	0	2	2	Unknown	Glove-hand contact by food handler suspected to be infectious, other source of contamination	Restaurant
20	King	June	*Norovirus* (suspect)	0	26	26	Unknown	Glove-hand contact by food handler suspected to be infectious	Restaurant

Table 10 continued. Foodborne Disease Outbreaks Reported to Washington State Department of Health, 2014

#	Local Health Jurisdiction	Month	Illness Agent	# Confirmed Cases	# Probable Cases	Total # Cases	Exposure Source	Contributing Factors	Setting
21	Pierce	June	*C. perfringens* (suspect)	0	2	2	Ground beef	Improper hot holding	Restaurant
22	Multiple	June	*Salmonella* Multiple sero-types	35	0	35	Raw beef, pork, lamb	Contaminated raw product, food practices that support proliferation of pathogens, insufficient cooking	Multiple venues
23	King	July	*Norovirus* (suspect)	0	4	4	Unknown	Unknown	Restaurant
24	King	August	*Norovirus* (confirmed in oysters)	0	2	2	Raw oysters (Korean)	Contaminated raw product	Restaurant
25	Clark	August	*Salmonella enteriditis*	2	1	3	Unknown	Unknown	Camp
26	Clark	August	*Vibrio parahae-molyticus*	1	1	2	Raw oysters	Contaminated raw product	Restaurant
27	Spokane	August	*Norovirus* (suspect)	0	30	30	Ice water (suspected)	Other source of contamination	Catered event
28	Clark	September	*Norovirus* (suspect)	0	18	18	Unknown	Bare-hand contact by food handler suspected to be infectious	Restaurant
29	Skagit	September	*Norovirus* (suspect)	0	4	4	Unknown	Bare and glove-hand contact by food handler suspected to be in-fectious	Restaurant
30	Pierce	September	Bacteria toxin (suspect)	0	3	3	Unknown	Improper cooling	Restaurant
31	Spokane	September	*Norovirus* (suspect)	0	4	4	Frozen, breaded oysters from Chi-na	Contaminated raw product, insuf-ficient cooking	Restaurant
32	Pierce	September	*Salmonella \ enteriditis*	3	2	5	Curry chicken salad	Cross-contamination of ingredi-ents, improper temperature control	Private home
33	King	October	*Campylobacter*	1	7	8	Vietnamese sand-wich	Cross-contamination of ingredi-ents, food preparation practices that support proliferation of patho-gens	Restaurant
34	Snohomish	October	*Norovirus*	0	6	6	Unknown	Other mode of contamination by a food handler	Private event
35	King	October	*Salmonella enteriditis*	6	1	7	Unknown	Unknown	Restaurant
36	Multistate	October	*Listeria mono-cytogenes*	1	0	1	Caramel apples, prepackaged	Contaminated raw product	Distributed product con-sumed at private home
37	Multistate	November	*Norovirus*	6	16	22	Oysters	Contaminated raw product	Multiple venues

Table 10 continued. Foodborne Disease Outbreaks Reported to Washington State Department of Health, 2014

#	Local Health Jurisdiction	Month	Illness Agent	# Confirmed Cases	# Probable Cases	Total # Cases	Exposure Source	Contributing Factors	Setting
38	Clark	November	Bacteria toxin (suspect)	0	3	3	Restaurant	Improper hot holding	Restaurant
39	Multiple	November	*Listeria mono-cytogenes*	3	0	3	Queso Fresco	Food originating from sources shown to be contaminated	Private home
40	King	November	*Listeria mono-cytogenes*	2	0	2	Ice cream shake mix	Food originating from sources shown to be contaminated	Hospital
41	Spokane	November	Scombroid (suspect)	0	2	2	Private home	Improper cold holding, toxic sub-stance part of tissue	Grocery store
42	Pierce	November	*B. cereus* (suspect)	0	5	5	Pork fried rice	Food practices that support prolifer-ation of pathogens, improper tem-perature control, improper cooling	Restaurant
43	Pierce	November	*Campylobacter*	3	16	19	Assisted living facility	Contaminated raw product, cross-contamination of ingredients	Assisted living facility
44	Clark	December	*Norovirus* (suspect)	0	5	5	Restaurant	Glove-hand contact by food handler suspected to be infectiousother source of contamination	Restaurant
45	King	December	*Norovirus*	0	16	16	Unknown	Bare and glove-hand contact by food handler suspected to be infectious	Banquet facility

INFLUENZA SURVEILLANCE, 2014–2015

The DOH, in collaboration with local health jurisdictions and Centers for Disease Control and Prevention (CDC), performed surveillance for influenza during the 2014 to 2015 season using several different systems. This report summarizes data collected from July 20, 2014 to July 25, 2015 (week 30 of 2014 through week 29 of 2015) through key systems.

Overall Summary

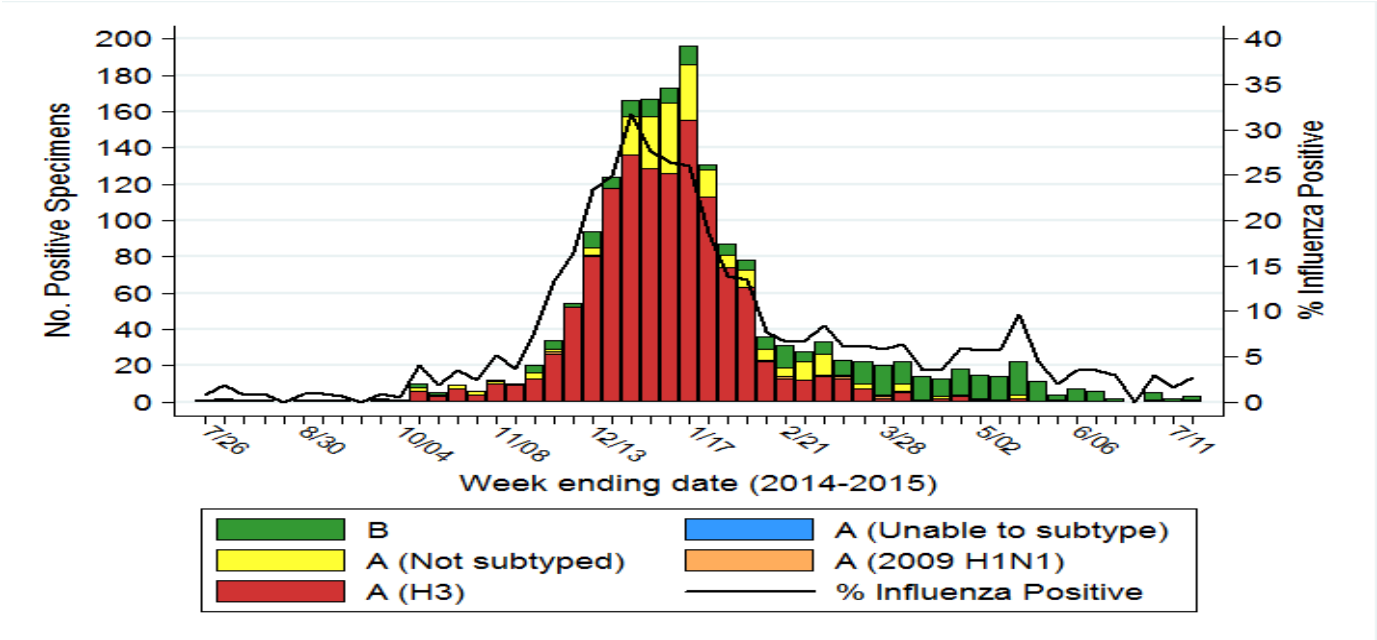
Overall, influenza activity during the 2014 to 2015 influenza season was moderately severe, reaching peak activity in Washington in late December and early January. The predominant viruses circulating throughout the state were influenza A (H3N2) viruses. Due to antigenic drift, there was a mismatch between the H3N2 vaccine strain and the predominant circulating H3N2 strain nationwide. Influenza seasons during which H3N2 viruses predominate tend to be more severe, which was the case for 2014 to 2015. See CDC summary of the influenza season here: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6421a5.htm

World Health Organization/National Respiratory and Enteric Virus Surveillance System (WHO/NREVSS)

Four laboratories in Washington participate in the WHO/NREVSS surveillance network: The Washington State Public Health Laboratories (PHL), Public Health – Seattle & King County Public Health Laboratory (PHSKC), University of Washington Virology Laboratory, and Seattle Children's Hospital Laboratory. Participating laboratories report the total number of positive influenza tests, by virus type/subtype, and the percent of specimens testing positive each week.

Of 1,745 specimens that tested positive for influenza during July 20, 2014 to July 25, 2015, 1,454 (83 percent) were influenza A and 291 (17 percent) were influenza B. Of the influenza A specimens, 1,227 (84 percent) were influenza A (H3N2) viruses, 10 (one percent) were influenza A (2009 H1N1) viruses, and 217 (15 percent) were unsubtyped influenza A viruses.

Figure 1. Influenza positive tests reported to CDC by WHO/NREVSS collaborating laboratories, Washington, 2014-2015



Antigenic Characterization

Antigenic characterization was conducted on 33 influenza specimens collected in Washington during the 2014 to 2015 season.

Six influenza A (H3N2) specimens were characterized as A/Texas/50/2012-like, the influenza A (H3N2) component of the 2014 to 2015 vaccine. Seven influenza A (H3N2) specimens were characterized as A/Switzerland/9715293/2013-like, which is antigenically drifted from the 2014 to 2015 vaccine strain.

Four influenza A (2009 H1N1) specimens were characterized as A/California/07/2009-like, the influenza A (2009 H1N1) component of the 2014 to 2015 vaccine.

Fourteen influenza B specimens were characterized as B/Massachusetts/02/2012-like, the influenza B component of the 2014 to 2015 vaccine. Two influenza B specimens were characterized as B/Brisbane/60/2008-like.

Antiviral Resistance Testing

The PHL have conducted antiviral resistance surveillance on a proportion of all influenza A (H3) specimens received. So far this season, 58 out of 58 (100 percent) of influenza A (H3) specimens screened by pyrosequencing at PHL have tested as wildtype.

CDC has also performed pyrosequencing on three separate influenza A (H3N2) specimens from Washington State. Two were wildtype and one had a mutation that is associated with resistance to oseltamivir.

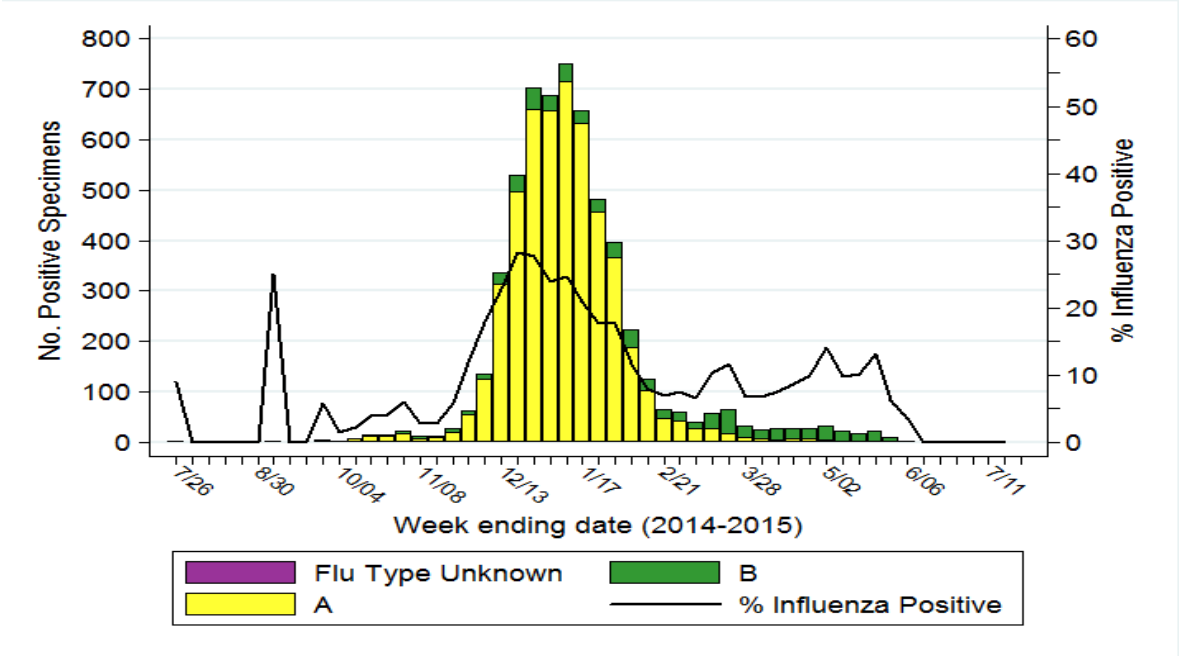
Novel, Avian and Unsubtypable Influenza Viruses

Avian influenza H5N8 was identified in captive falcons and wild birds, avian influenza H5N2 and H5N1 were identified in wild birds, and avian influenza H5N2 was identified in backyard poultry and at a game bird farm in Washington State this season. No human cases have been identified.

Public Health Reporting of Aggregate Influenza Data (PHRAID)

Select commercial laboratories in Washington report the number of influenza tests performed and the number positive for influenza A and B each week through PHRAID. During July 20, 2014 to July 25, 2015, of the total 34,258 flu tests performed, 5,756 (16 percent) were positive for influenza A, B, or unknown type. (Figure 2). No data are available from eastern Washington facilities.

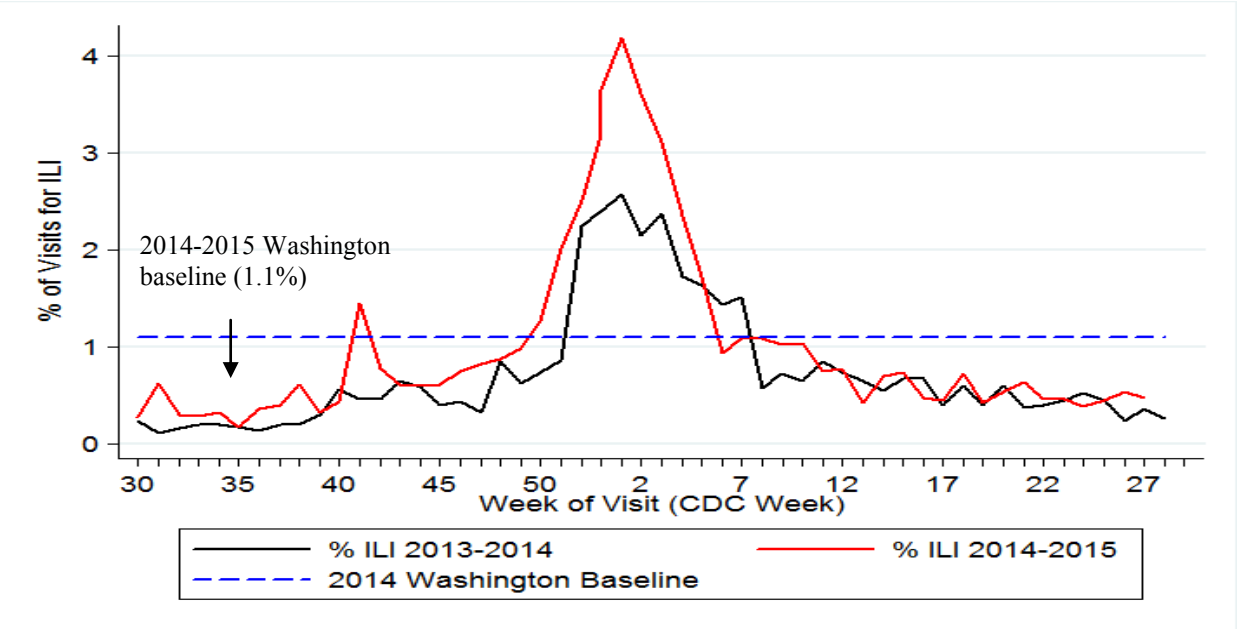
Figure 2. Aggregate Influenza Testing Results, Western Washington, 2014–2015



Outpatient Influenza-like Illness Surveillance Network (ILINet) Data

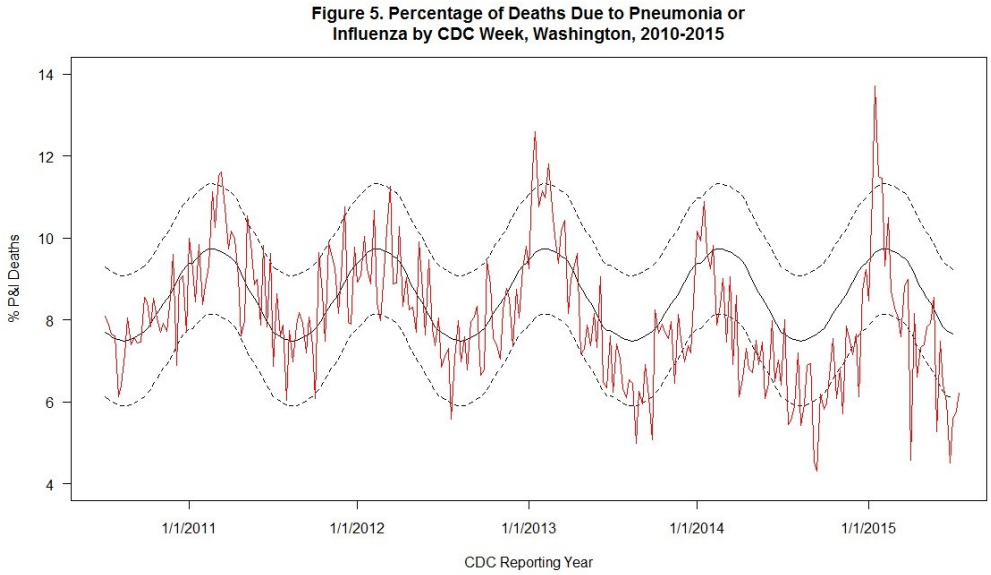
Information on patient visits to health care providers for influenza-like illness is collected through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet). Each week, up to 35 outpatient healthcare providers in Washington reported data to CDC on the total number of patients seen and the number of those patients with influenza-like illness (ILI) by age group (zero to four years, five to 24 years, 25 to 49 years, 50 to 64 years, and ≥ 65 years). During July 20, 2014 to July 25, 2015, of the total 188,344 visits reported, 2,083 (1.1 percent) were due to ILI.

Figure 4. Percentage of ILI Visits Reported by Sentinel Providers, Washington, 2013–2015



Pneumonia and Influenza (P&I) Mortality*

Death records submitted to the department are analyzed to determine the proportion of weekly deaths due to pneumonia or influenza (P&I). Figure 5 indicates the weekly proportion of deaths due to P&I during 2010 to 2015.



Reported Laboratory-confirmed Influenza Hospitalizations (Spokane County Only)

Spokane Regional Health District requires hospitals and providers to report laboratory-confirmed influenza-associated hospitalizations. During July 20, 2014 to July 25, 2015, 365 hospitalizations were reported among Spokane County residents. Of these 365 patients, 19 were zero to four years old, 17 were five to 17 years old, 42 were 18 to 49 years old, 59 were 50 to 64 years old, and 228 were 65 years or older.

Figure 6a: Laboratory-Confirmed Flu Hospitalization Rates by Age Group, Spokane County, WA 2014–2015

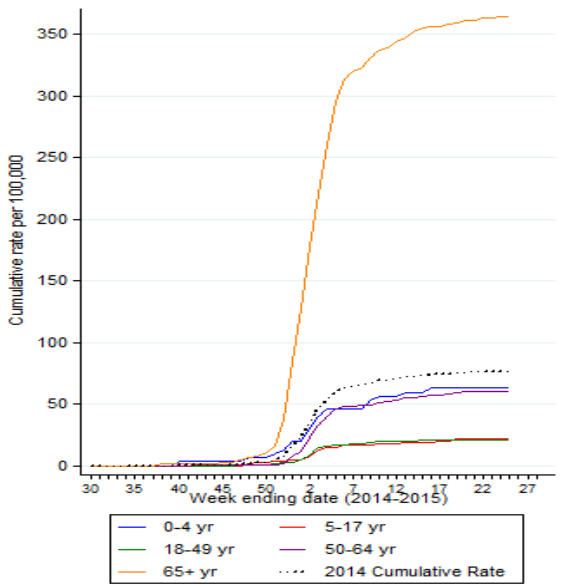
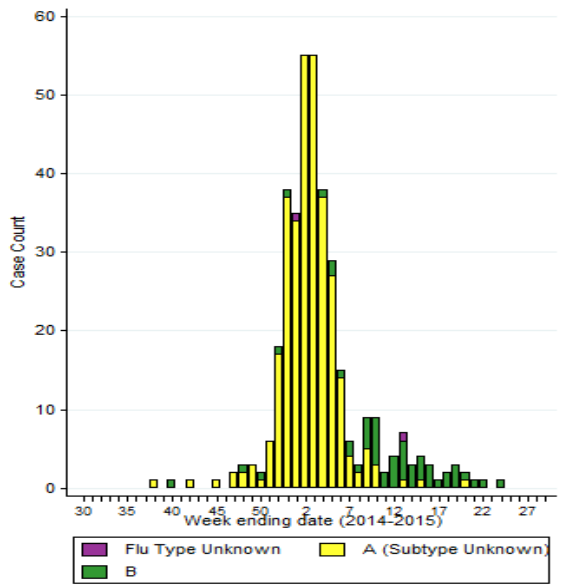
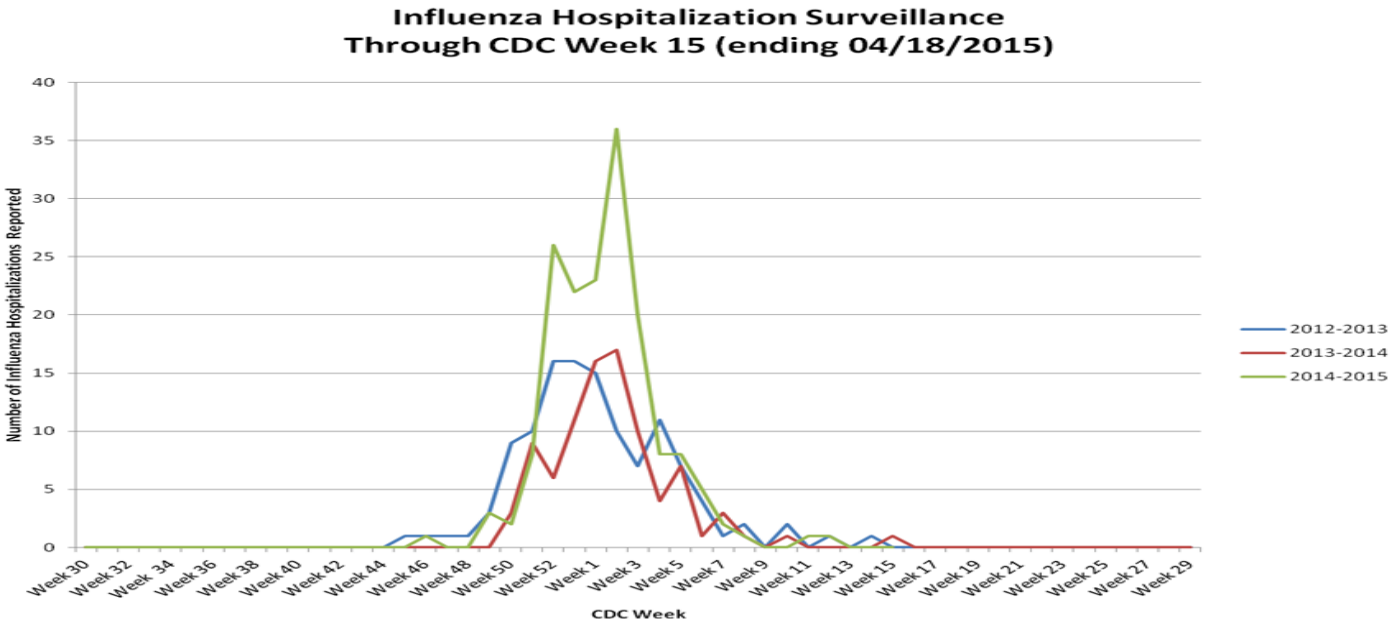


Figure 6b: Laboratory-Confirmed Flu Hospitalizations by Admission Week, Spokane County, WA 2014–2015



Influenza Hospitalization Data (Snohomish County Only)

Snohomish Health District requires hospitals in Snohomish County to report laboratory-confirmed influenza-associated hospitalizations to the health district. See figure below, courtesy of Snohomish Health District.



Reported Laboratory-Confirmed Influenza-Associated Deaths

One hundred fifty-seven laboratory-confirmed influenza deaths were reported during the period of July 20, 2014 to July 25, 2015, in Washington (week 30 of 2014 through week 29 of 2015), including one pediatric death in a child under age 10. Most deaths occurred in people with underlying health conditions, but one death was in a previously healthy child, and two deaths were in previously healthy individuals in the 30-40 year age range. One hundred forty-one of the deaths were attributable to influenza A, 13 to influenza B, and three to influenza type undetermined.

Table 3: Number and rate of reported laboratory-confirmed influenza-associated deaths by age group, Washington, 2014-2015

Age Group (in years)	Number of Deaths	Death Rate (per 100,000 population)
0–4	0	0
5–24	1	0.06
25–49	7	0.30
50–64	15	1.08
65+	134	14.31
Total	157	2.28

Reported Laboratory-Confirmed Influenza-Associated Deaths, Past Seasons

For reference, lab-confirmed influenza death totals reported to the DOH for past seasons are presented below in Table 4. Note that for the purposes of this table each season runs from week 30 of one year to week 29 of the next (roughly July to July).

Past season summaries are available: http://www.doh.wa.gov/DataandStatisticalReports/DiseasesandChronicConditions/CommunicableDiseaseSurveillanceData/InfluenzaSurveillanceData

Note that influenza deaths are likely under-reported. The reasons for this under-reporting vary. Influenza may not be listed as a cause of death, influenza testing may not have occurred in a timely fashion to identify the virus, or may not have been performed at all, and lab-confirmed influenza deaths may not have been appropriately reported to public health.

CDC has published information about estimating seasonal influenza-associated deaths: http://www.cdc.gov/flu/about/disease/us_flu-related_deaths.htm?mobile=nocontent

Table 4: Number and rate of reported laboratory-confirmed influenza-associated deaths by age group, by influenza season

Season	Number of Deaths, All Ages	Death Rate (per 100,000 population), All Ages
2014-2015	157	2.28
2013-2014	79	1.17
2012-2013	54	0.80
2011-2012	18	0.27
2010-2011	36	0.53

Additional Resources

International Influenza Data: http://www.who.int/topics/influenza/en/

National Influenza Surveillance Report: http://www.cdc.gov/flu/weekly/

Washington DOH Influenza Information for Public Health and Healthcare Providers: http://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/PublicHealthSystemResourcesandServices/Immunization/InfluenzaFluInformation#recommendation

Washington Local Health Department Influenza Surveillance Reports:

Clark County: http://www.clark.wa.gov/public-health/diseases/flu.html

King County: http://www.kingcounty.gov/healthservices/health/communicable/diseases/Influenza.aspx

Pierce County: http://www.tpchd.org/providers-partners/influenza-medical-providers

Whatcom County: http://www.co.whatcom.wa.us/967/Influenza

Yakima County: http://www.yakimacounty.us/365/RSV-Flu-Stats

APPENDIX III

State Demographics

Washington State Population Estimates, 1985-2014
Washington State Office of Financial Management

Year	Estimate
1985	4,415,785
1986	4,462,212
1987	4,527,098
1988	4,616,886
1989	4,728,077
1990	4,866,692
1991	5,021,335
1992	5,141,177
1993	5,265,688
1994	5,364,338
1995	5,470,104
1996	5,567,764
1997	5,663,763
1998	5,750,033
1999	5,830,835
2000	5,894,143
2001	5,970,330
2002	6,059,316
2003	6,126,885
2004	6,208,515
2005	6,298,816
2006	6,420,258
2007	6,525,086
2008	6,608,245
2009	6,672,159
2010	6,724,540
2011	6,767,900
2012	6,817,770
2013	6,882,400
2014	6,968,170

*State of Washington Office of Financial Management 2013 Population Trends. Accessed 7/20/15 from http://www.ofm.wa.gov/pop/april1/poptrends.pdf

Washington State Population Estimates By County, 2014*

Washington State Office of Financial Management

County	Estimate
Adams	19,400
Asotin	21,950
Benton	186,500
Chelan	74,300
Clallam	72,350
Clark	442,800
Columbia	4,080
Cowlitz	103,700
Douglas	39,700
Ferry	7,660
Franklin	86,600
Garfield	2,240
Grant	92,900
Grays Harbor	73,300
Island	80,000
Jefferson	30,700
King	2,017,250
Kitsap	255,900
Kittitas	42,100
Klickitat	20,850
Lewis	76,300
Lincoln	10,700
Mason	62,000
Okanogan	41,700
Pacific	21,100
Pend Oreille	13,210
Pierce	821,300
San Juan	16,100
Skagit	119,500
Skamania	11,370
Snohomish	741,000
Spokane	484,500
Stevens	43,900
Thurston	264,000
Wahkiakum	4,010
Walla Walla	60,150
Whatcom	207,600
Whitman	46,500
Yakima	248,800
Washington State	**6,968,170**

*State of Washington Office of Financial Management April 1 Population Data Table. Accessed 7/20/15 from http://www.ofm.wa.gov/pop/asr/default.asp

Washington State Population By Age and Sex, 2014*

Washington State Office of Financial Management

Age (years)	Male	Female	TOTAL
0-4	224,911	214,682	439,593
5-9	229,396	218,452	447,848
10-14	223,872	214,052	437,924
15-19	228,143	217,126	445,269
20-24	246,492	232,557	479,049
25-29	243,879	231,452	475,331
30-34	250,426	241,256	491,682
35-39	227,054	222,125	449,179
40-44	232,612	227,891	460,503
45-49	229,740	226,272	456,012
50-54	246,773	248,802	495,575
55-59	238,275	245,640	483,915
60-64	207,297	220,907	428,204
65-69	166,680	170,246	345,926
70-74	112,396	123,459	235,855
75-79	72,199	85,046	157,245
80-84	47,958	63,672	111,630
85 +	44,314	83,116	127,430
TOTAL	3,472,417	3,495,753	6,968,170

*State of Washington Office of Financial Management April 1 Population Data Table. Accessed 7/20/15 from http://www.ofm.wa.gov/pop/asr/default.asp