

Washington State COMMUNICABLE DISEASE REPORT 2013



John Snow, Father of Modern Epidemiology

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

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Communicable Disease Epidemiology
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COMMUNICABLE DISEASE REPORT 2013

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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 – 2013

This report summarizes notifiable communicable diseases reported by local health jurisdictions to the Washington State Department of Health in 2013. 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, coccidioidomycosis, Creutzfeldt-Jakob Disease (CJD), cryptococcosis, and *Anaplasma phagocytophilum*.

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 Department of Health. Local health jurisdictions report to the Department of Health 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 2013 CDC Year (December 30, 2012 – December 28, 2013).
3. Case report entered into PHIMS by March 1, 2014 if the condition is common (>10 cases per year).
4. Case report entered into PHIMS prior to May 15, 2014 if the condition is rare (≤ 10 cases per year).
5. Very rare conditions (0-2 cases per year) reported to DOH after the previous year's deadline (if not reported in a previous annual report).

Given a valid DOH case classification by Department of Health (as described in the guidelines for each condition: <http://www.doh.wa.gov/PublicHealthandHealthcareProviders/NotifiableConditions/ListofNotifiableConditions.aspx>). For select conditions, certain valid DOH classifications are excluded from the annual report. The following table lists the valid combinations of conditions and classifications that are excluded from the annual report.

Classification(s)	Conditions
Probable and Suspect	Measles; Rubella
Probable	Diphtheria; Poliomyelitis
Suspect	Lyme Disease; Mumps

Counts of asymptomatic presumptive viremic blood donors with West Nile Virus are included in the annual report; these cases are classified as suspect West Nile Virus Disease cases in PHIMS.

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 confirmed by the provider with appropriate 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 5 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

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/phsd-LHJ.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

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}	Lymphogranuloma venereum ^{3d}
Animal bites (when human exposure to rabies is suspected) ^{Imm}	Malaria ^{3d}
Anthrax ^{Imm}	Measles (rubeola) acute disease only ^{Imm}
Arboviral disease ^{3d} (West Nile virus disease, dengue, Eastern & Western equine encephalitis, St Louis encephalitis, and Powassan) ^{3d}	Meningococcal disease (invasive) ^{Imm}
Asthma, occupational (suspected or confirmed) ^{Mo} 1-888-66SHARP	Monkeypox ^{Imm}
Birth Defects ^{Mo} : autism spectrum disorders, cerebral palsy, alcohol related birth defects ^{Mo} 360-236-3533	Mumps (acute disease only) ^{24h}
Botulism (foodborne, wound and infant) ^{Imm}	Outbreaks of suspected foodborne origin ^{Imm}
Brucellosis (<i>Brucella</i> species) ^{24h}	Outbreaks of suspected waterborne origin ^{Imm}
Burkholderia mallei (Glanders) ^{Imm} and pseudomallei (Melioidosis) ^{Imm}	Paralytic shellfish poisoning ^{Imm}
Campylobacteriosis ^{3d}	Pertussis ^{24h}
Chancroid ^{3d}	Pesticide poisoning 1-800-222-1222
<i>Chlamydia trachomatis</i> infection ^{3d}	Hospitalized, fatal, or cluster ^{Imm}
Cholera ^{Imm}	Pesticide poisoning, all other ^{3d}
Cryptosporidiosis ^{3d}	Plague ^{Imm}
Cyclosporiasis ^{3d}	Poliomyelitis ^{Imm}
Diphtheria ^{Imm}	Prion disease ^{3d}
Disease of suspected bioterrorism origin ^{Imm}	Psittacosis ^{24h}
Domoic acid poisoning ^{Imm}	Q fever ^{24h}
E. coli - Refer to "Shiga toxin producing E. coli" ^{Imm}	Rabies (confirmed human or animal) ^{Imm}
Emerging condition with Outbreak potential ^{Imm}	Rabies, suspected human exposure ^{Imm}
Giardiasis ^{3d}	Relapsing fever (borreliosis) ^{24h}
Gonorrhea ^{3d}	Rubella (include congenital rubella syndrome) ^{Imm}
Granuloma inguinale ^{3d}	(acute disease only)
Haemophilus influenzae (invasive disease, children < age 5) ^{Imm}	Salmonellosis ^{24h}
Hantavirus pulmonary syndrome ^{24h}	SARS ^{Imm}
Hepatitis A, acute infection ^{24h}	Shiga toxin-producing E. coli infections ^{Imm}
Hepatitis B, acute ^{24h}	(enterohemorrhagic E. coli including, but not limited to, E. coli 0157:H7; also includes post-diarrheal hemolytic uremic syndrome)
Hepatitis B, chronic (initial diagnosis/previously unreported cases) ^{Mo}	Shigellosis ^{24h}
Hepatitis B, surface antigen positive pregnant women ^{3d}	Smallpox ^{Imm}
Hepatitis C, acute ^{3d} and chronic ^{Mo} (initial diagnosis only)	Syphilis (including congenital) ^{3d}
Hepatitis D (acute and chronic infections) ^{3d}	Tetanus ^{3d}
Hepatitis E (acute infection) ^{24h}	Trichinosis ^{3d}
Herpes simplex, neonatal and genital (initial infection only) ^{3d}	Tuberculosis ^{Imm}
HIV infection ^{3d}	Tularemia ^{Imm}
Immunization reactions ^{3d} (severe, adverse)	Vaccinia transmission ^{Imm}
Influenza, novel or unsubtypeable strain ^{Imm}	Vancomycin-resistant <i>Staphylococcus aureus</i> ^{24h}
Influenza-associated death (lab confirmed) ^{3d}	(not to include vancomycin intermediate)
Legionellosis ^{24h}	Varicella-associated death ^{3d}
Leptospirosis ^{24h}	Vibriosis ^{24h}
Listeriosis ^{24h}	Viral hemorrhagic fever ^{Imm}
Lyme disease ^{3d}	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/phsd-LHJ.pdf> If no one is available at the local health jurisdiction, call **1-877-539-4344**

Notifiable Conditions & Washington's Health Care Facilities



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*.

<p>Acquired immunodeficiency syndrome (AIDS) ^{3d} (including AIDS in persons previously reported with HIV infection)</p> <p>Animal bites (when human exposure to rabies is suspected) ^{Imm}</p> <p>Anthrax ^{Imm}</p> <p>Arboviral disease ^{3d} (acute disease only: West Nile virus, dengue, Eastern & Western equine encephalitis, etc.)</p> <p>Asthma, occupational (suspected or confirmed) ^{Mo} 1-888-66SHARP</p> <p>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)</p> <p>Botulism ^{Imm} (foodborne, infant, and wound)</p> <p>Brucellosis ^{24h}</p> <p>Burkholderia mallei (Glanders) ^{Imm} and pseudomallei (Melioidosis) ^{Imm}</p> <p>Campylobacteriosis ^{3d}</p> <p>Chancroid ^{3d}</p> <p><i>Chlamydia trachomatis</i> ^{3d}</p> <p>Cholera ^{Imm}</p> <p>Cryptosporidiosis ^{3d}</p> <p>Cyclosporiasis ^{3d}</p> <p>Diphtheria ^{Imm}</p> <p>Disease of suspected bioterrorism origin ^{Imm}</p> <p>Domoic acid poisoning ^{Imm}</p> <p><i>E. coli</i> – Refer to “Shiga toxin-producing <i>E. coli</i> ^{Imm}</p> <p>Emerging condition with outbreak potential ^{Imm}</p> <p>Giardiasis ^{3d}</p> <p>Gonorrhea ^{3d}</p> <p>Granuloma inguinale ^{3d}</p> <p>Gunshot Wounds ^{Mo} 360-236-2867</p> <p><i>Haemophilus influenzae</i> (invasive disease, children < age 5) ^{Imm}</p> <p>Hantavirus pulmonary syndrome ^{24h}</p> <p>Hepatitis A, acute ^{24h}</p> <p>Hepatitis B, acute ^{24h}</p> <p>Hepatitis B, chronic (initial diagnosis/previously unreported cases) ^{Mo}</p> <p>Hepatitis B, surface antigen positive pregnant women ^{3d}</p> <p>Hepatitis C, acute ^{3d}; chronic ^{Mo} (initial diagnosis only)</p> <p>Hepatitis D, acute and chronic ^{3d}</p> <p>Hepatitis E, acute ^{24h}</p> <p>HIV infection ^{3d}</p> <p>Immunization reactions ^{3d} (severe, adverse)</p> <p>Influenza, novel or unsubtypeable strain ^{Imm}</p> <p>Influenza-associated death (laboratory confirmed) ^{3d}</p> <p>Legionellosis ^{24h}</p> <p>Leptospirosis ^{24h}</p> <p>Listeriosis ^{24h}</p> <p>Lyme disease ^{3d}</p>	<p>Lymphogranuloma venereum ^{3d}</p> <p>Malaria ^{3d}</p> <p>Measles (rubeola) acute disease only ^{Imm}</p> <p>Meningococcal disease (invasive) ^{Imm}</p> <p>Monkeypox ^{Imm}</p> <p>Mumps (acute disease only) ^{24h}</p> <p>Outbreaks of disease that occur or are treated in the health care facility ^{Imm}</p> <p>Outbreak of suspected foodborne origin ^{Imm}</p> <p>Outbreak of suspected waterborne origin ^{Imm}</p> <p>Paralytic shellfish poisoning ^{Imm}</p> <p>Pertussis ^{24h}</p> <p>Pesticide poisoning 1-800-222-1222 Hospitalized, fatal, or cluster ^{Imm} Pesticide poisoning, all other ^{3d}</p> <p>Plague ^{Imm}</p> <p>Poliomyelitis ^{Imm}</p> <p>Prion disease ^{3d}</p> <p>Psittacosis ^{24h}</p> <p>Q fever ^{24h}</p> <p>Rabies (confirmed human or animal) ^{Imm}</p> <p>Rabies, suspected human exposure ^{Imm}</p> <p>Relapsing fever (borreliosis) ^{24h}</p> <p>Rubella (include congenital rubella syndrome) ^{Imm} (acute disease only)</p> <p>Salmonellosis ^{24h}</p> <p>SARS ^{Imm}</p> <p>Shiga toxin-producing <i>E. coli</i> infections ^{Imm} (enterohemorrhagic <i>E. coli</i> including, but not limited to, <i>E. coli</i> 0157:H7; also includes post-diarrheal hemolytic uremic syndrome)</p> <p>Shigellosis ^{24h}</p> <p>Smallpox ^{Imm}</p> <p>Syphilis (including congenital) ^{3d}</p> <p>Tetanus ^{3d}</p> <p>Trichinosis ^{3d}</p> <p>Tuberculosis ^{Imm}</p> <p>Tularemia ^{Imm}</p> <p>Vaccinia transmission ^{Imm}</p> <p>Vancomycin-resistant <i>Staphylococcus aureus</i> ^{24h} (not to include vancomycin intermediate)</p> <p>Varicella-associated death ^{3d}</p> <p>Vibriosis ^{24h}</p> <p>Viral hemorrhagic fever ^{Imm}</p> <p>Yellow fever ^{Imm}</p> <p>Yersiniosis ^{24h}</p> <p>Other rare diseases of public health significance ^{24h}</p> <p>Unexplained critical illness or death ^{24h}</p>
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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/phsd-LHJ.pdf> If no one is available at the local health jurisdiction, call **1-877-539-4344**

Notifiable Conditions & Washington's Laboratories



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	Hepatitis C virus ^{Mo*} Hepatitis D virus ^{2d*} Hepatitis E virus ^{24h*}
Bacillus anthracis (Anthrax) ^{Imm*!}	Human immunodeficiency virus (HIV) infection ^{2d & ii} (for example, positive Western blot assays, P24 antigen or viral culture tests)
Blood lead level (elevated) ^{2d & i}	Human immunodeficiency virus (HIV) infection ^{Mo & ii} (All viral load detection test results - detectable and undetectable)
Blood lead level (non-elevated) ^{Mo & i}	Influenza virus, novel or unsubtypeable strain ^{Imm*!}
<i>Bordetella pertussis</i> (Pertussis) ^{24h*!}	<i>Legionella</i> species (Legionellosis) ^{24h*!}
<i>Borrelia burgdorferi</i> (Lyme disease) ^{2d*}	<i>Leptospira</i> species (Leptospirosis) ^{24h*}
<i>Borrelia hermsii</i> or <i>recurrentis</i> (Relapsing fever, tick- or louseborne) ^{24h*}	<i>Listeria monocytogenes</i> (Listeriosis) ^{24h*!}
<i>Brucella</i> species (Brucellosis) ^{24h*!}	Measles virus (rubeola) ^{Imm*!} , acute, by: IgM positivity, PCR positivity
<i>Burkholderia mallei</i> and <i>pseudomallei</i> ^{Imm*!}	Mumps virus, acute, by IgM positivity; PCR positivity ^{24h*!}
<i>Campylobacter</i> species (Campylobacteriosis) ^{2d*}	<i>Mycobacterium tuberculosis</i> (Tuberculosis) ^{2d & iii! @}
CD4 + (T4) lymphocyte counts and/or CD4 + (T4) ^{Mo & ii} (patients aged thirteen or older)	<i>Neisseria gonorrhoeae</i> (Gonorrhea) ^{2d*}
<i>Chlamydia psittaci</i> (Psittacosis) ^{24h*}	<i>Neisseria meningitidis</i> (Meningococcal disease) ^{Imm*!}
<i>Chlamydia trachomatis</i> ^{2d*}	<i>Plasmodium</i> species (Malaria) ^{2d*}
<i>Clostridium botulinum</i> (Botulism) ^{Imm*!}	Poliovirus ^{Imm*!} , acute, by: IgM positivity, PCR positivity
<i>Corynebacterium diphtheriae</i> (Diphtheria) ^{Imm*!}	Rabies virus (human or animal) ^{Imm*!}
<i>Coxiella burnetii</i> (Q fever) ^{24h*!}	<i>Salmonella</i> species (Salmonellosis) ^{24h*!}
<i>Cryptococcus non v. neoformans</i> ^{2d!}	SARS-associated coronavirus ^{Imm*!}
<i>Cryptosporidium</i> (Cryptosporidiosis) ^{2d*}	Shiga toxin-producing <i>E. coli</i> ^{Imm*!} (enterohemorrhagic <i>E. coli</i> including, but not limited to, <i>E. coli</i> O157:H7)
<i>Cyclospora cayentanensis</i> (Cyclosporiasis) ^{2d*!}	<i>Shigella</i> species (Shigellosis) ^{24h*!}
<i>E. coli</i> ^{Imm*!} (refer to "Shiga toxin-producing <i>E. coli</i> ")	<i>Treponema pallidum</i> (Syphilis) ^{2d*!}
<i>Francisella tularensis</i> (Tularemia) ^{Imm*!}	<i>Trichinella</i> species ^{2d*}
<i>Giardia lamblia</i> (Giardiasis) ^{2d*}	Vancomycin-resistant <i>Staphylococcus aureus</i> ^{24h*!}
<i>Haemophilus influenzae</i> (children < 5 years) ^{Imm*!}	Varola virus (smallpox) ^{Imm*!}
Hantavirus ^{24h*}	<i>Vibrio cholerae</i> O1 or O139 (Cholera) ^{Imm*!}
Hepatitis A virus (acute) by IgM positivity ^{24h*} (Hepatocellular enzyme levels to accompany report)	<i>Vibrio</i> species (Vibriosis) ^{24h*!}
Hepatitis B virus (acute) by IgM positivity ^{24h*}	Viral hemorrhagic fever ^{Imm*!}
Hepatitis B virus, by: HBsAg (Surface antigen); HBeAg (E antigen); HBV DNA ^{Mo*}	Arenaviruses, Bunyaviruses, Filoviruses, Flaviviruses
	Yellow fever virus ^{Imm*!}
	<i>Yersinia enterocolitica</i> or <i>pseudotuberculosis</i> ^{24h*}
	<i>Yersinia pestis</i> (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/phsd-LHJ.pdf>

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

Notifiable Conditions & the Veterinarian



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 (<i>Brucella</i> species)		X
<i>Burkholderia mallei</i> (Glanders)	X	
Disease of suspected bioterrorism origin (including but not limited to anthrax)	X	
<i>E. coli</i> – Refer to "Shiga toxin-producing <i>E. coli</i> "	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 <i>E. coli</i> infections (enterohemorrhagic <i>E. coli</i> including, but not limited to, <i>E. coli</i> 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 4 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: In recent years, 10-20 cases of travel-associated dengue and a few travel-associated Chikungunya cases have been reported annually. 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.

2013: 14 cases of dengue fever were reported following travel.

West Nile Virus (WNV) Disease

Cause: West Nile virus.

Illness and treatment: About 80% of those infected are asymptomatic, around 20% have WNV fever (fever, headache, rash), and less than 1% 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 2 presumptive viremic donors. Of these cases, 36 infections were known to be endemically acquired within Washington.

2013: One travel-associated case and one asymptomatic viremic blood donor, also travel associated, were 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 kidney failure. Twenty to 50% 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 2 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.

2013: 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. Inadequately processed home-canned foods are implicated in foodborne botulism. Wound botulism is usually associated with injecting black-tar heroin into the skin ("skin popping") or muscle.

Additional risks: Infant botulism cases usually occur in babies under 3 months old (almost always under 6 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.

Recent Washington trends: Each year there are 0 to 4 reports of foodborne botulism, 0 to 9 reports of infant botulism and 0 to 7 reports of wound botulism. Almost all are type A.

2013: Two cases of foodborne botulism (one with consumption of home-canned venison, and the other with consumption of home-canned tuna), 4 cases of infant botulism and 4 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. Strains of *Brucella* used in animal vaccine prior to 1996 had a greater risk for causing disease in humans if unintentionally injected.

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 3 reports of human brucellosis infections each year, primarily due to consumption of raw dairy products in foreign countries.

2013: One case of brucellosis with exposure to raw milk cheese while in Mexico was reported.

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.

2013: 1,631 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 3 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 20,000 cases are reported each year.

2013: 25,013 cases were reported (363.43 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.

2013: One case was reported, associated with travel to Haiti.

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.

2013: 84 cases were reported (1.2 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 0 to 11 cases are reported, mainly after international travel.

2013: No 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 carriers are the reservoir but may be asymptomatic. Transmission is by respiratory droplets, but may occur from skin lesions or articles soiled with discharges from an infected person.

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.

2013: 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 5 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.

2013: 548 cases were reported (8.0 cases/100,000 population).

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 3 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: Recently over 3,000 cases were reported each year.

2013: 4,390 cases were reported (63.8 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 5 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% of cases surviving *H. influenzae* meningitis have permanent neurological damage; however, among cases surviving meningitis due to Hib, 15-30% 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 underimmunized 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: 4 to 13 cases (due to all serotypes) are reported annually in children less than 5 years of age. Among 60 cases reported in this age group during 2005 through 2013, only 10 (16.7%) 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.

Table 1. Number of *H. influenzae* cases among children <5 years old by serotype, Washington State, 2005-2013

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%
Total	60	4	10	20	26	17%	43%

2013: Eleven cases in children under 5 years were reported with no deaths.

Hantavirus Pulmonary Syndrome (HPS)

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

Illness and treatment: Fever and mild flu-like symptoms are followed by 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, 45 cases were reported through 2012 with 16 (36%) associated deaths (including a retrospectively identified case from 1985). In recent years there are usually 1 to 3 cases, predominantly exposed in eastern counties.

2013: No cases were reported.

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.

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.

2013: 45 cases (0.7 cases/100,000 population) were reported with one death. Ten cases were travel-related, with four cases associated with travel to Mexico, two to South America, two to India, one to Ethiopia, and one to Iraq.

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% of children under 5 years will become chronically infected compared to about 5% of adults. Infants born to surface antigen positive women are at extremely high risk (90%) of becoming chronically infected, and for developing later complications including liver cancer.

Prevention: To prevent infection, routine Hep 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 19-59 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 $\geq 2\%$ 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 85-95% 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. Each year 1,000 to 1,400 cases of chronic hepatitis B are reported with about one death a year due to fulminant infection. Current chronic hepatitis reports are posted at: <http://www.doh.wa.gov/Portals/1/Documents/Pubs/150-028-ChronicHepatitisBandCSurveillanceReport.pdf>. Between 2005 and 2012 (the most recent year for which complete data are available) 2,734 babies were born to HBsAg positive women and reported to local health jurisdictions (annual range: 317-377). For 2,684 (98%) of these babies preventive treatment was initiated within one day of birth. During this same time period only 17 infants who received all recommended treatment and follow-up testing developed chronic hepatitis B infections.

2013: 34 acute cases (0.5 cases/100,000 population) and one death were reported; among 350 infants born to surface antigen positive women three perinatal infections were reported.

Hepatitis C

Cause: Hepatitis C virus, which has 6 genotypes.

Illness and treatment: Most acute infections are asymptomatic but about 20% 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 75-85% 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 1945-1965.

Recent Washington trends: Each year fewer than 30 acute cases and around 5,700 chronic cases are reported. Current chronic hepatitis reports are posted at: <http://www.doh.wa.gov/Portals/1/Documents/Pubs/150-028-ChronicHepatitisBandCSurveillanceReport.pdf>.

2013: 63 acute cases (0.9 cases/100,000 population) were reported, including one case exposed perinatally. 45 of 54 cases interviewed had injection drug use as a risk factor.

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. Humans and animals (swine) are the reservoirs for hepatitis E, which is transmitted most commonly 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, 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.

2013: One case of hepatitis E was reported associated with travel to Afghanistan.

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.

2013: 2,207 cases of initial genital HSV infection (32.1 cases/100,000 population) and 4 cases of neonatal infection were 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.

2013: 470 cases were reported (6.8/100,000 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.

2013: 52 cases (0.8 cases/100,000 population) were reported with 5 deaths.

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 0 to 5 cases are reported. Most infections relate to recreational water exposure in Washington or during travel.

2013: 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 0 to 5 deaths.

2013: 21 cases were reported (0.3 cases/100,000 population) with one death.

Lyme Disease

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

Illness and treatment: The classic symptom is erythema migrans, a target-shaped (bull's-eye) rash. Systemic symptoms, such as fatigue, headache, fever, and muscle and joint aches also typically occur in early illness. Joint, nervous system, or heart complications can occur.

Sources: Only certain hard tick species transmit Lyme disease from the rodent or deer reservoirs. In the Pacific coastal United States, the western blacklegged (or deer) tick (*Ixodes pacificus*) is the primary vector. These ticks live in heavily-forested or dense brushy areas, not open areas. It is likely these ticks must attach for at least 24 hours to transmit the disease.

Prevention: During outdoor activities in endemic areas avoid tick bites by wearing appropriate clothing and using repellents. Check the body for ticks. If bitten by a tick, be alert for rash, fever, facial paralysis, or joint pain over the next month. If symptoms develop, see a health care provider.

Recent Washington trends: Each year there are 7 to 23 reports. Most Washington cases are the result of a tick bite out-of-state. The few endemic cases have tick exposures predominantly on the west side of the Cascade Mountains, reflecting the distribution of the *Ixodes* ticks.

2013: 19 cases (0.3 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.

2013: 30 cases (0.4 cases/100,000 population) were reported. 17 were *P. falciparum*, 4 *P. vivax*, 2 *P. malariae*, 3 *P. ovale*, 1 co-infection with both *P. falciparum* and *P. ovale*, and 3 were unknown *Plasmodium* species. Travel exposures were mainly to Africa.

Measles

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

Illness and treatment: Typical measles includes a 2–4 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 5–6 days or longer. Complications are more common among children under 5 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% 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 2 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 5 cases reported, although outbreaks with 7-19 cases occurred in Washington in 2001, 2004, and 2008.

2013: Four cases (0.1 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, and bloodstream infections (meningococcemia), which causes fever and septic shock as well as a rash or bruise-like skin lesions and often leads to severe outcomes such as permanent disability or 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 9-12%.

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 11–18 years and some persons aged 2–55 years at increased risk for this disease (e.g., persons with HIV, complement disorder or asplenia, and 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.

Table 2. Number of meningococcal disease cases by serogroup, Washington State, 2005-2013

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%
Total	256	22	113	41	69	6	5	45%	44%

2013: 20 cases (0.3 cases/100,000 population) were reported with three deaths.

Mumps

Cause: Mumps virus, a paramyxovirus.

Illness and treatment: Mumps causes inflammation of glandular tissue, most commonly the salivary glands (parotitis occurs in 30-40% of infected persons). Up to 20% of infections have no symptoms and an additional 40-50% has 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 40% of cases now occurring in persons 15 years of age and older. A large outbreak of mumps occurred in 2006 in 9 Midwestern states; the majority of cases were college-aged persons and adults in their 20s. 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 (0-26 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.

2013: Two 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 are often the reservoir. 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 2 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.

2013: 748 cases (10.9 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% 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 – July 2011 in Washington found 226 (2.8%) 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, 5 people have been diagnosed with plague between 2010 and 2012, along with and a positive cat in 2012.

2013: 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% of infections are asymptomatic and 4–8% result in only minor illnesses. Non-paralytic aseptic meningitis with full recovery occurs in 1–2% of infections. Less than 1% 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 3-6 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.

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 received live oral polio vaccine (which is no longer used in the United States).

2013: 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 0 to 4 reports commonly associated with indoor exposure to pet birds and less commonly farm or wild birds.

2013: No cases were reported.

Q Fever

Cause: Bacterium *Coxiella burnetii*.

Illness and treatment: Acute Q fever symptoms are fever, cough, chills, retrobulbar headache, malaise, weakness, 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 0 to 3 cases. A notable exception occurred in 2011, when 8 cases were linked to a goat-associated outbreak.

2013: Three cases were 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: In Washington, bats are the primary reservoir. Skunks, raccoons and foxes are additional reservoirs elsewhere in this country. In some countries, dogs and other carnivores are the main reservoirs. Rabies 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 for exposure to a rabid or potentially rabid animal. Certain high risk groups 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.

2013: 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 240-290 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 patient. Of bats tested in Washington, 5 to 10% are identified as rabid. Since 1987, only 4 rabid domestic animals have been identified, 2 with bat variant virus (Table 1).

2013: There were 287 reports of suspected rabies exposure. The most common exposures were bats (81%), dogs (10%), and raccoons (4%). 12 out of 284 (4%) of bats tested were rabid (Table 2). No animals tested in Washington were rabid other than bats (Table 3).

Table 3. Rabid Non-Bat Animals and Rabies Strains, Washington State, 1987–2013

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 4. Washington State Bats Tested for Rabies, 2009-2013

Counties	2009		2010		2011		2012		2013		County Total	
	Positive	Total	Positive	Total	Positive	Total	Positive	Total	Positive	Total	Posi-	Tested
Adams	0	0	0	0	0	1	0	0	0	0	0	1
Asotin	0	0	1	2	0	1	0	0	0	3	1	6
Benton	1	37	0	4	0	0	0	1	0	2	1	44
Chelan	0	1	0	2	1	1	1	13	0	2	2	19
Clallam	0	6	0	1	1	7	0	1	1	6	2	21
Clark	0	10	1	11	0	11	0	9	0	18	1	59
Columbia	0	1	0	0	0	0	0	0	0	0	0	1
Cowlitz	0	12	1	5	0	5	1	3	0	14	2	39
Douglas	0	2	0	1	0	1	0	1	0	0	0	5
Ferry	0	4	1	1	0	1	0	2	0	0	1	8
Franklin	0	0	0	1	0	0	0	1	1	1	1	3
Garfield	0	0	0	0	0	0	0	0	0	0	0	0
Grant	0	1	0	2	0	1	0	3	0	1	0	8
Grays Harbor	1	8	0	0	0	1	1	3	0	1	2	13
Island	1	6	0	6	1	10	1	9	0	10	3	41
Jefferson	1	5	0	2	0	1	0	5	1	4	2	17
King	1	38	2	45	1	45	1	47	4	64	9	239
Kitsap	0	18	1	10	0	15	0	10	1	27	2	80
Kittitas	1	2	1	2	0	0	0	2	1	3	3	9
Klickitat	0	1	0	3	0	1	0	3	0	0	0	8
Lewis	0	13	0	10	1	9	0	9	0	11	1	52
Lincoln	0	0	0	0	0	0	0	0	0	1	0	1
Mason	0	2	0	4	0	2	0	9	0	4	0	21
Okanogan	1	3	0	0	0	0	0	1	0	2	1	6
Pacific	1	4	0	3	0	1	0	7	0	4	1	19
Pend Oreille	0	1	0	0	0	3	0	1	0	0	0	5
Pierce	1	29	1	12	1	10	0	10	0	13	3	74
San Juan	0	2	0	2	0	3	0	2	0	1	0	10
Skagit	1	7	0	5	0	2	1	8	0	5	2	27
Skamania	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish	2	29	3	24	1	15	1	16	0	22	7	106
Spokane	0	19	0	8	0	7	0	9	0	19	0	62
Stevens	1	4	0	4	0	2	0	2	0	6	1	18
Thurston	1	27	2	16	2	37	0	18	0	11	5	109
Wahkiakum	0	2	0	1	0	2	1	1	0	2	1	8
Walla Walla	0	0	0	2	1	1	0	1	0	1	1	5
Whatcom	0	15	0	10	1	5	1	12	3	22	5	64
Whitman	0	1	0	1	0	2	0	0	0	2	0	6
Yakima	0	1	0	0	0	1	0	2	0	2	0	6
Total	14	311	14	200	11	204	9	221	12	284	60	1220

Table 5. Washington State Animals Tested for Rabies, 1988-2013
(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
1989	102 (9)	124	91	20	9	4	8	1	9	4	372
1990	63 (4)	104	82	5	7	5	5	1	14	4	290
1991	90 (9)	105	96	13	8	3	13	0	19	2	349
1992	73 (6)	132	90	16	14	2	12	0	14	6 (1)*	359
1993	68 (1)	122	95	8	4	8	16	2	10	13	346
1994	58 (14)	105	90	7	4	3	15	0	16	14 (1)^	312
1995	263 (15)	140	114	12	8	1	23	3	15	18	597
1996	257 (13)	104	101	8	9	2	14	3	20	12	530
1997	780 (51)	155	118	7	17	4	15	2	18	11	1127
1998	447 (27)	126	109	8	11	1	6	0	19	16	743
1999	334 (25)	103	71	3	11	3	8	1	14	13	561
2000	330 (23)	105	60	1	2	4	6	1	9	4	522
2001	263 (22)	111	93	2	3	1	8	0	4	5	490
2002	186 (12)	99 (1)	53	7	2	2	9	1	8	9	376
2003	229 (23)	137	72	0	11	1	4	1	9	10	474
2004	311 (20)	141	70	3	13	6	11	0	6	10	571
2005	245 (15)	132	66	3	12	2	5	1	10	4	480
2006	273 (15)	105	70	4	13	1	2	1	8	5	482
2007	315 (22)	132	97	1	16	3	5	0	9	3	581
2008	337 (17)	143	76	1	10	2	5	1	9	11	595
2009	311 (14)	133	90	1	12	5	4	1	7	9	573
2010	200 (14)	103	63	0	14	1	6	1	9	10	407
2011	204 (11)	87	51	1	9	1	2	0	8	5	368
2012	221 (9)	98	54	2	7	0	4	0	7	9	402
2013	284 (12)	80	65	0	13	0	3	0	5	9	459
Total		3091	214			68	221	23	281	219 (2)	12766 (410)
1988-2013	6313 (407)	(1)	7	148	255						

* Horse

^ Llama

Rodents include: beaver, chinchilla, chipmunk, degu, gerbil, gopher, hamster, marmot, mouse, muskrat, nutria, porcupine, prairie dog, rat, squirrel, vole, woodchuck
Lagomorphs include: burro, cattle, goat, horse, llama, mule, pig, sheep, zebra
Other domestic 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.

African Tick Bite Fever

Cause: *Rickettsia africae*.

Illness and treatment: Symptoms include fever, skin ulcers and swollen lymph nodes. Treatment is with antibiotics.

Sources: Certain hard tick species transmit the disease from various mammals in sub-Saharan Africa.

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

Recent Washington trends: Two state residents were infected in South Africa in 2005 and one in 2008.

2013: One case was reported with travel to South Africa.

Anaplasmosis

Cause: Bacterium called *Anaplasma phagocytophilum*, an organism formerly known as *Ehrlichia phagocytophilum*. The illness was formerly named human granulocytic ehrlichiosis (HGE) but is now human granulocytic anaplasmosis (HGA).

Illness and treatment: Symptoms vary from person to person, but may include fever, headache, muscle pain, malaise, nausea, cough, confusion or rarely rash.

Sources: The black-legged tick *Ixodes scapularis* is the vector in the northeast and upper midwest United States, while the western black-legged tick *Ixodes pacificus* is the primary vector in California and the presumed vector in the Pacific Northwest. The infection may be transmitted via blood transfusion or solid organ transplant.

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

Recent Washington trends: Before 2013, the most recent case was reported in 2007.

2013: Two cases, both associated with domestic travel in the midwestern United States.

Anisakiasis

Cause: Nematodes *Anisakis simplex* and *Pseudoterranova decipiens*

Illness and treatment: Also referred to as herring worm disease. Caused by ingestion of raw or undercooked fish or squid. The nematodes attach to the wall of the esophagus, stomach or intestine. Symptoms include tingling of the mouth or throat while eating the infected fish or squid, vomiting, abdominal pain, diarrhea, fever, and allergic reactions including itching and infrequently anaphylaxis. Treatment may require removal of the worm via endoscopy or surgery.

Sources: Undercooked infected fish or squid.

Prevention: Avoid consumption of raw or undercooked fish or squid.

Recent Washington trends: Prior to 2013, no cases reported in WA in the last decade.

2013: Two cases, associated with consumption of raw salmon purchased in Washington and eaten raw at home and the other associated with sushi eaten at a restaurant.

Babesiosis

Cause: *Babesia* species, including *B. microti*, *B. duncani*, and other rare species.

Illness and treatment: Varies, from asymptomatic infection to flu-like symptoms such as fever, chills, sweats and body aches to severe, life-threatening disease in people with underlying conditions. Treatment is based on individual factors.

Sources: Transmitted by bite of the infected *Ixodes scapularis* (black-legged) tick, and may also be transmitted via blood transfusion or from mother to infant during pregnancy or delivery.

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

Recent Washington trends: The previous most recent reported case of *B. microti* occurred in 2008, associated with travel to Massachusetts. A few cases of presumed tick-acquired as well as local donor and transfusion-associated *B. duncani* cases were reported in the early 1990s. A *B. divergens*-like infection occurred in 2002.

2013: One case of *B. microti*, associated with travel to Wisconsin.

Burkholderia

Cause: Bacterium *Burkholderia pseudomallei* (Meliodiosis) or *Burkholderia mallei* (Glanders)

Illness and treatment: Melioidosis is spread to humans (and animals) through direct contact with the contaminated soil or water. Glanders is primarily a disease affecting horses, donkeys, and mules, though it is possible for humans to get the disease. Both diseases may result in four types of infection: localized, pulmonary, blood-stream and chronic. Symptoms vary based on the type of infection. Treatment is with antibiotics.

Sources: Melioidosis is predominately a disease of tropical climates (e.g., Southeast Asia and northern Australia); the bacteria causing melioidosis are found in contaminated water and soil. Contact with the tissue or body fluids of infected animals is the primary route of infection for glanders, but the bacteria may also be inhaled via infected aerosols or dust.

Prevention: In the healthcare setting, standard contact precautions. In countries with endemic glanders in animals, prevention of disease in humans requires identification and elimination of infected animals.

Recent Washington trends: One case of melioidosis in 2007 associated with travel to Vietnam, and one case of melioidosis in 2011 associated with travel to Mexico.

2013: One case of melioidosis associated with travel to Thailand. Nearly 25 laboratory exposures were associated with the handling of the culture for this case.

Coccidioidomycosis (Valley Fever)

Cause: The soil-dwelling fungus *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: Recently there are up to six travel-associated cases each year. Three cases in 2010-2011 were exposed in south-central Washington State.

2013: Ten cases were reported; all were travel-related.

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.

Illness and treatment: About 85% of CJD cases are sporadic (sCJD) while 10–15% are inherited. Sporadic CJD is characterized by rapidly progressing dementia, poor balance, visual changes and/or muscle jerks. Treatment is supportive.

Sources: The cause of sporadic CJD is not known. In 1996, a new variant of CJD (vCJD) recognized in the United Kingdom was associated with cattle infected with a related infection (“mad cow disease”). To date, no cases of vCJD have been acquired in the United States.

Prevention: There are no specific precautions.

Recent Washington trends: During 2006 to 2012, 5 to 17 cases were reported each year (average 10 cases per year). The average yearly incidence rate of sporadic CJD over this time period was 1.4 cases per million population.

2013: 15 cases of CJD were reported.

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.

Prevention: There are no specific precautions.

Recent Washington trends: Since 2004 more than 40 animals have tested positive 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, 1–7 human cases are reported each year, some with presumed in-state exposure.

2013: Eight cases were reported.

Cysticercosis

Cause: Tapeworm *Taenia solium*

Illness and treatment: Found worldwide, most often in rural areas of developing countries. Parasitic tissue infection with larval cysts infecting brain, muscle or other tissues. Can lead to neurocysticercosis, which can cause seizures. Treatment with anti-parasitic and anti-inflammatory drugs.

Sources: Ingestion of tapeworm eggs from the stool of an infection person.

Prevention: Drink filtered water in developing countries, and practice good hand hygiene.

Recent Washington trends: Besides the 2013 case, no cases reported in the last decade.

2013: One case reported, in a recent arrival from Mexico.

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, 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: Besides the 2013 case, no cases reported in the last decade.

2013: One case, associated with travel to Indonesia.

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.

2013: No cases were reported.

Rare Sexually Transmitted Diseases

Cause: Bacterium *Haemophilus ducreyi* causes chancroid. Bacterium *Calymmatobacterium granulomatis* 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 2 chancroid cases, no granuloma inguinale cases, and 14 lymphogranuloma venereum cases.

2013: No lymphogranuloma venereum cases, no chancroid cases, and no granuloma inguinale cases were reported.

Relapsing Fever

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

Illness and treatment: Symptoms include a fever lasting 2 to 7 days cycling with afebrile periods of 4 to 14 days, with 1 to 10 cycles if untreated. Along with fever there may be 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 and *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 disease 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 there are 1 to 12 reports of TBRF cases. Most are associated with overnight stays in rustic summer cabins, but some are exposed in their primary homes. Louse-borne disease is rare, even in travelers; there have been no recent reports.

2013: Four cases 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 3 days and may itch. However, up to 50% 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 0 to 2 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.

2013: One case was 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).

2013: 670 cases were reported (9.7 cases/100,000 population) with one death.

Table 6. *Salmonella* Serotypes, 2013*

Serotype (n=638)	No.	% ⁺	
Enteritidis	148	23.2	
Typhimurium	98	15.3	
I 4,5,12:i-	38	6.0	
Heidelberg	35	5.5	2-5 Cases Each: Panama, Cotham, Virchow, Anatum, Berta, Dublin, I 4,5,12:b:-, Reading, Abony, Bareilly, Chailey, Chester, Daytona, Derby, Fluntern, Give, IV 50:g,z51:-, Johannesburg, Kiambu, Litchfield, Lomalinda, Ohio, Rissen.
Saintpaul	22	3.4	
Newport	21	2.3	
Oranienburg	18	2.8	
Muenchen	16	2.5	
Thompson	16	2.5	One Case Each: Ago, Baildon, Bovismorbificans, Cerro, Coeln, Concord, Ealing, Eastbourne, Farmsen, Gaminara, Havana, I 9,12:Iz28:=, IIIa 42:g,z51, IIIb 50:k:z, IIIb 50:r:z, IIIb 61:-:-, IIIb Rough:(k):-, IV 16:z4,z32:, IV 50:z4,z23:-, Kintambo, Lawra, London, Luciana, Michigan, Monschau, Norwich, Orientalis, Oslo, Paratyphi B, Pomona, Portland, Senftenberg, Singapore, Takoradi, Tallahassee, Tennessee, Uganda, Weltevreden.
Paratyphi B Tar + Java	14	2.2	
Infantis	13	2.0	
Montevideo	13	2.0	
Paratyphi A	12	1.9	
Brandenburg	11	1.7	
Agona	9	1.4	
Braederup	9	1.4	
Stanley	9	1.4	
Javiana	7	1.1	
Kentucky	7	1.1	
Poona	7	1.1	* Serotype data are only available for confirmed (not probable) salmonellosis cases. In 7 cases, no isolate was submitted to the Washington State Public Health Laboratories for serotyping, and in one case serotyping was pending at the time of this report.
Sandiego	7	1.1	
Hadar	6	0.9	
Mbandaka	6	0.9	
Panama	5	0.8	

⁺Percentage based on the number of cases with serotype result.

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-nitzschia* 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, Dungeness crab, other clams, 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 (7 reports in 2012, 7 reports in 2000, and 5 reports in 1998). There are no recent DAP cases reported. A DSP cluster in 2011 was from mussels gathered in Puget Sound.

2013: 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 5 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 150–250 reports each year. STEC has a seasonal pattern. Most cases occur during summer and fall months.

Table 7. Shiga Toxin-producing *Escherichia coli* (STEC) Serotypes, 2013

Serotype (n=298)	%	
O157:H7	156	54.6
O26	56	15.7
O103	25	8.8
O121	13	5.1
O111	7	5.1
O125ac	7	3.7
O157:NM	6	0.9
O186:H2	3	0.9
O118:H16	2	0.9
O157:H undetermined	2	0.5
O80:H2	2	0.5

One Case Each: O undetermined:H11, O undetermined:H19, O undetermined:H7, O1:H20, O101:NM, O103:H11, O103:H2, O142, O153:H25, O156:H25**, O165:H undetermined, O17:NM, O183:H18, O26:H11, O69:NM, O76:H19, O77:H18, Orough:H31, O71:H undetermined

* Serotype data are only available for confirmed cases.

+Percentage based on the number of cases with serotype result.

**Note that one case was co-infected with O156:H25 and O157:H undetermined (not reflected in the O157:H undetermined total above).

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.

2013: 122 cases were reported (1.8 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 9 cases were reported.

Recently over 250 primary and secondary cases have been reported annually.

2013: 285 cases of primary and secondary syphilis were reported (4.1 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 3-4 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% 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 that presents with a wound and has fewer than 3 documented doses of tetanus toxoid should be considered at risk for tetanus. Injection-drug by addicts, especially intramuscular and subcutaneous use, can lead to individual cases and occasional outbreaks.

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

Recent Washington trends: The most recent 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.

2013: No cases were reported.

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 2 cases have been reported. Exposures were bear and cougar meat eaten raw or undercooked.

2013: No cases were reported.

Tuberculosis

Cause: Bacterium *Mycobacterium tuberculosis*.

Illness and treatment: Tuberculosis (TB) usually affects the lungs, but can affect lymph nodes, bones, joints, and other parts of the body. Infection with TB may remain latent, and not communicable, or develop into active TB disease that can be infectious. Typical symptoms of TB disease may include persistent cough, bloody sputum, fever, unexplained weight loss, night sweats, and chest pain. Persons experiencing these symptoms should consult a medical provider or local health department immediately.

Patients with latent TB (LTBI) but not TB disease may need to take medication to prevent development of TB disease. Patients with active TB must complete a course of therapy.

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

Additional risks: About 75% of cases in Washington are among foreign-born persons, typically from countries with higher rates of TB, where the risk of becoming infected is greater. Young children, people infected with the HIV, diabetics, persons with a weakened immune system, and the elderly are among those at increased risk of developing active TB disease if infected.

Prevention: For patients diagnosed with TB disease the most effective ways to decrease the spread of TB are keeping away from others until non-infectious and taking all TB medications exactly as prescribed. Persons at risk for infection or the development of TB disease if infected can be screened for LTBI. Completing treatment for LTBI further prevents TB disease and its spread.

Washington trends: Each year there are approximately 200 to 250 cases of TB diagnosed in Washington. From a ten year period low of 2.7 in 2012, the state rate rose slightly to equal the national rate of 3.0 in 2013.

2013: Washington State reported 209 cases of TB for a crude case rate of 3.0 per 100,000 persons. Only 6 of the 39 counties had 5 or more cases of TB, together accounting for 85.6% of the cases in Washington. King County reported 114 cases, resulting in a county rate of 5.8 cases per 100,000, while representing 58% of all Washington cases.

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 1 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 2004–2005 a statewide serosurvey of 370 outdoor pet cats and dogs found 0.6% positive overall but 4.5% positive in southwest counties.

2013: Five 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; re-culture 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 5 to 22 reports each year.

2013: 11 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 water, 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 9 to 80 cases reported, with a mixture of locally acquired and travel associated exposures. Cases from out of state associated with consumption of Washington shellfish are not included in these counts.

2013: 90 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*, and *Cryptosporidium*. Bacterial agents are less commonly implicated.

Illness and treatment: Symptoms and treatment vary with the agent.

Sources: Sources vary with the agent. Waterborne outbreaks can occur from exposure to natural or recreational water, including pools and interactive fountains, and untreated drinking water.

Additional risks: Risks vary with the agent.

Prevention: Test private wells at least every 3 years and after potential contamination such as after floods. If ill with diarrhea, do not enter recreational water, pools, or interactive fountains.

Recent Washington trends: Waterborne outbreaks are often difficult to detect. There are 0 to 3 outbreaks reported each year, each with 2 to dozens or even hundreds of cases (Table 6).

2013: No waterborne outbreaks were reported in 2013.

Table 8. Waterborne Outbreaks, 1991-2013

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	<i>E. coli</i> 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	<i>Shigella sonnei</i>	Lake (Chelan)	3

Yersiniosis

Cause: Bacteria in the genus *Yersinia*, 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.

2013: 34 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	20	0	1 ^T	14 ^T	1 ^T	0	4 ^E (3 ^C , 1 ^P)	0	0
2009	54	0	0	11 ^T	0	1 ^T	40 (36 ^E , 2 ^U , 2 ^P)	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	16	0	0	14 ^T	0	0	2 (1 ^P , 1 ^T)	0	0

^V Vaccine-associated

^T Travel-associated

^E Endemically acquired

^C Confirmed case

^U Unknown exposure location

^P Presumptive Viremic Blood Donor

BOTULISM**BRUCELLOSIS**

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

*All rates are cases per 100,000 population.

*All rates are cases per 100,000 population.

CAMPYLOBACTERIOSIS

County	2009		2010		2011		2012		2013	
	Cases	Rate								
Adams	6	32.6	4	*	9	47.5	4	*	3	*
Asotin	1	*	1	*	1	*	3	*	2	*
Benton	33	19.3	41	23.4	29	16.3	31	17.2	41	22.4
Chelan	4	*	15	20.7	9	12.4	5	6.8	10	13.6
Clallam	14	19.7	13	18.2	5	7.0	4	*	3	*
Clark	74	17.5	110	25.9	118	27.6	83	19.2	97	22.3
Columbia	0	0.0	2	*	0	0.0	0	0.0	2	*
Cowlitz	18	17.6	23	22.5	38	37.0	24	23.3	22	21.3
Douglas	2	*	6	15.6	3	*	6	15.4	4	*
Ferry	2	*	2	*	1	*	2	*	2	*
Franklin	21	28.0	19	24.3	23	28.6	11	13.3	21	24.8
Garfield	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Grant	17	19.4	17	19.1	30	33.3	25	27.5	15	16.3
Grays Harbor	15	20.7	12	16.5	11	15.1	13	17.8	14	19.1
Island	14	17.8	11	14.0	10	12.7	18	22.7	8	10.0
Jefferson	7	23.5	6	20.1	7	23.3	5	16.6	21	69.4
King	261	13.7	304	15.7	403	20.7	447	22.8	455	23.0
Kitsap	34	13.5	33	13.1	45	17.7	34	13.4	41	16.1
Kittitas	2	*	6	14.7	8	19.4	14	33.7	7	16.7
Klickitat	3	*	2	*	7	34.1	2	*	9	43.5
Lewis	24	31.9	25	33.1	27	35.5	26	34.1	27	35.4
Lincoln	1	*	0	0.0	0	0.0	0	0.0	1	*
Mason	10	16.6	7	11.5	13	21.3	19	30.9	14	22.7
Okanogan	2	*	6	14.6	5	12.1	7	16.9	5	12.0
Pacific	1	*	5	23.9	13	62.2	4	*	5	23.8
Pend Oreille	2	*	1	*	2	*	4	*	0	0.0
Pierce	79	9.9	103	13.0	132	16.5	221	27.3	253	31.1
San Juan	4	*	2	*	5	31.4	3	*	4	25.0
Skagit	24	20.6	24	20.5	21	17.9	27	22.9	34	28.7
Skamania	2	*	0	0.0	2	*	2	*	0	0.0
Snohomish	92	13.0	172	24.1	219	30.5	159	22.0	180	24.6
Spokane	62	13.3	73	15.5	54	11.4	70	14.7	42	8.8
Stevens	1	*	2	*	7	16.1	4	*	8	18.3
Thurston	31	12.4	57	22.6	60	23.6	68	26.5	49	18.8
Wahkiakum	1	*	0	0.0	1	*	0	0.0	0	0.0
Walla Walla	5	8.5	8	13.6	11	18.7	11	18.6	20	33.6
Whatcom	59	29.5	74	36.8	86	42.6	77	37.8	56	27.2
Whitman	1	*	8	17.9	1	*	9	19.6	3	*
Yakima	101	41.8	121	49.7	121	49.4	109	44.3	153	61.9
STATEWIDE TOTAL	1,030	15.4	1,315	19.6	1,538	22.7	1,551	22.7	1,631	23.7

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	4

*All rates are cases per 100,000 population.

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

CHLAMYDIA TRACHOMATIS

County	2009		2010		2011		2012		2013	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rates	Cases	Rates
Adams	77	418.0	64	341.7	56	295.5	64	336.0	78	406.3
Asotin	41	189.9	76	351.5	59	272.5	80	368.7	80	367.0
Benton	570	332.6	585	333.9	596	335.0	597	331.7	672	366.4
Chelan	161	223.0	170	234.6	170	233.8	247	337.4	256	347.8
Clallam	164	230.9	164	229.7	165	230.4	172	238.9	188	259.9
Clark	1,312	309.6	1,347	316.7	1,490	348.1	1,382	320.5	1,419	325.8
Columbia	4	*	7	171.7	2	*	7	170.7	6	+
Cowlitz	340	332.8	327	319.3	380	370.0	439	426.0	292	282.7
Douglas	77	202.4	83	216.0	114	295.0	128	329.0	135	343.7
Ferry	16	211.6	15	198.6	29	381.6	32	418.3	26	339.9
Franklin	310	412.7	268	342.9	298	370.2	319	386.7	413	487.0
Garfield	1	*	4	*	1	*	1	*	0	+
Grant	262	298.7	288	323.2	286	317.4	329	361.5	383	417.2
Grays Harbor	140	192.9	155	212.9	137	187.9	176	240.6	171	233.6
Island	171	217.2	200	254.8	216	274.1	206	259.6	205	257.2
Jefferson	47	157.9	58	194.2	40	133.1	50	165.7	78	257.6
King	5,805	304.1	5,945	307.8	6,406	329.8	6,763	345.6	6,828	344.5
Kitsap	725	288.6	780	310.6	824	324.5	1,075	422.4	895	352.4
Kittitas	110	270.2	130	317.7	142	343.8	189	455.4	163	389.0
Klickitat	32	158.0	36	177.2	45	219.5	29	140.8	33	159.4
Lewis	160	212.5	157	208.1	226	297.4	233	305.4	261	342.5
Lincoln	9	84.7	15	141.9	10	94.3	13	121.8	6	+
Mason	130	215.8	137	225.7	161	263.5	153	249.0	177	286.4
Okanogan	105	256.3	117	284.5	115	279.1	136	328.3	130	313.3
Pacific	37	177.1	30	143.4	17	81.3	30	143.1	28	133.3
Pend Oreille	16	124.6	21	161.5	16	123.1	22	167.9	20	152.1
Pierce	3,861	484.5	3,815	479.7	4,159	518.5	4,293	531.2	4,298	527.7
San Juan	6	38.1	8	50.7	20	125.8	15	94.2	11	+
Skagit	331	283.8	324	277.2	320	272.6	342	290.0	409	344.9
Skamania	22	200.1	25	225.9	25	224.2	30	266.1	29	256.6
Snohomish	1,701	241.0	1,729	242.4	1,760	245.5	1,871	258.8	1,880	257.4
Spokane	1,637	351.0	1,617	343.2	1,780	376.6	1,923	404.3	2,037	424.4
Stevens	74	170.1	56	128.6	73	167.4	85	194.5	129	294.5
Thurston	716	287.2	663	262.8	958	377.0	906	352.8	919	353.3
Wahkiakum	1	*	9	226.2	5	125.0	4	*	1	+
Walla Walla	152	259.6	164	279.0	201	341.8	191	323.2	209	351.3
Whatcom	544	272.4	571	283.9	555	274.6	593	291.4	580	281.8
Whitman	131	297.7	131	292.6	156	348.2	173	376.5	189	410.9
Yakima	1,180	488.2	1,110	456.4	1,224	500.2	1,302	529.3	1,379	557.7
STATEWIDE TOTAL	21,178	317.4	21,401	318.3	23,237	343.3	24,600	360.8	25,013	363.4

CHLAMYDIA TRACHOMATIS STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
1987**	5,071	112.0	0
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

*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.

All incidence rates are cases per 100,000 population.

*For 2009-2012, incidence rates not calculated for <5 cases.

+For 2013, incidence rates suppressed for counts <20 and rates with residual standard error (RSE) >30% due to statistical instability.

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

*All rates are cases per 100,000 population.

CRYPTOSPORIDIOSIS⁺

County	2009		2010		2011		2012		2013	
	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	2	*	1	*	0	0.0	1	*	2	*
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clallam	4	*	4	*	8	11.2	4	*	1	*
Clark	18	4.2	13	3.1	9	2.1	14	3.2	8	1.8
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	4	*	7	6.8	3	*	2	*	4	*
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	*	1	*	1	*	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	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	5	16.8	8	26.8	7	23.3	7	23.2	3	*
King	32	1.7	17	0.9	13	0.7	23	1.2	18	0.9
Kitsap	0	0.0	0	0.0	0	0.0	2	*	0	0.0
Kittitas	1	*	0	0.0	0	0.0	0	0.0	1	*
Klickitat	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Lewis	2	*	0	0.0	0	0.0	0	0.0	1	*
Lincoln	0	0.0	0	0.0	1	*	0	0.0	1	*
Mason	0	0.0	0	0.0	1	*	1	*	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	1	*	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	17	2.1	32	4.0	39	4.9	22	2.7	24	2.9
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	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	0.0
Snohomish	6	0.8	8	1.1	1	*	10	1.4	7	1.0
Spokane	4	*	4	*	1	*	3	*	4	*
Stevens	1	*	1	*	0	0.0	0	0.0	0	0.0
Thurston	0	0.0	1	*	2	*	3	*	2	*
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	*	1	*	2	*
Whatcom	2	*	0	0.0	0	0.0	0	0.0	0	0.0
Whitman	0	0.0	1	*	0	0.0	1	*	1	*
Yakima	3	*	4	*	1	*	5	2.0	3	*
STATEWIDE TOTAL	102	1.5	102	1.5	88	1.3	101	1.5	84	1.2

CRYPTOSPORIDIOSIS STATEWIDE BY YEAR			
Year	Cases	Rate*	Death
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

*All rates are cases per 100,000 population.

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

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

[‡]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

*All rates are cases per 100,000 population.

GIARDIASIS

County	2009		2010		2011		2012		2013	
	Cases	Rate								
Adams	0	0.0	1	*	1	*	1	*	0	0.0
Asotin	2	*	1	*	0	0.0	1	*	3	*
Benton	8	4.7	5	2.9	3	*	3	*	8	4.4
Chelan	3	*	8	11.0	7	9.6	1	*	7	9.5
Clallam	8	11.3	7	9.8	4	*	7	9.7	6	8.3
Clark	38	9.0	56	13.2	47	11.0	30	7.0	25	5.7
Columbia	0	0.0	0	0.0	1	*	0	0.0	1	*
Cowlitz	1	*	2	*	2	*	5	4.9	6	5.8
Douglas	0	0.0	1	*	0	0.0	1	*	3	*
Ferry	0	0.0	1	*	0	0.0	0	0.0	1	*
Franklin	2	*	1	*	0	0.0	4	*	3	*
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	5	5.7	5	5.6	1	*	3	*	3	*
Grays Harbor	4	*	6	8.2	9	12.3	4	*	1	*
Island	7	8.9	10	12.7	7	8.9	6	7.6	13	16.3
Jefferson	6	20.2	9	30.1	6	20.0	9	29.8	6	19.8
King	105	5.5	110	5.7	156	8.0	170	8.7	195	9.8
Kitsap	8	3.2	16	6.4	18	7.1	23	9.0	23	9.0
Kittitas	4	*	4	*	4	*	4	*	1	*
Klickitat	1	*	1	*	0	0.0	1	*	2	*
Lewis	8	10.6	8	10.6	6	7.9	7	9.2	7	9.2
Lincoln	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Mason	2	*	7	11.5	8	13.1	7	11.4	4	*
Okanogan	5	12.2	4	*	4	*	2	*	7	16.9
Pacific	0	0.0	2	*	0	0.0	3	*	2	*
Pend Oreille	0	0.0	3	*	0	0.0	1	*	0	0.0
Pierce	31	3.9	37	4.7	42	5.2	48	5.9	46	5.6
San Juan	2	*	0	0.0	1	*	2	*	1	*
Skagit	10	8.6	11	9.4	9	7.7	3	*	6	5.1
Skamania	1	*	0	0.0	2	*	4	*	0	0.0
Snohomish	70	9.9	59	8.3	67	9.3	52	7.2	60	8.2
Spokane	55	11.8	47	10.0	31	6.6	39	8.2	24	5.0
Stevens	2	*	2	*	2	*	3	*	0	0.0
Thurston	27	10.8	22	8.7	37	14.6	33	12.9	27	10.4
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	3	*	1	*	5	8.5	4	*	7	11.8
Whatcom	23	11.5	44	21.9	29	14.3	19	9.3	35	17.0
Whitman	0	0.0	3	*	2	*	2	*	3	*
Yakima	26	10.8	27	11.1	17	6.9	10	4.1	12	4.9
STATEWIDE TOTAL	467	7.0	521	7.7	529	7.8	512	7.5	548	8.0

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

*All rates are cases per 100,000 population.

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

GONORRHEA

County	2009		2010		2011		2012		2013	
	Cases	Rate								
Adams	3	*	2	*	1	*	8	42.0	3	+
Asotin	4	*	5	23.1	6	27.7	0	0.0	2	+
Benton	34	19.8	16	9.1	30	16.9	49	27.2	88	48.0
Chelan	2	*	2	*	8	11.0	10	13.7	10	+
Clallam	12	16.9	21	29.4	15	20.9	2	*	8	+
Clark	124	29.3	170	40.0	159	37.1	151	35.0	148	34.0
Columbia	0	0.0	1	*	0	0.0	2	*	0	+
Cowlitz	9	8.8	35	34.2	19	18.5	26	25.2	21	20.3
Douglas	3	*	2	*	7	18.1	3	*	9	+
Ferry	0	0.0	2	*	1	*	2	*	2	+
Franklin	10	13.3	19	24.3	18	22.4	24	29.1	73	86.1
Garfield	0	0.0	1	*	0	0.0	1	*	0	+
Grant	9	10.3	17	19.1	21	23.3	59	64.8	34	37.0
Grays Harbor	12	16.5	5	6.9	12	16.5	5	6.8	12	16.4
Island	14	17.8	13	16.6	6	7.6	19	23.9	24	30.1
Jefferson	2	*	2	*	3	*	1	*	3	+
King	1,083	56.7	1,568	81.2	1,376	70.8	1,527	78.0	1,771	89.4
Kitsap	44	17.5	48	19.1	54	21.3	57	22.4	109	42.9
Kittitas	6	14.7	8	19.6	9	21.8	8	19.3	5	+
Klickitat	2	*	1	*	1	*	3	*	1	+
Lewis	8	10.6	10	13.3	6	7.9	12	15.7	21	27.6
Lincoln	1	*	1	*	0	0.0	1	*	0	+
Mason	5	8.3	7	11.5	6	9.8	15	24.4	14	22.7
Okanogan	7	17.1	3	*	8	19.4	5	12.1	12	28.9
Pacific	1	*	1	*	2	*	3	*	15	71.4
Pend Oreille	0	0.0	0	0.0	0	0.0	4	*	6	+
Pierce	457	57.3	414	52.1	424	52.9	657	81.3	966	118.6
San Juan	2	*	4	*	1	*	4	*	1	+
Skagit	12	10.3	17	14.5	16	13.6	22	18.7	41	34.6
Skamania	2	*	4	*	4	*	1	*	1	+
Snohomish	148	21.0	191	26.8	169	23.6	165	22.8	251	34.4
Spokane	131	28.1	137	29.1	158	33.4	181	38.1	329	68.5
Stevens	4	*	5	11.5	2	*	1	*	16	36.5
Thurston	26	10.4	49	19.4	57	22.4	88	34.3	114	43.8
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	+
Walla Walla	5	8.5	9	15.3	3	*	9	15.2	27	45.4
Whatcom	38	19.0	30	14.9	18	8.9	49	24.1	60	29.2
Whitman	10	22.7	11	24.6	11	24.6	26	56.6	13	28.3
Yakima	38	15.7	34	14.0	99	40.5	82	33.3	180	72.8
STATEWIDE TOTAL	2,268	34.0	2,865	42.6	2,730	40.3	3,282	48.1	4,390	63.8

GONORRHEA STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
1980	14,215	344.0	0
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

*All rates are cases per 100,000 population.

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

All incidence rates are cases per 100,000 population.

*For 2009-2012, incidence rates not calculated for <5 cases.

+For 2013, incidence rates suppressed for counts <20 and rates with residual standard error (RSE) >30% due to statistical instability.

***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

*All rates are cases per 100,000 population. Rates for 2001-2013 are for population aged 0-4 years.

HANTAVIRUS PULMONARY

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

‡ 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

County	2009		2010		2011		2012		2013	
	Cases	Rate								
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	1	*	1	*	0	0.0	1	*
Benton	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Chelan	0	0.0	0	0.0	1	*	1	*	4	*
Clallam	0	0.0	1	*	0	0.0	0	0.0	1	*
Clark	1	*	1	*	0	0.0	1	*	2	*
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	1	*	0	0.0	2	*	1	*
Douglas	0	0.0	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	1	*	0	0.0	1	*	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	*	1	*	1	*	1	*	2	*
Grays Harbor	1	*	0	0.0	0	0.0	1	*	0	0.0
Island	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	1	*	0	0.0
King	15	0.8	7	0.4	16	0.8	10	0.5	13	0.7
Kitsap	2	*	2	*	2	*	0	0.0	2	*
Kittitas	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Klickitat	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	0	0.0	0	0.0	1	*	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	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Pacific	1	*	0	0.0	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	5	0.6	2	*	2	*	1	*	1	*
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	0	0.0	2	*	1	*	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	7	1.0	2	*	2	*	1	*	9	1.2
Spokane	1	*	0	0.0	0	0.0	0	0.0	1	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	2	*	0	0.0	0	0.0	2	*	1	*
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	2	*	1	*	3	*	1	*	1	*
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	2	*	0	0.0	0	0.0	2	*	4	*
STATEWIDE TOTAL	42	0.6	21	0.3	31	0.5	29	0.4	45	0.7

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

*All rates are cases per 100,000 population.

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

HEPATITIS B, ACUTE

County	2009		2010		2011		2012		2013	
	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	1	*	0	0.0	0	0.0	1	*	1	*
Chelan	1	*	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	1	*	3	*	3	*	0	0.0	0	0.0
Columbia	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Cowlitz	4	*	2	*	4	*	1	*	2	*
Douglas	0	0.0	0	0.0	0	0.0	1	*	1	*
Ferry	1	*	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	1	*	1	*	0	0.0
Grays Harbor	0	0.0	0	0.0	1	*	1	*	1	*
Island	0	0.0	1	*	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	11	0.6	13	0.7	15	0.8	11	0.6	10	0.5
Kitsap	0	0.0	0	0.0	2	*	1	*	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	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	1	*	0	0.0	0	0.0
Pacific	2	*	0	0.0	1	*	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	9	1.1	2	*	1	*	1	*	3	*
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	1	*	1	*	0	0.0	0	0.0	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	2	*	8	1.1	3	*	5	0.7	0	0.0
Spokane	10	2.1	12	2.5	1	*	4	*	13	2.7
Stevens	3	*	1	*	0	0.0	1	*	0	0.0
Thurston	0	0.0	3	*	2	*	1	*	1	*
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	1	*	0	0.0	0	0.0	1	*	0	0.0
Whatcom	0	0.0	3	*	0	0.0	3	*	1	*
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	1	*	0	0.0	0	0.0	0	0.0	0	0.0
STATEWIDE TOTAL	48	0.7	50	0.7	35	0.5	34	0.5	34	0.5

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

*All rates are cases per 100,000 population.

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

HEPATITIS C, ACUTE

County	2009		2010		2011		2012		2013	
	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	1	*	0	0.0	3	*	2	*	2	*
Clark	0	0.0	3	*	1	*	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	0	0.0	1	*	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	1	*	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	1	*	0	0.0	0	0.0
Grays Harbor	1	*	0	0.0	0	0.0	0	0.0	1	*
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	3	*
King	5	0.3	8	0.4	7	0.4	5	0.3	18	0.9
Kitsap	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	1	*	0	0.0	1	*	0	0.0	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	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	1	*	2	*	1	*	3	*	7	0.9
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	1	*	1	*	4	*	4	*	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	1	*	1	*	3	*	1	*	3	*
Spokane	7	1.5	4	*	10	2.1	13	2.7	14	2.9
Stevens	0	0.0	0	0.0	1	*	2	*	1	*
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	2	*	0	0.0	0	0.0	0	0.0
Whatcom	2	*	4	*	8	4.0	19	9.3	9	4.4
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	1	*	0	0.0	0	0.0	2	*	0	0.0
STATEWIDE TOTAL	22	0.3	25	0.4	41	0.6	54	0.8	63	0.9

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

*All rates are cases per 100,000 population.

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

HERPES SIMPLEX

County	2009		2010		2011		2012		2013	
	Cases	Rate								
Adams	2	*	3	*	3	*	3	*	3	+
Asotin	3	*	4	*	7	32.3	4	*	6	+
Benton	60	35.0	33	18.8	50	28.1	44	24.4	50	27.3
Chelan	14	19.4	13	17.9	20	27.5	21	28.7	9	+
Clallam	21	29.6	16	22.4	10	14.0	12	16.7	20	27.6
Clark	87	20.5	82	19.3	67	15.7	90	20.9	153	35.1
Columbia	3	*	0	0.0	0	0.0	1	*	2	+
Cowlitz	38	37.2	41	40.0	32	31.2	53	51.4	31	30.0
Douglas	5	13.1	7	18.2	11	28.5	6	15.4	7	+
Ferry	2	*	0	0.0	1	*	0	0.0	4	+
Franklin	15	20.0	10	12.8	14	17.4	13	15.8	18	21.2
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	1	+
Grant	14	16.0	16	18.0	12	13.3	16	17.6	9	+
Grays Harbor	13	17.9	18	24.7	19	26.1	11	15.0	23	31.4
Island	29	36.8	38	48.4	35	44.4	31	39.1	34	42.7
Jefferson	4	*	10	33.5	9	30.0	5	16.6	2	+
King	542	28.4	601	31.1	632	32.5	742	37.9	633	31.9
Kitsap	82	32.6	74	29.5	71	28.0	67	26.3	71	28.0
Kittitas	10	24.6	12	29.3	14	33.9	17	41.0	8	+
Klickitat	0	0.0	2	*	1	*	3	*	2	+
Lewis	16	21.2	19	25.2	22	28.9	31	40.6	27	35.4
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	1	+
Mason	13	21.6	15	24.7	16	26.2	19	30.9	6	+
Okanogan	7	17.1	10	24.3	15	36.4	9	21.7	20	48.2
Pacific	2	*	2	*	1	*	1	*	5	+
Pend Oreille	4	*	1	*	6	46.2	1	*	2	+
Pierce	261	32.8	248	31.2	327	40.8	346	42.8	364	44.7
San Juan	1	*	4	*	2	*	3	*	0	*
Skagit	31	26.6	40	34.2	34	29.0	21	17.8	26	21.9
Skamania	3	*	3	*	0	0.0	1	*	1	+
Snohomish	221	31.3	280	39.3	297	41.4	228	31.5	282	38.6
Spokane	158	33.9	174	36.9	185	39.1	134	28.2	132	27.5
Stevens	5	11.5	4	*	3	*	8	18.3	11	+
Thurston	85	34.1	93	36.9	77	30.3	103	40.1	91	35.0
Wahkiakum	0	0.0	2	*	1	*	0	0.0	3	+
Walla Walla	20	34.2	23	39.1	17	28.9	17	28.8	14	23.5
Whatcom	41	20.5	75	37.3	62	30.7	66	32.4	71	34.5
Whitman	6	13.6	5	11.2	2	*	10	21.8	9	+
Yakima	57	23.6	50	20.6	74	30.2	60	24.4	56	22.7
STATEWIDE TOTAL	1,875	28.1	2,028	30.2	2,149	31.8	2,197	32.2	2,207	32.1

HERPES SIMPLEX STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
2001	1,836	30.8	0
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

*All rates are cases per 100,000 population.
 Note: Data prior to 2009 are based on year reported rather than year diagnosed.

All incidence rates are cases per 100,000 population.

*For 2009-2012, incidence rates not calculated for <5 cases.

+For 2013, incidence rates suppressed for counts <20 and rates with residual standard error (RSE) >30% due to statistical instability.

HUMAN IMMUNODEFICIENCY VIRUS (HIV)[§]

County	2009		2010		2011		2012		2013	
	Cases	Rate								
Adams	1	*	0	*	1	*	0	*	0	*
Asotin	2	*	2	*	1	*	0	*	1	*
Benton	6	*	7	*	12	6.7	6	*	7	*
Chelan	3	*	5	*	4	*	3	*	3	*
Clallam	3	*	1	*	3	*	4	*	3	*
Clark	22	5.2	29	6.8	28	6.5	27	6.3	26	6.0
Columbia	0	*	0	*	0	*	0	*	0	*
Cowlitz	4	*	5	*	4	*	4	*	2	*
Douglas	1	*	2	*	1	*	0	*	1	*
Ferry	0	*	0	*	0	*	0	*	0	*
Franklin	6	*	4	*	1	*	2	*	0	*
Garfield	0	*	0	*	0	*	0	*	0	*
Grant	1	*	3	*	3	*	3	*	0	*
Grays Harbor	0	*	5	*	4	*	6	*	1	*
Island	8	*	3	*	1	*	3	*	1	*
Jefferson	0	*	0	*	0	*	1	*	0	*
King	302	15.8	323	16.7	271	14.0	289	14.8	261	13.2
Kitsap	10	*	2	*	7	*	12	4.7	7	*
Kittitas	0	*	0	*	0	*	0	*	2	*
Klickitat	0	*	0	*	0	*	1	*	0	*
Lewis	4	*	0	*	5	*	1	*	1	*
Lincoln	0	*	0	*	0	*	0	*	0	*
Mason	3	*	11	*	7	*	9	*	3	*
Okanogan	4	*	0	*	1	*	3	*	0	*
Pacific	1	*	0	*	0	*	2	*	0	*
Pend Oreille	0	*	0	*	0	*	0	*	0	*
Pierce	62	7.8	61	*	56	7.0	53	6.6	59	7.3
San Juan	2	*	2	*	0	*	0	*	1	*
Skagit	1	*	4	*	5	*	4	*	9	*
Skamania	1	*	0	*	0	*	0	*	0	*
Snohomish	42	5.9	33	4.6	32	4.5	41	5.7	31	4.2
Spokane	18	3.9	24	5.1	25	5.3	25	5.3	21	4.4
Stevens	1	*	0	*	1	*	0	*	2	*
Thurston	12	4.8	12	4.8	7	*	4	*	10	*
Wahkiakum	0	*	0	*	0	*	0	*	1	*
Walla Walla	0	*	0	*	0	*	3	*	0	*
Whatcom	8	*	1	*	7	*	4	*	9	*
Whitman	1	*	1	*	1	*	0	*	0	*
Yakima	17	7.0	16	6.6	8	*	7	*	8	*
STATEWIDE TOTAL	546	8.2	556	8.3	496	7.3	517	7.6	470	6.8

People Living with HIV Disease and Related Deaths [‡]			
STATEWIDE BY YEAR			
Year	Cases ^α	Rate*	Deaths**
2000	7,576	128.5	154
2001	8,058	135.0	144
2002	8,545	141.0	143
2003	8,958	146.2	180
2004	9,415	151.7	142
2005	9,824	156.0	163
2006	10,276	160.1	122
2007	10,710	164.1	114
2008	11,061	167.4	109
2009	11,398	170.8	134
2010	11,761	174.9	107
2011	11,762	173.8	118
2012	11,930	175.0	79
2013	12,273	178.3	—

‡Note that this table has been changed since the last edition of this report. The new table lists people living with HIV disease rather than newly diagnosed cases.

^αNumbers are based on a new methodology which counts 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 2013 was unavailable at the time of this report.

§ 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 2009-2012 have been adjusted since previous editions of this report. Data reflects cases reported through 5/31/14.

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

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

*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

*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

*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	19	0.3	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

*All rates are cases per 100,000 population.

MEASLES

County	2009		2010		2011		2012		2013	
	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	0	0.0	3	*	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	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	1	*	1	*	0	0.0	0	0.0	4	*
Kitsap	0	0.0	0	0.0	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	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	0	0.0
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	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	0.0
Snohomish	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
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	0	0.0
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	1	0.0	4	0.1	0	0.0	4	0.1

All rates are cases per 100,000 population.

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

*All rates are cases per 100,000 population.

MENINGOCOCCAL DISEASE

County	2009		2010		2011		2012		2013	
	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	2	*	0	0.0	1	*
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	*	4	*	1	*	0	0.0	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	1	*	1	*
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	2	*	0	0.0	0	0.0
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	1	*	0	0.0	2	*	0	0.0
Island	0	0.0	1	*	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	5	0.3	8	0.4	8	0.4	4	*	3	*
Kitsap	2	*	0	0.0	1	*	0	0.0	2	*
Kittitas	0	0.0	0	0.0	0	0.0	2	*	1	*
Klickitat	0	0.0	0	0.0	0	0.0	1	*	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	1	*
Mason	1	*	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	*	3	*	1	*	3	*	1	*
San Juan	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	1	*	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	2	*	5	0.7	5	0.7	2	*	2	*
Spokane	4	*	2	*	0	0.0	2	*	2	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Thurston	1	*	2	*	0	0.0	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	1	*	0	0.0	1	*	0	0.0
Whatcom	1	*	0	0.0	2	*	1	*	0	0.0
Whitman	0	0.0	3	*	0	0.0	2	*	0	0.0
Yakima	2	*	2	*	0	0.0	2	*	0	0.0
STATEWIDE TOTAL	26	0.4	33	0.5	22	0.3	24	0.4	20	0.3

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

*All rates are cases per 100,000 population.

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

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

*All rates are cases per 100,000 population.

PERTUSSIS

County	2009		2010		2011		2012		2013	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	3	*	2	*	15	78.7	2	*
Asotin	0	0.0	3	*	0	0.0	4	*	1	*
Benton	6	3.5	9	5.1	4	*	85	47.2	8	4.4
Chelan	0	0.0	1	*	2	*	46	62.8	7	9.5
Clallam	0	0.0	2	*	4	*	25	34.7	13	18.0
Clark	18	4.2	92	21.6	94	22.0	326	75.6	59	13.5
Columbia	0	0.0	2	*	0	0.0	1	*	1	*
Cowlitz	6	5.9	26	25.4	71	69.1	72	69.9	5	4.8
Douglas	0	0.0	0	0.0	0	0.0	10	25.7	3	*
Ferry	0	0.0	1	*	0	0.0	7	91.5	0	0.0
Franklin	0	0.0	0	0.0	5	6.2	45	54.5	5	5.9
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Grant	1	*	25	28.1	30	33.3	53	58.2	58	63.2
Grays Harbor	7	9.6	2	*	3	*	24	32.8	1	*
Island	1	*	13	16.6	30	38.1	46	58.0	0	0.0
Jefferson	0	0.0	2	*	2	*	25	82.9	0	0.0
King	38	2.0	69	3.6	124	6.4	785	40.1	113	5.7
Kitsap	5	2.0	31	12.3	16	6.3	92	36.1	7	2.8
Kittitas	26	63.9	19	46.4	9	21.8	34	81.9	8	19.1
Klickitat	3	*	3	*	2	*	6	29.1	2	*
Lewis	6	8.0	41	54.3	6	7.9	71	93.1	6	7.9
Lincoln	0	0.0	0	0.0	1	*	2	*	1	*
Mason	0	0.0	2	*	0	0.0	14	22.8	7	11.3
Okanogan	7	17.1	6	14.6	2	*	22	53.1	15	36.1
Pacific	3	*	0	0.0	1	*	7	33.4	0	0.0
Pend Oreille	0	0.0	10	76.9	0	0.0	4	*	0	0.0
Pierce	29	3.6	84	10.6	129	16.1	783	96.9	116	14.2
San Juan	2	*	17	107.8	38	239.0	14	87.9	0	0.0
Skagit	9	7.7	4	*	5	4.3	559	473.9	18	15.2
Skamania	0	0.0	0	0.0	2	*	3	*	0	0.0
Snohomish	35	5.0	46	6.4	268	37.4	549	75.9	52	7.1
Spokane	4	*	7	1.5	18	3.8	198	41.6	48	10.0
Stevens	0	0.0	13	29.9	1	*	42	96.1	3	*
Thurston	11	4.4	36	14.3	10	3.9	63	24.5	43	16.5
Wahkiakum	6	149.9	0	0.0	0	0.0	1	*	0	0.0
Walla Walla	0	0.0	1	*	2	*	55	93.1	1	*
Whatcom	34	17.0	25	12.4	68	33.6	333	163.6	35	17.0
Whitman	0	0.0	1	*	2	*	2	*	8	17.4
Yakima	34	14.1	11	4.5	11	4.5	493	200.4	101	40.8
STATEWIDE TOTAL	291	4.4	607	9.0	962	14.2	4,916	72.1	748	10.9

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

*All rates are cases per 100,000 population.

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

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

*All rates are cases per 100,000 population.

POLIOMYELITIS

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

*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

*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

*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

*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

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

*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

*All rates are cases per 100,000 population.

SALMONELLOSIS

County	2009		2010		2011		2012		2013	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	3	*	3	*	3	*	2	*	3	*
Asotin	3	*	5	23.1	2	*	1	*	1	*
Benton	21	12.3	25	14.3	12	6.7	30	16.7	27	14.7
Chelan	8	11.1	9	12.4	8	11.0	6	8.2	2	*
Clallam	7	9.9	2	*	0	0.0	3	*	5	6.9
Clark	98	23.1	63	14.8	50	11.7	156	36.2	46	10.6
Columbia	1	*	1	*	2	*	0	0.0	0	0.0
Cowlitz	9	8.8	5	4.9	7	6.8	16	15.5	9	8.7
Douglas	1	*	3	*	3	*	4	*	2	*
Ferry	0	0.0	0	0.0	2	*	5	65.4	0	0.0
Franklin	6	8.0	13	16.6	8	9.9	7	8.5	15	17.7
Garfield	1	*	2	*	1	*	0	0.0	0	0.0
Grant	7	8.0	12	13.5	4	*	15	16.5	14	15.3
Grays Harbor	12	16.5	9	12.4	6	8.2	7	9.6	7	9.6
Island	10	12.7	10	12.7	3	*	7	8.8	7	8.8
Jefferson	4	*	3	*	1	*	4	*	5	16.5
King	257	13.5	224	11.6	193	9.9	219	11.2	199	10.0
Kitsap	22	8.8	27	10.8	25	9.8	16	6.3	19	7.5
Kittitas	5	12.3	1	*	3	*	7	16.9	5	11.9
Klickitat	4	*	1	*	5	24.4	0	0.0	2	*
Lewis	7	9.3	11	14.6	10	13.2	6	7.9	5	6.6
Lincoln	1	*	1	*	1	*	1	*	2	*
Mason	3	*	7	11.5	3	*	3	*	9	14.6
Okanogan	2	*	5	12.2	1	*	0	0.0	1	*
Pacific	0	0.0	3	*	0	0.0	2	*	2	*
Pend Oreille	0	0.0	1	*	0	0.0	8	61.1	1	*
Pierce	78	9.8	71	8.9	53	6.6	75	9.3	74	9.1
San Juan	1	*	1	*	0	0.0	2	*	0	0.0
Skagit	10	8.6	17	14.5	3	*	15	12.7	15	12.6
Skamania	1	*	0	0.0	0	0.0	0	0.0	1	*
Snohomish	88	12.5	77	10.8	77	10.7	67	9.3	64	8.8
Spokane	41	8.8	46	9.8	39	8.3	63	13.2	33	6.9
Stevens	2	*	3	*	1	*	6	13.7	6	13.7
Thurston	36	14.4	27	10.7	13	5.1	34	13.2	32	12.3
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	6	10.2	4	*	11	18.7	3	*	8	13.4
Whatcom	24	12.0	24	11.9	19	9.4	14	6.9	16	7.8
Whitman	1	*	11	24.6	2	*	12	26.1	2	*
Yakima	40	16.5	53	21.8	18	7.4	26	10.6	31	12.5
STATEWIDE TOTAL	820	12.3	780	11.6	589	8.7	842	12.4	670	9.7

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	670	9.7	1

*All rates are cases per 100,000 population.

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

**SHELLFISH POISONING:
PARALYTIC, DOMOIC ACID, 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

*All rates are cases per 100,000 population.

SHIGA TOXIN-PRODUCING *ESCHERICHIA COLI* (STEC)

County	2009		2010		2011		2012		2013	
	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	2	*	2	*
Benton	4	*	1	*	6	3.4	2	*	12	6.5
Chelan	2	*	2	*	0	0.0	3	*	5	6.8
Clallam	0	0.0	3	*	0	0.0	2	*	2	*
Clark	25	5.9	34	8.0	12	2.8	27	6.3	51	11.7
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	1	*	3	*	1	*	7	6.8	0	0.0
Douglas	0	0.0	0	0.0	2	*	0	0.0	0	0.0
Ferry	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	2	*	2	*	1	*	4	*
Garfield	1	*	0	0.0	1	*	0	0.0	0	0.0
Grant	3	*	1	*	7	7.8	7	7.7	6	6.5
Grays Harbor	1	*	0	0.0	1	*	1	*	2	*
Island	0	0.0	2	*	0	0.0	1	*	6	7.5
Jefferson	0	0.0	1	*	1	*	4	*	0	0.0
King	68	3.6	45	2.3	56	2.9	71	3.6	72	3.6
Kitsap	3	*	2	*	0	0.0	6	2.4	1	*
Kittitas	2	*	35	85.5	6	14.5	6	14.5	6	14.3
Klickitat	1	*	1	*	2	*	3	*	1	*
Lewis	1	*	4	*	1	*	2	*	6	7.9
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Mason	1	*	2	*	0	0.0	1	*	2	*
Okanogan	1	*	3	*	1	*	1	*	2	*
Pacific	1	*	1	*	1	*	0	0.0	0	0.0
Pend Oreille	0	0.0	1	*	0	0.0	1	*	0	0.0
Pierce	11	1.4	11	1.4	22	2.7	11	1.4	14	1.7
San Juan	1	*	1	*	0	0.0	0	0.0	2	*
Skagit	4	*	3	*	2	*	4	*	9	7.6
Skamania	0	0.0	0	0.0	1	*	1	*	0	0.0
Snohomish	32	4.5	23	3.2	27	3.8	21	2.9	42	5.7
Spokane	10	2.1	11	2.3	14	3.0	13	2.7	19	4.0
Stevens	0	0.0	1	*	0	0.0	3	*	4	*
Thurston	12	4.8	6	2.4	11	4.3	13	5.1	20	7.7
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	1	*	2	*	1	*	0	0.0	2	*
Whatcom	9	4.5	10	5.0	11	5.4	14	6.9	15	7.3
Whitman	0	0.0	4	*	2	*	3	*	0	0.0
Yakima	11	4.6	10	4.1	12	4.9	8	3.3	22	8.9
STATEWIDE TOTAL	206	3.1	226	3.4	203	3.0	239	3.5	330	4.8

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

SHIGA TOXIN-PRODUCING <i>ESCHERICHIA COLI</i> (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

*All rates are cases per 100,000 population.

SHIGELLOSIS

County	2009		2010		2011		2012		2013	
	Cases	Rate								
Adams	0	0.0	0	0.0	0	0.0	0	0.0	20	104.2
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	8	4.7	0	0.0	3	*	5	2.8	2	*
Chelan	2	*	2	*	0	0.0	2	*	1	*
Clallam	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clark	5	1.2	7	1.6	12	2.8	14	3.2	11	2.5
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	2	*	1	*	5	6.2	2	*	2	2.4
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	3	*	2	*	0	0.0	1	*	9	9.9
Grays Harbor	0	0.0	1	*	1	*	3	*	1	*
Island	1	*	1	*	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	2	*	0	0.0	0	0.0
King	64	3.4	44	2.3	41	2.1	74	3.8	43	2.2
Kitsap	2	*	0	0.0	0	0.0	1	*	3	*
Kittitas	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Lewis	0	0.0	2	*	0	0.0	0	0.0	1	*
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	2	*	0	0.0	1	*	2	*	1	*
Okanogan	1	*	1	*	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	8	1.0	7	0.9	2	*	5	0.6	4	*
San Juan	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	3	*	5	4.3	8	6.8	1	*	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	15	2.1	13	1.8	9	1.3	16	2.2	8	1.1
Spokane	4	*	3	*	4	*	1	*	3	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	1	*	2	*	1	*	2	*	1	*
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	21	35.9	0	0.0	0	0.0	2	*	0	0.0
Whatcom	3	*	18	8.9	2	*	1	*	5	2.4
Whitman	0	0.0	1	*	0	0.0	0	0.0	1	*
Yakima	7	2.9	2	*	11	4.5	1	*	6	2.4
STATEWIDE TOTAL	153	2.3	112	1.7	104	1.5	133	2.0	122	1.8

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

*All rates are cases per 100,000 population.

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

SYPHILIS (PRIMARY AND SECONDARY)

County	2009		2010		2011		2012		2013	
	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	0	0.0	2	*	1	*	0	0.0	7	+
Chelan	0	0.0	1	*	0	0.0	0	0.0	0	+
Clallam	1	*	0	0.0	0	0.0	0	0.0	0	+
Clark	4	*	6	1.4	5	1.2	23	5.3	22	5.1
Columbia	1	*	0	0.0	0	0.0	0	0.0	0	+
Cowlitz	1	*	1	*	0	0.0	1	*	1	+
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	0	0.0	2	*	5	6.2	3	*	4	+
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	+
Grant	0	0.0	0	0.0	2	*	1	*	1	+
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	0	+
Island	0	0.0	1	*	0	0.0	0	0.0	2	+
Jefferson	1	*	1	*	0	0.0	0	0.0	0	+
King	97	5.1	212	11.0	235	12.1	210	10.7	174	8.8
Kitsap	5	2.0	4	*	5	2.0	5	2.0	4	+
Kittitas	0	0.0	0	0.0	1	*	1	*	3	+
Klickitat	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	+
Lincoln	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	+
Okanogan	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	+
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	+
Pierce	9	1.1	9	1.1	27	3.4	22	2.7	28	3.4
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	+
Skagit	0	0.0	0	0.0	0	0.0	1	*	2	+
Skamania	0	0.0	0	0.0	1	*	0	0.0	0	+
Snohomish	5	0.7	10	1.4	16	2.2	12	1.7	13	1.8
Spokane	7	1.5	4	*	14	3.0	5	1.1	2	+
Stevens	0	0.0	1	*	1	*	0	0.0	0	+
Thurston	2	*	1	*	3	*	2	*	3	+
Wahkiakum	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	+
Whatcom	0	0.0	0	0.0	3	*	4	*	5	+
Whitman	0	0.0	0	0.0	0	0.0	2	*	0	+
Yakima	2	*	6	2.5	9	3.7	6	2.4	14	5.7
STATEWIDE TOTAL	135	2.0	261	3.9	329	4.9	300	4.4	285	4.1

All incidence rates are cases per 100,000 population.

*For 2009-2012, incidence rates not calculated for <5 cases.

+For 2013, 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
1980	262	6.3	8
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

*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

*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

*All rates are cases per 100,000 population.

TUBERCULOSIS

County	2009		2010		2011		2012		2013	
	Cases	Rate								
Adams	0	0.0	1	*	0	0.0	0	0.0	1	*
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	3	*	3	*	0	0.0	0	0.0	1	*
Chelan	2	*	3	*	0	0.0	0	0.0	2	*
Clallam	1	*	0	0.0	2	*	0	0.0	1	*
Clark	16	3.8	22	5.2	10	2.3	7	1.6	5	1.1
Columbia	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	1	*	0	0.0	2	*
Douglas	0	0.0	1	*	0	0.0	0	0.0	1	*
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	1	*	4	*	3	*	3	*	2	*
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	3	*	2	*	0	0.0	1	*	0	0.0
Grays Harbor	0	0.0	0	0.0	1	*	2	*	1	*
Island	2	*	2	*	2	*	0	0.0	1	*
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	130	6.8	114	5.9	106	5.5	108	5.5	114	5.8
Kitsap	4	*	0	0.0	2	*	4	*	1	*
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	1	*	1	*	0	0.0	0	0.0	0	0.0
Lewis	1	*	1	*	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	2	*	2	*	1	*	2	*	3	*
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	2	*
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
Pierce	34	4.3	15	1.9	25	3.1	19	2.4	22	2.7
San Juan	0	0.0	1	*	0	0.0	0	0.0	1	*
Skagit	2	*	1	*	2	*	3	*	3	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Snohomish	28	4.0	26	3.6	24	3.3	18	2.5	26	3.6
Spokane	9	1.9	4	*	8	1.7	7	1.5	7	1.5
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	8	3.2	14	5.5	5	2.0	5	1.9	5	1.9
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	2	*	0	0.0	0	0.0	1	*
Whatcom	3	*	6	3.0	2	*	1	*	4	*
Whitman	1	*	1	*	0	0.0	0	0.0	0	0.0
Yakima	5	2.1	9	3.7	6	2.5	5	2.0	2	*
STATEWIDE TOTAL	256	3.8	236	3.5	200	3.0	185	2.7	209	3.0

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

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	256	3.8	7
2010	236	3.5	7
2011	200	3.0	8
2012	185	2.7	10
2013	209	3.0	+

*All rates are 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: Death events reported here may not have occurred within the same year of case reporting for surveillance purposes, and are not confirmed against death certificate data.

+2013 death data not available at time of this report.

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

*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

*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

*All rates are cases per 100,000 population.

YERSINIOSIS

County	2009		2010		2011		2012		2013	
	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	1	*	0	0.0	0	0.0
Benton	0	0.0	1	*	1	*	1	*	2	*
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clallam	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Clark	1	*	1	*	1	*	0	0.0	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	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	0	0.0	0	0.0
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	7	0.4	8	0.4	5	0.3	23	1.2	14	0.7
Kitsap	0	0.0	1	*	2	*	1	*	1	*
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	2	*
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	1	*	0	0.0	0	0.0	0	0.0	2	*
Okanogan	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	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	1	*	1	*	2	*	1	*	0	0.0
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	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	4	*	5	0.7	5	0.7	4	*	4	*
Spokane	0	0.0	2	*	0	0.0	1	*	0	0.0
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	0	0.0	1	*	1	*	1	*	1	*
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	1	*	2	*	2	*
Whitman	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Yakima	0	0.0	3	*	1	*	1	*	2	*
STATEWIDE TOTAL	15	0.2	25	0.4	21	0.3	36	0.5	34	0.5

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

*All rates are cases per 100,000 population.

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

APPENDIX II

Special Topics

Local Health Jurisdiction Contributors are acknowledged for special topics.

Public Health Seattle King County

A child adopted from China developed measles upon arrival to Washington. This measles case was one of several among adoptees from the same orphanage (the other adoptees resided in other areas of the United States). CDC worked with health officials in China to evaluate all children from the originating orphanage for measles and to recommend all adoptees be screened for fever and rash illness, and measles immunity be verified for those with imminent departure. The associated MMWR is available here <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6314a1.htm>.

Highly Antibiotic Resistant Bacterial Surveillance

Carbapenem-resistant Enterobacteriaceae (CRE)

In 2012, the Washington State Department of Health 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- β -lactamases (NDM), Verona integron-encoded metallo- β -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 Washington state surveillance case definition for CRE through December 2013 was

E. coli, *Klebsiella* species or *Enterobacter* species non-susceptible to one or more carbapenems and resistant to all third generation cephalosporins tested;

OR

Any Enterobacteriaceae (other than those above) non-susceptible to 2 or more carbapenems and resistant to all third generation cephalosporins tested.

Isolates that met these criteria after confirmatory antimicrobial sensitivity testing at the Public Health Laboratories, as well as isolates that were Modified Hodge Test positive, underwent polymerase chain reaction (PCR) testing to detect presence of for carbapenemase.

Recently updated information submitted by providers and laboratories in the state revealed that 8 carbapenemase-producing CRE (CP-CRE) had been confirmed by PCR testing and reported to the Washington State Department of Health (DOH) prior to the beginning of systematic surveillance for CRE in October 2012: 2 VIM, 2 KPC, 2 NDM, 1 IMP, and 1 OXA-48. The origin of these CP-CRE isolates was out-of-state or international medical care, including 3 CP-CRE isolates in a single patient who had healthcare in India.

This report includes all CRE reported in 2013 and all those collected in 2013 (before the surveillance strategy changed on January 1, 2014). DOH Public Health Laboratories tested 130 CRE submitted by clinical labs. Of these, 108 (83%) were confirmed at PHL to meet the CRE surveillance case definition by antimicrobial sensitivity testing and 10 of 108 (9%) tested positive by PCR for carbapenemase. Of these 10 were CP-CRE, 5 were KPC, 3 were NDM, and were 2 IMP (both from the same patient).

Of 10 CP-CRE isolates in 9 persons, 2 had no out of state medical care or travel in the 6 months prior to diagnosis, 3 had recently been hospitalized in another state, and 4 had received healthcare internationally. Though the majority of cases have out of state or international health care exposure, surveillance findings suggest that KPC are circulating in the state.

Carbapenemases in Species other than Enterobacteriaceae

In 2013, a Washington resident suffered a broken bone while traveling on the Indian subcontinent. He required surgery abroad before returning home for further care. Cultures of his wound grew several highly antibiotic resistant gram negative bacteria. Final results included *Acinetobacter baumannii* positive by PCR for NDM, and *Pseudomonas stutzeri* positive for NDM and VIM.

Although carbapenemases are not uncommon in *Acinetobacter* spp., this is the first report of NDM-positive *Pseudomonas* in the United States. NDM-positive *Pseudomonas aeruginosa* has been detected in Europe after its initial report in Serbia in 2011. VIM-positive *Pseudomonas* has been reported in the US before. Nosocomial outbreaks caused by carbapenemase-producing *P. aeruginosa* have been reported in several countries worldwide.

Healthcare Associated Infections (HAI) Program

The Healthcare Associated Infections (HAI) Program was established in 2008 within the Office of the Assistant Secretary and is currently located in the Office of Communicable Disease Epidemiology. The program oversees the submission, analysis and public reporting of required HAI information, per [RCW 43.70.056](#). Currently, all state-licensed, acute care hospitals are required to collect and submit data on the following:

Central line-associated bloodstream infections (CLABSI) in all hospital inpatient areas where patients normally reside at least twenty-four hours; and

Surgical site infections (SSI) for sternal incision cardiac surgery, coronary artery bypass graft, hip and knee replacement surgery, colon and abdominal hysterectomy procedures.

Hospitals are required to report HAI data through CDC's National Healthcare Safety Network (NHSN). The program routinely analyzes hospital HAI surveillance data to produce annual public reports. Reporting accuracy is validated using quality sciences methods through "internal" hospital infection surveillance accuracy self-assessments, and "external" site visits by program staff performing medical record audits.

Central Line-Associated Bloodstream Infection (CLABSI) Validation Findings, 2009-2013

Washington State CLABSI reporting between 2009 and August 2013 was limited to hospital intensive care units (ICU), with 65 hospitals required to participate. All participated in annual "internal" validation and each received at least one "external" validation visit between 2010 and 2013. Validation uses International Standards Organization (ISO) 2859 acceptance sampling to ensure hospital CLABSI surveillance accuracy remains consistent with 85% sensitivity and 98% specificity. Most hospitals exceed the department's accuracy standards. For those that do not, corrective actions focused on communication gaps between infection control staff and the clinical laboratory, and application of NHSN surveillance definitions. Overall validation findings support reports that Washington State has among the lowest US CLABSI rates.

"External" validation assesses surveillance and clinical CLABSI records to estimate the burden and distribution of CLABSI hospital-wide. The department estimates Washington State has 2,250 to 3,650 CLABSI cases per year, with ~11% attributable to ICUs, ~21% attributable to lower-acuity wards, and ~67% present on hospital admission.

CLABSI can present as early-onset (\leq a week), likely from contamination during central line insertion, or late-onset, likely from lapses in care during line access or maintenance. Review of CLABSI validation identified a greater number of hospital associated infections occurring in the late-onset period (~65% after day seven).

Hospital resources needed for annual "internal" validation were ~6 hours/year. For "external" validation visits, 89% took \leq 1 day (only the most complicated patient settings required ~2 days). Department resources for CLABSI ICU validation and data quality activities require ~0.5 full-time equivalents. Validation findings were used to:

Expand CLABSI reporting to all Washington State hospital inpatient areas (Aug 2013);

Recommend departmental authority extend to all facilities where CLABSI risk is present to encompass the full spectrum of CLABSI for prevention

Reinforce infection control and prevention emphasis on central line maintenance best practices throughout the hospital, in addition to the focus on insertion practices; and

Support annual validation expansion to SSI reporting in 2014.

The cooperation and support of Washington's hospitals and infection preventionists has enabled the HAI Program to run efficient and effective annual HAI validation.

FOODBORNE DISEASE OUTBREAKS, 2013

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 2013, 37 outbreaks of foodborne disease were reported to DOH (Table 7). 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 9. Foodborne Disease Outbreaks, 2007 – 2013

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

Outbreaks occurred in a wide range of settings in 2013. 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 2013 are shown in Table 8.

Table 10. Agents associated with Foodborne Disease Outbreaks, 2013

Agent	Outbreaks	Cases
Bacterial		
<i>Salmonella</i>	4	28
STEC	4	8
<i>Vibrio parahaemolyticus</i>	2	10
<i>Campylobacter</i>	2	10
Viral		
Confirmed <i>Norovirus</i>	9	278
Suspect <i>Norovirus</i>	12	84
Toxins		
<i>Staphylococcus</i>	1	3
Scombroid/histamine	1	3
Chemicals	1	9
Unknown Agent	1	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 2013, there were 21 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 2013, there were 12 bacterial outbreaks. Contributing factors most frequently associated with bacterial outbreaks included consumption of food that was intended to be consumed raw or undercooked, and food that was intended to be consumed after a kill step (e.g. heating to kill bacteria) that was inadequate.

Additionally, 2 bacterial toxin outbreaks were reported in 2013. 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.

Additionally, in 2013 there was one outbreak in which no causative agent was identified.

Foodborne outbreaks reported in Washington during 2013 are summarized in Table 9.

Table 11. Foodborne Disease Outbreaks Reported to Washington State Department of Health, 2013

#	Local Health Jurisdiction	Month	Illness Agent	# Confirmed Cases	# Probable Cases	Total # Cases	Exposure Source	Contributing Factors	Setting
1	Benton-Franklin	January	<i>Norovirus</i>	4	50	54	Catered sandwiches	Unknown	Catered lunch
2	King	January	Suspect <i>Norovirus</i>	0	16	16	Catered office meal	Contamination by an infectious food handler	Catered meeting
3	Pierce	January	Unknown	0	4	4	Oyster shooters	Contaminated raw product	Restaurant
4	Pierce	January	<i>E. coli</i> O121	1	0	1	Microwavable frozen food; part of multi-state cluster	Unknown	Distributed product
5	Snohomish	February	Suspect <i>Norovirus</i>	0	5	5	Restaurant meal	Contamination and bare and gloved-hand contact by an infectious food handler	Restaurant
6	Clark	February	<i>Norovirus</i>	2	38	40	Restaurant meal	Contamination by infectious food handler	Restaurant
7	King	February	Suspect <i>Norovirus</i>	0	6	6	Restaurant meal	Contamination by infectious food handler	Restaurant
8	Skagit	February	Suspect <i>Norovirus</i>	0	6	6	Raw produce	Contamination and gloved-hand contact by an infectious food handler	Restaurant
9	Multiple	February	STEC O157:H7	3	0	3	Beef suspected	Unknown	Restaurant
10	Multiple	March	<i>Salmonella</i> Reading	1	0	1	Oysters; multi-state cluster	Unknown	Distributed product
11	King	March	<i>Norovirus</i>	0	13	13	Restaurant meal	Contamination, other source	Restaurant
12	Pierce	March	<i>Norovirus</i>	6	66	72	Hamburger buns, salads, sandwiches	Contamination and bare and gloved-hand contact by an infectious food handler	Restaurant
13	Yakima	March	<i>Norovirus</i>	2	6	8	Deli meal	Contamination and gloved-hand contact by an infectious food handler	Deli meal eaten at home
14	Multiple	April	<i>Salmonella</i> Heidelberg	16	0	16	Chicken	Cross-contamination of ingredients, contaminated product	Distributed product
15	King	April	<i>Norovirus</i>	4	10	14	Unknown	Bare and gloved-hand contact by an infectious food handler and improper cold hold-	Restaurant
16	King	May	Suspect <i>Norovirus</i>	0	8	8	Unknown	Contamination by an infectious food handler	Restaurant
17	Skagit	May	Suspect <i>Norovirus</i>	0	10	10	Salad	Unknown	Restaurant
18	Thurston	May	<i>E. coli</i> O26	1	0	1	Unknown	Multi-state outbreak associated with chain restaurant	Restaurant
19	Yakima	June	<i>Norovirus</i>	6	46	52	Unknown	Contamination and gloved-hand contact by an infectious food handler	Catered event
20	Pierce	June	<i>Norovirus</i>	2	22	24	Salad, bread	Contamination and bare-hand contact by infectious food handler	Banquet facility
21	King	June	<i>Campylobacter</i>	2	0	2	Unknown	None	Restaurant
22	King	July	Suspected <i>Vibrio parahaemolyticus</i>	0	5	5	Oysters	Contaminated raw product	Restaurant

Table 11 continued. Foodborne Disease Outbreaks Reported to Washington State Department of Health, 2013

#	Local Health Jurisdiction	Month	Illness Agent	# Confirmed Cases	# Probable Cases	Total # Cases	Exposure Source	Contributing Factors	Setting
23	King	July	<i>Salmonella</i> Virchow	1	0	1	Sugar cane juice	Contaminated raw product, part of multi-state outbreak associated with distributed	Distributed product served at restaurant
24	Multiple	July	<i>Vibrio parahaemolyticus</i>	2	3	5	Raw oysters	Contaminated raw product	Restaurant
25	King	August	<i>Salmonella</i> Enteritidis	4	6	10	Chicken Cordon Bleu suspected	Undercooking of frozen distributed product	Camp
26	Clark	August	<i>Norovirus</i>	0	1	1	Catered event	Glove-hand contact by infectious food handler, and other source of contamination by a food handler; part of Oregon	Banquet facility
27	King	September	<i>Campylobacter</i>	4	0	4	Catered picnic	Cross-contamination of ingredients	Catered picnic
28	King	September	Suspect <i>Norovirus</i>	0	5	5	Unknown	Other source of contamination	Restaurant
29	Pierce	October	Suspect <i>Norovirus</i>	0	5	5	Unknown	Bare and glove-hand contact by infectious food handler, and other source of	Restaurant
30	Multiple	October	<i>E. coli</i> O157:H7	3	0	3	Pre-packaged salad	Contaminated raw product, part of multi-state outbreak of distributed product	Distributed product
31	King	November	Suspect <i>Norovirus</i>	0	3	3	Unknown	Glove-hand contact by infectious food handler, and other source of contamination by a food handler	Restaurant
32	Pierce	November	<i>Staphylococcus aureus</i> (preformed enterotoxin) suspected	0	3	3	Chicken suspected	Glove-hand contact by infectious food handler, other source of contamination	Restaurant
33	Clark	November	Suspected scrobroid	0	3	3	Spicy tuna roll suspected	Toxic substance part of the tissue	Restaurant
34	Pierce	December	Chemical identified	0	9	9	Chili	Other source of contamination	Potluck
35	King	December	Suspect <i>Norovirus</i>	0	7	7	Unknown	Unknown	Restaurant
36	King	December	Suspect <i>Norovirus</i>	0	8	8	Unknown	Other source of contamination	Restaurant
37	Pierce	December	Suspect <i>Norovirus</i>	0	9	9	Tomato and chips suspected	Glove-hand contact by infectious food handler, other source of contamination by a food handler, and other source of	Restaurant

INFLUENZA SURVEILLANCE, 2013–2014

The Washington State Department of Health (DOH), in collaboration with local health jurisdictions and CDC, performed surveillance for influenza during the 2013–2014 season using several different systems. This report summarizes data collected during July 21, 2013 – July 19, 2014 through key systems.

Overall Summary

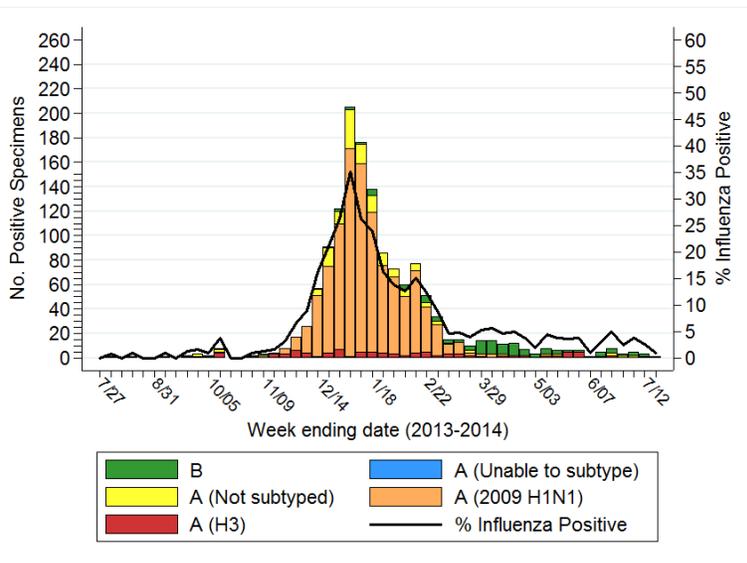
Overall, influenza activity during the 2013–2014 influenza season was moderately severe, reaching peak activity in Washington during surveillance week 1 (the week ending January 4, 2014). The predominant viruses circulating throughout the state were influenza A (2009 H1N1) viruses, which were part of the trivalent and quadrivalent seasonal vaccines for 2013-2014.

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

Five laboratories in Washington participate in the WHO/NREVSS surveillance network: The Washington State Public Health Laboratories (WAPHL), Public Health – Seattle & King County Public Health Laboratory (PHSKC), Spokane Regional Health District Laboratory, 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 1,401 specimens which tested positive for influenza during July 21, 2013 – July 19, 2014, 1,288 (92%) were influenza A and 113 (8%) were influenza B. Of the subtyped influenza A specimens, 1,041 (81%) were influenza A (2009 H1N1) viruses, 99 (8%) were influenza A (H3N2) viruses, and 148 (11%) were unsubtype influenza A viruses.

Figure 1. Influenza positive tests reported to CDC by WHO/NREVSS collaborating laboratories, Washington, 2013-2014



Antigenic Characterization

During the 2013–2014 season, the circulating viruses were well-matched to the strains included in the vaccine.

Antigenic characterization was performed on 82 influenza viruses from Washington during this season. All 47 influenza A (2009 H1N1) viruses were characterized as A/California/07/2009-like, the influenza A (H1N1) component of the 2013–2014 vaccine. All 20 influenza A(H3N2) viruses were characterized as A/Texas/50/2012-like, the influenza A (H3N2) component of the 2013–2014 vaccine. Ten influenza B viruses were characterized as B/Massachusetts/02/2012-like, the influenza B component of the trivalent 2013–2014 vaccine. Five influenza B viruses were characterized as B/Brisbane/60/2008-like, an additional influenza B component of the quadrivalent 2013–2014 vaccine.

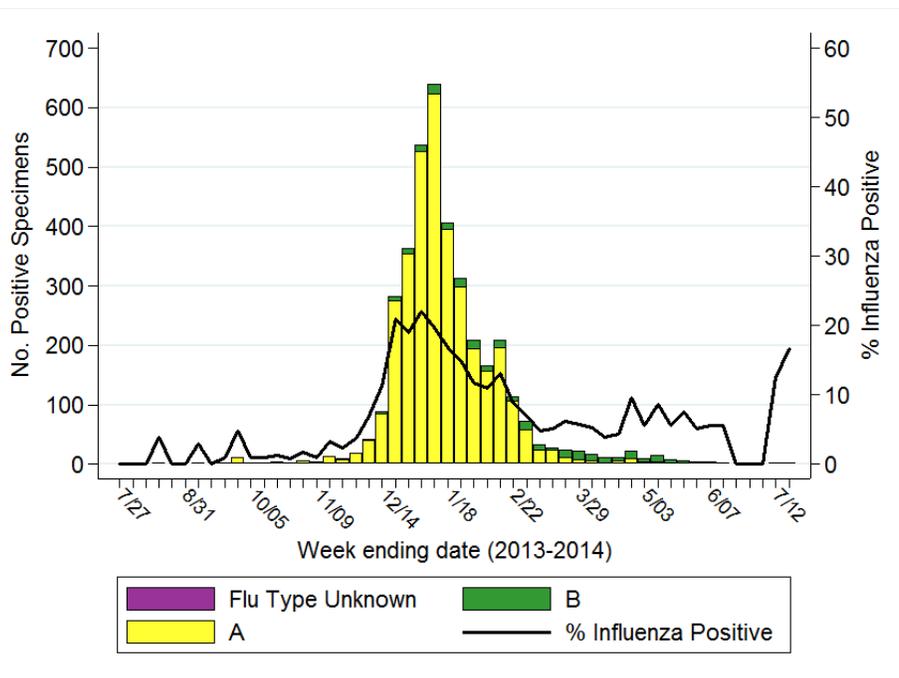
Antiviral Resistance Testing and Novel Influenza A Viruses

Of more than 140 influenza A (2009 H1N1) viruses tested at WAPHL or CDC this season, one had the H275Y mutation, and no novel influenza viruses were detected in Washington during the season.

Public Health Reporting of Aggregate Influenza Data (PHRAID)

Select commercial laboratories in Western Washington report the number of influenza tests performed and the number positive for influenza A and B viruses each week through PHRAID. During July 21, 2013 – July 19, 2014, of the total 29,794 flu tests performed, 3,738 (12.5%) were positive for influenza viruses A, B, or of unknown type.

Figure 2. Aggregate Influenza Testing Results, Western Washington, 2013–2014



Syndromic Surveillance Data

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics) WA: The following graphs show the proportion of emergency department visits, by CDC week, for a syndrome of influenza-like illness (ILI). A syndrome of ILI is derived from the chief complaint and is defined as “influenza” OR fever with cough or sore throat. Data are not available for weeks 12-29. Data are not yet available for weeks 12-29.

Figure 3a. Percentage of ER Visits for ILI by CDC Week, Western Washington, 2011–2014

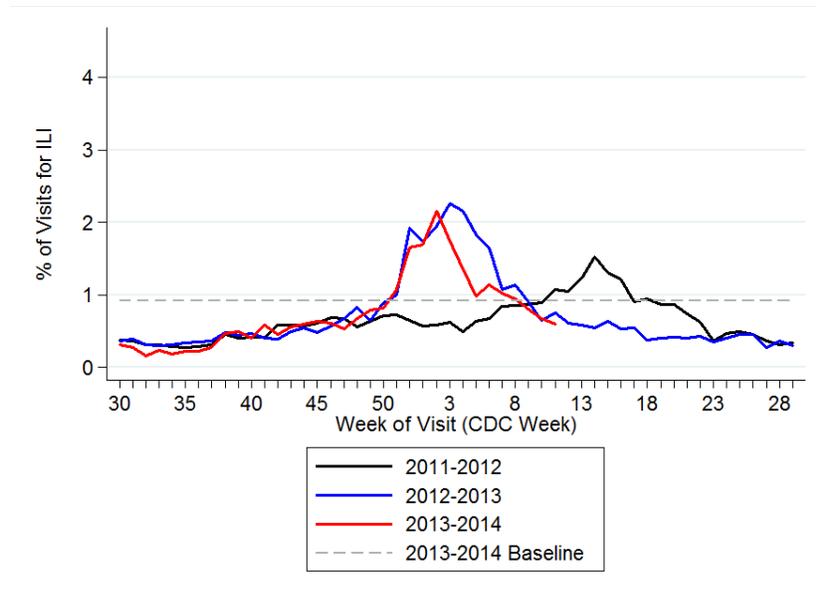
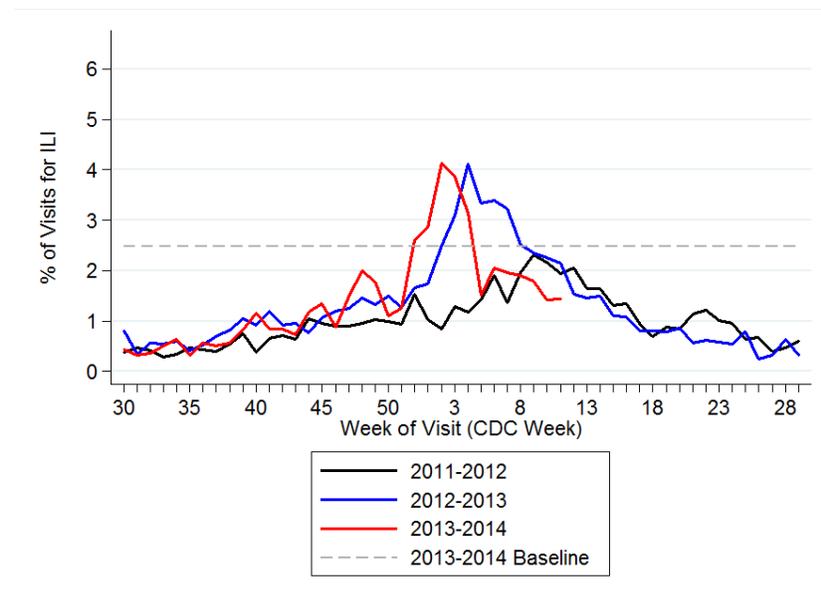


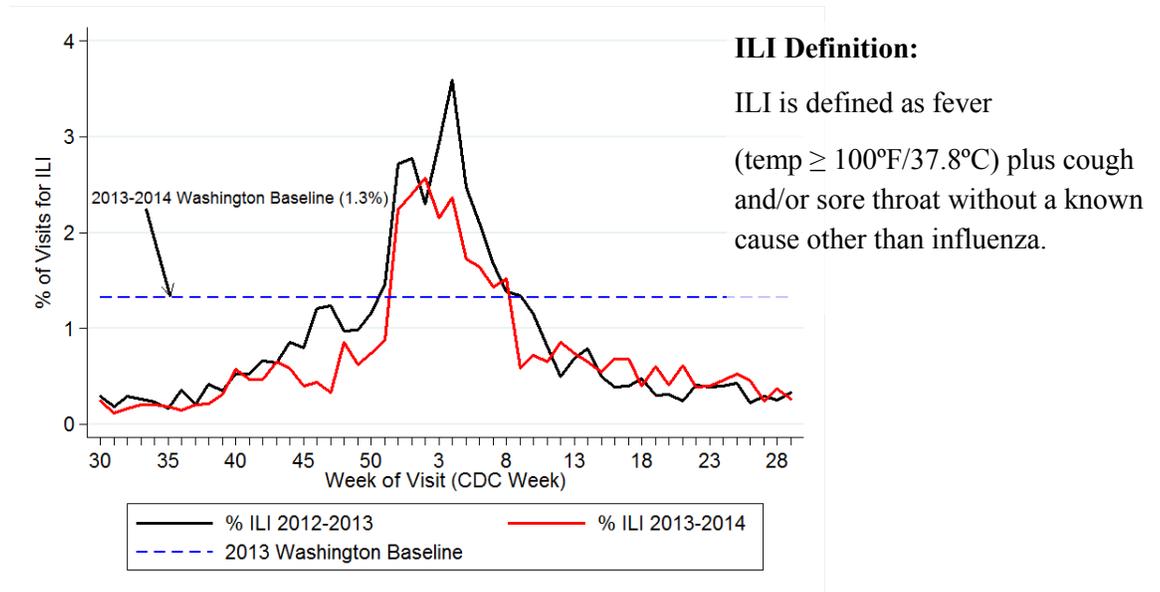
Figure 3b. Percentage of ER Visits for ILI by CDC Week, Eastern Washington, 2011–2014



Outpatient Influenza-like Illness Surveillance Network (ILINet) Data

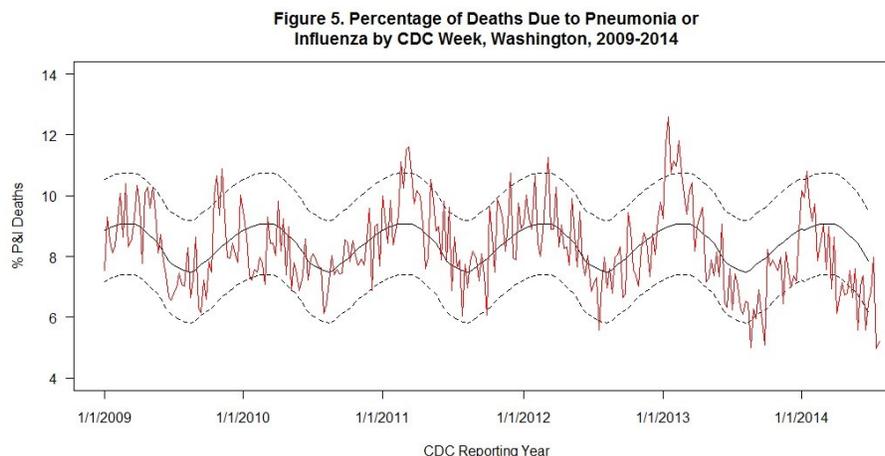
Information on patient visits to health care providers for influenza-like illness is collected through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet). Each week, up to 17 outpatient healthcare providers in Washington report data to CDC on the total number of patients seen and the number of those patients with influenza-like illness (ILI) by age group (0-4 years, 5-24 years, 25-49 years, 50-64 years, and ≥ 65 years). During July 21, 2013 – July 19, 2014, of the total 240,437 visits reported, 1,737 (0.7%) were due to ILI.

Figure 4. Percentage of ILI Visits Reported by Sentinel Providers, Washington, 2012–2014



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 2009–2014. Data points for the most recent 8–12 weeks do not represent all deaths in the state since there is a delay in submitting death records to the Department.



* P&I Mortality Graph: Weekly data is superimposed on a normative curve (based on 2009 - 2012 flu seasons) and 90% confidence intervals.

Reported Laboratory-Confirmed Influenza-Associated Deaths

During July 21, 2013 – July 19, 2014, 79 laboratory-confirmed influenza-associated deaths were reported to the Department of Health. Reported deaths likely significantly underestimate the true number of deaths due to influenza since many patients with influenza are not tested for the virus and some patients with laboratory-confirmed influenza are not reported to a public health agency. Of these 79 reported deaths, 69 were due to influenza A virus, 4 were due to influenza B virus, and 6 were due to an influenza virus of unknown type. Mortality rates were highest in those 65 years and older. Of 79 cases with available data, 75 (95%) had one or more risk factors known to increase complications from influenza.

Number and rate of reported laboratory-confirmed influenza-associated deaths by age group, Washington, July 2013 – July 2014

<i>Age Group (years)</i>	<i>Deaths</i>	<i>Death Rate (per 100,000 population)</i>
0–4	0	0
5–24	1	0.06
25–49	23	0.99
50–64	26	1.91
65+	29	3.4
Total	79	1.17

Reported Laboratory-confirmed Influenza Hospitalizations (Spokane County Only)

Spokane Regional Health District requires hospitals and providers to report laboratory-confirmed influenza-associated hospitalizations. During 9/29/13–7/19/14, 185 hospitalizations have been reported among Spokane County residents. Of these 185 patients, 11 were 0-4 years old, 4 were 5-17 years old, 43 were 18-49 years old, 75 were 50-64 years old, and 52 were 65 years or older. More than twice as many adults 18-64 years old have been hospitalized this season compared to last season.

Figure 6a: Laboratory-Confirmed Flu Hospitalization Rates by Age Group (per 100,000), Spokane County, WA 2013–2014

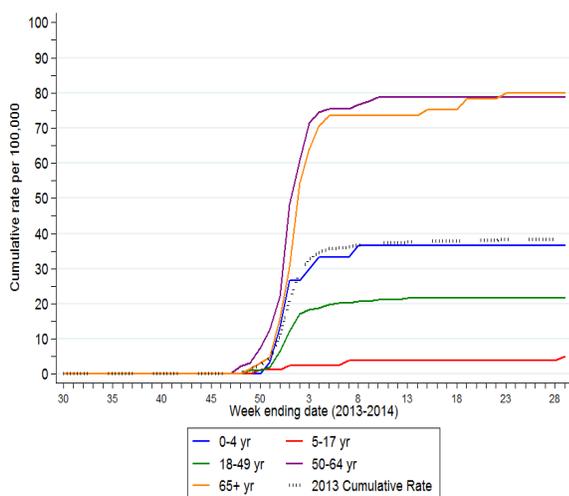
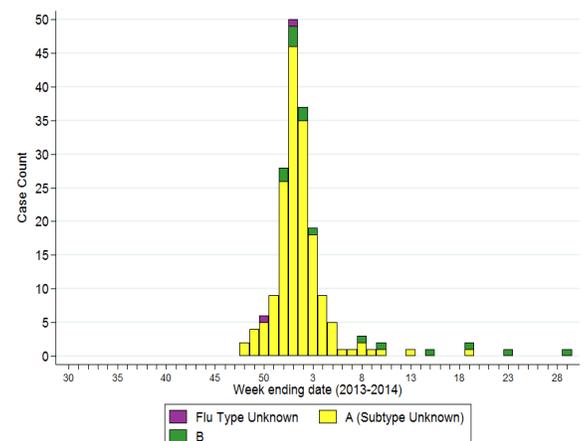


Figure 6b: Laboratory-Confirmed Flu Hospitalizations by Admission Week, Spokane County, WA 2013–2014



APPENDIX III

State Demographics

Washington State Population Estimates, 1985-2013

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

*State of Washington Office of Financial Management 2013 Population Trends. Accessed 7/8/14 from <http://www.ofm.wa.gov/pop/april1/poptrends.pdf>

Washington State Population Estimates By County, 2013*

Washington State Office of Financial Management

County	Estimate
Adams	19,200
Asotin	21,800
Benton	183,400
Chelan	73,600
Clallam	72,350
Clark	435,500
Columbia	4,100
Cowlitz	103,300
Douglas	39,280
Ferry	7,650
Franklin	84,800
Garfield	2,250
Grant	91,800
Grays Harbor	73,200
Island	79,700
Jefferson	30,275
King	1,981,900
Kitsap	254,500
Kittitas	41,900
Klickitat	20,700
Lewis	76,200
Lincoln	10,675
Mason	61,800
Okanogan	41,500
Pacific	21,000
Pend Oreille	13,150
Pierce	814,500
San Juan	16,000
Skagit	118,600
Skamania	11,300
Snohomish	730,500
Spokane	480,000
Stevens	43,800
Thurston	260,000
Wahkiakum	4,020
Walla Walla	59,500
Whatcom	205,800
Whitman	46,000
Yakima	247,250
Washington State	6,882,400

*State of Washington Office of Financial Management
April 1 Population Data Table. Accessed 7/8/14 from
<http://www.ofm.wa.gov/pop/asr/default.asp>

Washington State Population By Age and Sex, 2013*

Washington State Office of Financial Management

Age (years)	Male	Female	TOTAL
0-4	223,444	213,750	437,194
5-9	226,300	215,138	441,438
10-14	223,253	212,917	436,170
15-19	227,851	217,200	445,051
20-24	244,327	229,224	473,551
25-29	241,363	229,651	471,014
30-34	245,243	236,849	482,092
35-39	222,270	218,037	440,307
40-44	236,412	230,870	467,282
45-49	230,882	228,636	459,518
50-54	246,917	249,215	496,132
55-59	235,368	244,119	479,487
60-64	202,264	213,909	416,173
65-69	157,986	170,199	328,185
70-74	105,198	115,105	220,303
75-79	69,225	81,974	151,199
80-84	47,635	64,127	111,762
85 +	43,390	82,152	125,542
TOTAL	3,429,328	3,453,072	6,882,400

*State of Washington Office of Financial Management April 1 Population Data Table. Accessed 7/8/14 from <http://www.ofm.wa.gov/pop/asr/default.asp>