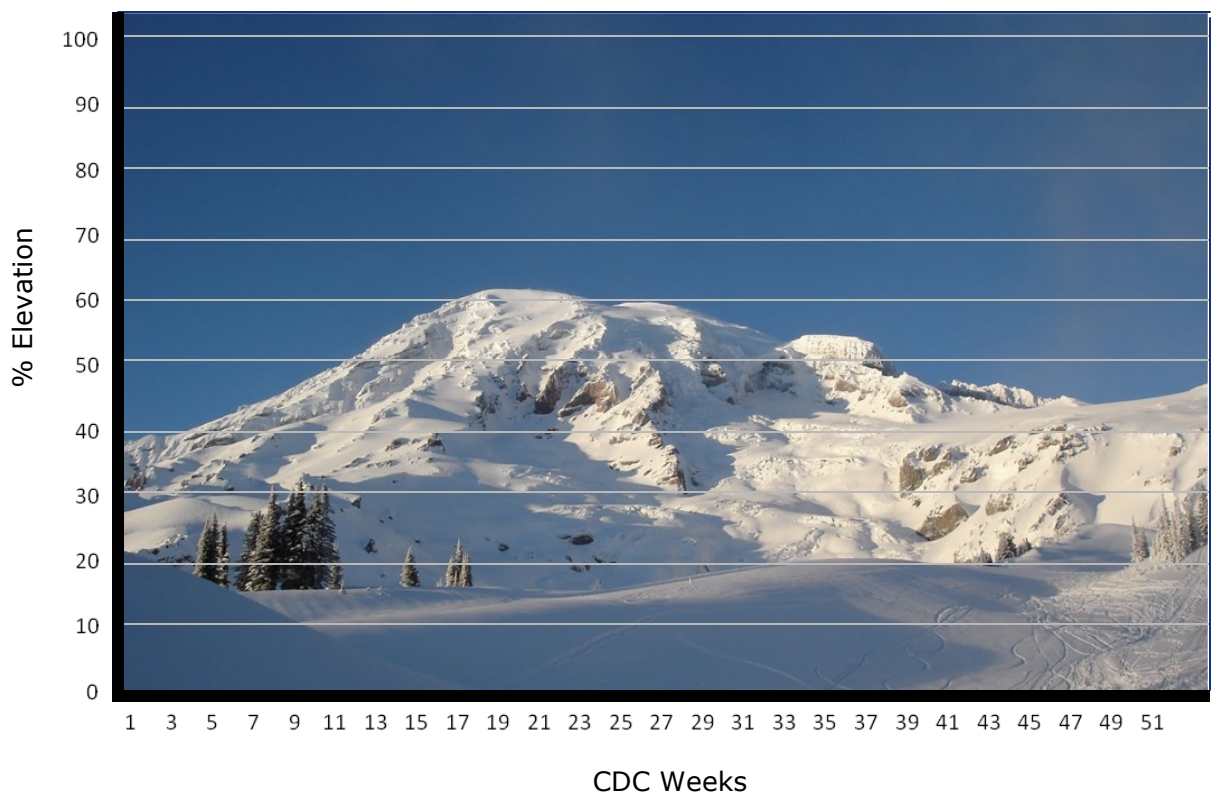


Washington State COMMUNICABLE DISEASE REPORT 2010



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COMMUNICABLE DISEASE REPORT 2010

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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.

Revised November 2011

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Executive Summary – 2010

This report summarizes notifiable communicable diseases reported by local health jurisdictions to the Department of Health (DOH) in 2010. The most common case reports continued to be sexually transmitted conditions, infections caused by enteric pathogens, tuberculosis, and pertussis. Rare conditions of interest that were reported include 22 cases of typhoid fever of which 5 were endemically acquired, one case of hepatitis E, one case of imported rubella, and three cases of Q fever. Influenza activity was low in 2010.

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 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 2010 CDC Year (January 3, 2010 – January 1, 2011).
3. Case report entered into PHIMS by March 1, 2011 if the condition is common (>10 cases per year).
4. Reported to DOH through PHIMS prior to May 17, 2011 if the condition is rare (≤ 10 cases per year). Very rare conditions (0-2 cases per year) that are reported to DOH after the previous year's deadline (if they were not reported in a previous annual report).
5. Given a valid DOH case classification by DOH (as described in the guidelines for each condition: <http://www.doh.wa.gov/notify/forms/>). For select conditions, certain valid DOH classifications are excluded from the annual report. The following table lists the combinations of conditions and classifications that are excluded from the annual report.

Classification(s)	Conditions
Probable and Suspect	Measles; Rubella
Probable	Diphtheria; Poliomyelitis; Vibriosis
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 because case patients may not be aware of being infected, are symptomatic but do not contact a health care provider, are not confirmed with appropriate tests, or are not reported after diagnosis.

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/coagemf/>. Rates are not provided for fewer than 5 cases and are not age-adjusted due to the small numbers of cases.

This report is available online at: <http://www.doh.wa.gov/notify/other/2010cdr/cdr2010.pdf>.

The online newsletter, *EpiTrends*, contains monthly Washington State disease tallies and is available at: <http://www.doh.wa.gov/EHSPHL/epitrends/default.htm>.

Additional information on communicable disease surveillance and case investigation is available at: <http://www.doh.wa.gov/notify/forms/>.

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
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Reporting a Notifiable Condition

In accordance with Washington State rule (www.doh.wa.gov/notify/other/legal.htm), 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/PHSD/doc/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 the posters section at <http://www.doh.wa.gov/notify/forms>.

Note that changes in disease reporting beginning January 2011 are included in the posters contained within this report but not in the surveillance data for this report.

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}

Animal bites (when human exposure to rabies is suspected) ^{Imm}

Anthrax ^{Imm}

Arboviral disease ^{3d} (West Nile virus disease, dengue, Eastern & Western equine encephalitis, St Louis encephalitis, and Powassan) ^{3d}

Asthma, occupational (suspected or confirmed) ^{Mo} **1-888-66SHARP**

Birth Defects ^{Mo}: autism spectrum disorders, cerebral palsy, alcohol related birth defects ^{Mo} **360-236-3533**

Botulism (foodborne, wound and infant) ^{Imm}

Brucellosis (*Brucella* species) ^{24h}

Burkholderia mallei (Glanders) ^{Imm} and **pseudomallei (Melioidosis)** ^{Imm}

Campylobacteriosis ^{3d}

Chancroid ^{3d}

Chlamydia trachomatis infection ^{3d}

Cholera ^{Imm}

Cryptosporidiosis ^{3d}

Cyclosporiasis ^{3d}

Diphtheria ^{Imm}

Disease of suspected bioterrorism origin ^{Imm}

Domoic acid poisoning ^{Imm}

E. coli - Refer to "Shiga toxin producing E. coli" ^{Imm}

Emerging condition with Outbreak potential ^{Imm}

Giardiasis ^{3d}

Gonorrhea ^{3d}

Granuloma inguinale ^{3d}

Haemophilus influenzae (invasive disease, children < age 5) ^{Imm}

Hantavirus pulmonary syndrome ^{24h}

Hepatitis A, acute infection ^{24h}

Hepatitis B, acute ^{24h}

Hepatitis B, chronic (initial diagnosis/previously unreported cases) ^{Mo}

Hepatitis B, surface antigen positive pregnant women ^{3d}

Hepatitis C, acute ^{3d} and chronic ^{Mo} (initial diagnosis only)

Hepatitis D (acute and chronic infections) ^{3d}

Hepatitis E (acute infection) ^{24h}

Herpes simplex, neonatal and genital (initial infection only) ^{3d}

HIV infection ^{3d}

Immunization reactions ^{3d} (severe, adverse)

Influenza, novel or unsubtypeable strain ^{Imm}

Influenza-associated death (lab confirmed) ^{3d}

Legionellosis ^{24h}

Leptospirosis ^{24h}

Listeriosis ^{24h}

Lyme disease ^{3d}

Lymphogranuloma venereum ^{3d}

Malaria ^{3d}

Measles (rubeola) acute disease only ^{Imm}

Meningococcal disease (invasive) ^{Imm}

Monkeypox ^{Imm}

Mumps (acute disease only) ^{24h}

Outbreaks of suspected foodborne origin ^{Imm}

Outbreaks of suspected waterborne origin ^{Imm}

Paralytic shellfish poisoning ^{Imm}

Pertussis ^{24h}

Pesticide poisoning **1-800-222-1222**

Hospitalized, fatal, or cluster ^{Imm}

Pesticide poisoning, all other ^{3d}

Plague ^{Imm}

Poliomyelitis ^{Imm}

Prion disease ^{3d}

Psittacosis ^{24h}

Q fever ^{24h}

Rabies (confirmed human or animal) ^{Imm}

Rabies, suspected human exposure ^{Imm}

Relapsing fever (borreliosis) ^{24h}

Rubella (include congenital rubella syndrome) ^{Imm}

(acute disease only)

Salmonellosis ^{24h}

SARS ^{Imm}

Shiga toxin-producing E. coli infections ^{Imm}

(enterohemorrhagic *E. coli* including, but not limited to, *E. coli* 0157:H7; also includes post-diarrheal hemolytic uremic syndrome)

Shigellosis ^{24h}

Smallpox ^{Imm}

Syphilis (including congenital) ^{3d}

Tetanus ^{3d}

Trichinosis ^{3d}

Tuberculosis ^{Imm}

Tularemia ^{Imm}

Vaccinia transmission ^{Imm}

Vancomycin-resistant *Staphylococcus aureus* ^{24h}

(not to include vancomycin intermediate)

Varicella-associated death ^{3d}

Vibriosis ^{24h}

Viral hemorrhagic fever ^{Imm}

Yellow fever ^{Imm}

Yersiniosis ^{24h}

Other rare diseases of public health significance ^{24h}

Unexplained critical illness or death ^{24h}

CODE LEGEND

^{Imm} **Immediately – Requires a phone call to reach a live person at the local health jurisdiction, 24/7**

^{24h} Within 24 hours – Requires a phone call if reporting after normal public health business hours

^{3d} Within 3 business days

^{Mo} Monthly

Phone numbers by county: <http://www.doh.wa.gov/PHSD/doc/lhj.pdf>
If no one is available at the local health jurisdiction, call **1-877-539-4344**

For more information, see WAC 246-101 or <http://www.doh.wa.gov/notify>

Last Updated November 7, 2011

DOH 210-001 (2/11)

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*.

Acquired immunodeficiency syndrome (AIDS) ^{3d} (including AIDS in persons previously reported with HIV infection)

Animal bites (when human exposure to rabies is suspected) ^{Imm}

Anthrax ^{Imm}

Arboviral disease ^{3d} (acute disease only: West Nile virus, dengue, Eastern & Western equine encephalitis, etc.)

Asthma, occupational (suspected or confirmed) ^{Mo} **1-888-66SHARP**

Birth Defects ^{Mo} **360-236-3533**
(abdominal wall defects, autism spectrum disorders, cerebral palsy, Down syndrome, alcohol-related birth defects, hypospadias, limb reductions, neural tube defects, oral clefts)

Botulism ^{Imm} (foodborne, infant, and wound)

Brucellosis ^{24h}

Burkholderia mallei (Glanders) ^{Imm} and pseudomallei (Meliodosis) ^{Imm}

Campylobacteriosis ^{3d}

Chancroid ^{3d}

Chlamydia trachomatis ^{3d}

Cholera ^{Imm}

Cryptosporidiosis ^{3d}

Cyclosporiasis ^{3d}

Diphtheria ^{Imm}

Disease of suspected bioterrorism origin ^{Imm}

Domoic acid poisoning ^{Imm}

***E. coli* – Refer to “Shiga toxin-producing *E. coli* ^{Imm}**

Emerging condition with outbreak potential ^{Imm}

Giardiasis ^{3d}

Gonorrhea ^{3d}

Granuloma inguinale ^{3d}

Gunshot Wounds ^{Mo} **360-236-2867**

***Haemophilus influenzae* (invasive disease, children < age 5) ^{Imm}**

Hantavirus pulmonary syndrome ^{24h}

Hepatitis A, acute ^{24h}

Hepatitis B, acute ^{24h}

Hepatitis B, chronic (initial diagnosis/previously unreported cases) ^{Mo}

Hepatitis B, surface antigen positive pregnant women ^{3d}

Hepatitis C, acute ^{3d}; chronic ^{Mo} (initial diagnosis only)

Hepatitis D, acute and chronic ^{3d}

Hepatitis E, acute ^{24h}

HIV infection ^{3d}

Immunization reactions ^{3d} (severe, adverse)

Influenza, novel or unsubtypeable strain ^{Imm}

Influenza-associated death (laboratory confirmed) ^{3d}

Legionellosis ^{24h}

Leptospirosis ^{24h}

Listeriosis ^{24h}

Lyme disease ^{3d}

Lymphogranuloma venereum ^{3d}

Malaria ^{3d}

Measles (rubeola) acute disease only ^{Imm}

Meningococcal disease (invasive) ^{Imm}

Monkeypox ^{Imm}

Mumps (acute disease only) ^{24h}

Outbreaks of disease that occur or are treated in the health care facility ^{Imm}

Outbreak of suspected foodborne origin ^{Imm}

Outbreak of suspected waterborne origin ^{Imm}

Paralytic shellfish poisoning ^{Imm}

Pesticide poisoning ^{Imm} 1-800-222-1222
Hospitalized, fatal, or cluster ^{Imm}
Pesticide poisoning, all other ^{3d}

Pertussis ^{24h}

Plague ^{Imm}

Poliomyelitis ^{Imm}

Prion disease ^{3d}

Psittacosis ^{24h}

Q fever ^{24h}

Rabies (confirmed human or animal) ^{Imm}

Rabies, suspected human exposure ^{Imm}

Relapsing fever (borreliosis) ^{24h}

Rubella (include congenital rubella syndrome) ^{Imm}
(acute disease only)

Salmonellosis ^{24h}

SARS ^{Imm}

Shiga toxin-producing *E. coli* infections ^{Imm}
(enterohemorrhagic *E. coli* including, but not limited to, *E. coli* 0157:H7; also includes post-diarrheal hemolytic uremic syndrome)

Shigellosis ^{24h}

Smallpox ^{Imm}

Syphilis (including congenital) ^{3d}

Tetanus ^{3d}

Trichinosis ^{3d}

Tuberculosis ^{Imm}

Tularemia ^{Imm}

Vaccinia transmission ^{Imm}

Vancomycin-resistant *Staphylococcus aureus* ^{24h}
(not to include vancomycin intermediate)

Varicella-associated death ^{3d}

Vibriosis ^{24h}

Viral hemorrhagic fever ^{Imm}

Yellow fever ^{Imm}

Yersiniosis ^{24h}

Other rare diseases of public health significance ^{24h}

Unexplained critical illness or death ^{24h}

CODE LEGEND

^{Imm} **Immediately – Requires a phone call to reach a live person at the local health jurisdiction 24/7**

^{24h} Within 24 hours – Requires a phone call if reporting after normal public health business hours

^{3d} Within 3 business days

^{Mo} Monthly

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

CODE LEGEND

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

Phone numbers by county are posted at:
<http://www.doh.wa.gov/PHSD/doc/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 unsubtypeable 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://apps.leg.wa.gov/WAC/default.aspx?cite=16-70>.

*A list of local health departments can be found at <http://www.doh.wa.gov/LHJMap/LHJMap.htm>.

Effective Date February 5, 2011

DOH 420-008 (rev. 2/11)

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, and Japanese encephalitis.

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.

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 fever and a few travel-associated Chikungunya cases have been reported annually. Rare reports of other travel-associated arboviral diseases including 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.

2010: 19 cases of dengue fever were reported following travel to India, Vietnam, Haiti, Philippines, Puerto Rico, Indonesia, Laos, Mexico, Tanzania, East Timor, and Venezuela. Three cases of Chikungunya virus disease were reported after travel to India and Indonesia.

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 asymptomatic presumptive viremic donors are reported.

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 were known to be endemically acquired within Washington.

2010: No cases 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.

2010: 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 a 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. 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 injection 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.

2010: Three cases of infant botulism and 1 case of wound botulism were reported. There were no cases of foodborne botulism reported. All cases were type A botulism.

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) in endemic countries. Airborne infection can occur in laboratories. 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.

2010: No cases of brucellosis were reported; however a lab worker was exposed to a specimen from a late-2009 case and received prophylactic antibiotics.

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: Animals such as cattle, puppies, kittens, swine, sheep, rodents and birds are the reservoirs. Contamination of raw poultry meat is very common. Exposure may also be through direct animal contact.

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 1,300 reports each year. Outbreaks involving multiple persons and person-to-person spread are relatively uncommon. Infections are reported most commonly in children and during the summer months.

2010: Cases reported in 2010 increased 30% over recent years (five-year average 1031 cases/year). In 2010, 1,315 cases were reported (19.5 cases/100,000 population) with 142 hospitalizations and 2 deaths. This is the highest rate since the 1990s when rates were running as high or higher. There were no common source outbreaks 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 to 4 months.

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. Female adolescents are physiologically more susceptible to infection than older women. 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. If *Chlamydia* is found, also screen or treat for gonorrhea.

Recent Washington trends: Each year over 20,000 cases are reported.

2010: 21,401 cases were reported (317.8 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.

2010: No cases were reported.

Cryptosporidiosis

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

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

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

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

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

Recent Washington trends: After an increase in case reporting during 2005, following changed treatment and diagnostic practices, case rates have stabilized to between 95 and 139 cases per year in Washington.

2010: 102 laboratory-confirmed cases were reported (1.5 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.

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: 0 to 11 cases are reported yearly, mainly after international travel.

2010: Two cases were reported. One case had traveled to Italy while the other one did not report traveling outside of Washington.

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.

2010: No cases were reported.

Enterohemorrhagic *Escherichia coli* (EHEC) Including *E. coli* O157:H7

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 EHEC diarrhea with antibiotics may increase the risk of developing HUS.

Sources: Cattle are the most important source, although other herbivores may also carry EHEC. 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 130–200 reports each year. EHEC has a seasonal pattern. Most cases occur during summer and fall months.

2010: A total of 226 EHEC cases were reported (rate 3.4 cases/100,000 population); 12 reported HUS as a complication. Among 186 confirmed cases only 110 (59%) were serogroup O157. A recent substantial rate increase for non-O157 EHEC (1.1 in 2010 vs. 0.5 in 2009) reflects new laboratory testing practices. The 76 non-O157 EHEC infections included 45 serogroup O26, 12 O103, 6 O121, and 3 each O111 and O45, and ≤ 2 cases each included O118, O145, O126, O174, and O178.

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 do 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.

2010: 521 cases were reported (7.7 cases/100,000 population). The infection was diagnosed most commonly in children <1 year of age and children 1 to 4 years of age.

Gonorrhea

Cause: Bacterium *Neisseria gonorrhoeae*.

Illness and treatment: About half of women and some men have no symptoms. When symptoms occur, urethral discharge and painful urination are typical of genital infections. Complications include pelvic inflammatory disease in women with a risk of infertility, or epididymitis in men. There can be conjunctivitis, pharyngitis, proctitis, or, rarely sepsis. Treatment is with antibiotics.

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

Additional risks: Rates are highest among sexually active adolescents and young adults.

Prevention: Use safe sexual practices to reduce transmission. Screen sexually active women at risk to detect infection in asymptomatic patients. If gonorrhea is found, also screen or treat for chlamydia.

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

2010: 2,865 cases were reported (42.6 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. Treatment is with antibiotics.

Sources: Humans, including asymptomatic carriers, are the reservoir and transmission is through respiratory droplets or direct contact.

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

Prevention: Immunization of all infants prevents *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.

2010: Ten cases in children under 5 years were reported with one death. Serotyping results were: serotype a – 1 case; serotype f – 2 cases; and the remaining 7 cases were untypable. Nine of the 10 cases were hospitalized, with 6 requiring admission to an intensive care unit.

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, 41 cases were reported through 2010 with 13 (32%) associated deaths (including a retrospectively identified case from 1985). Each year there are 1 to 5 cases reported, mainly exposed in eastern counties.

2010: Two cases were reported with no deaths; both exposures were in eastern Washington.

Hemolytic Uremic Syndrome (HUS)

Cause: Complication of infection with Shiga toxin-producing bacteria, usually *E. coli* O157:H7. HUS following a diarrheal illness is reported in Washington as suspect Enterohemorrhagic *E. coli*.

Illness and treatment: HUS includes hemolytic anemia (identified microscopically) and kidney damage. Most persons recover with supportive treatment, but some have permanent kidney damage or die from complications.

Sources: For enterohemorrhagic *E. coli* (EHEC), reservoirs include cattle and other animals including deer and horses; known sources are unpasteurized milk, undercooked ground beef and contaminated raw produce. There can be person-to-person transmission of EHEC.

Additional risks: Children are at particular risk for developing HUS as a complication of diarrheal illness caused by a Shiga toxin-producing organism. Using antibiotics to treat EHEC diarrhea may increase the 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: Each year there are 1 to 6 reports.

2010: There was one case of HUS that did not follow a diarrheal illness. 12 cases of HUS following a diarrheal illness are included as EHEC. Beginning in 2011, HUS following a diarrheal illness will be reported as a complication of Shiga-toxin producing *E. coli* (STEC). HUS without a preceding diarrheal illness will no longer be notifiable.

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 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 with 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, hepatitis A incidence decreased to fewer than 100 cases a year with increased vaccination.

2010: 21 cases (0.3 cases/100,000 population) were reported with no deaths. There were 13 reports of exposures occurring during foreign travel, including 6 to Mexico, 2 to Haiti, and 1 each to Brazil, Cambodia, Korea, Uganda, and Venezuela.

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 carries a risk for chronic infection. 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.

Additional risks: After acute infection, about 90% of infants and 30% of children under 5 years will become chronically infected compared to about 5% of adults.

Prevention: To prevent infection, immunize all children and any adults with risks for exposure. Screen and, if appropriate, vaccinate all pregnant women, infants born to infected women, household contacts and sex partners of infected individuals. Routine testing is recommended for those born in Asia, Africa, and other regions with $\geq 2\%$ prevalence of chronic infections. Use safe sexual practices, avoid sharing drug paraphernalia, and screen blood and tissue products to prevent transmission.

Recent Washington trends: Each year 60 to 100 cases of acute hepatitis B are reported. Acute cases declined with increased vaccination. 1100 to 1400 cases of chronic hepatitis B are reported annually with about one death a year due to fulminant infection. Current chronic hepatitis reports are posted at: <http://www.doh.wa.gov/cfh/Hepatitis/docs/hepbcrpt6-10.pdf>. About 380 hepatitis B surface antigen positive pregnant women are reported each year with 2 to 6 cases of perinatal hepatitis B virus infections.

2010: 50 acute cases (0.7 cases/100,000 population), 332 infants born to surface antigen positive women and 3 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 acute and chronic 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.

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/cfh/Hepatitis/docs/hepbcrpt6-10.pdf>

2010: 25 acute cases (0.4 cases/100,000 population) were reported.

Hepatitis, Unspecified (Infectious)

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 simultaneous hepatitis B infection, immunize all children and any adults 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.

2010: One case of hepatitis E was reported with exposure in Vietnam.

Herpes Simplex, Genital and Neonatal

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

Illness and treatment: Genital infection is lifelong, 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: Oral herpes (cold sores) can be transmitted to the genital area.

Prevention: Use safe sexual practices to reduce transmission.

Recent Washington trends: Each year there are about 2,000 cases reported.

2010: 2,028 cases of initial genital HSV infection (30.1 cases/100,000 population) and 6 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 been stable over the past decade. Between 550 and 600 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.

2010: 551 cases were reported (8.2/100,000 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*, *L. longbeachae* and *L. dumoffii*.

Illness and treatment: There are two clinically and epidemiologically distinct illnesses: Legionnaires' disease with fever, muscle aches, cough, pneumonia; and Pontiac fever, 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 65 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: Each year there are fewer than 30 reports, with one to 4 deaths.

2010: 35 cases (0.5 cases/100,000 population) were reported with 4 deaths; 15 (43%) were admitted to intensive care units and 11 (31%) required ventilation. Median age was 61 years (range 28-89) and 26 (74%) reported at least one of the following risk factors: chronic liver disease, immunosuppressive therapy, chronic diabetes, chronic lung disease, or smoking. Of cases with a species identified, 31 (89%) had *L. pneumophila*. 9 (26%) were travel-associated with 3 cases reporting travel to Mexico.

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 recreation or farm work.

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

Recent Washington trends: Each year there are 0 to 5 reports. Most infections relate to recreational water exposure in Washington or during travel.

2010: One leptospirosis case was reported who had exposure to river water in Washington.

Listeriosis

Cause: Bacterium *Listeria monocytogenes*.

Illness and treatment: Diarrhea may occur but the organism is generally not diagnosed by standard stool culture methods. Complications include septicemia or meningitis, which cause fever, headache, vomiting, delirium, or coma; fetal loss can occur subsequent to infection in pregnant women. Severe infections are treated with antibiotics.

Sources: *Listeria* occur 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.

2010: 24 cases were reported (0.4 cases/100,000 population), including 18 in persons over the age of 50 (0.8/100,000 population) and 2 newborn infants. One death was reported.

Lyme Disease

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

Illness and treatment: The classic symptom is a target-shaped (bull's-eye) rash called erythema migrans. 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 "flu-like" symptoms or rash over the next month. If symptoms develop, contact 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.

2010: 16 cases were reported; only 2 had in-state exposure in Klickitat and Okanogan counties.

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.

2010: 39 cases (0.6 cases/100,000 population) were reported: 20 *P. falciparum*, 1 *P. malariae*, 8 *P. vivax*, 2 mixed *ovale-vivax*, and 8 unknown. Exposures were in Africa, Asia, and Central America.

Measles

Cause: Measles virus, a paramyxovirus, genus *Morbillivirus*.

Illness and treatment: A 2–4 day prodrome that includes fever up to 105°F and cough, conjunctivitis, or runny nose, is 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 can include diarrhea, ear infection, pneumonia, acute encephalitis, and even death; they are more common among children under 5 and adults over 20 years of age. The case fatality rate for measles in this country is 0.1–0.3%. 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 through contact by a susceptible U.S. resident with infected international travelers. Transmission to additional persons within this country can occur. 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 and hand hygiene, 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.

2010: One case was reported after travel to India.

Meningococcal Disease (Invasive)

Cause: *Neisseria meningitidis*, mainly serogroups B, C, Y, and W135 in the United States, and additionally 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. Bloodstream infections (meningococcemia), which cause fever and often shock as well as a rash or bruise-like skin lesions, often lead to severe outcomes such as permanent disability or death. A case 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 persons aged 2–55 years at increased risk. Prophylactic antibiotics are usually advised for persons having recent close contact with a confirmed case. Good respiratory hygiene can reduce transmission.

Recent Washington trends: During the past decade, 26 to 76 cases have been reported annually, with 1 to 8 deaths each year.

2010: 33 cases (0.5 cases/100,000 population) were reported with 3 deaths. Isolates from 29 of 31 cases (93.5%) were submitted for determination of serogroup. Serogrouping results were: 13 serogroup Y (one fatal), 8 serogroup C (one fatal), 7 serogroup B, and 1 serogroup W135.

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% have mild, nonspecific, or primarily respiratory symptoms. Complications include inflammation of testes (orchitis) or ovaries (oophoritis), encephalitis or aseptic meningitis (rarely 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.

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 in Washington was 0.5 per 100,000 population or less (0-26 cases per year). Due to the increased awareness of mumps subsequent to the 2006 outbreak, 42 and 53 cases were reported in 2006 and 2007, respectively. A change in the national reporting criteria was made after 2007 and the rate of reported mumps has returned to pre-2006 levels.

2010: Seven cases were reported. The age range for reported cases was 1 to 44 years, with a median age of 18 years. Only one of the cases (14%) reported ever having received any mumps vaccine, and was also reported as being “up to date” for mumps vaccination.

Paralytic Shellfish Poisoning (PSP)

Cause: Ingestion of shellfish with a toxin from the phytoplankton *Alexandrium catenella*.

Illness and treatment: Symptoms begin minutes or hours after eating contaminated shellfish and may include numbness of the mouth and limbs. Severe poisoning progresses rapidly to paralysis and respiratory arrest. Mild symptoms resolve completely in hours to days. Supportive care, including mechanical ventilation, may be needed in severe cases. There is no anti-toxin.

Sources: Bivalve mollusks such as clams, oysters, mussels, and geoduck ingest the plankton and concentrate the toxin. There is no person-to-person spread.

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

Prevention: Before harvesting shellfish check the Marine Biotxin 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: Two clusters of PSP have been reported during the past 10 years (7 reports in 2000 and 5 in 1998). Both clusters were associated with mussels gathered recreationally from south Puget Sound waters.

2010: No 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 that may last for weeks with spasms of severe coughing (paroxysms) followed by a gasp, whoop, or vomiting. Infants 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 and transmit pertussis through respiratory droplets or direct contact.

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

Prevention: Recommended universal childhood immunization with a booster dose for adolescents and adults can reduce the risk of infection and generally prevent severe illness in most age groups. Very young infants (under 2 months of age) too young to be immunized can be protected by immunization of close contacts. Respiratory and hand hygiene can reduce transmission.

Recent Washington trends: The number of cases reported each year varies considerably, ranging from 184 to 1026 cases a year since 1995. There is also variation in the rate of reported disease among health jurisdictions, reflecting local outbreaks.

2010: 607 cases (9.0 cases/100,000 population) were reported. Rates were highest for children under 1 year of age (106/100,000). 44% of cases were reported as being “up to date” for pertussis vaccine. 276 (45%) of cases were outbreak-related.

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 14% 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: Serologic sampling of 6,781 wild carnivores collected between 1975 and 2009 in Washington showed 3.3% seropositivity but human infections are rare. The last reported case was an animal trapper in Yakima exposed while skinning a bobcat in 1984. In neighboring Oregon, 2 persons living in the southern part of the state were diagnosed with plague in 2010.

2010: No human cases of plague were reported; however, a laboratory technician in Washington who worked with a specimen from an Oregon plague case received prophylaxis for a laboratory exposure.

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. Nonparalytic aseptic meningitis with full recovery occurs in 1–2% of infections. Fewer 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).

2010: 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.

2010: 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, but shed the organism in birth products as well as 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.

Prevention: Consume only pasteurized milk and dairy products. Appropriately dispose of animal birth products. Restrict access to barns and facilities housing potentially infected animals.

Recent Washington trends: Each year there are 0 to 2 reports.

2010: Three cases, with one death, were reported. Two cases with possible exposures identified had residences near livestock farms.

Rabies Post-Exposure Prophylaxis

Information about post-exposure prophylaxis (PEP) is available from the Advisory Committee on Immunization Practices available on the CDC website (www.cdc.gov/rabies/). A reduction to four instead of five vaccine doses for PEP in immunocompetent persons became official in March 2010 (*MMWR* 2010; 59 (No. RR-2)). Also see Rabies (Human).

Recent Washington trends: Of bats tested in Washington, 5 to 10% are identified as rabid. Since 1987, only 4 rabid domestic animals were identified, 2 with bat variant virus (Table 1).

2010: There were 251 reports of PEP. The most common exposures were bats (51%), raccoons (19%), dogs (15%), and cats (3%). For 10 cases, PEP followed exposure to a bat testing positive for rabies; 13 persons receiving PEP had exposures out of state and 28 had exposures abroad. 14 of 200 (7%) bats tested were rabid (Table 2). No other animals tested in Washington were rabid (Table 3).

Table 1. Rabid Non-Bat Animals and Rabies Strains, Washington, 1987–2010

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

* Infection was not confirmed at CDC

Table 2. Washington State Bats Tested for Rabies, 2006-2010

	2006**		2007**		2008		2009		2010		County Total	
Counties	Positive	Total	Positive	Total	Positive	Total	Positive	Total	Positive	Total	Positive	Tested
Adams	0	0	0	0	0	0	0	0	0	0	0	0
Asotin	0	4	1	1	0	1	0	0	1	2	2	8
Benton	0	1	0	4	0	33	1	37	0	4	1	79
Chelan	1	8	0	1	1	7	0	1	0	2	2	19
Clallam	0	7	1	2	1	4	0	6	0	1	2	20
Clark	0	8	1	15	2	14	0	10	1	11	4	58
Columbia	0	0	0	1	0	0	0	1	0	0	0	2
Cowlitz	1	8	1	9	0	5	0	12	1	5	3	39
Douglas	0	1	0	0	0	1	0	2	0	1	0	5
Ferry	0	1	1	1	0	0	0	4	1	1	2	7
Franklin	0	0	0	0	0	1	0	0	0	1	0	2
Garfield	0	0	0	0	0	0	0	0	0	0	0	0
Grant	0	2	0	0	0	0	0	1	0	2	0	5
Grays Harbor	0	2	1	3	0	4	1	8	0	0	2	17
Island	1	15	0	8	1	15	1	6	0	6	3	50
Jefferson	0	2	0	1	0	1	1	5	0	2	1	11
King	3	58	4	98	1	83	1	38	2	45	11	322
Kitsap	1	13	3	20	0	17	0	18	1	10	5	78
Kittitas	0	1	0	0	0	1	1	2	1	2	2	6
Klickitat	0	0	0	2	0	1	0	1	0	3	0	7
Lewis	0	13	0	15	0	17	0	13	0	10	0	68
Lincoln	0	0	0	1	0	0	0	0	0	0	0	1
Mason	0	3	1	8	0	4	0	2	0	4	1	21
Okanogan	0	2	1	2	0	0	1	3	0	0	2	7
Pacific	0	0	0	1	2	8	1	4	0	3	3	16
Pend Oreille	1	2	0	0	0	0	0	1	0	0	1	3
Pierce	1	20	2	29	1	31	1	29	1	12	6	121
San Juan	0	1	0	3	0	0	0	2	0	2	0	8
Skagit	0	6	1	4	1	7	1	7	0	5	3	29
Skamania	1	1	0	2	0	1	0	0	0	0	1	4
Snohomish	3	25	0	24	2	20	2	29	3	24	10	122
Spokane	0	18	3	18	0	12	0	19	0	8	3	75
Stevens	0	8	0	3	0	4	1	4	0	4	1	23
Thurston	1	19	0	24	1	22	1	27	2	16	5	108
Wahkiakum	0	1	0	1	2	7	0	2	0	1	2	12
Walla Walla	0	1	0	3	0	0	0	0	0	2	0	6
Whatcom	1	20	1	7	1	8	0	15	0	10	3	60
Whitman	0	0	0	1	1	6	0	1	0	1	1	9
Yakima	0	2	0	3	0	2	0	1	0	0	0	8
Total	15	273	22	315	17	337	14	311	14	200	82	1436

** Numbers reported through 2007 were inclusive of only positive and negative test results; beginning in 2008 all specimens submitted (including unsatisfactory results) were included in counts.

Table 3. Washington State Animals Tested for Rabies, 1988-2010
(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
Total											
1988-2010	5604 (375)	2826 (1)	1977	145	226	67	212	23	261	196 (2)	11537 (378)

* Horse

^ Llama

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

Lagomorphs include: rabbit and pika

Other domestic include: alpaca, burro, cattle, goat, horse, llama, mule, pig, sheep

Other wild include: badger, bear, bison, bobcat, cougar, coyote, deer, fox, kinkajou, lynx, marten, mink, mole, monkey/non-human primates, ocelot, opossum, otter, seal, shrew, weasel, wolf, wolf hybrid, zebra, zorilla

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).

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 transmitted when saliva or brain tissue contaminates the 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.

2010: No human rabies cases were reported.

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.

Coccidioidomycosis (Valley Fever)

Cause: The soil fungus *Coccidioides immitis*.

Illness and treatment: A pneumonia or flu-like illness with symptoms including fever, cough, headache, rash, and muscle aches. Disseminated infections can occur. Treatment is with antifungal drugs.

Sources: Exposure to airborne fungal spores with disruption of contaminated soil in semi-arid areas such as southwestern United States and parts of Mexico and South America.

Prevention: Avoid exposure to dusty environments in endemic regions.

Recent Washington trends: Recently there are up to six travel-associated cases each year.

2010: Ten cases were reported. Four cases reported travel to Arizona during their exposure period. Three additional cases reported travel to California during their exposure period. One case was an immigrant from Mexico who was likely exposed prior to arriving in Washington.

Creutzfeldt-Jakob Disease (CJD)

Cause: Prions, or “proteinaceous infectious particles” in which normal cellular prion proteins in the brain fold into abnormal, pathologic forms, causing a fatal neurodegenerative disease.

Illness and treatment: About 85% of CJD cases are sporadic (sCJD) while 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 2000 to 2009, 4 to 17 cases were reported each year.

2010: Eight cases were reported. The median age was 67.5 years old (range 57–84 years). Six cases were confirmed through examination of brain tissue; 5 were sporadic CJD and one was familial CJD.

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 the organism.

Prevention: There are no specific precautions.

Recent Washington trends: Since 2004 more than 20 animals, including porpoises, cats, dogs, and a bird, have tested positive in Washington. *C. gattii* was found in soil from Whatcom County. Since 2006, 1–7 human cases are reported each year, some with presumed in-state exposure.

2010: Four cases were reported from Thurston and Whatcom counties. One case was likely exposed in Washington given no travel to other known endemic areas. The other 3 had visited either British Columbia (mainland) or Oregon during the exposure period, but in-state exposure could not be ruled out.

Rocky Mountain Spotted Fever

Cause: Bacterium *Rickettsia rickettsii*.

Illness and treatment: Symptoms include a persistent high fever, malaise, muscle pain, severe headache, chills, and conjunctival injection. A maculopapular rash appears on the extremities after 3 to 5 days and spreads to the trunk. Treatment is with antibiotics.

Sources: *R. rickettsii* is transmitted by the bite of an infected tick. Attachment of 4–6 hours is required for transmission.

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 flu-like symptoms within a week of the bite. If symptoms develop, contact a health care provider.

Recent Washington trends: 0–1 case is reported each year in Washington.

2010: One case was reported in a man who acquired a tick bite while hiking in Idaho.

Tick Paralysis

Cause: Toxin in the saliva of ticks.

Illness and treatment: Symptoms include acute ataxia and ascending flaccid paralysis which develop after 4 to 7 days of tick feeding. Treatment requires removal of the engorged tick. Recovery typically occurs within 24 hours of tick removal with no lasting deficits.

Sources: In the Pacific Northwest, the American dog tick (*Dermacentor variabilis*) or the rocky mountain wood tick (*D. andersoni*) can cause tick paralysis. Cases typically occur between April and June when *Dermacentor* ticks emerge to mate and seek blood meals.

Prevention: During outdoor activities in endemic areas avoid tick bites by wearing appropriate clothing and using repellents. Check the body for ticks and use tweezers to remove any ticks that have attached.

Recent Washington trends: Washington has had 1–2 cases per year since 2007.

2010: One case was reported in a young female from Eastern Washington.

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 12 lymphogranuloma venereum cases.

2010: Two lymphogranuloma venereum cases, one chancroid case, 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.

2010: Seven TBRF cases were reported, including 4 with exposures in Kittitas County, and 1 each with exposures in Spokane, Yakima, and California.

Rubella

Cause: Rubella virus, a togavirus, 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 may 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 are frequent in adults. Uncommon complications including encephalitis (1 in 6000 cases) 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 airborne or droplet 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 has not been routinely used or in unimmunized persons who travel outside the United States to areas where rubella is still endemic. Adults are more likely than children to develop arthritis or experience complications.

Prevention: Universal childhood immunization has been effective in preventing infection. Respiratory and hand hygiene can also reduce the risk of transmission.

Recent Washington trends: 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. Since 2000 only 0 to 2 cases of acquired rubella have been reported annually.

2010: One case was reported in a visiting student who was exposed before leaving Vietnam.

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 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 625 to 850 cases reported per year. Infections occur all year with some increase during the spring and summer months. Many serotypes are reported (Table 4).

2010: 780 cases were reported (11.6 cases/100,000 population) with three deaths. The infection was diagnosed most frequently in infants under one year and children 1 to 4 years of age.

Shigellosis

Cause: Bacteria in the genus *Shigella*, typically *S. sonnei*. Other species including *S. flexneri*, *S. boydii*, or *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.

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

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 116 to 185 reports.

2010: 112 cases were reported (1.7 cases/100,000 population). Shigellosis was diagnosed most frequently in children 1 to 4 years of age. 50% of cases were associated with travel outside of the United States. The most frequently reported travel destinations were Mexico and India.

Table 4. *Salmonella* Serotypes, 2010

Serotype	No.	%
Enteritidis	173	22.2
Typhimurium	127	16.3
Heidelberg	52	6.7
Newport	50	6.4
Montevideo	29	3.7
Infantis	18	2.3
Thompson	16	2.1
Agona	15	1.9
Oranienburg	14	1.8
Paratyphi B Tar + Java	14	1.8
Muechen	12	1.5
Saintpaul	12	1.5
Braenderup	11	1.4
Javiana	11	1.4
4,[5],12:I:--	10	1.3
Chester	10	1.3
Mbandaka	10	1.3
Poona	9	1.1
Dublin	8	1.0
Anatum	7	0.9
Senftenberg	7	0.9
Stanley	7	0.9
Hadar	6	0.8
Other/Unknown	44	5.6

2-5 Cases Each: 18:Z4 Z23:--; 4 12:I:--; 41:Z4 Z23:-; Adelaide; Bareilly; Berta; Blockley; Brandenburg; Cotham; Daytona; Derby; Gaminara; Give; Havana; Kentucky; Kiambu; Litchfield; Panama; Reading; Sandiego; Schwarzengrund; Tennessee; Virchow; Weltevreden

One Case Each: 48:Z4:Z24:--; Bovismorbificans; Clackamas; Coeln; Coleypark; Cubana; Durham; Ealing; Emek; Flint; Lagos; Manhattan; Miami; Michigan; Mississippi; Muenster; Oslo; Paratyphi A; Paratyphi B; Pomona; Singapore; Vancouver

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. Early latent and late/late latent syphilis, which are infections acquired in the past, can result in damage to the brain, heart, or other organs. Congenital syphilis may result in organ damage and bone deformities. Antibiotics treat the infection but organ damage is permanent.

Sources: Syphilis is sexually transmitted or acquired before birth.

Additional risks: Risk for syphilis is higher among men who have sex with men.

Prevention: Use safe sexual practices to reduce transmission.

Recent Washington trends: Rates have increased since 1996, when 9 cases were reported. Recently over 150 primary and secondary cases have been reported annually. Rates are higher among males.

2010: 261 cases of primary and secondary syphilis were reported (3.9 cases/100,000 population).

Tetanus

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

Illness and treatment: About 80% of cases are generalized tetanus, with descending rigidity and painful spasms of skeletal muscles starting with the jaw and neck (referred to as “lockjaw”). Spasms can continue for 3-4 weeks and complete recovery can take months. Complications include bone fractures and abnormal heart rhythms. Case fatality rate for generalized tetanus is 10% or higher, depending on available care, with more deaths occurring in infants and elderly persons. Treatment includes tetanus immune globulin (TIG), wound care, antibiotics, supportive care, and active immunization as soon as the person is stable. Neonatal tetanus is a form of generalized tetanus that occurs in newborn infants born without protective passive immunity, because the mother is not immune. Local tetanus and cephalic tetanus are other less common forms of the disease.

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 be apparent or inapparent) 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 persons with no history of vaccination with tetanus toxoid or those without a booster in the preceding decade. Cases related to injection-drug use have increased in recent years.

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

Recent Washington trends: The most recent case was reported in 2005 in a person approximately 60 years of age who had been gardening and got a splinter in a finger. The person’s most recent tetanus booster dose had been given 20 years prior to onset of illness.

2010: 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.

2010: 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 may be latent, and not communicable, or active. Typical symptoms are fever, weight loss, night sweats, cough, bloody sputum, and chest pain. If you have latent TB infection (LTBI) but not TB disease, your physician may want you to take medication to prevent you from developing TB disease. If you have active TB disease you must complete a course of curative therapy.

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

Additional risks: About 75% of cases in Washington are among foreign-born persons from countries with high rates of TB. People infected with the HIV virus, AIDS patients, persons with weakened immune symptoms, diabetics, young children and the elderly are at increased risk of developing active TB disease.

Prevention: Stop the spread of TB by covering the mouth and nose when coughing, and take all TB medicine exactly as prescribed. Completing treatment for LTBI and infectious TB prevents the spread of TB and the development of resistant strains. Persons at risk can be screened for TB.

Washington trends: Each year there are approximately 250 cases of TB, with the number of deaths ranging from 2 to 18. There continues to be a decrease in crude TB incidence rate.

2010: Washington State reported 236 cases of TB for a case rate of 3.5 per 100,000 persons. Only 7 of the 39 counties had 5 or more cases of TB, accounting for 87% of cases in Washington. King County accounted for 114 cases (48%) of the 236 cases (rate 6.0 per 100,000).

Tularemia

Cause: Bacterium *Francisella tularensis*.

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

Sources: The reservoir is wild mammals (especially rabbits, hares, voles, squirrels, muskrats, beavers). Infection can occur through direct contact with an infected animal, bite from an

arthropod (e.g., tick, deerfly), ingestion of contaminated raw meat or water, or inhalation, including during outdoor work or with improper handling of cultures in laboratories.

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

Recent Washington trends: Each year there are 1 to 10 reports. 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.

2010: Three cases were reported in state residents; 2 were exposed in western Washington and 1 in eastern Washington. One was presumed to be exposed while baling hay and the other 2 had insect bites. There were no fatal cases.

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.

2010: 22 cases were reported; 17 reported international travel, and 5 had exposures in western Washington including work in a microbiology laboratory, person-to-person transmission from an acute or chronic case, or multiple exposures. One case had no source of exposure determined.

Typhus

Cause: *Rickettsia typhi* or *R. felis* for flea-borne (endemic or murine) typhus and *R. prowazekii* for louseborne (epidemic) typhus.

Illness and treatment: Louseborne typhus is characterized by fevers, chills, headache, muscle aches, and rash. Flea-borne or murine typhus resembles louseborne typhus, but symptoms are milder. Treatment is with antibiotics.

Sources: Apparently healthy rats are the reservoir and fleas are the vector for flea-borne typhus. Humans are the reservoir and the body louse is the vector for louse-borne typhus. Both forms of typhus are acquired by rubbing flea or louse feces into a bite or other fresh skin wound.

Additional risks: Endemic typhus is rarely reported in the United States. Most cases occur in southern California, southern Texas, the southeastern Gulf Coast, and Hawaii.

Prevention: Keep rodents, especially rats, away from human habitations.

Recent Washington trends: The last reported case was in 1994 after travel to Asia.

2010: No cases were reported.

Vibriosis (Non-Cholera)

Cause: Bacteria in the genus *Vibrio*, including *V. parahaemolyticus*, *V. vulnificus*, non-toxin-producing *V. cholerae* and other less common species. Infections caused by toxin-producing *V. cholerae* 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, 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 contaminated 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 from only 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. Non-laboratory confirmed cases and cases from out of state associated with consumption of Washington shellfish are not included in these counts.

2010: 59 cases were reported (0.9 cases/100,000 population) with 55 reporting shellfish ingestion. The age groups most affected were persons 40–44 and 55–59 years of age. Males predominate among reported cases.

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 5).

2010: No waterborne outbreaks were reported.

**Table 5. Waterborne Outbreaks,
1991-2010**

Year	Cases	Outbreaks
1991	8	2
1992	10	1
1993	617	3
1994	8	2
1995	0	0
1996	18	1
1997	2	1
1998	306	2
1999	150	3
2000	0	0
2001	0	0
2002	0	0
2003	12	1
2004	0	0
2005	0	0
2006	0	0
2007	58	3
2008	0	0
2009	0	0
2010	0	0

Yersiniosis

Cause: Bacteria in the genus *Yersinia*, usually *Y. enterocolitica*.

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.

2010: 25 cases were reported (0.4 cases/100,000 population). Yersiniosis was most frequently diagnosed in infants less than one year of age.

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

^V Vaccine-associated

^T Travel-associated

^E Endemically acquired

^C Confirmed case

^U Unknown exposure location

^P Presumptive Viremic Blood Donor

BOTULISM

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

*All rates are cases per 100,000 population.

BRUCELLOSIS

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

*All rates are cases per 100,000 population.

CAMPYLOBACTERIOSIS

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	2	*	1	*	1	*	6	33.3	4	*
Asotin	0	0.0	0	0.0	1	*	1	*	1	*
Benton	23	14.3	24	14.7	22	13.3	33	19.5	41	23.7
Chelan	11	15.7	4	*	9	12.5	4	*	15	20.5
Clallam	6	8.8	6	8.8	12	17.3	14	20.1	13	18.5
Clark	57	14.1	70	16.9	54	12.7	74	17.2	110	25.3
Columbia	0	0.0	1	*	0	0.0	0	0.0	2	*
Cowlitz	12	12.4	14	14.3	14	14.1	18	18.1	23	23.0
Douglas	1	*	2	*	0	0.0	2	*	6	15.6
Ferry	0	0.0	0	0.0	1	*	2	*	2	*
Franklin	11	17.1	14	20.8	14	19.9	21	28.9	19	25.2
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	11	13.6	12	14.5	15	17.7	17	19.7	17	19.4
Grays Harbor	11	15.6	12	16.9	14	19.7	15	21.1	12	16.8
Island	7	9.1	6	7.7	11	13.9	14	17.4	11	13.6
Jefferson	1	*	3	*	1	*	7	24.1	6	20.5
King	258	14.1	263	14.1	294	15.6	261	13.7	304	15.7
Kitsap	24	9.9	16	6.5	25	10.1	34	13.7	33	13.3
Kittitas	3	*	1	*	3	*	2	*	6	14.8
Klickitat	3	*	3	*	1	*	3	*	2	*
Lewis	6	8.2	15	20.2	13	17.4	24	31.9	25	33.1
Lincoln	1	*	0	0.0	1	*	1	*	0	0.0
Mason	7	13.2	10	18.3	9	16.0	10	17.6	7	12.3
Okanogan	2	*	6	15.1	6	15.0	2	*	6	14.7
Pacific	3	*	1	*	6	27.5	1	*	5	22.6
Pend Oreille	0	0.0	2	*	1	*	2	*	1	*
Pierce	50	6.5	69	8.7	75	9.3	79	9.7	103	12.6
San Juan	4	*	3	*	4	*	4	*	2	*
Skagit	24	21.2	29	25.2	31	26.4	24	20.2	24	20.1
Skamania	0	0.0	0	0.0	0	0.0	2	*	0	0.0
Snohomish	94	14.0	117	17.0	123	17.7	92	13.1	172	24.2
Spokane	67	15.1	73	16.2	79	17.2	62	13.3	73	15.5
Stevens	1	*	1	*	4	*	1	*	2	*
Thurston	30	13.0	50	21.0	57	23.2	31	12.4	57	22.6
Wahkiakum	2	*	1	*	1	*	1	*	0	0.0
Walla Walla	3	*	3	*	3	*	5	8.4	8	13.4
Whatcom	56	30.4	64	34.0	45	23.6	59	30.6	74	37.9
Whitman	0	0.0	1	*	2	*	1	*	8	18.3
Yakima	202	87.1	123	52.5	117	49.6	101	42.4	121	50.6
STATEWIDE TOTAL	993	15.6	1,020	15.7	1,069	16.2	1,030	15.4	1,315	19.5

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	7.9	0
1987	420	9.4	1
1988	709	15.5	1
1989	899	19.3	0
1990	899	18.5	0
1991	930	18.6	4
1992	1,060	20.7	1
1993	1,051	20.1	0
1994	1,050	19.7	0
1995	1,050	19.3	4
1996	1,139	20.6	1
1997	1,150	20.5	0
1998	901	15.8	1
1999	950	16.5	2
2000	1,006	17.1	2
2001	991	16.6	0
2002	1,032	17.1	1
2003	943	15.5	0
2004	861	14.0	0
2005	1,045	16.7	0
2006	993	15.6	0
2007	1,020	15.7	0
2008	1,069	16.2	0
2009	1,030	15.4	1
2010	1,315	19.5	2

*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

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	70	404.6	39	221.6	57	320.2	77	427.8	64	349.7
Asotin	40	189.6	29	136.2	53	247.7	41	190.7	76	350.2
Benton	375	233.5	506	310.6	555	335.3	570	336.7	585	338.3
Chelan	165	235.4	139	195.2	210	291.3	161	221.8	170	231.9
Clallam	142	209.4	135	197.1	161	232.7	164	236.0	164	234.0
Clark	818	202.7	899	216.6	1,096	258.4	1,312	304.3	1,347	309.2
Columbia	3	*	2	*	3	*	4	*	7	168.7
Cowlitz	369	381.2	324	331.3	289	291.9	340	341.4	327	327.0
Douglas	78	218.5	64	176.3	76	205.4	77	204.8	83	215.6
Ferry	26	346.7	18	238.4	26	337.7	16	205.1	15	191.1
Franklin	284	442.4	252	373.9	282	401.7	310	426.4	268	355.0
Garfield	0	0.0	3	*	1	*	1	*	4	*
Grant	195	241.9	209	253.3	251	296.7	262	304.3	288	328.4
Grays Harbor	155	220.2	140	197.7	175	246.8	140	196.6	155	216.5
Island	171	221.5	205	261.5	222	279.9	171	213.0	200	246.6
Jefferson	30	106.4	36	125.9	48	166.7	47	162.1	58	198.0
King	5,244	285.7	6,015	323.2	5,957	316.2	5,805	304.0	5,945	307.5
Kitsap	683	280.6	688	281.0	780	316.0	725	292.8	780	314.1
Kittitas	102	272.7	85	221.9	122	309.6	110	275.7	130	321.0
Klickitat	17	85.9	16	80.4	16	79.6	32	158.4	36	175.6
Lewis	150	205.8	143	193.0	191	255.7	160	212.8	157	207.7
Lincoln	5	49.0	9	87.4	5	48.1	9	86.1	15	142.9
Mason	110	207.2	126	230.8	105	186.5	130	228.9	137	239.9
Okanogan	123	309.0	92	231.2	113	281.8	105	259.3	117	286.1
Pacific	19	88.4	19	88.0	29	133.0	37	169.7	30	135.7
Pend Oreille	9	73.2	18	142.9	17	132.8	16	124.0	21	160.3
Pierce	3,031	391.9	3,357	424.7	3,807	472.7	3,861	474.6	3,815	468.3
San Juan	12	76.4	12	75.5	14	87.0	6	36.8	8	48.5
Skagit	283	250.2	303	262.8	351	298.7	331	278.4	324	271.6
Skamania	8	75.5	10	93.5	18	168.2	22	203.7	25	229.4
Snohomish	1,503	223.7	1,416	206.3	1,719	246.8	1,701	241.5	1,729	243.1
Spokane	1,121	252.6	1,259	279.0	1,719	374.5	1,637	352.0	1,617	343.8
Stevens	46	109.3	47	109.3	87	199.1	74	168.2	56	126.4
Thurston	576	249.2	602	252.9	771	314.3	716	286.6	663	262.7
Wahkiakum	7	179.5	4	*	5	122.0	1	*	9	216.9
Walla Walla	93	160.6	144	247.0	201	343.0	152	256.8	164	275.2
Whatcom	519	281.6	450	239.0	467	244.5	544	281.7	571	292.1
Whitman	117	273.4	126	295.1	140	325.6	131	302.5	131	300.5
Yakima	1,120	483.2	1,182	504.7	1,188	503.6	1,180	495.0	1,110	464.2
STATEWIDE TOTAL	17,819	279.5	19,123	294.7	21,327	323.7	21,178	317.6	21,401	317.8

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

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

CHLAMYDIA TRACHOMATIS STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1987**	5,071	113.2	0
1988	12,534	274.6	0
1989	10,865	233.1	0
1990	12,709	261.1	0
1991	12,917	258.3	0
1992	11,762	229.9	0
1993	10,331	197.1	0
1994	10,575	198.2	0
1995	9,463	174.3	0
1996	9,237	167.4	0
1997	9,523	169.8	0
1998	10,998	193.4	0
1999	11,964	207.8	0
2000	13,066	221.7	0
2001	13,631	228.1	0
2002	14,936	247.2	0
2003	16,796	275.4	0
2004	17,635	285.9	0
2005	18,617	297.6	0
2006	17,819	279.5	0
2007	19,123	294.7	0
2008	21,327	323.7	0
2009	21,178	317.6	0
2010	21,401	317.8	0

*All rates are cases per 100,000 population.

**First year reported, July - December

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

CHOLERA

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

*All rates are cases per 100,000 population.

CRYPTOSPORIDIOSIS⁺

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	2	*	0	0.0	0	0.0	0	0.0
Benton	3	*	0	0.0	1	*	2	*	1	*
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clallam	0	0.0	0	0.0	1	*	4	*	4	*
Clark	5	1.2	9	2.2	1	*	18	4.2	13	3.0
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	1	*	7	7.2	4	*	4	*	7	7.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	1	*	0	0.0	0	0.0	1	*	1	*
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	1	*	1	*	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	2	*	5	17.4	5	17.2	8	27.3
King	46	2.5	43	2.3	34	1.8	32	1.7	17	0.9
Kitsap	1	*	5	2.0	8	3.2	0	0.0	0	0.0
Kittitas	1	*	2	*	13	33.0	1	*	0	0.0
Klickitat	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	2	*	2	*	2	*	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	1	*	1	*	2	*	0	0.0	0	0.0
Okanogan	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	7	0.9	21	2.7	13	1.6	17	2.1	32	3.9
San Juan	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Skagit	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	9	1.3	14	2.0	5	0.7	6	0.9	8	1.1
Spokane	4	*	6	1.3	2	*	4	*	4	*
Stevens	0	0.0	0	0.0	0	0.0	1	*	1	*
Thurston	3	*	4	*	0	0.0	0	0.0	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	1	*	0	0.0	0	0.0
Whatcom	3	*	3	*	0	0.0	2	*	0	0.0
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Yakima	6	2.6	15	6.4	7	3.0	3	*	4	*
STATEWIDE TOTAL	95	1.5	139	2.1	99	1.5	102	1.5	102	1.5

CRYPTOSPORIDIOSIS STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
2001	73	1.2	0
2002	62	1.0	0
2003	65	1.1	0
2004	63	1.0	0
2005	94	1.5	0
2006	95	1.5	0
2007	139	2.1	0
2008	99	1.5	0
2009	102	1.5	0
2010	102	1.5	0

*All rates are cases per 100,000 population.

+ Cryptosporidiosis first became a notifiable condition in Washington in 12/2000

*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

‡ 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

*All rates are cases per 100,000 population.

E. COLI, ENTEROHEMORRHAGIC

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Asotin	1	*	1	*	2	*	0	0.0	0	0.0
Benton	3	*	2	*	1	*	4	*	1	*
Chelan	5	7.1	0	0.0	0	0.0	2	*	2	*
Clallam	0	0.0	1	*	0	0.0	0	0.0	3	*
Clark	14	3.5	9	2.2	7	1.7	25	5.8	34	7.8
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	2	*	3	*	1	*	1	*	3	*
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	1	*
Franklin	1	*	1	*	0	0.0	0	0.0	2	*
Garfield	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Grant	5	6.2	0	0.0	2	*	3	*	1	*
Grays Harbor	0	0.0	0	0.0	1	*	1	*	0	0.0
Island	1	*	1	*	2	*	0	0.0	2	*
Jefferson	0	0.0	0	0.0	3	*	0	0.0	1	*
King	45	2.5	44	2.4	48	2.5	68	3.6	45	2.3
Kitsap	7	2.9	6	2.5	2	*	3	*	2	*
Kittitas	0	0.0	0	0.0	3	*	2	*	35	86.4
Klickitat	0	0.0	3	*	0	0.0	1	*	1	*
Lewis	4	*	0	0.0	4	*	1	*	4	*
Lincoln	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0	1	*	2	*
Okanogan	0	0.0	2	*	0	0.0	1	*	3	*
Pacific	0	0.0	0	0.0	1	*	1	*	1	*
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Pierce	22	2.8	14	1.8	15	1.9	11	1.4	11	1.4
San Juan	1	*	0	0.0	0	0.0	1	*	1	*
Skagit	1	*	5	4.3	10	8.5	4	*	3	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	17	2.5	19	2.8	53	7.6	32	4.5	23	3.2
Spokane	9	2.0	3	*	6	1.3	10	2.2	11	2.3
Stevens	0	0.0	1	*	2	*	0	0.0	1	*
Thurston	6	2.6	8	3.4	5	2.0	12	4.8	6	2.4
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	1	*	1	*	1	*	2	*
Whatcom	10	5.4	11	5.8	8	4.2	9	4.7	10	5.1
Whitman	2	*	0	0.0	0	0.0	0	0.0	4	*
Yakima	5	2.2	5	2.1	12	5.1	11	4.6	10	4.2
STATEWIDE TOTAL	162	2.5	141	2.2	189	2.9	206	3.1	226	3.4

E. COLI, ENTEROHEMORRHAGIC **STATEWIDE BY YEAR**

Year	Cases	Rate*	Deaths
1988	167	3.7	0
1989	157	3.4	1
1990	220	4.5	0
1991	164	3.3	0
1992	300	5.9	2
1993	741	14.1	3
1994	174	3.3	2
1995	140	2.6	1
1996	187	3.4	1
1997	149	2.7	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

*All rates are cases per 100,000 population.

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

GIARDIASIS

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Asotin	1	*	3	*	0	0.0	2	*	1	*
Benton	22	13.7	4	*	15	9.1	8	4.7	5	2.9
Chelan	2	*	1	*	2	*	3	*	8	10.9
Clallam	5	7.4	8	11.7	4	*	8	11.5	7	10.0
Clark	26	6.4	33	8.0	35	8.3	38	8.8	56	12.9
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	2	*	6	6.1	4	*	1	*	2	*
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Ferry	0	0.0	0	0.0	1	*	0	0.0	1	*
Franklin	4	*	5	7.4	3	*	2	*	1	*
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	3	*	2	*	3	*	5	5.8	5	5.7
Grays Harbor	4	*	8	11.3	6	8.5	4	*	6	8.4
Island	2	*	13	16.6	12	15.1	7	8.7	10	12.3
Jefferson	6	21.3	4	*	9	31.3	6	20.7	9	30.7
King	125	6.8	143	7.7	109	5.8	105	5.5	110	5.7
Kitsap	12	4.9	16	6.5	9	3.6	8	3.2	16	6.4
Kittitas	2	*	0	0.0	4	*	4	*	4	*
Klickitat	1	*	3	*	6	29.9	1	*	1	*
Lewis	5	6.9	6	8.1	6	8.0	8	10.6	8	10.6
Lincoln	0	0.0	2	*	0	0.0	0	0.0	0	0.0
Mason	4	*	5	9.2	8	14.2	2	*	7	12.3
Okanogan	4	*	3	*	5	12.5	5	12.3	4	*
Pacific	0	0.0	1	*	0	0.0	0	0.0	2	*
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	3	*
Pierce	17	2.2	53	6.7	25	3.1	31	3.8	37	4.5
San Juan	0	0.0	1	*	0	0.0	2	*	0	0.0
Skagit	5	4.4	5	4.3	9	7.7	10	8.4	11	9.2
Skamania	1	*	0	0.0	0	0.0	1	*	0	0.0
Snohomish	62	9.2	73	10.6	80	11.5	70	9.9	59	8.3
Spokane	56	12.6	57	12.6	47	10.2	55	11.8	47	10.0
Stevens	0	0.0	1	*	1	*	2	*	2	*
Thurston	21	9.1	48	20.2	21	8.6	27	10.8	22	8.7
Wahkiakum	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	4	*	3	*	1	*
Whatcom	27	14.7	37	19.6	34	17.8	23	11.9	44	22.5
Whitman	0	0.0	2	*	2	*	0	0.0	3	*
Yakima	31	13.4	47	20.1	22	9.3	26	10.9	27	11.3
STATEWIDE TOTAL	451	7.1	590	9.1	486	7.4	467	7.0	521	7.7

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

GIARDIASIS STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
1980	840	20.3	0
1981	547	12.9	0
1982	956	22.4	0
1983	706	16.5	0
1984	710	16.4	0
1985	779	17.8	0
1986	811	18.3	0
1987	827	18.5	0
1988	851	18.6	0
1989	980	21.0	0
1990	792	16.3	0
1991	876	17.5	1
1992	860	16.8	1
1993	747	14.3	0
1994	722	13.5	0
1995	855	15.7	0
1996	668	12.1	0
1997	738	13.2	0
1998	740	13.0	1
1999	560	9.7	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	7.0	0
2006	451	7.1	0
2007	590	9.1	0
2008	486	7.4	0
2009	467	7.0	0
2010	521	7.7	0

*All rates are cases per 100,000 population.

GONORRHEA

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	3	*	1	*	2	*	3	*	2	*
Asotin	1	*	2	*	4	*	4	*	5	23.0
Benton	43	26.8	30	18.4	32	19.3	34	20.1	16	9.3
Chelan	2	*	6	8.4	7	9.7	2	*	2	*
Clallam	17	25.1	13	19.0	16	23.1	12	17.3	21	30.0
Clark	129	32.0	160	38.6	170	40.1	124	28.8	170	39.0
Columbia	0	0.0	0	0.0	1	*	0	0.0	1	*
Cowlitz	223	230.4	128	130.9	39	39.4	9	9.0	35	35.0
Douglas	0	0.0	2	*	2	*	3	*	2	*
Ferry	0	0.0	1	*	1	*	0	0.0	2	*
Franklin	18	28.0	15	22.3	21	29.9	10	13.8	19	25.2
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Grant	11	13.6	10	12.1	14	16.5	9	10.5	17	19.4
Grays Harbor	30	42.6	15	21.2	20	28.2	12	16.9	5	7.0
Island	24	31.1	27	34.4	16	20.2	14	17.4	13	16.0
Jefferson	6	21.3	4	*	2	*	2	*	2	*
King	1,937	105.5	1,492	80.2	1,290	68.5	1,083	56.7	1,568	81.1
Kitsap	72	29.6	98	40.0	62	25.1	44	17.8	48	19.3
Kittitas	4	*	5	13.1	11	27.9	6	15.0	8	19.8
Klickitat	3	*	0	0.0	3	*	2	*	1	*
Lewis	44	60.4	28	37.8	21	28.1	8	10.6	10	13.2
Lincoln	1	*	2	*	1	*	1	*	1	*
Mason	9	16.9	15	27.5	13	23.1	5	8.8	7	12.3
Okanogan	4	*	9	22.6	9	22.4	7	17.3	3	*
Pacific	8	37.2	4	*	2	*	1	*	1	*
Pend Oreille	1	*	1	*	1	*	0	0.0	0	0.0
Pierce	825	106.7	830	105.0	676	83.9	457	56.2	414	50.8
San Juan	1	*	0	0.0	6	37.3	2	*	4	*
Skagit	37	32.7	17	14.7	9	7.7	12	10.1	17	14.2
Skamania	0	0.0	0	0.0	2	*	2	*	4	*
Snohomish	317	47.2	296	43.1	207	29.7	148	21.0	191	26.9
Spokane	120	27.0	207	45.9	272	59.3	131	28.2	137	29.1
Stevens	3	*	2	*	1	*	4	*	5	11.3
Thurston	58	25.1	47	19.7	43	17.5	26	10.4	49	19.4
Wahkiakum	3	*	0	0.0	2	*	0	0.0	0	0.0
Walla Walla	3	*	3	*	7	11.9	5	8.4	9	15.1
Whatcom	103	55.9	52	27.6	28	14.7	38	19.7	30	15.3
Whitman	5	11.7	11	25.8	17	39.5	10	23.1	11	25.2
Yakima	166	71.6	113	48.2	86	36.5	38	15.9	34	14.2
STATEWIDE TOTAL	4,231	66.4	3,646	56.2	3,116	47.3	2,268	34.0	2,865	42.6

GONORRHEA STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
1980	14,215	344.2	0
1981	13,204	310.7	0
1982	11,381	266.9	0
1983	9,895	230.9	0
1984	9,158	211.6	0
1985	10,073	229.8	0
1986	9,848	222.8	0
1987	8,909	198.8	0
1988	7,154	156.7	0
1989	6,369	136.7	0
1990	5,009	102.9	0
1991	4,441	88.8	0
1992	4,169	81.5	0
1993	3,740	71.4	0
1994	2,893	54.2	0
1995	2,765	50.9	0
1996	2,020	36.6	0
1997	1,955	34.9	0
1998	1,948	34.3	0
1999	2,132	37.0	0
2000	2,419	41.0	0
2001	2,991	50.1	0
2002	2,925	48.4	0
2003	2,754	45.2	0
2004	2,810	45.6	0
2005	3,738	59.7	0
2006	4,231	66.4	0
2007	3,646	56.2	0
2008	3,116	47.3	0
2009	2,268	34.0	0
2010	2,865	42.6	0

*All rates are cases per 100,000 population.

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

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

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

HAEMOPHILUS INFLUENZAE INVASIVE DISEASE

Year	Cases	Rate*	Deaths
1980	126	3.1	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	7.2	11
1987	271	6.0	6
1988	200	4.4	0
1989	163	3.5	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	1.3	0
2003*	13	3.3	1
2004*	4	1.0	0
2005*	5	1.2	0
2006*	5	1.2	0
2007*	6	1.4	0
2008*	2	0.0	0
2009*	9	2.0	0
2010*	10	2.2	1

*All rates are cases per 100,000 population. Rates for 2001-2009 are for population aged 0-4 years.

HANTAVIRUS PULMONARY SYNDROME‡

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

HEMOLYTIC UREMIC SYNDROME‡

Year	Cases	Rate*	Deaths
2001	3	0.1	0
2002	1	0.0	0
2003	1	0.0	0
2004	6	0.1	0
2005	4	0.1	0
2006	1	0.0	0
2007	2	0.0	0
2008	2	0.0	0
2009	0	0.0	0
2010	1	0.0	0

‡ Hemolytic uremic syndrome (HUS) is a complication of bacterial infections, most commonly *E. coli* O157:H7. HUS first became a notifiable condition in Washington in 12/2000. HUS following a diarrheal illness is reported in Washington as suspect enterohemorrhagic *E. coli* and are not included in this table.

*All rates are cases per 100,000 population.

HEPATITIS A, ACUTE

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Benton	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Chelan	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Clallam	0	0.0	1	*	0	0.0	0	0.0	1	*
Clark	1	*	3	*	6	1.4	1	*	1	*
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	1	*	2	*	0	0.0	1	*
Douglas	0	0.0	0	0.0	1	*	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	1	*	0	0.0	1	*
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	*	1	*	0	0.0	1	*	1	*
Grays Harbor	1	*	1	*	0	0.0	1	*	0	0.0
Island	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Jefferson	0	0.0	2	*	1	*	0	0.0	0	0.0
King	16	0.9	18	1.0	16	0.8	15	0.8	7	0.4
Kitsap	0	0.0	2	*	1	*	2	*	2	*
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	1	*	0	0.0	1	*	0	0.0
Lewis	1	*	0	0.0	1	*	0	0.0	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Okanogan	6	15.1	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	3	*	5	0.6	3	*	5	0.6	2	*
San Juan	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Skagit	1	*	2	*	1	*	0	0.0	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	8	1.2	9	1.3	10	1.4	7	1.0	2	*
Spokane	5	1.1	3	*	2	*	1	*	0	0.0
Stevens	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Thurston	1	*	1	*	1	*	2	*	0	0.0
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	1	*	0	0.0	1	*	0	0.0	0	0.0
Whatcom	6	3.3	6	3.2	1	*	2	*	1	*
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	1	*	0	0.0	2	*	2	*	0	0.0
STATEWIDE TOTAL	52	0.8	60	0.9	51	0.8	42	0.6	21	0.3

HEPATITIS A, ACUTE STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
1980	554	13.4	2
1981	791	18.6	0
1982	494	11.6	1
1983	268	6.3	1
1984	373	8.6	0
1985	702	16.0	2
1986	1,385	31.3	1
1987	2,589	57.8	1
1988	2,669	58.5	7
1989	3,273	70.2	5
1990	1,380	28.4	1
1991	608	12.2	3
1992	865	16.9	1
1993	926	17.7	1
1994	1,119	21.0	2
1995	937	17.3	9
1996	1,001	18.1	3
1997	1,019	18.2	1
1998	1,037	18.2	2
1999	505	8.8	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

*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

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Chelan	0	0.0	1	*	0	0.0	1	*	0	0.0
Clallam	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Clark	6	1.5	1	*	3	*	1	*	3	*
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Cowlitz	3	*	3	*	2	*	4	*	2	*
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	1	*	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	4	*	1	*	2	*	0	0.0	0	0.0
Island	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	21	1.1	20	1.1	29	1.5	11	0.6	13	0.7
Kitsap	6	2.5	2	*	0	0.0	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	1	*	0	0.0	0	0.0	0	0.0
Mason	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Pacific	1	*	0	0.0	0	0.0	2	*	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	5	0.6	11	1.4	6	0.7	9	1.1	2	*
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	1	*	2	*	1	*	1	*	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	6	0.9	3	*	1	*	2	*	8	1.1
Spokane	19	4.3	21	4.7	8	1.7	10	2.2	12	2.6
Stevens	0	0.0	1	*	0	0.0	3	*	1	*
Thurston	2	*	0	0.0	1	*	0	0.0	3	*
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	1	*	0	0.0
Whatcom	0	0.0	0	0.0	0	0.0	0	0.0	3	*
Whitman	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Yakima	5	2.2	1	*	2	*	1	*	0	0.0
STATEWIDE TOTAL	80	1.3	71	1.1	56	0.9	48	0.7	50	0.7

HEPATITIS B, ACUTE STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
1980	257	6.2	6
1981	345	8.1	11
1982	358	8.4	2
1983	307	7.2	3
1984	317	7.3	2
1985	484	11.0	6
1986	989	22.4	8
1987	1,126	25.1	4
1988	979	21.4	6
1989	1,055	22.6	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	4.2	2
1996	158	2.9	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	1.3	2
2007	71	1.1	1
2008	56	0.9	0
2009	48	0.7	0
2010	50	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 C, ACUTE

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	*	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	1	*	1	*	1	*	0	0.0	0	0.0
Clallam	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Clark	1	*	0	0.0	1	*	0	0.0	3	*
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	1	*	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	1	*	0	0.0
Island	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	8	0.4	7	0.4	11	0.6	5	0.3	8	0.4
Kitsap	1	*	0	0.0	0	0.0	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	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	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	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	3	*	3	*	1	*	1	*	2	*
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	2	*	1	*	1	*	1	*	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	0	0.0	0	0.0	1	*	1	*	1	*
Spokane	5	1.1	2	*	5	1.1	7	1.5	4	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	0	0.0	1	*	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	2	*
Whatcom	1	*	0	0.0	3	*	2	*	4	*
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	1	*	1	*	0	0.0	1	*	0	0.0
STATEWIDE TOTAL	23	0.4	18	0.3	25	0.4	22	0.3	25	0.4

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	3.8	7
1987	207	4.6	1
1988	232	5.1	2
1989	208	4.5	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

*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

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	2	*	3	*	2	*	2	*	3	*
Asotin	18	85.3	4	*	4	*	3	*	4	*
Benton	38	23.7	55	33.8	42	25.4	60	35.4	33	19.1
Chelan	23	32.8	27	37.9	37	51.3	14	19.3	13	17.7
Clallam	25	36.9	24	35.0	26	37.6	21	30.2	16	22.8
Clark	37	9.2	44	10.6	81	19.1	87	20.2	82	18.8
Columbia	1	*	0	0.0	0	0.0	3	*	0	0.0
Cowlitz	55	56.8	42	42.9	42	42.4	38	38.2	41	41.0
Douglas	11	30.8	11	30.3	11	29.7	5	13.3	7	18.2
Ferry	0	0.0	0	0.0	2	*	2	*	0	0.0
Franklin	22	34.3	16	23.7	18	25.6	15	20.6	10	13.2
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	11	13.6	12	14.5	11	13.0	14	16.3	16	18.2
Grays Harbor	17	24.1	25	35.3	14	19.7	13	18.3	18	25.1
Island	47	60.9	63	80.4	42	53.0	29	36.1	38	46.9
Jefferson	9	31.9	12	42.0	6	20.8	4	*	10	34.1
King	769	41.9	618	33.2	516	27.4	542	28.4	601	31.1
Kitsap	68	27.9	75	30.6	64	25.9	82	33.1	74	29.8
Kittitas	29	77.5	10	26.1	14	35.5	10	25.1	12	29.6
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	2	*
Lewis	23	31.6	22	29.7	6	8.0	16	21.3	19	25.1
Lincoln	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Mason	21	39.5	13	23.8	11	19.5	13	22.9	15	26.3
Okanogan	11	27.6	4	*	8	20.0	7	17.3	10	24.4
Pacific	5	23.3	2	*	4	*	2	*	2	*
Pend Oreille	3	*	4	*	4	*	4	*	1	*
Pierce	307	39.7	184	23.3	246	30.5	261	32.1	248	30.4
San Juan	1	*	2	*	7	43.5	1	*	4	*
Skagit	62	54.8	52	45.1	37	31.5	31	26.1	40	33.5
Skamania	0	0.0	0	0.0	0	0.0	3	*	3	*
Snohomish	395	58.8	270	39.3	328	47.1	221	31.4	280	39.4
Spokane	148	33.3	132	29.3	187	40.7	158	34.0	174	37.0
Stevens	5	11.9	8	18.6	11	25.2	5	11.4	4	*
Thurston	121	52.4	91	38.2	85	34.7	85	34.0	93	36.8
Wahkiakum	1	*	0	0.0	2	*	0	0.0	2	*
Walla Walla	12	20.7	20	34.3	23	39.2	20	33.8	23	38.6
Whatcom	67	36.4	53	28.1	39	20.4	41	21.2	75	38.4
Whitman	12	28.0	3	*	10	23.3	6	13.9	5	11.5
Yakima	70	30.2	50	21.3	69	29.2	57	23.9	50	20.9
STATEWIDE TOTAL	2,446	38.4	1,952	30.1	2,009	30.5	1,875	28.1	2,028	30.1

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

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

HERPES SIMPLEX STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
2001	1,836	30.7	0
2002	1,914	31.7	0
2003	2,073	34.0	0
2004	2,153	34.9	0
2005	2,331	37.3	0
2006	2,446	38.4	0
2007	1,952	30.1	0
2008	2,009	30.5	0
2009	1,875	28.1	0
2010	2,028	30.1	0

*All rates are cases per 100,000 population.

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

HUMAN IMMUNODEFICIENCY VIRUS (HIV)[§]

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Asotin	1	*	0	0.0	1	*	2	*	2	*
Benton	9	5.6	5	3.1	1	*	6	3.5	9	5.2
Chelan	4	*	3	*	1	*	3	*	5	6.8
Clallam	1	*	1	*	2	*	3	*	1	*
Clark	20	5.0	42	10.1	18	4.2	20	4.6	30	6.9
Columbia	0	0.0	2	*	0	0.0	0	0.0	0	0.0
Cowlitz	6	6.2	5	5.1	5	5.1	4	*	5	5.0
Douglas	0	0.0	2	*	0	0.0	1	*	2	*
Ferry	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Franklin	2	*	3	*	5	7.1	6	8.3	5	6.6
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	3	*	3	*	3	*	1	*	3	*
Grays Harbor	2	*	2	*	6	8.5	0	0.0	5	7.0
Island	2	*	2	*	3	*	9	11.2	2	*
Jefferson	3	*	1	*	0	0.0	0	0.0	0	0.0
King	306	16.7	319	17.1	314	16.7	309	16.2	317	16.4
Kitsap	13	5.3	7	2.9	7	2.8	10	4.0	2	*
Kittitas	3	*	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	2	*	1	*	0	0.0	0	0.0	0	0.0
Lewis	4	*	1	*	2	*	4	*	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	1	*	7	12.8	8	14.2	3	*	11	19.3
Okanogan	0	0.0	1	*	3	*	3	*	0	0.0
Pacific	3	*	2	*	1	*	1	*	0	0.0
Pend Oreille	1	*	0	0.0	0	0.0	0	0.0	2	*
Pierce	59	7.6	61	7.7	58	7.2	61	7.5	63	7.7
San Juan	1	*	1	*	0	0.0	1	*	2	*
Skagit	5	4.4	3	*	4	*	1	*	5	4.2
Skamania	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Snohomish	45	6.7	43	6.3	36	5.2	42	6.0	32	4.5
Spokane	24	5.4	36	8.0	26	5.7	18	3.9	20	4.3
Stevens	1	*	0	0.0	1	*	1	*	1	*
Thurston	9	3.9	15	6.3	9	3.7	12	4.8	12	4.8
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	1	*	0	0.0	3	*	0	0.0	0	0.0
Whatcom	8	4.3	10	5.3	10	5.2	9	4.7	2	*
Whitman	1	*	0	0.0	2	*	1	*	0	0.0
Yakima	7	3.0	12	5.1	12	5.1	17	7.1	13	5.4
STATEWIDE TOTAL	547	8.6	591	9.1	541	8.2	550	8.2	551	8.2

DEATHS ATTRIBUTED TO HIV DISEASE [‡]			
Year	Cases	Rate*	Deaths
1990	1,081	22.2	355
1991	1,015	20.3	432
1992	985	19.3	370
1993	930	17.7	580
1994	804	15.1	599
1995	696	12.8	572
1996	685	12.4	401
1997	608	10.8	183
1998	530	9.3	120
1999	587	10.2	101
2000	697	11.8	125
2001	568	9.5	115
2002	571	9.5	112
2003	565	9.3	147
2004	559	9.1	121
2005	563	9.0	139
2006	547	8.6	94
2007	591	9.1	95
2008	541	8.2	86
2009	550	8.2	100
2010	551	8.2	60

[‡] Includes only deaths attributed to HIV/AIDS

* All rates are new diagnoses per 100,000 population

Note: Data have been adjusted since previous editions 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. This presentation is different from previous editions of this report, which displayed separate columns for HIV and AIDS, and cannot be compared. Data from years 2006–2009 have been adjusted since previous editions of this report. Data reflect cases reported through 5/31/11.

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

*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

*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	0.5	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

*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

*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	0.4	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

*All rates are cases per 100,000 population.

MEASLES

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clallam	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clark	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	19	22.5	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	0	0.0	1	*	0	0.0	1	*	1	*
Kitsap	0	0.0	0	0.0	0	0.0	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	1	*	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	1	*	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	1	*	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	3	0.0	19	0.3	1	0.0	1	0.0

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	4.1	0
1986	176	4.0	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

*All rates are cases per 100,000 population.

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

MENINGOCOCCAL DISEASE

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	0	0.0	1	*	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	6	1.5	5	1.2	4	*	3	*	4	*
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	1	*	1	*	0	0.0	0	0.0	0	0.0
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	0	0.0	1	*	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	1	*	2	*	1	*	0	0.0
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Island	1	*	0	0.0	0	0.0	0	0.0	1	*
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	12	0.7	5	0.3	6	0.3	5	0.3	8	0.4
Kitsap	1	*	0	0.0	3	*	2	*	0	0.0
Kittitas	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Klickitat	0	0.0	2	*	0	0.0	0	0.0	0	0.0
Lewis	1	*	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	1	*	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	1	*	1	*	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	4	*	0	0.0	3	*	3	*	3	*
San Juan	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Skagit	3	*	1	*	1	*	0	0.0	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	5	0.7	4	*	5	0.7	2	*	5	0.7
Spokane	3	*	3	*	8	1.7	4	*	2	*
Stevens	2	*	1	*	0	0.0	0	0.0	0	0.0
Thurston	1	*	2	*	2	*	1	*	2	*
Wahkiakum	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	2	*	0	0.0	1	*
Whatcom	1	*	2	*	0	0.0	1	*	0	0.0
Whitman	1	*	0	0.0	0	0.0	0	0.0	3	*
Yakima	1	*	2	*	1	*	2	*	2	*
STATEWIDE TOTAL	45	0.7	32	0.5	40	0.6	26	0.4	33	0.5

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

MENINGOCOCCAL DISEASE STATEWIDE BY YEAR

Year	Cases	Rate*	Deaths
1980	67	1.6	2
1981	78	1.8	3
1982	56	1.3	2
1983	48	1.1	3
1984	56	1.3	3
1985	67	1.5	6
1986	62	1.4	5
1987	87	1.9	4
1988	76	1.7	3
1989	96	2.1	12
1990	80	1.6	5
1991	73	1.5	8
1992	92	1.8	5
1993	97	1.9	6
1994	111	2.1	7
1995	126	2.3	7
1996	116	2.1	10
1997	115	2.1	11
1998	77	1.4	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

*All rates are cases per 100,000 population.

MUMPS

Year	Cases	Rate*	Deaths
1980	166	4.0	0
1981	165	3.9	0
1982	102	2.4	0
1983	55	1.3	0
1984	56	1.3	0
1985	42	1.0	0
1986	30	0.7	0
1987	70	1.6	0
1988	44	1.0	0
1989	59	1.3	0
1990	66	1.4	0
1991	178	3.6	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

*All rates are cases per 100,000 population.

PARALYTIC SHELLFISH POISONING

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

*All rates are cases per 100,000 population.

PERTUSSIS

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	3	*
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	3	*
Benton	5	3.1	3	*	4	*	6	3.5	9	5.2
Chelan	1	*	5	7.0	3	*	0	0.0	1	*
Clallam	1	*	0	0.0	3	*	0	0.0	2	*
Clark	22	5.5	26	6.3	29	6.8	18	4.2	92	21.1
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	2	*
Cowlitz	13	13.4	2	*	2	*	6	6.0	26	26.0
Douglas	0	0.0	1	*	1	*	0	0.0	0	0.0
Ferry	0	0.0	1	*	0	0.0	0	0.0	1	*
Franklin	3	*	5	7.4	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	1	*	4	*	4	*	1	*	25	28.5
Grays Harbor	1	*	4	*	4	*	7	9.8	2	*
Island	2	*	0	0.0	86	108.4	1	*	13	16.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	2	*
King	94	5.1	130	7.0	85	4.5	38	2.0	69	3.6
Kitsap	18	7.4	24	9.8	13	5.3	5	2.0	31	12.5
Kittitas	2	*	3	*	2	*	26	65.2	19	46.9
Klickitat	1	*	0	0.0	0	0.0	3	*	3	*
Lewis	5	6.9	2	*	10	13.4	6	8.0	41	54.2
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	1	*	2	*	3	*	0	0.0	2	*
Okanogan	0	0.0	8	20.1	2	*	7	17.3	6	14.7
Pacific	0	0.0	0	0.0	3	*	3	*	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	10	76.3
Pierce	36	4.7	23	2.9	33	4.1	29	3.6	84	10.3
San Juan	3	*	44	276.7	18	111.8	2	*	17	103.0
Skagit	15	13.3	3	*	14	11.9	9	7.6	4	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	21	3.1	46	6.7	46	6.6	35	5.0	46	6.5
Spokane	39	8.8	34	7.5	6	1.3	4	*	7	1.5
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	13	29.3
Thurston	11	4.8	6	2.5	4	*	11	4.4	36	14.3
Wahkiakum	2	*	0	0.0	0	0.0	6	146.3	0	0.0
Walla Walla	0	0.0	0	0.0	1	*	0	0.0	1	*
Whatcom	58	31.5	66	35.1	55	28.8	34	17.6	25	12.8
Whitman	1	*	3	*	0	0.0	0	0.0	1	*
Yakima	21	9.1	37	15.8	29	12.3	34	14.3	11	4.6
STATEWIDE TOTAL	377	5.9	482	7.4	460	7.0	291	4.4	607	9.0

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

PERTUSSIS STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
1980	77	1.9	0
1981	58	1.4	1
1982	36	0.8	1
1983	20	0.5	0
1984	326	7.5	1
1985	92	2.1	0
1986	163	3.7	2
1987	110	2.5	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	15.0	1
1997	481	8.6	0
1998	406	7.1	1
1999	739	12.8	0
2000	458	7.8	1
2001	184	3.1	0
2002	575	9.5	0
2003	844	13.8	0
2004	842	13.7	0
2005	1,026	16.4	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

*All rates are cases per 100,000 population.

PLAGUE

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

*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

*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

*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

*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

*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

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

*All rates are cases per 100,000 population.

RUBELLA

Year	Cases	Rate*	Deaths
1981	108	2.5	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

*All rates are cases per 100,000 population.

SALMONELLOSIS

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	2	*	2	*	1	*	3	*	3	*
Asotin	0	0.0	2	*	2	*	3	*	5	23.0
Benton	18	11.2	25	15.3	18	10.9	21	12.4	25	14.5
Chelan	15	21.4	7	9.8	10	13.9	8	11.0	9	12.3
Clallam	3	*	11	16.1	15	21.7	7	10.1	2	*
Clark	53	13.1	43	10.4	45	10.6	98	22.7	63	14.5
Columbia	0	0.0	2	*	0	0.0	1	*	1	*
Cowlitz	1	*	8	8.2	7	7.1	9	9.0	5	5.0
Douglas	0	0.0	3	*	0	0.0	1	*	3	*
Ferry	0	0.0	6	79.5	0	0.0	0	0.0	0	0.0
Franklin	11	17.1	0	0.0	10	14.2	6	8.3	13	17.2
Garfield	0	0.0	0	0.0	0	0.0	1	*	2	*
Grant	10	12.4	24	29.1	14	16.5	7	8.1	12	13.7
Grays Harbor	7	9.9	6	8.5	6	8.5	12	16.9	9	12.6
Island	5	6.5	7	8.9	11	13.9	10	12.5	10	12.3
Jefferson	3	*	2	*	4	*	4	*	3	*
King	203	11.1	247	13.3	304	16.1	257	13.5	224	11.6
Kitsap	16	6.6	13	5.3	21	8.5	22	8.9	27	10.9
Kittitas	3	*	2	*	10	25.4	5	12.5	1	*
Klickitat	3	*	4	*	1	*	4	*	1	*
Lewis	11	15.1	10	13.5	11	14.7	7	9.3	11	14.6
Lincoln	1	*	0	0.0	3	*	1	*	1	*
Mason	2	*	3	*	4	*	3	*	7	12.3
Okanogan	1	*	8	20.1	7	17.5	2	*	5	12.2
Pacific	2	*	2	*	2	*	0	0.0	3	*
Pend Oreille	0	0.0	0	0.0	2	*	0	0.0	1	*
Pierce	71	9.2	85	10.8	78	9.7	78	9.6	71	8.7
San Juan	1	*	1	*	2	*	1	*	1	*
Skagit	11	9.7	8	6.9	13	11.1	10	8.4	17	14.2
Skamania	1	*	1	*	0	0.0	1	*	0	0.0
Snohomish	65	9.7	73	10.6	87	12.5	88	12.5	77	10.8
Spokane	30	6.8	37	8.2	39	8.5	41	8.8	46	9.8
Stevens	0	0.0	1	*	1	*	2	*	3	*
Thurston	15	6.5	36	15.1	29	11.8	36	14.4	27	10.7
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	2	*	16	27.4	7	11.9	6	10.1	4	*
Whatcom	22	11.9	23	12.2	30	15.7	24	12.4	24	12.3
Whitman	5	11.7	6	14.1	3	*	1	*	11	25.2
Yakima	34	14.7	34	14.5	49	20.8	40	16.8	53	22.2
STATEWIDE TOTAL	627	9.8	758	11.7	846	12.8	820	12.3	780	11.6

SALMONELLOSIS STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
1980	462	11.2	0
1981	574	13.5	5
1982	749	17.6	0
1983	739	17.2	0
1984	515	11.9	0
1985	565	12.9	0
1986	783	17.7	2
1987	660	14.7	1
1988	612	13.4	0
1989	630	13.5	2
1990	634	13.0	6
1991	791	15.8	1
1992	609	11.9	1
1993	830	15.8	0
1994	863	16.2	0
1995	691	12.7	0
1996	734	13.3	0
1997	675	12.0	0
1998	703	12.4	2
1999	792	13.8	2
2000	659	11.2	1
2001	681	11.4	2
2002	655	10.8	0
2003	699	11.5	1
2004	660	10.7	2
2005	626	10.0	0
2006	627	9.8	3
2007	758	11.7	2
2008	846	12.8	3
2009	820	12.3	2
2010	780	11.6	3

*All rates are cases per 100,000 population.

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

SHIGELLOSIS

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	*	2	*	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	7	4.4	4	*	5	3.0	8	4.7	0	0.0
Chelan	3	*	2	*	3	*	2	*	2	*
Clallam	1	*	1	*	1	*	0	0.0	0	0.0
Clark	6	1.5	8	1.9	4	*	5	1.2	7	1.6
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	1	*	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	7	10.9	3	*	3	*	2	*	1	*
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	2	*	3	*	5	5.9	3	*	2	*
Grays Harbor	2	*	0	0.0	0	0.0	0	0.0	1	*
Island	1	*	1	*	0	0.0	1	*	1	*
Jefferson	0	0.0	1	*	0	0.0	0	0.0	0	0.0
King	52	2.8	52	2.8	41	2.2	64	3.4	44	2.3
Kitsap	2	*	3	*	2	*	2	*	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	2	*	0	0.0	0	0.0
Lewis	0	0.0	0	0.0	1	*	0	0.0	2	*
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	1	*	0	0.0	1	*	2	*	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	1	*	1	*
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	6	0.8	14	1.8	5	0.6	8	1.0	7	0.9
San Juan	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Skagit	5	4.4	2	*	2	*	3	*	5	4.2
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	11	1.6	30	4.4	11	1.6	15	2.1	13	1.8
Spokane	3	*	2	*	4	*	4	*	3	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	1	*	1	*	4	*	1	*	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	3	*	21	35.5	0	0.0
Whatcom	26	14.1	5	2.7	9	4.7	3	*	18	9.2
Whitman	1	*	0	0.0	0	0.0	0	0.0	1	*
Yakima	32	13.8	26	11.1	8	3.4	7	2.9	2	*
STATEWIDE TOTAL	170	2.7	159	2.5	116	1.8	153	2.3	112	1.7

SHIGELLOSIS STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
1980	287	6.9	0
1981	426	10.0	1
1982	284	6.7	0
1983	370	8.6	0
1984	224	5.2	0
1985	144	3.3	0
1986	321	7.3	0
1987	318	7.1	0
1988	306	6.7	0
1989	232	5.0	0
1990	278	5.7	0
1991	405	8.1	0
1992	439	8.6	0
1993	797	15.2	0
1994	478	9.0	0
1995	426	7.8	0
1996	333	6.0	1
1997	318	5.7	0
1998	277	4.9	0
1999	172	3.0	0
2000	501	8.5	0
2001	236	3.9	0
2002	230	3.8	0
2003	188	3.1	0
2004	133	2.2	0
2005	185	3.0	0
2006	170	2.7	0
2007	159	2.5	0
2008	116	1.8	0
2009	153	2.3	0
2010	112	1.7	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)

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Benton	1	*	1	*	3	*	0	0.0	2	*
Chelan	0	0.0	1	*	0	0.0	0	0.0	1	*
Clallam	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Clark	2	*	1	*	2	*	4	*	6	1.4
Columbia	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Cowlitz	1	*	1	*	1	*	1	*	1	*
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	1	*	0	0.0	2	*
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	1	*	1	*	0	0.0	0	0.0
Island	1	*	0	0.0	0	0.0	0	0.0	1	*
Jefferson	0	0.0	0	0.0	0	0.0	1	*	1	*
King	147	8.0	120	6.4	127	6.7	97	5.1	212	11.0
Kitsap	4	*	3	*	9	3.6	5	2.0	4	*
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	1	*	0	0.0	1	*	0	0.0	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	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	7	0.9	19	2.4	19	2.4	9	1.1	9	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	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	0.9	9	1.3	7	1.0	5	0.7	10	1.4
Spokane	2	*	6	1.3	5	1.1	7	1.5	4	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Thurston	4	*	5	2.1	2	*	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	3	*	0	0.0	0	0.0	0	0.0	0	0.0
Whitman	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Yakima	3	*	0	0.0	1	*	2	*	6	2.5
STATEWIDE TOTAL	182	2.9	168	2.6	181	2.7	135	2.0	261	3.9

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	3.7	2
1985	115	2.6	2
1986	194	4.4	0
1987	176	3.9	0
1988	265	5.8	0
1989	461	9.9	0
1990	354	7.3	0
1991	178	3.6	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	2.9	0
2007	168	2.6	0
2008	181	2.7	0
2009	135	2.0	0
2010	261	3.9	0

*All rates are cases per 100,000 population.

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

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

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

*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

*All rates are cases per 100,000 population.

TUBERCULOSIS

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Asotin	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Benton	6	3.7	4	*	1	*	3	*	3	*
Chelan	3	*	2	*	1	*	2	*	3	*
Clallam	1	*	4	*	0	0.0	1	*	0	0.0
Clark	8	2.0	7	1.7	7	1.7	16	3.7	22	5.1
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Cowlitz	2	*	1	*	1	*	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	1	*	0	0.0	1	*
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	4	*	4	*	1	*	4	*
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	*	1	*	1	*	3	*	2	*
Grays Harbor	2	*	4	*	0	0.0	0	0.0	0	0.0
Island	0	0.0	6	7.7	2	*	2	*	2	*
Jefferson	0	0.0	1	*	0	0.0	0	0.0	0	0.0
King	145	7.9	161	8.6	121	6.4	130	6.8	114	5.9
Kitsap	6	2.5	10	4.1	5	2.0	4	*	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	1	*	1	*
Lewis	1	*	0	0.0	1	*	1	*	1	*
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	2	*	2	*	2	*	2	*	2	*
Okanogan	0	0.0	1	*	2	*	0	0.0	0	0.0
Pacific	0	0.0	3	*	1	*	0	0.0	0	0.0
Pend-Oreille	0		0		0		0		0	
Pierce	21	2.7	24	3.0	18	2.2	34	4.2	15	1.8
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Skagit	2	*	0	0.0	2	*	2	*	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	26	3.9	24	3.5	25	3.6	28	4.0	26	3.7
Spokane	10	2.3	5	1.1	8	1.7	9	1.9	4	*
Stevens	0	0.0	1	*	1	*	0	0.0	0	0.0
Thurston	5	2.2	6	2.5	5	2.0	8	3.2	14	5.5
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	2	*	0	0.0	3	*	0	0.0	2	*
Whatcom	4	*	7	3.7	5	2.6	3	*	6	3.1
Whitman	0	0.0	1	*	0	0.0	1	*	1	*
Yakima	14	6.0	12	5.1	11	4.7	5	2.1	9	3.8
STATEWIDE TOTAL	262	4.1	291	4.5	228	3.5	256	3.8	236	3.5

*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	9.4	15
1982	301	7.1	6
1983	239	5.6	10
1984	207	4.8	6
1985	220	5.0	5
1986	218	4.9	3
1987	255	5.7	10
1988	236	5.2	9
1989	248	5.3	4
1990	284	5.8	12
1991	309	6.2	7
1992	306	6.0	7
1993	286	5.5	7
1994	264	4.9	6
1995	278	5.1	2
1996	285	5.2	3
1997	305	5.4	6
1998	265	4.7	5
1999	258	4.5	5
2000	258	4.4	2
2001	261	4.4	6
2002	252	4.2	4
2003	250	4.1	11
2004	244	4.0	9
2005	254	4.1	14
2006	262	4.1	18
2007	291	4.5	12
2008	228	3.5	2
2009	256	3.8	9
2010	236	3.5	6

*All rates are cases per 100,000 population.

Note: The reported TB associated death count for 2010, represents the following:

1. TB cases dead at TB diagnosis, where TB was reported as among cause(s) of death (NOT necessarily as confirmed on death certificate), and date of death was in 2010 or missing.

2. TB cases alive at TB diagnosis, where reason for TB treatment being stopped or never started was given as Died, and death was given as related to TB.

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

*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

*All rates are cases per 100,000 population.

TYPHUS

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	1	0.0	0
1992	0	0.0	0
1993	0	0.0	0
1994	1	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

*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	1.3	0
2007	25	0.4	0
2008	29	0.4	0
2009	48	0.7	0
2010	59	0.9	0

*All rates are cases per 100,000 population.

YERSINIOSIS

	2006		2007		2008		2009		2010	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	1	*	2	*	1	*	0	0.0	1	*
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clallam	0	0.0	0	0.0	2	*	0	0.0	0	0.0
Clark	2	*	2	*	2	*	1	*	1	*
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	1	*	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	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	1	*	0	0.0
Jefferson	2	*	2	*	0	0.0	0	0.0	0	0.0
King	9	0.5	6	0.3	6	0.3	7	0.4	8	0.4
Kitsap	0	0.0	1	*	1	*	0	0.0	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	0	0.0
Lewis	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	2	*	2	*	2	*	1	*	1	*
San Juan	0	0.0	0	0.0	1	*	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	3	*	5	0.7	1	*	4	*	5	0.7
Spokane	3	*	0	0.0	0	0.0	0	0.0	2	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	0	0.0	0	0.0	1	*	0	0.0	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	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	6	2.6	1	*	0	0.0	3	*
STATEWIDE TOTAL	22	0.3	28	0.4	19	0.3	15	0.2	25	0.4

YERSINIOSIS STATEWIDE BY YEAR			
Year	Cases	Rate*	Deaths
1988	15	0.3	0
1989	40	0.9	0
1990	37	0.8	0
1991	28	0.6	0
1992	34	0.7	0
1993	50	1.0	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	0.6	0
2000	33	0.6	0
2001	23	0.4	0
2002	26	0.4	0
2003	28	0.5	0
2004	34	0.6	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

*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.

Brucellosis, January 2010

Sandi Paciotti, Skagit County Public Health Department

In January, 2010, Skagit County Public Health received a final report of *Brucella melitensis* in a 25 year old Hispanic male who was visiting Skagit County from Mexico.

He was first seen at a local clinic on December 21, 2009, with a history of fevers, sweats, chills, mild headache and fatigue, then low back and gluteus maximus pain which led to the clinic visit. His temperature was normal and he was diagnosed with left sacro-iliac pain, possibly from over exercising. He returned to the clinic on December 31, 2009, for continual worsening of pain, was given pain medication and had a lumbar spine MRI the following week, which was normal.

He was next seen in the emergency room on January 22, 2010 with a temperature of 38.5° C and left testicular pain with a diagnosis of left orchitis. He had a blood culture drawn and was sent home on Levoquin 250 mg daily. On January 25th the blood culture preliminary result was Gram negative cocci, *Francisella tularensis*. The treatment was changed to Ciprofloxacin 500 mg twice daily for 14 days. The specimen was sent to the Washington State Public Health Laboratories for confirmation, where it was identified as *Brucella melitensis*. The client was changed to doxycycline 200 mg and rifampin 600 mg daily for 6 weeks.

The case was likely exposed in Mexico at a local market on December 5, 2009 where he may have eaten raw milk cheese just before arriving in the United States. He had not brought any food with him from Mexico. He returned to Mexico in February with a copy of his lab result and all medication needed to complete treatment; and was recommended to follow-up with provider there. Orchitis had decreased, but was not back to normal at the time of departure.

One local laboratory technician was also exposed by opening the plate outside of the hood. Treatment with doxycycline 100 mg and rifampin 600 mg for 21 days was recommended. The technician discontinued the prophylaxis after one week, but continued to be monitored for development of febrile illness for 6 months and via blood tests at 2, 4, 6 and 24 weeks after exposure. The tech remained negative for *Brucella* antibodies.

Laboratory exposures are an important part of a public health investigation for brucellosis and often result in multiple persons requiring lengthy follow-up for exposure to a single specimen. All persons present in a microbiology lab during the work-up and identification of a *Brucella* isolate, from the time growth was first recognized on a culture plate until the time all culture isolates are destroyed or removed, need to be assessed for potential exposure. Exposures are classified as high-risk and low-risk. Additional information is available in the Washington State Department of Health *Surveillance and Response Guideline* for brucellosis (www.doh.wa.gov/notify/guidelines/pdf/brucellosis.pdf).

Sporadic Creutzfeldt-Jakob Disease

Sandi Paciotti, Skagit County Public Health Department

On October 6, 2010, the Department of Health notified Skagit Public Health of a Caucasian female in her 60s with suspected human prion disease. The patient began exhibiting confusion in February 2010 which progressed over time. She also had been experiencing increasing dizziness, poor balance resulting in falls, memory problems, inappropriate affect, paranoia, difficulty sleeping, and difficulty swallowing.

An extensive work-up included an MRI of the brain which showed signal abnormalities in the basal ganglia, thalami, bilateral medial temporal cortex, and left lateral temporal cortex, highly suspicious of Creutzfeldt-Jakob disease (CJD). Her CSF had elevated 14-3-3 and Tau protein.

A public health investigation initiated in October 2010 revealed that the patient underwent cataract surgery in May 2010 while symptomatic. Given the theoretical risk of transmitting prion disease through equipment contaminated during eye surgery, the infection control practitioner at the hospital where the surgery occurred reviewed the procedure and determined that no reusable equipment contacted the eye.

The patient died in December 2010. An autopsy arranged by the National Prion Disease Pathology Surveillance Center confirmed sporadic CJD.

Vaccinia Virus Infection After Sexual Contact with a Military Smallpox Vaccinee

Public Health – Seattle & King County and Washington State Department of Health

On March 1, 2010, the Washington State Department of Health notified Public Health - Seattle & King County of suspected transmission of vaccinia virus to a woman from sexual contact with a member of the military who had been vaccinated against smallpox on February 15, 2010. Five days after vaccination, the vaccinee removed the bandage covering his vaccination site; that same day, the couple had sexual intercourse including digital vaginal contact. The woman noticed a lesion on her right labia majora four days later and presented to a clinic on February 26, 2010, expressing concern about exposure to vaccinia virus. Despite her exposure history and clinical presentation, the diagnosis was not considered by the physician, who ordered laboratory testing for several common sexually transmitted infections.

The woman presented to a second physician a week later due to increased pain at the site of the lesion, new vaginal and vulvar sores, and a tender inguinal lymph node. The physician referred the patient to an infectious disease specialist for further evaluation. The specialist made a diagnosis of suspected vaccinia infection, collected a swab specimen from an ulcer, and submitted it to the Washington State Public Health Laboratories (WAPHL) for testing for vaccinia virus infection. Vaccinia virus was confirmed by WAPHL and the CDC Poxvirus Laboratory. The woman resided in a household with an immunosuppressed organ transplant

recipient. Appropriate contact precautions were recommended and no additional cases of contact transmission were reported.

School Pertussis Outbreak Tacoma-Pierce County Health Department

In early December 2010, the Tacoma-Pierce County Health Department became aware of a pertussis outbreak in an elementary school in north Tacoma. The outbreak centered in a third grade class in which six students had confirmed pertussis, five of them PCR positive. Initial reports indicated one or two students had been allowed to remain in school while contagious, although they were experiencing post-tussive vomiting.

The index case was determined to be a 14 year-old high school student, a sibling of one of the third graders, and whose onset had been in early November. A total of 27 cases were related to this outbreak; the last case was a fourth grader with an onset in late January 2011. Most cases were schoolchildren, but a few of their family members also became ill. Of the 27 cases, 15 (56%) were 5 to 9 years of age, and 18 of the 27 (67%) were up-to-date in their pertussis immunizations.

Control measures included antibiotic prophylaxis of all children in the third grade class and cancellation of an inter-school gymnastics activity, an action that was controversial in the school community. Other measures were strict exclusion of students and staff with any cough illness and suspension of extracurricular activities involving close face-to-face contact.

Shiga Toxin-producing *E. coli* O26 in a Daycare Linda Navarre, Kittitas County Public Health

Outbreak Summary:

Fifteen Kittitas County residents were infected with *E. coli* O26 between June and July of 2010. *E. coli* O26 is similar to the more prevalent *E. coli* O157:H7 as it is also a Shiga toxin-producing *E. coli* (STEC), which can cause hemolytic uremic syndrome. The cases ranged in age from 23 months to 7 years ($66.6\% \leq 3$ years), 11/15 (73.3%) were symptomatic, and one child was hospitalized. 14 of 15 children attended three child care facilities, which were temporarily closed by the Kittitas County Public Health Department (KCPHD) Health Officer to contain the outbreak. 151 of 214 (70.6%) people screened by KCPHD staff submitted stool samples for testing at the Washington State Public Health Laboratories (WAPHL). 9.9% (15/151) of tested individuals in this outbreak were shedding *E. coli* O26.

Health care providers were alerted to the outbreak via fax alerts and for those with the NextGen Electronic Health Record software, a public health “flag” was placed in the client’s electronic medical record. Appropriate hand hygiene helped to stop the spread of the disease between individuals. All three child care facilities were reopened after meeting Department of Early Learning requirements which were disinfection of the facilities observed through a site inspection and demonstration of an adequate number of staff meeting KCPHD’s screening requirements. Children were allowed to reenter the child care facilities after receiving clearance

from KCPHD with confirmation of two negative stool samples. Education was the emphasis for follow up activities with the child care staff. Child care facilities received follow up support in the form of additional on-site inspections and a check box tool to facilitate assessment of hand washing compliance as children enter the child care facilities. (WAC 170-295-3040(1) requires children to wash their hands with soap and warm water on arrival at their centers.)

What worked well:

- The closure of the child care facilities with a health order and immediate distribution of hand hygiene education allowed for an aggressive containment of the outbreak.
- Local media provided accurate messaging to the community.
- Health care provider updates increased awareness of the outbreak and child care testing and screening requirements.
- A community forum was held to provide education and emotional support to parents and child care staff.
- Daily transport of samples via car to WAPHL during the critical period was efficient and enabled rapid evaluation of the spread of disease and validity of receipt of samples, and emphasized to parents KCPHD's willingness to go above and beyond normal processes.
- Follow up mailing via FedEx was expensive but again expedited sample results.
- Distributing reentry forms ("golden tickets") to clients who met screening requirements provided functional communication tools between KCPHD and child care centers.

Lessons learned:

- Twice daily briefings are necessary after receipt of specimen results.
- Communication can be increased by use of a communication board with designated tasks.
- Health Orders should be delivered in person by a minimum of two staff members for information distribution and client screening, if possible.
- Communications with a local lab are necessary to arrange sample kit distribution and sample drop off during evening and weekend hours.
- Specimen submittal forms require highlighting of required fields with a warning of sample rejection if the submittal form is not completed properly.

***Vibrio mimicus* Infection from Consuming Crayfish**

**Dorothy MacEachern, Spokane Regional Health District and
Meagan Kay, Public Health – Seattle & King County**

On June 24, 2010, the Spokane Regional Health District (SRHD) was notified of two patients hospitalized in intensive care with severe dehydration whose stool specimens yielded *Vibrio mimicus*, an agent not normally seen in Washington State. CDC was asked to assist with the environmental and epidemiologic investigation. Both persons had consumed crayfish on June 20. The previous day, live crayfish obtained from an online seafood company had been boiled and served warm at a party. The chef reported serving the boiled crayfish out of a cooler that had contained live crayfish enclosed in burlap bags, without cleaning the cooler before using it to serve the cooked crayfish. Leftover crayfish were refrigerated overnight and served cold the evening of June 20. Two additional persons who had consumed leftover crayfish developed self-

limiting diarrheal illnesses within 5 days of the potluck. One was seen in the emergency department for a diarrheal illness but not admitted, and the other did not seek medical care. Only persons who ate the cold, leftover crayfish became ill. Clinicians should be aware that *V. mimicus* can produce cholera toxin and cause severely dehydrating diarrheal illness. Aggressive fluid resuscitation is critical when treating cholera-like diarrheal illness. Antibiotics might shorten duration of illness and decrease volume loss and should be considered in severe cases. Disease investigators should expect the unexpected!

Listeriosis at a Sushi Restaurant Public Health – Seattle & King County

In July 2010, Public Health - Seattle & King County (PHSKC) learned that isolates from two listeriosis cases shared the same pulsed field gel electrophoresis (PFGE) pattern: an elderly female King County resident with an illness onset date in June 2010 and an elderly female Pierce County resident with an onset date in July 2010. The two women did not know each other but both reported consuming sushi or sashimi during their exposure periods. Interviews with the cases and their family members revealed that both had consumed sushi and/or sashimi purchased from the same King County restaurant (restaurant A).

The PFGE pattern of these two case isolates was found to also match isolates from two King County listeriosis cases that were reported in 2008: One was an elderly female with bacteremia, the other was a premature newborn (delivered at 32 weeks gestation) with bacteremia. Investigations of the two cases were reopened. Though neither the elderly woman nor the mother of the infant could confirm that they had eaten sushi during their exposure periods two years ago, when asked if there were any traditional Japanese foods they could have eaten during their exposure periods, both mentioned sushi specifically purchased from restaurant A.

In response, PHSKC investigated restaurant A and found several food handling violations. Special attention was paid to restaurant equipment that was difficult or impossible to sanitize because the items were porous (bamboo mats and wooden bowls), worn (a sushi rice storage receptacle with cracks), or could not be fully dismantled and cleaned (non-restaurant grade mandolin slicers). Environmental specimens were collected for culture from several sites and pieces of equipment at the restaurant. A specimen from a bamboo mat was positive for *Listeria monocytogenes* with the same PFGE pattern as the cases (outbreak strain). PHSKC ordered the restaurant to comply with several corrective actions including replacing the bamboo sushi mats with new ones and using clean plastic wrap as a barrier between the sushi and the bamboo mats.

L. monocytogenes possesses several qualities that make it a hardy foodborne pathogen. The bacterium is relatively resistant to acids and high salt concentrations. It also grows at low temperatures allowing it to reproduce in refrigerated foods. The bacterium also readily produces a biofilm that helps it survive in the environment for prolonged periods of time. Previously described listeriosis outbreaks have been associated with a variety of contaminated raw, ready to eat foods including cold-smoked fish and raw fish.

In February, 2011 the PFGE pattern of an isolate from a male Snohomish County listeriosis case was found to match the outbreak strain. Investigation revealed that this case had also eaten sushi purchased from restaurant A during his exposure period. Upon reinspection, PHSKC found that the restaurant was not following recommended cleaning practices and was not consistently using clean plastic wrap as a barrier between sushi and bamboo sushi mats. PHSKC suspended the restaurant's permit and ordered the restaurant closed. Before being allowed to reopen the restaurant was required to hire a professional cleaning company and comply with safe food handling and storage practices. No additional cases have been identified since then.

FOODBORNE DISEASE OUTBREAKS, 2010

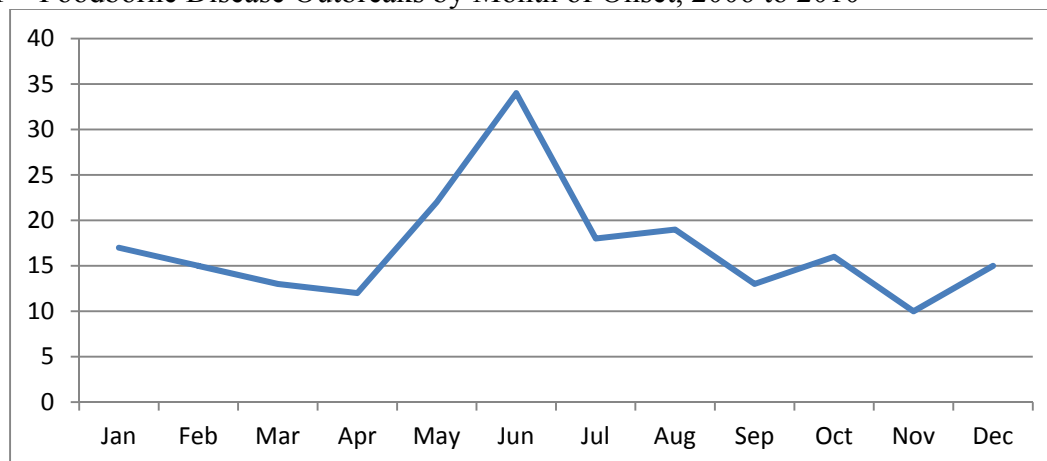
Foodborne disease outbreaks are caused by a variety of agents including viruses, bacteria, toxins and parasites. A foodborne disease outbreak is defined as the occurrence of two or more cases of a similar illness resulting from the ingestion of a common food where food is implicated as the source of illness. Outbreaks of foodborne disease are reportable to DOH as outlined in WAC 246-101-510.

In Washington, there are typically 30 to 50 outbreaks of foodborne disease reported every year (Table 1) with the majority of outbreaks reported during the summer months (Chart 1).

Table 1 – Foodborne Disease Outbreaks, 2006 – 2010

Year	Cases	Outbreaks
2006	677	51
2007	722	43
2008	564	46
2009	307	27
2010	344	37

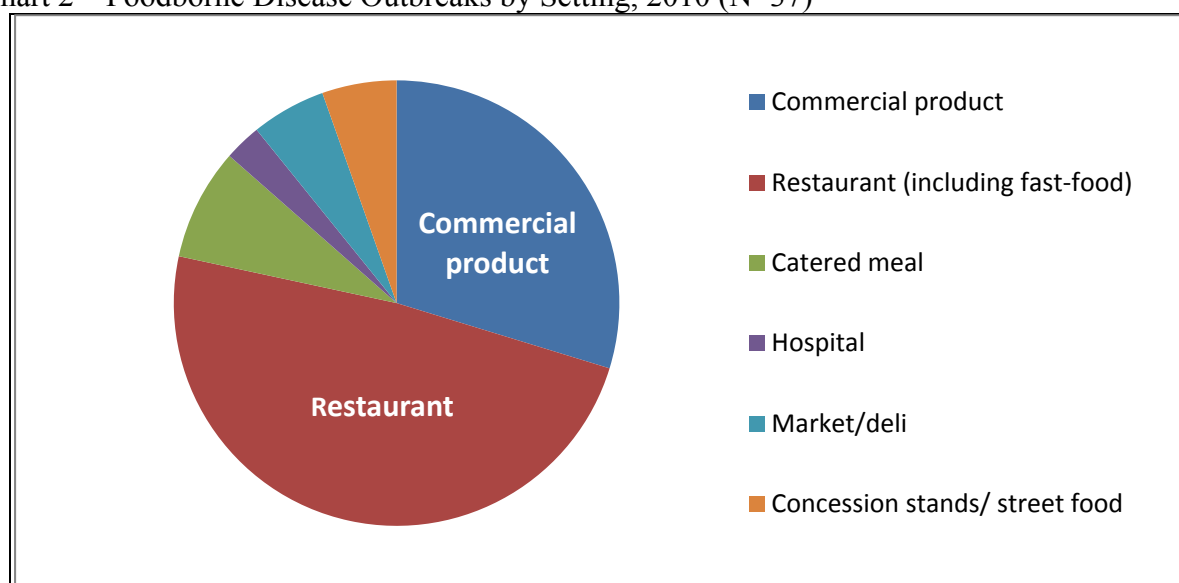
Chart 1 – Foodborne Disease Outbreaks by Month of Onset, 2006 to 2010



In 2010, 37 outbreaks of foodborne disease were reported to DOH. Foodborne disease outbreaks are detected through public health surveillance and investigation of cases of notifiable conditions (e.g. *Salmonella*, STEC) or by notification from members of the public, healthcare providers or food establishments. In 2010, 43% of reported outbreaks were detected through disease surveillance, while 57% were detected through complaint/notification systems.

Outbreaks occurred in a wide range of settings in 2010, as shown in Chart 2. Restaurants (49%) and commercial products (30%) were the most frequently reported settings.

Chart 2 – Foodborne Disease Outbreaks by Setting, 2010 (N=37)



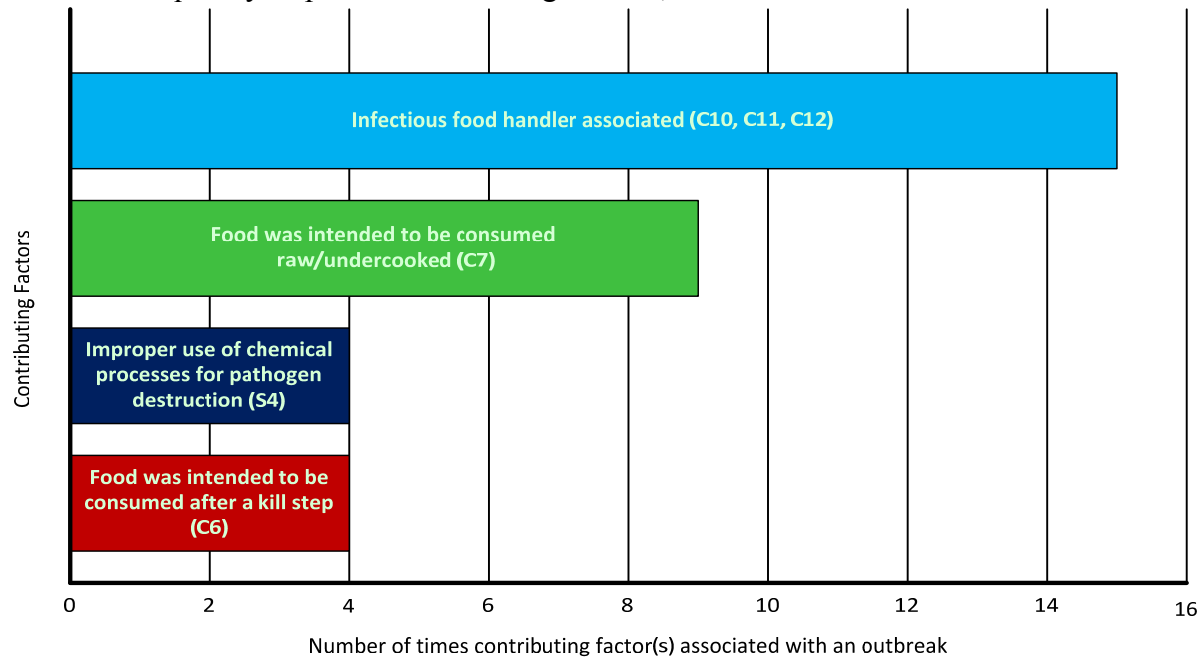
The agents associated with foodborne disease outbreaks in 2010 are shown in Table 2. Agents causing foodborne illness can be categorized broadly as bacterial, viral or toxin (includes bacterial toxins).

Table 2 - Agents associated with Foodborne Disease Outbreaks, 2010

Bacterial		Viral	
Agent	Number of outbreaks	Agent	Number of outbreaks
STEC	2	Hepatitis A	1
		Norovirus	2
<i>Vibrio parahaemolyticus</i>	1	Virus – not laboratory confirmed	14
<i>Vibrio mimicus</i>	1	Toxin	
		Agent	Number of outbreaks
<i>Listeria monocytogenes</i>	3	<i>Clostridium perfringens</i>	3
		Scombrototoxin	1
<i>Salmonella</i>	7	Bacterial toxin – not laboratory confirmed	1

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. Chart 3 shows the most frequently reported groups of contributing factors to foodborne disease outbreaks in 2010.

Chart 3 – Frequently Reported Contributing Factors, 2010



Contributing factors can also be reviewed by agent class in order to better identify the specific factors that led to viral, bacterial and toxin outbreaks. In 2010, there were 17 viral foodborne disease outbreaks. 15/17 of these outbreaks involved contributing factors related to an infectious individual who had contact with food. In addition, 13/17 viral foodborne disease outbreaks occurred in a restaurant setting.

In 2010, there were 15 bacterial outbreaks reported which were associated with a wide variety and foods and occurred in many different settings. Contributing factors most frequently associated with bacterial outbreaks included food that was intended to be consumed raw or undercooked, and food that was intended to be consumed after a kill step.

Additionally, four bacterial toxin and one scombrototoxin (histamine) outbreak were reported in 2010. Contributing factors associated with bacterial toxin outbreaks included improper hot holding, insufficient time/temperature during reheating, improper slow cooling and no control on time/temperature of the implicated food. In contrast, contributing factors identified during the scombrototoxin investigation were improper cold holding, a toxic substance was part of the tissue and food was intended to be consumed raw or undercooked.

Table 3 – Foodborne Disease Outbreaks Reported to Washington State Department of Health, 2010

No.	Month	County	Agent	Total # ill	# Ill lab confirmed	Food source	Setting	Contributing Factors
1	Jan	{ Multiple }	<i>Salmonella</i> Montevideo	19	19	Salami	Commercial product	Contaminated raw product, Insufficient kill step
2	Jan	{ Multiple }	<i>Salmonella</i> Illa, 18:z4:z23:-	5	5	Turkey	Commercial product	Contaminated raw product, Insufficient kill step
3	Jan	{ Multiple }	<i>Listeria monocytogenes</i>	2	2	Cheese	Commercial product	Storage in contaminated environment, Insufficient pathogen destruction
4	Jan	King	Virus	8		Restaurant meal	Restaurant	Unknown
5	Jan	King	Virus	3		Restaurant meal	Restaurant	Bare-hand contact by infectious worker
6	Feb	King	Virus	8		Fast food meal	Fast food restaurant	Glove hand contact by infectious worker, Insufficient pathogen destruction
7	Feb	{ Multiple }	STEC O26	8	6	Raw milk	Commercial product	Contaminated product eaten raw
8	Feb	King	Hepatitis A	2	2	Burritos	Restaurant	Unknown
9	Mar	King	Virus	6		Restaurant meal	Restaurant	Bare hand contact by infectious worker
10	Mar	King	Virus	4		Salad	Restaurant	Unknown
11	Mar	King	Virus	3		Salad	Restaurant	Bare hand contact by infectious worker
12	Apr	King	Virus	16		Oysters	Commercial product	Contaminated product eaten raw
13	Apr	King	Virus	4		Restaurant meal	Restaurant	Bare hand contact by infectious worker

No.	Month	County	Agent	Total # ill	# Ill lab confirmed	Food source	Setting	Contributing Factors
14	Apr	Stevens	<i>Clostridium perfringens</i>	4	1	Beef	Restaurant	Contaminated raw product, Insufficient kill step, Improper hot holding, Insufficient time or temperature control during cooking and reheating
15	Apr	King	Norovirus	67	3	Banquet meal	Catered banquet	Glove hand contact by infectious worker
16	May	Skagit	Bacterial toxin	4		Pork fried rice	Restaurant	Improper cooling
17	May	King	Norovirus	13	3	Salad	Street Food	Bare hand contact by infectious worker
18	May	{ Multiple }	<i>Salmonella</i> Newport	18	18	Tomatoes	Commercial product	Contaminated raw product
19	May	King	Virus	4		Buffet meal	Restaurant	Bare hand contact by infectious worker, Glove hand contact by infectious worker
20	May	King	Scombrototoxin	2		Tuna	Market	Toxin substance part of tissue, Improper cold holding
21	Jun	{ Multiple }	<i>Salmonella</i> Enteritidis	9	9	Chicken	Concession stands	Contaminated raw product, Insufficient kill step
22	Jun	{ Multiple }	<i>Salmonella</i> Chester	4	4	Frozen poultry dinners	Commercial product	Insufficient time or temperature control during cooking and reheating
23	Jun	{ Multiple }	<i>Listeria monocytogenes</i>	2	2	Sushi	Market/deli	Cross-contamination of ingredients, Food handling practices, Insufficient pathogen destruction
24	Jun	Kitsap	Virus	4		Vegetable garnish	Restaurant	Contact by infectious worker
25	Jun	Spokane	<i>Vibrio mimicus</i>	4	3	Crayfish	Commercial product	Toxin substance part of tissue, Storage in contaminated environment, Insufficient pathogen destruction

No.	Month	County	Agent	Total # ill	# Ill lab confirmed	Food source	Setting	Contributing Factors
26	Jul	King	<i>Clostridium perfringens</i>	9	2	Beef enchilada	Restaurant	Insufficient temperature control, Insufficient reheating, Improper hot holding
27	Jul	King	<i>Vibrio parahaemolyticus</i>	5	2	Oysters	Restaurant	Contaminated product eaten raw
28	Aug	King	<i>Vibrio parahaemolyticus</i>	4	1	Oysters	Restaurant	Contaminated product eaten raw
29	Sep	{ Multiple }	STEC O157:H7	4	4	Cheese	Commercial product	Contaminated raw product
30	Sep	King	<i>Salmonella</i> Uganda	13	13	Unknown	Commercial product	Unknown
31	Sep	Kitsap	Virus	30		Salad	Catered reception	Bare hand contact by infectious worker
32	Sep	King	<i>Clostridium perfringens</i>	22	1	Gumbo	Catered group meal	Food handling practices, Improper cold holding, Improper hot holding, Improper cooling, Insufficient time or temperature control during cooking and reheating
33	Oct	Walla Walla	Virus	11		Sandwiches/ Salad	Restaurant	Contact by infectious worker
34	Dec	{ Multiple }	<i>Salmonella</i> Newport	6	6	Sprouts	Commercial product	Contaminated raw product
35	Dec	King	<i>Listeria monocytogenes</i>	4	2	Hospital meals	Hospital	Unknown
36	Dec	King	Virus	2		Restaurant meal	Restaurant	Bare hand contact by infectious worker, Glove hand contact by infectious worker, Inadequate hand washing
37	Dec	King	Virus	11		Oysters	Restaurant	Contaminated product eaten raw

INFLUENZA SURVEILLANCE, 2010–2011

The Washington State Department of Health (DOH), in collaboration with local health jurisdictions and CDC, performed surveillance for influenza during the 2010–2011 season. Surveillance goals included monitoring influenza activity, estimating morbidity and mortality, and identifying risk factors for severe disease. DOH and local health jurisdictions accomplished these goals using several surveillance systems including:

- 1) World Health Organization/National Respiratory and Enteric Virus Surveillance System (WHO/NREVSS)
- 2) Emergency Department Influenza-like Illness Syndromic Surveillance
- 3) Pneumonia and Influenza Mortality Surveillance
- 4) Mandatory Reporting of Laboratory-confirmed Influenza-associated Deaths
- 5) Surveillance for Laboratory-confirmed Influenza Hospitalizations (Spokane County only)

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

The Washington State Public Health Laboratories (WAPHL), the Public Health - Seattle & King County Public Health Laboratory and the University of Washington Virology Laboratory conduct virologic surveillance as part of WHO/NREVSS. Participating laboratories report the total number of positive influenza tests, by virus type/subtype, and the percent of specimens testing positive each week.

Of 796 specimens which tested positive for influenza during July 25, 2010–July 23, 2011, 739 (93%) were influenza A and 57 (7%) were influenza B. Of the subtyped influenza A specimens, 300 (54%) were influenza A (2009 H1N1) viruses and 180 (46%) were influenza A (H3) viruses.

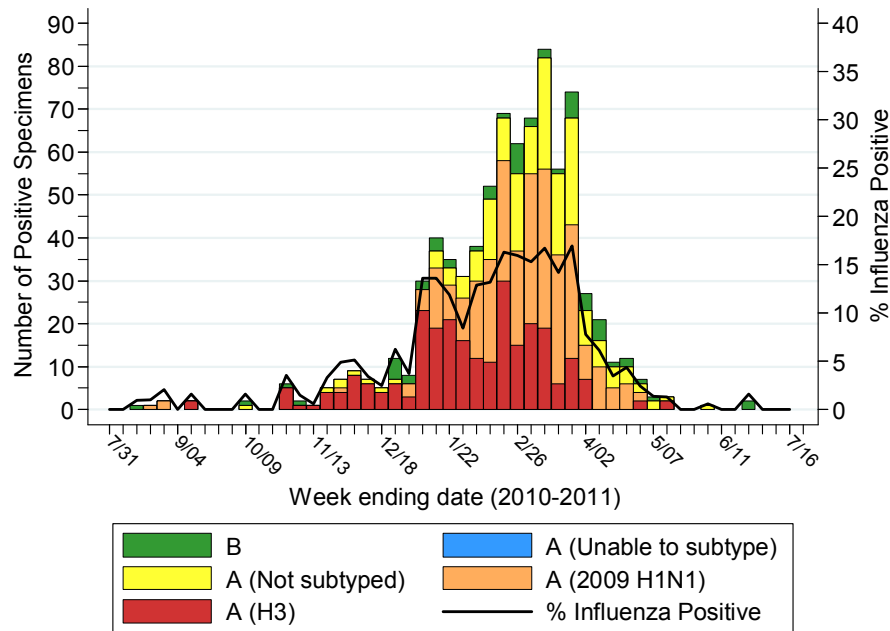


Figure 1. Influenza positive tests reported to CDC by WHO/NREVSS collaborating laboratories, Washington, 2010–2011

During the 2010-2011 season, the circulating viruses were very well matched to the strains included in the vaccine. All 33 influenza A (H3N2) specimens submitted to CDC by WAPHL were characterized as A/Perth/16/2009-like viruses and all 24 influenza A (H1N1) specimens submitted were characterized as A/California/07/2009-like viruses. Of 8 influenza B specimens submitted, 6 (75%) were characterized as B/Brisbane/60/2008-like viruses.

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.

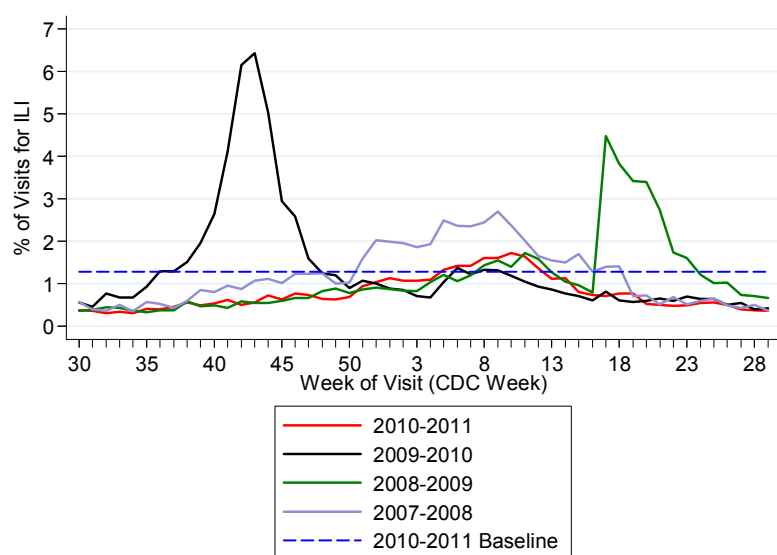


Figure 2. Percentage of ER visits for ILI by CDC week, Western Washington, 2007–2011

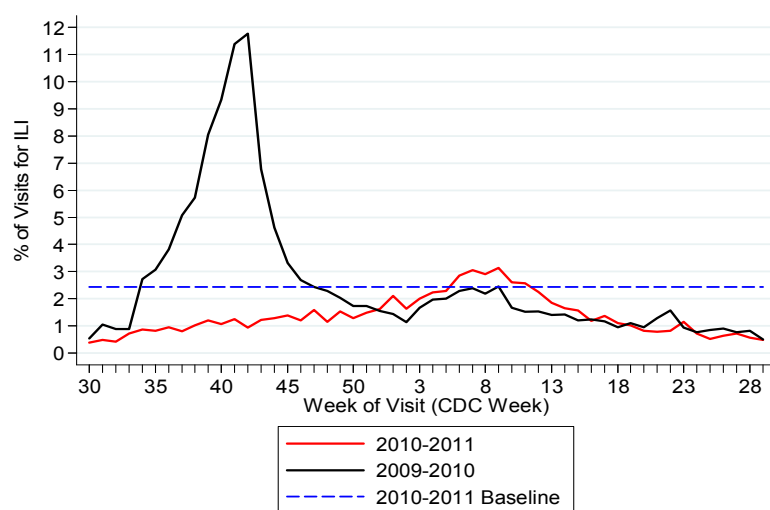


Figure 3. Percentage of ER visits for ILI by CDC week, Eastern Washington, 2009–2011

Pneumonia and Influenza (P&I) Mortality

DOH analyzes death records to determine the weekly proportion of deaths due to pneumonia and influenza (P&I). Figure 4 indicates the weekly proportion of deaths due to P&I during 2005 – 2011. 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 DOH.

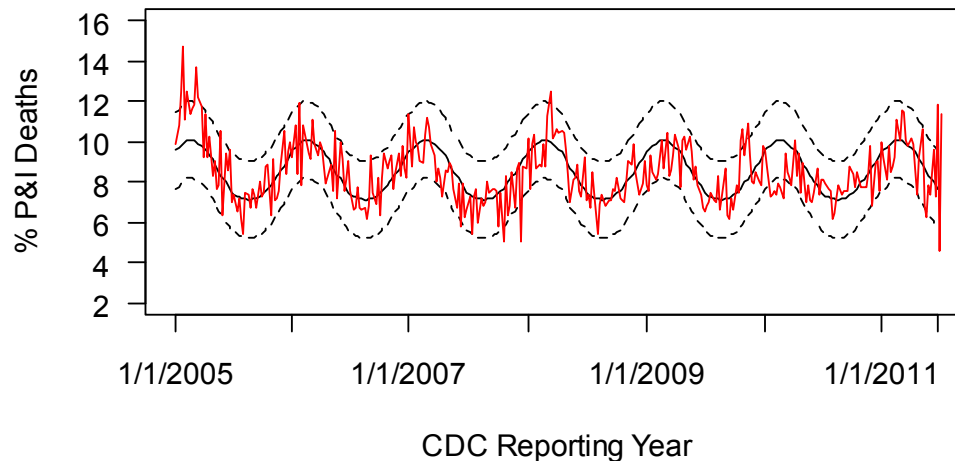


Figure 4. Percentage of deaths due to pneumonia and influenza (P&I) CDC week, Washington, 2005–2011

Laboratory-confirmed Influenza-associated Deaths

During July 25, 2010–July 23, 2011 (i.e., week 30 through week 29), surveillance identified 36 laboratory-confirmed influenza deaths. Of these deaths, 8 were due to influenza A (H3) virus, 15 were due to influenza A (2009 H1N1), 11 were due to influenza A virus of unknown subtype and 2 were due to influenza B virus.

Mortality rates were lowest for those younger than age 50 years and increased with age with the highest mortality rates in those 65 years and older (Table 1).

Of 34 patients with data on pre-existing conditions, 28 (82%) had at least one ACIP-defined pre-existing medical condition which put them at high risk for complications from influenza. Of the 6 remaining cases, 3 had either smoking or obesity as a risk factor.

Table 1. Number and rate of fatal laboratory-confirmed influenza cases by age group, Washington, July 2010–July 2011.

<i>Age Group (years)</i>	<i>Deaths</i>	<i>Death Rate (per 100,000 population)</i>
0–4	0	NA
5–24	3	0.16
25–49	4	0.17
50–64	16	1.24
65+	13	1.63
Total	36	0.53

Laboratory-confirmed Influenza-associated Hospitalizations, Spokane County

Spokane Regional Health District requires that their hospitals and providers report patients hospitalized with laboratory-confirmed influenza. Between October 3, 2010 and July 23, 2011, 84 adults and 36 children hospitalized with laboratory-confirmed influenza were reported among Spokane County residents. Cumulative hospitalization rates by age group and hospitalized cases by week of illness onset are shown on the below graphs.

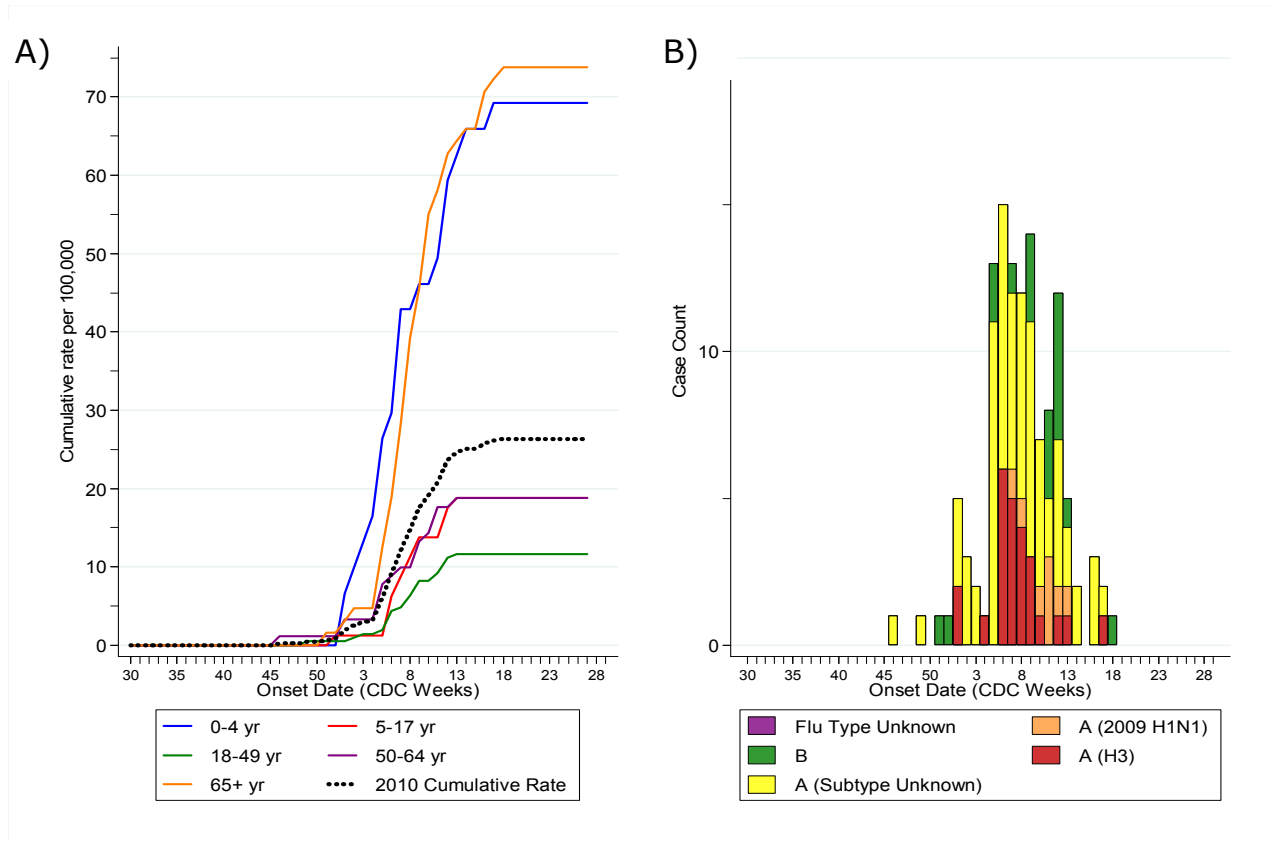


Figure 5. A) Laboratory-confirmed cumulative hospitalization rates by age group (per 100,000), Spokane County, Washington, 2010–2011. B) Hospitalized laboratory-confirmed influenza cases by week of illness onset, Spokane County, Washington, 2010–2011.

Influenza Trivalent Vaccine 2011–2012

The 2011–2012 trivalent influenza vaccine will contain the same components as the 2010–2011 vaccine. These components are:

- A/California/7/2009 (H1N1)-like antigens
- A/Perth/16/2009 (H3N2)-like antigens
- B/Brisbane/60/2008-like antigens

APPENDIX III

State Demographics

Washington State Population Estimates, 1985-2010*
Washington State Office of Financial Management

Year	Estimate
1985	4,384,100
1986	4,419,700
1987	4,481,100
1988	4,565,000
1989	4,660,700
1990	4,866,663
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	5,974,900
2002	6,041,700
2003	6,098,300
2004	6,167,800
2005	6,256,400
2006	6,375,600
2007	6,488,000
2008	6,587,600
2009	6,668,200
2010	6,733,250

*April 1, 2010 estimate updated October 2010; Accessed on 6/22/11 from:
<http://www.ofm.wa.gov/pop/coagemf>

Washington State Population Estimates By County, 2010*
Washington State Office of Financial Management

County	Estimate
Adams	18,300
Asotin	21,700
Benton	172,900
Chelan	73,300
Clallam	70,100
Clark	435,600
Columbia	4,150
Cowlitz	100,000
Douglas	38,500
Ferry	7,850
Franklin	75,500
Garfield	2,300
Grant	87,700
Grays Harbor	71,600
Island	81,100
Jefferson	29,300
King	1,933,400
Kitsap	248,300
Kittitas	40,500
Klickitat	20,500
Lewis	75,600
Lincoln	10,500
Mason	57,100
Okanogan	40,900
Pacific	22,100
Pend Oreille	13,100
Pierce	814,600
San Juan	16,500
Skagit	119,300
Skamania	10,900
Snohomish	711,100
Spokane	470,300
Stevens	44,300
Thurston	252,400
Wahkiakum	4,150
Walla Walla	59,600
Whatcom	195,500
Whitman	43,600
Yakima	239,100
Washington State	6,733,250

*April 1, 2010 estimate updated October 2010; Accessed on 6/22/11 from:
<http://www.ofm.wa.gov/pop/coagemf>

Washington State Population By Age and Sex, 2010*
Washington State Office of Financial Management

Age (years)	Male	Female	TOTAL
0-4	227,543	217,167	444,710
5-9	221,420	211,392	432,812
10-14	222,370	211,663	434,033
15-19	237,949	226,206	464,155
20-24	246,343	234,806	481,149
25-29	249,117	236,712	485,829
30-34	226,573	215,235	441,808
35-39	225,864	216,177	442,041
40-44	234,898	226,658	461,556
45-49	249,922	247,866	497,788
50-54	247,751	249,122	496,873
55-59	221,731	229,044	450,775
60-64	185,143	193,061	378,204
65-69	128,518	136,782	265,300
70-74	86,588	97,428	184,016
75-79	61,517	76,608	138,125
80-84	43,353	64,371	107,724
85 +	41,076	85,276	126,352
TOTAL	3,357,676	3,375,574	6,733,250

*April 1, 2010 estimate updated October 2010; Accessed on 6/22/11 from: <http://www.ofm.wa.gov/pop/coagemf>

[†]An estimate of April 1 population by age and sex was obtained from the Office of Financial Management website (<http://www.ofm.wa.gov/pop/coagemf/default.asp>; accessed 6/22/11). These population estimates are updated on a periodic basis and, therefore, may not reflect what is printed in this report. Please note that when smaller age brackets were needed for analysis purposes, data from the November 2010 forecast of the state population by age and sex were used (<http://www.ofm.wa.gov/pop/stfc/>; accessed 6/22/11).