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Epidemiology, Health Statistics and Public Health Laboratories
Communicable Disease Epidemiology Section
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COMMUNICABLE DISEASE REPORT 2003

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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. This is the nineteenth report from the Communicable Disease Epidemiology Section since 1982, having grown from about fifty pages of tabulations produced once every two years to an annual report of tables, graphs, maps, charts and narrative summaries. In addition to the contributors listed on the previous page, we would like to recognize the staff of our Public Health Laboratories and the thousands of people in local health jurisdictions, clinics, hospitals and clinical laboratories throughout Washington whose disease reports constitute the basis for this document.

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TECHNICAL NOTES AND COMMENTS

Washington State has conducted surveillance for designated notifiable conditions since the late 1880s. Legal requirements for disease reporting (Washington Administrative Code 246-101) form the foundation for disease surveillance and mandate healthcare providers, healthcare facilities, laboratories, veterinarians, food service establishments, child day care facilities and schools to notify local health jurisdictions and/or the Department of Health of suspected or confirmed cases of selected conditions within a specified time period. Local health jurisdictions are required to report information regarding those cases to the Washington State Department of Health, which in turn sends disease reports to the Centers for Disease Control and Prevention (CDC). This surveillance system is necessary to provide local, statewide and national disease incidence and trends in order to guide public health activities.

This report presents the number of notifiable condition cases reported to the Washington State Department of Health in 2003 and summarizes demographic, clinical, geographic and other trends evident from the data collected through the passive surveillance system. Incomplete reporting occurs with any surveillance system. The proportion of patients seeing a healthcare provider, diagnosed by clinical and laboratory methods and reported to local health jurisdictions varies according to the specific disease. Surveillance case definitions are usually more stringent than criteria for diagnosing and treating communicable diseases. Common and mild illnesses are typically under-diagnosed and under-reported, while unusual or severe illnesses are typically more frequently reported.

The 2003 population estimates used in the rate calculations contained in this report were provided by the Washington State Office of Financial Management. This information is available online at http://www.ofm.wa.gov/pop/index.htm.

Data regarding race and ethnicity collected through notifiable condition surveillance does not correspond with the new categories established in the 2000 Census. As a result, it is not possible to include estimates of disease incidence according to race or ethnicity in this report. The Washington State Department of Health is modifying data collection instruments in order to provide this information in the future; please contact the Washington State Department of Health Communicable Disease Epidemiology section with any specific questions or concerns.

Point estimates of disease rates without confidence intervals were considered the most straightforward way of providing data to non-technical readers. Disease rates were calculated per 100,000 population and were not age-adjusted due to the small numbers of cases for most diseases. Rates calculated on the basis of five or fewer cases are presented in this report with the understanding that these are not statistically valid and can be dramatically influenced with a small increase or decrease in numbers.

Bimonthly surveillance data for selected notifiable conditions by county are published in the Department of Health's ***Epitrends*** newsletter which is available online at http://www.doh.wa.gov/publicat/publications.htm.

Further information about notifiable condition surveillance including case definitions, guidelines for reporting, reporting forms, fact sheets and other resources can be found at http://www.doh.wa.gov/notify.

REPORT A NOTIFIABLE CONDITION

In accordance with Washington State law (www.doh.wa.gov/notify/other/legal.htm), public health and health care professionals should report notifiable conditions to the local health jurisdiction in the county of the patient's residence. Disease reporting telephone numbers are provided below. If no one is available at the local health jurisdiction and a condition is immediately notifiable, please call the Department of Health 24-hour reporting line: 1-877-539-4344.

Adams County Health Department
509-659-3315 after hrs: 509-659-3315

Asotin County Health District
509-758-3344 after hrs: 208-798-2648

Benton-Franklin Health District
509-547-9737 x226 after hrs: 509-543-3851

Chelan-Douglas Health District
509-886-6400 after hrs: 509-665-2202

Clallam County Health Department
360-417-2274 after hrs: 360-412-2556

Clark County Health Department
360-397-8408 after hrs: 1-888-727-6230

Columbia County Health District
509-382-2181 after hrs: 911

Cowlitz County Health Department
360-414-5599 after hrs: 360-414-5599

Garfield County Health District
509-843-3412 after hrs: 509-843-3491

Grant County Health District
509-754-6060 after hrs: 509-398-2083

Grays Harbor Health Department
360-532-8631 after hrs: 360-581-1401

Island County Health Department
360-679-7351 after hrs: 360-679-9567

Jefferson County Health Department
360-385-9400 after hrs: 360-412-2556

King County (Public Health – Seattle and King County)
AIDS/HIV: 206-296-4645
STDs: 206-731-3954
TB: 206-731-4579 (24/7)
Other CD: 206-296-4774 (24/7)
Message: 206-296-4782 (24/7)
After hours: 206-726-2128

Kitsap County Health District
360-337-5235 after hrs: 360-412-2556

Kittitas County Public Health Department
509-962-7515 after hrs: 509-899-3883

Klickitat County Health Department
509-773-4565 after hrs: 911

Lewis County Health Department
360-740-1223 after hrs: 360-740-1275

Lincoln County Health Department
509-725-1001 after hrs: 509-725-3501

Mason County Health Department
360-427-9670 x400 after hrs: 911

Northeast Tri-County Health District
Ferry: 509-775-3111 after hrs: 911
Pend Oreille: 509-447-3131 after hrs: 911
Stevens: 509-684-1301 after hrs: 911

Okanogan County Public Health Department
509-422-7140 after hrs: 911

Pacific County Health Department
360-875-9343 after hrs: 360-875-9397
Long Beach 360-642-9349

Pierce County Health Department
253-798-6410 after hrs: 253-798-6534

San Juan County Health Department
360-378-4474 after hrs: 360-410-1676

Skagit County Health Department
360-336-9397 after hrs: 360-336-9397

Skamania County Health Department
509-427-5138 after hrs: 1-888-727-6230

Snohomish Health District
425-339-5278 after hrs: 425-339-5295

Spokane Regional Health District
509-324-1449 after hrs: 509-324-1500

Thurston County Health Department
360-786-5581 after hrs: 911

Wahkiakum County Health Department
360-795-6207 after hrs: 360-795-6207

Walla Walla Health Department
509-527-3290 after hrs: 509-527-3290

Whatcom County Health Department
360-738-2508 after hrs: 360-738-2503

Whitman County Health Department
509-397-6280 after hrs: 509-397-6280

Yakima County Health District
509-249-6541 after hrs: 509-575-4040 #1

Notifiable Conditions & The Health Care Provider

Washington State Department of Health

The following diagnoses are notifiable to local health authorities in Washington in accordance with WAC 246-101. Timeframes for notification are indicated in footnotes. **Immediately notifiable conditions are indicated in bold** and should be reported when suspected or confirmed.

Acquired Immunodeficiency Syndrome (AIDS) [3]
(including AIDS in persons previously reported with HIV infection)
Animal Bites [1]
Botulism [1] **(foodborne, wound, and infant)**
Brucellosis [1]
Campylobacteriosis [3]
Chancroid [3]
Chlamydia trachomatis [3]
Cholera [1]
Cryptosporidiosis [3]
Cyclosporiasis [3]
Diphtheria [1]
Disease of Suspected Bioterrorism Origin (including) [1]
Anthrax
Smallpox
Disease of Suspected Foodborne Origin [1] **(clusters only)**
Disease of Suspected Waterborne Origin [1] **(clusters only)**
Encephalitis, viral [3]
Enterohemorrhagic *E. coli* including *E.coli* O157:H7 infection [1]
Giardiasis [3]
Gonorrhea [3]
Granuloma inguinale [3]
***Haemophilus influenzae* invasive disease** [1]
(under age five, excluding otitis media)
Hantavirus Pulmonary Syndrome [3]
Hemolytic Uremic Syndrome [1]
Hepatitis A - acute [1]
Hepatitis B - acute [3]; chronic [M] (initial diagnosis only)
Hepatitis B - surface antigen + pregnant women [3]
Hepatitis C - acute and chronic [M] (initial diagnosis only)
Hepatitis, unspecified (infectious) [1]
Herpes simplex, genital and neonatal (initial infection only) [3]
HIV infection [3]
Immunization reactions, severe, adverse [3]
Legionellosis [3]
Leptospirosis [3]
Listeriosis [1]
Lyme disease [3]
Lymphogranuloma venereum [3]
Malaria [3]
Measles (rubeola) [1]
Meningococcal disease [1]
Mumps [3]
Paralytic shellfish poisoning [1]
Pertussis [1]
Plague [1]
Poliomyelitis [1]
Psittacosis [3]
Q fever [3]
Rabies [1]
Rabies post-exposure prophylaxis [3]
Relapsing fever (borreliosis) [1]
Rubella, including congenital [1]
Salmonellosis [1]
Shigellosis [1]
Streptococcus Group A, invasive disease [3]
Syphilis [3] (including congenital)
Tetanus [3]
Trichinosis [3]
Tuberculosis [1]
Tularemia [3]
Typhus [1]
Vibriosis [3]
Yellow Fever [1]
Yersiniosis [3]

Unexplained Critical Illness or Death [1]
Rare Diseases of Public Health Significance [1]

The following diagnoses are notifiable to the Washington State Department of Health in accordance with WAC 246-101. Timeframes for notification are indicated in footnotes. **Immediately notifiable conditions are indicated in bold** and should be reported when suspected or confirmed.

Notification time frame: [1] **Immediately**, [3] Within 3 work days, [M] Within one month

Asthma, occupational (suspected or confirmed) [M]
Call 1-888-66-SHARP
Birth Defects – Autism [M], Cerebral Palsy [M], Fetal Alcohol Syndrome/ Fetal Alcohol Effects [M] Call (360) 236-3553
Pesticide Poisoning (hospitalized, fatal, or cluster) [1]
Call 1-800-222-1222

If no one is available at the local health jurisdiction and a condition is immediately notifiable, please call (877) 539-4344

For more information please see WAC 246-101 or www.doh.wa.gov/notify

Notifiable Conditions & Washington's Hospitals

Washington State Department of Health

The following diagnoses are notifiable to local health authorities in Washington in accordance with WAC 246-101. Timeframes for notification are indicated in footnotes. **Immediately notifiable conditions are indicated in bold** and should be reported when suspected or confirmed. These notifications are for conditions that occur or are treated in the hospital. Hospital laboratories should use the *Notifiable Conditions & Washington's Laboratories* poster.

Acquired Immunodeficiency Syndrome (AIDS) [3]
(including AIDS in persons previously reported with HIV infection)
Animal Bites [I]
Botulism [I] **(foodborne, wound, and infant)**
Brucellosis [I]
Campylobacteriosis [3]
Chancroid [3]
Chlamydia trachomatis [3]
Cholera [I]
Cryptosporidiosis [3]
Cyclosporiasis [3]
Diphtheria [I]
Disease of Suspected Bioterrorism Origin (including) [I]
Anthrax
Smallpox
Disease of Suspected Foodborne Origin [I] **(clusters only)**
Disease of Suspected Waterborne Origin [I] **(clusters only)**
Encephalitis, viral [3]
Enterohemorrhagic *E. coli* including *E.coli* O157:H7 infection [I]
Giardiasis [3]
Gonorrhea [3]
Granuloma inguinale [3]
***Haemophilus influenzae* invasive disease** [I]
(under age five, excluding otitis media)
Hantavirus Pulmonary Syndrome [3]
Hemolytic Uremic Syndrome [I]
Hepatitis A - acute [I]
Hepatitis B - acute [3]; chronic [M] (initial diagnosis only)
Hepatitis B - surface antigen + pregnant women [3]
Hepatitis C - acute and chronic [M] (initial diagnosis only)
Hepatitis, unspecified (infectious) [I]
HIV infection [3]
Immunization reactions, severe, adverse [3]
Legionellosis [3]
Leptospirosis [3]
Listeriosis [I]
Lyme disease [3]
Lymphogranuloma venereum [3]
Malaria [3]
Measles (rubeola) [I]
Meningococcal disease [I]
Mumps [3]
Paralytic shellfish poisoning [I]
Pertussis [I]
Plague [I]
Poliomyelitis [I]
Psittacosis [3]
Q fever [3]
Rabies [I]
Rabies post-exposure prophylaxis [3]
Relapsing fever (borreliosis) [I]
Rubella, including congenital [I]
Salmonellosis [I]
Shigellosis [I]
Streptococcus Group A, invasive disease [3]
Syphilis [3] (including congenital)
Tetanus [3]
Trichinosis [3]
Tuberculosis [I]
Tularemia [3]
Typhus [I]
Vibriosis [3]
Yellow Fever [I]
Yersiniosis [3]

Outbreaks of disease that occur or are treated in the hospital (pertussis, influenza, nosocomial infections, viral meningitis, etc.) [I]

Unexplained Critical Illness or Death [I]
Rare Diseases of Public Health Significance [I]

The following diagnoses are notifiable to the Washington State Department of Health in accordance with WAC 246-101. Timeframes for notification are indicated in footnotes. **Immediately notifiable conditions are indicated in bold** and should be reported when suspected or confirmed.

Notification time frame: [1] **Immediately**, [3] Within 3 work days, [M] Within one month

Asthma, occupational (suspected or confirmed) [M]
Call 1-888-66-SHARP
Birth Defects –Abdominal Wall Defects, Autism, Cerebral Palsy, Down Syndrome, Hypospadias, Limb Reductions, Neural Tube Defects, Oral Clefts [M] Call (360) 236-3553
Gunshot Wounds [M] Call (360) 236-3603
Pesticide Poisoning (hospitalized, fatal, or cluster) [I]
Call 1-800-222-1222

If no one is available at the local health jurisdiction and a condition is immediately notifiable, please call (877) 539-4344

For more information please see WAC 246-101 or www.doh.wa.gov/notify

Notifiable Conditions & Washington's Laboratories

Washington State Department of Health

The following laboratory results (preliminary or confirmed) are notifiable to public health authorities in Washington in accordance with WAC 246-101. Information provided must include: Specimen Type; Name and Telephone Number of Laboratory; Date Specimen Collected; Date Specimen Received; Requesting Health Care Provider's Name & Telephone Number or Address; Test Result; Name of Patient (if available) or patient identifier; Sex & Date of Birth or Age of Patient (if available).

Blood Lead Level (Elevated) [2&i]
Blood Lead Level (Non-elevated) [M &i]
Bordetella pertussis [2*]
Brucella [2*]!
CD4+ counts <200 or 14% [M &ii]
Chlamydia trachomatis [2*]
Clostridium botulinum [I*]!
Corynebacterium diphtheriae [2*]!
Cryptosporidium parvum [2*]
Cyclospora cayetanensis [2*]!
Diseases of Suspected
  Bioterrorism Origin [I*]!
  Anthrax (*Bacillus anthracis*)
  Smallpox (Variola virus)
Escherichia coli (Shiga-like toxins only) [2*]!
Francisella tularensis [2*]!
Hepatitis A (Hepatovirus) [2*]
Human Immunodeficiency Virus [2 &ii]
(Western Blot, P-24 Antigen, or viral culture)
Human Immunodeficiency Virus [M &ii]
(RNA or DNA Nucleic Acid Tests)
Listeria [2*]
Mycobacterium tuberculosis [2 &iii]!@
Neisseria gonorrhoeae [2*]
Neisseria meningitidis [2*]!
Rabies [I*]
Rubeola [I*]!
Salmonella [2*]!
Shigella [2*]!
Treponema pallidum [2*]!
Unusual Diseases of Public Health Significance [I*]
Vibrio cholerae [I*]!
Yersinia pestis [I*]!

CODE LEGEND

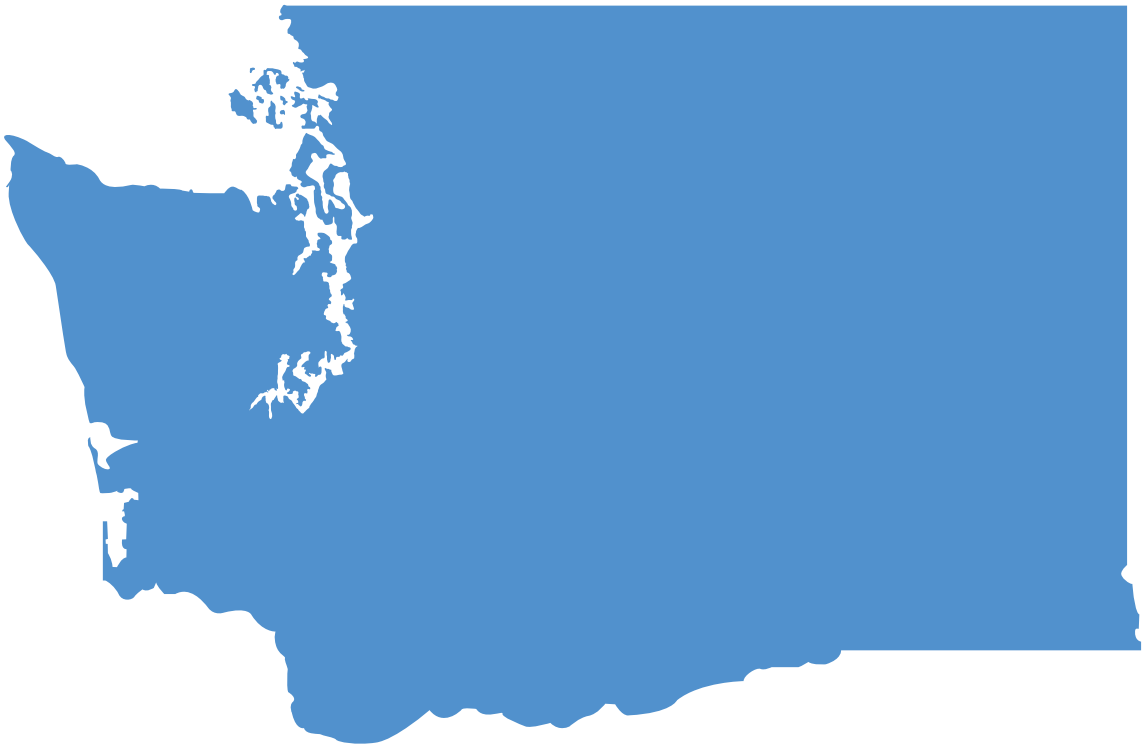
[I] **Immediately Notifiable**
[2] Notifiable within 2 Work Days
[M] Notifiable on a Monthly Basis
[*] Notifiable to the local health department of the patient's residence
[&i] Notifiable to DOH Lead Program (360-236-4252)
[&ii] Notifiable to DOH – IDRH Assessment (360-236-3419)
[&iii] Notifiable to DOH – TB Services (206-361-2838)
[!] Specimen submission required
[@] Antibiotic Sensitivity Testing (First isolates only)

To report a Notifiable Condition, contact the local health jurisdiction of the patient's residence, unless the condition is reportable directly to DOH. If the patient's local health jurisdiction is unknown, please notify the local health jurisdiction of the health care provider that ordered the diagnostic test.

If no one is available at the local health jurisdiction and a condition is immediately notifiable, please call (877) 539-4344

For more information please see WAC 246-101 or www.doh.wa.gov/notify

COMMUNICABLE DISEASE SUMMARIES



ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)

See HIV infection/AIDS

BOTULISM

Botulism is caused by a neurotoxin produced by the bacteria *Clostridium botulinum* which can be found worldwide in soil, agricultural products and animal intestinal tracts. *C. botulinum* is a potential agent of bioterrorism and is an immediately notifiable condition in Washington. Botulism occurs in three forms: foodborne, intestinal and wound; all result in flaccid paralysis caused by botulinum neurotoxin.

Foodborne (classic) botulism, which results from ingestion of botulinum toxin in contaminated food, is an illness of variable severity. Symptoms initially include blurred or double vision, dysphagia, dry mouth, vomiting, constipation or diarrhea and weakness, progressing to descending, symmetrical flaccid paralysis. Neurologic symptoms usually appear hours to days after eating contaminated food. With supportive care and administration of botulinum antitoxin, mortality is 5-10%; recovery may take months.

Intestinal (infant or adult) botulism results from ingestion and growth in the intestine of toxigenic *C. botulinum* spores. It primarily affects infants under a year of age and, rarely, adults with altered gastrointestinal anatomy. Symptoms may include constipation, poor feeding and failure to thrive that may be followed by progressive weakness, impaired respiration and death. Raw honey consumption has been implicated in some cases of intestinal botulism. With supportive treatment and administration of human-derived botulism immune globulin, mortality is low.

Wound botulism results from a wound infected with toxigenic *C. botulinum*. Symptoms of wound botulism are the same as those seen with foodborne botulism. Treatment is wound debridement and botulinum antitoxin. During 2003, multiple cases in Washington and California were associated with subcutaneous injection of black tar heroin. The heroin is cut with various agents that contaminate the product.

The number of cases of foodborne and intestinal botulism has remained fairly constant in recent years with minimal numbers reported. Nationally and in Washington, wound botulism incidence has increased with the growing use of black tar heroin. Proper home canning methods, avoiding the use of honey for infants and avoiding subcutaneous heroin use are preventive measures against botulism.

One case of foodborne botulism was reported in 2003. This involved a woman who consumed home canned asparagus and green beans. Foodborne botulism in Washington has been associated with improperly home canned vegetables including asparagus, beets, corn, carrots, green beans, spinach and salsa. Three cases of intestinal botulism were reported in 2003 in infants ranging from 3-6 months old; none of the infants had a history of eating raw honey.

In 2003, seven cases of wound botulism were reported in Washington. Five of the cases were reported from Yakima County and Snohomish and Pierce counties each reported one case. All cases of

wound botulism were associated with injecting black tar heroin, and at least five of the cases shared the same heroin dealer.

Table 1. Botulism - reported cases by category of disease, 1999-2003

Year	Foodborne	Intestinal	Wound	Total
1999	2	4	1	7
2000	1	4	0	5
2001	1	6	0	7
2002	1	1	4	6
2003	1	3	7	11

BRUCELLOSIS

Brucellosis is a systemic bacterial infection caused by several species of *Brucella* including *B. abortus*, *B. melitensis*, *B. suis* and *B. canis*. Symptom onset may be acute or subacute and include fever, chills, headache, malaise, weight loss and fatigue; symptoms may persist for a year or more without adequate treatment. Infection may occur occupationally for workers exposed to infected animals or their tissues (i.e., farm workers, veterinarians). Consumption of raw milk and milk products from infected cows, sheep and goats may cause sporadic cases or outbreaks. Person-to-person transmission of brucellosis is extremely rare.

Washington herds were declared free of bovine brucellosis in 1988. An average of one case per year is reported among Washington residents. Most cases result from exposures outside of the United States. Individuals should avoid ingesting raw milk and dairy products and use appropriate precautions (i.e., gloves, protective clothing) when handling carcasses and products of potentially infected animals to avoid infection.

Brucellosis is a potential agent of bioterrorism and is an immediately notifiable condition in Washington. Suspect or confirmed cases in individuals without an appropriate exposure history should raise the index of suspicion for a bioterrorism event.

Two cases of brucellosis were reported in Washington in 2002. Both cases occurred in Hispanic residents of Yakima County who were likely exposed in Mexico where brucellosis is more common. One case was reported in 2003 following exposure to goats in Africa.

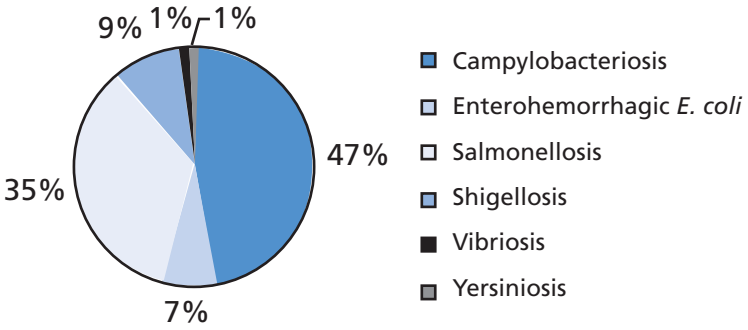
CAMPYLOBACTERIOSIS

Campylobacteriosis is a bacterial infection characterized by diarrhea, abdominal pain, malaise, fever, nausea and vomiting. The disease is most commonly caused by *Campylobacter jejuni*. Other *Campylobacter* species, including *C. coli, C. lardis* and *C. fetus*, have also been associated with infection.

Campylobacteriosis was the most frequently reported enteric disease in Washington in 2003, representing 47% of all bacterial enteric disease reports. There were 943 cases reported (15.5 cases/100,000

population). This is consistent with disease rates for the previous five years.

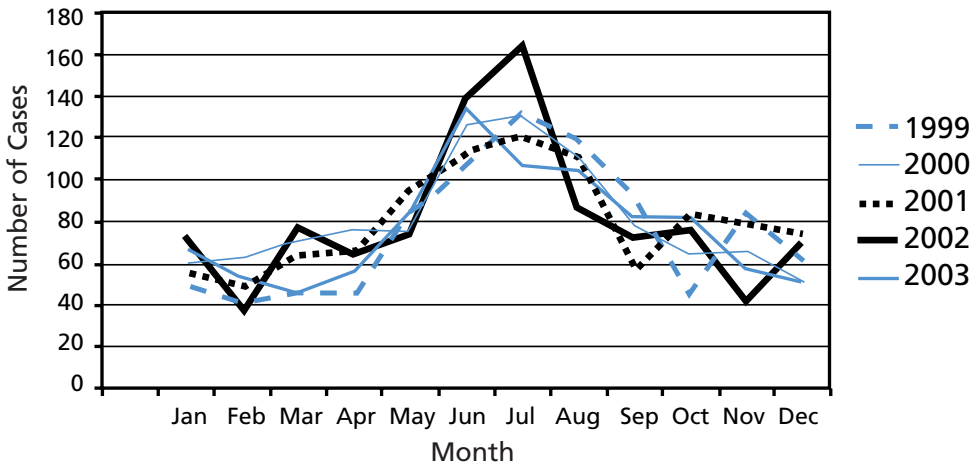
Figure 1. Bacterial enteric pathogens - percentage of reported cases, 2003



Submission of *Campylobacter* isolates to the Washington State Department of Health Public Health Laboratories (DOH PHL) is not required, but identification of species and relatedness of organisms can assist in outbreak detection. The species of *Campylobacter* was determined for 41% of reported cases in 2003. Of these, 380 (99%) were *C. jejuni*.

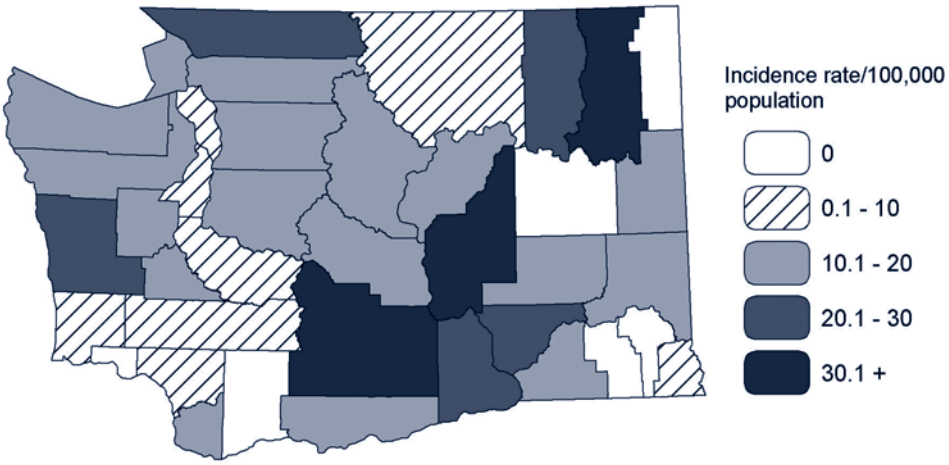
Cases of campylobacteriosis occur year-round, but peaks are commonly seen in summer months. In 2003, most cases were reported from June through August (348 or 37%). Outbreaks of campylobacteriosis do not occur as commonly as other enteric diseases due to the fragility of the microorganism and low rate of person-to-person spread. There were four confirmed outbreaks of campylobacteriosis reported in 2003, including a waterborne outbreak that affected more than 100 people at a private function (see Appendix IV).

Figure 2. Campylobacteriosis - reported cases by month of onset, 1999-2003



Several counties had incidence rates above the statewide average of 15.5 cases/100,000 population, however many of these were based on small numbers of cases.

Figure 3. Campylobacteriosis - incidence by county, 2003



CHANCROID

Chancroid is a sexually transmitted genital ulcer disease caused by *Haemophilus ducreyi*, a gram-negative bacillus. Chancroid is characterized by painful ulceration at the site of infection. The incubation period is usually 4-7 days, following sexual contact with an infected individual.

Most prevalent in tropical and subtropical regions of the world, chancroid is much less common in temperate zones where it may occur in small outbreaks. In the United States, outbreaks and some endemic transmission have occurred principally among migrant farm workers and inner-city residents. Chancroid is most often diagnosed in men who usually present with genital ulcers or inguinal tenderness. Depending on the site of the ulcer, women often have less obvious symptoms. About 10% of persons who have chancroid acquired in the United States are co-infected with syphilis or herpes simplex virus. Chancroid, like other genital ulcer diseases, is associated with an increased risk of HIV transmission.

Current recommendations for diagnosis and treatment of chancroid can be found in the ***CDC STD Treatment Guidelines***, available at www.cdc.gov/STD/treatment.

Sixty-seven cases were reported nationally in 2002, with South Carolina reporting 64% of the cases. No cases of chancroid were reported in Washington in 2003.

CHLAMYDIA TRACHOMATIS

Chlamydia trachomatis is the most commonly reported sexually transmitted disease (STD) in the United States and in Washington. Asymptomatic infection is common among both men and women. If symptoms occur, there may be abnormal discharge from the site of infection or pain during urination; women may also have abdominal pain. Untreated chlamydia is a major cause of pelvic inflammatory disease (PID) that can lead to infertility or ectopic pregnancies (particularly with recurrent infections). Perinatal infection can result in neonatal conjunctivitis or pneumonia. Complications in

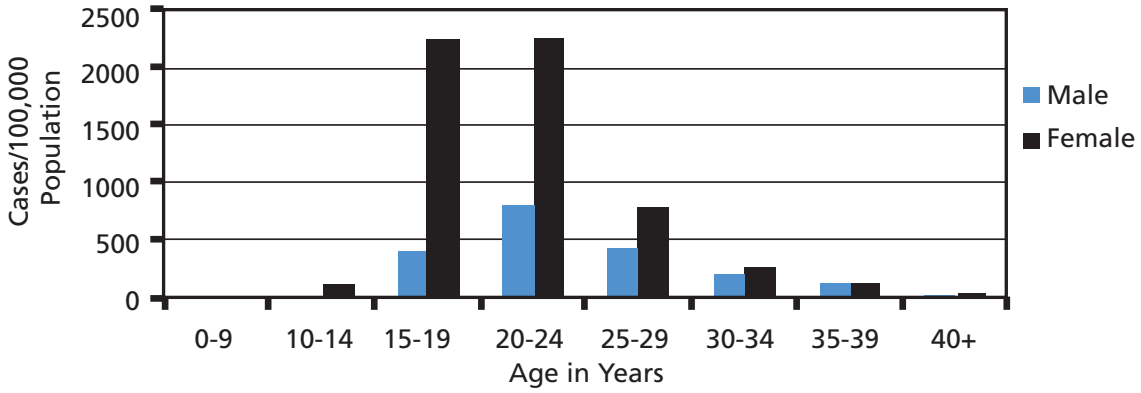
untreated men include urethritis, epididymitis and proctitis. Similar to other STDs, chlamydia may enhance the transmission of human immunodeficiency virus (HIV).

Current recommendations for diagnosis and treatment of chlamydia in adults, pregnant women and infants can be found in the ***CDC STD Treatment Guidelines***, available at www.cdc.gov/STD/treatment. Due to frequent co-infection with *Neisseria gonorrhoeae*, effective treatment for gonorrhea should be included.

In 2003, 16,796 cases of chlamydia (12,341 female, including 275 cases of chlamydial PID, and 4,455 male) were reported for a rate of 275.4 cases/100,000 population. Of these cases, 590 (3.5%) were also infected with *N. gonorrhoeae*. This compares to 14,936 cases of chlamydia (247.2 cases/100,000 population) reported in 2002. The increase in chlamydia cases can be attributed to several factors: more sensitive laboratory techniques, more patient-friendly urine tests, an increase in routine screening, improved surveillance and reporting, and an increase in risky sexual behaviors.

The Department of Health and Human Services' Region X Infertility Prevention Project (IPP) targets women for screening and accounts for the high female to male ratio (2.8:1) seen in the surveillance data. The population targeted by the IPP for chlamydia screening is women attending STD clinics or seeking reproductive health services in other facilities.

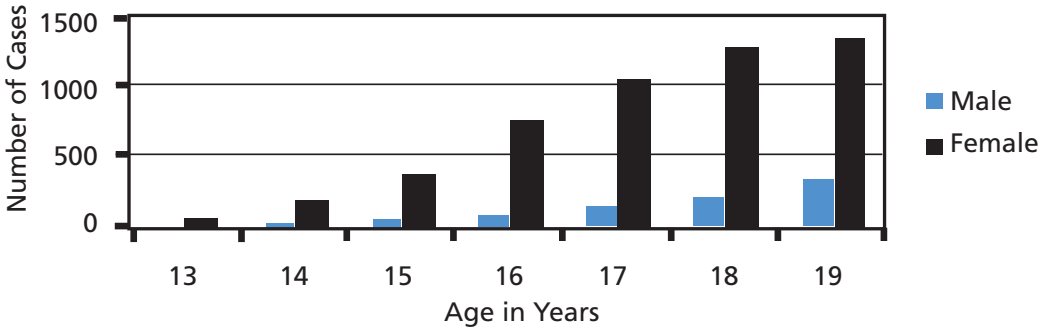
Figure 4. *Chlamydia trachomatis* - incidence by sex and age group, 2003



Chlamydia is common among sexually active teens (35% of reports; 5,913 cases in 2003) and is often concentrated among female adolescents, who are physiologically more susceptible to a chlamydial infection than older women. For ages 15-19 years, the incidence was 2,244 cases/100,000 population for females and 383 cases/100,000 population for males. Among ages 20-24 years, the rate was 2,245 cases/100,000 population for females and 774 cases/100,000 population for males.

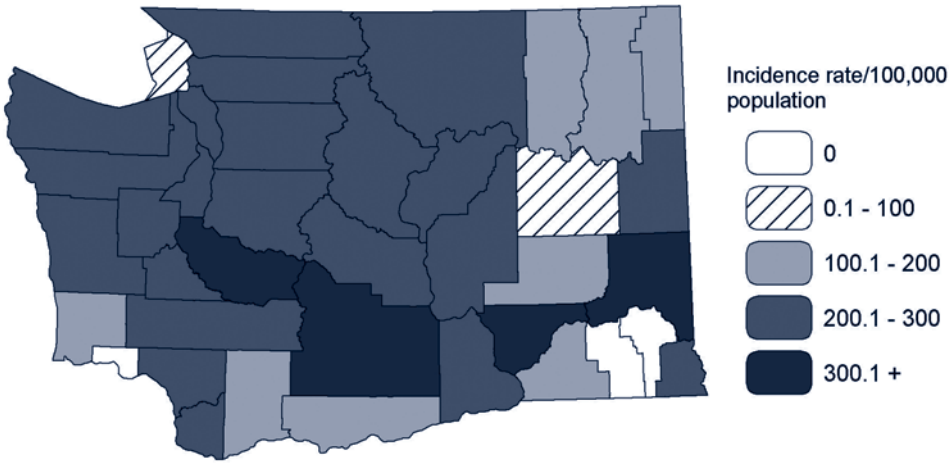
The ***CDC STD Treatment Guidelines*** recommend that all women (especially those <20 years of age) diagnosed with chlamydia be tested again for chlamydia three to four months after treatment. This is due to the high prevalence of repeat infections in women diagnosed with chlamydia. In 2003, 11% (1,358 cases) of chlamydia cases among women reported recurrent infection (>one episode in 12 months), and of the 1,632 cases of chlamydia with recurrent infection, 45% (733) were teenagers.

Figure 5. *Chlamydia trachomatis* - reported cases among persons 13-19 years of age by age and sex, 2003



Thirty-eight of 39 Washington counties reported cases of chlamydia in 2003. The highest incidence rates were in Yakima (422 cases/100,000 population) and Pierce (384 cases/100,000 population) counties.

Figure 6. *Chlamydia trachomatis* - incidence by county, 2003



CHOLERA

Disease caused by toxigenic *Vibrio cholerae* serogroup O1 or O139 may range from an asymptomatic infection to a life-threatening illness with acute, profuse watery diarrhea and dehydration. The bacteria are carried only by humans and are spread primarily through the fecal-oral route, usually through contaminated food or water. Cholera is an immediately notifiable condition in Washington. Non-toxigenic *Vibrio* including *V. cholerae* non-O1 and *V. cholerae* non-O139 are notifiable as **Vibriosis**.

V. cholerae is a major cause of epidemic diarrhea in Asia, Africa and Latin America. Cases of cholera are occasionally reported in Washington following travel to an endemic area. No cases of toxigenic *V. cholerae* infection were reported in Washington in 2003.

CRYPTOSPORIDIOSIS

Cryptosporidiosis is a diarrheal illness caused by the protozoa *Cryptosporidium parvum* which are found in animals and contaminated water sources. Symptoms may be prolonged and include watery diarrhea, abdominal pain, nausea, vomiting, weight loss and fever. For persons with immunodeficiencies, especially those with advanced HIV infection, the disease can be serious and long lasting.

Transmission is fecal-oral through ingestion of contaminated food or water or by direct contact with infected humans or animals, particularly calves. Outbreaks have typically occurred in water parks, swimming pools and child care facilities. The organisms can survive in the environment for long periods of time and are resistant to standard chlorine disinfection.

C. parvum cysts are present in the majority of surface waters tested throughout the United States; municipal water systems, home filtered water and bottled water are not necessarily free of *C. parvum*. Healthcare providers suspecting cryptosporidiosis must specifically request stool testing for *C. parvum*, as this test may not be routinely performed by clinical laboratories.

Cryptosporidiosis has been notifiable in Washington since 2001. There were 65 cases reported in 2003 (1.1 cases/100,000 population). No outbreaks were identified. The two most commonly reported risk factors were recent travel outside the United States (15%) and recreational water exposure (12%).

CYCLOSPORIASIS

Cyclosporiasis is a parasitic disease caused by *Cyclospora cayetanensis* causing persistent watery diarrhea, nausea, anorexia, abdominal pain, fatigue and weight loss; fever is rare. *Cyclospora* are transmitted primarily by the fecal-oral route through ingestion of contaminated food or water. Fresh fruits and vegetables (raspberries, basil, lettuce) have been implicated in national and international outbreaks of cyclosporiasis.

Since identification of *Cyclospora* in stool requires special laboratory tests that are not routinely performed, healthcare providers need to specifically request testing for *Cyclospora* if symptoms, food or travel history are suggestive of cyclosporiasis.

Cyclosporiasis became notifiable in Washington in 2001. No cases were reported in 2003.

DIPHTHERIA

Diphtheria is a bacterial disease caused by a toxigenic strain of *Corynebacterium diphtheriae* usually involving the upper respiratory tract, other mucous membranes or the skin. The toxin produced by C. *diphtheriae* causes inflammation, swelling and the formation of a characteristic grayish white membrane on lesions it produces. In severe cases of pharyngeal diphtheria, the infection progresses to airway obstruction. The toxin can also affect the myocardium and nerves and is fatal in 5–10% of non-cutaneous cases.

Transmission occurs through direct contact with an infected person or contact with articles soiled by discharge from diphtherial lesions. Diphtheria is an immediately notifiable condition in Washington.

Continued control of this disease depends on routine childhood immunization using diphtheria toxoid, with re-immunization of adults every 10 years. In Washington, diphtheria is not endemic and cases are usually travel-associated. The last case of diphtheria reported in Washington occurred in 1979. In 2003, a fatal case occurred in Pennsylvania following travel to Haiti.

DISEASE OF SUSPECTED BIOTERRORISM ORIGIN

The Washington State Department of Health (DOH) has never received a confirmed report of a disease of suspected bioterrorism origin. State and local health jurisdictions have responded to possible bioterrorism incidents (including letters claiming to contain anthrax) by recommending testing when appropriate and working closely with law enforcement agencies. Any disease of suspected bioterrorism origin is immediately notifiable to the relevant local health jurisdiction and to DOH. Diseases of suspected bioterrorism origin include, but are not limited to, anthrax, smallpox, plague, tularemia and botulism.

Public health emergency preparedness, and specifically bioterrorism preparedness, is imperative for an effective and coordinated response to public health emergencies and has been a priority for DOH. Two examples of bioterrorism preparedness initiatives are described below.

Smallpox Vaccination Clinics

In October 2002, planning for smallpox vaccination clinics began throughout Washington as part of Stage 1 of the National Smallpox Vaccination Program. This voluntary vaccination program was instituted to prepare the United States for a potential terrorist attack involving release of the smallpox virus. To prepare for the vaccination program, a comprehensive vaccine safety surveillance system was created to collect data about vaccine administration and adverse reactions. During early 2003, more than 500 civilian healthcare workers, public health staff and others received smallpox vaccine. These volunteers will enhance Washington's ability to respond immediately if a smallpox outbreak occurs in Washington.

Current initiatives include training of public health response team members and updating of smallpox response plans to include lessons learned during Stage 1. The focus has shifted from actively seeking to immunize new smallpox team members to identifying those with needed skills who are ready and willing to be vaccinated at the first report of a smallpox case. Additionally, efforts are being made to improve tracking of rash illnesses and the ability to conduct large scale vaccination clinics.

Suspicious Powder Protocols

While suspicious powder calls have diminished from their peak following the anthrax events of 2001, changes in national alert levels have reinforced the need to work closely with first responders and develop response protocols that clearly delineate roles and responsibilities during suspicious powder incidents. Standard response protocols have been developed and training is ongoing for public

health and laboratory staff, as well as for first responders from other agencies.

DISEASE OF SUSPECTED FOODBORNE ORIGIN

A number of infectious agents can be acquired from contaminated food. An outbreak of suspected foodborne origin is defined as two or more ill persons with epidemiologic and/or laboratory evidence implicating a common food as the source of illness. Foodborne outbreaks may result from various factors including inherently contaminated product (e.g., *Salmonella* and eggs), improper food preparation techniques, and contamination by ill food handlers. Agents that may cause foodborne outbreaks include *Bacillus cereus*, botulinum toxin, *Campylobacter jejuni*, *Escherichia coli* O157:H7, *Giardia lamblia*, hepatitis A, *Listeria monocytogenes*, noroviruses, *Salmonella* and *Shigella* species. Diseases of suspected foodborne origin are immediately notifiable in Washington.

The number of reported foodborne outbreaks likely represents only a small proportion of actual events, and reports can vary considerably from year to year. In 2003, 55 foodborne outbreaks, affecting more than 620 persons, were reported. Forty-four percent resulted in three or fewer ill persons. One outbreak of viral gastroenteritis involved 122 ill persons and was associated with an ill food handler at a Pierce County restaurant.

Fifty percent of the reported outbreaks occurred in King County and the majority of reported outbreaks (84%) involved restaurant settings. *Salmonella* was the etiologic agent confirmed in the majority of the bacterial disease outbreaks.

Table 2. Foodborne outbreaks by place of preparation, 2003

	Outbreaks		Cases	
Place	**Number**	**%**	**Number**	**%**
Restaurant	46	84	505	82
Home	4	7	17	3
Grocery	1	2	5	1
Bakery	1	2	41	6
Unknown	3	5	52	8
TOTAL	55	100	620	100

Table 3. Foodborne outbreaks by agent, 2003

Agent	Outbreaks Number	Outbreaks %	Cases* Number	Cases* %
Bacterial				
B. cereus	3	5	9	1
Campylobacter	4	7	16	3
E. coli	2	4	8	1
Salmonella	9	16	84	14
Staph aureus	4	7	56	9
Other bacterial	8	14	23	4
Chemical	0	0	0	0
Norovirus	19	34	399	64
Unknown	7	13	28	4
TOTAL**	56	100	623	100

*Includes cases with clinical symptoms matching an agent, but without laboratory confirmation.
** An outbreak may have more than one agent identified

Poultry was associated with five (9%) outbreaks and fresh produce was associated with seven (13%) outbreaks. Four other outbreaks were due to raw or inadequately cooked products, including raw oysters, unpasteurized milk and eggs. Factors contributing to foodborne illness in outbreaks during 2003 included bare-hand contact, contamination by ill food handlers, and improper preparation and storage of foods that allowed bacterial growth or viability. More than one factor may be identified in a single outbreak.

Table 4. Factors contributing to foodborne outbreaks, 2003

Factor*	Outbreaks (N=55) Number	Outbreaks (N=55) %
Contamination		
Contaminated raw product	8	15
Cross-contamination	4	7
Bare-hand contact	18	33
Ill food handler	10	18
Proliferation		
Room temperature holding	6	11
Slow cooling	7	13
Prior preparation	8	15
Survival		
Inadequate reheating	6	11

*An outbreak may have more than one factor identified

DISEASE OF SUSPECTED WATERBORNE ORIGIN

Waterborne outbreaks are due to many agents (including viruses, bacteria and parasites) that contaminate recreational or drinking water. An outbreak is defined as two or more ill persons with epidemiologic and/or laboratory evidence implicating a common water exposure. Suspected outbreaks should be reported promptly to local health jurisdictions, even before confirmatory laboratory results are available. In 2003, one waterborne outbreak was reported in Washington involving 12 confirmed and 98 probable cases of campylobacteriosis associated with consumption of water at a large private gathering. (See Appendix IV)

Table 5. Waterborne disease outbreaks, 1999 - 2003

Year	Agent	# Cases	Setting
1999	Viral	46	creek water
	Viral	68	well
	E. coli O157:H7	36	swimming lake
2000	*Pseudomonas*	10	hotel pool/hot tub
2001	*Pseudomonas*	3	hotel hot tub
2002	None reported	-	-
2003	*Campylobacter*	12	drinking water

ENCEPHALITIS, VIRAL

While a variety of viruses can cause encephalitis, surveillance is conducted only for arboviral (arthropod-borne or mosquito-borne) infections including West Nile virus (WNV), western equine encephalitis (WEE) and St. Louis encephalitis (SLE). In Washington, endemically acquired cases of WEE and SLE were documented in the Yakima Valley area during the 1930s, 1940s, 1970s and early 1980s. These viruses are usually transmitted to humans by the bite of an infected mosquito. Wild birds are the natural reservoir for these viruses and the source of infection for mosquitoes. Species of mosquitoes that act as vectors for these diseases are found throughout the state. The vast majority of human arbovirus infections are asymptomatic, however a range of illness can occur from mild to severe. The last reported human case of endemically acquired arbovirus encephalitis, WEE, occurred in a resident of King County in 1988.

In 1999, West Nile virus was first identified in the western hemisphere in New York City. Between 1999 and 2003, the virus spread throughout most of North America, causing a major epizootic in birds and horses as well as a human epidemic. During the fall of 2002, two dead birds (a raven in Pend Oreille County and a crow in Snohomish County) and two horses (one each in Whatcom and Island counties) that had neurologic symptoms were infected with WNV. Despite more extensive surveillance in 2003, there were no birds or animals diagnosed with WNV in Washington. In 2003, eight Washington residents were infected with WNV after being exposed to infected mosquitoes in other states (Colorado [two], Oklahoma [two], Wyoming [two], and one each in Texas and South Dakota).

No cases of WNV were acquired as a result of exposure in Washington in 2003.

Most human WNV infections are asymptomatic and approximately 20% develop mild, self-limited illness. Less than 1% of infected persons develop serious neuroinvasive disease (includes meningitis, encephalitis, acute flaccid paralysis, and other neurologic manifestations). The case fatality rate for severe cases of WNV is approximately 5-10%. Individuals over 50 years of age are at highest risk for severe illness and death. Prevention and risk reduction measures include appropriate personal protective measures to avoid mosquito bites, reducing mosquito breeding sources, and mosquito-proofing residences.

ENTEROHEMORRHAGIC *ESCHERICHIA COLI*

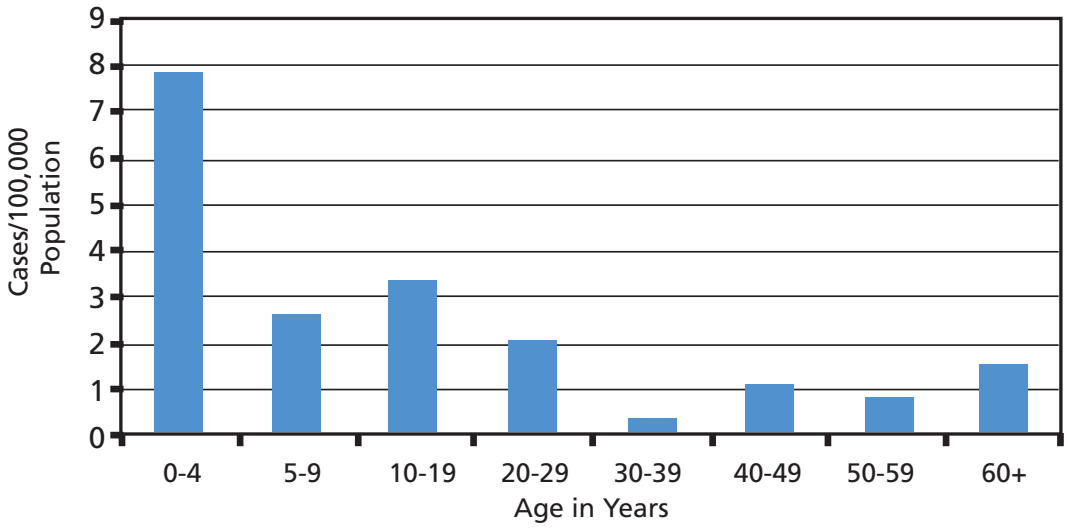
Infections caused by *Escherichia coli* O157:H7 and other Shiga-like toxin producing *E. coli* serotypes are notifiable as enterohemorrhagic *E. coli* infection. Symptoms include bloody diarrhea and abdominal pain, usually without fever. Serious complications including hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP) may occur.

Disease caused by enterohemorrhagic *E. coli* is immediately notifiable in Washington. Possibly due to heightened recognition and reporting, Washington has a higher incidence of *E. coli* cases compared to the national rate. In 2003, the incidence rate in Washington was 2.1 cases/100,000 population, compared to 1.4 cases/100,000 population in the United States.

In 2003, 131 cases of enterohemorrhagic *E. coli* were reported in Washington, including 128 cases of *E. coli* O157:H7 (2.1 cases/100,000 population), one case each of *E. coli* O157:NM, *E. coli* O118:H16 following travel to Mexico, and a Shiga-like toxin producing *E. coli* with unknown serotype. There were no deaths associated with enterohemorrhagic *E. coli* infection in Washington in 2003.

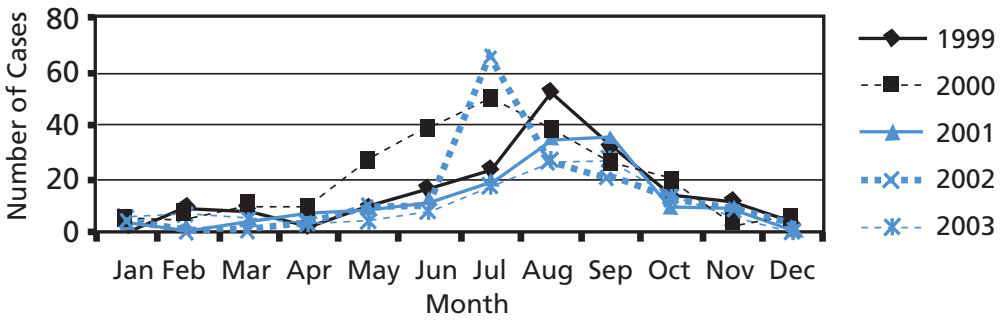
Males and females had similar rates of infection. Children under the age of five years had an elevated incidence (7.7 cases/100,000 population) and are at the highest risk for developing HUS as a complication of infection; treatment with antibiotics may increase this risk.

Figure 7. *E. coli* O157:H7 - incidence by age group, 2003



Infection with enterohemorrhagic *E. coli* is seasonal with cases most commonly occurring during summer months. In 2003, 36% of reported cases had onset of illness in July and August.

Figure 8. *E. coli* O157:H7 - reported cases by month of onset, 1999-2003



High rates in Lincoln, Pacific and San Juan counties are based on small numbers of cases. Fifteen counties reported no cases of enterohemorrhagic *E. coli* in 2003.

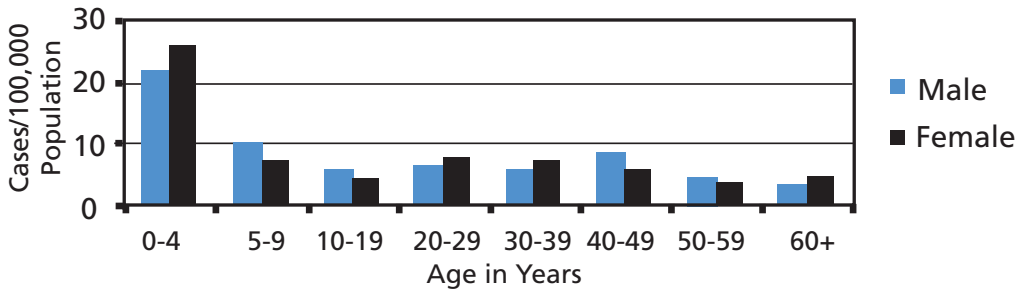
GIARDIASIS

Giardiasis is a diarrheal illness caused by the parasite *Giardia lamblia* (also known as *G. intestinalis* or *G. duodenalis*) that may be carried by humans or animals in the intestinal tract. Infection may be asymptomatic or cause diarrhea, abdominal pain, nausea and fatigue. Patients are infectious throughout their illness, which can be prolonged without treatment.

Giardia is spread by fecal-oral transmission through ingestion of contaminated drinking water, recreational water or food. Person-to-person transmission can occur, especially among children in child care facilities, or by oral-anal sexual contact. During the summer months, transmission is often related to outdoor activity in or near untreated water. *Giardia* is one of the most common causes of waterborne disease in the United States.

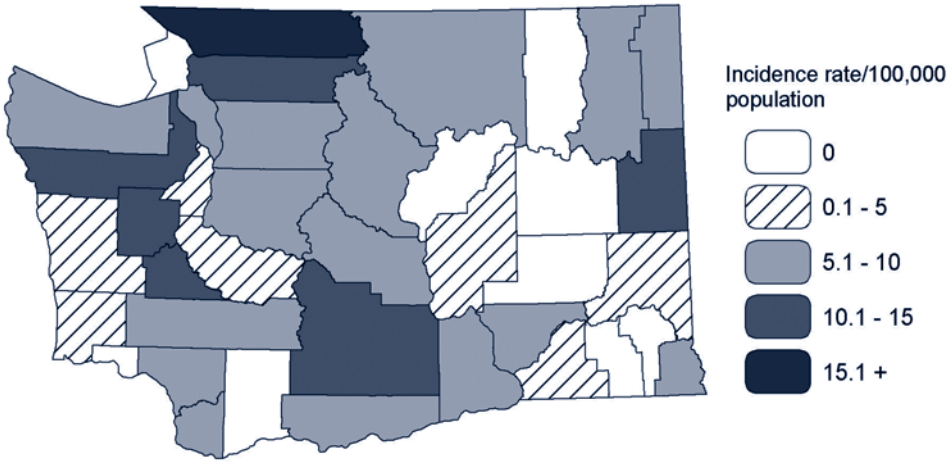
In 2003, 435 cases of giardiasis were reported (7.1 cases/100,000 population) from 30 counties in Washington. No deaths were reported. The age-specific incidence was highest in children under 10 years of age (16.0 cases/100,000 population). Thirty-five percent of cases had onset of illness in July, August or September, which coincides with recreational exposure to untreated water. In 2003, reported sources of exposure included drinking untreated water, camping or hiking (22%), immigration or international travel (20%), out-of-state travel (7%), attending or working in a daycare facility or having contact with a diapered child (5%), and having contact with animals (3%). Forty percent of cases reported no known exposures.

Figure 9. Giardiasis - incidence by sex and age group, 2003



Jefferson, Mason, Skagit, Spokane, Thurston, Whatcom and Yakima counties had incidence rates greater than 10.0 cases/100,000 population in 2003. However, Jefferson and Mason county rates were based on small numbers of cases.

Figure 10. Giardiasis - incidence by county, 2003



GONORRHEA

Gonorrhea is caused by the bacteria *Neisseria gonorrhoeae* and is transmitted through sexual contact with an infected partner. Infections may be asymptomatic. Only about 50% of women will have symptoms of an abnormal vaginal discharge or painful urination. Men usually have a urethral discharge and painful urination that may be severe. Infections may also cause conjunctivitis, pharyngitis or proctitis.

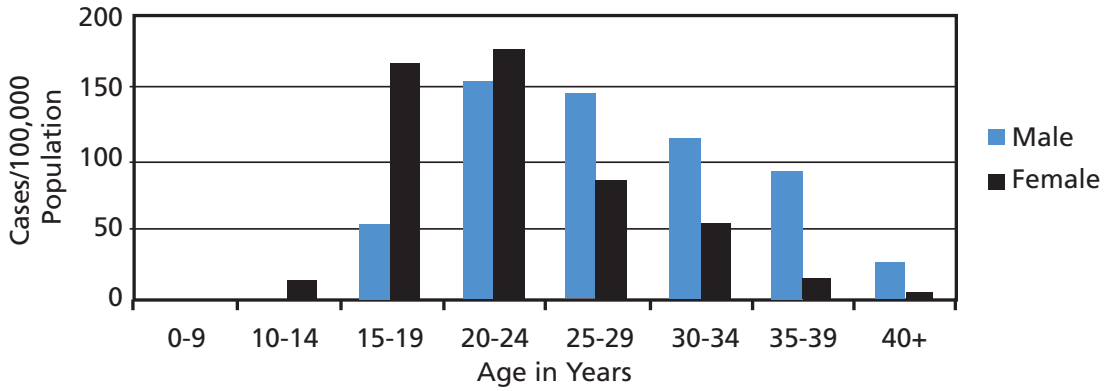
Certain strains of gonorrhea cause minimal initial symptoms but, if untreated, can spread through the blood causing arthritis, tenosynovitis, perihepatitis and petechial or pustular skin lesions. The most common complication of untreated gonorrhea in women is pelvic inflammatory disease (PID), which can result in infertility, ectopic pregnancy and chronic pelvic pain. The most common complication in men is epididymitis. Gonococcal conjunctivitis may result from perinatal transmission, but is

rare in the United States where post-partum ocular prophylaxis is used (mandated in Washington). Epidemiologic studies provide strong evidence that gonococcal infections may facilitate HIV transmission.

The CDC's Gonococcal Isolate Surveillance Project (GISP) has found that Seattle is now an area with increased prevalence of quinolone-resistant *Neisseria gonorrhoeae* (QRNG). Based on these findings, the Washington State Department of Health recommends that fluoroquinolones (ciprofloxacin, levofloxacin and ofloxacin) should no longer be used as the first line therapy for gonorrhea. The antibiotics of choice are ceftriaxone or cefpodoxime, followed with either azithromycin or doxycycline to empirically treat coexisting chlamydial infection. Current recommendations for diagnosis and treatment of gonorrhea in pregnant women and infants can be found in the ***CDC STD Treatment Guidelines***, available at www.cdc.gov/STD/treatment.

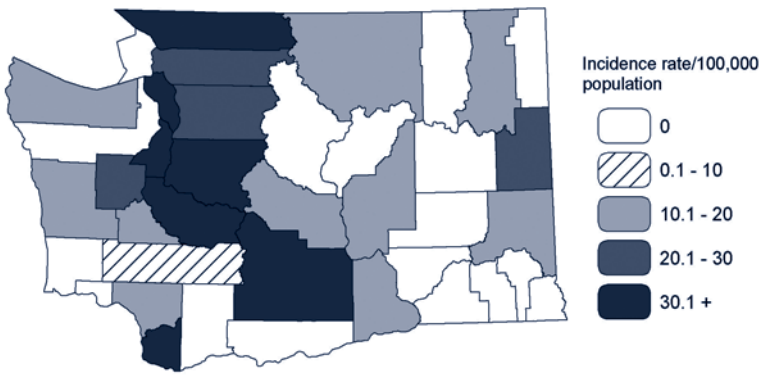
In 2003, 2,754 cases of gonorrhea (1,587 males and 1,167 females) were reported for an incidence of 45 cases/100,000 population; 590 (21%) also had chlamydia. Sixty-three cases of gonococcal PID were reported. Seven percent of females with gonorrhea (76 of 1,167) had recurrent infection, a risk factor for infertility. Gonorrhea incidence was highest among sexually active adolescents and young adults. The highest incidence for males occurred among those 20-24 (154 cases/100,000 population) and 25-29 (144 cases/100,000 population) years of age. The highest rates for females occurred among those 20-24 (178 cases/100,000 population) and 15-19 (166 cases/100,000 population) years of age. Of the 235 persons with recurrent gonococcal infection (>one episode in a 12 month period), 17% (40) were teenagers.

Figure 11. Gonorrhea - incidence by sex and age group, 2003



King and Pierce counties accounted for 69% of the Washington morbidity. King County had the highest incidence (76 cases/100,000 population). There were seven counties with no reported gonorrhea in 2003.

Figure 12. Gonorrhea - incidence by county, 2003



GRANULOMA INGUINALE

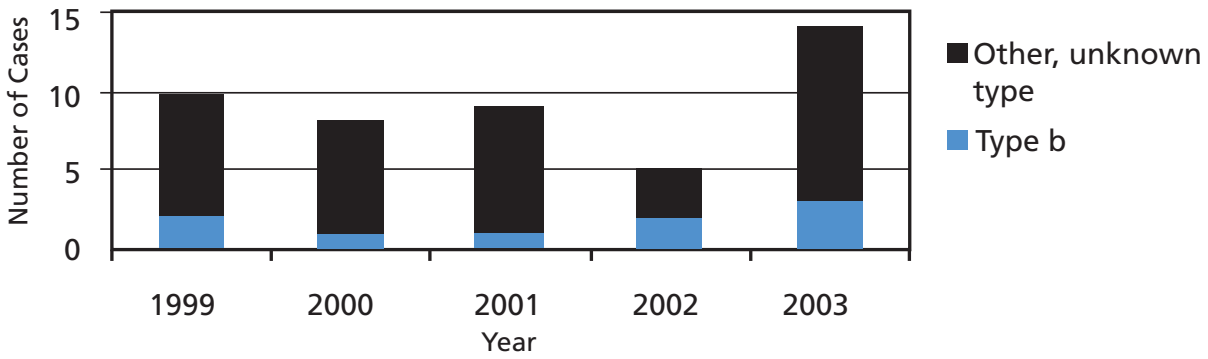
Granuloma inguinale (donovanosis), rare in the United States, is a sexually transmitted genital ulcer disease caused by the bacteria *Calymmatobacterium granulomatis*. The disease is endemic in some tropical and subtropical areas, primarily certain countries in Asia and in parts of Australia. Current recommendations for diagnosis and treatment of granuloma inguinale can be found in the ***CDC STD Treatment Guidelines***, available at www.cdc.gov/STD/treatment. No cases were reported in Washington in 2003.

HAEMOPHILUS INFLUENZAE INVASIVE DISEASE

Haemophilus influenzae, bacteria with six distinct capsular types (a-f), can cause severe invasive disease including meningitis, bacteremia, epiglottitis, pneumonia and bone or joint infections. Humans are the only reservoir for *H. influenzae*. Infections are now rare in the United States as a result of routine childhood immunization for *H. influenzae* type b (Hib). Transmission is by respiratory droplets and through contact with nasopharyngeal secretions. Children under three years of age are at particular risk for meningitis caused by Hib, sometimes with fatal outcomes. About 10% of Hib meningitis results in permanent sequelae including hearing loss, paralysis or other neurological damage. Only cases occurring in children under five years of age are immediately reportable in Washington.

Before vaccine was introduced in 1989, several hundred pediatric cases of type b (Hib) infection were reported annually in Washington. Fewer than 10 cases have been reported each year recently. In 2003, 14 cases of invasive *H. influenzae* infection were reported (0.2 cases/100,000 population), with one death in a premature infant. All but one case were among children four years of age or younger. Among the pediatric cases, two were type a, three were type b, two were type c, four were nontypeable and two isolates were not tested. One child with Hib was partially immunized. Three cases were premature infants, none with type b.

Figure 13. *Haemophilus influenzae* - reported cases by capsular type, 1999-2003



HANTAVIRUS PULMONARY SYNDROME

Hantavirus pulmonary syndrome (HPS) is a zoonosis caused by infection with Sin Nombre virus. Sin Nombre virus is carried by deer mice and closely related *Peromyscus* mice which are found in rural areas throughout Washington and most of North America. Human exposure occurs by inhalation of dust contaminated with rodent excreta containing the virus. A prodrome of fever, headache, myalgias, fatigue, nausea and abdominal pain is followed by rapidly progressive respiratory distress with cardiovascular shock. Most cases require hospitalization and intensive care; there is no specific treatment available. Approximately 35% of cases are fatal. Diagnosis of HPS can be confirmed by serological tests, immunohistochemical stains of tissue, or the detection of Sin Nombre virus in blood or tissue by nucleic acid testing methods.

HPS was first reported in Washington in 1994 and became notifiable in Washington in 2001. Through 2003, a total of 28 cases have been reported; 15 reported exposure in eastern Washington, 10 in western Washington and three were exposed in multiple Washington counties or out of state. Ten of the 28 (36%) cases were fatal. During 2003, two cases of HPS were reported in Washington residents; one was fatal. Both of the cases were male with onsets in late October and both were residents of, and exposed to infected rodent droppings, in western Washington.

HEMOLYTIC UREMIC SYNDROME

Hemolytic uremic syndrome (HUS) is a rare complication of certain infections, most commonly after infection with *E. coli* O157:H7 or other Shiga-like toxin producing enteric bacteria. Cases with laboratory confirmation of *E. coli* O157:H7, other Shiga-like toxin producing *E. coli*, or *Shigella* should be reported in the appropriate disease category. Cases without laboratory confirmation of a specific agent are reported as HUS.

Shiga-like toxin has several effects including hemolysis of red cells, destruction of platelets, and renal damage, which can cause renal failure. A case of HUS is defined as anemia with microangiopathic changes on peripheral smear and acute renal injury evidenced by hematuria, proteinuria or elevated creatinine, with no pathogen isolated if stool culture was obtained.

Most persons with HUS recover, but some may have permanent renal insufficiency or die from other complications. Neurological deficits or permanent pancreatic damage may occur. Children are at particular risk for developing HUS as a complication of diarrheal illness caused by a Shiga-like toxin producing organism. HUS was made immediately reportable in 2001. One case was reported in 2003.

HEPATITIS A

Infection with hepatitis A virus (HAV) may cause fever, anorexia, nausea, abdominal pain and jaundice, but is frequently asymptomatic in young children. Transmission occurs by the fecal-oral route, either person-to-person (including sexual contact) or by consumption of contaminated water or food, including raw or undercooked shellfish. The most common risk factors for exposure in the United

States include household or sexual contact with a person infected with HAV, but infection may also follow exposure in child care facilities, among injecting and non-injecting drug users, among men who have sex with men, in communities with high rates of hepatitis A and during travel to endemic areas. Infection with HAV confers lifelong immunity and chronic hepatitis A infection does not occur. Hepatitis A vaccine prevents infection and is recommended for those at risk. Since the introduction of effective vaccines against HAV in 1995, the incidence has declined locally and nationally. Acute hepatitis A is immediately notifiable in Washington.

In 2003, 76 cases of acute hepatitis A were reported (1.2 cases/100,000 population) and there were no reported deaths. This represents a continuing decline in hepatitis A since 1,037 cases were reported in 1998. Persons 20-29 years of age had an elevated rate (2.4 cases/100,000 population) compared with other age groups.

Figure 14. Acute hepatitis A - reported cases, 1999-2003

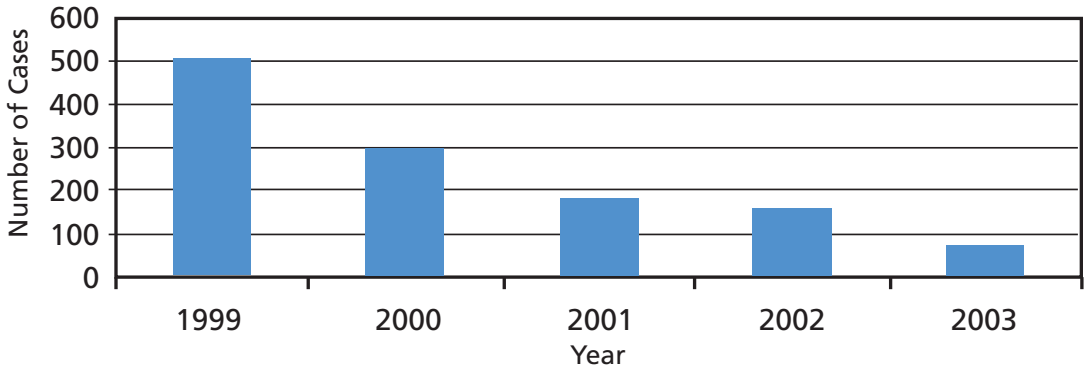
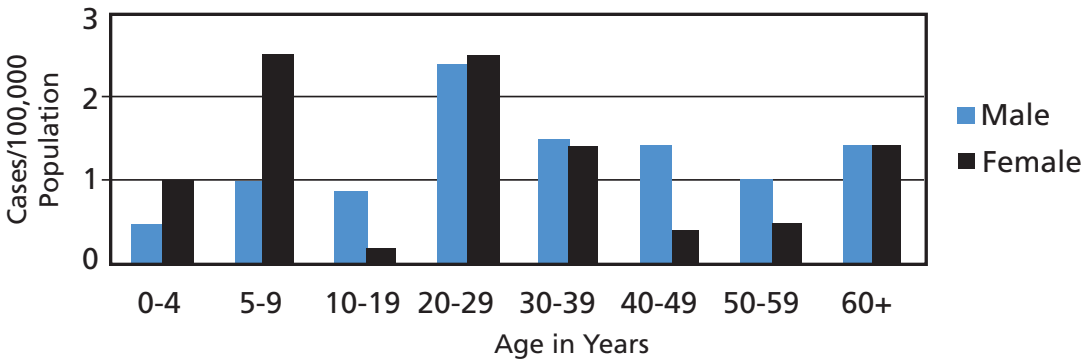
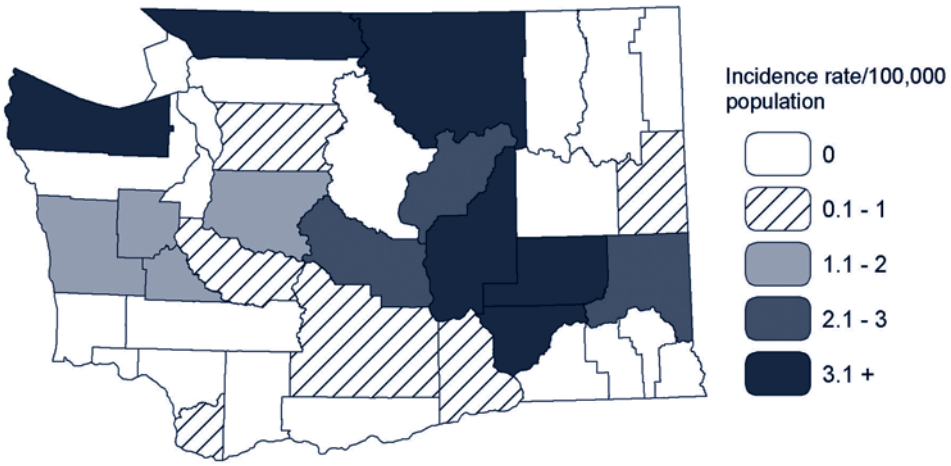


Figure 15. Acute hepatitis A - incidence by sex and age group, 2003



Rates exceeding 5.0 cases/100,000 population occurred in Adams, Okanogan and Whatcom counties, however these rates were calculated based on small numbers of cases.

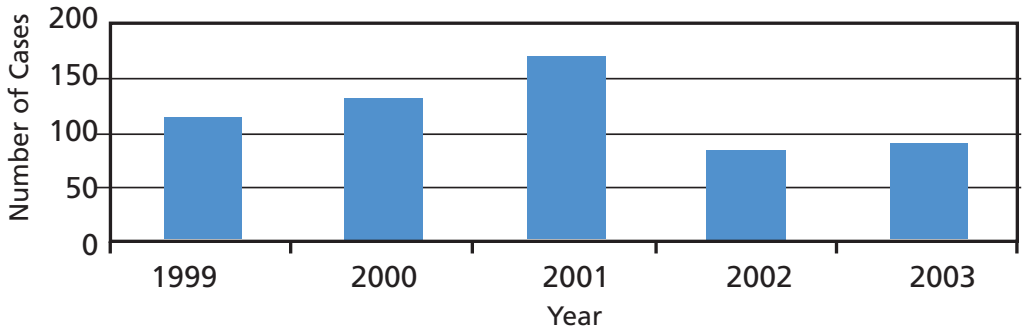
Figure 16. Acute hepatitis A - incidence by county, 2003



HEPATITIS B

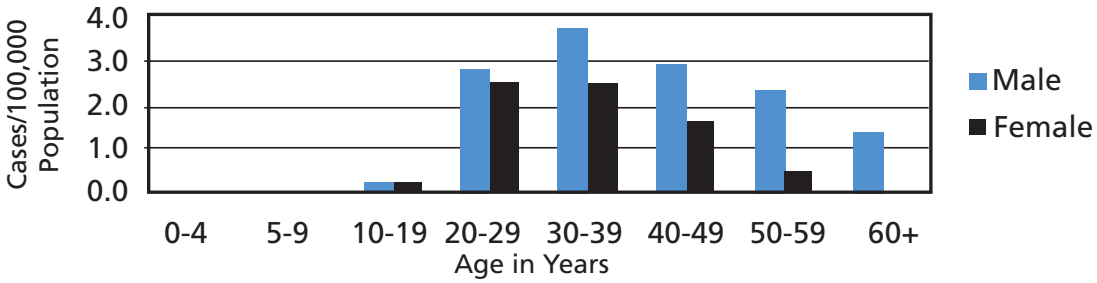
Infection with hepatitis B virus (HBV) causes acute and chronic disease; acute infection may be asymptomatic, but fever, anorexia, nausea, abdominal pain and jaundice can occur. Transmission occurs by exposure to blood or body fluids of an infected person during acute or chronic infection. The most common risk factor for hepatitis B in the United States is sexual contact with a person infected with HBV; the virus can also be transmitted by sharing injecting drug equipment and through perinatal and occupational exposures. The infection is more common among immigrants from endemic areas. HBV infection with recovery confers lifelong immunity, however 10% of those infected will develop chronic HBV infection, which may lead to cirrhosis and hepatocellular carcinoma. Hepatitis B vaccine, available since 1981, prevents infection and is routinely recommended for children, adolescents and for those at risk. Since the mid 1990s, the incidence of acute hepatitis B in the United States and Washington has declined. In 2003, 90 cases of acute hepatitis B were reported (1.5 cases/100,000 population) with one reported death.

Figure 17. Acute hepatitis B - reported cases, 1999-2003



The rate of acute hepatitis B was higher among males (1.9 cases/100,000 population) than among females (1.0 cases/100,000 population) and among those 20-49 years of age (2.7 cases/100,000 population), compared with other age groups.

Figure 18. Acute hepatitis B - incidence by sex and age group, 2003



Rates exceeding 3.0 cases/100,000 population occurred in Cowlitz, Douglas and Whatcom counties, however these rates were calculated based on small numbers of cases.

HEPATITIS C

Infection with hepatitis C virus (HCV) causes acute and chronic disease; infection is typically asymptomatic but fever, anorexia, nausea, abdominal pain and jaundice can occur. Transmission occurs by exposure to blood or body fluids of a person with acute or chronic infection. The most common risk factor for hepatitis C in the United States is sharing of injecting drug equipment with an infected person; the virus can also be transmitted by sexual contact, occupational exposure and, rarely, through perinatal exposure. About 85% of those infected will develop chronic HCV infection, which may lead to cirrhosis and hepatocellular carcinoma. About 1.8% of the United States population has chronic hepatitis C, which is the most common indicator for liver transplants among adults in this country. There is no vaccine for hepatitis C and current medical therapy has limited effectiveness, many side effects and is expensive.

Acute hepatitis C was formerly reportable as nonA, nonB hepatitis; in 2001, acute and chronic hepatitis C became notifiable conditions in Washington. In 2003, 21 cases of acute hepatitis C were reported (0.3 cases/100,000 population) and there were no reported deaths. The rate of acute hepatitis C was similar among males and females; the rate was elevated for those 40-49 years of age (1.2 cases/100,000 population) compared with other age groups.

It is likely that these numbers seriously underestimate the true incidence of acute hepatitis C as most infections are not recognized, diagnosed or reported to public health jurisdictions. Rates exceeding 1.0 cases/100,000 population occurred in Lewis and Thurston counties, however these rates were calculated based on small numbers of cases.

HEPATITIS, UNSPECIFIED (INFECTIOUS)

This immediately notifiable condition includes causes of infectious hepatitis other than hepatitis A, B or C. Examples of conditions that should be reported in this category include other causes of viral hepatitis such as hepatitis D (delta) and E. In 2003, one case of hepatitis E was reported, following travel to India.

HERPES SIMPLEX, GENITAL AND NEONATAL

Herpes simplex virus (HSV) infections can be caused by two serotypes of the virus, HSV-1 and HSV-2. Genital herpes is a recurrent, lifelong viral infection usually caused by HSV-2. The prevalence of HSV-2 among adults in the United States approaches 25% and about one million people are newly infected each year. Herpes virus can be transmitted by an infected person who has no noticeable symptoms. People with oral herpes can transmit the infection during oral sex and perinatal infections can occur even in the absence of genital lesions in the mother.

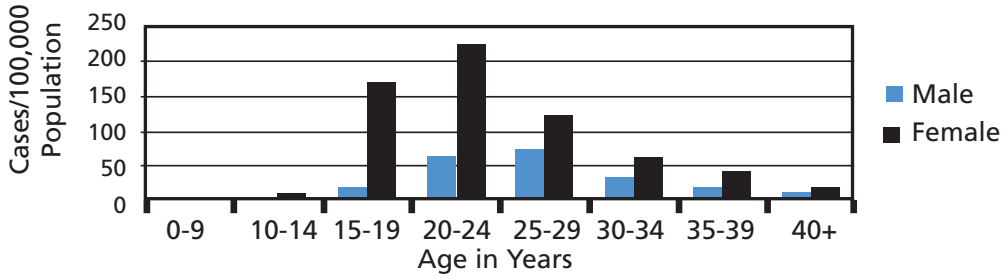
Symptoms of genital herpes vary widely, and asymptomatic infections are common. First episodes may be quite severe with painful genital ulcerations, malaise and fever. Symptoms can recur at the initial infection site and the cause of reactivation is unknown. Genital herpes, like other genital ulcer diseases, increases the risk of acquiring HIV.

Current recommendations for diagnosis and treatment of HSV can be found in the ***CDC STD Treatment Guidelines***, available at www.cdc.gov/STD/treatment. Diagnosis of herpes is based on observations of typical lesions with laboratory confirmation by isolation of HSV in culture, HSV antigen detection or by more expensive serologic methods. Antiviral drugs partially control the frequency and severity of outbreaks, but are not a cure.

Only a patient's first disease episode or neonatal infections are notifiable in Washington. In 2003, 2,073 cases of genital herpes (534 males and 1,539 females) were reported (34.0 cases/100,000 population). Included in the total are two neonatal infections. This compares to 1,914 (31.7 cases/100,000 population) cases (six neonatal) in 2002.

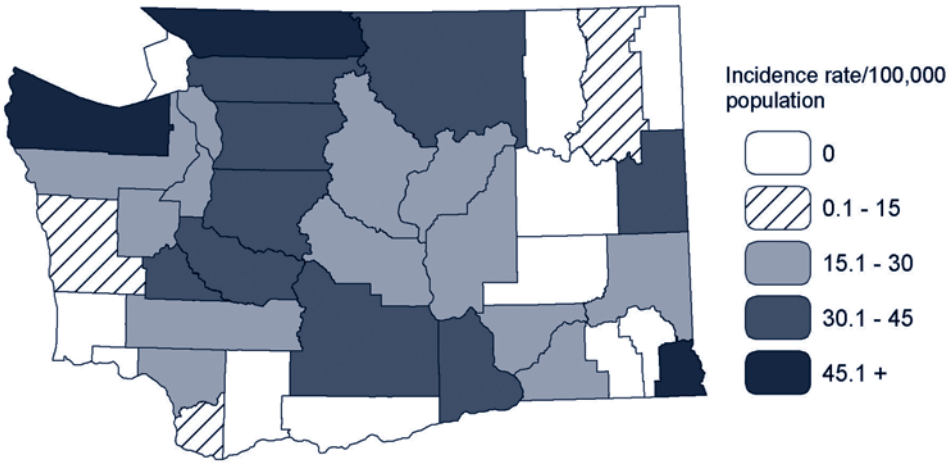
The highest age-specific incidence occurred among females 20-24 years of age (225.0 cases/100,000 population), followed by females 15-19 years of age (166.0 cases/100,000 population).

Figure 19. Herpes simplex - incidence by sex and age group, 2003



Four counties (King, Pierce, Snohomish and Spokane) accounted for 65% of the reported cases.

Figure 20. Herpes simplex - incidence by county, 2003



HIV INFECTION/AIDS

Acquired Immunodeficiency Syndrome (AIDS) is caused by infection with human immunodeficiency virus (HIV), a retrovirus that attacks the immune system and causes a gradual, progressive depletion of CD4+ T-lymphocytes, which are crucial for immune function. Without effective treatment, the resulting immunodeficiency causes susceptibility to opportunistic infections and malignancies; immunodeficiency becomes more severe over time and usually ends in death. Developments in HIV treatment, including combination, highly active antiretroviral therapy (HAART), have considerably improved the prognosis for patients with HIV infection, but the long-term effects of these drugs on organ systems, as well as the development of resistance to these drugs, continue to be studied.

The CDC case definition for AIDS requires one of 26 indicator conditions (Table 6) or a low CD4+ T-lymphocyte count (<200 cells/µl or <14% of total lymphocytes) in the absence of symptomatic illness. Since the introduction of HAART in 1996, reporting of AIDS has become a less reliable indicator of trends in HIV infection, as patients' outcomes improve and they no longer develop AIDS-defining immunodeficiency and/or diseases. DOH mandated HIV reporting in September 1999, and since then through December 31, 2003, 3,638 cases of HIV infection (not AIDS) were reported to DOH.

Table 6. CDC case definition: AIDS- indicator diseases

Candidiasis of bronchi, trachea, or lungs
Candidiasis, esophageal
Cervical cancer, invasive
Coccidioidomycosis, disseminated or extrapulmonary
Cryptococcosis, extrapulmonary
Cryptosporidiosis, chronic intestinal (>1 months duration)
Cytomegalovirus disease (other than liver, spleen or lymph nodes)
Cytomegalovirus retinitis (with loss of vision)

Encephalopathy, HIV-related
Herpes simplex: chronic ulcer(s) (>1 month duration; or bronchitis, pneumonitis, or esophagitis)
Histoplasmosis, disseminated or extrapulmonary
Isosporiasis, chronic intestinal (>1 month duration)
Kaposi's sarcoma
Lymphoma, Burkitt's (or equivalent term)
Lymphoma, immunoblastic (or equivalent term)
Lymphoma, primary, of brain
Mycobacterium avium complex or *M. kansasii*, disseminated or extrapulmonary
M. tuberculosis, any site (pulmonary or extrapulmonary)
M. species, disseminated or extrapulmonary
Pneumocystis carinii pneumonia
Pneumonia, recurrent
Progressive multifocal leukoencephalopathy
Salmonella septicemia, recurrent
Toxoplasmosis of brain
Wasting syndrome due to HIV

In 2003, 509 cases of AIDS were reported in Washington, a 12% increase from cases reported in 2002. While the number of cases fluctuates annually, the trend has been leveling, reflecting the trends seen nationally. Declines in morbidity and mortality seen in the 1990s, following the introduction of HAART, appear to be attenuated by several factors including treatment-resistant viral strains, late HIV testing, inadequate access to, and adherence to, treatment and recent increases in HIV and STD incidence in some risk groups.

In 2003, the incidence of AIDS was 8.3 cases/100,000 population, lower than the US rate of 14.5 cases/100,000 population (2002 data). AIDS cases were reported from 26 counties in Washington. For counties with at least five reported cases, the highest incidence rate was in King (18.5 cases/100,000 population), followed by Franklin (9.3 cases/100,000 population), Spokane (5.8 cases/100,000 population), Snohomish (5.5 cases/100,000 population) and Clallam (5.4 cases/100,000 population).

Of the 509 persons with AIDS reported, 421 (83%) were male and 88 (17%) female. Men who have sex with men (MSM) continued to account for the majority (56%) of persons reported with AIDS. Among adult and adolescent males with AIDS, 325 (77%) reported sex with men, with or without concurrent injection drug use (IDU), as a risk factor for infection. Risk due to IDU alone was reported by 29 (7%) men and 38 (9%) reported both sex with men and IDU as risk factors. Risk was unreported or unconfirmed in 40 (10%) men.

Early in the epidemic, the largest proportion of AIDS cases occurred among men. The proportion of women with AIDS has increased over time; in recent years, this proportion has fluctuated between 11% and 17%. In 2003, among adult and adolescent women with AIDS, the following risk factors were reported: 44 (50%) acquired HIV infection through heterosexual contact and 28 (32%) through IDU. Risk was unreported for 14 (16%) women. For both males and females, AIDS age-specific incidence rates were highest among persons 30-39 years of age (38.2 cases/100,000 population for men and 7.3 cases /100,000 population for women).

The proportion of AIDS among minorities has been steadily increasing over time. In 2003, the majority (65%) of persons reported with AIDS were white. African Americans accounted for 79 (16%), Hispanics for 60 (12%), Asians for 23 (5%) and Native Americans for 13 (3%).

Of the 509 persons with AIDS reported in 2003, 32 deaths were reported as of September 1, 2003. HAART has markedly increased survival for persons with AIDS who have been diagnosed and treated for their infection since 1995. In 2003, the number of persons living with AIDS in Washington rose to the highest number ever (4,980), an increase of 6% from 2002.

In addition to AIDS, 478 HIV infections (not AIDS) were reported from 22 Washington counties in 2003. For counties with at least five cases, the highest rate of HIV infection was in King (17.6 cases/100,000 population), followed by Clark (7.8 cases/100,000 population), Pierce (6.1 cases/100,000 population) and Spokane (4.2 cases/100,000 population).

The majority of reported HIV infections (85%) occurred among men. For adult and adolescent males, the primary mode of exposure was male-to-male sexual contact (300 persons, 74%), followed by IDU (26 persons, 6%) and the two risks combined (36 persons, 9%). Twenty-four (6%) persons had no identified risk (NIR). For adult and adolescent females, heterosexual contact was the mode of exposure for 42 persons (58%); 16 (22%) reported IDU and 12 (17%) reported NIR.

For males, age-specific HIV rates were highest among persons 30-39 years of age (36.4 cases/100,000 population), while for females, age-specific rates were highest among persons 20 – 29 years of age (7.0 cases/100,000 population).

Similar to AIDS, whites constituted the majority of HIV infections (326 persons, 68%) in 2003. African Americans accounted for 73 (15%), Hispanics for 41 (9%), Asians for 16 (3%) and Native Americans for 13 (3%).

LEGIONELLOSIS

Legionellosis is an acute bacterial infection caused by *Legionella* species, primarily *L. pneumophila*. It is estimated that 8,000-18,000 people in the United States are infected with *Legionella* annually, with a mortality rate of 5-30%. *Legionella* is found in soil, natural bodies of water and plumbing, heating or cooling systems where warm (90°–105° F) stagnant water allows the organisms to multiply at high rates. Infection has followed inhalation of contaminated aerosols from showers, hot water tanks, cooling towers and whirlpool spas. Person-to-person transmission does not occur.

Legionellosis causes atypical pneumonia with fever, myalgias, headache, fatigue, anorexia and occasionally diarrhea and abnormal liver function tests. Risks for infection include older age, smoking, chronic lung disease, renal insufficiency, diabetes and immune deficiency. Pontiac fever, characterized by fever and myalgias without pneumonia, is considered to be an allergic reaction to *Legionella* bacterial antigens. Diagnosis of legionellosis is made by detection of *Legionella* bacterial antigen in tissue, sputum or urine, and by isolation of Legionella in culture.

In 2003, there were 14 cases of legionellosis (0.2 cases/100,000 population) with one death in Washington. Nine of the 14 cases had identifiable risk factors for legionellosis. Thirteen cases had infection with *L. pneumophila* and one case was infected with an unknown *Legionella* species.

LEPTOSPIROSIS

Leptospirosis is a zoonotic bacterial disease caused by more than 200 *Leptospira interrogans* serovars found in soil or water that has been contaminated with urine of infected wild or domestic animals. It is transmitted through abraded skin and mucous membranes, often during swimming or direct contact with infected animal tissues, and less often through ingestion of urine-contaminated food or water or inhalation of infectious fluids. Infections may be asymptomatic and severity varies with the infecting serovar. Leptospirosis is usually characterized by fever, headache, myalgias, conjunctival suffusion, and less frequently, meningitis, rash, jaundice or renal insufficiency. Clinical illness lasts from a few days to weeks. Diagnosis can be made by detection of IgM antibody or by rising IgG titers in serum, and by isolation of leptospires from blood, CSF or urine. The one reported Washington case in 2003 was associated with swimming in Central America.

LISTERIOSIS

Listeriosis is caused by *Listeria monocytogenes*, a gram-positive bacterium found in soil and water. It is transmitted to humans through contaminated food. *Listeria* can be found in a variety of foods such as uncooked processed meats, fruits, vegetables, and unpasteurized milk or foods made with unpasteurized milk. Processed foods such as soft cheeses or cold cuts can become contaminated during or after processing. The disease may cause meningoencephalitis or septicemia in newborns and adults. Fetal or neonatal infections may occur as a result of maternal infection. Those at highest risk are neonates, the elderly, immunocompromised persons and pregnant women. Listeriosis is an immediately notifiable condition in Washington.

In 2003, 13 cases of listeriosis (0.2 cases/100,000 population) were reported, with three deaths. Of the 13 reported cases, seven occurred in individuals over 60 years of age, three in the 50-59 age group, one in the 40-49 age group, one in a four year old child, and one in a neonate. Risk factors included immunodeficiency, ingestion of soft home made cheese, and traveling in Mexico.

LYME DISEASE

Lyme disease is a bacterial disease caused by the spirochete *Borrelia burgdorferi*. In the Pacific Northwest, the western black-legged tick (*Ixodes pacificus*) transmits the spirochete to humans. Only a small percentage of tick bites result in human infection. Infected individuals may be asymptomatic or may develop an erythematous rash with central clearing (erythema chronica migrans [ECM]), fever, headache and myalgias or arthralgias. Without treatment, the infection can lead to arthralgias, arthritis, neuritis, myocarditis, skin and mental status changes. The risk for Lyme disease is highest

during warm weather when ticks are active and humans engage in outdoor activities such as hiking or camping. For surveillance purposes, the diagnosis of Lyme disease requires ECM >5 cm as described by a healthcare provider, or at least one objective manifestation of late disease, with documentation of reactive enzyme immunoassay and Western blot assay for antibody against *B. burgdorferi*.

In 2003, seven probable cases of Lyme disease (0.1 cases/100,000 population) were reported in residents of six counties in Washington. Three cases reported out-of-state exposures and two cases each reported exposures in western and eastern Washington.

LYMPHOGRANULOMA VENEREUM

Lymphogranuloma venereum (LGV) is a sexually transmitted genital ulcer disease and is rare in the United States. LGV is usually caused by the L1, L2 and L3 serovars of *Chlamydia trachomatis* and is characterized by genital lesions, suppurative regional lymphadenopathy or hemorrhagic proctitis. LGV is common in tropical and subtropical areas and is endemic in parts of Asia and Africa. In Washington, one case of LGV was reported in 2003.

Current recommendations for diagnosis and treatment of LGV can be found in the ***CDC STD Treatment Guidelines***, available at www.cdc.gov/STD/treatment.

MALARIA

Malaria is a mosquito-borne infection caused by several species of *Plasmodium* parasites (*Plasmodium falciparum, P. vivax, P. malariae or P. ovale*). *Anopheles* mosquitoes, uncommon in the United States, are the primary vectors and humans are the only important reservoir for malaria. The illness occurs primarily in tropical and subtropical regions. Symptoms of malaria include cyclic fevers, sweats, rigors and headache; some infections, particularly those caused by *P. falciparum*, may have life-threatening complications and require prompt treatment. Malaria is diagnosed by the identification of *Plasmodium* parasites in erythrocytes on thick blood smears or by antigen or nucleic acid detection.

Malaria ranks among the most significant global health challenges. Travelers to affected areas should consult with healthcare providers before leaving the United States about prophylaxis to prevent malaria. Prevention and treatment of malaria can be complicated due to increasing resistance to antimalarial drugs in some regions. Updated prophylaxis recommendations for travelers are available from travel clinics and the CDC Travelers' Health website (www.cdc.gov/travel).

Most of the cases reported in the United States are associated with exposures during travel or residency in malaria-endemic areas. Autochthonous malaria is extremely rare in the United States, although the mosquito vector does exist in limited areas in the United States, primarily in the southeast. Case counts in Washington vary from year to year and typically 20-45 cases are reported annually. Thirty-four cases were reported in 2003 (0.6 cases/100,000 population) and all of them were among immigrants and travelers arriving from Africa, Asia, and Central and South America.

MEASLES (RUBEOLA)

Measles is a febrile rash illness caused by the rubeola virus. Measles is characterized by the acute onset of fever, coryza, conjunctivitis, cough and oral lesions (Koplik spots), followed by an erythematous maculopapular rash that begins on the face and becomes generalized. The virus is highly contagious and is transmitted by airborne and respiratory droplets. The infectious period extends from four days before until four days after the onset of rash and illness usually lasts 7-10 days. Complications (otitis media, pneumonia, croup and encephalitis) may occur in any age group, however measles is most severe in infants and adults.

Diagnosis is made by serologic testing, viral isolation from nasopharyngeal secretions or urine, or identification of viral antigen in blood or tissues. Measles can be prevented by vaccination (measles-mumps-rubella vaccine [MMR]) and endemic measles has been eliminated in the United States. Recent cases in the US have been imported from endemic areas or spread from an imported case. Measles is an immediately notifiable condition in Washington. In 2003, there were no confirmed cases of measles in Washington.

MENINGOCOCCAL DISEASE

Infection with the bacteria *Neisseria meningitidis* may result in bacteremia (meningococcemia), pneumonia, or meningitis (meningococcal meningitis). Meningococcal meningitis is frequently accompanied by a petechial rash and may be complicated by purpura fulminans with peripheral gangrene and multi-organ system failure. About 10% of cases are fatal even if treated with appropriate antibiotics. *N. meningitidis* can be distinguished by their capsular polysaccharides and there are 13 pathogenic serogroups, with serogroups B, C and Y causing the most disease in the United States.

N. meningitidis are carried in the nasopharynx of about 15% of the healthy population. Transmission occurs by respiratory droplets and through contact with nasopharyngeal secretions. Risk groups for meningococcal disease include infants and young children, household and other close contacts of infected persons, residents in congregate settings (e.g., military recruits or college freshmen living in dormitories) and microbiologists working with isolates of *N. meningitidis*. Exposure to tobacco smoke, including second-hand smoke, may increase the risk of illness.

Following exposure to a case of meningococcal disease, prompt post-exposure chemoprophylaxis for close contacts is effective in preventing secondary cases. A conjugate vaccine protects against serogroups A, C, Y and W-135, but is ineffective against serogroup B. The vaccine is used to control outbreaks of serogroup C meningococcal disease and has been recommended by some colleges and universities for incoming freshmen. Meningococcal disease is an immediately notifiable condition in Washington.

In Washington, there were 61 cases of meningococcal disease (1.0 cases/100,000 population) with seven deaths reported in 2003. Rates in Washington have been constant for several years, but in some years, the rate has been slightly higher than the national average. Higher incidence rates in

Asotin, Klickitat and Pacific counties were calculated based on small numbers of cases.

In 2003, the highest incidence was among children less than one year of age (7.7 cases/100,000 population) and 1-4 years of age (3.4 cases/100,000 population). The incidence of meningococcal disease did not significantly vary by gender.

In the United States, serogroups B and C account for about 60% of meningococcal disease. Most infections in Washington are caused by serogroup B. In 2003, there was an increase in serogroup B and a decrease in serogroup C infections. Serogroup Y has increased nationwide over the past decade and in 2003 accounted for 22% of Washington cases. Pneumonia is most commonly associated with serogroup Y.

Table 7. *Neisseria meningitidis* by percentage of serogroups, 1999-2003

Year	B (%)	C (%)	Y (%)	Other (%)	Unknown (%)
1999	47	12	27	2	12
2000	42	3	27	4	14
2001	41	17	25	3	14
2002	33	32	21	4	11
2003	61	9	22	2	6

MUMPS

Mumps is an acute viral disease characterized by fever and swelling of the salivary glands, typically the parotids. Transmission may be airborne, by respiratory droplets, or through direct contact with nasopharyngeal secretions. Complications of mumps infection among individuals who are past puberty include orchitis and oophoritis. Other rare complications include infertility, arthritis, renal involvement, thyroiditis and hearing impairment.

Once a virtually universal infection, mumps incidence decreased in the United States due to routine childhood immunization with measles-mumps-rubella (MMR) vaccine. In 2003, there were 11 cases of mumps reported in Washington compared to no cases during 2002. One cluster of seven cases occurred as a result of unvaccinated family members being exposed to a source case exposed during travel; three additional cases occurred in unvaccinated persons, and one case occurred in a person with unknown vaccination history.

PARALYTIC SHELLFISH POISONING

Paralytic shellfish poisoning (PSP) is caused by eating shellfish containing a toxin produced by the phytoplankton *Alexandrium catenella*. Bivalve mollusks such as clams, oysters, mussels and geoduck ingest the algae and concentrate the toxin. "Red tide" is a misnomer as PSP is rarely associated with reddish discoloration of the water.

Symptoms begin within minutes or hours of eating poisonous shellfish and may include paresthesias of the mouth and extremities along with nausea. Severe poisoning progresses rapidly to paralysis, respiratory arrest and death. In milder cases, symptoms resolve within hours to days and recovery is complete. PSP should be suspected when a patient has compatible symptoms and has consumed food that is likely to have been contaminated. Confirmation requires detection of the toxin in the implicated food.

In Washington, prevention of PSP includes surveillance of recreational and commercial shellfish harvest areas for biotoxins using laboratory testing. Areas with dangerous levels of toxin are closed to harvesting. PSP can be present in dangerous amounts even when the water looks clean. Cooking does not inactivate the toxin. Updates on affected sites and site closures, which may not always be posted with signs, are available through the Washington State Department of Health Marine Biotoxin Hotline (1-800-562-5632) or the Food Safety and Shellfish Program web site at www.doh.wa.gov/ehp/sf/BiotoxinProgram.htm. In Washington, PSP is an immediately notifiable condition.

Two clusters of PSP have been reported in Washington within the past 10 years; seven cases in 2000 and five in 1998. All cases from both clusters were associated with consumption of mussels from south Puget Sound waters. No cases of PSP were reported in Washington in 2003.

PERTUSSIS

Pertussis is a vaccine-preventable respiratory illness resulting from infection with the bacillus *Bordetella pertussis*. Transmission of *B. pertussis* occurs through respiratory droplets. Classically, pertussis is characterized by episodes of forceful, repetitive coughing followed by an inspiratory whoop and vomiting, although these symptoms may be absent in infants under six months of age or partially immune adolescents and adults. In partially immune adolescents and adults, pertussis may cause mild or atypical respiratory illness; in this population, the diagnosis may not be recognized, allowing disease transmission to populations at risk for serious disease. Symptoms may last weeks and rare, but serious, complications may occur including pneumonia, encephalopathy and death. Infants under six months of age are at greatest risk for complications.

Routine childhood immunization against pertussis, combined with early recognition and treatment or post-exposure prophylaxis of contacts, is essential for disease control. Acellular pertussis vaccines (DTaP) are not recommended for individuals over seven years of age so adolescents and adults are at risk for pertussis due to waning immunity. Infections among adults and adolescents are an important source of disease transmission to non-immunized young children.

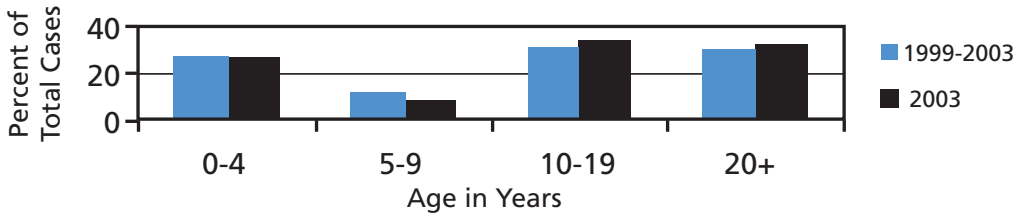
For surveillance purposes, the diagnosis of pertussis is made on the basis of a compatible illness with the identification of *B. pertussis* by isolation in culture or detection of *B. pertussis* nucleic acid. The direct fluorescent antibody (DFA) assay has low sensitivity and specificity; both false negatives and positives can occur. Serology is not accepted for laboratory confirmation. Pertussis is an immediately notifiable condition in Washington.

Pertussis rates fluctuate considerably. In Washington, the recent nadir was 1.8 cases/100,000 population in 1993 compared to a peak of 15.0 cases/100,000 population in 1996. In 2003, 844 cases (13.8 cases/100,000 population) of pertussis were reported in Washington, representing a continued increase from 2002 and a more than four-fold increase from 2001; no deaths were reported. There were 16 suspected or confirmed pertussis outbreaks reported in 2003 including nine in healthcare settings. Cough was reported by 99% of persons with pertussis. Other symptoms included vomiting (60%), apnea (42%) and whooping (29%). Seizures (four cases) and encephalitis (one case) were uncommon complications; 93 (11%) cases were hospitalized. In 2003, pertussis peaked in February, May and October.

Gender-specific incidence was comparable among children and adults >59 years of age, however the rate among females 20-59 years of age was twice that of males in the same age group (9.5 vs. 4.5 cases/100,000 population). This difference could be due to increased exposure to children with pertussis and more willingness by infected women to seek medical care.

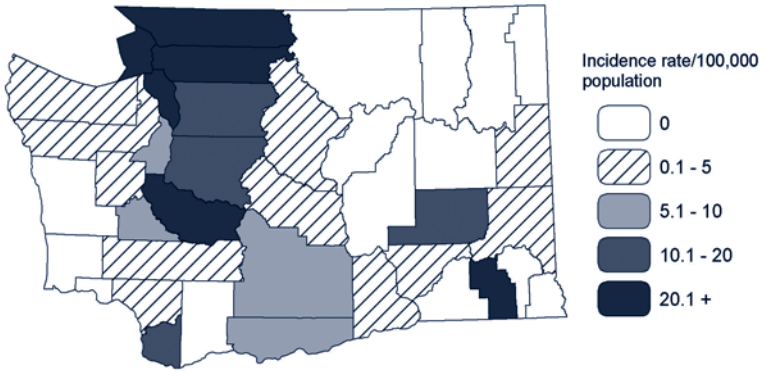
Pertussis rates are typically highest in younger children who have no or partial immunity due to their age. During 2003, infants under one year of age had a high incidence of pertussis (142.0 cases/100,000 population). Most of the cases reported in that age group were among infants under six months of age (15% of all reported cases). Thirteen percent of all cases occurred among children 1-4 years of age, 8% among children 5-9 years of age and 34% among adolescents 10-19 years of age. Adults older than 20 years of age comprised 32% of all reports.

Figure 21. Pertussis - percentage of cases in 2003, compared to average percentage of cases 1999-2003, by age group



Island, Pierce, San Juan and Skagit counties had rates more than twice the state average. The high rate in Cowlitz County was calculated based on a small number of cases.

Figure 22. Pertussis - incidence by county, 2003



PLAGUE

Plague is a bacterial zoonosis caused by *Yersinia pestis*. Plague is established in enzootic foci in small wild mammals throughout the western United States. Transmission to humans occurs by inoculation (e.g., flea or animal bite, handling infected animal tissues) or less commonly by inhalation. Plague can cause three clinical syndromes: bubonic (fever, headache, nausea and unilateral lymph node swelling); septicemic (bacteremia, coagulopathy and multi-organ system failure); and pneumonic (pneumonia). Early recognition and appropriate antimicrobial treatment are essential since the case fatality rate for untreated plague is 50-60%. Plague is a potential agent of bioterrorism and is immediately notifiable in Washington.

In the early 1900s, plague was probably widespread in rats and their fleas around Washington ports. The last reported human case in Washington occurred in 1984 in an animal trapper in Yakima County. No cases were reported in Washington in 2003. Limited serosurveys of wild carnivores, primarily coyotes, in Washington indicate that enzootic activity occurs at a low level; however, the distribution is unknown.

POLIOMYELITIS

Poliovirus is the infectious agent causing poliomyelitis. Most cases are asymptomatic, and fewer than 1% result in acute flaccid paralysis. The last naturally-acquired case of polio in the United States occurred in 1979 and the last in Washington occurred in 1977. A few cases of vaccine-associated paralytic polio (VAPP), associated with immunization using the live oral polio vaccine, have occurred in the state, one as recently as 1993. Due to cases of VAPP across the United States, oral vaccine is no longer recommended and inactivated, parenteral polio vaccine is now preferred. In the United States, there have been fewer than 15 annual cases of polio during the last 20 years; all were VAPP and none were naturally-acquired polio. Polio is an immediately notifiable condition in Washington. No cases of poliomyelitis were reported in Washington in 2003.

PSITTACOSIS

Psittacosis, caused by the bacterium *Chlamydophila psittaci*, can be a mild to severe respiratory illness with fever, chills, headache, cough, myalgias and atypical pneumonia. The most common source of infection for humans is *Psittacine* birds (parrots, love birds, parakeets), however other birds including pigeons, poultry, canaries and sea birds can shed the organism. Asymptomatic and ill birds shed the organism in their droppings, especially when under stress. Transmission to humans occurs through inhalation of the organism after disturbing bird droppings, secretions or dust.

Psittacosis is difficult to diagnose and is rarely reported. Outbreaks have occurred in households, aviaries, pet shops and other locations housing groups of birds. Reporting cases of psittacosis to public health agencies is important so that exposure sources can be identified, and further spread of disease among birds and humans is prevented. No cases of psittacosis were reported in Washington in 2003.

Q FEVER

Q fever is caused by infection with the rickettsia *Coxiella burnetti.* Transmission occurs after inhalation of airborne *C. burnetti* in dust contaminated by placental tissues, birth fluids, or excreta of infected animals including sheep, cattle, goats, dogs, cats and some wild animals. The symptoms, which are nonspecific and may be prolonged, include fever, chills, headache, weight loss and malaise, with or without hepatosplenomegaly. Chronic infection may cause endocarditis and hepatitis. The last case of Q fever in Washington occurred in 1999; there were no cases reported in 2003.

RABIES

Rabies is an acute infection of the central nervous system caused by a neurotropic rhabdovirus of the genus *Lyssavirus*. All mammals, including humans, are susceptible to rabies.

In humans, rabies causes a rapidly progressive and invariably fatal encephalomyelitis. Even with intensive care, rabies almost always progresses to coma or death within 20 days of onset. Non-specific early symptoms include paresthesias, sore throat, anorexia, fever and malaise. Neuropsychiatric symptoms may include anxiety, agitation, lethargy, confusion, hallucinations, seizures, dysphagia, paralysis and coma. There is no treatment for rabies and death is most often due to respiratory failure.

The incubation period in humans is usually 2-12 weeks, but there have been documented incubation periods of more than a year. Factors influencing the length of incubation include the amount of viral inoculum, anatomic location of exposure, the variant of rabies virus and the thoroughness of post-exposure wound cleansing. Bites from infected animals constitute the most important route of transmission; less common exposures include viral inoculation into an open wound or mucous membrane. Transplanted corneas from patients with fatal undiagnosed rabies have caused infection in recipients. Rabies is immediately notifiable in Washington.

In Washington, bats are the primary source of rabies and human exposures to bats should be carefully and immediately evaluated. Rabies can be transmitted from bats to humans, dogs, cats, horses, raccoons, skunks, coyotes and other mammals. Canine rabies still accounts for the majority of human rabies worldwide. Travelers to rabies-endemic countries should be warned to seek medical care if they are bitten by any mammal, especially a dog. Detailed information about animal rabies in Washington can be found in Appendix III.

There have been two cases of human rabies identified in Washington in the last decade. In 1995, a four year old child died of rabies four weeks after a bat was found in her bedroom (MMWR 1995; 44:625-7). In 1997, a 64 year old man was diagnosed with rabies more than six weeks post-mortem (MMWR 1997; 46:771-2). As with most endemically-acquired rabies in the United States, these two Washington residents were infected with bat variants of rabies virus, despite the lack of history of bat bites in either case. No human cases of rabies were reported in Washington in 2003.

RARE DISEASES OF PUBLIC HEALTH SIGNIFICANCE

Suspected or confirmed cases of rare diseases of public health significance are immediately notifiable in Washington. This allows public health agencies to identify diseases associated with emerging infections, travel or rare endemic infections in Washington. In 2002, there were three reports under this category: babesiosis, dengue fever and Rocky Mountain spotted fever. There were no cases of these diseases reported in Washington in 2003.

RELAPSING FEVER

Tick-borne relapsing fever is a bacterial zoonosis caused by the spirochete *Borrelia hermsii*. The principal vectors are *Ornithodoros hermsii* soft ticks which can transmit the organism from wild rodent reservoirs to humans. Soft ticks feed during the night, inflicting a painless and often undetectable bite. Humans are often exposed while staying overnight in rustic cabins. Symptoms include recurrent episodes of high fever (up to 105° F), headache, myalgias, fatigue and drenching sweats. A transient petechial rash may also occur. Periods of fever lasting 2-9 days alternate with afebrile periods of 2-4 days. There may be up to eight relapsing episodes. Diagnosis of relapsing fever can be made by identification of *Borrelia* on a peripheral blood smear. Treatment involves appropriate antimicrobials and supportive care for hospitalized patients. Relapsing fever is immediately notifiable in Washington.

In most years, fewer than 10 cases of tick-borne relapsing fever are reported in Washington residents and many of them are exposed to infected ticks in cabins while vacationing outside of Washington. During 2003, six cases were reported; all of the exposures occurred in Washington. A summer weekend gathering in a cabin in a wooded area of central Washington resulted in hospitalization of three Washington residents and one Canadian resident. The other three cases (two in King and one in Franklin County) had exposures in cabins in three different eastern Washington counties (Okanogan, Columbia and Walla Walla).

RUBELLA

Rubella, or German measles, is a rare, mild, febrile rash illness caused by rubella virus. Rubella is prevented by routine childhood immunization with measles-mumps-rubella (MMR) vaccine. Rubella is spread by respiratory droplets or direct contact with infected persons. Symptoms include a generalized maculopapular rash accompanied by slight fever and lymphadenopathy. Adults may have joint pain or frank arthritis. The most serious complication of rubella occurs during pregnancy, when infection may lead to congenital rubella syndrome, resulting in multiple fetal abnormalities of the brain, eye, ear and internal organs. Most rubella in the United States occurs among young adults who emigrated from areas where rubella is endemic. Rubella is immediately notifiable in Washington.

Diagnostic tests for rubella include serology, virus isolation, or identification of viral antigen in blood or tissues. Congenital infection is confirmed by serology.

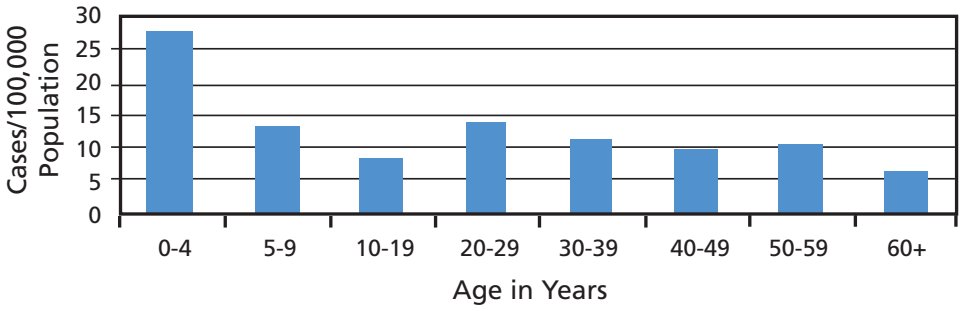
In 2003, there were no confirmed cases of rubella in Washington.

SALMONELLOSIS

Salmonellosis is an enteric bacterial infection caused by a myriad of *Salmonella* serotypes. Salmonellosis is characterized by the acute onset of fever, diarrhea, nausea and abdominal pain, with or without vomiting. Illness is usually mild, resolving after several days, but may be severe in the very young, elderly or those with chronic illnesses. *Salmonella* are transmitted by the fecal-oral route and the bacteria may be shed in the feces of humans and animals for days to months, even years. Healthy animals (especially reptiles, chickens, cattle, dogs and cats) can carry *Salmonella* chronically and be a direct source of human infection, but most human salmonellosis results from ingestion of contaminated food. Common exposures include ingestion of contaminated eggs, raw milk, poultry, meat and produce.

Salmonella infections occur year round with a slight increase during the spring and summer months. Most outbreaks have resulted from ingestion of inherently contaminated food or food contaminated by infected food handlers. Person-to-person transmission can occur including through oral-anal sex. Salmonellosis is immediately notifiable in Washington. In 2003, 699 cases were reported (11.5 cases/100,000 population) with one death. The highest incidence of salmonellosis occurred in the 0-4 year age group.

Figure 23. Salmonellosis - incidence by age group, 2003



In 2003, several outbreaks of salmonellosis were reported in Washington. These included an outbreak of *S. enteritidis* associated with raw eggs in a fried ice cream dessert and *S. saintpaul* and *S. chester* associated with alfalfa sprout consumption. In addition, reported cases included 19 food workers.

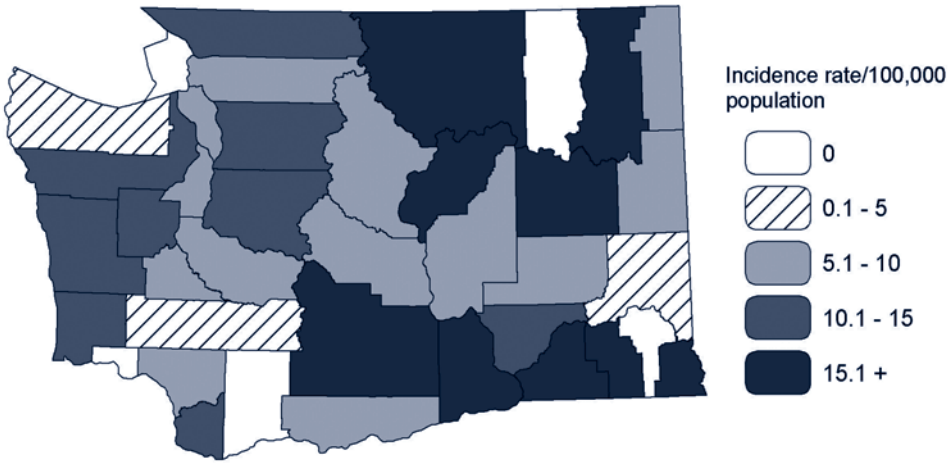
Submission of *Salmonella* isolates to the Washington State Department of Health Public Health Laboratories for serotyping is required. Serotyping and molecular epidemiologic methods may aid in identifying outbreaks and sources of infection. *S. typhimurium, S. enteritidis, S. newport, S. montevideo, S. heidelberg and S. saintpaul* continue to be the six most common serotypes causing disease in Washington and accounted for 67% of all cases of salmonellosis in 2003. Isolates from 32 cases (5%) were unavailable for serotyping.

Table 8. Salmonellosis cases by serotype, 2003

Serotype	No.	%
Enteritidis	171	24.5
Typhimurium	134	19.2
Newport	51	7.3
Montevideo	42	6.0
Heidelberg	38	5.4
Saintpaul	30	4.3
Thompson	15	2.1
Stanley	13	1.9
Brandenburg	12	1.7
Oranienburg	12	1.7
Infantis	9	1.3
Javiana	9	1.3
Muenchen	9	1.3
Hadar	8	1.1
Java	8	1.1
4,5,12:I:--	7	1.0
Chester	7	1.0
Derby	6	0.9
Anatum	5	0.7
Bareilly	5	0.7
Braenderup	5	0.7
Mbandaka	4	0.6
Unknown	32	4.6
4,12:I:--, Agona, Bredeney, Poona, Reading, Westhampton	3 cases each	<0.5
1,4,12:I:--; 1,4,5,12:1:-; Blockley, Dublin, Hartford, Paratyphi A, Paratyphi B, Rissen, Tennessee, Urbana, Virchow, Weltevreden	2 cases each	<0.5
11:Z4,Z23; 41:Z4 Z23:-; 50:GZ51:-; Apapa, Berta, Bovismorbificans, Choleraesuis, Clackmas, Daytona, Denver, Elomrane, Fluntern, Gaminara, Give, Havana, Itami, Johannesburg, Mississippi, Ohio, Orion, Pomona, San Diego, Schwarzengrund, Singapore, Sundsvall	1 case each	<0.5

Rates of greater than 10.0 cases/100,000 population occurred in 18 Washington counties in 2003. Rates in Columbia, Jefferson, Lincoln and Pacific counties were based on small numbers of cases.

Figure 24. Salmonellosis - incidence by county, 2003



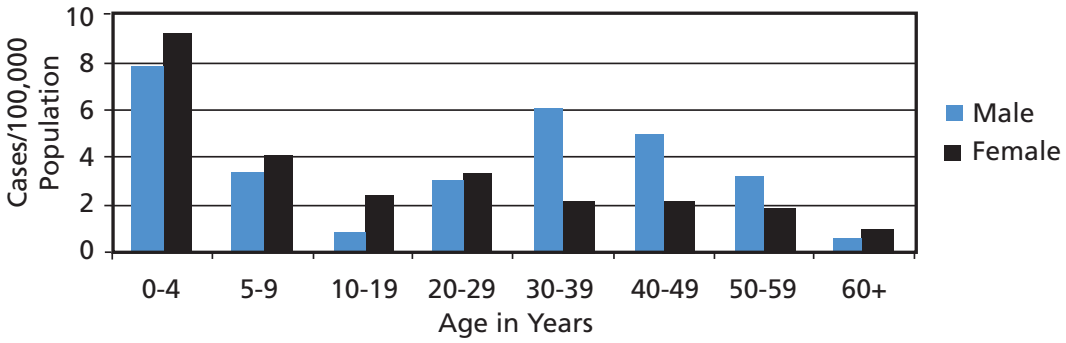
SHIGELLOSIS

Shigellosis is an acute bacterial infection caused by *Shigella sonnei, S. flexneri, S. dysenteriae or S. boydii.* Humans are the only reservoir of *Shigella* and transmission occurs by the fecal-oral route through ingestion of contaminated food or water or by person-to-person contact. Infection requires ingestion of very few organisms and outbreaks typically occur in association with child care or food service facilities. Symptoms include fever, watery or bloody diarrhea, abdominal pain, malaise and headache. Shigellosis is immediately notifiable in Washington.

In 2003, there were 188 cases of shigellosis reported in Washington (3.1 cases/100,000 population) with the highest incidence rate in the 0-4 year age group among both males and females.

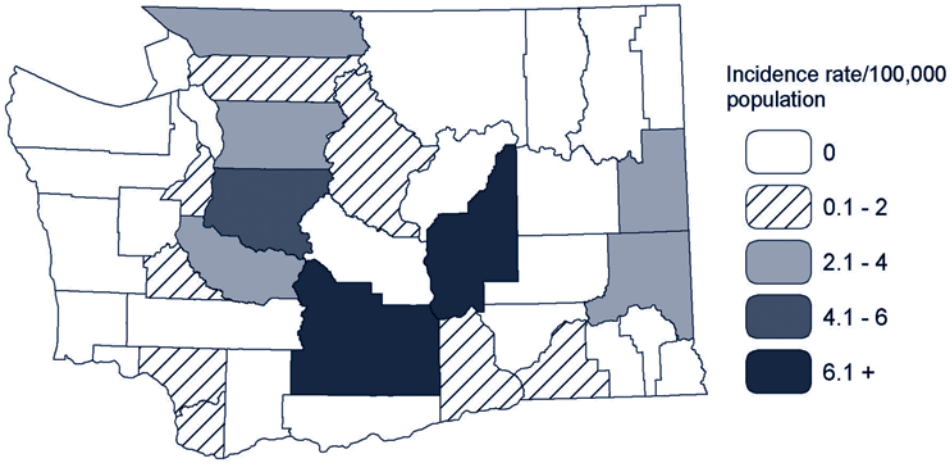
S. sonnei was the most common species identified, infecting 68% of cases, followed by *S. flexneri* (28%). There were five isolates that were not speciated.

Figure 25. Shigellosis - incidence by sex and age group, 2003



Fifteen counties in Washington reported cases of shigellosis in 2003. The high rate in Grant County was based on a small number of cases.

Figure 26. Shigellosis - incidence by county, 2003



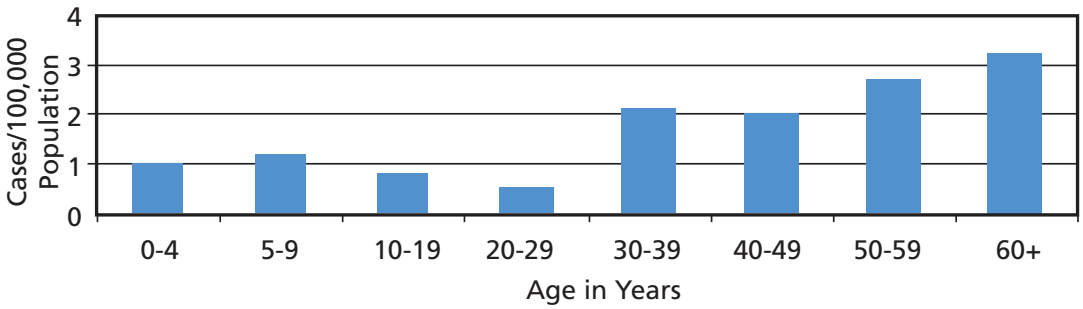
STREPTOCOCCUS GROUP A, INVASIVE DISEASE

Invasive disease caused by *Streptococcus pyogenes*, or group A *Streptococci* (GAS), may include pneumonia, meningitis, septic arthritis, peritonitis, osteomyelitis, post-partum and nosocomial infections, bacteremia, streptococcal toxic shock syndrome (STSS) and deep soft tissue infections (e.g., necrotizing fasciitis). Noninvasive skin and throat infections are less serious and are not reportable to public health agencies in Washington. Isolation of GAS by culture from a normally sterile site is required for case confirmation.

Invasive GAS infections became notifiable in Washington in 2001. In 2003, there were 110 cases of invasive GAS disease (1.8 cases/100,000 population), compared to an incidence of 1.3 cases/100,000 population in 2002. Eight deaths (7%) were reported (outcome was not available for four cases).

The median age of cases was 46.5 years (range: 11 months to 91 years); the incidence was approximately three times greater in individuals 30 years of age or older compared with those under 30.

Figure 27. *Streptococcus* Group A, invasive disease - incidence by age group, 2003



The risk factors most commonly identified were the presence of pre-existing wounds caused by blunt trauma, penetrating injuries, injection drug use or recent surgical procedures.

SYPHILIS

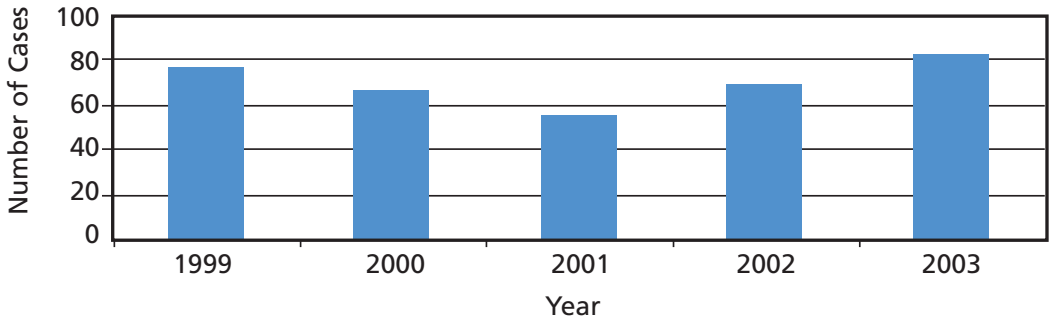
Syphilis is a genital ulcer and systemic disease caused by the spirochete *Treponema pallidum. T. pallidum* is transmitted by direct contact with lesions of primary or secondary syphilis or by perinatal transmission. Syphilis is divided into stages - primary, secondary and tertiary; latent syphilis can be early or late. Untreated primary and secondary syphilis are infectious. Untreated tertiary syphilis may cause damage to the central nervous system, heart or other organs. Similar to other genital ulcer diseases, syphilis facilitates the transmission of HIV.

Signs and symptoms differ for each stage of syphilis. Primary syphilis may be characterized by a painless ulcer, or chancre, at the site of infection (mouth, genitals, anus). Secondary syphilis, which occurs 3-6 weeks after primary infection, may present with a fever, diffuse rash that involves the palms or soles, myalgias, headache, hair loss and fatigue. Primary and secondary syphilis resolve with or without treatment, but some untreated infections may progress after many years to tertiary syphilis with irreversible multi-organ damage. Congenital syphilis may follow early, or rarely late, untreated infection during pregnancy and fetal death occurs in approximately 40% of cases if untreated. Surviving infants born with congenital syphilis may have multi-organ damage and serious bone deformities.

Current recommendations for diagnosis and treatment of syphilis can be found in the ***CDC STD Treatment Guidelines***, available at www.cdc.gov/STD/treatment.

The last major syphilis outbreak in Washington occurred during 1989-1990. In 2003, there were 82 primary and secondary (P & S) infections (1.3 cases/100,000 population), 36 early latent cases, 121 late/late latent cases and no cases of congenital syphilis.

Figure 28. Syphilis (primary and secondary) - reported cases, 1999-2003



Seventy-three percent of the P & S syphilis cases in 2003 were reported by King County and many of the other cases in the state may have been associated with this outbreak that occurred almost exclusively among men having sex with men. Over 50% of the male cases were HIV infected and most were receiving care for HIV at the time of their syphilis infection.

TETANUS

Tetanus results from exposure to a neurotoxin produced by *Clostridium tetani* bacteria, usually as the result of introduction of the bacteria into a wound by a penetrating injury. *C. tetani* are commonly present in the soil and the intestines of animals and humans.

The toxin prevents release of neurotransmitters and causes muscle spasms that progress in a descending pattern, ultimately causing respiratory arrest and autonomic dysfunction. Mortality is high, even with intensive care. Tetanus is prevented by routine childhood and adult vaccination and by appropriate wound care following tetanus-prone injuries.

Now relatively uncommon in the United States, tetanus primarily affects unvaccinated or under-vaccinated persons, usually older adults who have not received scheduled booster doses of tetanus toxoid. In Washington, the most recently reported case of tetanus occurred in 2000 and the last death from tetanus occurred in 1983. No cases of tetanus were reported in Washington in 2003.

TRICHINOSIS

Infection with the parasite *Trichinella spiralis* can result from eating raw or insufficiently cooked flesh of animals containing viable encysted larvae. Symptoms range from unapparent infection to a fulminating fatal disease depending on the number of larvae ingested. Sudden appearance of myalgias with edema of the upper eyelids and fever are early characteristic signs. Wild game from out-of-state has historically been a commonly reported exposure in Washington. The last case of trichinosis in Washington was reported in 2000; there were no cases reported in 2003.

TUBERCULOSIS

Tuberculosis (TB) is a systemic infection most commonly caused in the United States by the acid-fast bacillus *Mycobacterium tuberculosis*.

M. tuberculosis is transmitted by airborne droplets of respiratory secretions from infectious persons. Infection results in TB disease (active TB) or latent TB, and persons with latent TB are not infectious. The incubation period is highly variable and most TB disease affects the lungs (pulmonary TB) with respiratory and systemic symptoms, including hemoptysis, pleuritic chest pain, weight loss, fatigue, malaise, fever, and night sweats. Symptoms of extrapulmonary TB disease depend on the site of infection. TB infection can be detected by reaction to the purified protein derivative (PPD), or tuberculin, skin test; diagnosis of TB disease is usually performed by examination of chest radiographs and sputum or tissue stained for acid-fast bacilli, and isolation of *M. tuberculosis* by culture of sputum or other specimens. Tuberculosis disease is immediately notifiable in Washington.

TB disease in Washington increased 17% from 1987-1991 (255 to 309 cases). Factors contributing to this rise included increasing numbers of immigrants from endemic countries, TB associated with the HIV epidemic and outbreaks of TB in congregate settings (e.g., correctional and healthcare facilities,

homeless shelters). From 1991-1994, TB disease decreased 17%. After a brief increase (1995-1997), the case count has continued to decline.

In 2003, 250 new cases of active TB in Washington were reported (4.1 cases/100,000 population), the lowest incidence ever recorded for Washington. Twenty-four of 39 counties reported at least one new case of TB. Franklin and King counties had the highest incidence (9.3 and 8.7 cases/100,000 population, respectively).

Age-specific rates of TB were highest among persons 65 years of age and older (6.5 cases/100,000 population) in 2003; persons 5-14 years of age continue to have the lowest incidence (0.6 cases/100,000 population. The difference between gender-specific incidence rates was statistically significant in 2003 (5.2 cases/100,000 population in males vs. 3.0 cases/100,000 population in females).

Table 9. Tuberculosis by age group, 2003

Age (Years)	Cases	Cases/100,000 population	%
0-4	3	0.7	1
5-14	6	0.6	2
15-24	28	3.2	11
25-44	86	4.8	34
45-64	83	5.5	33
65+	44	6.5	18
Total	250	4.1	100

A large proportion of TB disease was reported among certain racial/ethnic groups. The incidence among Asians was more than 16 times higher than among whites and 3.5 times higher than that of Hispanics. The incidence among Blacks was almost 10 times higher than that of whites and two times higher than that of Hispanics. The incidence among whites remains below the national level (1.7 vs. 5.1 cases/100,000 population, respectively).

Table 10. Tuberculosis by race/ethnicity, 2003

Race/Ethnicity	Cases	Cases/100,000 population	%
White, alone	89	1.7	35
Black, alone	35	16.8	14
Hispanic, all races	40	8.0	16
American Indian/Alaska Native, alone	17	16.6	7
Asian/Pacific Islander, alone	109	28.5	44

Sixty-four percent (159) of TB cases occurred among persons born outside the United States. Foreign-born persons accounted for 99 (63%) of male TB cases and 60 (66%) of female TB cases.

Table 11. Tuberculosis by race/ethnicity and country of origin, 2003

	U.S.-born		Foreign-born*		TOTAL	
Race/Ethnicity	**No.**	**%**	**No.**	**%**	**No.**	**%**
White, alone	45	51	43	49	88	35
Black, alone	15	43	20	57	35	14
Hispanic, all races	9	23	31	77	40	16
American Indian/Alaska Native, alone	17	100	0	-	17	7
Asian/Pacific Islander, alone	12	11	96	89	108	44

*2 cases were missing country of origin data

Co-morbidity with HIV remains low in Washington. The number of reported persons with TB also infected with HIV decreased from 13 in 2002 to 12 in 2003.

Resistance to at least one anti-TB drug was found in 26 of 200 (13%) persons from whom *M. tuberculosis* was isolated and tested for drug susceptibility. Of these 26, six (23%) were from the United States and 20 (77%) were foreign-born. There were no multiple-drug resistant (defined as resistance to at least isoniazid and rifampin) isolates of *M. tuberculosis* identified in 2003. There were also no rifampin-only resistant cases.

TULAREMIA

Tularemia, also known as rabbit or deerfly fever, is an acute bacterial infection caused by *Francisella tularensis.* Infection may develop after inoculation (deerfly or tick bite, or while handling or skinning rabbits), ingestion of contaminated food or water, or by inhalation of bacteria aerosolized during handling of contaminated animal carcasses. The symptoms of tularemia reflect the route of transmission and include fever, malaise, lymphadenopathy (glandular form), skin ulcers (ulceroglandular) or eye infection (oculoglandular); pharyngitis, abdominal pain and diarrhea (oropharyngeal); pneumonia (pneumonic); and any of the types of infection can result in sepsis (typhoidal).

F. tularensis is a potential agent of bioterrorism and is immediately notifiable in Washington.

In most years, fewer than 10 cases of tularemia are reported in Washington. During 2003, two cases were reported among Washington residents, one associated with an insect bite and the other resulting from a squirrel bite. Both exposures occurred in western Washington. In addition, a case of tularemia in a snowshoe hare found dead in eastern Washington was identified.

TYPHUS

Typhus is a rickettsial disease transmitted by lice *(Rickettsia prowazekii)*, fleas *(R. typhi, R. mooseri, R. felis),* or mites *(Orientia tsutsugamushi)*. Typhus is characterized by the acute onset of headache, chills, prostration, fever and generalized pains. A diffuse macular rash may occur that spares the face, palms and soles. In the United States, only flea-borne, or murine, typhus is likely to occur with fewer than 80 cases reported annually. Murine typhus may resolve spontaneously and the case-fatality rate is 1%. Rats, mice and possibly other small mammals are the reservoir for flea-borne typhus.

In the United States, a seasonal peak occurs in late summer and autumn and cases tend to be scattered geographically, with a high proportion typically reported from Texas and southern California. Typhus is immediately notifiable in Washington. The last reported case of murine typhus in Washington occurred in 1994 and was associated with travel. No cases were reported in 2003.

UNEXPLAINED CRITICAL ILLNESS OR DEATH

Illness or death occurring in previously healthy individuals 1-49 years of age with hallmarks of an infectious disease (e.g., fever, abnormal white blood cell count), no identified diagnosis, and severity requiring admission to an intensive care unit or resulting in death, is immediately notifiable in Washington. Surveillance for unexplained critical illness or death (UCID) in Washington began in 2001 to identify emerging pathogens and unusual disease occurrences.

Twelve cases of UCID were reported by five Washington counties in 2003, compared to six cases in 2002. In 2003, DOH collaborated with the CDC's Meningitis and Special Pathogens Branch to investigate nine of the 12 UCID cases; tissue obtained at autopsy was submitted to CDC for laboratory testing. The etiology was identified in three cases: Sin Nombre virus (hantavirus pulmonary syndrome), *Legionella* species (legionellosis), and *Streptobacillus moniliformis* (rat bite fever). These cases were reclassified and removed from the UCID case count.

The remaining nine cases included five febrile illnesses with seizures, one apparent septic shock, two with probable myocarditis, and one death on arrival without obvious cause. The average age was 18 (range: 3-43 years) and all cases were fatal. Three of the deaths occurred in a single county in a three month period, and were extensively investigated, however no common etiology or epidemiologic links between the three cases were identified.

VIBRIOSIS

Vibriosis is a bacterial infection caused by non-toxigenic *Vibrio* species including *V. parahaemolyticus*, *V. vulnificus, non-toxigenic V. cholerae,* and other less common *Vibrio.* Infections caused by toxigenic *V. cholerae* are notifiable as **Cholera**.

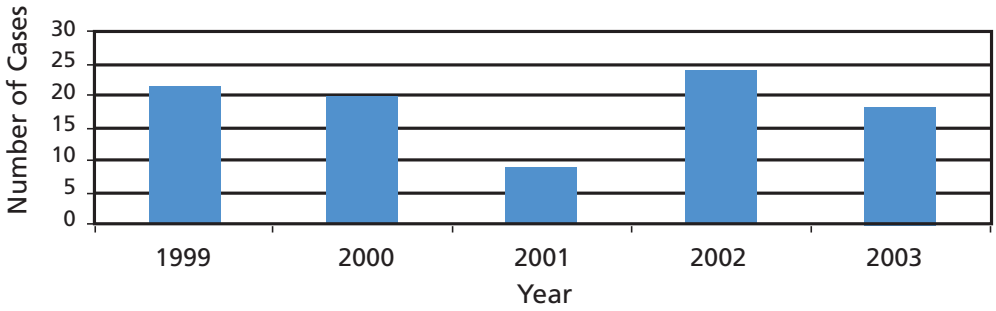
Transmission of *Vibrio* usually occurs by ingestion of contaminated raw or undercooked seafood or through abrasion or penetrating injuries acquired in contaminated seawater. Vibriosis causes abdominal pain, watery diarrhea, vomiting, headache and fever.

V. parahaemolyticus occurs naturally in Pacific coastal waters, especially during warmer months. *V. vulnificus,* a species that occurs in the Gulf of Mexico, can cause sepsis and shock in immunocompromised persons.

The number of cases of vibriosis varies from year to year in Washington. In 2003, 18 cases were reported (0.3 cases/100,000 population) and included one *V. parahaemolyticus* case involving travel to

Asia, one *V. parahaemolyticus* wound infection due to contaminated seawater exposure, one *V. fluvialis* case associated with travel to Mexico, one travel-associated infection due to *V. furnissii*, and one swimming-associated ear infection due to *V. alginolyticus*. Of cases with available data regarding shellfish consumption in Washington, three consumed shellfish in restaurants and four were associated with privately harvested shellfish; no cases were associated with retail shellfish.

Figure 29. Vibriosis - reported cases, 1999-2003



YELLOW FEVER

Yellow fever is a mosquito-borne flavivirus that occurs in tropical regions of Africa and South America. One of the primary vector mosquitoes for yellow fever is *Aedes aegypti*, a species which is found primarily in the eastern, southeastern, and lower midwestern United States. Symptoms include fever, rigors, headache, backache, generalized myalgias, prostration, jaundice, nausea and vomiting. Most infections resolve, but some progress to a hemorrhagic diathesis with hepatic and renal failure, with a mortality rate of 5-40%. Yellow fever is immediately notifiable in Washington.

With the exception of a single case of yellow fever vaccine-associated viscerotropic disease reported in 2002, no cases of yellow fever have ever been reported in Washington.

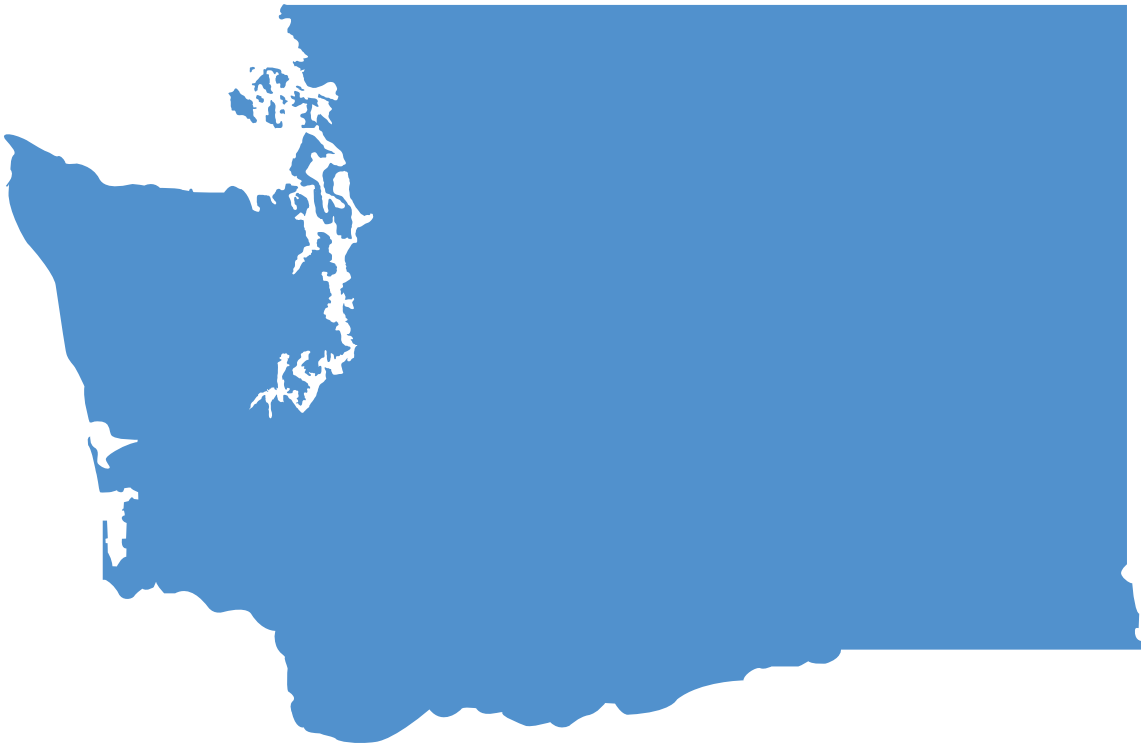
Vaccination recommendations for travelers are available from travel clinics and the CDC Travelers' Health website (www.cdc.gov/travel).

YERSINIOSIS

Yersiniosis is an acute bacterial enteric infection caused by *Yersinia*, primarily *Y. enterocolitica*, however other *Yersinia* species, comprising multiple serotypes and biotypes, are also pathogenic. The disease is characterized by acute fever, diarrhea and abdominal pain that may mimic appendicitis; complications are rare. Wild and domestic animals are reservoirs for *Yersinia*. Transmission occurs through the fecal-oral route by ingestion of contaminated food or water or by direct contact with infected humans or animals, particularly pigs. *Y. enterocolitica* has been isolated from a variety of foods including raw pork or pork products.

In 2003, there were 28 cases of yersiniosis (caused by *Y. enterocolitica*) reported in Washington (0.5 cases/100,000 population), a comparable number to previous years. Reported risk factors included pork consumption, ingestion of untreated water, and contact with animals (e.g., cats, dogs, pigs, goats and horses). There was one case of yersiniosis caused by *Y. pseudotuberculosis*.

APPENDIX I.
DISEASE INCIDENCE & MORTALITY RATES



ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003 (AIDS)		2003 (HIV)	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	6.7	0	0.0	0	0.0	2	12.0	1	6.0	0	0.0
Asotin	1	4.9	0	0.0	0	0.0	1	4.8	0	0.0	0	0.0
Benton	2	1.4	5	3.6	4	2.8	4	2.7	5	3.3	1	1.0
Chelan	1	1.6	1	1.6	0	0.0	1	1.5	2	2.9	0	0.0
Clallam	2	3.0	6	8.9	2	3.1	3	4.6	2	3.1	2	3.1
Clark	14	4.2	17	5.0	25	7.1	32	8.8	20	5.4	29	7.8
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	1	24.4	0	0.0
Cowlitz	0	0.0	6	6.3	4	4.3	2	2.1	4	4.2	4	4.2
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	1	13.7	1	13.7	0	0.0	0	0.0
Franklin	3	6.7	4	8.8	6	11.9	4	7.8	5	9.3	1	1.9
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	1.4	0	0.0	1	1.3	2	2.6	1	1.3	1	1.3
Grays Harbor	2	3.0	4	6.0	4	5.8	1	1.5	2	2.9	0	0.0
Island	2	2.7	1	1.3	2	2.8	2	2.7	4	5.4	3	4.1
Jefferson	1	3.8	2	7.6	0	0.0	1	3.8	0	0.0	0	0.0
King	233	13.7	234	13.7	323	18.4	275	15.5	329	18.5	313	17.6
Kitsap	6	2.6	14	6.0	6	2.6	11	4.7	10	4.2	7	3.0
Kittitas	0	0.0	0	0.0	0	0.0	1	2.9	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0	1	5.2	0	0.0	2	10.4
Lewis	1	1.5	3	4.4	1	1.4	1	1.4	2	2.8	3	4.3
Lincoln	0	0.0	1	10.4	0	0.0	0	0.0	1	9.9	0	0.0
Mason	2	4.2	6	12.4	5	10.1	2	5.0	2	4.0	1	2.0
Okanogan	1	2.7	2	5.3	0	0.0	2	5.0	0	0.0	0	0.0
Pacific	0	0.0	1	4.7	2	9.5	3	14.3	0	0.0	3	14.4
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	49	7.0	63	8.9	65	9.1	29	4.0	33	4.5	45	6.1
San Juan	0	0.0	2	15.7	1	6.9	0	0.0	1	6.8	0	0.0
Skagit	2	2.0	1	1.0	3	2.9	0	0.0	1	1.0	3	2.8
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	23	4.0	29	4.9	20	3.2	32	5.1	35	5.5	23	3.6
Spokane	13	3.1	37	8.9	20	4.7	18	4.2	25	5.8	18	4.2
Stevens	0	0.0	3	7.9	1	2.5	2	5.0	2	4.9	3	7.4
Thurston	3	1.5	11	5.4	11	5.2	10	4.7	6	2.8	5	2.3
Wahkiakum	0	0.0	1	25.9	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	1	1.8	5	9.1	3	5.4	2	3.6	1	1.8	1	1.8
Whatcom	9	5.7	4	2.5	5	2.9	8	4.6	5	2.9	2	1.1
Whitman	1	2.5	3	7.1	0	0.0	1	2.5	0	0.0	0	0.0
Yakima	3	1.4	12	5.6	9	4.0	3	1.3	9	4.0	8	3.5
STATEWIDE TOTAL												
CASES	377	6.5	478	8.2	524	8.8	457	7.6	509	8.3	478	7.8
DEATHS	93	1.6	73	1.3	55	0.9	44	0.6	32*	0.5	2	0.0

*As of September 1, 2003

AIDS STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1990	583	12.0	376	7.8
1991	634	12.7	475	9.5
1992	599	11.7	529	10.3
1993*	1,601	30.5	645	12.3
1994	932	17.5	674	12.6
1995	888	16.4	669	12.3
1996	734	13.3	464	8.4
1997	618	11.0	215	3.8
1998	424	7.5	147	2.6
1999	377	6.5	93	1.6
2000	478	8.2	73	1.3
2001	524	8.8	55	0.9
2002	457	7.6	44	0.7
2003	509	8.3	32**	0.5

* Revision of the AIDS case definition for adults and adolescents

**As of September 1, 2003

BOTULISM

Case, Death Rate/100,000 Population

Year	Food	Intestinal	Wound	Combined Rate	Deaths	Rate
1985	5	4	0	0.2	0	0.0
1986	2	4	0	0.1	0	0.0
1987	1	1	1	0.1	0	0.0
1988	3	4	0	0.2	0	0.0
1989	10	0	0	0.2	0	0.0
1990	1	0	0	0.1	0	0.0
1991	0	3	0	0.1	0	0.0
1992	0	2	0	0.0	0	0.0
1993	4	5	0	0.2	0	0.0
1994	3	2	0	0.1	0	0.0
1995	4	2	0	0.1	0	0.0
1996	2	0	2	0.1	0	0.0
1997	0	1	2	0.1	0	0.0
1998	2	4	0	0.1	0	0.0
1999	2	4	1	0.1	0	0.0
2000	1	4	0	0.1	0	0.0
2001	1	6	0	0.1	0	0.0
2002	1	1	4	0.1	0	0.0
2003	1	3	7	0.2	0	0.0

BRUCELLOSIS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	1	0.0	0	0.0
1987	1	0.0	0	0.0
1988	1	0.0	0	0.0
1989	1	0.0	0	0.0
1990	0	0.0	0	0.0
1991	3	0.1	0	0.0
1992	1	0.0	0	0.0
1993	0	0.0	0	0.0
1994	0	0.0	0	0.0
1995	0	0.0	0	0.0
1996	2	0.0	0	0.0
1997	3	0.1	0	0.0
1998	3	0.1	0	0.0
1999	0	0.0	0	0.0
2000	0	0.0	0	0.0
2001	0	0.0	0	0.0
2002	2	0.0	0	0.0
2003	1	0.0	0	0.0

CAMPYLOBACTERIOSIS

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	6.1	3	18.1	1	6.0	2	12.0
Asotin	0	0.0	0	0.0	3	14.5	1	4.8	1	4.9
Benton	13	9.4	19	13.3	11	7.6	19	12.9	40	26.4
Chelan	6	9.5	11	16.5	6	8.9	10	14.8	8	11.8
Clallam	11	16.4	3	4.6	7	10.8	4	6.2	8	12.3
Clark	50	14.8	50	14.5	57	16.2	54	14.9	67	18.0
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	15	15.9	12	12.9	13	13.8	11	11.7	4	4.2
Douglas	1	3.2	5	15.3	1	3.0	7	21.1	4	11.9
Ferry	1	13.7	2	27.5	0	0.0	0	0.0	2	27.4
Franklin	1	2.2	4	8.1	6	11.9	4	7.8	13	24.3
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	12	17.0	11	14.7	9	11.9	11	14.4	24	31.1
Grays Harbor	14	20.7	11	16.4	9	13.1	7	10.2	14	20.3
Island	8	10.9	1	1.4	2	2.8	3	4.1	6	8.1
Jefferson	3	11.3	1	3.9	7	26.8	3	11.3	4	15.0
King	281	16.8	331	19.1	320	18.2	295	16.6	270	15.2
Kitsap	24	10.4	18	7.8	26	11.1	11	4.7	20	8.4
Kittitas	0	0.0	4	12.0	7	20.6	3	8.6	5	14.2
Klickitat	0	0.0	2	10.4	8	41.5	2	10.4	3	15.5
Lewis	14	20.3	12	17.5	8	11.5	14	19.9	5	7.1
Lincoln	1	10.0	2	19.6	0	0.0	2	19.6	0	0.0
Mason	3	6.2	7	14.2	12	24.2	5	10.0	7	13.9
Okanogan	2	5.2	5	12.6	7	17.6	3	7.5	2	5.1
Pacific	1	4.7	2	9.5	2	9.5	2	9.5	2	9.6
Pend Oreille	4	36.0	1	8.5	1	8.5	1	8.5	0	0.0
Pierce	47	6.7	60	8.6	53	7.4	44	6.1	32	4.4
San Juan	0	0.0	3	21.3	2	13.9	5	34.2	2	13.5
Skagit	11	10.9	25	24.3	19	18.3	25	23.8	19	17.8
Skamania	2	20.2	0	0.0	2	20.2	0	0.0	0	0.0
Snohomish	105	18.0	107	17.7	108	17.5	105	16.7	96	15.1
Spokane	49	11.8	79	18.9	38	9.0	56	13.2	67	15.6
Stevens	1	2.6	0	0.0	8	19.9	7	17.3	13	32.0
Thurston	30	14.8	40	19.3	31	14.7	27	12.7	25	11.6
Wahkiakum	2	51.3	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	4	7.3	5	9.1	12	21.7	140	252.7	6	10.8
Whatcom	62	38.4	51	30.6	59	34.6	46	26.7	47	26.9
Whitman	2	4.8	6	14.7	2	5.0	2	4.9	5	12.2
Yakima	170	80.1	115	51.7	132	58.8	102	45.3	120	53.1
STATEWIDE TOTAL										
CASES	950	16.5	1,006	17.1	991	16.6	1,032	17.1	943	15.5
DEATHS	2	0.0	2	0.0	0	0.0	1	0.0	0	0.0

CAMPYLOBACTERIOSIS STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	8	0.2	0	0.0
1981	106	2.5	0	0.0
1982	299	7.0	0	0.0
1983	149	3.5	0	0.0
1984	146	3.4	1	0.0
1985	250	5.7	0	0.0
1986	347	7.9	0	0.0
1987	420	9.4	1	0.0
1988	709	15.5	1	0.0
1989	899	19.3	0	0.0
1990	899	18.5	0	0.0
1991	930	18.6	4	0.1
1992	1,060	20.7	1	0.0
1993	1,051	20.1	0	0.0
1994	1,050	19.7	0	0.0
1995	1,050	19.3	4	0.1
1996	1,139	20.6	1	0.0
1997	1,150	20.5	0	0.0
1998	901	15.8	1	0.0
1999	950	16.5	2	0.0
2000	1,006	17.1	2	0.0
2001	991	16.6	0	0.0
2002	1,032	17.1	1	0.0
2003	943	15.5	0	0.0

CHANCROID

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	1	0.0	0	0.0
1987	1	0.0	0	0.0
1988	0	0.0	0	0.0
1989	6	0.1	0	0.0
1990	1	0.0	0	0.0
1991	3	0.1	0	0.0
1992	2	0.0	0	0.0
1993	0	0.0	0	0.0
1994	1	0.0	0	0.0
1995	5	0.1	0	0.0
1996	1	0.0	0	0.0
1997	2	0.0	0	0.0
1998	1	0.0	0	0.0
1999	0	0.0	0	0.0
2000	0	0.0	0	0.0
2001	0	0.0	0	0.0
2002	1	0.0	0	0.0
2003	0	0.0	0	0.0

CHLAMYDIA TRACHOMATIS

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	26	173.2	29	183.9	37	222.9	22	132.5	30	180.7
Asotin	26	128.5	20	98.5	24	115.9	42	202.9	52	252.4
Benton	283	201.2	306	218.0	274	189.2	238	161.2	348	229.6
Chelan	117	185.4	118	186.2	117	174.4	129	190.8	168	247.4
Clallam	85	127.4	79	116.9	92	142.0	157	241.9	156	238.9
Clark	523	158.4	646	188.6	714	202.5	844	232.3	844	226.7
Columbia	2	0.0	4	0.0	1	0.0	3	0.0	1	0.0
Cowlitz	95	101.1	122	128.0	182	193.8	128	135.6	196	206.5
Douglas	49	155.9	52	162.8	53	161.6	60	181.3	69	205.4
Ferry	9	129.3	9	122.9	5	68.5	10	137.0	8	109.6
Franklin	176	390.9	189	416.3	162	321.4	162	315.8	188	350.7
Garfield	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0
Grant	158	228.3	143	202.3	158	208.2	169	221.2	216	280.2
Grays Harbor	116	173.2	111	165.9	87	127.0	108	157.9	153	222.4
Island	100	135.6	116	156.3	107	147.8	223	305.1	175	236.5
Jefferson	35	133.4	32	121.1	23	88.1	32	120.3	59	221.0
King	3,949	232.6	4,495	263.8	4,295	244.3	4470	251.9	5,169	290.5
Kitsap	479	203.7	536	230.5	483	206.9	532	226.7	671	283.1
Kittitas	35	113.7	60	186.0	76	223.5	74	212.6	90	255.7
Klickitat	23	126.3	21	109.5	30	155.4	26	134.7	35	181.3
Lewis	75	111.5	64	92.9	65	93.5	130	185.2	141	200.3
Lincoln	4	0.0	2	0.0	7	68.6	5	49.0	6	59.4
Mason	83	172.6	109	224.6	107	215.7	109	218.9	109	217.1
Okanogan	78	214.1	78	205.4	85	214.1	96	241.2	116	292.9
Pacific	13	63.8	13	60.8	29	138.1	39	185.7	37	177.0
Pend Oreille	10	91.4	6	55.0	4	0.0	9	76.3	16	135.6
Pierce	2,074	294.8	2,073	292.2	2,336	327.4	2733	377.0	2,820	384.4
San Juan	14	110.0	14	109.8	15	104.2	14	95.9	10	67.6
Skagit	206	207.5	180	178.2	201	193.1	229	217.9	270	253.0
Skamania	9	94.0	5	50.4	6	60.6	11	111.1	13	131.3
Snohomish	991	171.2	1,115	188.3	1349	218.1	1295	206.2	1,467	230.1
Spokane	660	158.8	688	165.7	736	174.2	905	212.6	988	230.5
Stevens	27	74.6	31	81.9	40	99.3	33	81.7	59	145.3
Thurston	316	154.1	401	195.4	430	204.6	440	207.3	511	237.9
Wahkiakum	4	0.0	4	0.0	2	0.0	3	0.0	3	0.0
Walla Walla	109	200.3	84	153.1	96	173.9	115	207.6	80	143.4
Whatcom	282	177.1	238	146.5	254	148.9	367	213.1	436	249.9
Whitman	55	137.0	64	152.3	74	183.6	87	214.3	133	324.4
Yakima	668	315.1	808	377.5	875	389.8	886	393.8	953	421.7
STATEWIDE TOTAL										
CASES	11,964	207.7	13,066	224.5	13,631	228.1	14,936	247.2	16,796	275.4
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

CHLAMYDIA TRACHOMATIS
STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1987*	5,071	113.2	0	0.0
1988	12,534	274.6	0	0.0
1989	10,865	233.1	0	0.0
1990	12,709	261.1	0	0.0
1991	12,917	258.3	0	0.0
1992	11,762	229.9	0	0.0
1993	10,331	197.1	0	0.0
1994	10,575	198.2	0	0.0
1995	9,463	174.3	0	0.0
1996	9,237	167.4	0	0.0
1997	9,523	169.8	0	0.0
1998	10,998	193.4	0	0.0
1999	11,964	207.7	0	0.0
2000	13,066	224.5	0	0.0
2001	13,631	228.1	0	0.0
2002	14,936	247.2	0	0.0
2003	16,796	275.4	0	0.0

*First year reported, July - December

CHOLERA

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	0	0.0	0	0.0
1987	0	0.0	0	0.0
1988	0	0.0	0	0.0
1989	0	0.0	0	0.0
1990	0	0.0	0	0.0
1991	0	0.0	0	0.0
1992	2	0.0	0	0.0
1993	0	0.0	0	0.0
1994	0	0.0	0	0.0
1995	0	0.0	0	0.0
1996	0	0.0	0	0.0
1997	0	0.0	0	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	0	0.0	0	0.0
2001	0	0.0	0	0.0
2002	1	0.0	0	0.0
2003	0	0.0	0	0.0

CRYPTOSPORIDIOSIS*

Case, Death Rate/100,000 Population

	2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	1	4.8	1	4.9
Benton	0	0.0	0	0.0	2	1.3
Chelan	0	0.0	0	0.0	0	0.0
Clallam	1	1.5	0	0.0	0	0.0
Clark	7	2.0	1	0.3	7	1.9
Columbia	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	1	3.0
Ferry	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	1	1.9	0	0.0
Garfield	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	0	0.0
Grays Harbor	0	0.0	1	1.5	0	0.0
Island	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0
King	31	1.8	32	1.8	35	2.0
Kitsap	1	0.4	1	0.4	3	1.3
Kittitas	2	5.9	0	0.0	2	5.7
Klickitat	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	2	2.8	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0
Pierce	16	2.2	10	1.4	2	0.3
San Juan	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	0	0.0	0	0.0
Skamania	0	0.0	0	0.0	0	0.0
Snohomish	2	0.3	6	1.0	7	1.1
Spokane	2	0.5	1	0.2	1	0.2
Stevens	0	0.0	0	0.0	0	0.0
Thurston	1	0.5	4	1.8	1	0.5
Wahkiakum	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0
Whatcom	0	0.0	1	0.6	0	0.0
Whitman	0	0.0	0	0.0	0	0.0
Yakima	10	4.5	1	0.4	3	1.3
STATEWIDE TOTAL						
CASES	73	1.2	62	1.0	65	1.1
DEATHS	0	0.0	0	0.0	0	0.0

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

CYCLOSPORIASIS*

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
2001	9	0.2	0	0.0
2002	5	0.1	0	0.0
2003	0	0.0	0	0.0

* Cyclosporiasis first became a notifiable condition in Washington in 12/2000

DIPHTHERIA

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	0	0.0	0	0.0
1987	0	0.0	0	0.0
1988	0	0.0	0	0.0
1989	0	0.0	0	0.0
1990	0	0.0	0	0.0
1991	0	0.0	0	0.0
1992	0	0.0	0	0.0
1993	0	0.0	0	0.0
1994	0	0.0	0	0.0
1995	0	0.0	0	0.0
1996	0	0.0	0	0.0
1997	0	0.0	0	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	0	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

ENCEPHALITIS, VIRAL

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	0	0.0	0	0.0
1987	0	0.0	0	0.0
1988	1*	0.0	0	0.0
1989	0	0.0	0	0.0
1990	0	0.0	0	0.0
1991	0	0.0	0	0.0
1992	0	0.0	0	0.0
1993	0	0.0	0	0.0
1994	0	0.0	0	0.0
1995	0	0.0	0	0.0
1996	0	0.0	0	0.0
1997	0	0.0	0	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	0	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

* Western Equine Encephalitis

ENTEROHEMORRHAGIC *E. COLI* O157:H7

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	6.3	0	0.0	1	6.0	0	0.0	0	0.0
Asotin	1	5.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	3	2.2	5	3.5	4	2.8	3	2.0	4	2.6
Chelan	0	0.0	3	4.5	2	3.0	0	0.0	0	0.0
Clallam	0	0.0	2	3.1	0	0.0	2	3.1	0	0.0
Clark	50	14.8	20	5.8	8	2.3	15	4.1	13	3.5
Columbia	0	0.0	1	24.6	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	1	1.1	1	1.1	1	1.1	2	2.1
Douglas	0	0.0	0	0.0	0	0.0	1	3.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	1	2.2	1	2.0	0	0.0	2	3.9	2	3.7
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	2	2.7	2	2.6	1	1.3	2	2.6
Grays Harbor	0	0.0	3	4.5	3	4.4	0	0.0	1	1.5
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	1	3.8	1	3.7
King	47	2.8	67	3.9	36	2.0	32	1.8	40	2.2
Kitsap	2	0.9	7	3.0	6	2.6	5	2.1	3	1.3
Kittitas	0	0.0	1	3.0	5	14.7	3	8.6	2	5.7
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	1	1.4	0	0.0	2	2.9	2	2.8	2	2.8
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	1	9.9
Mason	0	0.0	3	6.1	0	0.0	0	0.0	0	0.0
Okanogan	1	2.6	2	5.1	1	2.5	1	2.5	1	2.5
Pacific	0	0.0	1	4.8	0	0.0	0	0.0	2	9.6
Pend Oreille	0	0.0	0	0.0	0	0.0	1	8.5	0	0.0
Pierce	16	2.3	21	3.0	15	2.1	11	1.5	6	0.8
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	1	6.8
Skagit	5	5.0	4	3.9	3	2.9	0	0.0	5	4.7
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	11	1.9	29	4.8	20	3.2	11	1.8	12	1.9
Spokane	16	3.9	22	5.3	11	2.6	43	10.1	10	2.3
Stevens	1	2.6	0	0.0	0	0.0	0	0.0	1	2.5
Thurston	2	1.0	14	6.8	7	3.3	1	0.5	7	3.3
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	2	3.7	3	5.4	7	12.7	3	5.4	2	3.6
Whatcom	20	12.4	19	11.4	9	5.3	15	8.7	4	2.3
Whitman	2	4.8	0	0.0	0	0.0	2	4.9	0	0.0
Yakima	4	1.9	6	2.7	7	3.1	10	4.4	4	1.8
STATEWIDE TOTAL										
CASES	186	3.2	237	4.0	150	2.5	166	2.7	128	2.1
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

E. COLI O157:H7 STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1988	167	3.7	0	0.0
1989	157	3.4	1	0.0
1990	220	4.5	0	0.0
1991	164	3.3	0	0.0
1992	300	5.9	2	0.0
1993	741	14.1	3	0.0
1994	174	3.3	2	0.0
1995	140	2.6	1	0.0
1996	187	3.4	1	0.0
1997	149	2.7	0	0.0
1998	144	2.5	0	0.0
1999	186	3.2	0	0.0
2000	237	4.0	0	0.0
2001	150	2.5	0	0.0
2002	166	2.7	0	0.0
2003	128	2.1	0	0.0

GIARDIASIS

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	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	5	25.0	0	0.0	0	0.0	0	0.0	2	9.7
Benton	13	9.4	10	7.0	6	4.1	7	4.7	8	5.3
Chelan	5	7.9	4	6.0	6	8.9	3	4.4	5	7.4
Clallam	2	3.0	5	7.7	3	4.6	9	13.9	4	6.1
Clark	54	16.0	45	13.0	37	10.5	26	7.2	26	7.0
Columbia	0	0.0	1	24.6	0	0.0	0	0.0	0	0.0
Cowlitz	14	14.9	11	11.8	8	8.5	8	8.5	8	8.4
Douglas	1	3.2	0	0.0	2	6.1	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	3	6.7	2	4.1	4	7.9	0	0.0	4	7.5
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	8	11.3	6	8.0	4	5.3	2	2.6	1	1.3
Grays Harbor	3	4.4	1	1.5	0	0.0	3	4.4	2	2.9
Island	1	1.4	7	9.8	1	1.4	6	8.2	5	6.8
Jefferson	7	26.3	9	34.7	5	19.2	0	0.0	4	15.0
King	175	10.4	222	12.8	140	8.0	166	9.4	117	6.6
Kitsap	24	10.4	15	6.5	16	6.9	16	6.8	8	3.4
Kittitas	8	24.7	1	3.0	5	14.7	0	0.0	2	5.7
Klickitat	3	15.5	2	10.4	1	5.2	2	10.4	1	5.2
Lewis	5	7.2	8	11.7	5	7.2	5	7.1	5	7.1
Lincoln	0	0.0	1	9.8	0	0.0	1	9.8	0	0.0
Mason	5	10.3	3	6.1	11	22.2	2	4.0	6	12.0
Okanogan	0	0.0	0	0.0	4	10.1	4	10.1	3	7.6
Pacific	2	9.3	0	0.0	1	4.8	1	4.8	1	4.8
Pend Oreille	0	0.0	0	0.0	1	8.5	3	25.4	1	8.5
Pierce	37	5.3	45	6.4	40	5.6	39	5.4	27	3.7
San Juan	0	0.0	2	14.2	0	0.0	3	20.5	0	0.0
Skagit	7	7.0	4	3.9	5	4.8	11	10.5	14	13.1
Skamania	2	20.2	1	10.1	2	20.2	2	20.2	0	0.0
Snohomish	49	8.4	79	13.0	63	10.2	60	9.6	43	6.7
Spokane	24	5.8	42	10.0	49	11.6	47	11.0	46	10.7
Stevens	0	0.0	2	5.0	0	0.0	7	17.3	3	7.4
Thurston	14	6.9	15	7.2	19	9.0	21	9.9	25	11.6
Wahkiakum	0	0.0	0	0.0	1	26.3	0	0.0	0	0.0
Walla Walla	7	12.8	4	7.2	7	12.7	5	9.0	2	3.6
Whatcom	31	19.2	19	11.4	16	9.4	18	10.5	34	19.5
Whitman	3	7.2	2	4.9	4	9.9	1	2.5	2	4.9
Yakima	48	22.6	54	24.3	46	20.5	32	14.2	26	11.5
STATEWIDE TOTAL										
CASES	560	9.7	622	10.6	512	8.6	510	8.4	435	7.1
DEATHS	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0

GIARDIASIS STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	840	20.3	0	0.0
1981	547	12.9	0	0.0
1982	956	22.4	0	0.0
1983	706	16.5	0	0.0
1984	710	16.4	0	0.0
1985	779	17.8	0	0.0
1986	811	18.4	0	0.0
1987	827	18.5	0	0.0
1988	851	18.6	0	0.0
1989	980	21.0	0	0.0
1990	792	16.3	0	0.0
1991	876	17.5	1	0.0
1992	860	16.8	1	0.0
1993	747	14.3	0	0.0
1994	722	13.5	0	0.0
1995	855	15.7	0	0.0
1996	668	12.1	0	0.0
1997	738	13.2	0	0.0
1998	740	13.0	1	0.0
1999	560	9.7	1	0.0
2000	622	10.6	1	0.0
2001	512	8.6	0	0.0
2002	510	8.4	0	0.0
2003	435	7.1	0	0.0

GONORRHEA

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	0.0	2	0.0	2	0.0	0	0.0	4	0.0
Asotin	0	0.0	0	0.0	1	0.0	1	0.0	2	0.0
Benton	13	9.2	6	4.3	11	7.6	11	7.5	18	11.9
Chelan	4	0.0	6	9.5	4	0.0	3	0.0	2	0.0
Clallam	3	0.0	7	10.4	6	9.3	2	0.0	8	12.3
Clark	87	26.3	86	25.1	100	28.4	138	38.0	158	42.4
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	12	12.8	9	9.4	10	10.6	13	13.8	15	15.8
Douglas	2	0.0	4	0.0	1	0.0	3	0.0	3	0.0
Ferry	0	0.0	2	0.0	1	0.0	0	0.0	0	0.0
Franklin	6	13.3	1	0.0	14	27.8	4	0.0	2	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	9	13.0	7	9.9	15	19.8	4	0.0	13	16.9
Grays Harbor	3	0.0	2	0.0	5	7.3	12	17.5	7	10.2
Island	8	10.8	11	14.8	10	13.8	15	20.5	23	31.1
Jefferson	1	0.0	0	0.0	1	0.0	2	0.0	2	0.0
King	922	54.3	1222	71.7	1555	88.4	1462	82.4	1,351	75.9
Kitsap	72	30.6	133	57.2	127	54.4	81	34.5	91	38.4
Kittitas	2	0.0	2	0.0	1	0.0	2	0.0	7	19.9
Klickitat	1	0.0	0	0.0	1	0.0	2	0.0	2	0.0
Lewis	6	8.9	6	8.7	4	0.0	13	18.5	6	8.5
Lincoln	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0
Mason	11	22.9	8	16.5	10	20.2	6	12.0	13	25.9
Okanogan	5	13.7	2	0.0	1	0.0	4	0.0	6	15.2
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	4	0.0
Pend Oreille	0	0.0	0	0.0	2	0.0	0	0.0	0	0.0
Pierce	628	89.3	536	75.6	660	92.5	636	87.7	538	73.3
San Juan	0	0.0	0	0.0	0	0.0	1	0.0	2	0.0
Skagit	12	12.1	6	5.9	13	12.5	17	16.2	25	23.4
Skamania	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0
Snohomish	91	15.7	108	18.2	189	30.6	190	30.3	139	21.8
Spokane	114	27.4	108	26.0	102	24.1	124	29.1	97	22.6
Stevens	4	0.0	1	0.0	4	0.0	2	0.0	5	12.3
Thurston	37	18.0	33	16.1	33	15.7	52	24.5	37	17.2
Wahkiakum	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0
Walla Walla	0	0.0	1	0.0	3	0.0	3	0.0	2	0.0
Whatcom	20	12.6	12	7.4	23	13.5	53	30.8	57	32.7
Whitman	3	0.0	4	0.0	7	17.4	6	14.8	8	19.5
Yakima	55	25.9	92	43.0	74	33.0	61	27.1	107	47.3
STATEWIDE TOTAL										
CASES	2,132	37.0	2,419	41.6	2,991	50.1	2,925	48.4	2,754	45.2
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

GONORRHEA STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	14,215	344.2	0	0.0
1981	13,204	310.7	0	0.0
1982	11,381	266.9	0	0.0
1983	9,895	230.9	0	0.0
1984	9,158	211.6	0	0.0
1985	10,073	229.8	0	0.0
1986	9,848	222.8	0	0.0
1987	8,909	198.8	0	0.0
1988	7,154	156.7	0	0.0
1989	6,369	136.7	0	0.0
1990	5,009	105.7	0	0.0
1991	4,441	88.8	0	0.0
1992	4,169	81.5	0	0.0
1993	3,740	71.4	0	0.0
1994	2,893	54.2	0	0.0
1995	2,765	50.9	0	0.0
1996	2,020	36.6	0	0.0
1997	1,955	34.9	0	0.0
1998	1,948	34.3	0	0.0
1999	2,132	37.0	0	0.0
2000	2,419	41.6	0	0.0
2001	2,991	50.1	0	0.0
2002	2,925	48.4	0	0.0
2003	2,754	45.2	0	0.0

GRANULOMA INGUINALE

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	0	0.0	0	0.0
1987	1	0.0	0	0.0
1988	0	0.0	0	0.0
1989	0	0.0	0	0.0
1990	1	0.0	0	0.0
1991	2	0.0	0	0.0
1992	0	0.0	0	0.0
1993	0	0.0	0	0.0
1994	0	0.0	0	0.0
1995	0	0.0	0	0.0
1996	0	0.0	0	0.0
1997	0	0.0	0	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	0	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

HAEMOPHILUS INFLUENZAE INVASIVE DISEASE

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	6.1	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	2	1.4	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	2	0.6	1	0.3	1	0.3
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	1	1.1	0	0.0	0	0.0	2	2.1
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	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Island	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	0	0.0	0	0.0	0	0.0	2	0.1	1	0.1
Kitsap	1	0.4	0	0.0	1	0.4	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	1	5.2	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	0	0.0	0	0.0	0	0.0	1	1.4
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	1	2.1	0	0.0	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	1	2.5	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	0	0.0	2	0.3	0	0.0	0	0.0	1	0.1
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	1	1.0	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	1	0.2	0	0.0	0	0.0	1	0.2	0	0.0
Spokane	0	0.0	1	0.2	0	0.0	0	0.0	1	0.2
Stevens	1	2.6	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	0	0.0	0	0.0	1	0.5	0	0.0	1	0.5
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	1	0.6
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	1	0.5	0	0.0	3	1.3	0	0.0	5	2.2
STATEWIDE TOTAL										
CASES	5	0.1	8	0.1	8	0.1	5	0.1	14	0.2
DEATHS	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0

H. INFLUENZAE STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	126	3.0	0	0.0
1981	156	3.7	0	0.0
1982	149	3.5	6	0.1
1983	123	2.8	5	0.1
1984	110	2.5	5	0.1
1985	153	3.5	6	0.1
1986	319	7.1	11	0.2
1987	271	5.9	6	0.1
1988	200	4.3	0	0.0
1989	163	3.3	2	0.0
1990	123	2.5	6	0.1
1991	51	1.0	0	0.0
1992	22	0.4	1	0.0
1993	17	0.3	0	0.0
1994	10	0.2	0	0.0
1995	11	0.2	3	0.1
1996	10	0.2	0	0.0
1997	6	0.1	0	0.0
1998	11	0.2	1	0.0
1999	5	0.1	1	0.0
2000	8	0.1	0	0.0
2001	8	0.1	0	0.0
2002	5	0.1	0	0.0
2003	14	0.2	1	0.0

HANTAVIRUS PULMONARY SYNDROME*

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1994	2	0.0	1**	0.0
1995	4	0.1	2	0.0
1996	4	0.1	2	0.0
1997	3	0.0	1	0.0
1998	2	0.0	0	0.0
1999	5	0.1	1	0.0
2000	1	0.0	0	0.0
2001	1	0.0	0	0.0
2002	1	0.0	0	0.0
2003	2	0.0	1	0.0

* Hantavirus pulmonary syndrome first became a notifiable condition in Washington in 12/2000
**Out of state exposure

HEMOLYTIC UREMIC SYNDROME*

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
2001	3	0.1	0	0.0
2002	1	0.0	0	0.0
2003	1	0.0	0	0.0

* Hemolytic uremic syndrome first became a notifiable condition in Washington in 12/2000

HEPATITIS A

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	6.3	0	0.0	0	0.0	0	0.0	1	6.0
Asotin	0	0.0	1	4.9	0	0.0	0	0.0	0	0.0
Benton	2	1.4	3	2.1	6	4.1	1	0.7	1	0.7
Chelan	3	4.8	8	12.0	5	7.5	1	1.5	0	0.0
Clallam	1	1.5	0	0.0	3	4.6	1	1.5	3	4.6
Clark	59	17.5	26	7.5	10	2.8	13	3.6	3	0.8
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	19	20.2	8	8.6	4	4.3	2	2.1	0	0.0
Douglas	1	3.2	4	12.3	1	3.0	0	0.0	1	3.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	5	10.1	0	0.0	1	1.9	2	3.7
Garfield	0	0.0	0	0.0	1	41.7	0	0.0	0	0.0
Grant	8	11.3	15	20.1	2	2.6	1	1.3	3	3.9
Grays Harbor	1	1.5	2	3.0	1	1.5	1	1.5	1	1.5
Island	2	2.7	1	1.4	1	1.4	4	5.5	0	0.0
Jefferson	0	0.0	5	19.3	0	0.0	0	0.0	0	0.0
King	222	13.2	98	5.6	31	1.8	30	1.7	28	1.6
Kitsap	7	3.0	4	1.7	7	3.0	5	2.1	0	0.0
Kittitas	0	0.0	0	0.0	0	0.0	2	5.7	1	2.8
Klickitat	1	5.2	1	5.2	0	0.0	0	0.0	0	0.0
Lewis	2	2.9	1	1.5	0	0.0	4	5.7	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	1	2.1	2	4.0	1	2.0	2	4.0	1	2.0
Okanogan	0	0.0	5	12.6	0	0.0	0	0.0	2	5.1
Pacific	1	4.7	0	0.0	1	4.8	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	21	3.0	10	1.4	55	7.7	61	8.4	6	0.8
San Juan	0	0.0	7	49.7	0	0.0	1	6.8	0	0.0
Skagit	2	2.0	10	9.7	8	7.7	3	2.9	0	0.0
Skamania	3	30.3	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	95	16.3	23	3.8	8	1.3	14	2.2	5	0.8
Spokane	18	4.3	11	2.6	3	0.7	4	0.9	4	0.9
Stevens	3	7.9	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	10	4.9	14	6.8	13	6.2	6	2.8	3	1.4
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	9	16.3	1	1.8	0	0.0	0	0.0
Whatcom	13	8.1	3	1.8	4	2.3	2	1.2	9	5.2
Whitman	1	2.4	2	4.9	1	2.5	0	0.0	1	2.4
Yakima	8	3.8	20	9.0	17	7.6	3	1.3	1	0.4
STATEWIDE TOTAL										
CASES	505	8.8	298	5.1	184	3.1	162	2.7	76	1.2
DEATHS	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0

HEPATITIS A STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	554	13.4	2	0.0
1981	791	18.6	0	0.0
1982	494	11.6	1	0.0
1983	268	6.3	1	0.0
1984	373	8.6	0	0.0
1985	702	16.0	2	0.0
1986	1,385	31.3	1	0.0
1987	2,589	57.8	1	0.0
1988	2,669	58.5	7	0.1
1989	3,273	70.2	5	0.1
1990	1,380	28.4	1	0.0
1991	608	12.2	3	0.0
1992	865	16.9	1	0.0
1993	926	17.7	1	0.0
1994	1,119	21.0	2	0.0
1995	937	17.3	9	0.2
1996	1,001	18.1	3	0.0
1997	1,019	18.2	1	0.0
1998	1,037	18.2	2	0.0
1999	505	8.8	1	0.0
2000	298	5.1	1	0.0
2001	184	3.1	0	0.0
2002	162	2.7	0	0.0
2003	76	1.2	0	0.0

HEPATITIS B

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	6.3	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	6	4.3	0	0.0	1	0.7	0	0.0	0	0.0
Chelan	0	0.0	0	0.0	1	1.5	0	0.0	0	0.0
Clallam	0	0.0	0	0.0	2	3.1	0	0.0	0	0.0
Clark	10	3.0	4	1.2	9	2.6	2	0.6	2	0.5
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	4	4.3	5	5.4	22	23.4	11	11.7	3	3.2
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	2	6.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	2	4.4	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	1	1.4	2	2.7	1	1.3	0	0.0	0	0.0
Grays Harbor	0	0.0	1	1.5	0	0.0	0	0.0	1	1.5
Island	0	0.0	1	1.4	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	46	2.7	44	2.5	35	2.0	30	1.7	34	1.9
Kitsap	4	1.7	0	0.0	4	1.7	0	0.0	3	1.3
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	2	10.4	0	0.0	0	0.0
Lewis	1	1.4	0	0.0	0	0.0	0	0.0	2	2.8
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	1	2.1	2	4.0	1	2.0	2	4.0	1	2.0
Okanogan	1	2.6	0	0.0	1	2.5	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	1.0	26	3.7	7	1.0	5	0.7	5	0.7
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	2	2.0	1	1.0	4	3.8	3	2.9	2	1.9
Skamania	0	0.0	1	10.1	0	0.0	0	0.0	0	0.0
Snohomish	8	1.4	6	1.0	13	2.1	5	0.8	9	1.4
Spokane	5	1.2	22	5.3	33	7.8	15	3.5	12	2.8
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	2	1.0	6	2.9	2	1.0	2	0.9	3	1.4
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	1	1.8
Whatcom	4	2.5	5	3.0	30	17.6	7	4.1	9	5.2
Whitman	0	0.0	1	2.5	1	2.5	0	0.0	1	2.4
Yakima	6	2.8	5	2.2	2	0.9	1	0.4	0	0.0
STATEWIDE TOTAL										
CASES	111	1.9	132	2.2	171	2.9	83	1.4	90	1.5
DEATHS	1	0.0	5	0.1	0	0.0	0	0.0	1	0.0

HEPATITIS B STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	257	6.2	6	0.1
1981	345	8.1	11	0.3
1982	358	8.4	2	0.0
1983	307	7.2	3	0.1
1984	317	7.3	2	0.0
1985	484	11.0	6	0.1
1986	989	22.4	8	0.2
1987	1,126	25.1	4	0.1
1988	979	21.4	6	0.1
1989	1,055	22.6	9	0.2
1990	616	12.7	7	0.1
1991	470	9.4	5	0.1
1992	399	7.8	1	0.0
1993	247	4.7	0	0.0
1994	255	4.8	2	0.0
1995	226	4.2	2	0.0
1996	158	2.9	1	0.0
1997	114	2.0	2	0.0
1998	136	2.4	0	0.0
1999	111	1.9	1	0.0
2000	132	2.2	5	0.1
2001	171	2.9	0	0.0
2002	83	1.4	0	0.0
2003	90	1.5	1	0.0

HEPATITIS C

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	1	6.0	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	0.7	0	0.0	0	0.0
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clallam	1	1.5	0	0.0	0	0.0	0	0.0	0	0.0
Clark	2	0.6	6	1.7	1	0.3	0	0.0	0	0.0
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	4	4.3	4	4.3	2	2.1	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Island	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	7	0.4	12	0.7	10	0.6	8	0.5	8	0.4
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	2	2.9	1	1.5	1	1.4	2	2.8	1	1.4
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	2	4.0	0	0.0	0	0.0	0	0.0
Okanogan	1	2.6	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	2	9.5	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	0	0.0	5	0.7	2	0.3	5	0.7	3	0.4
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	0	0.0	1	1.0	1	1.0	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	2	0.3	1	0.2	2	0.3	1	0.2	2	0.3
Spokane	0	0.0	5	1.2	9	2.1	3	0.7	1	0.2
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	2	1.0	2	1.0	0	0.0	1	0.5	4	1.9
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	1	1.8	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	1	0.6	1	0.6	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	1	0.5	5	2.2	2	0.9	3	1.3	2	0.9
STATEWIDE TOTAL										
CASES	24	0.4	44	0.7	31	0.5	27	0.4	21	0.3
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

HEPATITIS C STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1981	54	1.3	8	0.2
1982	94	2.2	0	0.0
1983	151	3.5	1	0.0
1984	131	3.0	2	0.0
1985	145	3.3	1	0.0
1986	167	3.8	7	0.2
1987	207	4.6	1	0.0
1988	232	5.1	2	0.0
1989	208	4.5	4	0.1
1990	141	2.9	6	0.1
1991	164	3.3	4	0.1
1992	186	3.6	1	0.0
1993	219	4.2	1	0.0
1994	294	5.5	0	0.0
1995	234	4.3	1	0.0
1996	66	1.2	1	0.0
1997	42	0.7	0	0.0
1998	29	0.5	0	0.0
1999	24	0.4	0	0.0
2000	44	0.7	0	0.0
2001	31	0.5	0	0.0
2002	27	0.4	0	0.0
2003	21	0.3	0	0.0

HERPES SIMPLEX

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	3	0.0	2	0.0	11	66.3	6	36.1	4	0.0
Asotin	18	89.0	6	29.5	11	53.1	11	53.1	17	82.5
Benton	50	35.5	42	29.9	41	28.3	34	23.0	59	38.9
Chelan	23	36.4	13	20.5	22	32.8	15	22.2	19	28.0
Clallam	28	42.0	35	51.8	27	41.7	30	46.2	32	49.0
Clark	64	19.4	68	19.8	51	14.5	56	15.4	44	11.8
Columbia	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0
Cowlitz	8	8.5	16	16.8	16	17.0	15	15.9	18	19.0
Douglas	6	19.1	13	40.7	14	42.7	6	18.1	9	26.8
Ferry	0	0.0	2	0.0	2	0.0	0	0.0	0	0.0
Franklin	10	22.2	18	39.6	17	33.7	10	19.5	10	18.7
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	10	14.4	12	17.0	15	19.8	13	17.0	15	19.5
Grays Harbor	17	25.4	14	20.9	8	11.7	16	23.4	9	13.1
Island	24	32.5	19	25.6	16	22.1	22	30.1	20	27.0
Jefferson	3	0.0	0	0.0	9	34.5	7	26.3	7	26.2
King	664	39.1	745	43.7	672	38.2	650	36.6	688	38.7
Kitsap	89	37.8	83	35.7	59	25.3	80	34.1	64	27.0
Kittitas	14	45.5	9	27.9	12	35.3	12	34.5	9	25.6
Klickitat	0	0.0	2	0.0	1	0.0	5	25.9	3	0.0
Lewis	16	23.8	7	10.2	7	10.1	23	32.8	15	21.3
Lincoln	1	0.0	3	0.0	0	0.0	0	0.0	1	0.0
Mason	13	27.0	17	35.0	11	22.2	14	28.1	15	29.9
Okanogan	7	19.2	8	21.1	8	20.2	4	0.0	16	40.4
Pacific	7	34.3	0	0.0	3	0.0	4	0.0	2	0.0
Pend Oreille	3	0.0	1	0.0	2	0.0	4	0.0	4	0.0
Pierce	268	38.1	240	33.8	186	26.1	221	30.5	236	32.2
San Juan	4	0.0	5	39.2	1	0.0	5	34.2	2	0.0
Skagit	28	28.2	21	20.8	27	25.9	35	33.3	41	38.4
Skamania	1	0.0	2	0.0	0	0.0	0	0.0	0	0.0
Snohomish	256	44.2	246	41.5	244	39.4	268	32.7	268	42.0
Spokane	90	21.6	94	22.6	123	29.1	147	34.5	163	38.0
Stevens	4	0.0	3	0.0	6	14.9	2	0.0	6	14.8
Thurston	51	24.9	61	29.7	38	18.1	55	25.9	87	40.5
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
Walla Walla	15	27.6	23	41.9	12	21.7	9	16.2	15	26.9
Whatcom	63	39.6	59	36.3	37	21.7	55	31.9	80	45.8
Whitman	5	12.5	8	19.0	5	12.4	4	0.0	12	29.3
Yakima	89	42.0	113	52.8	121	53.9	76	33.8	82	36.3
STATEWIDE TOTAL										
CASES	1,952	33.9	2,010	34.5	1,836	30.7	1,914	31.7	2,073	34.0
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

LEGIONELLOSIS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	7	0.2	2	0.1
1986	15	0.3	8	0.2
1987	24	0.5	3	0.1
1988	29	0.6	4	0.1
1989	30	0.6	5	0.1
1990	18	0.4	4	0.1
1991	15	0.3	5	0.1
1992	15	0.3	5	0.1
1993	12	0.2	2	0.0
1994	13	0.2	2	0.0
1995	22	0.4	6	0.1
1996	7	0.1	2	0.0
1997	11	0.2	0	0.0
1998	15	0.3	2	0.0
1999	21	0.4	4	0.1
2000	19	0.3	1	0.0
2001	10	0.2	1	0.0
2002	8	0.1	3	0.1
2003	14	0.2	1	0.0

LEPTOSPIROSIS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	0	0.0	0	0.0
1987	0	0.0	0	0.0
1988	0	0.0	0	0.0
1989	0	0.0	0	0.0
1990	0	0.0	0	0.0
1991	0	0.0	0	0.0
1992	0	0.0	0	0.0
1993	0	0.0	0	0.0
1994	0	0.0	0	0.0
1995	0	0.0	0	0.0
1996	2	0.0	0	0.0
1997	2	0.0	0	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	0	0.0	0	0.0
2001	4	0.1	0	0.0
2002	0	0.0	0	0.0
2003	1	0.0	0	0.0

LISTERIOSIS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	21	0.5	1	0.0
1986	37	0.8	5	0.1
1987	36	0.8	6	0.1
1988	38	0.8	4	0.1
1989	21	0.5	2	0.0
1990	22	0.5	3	0.1
1991	18	0.4	6	0.1
1992	13	0.3	0	0.0
1993	21	0.4	2	0.0
1994	13	0.2	3	0.1
1995	24	0.4	1	0.0
1996	11	0.2	3	0.1
1997	17	0.3	1	0.0
1998	12	0.2	3	0.1
1999	19	0.3	5	0.1
2000	12	0.2	2	0.0
2001	15	0.3	1	0.0
2002	11	0.2	0	0.0
2003	13	0.2	3	0.0

LYME DISEASE

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	1	0.0	0	0.0
1987	10	0.2	0	0.0
1988	12	0.3	0	0.0
1989	37	0.8	0	0.0
1990	33	0.7	0	0.0
1991	7	0.1	0	0.0
1992	14	0.3	0	0.0
1993	9	0.2	0	0.0
1994	4	0.1	0	0.0
1995	10	0.2	0	0.0
1996	18	0.3	0	0.0
1997	10	0.2	0	0.0
1998	7	0.1	0	0.0
1999	14	0.2	0	0.0
2000	9	0.2	0	0.0
2001	9	0.2	0	0.0
2002	12	0.2	0	0.0
2003	7	0.1	0	0.0

LYMPHOGRANULOMA VENEREUM

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	1	0.0	0	0.0
1986	0	0.0	0	0.0
1987	5	0.1	0	0.0
1988	1	0.0	0	0.0
1989	7	0.1	0	0.0
1990	1	0.0	0	0.0
1991	2	0.0	0	0.0
1992	2	0.0	0	0.0
1993	4	0.1	0	0.0
1994	3	0.1	0	0.0
1995	1	0.0	0	0.0
1996	1	0.0	0	0.0
1997	0	0.0	0	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	1	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	1	0.0	0	0.0

MALARIA

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	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	0.7	0	0.0	0	0.0	1	0.7	0	0.0
Chelan	0	0.0	0	0.0	1	1.5	0	0.0	0	0.0
Clallam	0	0.0	0	0.0	1	1.5	0	0.0	0	0.0
Clark	1	0.3	0	0.0	0	0.0	2	0.6	3	0.8
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	1	1.3	0	0.0	0	0.0	1	1.3
Grays Harbor	0	0.0	1	1.5	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	21	1.3	17	1.0	10	0.6	15	0.9	15	0.8
Kitsap	0	0.0	2	0.9	0	0.0	0	0.0	0	0.0
Kittitas	1	3.1	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	1	5.2
Lewis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	1	2.0	0	0.0	0	0.0	1	2.0
Okanogan	0	0.0	1	2.5	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	11	1.6	12	1.7	1	0.1	5	0.7	7	1.0
San Juan	0	0.0	0	0.0	1	6.9	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	3	0.5	2	0.3	1	0.2	1	0.2	1	0.2
Spokane	2	0.5	3	0.7	3	0.7	1	0.2	3	0.7
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	1	2.5
Thurston	1	0.5	1	0.5	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	1	2.4	1	2.5	0	0.0	0	0.0	1	2.4
Yakima	1	0.5	1	0.4	1	0.4	1	0.4	0	0.0
STATEWIDE TOTAL										
CASES	43	0.7	43	0.7	19	0.3	26	0.4	34	0.6
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

MALARIA STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1981	30	0.7	0	0.0
1982	24	0.6	0	0.0
1983	15	0.3	0	0.0
1984	20	0.5	0	0.0
1985	34	0.8	0	0.0
1986	35	0.8	0	0.0
1987	28	0.6	0	0.0
1988	24	0.5	0	0.0
1989	44	0.9	0	0.0
1990	33	0.7	0	0.0
1991	29	0.6	0	0.0
1992	21	0.4	0	0.0
1993	41	0.8	0	0.0
1994	45	0.8	0	0.0
1995	23	0.4	0	0.0
1996	41	0.7	0	0.0
1997	49	0.9	0	0.0
1998	30	0.5	0	0.0
1999	43	0.7	0	0.0
2000	43	0.7	0	0.0
2001	19	0.3	0	0.0
2002	26	0.4	0	0.0
2003	34	0.6	0	0.0

MEASLES

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	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	1	0.3	1	0.3	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	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Island	0	0.0	0	0.0	2	2.8	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	1	0.1	2	0.1	12	0.7	0	0.0	0	0.0
Kitsap	2	0.9	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	2	9.3	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Spokane	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
STATEWIDE TOTAL										
CASES	5	0.1	3	0.1	15	0.3	1	0.0	0	0.0
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

MEASLES STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	178	4.2	0	0.0
1981	3	0.1	0	0.0
1982	42	1.0	0	0.0
1983	43	1.0	0	0.0
1984	178	4.1	0	0.0
1985	178	4.0	0	0.0
1986	176	3.9	0	0.0
1987	47	1.0	0	0.0
1988	7	0.2	0	0.0
1989	56	1.2	0	0.0
1990	357	7.1	2	0.0
1991	67	1.3	0	0.0
1992	11	0.2	0	0.0
1993	0	0.0	0	0.0
1994	5	0.1	0	0.0
1995	17	0.3	0	0.0
1996	38	0.7	0	0.0
1997	2	0.0	0	0.0
1998	1	0.0	0	0.0
1999	5	0.1	0	0.0
2000	3	0.1	0	0.0
2001	15	0.3	0	0.0
2002	1	0.0	0	0.0
2003	0	0.0	0	0.0

MENINGOCOCCAL DISEASE

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	1	5.1	1	4.9	0	0.0	1	4.8	1	4.9
Benton	1	0.7	0	0.0	0	0.0	1	0.7	0	0.0
Chelan	0	0.0	0	0.0	0	0.0	2	3.0	1	1.5
Clallam	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clark	11	3.5	8	2.3	12	3.4	11	3.0	5	1.3
Columbia	0	0.0	1	24.6	0	0.0	0	0.0	0	0.0
Cowlitz	3	3.3	2	2.2	3	3.2	0	0.0	2	2.1
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	0	0.0	2	3.9	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	2	2.7	1	1.3	1	1.3	0	0.0
Grays Harbor	2	2.9	2	3.0	0	0.0	0	0.0	1	1.5
Island	2	2.7	0	0.0	0	0.0	1	1.4	2	2.7
Jefferson	2	7.6	0	0.0	0	0.0	0	0.0	0	0.0
King	25	1.5	18	1.0	14	0.8	21	1.2	8	0.4
Kitsap	2	0.9	4	1.7	5	2.1	0	0.0	3	1.3
Kittitas	0	0.0	0	0.0	0	0.0	1	2.9	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	1	5.2
Lewis	0	0.0	0	0.0	0	0.0	0	0.0	5	7.1
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	2	4.0	3	6.0	0	0.0	0	0.0
Okanogan	0	0.0	1	2.5	0	0.0	0	0.0	1	2.5
Pacific	0	0.0	0	0.0	0	0.0	2	9.5	1	4.8
Pend Oreille	0	0.0	0	0.0	1	8.5	0	0.0	0	0.0
Pierce	12	1.7	7	1.0	9	1.3	11	1.5	10	1.4
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	8	8.0	4	3.9	1	1.0	6	5.7	4	3.7
Skamania	1	10.1	1	10.1	0	0.0	0	0.0	0	0.0
Snohomish	3	0.5	2	0.3	5	0.8	5	0.8	6	0.9
Spokane	3	0.7	1	0.2	8	1.9	2	0.5	4	0.9
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	3	1.5	1	0.5	2	1.0	1	0.5	1	0.5
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	5	3.1	5	3.0	3	1.8	1	0.6	2	1.1
Whitman	2	4.9	0	0.0	2	5.0	2	4.9	0	0.0
Yakima	7	3.3	9	4.0	2	0.9	5	2.2	3	1.3
STATEWIDE TOTAL										
CASES	93	1.6	71	1.2	71	1.2	76	1.3	61	1.0
DEATHS	4	0.1	6	0.1	6	0.1	8	0.1	7	0.1

MENINGOCOCCAL DISEASE STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	67	1.6	2	0.0
1981	78	1.8	3	0.1
1982	56	1.3	2	0.0
1983	48	1.1	3	0.1
1984	56	1.3	3	0.1
1985	67	1.5	6	0.1
1986	62	1.4	5	0.1
1987	87	1.9	4	0.1
1988	76	1.7	3	0.1
1989	96	2.1	12	0.2
1990	80	1.6	5	0.1
1991	73	1.5	8	0.1
1992	92	1.8	5	0.1
1993	97	1.9	6	0.1
1994	111	2.1	7	0.1
1995	126	2.3	7	0.1
1996	116	2.1	10	0.2
1997	115	2.1	11	0.2
1998	77	1.4	7	0.1
1999	93	1.6	4	0.1
2000	71	1.2	6	0.1
2001	71	1.2	6	0.1
2002	76	1.3	8	0.1
2003	61	1.0	7	0.1

MUMPS

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	0	0.0	1	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	1	1.1	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	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	10	0.2
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Island	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	1	0.1	8	0.5	1	0.1	0	0.0	0	0.0
Kitsap	0	0.0	1	0.4	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	0	0.0	0	0.0	1	0.1	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	0.2	0	0.0	0	0.0	0	0.0
Spokane	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
STATEWIDE TOTAL										
CASES	2	0.0	10	0.2	2	0.0	0	0.0	11	0.2
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

MUMPS STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	166	4.0	0	0.0
1981	165	3.9	0	0.0
1982	102	2.4	0	0.0
1983	55	1.3	0	0.0
1984	56	1.3	0	0.0
1985	42	1.0	0	0.0
1986	30	0.7	0	0.0
1987	70	1.6	0	0.0
1988	44	1.0	0	0.0
1989	59	1.3	0	0.0
1990	66	1.4	0	0.0
1991	178	3.6	0	0.0
1992	18	0.4	0	0.0
1993	14	0.3	0	0.0
1994	23	0.4	0	0.0
1995	16	0.3	0	0.0
1996	26	0.5	0	0.0
1997	21	0.4	0	0.0
1998	11	0.2	0	0.0
1999	2	0.0	0	0.0
2000	10	0.2	0	0.0
2001	2	0.0	0	0.0
2002	0	0.0	0	0.0
2003	11	0.2	0	0.0

PARALYTIC SHELLFISH POISONING

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	3	0.1	0	0.0
1986	0	0.0	0	0.0
1987	0	0.0	0	0.0
1988	7	0.2	0	0.0
1989	0	0.0	0	0.0
1990	0	0.0	0	0.0
1991	0	0.0	0	0.0
1992	0	0.0	0	0.0
1993	0	0.0	0	0.0
1994	0	0.0	0	0.0
1995	0	0.0	0	0.0
1996	0	0.0	0	0.0
1997	0	0.0	0	0.0
1998	5	0.1	0	0.0
1999	0	0.0	0	0.0
2000	7	0.1	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

PERTUSSIS

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	1	6.0	2	12.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	4	2.8	2	1.4	1	0.7	5	3.3
Chelan	6	9.5	2	3.0	2	3.0	8	11.8	2	2.9
Clallam	6	9.0	1	1.5	1	1.5	2	3.1	2	3.1
Clark	15	4.5	12	3.5	3	0.9	22	6.1	38	10.2
Columbia	0	0.0	0	0.0	1	24.4	0	0.0	1	24.4
Cowlitz	0	0.0	1	1.1	3	3.2	26	27.5	3	3.2
Douglas	1	3.2	0	0.0	1	3.0	2	6.0	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	1	1.9	2	3.7
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	1.4	1	1.3	0	0.0	1	1.3	0	0.0
Grays Harbor	1	1.5	0	0.0	0	0.0	5	7.3	0	0.0
Island	34	46.4	10	14.0	1	1.4	2	2.7	21	28.4
Jefferson	0	0.0	0	0.0	10	38.3	0	0.0	1	3.7
King	480	28.6	192	11.1	40	2.3	153	8.6	294	16.5
Kitsap	21	9.1	8	3.4	28	12.0	5	2.1	15	6.3
Kittitas	4	12.3	6	18.0	0	0.0	0	0.0	1	2.8
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	1	5.2
Lewis	2	2.9	1	1.5	3	4.3	0	0.0	2	2.8
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	2	4.1	3	6.1	1	2.0	1	2.0	2	4.0
Okanogan	5	13.0	12	30.3	0	0.0	2	5.0	0	0.0
Pacific	0	0.0	0	0.0	1	4.8	1	4.8	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	48	6.9	79	11.3	39	5.5	124	17.1	211	28.8
San Juan	0	0.0	19	135.0	1	6.9	1	6.8	18	121.6
Skagit	4	4.0	9	8.7	1	1.0	70	66.6	45	42.2
Skamania	0	0.0	0	0.0	0	0.0	2	20.2	0	0.0
Snohomish	53	9.1	43	7.1	7	1.1	35	5.6	95	14.9
Spokane	6	1.4	7	1.7	2	0.5	0	0.0	4	0.9
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	8	3.9	9	4.3	11	5.2	11	5.2	13	6.1
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	5	9.2	1	1.8	0	0.0	0	0.0	0	0.0
Whatcom	8	5.0	11	6.6	23	13.5	13	7.5	46	26.4
Whitman	0	0.0	0	0.0	0	0.0	1	2.5	2	4.9
Yakima	29	13.7	27	12.1	3	1.3	85	37.8	18	8.0
STATEWIDE TOTAL										
CASES	739	12.8	458	7.8	184	3.1	575	9.5	844	13.8
DEATHS	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0

PERTUSSIS STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	77	1.9	0	0.0
1981	58	1.4	1	0.0
1982	36	0.8	1	0.0
1983	20	0.5	0	0.0
1984	326	7.5	1	0.0
1985	92	2.1	0	0.0
1986	163	3.7	2	0.0
1987	110	2.5	0	0.0
1988	130	2.8	1	0.0
1989	201	4.3	0	0.0
1990	227	4.7	0	0.0
1991	149	3.0	0	0.0
1992	241	4.7	0	0.0
1993	96	1.8	0	0.0
1994	140	2.6	0	0.0
1995	491	9.0	0	0.0
1996	830	15.0	1	0.0
1997	481	8.6	0	0.0
1998	406	7.1	1	0.0
1999	739	12.8	0	0.0
2000	458	7.8	1	0.0
2001	184	3.1	0	0.0
2002	575	9.5	0	0.0
2003	844	13.8	0	0.0

PLAGUE

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	0	0.0	0	0.0
1987	0	0.0	0	0.0
1988	0	0.0	0	0.0
1989	0	0.0	0	0.0
1990	0	0.0	0	0.0
1991	0	0.0	0	0.0
1992	0	0.0	0	0.0
1993	0	0.0	0	0.0
1994	0	0.0	0	0.0
1995	0	0.0	0	0.0
1996	0	0.0	0	0.0
1997	0	0.0	0	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	0	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

POLIOMYELITIS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	0	0.0	0	0.0
1987	1*	0.0	0	0.0
1988	1*	0.0	0	0.0
1989	0	0.0	0	0.0
1990	0	0.0	0	0.0
1991	1*	0.0	0	0.0
1992	1*	0.0	0	0.0
1993	1*	0.0	0	0.0
1994	0	0.0	0	0.0
1995	0	0.0	0	0.0
1996	0	0.0	0	0.0
1997	0	0.0	0	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	0	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

*Vaccine associated cases

PSITTACOSIS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	3	0.1	1	0.0
1986	7	0.2	0	0.0
1987	12	0.3	0	0.0
1988	8	0.2	0	0.0
1989	4	0.1	1	0.0
1990	5	0.1	0	0.0
1991	6	0.1	0	0.0
1992	13	0.3	0	0.0
1993	4	0.1	0	0.0
1994	4	0.1	0	0.0
1995	7	0.1	0	0.0
1996	4	0.1	0	0.0
1997	0	0.0	0	0.0
1998	3	0.1	0	0.0
1999	0	0.0	0	0.0
2000	1	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

Q FEVER

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	1	0.0	0	0.0
1986	2	0.0	0	0.0
1987	1	0.0	1	0.0
1988	1	0.0	0	0.0
1989	0	0.0	0	0.0
1990	2	0.0	0	0.0
1991	0	0.0	0	0.0
1992	1	0.0	0	0.0
1993	0	0.0	0	0.0
1994	0	0.0	0	0.0
1995	1	0.0	0	0.0
1996	0	0.0	0	0.0
1997	0	0.0	0	0.0
1998	0	0.0	0	0.0
1999	2	0.0	0	0.0
2000	0	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

RABIES

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	0	0.0	0	0.0
1987	0	0.0	0	0.0
1988	0	0.0	0	0.0
1989	0	0.0	0	0.0
1990	0	0.0	0	0.0
1991	0	0.0	0	0.0
1992	0	0.0	0	0.0
1993	0	0.0	0	0.0
1994	0	0.0	0	0.0
1995	1	0.0	1	0.0
1996	0	0.0	0	0.0
1997	1	0.0	1	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	0	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

RELAPSING FEVER

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	4	0.1	0	0.0
1986	2	0.0	0	0.0
1987	7	0.1	1	0.0
1988	5	0.1	0	0.0
1989	5	0.0	0	0.0
1990	4	0.1	0	0.0
1991	6	0.1	0	0.0
1992	6	0.1	0	0.0
1993	2	0.0	0	0.0
1994	9	0.2	0	0.0
1995	12	0.2	0	0.0
1996	8	0.2	0	0.0
1997	4	0.1	0	0.0
1998	5	0.1	0	0.0
1999	3	0.1	0	0.0
2000	5	0.1	1	0.0
2001	1	0.1	0	0.0
2002	7	0.1	0	0.0
2003	6	0.1	0	0.0

RUBELLA

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1981	108	2.5	0	0.0
1982	58	1.4	0	0.0
1983	10	0.2	0	0.0
1984	2	0.1	0	0.0
1985	16	0.4	0	0.0
1986	15	0.3	0	0.0
1987	2	0.0	0	0.0
1988	0	0.0	0	0.0
1989	2	0.0	0	0.0
1990	6	0.1	0	0.0
1991	8	0.2	0	0.0
1992	8	0.2	0	0.0
1993	3	0.1	0	0.0
1994	0	0.0	0	0.0
1995	2	0.0	0	0.0
1996	15	0.3	0	0.0
1997	5	0.1	0	0.0
1998	5	0.1	0	0.0
1999	5	0.1	0	0.0
2000	8	0.1	0	0.0
2001	0	0.0	0	0.0
2002	2	0.0	0	0.0
2003	0	0.0	0	0.0

SALMONELLOSIS

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	2	12.6	0	0.0	4	24.1	1	6.0	1	6.0
Asotin	1	5.0	1	4.9	0	0.0	0	0.0	7	34.0
Benton	15	10.8	17	11.9	14	9.7	13	8.8	24	15.8
Chelan	16	25.4	6	9.0	7	10.4	10	14.8	5	7.4
Clallam	6	9.0	1	1.5	14	21.6	10	15.4	1	1.5
Clark	53	15.7	33	9.6	25	7.1	33	9.1	39	10.5
Columbia	0	0.0	0	0.0	1	24.4	0	0.0	2	48.8
Cowlitz	5	5.3	12	12.9	9	9.6	7	7.4	5	5.3
Douglas	3	9.5	1	3.1	1	3.0	4	12.1	7	20.8
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	4	8.9	1	2.0	5	9.9	8	15.6	7	13.1
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	3	4.2	6	8.0	6	7.9	22	28.8	7	9.1
Grays Harbor	6	8.9	2	3.0	8	11.7	13	19.0	9	13.1
Island	5	6.8	15	21.0	3	4.1	4	5.5	5	6.8
Jefferson	3	11.3	5	19.3	3	11.5	2	7.5	4	15.0
King	264	15.7	200	11.5	261	14.8	211	11.9	246	13.8
Kitsap	32	13.9	24	10.3	15	6.4	18	7.7	12	5.1
Kittitas	3	9.3	6	18.0	1	2.9	5	14.4	3	8.5
Klickitat	6	31.1	3	15.7	3	15.5	1	5.2	1	5.2
Lewis	10	14.5	6	8.7	9	12.9	5	7.1	2	2.8
Lincoln	1	10.0	0	0.0	1	9.8	0	0.0	2	19.8
Mason	7	14.4	2	4.0	2	4.0	3	6.0	6	12.0
Okanogan	2	5.2	2	5.1	8	20.2	1	2.5	8	20.2
Pacific	1	4.7	0	0.0	4	19.0	1	4.8	3	14.4
Pend Oreille	0	0.0	2	17.0	0	0.0	0	0.0	1	8.5
Pierce	61	8.7	62	8.8	76	10.7	60	8.3	64	8.7
San Juan	1	7.9	0	0.0	0	0.0	1	6.8	0	0.0
Skagit	8	8.0	15	14.6	11	10.6	13	12.4	8	7.5
Skamania	0	0.0	0	0.0	1	10.1	1	10.1	0	0.0
Snohomish	78	13.4	71	11.7	65	10.5	78	12.4	70	11.0
Spokane	30	7.2	34	8.1	42	9.9	26	6.1	30	7.0
Stevens	6	15.8	1	2.5	2	5.0	4	9.9	13	32.0
Thurston	34	16.8	22	10.6	22	10.5	17	8.0	17	7.9
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	9	16.5	10	18.1	4	7.2	10	18.1	10	17.9
Whatcom	37	22.9	29	17.4	20	11.7	16	9.3	23	13.2
Whitman	15	35.8	9	22.1	3	7.4	2	4.9	2	4.9
Yakima	65	30.6	61	27.4	31	13.8	55	24.4	55	24.3
STATEWIDE TOTAL										
CASES	792	13.8	659	11.2	681	11.4	655	10.8	699	11.5
DEATHS	2	0.0	1	0.0	2	0.0	0	0.0	1	0.0

SALMONELLOSIS STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	462	11.2	0	0.0
1981	574	13.5	1	0.0
1982	749	17.6	0	0.0
1983	739	17.2	0	0.0
1984	515	11.9	0	0.0
1985	565	12.9	0	0.0
1986	783	17.7	2	0.0
1987	660	14.7	1	0.0
1988	612	13.4	0	0.0
1989	630	13.5	2	0.0
1990	634	13.4	6	0.1
1991	791	15.8	1	0.0
1992	609	11.9	1	0.0
1993	830	15.8	0	0.0
1994	863	16.2	0	0.0
1995	691	12.7	0	0.0
1996	734	13.3	0	0.0
1997	675	12.0	0	0.0
1998	703	12.4	2	0.0
1999	792	13.8	2	0.0
2000	659	11.2	1	0.0
2001	681	11.4	2	0.0
2002	655	10.8	0	0.0
2003	699	11.5	1	0.0

SHIGELLOSIS

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	2	12.6	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	2	10.0	2	9.7	0	0.0	1	4.8	0	0.0
Benton	4	2.9	3	2.1	8	5.5	5	3.4	3	2.0
Chelan	3	4.8	3	4.5	10	14.9	0	0.0	1	1.5
Clallam	1	1.5	1	1.5	1	1.5	0	0.0	0	0.0
Clark	3	0.9	9	2.6	5	1.4	8	2.2	5	1.3
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	1	1.1	3	3.2	1	1.1	1	1.1	1	1.1
Douglas	2	6.3	1	3.1	2	6.1	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	1	2.2	1	2.0	3	6.0	1	1.9	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	2	2.8	3	4.0	1	1.3	2	2.6	5	6.5
Grays Harbor	1	1.5	1	1.5	0	0.0	1	1.5	0	0.0
Island	0	0.0	13	18.2	2	2.8	0	0.0	0	0.0
Jefferson	0	0.0	4	15.4	1	3.8	0	0.0	0	0.0
King	63	3.8	155	8.9	110	6.3	84	4.7	95	5.3
Kitsap	3	1.3	15	6.5	5	2.1	2	0.9	2	0.8
Kittitas	0	0.0	1	3.0	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	2	2.9	7	10.2	1	1.4	2	2.8	0	0.0
Lincoln	0	0.0	1	9.8	0	0.0	0	0.0	0	0.0
Mason	1	2.1	5	10.1	1	2.0	1	2.0	0	0.0
Okanogan	0	0.0	4	10.1	0	0.0	1	2.5	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	4	19.0	0	0.0
Pend Oreille	1	9.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	12	1.7	40	5.7	12	1.7	58	8.0	21	2.9
San Juan	0	0.0	0	0.0	2	13.9	1	6.8	0	0.0
Skagit	4	4.0	8	7.8	10	9.6	1	1.0	1	0.9
Skamania	0	0.0	0	0.0	1	10.1	0	0.0	0	0.0
Snohomish	7	1.2	30	5.0	19	3.1	17	2.7	17	2.7
Spokane	4	1.0	15	3.6	6	1.4	7	1.6	10	2.3
Stevens	0	0.0	0	0.0	1	2.5	0	0.0	0	0.0
Thurston	4	2.0	11	5.3	4	1.9	3	1.4	1	0.5
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	4	7.3	1	1.8	1	1.8	0	0.0	1	1.8
Whatcom	2	1.2	6	3.6	9	5.3	2	1.2	6	3.4
Whitman	0	0.0	1	2.5	0	0.0	0	0.0	1	2.4
Yakima	43	20.3	157	70.5	20	8.9	28	12.4	18	8.0
STATEWIDE TOTAL										
CASES	172	3.0	501	8.5	236	3.9	230	3.8	188	3.1
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

SHIGELLOSIS STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	287	6.9	0	0.0
1981	426	10.0	1	0.0
1982	284	6.7	0	0.0
1983	370	8.6	0	0.0
1984	224	5.2	0	0.0
1985	144	3.3	0	0.0
1986	321	7.3	0	0.0
1987	318	7.1	0	0.0
1988	306	6.7	0	0.0
1989	232	5.0	0	0.0
1990	278	5.7	0	0.0
1991	405	8.1	0	0.0
1992	439	8.6	0	0.0
1993	797	15.2	0	0.0
1994	478	9.0	0	0.0
1995	426	7.8	0	0.0
1996	333	6.0	1	0.0
1997	318	5.7	0	0.0
1998	277	4.9	0	0.0
1999	172	3.0	0	0.0
2000	501	8.5	0	0.0
2001	236	3.9	0	0.0
2002	230	3.8	0	0.0
2003	188	3.1	0	0.0

STREPTOCOCCUS GROUP A, INVASIVE DISEASE*

Case, Death Rate/100,000 Population

	2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0
Benton	0	0.0	0	0.0	0	0.0
Chelan	0	0.0	1	1.5	4	5.9
Clallam	2	3.1	0	0.0	2	3.1
Clark	12	3.4	4	1.1	14	3.8
Columbia	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	1	1.1	1	1.1
Douglas	0	0.0	0	0.0	6	17.9
Ferry	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0
Grant	1	1.3	0	0.0	1	1.3
Grays Harbor	0	0.0	0	0.0	1	1.5
Island	0	0.0	0	0.0	1	1.4
Jefferson	0	0.0	0	0.0	0	0.0
King	38	2.2	38	2.1	37	2.1
Kitsap	1	0.9	0	0.0	0	0.0
Kittitas	1	2.9	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	0	0.0	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0
Okanogan	3	10.1	1	2.5	1	2.5
Pacific	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0
Pierce	4	0.6	8	1.1	7	1.0
San Juan	0	0.0	0	0.0	0	0.0
Skagit	2	1.9	1	1.0	3	2.8
Skamania	0	0.0	0	0.0	0	0.0
Snohomish	10	1.8	8	1.3	9	1.4
Spokane	2	0.7	11	2.6	11	2.6
Stevens	0	0.0	0	0.0	0	0.0
Thurston	0	0.0	0	0.0	0	0.0
Wahkiakum	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0
Whatcom	1	0.6	0	0.0	0	0.0
Whitman	0	0.0	0	0.0	1	2.4
Yakima	15	6.7	7	3.1	11	4.9
STATEWIDE TOTAL						
CASES	92	1.5	80	1.3	110	1.8
DEATHS	11	0.2	9	0.2	8	0.1

* *Streptococcus* Group A, invasive disease first became a notifiable condition in Washington in 12/2000

SYPHILIS (PRIMARY AND SECONDARY)

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	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	1	1.6	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	3	0.9	1	0.3	0	0.0	2	0.6	6	1.6
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	1	1.1	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	1	2.0	0	0.0	1	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
Island	0	0.0	0	0.0	0	0.0	4	5.5	0	0.0
Jefferson	0	0.0	1	3.8	0	0.0	0	0.0	0	0.0
King	65	3.9	50	2.9	41	2.3	50	2.8	60	3.4
Kitsap	0	0.0	2	0.9	0	0.0	2	0.9	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	1	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	1	2.5	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	3	0.4	5	0.7	5	0.7	5	0.7	2	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	2	1.9	1	1.0	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	5	0.9	1	0.2	2	0.3	4	0.6	8	1.3
Spokane	0	0.0	0	0.0	0	0.0	1	0.2	1	0.0
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	0	0.0	1	0.6	1	0.6	0	0.0	0	0.0
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	1	0.5	3	1.4	4	1.8	1	0.4	2	0.0
STATEWIDE TOTAL										
CASES	77	1.3	66	1.1	57	1.0	70	1.2	82	1.3
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

SYPHILIS (PRIMARY AND SECONDARY)

STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	262	6.3	8	0.2
1981	167	3.9	2	0.0
1982	172	4.0	0	0.0
1983	196	4.6	0	0.0
1984	158	3.7	2	0.0
1985	115	2.6	2	0.0
1986	194	4.4	0	0.0
1987	176	3.9	0	0.0
1988	265	5.8	0	0.0
1989	461	9.9	0	0.0
1990	354	7.5	0	0.0
1991	178	3.6	0	0.0
1992	85	1.7	0	0.0
1993	67	1.3	0	0.0
1994	36	0.7	0	0.0
1995	17	0.3	0	0.0
1996	9	0.2	0	0.0
1997	17	0.3	0	0.0
1998	44	0.8	0	0.0
1999	77	1.3	0	0.0
2000	66	1.1	0	0.0
2001	57	1.0	0	0.0
2002	70	1.2	0	0.0
2003	82	1.3	0	0.0

TETANUS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	0	0.0	0	0.0
1987	1	0.0	0	0.0
1988	1	0.0	0	0.0
1989	1	0.0	0	0.0
1990	1	0.0	0	0.0
1991	1	0.0	0	0.0
1992	3	0.1	0	0.0
1993	1	0.0	0	0.0
1994	1	0.0	0	0.0
1995	0	0.0	0	0.0
1996	1	0.0	0	0.0
1997	1	0.0	0	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	1	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

TRICHINOSIS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	0	0.0	0	0.0
1987	0	0.0	0	0.0
1988	0	0.0	0	0.0
1989	2	0.0	0	0.0
1990	1	0.0	0	0.0
1991	0	0.0	0	0.0
1992	1	0.0	0	0.0
1993	1	0.0	0	0.0
1994	0	0.0	0	0.0
1995	0	0.0	0	0.0
1996	0	0.0	0	0.0
1997	0	0.0	0	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	1	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

TUBERCULOSIS

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	0.0	1	0.0	0	0.0	0	0.0	1	0.0
Asotin	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	5	3.6	3	0.0	1	0.0	1	0.0	2	0.0
Chelan	4	0.0	0	0.0	1	0.0	1	0.0	4	0.0
Clallam	2	0.0	2	0.0	0	0.0	0	0.0	1	0.0
Clark	11	3.3	6	1.8	8	2.3	10	2.7	10	2.6
Columbia	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	2	0.0	6	6.3	2	0.0	2	0.0	1	0.0
Douglas	1	0.0	1	0.0	0	0.0	1	0.0	2	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	2	0.0	6	13.2	2	0.0	3	0.0	5	9.3
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	0.0	3	0.0	7	9.9	2	0.0	3	0.0
Grays Harbor	3	0.0	1	0.0	3	0.0	1	0.0	1	0.0
Island	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
Jefferson	2	0.0	1	0.0	0	0.0	0	0.0	0	0.0
King	104	6.2	127	7.5	139	7.9	158	8.9	155	8.7
Kitsap	7	3.1	7	3.0	5	2.1	6	2.5	2	0.0
Kittitas	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0
Klickitat	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0
Lewis	3	0.0	2	0.0	0	0.0	0	0.0	2	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	2	0.0	1	0.0	3	0.0	0	0.0	3	0.0
Okanogan	3	0.0	2	0.0	0	0.0	1	0.0	2	0.0
Pacific	1	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	43	6.1	34	0.0	22	3.1	16	2.2	18	2.4
San Juan	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0
Skagit	3	0.0	0	0.0	1	0.0	3	0.0	2	0.0
Skamania	2	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	23	3.9	21	3.6	28	4.5	16	2.5	12	1.8
Spokane	13	3.1	14	3.4	10	2.4	7	1.6	4	0.0
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	6	3.0	2	0.0	5	2.4	3	0.0	5	2.3
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	1	0.0	2	0.0	1	0.0	3	0.0	1	0.0
Whatcom	1	0.0	3	0.0	6	3.5	7	4.0	5	2.8
Whitman	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0
Yakima	9	4.2	10	4.7	15	6.7	8	3.5	8	3.5
STATEWIDE TOTAL										
CASES	258	4.5	258	4.4	261	4.4	252	4.2	250	4.1
DEATHS	6	0.1	2	0.0	6	0.1	4	0.0	0	0.0

TUBERCULOSIS STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1980	424	10.3	13	0.3
1981	401	9.4	15	0.4
1982	301	7.1	6	0.1
1983	239	5.6	10	0.2
1984	207	4.8	6	0.1
1985	220	5.0	5	0.1
1986	218	4.9	3	0.1
1987	255	5.7	10	0.2
1988	236	5.2	9	0.2
1989	248	5.3	4	0.1
1990	284	5.8	12	0.2
1991	309	6.2	7	0.1
1992	306	6.0	7	0.1
1993	286	5.5	7	0.1
1994	264	4.9	6	0.1
1995	278	5.1	2	0.0
1996	285	5.2	3	0.1
1997	305	5.4	6	0.1
1998	265	4.7	5	0.1
1999	258	4.5	5	0.1
2000	258	4.4	2	0.0
2001	261	4.4	6	0.1
2002	252	4.2	4	0.0
2003	250	4.1	0	0.0

TULAREMIA

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	1	0.0	0	0.0
1987	4	0.1	0	0.0
1988	1	0.0	0	0.0
1989	2	0.0	0	0.0
1990	4	0.1	0	0.0
1991	2	0.0	0	0.0
1992	2	0.0	0	0.0
1993	2	0.0	0	0.0
1994	1	0.0	0	0.0
1995	4	0.1	0	0.0
1996	2	0.0	0	0.0
1997	2	0.0	0	0.0
1998	8	0.1	0	0.0
1999	2	0.0	0	0.0
2000	2	0.0	0	0.0
2001	5	0.1	0	0.0
2002	3	0.1	0	0.0
2003	2	0.0	0	0.0

TYPHUS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	0	0.0	0	0.0
1987	0	0.0	0	0.0
1988	0	0.0	0	0.0
1989	0	0.0	0	0.0
1990	0	0.0	0	0.0
1991	1	0.0	0	0.0
1992	0	0.0	0	0.0
1993	0	0.0	0	0.0
1994	1	0.0	0	0.0
1995	0	0.0	0	0.0
1996	0	0.0	0	0.0
1997	0	0.0	0	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	0	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

UNEXPLAINED CRITICAL ILLNESS OR DEATH*

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
2001	3	0.1	2	0.0
2002	6	0.1	5	0.1
2003	9	0.1	9	0.1

* Unexplained critical illness or death first became a notifiable condition in Washington in 12/2000

VIBRIOSIS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	4	0.1	0	0.0
1986	7	0.1	0	0.0
1987	18	0.4	0	0.0
1988	11	0.2	0	0.0
1989	4	0.1	0	0.0
1990	30	0.6	0	0.0
1991	4	0.1	0	0.0
1992	7	0.1	0	0.0
1993	33	0.6	0	0.0
1994	9	0.2	0	0.0
1995	6	0.1	0	0.0
1996	3	0.1	0	0.0
1997	58	1.0	0	0.0
1998	41	0.7	0	0.0
1999	21	0.4	0	0.0
2000	20	0.3	0	0.0
2001	9	0.2	0	0.0
2002	25	0.4	0	0.0
2003	18	0.3	0	0.0

YELLOW FEVER

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	0	0.0	0	0.0
1986	0	0.0	0	0.0
1987	0	0.0	0	0.0
1988	0	0.0	0	0.0
1989	0	0.0	0	0.0
1990	0	0.0	0	0.0
1991	0	0.0	0	0.0
1992	0	0.0	0	0.0
1993	0	0.0	0	0.0
1994	0	0.0	0	0.0
1995	0	0.0	0	0.0
1996	0	0.0	0	0.0
1997	0	0.0	0	0.0
1998	0	0.0	0	0.0
1999	0	0.0	0	0.0
2000	0	0.0	0	0.0
2001	0	0.0	0	0.0
2002	0	0.0	0	0.0
2003	0	0.0	0	0.0

YERSINIOSIS

Case, Death Rate/100,000 Population

	1999		2000		2001		2002		2003	
Counties	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	2	1.4	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	1	1.5
Clark	0	0.0	0	0.0	1	0.3	4	1.1	0	0.0
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	1	1.1	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	0	0.0	0	0.0	0	0.0	0	0.0	1	1.9
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	2	2.7	0	0.0	0	0.0	0	0.0
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Island	0	0.0	0	0.0	0	0.0	2	2.7	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	1	3.8	0	0.0
King	15	0.9	22	1.3	16	0.9	12	0.7	12	0.7
Kitsap	1	0.4	1	0.4	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	1	9.9
Mason	1	2.1	0	0.0	0	0.0	1	2.0	1	2.0
Okanogan	0	0.0	0	0.0	1	2.5	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	4	0.6	1	0.1	0	0.0	2	0.3	1	0.1
San Juan	1	7.9	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	0	0.0	1	1.0	0	0.0	1	0.9
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	4	0.7	4	0.7	2	0.3	4	0.6	6	0.9
Spokane	1	0.2	2	0.5	0	0.0	0	0.0	0	0.0
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	2	4.9
Thurston	2	1.0	1	0.5	1	0.5	0	0.0	1	0.5
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	0	0.0	0	0.0	1	0.6	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	1	0.4
STATEWIDE TOTAL										
CASES	32	0.6	33	0.6	23	0.4	26	0.4	28	0.5
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

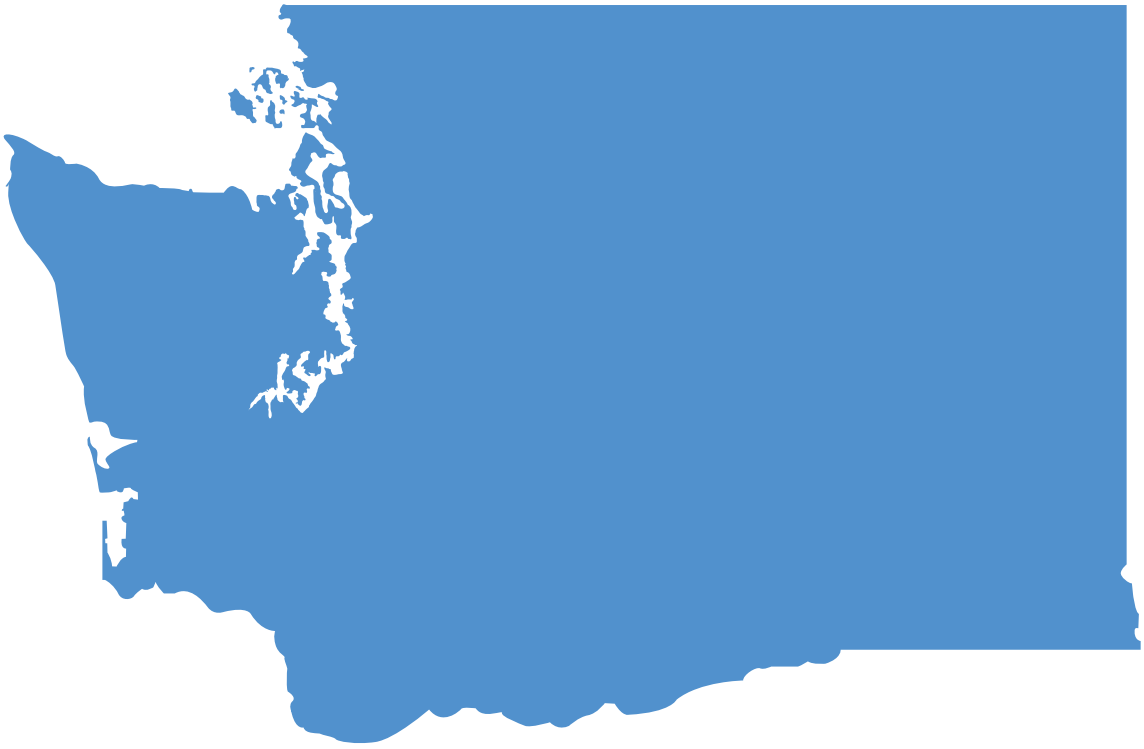
YERSINIOSIS STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1988	15	0.3	0	0.0
1989	40	0.9	0	0.0
1990	37	0.8	0	0.0
1991	28	0.6	0	0.0
1992	34	0.7	0	0.0
1993	50	1.0	0	0.0
1994	40	0.7	0	0.0
1995	50	0.9	0	0.0
1996	37	0.7	0	0.0
1997	30	0.5	0	0.0
1998	39	0.7	0	0.0
1999	32	0.6	0	0.0
2000	33	0.6	0	0.0
2001	23	0.4	0	0.0
2002	26	0.4	0	0.0
2003	28	0.5	0	0.0

APPENDIX II.

FOODBORNE OUTBREAKS, 2003



APPENDIX II. FOODBORNE OUTBREAKS, 2003

MONTH	COUNTY	# ILL	# LAB CONF	VEHICLE	AGENT	CONTRIBUTING FACTORS	PREP PLACE	EVIDENCE^
Jan	King	3	0	Greek Salad	Viral gastroenteritis*	bare hand contact, ill food handler, handwashing	Restaurant	3
Jan	King	7	0	Burritos	Viral gastroenteritis*	unknown	Restaurant	3
Jan	King	3	0	Ahi Tuna	Scombroid	toxic substance, room temp storage	Restaurant	2,3
Jan	Kitsap	2	0	Chips and Salsa	Viral gastroenteritis*	bare hand contact; ill food handler	Restaurant	3
Jan	Skagit	8	8	Raw Milk Cheese	Campylobacter jejuni	ingestion of contaminated raw product	Unpermitted	1,2,3
Feb	Clallam	6	0	Hamburgers	Viral gastroenteritis*	bare hand contact	Restaurant	5
Feb	King	2	0	Undetermined	Unknown	bare hand contact	Restaurant	5
Feb	King	4	0	Clam Chowder	Bacillus cereus*	slow cooling; reheating; thawing	Restaurant	5
Feb	Stevens	96	0	Chips and Salsa	Viral gastroenteritis*	bare hand contact; ill food handler	Restaurant	1,3
Feb	Yakima	8	4	Picnic Food	Salmonella enteritidis	unknown	Home	3
Mar	King	3	1	Multiple Mexican	Salmonella montevideo	bare hand contact; handwashing; prior prep	Restaurant	3
Mar	Asotin	47	19	Fried Ice Cream	Salmonella enteritidis	ingestion of contaminated raw product; advanced prep	Restaurant	1,3,4
Mar	Whatcom	3	0	Salad/Sandwich	Viral gastroenteritis*	ill food handler, handwashing	Restaurant	3
Mar	Clark	2	0	Vegetarian Pasta	Unknown	slow cooling	Restaurant	5
Mar	Multi-county/ state	2+	2	Alfalfa Sprouts	Salmonella saintpaul	ingestion of contaminated raw product	Multiple	1,2,3
Apr	King	2	0	Salads	Bacillus cereus*	room temp storage; cold holding	Restaurant	5
May	King	4	2	Multiple Asian	Salmonella weltevreden	unknown	Home	3
May	King	2	0	Ahi Tuna Sandwich	Scombroid*	toxic substance part of tissue	Restaurant	3
May	Skagit	10	0	Undetermined	Viral gastroenteritis*	unknown	Restaurant	5
May	Yakima	3	2	Raw Milk	C. jejuni + E. coli O157	ingestion of contaminated raw product	Home	3
Jun	Pierce	122	0	Undetermined	Viral gastroenteritis*	ill food handler	Restaurant	5
Jun	Kitsap	4	0	Steak/Burrito	Clostridium perfringens*	hot holding; cooking; reheating	Restaurant	5

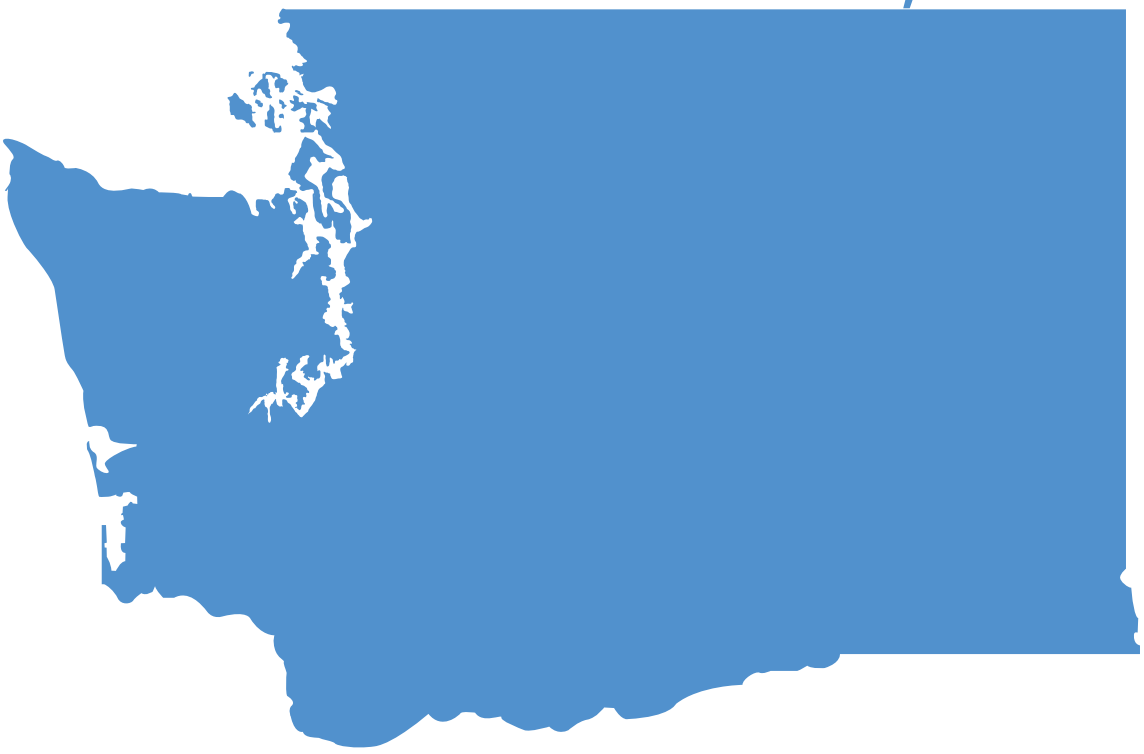
Jun	King	2	1	Chicken with Broccoli	Campylobacter jejuni	cross contamination; bare hand contact	Restaurant	5
Jun	King	3	0	Pork/Turkey Sandwich	Clostridium perfringens*	unknown	Restaurant	5
Jun	King	5	0	Meat and Cheese Tray	Staph aureus*	bare hand contact, room temp storage, prior prep	Grocery	5
Jun	King	3	0	Pepperoni & Pineapple Pizza	Staph aureus*	cold holding	Restaurant	5
Jul	King	2	0	Multiple Mexican	Unknown	cross contamination; bare hand contact; inadequate cleaning; slow cooling; hot holding; reheating	Restaurant	5
Jul	King	3	0	Fried Chicken	Campylobacter*	cold holding; hot holding; cooking	Restaurant	5
Jul	King	3	2	Chicken Teriyaki	Salmonella typhimurium	cross contamination; gloves; inadequate cleaning; handwashing; room temp storage; cold holding; hot holding; cooking; thawing	Restaurant	3,4
Jul	San Juan	2	0	Refried Beans	Clostridium perfringens*	slow cooling; advanced prep; hot holding; reheating	Restaurant	5
Jul	King	4	0	Lettuce	Viral gastroenteritis*	inadequate cleaning; handwashing	Restaurant	5
Jul	Skagit	10	0	Undetermined	Unknown	unknown	Restaurant	5
Jul	Kitsap	6	0	Salads	Viral gastroenteritis*	ingestion of contaminated raw product	Restaurant	5
Jul	Spokane	5	5	Undetermined	E. coli O157	unknown	Restaurant	3
Aug	King	41	1	Cake	Norovirus	bare hand contact; ill food handler; handwashing	Bakery	1,3
Aug	Skagit	22	0	Salad	Viral gastroenteritis*	bare hand contact; ill food handler, handwashing	Restaurant	1,3
Oct	Grant	42	6	Beef and Potato Tacos	Staph aureus	bare hand contact; ill food handler; room temp storage; prior prep; hot holding	Unpermitted	3
Oct	Spokane	5	0	Sandwiches	Viral gastroenteritis*	bare hand contact; ill food handler; handwashing	Restaurant	3
Oct	King	3	0	Soup	Bacillus cereus*	slow cooling	Restaurant	5
Oct	King	2	0	Multiple Asian	Salmonella*	slow cooling; cooking; reheating	Restaurant	5
Oct	King	18	1	Lettuce	Norovirus	bare hand contact	Restaurant	1,3
Oct	King	5	0	Chicken Salad	Salmonella*	unknown	Restaurant	5

Oct	King	2	0	Chicken Curry	Clostridium perfringens*	room temp storage; cooking	Restaurant	5
Oct	King	3	0	Beef Taco/Burritos	Clostridium perfringens*	cross contamination; inadequate cleaning; hot holding; cooking	Restaurant	5
Oct	King	4	0	Hamburgers	Unknown	unknown	Restaurant	5
Oct	Kitsap	2	0	Multiple Mexican	Viral gastroenteritis*	bare hand contact; handwashing	Restaurant	5
Nov	Multi-county	28	0	Raw Oysters	Viral gastroenteritis*	ingestion of contaminated raw product	Restaurants/ Home	1,3,4
Nov	Multi-county/ state	10+	10	Alfalfa Sprouts	Salmonella chester	ingestion of contaminated raw product	Restaurants/ Home	1,2,3,4
Nov	King	6	0	Cooked Oysters	Staph aureus	contaminated raw product	Restaurant	5
Nov	Snohomish	4	0	Pepperoni Pizza	Unknown	unknown	Restaurant	5
Dec	Pierce	19	2	Multiple Mexican	Norovirus	bare hand contact; glove; ill food handler; inadequate cleaning	Restaurant	1,3
Dec	Grant	4	0	Pot Roast	Clostridium perfringens*	slow cooling; advanced prep; hot holding; reheating	Restaurant	3
Dec	King	3	0	Spring Rolls	Viral gastroenteritis*	bare hand contact; glove; hand-washing	Restaurant	5
Dec	Snohomish	4	0	Pizza	Unknown	unknown	Restaurant	5
Dec	Skagit	2	2	Raw Oysters	Norovirus	unknown	Home	5

*Suspected Agent
^Evidence: 1- Statistical evidence from epi investigation, 2 - Laboratory evidence (e.g., id agent in food), 3 - Compelling supportive information, 4 - Other data 5, - Specific evidence lacking, but prior experience makes this likely

APPENDIX III.

RABIES EXPOSURE, 2003

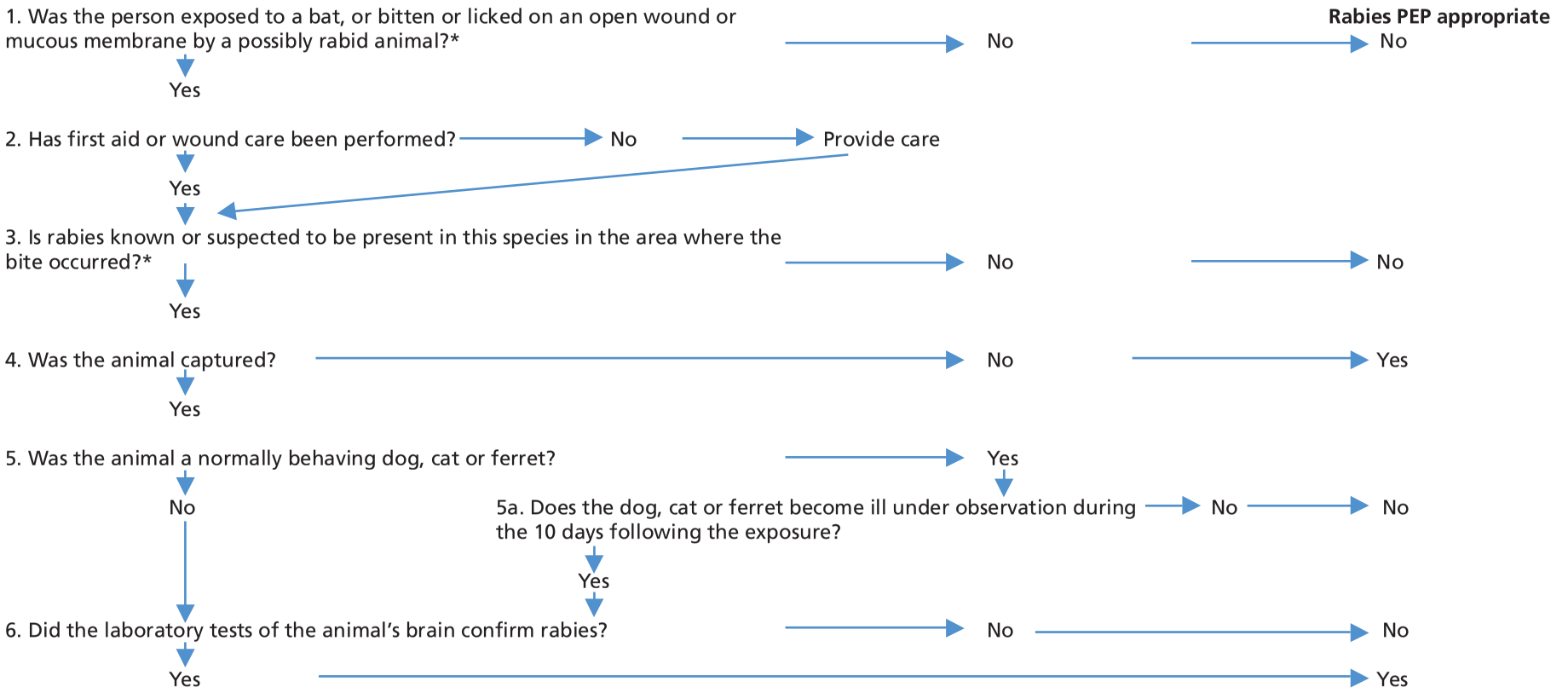


WASHINGTON RABIES PROPHYLAXIS DECISION-MAKING

Although human rabies is rare in the United States (2-6 cases per year), animal bites are very common and as a result, thousands of people receive rabies post-exposure prophylaxis (PEP) each year. Rabies is almost universally fatal without appropriate PEP (rabies vaccine and rabies immune globulin) which is a safe and effective means of prevention. All animal bites should be thoroughly cleansed and consideration of PEP should be based on careful evaluation of the circumstances surrounding the exposure, the species and availability of the animal, and the epidemiology of rabies in the area.

Complete information about human rabies pre and post-exposure prophylaxis is available in the document 'Human Rabies Prevention - United States, 1999, Recommendations of the Advisory Committee on Immunization Practices (ACIP)' on the CDC website at www.cdc.gov/ncidod/dvrd/rabies/prevention&control/preventi.htm. Rabies exposures usually involve animal bites, however in rare circumstances, exposures can involve saliva or central nervous system tissue inoculated into mucous membranes or open wounds. Petting or touching the body, urine, blood or feces of a potentially rabid animal or being sprayed by a skunk are not considered to be rabies exposures. In Washington, the most common high risk rabies exposures involve direct contact with rabid bats.

ALGORITHM FOR RABIES POST-EXPOSURE PROPHYLAXIS (PEP) IN WASHINGTON STATE



*** Bats are the only significant rabies reservoir in the Pacific Northwest. Although raccoon rabies is common in other parts of the US, especially the Mid-Atlantic states, no rabid raccoons have ever been identified in Washington, the surrounding states or provinces. Since 1970, among more than 8,000 animals tested at the State Public Health Laboratory, the only animals (other than bats) identified as having rabies were a dog, two cats, a llama, a horse and two skunks. Rabies is extremely rare in rodents.**

RABIES PROPHYLAXIS REGIMENS

Vaccination Status	Treatment	Regimen*
Not previously vaccinated	Wound cleansing	All post-exposure treatment should begin with immediate thorough cleansing of all wounds with soap and water. If available, a virucidal agent such as a povidone-iodine solution should be used to irrigate the wounds.
	RIG	Administer 20 IU/kg body weight. If anatomically feasible, the full dose should be infiltrated around the wound(s) and any remaining volume should be administered IM at an anatomical site distant from vaccine administration. Also, RIG should not be administered in the same syringe as vaccine. Because RIG might partially suppress active production of antibody, no more than the recommended dose should be given.
	Vaccine	HDCV,RVA,or PCEC 1.0 mL,IM (deltoid area+),one each on days 0&,3,7,14 and 28
Previously vaccinated@	Wound cleansing	All post-exposure treatment should begin with immediate thorough cleansing of all wounds with soap and water. If available, a virucidal agent such as a povidone-iodine solution should be used to irrigate the wounds.
	RIG	RIG should not be administered.
	Vaccine	HDCV,RVA,or PCEC 1.0 mL,IM (deltoid area+),one each on days 0& and 3.

HDCV=human diploid cell vaccine; PCEC=purified chick embryo cell vaccine; RIG=rabies immune globulin; RVA=rabies vaccine adsorbed; IM=intramuscular.
* These regimens are applicable for all age groups, including children.
+ The deltoid area is the only acceptable site of vaccination for adults and older children. For younger children, the outer aspect of the thigh may be used. Vaccine should never be administered in the gluteal area.
& Day 0 is the day the first dose of vaccine is administered.
@ Any person with a history of pre-exposure vaccination with HDCV, RVA or PCEC; prior post-exposure prophylaxis with HDCV, RVA, or PCEC; or previous vaccination with any other type of rabies vaccine and a documented history of antibody response to the prior vaccination.

ANIMAL RABIES

Rabies was endemic among dogs in King County between 1937 and 1940. During the 1950s and 1960s, major efforts in pet vaccination and animal control eradicated the canine variant of rabies in the United States, however rabies in wildlife in the United States has been documented at record levels nationwide during the last two decades.

Between 1970 and 2003, 14,616 animals were tested for rabies in Washington and 423 (3%) were found to have rabies. This does not represent the actual number of rabies cases that occurred, since no routine surveillance in animals is conducted and most animals are submitted for diagnostic testing only after human exposure has occurred.

The primary reservoir of rabies in the Northwest is bats. Of the 5,855 bats examined for rabies in Washington between 1960 and 2003, 492 (8.4%) were rabid. Rabid bats have been found in almost every county in Washington. While terrestrial animal (non-bat) variants of rabies have not been identified in Washington, rabies is occasionally transmitted from bats to other mammals including humans.

Domestic Animals

In the United States, twice as many cats as dogs are reported annually with rabies, underlining the need for better vaccination coverage in cats. In 2002, a rabid cat was identified in Walla Walla County. The last suspected rabid dog was identified in Pierce County in 1987, six months after exposure to a rabid bat. Testing for rabies performed at the PHL identified the virus in the dog's brain tissues, however the infection was not confirmed at CDC.

In 1992, a horse from Benton County died of rabies and in 1994, a llama from King County died after becoming infected with a bat-variant of rabies virus.

Wild Animals, Rodents and Lagomorphs

Although common in some parts of the US, raccoon, skunk and fox (terrestrial) variants of rabies virus have not been documented in Washington. Four rabid skunks identified in the 1960s and 1970s were either imported from outside the state or inappropriately given live virus rabies vaccine. Rodents (mice, guinea pigs, gophers, rats, squirrels) and lagomorphs (rabbits, hares) pose a very low risk of rabies and rabid lagomorphs have never been found in Washington. Bites from other wild animals should be evaluated on a case-by-case basis, as surveillance for terrestrial rabies is limited in Washington and lack of data does not definitely rule out its presence.

Animal Rabies in Washington, 1930-2003

Species	1930-1949	1950-1969	1970-1989	1990-1999	2000-2003	TOTAL
Bat	0	75	171	165	80	491
Cat	19	2	1	0	1	23
Cattle	37	0	0	0	0	37
Coyote	1	0	0	0	0	1
Dog	1,415	24	1	0	0	1,440
Goat	2	0	0	0	0	2
Horse	0	0	0	1	0	1
Llama	0	0	0	1	0	1
Sheep	1	0	0	0	0	1
Skunk	0	2*	2*	0	0	4
TOTAL	1,475	103	175	167	81	2,001

*Imported ill or improperly vaccinated

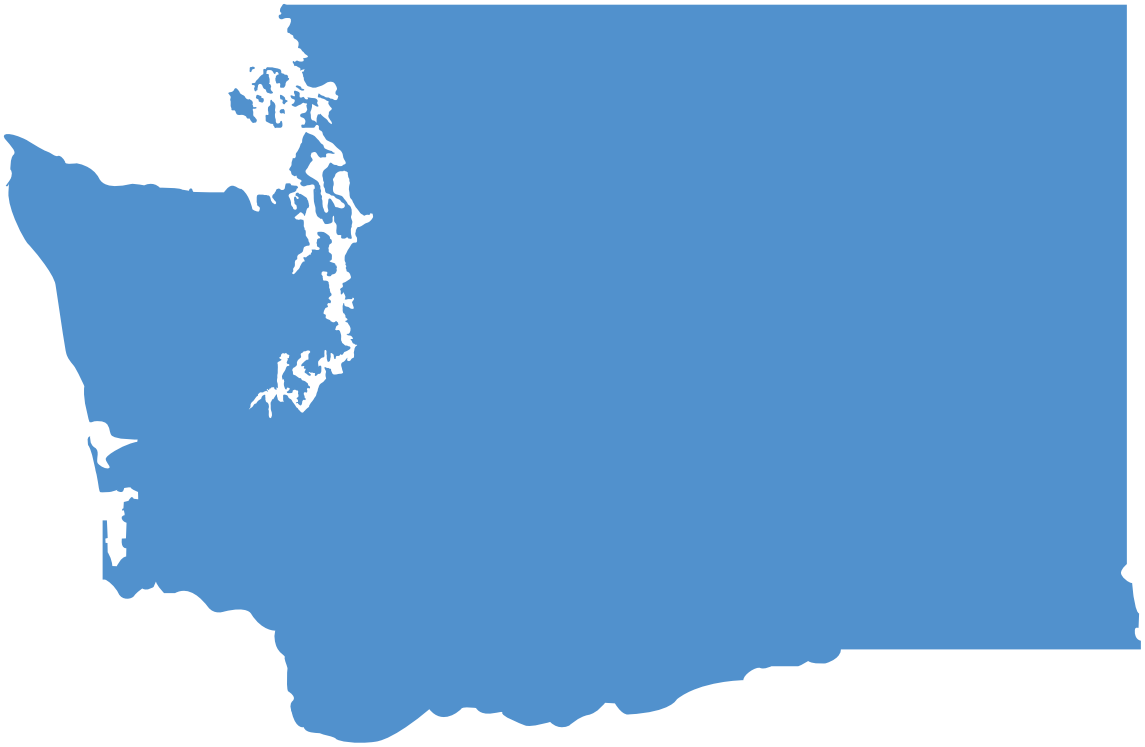
References:

Bleck, Thomas P. and Charles E. Rupprecht. "Rabies Virus," in Mandell G.L. ed, Principles and Practice of Infectious Disease. Fifth Edition, 2000. Churchill Livingstone, Inc.

Compendium of Animal Rabies Prevention and Control, National Association of State Public Health Veterinarians, Inc. *MMWR* 2004; 53(RR-9); 1-12.

Human Rabies Prevention – United States, 1999 Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 1999; 48 (RR-1); 1-21.

APPENDIX IV.
SPECIAL TOPICS



Outbreak of Campylobacteriosis Associated with Consumption of Potable Water from a Farm, June 2003
Washington State Department of Health

In early June 2003, the Walla Walla County Health Department and Benton-Franklin Health District notified the Washington State Department of Health (DOH) of an outbreak of campylobacteriosis occurring among attendees of a convention held on a farm in Walla Walla County from May 28 through June 1, 2003. Immediately after notification of the outbreak, local, regional and state public health officials initiated an epidemiologic and environmental investigation.

A case-control study, using household controls when possible, was conducted to identify risk factors for illness. A confirmed case was defined as a patient with *Campylobacter* isolated from stool; a probable case as a patient with diarrhea and one additional gastrointestinal symptom or fever. We calculated crude odds ratios (OR) and adjusted OR using multiple logistic regression for foods and drinks consumed during the event, and dose-response relations between water consumed and illness. The farm's water systems were inspected. Water samples were tested for fecal coliforms and *Campylobacter*.

The organizers of the event were able to identify 458 (68%) of the approximately 675 attendees. Of those identified, 110 were reported to be ill. The case-control study included 11 confirmed case-patients, 37 probable case-patients, and 70 controls. No single meal was attended by all cases. No foods were significantly associated with illness after controlling for water consumption. A dose-response association was found between the amount of water consumed with meals during the convention and illness (OR = 1.2, 95% confidence interval = 1.1-1.3). The irrigation and potable water systems on the farm were separated by a single valve. Both systems yielded fecal coliforms; however, C*ampylobacter* was not detected.

The findings of the investigation revealed that illness was associated with consuming potable water from the farm. The potable water system on the farm was most likely contaminated via inappropriate cross connections with the irrigation system. Recommendations were made to the owner and convention organizers to prevent future illness on the farm.

Outbreak of Mumps in Grant County, April-July 2003
Grant County Health District

From April 25 to July 7, 2003, Grant County Health District (GCHD) reported a mumps outbreak with 10 related cases. The index case traveled to Haiti after declining recommended travel immunizations; this case was seen by a healthcare provider April 25 and was diagnosed with mumps. On May 1, GCHD was contacted by the employer of a family member of the index case, and at that time, GCHD provided disease control recommendations to contacts of the index case, which included students in the local school district.

The school district excluded 52 students and one employee for the entire recommended exclusion period (May 15 to June 9). In total, GCHD vaccinated 185 individuals and private providers acquired 230 doses of measles-mumps-rubella (MMR) for immunization of susceptible people. Isolation and quarantine measures were difficult to enforce; in one instance, an exposed high school student attended the senior prom during the infectious period and remained in school until being sent home by the school nurse after developing symptoms of mumps.

Relevant points regarding this outbreak include:

1. The outbreak could have been prevented by recommended childhood and adult immunizations.
2. Notifiable condition reporting by the healthcare provider would have enabled Health District staff to investigate cases and provide information which may have limited the number of exposed individuals. This illustrates the value of timely reporting and response.
3. Adherence to isolation and quarantine precautions in both a timely and appropriate manner would have limited exposures. In one instance, after being counseled regarding quarantine dates, an individual who had been exposed called a public health worker who was not familiar with the case and followed recommendations that were not applicable (nor sufficient).
4. The outbreak and subsequent evaluation provided an opportunity to assess procedures and strengthen networks. A formal review process was utilized with participation from community partners.
5. The outbreak provided an opportunity to educate the community about the cost saving associated with basic prevention measures. The economic cost of this outbreak to the community was nearly $70,000, which might have been prevented for the cost of an immunization prior to travel to Haiti.

Outbreak of Infections Caused by Methicillin Resistant *Staphylococcus aureus* among a High School Wrestling Team in Snohomish County
Snohomish Health District

Snohomish Health District received a phone call in early January from a local primary care provider who reported seeing six high school students with rashes in the previous week. The students were all members of a local high school wrestling team. The rashes occurred on exposed areas of their faces, arms and legs. Cultures were obtained from rashes of four students, and *Staphylococcus aureus* was isolated from two. The primary care provider also consulted the high school athletics director and the decision was made to temporarily stop all wrestling team activities pending actions to disrupt the apparent transmission by the team.

After consulting with the Washington State Department of Health (DOH), recommendations for control measures were given to the school administrators and coaching staff. Personal control measures included: 1) practicing frequent handwashing; 2) showering with antibacterial soaps (e.g., Hibiclens™ or Phisohex™) after every practice or competition; 3) avoiding the sharing of personal items or equipment; and 4) washing towels and uniforms daily.

School environmental control measures included: 1) disinfecting wrestling mats prior to every practice/competition; 2) avoiding the sharing of headgear, knee pads or other equipment; and 3) daily cleaning and disinfecting of the locker room. To monitor for skin rashes, coaches were encouraged to ask all athletes to report skin infections/lesions, do regular skin checks, refer players for medical follow-up when any suspect infection/lesion was noted, and maintain a record of athletes and coaches with skin infections.

Fifteen of 41 (37%) athletes and one coach developed rashes. Of those cultured, methicillin-sensitive *S. aureus* was isolated from three, methicillin-resistant *S. aureus* (MRSA) was isolated from three, and one had herpes simplex virus isolated. The MRSA isolates were susceptible to ciprofloxacin, gatifloxacin, clindamycin, trimethoprim/sulfamethoxazole and vancomycin, and resistant to cephalothin, erythromycin, methicillin and penicillin G. Pulsed-field gel electrophoresis assay at the DOH Public Health Laboratories identified the SA056 strain, a previously described community-acquired strain in the United States.

All players with open or draining skin lesions were restricted from participating in sporting events until their lesions healed and they were cleared by their healthcare providers. Fact sheets were given to the athletes' parents explaining the importance of control measures and medical care. The staff at the high school did an excellent job of implementing proper infection control practices for the wrestling team. After one week, no further cases of rash among team members or staff were reported.

Outbreak of Norovirus Illnesses Associated with Samish Bay Oysters, November 2003
Washington State Department of Health

During the second week of November 2003, Public Health – Seattle & King County (PHSKC) began receiving reports of gastrointestinal illness from persons who ate raw oysters in several King County restaurants. The symptoms included vomiting and diarrhea starting about 24 hours after eating oysters and lasting about 48 hours. The illnesses were consistent with viral gastroenteritis, possibly from a norovirus.

By November 19, epidemiologists at PHSKC had received reports of 14 people ill after eating raw oysters in four Seattle area restaurants between November 7-10. By checking shellfish tags, PHSKC determined that one of the restaurants had only received oysters from a single dealer (Company A) and the other three restaurants had oysters from multiple sources, which included Company A. On November 20, after alerting the Washington State Department of Health (DOH) Communicable Disease Epidemiology Section (CDES) and Shellfish Program, an association was recognized between the illnesses and consumption of raw oysters harvested from Samish Bay on, or after, November 4. PHSKC was also investigating additional illness reports related to oyster consumption, and later determined that five were associated with oysters harvested from Samish Bay.

DOH CDES issued a health alert to local health jurisdictions and the DOH Shellfish Program issued a recall of the oysters. Oyster harvests from November 4–21 were recalled and involved 17 states and four countries. Skagit County Health Department received related complaints from five persons who became ill with viral gastroenteritis following consumption of raw oysters from two different restaurants. Whatcom County Health Department also received complaints from three persons who became ill following consumption of raw oysters purchased directly from the grower.

A total of 28 illnesses during November 2003 were epidemiologically linked with oysters harvested from Samish Bay from November 4 until the recall. All illnesses were consistent with viral gastroenteritis, possibly norovirus. However, no patients submitted specimens for laboratory confirmation.

Unexplained Death in Thurston County, November 2003
Thurston County Health Department

A 19 year old previously healthy female had onset of nausea and weakness on the evening of November 20, 2003. The following day, she felt warm and had nausea, headache, myalgias and continued weakness. On November 23, she woke up feeling a little better, but that evening, complained that her feet were tingling and stinging, and she was unable to sleep. During the night of November 23, she awoke delirious and anxious with labored breathing. She was taken to an emergency room and arrived unresponsive; at the time, hospital staff noted she was jaundiced. She was pronounced dead following unsuccessful attempts at resuscitation.

Thurston County Health Department rapidly initiated an investigation which included interviews with the woman's boyfriend and inspection of their apartment where nine pet rats were found. After consultation with the Washington State Department of Health (DOH), the rats were euthanized. A list was compiled of herbal medications in the house that she may have been taking prior to her death.

Autopsy findings were consistent with myocarditis, possibly due to a systemic infection. DOH Communicable Disease Epidemiology notified the Unexplained Deaths Program at the Centers for Disease Control and Prevention (CDC) and tissues were submitted to CDC for laboratory testing. Immunohistochemical staining identified the bacteria *Streptobacillus moniliformis* in her tissues. The infection caused by *S. moniliformis* is commonly referred to as "rat-bite fever" (RBF).

Rat-bite fever is a rare systemic febrile illness, caused by infection with one of two gram-negative bacteria; *Streptococcus moniliformis*, which causes streptobacillary RBF, and *Spirillum minus*, the cause of spirillary RBF. Both bacteria are normal oral flora in healthy rats. *S. moniliformis* is the most common cause of RBF in the United States; the incubation period ranges from 1-22 days, with an average of 2-10 days.

Streptobacillary RBF is characterized by the sudden onset of fever, chills, headache, vomiting and severe migratory arthralgias and myalgias. The initial wound is usually healed at presentation, and within 2-4 days after onset of fever, a rash (maculopapular, petechial or pustular) appears on the extremities, palms and soles. The fever may relapse in an irregular pattern, and untreated infection may result in anemia, endocarditis, myocarditis, meningitis, pneumonia and focal abscesses. Although most cases resolve spontaneously within two weeks, 13% of untreated cases are fatal.

Streptobacillary RBF can be diagnosed by identification of the organism in blood culture, however, the organism grows slowly and requires enriched media, making it difficult for most laboratories to isolate. Serologic tests are not widely available for *S. moniliformis*, and the diagnosis may require specific immunohistochemical staining of tissue, as in this case.

Recommended treatment is intravenous penicillin G for 5-7 days followed by oral penicillin for seven days for patients who improve with initial therapy. Mild infections can be treated with oral penicillin alone. The efficacy of prophylactic antibiotic therapy against RBF following a rodent bite is unknown, however, following rodent bites, patients should receive tetanus prophylaxis as indicated, have their

wounds thoroughly cleaned, and be advised to return if signs of infection present.

References:

Freels LK, Elliot SP. "Rat bite fever: three case reports and a literature review," *Clinical Pediatrics* 2004; 43: 291-5.

Rat-bite fever - New Mexico, 1996. *MMWR* 1998; 47: 89-91.

Influenza 2003
Washington State Department of Health

Influenza is a highly contagious respiratory infection caused by the influenza virus, which is transmitted by airborne droplets or direct contact with respiratory secretions. Three types of influenza viruses cause illness in humans: type A, associated with epidemics and pandemics; type B, usually associated with regional epidemics; and type C, which occurs sporadically and in minor localized outbreaks. Approximately 20,000 deaths are caused in the United States each year by complications of influenza. Influenza vaccine is the most effective means to prevent or ameliorate disease caused by types A and B. Current recommendations from the CDC Advisory Committee on Immunization Practices (ACIP) for the use of influenza vaccine are available at www.cdc.gov/ncidod/diseases/flu/hc_providers.htm.

Symptoms of influenza include fever, headache, pharyngitis, nasal congestion, non-productive cough, malaise and myalgias. Gastrointestinal symptoms rarely occur except in small children. The incubation period of influenza is usually 1-4 days and the virus can be transmitted from one day before the onset of symptoms until five days after onset, sometimes longer in children.

Influenza surveillance in Washington is conducted in conjunction with the CDC from October through May of the following year. This surveillance system combines reports of influenza-like illnesses (ILI) and documented influenza from sentinel healthcare providers, outbreaks from long-term care facilities, school absenteeism related to ILI, influenza isolates submitted to the Public Health and other sentinel laboratories, and deaths due to pneumonia and influenza in three metropolitan areas in Washington.

In 2003, influenza activity began approximately eight weeks earlier than usual, and accelerated rapidly during the first weeks of November. Activity peaked the last two weeks of November and first two weeks of December, thereafter dropping rapidly. Both in Washington and nationwide, there was a large amount of influenza activity in a shorter time frame in 2003 compared to previous years.

Reported influenza activity in schools commenced approximately the second week of November when 14 schools reported >10% with ILI. Activity quickly increased and peaked the week of November 22, with 73 schools reporting >10% absenteeism due to ILI. Thereafter, reported absenteeism rapidly declined to a single school reporting increased absenteeism the last week of December.

Forty-three long-term care and assisted living facilities participated in sentinel influenza surveillance in 2003. Outbreaks in 25 long-term care and assisted living facilities were investigated with 16 (64%) confirmed as influenza A (not subtyped); five (20%) confirmed as A, H3N2; and four ruled out for influenza.

Three outbreaks of respiratory illness in large institutions other than nursing homes were confirmed as influenza type A. A survey of 48 long-term care facilities in 24 Washington counties revealed an average influenza vaccination rate of 86% for residents and 57% for staff*.

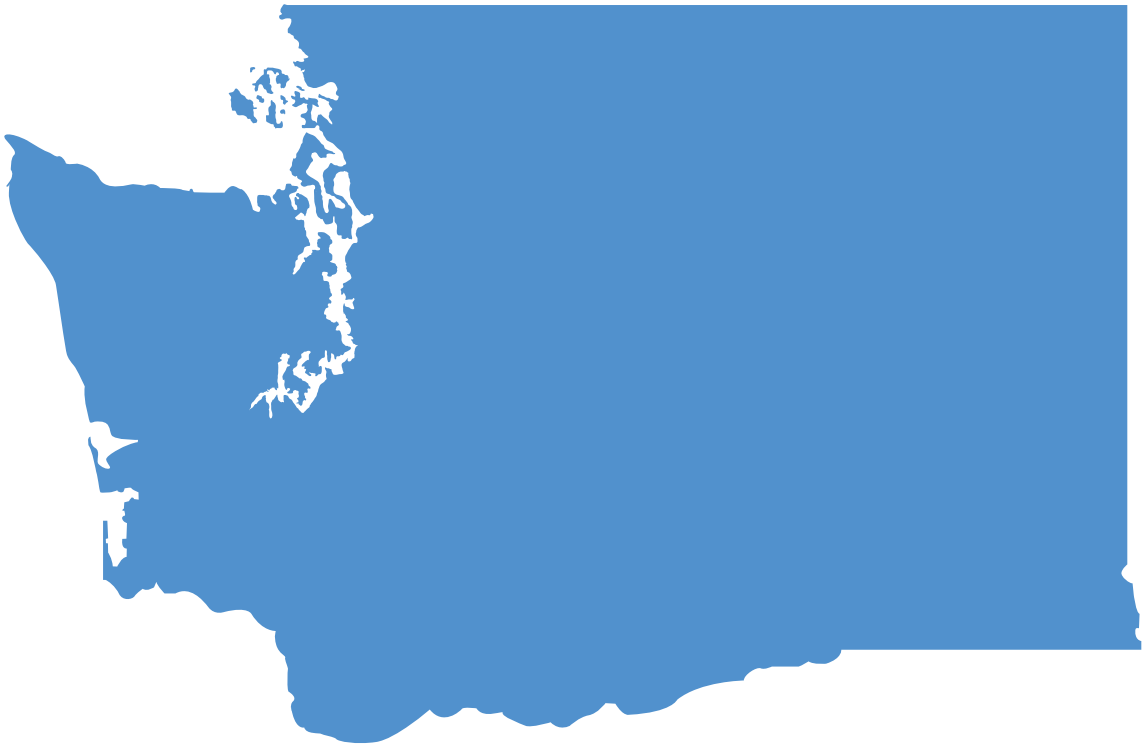
Sentinel surveillance laboratories reported 922 influenza isolates from 26 counties. Ninety-nine percent of the influenza isolates were type A and three (<1%) isolates were type B. Of the 152 influenza

A isolates subtyped, all were A, H3N2. Fourteen percent of surveillance isolates were obtained from patients <1 year of age, 27% from 1-4 years of age, 25% from 5-19 years of age, 16% from 20-39 years of age, 7% from 40-59 years of age, and 9% were from persons >60 years of age. Age was not reported for 2% of cases.

Two of the three influenza strains circulating in Washington and the United States in 2003 were antigenically similar to those contained in the 2003-2004 vaccine (A/New Caledonia/20/99 [H1N1]-like and B/Hong Kong/330/01-like). While some of the isolates were similar to the third vaccine strain (A/Moscow/10/99 [H3N2]-like), most were similar to the A/Fujian/411/2002 (H3N2)-like strain. The trivalent influenza vaccine for 2004-2005 will reflect this and contain an A/New Caledonia/20/99 (H1N1)-like virus, an A/Fujian/411/2002 (H3N2)-like virus, and a B/Shanghai/361/2002-like virus.

*Rates of staff vaccination may be under-reported as vaccination provided by private health care providers may not be reported to their employers.

APPENDIX V.
WASHINGTON STATE DEMOGRAPHICS



Washington State Population Estimates, 1985-2003
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	4,866,692
1991	5,000,400
1992	5,116,700
1993	5,240,900
1994	5,334,400
1995	5,429,900
1996	5,516,800
1997	5,606,800
1998	5,685,300
1999	5,757,400
2000	5,894,121
2001	5,974,900
2002	6,041,700
2003	6,098,300

Washington State Population By Age and Sex
Washington State Office of Financial Management - April 1, 2003 Forecast

Age (years)	Male	Female	TOTAL
<1	40,102	38,272	78,374
1	40,424	38,587	79,011
2	41,486	39,602	81,088
3	40,804	38,701	79,505
4	41,495	39,593	81,088
5	41,476	39,422	80,898
6	41,362	39,486	80,848
7	41,931	39,827	81,758
8	42,434	40,466	82,900
9	43,141	40,999	84,140
10-14	229,595	217,265	446,860
15-19	225,346	214,010	439,356
20-24	220,692	208,017	428,709
25-29	201,435	191,466	392,901
30-34	226,451	215,535	441,986
35-39	229,238	223,011	452,249
40-44	248,466	246,634	495,100
45-49	241,181	242,686	483,867
50-54	213,069	216,546	429,615
55-59	171,227	174,550	345,777
60+	415,854	516,416	932,270
TOTAL	3,037,209	3,061,091	6,098,300

Washington State Population Estimates By County
Washington State Office of Financial Management - April 1, 2003 Forecast

County	Estimate
Adams	16,600
Asotin	20,600
Benton	151,600
Chelan	67,900
Clallam	65,300
Clark	372,300
Columbia	4,100
Cowlitz	94,900
Douglas	33,600
Ferry	7,300
Franklin	53,600
Garfield	2,400
Grant	77,100
Grays Harbor	68,800
Island	74,000
Jefferson	26,700
King	1,779,300
Kitsap	237,000
Kittitas	35,200
Klickitat	19,300
Lewis	70,400
Lincoln	10,100
Mason	50,200
Okanogan	39,600
Pacific	20,900
Pend Oreille	11,800
Pierce	733,700
San Juan	14,800
Skagit	106,700
Skamania	9,900
Snohomish	637,500
Spokane	428,600
Stevens	40,600
Thurston	214,800
Wahkiakum	3,800
Walla Walla	55,800
Whatcom	174,500
Whitman	41,000
Yakima	226,000
Washington State	6,098,300


Whatcom
San Juan
Skagit
Okanogan
Island
Snohomish
Clallam
Chelan
Ferry
Stevens
Pend Oreille
Jefferson
King
Douglas
Lincoln
Spokane
Kitsap
Grays Harbor
Mason
Grant
Kittitas
Adams
Whitman
Pierce
Thurston
Pacific
Lewis
Franklin
Garfield
Columbia
Cowlitz
Yakima
Asotin
Wahkiakum
Skamania
Benton
Walla Walla
Klickitat
Clark