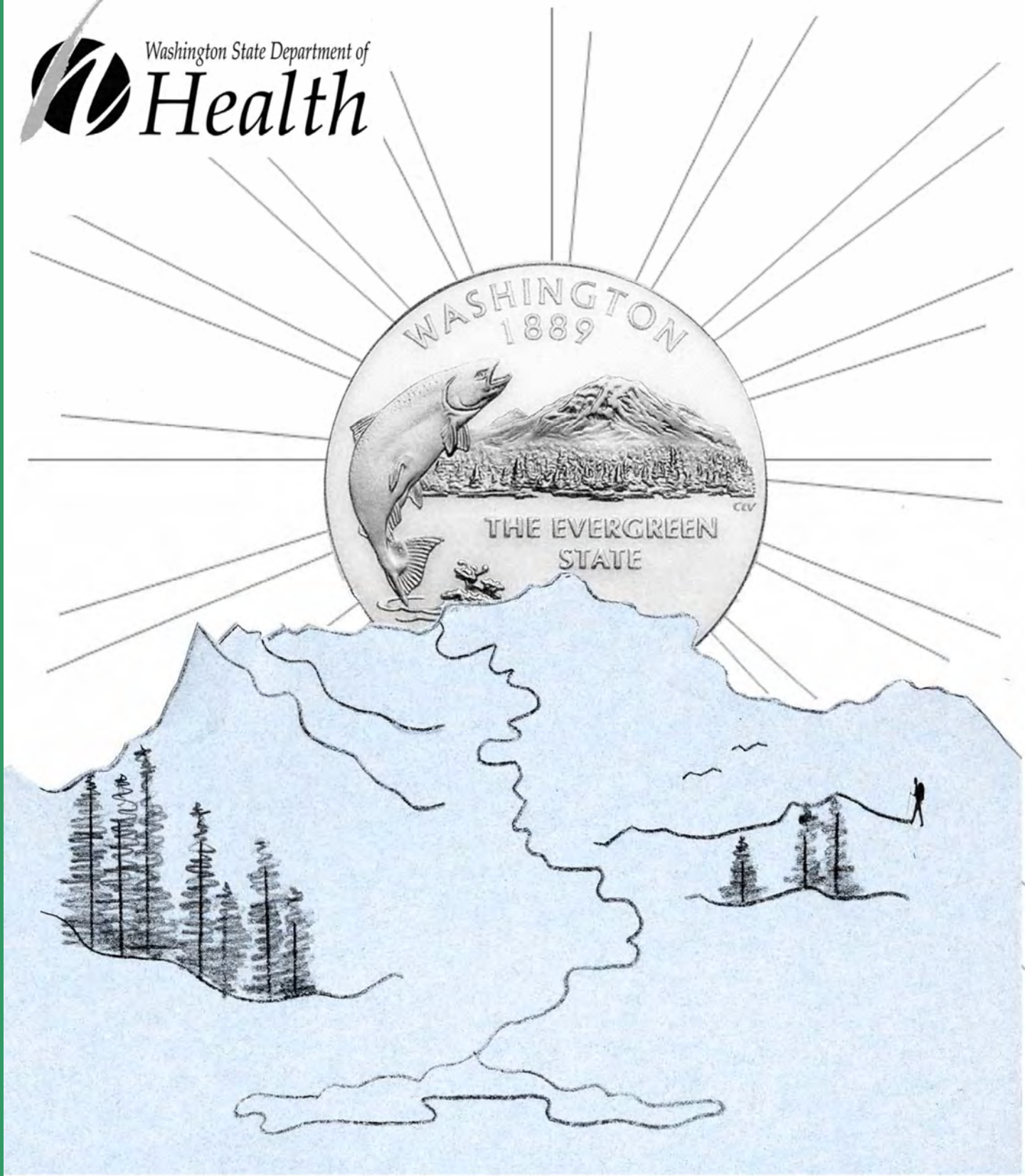
Washington State
COMMUNICABLE DISEASE REPORT 2006

Washington State Department of Health



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COMMUNICABLE DISEASE REPORT 2006

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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 twenty-second report from the Communicable Disease Epidemiology Section since 1982. 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

Washington State has conducted surveillance for notifiable conditions since the 1880s. The rules for reporting notifiable conditions (Washington Administrative Codes 246-100 and 246-101) outline requirements for disease surveillance: healthcare providers and facilities, laboratories, veterinarians, food service establishments, childcare facilities and schools must notify local health jurisdictions and/or the Washington State Department of Health of certain conditions, including communicable diseases. The information collected in this system flows from local health jurisdictions to the Department of Health and on to the Centers for Disease Control and Prevention (CDC). This information is critical for two reasons: 1) it enables public health agencies to act quickly to prevent the spread of disease and, 2) it provides an overall picture of disease trends at the local, state and national levels. Analyzing these trends allows us to target resources where they are most needed and to assess our effectiveness in preventing and controlling disease.

This report summarizes trends in notifiable communicable diseases reported by local health jurisdictions to the Department of Health in 2006. There are several limitations to the accuracy of this information – sick people don't always seek health care and health care providers and others don't always recognize, confirm or report notifiable conditions. Therefore, reported cases may represent a fraction of the burden of disease.

The 2006 population estimates used for rate calculations in this report were provided by the Washington State Office of Financial Management, available online at http://www.ofm.wa.gov/pop/index.htm. Point estimates of disease rates are provided as the number of cases of a disease per 100,000 population without confidence intervals, a format intended for non-technical readers. At the county level, incidence rates are not provided for fewer than five cases. In addition, rates are not age-adjusted due to the small numbers of cases for many conditions.

This report is available online at:
http://www.doh.wa.gov/notify/survdata/survdata.htm.

The online newsletter, *Epitrends,* is available at:
http://static.doh.wa.gov/Publicat/EpiTrends/07_epitrends/2007_trend.htm.

This page also contains monthly tallies ("Morbidity Tables") of selected notifiable conditions by county. Additional information on communicable disease surveillance is available at: http://www.doh.wa.gov/Notify/list.htm or by contacting the Department of Health Communicable Disease Epidemiology Section, 206.418.5500.

For additional information about this report or to request a copy in an alternate format, contact:

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EXECUTIVE SUMMARY

In 2006, Washington State experienced its first endemically acquired cases of human West Nile virus (WNV) infection. In addition to three confirmed cases acquired in state, five other cases were travel-related. WNV activity was also identified in multiple counties through surveillance of dead birds and of horses with neurologic symptoms.

Foodborne illness outbreaks played a prominent role in 2006. A record outbreak of vibriosis (*Vibrio parahaemolyticus* infection) was associated with raw oysters harvested in Pacific Northwest waters. At least 50 other enteric and foodborne outbreaks were investigated by local health jurisdictions, including an outbreak of *Escherichia coli* O157:H7 infections related to raw milk from a commercial dairy and three scombroid toxin outbreaks related to contaminated fish. Collaborative investigations with multiple jurisdictions and agencies included a multi-state outbreak of *Salmonella* Tennessee linked to contaminated peanut butter and a multi-state outbreak of *Escherichia coli* O157:H7 associated with spinach. A single case of trichinosis was reported associated with raw cougar meat.

The most commonly reported conditions in Washington State continue to be sexually transmitted infections, illnesses caused by enteric bacteria, and pertussis. Rates of *Chlamydia trachomatis* infection remain high, with 17,819 infections reported in 2006 (279.5 cases/ 100,000 population). The rates both of primary and secondary syphilis (2.9 cases/100,000) and of gonorrhea (66.4 cases/100,000) continue to rise. Rates of foodborne and enteric disease are stable and below national averages reported by CDC, with the exception of campylobacteriosis and infections caused by Shiga toxin-producing *Escherichia coli*.

In 2006, the pertussis incidence rate (5.9/100,000) was the lowest point since 2001. The highest rate and the most serious illnesses continue to occur among children under one year of age, although 60% of pertussis in Washington occurs among those 10 years of age and older, who may have waning immunity. The licensing of an acellular pertussis vaccine (Tdap) for adolescents and adults in 2005 may have played a role in the drop in pertussis rates for 2006, not only by decreasing the rate of pertussis in this population but also by reducing an exposure source for unimmunized and underimmunized children.

During 2006, using more stringent mumps reporting guidelines instituted after an outbreak in the Midwest, seven confirmed and 34 probable mumps cases were identified in Washington. None were linked to the outbreak. Eleven had traveled during their likely exposure period, including two to Europe, one to the Bahamas, one to British Columbia, and one to the Philippines.

The decline in acute viral hepatitis A and B continues, reflecting the success of increased immunization coverage and harm reduction programs. Surveillance for hepatitis C remains challenging, as many infections are unrecognized, many are unreported, and resources to track and manage this infection are limited.

We hope that you find this summary useful. We are grateful to healthcare and other professionals who report notifiable conditions and to the staff of Washington's local health jurisdictions who contribute to disease surveillance, investigation and prevention in our state.

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. For a complete list of notifiable conditions for health care providers, hospitals, laboratories and veterinarians, please refer to the posters section at http://www.doh.wa.gov/notify.

LOCAL HEALTH JURISDICTIONS

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: 509-665-1509

Clallam County Health Department
360-417-2274 after hrs: 360-415-2005

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
360-414-5590 after hrs: 360-636-9595

Garfield County Health District
509-843-3412 after hrs: 509-843-3494

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: 360-415-2005

King County (Public Health – Seattle and King County)
AIDS/HIV: 206-296-4645
STDs: 206-731-3954
TB: 206-731-4579
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: 360-415-2005

Kittitas County Public Health Department
509-962-7515 after hrs: 800-839-1922

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

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

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

Mason County Health Department
360-427-9670 x274 after hrs: 911

Northeast Tri-County Health District
Ferry: 509-775-3111 after hrs: 911
Pend Oreille: 509-447-3131 after hrs: 911
Stevens: 509-684-5048 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

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
1-800-996-2526 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: 509-869-3133

Thurston County Health Department
360-786-5470 after hrs: 911

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

Walla Walla Health Department
509-524-2650 after hrs: 509-524-2650

Whatcom County Health Department
360-676-6724 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

November 2007

Notifiable Conditions & the Health Care Provider

Washington State Department of Health

The following conditions are notifiable to local public 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 [I]
Arboviral disease [3] (West Nile virus disease, dengue, Eastern & Western equine encephalitis, etc.)
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 [I] **(including Anthrax and Smallpox)**
Disease of suspected foodborne origin [I] **(clusters only)**
Disease of suspected waterborne origin [I] **(clusters only)**
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 years, excluding otitis media)**
Hantavirus pulmonary syndrome [3]
Hemolytic uremic syndrome (HUS) [I]
Hepatitis A, acute [I]
Hepatitis B, acute [3]; chronic [M] (initial diagnosis only)
Hepatitis B, surface antigen positive pregnant women [3]
Hepatitis C, acute and chronic [M] (initial diagnosis only)
Hepatitis, unspecified (infectious) [3]
Herpes simplex, genital (initial infection only) and neonatal [3]
HIV infection [3]
Immunization reactions [3] (severe, adverse)
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 [I] **(including congenital)**
Salmonellosis [I]
Shigellosis [I]
Syphilis [3] (including congenital)
Tetanus [3]
Trichinosis [3]
Tuberculosis [I]
Tularemia [3]
Typhus [I]
Vibriosis [3]
Yellow fever [I]
Yersiniosis [3]

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: [I] **Immediately,**
[3] Within 3 work days, [M] Within one month

Asthma, occupational (suspected or confirmed) [M]	**1-888-66-SHARP**
Birth Defects [M]: Autism spectrum disorders, Cerebral palsy, Alcohol related birth defects	**360-236-3533**
Pesticide Poisoning (hospitalized, fatal, or cluster) [I]	**1-800-222-1222**
Pesticide Poisoning (all other) [3]	**1-800-222-1222**

If no one is available at the local health jurisdiction and a condition is immediately notifiable, please call 1-877-539-4344

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

December 2007

Notifiable Conditions & Washington's Hospitals

Washington State Department of Health

The following conditions are notifiable to local public 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]
Arboviral disease [3] (West Nile virus disease, dengue, Eastern & Western equine encephalitis, etc.)
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 [I] **(including Anthrax and Smallpox)**
Disease of suspected foodborne origin [I] **(clusters only)**
Disease of suspected waterborne origin [I] **(clusters only)**
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 years, excluding otitis media)**
Hantavirus pulmonary syndrome [3]
Hemolytic uremic syndrome (HUS) [I]
Hepatitis A, acute [I]
Hepatitis B, acute [3]; chronic [M] (initial diagnosis only)
Hepatitis B, surface antigen positive pregnant women [3]
Hepatitis C, acute and chronic [M] (initial diagnosis only)
Hepatitis, unspecified (infectious) [3]
HIV infection [3]
Immunization reactions [3] (severe, adverse)
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 [I] **(including congenital)**
Salmonellosis [I]
Shigellosis [I]
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.)
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: [I] **Immediately,**
[3] Within 3 work days, [M] Within one month

Asthma, occupational (suspected or confirmed) [M]	**1-888-66-SHARP**
Birth Defects [M]: Abdominal wall defects, Autism spectrum disorders, Cerebral palsy, Down syndrome, Alcohol related birth defects, Hypospadias, Limb reductions, Neural tube defects, Oral clefts	**360-236-3533**
Gunshot Wounds [M]	**360-236-2867**
Pesticide Poisoning (hospitalized, fatal, or cluster) [I]	**1-800-222-1222**
Pesticide Poisoning (all other) [3]	**1-800-222-1222**

If no one is available at the local health jurisdiction and a condition is immediately notifiable, please call 1-877-539-4344

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

December 2007

Notifiable Conditions & Washington's Laboratories

Washington State Department of Health

The following laboratory results (preliminary or confirmed) are notifiable to local public health authorities in Washington in accordance with WAC 246-101. Timeframes for notification are indicated in footnotes. **Immediately notifiable results are indicated in bold**. Information provided must include: specimen type; name and telephone number of laboratory; date specimen collected; date specimen received; requesting health care provider's name and telephone number or address; test result; name of patient (if available) or patient identifier; sex and date of birth or age of patient (if available).

Arboviral disease (West Nile virus disease, dengue, Eastern & Western equine encephalitis, etc.) (detection of viral antigen, antibody, or nucleic acid) [2*]

Blood lead level (elevated) [2&i]

Blood lead level (non-elevated) [M&i]

Bordetella pertussis [2*]

Brucella [2*!]

CD4+ counts [M&ii]

Chlamydia trachomatis [2*]

Clostridium botulinum **[I*!]**

Corynebacterium diphtheriae [2*!]

Cryptosporidium parvum [2*]

Cyclospora cayetanensis [2*!]

Disease of suspected bioterrorism origin [I*!]
- **Anthrax *(Bacillus anthracis)* [I*!]**
- **Smallpox (Variola virus) [I*!]**

*Escherichia coli (*Shiga-like toxin only) [2*!]

Francisella tularensis [2*!]

Hepatitis A (IgM +) [2*]

Hepatitis B (detection of viral antigen, antibody, or nucleic acid) [M*]

Hepatitis C (detection of antibody or nucleic acid) [M*]

Human immunodeficiency virus (Western blot, P-24 antigen, or viral culture) [2&ii]

Human immunodeficiency virus (RNA or DNA nucleic acid tests) [M&iig]

Listeria monocytogenes [2*]

Mycobacterium tuberculosis [2&iii!@]

Neisseria gonorrhoeae [2*]

Neisseria meningitidis [2*!]

Rabies [I*]

Rubeola [I*!]

Salmonella species [2*!]

Shigella species [2*!]

Treponema pallidum [2!]

Rare 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 jurisdiction of the patient's residence
&i Notifiable to DOH Lead Program **360-236-3359**
&ii Notifiable to DOH IDRH Assessment **360-236-3419**
&iii Notifiable to DOH TB Reporting Line **360-236-3397**
or TB Reporting Fax Line **360-236-3405**
! Specimen submission required
@ 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 1-877-539-4344

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

December 2007

Notifiable Conditions & the Veterinarian

Washington State Department of Health

Veterinarians, including those working in private practices, laboratories, academic settings, zoos, wildlife centers, animal shelters and government agencies, have an important public health role in the identification and control of zoonotic and vector-borne diseases. **The Washington State Administrative Code (WAC 246-101-405) outlines these responsibilities for veterinarians:**

1. **Notify your local public health department* of any suspected or confirmed case or outbreak involving a disease of public health importance (see table below).**
2. **Cooperate with public health authorities in the investigation of suspected and confirmed cases or outbreaks of zoonotic disease.**
3. **Cooperate with public health authorities in the implementation of zoonotic disease infection control measures including isolation and quarantine when necessary.**

DISEASE OR CONDITION (report both suspected and confirmed cases or outbreaks)	Report immediately	Report within 7 work days
Animal bite to human	X	
Anthrax (*Bacillus anthracis*)	X	
Arthropod–borne viruses: West Nile virus; Eastern & Western equine encephalitis	X	
Bat bite or contact exposure to human or domestic animal	X	
Brucellosis *(Brucella arbortus, B. melitensis, B. suis, B. canis, B. ovis)*	X	
Herpes B virus	X	
Leptospirosis	X	
Plague (*Yersinia pestis*)	X	
Psittacosis/Ornithosis (*Chlamydophila psittaci*)	X	
Q Fever (*Coxiella burnetii*)	X	
Rabies	X	
Tick-borne diseases: Babesiosis, Relapsing fever (*Borrelia hermsii*) Lyme (*B. burgdorferi*), Rocky Mt. spotted fever (*Rickettsia rickettsii*)		X
Trichinosis (*Trichinella spiralis*)		X
Tuberculosis *(Mycobacterium tuberculosis, M. bovis)*	X	
Tularemia (*Francisella tularensis*)	X	
Other vector-borne or zoonotic disease of public health significance (examples: spongiform encephalopathies, Baylisascaris infection in a non-raccoon animal, avian influenza, emerging zoonoses as requested by public health officials)	X	

IMPORTANT NOTE: Selected animal diseases, especially in livestock and poultry, must be reported to the Washington State Department of Agriculture, State Veterinarian's Office. These include eradicated diseases (e.g., tuberculosis, brucellosis), suspected foreign animal diseases (e.g., foot and mouth disease, exotic Newcastle disease, hog cholera) and certain domestic diseases (e.g., anthrax, rabies).

For diseases reportable to both the Department of Agriculture and to Public Health, veterinarians can make just one report and the agencies will reciprocally share these reports.

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

2005

Communicable Disease Summary

ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)

See HIV infection/AIDS

ARBOVIRAL DISEASE

Arboviral diseases are transmitted by mosquitoes, other insects, and ticks. They include West Nile virus, dengue, St. Louis encephalitis, yellow fever (all flaviviruses), western equine encephalitis (an alphavirus), and others.

West Nile virus infection

In 1999, West Nile virus (WNV) was first identified in the western hemisphere in New York City. Since 1999, the virus has spread throughout most of North America, causing a major epizootic in birds and horses, as well as a human epidemic.

In humans, approximately 80% of WNV infections are asymptomatic. Twenty percent develop mild, self-limited febrile illness that may cause weakness and fatigue lasting weeks. Less than 1% of infected persons develop serious neuroinvasive disease (meningitis, encephalitis, acute flaccid paralysis, or other neurologic manifestations). The case-fatality rate for severe WNV infection 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 using appropriate personal protection to avoid mosquito bites, reducing mosquito breeding sources, and mosquito-proofing residences.

In 2006, the first human WNV infections acquired in Washington were reported in two patients in Pierce County and one in Clark County. Each of these patients presented with non-neuroinvasive disease. Five cases of non-neuroinvasive WNV infections were reported in Washington residents who acquired the disease outside of Washington. In addition, a blood bank reported a presumptive viremic donor identified through blood donation screening. The donor was a King County resident who did not develop symptoms of disease and acquired the infection in Oregon or California. There were no reports of patients with neuroinvasive WNV disease in Washington in 2006.

Other arboviral diseases

In Washington, endemically acquired cases of western equine encephalitis (WEE) and St. Louis encephalitis (SLE) were documented in the Yakima Valley during the 1930s, 1940s, 1970s and early 1980s. These viruses are 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 Washington. In 2005, a sentinel chicken in Benton County tested positive for SLE antibodies, although no human cases were identified.

In 2006, four cases of dengue fever were reported in Washington. Three were reported in King County residents and one in a San Juan County resident. All acquired the infections

while traveling (in Honduras, Costa Rica, Sri Lanka, Ethiopia and Burundi). In addition, one King County resident acquired chikungunya fever while traveling in Sri Lanka. Information for travelers is available from travel clinics and the CDC Travelers' Health Web site at http://www.cdc.gov/travel.

BOTULISM

Botulism is caused by a neurotoxin produced by *Clostridium botulinum* bacteria which can be found in soil, agricultural products and animal intestinal tracts. Rarely, other clostridial species produce the neurotoxin and cause illness. Botulism occurs naturally in three forms: foodborne, infant and wound. All result in flaccid paralysis caused by botulinum neurotoxin. In addition, historically there have been a few, rare cases of inhalational botulism occurring in laboratory workers. Inhalational botulism does not occur naturally. *C. botulinum* is a potential agent of bioterrorism.

Foodborne (classic) botulism results from ingestion of botulinum toxin present in contaminated food and is an illness of variable severity. Symptoms initially include blurred or double vision, drooping eyelids, dysarthria, dysphagia, dry mouth, and weakness progressing to descending, symmetrical flaccid paralysis. Neurologic symptoms usually appear hours to days after ingestion of contaminated food. With supportive care and administration of botulinum antitoxin, mortality is 5% to10%; recovery may take months. Typical exposures are home-canned vegetables with neutral pH. Foodborne botulism in Washington has been associated with improperly home-canned vegetables including asparagus, beets, corn, carrots, green beans, spinach and salsa.

Infant botulism results from ingestion and intestinal growth of toxigenic *C. botulinum* spores. It affects infants under one year of age. Rarely, adults with gastrointestinal anatomy altered by surgery or illness may develop the related illness, adult colonization botulism. Symptoms for infants may include constipation, poor feeding and failure to thrive that may be followed by progressive weakness, impaired respiration and death. With supportive treatment and administration of human-derived botulism immune globulin, mortality is low. Raw honey consumption has been implicated in some, though not all, cases of infant botulism.

Wound botulism results from tissue infected with toxigenic *C. botulinum*. Symptoms of wound botulism are the same as those seen with foodborne botulism. Treatment is administration of botulinum antitoxin and antibiotics, followed by wound debridement. Most cases in Washington have been associated with subcutaneous injection of black tar heroin that is cut with various agents that contaminate the product.

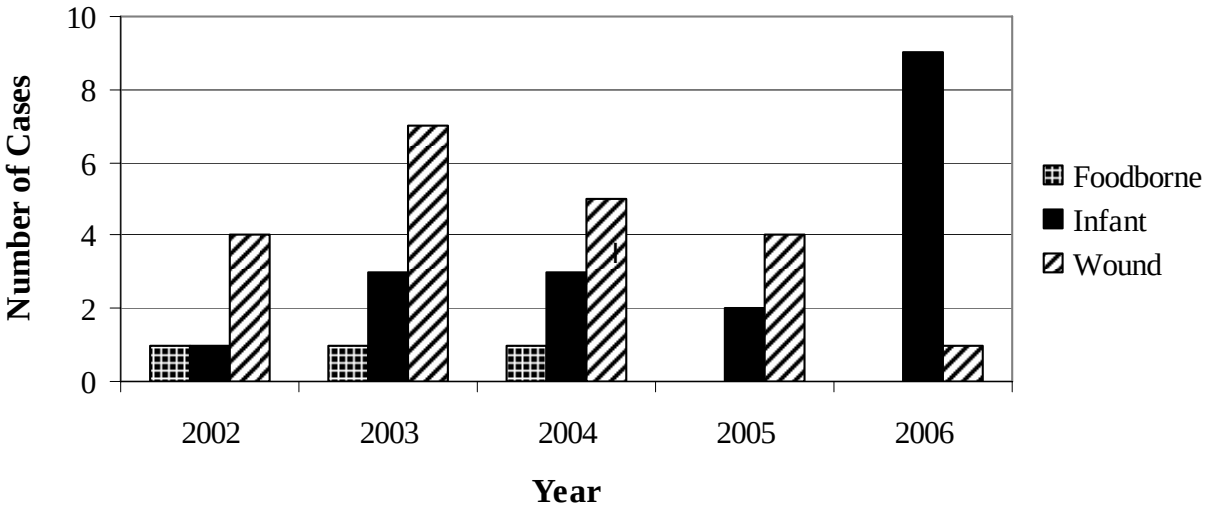
Inhalational botulism does not occur naturally but may occur if botulinum toxin is aerosolized. Inhalational botulism is clinically indistinguishable from the three naturally occurring forms. Suspected or confirmed cases in individuals without an appropriate exposure history (e.g., laboratory exposure) should raise the index of suspicion for a bioterrorism attack.

The number of cases of foodborne and infant botulism has remained fairly constant in recent years, with minimal numbers reported. In Western states, including Washington, wound

botulism has increased with the growing use of black tar heroin. Proper home-canning methods, avoiding honey for infants, and avoiding subcutaneous heroin injection constitute preventive measures.

Botulism is an immediately notifiable condition in Washington State. In 2006, nine cases of infant botulism were reported in Washington, ranging in age from 4 months to 9 months. One case of wound botulism (type B) occurred in an injection drug user associated with black tar heroin. No cases of foodborne botulism were reported in Washington in 2006.

Figure 1. Botulism - reported cases by category of disease, 2002-2006



BRUCELLOSIS

Brucellosis is a systemic bacterial infection caused by several species of *Brucella,* most commonly *B. abortus* or *B. melitensis.* The onset of symptoms may be acute or insidious (persistent and subtle) for weeks or months. Symptoms include intermittent fever, chills, sweating, headache, weakness, weight loss and fatigue.

Brucellosis is usually associated with the consumption of unpasteurized dairy products in developing countries. Exposure has also occurred in clinical laboratory workers handling blood cultures of infected individuals. Occupational exposure of slaughterhouse workers and veterinarians to infected placentas and tissues would be unusual since herd management has eradicated brucellosis from most confined livestock in the United States.

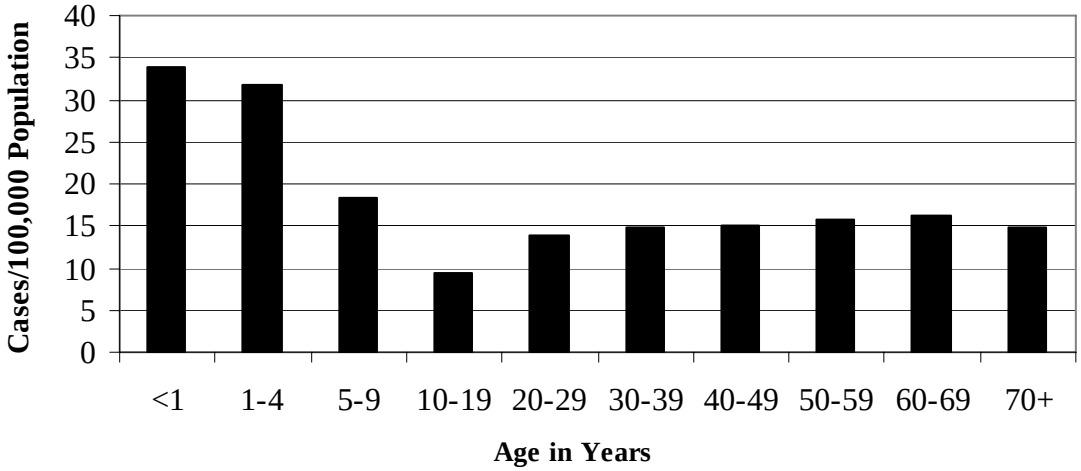
An average of one case per year is reported in Washington. During 2006, a resident of Mexico became ill with brucellosis while visiting Washington. There were no cases of brucellosis reported in Washington residents in 2006. Brucellosis is a potential agent of bioterrorism and is an immediately notifiable condition in Washington.

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. larii, C. laridis,* and *C. fetus,* have also been associated with illness.

Campylobacteriosis was the most frequently reported enteric disease in Washington in 2006, representing 48% of all bacterial enteric disease reports. There were 993 campylobacteriosis cases (15.6 cases/100,000 population) reported in 2006 by 32 counties, consistent with disease rates for the previous five years. The highest rate was among those under one year of age (34.0 cases/100,000 population). The rate in the 1−4 year age group was 31.8 cases/100,000 population.

Figure 2. Campylobacteriosis - incidence by age group, 2006*

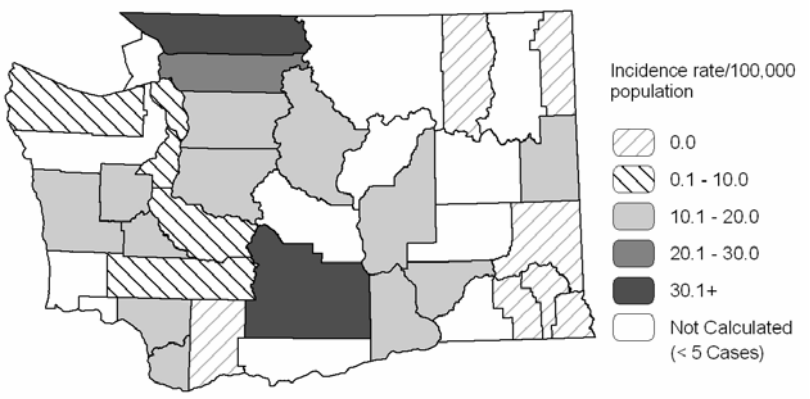


*Age unknown for one case

Submission of *Campylobacter* isolates to the Washington State Department of Health Public Health Laboratories (PHL) is not required, but identification of species and relatedness of organisms can assist in outbreak detection. The species of *Campylobacter* was determined for 50% of reported cases in 2006. Of the 499 cases with known species, 99% were *C. jejuni.* There were three *C. coli* isolates and one *C. laridis* isolate. One restaurant outbreak was reported, with eight confirmed and two probable campylobacteriosis cases.

Cases of campylobacteriosis occur year round, but peaks are commonly seen in summer months. In 2006, 959 cases (97%) had reported onset dates. Of these, 40% had onset of illness during the months of May through August. Outbreaks of campylobacteriosis do not occur as commonly as other enteric diseases, possibly due to the relative fragility of the microorganism in the environment and low rate of person-to-person spread.

Figure 3. Campylobacteriosis - incidence by county, 2006



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.

Prevalent primarily in tropical and subtropical regions of the world, chancroid is much less common in temperate zones where it infrequently occurs in small outbreaks. In the United States, outbreaks and some endemic transmission are observed, principally among migrant farm workers and inner-city residents. Chancroid is most often diagnosed in men who present with genital ulcers or inguinal tenderness. Depending on the site of the ulcer, women may have less obvious symptoms. Chancroid, like other genital ulcer diseases, is associated with an increased susceptibility to, or risk of, human immunodeficiency virus (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.

No cases of chancroid were reported in Washington State in 2006. Seventeen cases were reported nationally in 2005, with North Carolina reporting 29% of the cases. (National figures for 2006 were not available at the time of printing.)

CHLAMYDIA TRACHOMATIS

Infection with *Chlamydia trachomatis* is the most common notifiable condition both in the United States and in Washington State. The bacterium is transmitted through sexual contact with an infected person. Asymptomatic infection is common among both males and females and contributes to the spread of disease. 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, chlamydial infection may enhance the transmission of HIV.

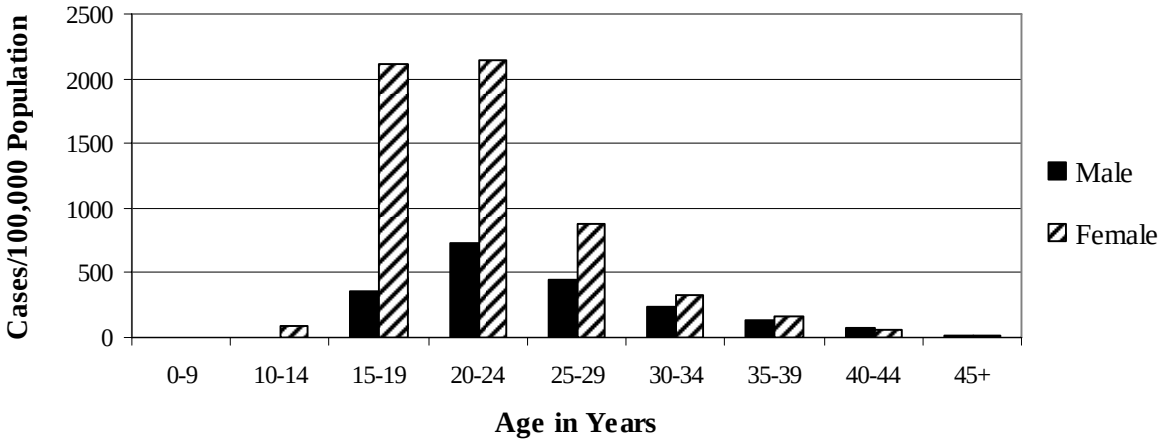
Current recommendations for diagnosis and treatment of chlamydial infection in adults, pregnant women and infants can be found in the CDC STD Treatment Guidelines, available at www.cdc.gov/STD/treatment.

In 2006, 17,819 cases of chlamydial infection (13,021 females and 4,798 males) were reported in Washington for a crude rate of 279.5 cases/100,000 population. Of these cases, 1,034 (6%) were also infected with *N. gonorrhoeae*. This compares to 18,617 cases of chlamydia (297.6 cases/100,000 population) reported in 2005. Chlamydia cases and rates increased steadily from 1997 to 2005 but decreased slightly (4%) in 2006.

Many providers of reproductive health and STD services selectively target women for chlamydial screening, which may help account for the high female to male ratio (2.7:1) observed among reported cases in the surveillance data. The population targeted by the Infertility Prevention Project, the major provider of public funding for chlamydia screening, is young sexually active women.

Chlamydial infection is common among sexually active teens (in 2006, 5,475 cases; 31% of reports) and is often more prevalent among female adolescents, who are physiologically more susceptible to infection with chlamydia than older women. For ages 15−19 years, the incidence rate was 2,074.5 cases/100,000 population for females and 352.7 cases/100,000 population for males. For ages 20−24 years, the rate was 2,168.8 cases/100,000 population for females and 728.0 cases/100,000 population for males.

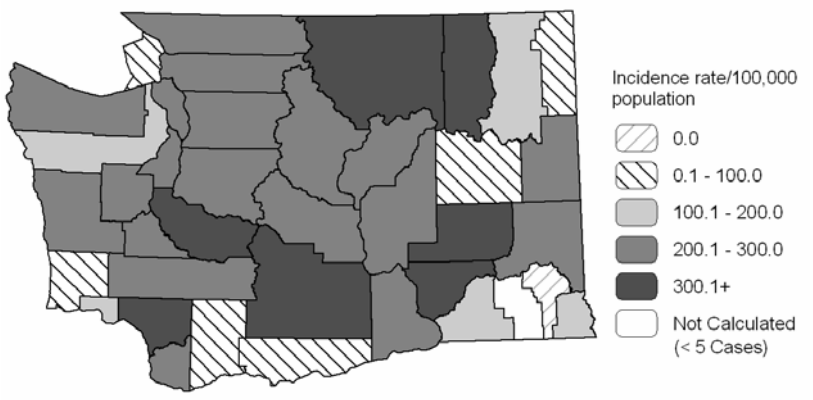
Figure 4. *Chlamydia trachomatis* - incidence by sex and age group, 2006



The CDC STD Treatment Guidelines recommend that all women (especially those under 20 years of age) diagnosed with chlamydial infection 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 chlamydial infection. In 2006, of 13,021 chlamydial infections reported among Washington females, 1502 (12%) were recurrent infections (i.e., previous infection in the past twelve months). Of the 1,836 total recurrent cases among both males and females, 778 (42%) were teenagers.

Thirty-eight of the thirty-nine Washington counties reported cases of chlamydial infection in 2006. The highest incidence rates were in Yakima (483.2 cases/100,000 population) and Franklin (442.4 cases/100,000 population) Counties.

Figure 5. *Chlamydia trachomatis* - incidence by county, 2006



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. *V. cholerae* is a major cause of epidemic diarrheal disease in Asia, Africa and Latin America. The bacteria are carried only by humans and are spread 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 non-O139, are notifiable as vibriosis.

Cases of cholera are occasionally reported in Washington following travel to endemic areas. No cases of toxigenic *V. cholerae* infection were reported in Washington in 2006. During the past 10 years, one case was reported in 2002 related to travel to the Philippines. Information for travelers is available from travel clinics and the CDC Travelers' Health website at http://www.cdc.gov/travel.

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 who are immunocompromised, especially those with advanced HIV infection, the disease can be serious and persist for long periods of time.

Transmission is via the fecal-oral route, through ingestion of contaminated food or water or by direct contact with infected humans or animals, particularly calves. Outbreaks have 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 and other chemical 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* due to the organism's resistance to standard disinfectants. Healthcare providers suspecting cryptosporidiosis must specifically request stool testing for *C. parvum* as this test may not be routinely performed by clinical laboratories.

Cryptosporidiosis became a notifiable condition in Washington in December 2000. There were 95 cases reported in Washington in 2006 (1.5 cases/100,000 population). Exposures included recreational water exposure, international travel, and raw milk or unpasteurized dairy products. No cryptosporidiosis outbreaks were identified in 2006.

CYCLOSPORIASIS

Cyclosporiasis is a parasitic disease caused by *Cyclospora cayetanensis*. Symptoms include persistent watery diarrhea, nausea, anorexia, abdominal pain, fatigue and weight loss; fever is rare. Transmission is primarily via the fecal-oral route through ingestion of contaminated food or water. Fresh fruits and vegetables such as raspberries, basil and lettuce have been implicated in national and international outbreaks of cyclosporiasis. Exposure is most common in developing countries.

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

Cyclosporiasis became a notifiable condition in Washington in December 2000. One case, an adult, was reported in Washington in 2006 and involved exposures during international travel. Prevention information for travelers is available from travel clinics and the CDC Travelers' Health Web site at http://www.cdc.gov/travel.

DIPHTHERIA

Diphtheria is a bacterial disease caused by a toxigenic strain of *Corynebacterium diphtheriae*, usually involving the upper respiratory tract (pharyngeal diphtheria), the skin (cutaneous diphtheria) or, rarely, other mucous membranes. The toxin produced by *C. diphtheriae* causes inflammation, swelling, and the formation of a characteristic grayish-white membrane on the lesions it produces. In severe cases of pharyngeal diphtheria, the inflammation is progressive and can cause airway obstruction. The toxin can also affect the myocardium and nerves. The case fatality rate in non-cutaneous diphtheria cases is 5–10%. Transmission occurs through direct contact with respiratory secretions or discharge from lesions of an infected person, or through contact with articles soiled by such secretions or exudates.

Diphtheria is an immediately notifiable condition in Washington. However, diphtheria is no longer endemic anywhere in the United States. The rare diphtheria case reported in the United States is usually associated with international travel. Only infections caused by toxigenic strains of *C. diphtheriae* are counted as diphtheria cases. The last case of toxigenic diphtheria reported in Washington occurred in 1979. The Washington State Public Health Laboratories occasionally receive *C. diphtheriae* isolates from skin lesions or other sites. Testing for toxigenicity is always done in these instances.

When diphtheria is present in a community, inapparent infections (colonizations) will outnumber clinical cases. Therefore, continued control of this disease is dependent upon maintaining high rates of immunization with diphtheria toxoid. This is available as DTaP (diphtheria and tetanus toxoids and acellular pertussis vaccine) and is a part of the recommended schedule for routine childhood immunization. Because of waning antitoxin titers, diphtheria toxoid should be given with tetanus toxoid at least every ten years as Td (tetanus and reduced diphtheria toxoid). Tdap (tetanus reduced diphtheria toxoids and cellular pertussis vaccine) was licensed in 2005 and is approved for a single dose given to adolescents and adults.

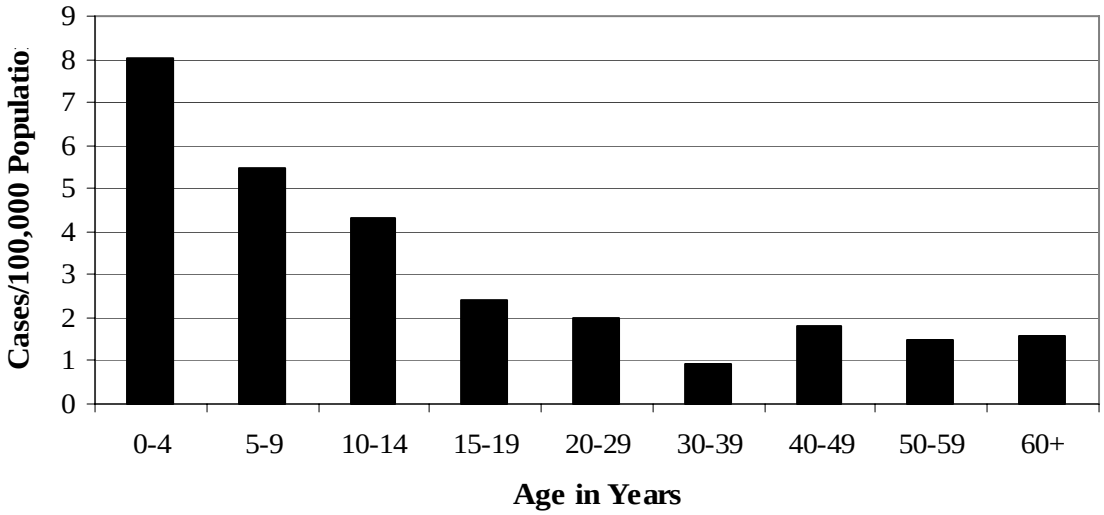
ENTEROHEMORRHAGIC *ESCHERICHIA COLI*

Infections caused by *Escherichia coli* O157:H7 and other Shiga toxin-producing *E. coli* serotypes are notifiable as enterohemorrhagic *E. coli*. Symptoms include bloody diarrhea and abdominal pain, usually without fever. Serious complications include hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP). Enterohemorrhagic *E. coli* cases include persons with positive cultures for *E. coli* O157:H7, *E. coli* O157 or other Shiga toxin-positive strains, positive assays for Shiga toxin or post-diarrheal HUS. HUS without preceding diarrhea or laboratory confirmation of an agent is a separately notifiable condition.

Enterohemorrhagic *E. coli* is an immediately notifiable condition in Washington. In 2006, 162 cases (2.5 cases/100,000 population) were reported in Washington with no deaths. Of these, 124 cases (77%) were infected with *E. coli* O157:H7. There were nine cases of O157:NM, one case of *E. coli* O26:H11, two cases of *E. coli* O121:H19, one case of O111, and 25 cases (15%) with unknown serotype. HUS occurred as a complication in thirteen cases, nine of which were age 10 or younger.

In 2006, children under 5 years of age had the highest incidence of *E. coli* infection in Washington, with 8.0 cases/100,000 population. This group is at highest risk of developing HUS as a complication of infection. Treatment with antibiotics may increase this risk. Children 5−9 years of age also had an elevated incidence, with 5.5 cases/100,000 population.

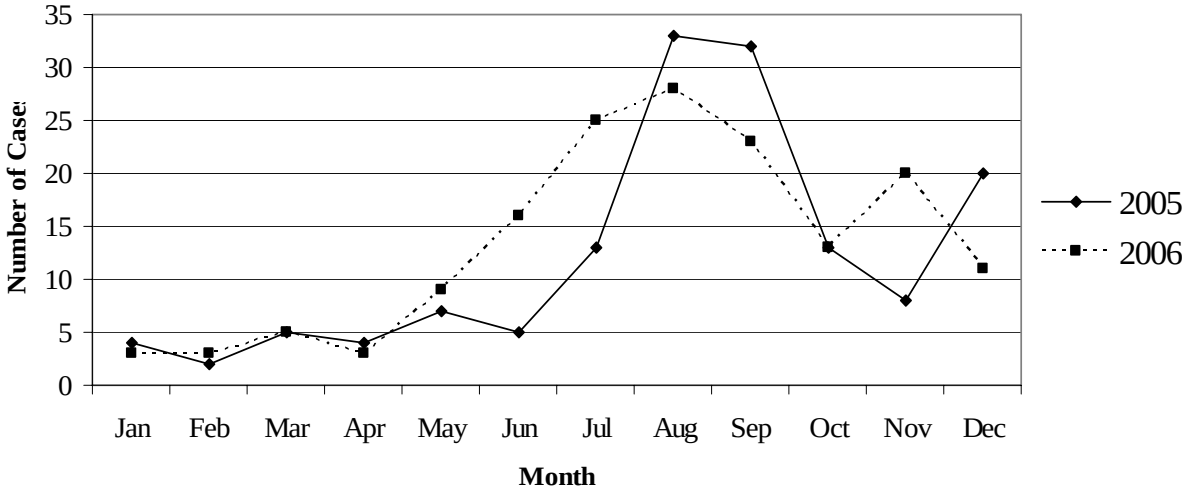
Figure 6. Enterohemorrhagic *E. coli* - incidence by age group, 2006*



*Age unknown for three cases

Infection with enterohemorrhagic *E. coli* is seasonal, with the majority of cases occurring during the summer months. In 2006, 56% of reported cases with onset date reported had an onset of illness during the months of June through September. Reported outbreaks in 2006 included a national outbreak associated with bagged spinach (three Washington cases) and another outbreak associated with raw milk (two cases).

Figure 7. Enterohemorrhagic E. coli - reported cases by month of onset, 2005-2006

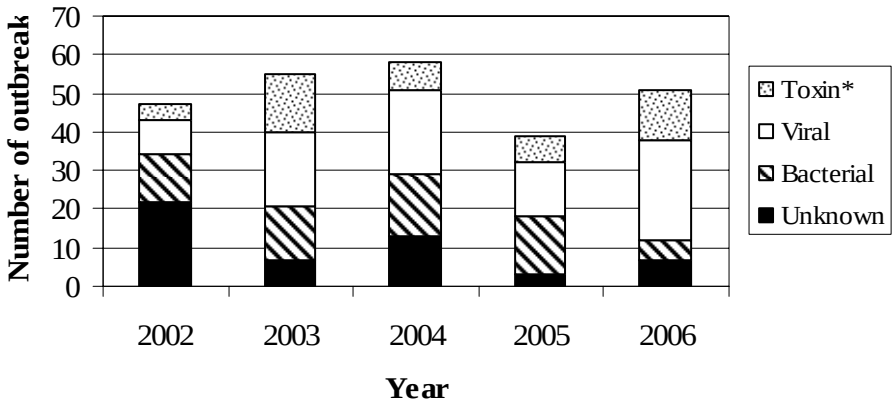


FOODBORNE OUTBREAKS

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* in 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, Shigella and Vibrio* species.

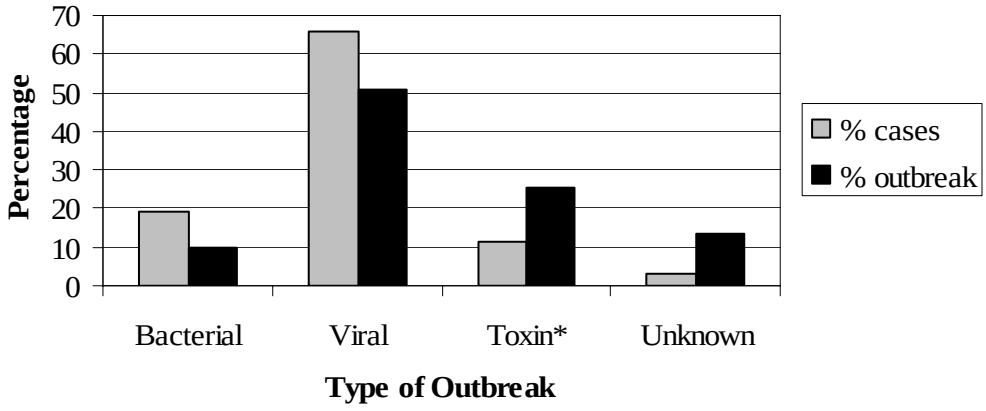
Clusters of diseases of suspected foodborne origin are immediately notifiable in Washington. The number of reported foodborne outbreaks likely represents only a small proportion of actual events, and reports can vary considerably from year to year. In 2006, 51 foodborne outbreaks, affecting approximately 677 persons (105 laboratory-confirmed cases), were reported in Washington. The majority (26; 51%) of reported foodborne outbreaks had a viral etiology. Outbreaks of bacterial origin comprised a smaller percentage of reported outbreaks in 2006 compared with past years. The median number of persons affected per outbreak was five, ranging from two to 77. Nine outbreaks had confirmed etiology (two or more cases laboratory confirmed): five viral, one *E. coli* O157:H7, one salmonellosis, one campylobacteriosis, and one vibriosis.

Figure 8. Foodborne outbreak etiology, 2002 - 2006



* Includes C. perfringens, B. cereus

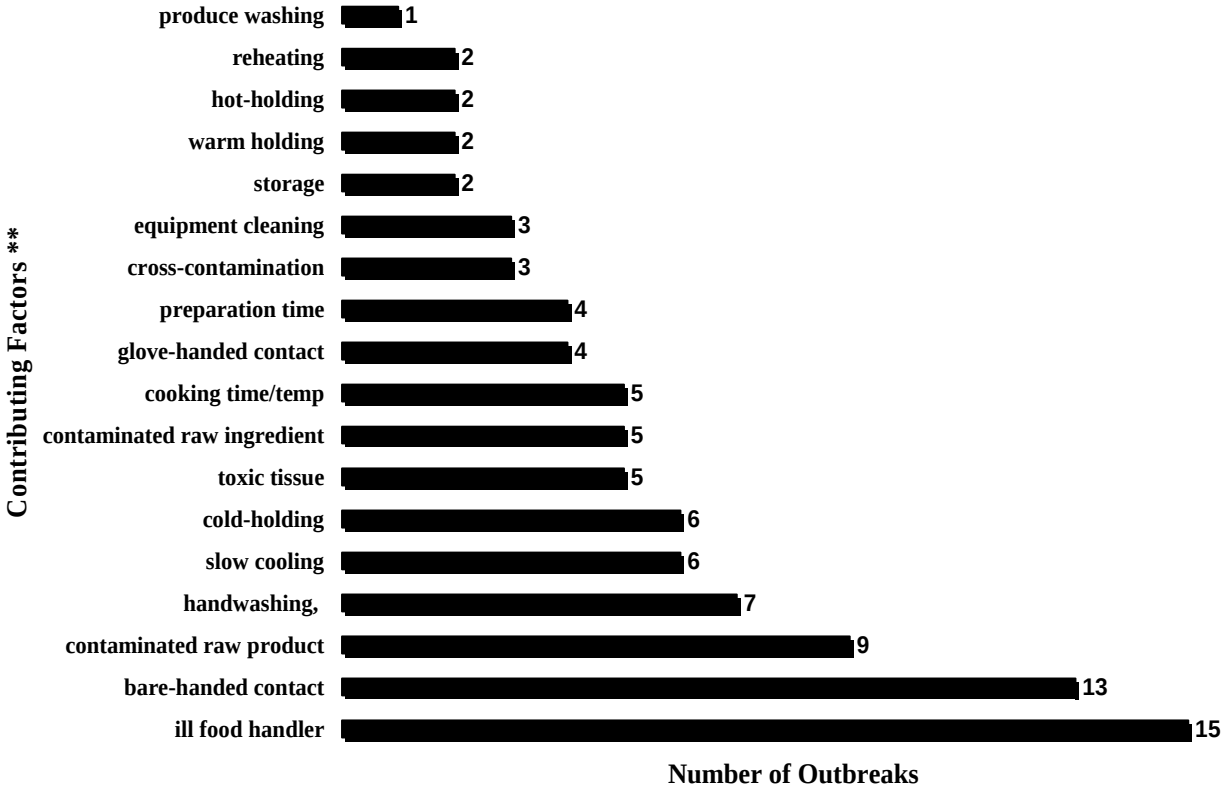
Figure 9. Foodborne outbreaks/cases by type, 2006



* Includes C. perfringens, B. cereus

Thirty-six of the 51 reported outbreaks (71%) involved restaurant settings. Four (8%) involved distributed commercial product: oysters, peanut butter, raw milk, and bagged spinach. Factors contributing to foodborne outbreaks included contaminated raw product, contamination by ill food handlers, bare-handed contact, and improper preparation and storage of foods that enabled bacterial growth or viability.

Figure 10. Foodborne outbreaks - contributing factors, 2006*



* 9 outbreaks with unknown contributing factors
** More than one contributing factor may be identified in a single outbreak

A complete list of foodborne outbreaks reported in 2006, including etiology and contributing factors, is contained in Table 1.

Table 1. FOODBORNE OUTBREAKS REPORTED TO WASHINGTON STATE DEPARTMENT OF HEALTH, 2006

NO.	MTH	COUNTY	# ILL	# LAB CONFIRMED	AGENT	VEHICLE	EVIDENCE^ (Vehicle)	PREP PLACE	CONTRIBUTING FACTORS
1	Jan	Snohomish	5	0	Bacterial toxin*	Restaurant meal	N/A	Restaurant	unknown
2	Jan	San Juan	32	0	*Clostridium perfringens**	Taco spiced ground beef	5	School	preparation time; slow cooling; inadequate cold-holding; insufficient reheating
3	Feb	King	6	0	Viral gastroenteritis*	Buffet meal	N/A	Restaurant	inadequate handwashing
4	Feb	King	3	0	Unknown	Chicken satay with peanut sauce	1,3	Restaurant	cross contamination; preparation time; warm holding; slow cooling; inadequate cold-holding; insufficient cooking time/temp; insufficient reheating
5	Mar	Jefferson	7	0	Bacterial toxin*	Appetizers	3	Restaurant	bare-handed contact
6	Mar	Yakima	6	0	Viral gastroenteritis*	Green salad	3	Restaurant	contaminated raw product; glove-handed contact; ill food handler
7	Apr	King	43	0	Viral gastroenteritis*	Shrimp	1	Private Club	ill food handler; inadequate equipment cleaning; inadequate handwashing
8	Apr	Skagit	14	0	Viral gastroenteritis*	Cake	3	Nursing Home	ill food handler
9	May	Thurston	3	0	Mushroom toxin*	Wild Mushrooms	3	Residence	toxic food product
10	May	Yakima	10	8	*Campylobacter jejuni*	Lettuce	1	Restaurant	cross contamination; bare-handed contact; inadequate handwashing; warm holding; inadequate produce washing
11	May	King	4	0	Viral gastroenteritis*	Sandwiches	3	Restaurant	ill food handler
12	May	Multiple**	113	72	*Vibrio parahaemolyticus*	Oysters	3	Distributed product	contaminated raw product; inadequate cold-holding; insufficient cooking time/temp
13	Jun	King	5	0	Bacterial toxin*	Pork fried rice	1,3	Restaurant	food storage
14	Jun	King	8	0	Viral gastroenteritis*	Restaurant meal	N/A	Restaurant	glove-handed contact; ill food handler; food storage
15	Jun	Grant	77	4	Norovirus	Burger stand	1,3	Food Booth	ill food handler
16	Jun	Jefferson	5	0	Viral gastroenteritis*	Salad with Pecans	3	Restaurant	bare-handed contact
17	Jun	Jefferson	3	0	Unknown	Restaurant meal	N/A	Restaurant	slow cooling; inadequate cold-holding; preparation time; inadequate handwashing
18	Jun	King	2	0	Scombrotoxin*	Ahi tuna	1,3	Restaurant	toxic food product; contaminated raw product
19	Jun	Kitsap	38	0	Viral gastroenteritis*	Restaurant meal	N/A	Restaurant	ill food handler
20	Jun	Clallam	2	0	Unknown	Caesar Salad	3	Restaurant	unknown
21	Jun	King	4	0	Scombrotoxin*	Ahi tuna	5	Restaurant	toxic food product; contaminated raw product
22	Jul	Snohomish	2	0	Bacterial toxin*	Restaurant meal	N/A	Restaurant	bare-handed contact
23	Jul	Skagit	11	1	Viral gastroenteritis	Restaurant meal	N/A	Restaurant	unknown
24	Jul	King	2	0	Unknown	Shellfish	3	Restaurant	toxic food product
25	Aug	Clark	5	0	Bacterial toxin*	Catered lunch	N/A	Workplace/catered	unknown
26	Aug	King	3	0	Viral gastroenteritis*	Restaurant meal	N/A	Restaurant	bare-handed contact
27	Aug	Asotin	31	2	Norovirus	Restaurant meal	N/A	Restaurant	bare-handed contact; ill food handler

Table 1. FOODBORNE OUTBREAKS REPORTED TO WASHINGTON STATE DEPARTMENT OF HEALTH, 2006

NO.	MTH	COUNTY	# ILL	# LAB CONFIRMED	AGENT	VEHICLE	EVIDENCE^ (Vehicle)	PREP PLACE	CONTRIBUTING FACTORS
28	Aug	Thurston	4	0	Unknown	Restaurant meal	N/A	Restaurant	bare-handed contac:; nsufficient cooking time/temp
29	Aug	out of state res.	3	3	*E. coli* O157:H7	Bagged Spinach	1,2	D stributed product	contaminated raw ingredient; contaminated raw product
30	Aug	Clark	25	1	Norovirus	Catered picnic	N/A	Private party/catered	bare-hanced contact; ill food handler
31	Sep	King	4	0	Viral gastroerteritis*	Restaurant meal	N/A	Restaurant	bare-handed contact; inadequate handwashing
32	Sep	King	2	0	Scombrotoxin*	Hamachi (Yellowtail) fish	3	Restaurant	toxic food product; contaminated raw product
33	Sep	Multiple**	2	0	*E. coli* O157:H7*	Raw milk	3	D stributed product	contaminated raw ingredient; contaminated raw product
34	Oct	King	4	0	Unknown	Restaurant meal	N/A	Restaurant	cross contamination; prepa ation time; bare-handed contact; inadequate equipment cleaning; nadequate handwashing; insufficient hot-holding
35	Oct	King	5	0	Viral gastroerteritis*	Restaurant meal	N/A	Restaurant	bare-handed contact; glove-handed contact; ill food handler; slow cooling; inadecuate cold-ho ding ; insufficient cooking time/temp
36	Oct	Clark	16	4	Norovirus	Restaurant meal	N/A	Restaurant	bare-hanced contact; ill food handler
37	Oct	King	3	0	Bacterial toxin*	Restaurant meal	N/A	Restaurant	slow cooling
38	Oct	King	6	0	Bacterial toxin*	Restaurant meal	N/A	Restaurant	inadequate equipment cleaning;inadequate cold-holding; insufficient hot-holding; insufficient cooking time/temp
39	Oct	out of state res.	4	4	*S. Tennessee*	Peanut butter	1, 2	D stributed product	unknown
40	Oct	King	10	2	Norovirus	Oysters	1, 3	Restaurant	contaminated raw ingredient; contaminated raw product
41	Oct	King	8	0	Viral gastroerteritis*	Sub sandwiches	1,3	Restaurant	ill food handler inadequate handwashing
42	Nov	Cowlitz	25	4	Norovirus	Frosted bars	1	Banquet	glove-handed contact; ill food handler
43	Nov	King	4	0	Viral gastroerteritis*	Oysters	3	Food Market	contaminated raw ingredient
44	Dec	Snohomish	3	0	Unknown	Restaurant meal	N/A	Restaurant	unknown
45	Dec	King	2	0	Bacterial toxin*	Restaurant meal	N/A	Restaurant	contaminatec raw product slow cooling
46	Dec	Che an	18	0	Viral gastroerteritis*	Cheesecake	1	Restaurant	unknown
47	Dec	Pierce	17	0	Viral gastroerteritis*	Catered lunches	N/A	Workplaces/catered	unknown
48	Dec	Che an	10	0	Viral gastroerteritis*	Salad bar	3	Restaurant	bare-hanced contact; ill food handler
49	Dec	King	46	0	Viral gastroerteritis*	Fruit	3	Restaurant	ill food handler
50	Dec	King	4	0	Viral gastroerteritis*	Oysters	3	Food Market	contaminated raw ingredient
51	Dec	Pierce	8	0	Viral gastroerteritis*	Home prepared meal	N/A	Private party	unknown
		Total	**677**	**105**					

* agent not lab confirmed

** part of larger cluster

^ Supporting evidence for vehicle: 1 - Statistical evidence from epidemiologic investigation; 2 - Laboratory evidence; 3 - Compelling supportive information; 4 - Other data; 5 - Specific evidence lacking, but prior experience makes this likely; N/A - not applicable

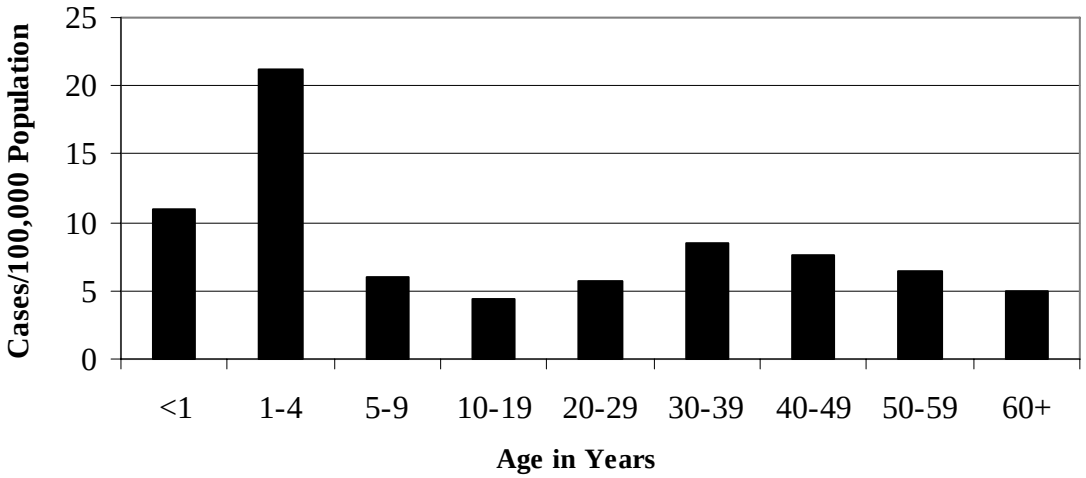
GIARDIASIS

Giardiasis is a diarrheal illness caused by the parasite *Giardia lamblia* (also known as *G. intestinalis* or *G. duodenalis)* that can 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 transmission is via the fecal-oral route through ingestion of contaminated drinking water, recreational water, or food. Person-to-person transmission can occur, especially among children in child care facilities, or through 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.

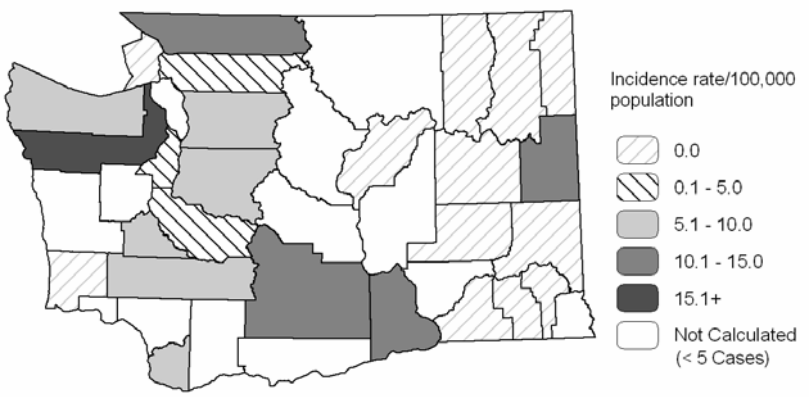
In 2006, 451 cases of giardiasis were reported (7.1 cases/100,000 population) from 27 counties in Washington, a number comparable to previous years. The age-specific incidence was highest in children under 5 years of age (21.2 cases/100,000 population). Forty-eight percent of cases with known onset date reported illness onsets in June through September, coinciding with peak recreational exposure to untreated water. Forty-two cases reported international travel, 115 reported recreational water exposure and 86 reported drinking unchlorinated water. No outbreaks of giardiasis were identified in 2006.

Figure 11. Giardiasis - incidence by age group, 2006*



*Age unknown for one case

Figure 12. Giardiasis - incidence by county, 2006



GONORRHEA

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

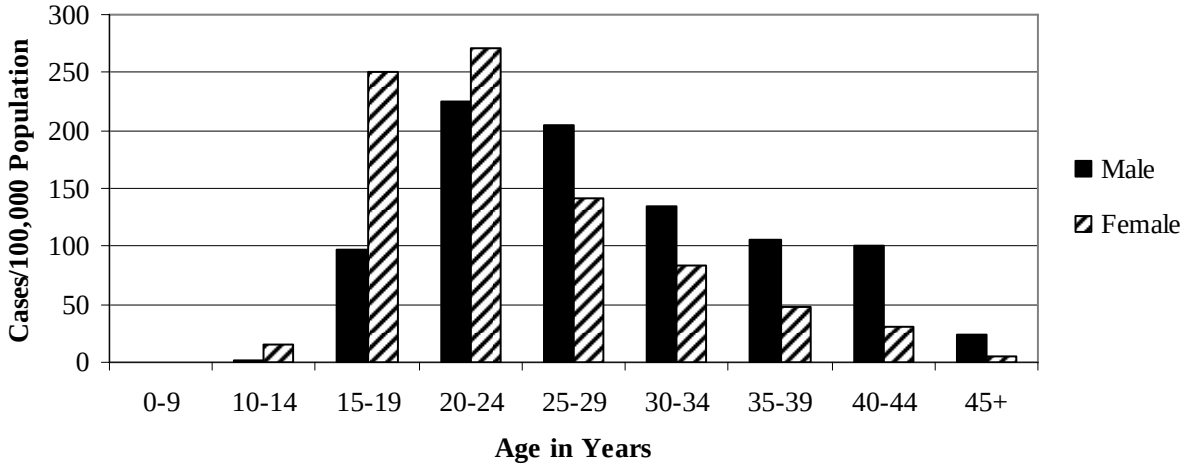
The most common complication of untreated gonorrhea in women is pelvic inflammatory disease (PID) which can result in infertility, ectopic pregnancy and chronic pelvic pain. The most common complication in men is epididymitis. Gonococcal conjunctivitis may result from perinatal transmission, but is rare in the United States where post-partum ocular prophylaxis is used (mandated in Washington State). Epidemiologic studies provide strong evidence that gonococcal infections may facilitate HIV transmission.

Certain strains of *N. gonorrhoeae* cause minimal initial genital symptoms but if untreated can spread through the blood causing arthritis, tenosynovitis, perihepatitis, and petechial or pustular skin lesions. This is called disseminated gonococcal infection (DGI). DGI has been quite rare since the 1970s; however, twelve cases were reported in Washington in 2006. Clinicians statewide have been alerted to be more aware of the potential for disseminated infection as gonorrhea case counts and rates have risen markedly in the last couple of years.

The CDC's Gonococcal Isolate Surveillance Project (GISP), which monitors antimicrobial susceptibility of gonorrhea in sentinel sites around the Untied States, including Seattle, has found increasing prevalence of quinolone-resistant *Neisseria gonorrhoeae* (QRNG). In light of the recent finding in April 2007, CDC is now recommending that fluoroquinolones (ciprofloxacin, levofloxacin and ofloxacin) should no longer be used for treatment of gonorrhea or PID. In response to early findings of the GISP, Washington State first recommended fluoroquinolones no longer be used as the first-line treatment for gonorrhea in March 2004. 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 can be found in the CDC STD Treatment Guidelines, available at www.cdc.gov/STD/treatment.

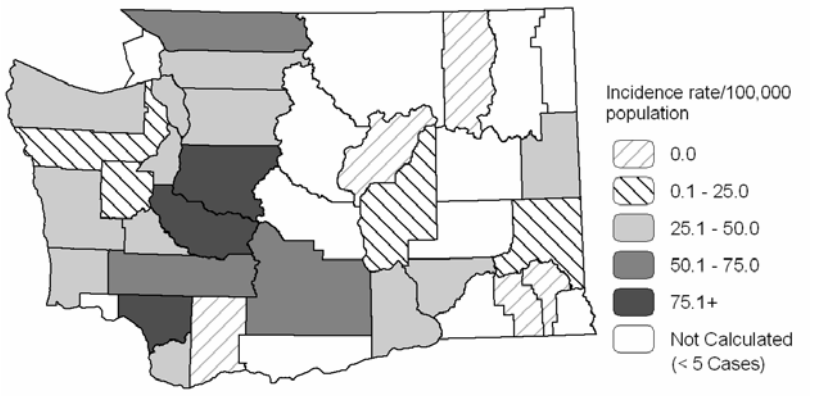
In 2006, 4,231 cases of gonorrhea (2,293 males and 1,938 females) were reported in Washington State for a crude incidence rate of 66.4 cases/100,000 population. Among these cases, 1,034 (24%) also had chlamydial infection. Gonorrhea incidence was highest among sexually active adolescents and young adults. The highest incidence for males occurred among those 20−24 (224.5 cases/100,000 population) and 25−29 (203.8/100,000) years of age. The highest rates for females occurred among those 20−24 (271.2 cases/100,000 population) and 15−19 (250.7 cases/100,000 population) years of age. Eight percent of females with gonorrhea (150 of 1,938) had recurrent infection (more than one episode in a twelve month period), a risk factor for infertility. Of the 402 persons with recurrent gonococcal infection, 112 (28%) were age 20−24.

Figure 13. Gonorrhea - incidence by sex and age group, 2006



King and Pierce Counties accounted for 65% of Washington State's gonorrhea morbidity. Cowlitz County had the highest incidence rate (230.4 cases/100,000 population). Five counties reported no cases of gonorrhea in 2006.

Figure 14. Gonorrhea - incidence by county, 2006



GRANULOMA INGUINALE

Granuloma inguinale (donovanosis), rare in the United States, is a sexually transmitted genital ulcer disease caused by the bacterium *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 of granuloma inguinale were reported in Washington in 2006.

HAEMOPHILUS INFLUENZAE INVASIVE DISEASE

Haemophilus influenzae, a bacterium with six distinct capsular types (characterized as types a − f), can cause severe and even fatal invasive disease including meningitis, bacteremia, epiglottitis, or pneumonia as well as bone or joint infections. Humans are the only reservoir for *H. influenzae*. Transmission is via respiratory droplets and through contact with nasopharyngeal secretions. Prior to the widespread use of vaccine against *H. influenzae* type b (Hib), about 10% of Hib meningitis resulted in permanent sequelae including hearing loss, paralysis or other neurological damage. Invasive infections with Hib are now rare in the United States as a result of routine childhood immunization. Because children under three years of age are at particular risk for Hib meningitis, a series of four immunizations for type b (Hib) are given at 2 months, 4 months, 6 months, and 12 to 15 months of age.

Haemophilus influenzae disease is immediately reportable in Washington. Only invasive disease is reportable and only in children under five years of age. Currently, this includes all types of invasive *H. influenzae* disease in children occurring in the <5 year age group. Before the introduction of a polysaccharide vaccine in 1985, followed by the licensure of a conjugate vaccine in 1987, hundreds of pediatric *H. influenzae* type b (Hib) infections occurred in the state each year and only type b was reportable. The availability of a vaccine for Hib brought about a precipitous drop in the incidence of Hib disease. For this reason, in 2000, Washington state law was changed to make invasive *H. influenzae* of any serotype reportable. During the past six years, an average of six cases of invasive *H. influenzae* of any type have been reported annually in Washington.

In 2006, five cases of invasive *H. influenzae* disease in children under five years of age were reported in Washington. Three of these children were under one year of age. Only one of the reported illnesses was due to serotype b. The others were due to serotypes a and f, with one isolate of unknown type. All of the children were hospitalized but none died. All five of these children were up to date for their ages for Hib immunizations, although the child infected with serotype b was 3 months old and had received only one dose of vaccine.

HANTAVIRUS PULMONARY SYNDROME

Hantavirus pulmonary syndrome (HPS) is a zoonosis caused by infection with Sin Nombre virus or other hantaviruses. Sin Nombre virus is carried by deer mice (*Peromyscus maniculatus*) and other 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 usually followed by rapidly progressive respiratory distress with cardiovascular shock. Most patients require hospitalization and intensive care. There is no specific treatment available and approximately 35% of recognized infections are fatal. Confirmatory diagnosis of HPS is by serological assays performed at the Public Health Laboratories (PHL). Post-mortem testing is conducted using immunohistochemical tissue staining.

In 2006, three cases of HPS were reported in Washington; in a Yakima County resident, an Okanogan County resident, and a Whatcom County resident. Two of these cases were fatal. HPS was first reported in Washington in 1994. From 1994 to the present, a total of 32 cases have been reported in Washington. Twenty-one of the 32 cases were residents of eastern Washington and twelve were residents of western Washington. Eleven of the 32 cases (34%) were fatal.

HEMOLYTIC UREMIC SYNDROME (HUS)

Hemolytic uremic syndrome (HUS) is a rare complication of infection with Shiga toxin-producing enteric bacteria, most commonly *E. coli* O157:H7. HUS cases with laboratory confirmation of *E. coli* O157:H7, other Shiga toxin-producing *E. coli,* or *Shigella* should be reported in the appropriate disease category. HUS occurring after diarrhea and without laboratory confirmation of an agent should be reported as a suspect case of enterohemorrhagic *E. coli*. Cases without preceding diarrhea and with no laboratory confirmation of a specific agent should be reported as HUS. A case of HUS is defined as anemia with microangiopathic changes on a peripheral smear and acute renal injury evidenced by hematuria, proteinuria or elevated creatinine, with no preceding diarrhea and no pathogen isolated in stool culture.

Most persons with HUS recover, but some may have permanent renal insufficiency or die from other complications. Neurological deficits or permanent pancreatic damage may also occur. Children are at particular risk for developing HUS as a complication of diarrheal illness caused by a Shiga toxin-producing organism.

HUS was made an immediately notifiable condition in Washington in December 2000. In 2006, one person with HUS was reported in Washington. There were also 13 cases of enterohemorrhagic *E. coli* with HUS reported as a complication.

HEPATITIS A

Infection with hepatitis A virus (HAV) is characterized by the acute onset of fever, anorexia, nausea, abdominal pain and jaundice. Infections may be asymptomatic in up to 70% of children under 6 years of age and 30% of older children and adults. Transmission occurs through the fecal-oral route, either person-to-person (including sexual contact) or by consumption of contaminated food or water, including raw or undercooked shellfish. Most common risk factors for exposure in the United States include household or sexual contact with a person infected with HAV. Elevated risk is also seen with exposure to child care

facilities, among injecting and non-injecting drug users with poor hygiene, 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. 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 of acute hepatitis A has declined both in Washington and in the United States. In May 2006, the Advisory Committee on Immunization Practices extended their recommendation for routine childhood immunization with hepatitis A vaccine to include children 12−23 months of age.

Symptomatic acute hepatitis A is immediately notifiable in Washington State. In 2006, 52 cases of acute hepatitis A were reported in Washington (0.8 cases/100,000 population) with two deaths. This represents a continuing decline since the late 1980s when hepatitis A peaked with a rate of 70.2 cases/100,000 population. Rates were similar for all age groups.

Figure 15. Acute Hepatitis A - reported cases, 2002-2006

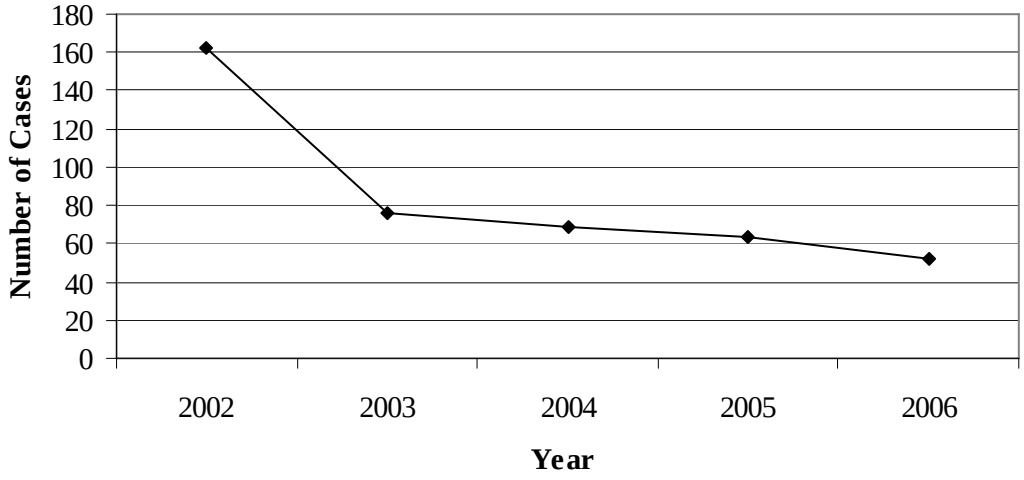
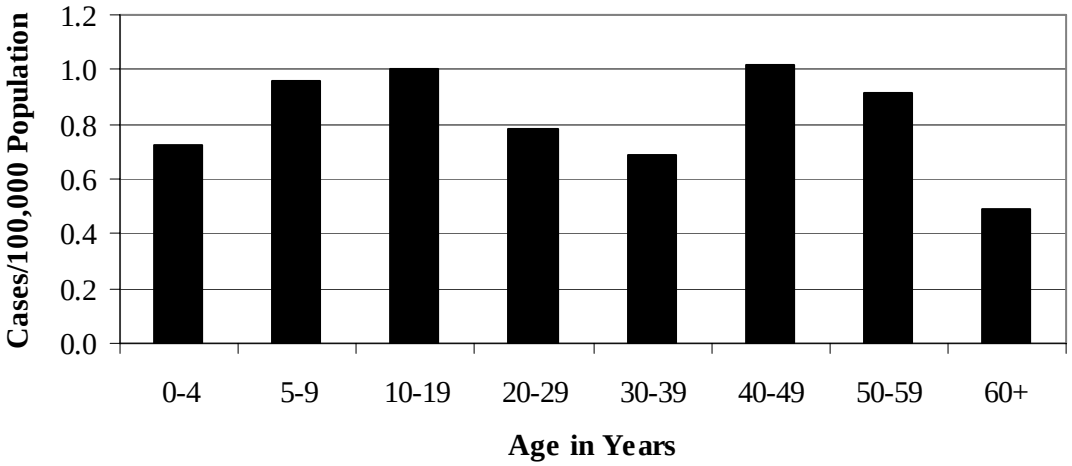


Figure 16. Acute Hepatitis A - incidence by age group, 2006



HEPATITIS B (ACUTE)

Infection with hepatitis B virus (HBV) causes acute and chronic disease. Acute infection may be asymptomatic, but some individuals have fever, anorexia, nausea, abdominal pain and jaundice. Transmission occurs by exposure to blood or body fluids of an infected person and the virus can be spread 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. Infection with HBV is common among immigrants from areas of the world with high rates of disease (e.g., Central and Southeast Asia, the Pacific Islands and Sub-Saharan Africa).

Acute 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. As a result of widespread immunization, the incidence of acute hepatitis B in Washington and elsewhere in the United States has declined since the mid 1990s, especially among children and adolescents.

In 2006, 80 cases of symptomatic or perinatal acute hepatitis B were reported in Washington (1.3 cases/100,000 population) with two deaths. The rates were highest among those 20−39 years of age. All six perinatal hepatitis B cases had been enrolled in the Perinatal Hepatitis B Prevention Program.

Figure 17. Acute Hepatitis B - reported cases, 2002-2006

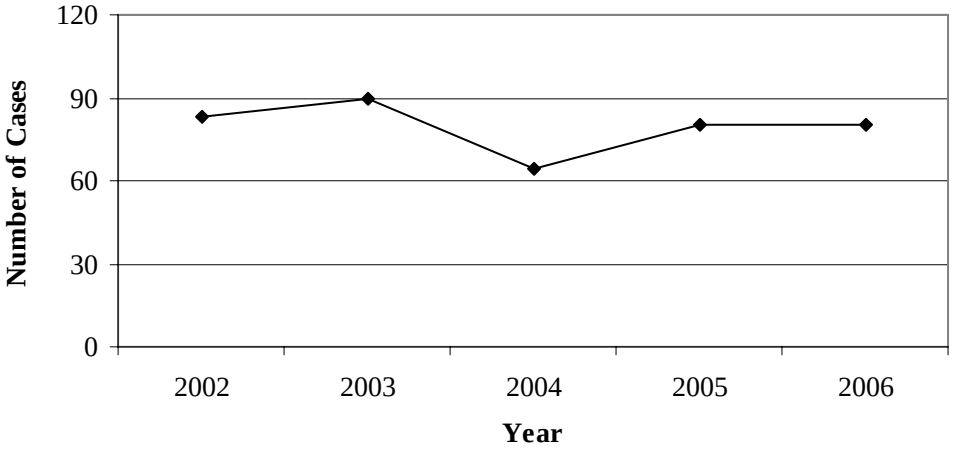
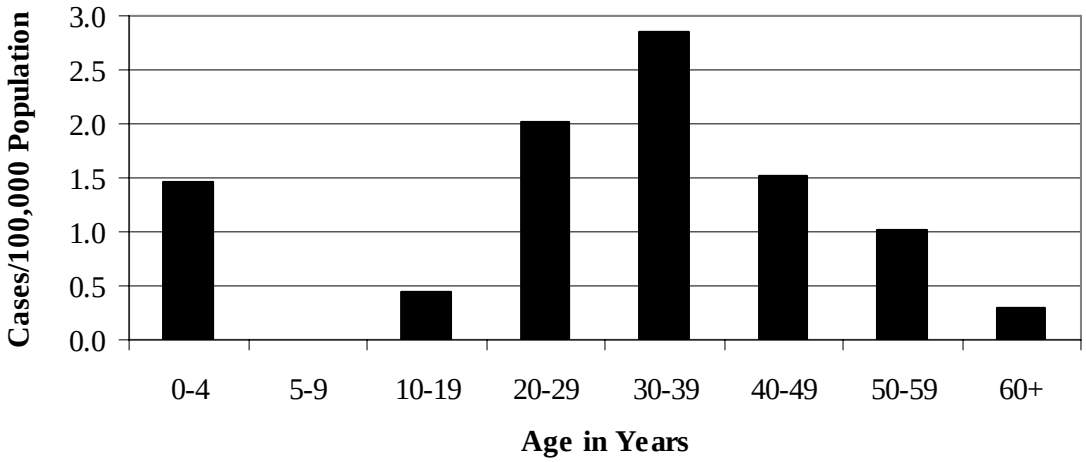


Figure 18. Acute Hepatitis B - incidence by age group, 2006



HEPATITIS C (ACUTE)

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 occupational exposure, during medical or surgical procedures, by sexual contact 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 indication for liver transplants among adults in this country. There is no vaccine for hepatitis C and current medical therapy is expensive, has many associated side effects, and has limited effectiveness.

Acute hepatitis C was formerly reportable as non-A, non-B hepatitis. In 2001, acute and chronic hepatitis C became notifiable conditions in Washington. In 2006, 23 cases of symptomatic acute hepatitis C were reported in Washington (0.4 cases/100,000 population) with no reported deaths. It is likely that these numbers seriously underestimate the true incidence of acute hepatitis C, as most infections are asymptomatic, not diagnosed, or not reported to public health jurisdictions. Rates were highest in the 20−39 year age group (0.7/100,000).

HEPATITIS, UNSPECIFIED (INFECTIOUS)

This immediately notifiable condition includes all 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 2006, there was one reported case of hepatitis E in Washington, following travel to India.

HERPES SIMPLEX, GENITAL AND NEONATAL

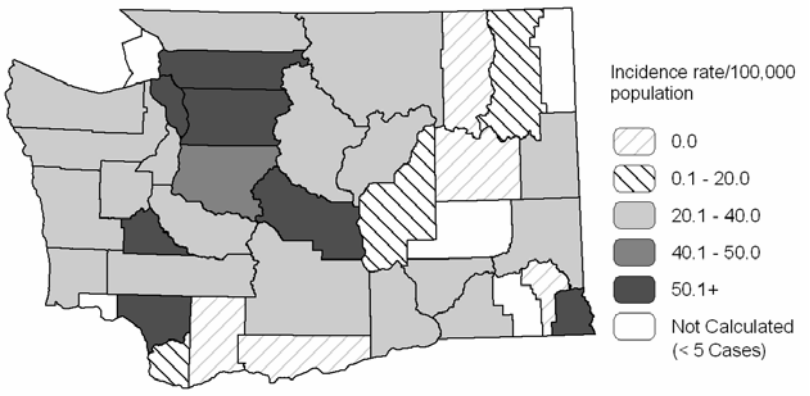
Herpes simplex virus (HSV) infections can be caused by two serotypes of the virus, HSV-1 and HSV-2. Genital herpes is a recurrent, lifelong viral infection usually caused by HSV-2. The prevalence of HSV-2 among adults in the United States approaches 25% and about one million people are newly infected 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; 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.

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

Only patients' first disease episodes (and neonatal infections) are notifiable in Washington State; recurrent episodes are not reportable. In 2006, 2,446 cases of genital herpes (608 males and 1,838 females) were reported in Washington (38.4 cases/100,000 population). Included in the total are six neonatal infections. This compares to 2,331 (37.3 cases/100,000 population) cases in 2005. Three counties (King, Pierce and Snohomish) accounted for 60% of the reported cases.

Figure 19. Herpes simplex - incidence by county, 2006



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. However, 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 25 indicator conditions (Table 2) 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. The State Board of Health mandated HIV reporting in September 1999. Through December 31, 2006, a total of 4,325 cases of HIV infection (not AIDS) were diagnosed in Washington State.

Table 2. 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 2006, 375 cases of AIDS were diagnosed in Washington, an 8% decrease from 2005. The incidence rate of AIDS in 2006 was 5.9 cases/100,000 population, compared to a national rate of 13.7 cases/100,000 population (2005 data). While the number of cases fluctuates annually, the trend has been leveling, reflecting 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. Of the 375 AIDS cases newly diagnosed in 2006, 18 are known to have died. In 2006, the number of persons living with AIDS in Washington rose to the highest number ever (5,516), in part due to HAART markedly increasing survival among AIDS patients diagnosed since 1995.

AIDS cases were diagnosed in 26 Washington counties in 2006. For counties with at least five cases, the highest incidence rate was in King County (11.3 cases/100,000 population), followed by Grays Harbor County (7.1 cases/100,000 population), Kitsap County (5.3 cases/100,000 population), and Snohomish County (5.1 cases/100,000 population).

Of the 375 AIDS cases diagnosed in Washington in 2006, 319 (85%) were male and 56 (15%) were female. Men who have sex with men (MSM) continued to account for the largest proportion (48%) of all AIDS cases diagnosed. Among adult and adolescent males, 223 cases (70%) were MSM, with or without concurrent injection drug use. Injection drug use alone accounted for 23 (7%) cases among men and 44 cases (14%) were MSM who also reported using injection drugs. Risk was unreported or unconfirmed in 56 (18%) adult and adolescent male cases. For males, the age-specific rate was highest among persons 30−39 years of age (26.3 cases/100,000 population).

Since early in the epidemic, males have constituted the largest proportion of AIDS cases. However, the proportion of female AIDS cases has increased over time. In the past few years, this proportion has stabilized at about 15%. Among adult and adolescent women with AIDS diagnosed in Washington in 2006, 20 (38%) acquired HIV infection through heterosexual contact and 14 (25%) reported injection drug use. Risk was unreported for 21 (38%) women. For women, the age-specific rate was highest among persons 30−39 years of age (4.2 cases/100,000 population).

As in previous years, racial/ethnic minorities were disproportionately represented among AIDS cases. Whites accounted for the majority (230 cases, 61%) of cases diagnosed. African Americans comprised 68 cases (18%), Hispanics 38 cases (10%), Asians 25 cases (7%) and Native Americans seven cases (2%). Those with multiple or unknown race/ethnicity comprised seven cases (2%).

In addition to AIDS cases, 374 cases of HIV (not AIDS) were diagnosed in Washington in 2006 (5.9 cases/100,000 population). These included 316 (84%) male cases and 58 (16%) female cases diagnosed in 24 Washington counties. For counties with at least five cases, the highest rate was in King County (12.0 cases/100,000 population), followed by Pierce County

(5.7 cases/100,000 population), Cowlitz County (5.2 cases/100,000 population), and Snohomish County (3.9 cases/100,000 population).

For adult and adolescent males, the primary mode of exposure was MSM (231 cases, 73%), followed by injection drug use (14 cases, 4%) and the two risks combined (22 cases, 7%). Thirty-six cases (11%) were reported with no identified risk. For males, the age-specific HIV rate was highest among persons 30−39 years of age (23.0 cases/100,000 population). For adult and adolescent females, heterosexual contact was the mode of exposure for 25 cases (43%); 16 cases (28%) reported injection drug use and 16 cases (28%) reported no identified risk. For females, the age-specific HIV rate was highest among persons 30−39 years of age (4.9 cases/100,000 population).

Similar to for AIDS cases, whites constituted the majority of HIV cases (254 cases, 68%). African Americans accounted for 57 cases (15%), Hispanics 41 cases (11%), Asians eleven cases (3%) and Native Americans four cases (1%). Persons with multiple or unknown race/ethnicity comprised seven (2%) cases.

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, plumbing, and 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 immunodeficiency. 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 the detection of *Legionella* bacterial antigen in tissue, sputum or urine, and by isolation of *Legionella* in culture.

In 2006, there were 20 cases of legionellosis (0.3 cases/100,000 population) reported in Washington, with one death. All but two cases had documented predisposing conditions for legionellosis including diabetes, chronic liver disease, chronic lung disease, immunodeficiency and/or a history of smoking. Six cases were associated with travel outside Washington. Of the 19 cases with known *Legionella* species, 17 had infection with *L. pneumophila*, one with *L. longbeachae*, and one with *L. micdadei*.

LEPTOSPIROSIS

Leptospirosis is a zoonotic bacterial disease caused by more than 200 *Leptospira interrogans* serovars. The bacteria (leptospires), excreted in urine by a variety of infected wild and domesticated animals, can contaminate soil and water. Transmission to humans is usually through ingestion, abraded skin, or mucous membrane contact during swimming or wading in natural bodies of water (e.g., streams), or through direct contact with infected animal urine or tissues. Several outbreaks have been associated with the swimming portion of triathlons.

Infection may be asymptomatic, mild, or severe. Symptoms may include fever, headache, myalgias, conjunctival suffusion and, less frequently, meningitis, rash, jaundice, or renal dysfunction. Clinical illness may last from a few days to weeks. Confirmation of leptospirosis requires detection of the organism in a clinical specimen or a four-fold or greater rise in microscopic agglutination test (MAT) titer with an appropriate clinical syndrome.

One case of leptospirosis in a human was reported in Washington in 2006. The patient was a King County resident with recent travel to Costa Rica.

LISTERIOSIS

Listeriosis is caused by *Listeria monocytogenes,* a gram-positive bacterium found in soil and water, and is transmitted to humans primarily through contaminated food. *Listeria* can be found in a variety of foods such as processed meats, fruits, vegetables, and unpasteurized milk or foods made with unpasteurized milk. Unlike most other foodborne pathogens, *Listeria* tends to multiply in refrigerated foods that are contaminated. 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 for listeriosis are neonates, the elderly, immunocompromised persons, and pregnant women.

Listeriosis is an immediately notifiable condition in Washington. In 2006, 18 cases of listeriosis (0.2 cases/100,000 population) were reported in Washington, with three deaths. Of the reported cases, 15 occurred in individuals over 50 years of age (five over 75 years of age), two occurred in the 20−39 year age group including a woman with a miscarriage, and one was a newborn whose mother had multiple potential exposures prior to delivery.

LYME DISEASE

Lyme disease is a tick-borne bacterial disease caused by the spirochete *Borrelia burgdorferi*. Most cases reported in Washington residents occur in travelers who have been bitten by infected ticks in highly endemic areas of the United States. Lyme disease is rarely acquired in Washington. Only a small percentage of tick bites result in human infection and removing ticks within 24 hours of attachment reduces the likelihood of transmission.

Sixty to eighty percent of infected individuals develop an expanding erythematous "bulls-eye" rash with central clearing (erythema migrans [EM]), fever, chills, fatigue, headache, and myalgias or arthralgias. Without treatment, the infection can lead to Bell's palsy, meningitis, myalgias, arthralgias and chronic complications of the musculoskeletal, cardiac or nervous systems. Most acute Lyme disease can be cured with antibiotics.

The risk for Lyme disease is highest in the northeastern and north central states, especially during May to August when ticks are most active. For surveillance purposes, the diagnosis of Lyme disease requires recent exposure in an endemic area with EM >5cm, as described by a healthcare provider, or at least one objective manifestation of late disease with two-step antibody testing by both enzyme immunoassay and Western blot assay.

During 2006, eight cases of Lyme disease were reported in Washington residents; all had out-of-state exposures.

LYMPHOGRANULOMA VENEREUM

Lymphogranuloma venereum is a sexually transmitted genital ulcer disease and is rare in the United States. Lymphogranuloma venereum 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. This disease is common in tropical and subtropical areas and is endemic in parts of Asia and Africa. Recently, lymphogranuloma venereum has emerged in men who have sex with men in large urban centers in the Netherlands and elsewhere in Europe, triggering enhanced surveillance should this outbreak spread to North America.

In Washington State, protocols have been developed to identify potential lymphogranuloma venereum infection in sentinel clinic populations. No cases of lymphogranuloma venereum were reported in 2006. Three cases were reported in Washington in 2005. Current recommendations for diagnosis and treatment of lymphogranuloma venereum 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 species of *Plasmodium* parasites (*P. falciparum, P. vivax, P. malariae, P. ovale*). *Anopheles* mosquitoes are the primary vector and humans are the main reservoir for malaria. Infections occur primarily in tropical and subtropical regions. Malaria ranks among the most significant global health challenges. Most of the cases reported in the United States are associated with exposures during travel to, or residency in, malaria-endemic areas. However, from 1993 to 2003, a total of 26 malaria infections, sporadic or outbreak-related, occurred in U.S. residents who had no previous international travel. Autochthonous malaria is extremely rare in the United States, although the mosquito vector exists in some parts of the southern United States.

Symptoms of malaria include cyclic fevers, sweats, rigors and headache. Some infections, particularly those caused by *P. falciparum*, may be severe and life-threatening. Malaria is diagnosed by the identification of *Plasmodium* parasites in red blood cells on thick blood smears, or by antigen or nucleic acid detection.

In 2006, malaria infections were reported in 43 Washington residents; all cases were infected in other countries. Travelers to affected areas should consult with healthcare providers about malaria prophylaxis before leaving the United States. Prevention and treatment of malaria can be complicated due to increasing resistance to antimalarial drugs in some regions. Prophylaxis recommendations for travelers are available from travel clinics and the CDC Travelers' Health Web site at http://www.cdc.gov/travel.

MEASLES

Measles is a febrile rash illness caused by measles (also called rubeola) virus. Measles disease is characterized by the acute onset of fever, coryza, conjunctivitis and cough. Oral mucosal lesions called Koplik spots may occasionally be seen. This "prodrome" is followed by an erythematous maculopapular rash that begins on the face and spreads downward to become generalized to the entire body. Measles virus is highly contagious and is transmitted by airborne and respiratory droplets. Rapid public health response is essential when a case of measles is identified in order to prevent outbreaks. The infectious period extends from four days before until four days after the onset of rash. The acute illness usually lasts 7−10 days. Complications such as otitis media, pneumonia (1 in 20 cases), croup, encephalitis (1 in 100 cases), or even death (1 in 3,000−10,000 cases) may occur in any age group. However, measles is often more severe in infants and adults than in children or adolescents.

Diagnosis is made by serologic testing, by viral isolation from nasopharyngeal secretions or urine, or, rarely, by identification of viral antigen in blood or tissues. Measles can be easily prevented by vaccination with MMR (measles-mumps-rubella) vaccine. Before 1963, approximately 500,000 cases and 500 deaths were reported annually, with epidemic cycles every 2−3 years in the United States. Endemic measles is now considered to have been eliminated in the United States. Measles cases diagnosed in the United States in recent years have either been imported from areas where the disease is still endemic or linked to an imported case.

Measles is an immediately notifiable condition in Washington. In 2006, two confirmed cases of measles were diagnosed in Washington. One person, a 37 year old female with an unknown vaccine history, had traveled to China during the likely exposure period. The other individual with measles was a 31 year old male with unknown vaccination status visiting from Italy. During the past five years, the number of cases reported annually in Washington has ranged from 0 to 7.

MENINGOCOCCAL DISEASE

Invasive infection with *Neisseria meningitidis* bacteria most often results in bacteremia (meningococcemia) or meningitis (meningococcal meningitis). Other less common manifestations are pneumonia, septic arthritis and epiglottitis. A petechial rash may accompany any of these syndromes, as may complications such as purpura fulminans, peripheral gangrene or multi-organ failure. The case fatality rate of invasive meningococcal disease is 9%−12%, even with appropriate antibiotic treatment, and the fatality rate of meningococcemia is as high as 40%. Up to 20% of survivors have permanent sequelae such as hearing loss, neurologic damage, or loss of a limb.

N. meningitidis, or meningococcus, is classified by using serologic methods based on the structure of the polysaccharide capsule. Almost all invasive disease is caused by one of five serogroups: A, B, C, Y, and W-135. Serogroup prevalence varies by geographic area. The proportion of cases caused by each serogroup also varies by age group. Serogroups B and C account for about 70% of meningococcal disease in the United States.

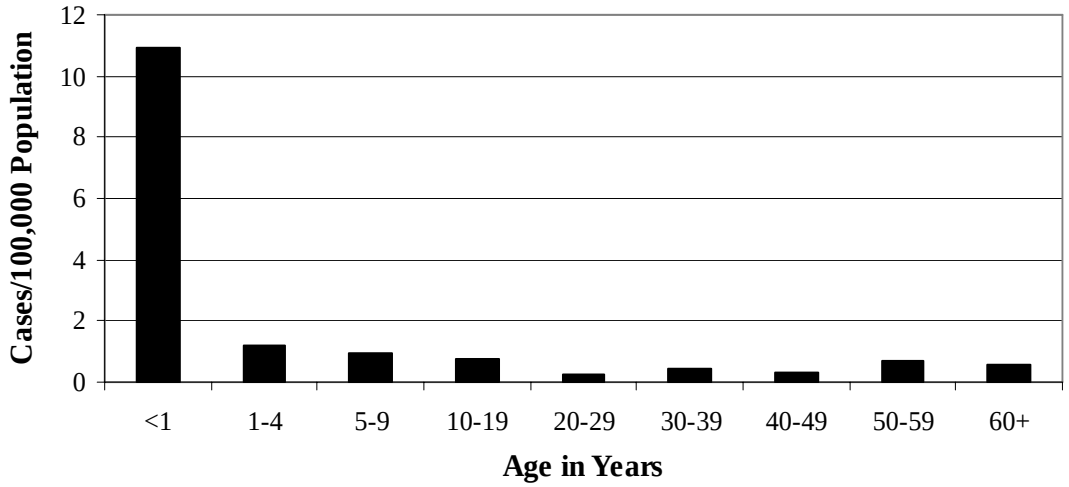
Family members of an infected person are at increased risk for meningococcal disease, as are infants and young children. Microbiologists working with isolates of *N. meningitidis* also are at increased risk. Outbreaks account for less than 5% of reported cases (95%−97% of cases are sporadic). During outbreaks, bar or nightclub patronage and alcohol use have been associated with higher risk for disease.

Humans are the only natural reservoir of meningococcus. As many as 10% of adolescents and adults are asymptomatic, transient carriers of *N. meningitidis*. The primary mode of transmission is by respiratory droplet spread or by direct contact with saliva. Prompt post-exposure chemoprophylaxis for close contacts following exposure to a case of meningococcal disease is effective in preventing secondary cases.

The current quadrivalent A, C, Y, and W-135 polysaccharide vaccine (MPSV) was licensed in 1978. Meningococcal conjugate vaccine (MCV) is also quadrivalent A, C, Y, and W-135 and was first licensed in 2005. No vaccine is available in the United States for serogroup B. MCV should be administered to all children at 11−12 years of age as well as to unvaccinated adolescents at high school entry and all college freshmen who live in a dormitory.

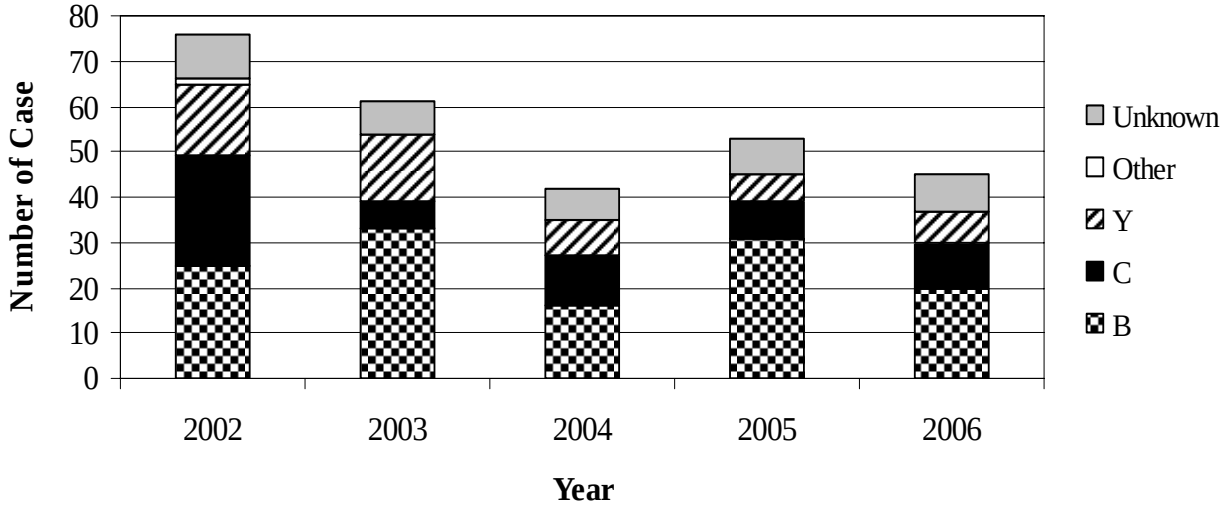
Meningococcal disease is an immediately notifiable condition in Washington. In 2006, 45 cases of meningococcal disease were reported in Washington (0.7 cases/100,000 population) with one death (2.2% fatality rate). The highest reported incidence was in children under one year of age (10.9 cases/100,000 population).

Figure 20. Meningococcal Disease - incidence by age group, 2006



An isolate was available for serogrouping in 37 (82%) of these cases. Serogroup B accounted for 44% of reported cases with known serogroup in Washington in 2006. These cases would not be considered vaccine-preventable. Serogroup C accounted for 27% and serogroup Y, which may be more likely to be associated with pneumonia, accounted for 19% of reported cases.

Figure 21. Meningococcal Disease - number of cases by serogroup, 2002-2006



MUMPS

Mumps is an acute viral disease characterized by fever and glandular swelling, typically of the parotids or other salivary glands. Transmission is primarily through respiratory droplets or through direct contact with nasopharyngeal secretions. Complications of mumps infection among individuals who are past puberty include orchitis and oophoritis. Other complications are rare, but may include encephalitis, meningitis, mastitis, pancreatitis, myocarditis, arthritis, and nephritis. Rarely (~1 in 20,000 cases), mumps infection can cause deafness, which is usually permanent.

Once a virtually universal childhood infection, mumps incidence has decreased in recent years in the United States due to routine childhood immunization with measles-mumps-rubella (MMR) vaccine. During 1998–2005, zero to eleven mumps infection cases were reported per year in Washington.

In 2006, a large outbreak of mumps that had originated in the Midwest in December 2005 spread to nine other states. Because of increased awareness of mumps during 2006, the State of Washington Department of Health (DOH) received over 150 reports of possible mumps cases. Laboratory testing of submitted samples for mumps—polymerase chain reaction (PCR) and serologic assay—was initiated at DOH Public Health Laboratories. In October 2006, CDC requested that a strict interpretation of the case definition be used (MMWR 2006;55(42):1152–1153) which meant that any person with two or more days of parotitis should be reported as a probable case, regardless of immunization status.

During 2006, using these more stringent guidelines for the reporting of probable cases, seven confirmed and 34 probable mumps cases were identified in Washington. None of these were linked to the outbreak in the Midwest. Eleven of the cases (26%) had traveled during their likely exposure period. Of the eight with known out of state destinations, five had traveled internationally (two to Europe, one to the Bahamas, one to British Columbia, and one to the Philippines).

Case ages ranged from 20 months to 75 years. Fourteen percent of the cases were in the 1−5 year age group, 17% were school age (6−17 years), only 10% were 18−24 years (the predominant age group in the Midwest outbreak), 26% were 25−40, and 33% were age 41−75. For cases age 18 and over, 7% had no doses of MMR vaccine, 17% had one dose, and 17% had two doses. Immunization information was missing for 59% of cases in this age group. Among school-age children, 86% had two MMR doses and 14% had one dose. Among the six children less than 6 years of age reported as mumps cases, one was missing immunization information, two reported no doses of MMR received, and the other three were appropriately immunized for their ages (two with one dose and one with two doses).

PARALYTIC SHELLFISH POISONING

Paralytic shellfish poisoning (PSP) is caused by eating shellfish contaminated with 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 water.

Symptoms begin within minutes or hours after 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 impli cated 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 at beaches, are available through the Washington State Department of Health Marine Biotoxin Hotline (1-800-562-5632) or the Biotoxin Program website at http://www.doh.wa.gov/ehp/sf/BiotoxinProgram.htm.

Paralytic shellfish poisoning is an immediately notifiable condition in Washington. Two clusters of PSP have been reported in Washington during the past ten 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. One probable case of PSP was reported in Washington in 2006 and was associated with consumption of seafood out of state.

PERTUSSIS

Pertussis is a respiratory illness resulting from local infection of the nasopharyngeal area by the bacteria *Bordetella pertussis*. Transmission of *B. pertussis* occurs through contact with respiratory droplets from the nose and throat of an infected person. Classically, pertussis is characterized by episodes of forceful, repetitive coughing followed by an inspiratory whoop and post-tussive vomiting. Because of the local nature of the disease, fever is usually low grade or absent. Symptoms are often modified in infants who may present with difficulty with feeding as a primary manifestation along with apnea or cyanosis. 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 increased risk for becoming more seriously ill. Pertussis symptoms may last for weeks. Rare, but serious complications may occur including pneumonia, encephalopathy and death. Very young infants are at greatest risk for such complications.

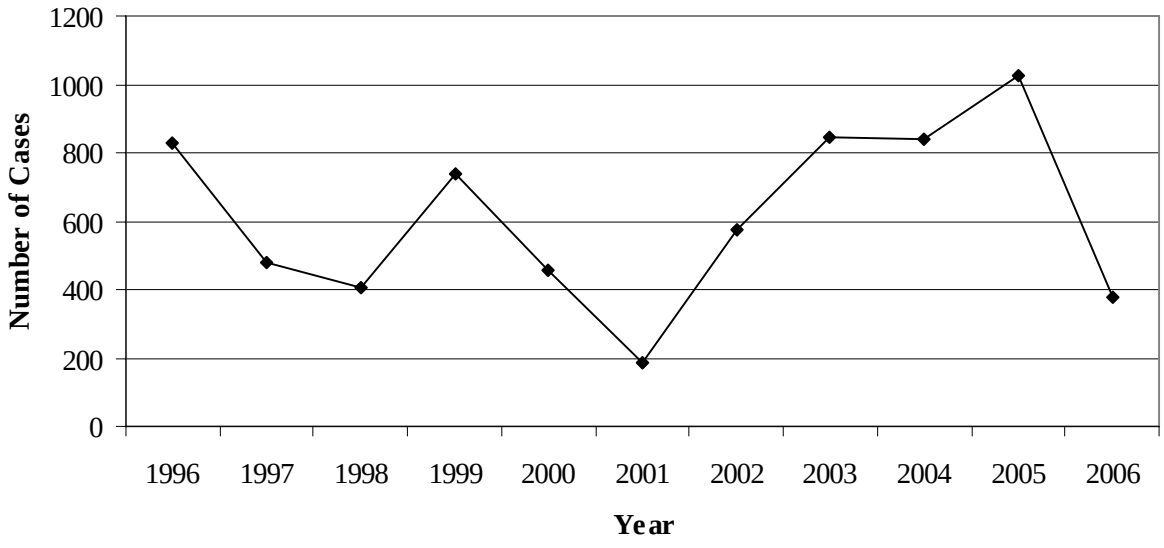
Routine childhood immunization, early recognition and treatment of cases, and identification and post-exposure prophylaxis of high-risk contacts are essential elements of disease control. Pediatric formulation DTaP (diphtheria and tetanus toxoids and acellular pertussis vaccine) is recommended for individuals under 7 years of age. In 2005, two new adolescent and adult

formulations of Tdap, (tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccine) were licensed. Most adolescents and adults are susceptible due to waning immunity 5−10 years after the initial series of pertussis vaccinations (or after pertussis disease). Infections among adolescents and adults are an important source of disease transmission to not yet immunized young children.

For surveillance purposes, a diagnosis of pertussis is made on the basis of clinically compatible symptoms. Supporting laboratory evidence can be obtained with the identification of *B. pertussis* by isolation in culture or the detection of *B. pertussis* nucleic acid by polymerase chain reaction (PCR). Serology as well as direct fluorescent antibody for pertussis may be available at some laboratories, but neither is acceptable for use as laboratory confirmation of a case.

Pertussis is an immediately notifiable condition in Washington. In 2006, 377 cases (5.9 cases/100,000 population) of pertussis were reported from 25 counties in Washington. This represents a 63% decrease from 2005, and a reversal of an upward trend during the previous four years. Pertussis incidence is cyclical, and 2001 saw the lowest number of reports (184) submitted in Washington during any year in the past decade. However, overall, both in Washington and in the United States as a whole, the trend has been toward increased rates of reported pertussis since the late 1970s, when less than 2,000 cases were reported in the entire United States – considerably less than one case/100,000 population. In 2004, the national incidence of pertussis was 8.9 cases/100,000 population, the highest rate since 1959. The increase in reported pertussis may be due to a combination of heightened surveillance and improved testing, along with a genuine increase in disease burden.

Figure 22. Pertussis - reported cases, 1996-2006

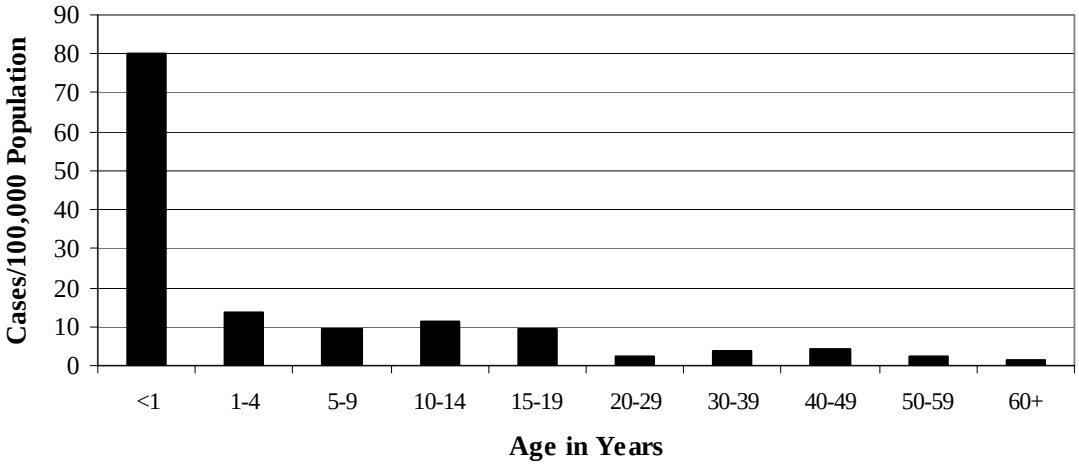


In 2006, males and females constituted 45% and 55% of reported Washington cases, respectively. Gender-specific incidence was similar among adults older than 59 years of age. However, the rate among females 20−59 years of age was 4.1 cases/100,000 compared to 2.1 cases/100,000 among males in the same age group, and the rate among females 0−19 years of

age was 14.5 cases/100,000 compared to 13.8 cases/100,000 among males of the same age. The difference in rates among males and females 20−59 years of age may be due to a greater willingness by symptomatic women to seek medical care, and perhaps to an increased likelihood of exposure to children with pertussis among females compared to males.

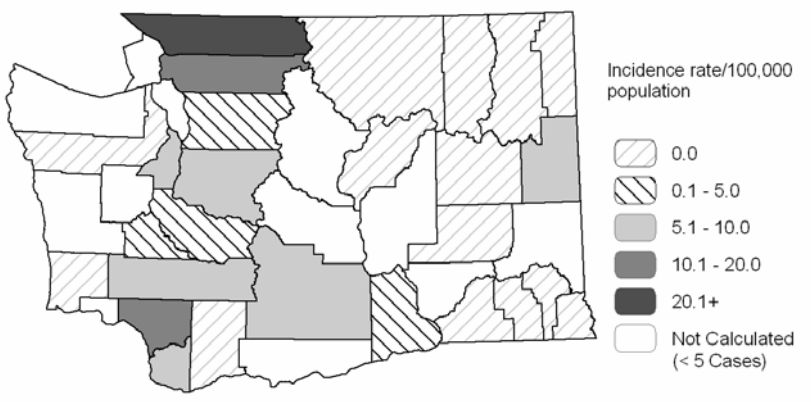
Pertussis rates are typically highest in very young children who are not yet fully immunized due to their age. During 2006 in Washington, infants under one year of age had the highest incidence of pertussis (80.1 cases/100,000 population) though they comprised only 18% of reported cases. Eighty-six percent of cases under one year of age were under 6 months of age. Twelve percent of reported cases were 1−4 years of age, 11% were 5−9 years of age, and 25% were adolescents 10−19 years of age. Adults aged 20 years and over comprised 35% of reported pertussis cases.

Figure 23. Pertussis - incidence by age group, 2006*



Cowlitz, Skagit, and Whatcom Counties had reported incidence rates more than twice the state average in 2006 with rates of 13.4, 13.3, and 31.5 cases per 100,000 population, respectively. In 2006, 26% of reports with onset date available showed an onset of illness during the months of May through August. There were several suspected or confirmed pertussis outbreaks reported in 2006 in Washington involving day cares, schools, healthcare facilities and a variety of other settings.

Figure 24. Pertussis - incidence by county, 2006



PLAGUE

Plague is a bacterial zoonosis caused by *Yersinia pestis*. Plague is established in wild small mammal populations throughout the western United States. Transmission to humans occurs by flea or animal bite, handling infected animal tissues or, less commonly, by inhalation of infectious respiratory droplets. 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 as the case fatality rate for untreated plague is 50−60%.

During 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 who was exposed to a bobcat carcass. Limited serosurveys of wild carnivores, primarily coyotes, in Washington indicate that plague occurs in wild animals at a low level; however, the distribution is unknown.

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

POLIOMYELITIS

Poliovirus is the infectious agent that causes poliomyelitis (polio). Polio is transmitted mainly via the fecal-oral route. Less frequently, transmission can occur through contact with infected respiratory secretions or saliva. Most cases are asymptomatic and fewer than 1% result in acute flaccid paralysis.

Polio is no longer endemic in most of the world. The most recent case of paralytic polio in the United States was reported in 2005 and was associated with immunization with oral live vaccine during overseas travel. The last naturally-acquired case of polio in the United States

occurred in 1979. Due to the risk for vaccine-associated paralytic polio (VAPP), oral live vaccine has been replaced by parenteral inactivated polio vaccine (IPV) in the United States. Effective January 2000, all children in the United States should receive four doses of IPV at ages 2, 4, 6−18 months, and 4−6 years. Although 22 countries reported polio reintroduction after 2003, as of March 2006 wild poliovirus was indigenous in only four countries: Afghanistan, India, Nigeria and Pakistan.

Polio is an immediately notifiable condition in Washington. No cases of poliomyelitis were reported in Washington in 2006. The last case of paralytic polio in Washington was reported in 1993 and was associated with receipt of oral live polio vaccine. The last naturally-acquired case of polio in Washington occurred in 1977.

PSITTACOSIS

Psittacosis is an infection caused by the bacteria *Chlamydophila psittaci*. It can be a mild or severe respiratory illness with fever, chills, headache, cough, myalgias, and atypical pneumonia. Humans are infected after inhaling aerosolized bacteria, usually while cleaning pet bird cages indoors. Psittacine birds (parrots, love birds, parakeets) are most commonly infected, though other birds acquire infection including pigeons, poultry, canaries, and sea birds. Infected birds may be asymptomatic or ill, and shed the organism in their droppings, especially when under stress. Outbreaks in birds are common in aviaries and pet shops. Human exposure is often associated with occupational transmission in these settings or with newly purchased birds.

Psittacosis is difficult to diagnose, as laboratory tests cross-react and are difficult to interpret. 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 can be prevented. There were no reported cases of psittacosis in a human in Washington in 2006.

Q FEVER

Q fever is caused by infection with the rickettsial agent *Coxiella burnetii.* Transmission occurs after inhalation of *C. burnetii* in dust contaminated by placental tissues, birth fluids, or excreta of infected animals including sheep, cattle, goats, dogs, cats, and some wild animals. Non-specific symptoms may be prolonged, including fever, chills, headache, weight loss, and malaise, with or without hepatosplenomegaly. Chronic infection may cause endocarditis and hepatitis.

There were no reported cases of Q fever in Washington in 2006. Q fever is a potential agent of bioterrorism. Suspected or confirmed cases in individuals without an appropriate exposure history should raise the index of suspicion for a bioterrorism event.

RABIES

Rabies is an acute zoonotic infection of the central nervous system caused by a lyssavirus. All mammals, including humans, are susceptible to rabies. In humans, rabies causes a rapidly progressive and fatal encephalomyelitis. Even with intensive medical care, rabies almost always progresses to coma and 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. Death is most often due to respiratory failure.

The incubation period for rabies in humans is usually 2−12 weeks; however, there have been documented incubation periods of more than one 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 primary route of transmission. Less common exposures include viral inoculation into an open wound or mucous membrane. Transplanted organs and corneas from patients with fatal undiagnosed rabies have caused infection in recipients as well.

In Washington, bats are the primary source of rabies, and human exposures to bats should be evaluated carefully and immediately. Rabies can be transmitted from bats to humans, dogs, cats, horses, wild carnivores, and other mammals. Bat variant rabies has been identified in a llama, a cat, and a dog in Washington. In other regions of the United States, endemic sources of rabies include raccoons, skunks, foxes and coyotes. Canine rabies still accounts for the majority of human rabies worldwide. Travelers to rabies-endemic countries should be warned to seek immediate medical care if bitten by any mammal. Vaccination recommendations for travelers are available from travel clinics and the CDC Travelers' Health Web site at http://www.cdc.gov/travel.

Rabies is an immediately notifiable condition in Washington. No human cases of rabies were reported in Washington in 2006. There have been two cases of human rabies identified in Washington during the last 20 years. In 1995, a four year old child died of rabies four weeks after a bat was found in her bedroom [MMWR 1995; 44(34):625-27]. In 1997, a 64 year old man was diagnosed with rabies more than six weeks post-mortem [MMWR 1997; 46(33):770-74]. Similar to many endemically-acquired rabies infections 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.

Table 3. Washington State Animals Tested for Rabies, 1987-2006
(Rabid animals in parentheses)

Year	Bat	Cat	Dog	Ferret	Raccoon	Skunk	Rodents	Lago-morphs	Other Wild	Other Domestic	Total
1987	91 (10)	133	119 (1)	30	10	4	13	0	8	0	408
1988	69 (4)	165	110	15	16	3	12	2	5	3	400
1989	102 (9)	124	91	20	9	4	8	1	9	4	372
1990	63 (4)	104	82	5	7	5	5	1	14	4	290
1991	90 (9)	105	96	13	8	3	13	0	19	2	349
1992	73 (6)	132	90	16	14	2	12	0	14	6 (1)*	359
1993	68 (1)	122	95	8	4	8	16	2	10	13	346
1994	58 (14)	105	90	7	4	3	15	0	16	14 (1)^	312
1995	263 (15)	140	114	12	8	1	23	3	15	18	597
1996	257 (13)	104	101	8	9	2	14	3	20	12	530
1997	780 (51)	155	118	7	17	4	15	2	18	11	1127
1998	447 (27)	126	109	8	11	1	6	0	19	16	743
1999	334 (25)	103	71	3	11	3	8	1	14	13	561
2000	330 (23)	105	60	1	2	4	6	1	9	4	522
2001	263 (22)	111	93	2	3	1	8	0	4	5	490
2002	186 (12)	99 (1)	53	7	2	2	9	1	8	9	376
2003	229 (23)	137	72	0	11	1	4	1	9	10	474
2004	311 (20)	141	70	3	13	6	11	0	6	10	571
2005	245 (15)	132	66	3	12	2	5	1	10	4	480
2006	273 (15)	105	70	4	13	1	2	1	8	5	482
Total 1987-2006	**4532 (318)**	**2448 (1)**	**1770 (1)**	**172**	**184**	**60**	**205**	**20**	**235**	**163 (2)**	**9789 (322)**

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

Lagomorphs include: rabbit and pika
Other domestic include: burro, cattle, goat, horse, llama, mule, pig, sheep
Other wild include: badger, bear, bison, bobcat, cougar, coyote, deer, fox, kinkajou, lynx, marten, mink, mole, monkey/non-human primates, ocelot, opossum, otter, seal, shrew, weasel, wolf, wolf hybrid, zorilla

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.

Rabies exposures usually involve animal bites; however, in rare circumstances rabies may be transmitted when infected saliva or central nervous system tissue penetrates the skin or contaminates mucosa of a susceptible mammal. Rabies is not transmitted by contact with blood, urine or feces, by touching fur, or by being sprayed by a skunk. Rare transmission has occurred after transplantation of infected tissues including corneas and organs. In Washington, the most common high risk rabies exposures involve direct contact with rabid bats.

Information about rabies pre- and post-exposure prophylaxis is available in 'Human Rabies Prevention – United States, 1999, Recommendations of the Advisory Committee on Immunization Practices' located in the right-hand column of the CDC rabies webpage at: http://www.cdc.gov/ncidod/dvrd/rabies/prevention&control/preventi.htm.

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 has been documented at record levels nationwide during the last two decades.

Between 1987 and 2006, 9,789 animals were tested for rabies in Washington and 322 (3%) were found to have rabies. This does not represent the prevalence of rabies, 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 United States is bats. Of the 4,532 bats examined for rabies in Washington between 1987 and 2006, 318 (7%) 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 can be 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 with bat-variant rabies. 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 Public Health Laboratories identified the virus in the dog's brain tissues; however, the infection was not confirmed at CDC. In 1992, a horse in Benton County died of rabies and in

1994, a llama in 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 United States, 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 there have been no documented cases of rabies found in either rodents or lagomorphs 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 definitively rule out its presence.

Table 4. 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. As 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 dose on each of 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 dose on each of 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.

[@] 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.

[+] 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.

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 and respond to diseases associated with emerging infections, travel-associated disease, or infections rarely acquired in Washington. Such rare diseases include, but are not limited to, Creutzfeldt-Jakob disease, cryptococcosis, coccidioidomycosis, exotic zoonoses and vector-borne diseases, avian influenza, smallpox, monkeypox, viral hemorrhagic diseases, lymphocytic choriomeningitis, visceral larval migrans, and others.

Certain rare diseases including smallpox and viral hemorrhagic diseases may be associated with acts of bioterrorism. Suspected or confirmed cases in individuals without an appropriate exposure history should raise the index of suspicion for a bioterrorism event.

Creutzfeldt-Jakob disease

Prion diseases, also known as transmissible spongiform encephalopathies (TSE), are rare, fatal neurodegenerative diseases of animals and humans thought to be caused by abnormal transmissible proteins known as prions. The most common human prion disease, Creutzfeldt-Jakob disease (CJD), occurs worldwide and affects approximately one person per million population annually, with the highest incidence among persons over age 55. An average of five cases of CJD are reported annually in Washington (range 2−9). In 2006, two cases of CJD were reported resulting in two deaths.

Coccidioidomycosis

Coccidioidomycosis is a respiratory infection caused by the fungus *Coccidioides immitis* found in soil in the southwestern United States and northern Mexico. The most common manifestations of infection are fever, cough, chest pain, and muscle aches. Infection may be asymptomatic in some. Disseminated infection also occurs in rare cases. In 2006, one case of travel-associated coccidioidomycosis was reported in a Washington resident.

Cryptococcosis

Cryptococcosis is a very rare fungal disease caused by *Cryptococcus* fungus that can affect the lungs (pneumonia) and nervous system (meningitis) in humans. Initial pulmonary infection is usually asymptomatic. Most patients present with disseminated infection, especially meningoencephalitis. In the United States, 85% of cases occur in HIV-infected persons.

Human and animal infections caused by *Cryptococcus gattii* VGIIa emerged on Vancouver Island, British Columbia (BC) in 1999. *C. gattii* is generally considered to be restricted to tropical and sub-tropical climates (e.g., Australia, Africa and India). Two cases of the BC strain of *C. gattii* were identified in Washington residents in 2006. Both had out of state travel as potential exposures so an in-state source could not be determined for either case.

Rocky Mountain Spotted Fever

A probable case of Rocky Mountain spotted fever was reported following exposure in eastern Washington. The patient developed a fever and rash on the back of his neck but did not require hospitalization. Serology was supportive but a confirming specimen was not obtained.

RELAPSING FEVER

Tick-borne relapsing fever is a bacterial zoonosis caused by the spirochete *Borrelia hermsii* and is the most common tick-borne infection transmitted in Washington. 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 most often exposed while staying overnight in rustic cabins. Symptoms include recurrent episodes of high fever, headache, myalgias, fatigue and drenching sweats; a transient petechial rash may occur as well. Acute respiratory distress syndrome is a rare complication. 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* spirochetes on a peripheral blood smear. Treatment involves appropriate antimicrobials and supportive care for hospitalized patients.

Relapsing fever is an immediately notifiable condition in Washington. Fewer than ten cases of tick-borne relapsing fever are reported annually in Washington residents and many are exposed to infected ticks in cabins while vacationing outside of Washington. During 2006, two cases of relapsing fever were reported in Washington residents, both with exposure out-of-state (California and Idaho).

RUBELLA

Rubella, often called German measles or "three day" measles in the past, is a mild febrile rash illness caused by the rubella virus. Rubella is spread by respiratory droplets or through direct contact with infected persons. Like many vaccine-preventable diseases, rubella is now rare in the United States. Children usually present with a generalized maculopapular rash but few or no constitutional symptoms. Adults may experience a 1−5 day prodrome of low-grade fever, headache, malaise, mild coryza and conjunctivitis. Postauricular, occipital and posterior cervical lymphadenopathy is the most characteristic clinical feature and precedes the rash by 5−10 days. Arthralgia or frank arthritis may complicate the illness, particularly among adult females. Up to 50% of rubella infections can be subclinical and therefore inapparent.

Rubella is important because of its ability to produce abnormalities in a developing fetus. Congenital rubella syndrome (CRS) occurs in up to 90% of infants born to women infected with rubella during the first trimester of pregnancy, and can result in multiple fetal abnormalities of the brain, eye, ear and internal organs. Fetal defects are rare when maternal infection occurs after the 20^{th} week of gestation. Congenital malformations and fetal death may occur following inapparent maternal rubella.

Rubella is prevented by routine childhood immunization with the measles-mumps-rubella (MMR) vaccine. The rubella antigen became available in the United States in 1969. By the end of 2002, 58% of countries had included rubella vaccine in their national immunization programs, including 94% of countries in the Americas. In countries where rubella vaccine has not been introduced, the disease remains endemic. Most rubella in the United States now occurs among young adults who emigrated from rubella-endemic areas, or in U.S. residents who travel to endemic countries while unaware that they are susceptible to the disease. Diagnostic tests for rubella include serology, virus isolation, or identification of viral antigen

in blood or tissues. Congenital infection is confirmed by serology.

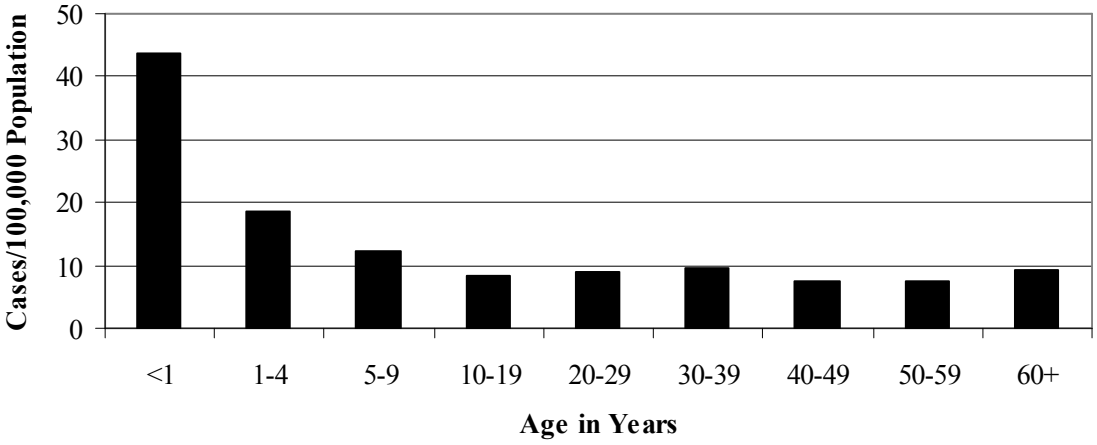
Rubella is an immediately notifiable condition in Washington. No cases of rubella were reported in Washington in 2006.

SALMONELLOSIS

Salmonellosis is an enteric bacterial infection caused by a myriad of *Salmonella* serotypes. Salmonellosis is typically 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 through the fecal-oral route and the bacteria may be shed in the feces of humans and animals for days to months or longer. Healthy animals (especially reptiles, chickens, cattle, dogs and cats) can carry *Salmonella* chronically and be a direct source of human infection. However, most human salmonellosis results from ingestion of contaminated food. Common exposures include ingestion of contaminated eggs, unpasteurized milk, poultry 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.

Figure 25. Salmonellosis - incidence by age group, 2006*



*Age unknown for three cases

Salmonellosis is an immediately notifiable condition in Washington. In 2006, 627 cases were reported (9.8 cases/100,000 population). The highest incidence occurred in the under 1 year age group (43.7 cases/100,000 population) and in the 1−4 year age group (18.5 cases/100,000 population). Ninety-four cases (15%) were associated with out of country travel. Four cases of *S.* Tennessee were part of a national outbreak connected with commercial peanut butter.

Submission of *Salmonella* isolates to the Public Health Laboratories (PHL) for serotyping is required. Serotyping and molecular epidemiologic methods aid in identifying outbreaks and sources of infection. *S.* Enteritidis*, S.* Typhimurium, *S*. Newport and *S.* Heidelberg continue to be among the most common serotypes causing disease in Washington and these accounted for 51% of all cases of salmonellosis reported in 2006. The serotype was unknown for 23 (4%) reported cases.

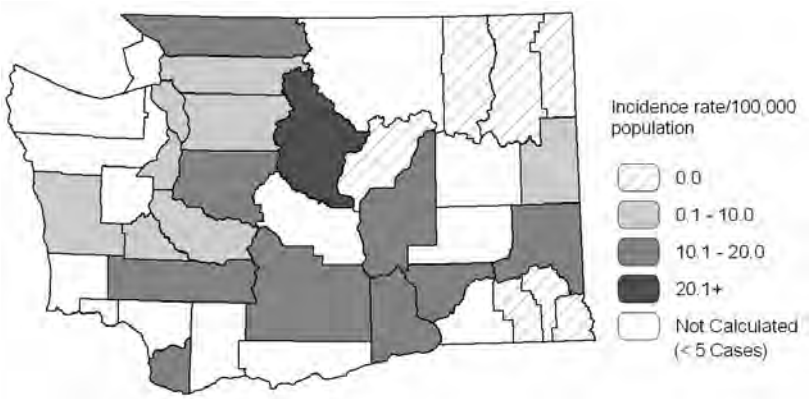
Table 5. *Salmonella* isolates submitted to the Public Health Laboratories, 2006

Serotype	No.	%
Enteritidis	140	22
Typhimurium	93	15
Newport	46	7
Heidelberg	42	7
Montevideo	27	4
4 5 12:I:--	15	2
Infantis	14	2
Oranienburg	14	2
Stanley	13	2
Thompson	10	2
4 12:I;--	9	1
Agona	9	1
Braenderup	9	1
Javiana	8	1
Paratyphi B	8	1
Muenchen	7	1
Virchow	7	1
Hadar	6	1
Mbandaka	6	1
Paratyphi B Tar + Java	6	1
Poona	6	1
Dublin	5	1
Paratyphi A	5	1
Saintpaul	5	1
Tennessee	5	1
Weltevreden	5	1
Anatum	4	1
Ohio	4	1
Unknown	18	3

≤ 3 Cases: Albany; Apapa; Bardo; Barranquilla; Beaudesert; Blockley; Bovismorbificans; Brandenburg; Carrau; Chandans; Cholera-Suis; Corvallis; Derby; Eastbourne; Gaminara; Give; Group B; Grp 41; Havana; Hvittingfoss; Indiana; Kedougou; Kentucky; Lanka; Litchfield; Liverpool; Lomalinda; Meleagridis; Minnesota; Muenster; NOS; Oslo; Panama; Pomona; Portland; R:1 2; Reading; Rough: Z:Z6; Rough:R:- -; Sandiego; Schwarzengrund; Senftenberg; Soerenga; Subgenus; Subgenus III; Telelkebir; Toucra; Uganda; Vinohrady; Wassenaar; 1 4 12:I:--; 17:G T:-; 18:Z4 Z23:--; 18:Z4 Z32:-; 41:Z4 Z23:-; 45:G;Z51;- ; 58:C:- ; 6 7:-:1 5; 60:R:E N X Z15; 61:1 (v) z13:z35; 61:Z52:Z53

Cases of salmonellosis were reported by 32 counties in Washington in 2006. The highest rates were in Chelan, Franklin, and Lewis Counties with 21.4, 17.1 and 15.1 cases per 100,000 population reported, respectively.

Figure 26. Salmonellosis - incidence by county, 2006

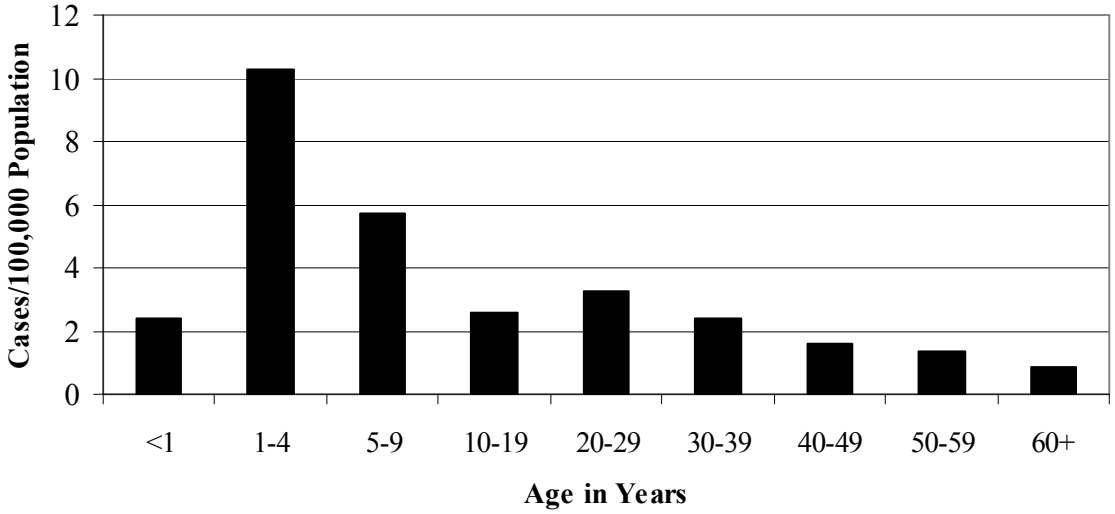


SHIGELLOSIS

Shigellosis is an acute enteric bacterial infection caused by *Shigella sonnei, S. flexneri, S. dysenteriae* or *S. boydii.* Humans are the only reservoir for *Shigella* and transmission occurs via the fecal-oral route through ingestion of contaminated food or water or via person-to-person transmission, including oral-anal sex. Ingestion of very few organisms can cause infection. Outbreaks occasionally occur in association with child care or food service facilities. Symptoms include fever, watery or bloody diarrhea, abdominal pain, malaise and headache.

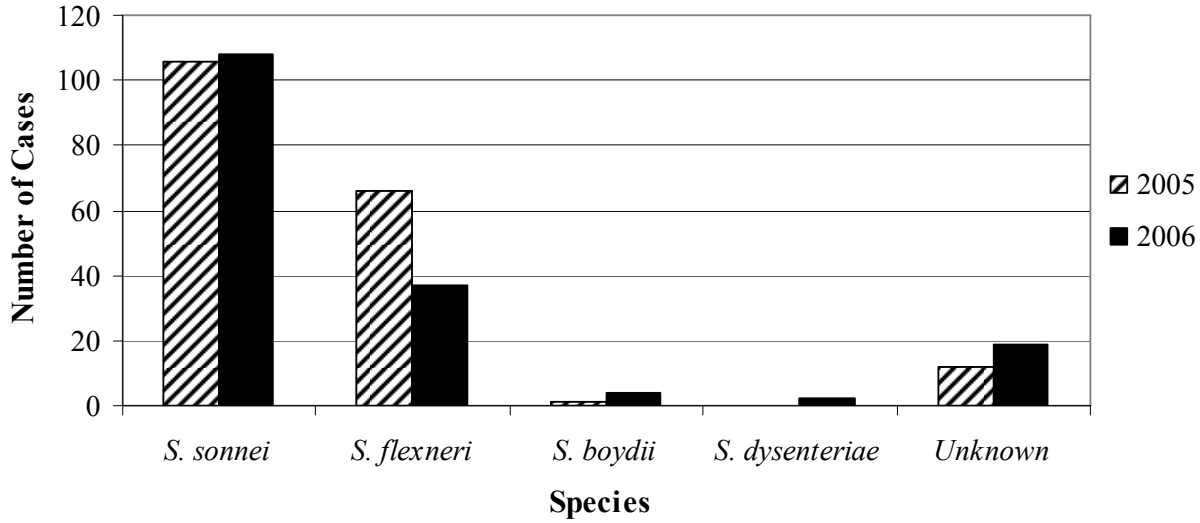
Shigellosis is an immediately notifiable condition in Washington. In 2006, there were 170 cases of shigellosis reported in Washington (2.7 cases/100,000 population) by 20 counties with no deaths.

Figure 27. Shigellosis - incidence by age group, 2006



Of 152 cases with species identified, there were 109 *S. sonnei*, 37 *S. flexneri*, four *S. boydii*, and two *S. dysenteriae*. The highest incidence was in the 1−4 year age group (10.3 cases/100,000 population). Exposures during foreign travel accounted for 27 cases (16%). Four clusters were reported, three within household/extended family groups and one associated with transmission during a wrestling match.

Figure 28. Shigellosis - number of cases by species, 2005-2006



SYPHILIS

Syphilis is a genital ulcer and systemic disease caused by the spirochete *Treponema pallidum*. Syphilis is divided into four disease stages− primary, secondary, early latent and late/late latent. *T. pallidum* is transmitted by direct contact with lesions of primary or secondary syphilis or by perinatal transmission. Untreated syphilis is infectious during the first three stages. Untreated late or late latent 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 progress after many years to late syphilis with irreversible multi-organ damage. Congenital syphilis may follow early or, rarely, late 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.

In 2006, there were 182 primary and secondary (P & S) infections (2.9 cases/100,000 population), 81 early latent cases, 160 late/late latent cases and no cases of congenital syphilis reported in Washington. These cases represent an ongoing resurgence of syphilis among men who have sex with men first observed in Washington in 1999. The most recent outbreak of syphilis among heterosexuals occurred more than a decade ago.

Figure 29. Primary and secondary syphilis - reported cases, 2002-2006

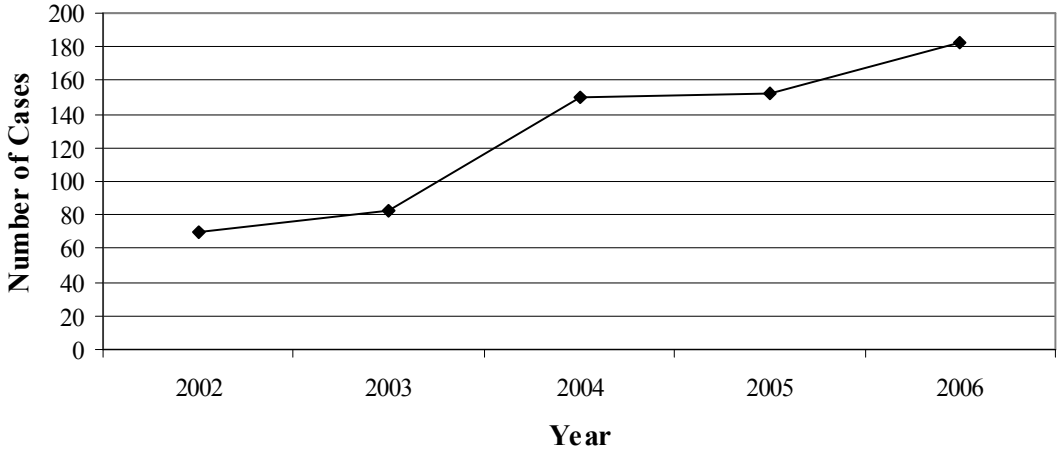
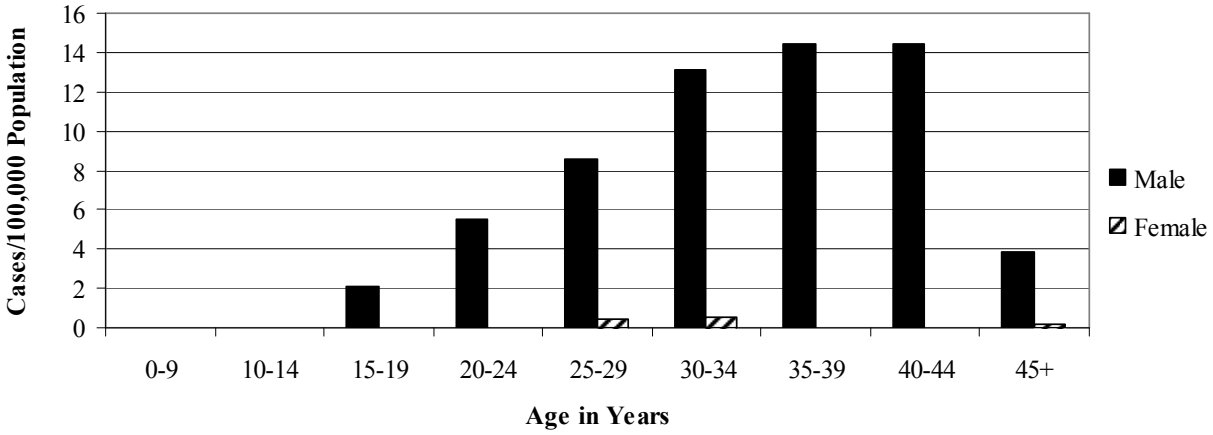


Figure 30. Primary and secondary syphilis - incidence by sex and age group, 2006



Eighty-one percent of the P & S syphilis cases in 2006 were reported by King County. This pattern has been observed since 1997 in contrast to previous outbreaks where a greater proportion of cases were reported from counties other than King County.

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

TETANUS

Tetanus is an acute disease caused by an exotoxin produced by *Clostridium tetani* bacteria which grow anaerobically at the site of an injury. *C. tetani* are commonly present and harmless in the intestines of animals and humans. Soil or fomites can be contaminated with animal or human feces and tetanus spores are ubiquitous in the environment. They can be introduced by a penetrating injury resulting from trauma or during activities such as farm work, gardening, or even peeling vegetables grown in soil.

Tetanus is characterized by painful muscular contractions, primarily of the masseter and neck muscles, secondarily of the trunk muscles. Muscle spasms usually begin within 14 days of the injury. Symptoms progress in a descending pattern and can ultimately cause respiratory arrest and autonomic dysfunction. The case fatality rate ranges from 10% to over 80% and is highest in infants and in the elderly. Tetanus is easily prevented by routine childhood and adult vaccination and by appropriate wound care following tetanus-prone injuries. The first tetanus toxoid vaccine was produced in 1924 and is available as a single-antigen preparation in combination with diphtheria toxoid as pediatric DT or adult Td, and with both diphtheria toxoid and acellular pertussis vaccine as DTaP or Tdap.

In Washington, four cases of tetanus were reported during the past ten years. No cases were reported in Washington in 2006. Due to the availability of immunization, tetanus is now relatively uncommon in the United States. It primarily affects unvaccinated or under-vaccinated persons, typically older adults who have not received scheduled booster doses of tetanus toxoid.

TRICHINOSIS

Trichinosis is an infection caused by the ingestion of raw or insufficiently cooked meat contaminated with the parasite *Trichinella spiralis.* Symptoms range from unapparent infection to a fulminating fatal disease depending on the number of larvae ingested. The sudden appearance of myalgias with edema of the upper eyelids and fever are early characteristic signs of trichinosis. Consumption of wild game is the most likely exposure in North America. An outbreak reported in 2005 in British Columbia was associated with hunting and consuming bear meat. One case of trichinosis was reported in 2006 in a Klickitat County resident with a history of consuming raw cougar meat.

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 and respiratory secretions from infectious persons. Infection results in TB disease (active TB) or latent TB. 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) tuberculin skin test. Diagnosis of TB is usually performed by examination of chest radiographs, sputum or tissue stained for acid-fast bacilli and by isolation of *M. tuberculosi*s from sputum or other specimens.

Tuberculosis is an immediately notifiable condition in Washington. Reported TB in Washington increased 21% 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, reported TB decreased 17%. After a brief increase during 1995−1997, the case count has declined. In 2005, the case count increased and this increase has continued in 2006.

In 2006, 262 new cases of active TB (4.1 cases/100,000 population) were reported in Washington, a slight increase from 2005. Twenty counties reported at least one new case of TB and eleven counties reported five or more cases. Among these, the highest rates were in King and Yakima Counties with 7.9 and 6.0 cases/100,000 population reported respectively.

The rate of TB was highest among persons 65 years of age or older (7.8 cases/100,000 population) in 2006. Persons 5−14 years of age continued to have the lowest incidence (0.4 cases/100,000 population). The proportion of cases by gender changed slightly in 2006; an increased proportion of male cases were reported in 2006 as compared to 2005 (63% vs. 59% respectively).

Table 6. Tuberculosis by age group, 2006

Age (Years)	Cases	Cases/100,000 Population	%
0-4	8	1.9	3
5-14	4	0.4	2
15-24	28	3.0	11
25-44	95	5.3	36
45-64	70	4.2	27
65+	57	7.8	22
Total	**262**	**4.1**	**100**

A large proportion of TB disease was reported among certain racial/ethnic groups. The incidence among Asians was more than 28 times that of Whites and almost four times that of Hispanics. The incidence among Blacks was more than 16 times that of Whites and two times that of Hispanics.

Table 7. Tuberculosis by race/ethnicity, 2006

Race/Ethnicity	Cases	Cases/100,000 Population	%
Asian/Pacific Islander, alone	115	31.7	44
White, alone	54	1.1	21
Black, alone	36	17.8	14
Hispanic American, all races	42	8	16
Indian/Alaska Native, alone	11	11.9	4
Multi-Race	1	.6	<1

Seventy-three percent (190 cases) of the 2006 tuberculosis cases in Washington were among foreign-born immigrants or refugees from countries with high rates of tuberculosis; Vietnam, Mexico, the Philippines, or Ethiopia.

Table 8. Tuberculosis by race/ethnicity and country of origin, 2006

	US-born		Foreign-born		Total	
Race/Ethnicity	**No.**	**%**	**No.**	**%**	**No.**	**%**
Asian/Pacific Islander, alone	4	3	111	97	115	44
White, alone	44	81	10	19	54	21
Black, alone	7	19	29	81	36	14
Hispanic, all races	5	12	37	88	42	16
American Indian/Alaska Native, alone	11	100	0	0	11	4
Multi-Race	0	0	1	100	1	<1

Co-morbidity with HIV remains low in Washington. The number of TB cases among persons with HIV/AIDS decreased slightly in 2006; eleven (4%) cases were reported in 2006 vs. 15 (6%) cases reported in 2005.

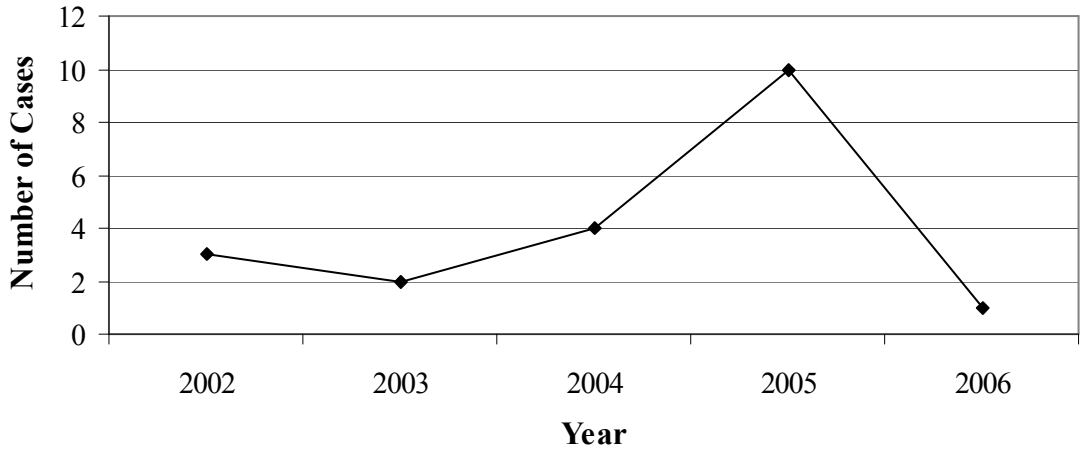
Drug sensitivity testing in 2006 revealed that of the 201 *M. tuberculosis* specimens available for analysis, 24 (12%) were resistant to isoniazid. Only four people (2%) had specimens that were multi-drug resistant (that is, resistant to both isoniazid and rifampin). In 2006, isoniazid resistance was slightly higher in specimens collected from foreign-born persons (10%) than in specimens from US-born people (7%).

TULAREMIA

Tularemia, also known as rabbit or deerfly fever, is an acute bacterial zoonosis caused by *Francisella tularensis.* Infection may develop following several routes of exposure: deerfly or tick bite, handling infected animals, ingesting contaminated food or water, mucous membrane contact with contaminated water and inhalation of bacteria aerosolized by lawn mowers or other garden equipment. Symptoms reflect the route of transmission and can include fever, malaise, lymphadenopathy (glandular form), skin ulcers (ulceroglandular form), eye infection (oculoglandular form), pharyngitis, abdominal pain, diarrhea and pneumonia; any of the types of infection can cause sepsis (typhoidal form). Occasionally, infected animal reservoirs such as snowshoe hare are identified.

Tularemia is an immediately notifiable condition in Washington. An average of three cases have been reported annually during recent years. In 2006, one case of tularemia was reported in a Thurston County child. *F. tularensis* is a potential agent of bioterrorism. Suspected or confirmed cases in individuals, without an appropriate exposure history, should raise the index of suspicion for a bioterrorism event.

Figure 31. Tularemia - reported cases, 2002-2006



TYPHOID FEVER

Typhoid fever, caused by *Salmonella* Typhi, is a systemic bacterial infection with fever, headache, rash, constipation or diarrhea, and swelling of the lymph nodes. Humans are the reservoir. The disease is spread via the fecal-oral route either directly, through person-to-person transmission, or through contaminated food, water or milk. The incubation period is one to three weeks. Mortality may be as high as 10% without antibiotic treatment. Since there can be a prolonged intestinal carrier state, sometimes due to gallbladder infection, patients should be re-cultured after antibiotic treatment to confirm resolution of the infection. Organisms can be isolated from blood early in the disease and from urine and feces after the first week.

Typhoid fever is not endemic in Washington and reported cases occur among immigrants and travelers. People traveling to areas where there is a recognized risk of exposure to *S.* Typhi should be vaccinated. Infections with *S.* Typhi should be reported (immediately) as typhoid fever.

Typhoid fever is immediately reportable in Washington. In 2006, seven cases of typhoid fever were reported in Washington (0.1 cases/100,000 population). Three of the cases reported travel during the exposure period; one to India, one to the Middle East, and one to Malaysia. No exposure was reported for two cases. Vaccination recommendations for travelers are available from travel clinics and the CDC Travelers' Health Web site at http://www.cdc.gov/travel.

TYPHUS

Typhus is a rickettsial disease transmitted by lice (which carry *Rickettsia prowazekii*), fleas (*R. typhi, R. mooseri, R. felis*), or mites (*Orientia tsutsugamushi*). In the United States, only flea-borne (murine) typhus is likely to occur, with fewer than 80 cases reported annually nationwide. Symptoms of flea-borne typhus may include headache, chills, fever, prostration, confusion, photophobia, vomiting and rash. The case-fatality rate is about 1%. Rats, mice, and possibly other small mammals are reservoirs for flea-borne typhus.

Typhus is an immediately notifiable condition in Washington. The last reported case of flea-borne (murine) typhus in Washington occurred in 1994 and was travel-associated. No cases of typhus were reported in Washington in 2006.

UNEXPLAINED CRITICAL ILLNESS OR DEATH

Critical illness or death from a potentially infectious cause occurring in previously healthy persons ages 1−49 is an immediately notifiable condition in Washington. The case must have:

1) indication of an infectious origin (fever, abnormal white blood cell count),
2) be severe enough to require hospitalization or result in death, and
3) have no identified etiology from initial testing performed at a hospital or commercial reference laboratory

In 2006, five persons meeting the initial criteria for unexplained critical illness or death were reported to the Department of Health. One was eventually diagnosed with herpes simplex meningitis and one was diagnosed with a vasculitis. The three remaining cases, all of whom had encephalitis or meningoencephalitis, remained unexplained. One of the cases died.

VIBRIOSIS

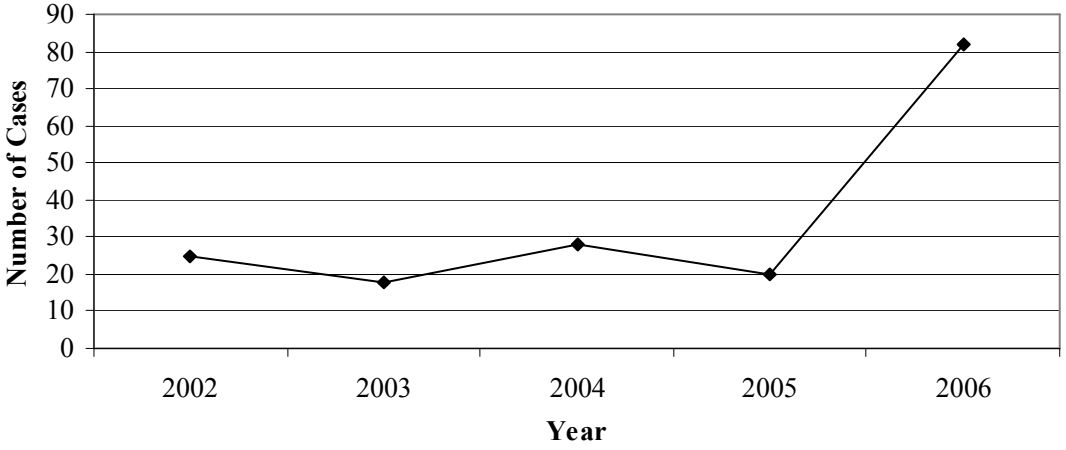
Vibriosis is caused by infection with *Vibrio* bacteria, including *V. parahaemolyticus, V. vulnificus,* non-toxigenic *V. cholerae* and other less common species. Infections caused by toxigenic *V. cholerae* are notifiable as cholera.

V. parahaemolyticus occurs naturally in Pacific coastal waters, especially during warmer months. Transmission of *Vibrio* usually occurs through ingestion of contaminated raw or undercooked shellfish, or through abrasion or penetrating injuries acquired in contaminated seawater. Symptoms include abdominal pain, watery diarrhea, vomiting, headache and fever. *V. vulnificus*, a species that occurs primarily in the Gulf of Mexico, can cause sepsis in immunocompromised persons.

In 2006, 80 laboratory-confirmed vibriosis cases were reported in Washington residents (1.3 cases/100,000 population). These included 73 *V. parahaemolyticus* cases, one non-O1, non-O139 *V. cholerae*, one *V. fluvialis* case and five cases of unknown species. All but three of the cases reported seafood exposure, mainly consumption of raw oysters.

A large regional outbreak of vibriosis affected the Pacific Northwest in 2006. Probable and confirmed vibriosis cases traced to oysters harvested in Washington and consumed locally numbered 113, with many additional cases reported from states where Washington product is shipped.

Figure 32. Vibriosis - reported cases, 2002-2006



WATERBORNE OUTBREAKS

Disease of waterborne origin can be due to many infectious agents including viruses such as hepatitis A, bacteria such as *E. coli* O157:H7, and parasites such as *Giardia*. A waterborne outbreak is defined as two or more ill persons with epidemiologic and/or laboratory evidence implicating a common water exposure as the source of illness. The exposure may be drinking water or recreational water. Suspected outbreaks should be immediately reported to local health jurisdictions, even before confirmatory laboratory results are available. In 2006, no confirmed waterborne outbreaks were reported.

YELLOW FEVER

Yellow fever is caused by a mosquito-borne flavivirus that occurs in tropical regions of Africa and South America. One of the primary vector mosquitoes for yellow fever, *Aedes aegypti*, is also found in some parts of the southern 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. The mortality rate ranges from 5−40%.

Yellow fever is an immediately notifiable condition 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 Web site at http://www.cdc.gov/travel.

YERSINIOSIS

Yersiniosis is an acute enteric infection caused by *Yersinia* bacteria, primarily *Y. enterocolitica;* however, other *Yersinia* species that comprise 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 and pork products.

In 2006, there were 22 cases of yersiniosis reported in Washington (0.3 cases/100,000 population), a slight increase from 2005 but down from previous years. Six cases (27%) were in the 0−9 year age group. Five cases (23%) were age 60 or older. Reported risk factors included consuming pork or pork products, ingesting untreated water, recreational water exposure, and contact with animals.

APPENDIX I
DISEASE INCIDENCE AND MORTALITY RATES

ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)*

Case, Death Rate/100,000 Population

	2003 (AIDS)		2003 (HIV)		2004 (AIDS)		2004 (HIV)		2005 (AIDS)		2005 (HIV)		2006 (AIDS)		2006 (HIV)	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	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	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	1	*	2	*	0	0.0	2	*	0	0.0
Benton	2	*	1	*	2	*	0	0.0	4	*	2	*	4	*	5	3.1
Chelan	1	*	1	*	2	*	1	*	2	*	3	*	3	*	2	*
Clallam	0	0.0	1	*	0	0.0	2	*	4	*	3	*	3	*	1	*
Clark	15	4.0	16	4.3	21	5.5	11	2.9	16	4.1	19	4.9	13	3.2	14	3.5
Columbia	1	*	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	3	*	2	*	2	*	3	*	2	*	2	*	1	*	5	5.2
Douglas	0	0.0	0	0.0	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	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	5	9.3	0	0.0	5	8.8	1	*	5	8.3	3	*	2	*	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	*	0	0.0	4	*	2	*	0	0.0	1	*	3	*	2	*
Grays Harbor	1	*	0	0.0	3	*	1	*	6	8.6	2	*	5	7.1	1	*
Island	3	*	3	*	1	*	1	*	1	*	0	0.0	1	*	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	1	*	2	*	0	0.0	0	0.0	3	*
King	272	15.3	207	11.6	221	12.4	219	12.2	213	11.8	227	12.6	207	11.3	221	12.0
Kitsap	6	2.5	6	2.5	12	5.0	3	*	7	2.9	5	2.1	13	5.3	8	3.3
Kittitas	0	0.0	0	0.0	2	*	0	0.0	2	*	1	*	2	*	1	*
Klickitat	0	0.0	1	*	1	*	0	0.0	0	0.0	0	0.0	0	0.0	2	*
Lewis	1	*	1	*	1	*	0	0.0	1	*	0	0.0	1	*	2	*
Lincoln	0	0.0	0	0.0	1	*	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	1	*	2	*	3	*	3	*	5	9.6	2	*	4	*	0	0.0
Okanogan	1	*	0	0.0	5	12.6	1	*	0	0.0	0	0.0	0	0.0	1	*
Pacific	0	0.0	3	*	0	0.0	0	0.0	1	*	2	*	2	*	2	*
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Pierce	33	4.5	34	4.6	33	4.4	20	2.7	34	4.5	43	5.7	28	3.6	44	5.7
San Juan	0	0.0	0	0.0	1	*	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Skagit	3	*	3	*	3	*	3	*	5	4.5	2	*	5	4.4	2	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	24	3.8	16	2.5	34	5.3	13	2.0	48	7.3	25	3.8	34	5.1	26	3.9
Spokane	22	5.1	12	2.8	22	5.1	15	3.5	26	6.0	10	2.3	17	3.8	15	3.4
Stevens	2	*	1	*	1	*	0	0.0	0	0.0	1	*	0	0.0	1	*
Thurston	6	2.8	2	*	11	5.0	11	5.0	8	3.6	6	2.7	8	3.5	6	2.6
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	1	*	1	*	0	0.0	0	0.0	1	*	0	0.0	0	0.0	1	*
Whatcom	6	3.4	3	*	1	*	6	3.4	3	*	7	3.9	6	3.3	6	3.3
Whitman	0	0.0	0	0.0	1	*	0	0.0	1	*	2	*	2	*	0	0.0
Yakima	11	4.9	4	*	7	3.1	5	2.2	7	3.1	8	3.5	7	3.0	3	*
STATEWIDE TOTAL																
CASES	421	6.9	320	5.2	400	6.5	324	5.3	406	6.5	376	6.0	375	5.9	374	5.9
DEATHS	184	3.0	29	0.5	152	2.5	10	0.2	93	1.5	9	0.1	87	1.4	11	0.2

*Incidence rates not calculated for < 5 cases.

Note: Cases are presented by year of diagnosis and county of residence at that time. HIV/AIDS data are dynamic in that cases that progress from HIV to AIDS are removed from the HIV column and added to the AIDS column, and cases discovered to have an initial diagnosis in another state are removed from WA State data.

Data reflect cases reported through 6/30/07.

AIDS STATEWIDE BY YEAR

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1990	733	15.1	371	7.6
1991	835	16.6	461	9.2
1992	897	17.4	515	10.0
1993^	943	17.9	617	11.7
1994	853	15.9	676	12.6
1995	754	13.8	665	12.2
1996	661	11.9	495	8.9
1997	512	9.0	226	4.0
1998	385	6.7	167	2.9
1999	351	6.0	137	2.3
2000	429	7.3	165	2.8
2001	387	6.5	153	2.6
2002	414	6.9	157	2.6
2003	421	6.9	184	3.0
2004	400	6.5	152	2.5
2005	406	6.5	93	1.5
2006	375	5.9	87	1.4

^ Revision of the AIDS case definition for adults and adolescents.

ARBOVIRAL DISEASE^

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
2002	1	0.0	0	0.0
2003	8	0.1	0	0.0
2004	3	0.0	0	0.0
2005	6	0.1	0	0.0
2006	13	0.2	0	0.0

^ Arboviral (mosquito, sandfly, tick-borne) Disease became a notifiable condition in 2004, replacing Encephalitis, viral.

ARBOVIRAL DISEASE TYPES

Year	Total Cases	Yellow Fever	West Nile Virus	Japanese Encephalitis	Dengue	Chikungunya
2002	1	1[V]	0	0	0	0
2003	8	0	8[T]	0	0	0
2004	3	0	1[T]	1[T]	1[T]	0
2005	6	0	3[T]	0	3[T]	0
2006	13	0	8 (5[T], 3[E])	0	4[T]	1[T]

[V] Vaccine-associated

[T] Travel-associated

[E] Endemically acquired

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
2004	1	3	5	0.1	0	0.0
2005	0	2	4	0.1	0	0.0
2006	0	9	1	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
2004	2	0.0	0	0.0
2005	0	0.0	0	0.0
2006	0	0.0	0	0.0

CAMPYLOBACTERIOSIS

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	*	2	*	3	*	4	*	2	*
Asotin	1	*	1	*	1	*	0	0.0	0	0.0
Benton	19	12.9	40	26.4	20	12.9	26	16.4	23	14.3
Chelan	10	14.8	8	11.8	7	10.2	9	13.0	11	15.7
Clallam	4	*	8	12.3	2	*	7	10.5	6	8.8
Clark	54	14.9	67	18.0	74	19.3	57	14.6	57	14.1
Columbia	0	0.0	0	0.0	2	*	0	0.0	0	0.0
Cowlitz	11	11.7	4	*	11	11.5	16	16.7	12	12.4
Douglas	7	21.1	4	*	5	14.6	0	0.0	1	*
Ferry	0	0.0	2	*	0	0.0	2	*	0	0.0
Franklin	4	*	13	24.3	5	8.8	6	9.9	11	17.1
Garfield	0	0.0	0	0.0	1	*	1	*	0	0.0
Grant	11	14.4	24	31.1	18	23.0	19	24.0	11	13.6
Grays Harbor	7	10.2	14	20.3	19	27.5	10	14.3	11	15.6
Island	3	*	6	8.1	5	6.7	10	13.2	7	9.1
Jefferson	3	*	4	*	2	*	8	29.0	1	*
King	295	16.6	270	15.2	266	14.9	337	18.6	258	14.1
Kitsap	11	4.7	20	8.4	24	10.0	28	11.6	24	9.9
Kittitas	3	*	5	14.2	2	*	6	16.4	3	*
Klickitat	2	*	3	*	2	*	4	*	3	*
Lewis	14	19.9	5	7.1	0	0.0	16	22.3	6	8.2
Lincoln	2	*	0	0.0	0	0.0	1	*	1	*
Mason	5	10.0	7	13.9	2	*	5	9.6	7	13.2
Okanogan	3	*	2	*	8	20.2	0	0.0	2	*
Pacific	2	*	2	*	3	*	3	*	3	*
Pend Oreille	1	*	0	0.0	2	*	0	0.0	0	0.0
Pierce	44	6.1	32	4.4	33	4.4	48	6.4	50	6.5
San Juan	5	34.2	2	*	5	33.1	2	*	4	*
Skagit	25	23.8	19	17.8	23	21.1	22	19.8	24	21.2
Skamania	0	0.0	0	0.0	0	0.0	2	*	0	0.0
Snohomish	105	16.7	96	15.1	88	13.6	110	16.8	94	14.0
Spokane	56	13.2	67	15.6	49	11.3	74	17.0	67	15.1
Stevens	7	17.3	13	32.0	2	*	2	*	1	*
Thurston	27	12.7	25	11.6	28	12.8	26	11.6	30	13.0
Wahkiakum	0	0.0	0	0.0	1	*	0	0.0	2	*
Walla Walla	140	252.7	6	10.8	6	10.6	2	*	3	*
Whatcom	46	26.7	47	26.9	48	27.1	66	36.5	56	30.4
Whitman	2	*	5	12.2	6	14.4	0	0.0	0	0.0
Yakima	102	45.3	120	53.1	88	38.7	116	50.6	202	87.1
STATEWIDE TOTAL										
CASES	1,032	17.1	943	15.5	861	14.0	1,045	16.7	993	15.6
DEATHS	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0

* Incidence rates not calculated for < 5 cases.

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
2004	861	14.0	0	0.0
2005	1,045	16.7	0	0.0
2006	993	15.6	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
2004	0	0.0	0	0.0
2005	0	0.0	0	0.0
2006	0	0.0	0	0.0

CHLAMYDIA TRACHOMATIS

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	22	132.5	30	180.7	24	143.7	32	188.2	70	404.6
Asotin	42	202.9	52	252.4	41	198.1	37	177.0	40	189.6
Benton	238	161.2	348	229.6	406	261.8	406	256.8	375	233.5
Chelan	129	190.8	168	247.4	169	247.1	174	251.4	165	235.4
Clallam	157	241.9	156	238.9	151	229.1	145	217.1	142	209.4
Clark	844	232.3	844	226.7	891	232.5	916	234.0	818	202.7
Columbia	3	*	1	*	9	219.5	4	*	3	*
Cowlitz	128	135.6	196	206.5	235	246.6	322	335.8	369	381.2
Douglas	60	181.3	69	205.4	85	248.5	72	207.5	78	218.5
Ferry	10	137.0	8	109.6	14	191.8	16	216.2	26	346.7
Franklin	162	315.8	188	350.7	192	366.8	221	365.3	284	442.4
Garfield	1	*	0	0.0	0	0.0	1	*	0	0.0
Grant	169	221.2	216	280.2	234	298.9	188	237.7	195	241.9
Grays Harbor	108	157.9	153	222.4	189	273.1	164	235.0	155	220.2
Island	223	305.1	175	236.5	177	236.6	183	240.8	171	221.5
Jefferson	32	120.3	59	221.0	37	137.0	57	206.5	30	106.4
King	4,470	251.9	5,169	290.5	5,336	298.4	5,604	309.9	5,244	285.7
Kitsap	532	226.7	671	283.1	672	280.6	660	274.5	683	280.6
Kittitas	74	212.6	90	255.7	94	262.6	155	423.5	102	272.7
Klickitat	26	134.7	35	181.3	41	212.4	26	133.3	17	85.9
Lewis	130	185.2	141	200.3	196	277.2	162	226.3	150	205.8
Lincoln	5	49.0	6	59.4	8	78.4	5	49.5	5	49.0
Mason	109	218.9	109	217.1	119	234.3	162	312.1	110	207.2
Okanogan	96	241.2	116	292.9	133	335.9	124	313.1	123	309.0
Pacific	39	185.7	37	177.0	33	157.1	33	154.9	19	88.4
Pend Oreille	9	76.3	16	135.6	14	117.7	10	82.0	9	73.2
Pierce	2,733	377.0	2,820	384.4	2,687	361.2	3,428	453.5	3,031	391.9
San Juan	14	95.9	10	67.6	21	139.1	10	64.5	12	76.4
Skagit	229	217.9	270	253.0	327	330.6	294	265.1	283	250.2
Skamania	11	111.1	13	131.3	19	188.1	9	87.4	8	75.5
Snohomish	1,295	206.2	1,467	230.1	1,632	253.1	1,556	237.3	1,503	223.7
Spokane	905	212.6	988	230.5	1,101	254.9	1,071	245.5	1,121	252.6
Stevens	33	81.7	59	145.3	44	108.1	72	174.8	46	109.3
Thurston	440	207.3	511	237.9	552	252.6	528	235.6	576	249.2
Wahkiakum	3	*	3	*	3	*	5	128.2	7	179.5
Walla Walla	115	207.6	80	143.4	138	243.4	160	278.3	93	160.6
Whatcom	367	213.1	436	249.9	462	260.6	480	265.5	519	281.6
Whitman	87	214.3	133	324.4	147	352.5	152	358.5	117	273.4
Yakima	886	393.8	953	421.7	1,002	440.4	973	424.3	1,120	483.2

STATEWIDE TOTAL

CASES	14,936	247.2	16,796	275.4	17,635	285.9	18,617	297.6	17,819	279.5
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

* Incidence rates not calculated for < 5 cases.

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
2004	17,635	285.9	0	0.0
2005	18,617	297.6	0	0.0
2006	17,819	279.5	0	0.0

**First year reported, July - December

CHOLERA

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
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
2004	0	0.0	0	0.0
2005	0	0.0	0	0.0
2006	0	0.0	0	0.0

CRYPTOSPORIDIOSIS[+]

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
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	*	1	*	0	0.0	0	0.0	0	0.0
Benton	0	0.0	2	*	3	*	4	*	3	*
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	1	*	7	1.9	6	1.6	7	1.8	5	1.2
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	3	*	3	*	1	*
Douglas	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	1	*	0	0.0	1	*	0	0.0	1	*
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grays Harbor	1	*	0	0.0	0	0.0	0	0.0	1	*
Island	0	0.0	0	0.0	0	0.0	1	*	1	*
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	32	1.8	35	2.0	31	1.7	55	3.0	46	2.5
Kitsap	1	*	3	*	2	*	2	*	1	*
Kittitas	0	0.0	2	*	0	0.0	2	*	1	*
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	2	*	0	0.0	0	0.0	1	*	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	2	*	0	0.0
Mason	0	0.0	0	0.0	0	0.0	1	*	1	*
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	10	1.4	2	*	8	1.1	4	*	7	0.9
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	6	1.0	7	1.1	6	0.9	2	*	9	1.3
Spokane	1	*	1	*	0	0.0	0	0.0	4	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	4	*	1	*	0	0.0	1	*	3	*
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Whatcom	1	*	0	0.0	0	0.0	1	*	3	*
Whitman	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Yakima	1	*	3	*	2	*	7	3.1	6	2.6
STATEWIDE TOTAL										
CASES	62	1.0	65	1.1	63	1.0	94	1.5	95	1.5
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

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

* Incidence rates not calculated for < 5 cases.

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
2004	11	0.2	0	0.0
2005	5	0.1	0	0.0
2006	1	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
2004	0	0.0	0	0.0
2005	0	0.0	0	0.0
2006	0	0.0	0	0.0

ENTEROHEMORRHAGIC *E. COLI*

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
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	1	*	1	*
Benton	3	*	4	*	9	5.8	3	*	3	*
Chelan	0	0.0	0	0.0	0	0.0	1	*	5	7.1
Clallam	2	*	0	0.0	0	0.0	1	*	0	0.0
Clark	15	4.1	13	3.5	21	5.5	30	7.7	14	3.5
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	1	*	2	*	0	0.0	7	7.3	2	*
Douglas	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	2	*	2	*	2	*	2	*	1	*
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	*	2	*	0	0.0	0	0.0	5	6.2
Grays Harbor	0	0.0	1	*	2	*	2	*	0	0.0
Island	0	0.0	0	0.0	0	0.0	2	*	1	*
Jefferson	1	*	1	*	0	0.0	0	0.0	0	0.0
King	32	1.8	40	2.2	43	2.4	43	2.4	45	2.5
Kitsap	5	2.1	3	*	4	*	9	3.7	7	2.9
Kittitas	3	*	2	*	0	0.0	1	*	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Lewis	2	*	2	*	0	0.0	1	*	4	*
Lincoln	0	0.0	1	*	0	0.0	0	0.0	1	*
Mason	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Okanogan	1	*	1	*	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	2	*	2	*	0	0.0	0	0.0
Pend Oreille	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	11	1.5	6	0.8	28	3.8	6	0.8	22	2.8
San Juan	0	0.0	1	*	0	0.0	0	0.0	1	*
Skagit	0	0.0	5	4.7	1	*	2	*	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	11	1.8	12	1.9	20	3.1	17	2.6	17	2.5
Spokane	43	10.1	10	2.3	2	*	3	*	9	2.0
Stevens	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Thurston	1	*	7	3.3	6	2.7	4	*	6	2.6
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	3	*	2	*	0	0.0	0	0.0	0	0.0
Whatcom	15	8.7	4	*	5	2.8	9	5.0	10	5.4
Whitman	2	*	0	0.0	5	12.0	0	0.0	2	*
Yakima	10	4.4	4	*	3	*	3	*	5	2.2
STATEWIDE TOTAL										
CASES	166	2.7	128	2.1	153	2.5	149	2.4	162	2.5
DEATHS	0	0.0	0	0.0	3	0.0	0	0.0	0	0.0

* Incidence rates not calculated for < 5 cases.

ENTEROHEMORRHAGIC *E. COLI* 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
2004	153	2.5	3	0.0
2005	149	2.4	0	0.0
2006	162	2.5	0	0.0

GIARDIASIS

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Asotin	0	0.0	2	*	0	0.0	0	0.0	1	*
Benton	7	4.7	8	5.3	4	*	7	4.4	22	13.7
Chelan	3	*	5	7.4	2	*	2	*	2	*
Clallam	9	13.9	4	*	8	12.1	5	7.5	5	7.4
Clark	26	7.2	26	7.0	40	10.4	31	7.9	26	6.4
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	8	8.5	8	8.4	4	*	1	*	2	*
Douglas	0	0.0	0	0.0	1	*	2	*	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	4	*	2	*	1	*	4	*
Garfield	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Grant	2	*	1	*	2	*	6	7.6	3	*
Grays Harbor	3	*	2	*	7	10.1	3	*	4	*
Island	6	8.2	5	6.8	4	*	3	*	2	*
Jefferson	0	0.0	4	*	2	*	7	25.4	6	21.3
King	166	9.4	117	6.6	119	6.7	140	7.7	125	6.8
Kitsap	16	6.8	8	3.4	11	4.6	10	4.2	12	4.9
Kittitas	0	0.0	2	*	0	0.0	1	*	2	*
Klickitat	2	*	1	*	2	*	6	30.8	1	*
Lewis	5	7.1	5	7.1	0	0.0	1	*	5	6.9
Lincoln	1	*	0	0.0	0	0.0	4	*	0	0.0
Mason	2	*	6	12.0	5	9.8	6	11.6	4	*
Okanogan	4	*	3	*	0	0.0	1	*	4	*
Pacific	1	*	1	*	0	0.0	4	*	0	0.0
Pend Oreille	3	*	1	*	1	*	0	0.0	0	0.0
Pierce	39	5.4	27	3.7	26	3.5	21	2.8	17	2.2
San Juan	3	*	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	11	10.5	14	13.1	7	6.4	2	*	5	4.4
Skamania	2	*	0	0.0	0	0.0	0	0.0	1	*
Snohomish	60	9.6	43	6.7	63	9.8	54	8.2	62	9.2
Spokane	47	11.0	46	10.7	44	10.2	54	12.4	56	12.6
Stevens	7	17.3	3	*	6	14.7	0	0.0	0	0.0
Thurston	21	9.9	25	11.6	33	15.1	17	7.6	21	9.1
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Walla Walla	5	9.0	2	*	2	*	3	*	0	0.0
Whatcom	18	10.5	34	19.5	18	10.2	16	8.8	27	14.7
Whitman	1	*	2	*	1	*	0	0.0	0	0.0
Yakima	32	14.2	26	11.5	29	12.7	28	12.2	31	13.4
STATEWIDE TOTAL										
CASES	510	8.4	435	7.1	444	7.2	437	7.0	451	7.1
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

* Incidence rates not calculated for < 5 cases.

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
2004	444	7.2	0	0.0
2005	437	7.0	0	0.0
2006	451	7.1	0	0.0

GONORRHEA

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	4	*	3	*	5	29.4	3	*
Asotin	1	*	2	*	2	*	1	*	1	*
Benton	11	7.5	18	11.9	19	12.3	21	13.3	43	26.8
Chelan	3	*	2	*	2	*	6	8.7	2	*
Clallam	2	*	8	12.3	8	12.1	21	31.4	17	25.1
Clark	138	38.0	158	42.4	191	49.8	206	52.6	129	32
Columbia	0	0.0	0	0.0	0	0.0	2	*	0	0.0
Cowlitz	13	13.8	15	15.8	51	53.5	104	108.4	223	230.4
Douglas	3	*	3	*	2	*	2	*	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	4	*	2	*	7	12.3	17	28.1	18	28
Garfield	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Grant	4	*	13	16.9	15	19.2	13	16.4	11	13.6
Grays Harbor	12	17.5	7	10.2	4	*	5	7.2	30	42.6
Island	15	20.5	23	31.1	14	18.7	31	40.8	24	31.1
Jefferson	2	*	2	*	3	*	2	*	6	21.3
King	1,462	82.4	1,351	75.9	1,265	70.7	1,785	98.7	1,937	105.5
Kitsap	81	34.5	91	38.4	70	29.2	76	31.6	72	29.6
Kittitas	2	*	7	19.9	3	*	8	21.9	4	*
Klickitat	2	*	2	*	8	41.5	5	25.6	3	*
Lewis	13	18.5	6	8.5	13	18.4	12	16.8	44	60.4
Lincoln	0	0.0	0	0.0	1	*	0	0.0	1	*
Mason	6	12.0	13	25.9	5	9.8	14	27.0	9	16.9
Okanogan	4	*	6	15.2	6	15.2	1	*	4	*
Pacific	0	0.0	4	*	1	*	3	*	8	37.2
Pend Oreille	0	0.0	0	0.0	1	*	2	*	1	*
Pierce	636	87.7	538	73.3	452	60.8	675	89.3	825	106.7
San Juan	1	*	2	*	0	0.0	0	0.0	1	*
Skagit	17	16.2	25	23.4	20	18.4	32	28.9	37	32.7
Skamania	1	*	0	0.0	2	*	3	*	0	0.0
Snohomish	190	30.3	139	21.8	166	25.7	244	37.2	317	47.2
Spokane	124	29.1	97	22.6	152	35.2	121	27.7	120	27
Stevens	2	*	5	12.3	2	*	5	12.1	3	*
Thurston	52	24.5	37	17.2	43	19.7	56	25.0	58	25.1
Wahkiakum	1	*	0	0.0	1	*	0	0.0	3	*
Walla Walla	3	*	2	*	8	14.1	1	*	3	*
Whatcom	53	30.8	57	32.7	65	36.7	117	64.7	103	55.9
Whitman	6	14.8	8	19.5	7	16.8	2	*	5	11.7
Yakima	61	27.1	107	47.3	198	87.0	139	60.6	166	71.6
STATEWIDE TOTAL										
CASES	2,925	48.4	2,754	45.2	2,810	45.6	3,738	59.7	4,231	66.4
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

* Incidence rates not calculated for < 5 cases.

GONORRHEA STATEWIDE BY YEAR

Case, Death Rate/100,00 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
2004	2,810	45.6	0	0.0
2005	3,738	59.7	0	0.0
2006	4,231	66.4	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
2004	0	0.0	0	0.0
2005	0	0.0	0	0.0
2006	0	0.0	0	0.0

HAEMOPHILUS INFLUENZAE INVASIVE DISEASE

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*	7	1.8	0	0.0
2002*	5	1.3	0	0.0
2003*	13	3.3	1	0.3
2004*	4	1.0	0	0.0
2005*	5	1.2	0	0.0
2006*	5	1.2	0	0.0

*Rates for 2001-2006 are for 0-4 age populations.

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
2004	2	0.0	0	0.0
2005	1	0.0	0	0.0
2006	3	0.0	2	0.0

* Hantavirus Pulmonary Syndrome first became a notifiable condition in Washington in 12/2000

** Out of state exposure

Note: One retrospective case from 1985 was reported, for a total of 32 cases reported in Washington.

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
2004	6	0.1	0	0.0
2005	4	0.1	0	0.0
2006	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

	2002		2003		2004		2005		2006	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	1	0.7	*	0.7	2	*	1	*	0	0.0
Chelan	1	1.5	*	0.0	2	*	1	*	0	0.0
Clallam	1	1.5	*	4.6	0	0.0	3	*	0	0.0
Clark	13	3.6	3	*	10	2.6	7	1.8	1	*
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	2	2.1	*	0.0	2	*	2	*	0	0.0
Douglas	0	0.0	1	*	2	*	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	1	1.9	*	3.7	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	1.3	*	3.9	1	*	5	6.3	1	*
Grays Harbor	1	1.5	*	1.5	1	*	0	0.0	1	*
Island	4	5.5	*	0.0	1	*	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	30	1.7	28	1.6	17	1.0	16	0.9	16	0.9
Kitsap	5	2.1	0	0.0	3	*	1	*	0	0.0
Kittitas	2	5.7	*	2.8	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	2	*	0	0.0	0	0.0
Lewis	4	5.7	*	0.0	1	*	0	0.0	1	*
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	2	4.0	*	2.0	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	2	*	1	*	0	0.0	6	15.1
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	2	*	0	0.0	0	0.0
Pierce	61	8.4	6	0.8	2	*	5	0.7	3	*
San Juan	1	6.8	*	0.0	0	0.0	0	0.0	0	0.0
Skagit	3	2.9	*	0.0	1	*	1	*	1	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	14	2.2	5	0.8	5	0.8	11	1.7	8	1.2
Spokane	4	0.9	*	0.9	2	*	1	*	5	1.1
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	6	2.8	3	*	3	*	3	*	1	*
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	2	*	0	0.0	1	*
Whatcom	2	1.2	*	5.2	5	2.8	2	*	6	3.3
Whitman	0	0.0	1	*	0	0.0	1	*	0	0.0
Yakima	3	1.3	*	0.4	2	*	3	*	1	*
STATEWIDE TOTAL										
CASES	162	2.7	76	1.2	69	1.1	63	1.0	52	0.8
DEATHS	0	0.0	0	0.0	0	0.0	1	0.0	2	0.0

* Incidence rates not calculated for < 5 cases.

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
2004	69	1.1	0	0.0
2005	63	1.0	1	0.0
2006	52	0.8	2	0.0

HEPATITIS B

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
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	1	*	0	0.0	0	0.0
Clark	2	*	2	*	6	1.6	13	3.3	6	1.5
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	11	11.7	3	*	3	*	5	5.2	3	*
Douglas	0	0.0	2	*	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	1	*	1	*	0	0.0
Grays Harbor	0	0.0	1	*	0	0.0	1	*	4	*
Island	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	30	1.7	34	1.9	22	1.2	23	1.3	21	1.1
Kitsap	0	0.0	3	*	0	0.0	6	2.5	6	2.5
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	2	*	0	0.0	0	0.0	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	2	*	1	*	1	*	0	0.0	1	*
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	1	*
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	5	0.7	5	0.7	4	*	5	0.7	5	0.6
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	3	*	2	*	0	0.0	0	0.0	1	*
Skamania	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Snohomish	5	0.8	9	1.4	11	1.7	6	0.9	6	0.9
Spokane	15	3.5	12	2.8	9	2.1	14	3.2	19	4.3
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	2	*	3	*	0	0.0	1	*	2	*
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Whatcom	7	4.1	9	5.2	1	*	4	*	0	0.0
Whitman	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Yakima	1	*	0	0.0	4	*	1	*	5	2.2
STATEWIDE TOTAL										
CASES	83	1.4	90	1.5	64	1.0	80	1.3	80	1.3
DEATHS	0	0.0	1	0.0	1	0.0	0	0.0	2	0.0

* Incidence rates not calculated for < 5 cases.

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
2004	64	1.0	1	0.0
2005	80	1.3	0	0.0
2006	80	1.3	2	0.0

HEPATITIS C

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	1	*
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	1	*
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Island	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	8	0.5	8	0.4	8	0.4	9	0.5	8	0.4
Kitsap	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	2	*	1	*	1	*	0	0.0	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	2	*	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	5	0.7	3	*	3	*	5	0.7	3	*
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	1	*	0	0.0	3	*	2	*	2	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	1	*	2	*	0	0.0	1	*	0	0.0
Spokane	3	*	1	*	6	1.4	2	*	5	1.1
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	1	*	4	*	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	1	*
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	3	*	2	*	1	*	2	*	1	*
STATEWIDE TOTAL										
CASES	27	0.4	21	0.3	23	0.4	21	0.3	23	0.4
DEATHS	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0

* Incidence rates not calculated for < 5 cases.

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
2004	23	0.4	1	0.0
2005	21	0.3	0	0.0
2006	23	0.4	0	0.0

HERPES SIMPLEX

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	6	36.1	4	*	3	*	2	*	2	*
Asotin	11	53.1	17	82.5	9	43.5	18	86.1	18	85.3
Benton	34	23.0	59	38.9	40	25.8	38	24.0	38	23.7
Chelan	15	22.2	19	28.0	27	39.5	23	33.2	23	32.8
Clallam	30	46.2	32	49.0	24	36.4	29	43.4	25	36.9
Clark	56	15.4	44	11.8	42	11.0	72	18.4	37	9.2
Columbia	0	0.0	0	0.0	0	0.0	2	*	1	*
Cowlitz	15	15.9	18	19.0	18	18.9	30	31.3	55	56.8
Douglas	6	18.1	9	26.8	8	23.4	15	43.2	11	30.8
Ferry	0	0.0	0	0.0	3	*	0	0.0	0	0.0
Franklin	10	19.5	10	18.7	11	19.3	15	24.8	22	34.3
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	13	17.0	15	19.5	30	38.3	22	27.8	11	13.6
Grays Harbor	16	23.4	9	13.1	10	14.5	11	15.8	17	24.1
Island	22	30.1	20	27.0	35	46.8	34	44.7	47	60.9
Jefferson	7	26.3	7	26.2	11	40.7	14	50.7	9	31.9
King	650	36.6	688	38.7	700	39.1	798	44.1	769	41.9
Kitsap	80	34.1	64	27.0	54	22.5	67	27.9	68	27.9
Kittitas	12	34.5	9	25.6	8	22.3	18	49.2	29	77.5
Klickitat	5	25.9	3	*	3	*	0	0.0	0	0.0
Lewis	23	32.8	15	21.3	19	26.9	25	34.9	23	31.6
Lincoln	0	0.0	1	*	1	*	2	*	0	0.0
Mason	14	28.1	15	29.9	14	27.6	20	38.5	21	39.5
Okanogan	4	*	16	40.4	12	30.3	13	32.8	11	27.6
Pacific	4	*	2	*	3	*	2	*	5	23.3
Pend Oreille	4	*	4	*	4	*	4	*	3	*
Pierce	221	30.5	236	32.2	194	26.1	231	30.6	307	39.7
San Juan	5	34.2	2	*	5	33.1	2	*	1	*
Skagit	35	33.3	41	38.4	84	77.2	65	58.6	62	54.8
Skamania	0	0.0	0	0.0	3	*	0	0.0	0	0.0
Snohomish	268	32.7	268	42.0	286	44.4	305	46.5	395	58.8
Spokane	147	34.5	163	38.0	172	39.8	155	35.5	148	33.3
Stevens	2	*	6	14.8	6	14.7	5	12.1	5	11.9
Thurston	55	25.9	87	40.5	70	32.0	82	36.6	121	52.4
Wahkiakum	0	0.0	1	*	1	*	0	0.0	1	*
Walla Walla	9	16.2	15	26.9	23	40.6	22	38.3	12	20.7
Whatcom	55	31.9	80	45.8	87	49.1	77	42.6	67	36.4
Whitman	4	*	12	29.3	8	19.2	14	33.0	12	28.0
Yakima	76	33.8	82	36.3	125	54.9	99	43.2	70	30.2
STATEWIDE TOTAL										
CASES	1,914	31.7	2,073	34.0	2,153	34.9	2,331	37.3	2,446	38.4
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

* Incidence rates not calculated for < 5 cases.

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
2004	15	0.2	4	0.1
2005	18	0.3	1	0.0
2006	20	0.3	1	0.0

LEPTOSPIROSIS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
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
2004	0	0.0	0	0.0
2005	4	0.1	0	0.0
2006	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
2004	13	0.2	3	0.0
2005	14	0.2	3	0.0
2006	18	0.2	3	0.0

LYME DISEASE

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
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
2004	14	0.2	0	0.0
2005	13	0.2	0	0.0
2006	8	0.1	0	0.0

LYMPHOGRANULOMA VENEREUM

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
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
2004	0	0.0	0	0.0
2005	3	0.0	0	0.0
2006	0	0.0	0	0.0

MALARIA

Case, Death Rate/100,00 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
2004	24	0.4	0	0.0
2005	24	0.4	0	0.0
2006	43	0.7	1	0.0

MEASLES

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
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	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	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	6	0.3	1	*	0	0.0
Kitsap	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	0	0.0	0	0.0	0	0.0	0	0.0	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	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	1	*	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	1	0.0	0	0.0	7	0.1	1	0.0	1	0.0
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

* Incidence rates not calculated for < 5 cases.

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
2004	7	0.1	0	0.0
2005	1	0.0	0	0.0
2006	1	0.0	0	0.0

MENINGOCOCCAL DISEASE

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
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	*	1	*	0	0.0	0	0.0	0	0.0
Benton	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Chelan	2	*	1	*	0	0.0	0	0.0	0	0.0
Clallam	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Clark	11	3.0	5	1.3	3	*	6	1.5	6	1.5
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	2	*	0	0.0	3	*	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	2	*	0	0.0	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	1	*	1	*	0	0.0
Grant	1	*	0	0.0	1	*	1	*	0	0.0
Grays Harbor	0	0.0	1	*	0	0.0	1	*	0	0.0
Island	1	*	2	*	1	*	0	0.0	1	*
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	21	1.2	8	0.4	17	1.0	14	0.8	12	0.7
Kitsap	0	0.0	3	*	2	*	1	*	1	*
Kittitas	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	5	7.1	0	0.0	2	*	1	*
Lincoln	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Mason	0	0.0	0	0.0	1	*	0	0.0	1	*
Okanogan	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Pacific	2	*	1	*	1	*	1	*	1	*
Pend Oreille	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Pierce	11	1.5	10	1.4	4	*	7	0.9	4	*
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	6	5.7	4	*	0	0.0	0	0.0	3	*
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	5	0.8	6	0.9	3	*	4	*	5	0.7
Spokane	2	*	4	*	3	*	5	1.1	3	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	2	*
Thurston	1	*	1	*	1	*	0	0.0	1	*
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	1	*	2	*	0	0.0	3	*	1	*
Whitman	2	*	0	0.0	1	*	0	0.0	1	*
Yakima	5	2.2	3	*	2	*	2	*	1	*
STATEWIDE TOTAL										
CASES	76	1.3	61	1.0	42	0.7	53	0.8	45	0.7
DEATHS	8	0.1	7	0.1	4	0.1	4	0.1	1	0.0

* Incidence rates not calculated for < 5 cases.

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
2004	42	0.7	4	0.1
2005	53	0.8	4	0.1
2006	45	0.7	1	0.0

MUMPS

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
2004	2	0.0	0	0.0
2005	3	0.0	0	0.0
2006	42	0.7	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
2004	0	0.0	0	0.0
2005	1	0.0	0	0.0
2006	1	0.0	0	0.0

PERTUSSIS

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	*	2	*	1	*	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	1	*	5	3.3	0	0.0	7	4.4	5	3.1
Chelan	8	11.8	2	*	2	*	1	*	1	*
Clallam	2	*	2	*	2	*	5	7.5	1	*
Clark	22	6.1	38	10.2	21	5.5	61	15.6	22	5.5
Columbia	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Cowlitz	26	27.5	3	*	10	10.5	4	*	13	13.4
Douglas	2	*	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	1	*	2	*	1	*	2	*	3	*
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	*	0	0.0	0	0.0	4	*	1	*
Grays Harbor	5	7.3	0	0.0	2	*	2	*	1	*
Island	2	*	21	28.4	6	8.0	5	6.6	2	*
Jefferson	0	0.0	1	*	19	70.4	8	29.0	0	0.0
King	153	8.6	294	16.5	190	10.6	316	17.5	94	5.1
Kitsap	5	2.1	15	6.3	8	3.3	60	25.0	18	7.4
Kittitas	0	0.0	1	*	0	0.0	5	13.7	2	*
Klickitat	0	0.0	1	*	6	31.1	0	0.0	1	*
Lewis	0	0.0	2	*	0	0.0	14	19.6	5	6.9
Lincoln	0	0.0	0	0.0	1	*	1	*	0	0.0
Mason	1	*	2	*	3	*	5	9.6	1	*
Okanogan	2	*	0	0.0	2	*	0	0.0	0	0.0
Pacific	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Pierce	124	17.1	211	28.8	68	9.1	70	9.3	36	4.7
San Juan	1	*	18	121.6	1	*	12	77.4	3	*
Skagit	70	66.6	45	42.2	8	7.4	40	36.1	15	13.3
Skamania	2	*	0	0.0	1	*	0	0.0	0	0.0
Snohomish	35	5.6	95	14.9	40	6.2	55	8.4	21	3.1
Spokane	0	0.0	4	*	43	10.0	19	4.4	39	8.8
Stevens	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Thurston	11	5.2	13	6.1	13	5.9	14	6.2	11	4.8
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	2	*
Walla Walla	0	0.0	0	0.0	0	0.0	4	*	0	0.0
Whatcom	13	7.5	46	26.4	303	170.9	120	66.4	58	31.5
Whitman	1	*	2	*	23	55.2	3	*	1	*
Yakima	85	37.8	18	8.0	66	29.0	189	82.4	21	9.1
STATEWIDE TOTAL										
CASES	575	9.5	844	13.8	842	13.7	1,026	16.4	377	5.9
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0

* Incidence rates not calculated for < 5 cases.

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
2004	842	13.7	0	0.0
2005	1,026	16.4	0	0.0
2006	377	5.9	1	0.0

PLAGUE

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
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
2004	0	0.0	0	0.0
2005	0	0.0	0	0.0
2006	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
2004	0	0.0	0	0.0
2005	0	0.0	0	0.0
2006	0	0.0	0	0.0

*Vaccine-associated cases

PSITTACOSIS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
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
2004	0	0.0	0	0.0
2005	1	0.0	0	0.0
2006	0	0.0	0	0.0

Q FEVER

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
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	1	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
2004	0	0.0	0	0.0
2005	2	0.0	0	0.0
2006	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
2004	0	0.0	0	0.0
2005	0	0.0	0	0.0
2006	0	0.0	0	0.0

RELAPSING FEVER

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
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
2004	6	0.1	0	0.0
2005	6	0.1	0	0.0
2006	2	0.0	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
2004	0	0.0	0	0.0
2005	1	0.0	0	0.0
2006	0	0.0	0	0.0

SALMONELLOSIS

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	*	1	*	1	*	4	*	2	*
Asotin	0	0.0	7	34.0	5	24.2	2	*	0	0.0
Benton	13	8.8	24	15.8	21	13.5	19	12.0	18	11.2
Chelan	10	14.8	5	7.4	2	*	8	11.6	15	21.4
Clallam	10	15.4	1	*	5	7.6	4	*	3	*
Clark	33	9.1	39	10.5	36	9.4	40	10.2	53	13.1
Columbia	0	0.0	2	*	1	*	0	0.0	0	0.0
Cowlitz	7	7.4	5	5.3	18	18.9	4	*	1	*
Douglas	4	*	7	20.8	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	8	15.6	7	13.1	13	22.8	7	11.6	11	17.1
Garfield	0	0.0	0	0.0	1	*	1	*	0	0.0
Grant	22	28.8	7	9.1	5	6.4	5	6.3	10	12.4
Grays Harbor	13	19.0	9	13.1	12	17.3	3	*	7	9.9
Island	4	*	5	6.8	1	*	10	13.2	5	6.5
Jefferson	2	*	4	*	2	*	2	*	3	*
King	211	11.9	246	13.8	236	13.2	214	11.8	203	11.1
Kitsap	18	7.7	12	5.1	14	5.8	19	7.9	16	6.6
Kittitas	5	14.4	3	*	2	*	4	*	3	*
Klickitat	1	*	1	*	6	31.1	2	*	3	*
Lewis	5	7.1	2	*	1	*	2	*	11	15.1
Lincoln	0	0.0	2	*	0	0.0	0	0.0	1	*
Mason	3	*	6	12.0	2	*	4	*	2	*
Okanogan	1	*	8	20.2	2	*	2	*	1	*
Pacific	1	*	3	*	1	*	2	*	2	*
Pend Oreille	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Pierce	60	8.3	64	8.7	69	9.3	52	6.9	71	9.2
San Juan	1	*	0	0.0	3	*	1	*	1	*
Skagit	13	12.4	8	7.5	11	10.1	13	11.7	11	9.7
Skamania	1	*	0	0.0	0	0.0	0	0.0	1	*
Snohomish	78	12.4	70	11.0	67	10.4	69	10.5	65	9.7
Spokane	26	6.1	30	7.0	31	7.2	40	9.2	30	6.5
Stevens	4	*	13	32.0	1	*	1	*	0	0.0
Thurston	17	8.0	17	7.9	24	11.0	23	10.3	15	6.5
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	10	18.1	10	17.9	3	5.3	1	*	2	*
Whatcom	16	9.3	23	13.2	19	10.7	16	8.8	22	11.9
Whitman	2	*	2	*	10	24.0	0	0.0	5	11.7
Yakima	55	24.4	55	24.3	35	15.4	52	22.7	34	14.7
STATEWIDE TOTAL										
CASES	655	10.8	699	11.5	660	10.7	626	10.0	627	9.8
DEATHS	0	0.0	1	0.0	2	0.0	0	0.0	3	0.0

* Incidence rates not calculated for < 5 cases.

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	5	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
2004	660	10.7	2	0.0
2005	626	10.0	0	0.0
2006	627	9.8	3	0.0

SHIGELLOSIS

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
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	*	0	0.0	0	0.0	0	0.0	0	0.0
Benton	5	3.4	3	*	3	*	5	3.2	7	4.4
Chelan	0	0.0	1	*	0	0.0	4	*	3	*
Clallam	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Clark	8	2.2	5	1.3	10	2.6	10	2.6	6	1.5
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	1	*	1	*	15	15.7	2	*	1	*
Douglas	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	1	*	0	0.0	0	0.0	0	0.0	7	10.9
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	2	*	5	6.5	1	*	3	*	2	*
Grays Harbor	1	*	0	0.0	0	0.0	0	0.0	2	*
Island	0	0.0	0	0.0	0	0.0	1	*	1	*
Jefferson	0	0.0	0	0.0	0	0.0	1	*	0	0.0
King	84	4.7	95	5.3	56	3.1	72	4.0	52	2.8
Kitsap	2	*	2	*	4	*	1	*	2	*
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	1	*	1	*	0	0.0
Lewis	2	*	0	0.0	0	0.0	2	*	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	1	*	0	0.0	0	0.0	0	0.0	1	*
Okanogan	1	*	0	0.0	4	*	1	*	0	0.0
Pacific	4	*	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	58	8.0	21	2.9	12	1.6	12	1.6	6	0.8
San Juan	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	1	*	1	*	5	4.6	10	9.0	5	4.4
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	17	2.7	17	2.7	10	1.6	16	2.4	11	1.6
Spokane	7	1.6	10	2.3	1	*	6	1.4	3	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	3	*	1	*	1	*	3	*	1	*
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Whatcom	2	*	6	3.4	3	*	5	2.8	26	14.1
Whitman	0	0.0	1	*	0	0.0	0	0.0	1	*
Yakima	28	12.4	18	8.0	7	3.1	29	12.6	32	13.8
STATEWIDE TOTAL										
CASES	230	3.8	188	3.1	133	2.2	185	3.0	170	2.7
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

* Incidence rates not calculated for < 5 cases.

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
2004	133	2.2	0	0.0
2005	185	3.0	0	0.0
2006	170	2.7	0	0.0

SYPHILIS (PRIMARY AND SECONDARY)

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
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	1	*	1	*
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clallam	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Clark	2	*	6	1.6	2	*	5	1.3	2	*
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	0	0.0	1	*	1	*
Douglas	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	1	*	0	0.0	1	*	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grays Harbor	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Island	4	*	0	0.0	1	*	4	*	1	*
Jefferson	0	0.0	0	0.0	0	0.0	1	*	0	0.0
King	50	2.8	60	3.4	123	6.9	119	6.6	147	8.0
Kitsap	2	*	0	0.0	4	*	4	*	4	*
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	1	*	0	0.0	1	*	1	*
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	0	0.0	1	*	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	5	0.7	2	*	7	0.9	3	*	7	0.9
San Juan	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Skagit	1	*	0	0.0	1	*	1	*	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	4	*	8	1.3	8	1.2	3	*	6	0.9
Spokane	1	*	1	*	0	0.0	0	0.0	2	*
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurston	0	0.0	0	0.0	2	*	2	*	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	0	0.0
Whatcom	0	0.0	0	0.0	0	0.0	1	*	3	*
Whitman	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Yakima	1	*	2	*	0	0.0	2	*	3	*
STATEWIDE TOTAL										
CASES	70	1.2	82	1.3	150	2.4	152	2.4	182	2.9
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

* Incidence rates not calculated for < 5 cases.

PRIMARY AND SECONDARY SYPHILIS

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
2004	150	2.4	0	0.0
2005	152	2.4	0	0.0
2006	182	2.9	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
2004	0	0.0	0	0.0
2005	1	0.0	0	0.0
2006	0	0.0	0	0.0

TRICHINOSIS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
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
2004	0	0.0	0	0.0
2005	0	0.0	0	0.0
2006	1	0.0	0	0.0

TUBERCULOSIS

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	1	*
Benton	1	*	2	*	4	*	0	0.0	6	3.7
Chelan	1	*	4	*	0	0.0	1	*	3	*
Clallam	0	0.0	1	*	0	0.0	0	0.0	1	*
Clark	10	2.7	10	2.6	8	2.0	9	2.1	8	1.9
Columbia	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Cowlitz	2	*	1	*	0	0.0	1	*	2	*
Douglas	1	*	2	*	0	0.0	1	*	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	3	*	5	9.3	3	*	2	*	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	2	*	3	*	0	0.0	3	*	1	*
Grays Harbor	1	*	1	*	1	*	3	*	2	*
Island	0	0.0	1	*	5	6.6	1	*	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	1	*	0	0.0
King	158	8.9	155	8.7	133	7.4	125	7.0	145	7.9
Kitsap	6	2.5	2	*	2	*	6	2.4	6	2.4
Kittitas	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Klickitat	1	*	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	2	*	1	*	0	0.0	1	*
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	3	*	1	*	0	0.0	2	*
Okanogan	1	*	2	*	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	16	2.2	18	2.4	34	4.5	27	3.5	21	2.7
San Juan	1	*	0	0.0	1	*	0	0.0	0	0.0
Skagit	3	*	2	*	2	*	6	5.4	2	*
Skamania	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Snohomish	16	2.5	12	1.8	15	2.3	24	3.6	26	3.8
Spokane	7	1.6	4	*	7	1.6	13	2.9	10	2.2
Stevens	0	0.0	0	0.0	0	0.0	1	*	0	0.0
Thurston	3	*	5	2.3	7	3.2	6	2.6	5	2.1
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	3	*	1	*	1	*	2	*	2	*
Whatcom	7	4.0	5	2.8	6	3.3	5	2.7	4	*
Whitman	1	*	0	0.0	0	0.0	1	*	0	0.0
Yakima	8	3.5	8	3.5	12	5.2	14	5.6	14	6.0
STATEWIDE TOTAL										
CASES	252	4.2	250	4.1	245	3.9	256	4.0	262	4.1
DEATHS	4	0.0	11	0.2	9	0.1	14	0.2	18	0.2

*Incidence rates not calculated for < 5 cases.

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	11	0.2
2004	245	3.9	9	0.1
2005	256	4.0	14	0.2
2006	262	4.1	18	0.2

TULAREMIA

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
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
2004	4	0.1	0	0.0
2005	10	0.2	0	0.0
2006	1	0.0	0	0.0

TYPHOID FEVER

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
1985	3	0.1	0	0.0
1986	3	0.1	0	0.0
1987	9	0.2	0	0.0
1988	13	0.3	0	0.0
1989	11	0.2	0	0.0
1990	22	0.5	0	0.0
1991	10	0.2	0	0.0
1992	11	0.2	0	0.0
1993	8	0.1	0	0.0
1994	12	0.2	0	0.0
1995	4	0.1	0	0.0
1996	4	0.1	0	0.0
1997	7	0.1	0	0.0
1998	8	0.1	0	0.0
1999	8	0.1	0	0.0
2000	6	0.1	0	0.0
2001	7	0.1	0	0.0
2002	7	0.1	0	0.0
2003	4	0.1	0	0.0
2004	6	0.1	0	0.0
2005	11	0.2	0	0.0
2006	7	0.1	0	0.0

TYPHUS

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
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
2004	0	0.0	0	0.0
2005	0	0.0	0	0.0
2006	0	0.0	0	0.0

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
2004	28	0.5	0	0.0
2005	20	0.3	0	0.0
2006	80	1.3	0	0.0

YELLOW FEVER

Case, Death Rate/100,000 Population

Year	Cases	Rate	Deaths	Rate
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
2004	0	0.0	0	0.0
2005	0	0.0	0	0.0
2006	0	0.0	0	0.0

YERSINIOSIS

Case, Death Rate/100,000 Population

	2002		2003		2004		2005		2006	
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	1	*	1	*
Chelan	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Clallam	0	0.0	1	*	0	0.0	1	*	0	0.0
Clark	4	*	0	0.0	1	*	0	0.0	2	*
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	0	0.0	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	1	*	0	0.0	1	*	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grays Harbor	0	0.0	0	0.0	1	*	0	0.0	0	0.0
Island	2	*	0	0.0	1	*	0	0.0	0	0.0
Jefferson	1	*	0	0.0	0	0.0	1	*	2	*
King	12	0.7	12	0.7	14	0.8	10	0.6	9	0.5
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	2	*	0	0.0	0	0.0
Lewis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lincoln	0	0.0	1	*	0	0.0	0	0.0	0	0.0
Mason	1	*	1	*	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	2	*	1	*	3	*	0	0.0	2	*
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	1	*	1	*	0	0.0	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	4	*	6	0.9	6	0.9	1	*	3	*
Spokane	0	0.0	0	0.0	1	*	0	0.0	3	*
Stevens	0	0.0	2	*	1	*	0	0.0	0	0.0
Thurston	0	0.0	1	*	0	0.0	1	*	0	0.0
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	0	0.0	0	0.0	1	*	2	*	0	0.0
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	0	0.0	1	*	1	*	1	*	0	0.0
STATEWIDE TOTAL										
CASES	26	0.4	28	0.5	34	0.6	19	0.3	22	0.3
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

* Incidence rates not calculated for < 5 cases.

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
2004	34	0.6	0	0.0
2005	19	0.3	0	0.0
2006	22	0.3	0	0.0

APPENDIX II
SPECIAL TOPICS

Cryptococcus gattii, an Emerging Pathogen in Washington, 2006
Washington State Department of Health

Since 1999, *Cryptococcus gattii* has been known to occur on Vancouver Island in British Columbia, Canada, and has caused disease among residents, visitors to the island, and domestic and wild animal populations. The fungus has since spread to mainland British Columbia and Washington State. Unlike the closely related species *C. neoformans*, a common opportunistic pathogen of immunocompromised hosts, *C. gattii* affects primarily immunocompetent persons. *C. gattii* has been isolated from trees and from the surrounding soil and air. The infection is caused by breathing in the spores of the *Cryptococcus* fungus. It is not transmitted from person-to-person or from animal-to-person.

Reported symptoms include severe cough and shortness of breath. There may be other symptoms such as chills, night sweats, and loss of appetite. About a fifth of cases have meningitis. Smoking or treatment with steroids may be risk factors for infection. The incubation period appears to be two to eleven months.

During 2005, three cats living in Washington near the Canadian border were diagnosed with *C. gattii* by histopathology. None of the animals had exposures in Canada. In 2006, researchers from University of British Columbia recovered the organism from soil samples in Whatcom County, Washington. In addition, two Washington State residents with cryptococcal disease may have been locally exposed in 2006. One patient from San Juan County presented with an asymptomatic cryptococcal lung nodule and the other, a Whatcom County resident, developed cryptococcal meningitis. Both patients traveled during their exposure period and out-of-state acquisition could not be ruled out.

Human or animal infections with *C. gattii* are reportable in Washington State as rare diseases of public health significance.

Vibrio Parahaemolyticus Associated with Consumption of Raw Oysters, 2006 Washington State Department of Health

In the summer of 2006, a record number of vibriosis cases were reported to public health agencies in Washington State. Out of a total 113 reported illnesses associated with the outbreak, 72 were laboratory-confirmed. Other states reported an additional 158 cases. The outbreak was attributed to the consumption of raw oysters harvested in Pacific Northwest waters. The last previous outbreak of vibriosis in Washington State occurred in 1997 with 58 confirmed cases. From 1998 to 2005, Washington averaged 20 reported cases of vibriosis per year. Vibriosis is the leading cause of shellfish-associated gastroenteritis in the United States.

Vibriosis typically occurs as a self-limited gastrointestinal illness, although wound infection or, rarely, life-threatening sepsis syndrome may also occur. Illness occurs 12-24 hours after ingestion of contaminated oysters. The majority of cases associated with the outbreak reported gastroenteritis, with an average duration of eight days and a range of 3-19 days. Gastroenteritis attributed to *Vibrio parahaemolyticus* is characterized by the acute onset of profuse watery diarrhea, often accompanied by abdominal cramping, nausea, and vomiting. Illness onset occurs approximately one to three days after exposure. Diarrheal illness caused by *Vibrio parahaemolyticus* can pose a serious threat of complications to persons in vulnerable health and to the elderly. Vibriosis has been a notifiable condition in Washington since 1987.

Although consuming any raw or partially cooked molluscan shellfish harvested in warmer waters carries the risk of vibriosis infection, in Washington vibriosis is most commonly seen with consumption of raw oysters. The infectious agent responsible for the outbreak, *Vibrio parahaemolyticus,* is a gram-negative, salt-loving bacterium that occurs naturally in estuarine environments. Growth of the organism is enhanced by warmer water temperatures. Most oysters in Washington are grown inter-tidally, exposing the oysters to ambient air temperatures for as much as six hours between tidal changes. Among possible factors contributing to this outbreak, record warm water and air temperatures are thought to have been a critical factor in the development of this outbreak.

The 2006 *Vibrio parahaemolyticus* outbreak in Washington State came during a year of record warm water and air temperatures reinforced by extended afternoon tides, a record lack of precipitation, and abundance of sunshine. This is the largest vibriosis outbreak recorded in Washington to date. Existing shellfish monitoring strategies, which did not prevent the extraordinary illness occurrence in 2006, were intensively evaluated and revised for the 2007 season.

Two Cases of West Nile Virus in Pierce County, July 2006
Tacoma-Pierce County Health Department

In mid July 2006, two middle-aged adults from the same household became ill with headache, neck pain, nausea, and joint pain, and felt tired enough to postpone the onset of their family vacation for a few days. Both later developed muscle aches and rashes that were concentrated on their torsos. One of the adults eventually sought care at a nearby urgent care facility in mid-August where an astute medical provider ordered West Nile virus (WNV) testing. An initial diagnosis of non-neuroinvasive WNV infection for the first adult was based on clinical symptoms and a commercial laboratory report.

After consultation with the Washington State Department of Health, the positive specimen from the first adult and serum from the second adult were sent to the state laboratory for enzyme immunoassay (EIA) for WNV IgM antibodies. Both were reported as presumptive positive in September. CDC confirmation on both specimens made them the first locally acquired cases reported in Washington State.

One of the adults said that the family spent a great deal of time outdoors and had noticed more mosquitoes around their house in 2006 than in other years. No areas of standing water were reported, apart from water troughs for horses at nearby farms. Even with increased surveillance in the geographical area where the two confirmed cases live, no birds or other animals tested positive for WNV in the county in 2006.

As of June 2007, these two middle-aged adults have continued to self-report intermittent headaches, fatigue, stiff neck, and muscle aches. Symptoms lasting up to a year or more after diagnosis have been reported in West Nile virus infections. Patients with milder illness have been just as likely as those with more severe illness to experience adverse outcomes.[1]

[1] Carson, Paul J., et al. Long-Term Clinical and Neuropsychological Outcomes of West Nile Virus Infection. *Clinical Infectious Diseases*. 2006. 43:723-30.

Influenza, 2006-2007 Season
Washington State Department of Health

The Washington State Department of Health (DOH), in collaboration with local health jurisdictions and the US Centers for Disease Control and Prevention (CDC), conducts routine influenza surveillance each year from October to May. Influenza surveillance activities in the state include sentinel laboratory reporting, monitoring of school absenteeism, sentinel long-term care facility surveillance, reporting of influenza-like illnesses by health care providers enrolled in the CDC's Sentinel Provider Surveillance Network, and other surveillance activities.

Because influenza is not a notifiable condition in Washington State, information on incidence rates are not gathered. However, routine influenza surveillance provides useful information on influenza activity levels and trends in influenza virulence and pathogenicity. Subtyping of influenza isolates by sentinel laboratories also yields information on what subtypes are in circulation and informs the selection of influenza strains to include in seasonal flu vaccines.

The Washington State Influenza Coordinator reports on influenza surveillance each week on the DOH website at http://www.doh.wa.gov/EHSPHL/Epidemiology/CD/fluupdate.htm. Each year, at the end of the influenza season, a report summarizing the season is posted on this site. The following is a summary of the 2006-2007 influenza season.

Synopsis

Sporadic cases of influenza A began to appear in December 2006. Reports of laboratory-confirmed cases peaked in the third week of February. Reported influenza activity began to decrease at the end of March, with sporadic cases being reported in April and May. Ninety percent of cases were influenza A. While school absenteeism related to influenza was higher than last year, absenteeism percentages were relatively low over-all. Reported nursing home outbreaks related to influenza were very low with more illness activity related to norovirus than to influenza.

Sentinel Laboratories

Sentinel influenza surveillance laboratories reported 644 isolates from 20 counties. Six hundred twenty-six (97%) of the isolates were influenza type A strains similar to those included in this year's vaccine. Eighteen (3%) isolates were influenza B. Of the 626 influenza A isolates, 8 percent were influenza A, H1N1; 15 percent were influenza A, H3N2; and 77 percent were influenza A, not subtyped. Ten percent of surveillance isolates were obtained from patients under one year of age, 19 percent from persons 1-4 years of age, 23 percent from persons 5-9 years of age, 15 percent from persons 10-19 years of age, 12 percent from persons 20-29 years of age; 8 percent from persons 30-39 years of age; 5 percent from persons 40-49 years of age; 3 percent from persons 50-59 years of age; and 5 percent from persons 60 years or older. Information on age and sex was not reported for four cases.

School Absenteeism

Nine schools reported influenza absenteeism from October 2006 through January 2007. During February, a total of 110 schools reported greater than 10 percent absenteeism with influenza-like illnesses (ILI). By the first week of March only 11 schools reported

absenteeism consistent with influenza. No absenteeism was reported the last ten weeks of the influenza season. Gastrointestinal symptoms were reported in many schools during the influenza season. Norovirus was suspected in many of these outbreaks.

Sentinel Long-Term Care Facilities

Twenty-three long-term care or assisted living facilities participated in sentinel influenza surveillance in Washington during the 2006-2007 season. Seventeen possible influenza outbreaks were investigated with three (17%) laboratory-confirmed as either influenza A, not subtyped (2); or influenza A, H3N2 (1). Three outbreaks were laboratory negative for influenza viruses, three were laboratory-confirmed as norovirus, and eight were classified as suspect norovirus.

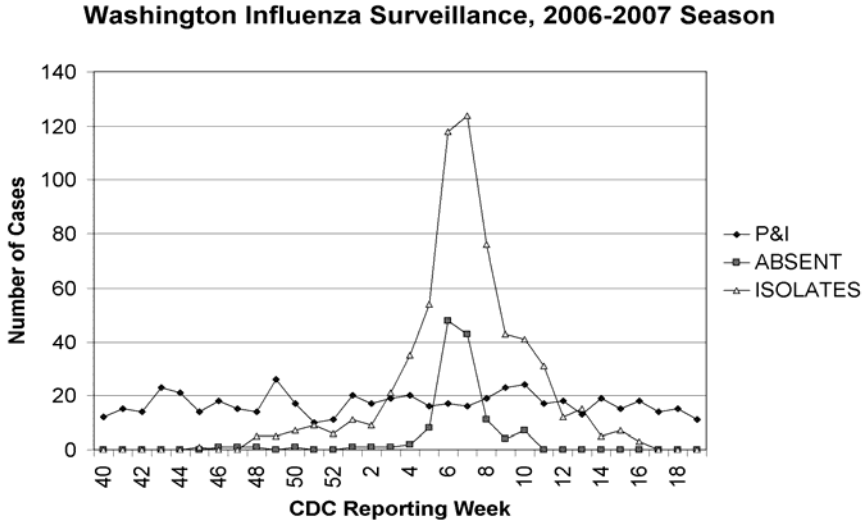
Sentinel Physicians

While Washington State has been able to meet the Centers for Disease Control and Prevention (CDC) goal of one sentinel physician per 250,000 state population, not all of our physicians who sign up participate fully. Forty-eight percent of Washington sentinel physicians reported at least once to CDC on the level of influenza activity among their patients. Many of these physicians reported 50 percent or more of the time. Eight physicians reported 80 to 100 percent of the time. Many also sent in specimens for influenza testing.

Influenza Trivalent Vaccine 2007-2008

The World Health Organization (WHO) has recommended that one component of the 2007-2008 trivalent influenza vaccine for the Northern Hemisphere be changed. The influenza A (H1N1) component of the influenza vaccine has been changed to A/Solomon Islands/3/2006. This is a recent antigenic variant of the current vaccine strain A/New Caledonia/20/99. This recommendation was based on antigenic analyses of recently isolated influenza viruses, epidemiologic data, and post-vaccination serologic studies in humans. The vaccine for the 2007-2008 influenza season will contain the following strains:

- A/Solomon Islands/3/2006 (H1N1)-like
- A/Wisconsin/67/2005 (H3N2)-like
- B/Malaysia/2506/2004-like



APPENDIX III
STATE DEMOGRAPHICS

Washington State Population Estimates, 1985-2006*

Washington State Office of Financial Management

Year	Estimate
1985	4,384,100
1986	4,419,700
1987	4,481,100
1988	4,565,000
1989	4,660,700
1990	4,866,663
1991	5,021,335
1992	5,141,177
1993	5,265,688
1994	5,364,338
1995	5,470,104
1996	5,567,764
1997	5,663,763
1998	5,750,033
1999	5,830,835
2000	5,894,143
2001	5,974,900
2002	6,041,700
2003	6,098,300
2004	6,167,800
2005	6,256,400
2006	6,375,600

*April 1, 2006 estimate

Washington State Population Estimates By County, 2006*

Washington State Office of Financial Management

County	Estimate
Adams	17,300
Asotin	21,100
Benton	160,600
Chelan	70,100
Clallam	67,800
Clark	403,500
Columbia	4,100
Cowlitz	96,800
Douglas	35,700
Ferry	7,500
Franklin	64,200
Garfield	2,400
Grant	80,600
Grays Harbor	70,400
Island	77,200
Jefferson	28,200
King	1,835,300
Kitsap	243,400
Kittitas	37,400
Klickitat	19,800
Lewis	72,900
Lincoln	10,200
Mason	53,100
Okanogan	39,800
Pacific	21,500
Pend Oreille	12,300
Pierce	773,500
San Juan	15,700
Skagit	113,100
Skamania	10,600
Snohomish	671,800
Spokane	443,800
Stevens	42,100
Thurston	231,100
Wahkiakum	3,900
Walla Walla	57,900
Whatcom	184,300
Whitman	42,800
Yakima	231,800
Washington State	**6,375,600**

*April 1, 2006 estimate

Washington State Population By Age and Sex, 2006*

Washington State Office of Financial Management

Age (years)	Male	Female	TOTAL
0-4	210,935	201,337	412,272
5-9	214,446	204,270	418,716
10-14	225,606	214,191	439,797
15-19	235,599	223,862	459,461
20-24	237,375	224,223	461,598
25-29	221,294	210,526	431,820
30-34	212,844	203,109	415,953
35-39	234,987	225,095	460,082
40-44	243,344	239,176	482,520
45-49	250,380	249,933	500,313
50-54	231,187	235,463	466,650
55-59	202,463	207,580	410,043
60-64	142,550	147,170	289,720
65-69	101,156	107,554	208,710
70-74	75,198	86,615	161,813
75-79	59,814	77,513	137,327
80-84	43,011	66,802	109,813
85+	35,162	73,830	108,992
TOTAL	3,177,351	3,198,249	6,375,600

*April 1, 2006 estimate


Washington State Department of
Health