ANNUAL COMMUNICABLE DISEASE REPORT 2002

WASHINGTON STATE DEPARTMENT OF HEALTH

Epidemiology, Health Statistics, and Public Health Laboratories
1610 NE 150th Street
Shoreline, WA 98155-9701
206-361-2914 or 1-877-539-4344

CONTRIBUTORS TO THE ANNUAL REPORT

COMMUNICABLE DISEASE EPIDEMIOLOGY

Mary Chadden
Marcia Goldoft, MD, MPH
Jo Hofmann, MD
Tamarind Keating, MPH
Mira Leslie, DVM, MPH
Kathy Lofy, MD
Kathryn MacDonald, PhD
Phyllis Shoemaker, BA
Elizabeth Tesh, MPH
Julie Wicklund, MPH

IMMUNIZATION PROGRAM

Pat deHart, ScD

INFECTIOUS DISEASE AND REPRODUCTIVE HEALTH

Leah Cochran, BA
Maria Courogen, MPH
Alexia Exarchos, MPH

INFORMATION RESOURCE MANAGEMENT

Craig Erickson

Washington State Department of Health

DEPARTMENT OF HEALTH

Mary Selecky
Secretary of Health

Maxine Hayes, MD, MPH
Health Officer

Jac Davies, MS, MPH
Assistant Secretary
Epidemiology, Health Statistics, Epidemiology and Public Health Laboratories

Jo Hofmann, MD
State Epidemiologist for Communicable Disease
Communicable Disease Epidemiology

Juliet Van Eenwyk, PhD, MS
State Epidemiologist for Non-Infectious Conditions Epidemiology

This report represents communicable disease surveillance in Washington: the ongoing collection, analysis and dissemination of morbidity and mortality data to assist in the prevention and control of disease. This is the eighteenth report from the Communicable Disease Epidemiology Section since 1982, having grown from about 50 pages of tabulations produced once every two years to an annual report of tables, graphs, maps, charts, and narrative summaries. In addition to the contributors listed on the previous page, we would like to recognize the thousands of people in local health departments, clinics, hospitals, and clinical laboratories throughout Washington whose disease reports are the basis for this document.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

TECHNICAL NOTES AND COMMENTS

Washington has conducted surveillance for designated notifiable conditions since the late 1880s. Legal requirements for disease reporting (Washington Administrative Code 246-100 and 246-101) form the foundation for disease surveillance and mandate health care providers, health care facilities, laboratories, veterinarians, food service establishments, child care facilities, and schools to notify local health jurisdictions and/or the Washington State Department of Health (DOH) of suspected or confirmed cases of selected conditions within a specified time period. Local health jurisdictions are required to report information regarding those cases to DOH, which in turn sends disease reports to the Centers for Disease Control and Prevention (CDC). This passive surveillance system is necessary to provide local, statewide, and national disease incidence and trends to guide public health activities.

This report presents cases of notifiable conditions reported to DOH in 2002 and summarizes demographic, clinical, geographic, and other trends evident from the data collected through the passive surveillance system.

Incomplete reporting occurs with any surveillance system. The proportion of patients seeing a health care provider, diagnosed by clinical and laboratory methods, and reported to local health agencies varies according to the specific disease. Surveillance case definitions are usually more stringent than criteria for diagnosing and treating communicable diseases. Common and mild illnesses are typically underdiagnosed and underreported, while unusual or severe illnesses are typically more completely reported. This document presents reported cases.

The 2002 population estimates used in rate calculations were provided by the Washington State Office of Financial Management. These are available on line at: **http://www.ofm.wa.gov/pop/index.htm**

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

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

Bi-monthly surveillance data for selected notifiable conditions by county are published in the Department of Health epiTRENDS newsletter and are available on-line at http://www.doh.wa.gov/publicat/publications.htm.

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

REPORT A NOTIFIABLE CONDITION

In accordance with the Washington 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.

Local Health Jurisdictions

Adams County Health District
509-659-3315

Asotin County Health District
509-758-3344
After hours: 509-758-2648

Benton-Franklin Health District
509-547-9737

Chelan-Douglas Health District
509-886-6400
After hours: 509-665-2202

Clallam County Health Department
360-417-2439
After hours: 360-582-8353

Clark County Health Department
360-397-8408
After hours: 888-727-6230

Columbia County Health District
509-382-2181

Cowlitz Health District
360-414-5599

Garfield County Health District
509-843-3412

Grant County Health District
STDs 509-754-6060 x17
Other CD 509-766-7960
509-754-6060

Grays Harbor Health Department
360-532-8631

Island County Health Department
360-679-7351
After hours: 360-672-4251

Jefferson County Health Department
360-385-9400

Kitsap County Health District
360-337-5239
360-337-5235

Kittitas County Public Health Department
509-962-7515

Klickitat County Health Department
509-773-4565
After hours: 509-773-5796

Lewis County Department of Public Health
360-740-1275
After hours: 360-740-1105

Lincoln County Health Department
509-725-1001

Mason County Health Department
360-427-5274
After hours: 360-426-4441

Northeast Tri-County Health District
800-827-3218
Ferry: 509-775-3111
800-876-3319
Pend Oreille: 509-447-3131
800-873-6162
Stevens: 509-684-5048
800-776-6207

Okanogan County Health Department
509-422-7140

Pacific County Health Department
360-875-9343
After hours: 360-875-9347

Public Health – Seattle & King County
AIDS/HIV 206-296-4645
STDs 206-731-3954
TB 206-731-4579
Other CD 206-296-4774

San Juan County Health Department
360-378-4474
After hours: 360-201-2505

Skagit County Health Department
360-336-9397
After hours: 360-770-8931
360-424-4661

Skamania County Health Department
360-397-8408
After hours: 888-727-6230

Snohomish County Health District
425-339-5278

Spokane Regional Health District
509-324-1442
Message: 509-324-1449
After hours: 509-869-3133

Tacoma-Pierce County Health Department
253-798-6534

Thurston County Health Department
360-786-5470
911 for any public health emergency

Wahkiakum County Health Department
360-795-6207

Walla Walla Health Department
509-527-3290
After hours: 509-520-7336
509-522-7198

Whatcom County Health Department
360-738-2508

Whitman County Health Department
509-397-6280

Yakima County Health District
509-249-6541
800-535-5016 x541

Notifiable Conditions & The Health Care Provider

Washington State Department of Health

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

Acquired Immunodeficiency Syndrome (AIDS) [3] *(including AIDS in persons previously reported with HIV infection)*
Animal Bites [I]
Botulism [I] **(foodborne, wound, and infant)**
Brucellosis [I]
Campylobacteriosis [3]
Chancroid [3]
Chlamydia trachomatis [3]
Cholera [I]
Cryptosporidiosis [3]
Cyclosporiasis [3]
Diphtheria [I]
Disease of Suspected Bioterrorism Origin (including) [I]
Anthrax
Smallpox
Disease of Suspected Foodborne Origin [I] **(clusters only)**
Disease of Suspected Waterborne Origin [I] **(clusters only)**
Encephalitis, viral [3]
Enterohemorrhagic *E. coli* including *E.coli* 0157:H7 infection [I]
Giardiasis [3]
Gonorrhea [3]
Granuloma inguinale [3]
***Haemophilus influenzae* invasive disease** [I]
(under age five, excluding otitis media)
Hantavirus Pulmonary Syndrome [3]
Hemolytic Uremic Syndrome [I]
Hepatitis A - acute [I]
Hepatitis B - acute [3]; chronic [M] (initial diagnosis only)
Hepatitis B - surface antigen + pregnant women [3]
Hepatitis C - acute and chronic [M] (initial diagnosis only)
Hepatitis, unspecified (infectious) [I]
Herpes simplex, genital and neonatal [3] (initial infection only)
HIV infection [3]
Legionellosis [3]
Leptospirosis [3]
Listeriosis [I]
Lyme disease [3]
Lymphogranuloma venereum [3]
Malaria [3]
Measles (rubeola) [I]
Meningococcal disease [I]
Mumps [3]
Paralytic shellfish poisoning [I]
Pertussis [I]
Plague [I]
Poliomyelitis [I]
Psittacosis [3]
Q fever [3]
Rabies [I]
Rabies post-exposure prophylaxis [3]
Relapsing fever (*borreliosis*) [I]
Rubella, including congenital [I]
Salmonellosis [I]
Shigellosis [I]
Streptococcus Group A, invasive disease [3]
Syphilis [3] (*including congenital)*
Tetanus [3]
Trichinosis [3]
Tuberculosis [I]
Tularemia [3]
Typhus [I]
Vibriosis [3]
Yellow Fever [I]
Yersiniosis [3]

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]
Call 1-888-66-SHARP
Birth Defects - Autism [M] *Call (360) 236-3492*
Birth Defects - Cerebral Palsy [M] *Call (360) 236-3492*
Birth Defects - Fetal Alcohol Syndrome/Fetal Alcohol Effects [M]
Call (360) 236-3492
Pesticide poisoning (hospitalized, fatal, or cluster) [I]
Call 1-888-586-9427; 1-800-222-1222 (after hours)
Pesticide Poisoning (other) [3]
Call 1-888-586-9427; 1-800-222-1222 (after hours)

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

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

Notifiable Conditions & Wahsington's Hospitals

Washington State Department of Health

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

Acquired Immunodeficiency Syndrome (AIDS) [3] *(including AIDS in persons previously reported with HIV infection)*
Animal Bites [I]
Botulism [I] **(foodborne, wound, and infant)**
Brucellosis [I]
Campylobacteriosis [3]
Chancroid [3]
Chlamydia trachomatis [3]
Cholera [I]
Cryptosporidiosis [3]
Cyclosporiasis [3]
Diphtheria [I]
Disease of Suspected Bioterrorism Origin (including) [I]
Anthrax
Smallpox
Disease of Suspected Foodborne Origin [I] **(clusters only)**
Disease of Suspected Waterborne Origin [I] **(clusters only)**
Encephalitis, viral [3]
Enterohemorrhagic *E. coli* including *E.coli* 0157:H7 infection [I]
Giardiasis [3]
Gonorrhea [3]
Granuloma inguinale [3]
***Haemophilus influenzae* invasive disease** [I]
(under age five, excluding otitis media)
Hantavirus Pulmonary Syndrome [3]
Hemolytic Uremic Syndrome [I]
Hepatitis A - acute [I]
Hepatitis B - acute [3]; chronic [M] (initial diagnosis only)
Hepatitis B - surface antigen + pregnant women [3]
Hepatitis C - acute and chronic [M] (initial diagnosis only)
Hepatitis, unspecified (infectious) [I]
HIV infection [3]
Immunization reactions, severe, adverse [3]
Legionellosis [3]
Leptospirosis [3]
Listeriosis [I]
Lyme disease [3]
Lymphogranuloma venereum [3]
Malaria [3]
Measles (rubeola) [I]
Meningococcal disease [I]
Mumps [3]
Paralytic shellfish poisoning [I]
Pertussis [I]
Plague [I]
Poliomyelitis [I]
Psittacosis [3]
Q fever [3]
Rabies [I]
Rabies post-exposure prophylaxis [3]
Relapsing fever (*borreliosis*) [I]
Rubella, including congenital [I]
Salmonellosis [I]
Shigellosis [I]
Streptococcus Group A, invasive disease [3]
Syphilis [3] (*including congenital)*
Tetanus [3]
Trichinosis [3]
Tuberculosis [I]
Tularemia [3]
Typhus [I]
Vibriosis [3]
Yellow Fever [I]
Yersiniosis [3]

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

Asthma, occupational (suspected or confirmed) [M]
Call 1-888-66-SHARP
Birth Defects -Abdominal Wall Defects, Autism, Cerebral Palsy, Down Syndrome, Hypospadias, Limb Reductions, Neural Tube Defects, Oral Clefts [M] *Call (360) 236-3591*
Gunshot Wounds [M] *Call (360) 236-3693*
Pesticide poisoning (hospitalized, fatal, or cluster) [I]
Call 1-888-586-9427; 1-800-222-1222 (after hours)

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

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

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

Notifiable Conditions & Washington's Laboratories

Washington State Department of Health

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

Blood Lead Level (Elevated) [2&i]

Blood Lead Level (Non-elevated) [M &i]

Bordetalla pertussis [2*]

Brucella [2*!]

CD4+ counts <200 or 14% [M &ii]

Chlamydia trachomatis [2*]

Clostridium botulinum [I*!]

Corynebacterium diphtheriae [2*!]

Cryptosporidium parvum [2*]

Cyclospora cayetanensis [2*!]

Diseases of Suspected Bioterrorism Origin [I*!]

Anthrax *(Bacillus anthracis)*

Smallpox (Variola virus)

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

Francisella tularenis [!]

Hepatitis A (*Hepatovirus*) [2*]

Human Immunodeficiency Virus [2 &ii] (Western Blot, P-24 Antigen, or viral culture)

Human Immunodeficiency Virus [M &ii] (RNA or DNA Nucleic Acid Tests)

Listeria [2*]

Mycobacterium tuberculosis [2 &iii!@]

Neisseria gonorrhoeae [2*]

Neisseria meningitidis [2*!]

Rabies [I*]

Rubeola [I*!]

Salmonella [2*!]

Shigella [2*!]

Treponema pallidum [!]

Unusual Diseases of Public Health Significance [I*]

Vibrio cholerae [I*!]

Yersinia pestis [I*!]

CODE LEGEND

[I] Immediately Notifiable

[2] Notifiable within 2 Work Days

[M] Notifiable on a Monthly Basis

[*] Notifiable to the local health department of the patient's residence

[&i] Notifiable to DOH Lead Program (360-236-4252)

[&ii] Notifiable to DOH - IDRH Assessment (360-236-3419)

[&iii] Notifiable to DOH - TB Services (206-361-2838)

[!] Specimen submission required

[@] Antibiotic Sensitivity Testing (First isolates only)

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

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

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

COMMUNICABLE DISEASE SUMMARIES

AIDS

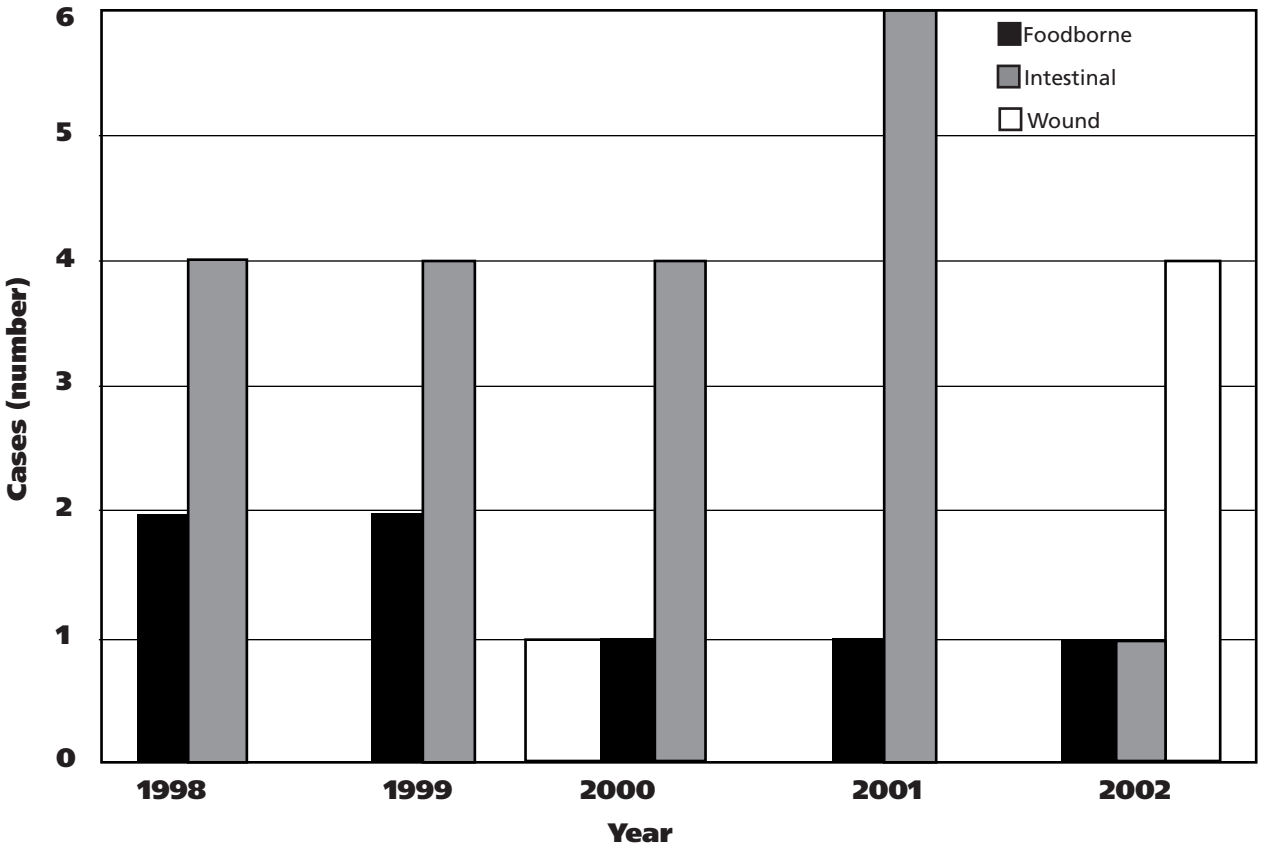
See HIV infection/AIDS

BOTULISM

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

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

Figure 1. Botulism - reported cases by category of disease, 1998-2002



Intestinal (infant or adult) botulism results from ingestion of toxigenic *C. botulinum* spores and affects infants under a year of age and rarely, adults with altered gastrointestinal anatomy. Symptoms may include constipation, poor feeding, and failure to thrive that may be followed by progressive weakness, impaired respiration, and death. Raw honey consumption has been implicated in some, but not all, cases of intestinal botulism. Treatment is primarily supportive, and human-derived botulism immune globulin is available.

Wound botulism results from a wound infected with toxigenic *C. botulinum*. Symptoms of wound botulism are the same as those seen with foodborne botulism. Treatment is wound debridement and botulinum antitoxin. The risk associated with subcutaneous heroin injection occurs with product imported from Mexico, known as black tar heroin, which is more commonly used on the west coast.

The number of cases of foodborne and infant botulism has remained fairly constant in recent years. Nationally, wound botulism incidence has increased with the growing use of black tar heroin.

Proper home canning methods, avoiding the use of honey for infants, and avoiding subcutaneous heroin use are preventative measures against botulism.

One case of foodborne botulism was reported in 2002: an 86 year-old woman who consumed home-canned green beans. Foodborne botulism in Washington has been associated with improperly home-canned asparagus, beets, corn, carrots, spinach, and salsa.

One case of intestinal botulism was reported in 2002 in a 6 month-old child; the infant did not have a history of eating raw honey

In 2002, 4 cases of wound botulism were reported in Washington, 3 were associated with subcutaneous injection of heroin and one case denied current injection drug use but had injected drugs in the past.

BRUCELLOSIS

Brucellosis is a systemic bacterial infection caused by several species of Brucella including *B. abortus, B. melitensis, B. suis*, or *B. canis*. Symptom onset may be acute or subacute and include fever, chills, headache, malaise, weight loss and fatigue; symptoms may persist for a year or more if the patient is not adequately treated. Infection may occur occupationally for workers exposed to infected animals or their tissues (i.e., farm workers, veterinarians). Consumption of raw milk and milk products from infected cows, sheep and goats may cause sporadic cases or outbreaks, but brucellosis is not transmitted from person-to-person.

Washington was declared free of bovine brucellosis in 1988; while an average of one case per year is reported among Washington residents, most result from exposures outside of the United States (US). Individuals should avoid raw milk and dairy products and use appropriate precautions (i.e., gloves, clothing) when handling carcasses and products of potentially infected animals to avoid infection.

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

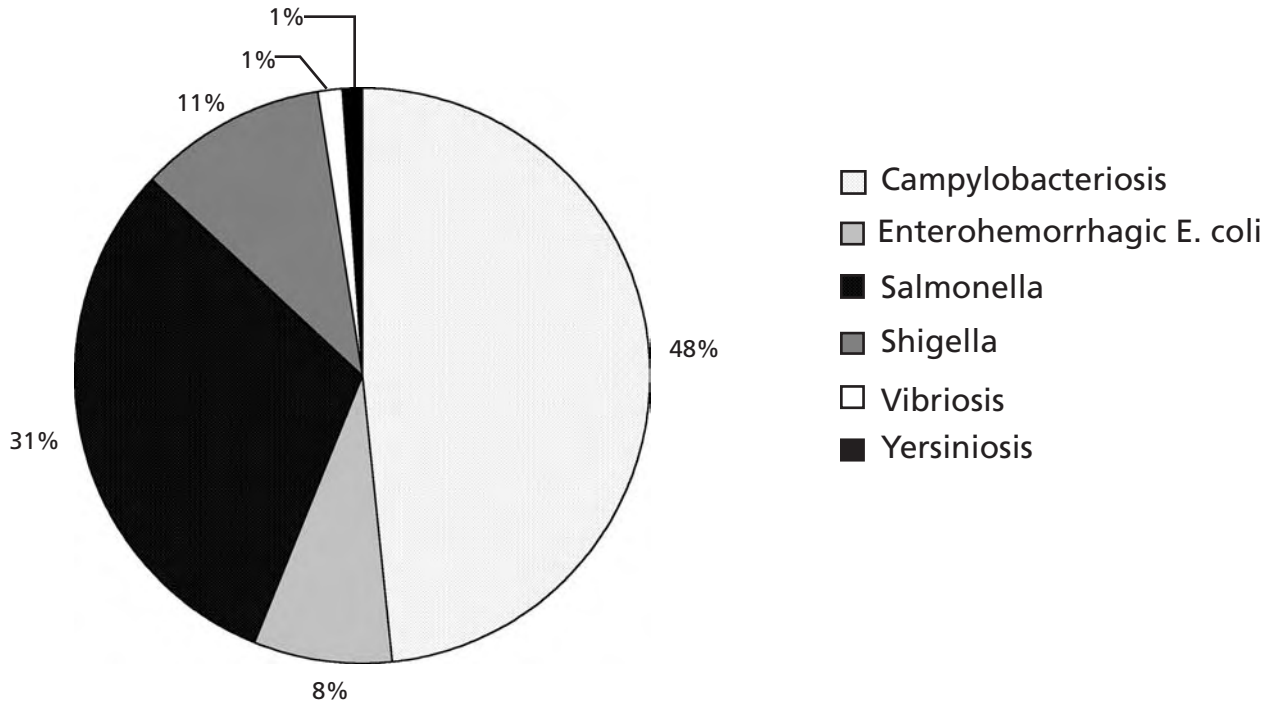
Two cases of brucellosis were reported in Washington in 2002. Both cases occurred in Hispanic residents of Yakima County who were likely exposed in Mexico, where brucellosis is more common. The cases were unrelated and reported exposures to raw milk or milk products, including homemade cheese. The infectious agent in both cases was *Brucella melitensis/abortus*, and was not further characterized by the laboratory.

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*, and less commonly by *C. coli*. Other *Campylobacter* species, including *C. lardis* and *C. fetus* have also been associated with infection.

Campylobacteriosis was the most frequently reported enteric disease in 2002, representing 38% of all bacterial enteric disease reports. There were 1,032 cases reported for an incidence of 17.1 cases/100,000 population. This is consistent with disease rates for the previous five years.

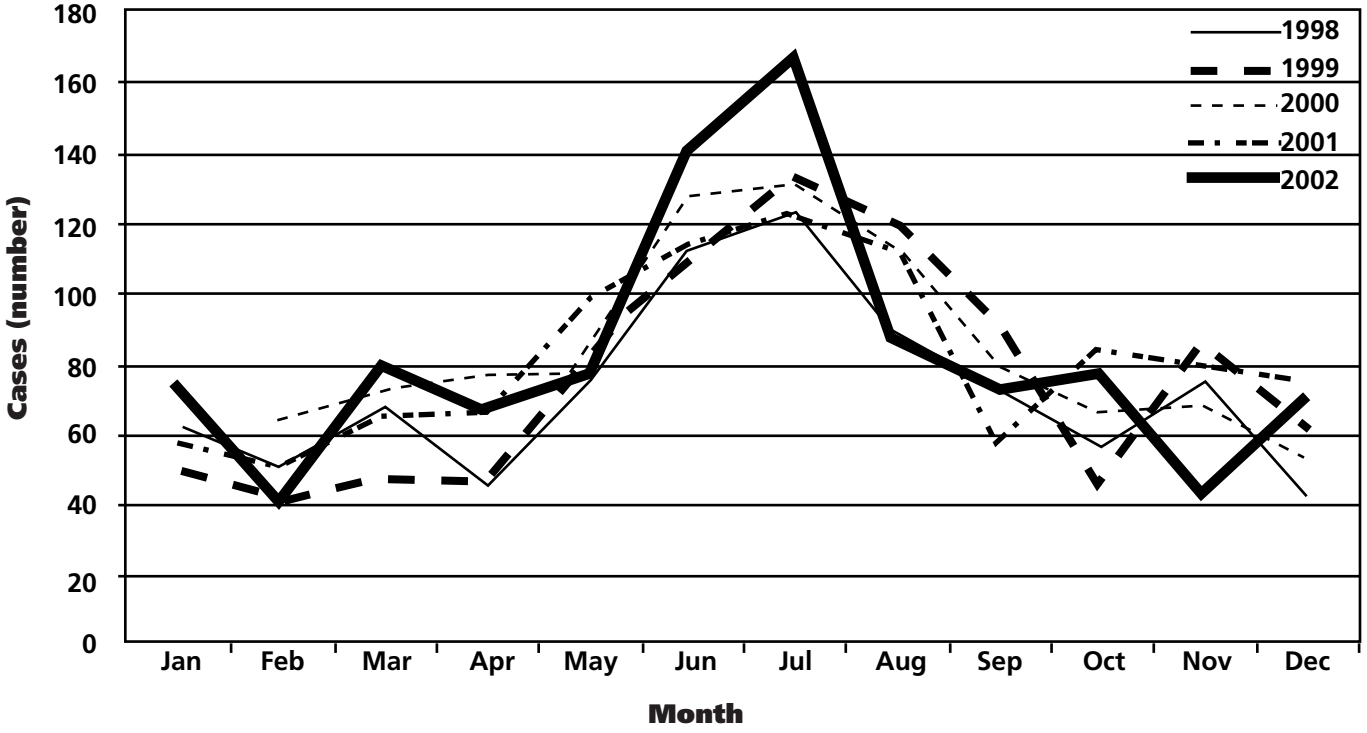
Figure 2. Bacterial entericc pathogens- percentage of reported cases by pathogen, 2002



Submission of *Campylobacter* isolates to the DOH Public Health Laboratories (PHL) is not required, but identification of the species and relatedness of organisms can assist in outbreak detection. The species of *Campylobacter* were determined for approximately half of the reported cases (472/1,032). Of these, 467 (99%) were *C. jejuni* and 5 (1%) were *C. coli.*

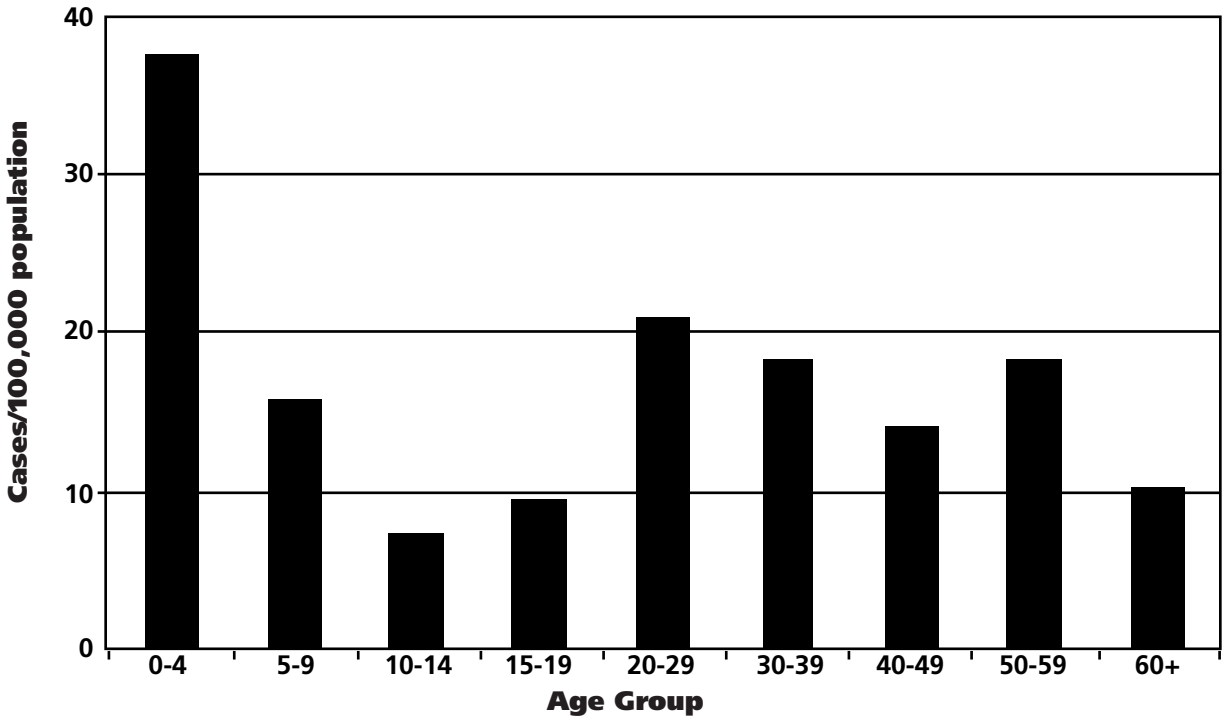
Cases of campylobacteriosis occur year-round, but peaks are commonly seen in summer months. In 2002, the highest number of cases were reported from June through August. Less noticeable peaks, observed in March, October and December, were due to a recurring outbreak in Walla Walla County (An outbreak of campylobacteriosis in a state-run facility is described in Appendix IV: Special Topics). Outbreaks of campylobacteriosis do not occur as commonly as other enteric diseases due to the fragility of the microorganism and low rate of person-to-person spread. There were four confirmed outbreaks of campylobacteriosis reported in 2002.

Figure 3. Campylobacteriosis - reported cases by month of onset, 1998-2002



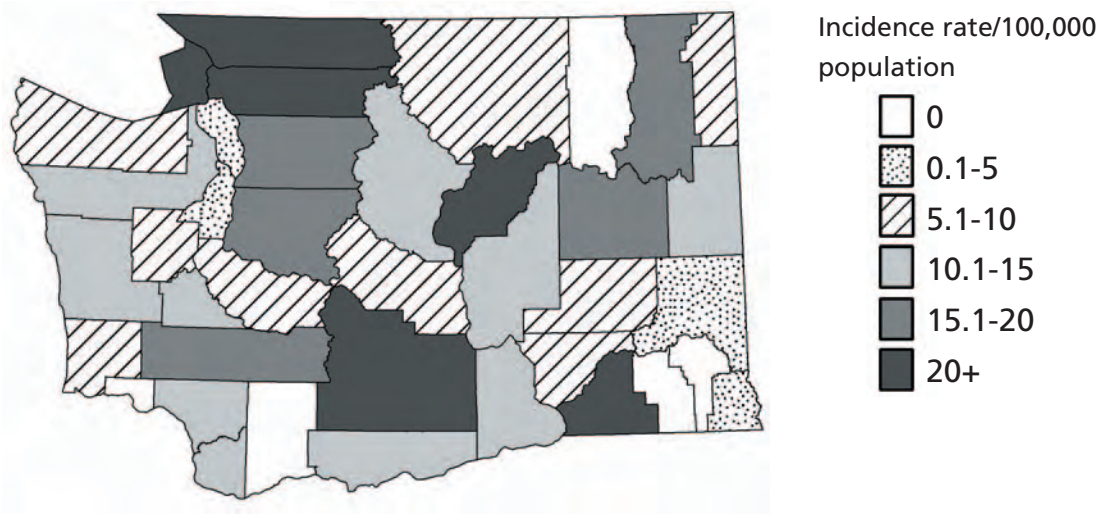
Children under 5 years of age had the highest incidence of illness with a rate of 37/100,000. Rates of illness were also slightly elevated in young adults, as is typical of campylobacteriosis in developed countries. There was no difference in the incidence of disease by gender.

Figure 4. Campylobacteriosis - incidence by age group, 2002



High rates of campylobacteriosis were observed in Walla Walla (253/100,000), Yakima (45/100,000), Whatcom (27/100,000) and Skagit (24/100,000) counties. Douglas, Lincoln and San Juan counties also had rates above the statewide average, however these are based on small numbers of cases.

Figure 5. Campylobacteriosis - incidence by county, 2002



CHANCROID

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

Most prevalent in tropical and subtropical regions of the world, chancroid is much less common in temperate zones and may occur in small outbreaks. In the US, outbreaks and some endemic transmission have occurred, principally among migrant farm workers and poor inner-city residents. Chancroid is most often diagnosed in men, who usually present with genital ulcers or inguinal tenderness. Depending on the site of the ulcer, women often have less obvious symptoms. Chancroid, like other genital ulcer diseases, is associated with increased risk of HIV transmission.

Current recommendations for diagnosis and treatment for chancroid can be found in the CDC's 2002 STD Treatment Guidelines, available on the web at www.cdc.gov/STD/treatment/.

A total of 38 cases were reported in the US in 2001, with two states (South Carolina and Texas) reporting 55% of the cases. One case of chancroid was reported in Washington State in 2002.

CHLAMYDIA TRACHOMATIS

Chlamydia trachomatis is the most commonly reported sexually transmitted disease (STD) in the US and in Washington. Asymptomatic infection is common among both men and women. If symptoms occur, there may be abnormal discharge from the site of infection or pain during urination. Women may also have abdominal pain; untreated *Chlamydia* is a major cause of pelvic inflammatory disease (PID) that can lead to infertility or ectopic pregnancies (particularly with recurrent infections). Perinatal infection can result in neonatal conjunctivitis or pneumonia. Complications in untreated men include urethritis, epididymitis, and proctitis. Similar to other STDs, *Chlamydia* may enhance the transmission of HIV.

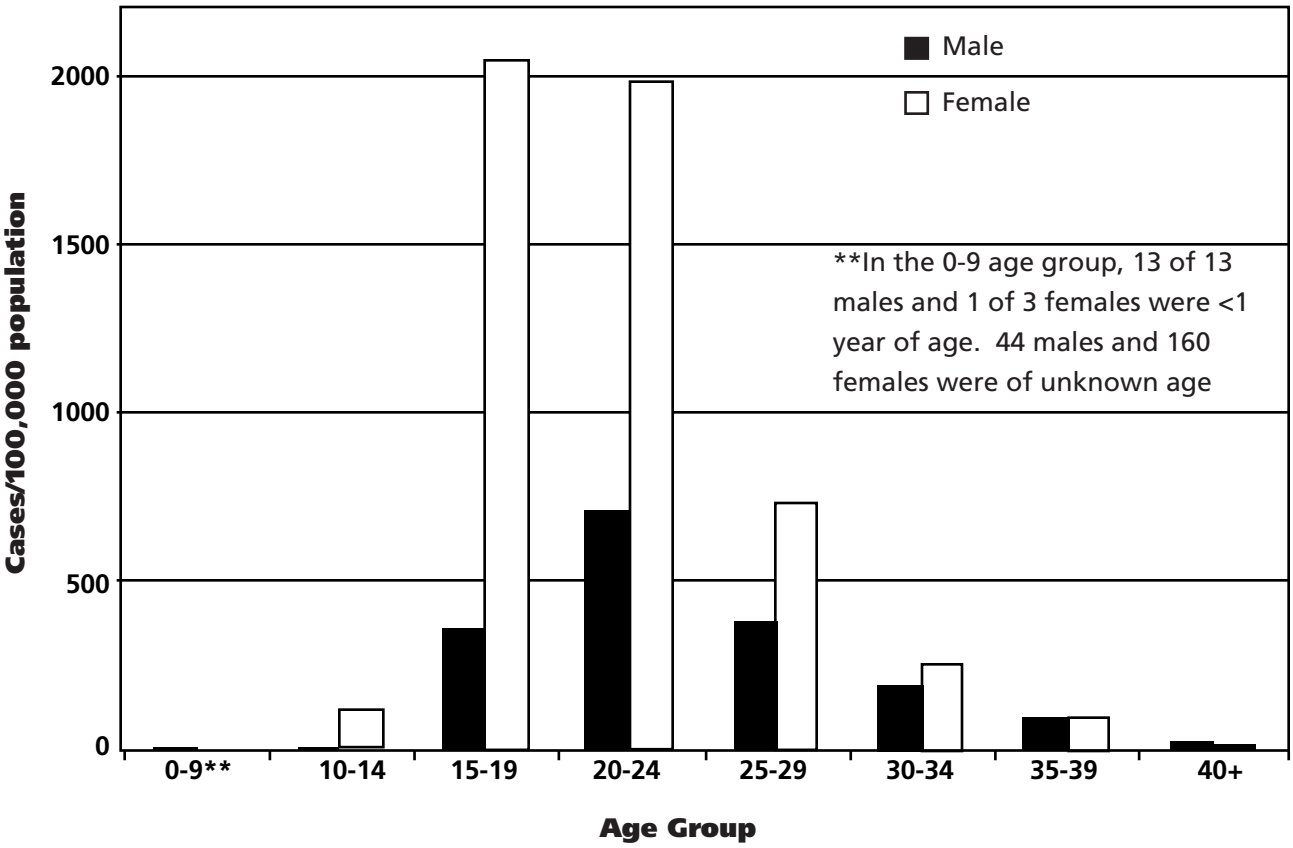
Current recommendations for diagnosis and treatment for *Chlamydia* can be found in the CDC's 2002 STD Treatment Guidelines, available on the CDC website at www.cdc.gov/STD/treatment/. Because of frequent co-infection with *Neisseria gonorrhoeae*, effective treatment for gonorrhea should be included.

In 2002, 14,936 cases of *Chlamydia* (11,008 female, including 283 cases of chlamydial PID, and 3,931 male) were reported for a rate of 247 cases/100,000 population. Of these cases, 666 (4.5%) were also infected with *N. gonorrhoeae*. This compares to 13,631 cases of *Chlamydia* (228/100,000) in 2001.

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

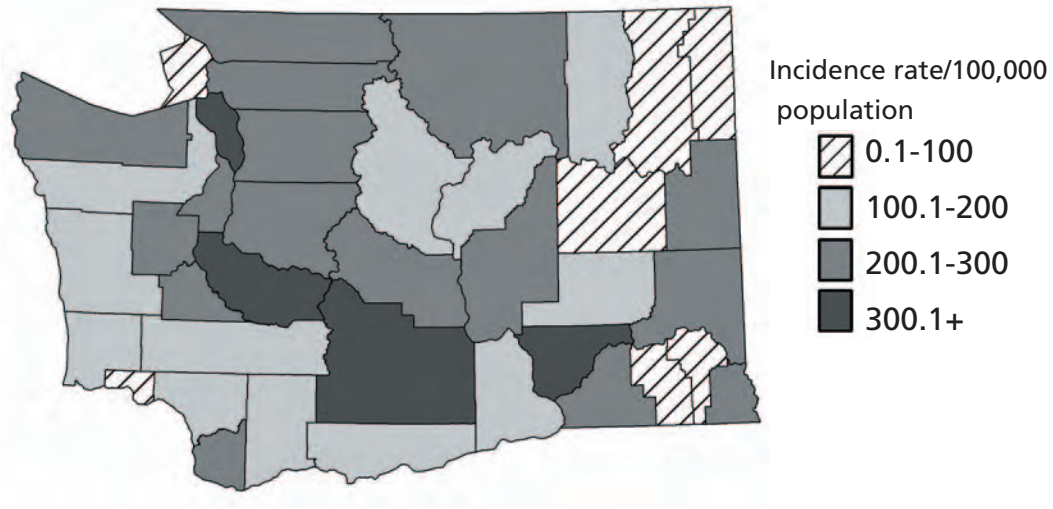
The increase in *Chlamydia* cases can be attributed to several factors including more sensitive laboratory techniques, an increase in routine screening, improved surveillance and reporting, and an increase in risky sexual behaviors.

Figure 6. *Chlamydia trachomatis* - incidence by sex and age group, 2002



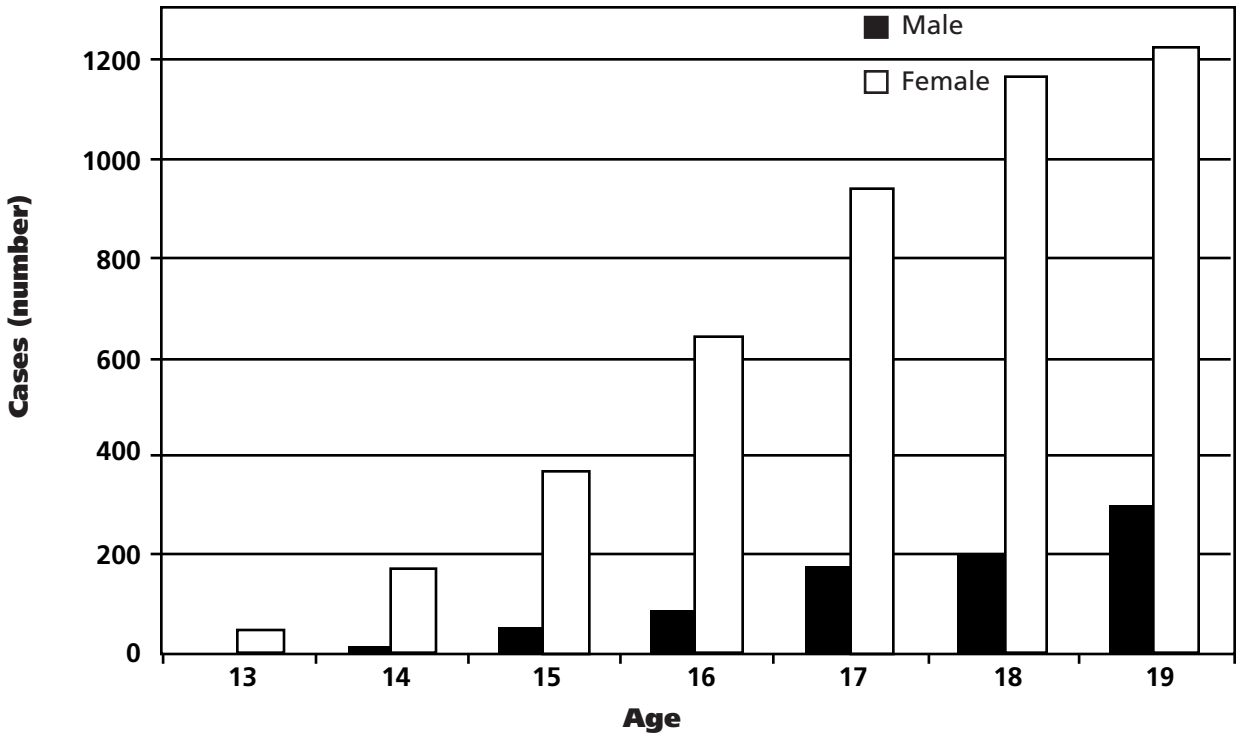
All 39 Washington counties reported cases of *Chlamydia*. The highest incidence was in Yakima (394/100,000) and Pierce (377/100,000) counties.

Figure 7. *Chlamydia trachomatis* - incidence by county, 2002



Chlamydia can be a problem for sexually active teens (36% of reports, 5,356 cases), and is often concentrated among female adolescents, who are physiologically more susceptible to a chlamydial infection than older women. For ages 15-19 years, the incidence was 2,037/100,000 for females and 355/100,000 for males. Among ages 20-24 years, the rate was 1,982/100,000 for females and 694/100,000 for males. Screening more often than once a year should be considered for adolescents.

Figure 8. *Chlamydia trachomatis* - reported cases among persons 13-19 years of age by age and sex, 2002



Of 1,447 cases with recurrent *Chlamydia* (>1 episode in 12 months), 46% (661) were teenagers; 11% of females (1,172 cases) had recurrent *Chlamydia* infection.

CHOLERA

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

V. cholerae is a major cause of epidemic diarrhea in Asia, Africa, and Latin America. Cases of cholera are occasionally reported in Washington following travel to an endemic area. There was one *V. cholerae* (serotype Ogawa) case in 2002, associated with travel to the Philippines.

CRYPTOSPORIDIOSIS

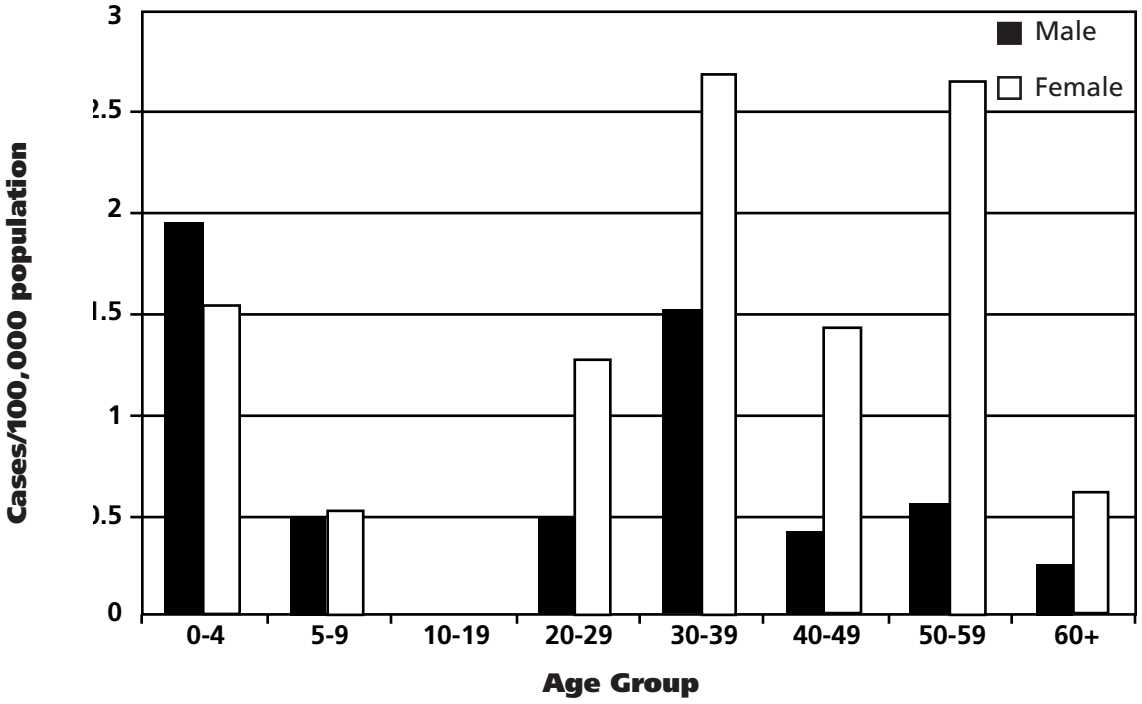
Cryptosporidiosis is a diarrheal illness caused by the protozoa *Cryptosporidium parvum,* which is found in animals and contaminated water sources. Symptoms may be prolonged and include watery diarrhea, abdominal pain, nausea, vomiting, weight loss and fever. For persons with immune deficiencies, especially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

Transmission is fecal-oral, through ingestion of contaminated food or water or by direct contact with infected humans or animals, particularly calves. Outbreaks have occurred in water parks, swimming pools, and child care facilities. The organism can survive in the environment for long periods of time and is resistant to chlorine disinfection. *C. parvum* cysts are present in the majority of surface waters tested throughout the US; municipal water systems, home filtered water and bottled waters are not necessarily free of *C. parvum*.

Health care providers suspecting cryptosporidiosis must specifically request stool testing for *C. parvum,* as this test may not be routinely performed by clinical laboratories.

Cryptosporidiosis has been notifiable in Washington since 2001. There were 62 cases reported in 2002, a decrease from the 73 cases reported in 2001, with no outbreaks identified. The two most commonly reported risk factors were recent travel outside the US (22%), and contact with farm animals or sick animals (8%). Washington cases occurred most frequently in younger adults and over two-thirds of cases occurred in women.

Figure 9. Cryptosporidiosis -incidence by sex and age group, 2002



CYCLOSPORIASIS

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

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

Cyclosporiasis became notifiable in Washington in 2001, when 9 cases were reported to DOH. Five cases were reported in 2002, with 2 of the 5 cases reporting travel outside the country (South America, Caribbean) during their exposure period.

DIPHTHERIA

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

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

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

DISEASE OF SUSPECTED BIOTERRORISM ORIGIN

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

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

In October 2002, planning for smallpox vaccination clinics began throughout Washington as part of Stage 1 of the National Smallpox Vaccination Program. This voluntary vaccination program was instituted to prepare the US for a potential terrorist attack involving the release of the smallpox virus. To prepare for the vaccination program, a comprehensive vaccine safety surveillance system was created to collect data about vaccine administration and adverse reactions. Vaccinations of health care and public health staff who will be part of Smallpox Response Teams was planned for early 2003.

While suspicious powder calls have diminished from their peak following the anthrax events of 2001, changes in national alert levels have reinforced the need to work closely with first responders and develop response protocols that clearly delineate roles and responsibilities during suspicious powder incidents. Standard response protocols have been developed and work has begun on training for public health and laboratory staff as well as for first responders from other agencies.

DISEASE OF SUSPECTED FOODBORNE ORIGIN

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

The number of reported foodborne outbreaks likely represents only a small proportion of the actual events, and reports can vary considerably from year to year. In 2002, 56 foodborne outbreaks affecting 704 persons were reported. Half resulted in 3 or fewer ill persons. One outbreak of norovirus (Norwalk-like virus) infections involved 219 cases and was associated with multiple food items at a single restaurant.

As in previous years, most reported outbreaks (63%) occurred in King County and the majority of reported outbreaks (75%) were associated with restaurant-prepared food.

Table 1. Foodborne outbreaks by place of preparation 2002

	Outbreaks		Cases	
Place	#	%	#	%
Caterer	2	4	31	4
Church	1	2	23	3
Grocery	2	4	15	2
Home	4	7	42	6
Prison	1	2	43	6
Restaurant	40	73	456	65
Restaurant/Caterer	1	2	27	4
Unknown	5	7	67	10
Total	56	100	704	100

The etiologic agent was confirmed by laboratory testing in 17 (30%) outbreaks, an increase over 2001 when an etiologic agent was confirmed in only 9% of reported outbreaks. A specific food item causing illness was not identified in 26 (46%) of the outbreaks

Table 2. Foodborne outbreaks by agent 2002

	Outbreaks		Cases	
Agent*	#	%	#	%
Bacterial				
B.cereus	1	2	8	1
Campylobacter	4	7	49	7
E.coli	1	2	4	<1
Salmonella	9	16	157	22
Staph aureus	3	5	9	1
Other bacterial	1	2	2	<1
Chemical	1	2	2	<1
Norovirus	10	18	356	51
Unknown	26	46	116	16
Total	56	100	704	100

* Includes laboratory confirmed cases with clinical sympoms matching an agent but withougt laboratory confirmation

Poultry was associated with 9 (16%) outbreaks and fresh produce was associated with 6 (11%) outbreaks. Three other outbreaks were due to raw or inadequately cooked products, including raw oysters, unpasteurized milk, and eggs. Factors contributing to foodborne illness in these outbreaks included cross-contamination of the food item and improper handling or storage of foods that allowed bacterial growth or viability; more than one factor may be identified in a single outbreak.

Table 3. Factors contributing to foodborne outbreaks, 2002

Factor*	Outbreaks (N=56) #	%
Contamination		
Contaminated raw product	8	14
Cross-Contamination	10	18
Bare hand contact	14	25
Ill Food Handler	8	14
Proliferation		
Room temperature holding	14	25
Slow cooling	16	29
Prior preperation	16	29
Survival		
Inadequate reheating	14	25

*An outbreak may have more than one factor identified

DISEASE OF SUSPECTED WATERBORNE ORIGIN

Waterborne outbreaks are due to many agents, including viruses, bacteria and parasites that contaminate recreational or drinking water. An outbreak is defined as two or more ill persons with epidemiologic and/or laboratory evidence implicating a common water exposure. Suspected outbreaks should be reported promptly to local health jurisdiction, even before confirmatory laboratory results are available. In 2002, no waterborne outbreaks were reported in Washington.

Table 4. Waterborne disease outbreaks, 1998-2002

Year	Agent	# cases	Setting
1998	viral	248	swimming lake
	viral	58	swimming lake
1999	viral	46	creek water
	viral	68	well
	E. coli O157:H7	36	swimming lake
2000	Pseudomona	10	hotel pool/hot tub
2001	Pseudomona	3	hotel hot tub
2002	None reported		

ENCEPHALITIS, VIRAL

While a variety of viruses can cause encephalitis, surveillance is conducted only for arboviral (mosquito-borne) infections, including West Nile virus (WNV), western equine encephalitis (WEE), and St. Louis encephalitis (SLE). Cases in Washington are counted only if the disease was acquired in state; travel-associated cases are counted in the state where exposure and transmission occurred. In Washington, endemic cases of WEE and SLE were documented in the Yakima valley area during the 1930s, 1970s, and early 1980s. Both WEE and SLE are transmitted to humans by the bite of an infected mosquito. Wild birds are the natural reservoir for the viruses and the source of infection for mosquitoes. Species of mosquitoes that act as vectors for these diseases are found throughout the state. The vast majority of human arbovirus infections are asymptomatic, however severe illness with fever, headache, altered mental status, seizures, coma and death can occur. The last reported human case of arbovirus encephalitis, WEE, occurred in a resident of King county who became ill in 1988.

In 1999, West Nile virus was first identified in the western hemisphere in New York City. Between 1999 and 2003, the virus spread throughout most of North America, causing a major epizootic in birds and horses and an epidemic in humans. In Washington, WNV enzootic activity was first identified in September 2002 when a dead raven from Pend Oreille county was found to be infected. In the next 3 months, WNV was found in a dead crow from Snohomish county, and in 2 locally maintained horses (Whatcom and Island counties) that had neurologic symptoms. One resident of Washington State developed WNV infection after being bitten by mosquitoes during a visit to Michigan (in accordance with CDC case reporting requirements, this is counted as a Michigan case).

Most human WNV infections are asymptomatic, and approximately 20% develop mild, self-limited illness. Less than 1% of infected people develop serious neurologic disease including meningoencephalitis or acute flaccid paralysis. Individuals over 50 years of age are at higher risk of severe illness and death. Prevention and risk reduction measures include application of personal protective measures to avoid mosquito bites, reducing mosquito breeding sources, and mosquito-proofing residences.

No cases in Washington met the case definition for encephalitis reporting in 2002.

ENTEROHEMORRHAGIC E. COLI

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

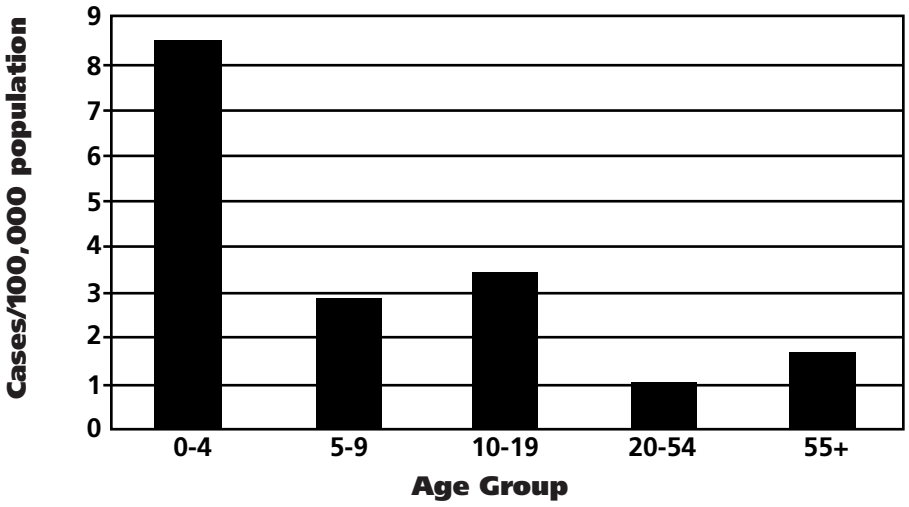
Disease caused by enterohemorrhagic *E. coli* is immediately notifiable in Washington. Our state continues to report high numbers of *E. coli* cases compared with other states. In 2001, Washington represented 4.6% of US cases, while the population of Washington is only 2.1% of the US total. This may be due to better identification and reporting of cases.

In 2002, 170 cases of enterohemorrhagic *E. coli* were reported to DOH, including 166 cases of *E. coli* O157:H7, 2 cases of *E. coli* O103:H2, and 2 cases of Shiga-like toxin producing *E. coli* with unknown serotype. This represents a 4% decrease in the number of reported cases compared to the 5-year average. There were no deaths associated with enterohemorrhagic *E. coli* infection

Thirty-eight (22%) of the 170 reported cases were associated with a single outbreak in a Spokane County dance camp where pre-washed and bagged romaine lettuce was implicated as the source. One other outbreak was reported with 4 probable or confirmed cases.

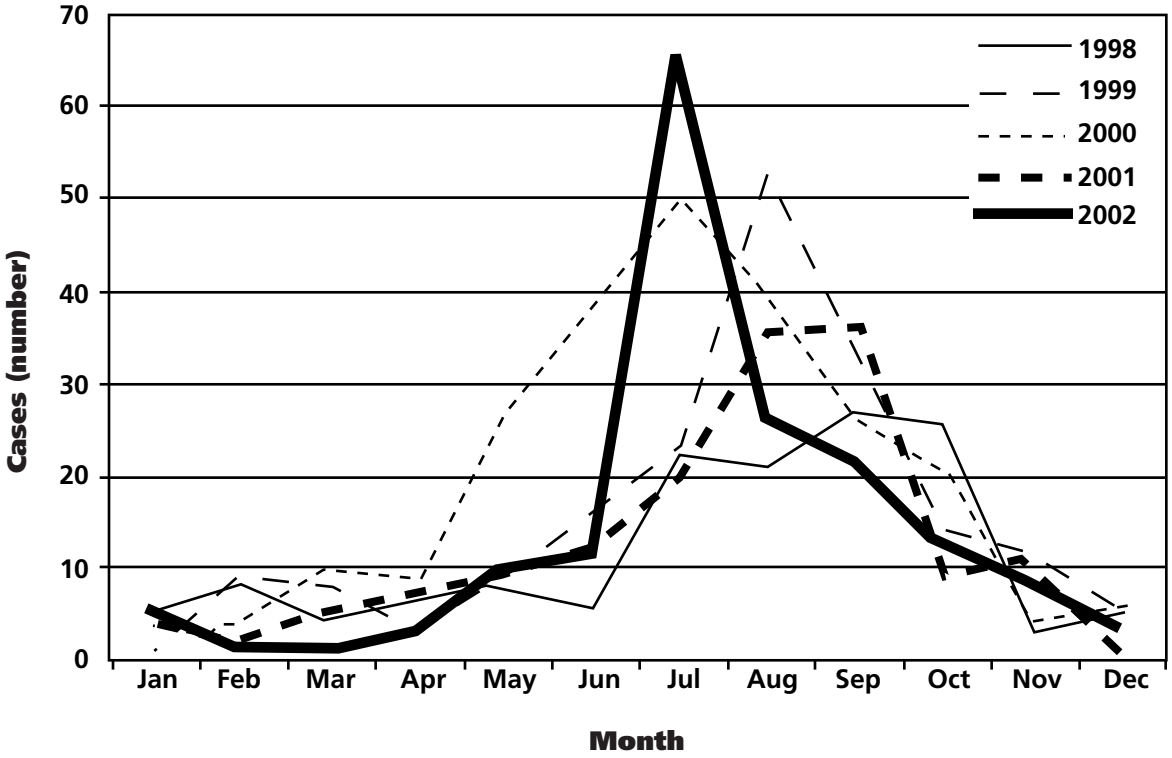
Among sporadic cases, men and women had similar rates of infection (2.3 cases and 1.9/100,000 population, respectively). Children under the age of five years had an elevated incidence (8.5/100,000), and are at the highest risk for developing HUS as a complication of infection; treatment with antibiotics may increase this risk.

Figure 10. *E. coli* O157:H7 - incidence by age group,2002



Infection with enterohemorrhagic *E. coli* is seasonal, with cases most commonly occurring in summer months. In 2002, 38% of the reported cases had onset during the month of July, corresponding with the Spokane County outbreak.

Figure 10. *E. coli* O157:H7 - reported cases by month of onset, 1998-2002



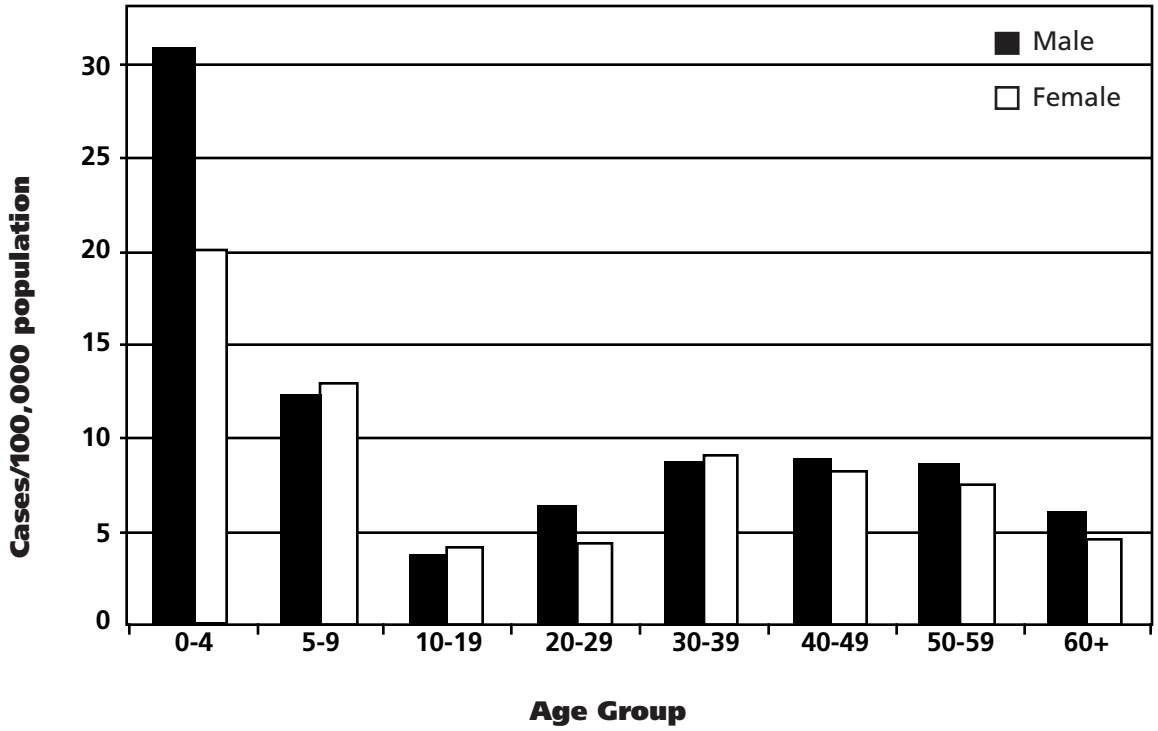
Incidence in Spokane and Whatcom counties were more than twice the statewide rate. High rates in Pend Oreille, Kittitas, and Walla Walla counties are based on small numbers. Seventeen counties reported no cases of enterohemorrhagic *E. coli*.

GIARDIASIS

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

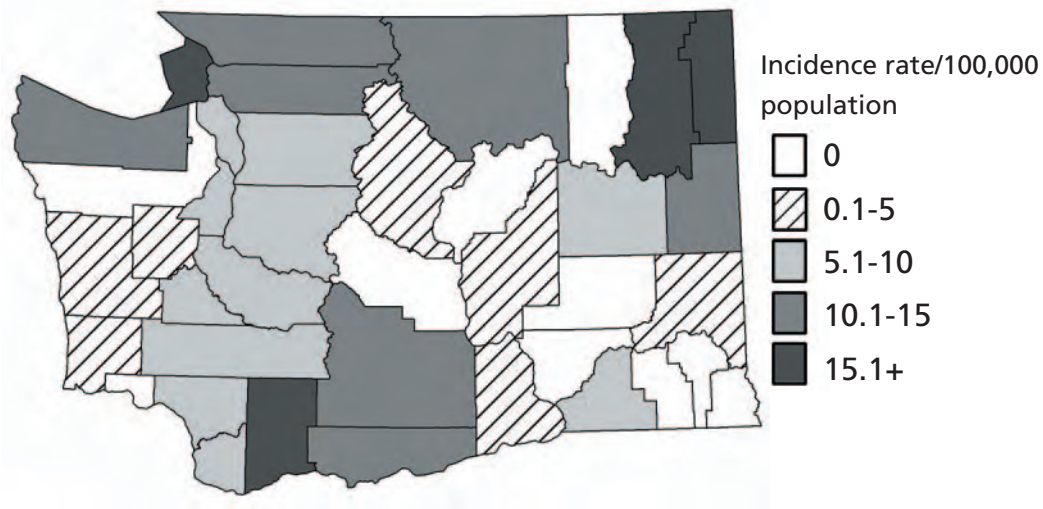
Giardia is spread by fecal-oral transmission through ingestion of contaminated drinking or recreational water or food. Person-to-person transmission can occur, especially among children in child care facilities, or by oral-anal sexual contact. During the summer, transmission is often related to swimming in rivers or lakes or through drinking untreated water while hiking or camping. *Giardia* is one of the most common causes of waterborne disease in the US.

Figure 12. Giardiasis - incidence by sex and age group, 2002



In 2002, 510 cases of giardiasis were reported (incidence 8.4 cases/100,000 population) from residents in 29 counties. No deaths were reported. The age-specific incidence was highest in children under 10 years of age (19/100,000). Thirty-three percent of cases had onset of illness in July, August or September. This coincides with recreational exposure to untreated water and vacation travel. In 2002, reported sources of exposure included immigration or out-of-state travel, 24%; drinking untreated water or camping and hiking, 20%; attending a child care facility, or having a household contact who attended or worked in a child care facility, 12%; infected sexual partners, 4%; contact with a confirmed case, or with animals, 3% each; and chronic illness, 3%. Thirty percent of cases reported no known exposures.

Figure 13. Giardiasis - incidence by county, 2002



GONORRHEA

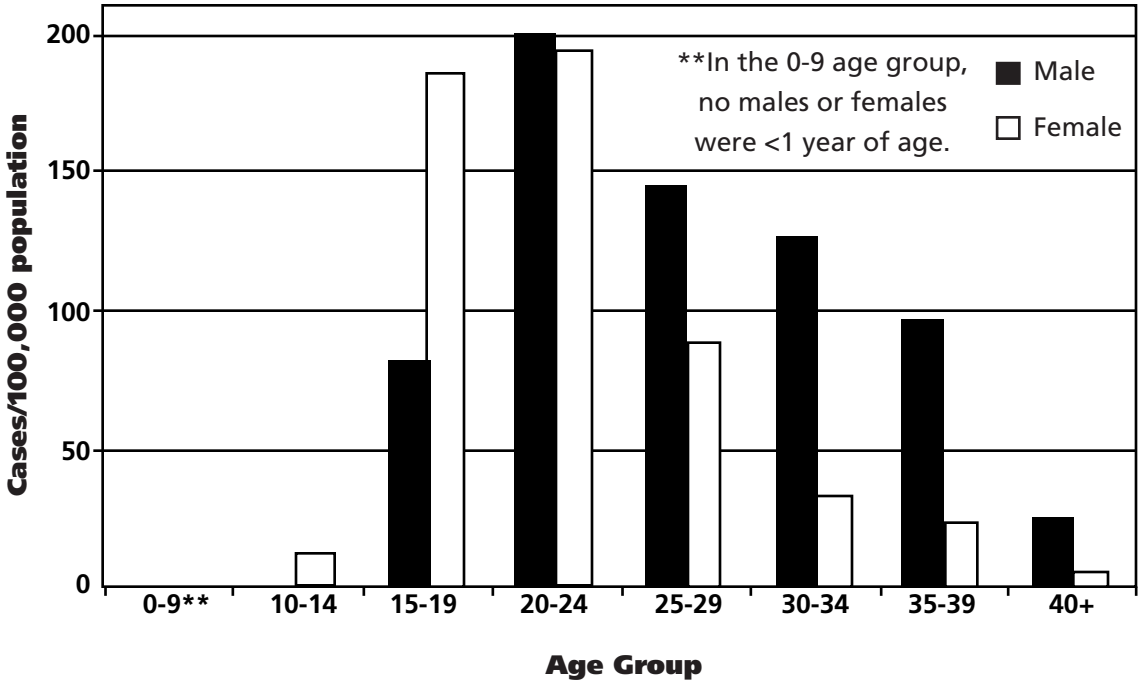
Gonorrhea is caused by the bacteria *Neisseria gonorrhoeae*, and is transmitted by sex with an infected partner. Infections may be asymptomatic, and only about 50% of women will have an abnormal vaginal discharge or painful urination. Men usually have a urethral discharge and pain on urination that may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

Certain strains of gonorrhea cause minimal initial symptoms and if untreated, can spread through the blood, causing arthritis, tenosynovitis, perihepatitis and petechial or pustular skin lesions. The most common complication of untreated gonorrhea in women is pelvic inflammatory disease (PID), which can result in infertility, ectopic pregnancy, and chronic pelvic pain. The most common complication in men is epididymitis. Gonococcal conjuncitivitis may result from perinatal transmission but is rare in the US, where postpartum ocular prophylaxis is used (mandated in Washington). Epidemiologic studies provide strong evidence that gonococcal infections may facilitate HIV transmission.

Current recommendations for diagnosis and treatment of gonorrhea can be found in the Centers for Disease Control and Prevention (CDC) *2002 STD Treatment Guidelines*, available on the CDC website at www.cdc.gov/STD/treatment/. Selection of treatment requires consideration of the anatomic site of infection, the geographic area where the infection was acquired (flouroquinolone resistance is common in California, Hawaii, and regions of the Pacific Islands and Asia), and the possibility of concurrent *Chlamydia* infection.

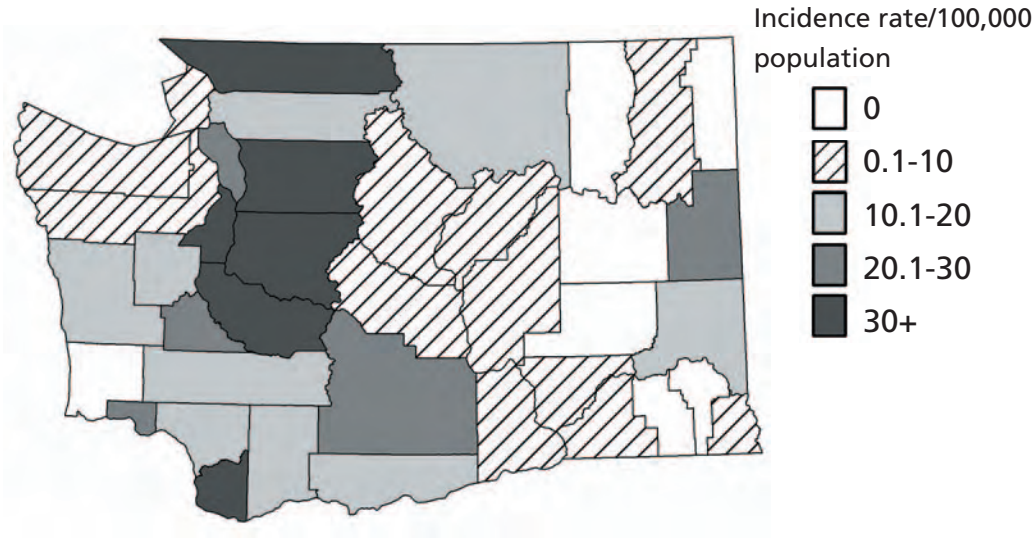
In 2002, 2,925 cases of gonorrhea (1,728 males and 1,197 females) were reported for an incidence of 48 cases/100,000 population; 666 (23%) were found to also have *Chlamydia*. Eighty-four cases of gonococcal PID were reported.

Figure 14. Gonorrhea - incidence by sex and age group, 2002



There were 7 counties with no reported cases of gonorrhea; King and Pierce counties accounted for 72% of the Washington morbidity. Pierce County had the highest incidence (88/100,000).

Figure 15. Gonorrhea - incidence by county, 2002



Gonorrhea incidence is highest among sexually active adolescents and young adults. The highest incidence for males occurs among those 20-24 (200/100,000) and 25-29 (144/100,000) years of age. The highest rates for females are among those 20-24 (193/100,000) and 15-19 (186/100,000) years of age.

Of 263 persons with recurrent gonococcal infection (>1 episode in a 12-month period), 21% (55) were teenagers. Seven percent of females with gonorrhea (85 of 1,197) had recurrent infection, a risk factor for infertility.

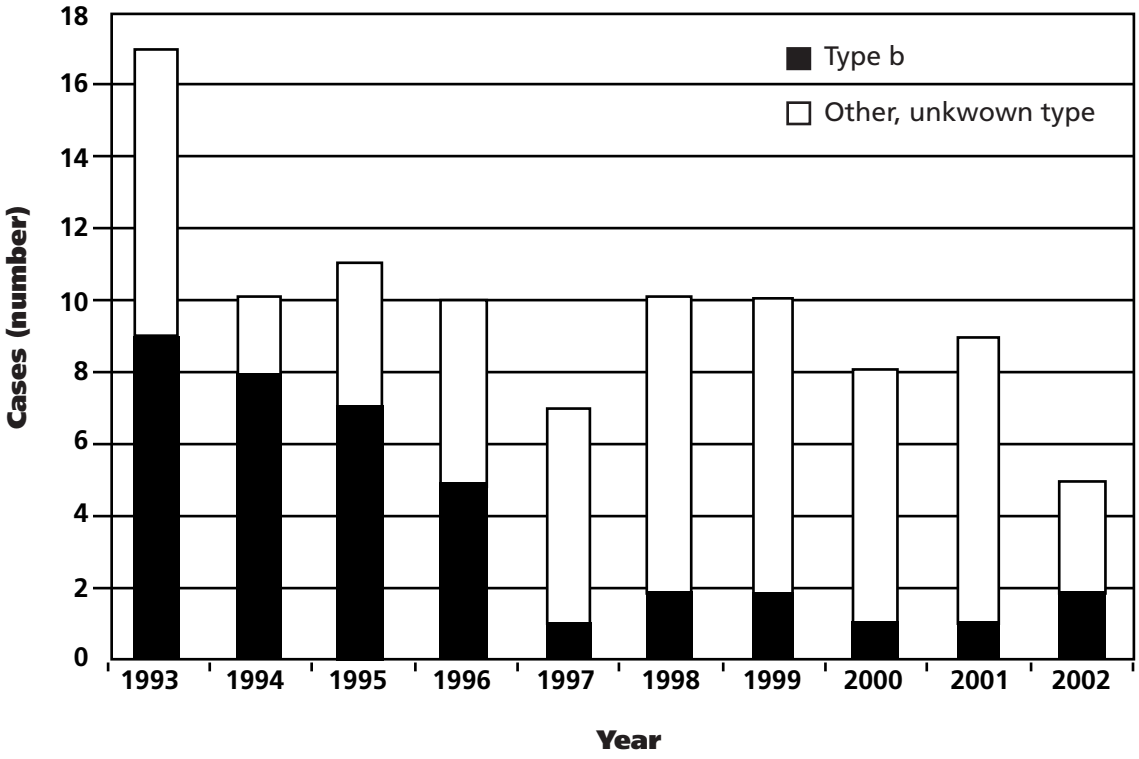
GRANULOMA INGUINALE

Granuloma inguinale (donovanosis) is a rare genital ulcer disease in the US, caused by the bacterium *Calymmatobacterium granulomatis*. The disease is endemic in some tropical and developing areas. Current recommendations for diagnosis and treatment of granuloma inguinale can be found in the CDC's *2002 STD Treatment Guidelines*, available on the CDC website at www.cdc.gov/STD/treatment/.

HAEMOPHILUS INFLUENZAE INVASIVE DISEASE

Haemophilus influenzae, a bacterium with 6 distinct capsular types (a-f) causes severe invasive disease, including meningitis, bacteremia, epiglottitis, pneumonia, and bone or joint infections. Humans are the only reservoir for *H. influenzae*. Transmission is by respiratory droplets and through contact with nasopharyngeal secretions. Children under 3 years of age are at particular risk for meningitis caused by *H. influenzae* type b (Hib), sometimes with fatal outcomes. About 10% of Hib meningitis results in permanent sequelae including hearing loss, paralysis, and other neurological damage. Since the widespread use of conjugate Hib vaccine in children, the incidence of invasive Hib in the US has fallen dramatically. Only cases occurring in children under 5 years of age are immediately reportable to local health jurisdictions and DOH.

Figure 16. *Haemophilus influenzae* - reported cases by capsular type, 1993-2002



Before vaccine was introduced in 1989, several hundred cases were reported annually in Washington. Fewer than 10 cases have been reported each year recently. In 2002, 5 cases of invasive *H. influenzae* infection were reported with no deaths. All cases were among children 2 years of age or younger: 2 were type b, one type c, one type f, and one nontypeable.

HANTAVIRUS PULMONARY SYNDROME

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

HPS was first reported in Washington in 1994. Since that time, a total of 24 cases have been reported; 15 reported exposure in eastern Washington, 6 in western Washington, and 3 were exposed in multiple counties or out-of-state. Eight of the 24 (33%) cases were fatal. One case of HPS was reported in a Washington resident during 2002; they were likely exposed in western Washington.

HEMOLYTIC UREMIC SYNDROME

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

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

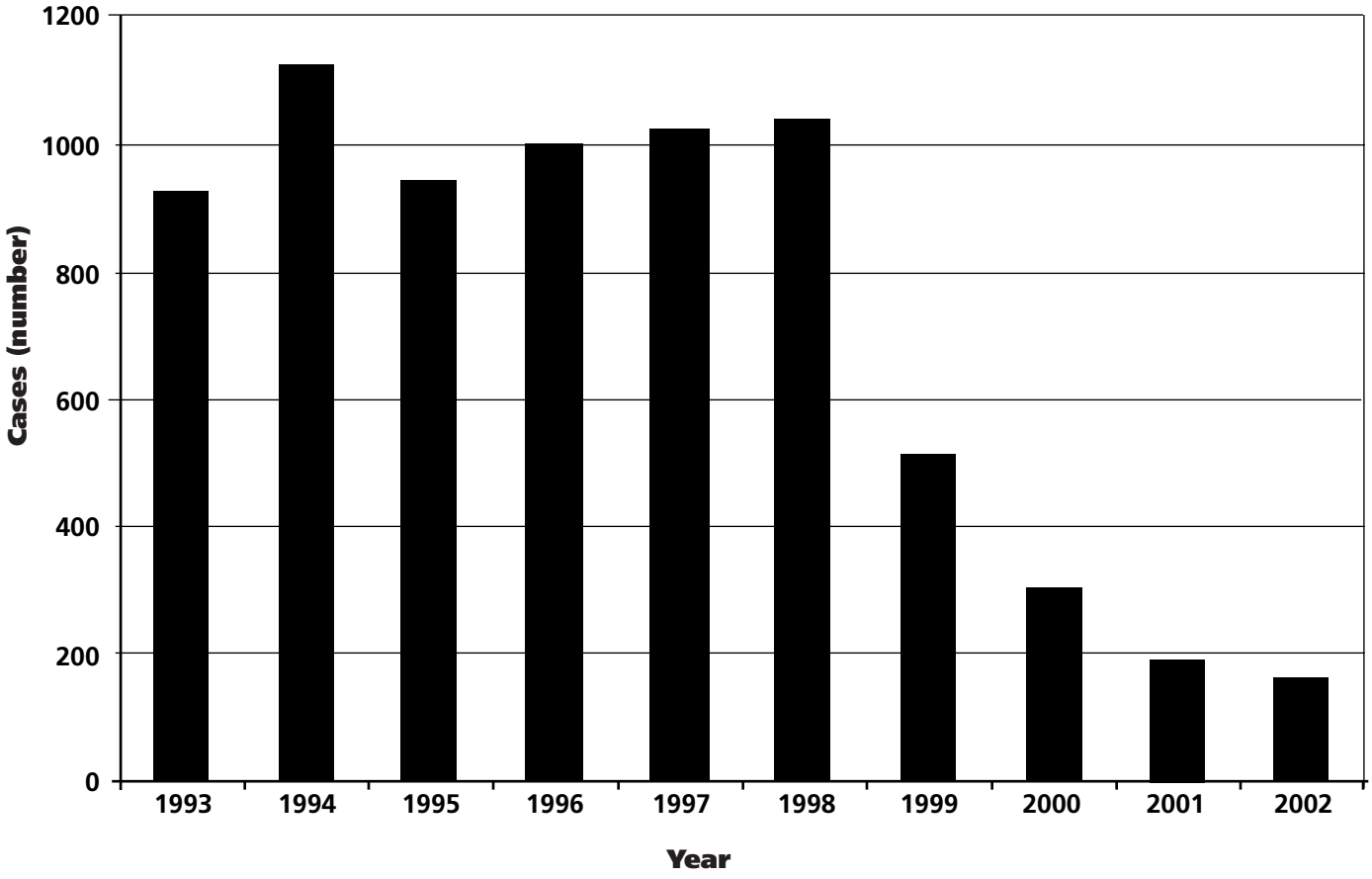
Most persons with HUS recover, but some may have permanent renal insufficiency or die from other complications. Neurological deficits or permanent pancreatic damage may occur. Children are at particular risk for developing HUS as a complication of a diarrheal illness caused by a Shiga toxin producing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

HUS was made immediately reportable in 2001. One case was reported in 2002, which was associated with exposure out-of-state.

HEPATITIS A

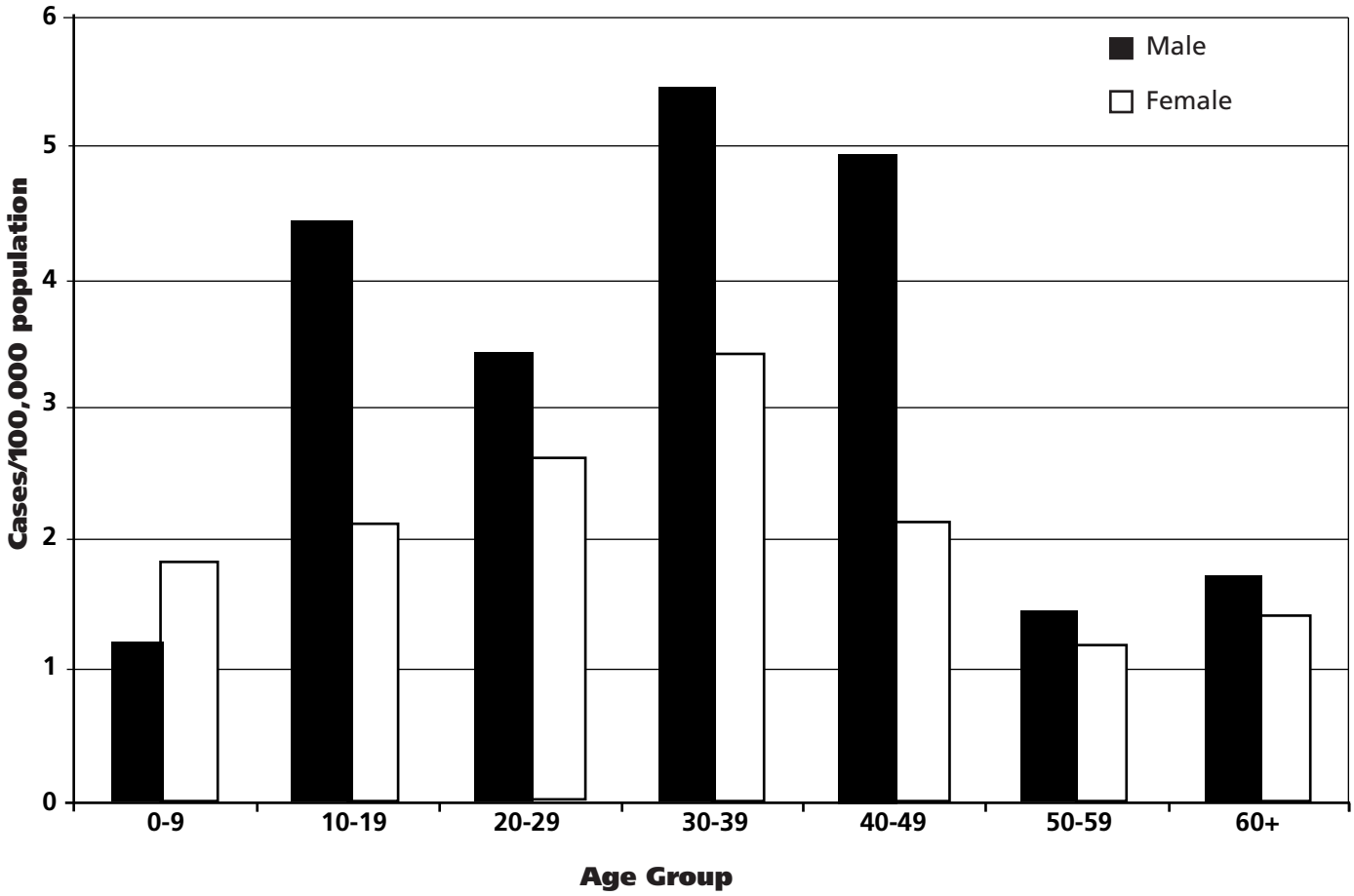
Infection with hepatitis A virus (HAV) may cause fever, anorexia, nausea, abdominal pain, and jaundice. Transmission occurs by the fecal-oral route, either person-to-person (including sexual contact) or by consumption of contaminated water or food, including raw or undercooked shellfish. The most common risk factors for exposure in the US include household or sexual contact with a person infected with HAV, but infection may also follow exposure in child care facilities, among injecting and non-injecting drug users, men who have sex with men, in communities with high rates of hepatitis A, and during travel to endemic areas. Infection with HAV confers lifelong immunity, and chronic hepatitis A infection does not occur. Hepatitis A vaccine prevents infection and is recommended for those at risk. Since the introduction of effective vaccines against HAV in 1995, the incidence has declined locally and in the US. Acute hepatitis A is immediately notifiable in Washington.

Figure 17. Acute hepatitis A - reported cases by year, 1993-2002



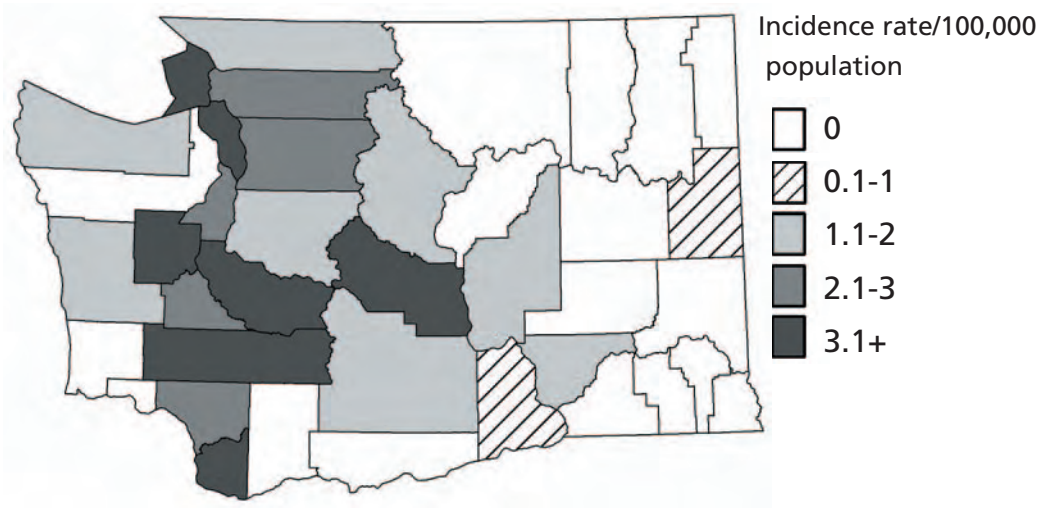
In 2002, 162 cases of acute hepatitis A were reported for an incidence of 2.7 cases/100,000 population and there were no reported deaths. The incidence of acute hepatitis A was higher among males (3.3/100,000) than among females 2.0/100,000) and those 30-49 years of age (4.4/100,000) compared with other age groups.

Figure 18. Acute hepatitis A - incidence by sex and age group 2002



Rates exceeding 6/100,000 occurred in Pierce and San Juan counties, however the rate in San Juan is calculated based on a single case.

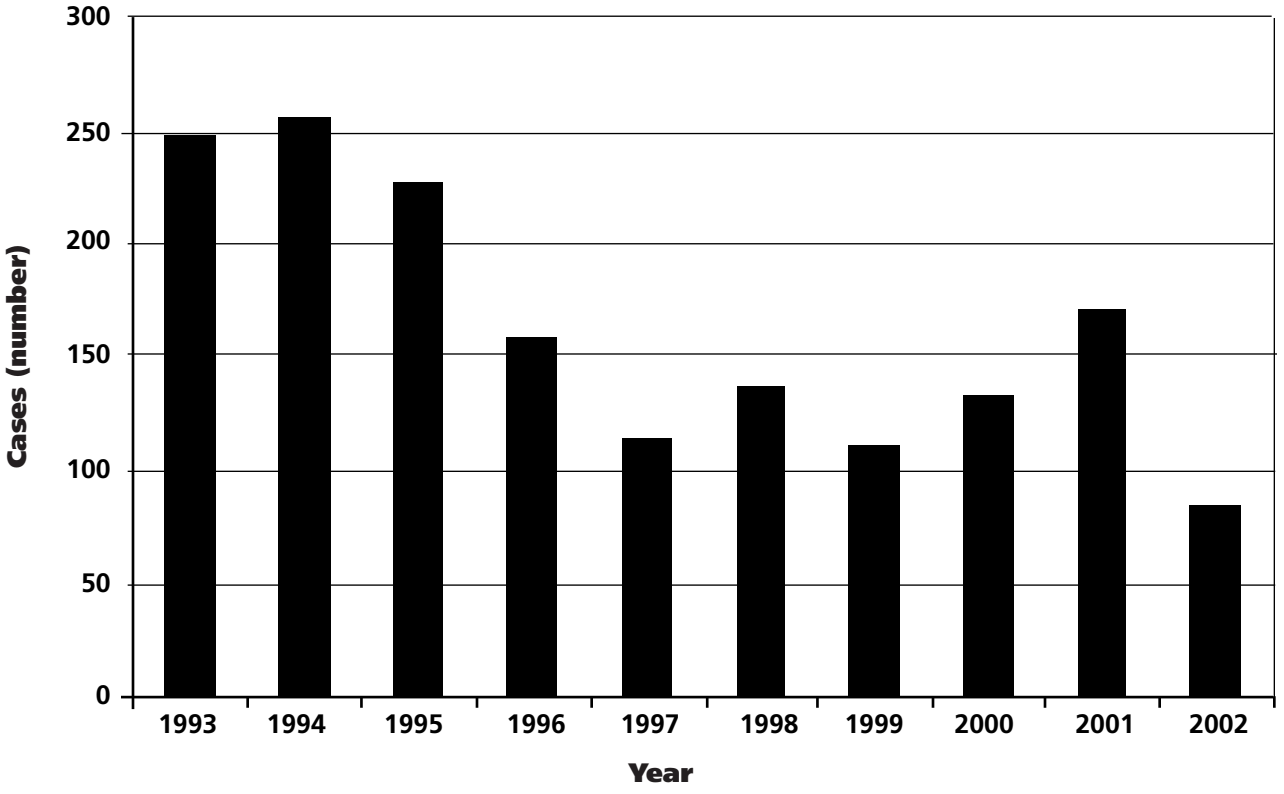
Figure 19. Acute hepatitis A - incidence by county 2002



HEPATITIS B

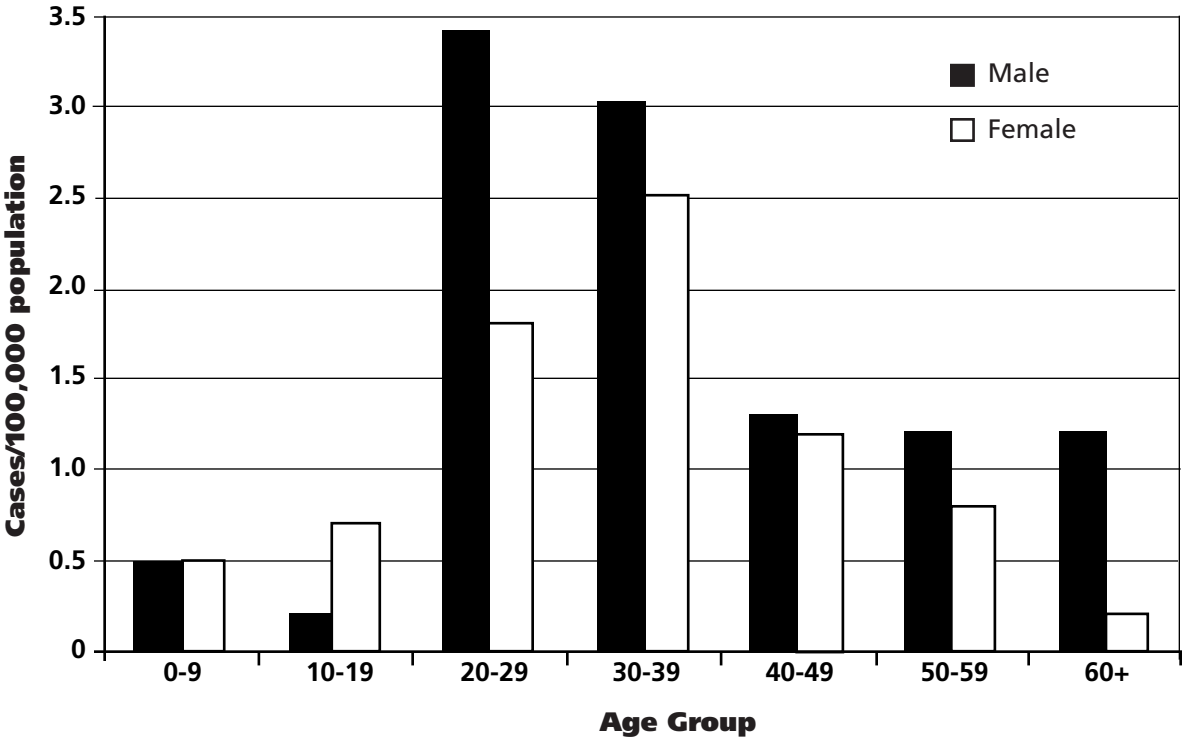
Infection with hepatitis B virus (HBV) causes acute and chronic disease; acute infection may be asymptomatic but fever, anorexia, nausea, abdominal pain, and jaundice can occur. Transmission occurs by exposure to blood or body fluids of an infected person during acute or chronic infection. The most common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

Figure 20. Acute hepatitis B - reported cases by year, 1993-2002



In 2002, 83 cases of acute hepatitis B were reported for an incidence of 1.4 cases/100,000 population, and there were no reported deaths. The rate of acute hepatitis B was higher among males (1.7/100,000) than among females (1.0/100,00) and those 30-49 years of age (2.8/100,000) compared with other age groups.

Figure 21. Acute hepatitis B - incidence by sex and age group 2002



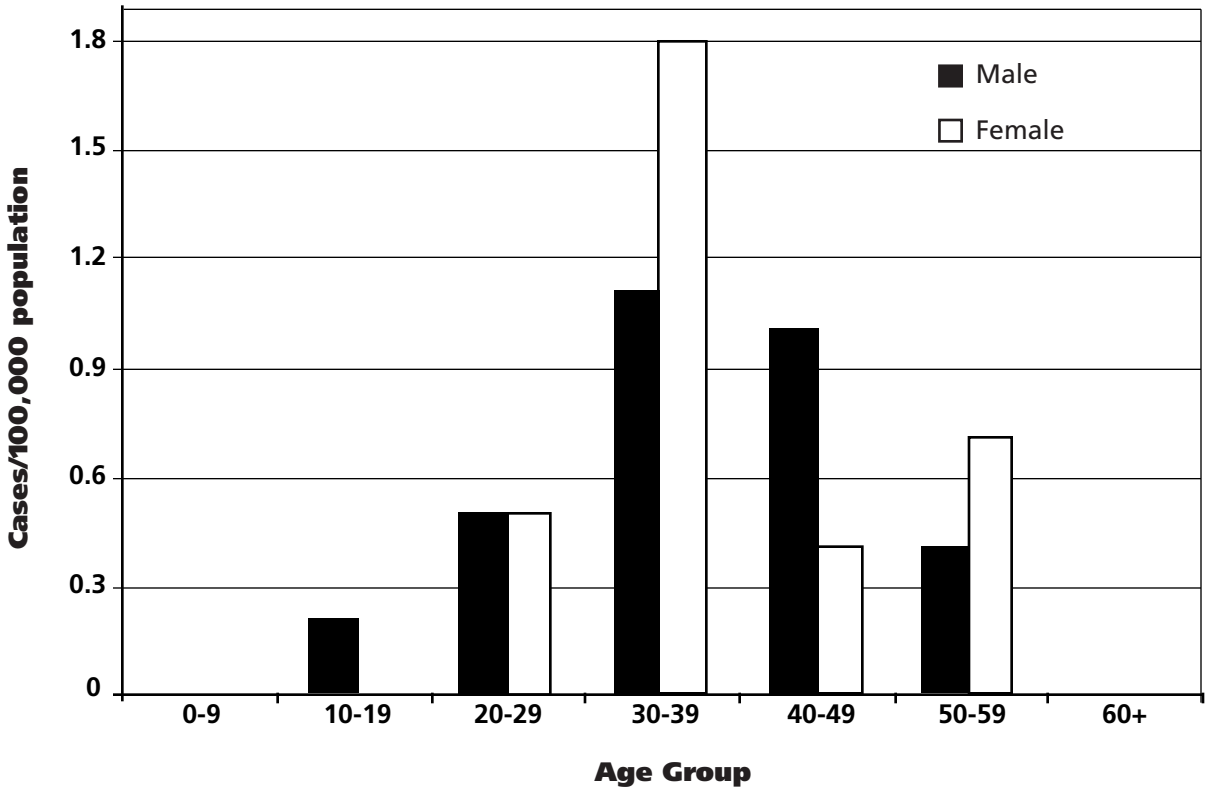
Rates exceeding 3/100,000 occurred in Cowlitz, Mason, Spokane, and Whatcom counties, however the rate in Mason is calculated based on 2 cases. Data on chronic HBV infection will be available for the 2003 Annual Communicable Disease Report.

HEPATITIS C

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

Chronic and acute hepatitis C became notifiable conditions in Washington in 2001, and acute hepatitis C was formerly classified as nonA, nonB hepatitis. In 2002, 27 cases of acute hepatitis C were reported for an incidence of 0.4 cases/100,000 population, and there were no reported deaths. The rate of acute hepatitis C was higher among males (0.5/100,000) than among females (0.4/100,00) and those 30-49 years of age (1.4/100,000) compared with other age groups.

Figure 22. Acute hepatitis C - incidence by sex and age group 2002



It is likely these numbers seriously underestimate the incidence of hepatitis C, as most infections are not recognized, diagnosed, or reported to public health jurisdictions. Rates exceeding 2/100,000 occurred in Adams and Pacific counties, however these rates were calculated based on a small number of cases. Data on chronic HCV infection will be available for the 2003 Annual Communicable Disease Report.

HEPATITIS, UNSPECIFIED (INFECTIOUS)

This immediately notifiable condition includes causes of infectious hepatitis other than hepatitis A, B, or C. Examples of conditions that should be reported in this category include other causes of viral hepatitis, such as delta hepatitis virus, hepatitis D, E, and G. In 2002, no cases of unspecified (infectious) hepatitis were reported.

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, life-long viral infection usually caused by herpes simplex virus type 2 (HSV-2). The prevalence of HSV-2 among adults in the US approaches 25%, and about one million people are newly infected each year. Herpes can be transmitted by an infected person with no noticeable symptoms. People with oral herpes can transmit the infection during oral-genital or oral-anal sex, and perinatal infections can occur, even in the absence of genital symptoms.

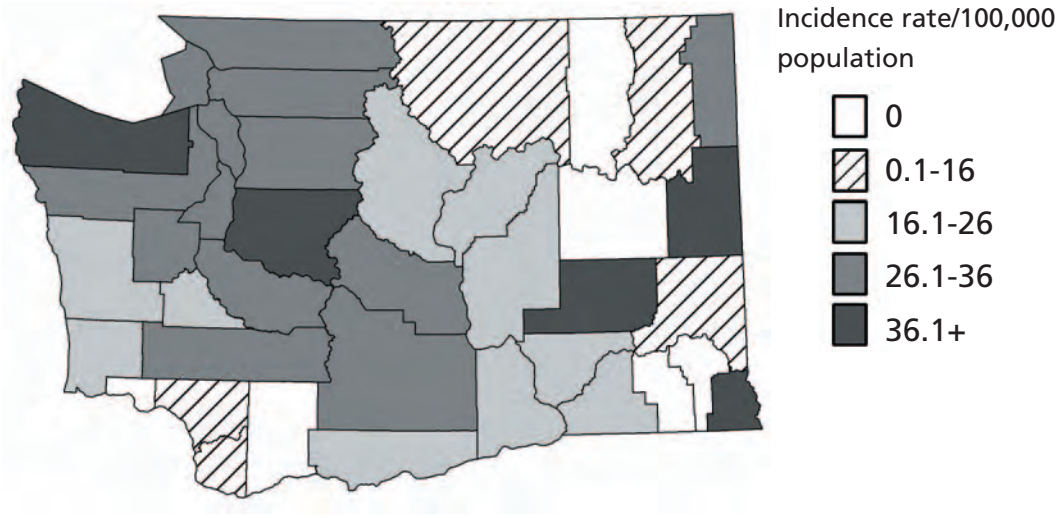
Asymptomatic infections are common and symptoms of genital herpes vary widely, however, first episodes may be quite severe with painful genital ulcerations, malaise and fever. Symptoms can recur at the initial infection site, and the cause of reactivation is unknown. Genital herpes, like other genital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

Current recommendations for diagnosis and treatment of HSV can be found in the CDC's *2002 STD Treatment Guidelines*, available on the CDC website at www.cdc.gov/STD/treatment/. Diagnosis of herpes is made through clinical observations of typical lesions and/or by laboratory confirmation. Antiviral drugs partially control the frequency and severity of outbreaks, however, they are not a cure.

Only a patient's first disease episode or neonatal infections are notifiable in Washington. In 2002, 1,914 cases of genital herpes (573 males and 1,341 females) were reported, an incidence of 32 cases/100,000 population. Included in the total are 6 neonatal infections. This compares to 1,833 (35/100,000) cases (3 neonatal) in 2001.

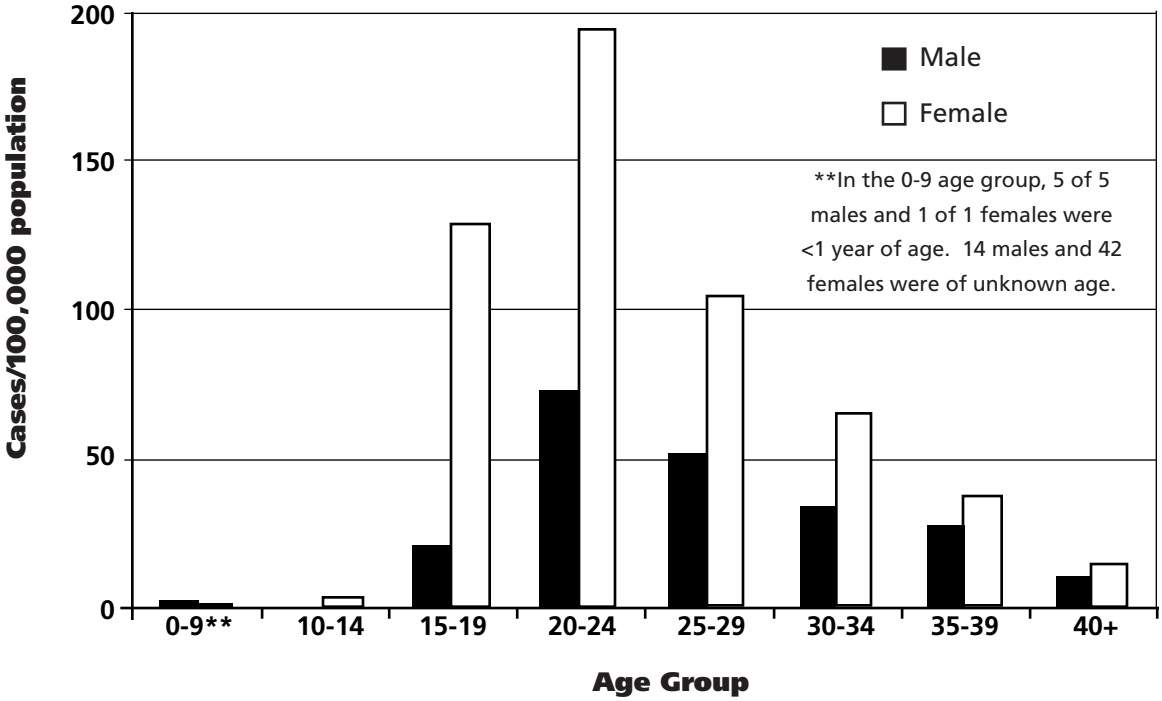
Four counties (King, Pierce, Snohomish, and Spokane) accounted for 67% of the total.

Figure 23. Herpes simplex - incidence by county 2002



The highest age-specific incidence occurred among females 20-24 years of age (195/100,000) followed by females 15-19 years of age (128/100,000).

Figure 24. Herpes simplex - incidence by sex and age group 2002



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. Recent developments in HIV treatment, including combination, highly active antiretroviral therapy (HAART) has considerably improved the prognosis for patients with HIV infection, but the long-term effects of these drugs are unknown.

The CDC case definition for AIDS requires one of 26 indicator conditions (Table 5) 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. September 1999, the DOH Board of Health mandated HIV reporting, and through December 31, 2002, 3,393 cases of HIV infection (not AIDS) were reported to DOH. A description of these data will be presented; however, rates are calculated based only on reported adolescent and adult AIDS cases for 2002.

Table 5. 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
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 2002, 457 cases of AIDS were reported in Washington, a 13% decrease from cases reported in 2001. While the number of cases fluctuates annually, the trend has been leveling, reflecting the trends seen nationally. Declines in morbidity and mortality seen in the 1990s following the introduction of HAART appear to be attenuated by several factors, including treatment-resistant viral strains; late HIV testing; inadequate access to, and adherence to, treatment; and recent increases in HIV and STD incidence in some risk groups.

The incidence of AIDS was 7.6 cases/100,000 population, which is lower than the US rate of 14.7/100,000 (50 states and the District of Columbia, 2001 data). AIDS cases were reported from 30 counties. For counties with at least 5 cases, the highest incidence was in King (15.5/100,000), followed by Clark (8.8/100,000), Snohomish (5.1/100,000), Thurston (4.7/100,000) and Whatcom (4.6/100,000).

Of the 457 AIDS cases reported, 393 (86%) occurred among males and 64 (14%) among females. Men who have sex with men (MSM) continued to account for the majority (56%) of all AIDS cases reported. Among adult and adolescent males, 301 cases (77%) were MSM, with or without concurrent injection drug use (IDU). Injection drug use alone accounted for 33 (8%) cases among men, and 45 cases (11%) were MSM who also used injection drugs. Risk was unreported or unconfirmed in 34 cases (9%).

From 1987 to 2001, the proportion of AIDS cases among women increased from 2-15%. Among adult and adolescent women with AIDS reported in 2002, 35 (55%) acquired HIV infection through heterosexual contact, and 14 (22%) reported IDU. Risk was unreported for 15 (23%) women. For both males and females, age-specific incidence rates were highest among persons 30-39 years of age (39.3/100,000 for men and 6.3/100,000 for women).

As in previous years, racial/ethnic minorities were disproportionately represented among AIDS cases. Whites accounted for a majority (68%) of cases reported, but from 1987 to 2002, the proportion of cases among minorities grew from 11%-32%. African Americans were particularly overrepresented with 79 cases (17%); Hispanics for 43 (9%) cases, Asians for 13 cases (3%), and Native Americans for 9 cases (2%).

Of the 457 AIDS cases, 34 are known to have died as of September 1, 2002. HAART use has markedly increased survival among AIDS patients diagnosed since 1995. In 2002, the numbers of persons living with AIDS in Washington rose to the highest number ever (4,689), an increase of 7% from the previous year.

In addition to AIDS, 605 cases of HIV were reported in 2002. Thirty-five percent of these cases were not newly diagnosed, but were prevalent cases diagnosed prior to 1999. Patients recently diagnosed and reported as having HIV infection may have been infected weeks to years in the past.

Of the 605 HIV infections reported in 2002 from 24 Washington counties, 382 (63%) were reported from King, followed by Pierce with 47 cases (8%) and Snohomish with 34 cases (6%).

The majority of cases (87%) were male. For adult and adolescent males, the primary mode of exposure was male-to-male sexual contact (391 cases, 75%), followed by IDU (34 cases, 6%) and the two risks combined (48 cases, 9%). Twenty-seven cases (5%) reported no identified risk (NIR). For adult and adolescent females, heterosexual sexual contact was the mode of exposure for 45 cases (58%); 15 cases (19%) reported IDU and 18 cases (23%) reported NIR.

Similar to AIDS cases, whites made up the majority of HIV cases (438 cases, 73%) and some racial/ethnic minorities are disproportionately represented. African Americans accounted for 86 (14%) of cases, Hispanics for (9%) 53 cases, Asians for 15 cases (3%), and Native Americans for 7 cases (1%).

LEGIONELLOSIS

Legionellosis is caused by infection with *Legionella* species, primarily *L. pneumophila*. It is estimated that up to 18,000 people in the US get legionellosis each year with a mortality rate of 5-30%. *Legionella* is found in soil, natural bodies of water, and water systems where warm (90˚–105˚ F), stagnant water allows the organisms to reproduce in high numbers. Infection has followed inhalation of contaminated aerosols from showers, hot water tanks, cooling towers and whirlpool spas. There is no person-to-person transmission.

Legionellosis causes atypical pneumonia, with fever, myalgias, headache, fatigue, anorexia, and occasionally diarrhea and abnormal liver function tests. Risks for infection include increasing age, smoking, chronic lung disease, renal insufficiency, diabetes, or immune deficiency. Pontiac fever is probably an allergic reaction to bacterial antigens, with fever and myalgias, but no pneumonia.

In 2002, there were 8 cases of legionellosis (0.1 cases/100,000 population) with 3 deaths in Washington, fewer than in recent years. All 8 cases had identifiable risk factors for legionellosis. King county reported 5 cases with one each reported from Clark, Ferry, and Lewis counties. Seven cases had infection with *L. pneumophila* and one case had *L. bozemanii*.

LEPTOSPIROSIS

Leptospirosis is a zoonotic bacterial disease caused by *Leptospira interrogans*. Infections may be asymptomatic, but leptospirosis is usually characterized by fever, headache, myalgias, conjunctival injection, and less frequently, meningitis, rash, jaundice, or renal insufficiency. Cases are often misdiagnosed as meningitis, encephalitis or influenza. Clinical illness lasts a few days to weeks.

LISTERIOSIS

Listeria monocytogenes is found in soil and water and can be transmitted to humans through contaminated food. *Listeri*a can be found in a variety of raw foods, such as uncooked meats, fruits, vegetables, and unpasteurized milk or foods made with unpasteurized milk. Processed foods such as soft cheeses or cold cuts can become contaminated during or after processing. Fetal or neonatal infections may occur during maternal infection. Listeriosis is an immediately notifiable condition in Washington.

In 2002, 11 cases of listeriosis (incidence 0.2 cases/100,000 population) were reported with no deaths, essentially unchanged from previous years in Washington. Five cases occurred in individuals over 60 years of age and one occurred in a neonate. Risk factors reported included malignancy, multiple chronic illnesses, and undiagnosed illness during pregnancy.

LYME DISEASE

Lyme disease is a bacterial disease caused by *Borrelia burgdorferi*, inoculated during the bite of an infected *Ixodes* tick. In the Pacific Northwest, the western black-legged tick (*Ixodes pacificus*) is responsible for transmitting the disease. Only a small percentage of tick bites will result in human infection; those infected may be asymptomatic or may develop an erythematous rash with central clearing (erythema migrans) with fever, headache, and myalgias or arthralgias. Without treatment, the bacteria may spread and cause arthralgias, arthritis, neuritis, myocarditis, skin and mental status changes. Lyme disease generally occurs during warm weather when ticks are active and humans engage in outdoor activities such as hiking or camping.

In the past 10 years, 4-18 cases of Lyme disease were reported annually with about 30% reporting out-of-state exposure. In 2002, 12 cases (incidence 0.2 cases/100,000 population) were reported in Washington with no deaths. About half of the cases reported out-of-state exposures, with the rest exposed in western Washington (Clark, Grays Harbor, Lewis, San Juan and Snohomish counties) from June through September.

LYMPHOGRANULOMA VENEREUM

Lymphogranuloma venereum (LGV) is a rare genital ulcer disease in the US, usually caused by the L1, L2 and L3 serovars of *Chlamydia trachomatis*. LGV is characterized by genital lesions, suppurative regional lymphadenopathy, or hemorrhagic proctitis. The infection is usually sexually transmitted. LGV is common in tropical and subtropical areas and endemic in parts of Asia and Africa.

Current recommendations for diagnosis and treatment of LGV can be found in the CDC's *2002 STD Treatment Guidelines*, available on the CDC website at: www.cdc.gov/STD/treatment/. In Washington, the last case of LGV was reported in 2000.

MALARIA

Malaria is a mosquito-borne parasitic infection caused by one of 4 species of parasites (*Malaria falciparum, M. vivax, M. malariae and M. ovale*) that infect *Anopheline* mosquitoes. Humans are the only important reservoir for malaria, which occurs in tropical and subtropical regions where the *Anopheline* mosquito vectors are present. Symptoms of malaria include cyclic fevers, sweats, rigors, and headache; some infections, particularly those caused by *M. falciparum*, may have life-threatening complications and require prompt treatment. Malaria is diagnosed by detection of malaria parasites on specially stained blood films.

Travelers can take prophylaxis to prevent malaria. Prevention and treatment of malaria can be complicated due to increasing levels of resistance to antimalarial drugs in some regions. Updated prophylaxis recommendations for travelers are available from travel clinics and the CDC website (www.cdc.gov).

In the absence of travel to a malaria-endemic area, autochthonous malaria is extremely rare in the US because vector mosquitoes are no longer endemic. Case counts in Washington vary from year to year and typically 20-45 cases are reported annually. The 26 cases reported in 2002 occurred among immigrants and travelers arriving from Africa, Asia, and Central America.

MEASLES (RUBEOLA)

Measles is a viral rash illness characterized by the acute onset of fever, coryza, conjunctivitis, cough, and oral lesions (Koplik spots), followed by an erythematous maculopapular rash that begins on the face and becomes generalized. The virus is transmitted by airborne and respiratory droplets routes. The infectious period extends from 4 days before until 4 days after the onset of rash, and illness usually lasts 7-10 days. Complications include otitis media, pneumonia, croup and encephalitis, and may occur in all age groups. However, measles is most severe in infants and adults.

Diagnosis is made by serologic testing, viral isolation from nasopharyngeal secretions or urine, or identification of viral antigen in blood or tissues. Measles can be prevented by vaccination (measles-mumps-rubella vaccine [MMR]), and endemic measles has been eliminated in the US. Recent cases in the US have been imported from endemic areas or spread from an imported case. Measles is an immediately notifiable condition in Washington.

In Washington in 2002, there was one confirmed case of measles, in an eight-month old child who entered the US through adoption from China.

MENINGOCOCCAL DISEASE

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

N. meningitidis is carried in the nasopharynx of about 15% of the healthy population. Transmission occurs by respiratory droplets and through contact with nasopharyngeal secretions. Risk groups for meningococcal disease include infants and young children, household and other close contacts of infected persons, residents in congregate settings (e.g., military recruits or college freshmen living in dormitories), and microbiologists working with isolates of *N. meningitidis*. Exposure to tobacco smoke, including second-hand smoke may increase the risk of illness. There is a vaccine that protects against four serogroups of *N. meningitidis*, but not serogroup B. The vaccine is used to control outbreaks of serogroup C meningococcal disease and has been recommended by some colleges and universities for incoming freshmen. Meningococcal disease is an immediately notifiable condition in Washington.

In 2002, there were 76 cases of meningococcal disease (incidence: 1.3 cases/100,000 population) with 8 deaths. Rates in Washington have been similar for several years but are typically higher than elsewhere in the US. Higher incidence in Pacific, Whitman, and Benton counties were based on small numbers.

The highest rate was among children less than one year of age (16.5/100,000) and 1-4 years of age (5.6/100,000), both elevated compared with 2001. The incidence of meningococcal disease does not significantly vary by age in individuals 5 years of age and older (0.8 /100,000).

In the US, serogroups B and C account for about 60% of meningococcal disease. Most infections in Washington are caused by serogroup B. Serogroup Y has increased nationwide over the past decade and in 2002, accounted for 21% of Washington cases. There was also an increase in serogroup C infections. Pneumonia is more common with serogroup Y; 3 of 6 cases of meningococcal pneumonia were due to serogroup Y *N. meningitidis*.

Table 6. *Neisseria meningitis* by percentage of serogroups 1993-2002

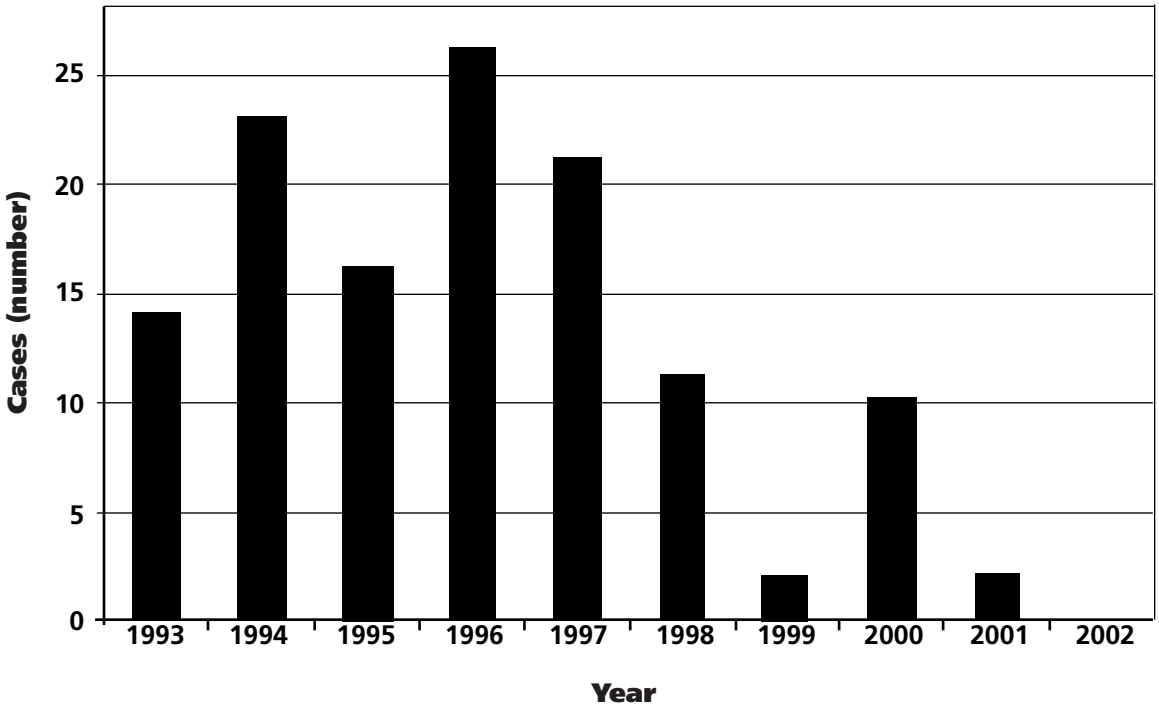
Year	B%	C%	Y%	Other(%)	Unknown (%)
1993	51	29	4	3	14
1994	52	18	9	4	17
1995	60	13	6	5	16
1996	57	24	14	0	5
1997	51	17	18	4	10
1998	56	18	16	1	9
1999	47	12	27	2	12
2000	42	3	27	4	14
2001	41	17	25	3	14
2002	33	32	21	4	11

MUMPS

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

Once a virtually universal infection, mumps incidence decreased in the US due to routine childhood immunization with MMR. In the past 5 years, fewer than 25 cases have occurred annually in Washington. There were no cases of mumps reported in Washington during 2002.

Figure 27. Mumps -reported cases by year 1993-2002



PARALYTIC SHELLFISH POISONING

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

Symptoms begin within minutes or hours of eating poisonous shellfish, and may include paresthesias of the mouth and extremities, and 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 be contaminated. Confirmation requires detection of the toxin in the implicated food.

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

Two clusters of PSP have been reported in Washington within the past 10 years: 7 cases in 2000 and 5 in 1998. All cases from both clusters were associated with consumption of mussels taken from South Puget Sound waters. No cases of PSP were reported in Washington in 2002.

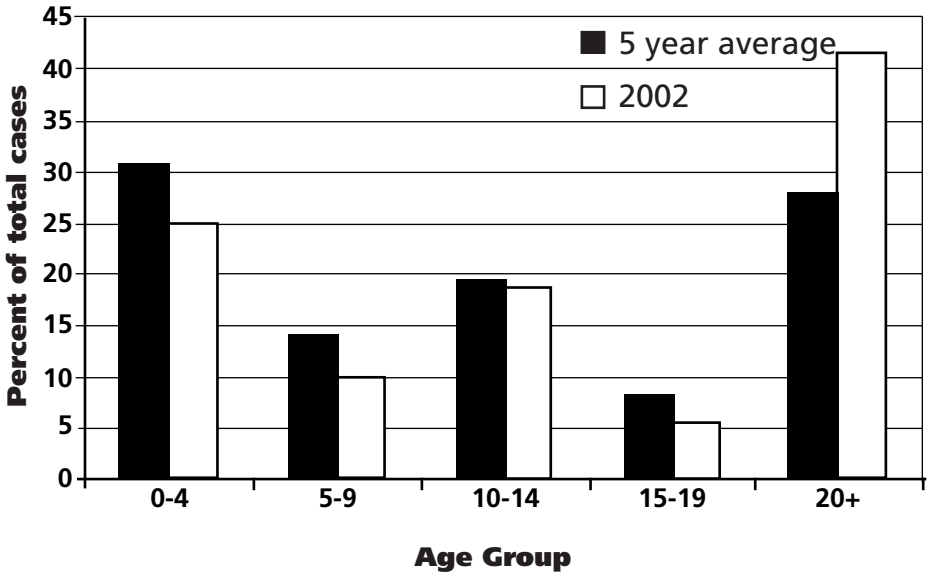
PERTUSSIS

Pertussis is a vaccine-preventable respiratory illness resulting from infection with the bacillus *Bordetella pertussis*. Transmission of B. *pertussis* occurs through respiratory droplets. Classically, pertussis is characterized by episodes of forceful, repetitive coughing followed by an inspiratory whoop and vomiting, although these symptoms may be absent in infants under 6 months of age or partially immune adolescents and adults. In partially immune adolescents and adults, pertussis may cause mild or atypical respiratory illness; in this population, the diagnosis may not be recognized, allowing disease transmission to populations at risk for serious disease. Symptoms may last months and rare but serious complications may occur, including pneumonia, encephalopathy and death. Infants under 6 months are at greatest risk for complications.

Routine childhood immunization against pertussis combined with early recognition and treatment or prophylaxis of infection is essential for disease control. Diphtheria, tetanus and acellular pertussis (DtaP) vaccine is not recommended for individuals over 7 years of age, and adolescents and adults are at risk for pertussis due to waning immunity. Infections among adults and adolescents are an important factor for disease transmission to nonimmunized young children. Pertussis is an immediately notifiable condition in Washington.

In Washington, 575 cases (incidence: 9.5 cases/100,000 population) of pertussis were reported in 2002, representing a 3-fold increase from the number reported in 2001; no deaths were reported. Sixteen suspected or confirmed pertussis outbreaks were reported in 2002, including 8 in health care settings. In 2002, pertussis peaked in February, May and October. Yakima, Cowlitz and Skagit counties had rates more than twice the state average. The high rate in Skamania County is based on small numbers.

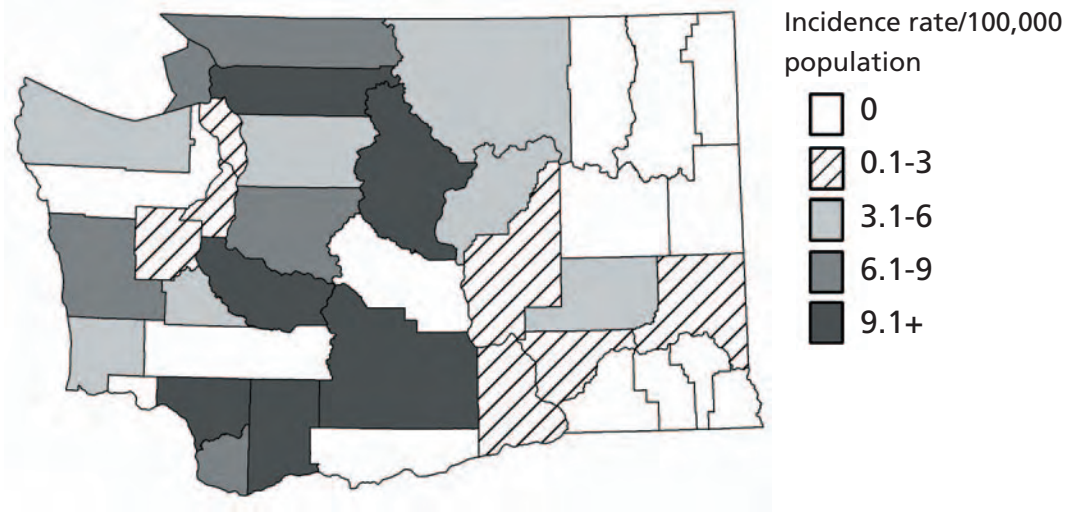
Figure 28 - Pertussis - percentage of reported cases in 2002 by age group, compared to average percentage by age group reported 1998-2



Pertussis incidence by gender was comparable among children and adults >54 years of age, however, the rate among females 20-54 years of age was five times higher than among males of the same age (11.1/100,000 compared to 2.3/100,000). This difference may be due to a combination of factors, including increased exposure to children with pertussis and more willingness by infected women to seek medical care.

Infants under one year of age had a high incidence of pertussis: 115/100,000. Most of the cases reported in that age group were among infants under 6 months of age, who represented 12% of all reported cases while those aged 6 to 11 months comprised 2% of all cases. Eleven percent of all cases occurred among children 1-4 years of age, 10% among children 5-9 years of age, and 24% among adolescents 10-19 years of age. Adults >20 years of age comprised 41% of all reports, an increased proportion compared with previous years.

Figure 29 - Pertussis - Incidence by county, 2002



Cough, with an average duration of 8 days, was reported by 99% of persons with pertussis. Other symptoms included vomiting (55%), apnea (41%) and whooping (25%). Seizures (reported by 1% of cases) and encephalitis (0) were uncommon.

Laboratory confirmation of pertussis requires identification of *B. pertussis* in nasopharyngeal specimens by culture or polymerase chain reaction (PCR) methods. Direct fluorescent antibody (DFA) assay of nasopharyngeal secretions has low sensitivity and specificity, and false negatives and false positives occur. Of the 575 cases reported, 282 were tested by both DFA and culture methods. The testing methods agreed a little more than half of the time (52%).

Pertussis – results for samples tested by DFA and culture (N = 282), 2002

	DFA Positive	DFA Negative
Culture Positive	18%	28%
Culture Negative	20%	34%

The number of cases of pertussis in 2002 corresponds to a 27% increase from the average number of cases over the last five years, with a higher proportion of infected adolescents and adults compared to previous years.

PLAGUE

Plague is a bacterial zoonosis caused by *Yersinia pestis.* Plague is established in enzootic foci in small wild mammals in the western US. Transmission to humans occurs by inoculation (e.g., flea or animal bite, handling infected animal tissues) or less commonly by inhalation. There are three clinical plague syndromes: bubonic with fever, headache, nausea, and unilateral lymph node swelling; septicemic, with bacteremia, coagulopathy, and multiorgan system failure; and pneumonic, with pneumonia. Early recognition and appropriate antimicrobial treatment is essential for a good outcome. Plague is a potential agent of bioterrorism, and is immediately notifiable in Washington.

In the early 1900s, plague was probably widespread in rats and their fleas around Washington ports. The last reported human case in Washington occurred in 1984 in an animal trapper in Yakima County. Limited serosurveys of coyotes in Washington indicate that enzootic activity is ongoing at a low level, however, the distribution is unknown.

POLIOMYELITIS

Poliovirus is the infectious agent causing poliomyelitis, a disease characterized by acute flaccid paralysis. The last naturally-acquired case of indigenous (wild-type) polio in the US occurred in 1979, and the last in Washington in 1977. Sporadic cases linked to use of live oral polio vaccine occurred here as recently as 1993. Inactivated, parenteral polio vaccine is now recommended to eliminate vaccine-associated paralytic polio (VAPP). In the US, there have been less than 15 cases/year of polio for the last 20 years; all were VAPP, and none were wild-type polio. Polio is an immediately notifiable condition in Washington. No cases of poliomyelitis were reported in Washington in 2002.

PSITTACOSIS

Psittacosis, caused by the bacterium *Chlamydophila psittaci,* is generally a mild to moderately severe respiratory illness with fever, chills, headache, cough and myalgias. Psittacosis may be serious if untreated, especially among the elderly. C. *psittaci* is carried by a variety of birds kept as pets, livestock, or in zoos or aviaries, and may not necessarily cause illness in these birds. Transmission to humans occurs through inhalation of the organism in dried bird droppings, secretions or dust.

Psittacosis is generally sporadic and the diagnosis may be missed. Outbreaks have occurred affecting households, aviaries, pet shops and other locations housing birds. Reporting individual cases of psittacosis to public health agencies is important for the prevention of additional human cases by the identification of birds carrying *C. psittaci.* No cases of psittacosis were reported in Washington in 2002.

Q FEVER

Infection with the Protobacteria *Coxiella burnetii* results from inhalation of airborne *C. burnetti* in dust contaminated by placental tissues, birth fluids and excreta of infected animals. Reservoirs include sheep, cattle, goats, dogs, cats and some wild animals. The symptoms are nonspecific and may be prolonged: fever, chills, headache, weight loss, and malaise, with or without hepatosplenomegaly. Chronic infection may cause endocarditis and hepatitis. The last case of Q Fever in Washington occurred in 1999, there were no cases reported in 2002.

RABIES

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

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

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

In Washington, bats are the primary source of rabies, which appears to be rare among terrestrial (ground-dwelling) animals. Canine rabies still accounts for the majority of human rabies worldwide. Travelers to rabies-endemic countries should be warned to seek medical care if they are bitten by any mammal, especially a dog. Detailed information about animal rabies in Washington, can be found in Appendix III: Rabies Exposure. An account of rabies occurring in a domestic Washington cat in 2002 is included in Appendix IV: Special Topics.

There have been two cases of human rabies recognized in Washington in the last decade. In 1995, a 4 year-old child died of rabies 4 weeks after a bat was found in her bedroom (MMWR 1995;44:625-7). In 1997, a 64 year-old man was diagnosed with rabies more than 6 weeks post-mortem (MMWR 1997:46:771-2). As with most endemically-acquired rabies in the US, these two Washington residents were infected with a bat variant of rabies virus despite the lack of history of a bat bite in either case.

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 rare diseases associated with emerging infections, travel, or those which are unusual but endemic in Washington. In 2002, there were 3 diseases reported under this category: babesiosis, dengue fever, and Rocky Mountain spotted fever.

Babesiosis is a potentially fatal infection caused by multiple species of the *Babesia* parasite. Babesiosis symptoms include fever, chills, myalgias, fatigue, hemolytic anemia, and renal insufficiency. Babesiosis is most severe in asplenic persons. The parasite is transmitted to humans by the bite of infected *Ixodes* ticks. Ticks are infected with *Babesia* from an animal reservoir (rodents or cattle, depending on the *Babesia* species). In 2002, an 87 year-old, asplenic Kitsap County resident survived an infection with a *Babesia* divergens-like parasite. He reported no travel outside the county for months prior to his illness (see Appendix IV: Special Topics for further description).

Dengue fever is an acute illness caused by a mosquito-borne flavivirus endemic to tropical areas of Asia, Australia, Africa, and Latin America. Dengue is characterized by the acute onset of fever, headache, myalgias, arthralgias, retro-orbital pain, anorexia, gastrointestinal symptoms and rash. Recurrent infection may result in a severe illness, dengue hemorrhagic fever, which causes hemorrhagic phenomena and hypovolemic shock. In 2002, a 32 year-old Washington man developed fatal dengue hemorrhagic fever a week after returning from Mexico.

Rocky Mountain spotted fever (RMSF) is a tick-borne disease caused by *Rickettsia rickettsii*, and is characterized by acute onset of fever, chills, malaise, myalgias, headache, conjunctival injection and a "classic" maculopapular rash that begins on wrists and ankles and spreads to the trunk and face (may be absent in 20% of cases). The disease is carried by *Dermacentor* and *Amblyomma* ticks and is distributed across the US, but is most common in the southeastern and south-central states. In 2002, a Washington resident developed a severe headache, fever, myalgias and malaise four days after removing a tick while camping in Stevens County and was subsequently confirmed to have RMSF.

RELAPSING FEVER

Tick-borne relapsing fever is a bacterial zoonosis caused by several different species of *Borrelia*, a spirochete. The principal vectors are *Ornithodoros* soft ticks which transmit *Borrelia* from wild rodent reservoirs to humans. Soft ticks feed during the night, inflicting a painless and often undetectable bite. Humans are often exposed while camping or staying overnight in rustic cabins. Symptoms include recurrent episodes of high fever (up to 105°F), headache, myalgias, fatigue and drenching sweats. A transient petechial rash may also occur. Periods of fever lasting 2-9 days alternate

with afebrile periods of 2-4 days. There may be up to 8 relapsing episodes. Diagnosis of relapsing fever can be made by identification of *Borrelia* on a peripheral blood smear, and appropriate antimicrobial treatment is curative. Relapsing fever is immediately notifiable in Washington.

In most years, less than 10 cases of tick-borne relapsing fever are reported in Washington residents, and during 2002, 7 cases were reported. The most common exposures include camping or staying in cabins in eastern Washington or out-of-state. Of the 7 cases reported in 2002, 6 had exposure information and only one had an exposure in Washington.

RUBELLA, INCLUDING CONGENITAL

Rubella is a rare, mild, febrile rash illness that is prevented by routine immunization with MMR. It is caused by the rubella virus, which is spread by airborne transmission or respiratory droplets. Symptoms include a generalized maculopapular rash accompanied by slight fever and lymphadenopathy. Adults may have arthralgias or frank arthritis. The most serious complication of rubella occurs during pregnancy when infection may lead to congenital rubella syndrome, resulting in multiple abnormalities of the brain, eye, ear, and internal organs. Most cases of rubella in the US are now reported among young adults who emigrated from areas where rubella is endemic. Rubella is immediately notifiable in Washington.

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

In 2002, two cases of rubella were confirmed in Washington. The unvaccinated index case had traveled to an endemic country and developed rubella after return to the US. The second case was epidemiologically linked to the index case.

SALMONELLOSIS

Salmonellosis is an enteric bacterial infection caused by myriad *Salmonella* species, which can be distinguished by serotype. Salmonellosis is characterized by the acute onset of fever, diarrhea, nausea, and abdominal pain, with or without vomiting. Illness is usually mild to moderately severe, resolving after several days, but may be severe in the very young, elderly, or those with chronic illnesses. *Salmonella* are transmitted by the fecal-oral route, and the bacteria may be shed in the feces of humans and animals for days to months, even years. Animals (especially reptiles, chickens, cattle, dogs, and cats) can carry *Salmonella* chronically and be a source of human infection, but most human salmonellosis results from ingestion of contaminated food. Most outbreaks have resulted from ingestion of inherently contaminated food or food contaminated by infected food handlers. Person-to-person transmission is rare. Salmonellosis is immediately notifiable in Washington.

Figure 28 - Salmonellosis - incidence by county, 2002

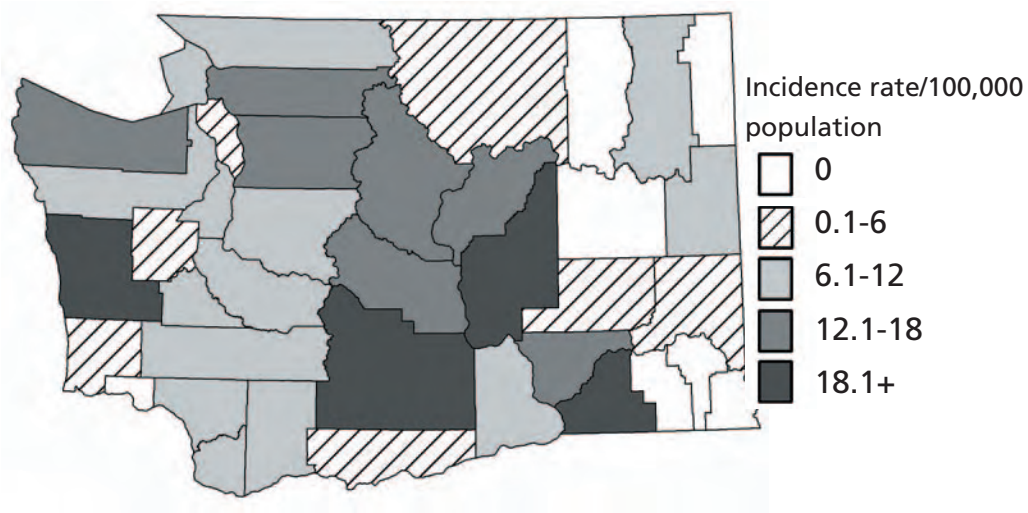
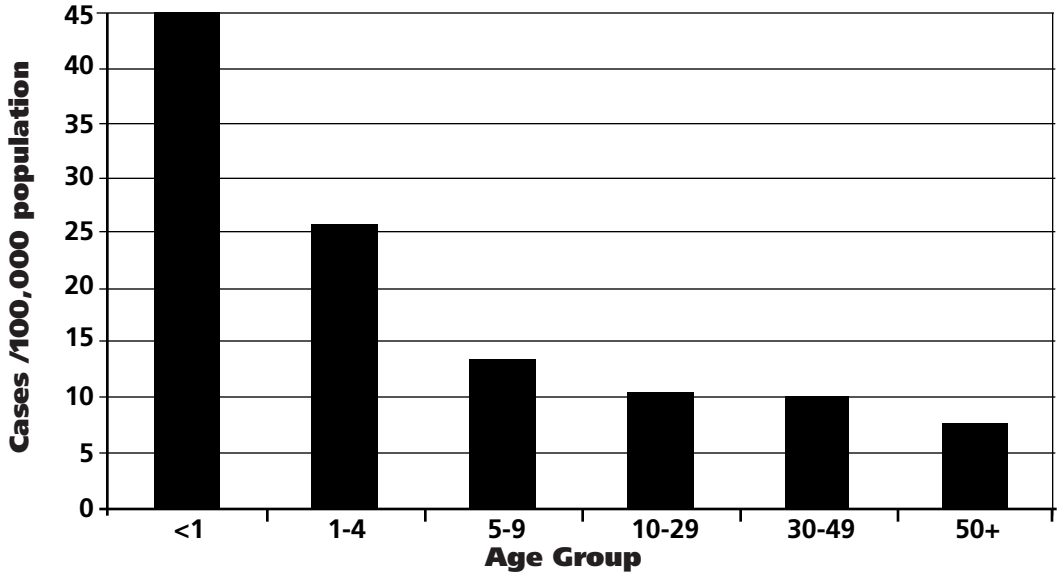
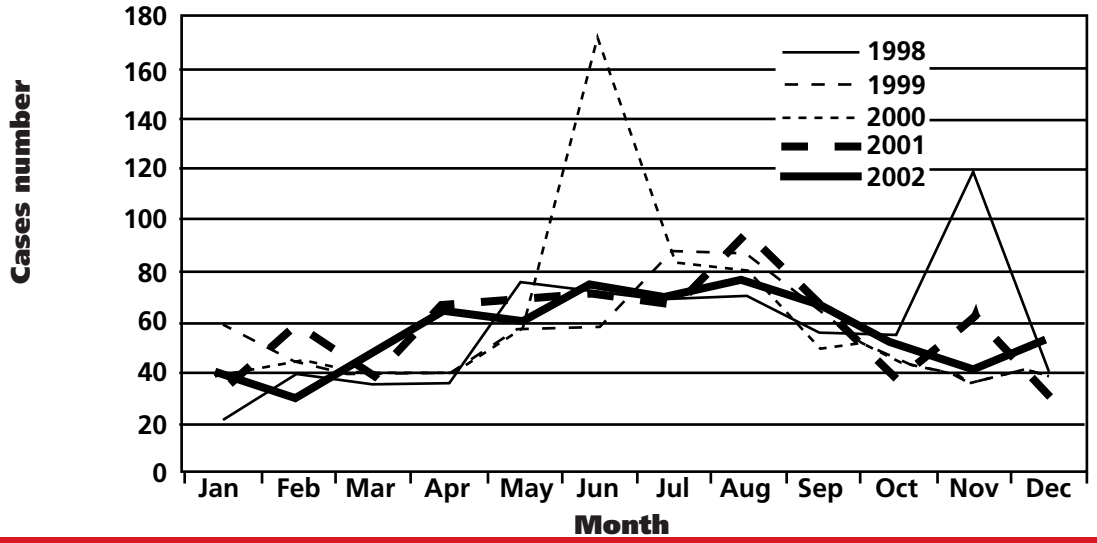


Figure 29 - Salmonellosis - incidence by age group, 2002



Salmonella infections occur year round with a slight increase April through September.

Figure 30. Salmonellosis - reported cases by month of onset, 1998-2002



Submission of *Salmonella* isolates to the PHL for serotyping is required. Serotyping and molecular epidemiologic methods may aid in identifying outbreaks and sources of infection. *S. typhimurium, S. enteritidis, S. newport, S. heidelberg,* and *S. saintpaul* continue to be the five most common serotypes found in Washington, accounting for 55% of all cases of salmonellosis in 2002. Isolates from 38 cases (6%) were unavailable for serotyping.

Serotype	#	%
Typhimurium	123	19
Enteritids	105	16
Newport	50	8
Heidelberg	44	7
Unknown	38	6
Saintpaul	31	5
Berta	30	5
Agona	27	4
Hadar	17	3
Montevideo	16	2
Oranienburg	16	2
Poona	15	2
Infatis	15	2
Brandenburg	14	2
Braenderup	13	2
Thompson	10	2
Muenchen	6	1
Stanley	6	1
4.5.12.1:--	6	1
Panama	5	1
Four cases each:	Bovismorbificans: Paratypi B	
Three cases each:	Derby; Java; Mbandaka; Reading; Urbana; Westhamptom	
Two cases each:	Dublin; Earling; Eastborne; Hvittingfoss; Javiana; Muenster; Schwarzengrun; Virchow; Weltevreden; Worthington	
One case each:	1,4,12:I:--; 18:Z4,Z23; 41:Z4 Z23:--; 48: I:Z; 50:K:Z; 50:K:3,N,X,Z15; Adelaide; Anatum; Apapa; B;4,12:I:--; Clarkamas; Cubana; Daytona; Hartford; Itami; Kiambu; Litchfield; London; Oslo; Paratyphi A; Rubislaw; Sandiego; Senftenberg	

Common exposures for salmonellosis include ingestion of contaminated eggs, raw milk, poultry, meat, produce, and contact with reptiles or other exotic pets. Reported cases in 2002 included 18 food handlers.

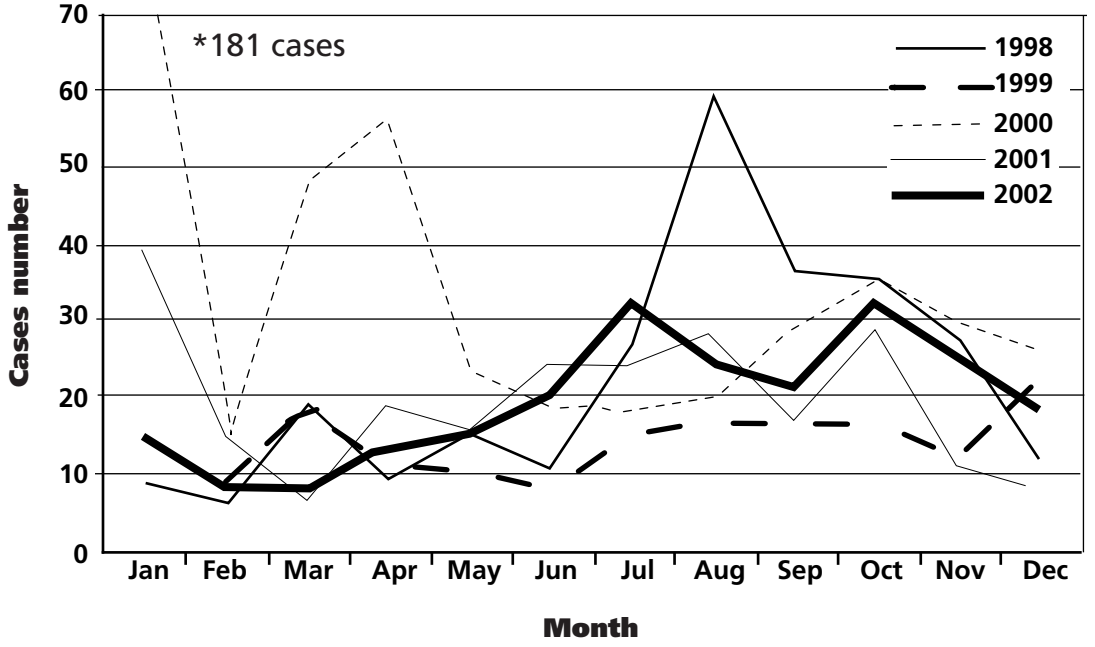
In 2002, several outbreaks of salmonellosis were reported in Washington, including an outbreak of *S. poona* associated with cantaloupe consumption (MMWR 2002; 51(46): 1044-1047), *S. saintpaul* associated with sprout consumption, and *S. agona* associated with goat meat consumption.

SHIGELLOSIS

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

In 2002, there were 230 cases of shigellosis reported in Washington for an incidence of 3.8 cases/100,000 population, essentially unchanged from 2001 (3.9/100,000). Cases occurred most commonly in the summer and fall.

Figure 31 - Shigellosis - reported cases by month of onset, 1998-2002



The age range of cases was several months to 78 years, with 41% occurring among children less than 10 years of age. Age-specific rates of shigellosis were greatest for children 0-4 (13.0/100,000) and 5-9 years of age (10.4/100,000). Fifteen percent of the cases attended child care facilities and 13% had a household contact in child care.

Figure 32 - Shigellosis - Incidence by county, -2002

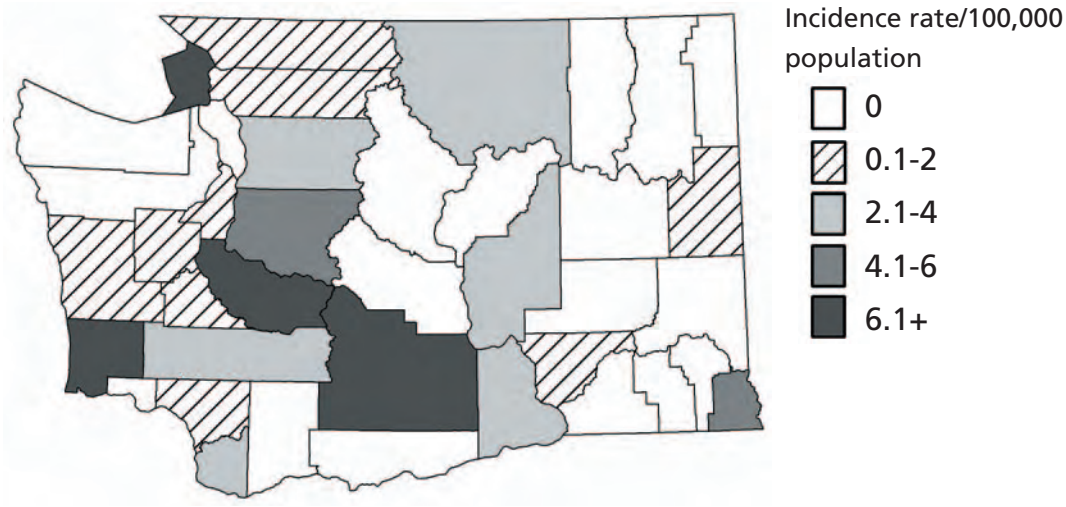
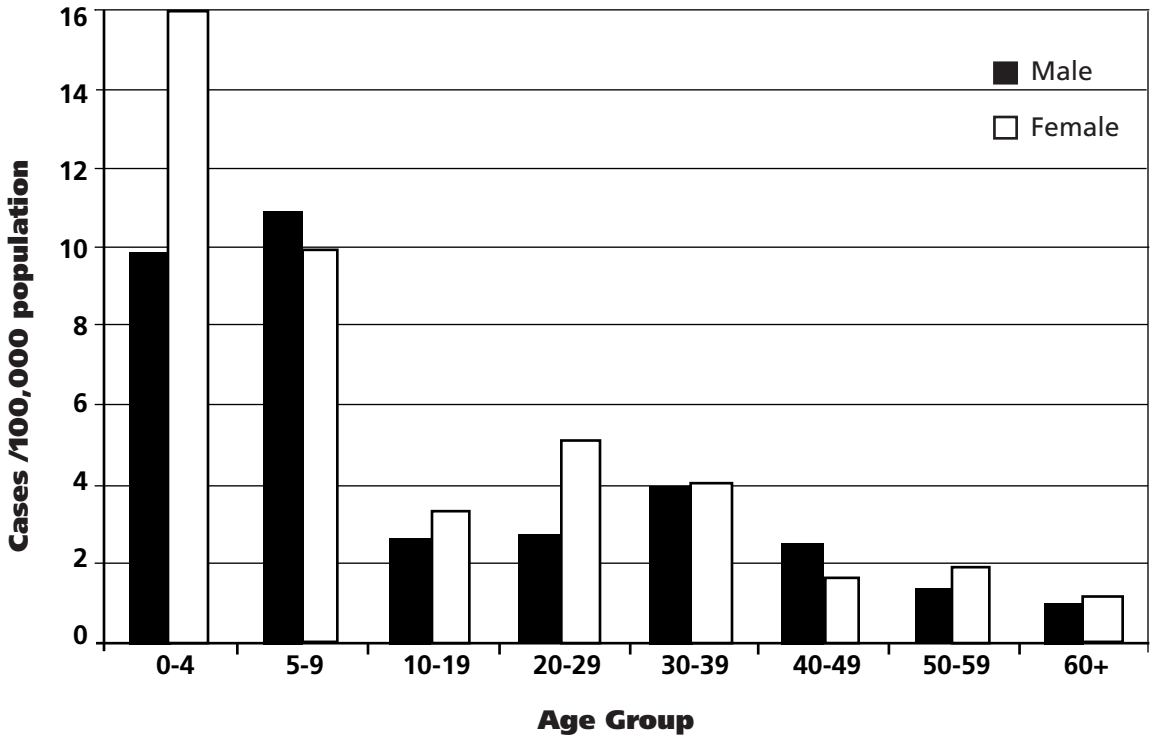


Figure 32 - Shigellosis - Incidence by sex and age group -2002



S. sonnei was the most common species identified, infecting 70% of cases, followed by S. flexneri (28%) and one case each of *S. boydii* and *S. dysenteriae.* There were four isolates that were not speciated.

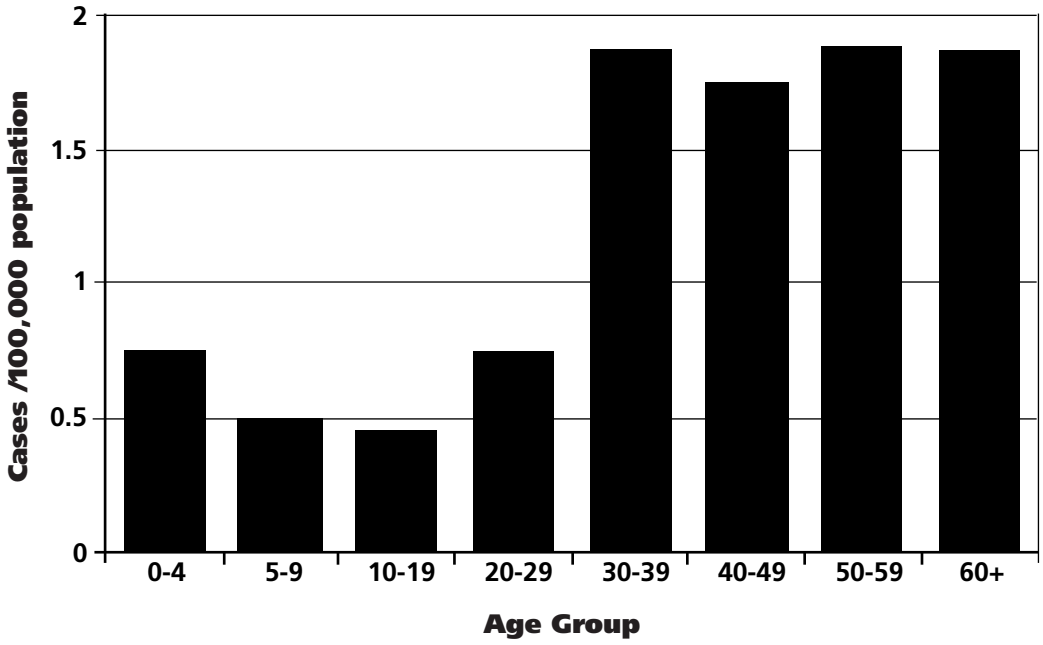
STREPTOCOCCUS GROUP A, INVASIVE DISEASE

Invasive disease cause by group A *Streptococcus* (*Streptococcus pyogenes* or GAS) may include pneumonia, meningitis, septic arthritis, peritonitis, osteomyelitis, post-partum and nosocomial infections, bacteremia, streptococcal toxic shock syndrome (STSS), and deep soft tissue infections (e.g., necrotizing fasciitis). Noninvasive skin and throat infections are less serious and are not reportable to public health agencies. Isolation of GAS by culture from a normally sterile site is required for case confirmation. The overall case-fatality rate for invasive GAS disease is 10-15%.

Invasive GAS infections became notifiable in Washington in 2001. In 2002, there were 80 cases of invasive GAS disease for an incidence of 1.3 cases/100,000 population, compared to an incidence of 1.5/100,000 in 2001. Nine deaths were reported for a case-fatality rate of 11.5% (outcome data was not available for 2 [3%] cases).

There was no significant difference in disease incidence by gender. The median age of cases was 45.5 years (range: 11 months to 88 years of age); the incidence was approximately three times greater in individuals 30 years of age or older compared with those under 30.

Group A *Streptococcus*, invasive disease - Incidence by age group - 2002



There were a variety of GAS clinical syndromes reported, and many patients were classified as having multiple syndromes.

Table 9. Group A *Streptococcus*, invasive disease - clinical syndromes -2002

Syndrome	# cases
Blood Infections	60
Necrotizing fasciitis	18
Pneumonia	12
STSS	10
Septic arthritis	5
Postpartum blood infection	2
Meningitis	1
Osteomyelitis	1
Pentonitis	1

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

SYPHILIS

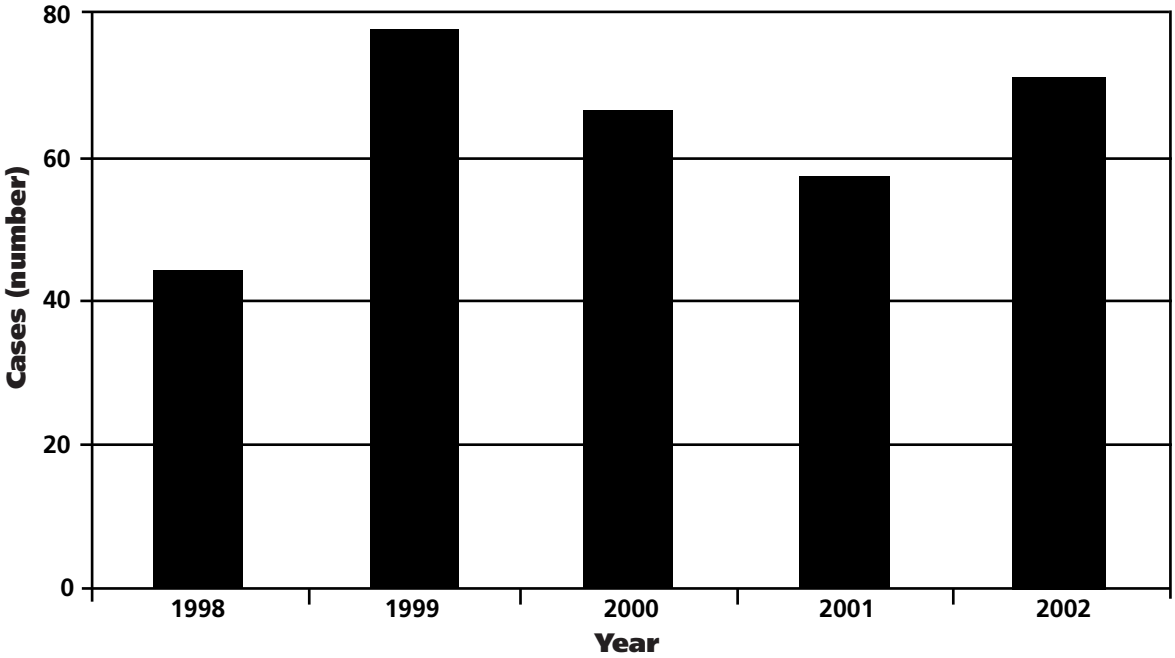
Syphilis is a genital ulcer and systemic disease caused by the spirochete *Treponema pallidum. T. pallidum* is transmitted by direct contact with lesions of primary or secondary syphilis, or by perinatal transmission. Syphilis is divided into four stages - primary, secondary, early latent, and late/late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

Signs and symptoms differ for each stage of syphilis. Primary syphilis may be characterized by a painless ulcer, or chancre, at the site of infection (mouth, genitals, anus). Secondary syphilis, which occurs 3-6 weeks after primary infection, may present with a fever, diffuse rash that involves the palms or soles, myalgias, headache, hair loss, and fatigue. Primary and secondary syphilis resolve with or without treatment, but some untreated infections may progress after many years to 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.

Current recommendations for diagnosis and treatment of syphilis can be found in the CDC's *2002 STD Treatment Guidelines*, available on the CDC website at: www.cdc.gov/STD/treatment/.

The last major syphilis outbreak in Washington occurred in 1989-1990. In 2002, there were 70 primary and secondary (P & S) infections (incidence: 1.2 cases/100,000 population), 23 early latent cases (0.3/100,000), 63 late/late latent cases, and 2 cases of congenital syphilis. Rates by county, age, and race were not calculated due to small numbers of cases.

Syphilis (primary and secondary) - reported cases 1998-2002



Seventy-one percent of the cases of P & S syphilis in 2002 were reported by King county, and many of the other cases in the state may be associated with this ongoing outbreak (occurring almost exclusively among MSM). One-half of the male cases were HIV infected and most were receiving care for HIV at the time of their syphilis infection. Because of this, routine STD screening in primary care settings is recommended.

TETANUS

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

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

Now relatively uncommon in the US, tetanus primarily affects unvaccinated or under-vaccinated persons, usually older adults who have not received recent booster doses of tetanus toxoid. The most recently reported case of tetanus occurred in 2000, and the last death from tetanus occurred in 1983. No cases of tetanus were reported in Washington in 2002.

TRICHINOSIS

Infection with the parasite *Trichinella spiralis* can result from eating raw or insufficiently cooked flesh of animals containing viable encysted larvae. Symptoms range from inapparent infection to a fulminating, fatal disease depending on the number of larvae ingested. Sudden appearance of myalgias with edema of the upper eyelids and fever are early characteristic signs. Wild game from out-of-state is a commonly reported exposure in Washington. The last case of trichinosis in Washington occurred in 2000, and there were no cases reported in 2002.

TUBERCULOSIS

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

M. tuberculosis is transmitted by the airborne droplets from respiratory secretions of infectious persons. Infection results in TB disease or latent TB, and those with latent TB are not infectious. The incubation period is highly variable, and most cases of TB disease are pulmonary, 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, or tuberculin, skin test; diagnosis of TB disease is usually performed by examination of chest radiographs and sputum or tissue stained for acid-fast bacilli, and isolation of *M. tuberculosis* by culture of sputum or other specimens. Tuberculosis disease is immediately notifiable in Washington.

After a decade-long decrease in the number of TB cases reported annually in the US and Washington TB has re-emerged as a serious communicable disease. The number of TB cases in Washington increased 21% from 1987-1991 (255 vs. 309 cases, respectively). Factors contributing to the increase in TB include an increase in immigration from endemic countries, the association of TB with the HIV epidemic, and transmission of TB in congregate settings (e.g., correctional and health care facilities, homeless shelters). From 1991-1994 the number of TB cases decreased 17%. After a period of increased cases (1995-1997) the case count declined 21%.

In 2002, 252 new cases of active TB in Washington were reported to DOH. The statewide TB incidence was 4.17 cases/100,000 population, the lowest incidence ever recorded for Washington.

Twenty-two of thirty-nine counties reported at least one new case of TB. King and Whatcom counties had the highest incidence (8.9/100,000 and 4.0/100,000, respectively).

Age-specific rates of TB were highest among persons 65 years of age and older (7.8/100,000). Persons 5-14 years of age continue to have the lowest incidence, 0.6/100,000.

Table 10. Tuberculosis by age group -2002

Age Group	Rate	# Cases	%
0-4	1.7	7	3
5-14	0.6	6	2
15-24	4.4	38	15
25-44	4.9	89	35
45-64	4.0	59	23
	7.8	53	21
TOTAL	-	252	100

A large proportion of TB cases were reported among certain racial/ethnic groups. The incidence among Asians was more than 26 times higher than among whites and 4 times higher than that of Hispanics. The incidence among African Americans was 24 times higher than that of whites and 4 times higher than that of Hispanics. The incidence among whites remains below the national level (1.0 vs. 5.2, respectively).

Table 11. Tuberculosis by race/ ethnicity -2002

Race/Ethnicity	Rate	# Cases	%
White, Non-Hispanic	10	49	19
Black, Non-Hispanic	24.4	47	19
Hispanic, All races	6.4	33	13
American Indian/Alaskan Native	16.8	15	6
Asian/ Pacific Islander	26.5	103	41
TOTAL	-	247	98

Note: 5 cases with unkown race/ethnicity

Sixty-nine percent (173 cases) of cases of TB occurred among persons born outside the US. Foreign-born persons accounted for 66% (96/145) of male TB cases and 72% (77/107) of female TB cases.

Table 11. Tuberculosis by race/ ethnicity and country of origin -2002

	US		FOREIGN		
Race/Ethnicity	# cases	%	# cases	%	TOTAL
White, Non-Hispanic	33	67	16	33	49
Black, Non-Hispanic	18	38	29	62	47
Hispanic, All races	6	18	27	82	33
American Indian/Alaskan Native	14	93	1	7	15
Asian/ Pacific Islander	5	5	98	95	103
	76	31	171	69	247

Note: 5 cases with unkown race/ethnicity

The number of persons with TB also infected with HIV increased from 10 in 2001 to 13 in 2002.

Resistance to at least one anti-TB drug was found in 40 of 214 (19%) persons from whom M. tuberculosis was isolated and tested for drug susceptibility. Of these forty, four (10%) were from the US and 36 (90%) were foreign-born. There was one multiple-drug resistant (defined as resistance to at least INH and rifampin) isolate of M. tuberculosis identified in 2002.

A description of a tuberculosis outbreak in homeless persons in King county can be found in Appendix IV: Special Topics.

TULAREMIA

Tularemia, also known as rabbit or deerfly fever, is an acute bacterial infection caused by *Francisella tularensis,* which is carried by multiple insects and animals. Infection may develop after ingestion of contaminated food or water, by inoculation (deer fly or tick bite, or while handling or skinning rabbit), or by inhalation of bacteria aerosolized during handling of contaminated animal carcasses. The syndromes of tularemia include fever, malaise and lymphadenopathy (glandular) often accompanied by skin ulcers (ulceroglandular) or eye infection (oculoglandular); and pharyngitis, abdominal pain, and diarrhea (oropharyngeal). Inhalation of the bacteria can cause pneumonia (pneumonic), and any of the forms can result in sepsis (typhoidal). *F. tularensis* is a potential agent of bioterrorism, and is immediately notifiable.

In most years, fewer than 10 cases of tularemia are reported in Washington. During 2002, 3 cases were reported among Washington residents, one exposed to insect bites out-of-state, one lived in a rural area, and one did not provide exposure information.

TYPHUS

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

A seasonal peak occurs in late summer and autumn; cases tend to be scattered geographically, with a high proportion reported from Texas and southern California. Rats, mice, and possibly other small mammals are the reservoir for fleaborne typhus. Typhus is immediately notifiable.

The last reported case of murine typhus in Washington occurred in 1994, and was associated with travel. No cases were reported in 2002.

UNEXPLAINED CRITICAL ILLNESS OR DEATH

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

Six cases of UCID were reported to DOH by five counties in 2002. The average age was 14 years (range: 2-49 years); 5 of the 6 were fatal. The critical illness syndromes reported were: cardiac disease (2), meningoencephalitis (2), shock (1) and death (5). No trends of note were identified.

UCID surveillance also identified several unusual complications of notifiable infectious diseases, including yellow fever vaccine-associated viscerotropic disease (YEL-AVD) and dengue fever (see Rare Diseases of Public Health Significance), both initially reported as UCID in 2002. These cases were reclassified after an etiology was identified and are not included in the 2002 case count.

UCID is still dramatically underreported in Washington, in part due to the complexity of the case definition and a lack of familiarity with reporting requirements. Surveillance for UCID is a valuable tool for identifying unusual disease events, such as the cases of dengue hemorrhagic fever and YEL-AVD. A sudden increase in UCID reports should also raise the index of suspicion of a possible bioterrorism event.

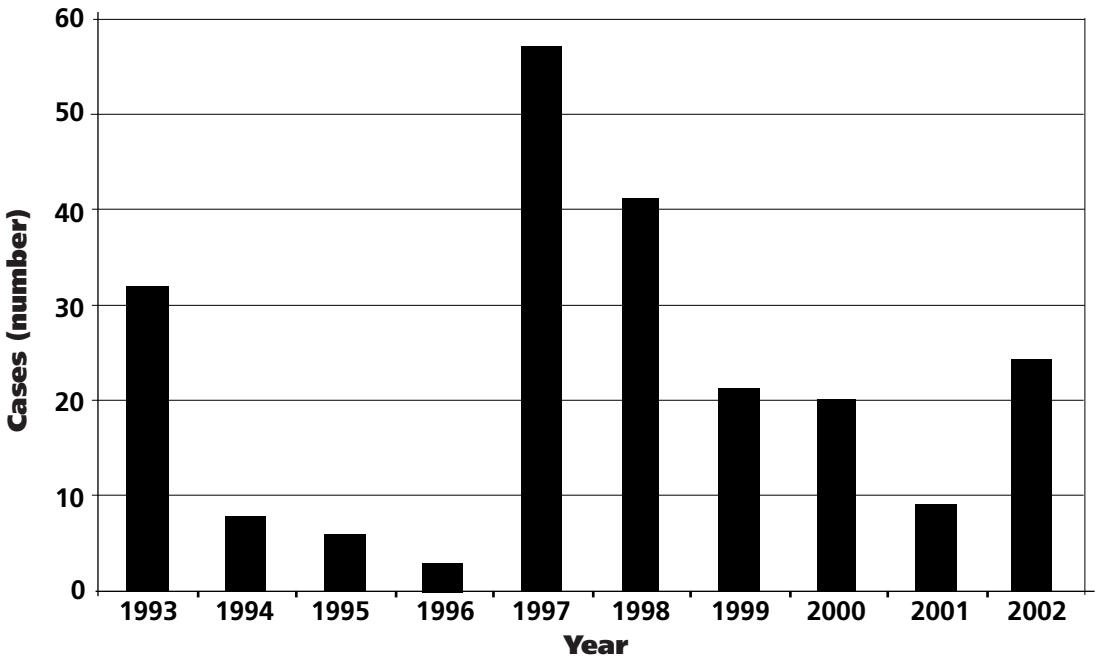
VIBRIOSIS

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

V. parahaemolyticus occurs naturally in Pacific coastal waters, especially in warmer months. Transmission of *Vibrio* usually occurs by ingestion of contaminated raw or undercooked seafood, or through abrasion or penetrating injuries acquired in contaminated seawater. Vibriosis causes abdominal pain, watery diarrhea, vomiting, headache, and fever. *V. vulnificus*, a species that occurs in the Gulf of Mexico, can cause sepsis and shock in persons with immune deficiencies, cancer, or chronic liver, kidney, or intestinal disease. Other *Vibrio* species cause skin or wound infections after exposure to seawater.

The number of cases of vibriosis vary from year to year; the 25 cases reported in 2002 included 16 *V. parahaemolyticus*, 5 non-toxigenic V. cholerae associated with travel to Singapore, the Caribbean, or Mexico; one *V. fluvialis*, and 2 tissue infections due to *V. alginolyticus*, one the result of out-of-state exposure. Of 14 V. *parahaemolyticus* cases with available data, 3 reported consuming shellfish in other Pacific coast states or provinces, and 11 reported consumption of shellfish in Washington. Of the 11 cases with Washington exposure, 6 consumed shellfish in restaurants, 3 were associated with privately harvested shellfish, and 2 with retail shellfish.

Figure 36. Vibriosis - reported cases, 1993-2002



YELLOW FEVER

Yellow fever is caused by the yellow fever virus, which is a flavivirus. Yellow fever is a mosquito-borne infection, and the vector mosquitoes *(Aedes)* occur only in Africa and South America, where both animals and humans serve as a reservoir. Symptoms include the acute onset of fever, rigors, headache, backache, generalized myalgias, prostration, nausea, and vomiting. Hepatic and renal insufficiency may occur, with jaundice and proteinuria. Most infections resolve, but some progress to a hemorrhagic diathesis with hepatic and renal failure, which has a mortality rate of 5-40%. Yellow fever is immediately notifiable in Washington.

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

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

YERSINIOSIS

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

There were 26 cases of yersiniosis reported in Washington in 2002, which is similar to the number of cases reported in previous years. Most cases reported one of the following risk factors: pork consumption, ingestion of, or recreation in untreated water, or contact with animals (e.g., cats, dogs, pigs, goats and horses).

ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

Case, Death Rate per 100,000 Population

	1997		1998		1999		2000		2001		2002	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	1	6.7	0	0.0	0	0.0	2	12.0
Asotin	5	25.4	0	0.0	1	4.9	0	0.0	0	0.0	1	4.8
Benton	13	9.7	4	2.9	2	1.4	5	3.6	4	2.8	4	2.7
Chelan	4	6.4	0	0.0	1	1.6	1	1.6	0	0.0	1	1.5
Clallam	4	6.0	3	4.5	2	3.0	6	8.9	2	3.1	3	4.6
Clark	31	9.8	19	5.8	14	4.2	17	5.0	25	7.1	32	8.8
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	7	7.6	5	5.4	0	0.0	6	6.3	4	4.3	2	2.1
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	1	13.7	0	0.0	0	0.0	1	13.7	1	13.7
Franklin	2	4.6	5	11.3	3	6.7	4	8.8	6	11.9	4	7.8
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	1	1.4	0	0.0	1	1.3	2	2.6
Grays Harbor	2	2.9	1	1.5	2	3.0	4	6.0	4	5.8	1	1.5
Island	4	5.6	2	2.8	2	2.7	1	1.3	2	2.8	2	2.7
Jefferson	0	0.0	2	7.5	1	3.8	2	7.6	0	0.0	1	3.8
King	320	19.4	242	14.5	233	13.7	234	13.7	323	18.4	275	15.5
Kitsap	15	6.5	6	2.6	6	2.3	14	6.0	6	2.6	11	4.7
Kittitas	2	6.3	2	6.4	0	0.0	0	0.0	0	0.0	1	2.9
Klickitat	0	0.0	1	5.2	0	0.0	0	0.0	0	0.0	1	5.2
Lewis	1	1.5	0	0.0	1	1.5	3	4.4	1	1.4	1	1.4
Lincoln	0	0.0	0	0.0	0	0.0	1	10.4	0	0.0	0	0.0
Mason	9	18.8	2	4.1	2	4.2	6	12.4	5	10.1	2	5.0
Okanogan	3	7.8	2	5.2	1	2.7	2	5.3	0	0.0	2	5.0
Pacific	0	0.0	0	0.0	0	0.0	1	4.7	2	9.5	3	14.3
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	67	9.9	53	.7	49	7.0	63	8.9	65	9.1	29	4.0
San Juan	0	0.0	1	7.9	0	0.0	2	15.7	1	6.9	0	0.0
Skagit	2	2.1	0	0.0	2	2.0	1	1.0	3	2.9	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	45	8.2	24	4.2	23	4.0	29	4.9	20	3.2	32	5.1
Spokane	30	7.3	15	3.7	13	3.1	37	8.9	20	4.7	18	4.2
Stevens	3	8.0	1	2.7	0	0.0	3	7.9	1	2.5	2	5.0
Thurson	13	6.6	6	3.0	3	1.5	11	5.4	11	5.2	10	4.7
Wahkiakum	0	0.0	1	25.6	0	0.0	1	25.9	0	0.0	0	0.0
Walla Walla	5	9.3	3	5.5	1	1.8	5	9.1	3	5.4	2	3.6
Whatcom	18	11.5	10	6.3	9	5.7	4	2.5	5	2.9	8	4.6
Whitman	0	0.0	0	0.0	1	2.5	3	7.1	0	0.0	1	2.5
Yakima	13	6.2	13	6.2	3	1.4	12	5.6	9	4.0	3	1.3
STATE WIDE TOTAL												
CASES	618	11.0	424	7.5	377	6.5	478	8.2	524	8.8	457	7.6
DEATHS	215	3.8	147	2.6	93	1.6	73	1.3	55	0.9	34*	0.6

*as of September 1, 2002

BOTULISM

Case, Death Rate per 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

BRUCELLOSIS

Case, Death Rate per 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

CAMPYLOBACTERIOSIS

Case, Death Rate per 100,000 Population

	1997		1998		1999		2000		2001		2002	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	0.0	0	0.0	1	6.1	3	18.1	1	6.0
Asotin	4	20.3	2	0.0	0	0.0	0	0.0	3	14.5	1	4.8
Benton	19	14.2	9	9.4	13	9.4	19	13.3	11	7.6	19	12.9
Chelan	4	6.4	8	9.5	6	9.5	11	16.5	6	8.9	10	14.8
Clallam	4	6.0	7	16.4	11	16.4	3	4.6	7	10.8	4	6.2
Clark	55	17.4	52	14.8	50	14.8	50	14.5	57	16.2	54	14.9
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	18	19.6	16	15.9	15	15.9	12	12.9	13	13.8	11	11.7
Douglas	3	9.7	1	3.2	1	3.2	5	15.3	1	3.0	7	21.1
Ferry	0	0.0	1	13.7	1	13.7	2	27.5	0	0.0	0	0.0
Franklin	4	9.1	7	2.2	1	2.2	4	8.1	6	11.9	4	7.8
Garfield	1	41.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	9	13.2	5	17.0	12	17.0	11	14.7	9	11.9	11	14.4
Grays Harbor	10	14.6	22	20.7	14	20.7	11	16.4	9	13.1	7	10.2
Island	5	1.0	6	10.9	8	10.9	1	1.4	2	2.8	3	4.1
Jefferson	4	15.2	6	11.3	3	11.3	1	3.9	7	26.8	3	11.3
King	316	19.2	219	16.8	281	16.8	331	19.1	320	18.2	295	16.6
Kitsap	44	19.2	34	10.4	24	10.4	18	7.8	26	11.1	11	4.7
Kittitas	2	6.3	5	0.0	0	0.0	4	12.0	7	20.6	3	8.6
Klickitat	2	10.5	0	0.0	0	0.0	2	10.4	8	41.5	2	10.4
Lewis	15	22.0	17	20.3	14	20.3	12	17.5	8	11.5	14	19.9
Lincoln	0	0.0	1	10.0	1	10.0	2	19.6	0	0.0	2	19.6
Mason	10	20.9	6	6.2	3	6.2	7	14.2	12	24.2	5	10.0
Okanogan	7	18.2	10	5.2	2	5.2	5	12.6	7	17.6	3	7.5
Pacific	8	37.6	0	4.7	1	4.7	2	9.5	2	9.5	2	9.5
Pend Oreille	3	26.8	2	36.0	4	36.0	1	8.5	1	8.5	1	8.5
Pierce	79	11.7	58	6.7	47	6.7	60	8.6	53	7.4	44	6.1
San Juan	3	24.0	1	0.0	0	0.0	3	21.3	2	13.9	5	34.2
Skagit	20	20.6	5	10.9	11	10.9	25	24.3	19	18.3	25	23.8
Skamania	0	0.0	1	20.2	2	20.2	0	0.0	2	20.2	0	0.0
Snohomish	113	20.5	108	18.0	105	18.0	107	17.7	108	17.5	105	16.7
Spokane	80	19.5	57	11.8	49	11.8	79	18.9	38	9.0	56	13.2
Stevens	0	0.0	1	2.6	1	2.6	0	0.0	8	19.9	7	17.3
Thurson	43	21.8	35	14.8	30	14.8	40	19.3	31	14.7	27	12.7
Wahkiakum	0	0.0	2	51.3	2	51.3	0	0.0	0	0.0	0	0.0
Walla Walla	10	18.5	6	7.3	4	7.3	5	9.1	12	21.7	140	
Whatcom	66	42.3	58	38.4	62	38.4	51	30.6	59	34.6	46	26.7
Whitman	9	21.8	2	4.8	2	4.8	6	14.7	2	5.0	2	4.9
Yakima	180	86.2	130	80.1	170	80.1	115	51.7	132	58.8	102	45.3

STATE WIDE TOTAL

CASES	1,150	20.5	901	15.8	950	16.5	1.006	17.1	991	16.6	1032	17.1
DEATHS	0	0.0	1	0.0	2	0.0	2	0.0	0	0.0	1	0.0

CHANCROID

Case, Death Rate per 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

CHLAMYDIA TRACHOMIS

Case, Death Rate per 100,000 Population

Counties	1997		1998		1999		2000		2001		2002	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	22	139.2	27	169.8	26	173.2	29	183.9	37	222.9	22	132.5
Asotin	39	198.0	40	200.0	26	128.5	20	98.5	24	115.9	42	202.9
Benton	189	140.9	246	178.9	283	201.2	306	218.0	274	189.2	238	161.2
Chelan	90	144.7	99	158.1	117	185.4	118	186.2	117	174.4	129	190.8
Clallam	54	81.3	75	112.4	85	127.4	79	116.9	92	142.0	157	241.9
Clark	473	149.3	612	186.6	523	158.4	646	188.6	714	202.5	844	232.3
Columbia	4	95.2	1	23.8	2	50.3	4	96.9	1	24.4	3	73.2
Cowlitz	90	97.8	107	114.9	95	101.1	122	128.0	182	193.8	128	135.6
Douglas	36	116.9	46	146.5	49	155.9	52	162.8	53	161.6	60	181.3
Ferry	10	137.1	6	82.2	9	129.3	9	122.9	5	68.5	10	137.0
Franklin	116	264.2	135	304.1	176	390.9	189	416.3	162	321.4	162	315.8
Garfield	2	83.4	9	375.0	0	0.0	1	42.7	0	0.0	1	41.7
Grant	177	259.2	140	201.7	158	228.3	143	202.3	158	208.2	169	221.2
Grays Harbor	109	159.6	144	212.1	116	173.2	111	165.9	87	127.0	108	157.9
Island	63	88.0	117	161.4	100	135.6	116	156.3	107	147.8	223	305.1
Jefferson	16	60.8	15	56.6	35	133.4	32	121.1	23	88.1	32	120.3
King	3,174	192.8	3,486	209.3	3,949	232.6	4,495	263.8	4,295	244.3	4,470	251.9
Kitsap	454	197.9	514	224.5	479	203.7	536	230.5	483	206.9	532	226.7
Kittitas	28	88.6	46	146.5	35	113.7	60	186.0	76	223.5	74	212.6
Klickitat	21	110.5	33	172.8	23	126.3	21	109.5	30	155.4	26	134.7
Lewis	67	98.1	89	129.7	75	111.5	64	92.9	65	93.5	130	185.2
Lincoln	2	20.4	3	30.0	4	46.5	2	20.7	7	68.6	5	49.0
Mason	65	135.7	74	153.2	83	172.6	109	224.6	107	215.7	109	218.9
Okanogan	52	135.4	67	174.5	78	214.1	78	205.4	85	214.1	96	241.2
Pacific	21	98.6	10	46.5	13	63.8	13	60.8	29	138.1	39	185.7
Pend Oreille	3	26.8	5	44.6	10	91.4	6	55.0	4	33.9	9	76.3
Pierce	1,462	216.8	1,769	257.6	2,074	294.8	2,073	292.2	2,336	327.4	2,733	377.0
San Juan	11	87.9	10	79.4	14	110.0	14	109.8	15	104.2	14	95.9
Skagit	123	126.9	151	153.0	206	207.5	180	178.2	201	193.1	229	217.9
Skamania	14	141.4	5	50.5	9	94.0	5	50.4	6	60.6	11	111.1
Snohomish	726	131.7	888	156.3	991	171.2	1,115	188.3	1349	218.1	1,295	206.2
Spokane	286	143.0	622	151.4	660	158.8	688	165.7	736	174.2	905	212.6
Stevens	41	109.6	29	77.1	27	74.6	31	81.9	40	99.3	33	81.7
Thurson	262	132.6	322	161.2	316	154.1	401	195.4	430	204.6	440	207.3
Wahkiakum	1	25.7	3	76.9	4	109.2	4	103.5	2	52.6	3	78.9
Walla Walla	103	190.7	137	250.9	109	200.3	84	153.1	96	173.9	115	207.6
Whatcom	237	151.7	259	164.4	282	17.1	238	146.5	254	148.9	367	213.1
Whitman	53	128.6	54	130.4	55	137.0	64	152.3	74	183.6	87	214.3
Yakima	527	252.5	603	286.5	668	315.1	808	377.5	875	389.8	886	393.8
STATE WIDE TOTAL												
CASES	9,523	169.8	10,998	193.4	11,964	207.7	13,066	224.5	13,631	228.1	14,936	247.2
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

CHOLERA

Case, Death Rate per 100,000 Population

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

*CRYPTOSPORIDIOSIS**

Case, Death Rate per 100,000 Population

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

STATE WIDE TOTAL

CASES	73	1.2	62	1.0
DEATHS	0	0.0	0	0.0

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

*CYCLOSPORIASIS**

Case, Death Rate per 100,000 Population

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

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

DIPTHERIA

Case, Death Rate per 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

E.COLI 0157:H7

Case, Death Rate per 100,000 Population

	1997		1998		1999		2000		2001		2002	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	6.3	1	6.3	0	0.0	1	6.0	0	0.0
Asotin	0	0.0	2	0.0	1	5.0	0	0.0	0	0.0	0	0.0
Benton	3	2.2	20	14.5	3	2.2	5	3.5	4	2.8	3	2.0
Chelan	2	3.2	2	3.2	0	0.0	3	4.5	2	3.0	0	0.0
Clallam	1	1.5	1	1.5	0	0.0	2	3.1	0	0.0	2	3.1
Clark	12	3.8	7	2.1	50	14.8	20	5.8	8	2.3	15	4.1
Columbia	0	0.0	0	0.0	0	0.0	1	24.6	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	0	0.0	1	1.1	1	1.1	1	1.1
Douglas	1	3.2	0	0.0	0	0.0	0	0.0	0	0.0	1	3.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	1	2.2	1	2.0	0	0.0	2	3.9
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	3	4.4	2	2.9	0	0.0	2	2.7	2	2.6	1	1.3
Grays Harbor	0	0.0	0	0.0	0	0.0	3	4.5	3	4.4	0	0.0
Island	0	0.0	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	1	3.8
King	51	3.1	36	2.2	47	2.8	67	3.9	36	2.0	32	1.8
Kitsap	6	2.6	4	1.7	2	0.9	7	3.0	6	2.6	5	2.1
Kittitas	0	0.0	1	3.2	0	0.0	1	3.0	5	14.7	3	8.6
Klickitat	1	5.3	1	5.2	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	2	2.9	4	5.8	1	1.4	0	0.0	2	2.9	2	2.8
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	1	2.1	0	0.0	0	0.0	3	6.1	0	0.0	0	0.0
Okanogan	2	5.2	0	0.0	1	2.6	2	5.1	1	2.5	1	2.5
Pacific	1	4.7	0	0.0	0	0.0	1	4.8	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	8.5
Pierce	11	1.6	13	1.9	16	2.3	21	3.0	15	2.1	11	1.5
San Juan	0	0.0	1	7.9	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	1	1.0	3	3.0	5	5.0	4	3.9	3	2.9	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	14	2.5	10	1.8	11	1.9	29	4.8	20	3.2	11	1.8
Spokane	10	2.4	13	3.2	16	3.9	22	5.3	11	2.6	43	10.1
Stevens	0	0.0	1	2.7	1	2.6	0	0.0	0	0.0	0	0.0
Thurson	5	2.5	6	3.0	2	1.0	14	6.8	7	3.3	1	0.5
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	1	1.9	0	0.0	2	3.7	3	5.4	7	12.7	3	5.4
Whatcom	9	5.8	12	7.6	20	12.4	19	11.4	9	5.3	15	8.7
Whitman	3	7.3	0	0.0	2	4.8	0	0.0	0	0.0	2	4.9
Yakima	9	4.3	6	2.9	4	1.9	6	2.7	7	3.1	10	4.4
STATE WIDE TOTAL												
CASES	149	2.7	144	2.5	186	3.2	237	4.0	150	2.5	166	2.7
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

ENCEPHALITIS, VIRAL

Case, Death Rate per 100,000 Population

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

GIARDIASIS

Case, Death Rate per 100,000 Population

Counties	1997		1998		1999		2000		2001		2002	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	3	18.9	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	4	20.3	3	15.0	5	25.0	0	0.0	0	0.0	0	0.0
Benton	7	5.2	10	7.3	13	9.4	10	7.0	6	4.1	7	4.7
Chelan	1	1.6	10	16.0	5	7.9	4	6.0	6	8.9	3	4.4
Clallam	9	13.6	5	7.5	2	3.0	5	7.7	3	4.6	9	13.9
Clark	76	24.0	58	17.7	54	16.0	45	13.0	37	10.5	26	7.2
Columbia	0	0.0	0	0.0	0	0.0	1	24.6	0	0.0	0	0.0
Cowlitz	20	21.7	10	10.7	14	14.9	11	11.8	8	8.5	8	8.5
Douglas	0	0.0	2	6.4	1	3.2	0	0.0	2	6.1	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	4	9.7	3	6.8	3	6.7	2	4.1	4	7.9	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	1.5	6	8.6	8	11.3	6	8.0	4	5.3	2	2.6
Grays Harbor	7	10.2	1	1.5	3	4.4	1	1.5	0	0.0	3	4.4
Island	5	7.0	1	1.4	1	1.4	7	9.8	1	1.4	6	8.2
Jefferson	3	11.4	4	15.1	7	26.3	9	34.7	5	19.2	0	0.0
King	243	14.8	240	14.4	175	10.4	222	12.8	140	8.0	166	9.4
Kitsap	37	16.1	24	10.5	24	10.4	15	6.5	16	6.9	16	6.8
Kittitas	1	3.2	11	35.0	8	24.7	1	3.0	5	14.7	0	0.0
Klickitat	4	21.1	2	10.5	3	15.5	2	10.4	1	5.2	2	10.4
Lewis	2	2.9	6	8.7	5	7.2	8	11.7	5	7.2	5	7.1
Lincoln	0	0.0	1	10.0	0	0.0	1	9.8	0	0.0	1	9.8
Mason	7	14.6	3	6.2	5	10.3	3	6.1	11	22.2	2	4.0
Okanogan	9	23.4	3	7.8	0	0.0	0	0.0	4	10.1	4	10.1
Pacific	6	28.2	1	4.7	2	9.3	0	0.0	1	4.8	1	4.8
Pend Oreille	2	17.	0	0.0	0	0.0	0	0.0	1	8.5	3	25.4
Pierce	58	8.6	68	9.9	37	5.3	45	6.4	40	5.6	39	5.4
San Juan	0	0.0	1	7.9	0	0.0	2	14.2	0	0.0	3	20.5
Skagit	3	3.1	15	15.2	7	7.0	4	3.9	5	4.8	11	10.5
Skamania	0	0.0	1	10.1	2	20.2	1	10.1	2	20.2	2	20.2
Snohomish	81	14.7	78	13.7	49	8.4	79	13.0	63	10.2	60	9.6
Spokane	21	5.1	35	8.5	24	5.8	42	10.0	49	11.6	47	11.0
Stevens	1	2.7	0	0.0	0	0.0	2	5.0	0	0.0	7	17.3
Thurson	15	7.6	12	6.0	14	6.9	15	7.2	19	9.0	21	9.9
Wahkiakum	1	25.6	1	25.6	0	0.0	0	0.0	1	26.3	0	0.0
Walla Walla	4	7.4	7	12.8	7	12.8	4	7.2	7	12.7	5	9.0
Whatcom	25	16.0	38	24.1	31	19.2	19	11.4	16	9.4	18	10.5
Whitman	5	12.1	6	14.5	3	7.2	2	4.9	4	9.9	1	2.5
Yakima	76	36.4	71	33.7	48	22.6	54	24.3	46	20.5	32	14.2
STATE WIDE TOTAL												
CASES	738	13.2	740	13.0	560	9.7	622	10.6	512	8.6	510	8.4
DEATHS	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0

GONORRHEA

Case, Death Rate per 100,000 Population

Counties	1997		1998		1999		2000		2001		2002	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	2	12.7	1	6.3	1	6.7	2	12.7	2	12.0	0	0.0
Asotin	1	5.1	0	0.0	0	0.0	0	0.0	1	4.8	1	4.8
Benton	9	6.7	6	4.4	13	9.2	6	4.3	11	7.6	11	7.5
Chelan	2	3.2	8	12.8	4	6.3	6	9.5	4	2.8	3	4.4
Clallam	8	12.0	3	4.5	3	4.5	7	10.4	6	9.3	2	3.1
Clark	45	14.2	71	21.6	87	26.3	86	25.1	100	28.4	138	38.0
Columbia	0	0.0	1	23.8	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	2	2.2	2	2.1	12	12.8	9	9.4	10	10.6	13	13.8
Douglas	1	3.2	0	0.0	2	6.4	4	12.5	1	3.0	3	9.1
Ferry	0	0.0	0	0.0	0	0.0	2	27.3	1	13.7	0	0.0
Franklin	12	27.3	6	13.5	6	13.3	1	2.2	14	27.8	4	7.8
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	12	17.6	3	4.3	9	13.0	7	9.9	15	19.8	4	5.2
Grays Harbor	12	17.6	3	4.4	3	4.5	2	3.0	5	7.3	12	17.5
Island	3	4.2	21	29.0	8	10.8	11	14.8	10	13.8	15	20.5
Jefferson	2	7.6	2	7.5	1	3.8	0	0.0	1	3.8	2	7.5
King	918	55.8	975	58.5	922	54.3	1,222	71.7	1,555	88.4	1462	82.4
Kitsap	70	30.5	72	31.4	72	30.6	133	57.2	127	54.4	81	34.5
Kittitas	1	3.2	0	0.0	2	6.5	2	6.2	1	2.9	2	5.7
Klickitat	0	0.0	0	0.0	1	5.5	0	0.0	1	5.2	2	10.4
Lewis	8	11.7	9	13.1	6	8.9	6	8.7	4	5.8	13	18.5
Lincoln	0	0.0	0	0.0	0	0.0	1	10.4	1	9.8	0	0.0
Mason	4	8.4	5	10.4	11	22.9	8	16.5	10	20.2	6	12.0
Okanogan	5	13.0	10	26.0	5	13.7	2	5.3	1	2.5	4	10.1
Pacific	5	23.5	3	14.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	2	17.9	0	0.0	0	0.0	2	16.9	0	0.0
Pierce	480	71.2	404	58.8	628	89.3	536	75.6	660	92.5	636	87.7
San Juan	0	0.0	1	7.9	0	0.0	0	0.0	0	0.0	1	6.8
Skagit	9	9.3	20	20.3	12	12.1	6	5.9	13	12.5	17	16.2
Skamania	0	0.0	0	0.0	0	0.0	1	10.1	0	0.0	1	10.1
Snohomish	117	21.2	150	26.4	91	15.7	108	18.2	189	30.6	190	30.3
Spokane	145	35.4	89	21.7	114	27.4	108	26.0	102	24.1	124	29.1
Stevens	7	18.7	0	0.0	4	11.0	1	2.6	4	9.9	2	5.0
Thurson	24	12.1	28	14.0	37	18.0	33	16.1	33	15.7	52	24.5
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	26.3
Walla Walla	7	13.0	5	9.2	0	0.0	1	1.8	3	5.4	3	5.4
Whatcom	12	7.7	12	7.6	20	12.6	12	7.4	23	13.5	53	30.8
Whitman	4	9.7	6	14.5	3	7.5	4	9.5	7	17.4	6	14.8
Yakima	28	13.4	30	14.3	55	25.9	92	43.0	74	33.0	61	27.1
STATE WIDE TOTAL												
CASES	1.955	34.9	1,948	34.3	2,132	37.0	2,419	41.6	2,991	50.1	2,925	48.8
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

GRANULOMA INGUINALE

Case, Death Rate per 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

*HANTAVIRUS PULMONARY SYNDROME**

Case, Death Rate per 100,000 Population

Year	Cases	Rate	Deaths	Rate
2001	1	0.0	0	0.0
2002	1	0.0	0	0.0

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

HEPATITIS A

Case, Death Rate per 100,000 Population

Counties	1997		1998		1999		2000		2001		2002	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	3	19.0	2	12.6	1	6.3	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	2	10.0	0	0.0	1	4.9	0	0.0	0	0.0
Benton	7	5.2	10	7.3	2	1.4	3	2.1	6	4.1	1	0.7
Chelan	7	11.3	2	3.2	3	4.8	8	12.0	5	7.5	1	1.5
Clallam	3	4.5	2	3.0	1	1.5	0	0.0	3	4.6	1	1.5
Clark	19	6.0	66	20.1	59	17.5	26	7.5	10	2.8	13	3.6
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	6	6.5	27	29.0	19	20.2	8	8.6	4	4.3	2	2.1
Douglas	11	35.7	1	3.2	1	3.2	4	12.3	1	3.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	3	6.8	2	4.5	0	0.0	5	10.1	0	0.0	1	1.9
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	1	41.7	0	0.0
Grant	16	23.4	8	11.5	8	11.3	15	20.1	2	2.6	1	1.3
Grays Harbor	2	2.9	5	7.4	1	1.5	2	3.0	1	1.5	1	1.5
Island	2	2.8	3	4.1	2	2.7	1	1.4	1	1.4	4	5.5
Jefferson	2	7.6	4	15.1	0	0.0	5	19.3	0	0.0	0	0.0
King	435	26.4	377	22.6	222	13.2	98	5.6	31	1.8	30	1.7
Kitsap	38	16.6	10	4.4	7	3.0	4	1.7	7	3.0	5	2.1
Kittitas	4	12.7	4	12.7	0	0.0	0	0.0	0	0.0	2	5.7
Klickitat	2	10.5	0	0.0	1	5.2	1	5.2	0	0.0	0	0.0
Lewis	1	1.5	0	0.0	2	2.9	1	1.5	0	0.0	4	5.7
Lincoln	1	10.2	2	20.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	5	10.4	1	2.1	1	2.1	2	4.0	1	2.0	2	4.0
Okanogan	2	5.2	3	7.8	0	0.0	5	12.6	0	0.0	0	0.0
Pacific	2	9.4	4	18.6	1	4.7	0	0.0	1	4.8	0	0.0
Pend Oreille	0	0.0	1	8.9	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	54	8.0	42	6.1	21	3.0	10	1.4	55	7.7	61	8.4
San Juan	2	16.0	2	15.9	0	0.0	7	49.7	0	0.0	1	6.8
Skagit	24	24.8	13	13.2	2	2.0	10	9.7	8	7.7	3	2.9
Skamania	0	0.0	1	10.1	3	30.3	0	0.0	0	0.0	0	0.0
Snohomish	35	6.3	39	6.9	95	16.3	23	3.8	8	1.3	14	2.2
Spokane	195	47.6	347	84.4	18	4.3	11	2.6	3	0.7	4	0.9
Stevens	2	5.3	5	13.3	3	7.9	0	0.0	0	0.0	0	0.0
Thurson	30	15.2	21	10.5	10	4.9	14	6.8	13	6.2	6	2.8
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	9	16.7	2	3.7	0	0.0	9	16.3	1	1.8	0	0.0
Whatcom	31	19.8	9	5.7	13	8.1	3	1.8	4	2.3	2	1.2
Whitman	10	24.3	9	21.7	1	2.4	2	4.9	1	2.5	0	0.0
Yakima	56	26.8	11	5.2	8	3.8	20	9.0	17	7.6	3	1.3

STATE WIDE TOTAL

CASES	1,019	18.2	1,037	18.2	505	8.8	298	5.1	184	3.1	162	2.7
DEATHS	1	0.0	2	0.0	1	0.0	1	0.0	0	0.0	0	0.0

HEPATITIS B

Case, Death Rate per 100,000 Population

Counties	1997		1998		1999		2000		2001		2002	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	1	6.3	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	0	0.0
Benton	5	3.7	5	3.6	6	4.3	0	0.0	1	0.7	0	0.0
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	1	1.5	0	0.0
Clallam	2	3.0	1	1.5	0	0.0	0	0.0	2	3.1	0	0.0
Clark	11	3.5	18	5.5	10	3.0	4	1.2	9	2.6	2	0.6
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	5	5.4	4	4.3	4	4.3	5	5.4	22	23.4	11	11.7
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	1	2.3	2	4.5	2	4.4	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	0	0.0	0	0.0	1	1.4	2	2.7	1	1.3	0	0.0
Grays Harbor	4	5.9	2	2.9	0	0.0	1	1.5	0	0.0	0	0.0
Island	0	0.0	1	1.4	0	0.0	1	1.4	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	35	2.1	48	2.9	46	2.7	44	2.5	35	2.0	30	1.7
Kitsap	3	1.3	3	1.3	4	1.7	0	0.0	4	1.7	0	0.0
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	1	5.2	0	0.0	0	0.0	2	10.4	0	0.0
Lewis	1	1.5	2	2.9	1	1.4	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	0	0.0
Mason	5	10.4	2	4.1	1	2.1	2	4.0	1	2.0	2	4.0
Okanogan	2	5.2	0	0.0	1	2.6	0	0.0	1	2.5	0	0.0
Pacific	1	4.7	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	0	0.0
Pierce	15	2.2	11	1.6	7	1.0	26	3.7	7	1.0	5	0.7
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	5	5.2	2	2.0	2	2.0	1	1.0	4	3.8	3	2.9
Skamania	0	0.0	0	0.0	0	0.0	1	10.1	0	0.0	0	0.0
Snohomish	7	1.3	15	2.6	8	1.4	6	1.0	13	2.1	5	0.8
Spokane	2	0.5	7	1.7	5	1.2	22	5.3	33	7.8	15	3.5
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurson	1	0.5	0	0.0	2	1.0	6	2.9	2	1.0	2	0.9
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	3	5.5	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	3	1.9	0	0.0	4	2.5	5	3.0	30	17.6	7	4.1
Whitman	0	0.0	0	0.0	0	0.0	1	2.5	1	2.5	0	0.0
Yakima	6	2.9	9	4.3	6	2.8	5	2.2	2	0.9	1	0.4
STATE WIDE TOTAL												
CASES	114	2.0	136	2.4	111	1.9	132	2.2	171	2.9	83	1.4
DEATHS	2	0.0	0	0.0	1	0.0	5	0.1	0	0.0	0	0.0

HEPATITIS C

Case, Death Rate per 100,000 Population

Counties	1997		1998		1999		2000		2001		2002	
	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	1	6.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	0	0.0	0	0.0	0	0.0	1	0.7	0	0.0
Chelan	1	1.6	2	3.2	0	0.0	0	0.0	0	0.0	0	0.0
Clallam	1	1.5	0	0.0	1	1.5	0	0.0	0	0.0	0	0.0
Clark	8	2.5	6	1.8	2	0.6	6	1.7	1	0.3	0	0.0
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	2	2.2	2	2.1	4	4.3	4	4.3	2	2.1	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	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	0	0.0
Garfield	0	0.0	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	0	0.0
Grays Harbor	0	0.0	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	0	0.0
Jefferson	1	3.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	8	0.5	7	0.4	7	0.4	12	0.7	10	0.6	8	0.5
Kitsap	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Kittitas	2	6.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	1	5.2	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	1	1.5	2	2.9	1	1.5	1	1.4	2	2.8
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	1	2.1	0	0.0	0	0.0	2	4.0	0	0.0	0	0.0
Okanogan	1	2.6	0	0.0	1	2.6	0	0.0	0	0.0	0	0.0
Pacific	1	4.7	1	4.7	0	0.0	0	0.0	0	0.0	2	9.5
Pend Oreille	0	0.0	1	8.9	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	4	0.6	1	0.1	0	0.0	5	0.7	2	0.3	5	0.7
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	1	1.0	0	0.0	0	0.0	0	0.0	1	1.0	1	1.0
Skamania	0	0.0	1	10.1	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	9	1.6	4	0.7	2	0.3	1	0.2	2	0.3	1	0.2
Spokane	0	0.0	0	0.0	0	0.0	5	1.2	9	2.1	3	0.7
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurson	1	0.5	0	0.0	2	1.0	2	1.0	0	0.0	1	0.5
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	1	1.8	0	0.0	0	0.0	0	0.0
Whatcom	1	0.6	0	0.0	1	0.6	1	0.6	0	0.0	0	0.0
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	0	0.0	2	1.0	1	0.5	5	2.2	2	0.9	3	1.3

STATE WIDE TOTAL

CASES	42	0.7	29	0.5	24	0.4	44	0.7	31	0.5	27	0.4
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

HERPES SIMPLEX

Case, Death Rate per 100,000 Population

Counties	1997		1998		1999		2000		2001		2002	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	3	19.0	10	62.9	3	20.0	2	12.7	11	66.3	6	36.1
Asotin	20	101.5	16	80.0	18	89.0	6	29.5	11	53.1	11	53.1
Benton	39	29.1	32	23.3	50	35.5	42	29.9	41	28.3	34	23.0
Chelan	19	30.5	15	24.0	23	36.4	13	20.5	22	32.8	15	22.2
Clallam	25	37.7	27	40.5	28	42.0	35	51.8	27	41.7	30	46.2
Clark	57	18.0	42	12.8	64	19.4	68	19.8	51	14.5	56	15.4
Columbia	0	0.0	1	23.8	0	0.0	0	0.0	1	24.4	0	0.0
Cowlitz	5	5.4	7	7.5	8	8.5	16	16.8	16	17.0	15	15.9
Douglas	8	26.0	8	25.5	6	19.1	13	40.7	14	42.7	6	18.1
Ferry	1	13.7	0	0.0	0	0.0	2	27.3	2	27.4	0	0.0
Franklin	13	29.6	9	20.3	10	22.2	18	39.6	17	33.7	10	19.5
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	11	16.1	11	15.9	10	14.4	12	17.0	15	19.8	13	17.0
Grays Harbor	21	30.7	23	33.9	17	25.4	14	20.9	8	11.7	16	23.4
Island	14	19.6	29	40.0	24	32.5	19	25.6	16	22.1	22	30.1
Jefferson	6	22.8	8	30.2	3	11.4	0	0.0	9	34.5	7	26.3
King	692	42.0	651	39.1	664	39.1	745	43.7	672	38.2	650	36.6
Kitsap	80	34.9	63	27.5	89	37.8	83	35.7	59	25.3	80	34.1
Kittitas	11	34.9	12	38.2	14	45.5	9	27.9	12	35.3	12	34.5
Klickitat	0	0.0	4	20.9	0	0.0	2	10.4	1	5.2	5	25.9
Lewis	10	14.6	18	26.2	16	23.8	7	10.2	7	10.1	23	32.8
Lincoln	1	10.2	0	0.0	1	11.6	3	31.1	0	0.0	0	0.0
Mason	16	33.4	13	26.9	13	27.0	17	35.0	11	22.2	14	28.1
Okanogan	6	15.6	13	33.9	7	19.2	8	21.1	8	20.2	4	10.1
Pacific	1	4.7	0	0.0	7	34.3	0	0.0	3	14.3	4	19.0
Pend Oreille	4	35.7	1	8.9	3	27.4	1	9.2	2	16.9	4	33.9
Pierce	218	32.3	207	30.1	268	38.1	240	33.8	186	26.1	221	30.5
San Juan	3	24.0	2	15.9	4	31.4	5	39.2	1	6.9	5	34.2
Skagit	24	24.8	26	26.3	28	28.2	21	20.8	27	25.9	35	33.3
Skamania	0	0.0	1	10.1	1	10.4	2	20.1	0	0.0	0	0.0
Snohomish	303	55.0	245	43.1	256	44.2	246	41.5	244	39.4	268	32.7
Spokane	80	19.5	68	16.	90	21.6	94	22.6	123	29.1	147	34.5
Stevens	9	24.1	8	21.3	4	11.0	3	7.9	6	14.9	2	5.0
Thurson	65	32.9	55	27.5	51	24.9	61	29.7	38	18.1	55	25.9
Wahkiakum	0	0.0	1	25.6	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	13	24.1	22	40.3	15	27.6	23	41.9	12	21.7	9	16.2
Whatcom	67	42.9	72	45.7	63	39.6	59	36.3	37	21.7	55	31.9
Whitman	5	12.1	10	24.2	5	12.5	8	19.0	5	12.4	4	9.9
Yakima	87	41.7	81	38.5	89	42.0	113	52.8	121	53.9	76	33.8

STATE WIDE TOTAL

CASES	1,937	34.5	1,811	31.9	1,952	33.9	2,010	34.5	1,836	30.7	1,914	31.7
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0

HAEMOPHILUS INFLUENZAE INVASIVE DISEASE

Case, Death Rate per 100,000 Population

	1997		1998		1999		2000		2001		2002	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	0	0.0	0	0.0	1	6.1	0	0.0	0	0.0
Asotin	0	0.0	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	2	1.4	0	0.0	0	0.0
Chelan	0	0.0	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	0	0.0
Clark	0	0.0	0	0.0	0	0.0	0	0.0	2	0.6	1	0.3
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	1	1.1	0	0.0	1	1.1	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	1	2.3	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	0	0.0
Grant	0	0.0	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	0	0.0
Island	0	0.0	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	0	0.0
King	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
Kitsap	0	0.0	0	0.0	1	0.4	0	0.0	1	0.4	0	0.0
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0	1	5.2	0	0.0	0	0.0
Lewis	0	0.0	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	0	0.0
Mason	0	0.0	0	0.0	1	2.1	0	0.0	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	1	2.5	0	0.0
Pacific	0	0.0	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	0	0.0
Pierce	0	0.0	0	0.0	0	0.0	2	0.3	0	0.0	0	0.0
San Juan	0	0.0	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	0.0	0	0.0	1	1.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	1	0.2	0	0.0	1	0.2	0	0.0	0	0.0	1	0.2
Spokane	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0
Stevens	0	0.0	0	0.0	1	2.6	0	0.0	0	0.0	0	0.0
Thurson	0	0.0	0	0.0	0	0.0	0	0.0	1	0.5	0	0.0
Wahkiakum	0	0.0	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	0	0.0
Whatcom	0	0.0	2	1.2	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	0	0.0
Yakima	1	0.4	0	0.0	1	0.5	0	0.0	3	1.3	0	0.0
STATE WIDE TOTAL												
CASES	3	0.1	4	0.1	5	0.1	8	0.1	8	0.1	5	0.1
DEATHS	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0

*HEMOLYTIC UREMIC SYNDROME**

Case, Death Rate per 100,000 Population

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

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

LEGIONELLOSIS

Case, Death Rate per 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

LEPTOSPIROSIS

Case, Death Rate per 100,000 Population

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

LISTERIOSIS

Case, Death Rate per 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

LYME DISEASE

Case, Death Rate per 100,000 Population

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

LYMPHOGRANULOMA VENEREUM

Case, Death Rate per 100,000 Population

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

MALARIA

Case, Death Rate per 100,000 Population

Counties	1997		1998		1999		2000		2001		2002	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	6.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	0	0.0	1	0.7	0	0.0	0	0.0	1	0.7
Chelan	0	0.0	0	0.0	0	0.0	0	0.0	1	1.5	0	0.0
Clallam	0	0.0	0	0.0	0	0.0	0	0.0	1	1.5	0	0.0
Clark	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	2	0.6
Columbia	0	0.0	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	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	2	4.5	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	0	0.0
Grant	0	0.0	0	0.0	0	0.0	1	1.3	0	0.0	0	0.0
Grays Harbor	1	1.5	0	0.0	0	0.0	1	1.5	0	0.0	0	0.0
Island	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Jefferson	1	3.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	31	1.9	16	1.0	21	1.3	17	1.0	10	0.6	15	0.9
Kitsap	0	0.0	0	0.0	0	0.0	2	0.9	0	0.0	0	0.0
Kittitas	0	0.0	0	0.0	1	3.1	0	0.0	0	0.0	0	0.0
Klickitat	2	10.5	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	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	0	0.0	1	2.1	0	0.0	1	2.0	0	0.0	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	1	2.5	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	6	0.9	5	0.7	11	1.6	12	1.7	1	0.1	5	0.7
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	1	6.9	0	0.0
Skagit	0	0.0	1	1.0	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	0	0.0
Snohomish	2	0.4	1	0.2	3	0.5	2	0.3	1	0.2	1	0.2
Spokane	1	0.2	1	0.2	2	0.5	3	0.7	3	0.7	1	0.2
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurson	3	1.5	0	0.0	1	0.5	1	0.5	0	0.0	0	0.0
Wahkiakum	0	0.0	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	0	0.0
Whatcom	0	0.0	2	1.3	0	0.0	0	0.0	0	0.0	0	0.0
Whitman	0	0.0	1	2.4	1	2.4	1	2.5	0	0.0	0	0.0
Yakima	1	0.5	0	0.0	1	0.5	1	0.4	1	0.4	1	0.4
STATE WIDE TOTAL												
CASES	49	0.9	30	0.5	43	0.7	43	0.7	19	0.3	26	0.4
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

MEASLES

Case, Death Rate per 100,000 Population

Counties	1997		1998		1999		2000		2001		2002	
	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
Asotin	0	0.0	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	0	0.0
Chelan	0	0.0	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	0	0.0
Clark	0	0.0	1	0.3	0	0.0	0	0.0	1	0.3	1	0.3
Columbia	0	0.0	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	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	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	0	0.0
Garfield	0	0.0	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	0	0.0
Grays Harbor	0	0.0	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	2	2.8	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
King	1	0.1	0	0.0	1	0.1	2	0.1	12	0.7	0	0.0
Kitsap	0	0.0	0	0.0	2	0.9	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	0	0.0
Klickitat	0	0.0	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	0	0.0
Lincoln	0	0.0	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	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	2	9.3	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	0	0.0
Pierce	1	0.1	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	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	0	0.0
Snohomish	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Spokane	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurson	0	0.0	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	0	0.0
Walla Walla	0	0.0	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	0	0.0
Whitman	0	0.0	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	0	0.0
STATE WIDE TOTAL												
CASES	2	0.0	1	0.0	5	0.1	3	0.1	15	0.3	1	0.0
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

MENINGOCOCCAL DISEASE

Case, Death Rate per 100,000 Population

	1997		1998		1999		2000		2001		2002	
Counties	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
Asotin	2	10.2	0	0.0	1	5.1	1	4.9	0	0.0	1	4.8
Benton	1	0.7	0	0.0	1	0.7	0	0.0	0	0.0	1	0.7
Chelan	1	1.6	0	0.0	0	0.0	0	0.0	0	0.0	2	3.0
Clallam	1	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clark	17	5.4	15	4.6	11	3.5	8	2.3	12	3.4	11	3.0
Columbia	0	0.0	0	0.0	0	0.0	1	24.6	0	0.0	0	0.0
Cowlitz	2	2.2	1	1.1	3	3.3	2	2.2	3	3.2	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	1	13.7	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	2	3.9
Garfield	0	0.0	1	41.7	0	0.0	0	0.0	0	0.0	0	0.0
Grant	1	1.5	1	1.4	0	0.0	2	2.7	1	1.3	1	1.3
Grays Harbor	1	1.5	2	2.9	2	2.9	2	3.0	0	0.0	0	0.0
Island	3	4.2	4	5.5	2	2.7	0	0.0	0	0.0	1	1.4
Jefferson	1	3.8	0	0.0	2	7.6	0	0.0	0	0.0	0	0.0
King	24	1.5	15	0.9	25	1.5	18	1.0	14	0.8	21	1.2
Kitsap	4	1.7	2	0.9	2	0.9	4	1.7	5	2.1	0	0.0
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9
Klickitat	0	0.0	1	5.2	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	2	2.9	1	1.5	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	0	0.0
Mason	2	4.2	1	2.1	0	0.0	2	4.0	3	6.0	0	0.0
Okanogan	0	0.0	0	0.0	0	0.0	1	2.5	0	0.0	0	0.0
Pacific	2	9.4	2	9.3	0	0.0	0	0.0	0	0.0	2	9.5
Pend Oreille	0	0.0	1	8.9	0	0.0	0	0.0	1	8.5	0	0.0
Pierce	11	1.6	4	0.6	12	1.7	7	1.0	9	1.3	11	1.5
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	2	2.1	2	2.0	8	8.0	4	3.9	1	1.0	6	5.7
Skamania	1	10.1	0	0.0	1	10.1	1	10.1	0	0.0	0	0.0
Snohomish	7	1.3	6	1.1	3	0.5	2	0.3	5	0.8	5	0.8
Spokane	6	1.5	3	0.7	3	0.7	1	0.2	8	1.9	2	0.5
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurson	3	1.5	2	1.0	3	1.5	1	0.5	2	1.0	1	0.5
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	1	1.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	2	1.3	3	1.9	5	3.1	5	3.0	3	1.8	1	0.6
Whitman	0	0.0	1	2.4	2	4.9	0	0.0	2	5.0	2	4.9
Yakima	17	8.1	9	4.3	7	3.3	9	4.0	2	0.9	5	2.2
STATE WIDE TOTAL												
CASES	115	2.1	77	1.4	93	1.6	71	1.2	71	1.2	76	1.3
DEATHS	11	0.2	7	0.1	4	0.1	6	0.1	6	0.1	8	0.1

MUMPS

Case, Death Rate per 100,000 Population

Counties	1997		1998		1999		2000		2001		2002	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	6.3	0	0.0	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	1	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Chelan	2	3.2	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	0	0.0
Clark	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	1	1.1	0	0.0	0	0.0	0	0.0
Douglas	1	3.2	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
Franklin	0	0.0	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	0	0.0
Grant	2	2.9	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	0	0.0
Island	0	0.0	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	0	0.0
King	5	0.3	2	0.1	1	0.1	8	0.5	1	0.1	0	0.0
Kitsap	1	0.4	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	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	0	0.0
Lincoln	0	0.0	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	0	0.0
Okanogan	0	0.0	1	2.6	0	0.0	0	0.0	0	0.0	0	0.0
Pacific	0	0.0	0	0.0	0	0.0	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	0	0.0
Pierce	1	0.1	3	0.4	0	0.0	0	0.0	1	0.1	0	0.0
San Juan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skagit	1	1.0	1	1.0	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	0	0.0
Snohomish	0	0.0	2	0.4	0	0.0	1	0.2	0	0.0	0	0.0
Spokane	0	0.0	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	0	0.0
Thurson	0	0.0	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	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	1	0.6	1	0.6	0	0.0	0	0.0	0	0.0	0	0.0
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	6	2.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

STATE WIDE TOTAL

CASES	21	0.4	11	0.2	2	0.0	10	0.2	2	0.0	0	0.0
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

PERTUSSIS

Case, Death Rate per 100,000 Population

	1997		1998		1999		2000		2001		2002	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	6.3	0	0.0	0	0.0	0	0.0	1	6.0
Asotin	0	0.0	2	10.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	5	3.7	0	0.0	0	0.0	4	2.8	2	1.4	1	0.7
Chelan	6	9.6	5	8.0	6	9.5	2	3.0	2	3.0	8	11.8
Clallam	2	3.0	2	3.0	6	9.0	1	1.5	1	1.5	2	3.1
Clark	20	6.3	6	1.8	15	4.5	12	3.5	3	0.9	22	6.1
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	1	24.4	0	0.0
Cowlitz	2	2.2	5	5.4	0	0.0	1	1.1	3	3.2	26	27.5
Douglas	2	6.5	0	0.0	1	3.2	0	0.0	1	3.0	2	6.0
Ferry	0	0.0	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	1	1.9
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	4	5.9	2	2.9	1	1.4	1	1.3	0	0.0	1	1.3
Grays Harbor	20	29.3	3	4.4	1	1.5	0	0.0	0	0.0	5	7.3
Island	5	7.0	9	12.4	34	46.4	10	14.0	1	1.4	2	2.7
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	10	38.3	0	0.0
King	195	11.8	159	9.5	480	28.6	192	11.1	40	2.3	153	8.6
Kitsap	6	2.6	9	3.9	21	9.1	8	3.4	28	12.0	5	2.1
Kittitas	8	25.4	1	3.2	4	12.3	6	18.0	0	0.0	0	0.0
Klickitat	2	10.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	0	0.0	2	2.9	2	2.9	1	1.5	3	4.3	0	0.0
Lincoln	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mason	5	10.4	6	12.4	2	4.1	3	6.1	1	2.0	1	2.0
Okanogan	1	2.6	1	2.6	5	13.0	12	30.3	0	0.0	2	5.0
Pacific	1	4.7	0	0.0	0	0.0	0	0.0	1	4.8	1	4.8
Pend Oreille	4	35.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pierce	51	7.6	67	9.8	48	6.9	79	11.3	39	5.5	124	17.1
San Juan	1	8.0	0	0.0	0	0.0	19	135.0	1	6.9	1	6.8
Skagit	6	6.2	3	3.0	4	4.0	9	8.7	1	1.0	70	66.6
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	20.2
Snohomish	34	6.2	49	8.6	53	9.1	43	7.1	7	1.1	35	5.6
Spokane	14	3.4	0	0.0	6	1.4	7	1.7	2	0.5	0	0.0
Stevens	0	0.0	1	2.7	0	0.0	0	0.0	0	0.0	0	0.0
Thurson	23	11.6	14	7.0	8	3.9	9	4.3	11	5.2	11	5.2
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0	5	9.2	1	1.8	0	0.0	0	0.0
Whatcom	28	17.9	10	6.3	8	5.0	11	6.6	23	13.5	13	7.5
Whitman	2	4.9	0	0.0	0	0.0	0	0.0	0	0.0	1	2.5
Yakima	34	16.3	49	23.3	29	13.7	27	12.1	3	1.3	85	37.8

STATE WIDE TOTAL

CASES	481	8.6	406	7.1	739	12.8	458	7.8	184	3.1	575	9.5
DEATHS	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0

PLAGUE

Case, Death Rate per 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

POLIO

Case, Death Rate per 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

*Vaccine associated cases

PSITTACOSIS

Case, Death Rate per 100,000 Population

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

PARALYTIC SHELLFISH POISONING

Case, Death Rate per 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

Q FEVER

Case, Death Rate per 100,000 Population

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

RABIES

Case, Death Rate per 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	1	0.0	0	0.0
1997	0	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

RELAPSING FEVER

Case, Death Rate per 100,000 Population

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

RUBELLA

Case, Death Rate per 100,000 Population

Year	Cases	Rate	Deaths	Rate
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

SALMONELLOSIS

Case, Death Rate per 100,000 Population

	1997		1998		1999		2000		2001		2002	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	1	6.3	1	6.3	2	12.6	0	0.0	4	24.1	1	6.0
Asotin	0	0.0	2	10.0	1	5.0	1	4.9	0	0.0	0	0.0
Benton	13	9.7	17	12.4	15	10.8	17	11.9	14	9.7	13	8.8
Chelan	8	12.9	6	9.6	16	25.4	6	9.0	7	10.4	10	14.8
Clallam	4	6.0	6	9.0	6	9.0	1	1.5	14	21.6	10	15.4
Clark	24	7.6	33	10.1	53	15.7	33	9.6	25	7.1	33	9.1
Columbia	1	23.8	0	0.0	0	0.0	0	0.0	1	24.4	0	0.0
Cowlitz	7	7.6	5	5.4	5	5.3	12	12.9	9	9.6	7	7.4
Douglas	2	6.5	4	12.7	3	9.5	1	3.1	1	3.0	4	12.1
Ferry	2	27.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	9	20.5	4	9.0	4	8.9	1	2.0	5	9.9	8	15.6
Garfield	0	0.0	1	41.7	0	0.0	0	0.0	0	0.0	0	0.0
Grant	6	8.8	3	4.3	3	4.2	6	8.0	6	7.9	22	28.8
Grays Harbor	9	13.2	65	95.7	6	8.9	2	3.0	8	11.7	13	19.0
Island	4	5.6	2	2.8	5	6.8	15	21.0	3	4.1	4	5.5
Jefferson	1	3.8	1	3.8	3	11.3	5	19.3	3	11.5	2	7.5
King	221	13.4	217	13.0	264	15.7	200	11.5	261	14.8	211	11.9
Kitsap	18	7.8	19	8.3	32	13.9	24	10.3	15	6.4	18	7.7
Kittitas	1	3.2	2	6.4	3	9.3	6	18.0	1	2.9	5	14.4
Klickitat	0	0.0	1	5.2	6	31.1	3	15.7	3	15.5	1	5.2
Lewis	3	4.4	2	2.9	10	14.5	6	8.7	9	12.9	5	7.1
Lincoln	0	0.0	1	10.0	1	10.0	0	0.0	1	9.8	0	0.0
Mason	3	6.3	7	14.5	7	14.4	2	4.0	2	4.0	3	6.0
Okanogan	0	0.0	6	15.6	2	5.2	2	5.1	8	20.2	1	2.5
Pacific	2	9.4	1	4.7	1	4.7	0	0.0	4	19.0	1	4.8
Pend Oreille	1	8.9	0	0.0	0	0.0	2	17.0	0	0.0	0	0.0
Pierce	65	9.6	67	9.8	61	8.7	62	8.8	76	10.7	60	8.3
San Juan	2	16.0	1	7.9	1	7.9	0	0.0	0	0.0	1	6.8
Skagit	11	11.4	13	13.2	8	8.0	15	14.6	11	10.6	13	12.4
Skamania	1	10.1	3	30.3	0	0.0	0	0.0	1	10.1	1	10.1
Snohomish	71	12.9	63	11.1	78	13.4	71	11.7	65	10.5	78	12.4
Spokane	31	7.6	54	13.1	30	7.2	34	8.1	42	9.9	26	6.1
Stevens	3	8.0	1	2.7	6	15.8	1	2.5	2	5.0	4	9.9
Thurson	17	8.6	29	14.5	34	16.8	22	10.6	22	10.5	17	8.0
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	6	11.1	8	14.7	9	16.5	10	18.1	4	7.2	10	18.1
Whatcom	9	5.8	23	14.6	37	22.9	29	17.4	20	11.7	16	9.3
Whitman	6	14.6	3	7.2	15	35.8	9	22.1	3	7.4	2	4.9
Yakima	113	54.1	32	15.2	65	30.6	61	27.4	31	13.8	55	24.4

STATE WIDE TOTAL

CASES	675	12.0	703	12.4	792	13.8	659	11.2	681	11.4	655	10.8
DEATHS	0	0.0	2	0.0	2	0.0	1	0.0	2	0.0	0	0.0

SHIGELLOSIS

Case, Death Rate per 100,000 Population

	1997		1998		1999		2000		2001		2002	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	0	0.0	1	6.3	2	12.6	0	0.0	0	0.0	0	0.0
Asotin	0	0.0	0	0.0	2	10.0	2	9.7	0	0.0	1	4.8
Benton	2	1.5	6	4.4	4	2.9	3	2.1	8	5.5	5	3.4
Chelan	3	4.8	4	6.4	3	4.8	3	4.5	10	14.9	0	0.0
Clallam	0	0.0	0	0.0	1	1.5	1	1.5	1	1.5	0	0.0
Clark	9	2.8	13	4.0	3	0.9	9	2.6	5	1.4	8	2.2
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	1	1.1	1	1.1	3	3.2	1	1.1	1	1.1
Douglas	1	3.2	1	3.2	2	6.3	1	3.1	2	6.1	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	3	6.8	3	6.8	1	2.2	1	2.0	3	6.0	1	1.9
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grant	2	2.9	5	7.2	2	2.8	3	4.0	1	1.3	2	2.6
Grays Harbor	1	1.5	2	2.9	1	1.5	1	1.5	0	0.0	1	1.5
Island	0	0.0	2	2.8	0	0.0	13	18.2	2	2.8	0	0.0
Jefferson	0	0.0	0	0.0	0	0.0	4	15.4	1	3.8	0	0.0
King	104	6.3	85	5.1	63	3.8	155	8.9	110	6.3	84	4.7
Kitsap	5	2.2	6	2.6	3	1.3	15	6.5	5	2.1	2	0.9
Kittitas	1	3.2	2	6.4	0	0.0	1	3.0	0	0.0	0	0.0
Klickitat	1	5.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	1	1.5	2	2.9	2	2.9	7	10.2	1	1.4	2	2.8
Lincoln	0	0.0	0	0.0	0	0.0	1	9.8	0	0.0	0	0.0
Mason	1	2.1	0	0.0	1	2.1	5	10.1	1	2.0	1	2.0
Okanogan	8	20.8	0	0.0	0	0.0	4	10.1	0	0.0	1	2.5
Pacific	1	4.7	0	0.0	0	0.0	0	0.0	0	0.0	4	19.0
Pend Oreille	0	0.0	0	0.0	1	9.0	0	0.0	0	0.0	0	0.0
Pierce	14	2.1	16	2.3	12	1.7	40	5.7	12	1.7	58	8.0
San Juan	1	8.0	1	7.9	0	0.0	0	0.0	2	13.9	1	6.8
Skagit	2	2.1	4	4.1	4	4.0	8	7.8	10	9.6	1	1.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	1	10.1	0	0.0
Snohomish	9	1.6	22	3.9	7	1.2	30	5.0	19	3.1	17	2.7
Spokane	9	2.2	3	0.7	4	1.0	15	3.6	6	1.4	7	1.6
Stevens	2	5.3	0	0.0	0	0.0	0	0.0	1	2.5	0	0.0
Thurson	5	2.5	4	2.0	4	2.0	11	5.3	4	1.9	3	1.4
Wahkiakum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Walla Walla	3	5.6	2	3.7	4	7.3	1	1.8	1	1.8	0	0.0
Whatcom	10	6.4	14	8.9	2	1.2	6	3.6	9	5.3	2	1.2
Whitman	1	2.4	0	0.0	0	0.0	1	2.5	0	0.0	0	0.0
Yakima	119	57.0	78	37.1	43	20.3	157	70.5	20	8.9	28	12.4

STATE WIDE TOTAL

CASES	318	5.7	277	4.9	172	3.0	501	8.5	236	3.9	230	3.8
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

STREPTOCOCCUS GROUP A, INVASIVE DISEASE

Case, Death Rate per 100,000 Population

Counties	2001 Cases	2001 Rate	2002 Cases	2002 Rate
Adams	0	0.0	0	0.0
Asotin	0	0.0	0	0.0
Benton	0	0.0	0	0.0
Chelan	0	0.0	1	1.5
Clallam	2	3.1	0	0.0
Clark	12	3.4	4	1.1
Columbia	0	0.0	0	0.0
Cowlitz	0	0.0	1	1.1
Douglas	0	0.0	0	0.0
Ferry	0	0.0	0	0.0
Franklin	0	0.0	0	0.0
Garfield	0	0.0	0	0.0
Grant	1	1.3	0	0.0
Grays Harbor	0	0.0	0	0.0
Island	0	0.0	0	0.0
Jefferson	0	0.0	0	0.0
King	38	2.2	38	2.1
Kitsap	1	0.9	0	0.0
Kittitas	1	2.9	0	0.0
Klickitat	0	0.0	0	0.0
Lewis	0	0.0	0	0.0
Lincoln	0	0.0	0	0.0
Mason	0	0.0	0	0.0
Okanogan	3	10.1	1	2.5
Pacific	0	0.0	0	0.0
Pend Oreille	0	0.0	0	0.0
Pierce	4	0.6	8	1.1
San Juan	0	0.0	0	0.0
Skagit	2	1.9	1	1.0
Skamania	0	0.0	0	0.0
Snohomish	10	1.8	8	1.3
Spokane	2	0.7	11	2.6
Stevens	0	0.0	0	0.0
Thurson	0	0.0	0	0.0
Wahkiakum	0	0.0	0	0.0
Walla Walla	0	0.0	0	0.0
Whatcom	1	0.6	0	0.0
Whitman	0	0.0	0	0.0
Yakima	15	6.7	7	3.1

STATE WIDE TOTAL

CASES	92	1.5	80	1.3
DEATHS	11	0.2	9	0.2

* Streptococcus Group A, invasive disease first became a notifiable condition in Washington in December of 2000

SYPHILIS (PRIMARY AND SECONDARY)

Case, Death Rate per 100,000 Population

	1997		1998		1999		2000		2001		2002	
Counties	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
Asotin	0	0.0	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	0	0.0
Chelan	0	0.0	0	0.0	0	0.0	1	1.6	0	0.0	0	0.0
Clallam	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clark	0	0.0	2	0.6	3	0.9	1	0.3	0	0.0	2	0.6
Columbia	0	0.0	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	1.1	0	0.0	0	0.0
Douglas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	0	0.0	0	0.0	0	0.0	1	2.0	0	0.0
Garfield	0	0.0	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	0	0.0
Grays Harbor	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Island	0	0.0	2	2.8	0	0.0	0	0.0	0	0.0	4	5.5
Jefferson	0	0.0	0	0.0	0	0.0	1	3.8	0	0.0	0	0.0
King	11	0.7	33	2.0	65	3.9	50	2.9	41	2.3	50	2.8
Kitsap	0	0.0	1	0.4	0	0.0	2	0.9	0	0.0	2	0.9
Kittitas	0	0.0	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	0	0.0
Lewis	0	0.0	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	0	0.0
Mason	0	0.0	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	1	2.5	0	0.0
Pacific	0	0.0	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	0	0.0
Pierce	0	0.0	2	0.3	3	0.4	5	0.7	5	0.7	5	0.7
San Juan	0	0.0	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	2	1.9	1	1.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	3	0.6	1	0.2	5	0.9	1	0.2	2	0.3	4	0.6
Spokane	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0	1	0.2
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurson	0	0.0	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	0	0.0
Walla Walla	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Whatcom	1	0.7	0	0.0	0	0.0	1	0.6	1	0.6	0	0.0
Whitman	0	0.0	2	4.9	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	2	1.0	0	0.0	1	0.5	3	1.4	4	1.8	1	0.4
CASES	17	0.3	44	0.8	77	1.4	66	1.1	57	1.0	70	1.2
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

TETANUS

Case, Death Rate per 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	0.0	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

TRICHINOSIS

Case, Death Rate per 100,000 Population

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

TUBERCULOSIS

Case, Death Rate per 100,000 Population

	1997		1998		1999		2000		2001		2002	
Counties	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Adams	2	-	1	-	1	-	1	-	0	-	0	-
Asotin	0	-	0	-	1	-	0	-	0	-	0	-
Benton	8	5.80	3	-	5	3.60	3	-	1	-	1	-
Chelan	2	-	5	7.99	4	-	0	-	1	-	1	-
Clallam	0	-	2	-	2	-	2	-	0	-	0	-
Clark	12	3.90	9	2.74	11	3.26	6	1.75	8	2.26	10	2.7
Columbia	0	-	0	-	1	-	0	-	0	-	0	-
Cowlitz	3	-	6	6.44	2	-	6	6.30	2	-	2	-
Douglas	3	-	1	-	1	-	1	-	0	-	1	-
Ferry	0	-	0	-	0	-	0	-	0	-	0	-
Franklin	6	13.20	4	-	2	-	6	13.22	2	-	3	-
Garfield	0	-	0	-	0	-	0	-	0	-	0	-
Grant	4	-	2	-	1	-	3	-	7	9.92	2	-
Grays Harbor	2	-	5	7.36	3	-	1	-	3	-	1	-
Island	1	-	0	-	0	-	0	-	1	-	0	-
Jefferson	1	-	0	-	2	-	1	-	0	-	0	-
King	113	6.80	116	7.02	104	6.20	127	7.45	139	7.90	158	8.9
Kitsap	6	2.60	3	-	7	3.05	7	3.01	5	2.14	6	2.5
Kittitas	0	-	0	-	0	-	0	-	1	-	0	-
Klickitat	0	-	0	-	0	-	1	-	0	-	1	-
Lewis	3	-	1	-	3	-	2	-	0	-	0	-
Lincoln	0	-	0	-	0	-	0	-	0	-	0	-
Mason	1	-	5	10.35	2	-	1	-	3	-	0	-
Okanogan	5	13.60	0	-	3	-	2	-	0	-	1	-
Pacific	1	-	0	-	1	-	0	-	0	-	0	-
Pend Oreille	0	-	0	-	0	-	0	-	0	-	0	-
Pierce	43	6.30	36	5.24	43	6.14	34	-	22	3.08	16	2.2
San Juan	0	-	0	-	0	-	1	-	0	-	1	-
Skagit	4	-	3	-	3	-	0	-	1	-	3	-
Skamania	0	-	0	-	2	-	0	-	0	-	0	-
Snohomish	29	5.30	20	3.52	23	3.94	21	3.55	28	4.52	16	2.5
Spokane	20	4.90	22	5.35	13	3.14	14	3.37	10	2.36	7	1.6
Stevens	0	-	0	-	0	-	0	-	0	-	0	-
Thurson	7	3.50	2	-	6	2.96	2	-	5	2.37	3	-
Wahkiakum	0	-	0	-	0	-	0	-	0	-	0	-
Walla Walla	2	-	2	-	1	-	2	-	1	-	3	-
Whatcom	4	-	5	3.17	1	-	3	-	6	3.51	7	4.0
Whitman	0	-	1	-	1	-	1	-	0	-	1	-
Yakima	23	11.00	11	-	9	4.24	10	4.67	15	6.68	8	3.5
CASES	305	5.44	265	4.68	258	4.48	258	4.43	261	4.36	252	4.17
DEATHS	6	0.19	5	0.08	6	0.10	2	-	6	0.10	4	-

TYPHUS

Case, Death Rate per 100,000 Population

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

TULAREMIA

Case, Death Rate per 100,000 Population

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

UNEXPLAINED CRITICAL ILLNESS OR DEATH*

Case, Death Rate per 100,000 Population

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

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

VIBRIOSIS

Case, Death Rate per 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

YELLOW FEVER

Case, Death Rate per 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

YERSINIOSIS

Case, Death Rate per 100,000 Population

Counties	1997		1998		1999		2000		2001		2002	
	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
Asotin	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Benton	0	0.0	0	0.0	2	1.4	0	0.0	0	0.0	0	0.0
Chelan	0	0.0	1	1.6	0	0.0	0	0.0	0	0.0	0	0.0
Clallam	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clark	0	0.0	1	0.3	0	0.0	0	0.0	1	0.3	4	1.1
Columbia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cowlitz	0	0.0	0	0.0	1	1.1	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	0	0.0
Ferry	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Franklin	0	0.0	1	2.3	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	0	0.0
Grant	0	0.0	0	0.0	0	0.0	2	2.7	0	0.0	0	0.0
Grays Harbor	0	0.0	1	1.5	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	2	2.7
Jefferson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	3.8
King	19	1.2	17	1.0	15	0.9	22	1.3	16	0.9	12	0.7
Kitsap	0	0.0	0	0.0	1	0.4	1	0.4	0	0.0	0	0.0
Kittitas	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klickitat	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lewis	1	1.5	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	0	0.0
Mason	0	0.0	0	0.0	1	2.1	0	0.0	0	0.0	1	2.0
Okanogan	0	0.0	0	0.0	0	0.0	0	0.0	1	2.5	0	0.0
Pacific	0	0.0	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	0	0.0
Pierce	2	0.3	2	0.3	4	0.6	1	0.1	0	0.0	2	0.3
San Juan	0	0.0	0	0.0	1	7.9	0	0.0	0	0.0	0	0.0
Skagit	0	0.0	0	0.0	0	0.0	0	0.0	1	1.0	0	0.0
Skamania	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Snohomish	4	0.7	9	1.4	4	0.7	4	0.7	2	0.3	4	0.6
Spokane	2	0.5	0	0.0	1	0.2	2	0.5	0	0.0	0	0.0
Stevens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Thurson	1	0.5	1	0.5	2	1.0	1	0.5	1	0.5	0	0.0
Wahkiakum	0	0.0	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	0	0.0
Whatcom	0	0.0	3	2.0	0	0.0	0	0.0	1	0.6	0	0.0
Whitman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yakima	1	0.5	2	1.0	0	0.0	0	0.0	0	0.0	0	0.0
CASES	31	0.5	38	0.7	32	0.6	33	0.6	23	0.4	26	0.4
DEATHS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

APPENDIX II. FOODBORNE OUTBREAKS, 2002

Month	COUNTY	# ILL	IMPLICATED FOODS	AGENT	STATUS	CONTRIBUTING FACTORS	PREP PLACE
Jan	King	2	Refried beans	Unknown	Probable	inadequate cooling, thawing, reheating	Restaurant
Jan	King	5	Ethnic style	Unknown	Probable	bare hand contact; prior prep; room temp storage; inadequate reheating	Restaurant
Jan	King	2	Oysters, raw	Unknown	Probable	contaminated raw product	Restaurant
Jan	Whatcom	2	Whole milk, unpasteurized	*Campylobacter jejuni*	Confirmed	contaminated raw product	Home
Feb	Walla Walla	2	Turkey, roasted	Unknown	Probable	cross contamination; prior prep; inadequate acidification	Restaurant
Feb	Clark	4	Pizza, meat	*Staphylococcus aureus*	Probable	handwashing; bare hand contact; ill food handler	Restaurant
Feb	King	2	Pizza, meat and veggie	*Campylobacter jejuni*	Confirmed	cross contamination; room temp storage; inadequate cooling	Restaurant
Mar	King	2	Sandwich, beef	*Campylobacter*	Confirmed	contaminated raw product; cross contamination; inadequate cooking, reheating	Restaurant
Mar	King	3	Chicken, teriyaki	Unknown	Probable	contaminated raw product; room temp storage; inadequate cooling; prior prep; inadequate thawing, cooking, reheating	Restaurant
Mar	San Juan	4	Green salad	Unknown	Probable	bare hand contact	Restaurant
Mar	Walla Walla	43	Tuna salad	*Campylobacter jejuni*	Confirmed	bare hand contact; cross contamination; room temp storage	Prison
Mar	King	3		Unknown	Probable	unknown	Restaurant
Mar	Kitsap	2	Beef/steak dish	Unknown	Probable	cross contamination	Restaurant
Apr	Jefferson	3	Chicken, fried	Unknown	Probable	prior prep; inadequate cooling, cooking, reheating	Restaurant
Apr	Snohomish	219	Multiple	Calicivirus, Norovirus	Confirmed	handwashing; bare hand contact; ill food handler	Restaurant
Apr	Multiple	12	Cantaloupe	*S. Poona*	Confirmed	contaminated raw products; room temp storage; prior prep	Grocery
Apr	King	3	Chicken, teriyaki and rice	Unknown	Probable	inadequate cooling; inadequate reheating	Restaurant
Apr	King	6	Cantaloupe	*Salmonella*	Probable	unknown	Unknown
May	King	2	Fiddlehead fern	Unknown	Probable	natural toxicant	Restaurant
May	Walla Walla	13		Calicivirus, Norovirus	Confirmed	bare hand contact; ill food handler	
May	Walla Walla	4	Chef salad	Calicivirus, Norovirus	Confirmed	ill food handler	Restaurant
May	King	5	Quesadilla, chicken	Calicivirus, Norovirus	Probable	ill food handler; no further cooking after assembly	Restaurant

May	Kittitas	3	Ethnic style buffet	Unknown	Probable	unknown	Restaurant
Jun	King	2	Ethnic style	Unknown	Probable	prior prep; inadequate cooling, reheating	Restaurant
Jun	King	7	Ethnic style	Unknown	Probable	handwashing; cross contamination	Restaurant
Jun	King	19	Multiple	*S. Brandenburg*	Confirmed	unknown	Home
Jun	King	2	Coleslaw	Unknown	Probable	handwashing; inadequate cold holding; prior prep	Restaurant
Jun	King	19	Sandwich, turkey	Calicivirus, Norovirus	Probable	ill food handler	Restaurant
Jun	Clark	14		Unknown	Probable	unknown	Restaurant
Jun	Kittitas	6	Ethnic style buffet	Unknown	Probable	unknown	Restaurant
Jun	King	18	Unknown	Calicivirus, Norovirus	Probable	unknown	Unknown
Jul	King	37	Sandwich, deli	Calicivirus, Norovirus	Probable	handwashing; bare hand contact; ill food handler	Restaurant
Jul	King	0	Refried beans	Unknown	Probable	handwashing; contaminated raw product; prior prep; inadequte cooling, cold holding, hot holding, reheating	Restaurant
Jul	King	4	Pizza, veggie	Unknown	Probable	bare hand contact; inadequate cold holding	Restaurant
Jul	King	2	Enchilada, chicken and burrito, chicken	Unknown	Probable	handwashing; cross contamination; contaminated storage; room temp storage; prior prep; inadequate cooling, hot holding, cooking, reheating	Restaurant
Jul	King	2	Salsa and rice	Calicivirus, Norovirus	Probable	handwashing; ill food handler; room temp storage; prior prep, inadequate cooling, cold holding, hot holding, thawing, reheating	Restaurant
Jul	Thurston	7	Ethnic style buffet	Unknown	Probable	cross contamination; room temp storage; prior prep; inadequate cooling, cold holding, hot holding, thawing, reheating	Restaurant
Aug	Grant	17	Goat	*S. Agona*	Confirmed	cross contamination; contaminated storage; room temp storage; prior prep; inadequate cooling, cold holding, reheating	Home
Aug	Kittitas	4	Ethnic style buffet	Unknown	Probable	unknown	Restaurant
Aug	King	27	Ethnic style	Calicivirus, Norovirus	Confirmed	unknown	Unknown
Aug	King	2	Ethnic style	Unknown	Probable	inadequate hot holding	Restaurant
Aug	King	2	Mussels	*Staphylococcus aureus*	Probable	bare hand contact; ill food handler; inadequate cooling	Restaurant
Aug	King	3	Unknown	*Staphylococcus aureus*	Probable	cross contamination; inadequate cooling	Unknown
Aug	Kitsap	2	Chicken nuggets/fingers and cabbage coleslaw	Unknown	Probable	unknown	Restaurant
Sep	King	3	Ethnic style	Unknown	Probable	unknown	Restaurant

Sep	King	23	Chicken salad	*S. Hadar*	Confirmed	contaminated raw product; bare hand contact; room temp storage; prior prep; inadequate thawing	Church
Sep	King	12	Ethnic style	Calicivirus, Norovirus	Probable	unknown	Restaurant
Sep	King	29	Watermelon cantaloupe grapes bananas	*S. Berta*	Confirmed	bare hand contact; cross contamination; unlicensed caterer; room temp storage	Caterer
Oct	King	2	Mushrooms	Other chemical	Probable	natural toxicant, deliberate introduction	Caterer
Nov	King	7	Pork, sweet and sour	*S. Infantis*	Confirmed	cross contamination; room temp storage; inadequate cooling; prior prep; inadequate cooking, reheating	Restaurant
Nov	King	3	Chicken, roasted	Other bacterial	Probable	bare hand contact; cross contamination; room temp storage; inadequate hot holding	Grocery
Nov	King	4	Meat and iceberg lettuce	*E. coli*, Enterohemorrhagic	Confirmed	contaminated raw product; cross contamination; contaminated storage; inadequate cold holding	Restaurant
Nov	Whitman	27	Beef lasagna	Unknown	Probable	room temp storage; inadequate cooling; prior prep	Restaurant/ Caterer
Dec	Kitsap	8	Pork, other and bread	*Bacillus cereus*	Probable	unknown	Restaurant
Dec	Multiple	40	Eggs	*S. Enteritidis*	Confirmed	contaminated raw product; inadequate cooking	Restaurant
Dec	King	4	Turkey, smoked	*S. Heidelberg*	Confirmed	contaminated raw product; inadequate cooking	Home

APPENDIX III. RABIES EXPOSURE

WASHINGTON RABIES PROPHYLAXIS DECISION-MAKING

Although human rabies is rare in the US (2-6 cases per year), animal bites are common, and result in rabies post-exposure prophylaxis (PEP) given to thousands of people each year. Rabies is almost universally fatal without appropriate PEP (human diploid cell rabies vaccine and rabies immune globulin) is a safe and effective means of prevention. However, PEP is expensive (over $1000 to treat an adult) and rare adverse reactions can occur. Therefore, potential rabies exposures and the need for PEP should be carefully evaluated.

CDC recommendations for rabies PEP are available on the CDC website at www.cdc.gov/ncidod/dvrd/rabies/prevention&control/preventi.htm. These reccomendations were last updated in 1999 and are still current and applicable in Washington. The decision to provide PEP following an animal bite or other high risk exposure will vary by the animal species involved, and by region of the country where exposure occurred, as the prevalence of rabies in species varies by region. A suggested algorithm for exposure in Washington is reviewed below.

1. **Was the person exposed to a bat, or bitten or licked on an open wound or mucous membrane by another possibly rabid animal?**
Determine whether the bite was provoked or unprovoked. Bites inflicted while attempting to feed or handle an apparently healthy animal should be generally regarded as provoked. If a bite was provoked, it is less likely to have been caused by a rabid animal.

   Humans have been infected with bat rabies after minimal or no documented contact with bats[4,5]. Rabies exposure should be considered to have occurred if a bat is present and the individual cannot exclude a possible bite, for example if a bat is found in a room where people were sleeping, or with children too young to provide reliable information about contact. However, casual contact with other animals (such as petting) does not constitute an exposure and is not an indication for prophylaxis even if the animals are rabid. If only casual contact occurred with an animal other than a bat, we generally do not recommend rabies testing.

2. **Have first aid and wound care been performed?**
Immediate and thorough washing of wounds and scratches is perhaps the most effective measure to prevent rabies. Tetanus prophylaxis and measures to control bacterial infection should be given as indicated.

3. **Is rabies known or suspected to be present in the species and area?**
The information presented elsewhere in this report does not unequivocally rule out rabies in a given animal, since all mammals are potentially susceptible to rabies, but is useful in assessing the risks and benefits of treatment, particularly if an animal is not available for testing or observation. Each year the DOH Public

Health Laboratories (PHL) and Public Health -Seattle& King County Laboratory perform rabies testing on hundreds of animals that have potentially exposed humans to rabies. Of 5,008 bats examined from 1970-2002, 393 or 7.8 were rabid. Rabid bats have been found in almost every Washington County. Rabies in domestic animals is extremely rare in Washington, however, in 2002, a pet cat was found to have bat-variant rabies. Although common in some parts of the USlimited surveillance for terrestrial has never identified raccoon-variant rabies in Washington (through 2002). Rodents and lagomorphs, such as beaver, guinea pigs, gopher, rats squirrels, rabbits, and hares, have never been found to have rabies in Washington and are rarely infected anywhere in the US.

4. **Was the animal captured?**
If bat exposure occurred but the bat escaped, we recommend treatment. For other animals not available for testing, an individual decision must be made, considering the risk of disease and the risks from treatment.

5. **Was the captured animal a normally behaving dog, cat or ferret?**
Quarantine and observation for 10 days can be used to rule out rabies only in normally behaving dogs, cats and ferrets. Other animals must be tested to rule out rabies definitively. This includes dog-wolf and cat-bobcat hybrids, and other wild or exotic animals.

6. **Does the dog, cat or ferret become ill under observation during the next 10 days?**
A dog, cat or ferret remaining well for at least 10 days was not infectious for rabies at the time of the bite. Ill animals should be humanely killed without injuring the brain and tested for rabies. Call the Communicable Disease Epidemiology Section at 206-361-2914 (24 hour number) before shipping any specimens for rabies testing. In Seattle/King County, call 206-296-4632 (after hours 206-296-4774).

7. **Does laboratory examination confirm rabies?**
The fluorescent antibody and mouse inoculation tests for rabies are extremely reliable in diagnosing or ruling out rabies when performed properly in a qualified laboratory. Rabies testing of animals following human exposure is available without charge at the PHL after consultation with an epidemiologist. If the animal is a healthy-appearing dog, cat, or ferret, 10 days of observation is preferred to euthanization, especially in circumstances where an attack was provoked.

8. Treat with serum and vaccine.

See treatment regimens (below) with human diploid cell rabies vaccine (HDCV) and human rabies immune globulin (RIG). HDCV and RIG are available in a limited number of facilities in Washington (see 2003 Emergency Biologics Listing from DOH) or contact pharmaceutical companies directly.

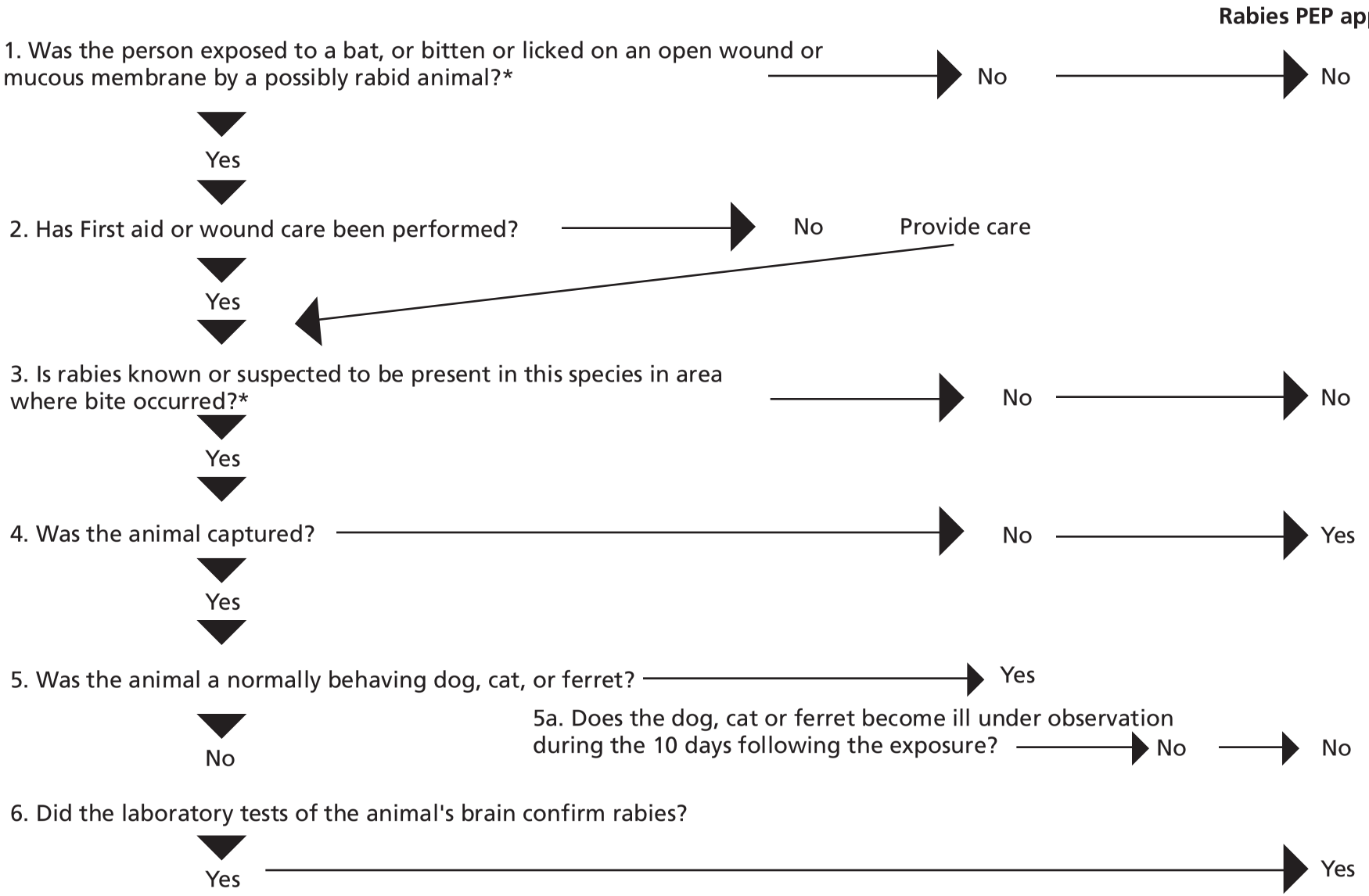
References:

1. Human Rabies Prevention, United States, 1999 – Recommendations of the . Advisory Committee on Immunization Practices (ACIP). *MMWR* **1999**; 8 (RR07):1-21.
2. Compendium of Animal Rabies Prevention and Control, National Association of State Public Health Veterinarians, Inc., 2000. *MMWR* **2000** 49;(RR08):19-30.
3. Fishbein, D. "Rabies Virus." in Mandell G.L. ed. Principles and Practice of Infectious Disease. 2000. Churchill Livingstone, Inc.

4 Human Rabies - Washington, 1995. *MMWR* **1995**;44:625-627.

5. Human Rabies - Montana and Washington 1996. *MMWR* **1997;** 46:770-774.

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



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

RABIES PROPHYLAXIS REGIMENS

Pre-exposure prophylaxis (immunization prior to a bite)
Pre-exposure prophylaxis may be considered for certain high-risk groups. This includes veterinarians, animal handlers, persons – especially children – living in or visiting countries where rabies is a constant treat, and persons whose vocational or avocational pursuit brings them into contact with potentially rabid animals.

Medication	Dose	Route of administration	Vaccination schedule
Human diploid cell rabies vaccine (HDCV) Primary series	1 ml	Intramuscular (IM) – deltoid	One dose given on days 0, 7, and 21 or 28 days[1,2]

Post-exposure prophylaxis (immunization after a bite, not previously vaccinated)[3]

Medication	Dose	Route of administration	Vaccination schedule
Human diploid cell rabies vaccine (HDCV)	1 ml	IM – deltoid	One dose given on days 0, 3, 7, 14, and 28,
Rabies immune globulin (RIG)	20 IU per kg. body weight	If feasible – full dose should be infiltrated around wound(s), and any remaining given Im at site distant from vaccine administration	One dose only when treatment is begun

Notes:
1. Booster doses are not recommended per MMWR 48:RR1 (1/8/99)
2. Routine serologic testing for rabies antibody after vaccination is no longer recommended. In a study in the US over 1,000 persons received HDCV according to this regimen and developed serum antibody.
3. If previously immunized, give HDCV 1.0ml, IM in the deltoid area on days 0 and 3

ANIMAL RABIES

Rabies was endemic among in dogs in King County between 1937 and 1940. During the 1950s and 60s, major efforts at pet vaccination and animal control eradicated the canine variant of rabies in the United States, however the disease in US wildlife has been documented at record levels nationwide during the last two decades.

Between 1970 and 2002, 14,142 animals were tested for rabies in Washington and 400 (2.8%) were found to have rabies. This does not represent the actual number of case of rabiesthat occur, 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 has been bats. Of the 6,410 bats examined for rabies between1960 and 2002, 526 (8.2%) were rabid. Rabid bats have been found in almost every county in Washington State. More recently, between 1990-2002, 222 of the 225 rabid animals in Washington were bats. While terrestrial animal variants of rabies have not been identified in Washington, rabies is occasionally transmitted from bats to other mammals including humans. During 2002, testing identified a domestic cat and 12 bats infected with rabies virus.

Domestic Animals

A cat from Walla Walla county was found to have rabies during 2002. The cat was infected with a bat-variant of the rabies virus, however how the exposure occurred was unknown, although the cat was unvaccinated and allowed to roam outdoors. Ten people received rabies PEP due to exposure to the cat before it died. This was the first rabid cat in Washington State since 1976. Annually in the US, twice as many cats as dogs are reported to have rabies.

In 1987 a dog suspected to have rabies in Pierce County, became ill six months after exposure to a rabid bat. The dog was tested at the PHL and rabies was identified in brain tissues, however, the infection was not confirmed at CDC. In 1992, a horse from Benton County died of rabies. In 1994, a llama from King County died after becoming infected with a bat-variant of rabies virus.

Wild Animals, Rodents and Lagomorphs

Although common in some parts of the US, raccoon, skunk and fox 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 and lagomorphs, such as mice, guinea pigs, gophers, rats, squirrels, and rabbits, pose a very low risk of rabies, and rabid lagomorphs have never been found in Washington. Bites from other wild animals should be evaluated on a case-by-case basis, as surveillance for terrestrial rabies is limited in this state and lack of data does not definitely rule out its presence.

Species	1930-1949	1950-1969	1970-1989	1990-1999	2000-2002	TOTAL
Bat	0	75	171	165	57	468
Cat	19	2	1	0	1	23
Cattle	37	0	0	0	0	37
Coyote	1	0	0	0	0	1
Dog	1,415	24[1]	1	0	0	1,440
Goat	2	0	0	0	0	2
Horse	0	0	0	1	0	1
Llama	0	0	0	1	0	1
Sheep	1	0	0	0	0	1
Skunk	0	2[2]	2[2]	0	0	4
TOTAL	1,475	103	175	167	58	1,978

[1]Dog from California
[2]Skunk imported ill or improperly vaccinated

APPENDIX IV SPECIAL TOPICS

ANTIMICROBIAL RESISTANCE – Washington State Department of Health

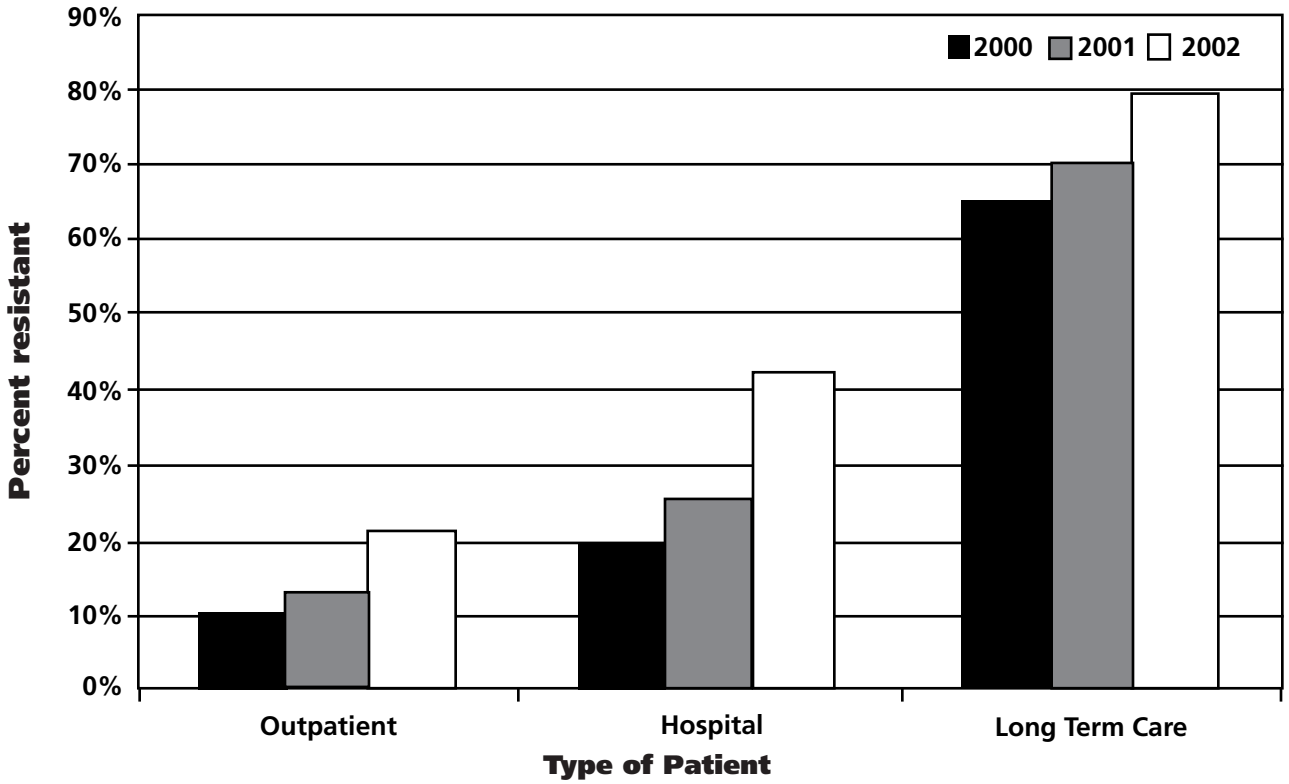
Bacteria that acquire resistance to previously effective antimicrobial drugs cause prolongation of illness, increase health care costs, and raise the specter of a future with fewer choices for the treatment of infectious diseases. There are several risk factors common to infections caused by various resistant bacteria. These include previous or current antibiotic therapy, hospitalization or residence in a long-term care facility, underlying illness, invasive medical procedures or devices, and very young or old age.

Although infections caused by antibiotic resistant bacteria are not routinely notifiable in Washington State, hospitals and laboratories are asked to participate in a network of sentinel reporters to provide information on trends of resistance. In 2002, thirty facilities providing laboratory services to inpatient and/or outpatient populations provided information to DOH, including Cumulative Antimicrobial Susceptibility Test Data (antibiograms) and reports of invasive pneumococcal infection. This type of information does not provide incidence rates for disease, but does give estimates of the prevalence (percent) of resistance among organisms that have been identified by laboratory diagnosis.

Methicillin Resistant *Staphylococcus aureus* (MRSA): *S. aureus*, often simply called "staph" is frequently found on the skin or in the nose of healthy people without causing illness. However, it can cause minor and major illnesses; including pustules, boils, abscesses, wound infections, pneumonia or life threatening bacteriemia. MRSA are staph that have developed resistance to all penicillins as well as to the cephalosporins (e.g. Keflex®) commonly used empirically to treat skin infections. MRSA is a serious problem in health care institutions and is now also appearing in the community in persons without the common risk factors for MRSA infection. The infection is spread by direct contact with persons who are infected or are carriers of the organism. Good hand hygiene and infection control precautions by health care workers decrease transmission.

The prevalence of MRSA is increasing in Washington State, as it is in other parts of the country. In 2002, thirty-one percent of all reported *S. aureus* isolates causing invasive and non-invasive disease were methicillin resistant. The average yearly increase in MRSA prevalence has been 6.5% over the three years that data from across the state have been aggregated. The prevalence of MRSA for cultures taken from only hospitalized patients was 42%, with methicillin resistance among hospital isolates varying among regions of the state from 34% to 52%. Prevalence of MRSA was highest among cultures taken from resident of long term care facilities (79%).

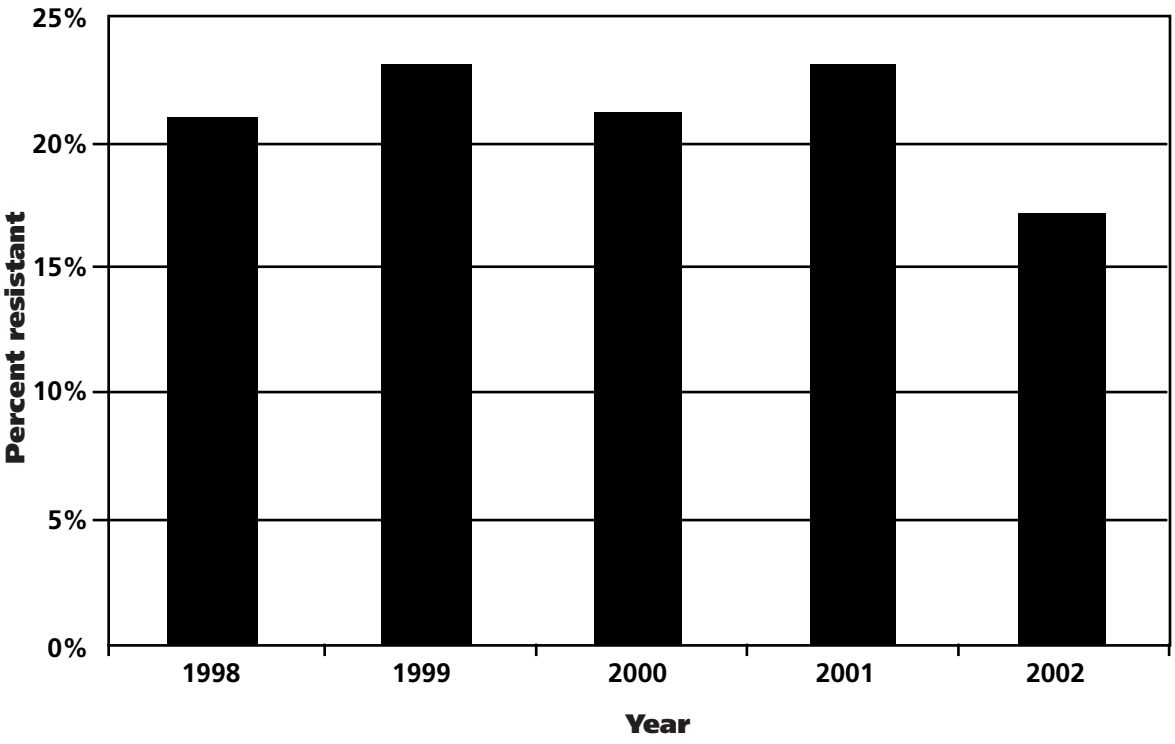
Increase in MRSA over Three Years



***Streptococcus pneumoniae* Invasive Disease:** *S. pneumoniae* (pneumococcus) is an important cause of otitis and sinusitis, pneumonia, meningitis and bactermia, and is a leading cause worldwide of illness and death in young children, debilitated persons and the elderly. Pneumococci are commonly found in the upper respiratory tract and are transmitted by person-to-person and respiratory droplet spread. Since the introduction of the pneumococcal conjugate vaccine for children in 2000, the incidence of invasive disease in the United States has begun to decline in the age groups affected by the vaccine.

Two hundred and thirty-one cases of invasive pneumococcal infection (with *S. pneumoniae* isolated from blood or spinal fluid) were reported to DOH in 2002. As many as 40% of pneumococcal infections in some parts of the US are resistant to penicillin. In Washington, intermediate or complete resistance to penicillin, (usually the antibiotic of choice) rose to 21% by 1998. After remaining somewhat stable for the intervening years, non-susceptibility decreased in 2002 to 17%. This corresponds to a small but declining trend in resistance seen in some, but not all, parts of the country. The rate of non-susceptibility to penicillin was significantly greater for children less than twelve years old (37%) than for adults (13%).

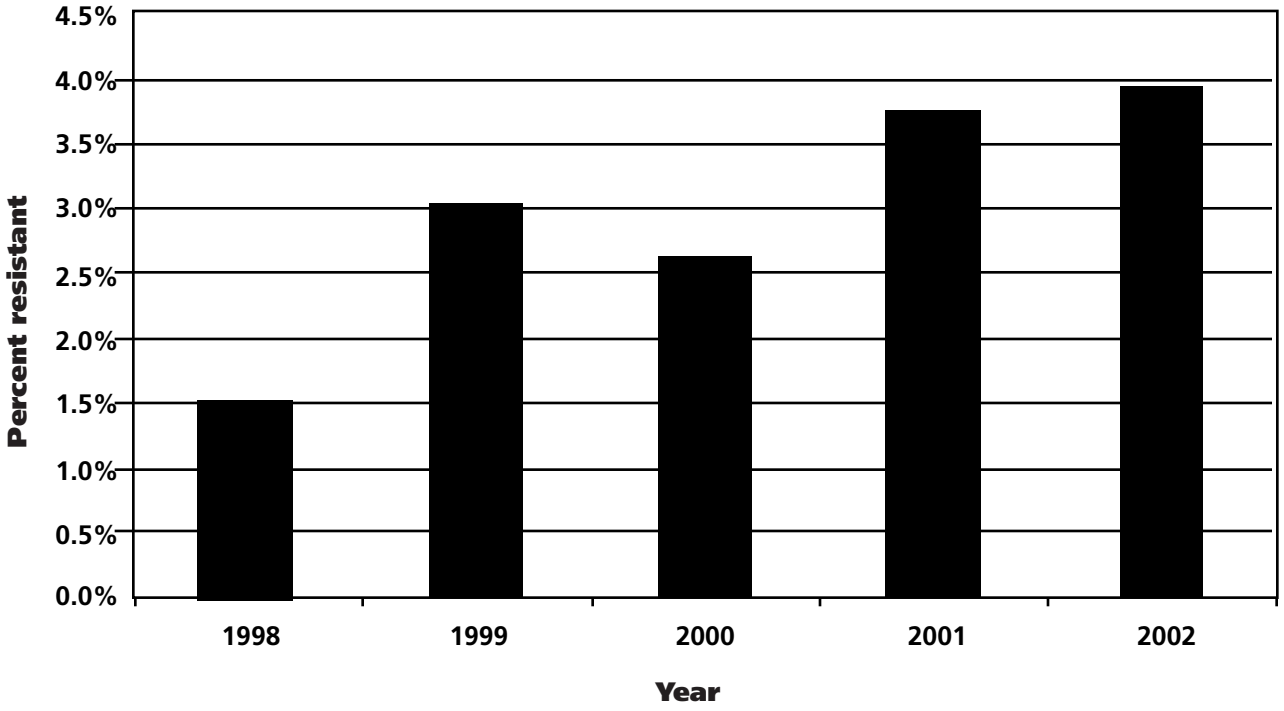
Invasive Streptococcus Pneumoniae
Percent Non-susceptible to penicillin



Vancomycin Resistant Enterococcus (VRE): Enterococci are bacteria that normally inhabit the bowels of humans and other warm-blooded animals. These bacteria have the ability to cause a variety of serious conditions in hospital patients, including urinary tract and wound infections, endocarditis, and bactermia. These organisms are inherently resistant to some antibiotics, and can acquire resistance to most others in an environment of exposure to multiple antibiotics. Vancomycin is the only drug that remains effective in many cases of enterococcal infection. Vancomycin resistance is also monitored closely because enterococci have the ability to readily exchange resistance genes with a number of other organisms for which vancomycin is an important treatment option.

VRE isolates come mainly from hospitalized patients who are colonized or infected (with either invasive or noninvasive disease) with Enterococcus. The prevalence of VRE, while at low levels, has increased over the past five years from 1.5% to almost 4 % in 2002. This is lower than the national reported average of 12%VRE isolated from hospitalized patients.

Vancomycin Resistant Enterococci (VRE)



Prevention: Prevention and control efforts consist of programs to prevent the spread of resistant organisms in health care settings, and to promote the judicious use of antibiotics. Strategies include surveillance and culturing to identify resistant organisms, the use of contact precautions by health care workers, medical practice guidelines for appropriate anti-infective therapies, public and health care provider education on antibiotic use and misuse, auditing of antimicrobial use patterns in health care organizations, and restrictions on the use of certain key drugs.

BABESIOSIS CAUSED BY A NEWLY DESCRIBED BABESIA ORGANISM –
Washington State Department of Health

Babesiosis is a potentially fatal zoonosis, caused by several species of intraerythrocytic parasites. The infection is transmitted most commonly by an infected tick, but may also be transmitted by blood transfusion from an infected donor. In the US, most cases of babesiosis are caused by *Babesia microti* and are acquired in the northeastern states where the tick Ixodes scapularis is the vector and *Peromyscus leucopus* (white-footed mouse) is the reservoir. Babesiosis is rare in Washington, but infections caused by a Babesia species, designated WA1, were reported in 1991 and 1994 in a resident of rural eastern Washington (1991) and a donor and recipient of a blood transfusion (1994).

In 2002, an infection caused by another newly identified *Babesia* organism was reported in a western Washington resident. The patient was an 82-year-old asplenic man who lived in a rural area and was exposed to tick habitats daily while he jogged or walked his dog. He was hospitalized in July 2002 with fever, hematuria, anemia, and acute renal failure. A blood smear showed the presence of intraerythrocytic organisms suspicious for *Babesia*. The initial level of parasitemia on admission to the hospital was 35%. He recovered after 26 days of treatment with clindamycin and quinine.

Specimens of his blood were forwarded to the CDC where testing was performed by indirect fluorescent antibody assay for antibodies to *B. microti, B. divergens,* and WA1 antigens. In addition, the 18S ribosomal RNA gene of the organism was amplified by polymerase chain reaction (PCR) and sequenced.

The patient's antibody titer to B. divergens rose from 1:64 at diagnosis to ≥1:4096 6 weeks later. Phylogenetic analysis showed that the organism was closely related to the bovine parasite, *B. divergens*, and secondarily to the deer parasite, B. odocoilei. Babesia DNA was detected by PCR in the patient's blood 8 weeks following the discontinuation of therapy, and he has remained well. Efforts to capture and identify possible tick vectors in areas where the patient may have been exposed were unsuccessful.

We concluded from the laboratory evidence that the patient was infected by a previously undescribed *Babesia,* closely related to *B. divergens*. The presence of the organism in the pateint's blood (documented by PCR) months after therapy suggests he had a persistent, low-grade infection, a phenomenon described with other *Babesia* species. The importance of the organism, and description of the vector, reservoir, and risk factors for infection, are not yet known, however, health-care providers and public health investigators should be vigilant for zoonotic infections caused by novel vector-borne pathogens.

CAMPYLOBACTER JEJUNI *OUTBREAK IN A CORRECTIONAL FACILITY - Washington State Department of Health*

DOH was notified by the Walla Walla County-City Health Department and Washington State Penitentiary (WSP) of four distinct outbreaks of diarrheal illness occurring among staff and inmates at WSP in March, July, October and December of 2002. *Campylobacter jejuni* was confirmed as the causative agent in each outbreak.

Epidemiological and environmental investigations were initiated in March, July and December by local, state and federal public health investigators. Case-control studies, environmental inspections, staff interviews and laboratory analysis were used to identify cases of illness, foods and other common exposures associated with illness and environmental factors responsible for, or contributing to, each outbreak.

Sixty-four suspected, probable, or confirmed cases were identified in March; 34 in July; 13 in October, 1 in November and 45 in December. Isolates of *Campylobacter* obtained from cases in each of the four outbreaks shared a pattern that was indistinguishable by pulsed field gel electrophoresis (PFGE) analysis. CDC verified that *C. jejuni* isolates with this PFGE pattern had not identified in the US during the six months preceding the outbreaks. Analysis of data from case-control studies implicated food items served by the institution kitchen, particularly those prepared in an area of the kitchen used for salad preparation, however *C. jejuni* was never isolated from any food, water or environmental samples tested. Further, no food items or food ingredients were common to all the outbreaks.

Food items significantly associated with illness for three outbreaks

Outbreak	Food item	OR (p value)
March	Tuna salad	4.8 (.002)
July	Dinner salad	6.1 (.006)
December	Pasta salad	4.5 (.04)
December	Tuna salad	6.4 (.02)

Three extensive investigations identified potential sources of contamination and led to recommendations to prevent future outbreaks at the facility. Despite changes implemented by the facility, and extensive environmental sampling to detect the source of *Campylobacter,* outbreaks continued to recur. The most remarkable feature of theseoutbreaks is the indistinguishable PFGE pattern shared by *C. jejuni* isolates obtained from cases in March, July, October and December. Had the organism persisted in a living host or an environment that allowed replication, it is unlikely that the pattern would remain unchanged. Further, *Campylobacter* is fragile and does not persist well in the environment. Laboratory evidence supports the hypothesis that each outbreak was caused by contamination from a source common to all of the outbreaks, however no such source of *Campylobacter* has been identified despite multiple epidemiological and environmental investigations.

INFLUENZA 2002 – Washington State Department of Health

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

Symptoms of influenza include fever, headache, pharyngitis, nasal congestion, nonproductive cough, malaise, and myalgias. Gastrointestinal symptoms rarely occur except in small children. The incubation period of influenza is usually1-4 days, and the virus can be transmitted from one day before the onset of symptoms until 5 days after onset, sometimes longer in children. Washington State influenza surveillance is conducted in conjunction with the CDC from October through May of the following year. nfluenza activity was mild locally and nationally during the 2002-2003 season. State activity peaked about 3 weeks later than the average peak, from the last week of February through the end of March.

Sentinel surveillance laboratories reported 220 influenza isolates, with identification of at least one influenza isolate in 18 counties; 64% of influenza was isolated from King County residents, and16% from Spokane County residents. The number of influenza isolates is reflective of population size and possibly, greater sentinel laboratory participation in these counties. Eighty-three percent of the influenza isolates were type A, and 17% type B. Of the 94 influenza A isolates subtyped, 56 (60%) were A, H1N1, (39%) were A, H3N2, one (1%) was A, H1N2. Twenty-six percent of surveillance isolates were obtained from patients four years of age or younger, 33% 5-19 years of age, 28% 20-59 years of age, and 5% were 60 years of age or older. Age for 7% of the patients was not reported. The influenza strains circulating in Washington State and the US in 2002-2003 were antigenically similar to those contained in the 2002-2003 vaccine (A/New Caledonia/20/99-H1N1, A/Moscow/10/99-H3N2, and B/Hong Kong/330/01). Trivalent influenza vaccine for 2003-2004 will contain antigens of the same strains.

Influenza Outbreaks: Thirty-two long-term care facilities (LTCF) participated in sentinel LTCF surveillance; several outbreaks of respiratory illness were investigated in LTCFs, however, none had influenza confirmed as the etiology. Two outbreaks of respiratory illness in large institutions other than nursing homes were confirmed as influenza A.

Influenza Immunization rates: a survey of 44 LTCFs in 22 counties reported an average influenza vaccination rate among their residents of 85% and among staff of49%*.

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

PERTUSSIS OUTBREAK - Skagit County Health Department

Outbreak notification: On May15, 2002, Skagit County Health Department (SCHD) was notified of a + DFA and culture for pertussis by the Washington State Department of Health Public Laboratories (PHL) on a 9 monthold female, who was up to date in DTaP immunization. We were notified of a + PCR for pertussis by a commercial laboratory on May 17,2002 on a 10 year old female 4th grade student at School A. And on May 20, 2002, a classmate of the index case-patient was reported to SCHD with a clinical diagnosis (not laboratory confirmed) of pertussis by her physician.

Investigation of events: DOH was immediately notified of the possible outbreak of pertussis :3 cases identified within six days. School A was notified on May18 of the index case of pertussis. A letter was drafted by SCHD for parents of classroom contacts and distributed by School A on May20, 2002. Case finding was enhanced by requesting that the local clinical laboratory inform SCHD daily about any cultures for pertussis that were sent to the PHL. Beginning the same day, alerts on the pertussis outbreak were distributed to county health care providers, laboratories, hospitals, schools and media by SCHD's Facts by Fax. A series of six alerts updated the community about the outbreak and reminded providers to report suspected cases of pertussis. Other efforts to alert the community included a televised Board of Health presentation, articles in the local newspapers and coverage on King 5 TV. Over the next 4 weeks, more than 100 contacts were evaluated for symptoms of pertussis, referred to their health care providers for diagnostic testing and treatment or prophylaxis. During this time, more than 19 confirmed or probable epidemiologically-linked cases of pertussis were identified, followed by identification of unrelated cases in the community.

Outbreak statistics: We reported a total of 62 suspect, probable and confirmed cases of pertussis as follows:

- 87 specimens sent to PHL for DFA & culture
- 4 specimens DFA +
- 4 specimens Culture +
- 6 specimens DFA & Culture +
- 1 specimen PCR & Culture +
- 1 specimen PCR + only
- 25 diagnosed by a health care provider, not necessarily reported as case
- 26 met the case definition and epi-linked, without laboratory confirmation
- 18 met the case definition without laboratory confirmation or apparent epidemiologic link

Outbreak summary: Early in the outbreak, we recognized a constant need to communicate with providers throughout the outbreak to assure recognition, diagnosis, treatment of clients, and to encourage prophylaxis of household contacts to prevent spread of pertussis. Providers failed to recognize pertussis in their clients and household transmission may have occurred when providers failed to treat contacts or waited for DFA or culture confirmation of pertussis before beginning appropriate therapy. However, neither DFA or culture are always reliable for diagnosis, therefore we recommended that providers diagnose and treat based on symptoms that met the case definition for pertussis. Most providers treated with appropriate antibiotics when they suspected pertussis. We had good cooperation and communications with the laboratories, schools, and hospital infection control. Reporting of suspected cases by local laboratories, dissemination of health alerts via Facts by Fax and telephoning providers were our biggest asset in curtailing the outbreak. At the time of this outbreak, there was a nationwide shortage of DTaP vaccine and many children did not receive their 4th and 5th dose of vaccine. However, the DOH Immunization Program obtained enough vaccine to immunize all children in Skagit County through 6 years of age. Because resources of SCHD were limited to 2 FTE Communicable Disease nurses and 1 FTE Immunization nurse, providers were supplied with enough vaccine to immunize all clients under 7 years of age and strongly encouraged to do so. However, as effective vaccine is not available for older children and adults, they may represent a significant reservoir for pertussis, limiting the effectiveness of immunization.

Statistics for our outbreak include the following:

- Only 16 cases were laboratory confirmed
- Ages of cases ranged from 4 mo. – 73 yrs
- 5 cases identified were under 1 yr. of age
- 18 cases were 1 yr. – 5 yrs. of age
- Only 5 cases had never received any DTP immunizations
- Household members of 10 cases did not receive antibiotic preventive prophylaxis
- 8 cases were not age-appropriately immunized for pertussis
- Immunization status of 14 cases was unknown
- 7 cases were epi-linked to the School A
- 32 cases lived in Mt. Vernon, 22 cases lived in Burlington, 2 cases lived in Sedro Woolley, 4 cases lived in Anacortes, and 2 cases lived in Bow

Conclusions:

1. Diagnosis of cases increased with provider awareness, as few providers obtain cultures for pertussis on their clients with a cough illness.
2. Cases may have decreased over the summer because school was out.
3. To prevent hospitalizations or death among infants, prophylaxis of contacts in day care facilities or households with children under 1 year of age is crucial.
4. Focal outbreaks may lead to disease in the general community – as our most recent case of laboratory-confirmed pertussis occurred in a 73 year-old male with no known association with School A.

Working with commercial laboratories can be a useful means of case finding.

PUBLIC HEALTH LIAISONS - Spokane Regional Health District

Over the last 2 years, the Spokane Regional Health District (SRHD) has undertaken a new program to increase public health surveillance in our community.

Health educators called Public Health Liaisons (PHLs) visit medical practices, laboratories, nursing homes and correctional facilities two to four times yearly. The purpose of these visits is to increase reporting of communicable disease, to provide a link between SRHD and the medical community, and to promote SRHD programs. Prior to initiating the visits, the PHLs developed a comprehensive database of health care providers, including veterinarians, and a Communicable Disease Reporting and Resource Manual. The manual contains a SRHD phone list, disease reporting forms, current treatment information for STDs, algorithms for proper diagnosing and reporting of hepatitis, information on vaccine preventable diseases, and materials on antibiotic resistance among other materials. Manuals are tailored to provider needs depending on the type of practice/facility served.

SRHD has strengthened relationships with area providers as a result of the Liaison visits. Communication has been enhanced by using the database and LAN FAX to rapidly distribute urgent medical information to providers. The Epigram, a monthly newsletter sent to all providers, covers a wide range of (mostly) infectious disease topics. It also provides case numbers of some notifiable conditions reported to SRHD, closing the reporting loop. Communication with providers has increased markedly with indications of an increase in the reporting of certain communicable diseases as a result of this program.

RABID CAT INVESTIGATION - Walla Walla County Health Department

On November 4, 2002, the Walla Walla County Health Department received a phone call from a local veterinarian concerned about rabies in a cat that he had hospitalized with neurologic symptoms. The domestic cat was brought in by its owners who reported that it was behaving abnormally, including scratching its head and vocalizing. A family member that had tried to pick it up and soothe the cat had been bitten on the left forearmt. During the veterinary examination, the cat was agitated, aggressive and had a seizure. In consultation with the Walla Walla County Health Department, the animal was euthanized, brain tissue tested at the Washington State Public Health Laboratory indicated the cat had rabies. Samples were forwarded to CDC for rabies virus variant identification.

An investigation team composed of a sanitarian, public health nurse, environmental health director and nursing director interviewed the family to discuss potential exposures that the family, friends or neighbors may have had with the cat. During the interviews, the investigators discovered that the cat was unvaccinated and allowed to roam freely in the neighborhood during the day.

Ten potential human exposures to the rabid cat were identified including eight family members and two neighbors. Three weeks was used as a conservative timeframe for determining who may have been exposed to the cat during the time it could have been shedding rabies virus from saliva. The investigators discussed the rabies virus, its transmission, incubation and exposure protocols and provided information about rabies post-exposure prophylaxis (PEP) and its side effects. All ten people who had potential exposure were referred to their health care providers for rabies PEP with rabies immune globulin and rabies vaccine. No major side effects were associated with the PEP

During the interviews it was found that the family also had two dogs that were not currently vaccinated against rabies. Due to the possible exposure of the dogs to the rabid cat and/or to the unknown animal that had exposed the cat, the dogs were euthanized and tested for rabies virus; both were negative.

On November 8, 2002, CDC confirmed that the cat had been infected with a bat variant of rabies virus. Bats are the only known reservoir of rabies in Washington State. Identifying the virus variant ruled out the possibility that this cat could have been infected by another terrestrial rabies reservoir, such as a raccoon or skunk. This is the first case of feline rabies recognized in Washington in approximately 26 years.

TUBERCULOSIS OUTBREAK IN HOMELESS PERSONS - Washington State Department of Health

In 2002, the Tuberculosis Control Program of Public Health – Seattle & King County (PHSKC) reported a 30-year peak in cases of tuberculosis (TB), with a 2-fold increase among the homeless compared with the previous 3 years. PHSKC, DOH and CDC collaborated in an investigation of a recent outbreak of Mycobacterium tuberculosis (MTB) among the homeless in Seattle to: 1) identify high-risk contacts, 2) evaluate those contacts for tuberculosis (TB) infection, and 3) initiate additional control measures.

We reviewed patients' medical records and estimated the duration of their infectiousness, based on clinical and microbiological findings. To identify sites where TB transmission was most likely to occur, and which contacts were most likely to be exposed at those sites, data from facilities frequented by the homeless were reviewed to document visits by infectious case-patients and the results of staff and client tuberculin skin testing. Contacts were identified through patient interviews and review of homeless facility logbooks. M. tuberculosis isolates from county TB patients were analyzed using restriction fragment length polymorphism (RFLP) techniques. Outbreak-associated case-patients were defined as: having an MTB isolate that shared an indistinguishable 15-band DNAFP, or if DNAFP results were pending, had an epidemiological link to an outbreak associated case-patient.

From January 2002 through April 15, 2003, 33 of 49 homeless case-patients with TB met our case definition. Isolates from 22 outbreak-associated case-patients shared a 15-band DNAFP, and 11 had an epidemiologic link to a case and DNAFP is pending. All but one of the outbreak-associated case-patients were US-born, 26 (79%) are male, 17 (52%) are American Indian/Alaska Native (AI/AN), and 29 (88%) have pulmonary TB. Of the patients with pulmonary disease, 20 (69%) had acid-fast bacilli identified on sputum smear at diagnosis. Seven (21%) of the outbreak-associated patients are co-infected with human immunodeficiency virus (HIV), including five AI/AN. Between January 1 and April 15, 2003, intensive screening of approximately 300 high-risk contacts using chest radiograph and/or sputum examination and culture identified 8 (24%) of the outbreak-associated case-patients.

A large, ongoing TB outbreak involving a high proportion of AI/AN patients is ongoing among homeless persons in King County. Focused, intensified screening efforts for early detection and treatment of both TB disease and latent TB infection are ongoing to control transmission in the King County homeless community. TB controllers, particularly those from western states, need to consider the possibility of unrecognized outbreaks when TB occurs among homeless persons in their community.

APPENDIX V POPULATION DEMOGRAPHICS

Washington State population estimates, 1985-2002 Office of Financial Management

Year	Estimate
1985	4,384,100
1986	4,419,700
1987	4,481,100
1988	4,565,000
1989	4,660,700
1990	4,866,692
1991	5,000,400
1992	5,116,700
1993	5,240,900
1994	5,334,400
1995	5,429,900
1996	5,516,800
1997	5,606,800
1998	5,685,300
1999	5,757,400
2000	5,894,121
2001	5,974,900
2002	6,041,700

Washington State population by age and sex

Office of Financial Management April 1, 2002 Forecast

Age (years)	Male	Female	TOTAL
<1	40228	38393	78621
1	41233	39357	80590
2	40557	38462	79019
3	41251	39358	80609
4	41253	39208	80461
5	41157	39291	80448
6	41731	39639	81370
7	42235	40275	82510
8	42945	40811	83756
9	44922	42306	87228
10-14	228573	216758	445331
15-19	225024	212805	437829
20-24	214102	202630	416732
25-29	200215	190361	390576
30-34	229497	218235	447732
35-39	233871	228423	462294
40-44	249579	247735	497314
45-49	236934	239462	476396
50-54	208576	211601	420177
55-59	161523	163624	325147
60+	403364	504196	907560
TOTAL	3008770	3032930	6041700

Washington State population estimates by county

Office of Financial Management April 1, 2002 Forecast

County	Estimate
Adams	16,600
Asotin	20,700
Benton	147,600
Chelan	67,600
Clallam	64,900
Clark	363,400
Columbia	4,100
Cowlitz	94,400
Douglas	33,100
Ferry	7,300
Franklin	51,300
Garfield	2,400
Grant	76,400
Grays Harbor	68,400
Island	73,100
Jefferson	26,600
King	1,774,300
Kitsap	234,700
Kittitas	34,800
Klickitat	19,300
Lewis	70,200
Lincoln	10,200
Mason	49,800
Okanogan	39,800
Pacific	21,000
Pend Oreille	11,800
Pierce	725,000
San Juan	14,600
Skagit	105,100
Skamania	9,900
Snohomish	628,000
Spokane	425,600
Stevens	40,400
Thurston	212,300
Wahkiakum	3,800
Walla Walla	55,400
Whatcom	172,200
Whitman	40,600
Yakima	225,000
Washington State	6,041,700

Washington State County Map