

Infectious Disease

Fast Facts

- The pertussis incident rate has risen in Island County and in Washington State over the past five years.
- From 1996 through 2000, new cases of AIDS have been decreasing in Island County, however HIV does not appear to be slowing down. This is comparable to national and state trends.
- Children should receive nineteen immunizations by age two. Adults 50 years of age and older should be vaccinated against influenza and those over the age of 65 should receive pneumonia vaccine.
- Chlamydia is the most frequently reported sexually transmitted disease (STD) in Island County. Both chlamydia and gonorrhea are reported to be increasing in the NW region of Washington with over 80% of the cases occurring among those ages 15-24.
- The National Vaccine Advisory Committee has identified four major barriers to immunization in the United States: 1) missed opportunities for administration of vaccines; 2) shortfalls in the health care delivery system; 3) inadequate access to care; and 4) lack of public awareness and public requests for immunization. (*The Health of Washington*)

Identified Issues

- ***Island County had higher than average enteric disease outbreaks of salmonella, shigella and giardiasis in 2000, and Norwalk-like virus in 2002.***
- ***Pertussis outbreaks: In 1999 (34 cases) and in 2000 (10 cases). Lower childhood immunization rates is an emerging issue in Island County and is currently under exploration by the ICHD.***
- ***Measles outbreak: After years of no reported cases, Island County had two cases of measles in 2001. Studies have suggested that the primary cause for measles is the failure to immunize children at the appropriate age. (The Health of Washington)***
- ***STD rates are high: In 1998 Whidbey Island had 185 cases of STDs, 107 reported by Whidbey Naval Hospital. The Navy's Preventive Medicine Department has been increasingly reporting their cases, which has increased the numbers. In 1998 gonorrhea rates were very high. In 2001-2003 Island County had a high rate of chlamydia reported, with rates doubling from 2001 to 2002. Physicians in private practice under-report STDs.***

■ **Adult immunization: Pneumonia and influenza deaths together constitute the 6th leading cause of death in Washington State, and 7th in the United States. In the 2000-2001 BRFSS, 67.4% of adults older than 65 years of age received shots for flu and 70.6% for pneumonia.**

■ **76% of BRFSS respondents had a tetanus shot in the past 10 years, and for 10.8% of the respondents it had been more than 10 years and 13.1% didn't know when they had their last tetanus shot.**

Background and Introduction

Infectious disease is transmitted from a host to a person. The host can be a person; common vehicle, such as water, blood, or contaminated food; air, including droplet-spread diseases such as measles, tuberculosis, and streptococcal diseases; or a vector, such as insect or animal bites. Communicable disease threats include both new diseases such as AIDS, Lyme disease, Hantavirus pulmonary syndrome, and West Nile virus as well as old diseases such as drug resistant forms of malaria, tuberculosis, and bacterial pneumonia.

Pathogenic microbes can be resilient, dangerous foes. Although it is impossible to predict their individual emergence in time & place, we can be confident that new microbial diseases will emerge.

—Institute of Medicine, Emerging Infections: Microbial Threats to Health, 1992

Control of disease has been a major reason for declining death rates in the nineteenth and twentieth centuries. Advances in medical technology, such as the development of vaccines and antimicrobial drugs, and in public health practices, such as the treatment and protection of drinking water, and the proper storage, handling, and preparation of food, have vastly improved the ability to identify, treat and control the spread of many infectious diseases. Despite great progress in controlling infectious disease, emerging diseases, such as HIV/AIDS, and traditional diseases, such as TB, that have become increasingly resistant to drug therapy are still of great concern and a potential threat to public health.

With rising rates of chronic disease in the United States, it is also extremely important to monitor and seek treatment of infectious causes of common chronic diseases including *Helicobacter pylori* (peptic ulcers), Hepatitis B and C (cirrhosis and liver cancer), Human immunodeficiency virus (Kaposi's sarcoma), Human papilloma virus (cervical cancer, recurrent respiratory papillomatosis), and Epstein-Barr virus (B-cell lymphoma).

The occurrence of infectious disease is measured by reports from local health care providers and labs, which are required by Washington State law to report over sixty communicable diseases. Prompt reporting enables health department staff to identify exposed persons who are at risk of acquiring disease, detect outbreaks, follow trends, and limit the spread of disease. Although the law requires reporting, there are often inconsistencies in reporting, documentation and diagnosis among different providers, and it is believed that many communicable diseases, especially those that are less severe or are associated with sexual contact, are seriously under-reported. The Health Department also receives many calls about non-reportable communicable diseases such as chicken pox, lice and scabies.

Background, Interventions and Findings

Childhood Vaccine-Preventable Diseases

Washington State law requires that students have certain recommended immunizations before they enter school. Over the past several years, immunization rates of school-aged children in Washington have been near 95%. However, immunization rates for children under the age of two are significantly lower, only about half of all two-year-olds in Washington were fully protected against preventable disease in the late 1980s and early 1990s. Because this is when children are most susceptible to communicable diseases, 80% of childhood vaccinations are recommended during a child's first two years of life.

Washington State makes vaccine available to providers at low or no cost. Immunization clinics are held weekly throughout the county at public health clinic sites. Flu shots are available at several accessible locations each fall, and pneumonia is available all year.

The Centers for Disease Control and Prevention's National Immunization Survey provides ongoing national estimates of vaccination coverage among children aged 19-35 months. The 1997 survey showed that only 76% of those children surveyed had received the initial primary series of vaccines. This includes four or more doses of diphtheria and tetanus toxoids and pertussis vaccine/diphtheria and tetanus toxoids, three or more doses of poliovirus vaccine, one or more doses of measles-containing vaccine, and three or more doses of Haemophilus influenzae type b vaccine. In Washington State during that same year, 80% of the children surveyed had received this series. Island County, however, in two childhood immunization studies, has had much lower rates of childhood immunization.

Measles

Measles is a highly contagious viral illness with signs and symptoms including a rash, fever, headache and sensitivity to light. Complications of measles are more common among children under age five and adults over age twenty. Serious complications from measles include pneumonia, ear infections, encephalitis and seizures that can lead to death or lifelong consequences of brain damage or hearing or vision impairment.

The incidence of measles in the United States steadily declined after the introduction of measles vaccine in 1958. However, in the latter half of the 1980s and early 1990s, an increase in the number of cases was observed. Nationally, the overall rate for measles was 40% higher in 1990 than in 1989, with nearly half of the cases occurring in preschoolers. The primary cause for measles epidemics may be the failure to immunize children at the recommended age.

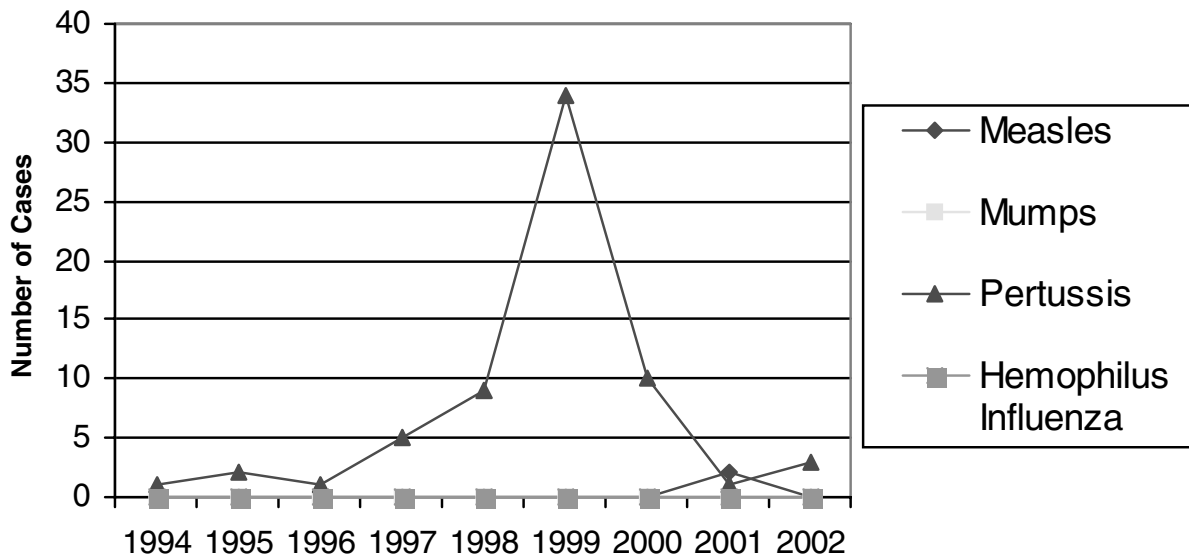
Island County had 2 cases of measles reported in 2001. However, experiences in Clark County, Washington and British Columbia demonstrate the potential vulnerability of a population that is not adequately immunized. In Clark County, between the months of March and July of 1996, there were thirty-one cases of laboratory-confirmed measles and two other probable cases—a total of thirty-three. Between January and March of 1997, British Columbia had an outbreak of 283 cases.

Pertussis

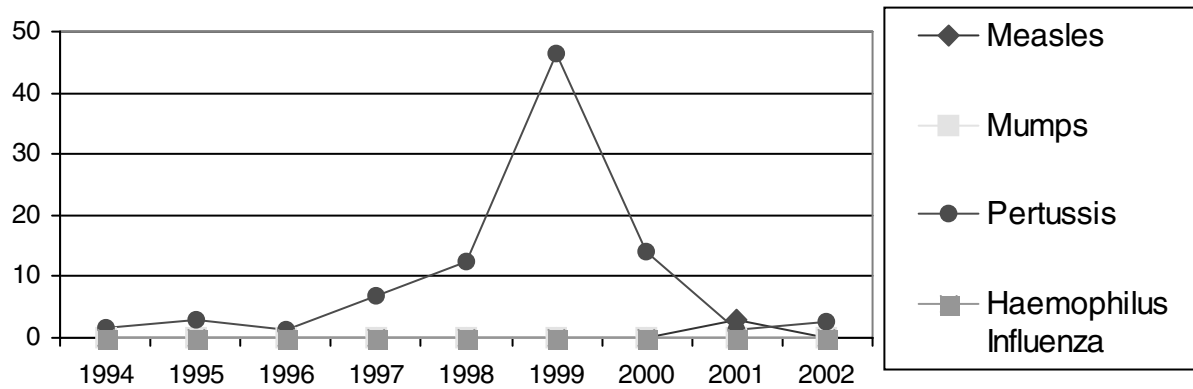
Pertussis is an acute bacterial disease that may range from mild respiratory symptoms to a full-blown syndrome characterized by episodes of repeated violent coughing with intervening high-pitched whoops. This disease is highly contagious during the early stage before coughing begins, as well as just when the coughing begins. Primarily airborne droplets transmit pertussis bacteria. Infants under six months of age, adolescents, and adults often do not have the characteristic whoop and may not be accurately diagnosed. Most deaths from pertussis occur in infants under one year of age, primarily from pneumonia.

In the United States, pertussis incidence decreased from the 1940s, when vaccine became widely available, until the mid-1970s when the incidence began to rise. A leading hypothesis is that natural, longer lasting immunity, which resulted from widespread childhood infection in the pre-vaccine era, has been replaced by twelve years of artificial immunity provided by the vaccine. During a pertussis outbreak in Seattle-King County in 1995, 40% of the cases were adults. In Washington, the annual incidence of pertussis rose from 4.7 per 100,000 in 1990 to 15 per 100,000 in 1996, the highest rate since 1962, and rates continued to remain at higher levels from 1997-2000. In Island County pertussis rates were fairly low from 1990-1997. However, in 1998 8 cases occurred, with a large outbreak in 1999 (34 cases) and we had 10 cases in 2000. In 2001 we had 1 lab-confirmed case of pertussis and many more clinically treated, and we had 3 cases in 2002. Pertussis incident rates ranged from 12.4 - 46.4 during that time period.

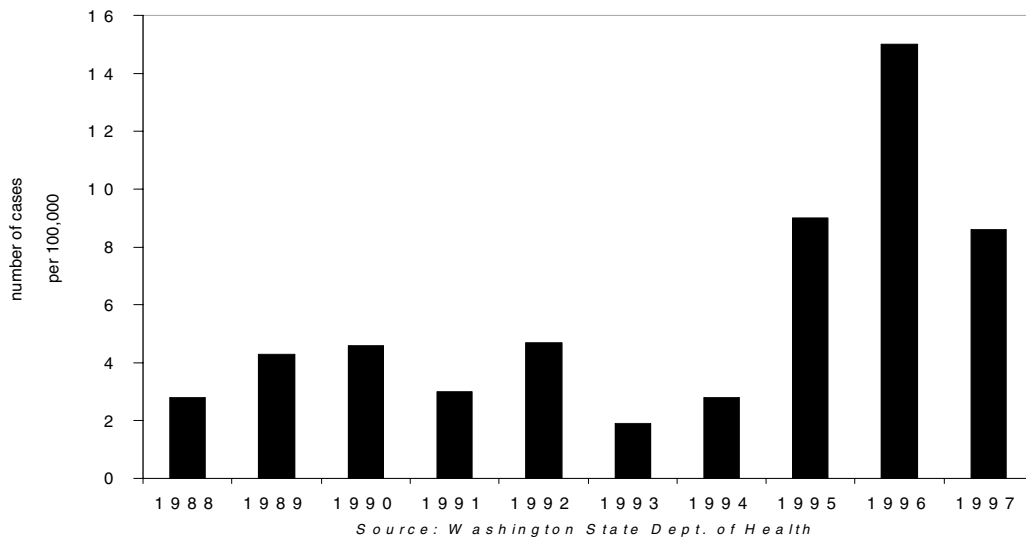
Vaccine Preventable Disease (Numbers), Island County 1998-2002



Vaccine Preventable Disease Rates, Island County 1998-2002



Pertussis Rates, Washington State, 1988-2000



Haemophilus influenzae type b

Meningitis is the most common form of *Haemophilus influenzae type b* (Hib) disease, accounting for 50-65% of the cases. Even with appropriate treatment, the mortality rate is 2-5%, and 15-30% of survivors have hearing impairment or residual neurologic effects. Since the Hib vaccine began being widely used in 1987, there has been a dramatic decrease in cases of Hib disease statewide. Island County did not experience any cases of Hib disease between 1996 and 2000, however, we had a case in 2002.

Other Vaccine-Preventable Diseases

Influenza and Pneumonia

Influenza, commonly called “flu,” is a viral respiratory disease that usually occurs during the winter. Because the strains of influenza change from year to year, health experts are continually tracking which strains pose the most serious threat worldwide in order to determine which three strains need to be included in the yearly flu vaccine. The viruses in the vaccine are inactivated.

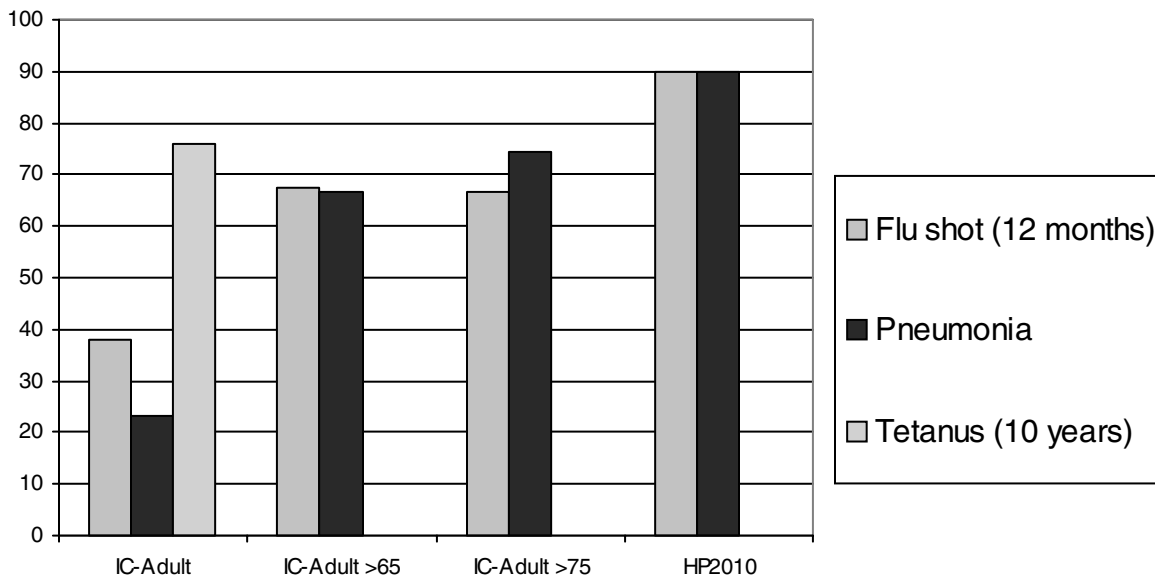
Pneumonia can also be caused by a number of different organisms. There are over 30 different strains of bacteria that cause disease. Prevention for some types of pneumonia is possible with a pneumonia vaccine. Influenza vaccine is recommended for individuals 50 years and older. Pneumonia vaccine is recommended for individuals 65 years of age and older and for those with chronic illness such as heart or lung disease. Both the influenza and pneumonia vaccines are recommended for people with chronic illness, because these populations are especially susceptible to complications from illness.

Vaccination levels are estimated to be at only 58% of people over 65 and less than 30% of people under 65 who are at high risk. In 1998, U.S. influenza rates were 64% for adults greater than 65 years and only 46% of persons greater than 65 years had ever received a pneumonia vaccine. Pneumonia and influenza deaths together constitute the 6th leading cause of death (30,000-34,000). In Island County, 67% of BRFSS respondents' age 65 or older received a flu vaccine. Most said they received their flu immunization at a doctor's office (25%) or a military or naval base (18%). Camano Island residents were also more likely to receive their flu shots at a doctor's office (48%). Of respondents age 65 or older 72.5% received a pneumonia vaccine. Island County's 1999 rate for hospital admissions related to pneumonia and influenza was 369.11 per 100,000. The State's rate was 341.73 per 100,000 in 1999. Island County's age-adjusted death rate from pneumonia and influenza 1996 to 2000 ranged from 12.3 to 34.3 per 100,000 compared to the State's rate of 18.6 to 34.3 per 100,000.

Tetanus

Tetanus is an acute disease caused by the introduction of tetanus spores into the body, usually through a puncture wound contaminated with soil or animal feces. Most cases in the United States occur in the elderly with the case-fatality rate being highest in infants and in those greater than 80 years old. Since 1988, there have been fewer than 10 cases of tetanus in Washington State, one case that occurred in San Juan County in 1989. Island County BRFSS also asked respondents about the status of their tetanus immunizations. Over three-quarters (76%) said they received their last tetanus shot

Immunization Rates, Island County, 2000-2001



within the past 10 years. Men were more likely to say they had received a tetanus shot within the past ten years (80%) than were women (72%).

Barriers to adult immunization of other vaccine preventable diseases are people not knowing immunizations are needed, misconceptions about vaccines, and a lack of recommendations from health care providers.

Viral Hepatitis

Several distinct diseases are grouped together under the heading of viral hepatitis. Though they are all caused by viruses and have similar symptoms, their modes of transmission, epidemiology, disease courses, and prevention methods differ.

Hepatitis A

Hepatitis A is spread through fecal-oral transmission (ingesting contaminated feces) that generally occurs through direct contact (including casual and sexual). Consuming contaminated water or food, or raw or undercooked shellfish may also transmit it. Hepatitis A is generally an acute disease characterized by fever, nausea, abdominal discomfort and jaundice. Recovery is complete but may be prolonged, especially in adults.

The general public often hears about hepatitis A through a public health alert in association with an infected restaurant employee. If a food handler is identified with hepatitis A, the Health Department determines public risk, and may issue an alert advising patrons of the affected food establishment to obtain immune globulin injections to prevent disease. In Washington, annual hepatitis A rates have fluctuated widely over the past 15 years, but seem to be on the decline. In Island County the number of cases between 1996 and 2000 has averaged about 2.4 per year. Island County had 4 cases of Hepatitis A in 2002, resulting in one death. A vaccine is now available for Hepatitis A and is recommended for those at increased risk.

Hepatitis B

Hepatitis B is transmitted through sexual contact, injection drug use, occupational exposure, household contact, transfusion of contaminated blood, or at birth from an infected mother to her child. About 6-10% of newly infected adults become chronic carriers who are potentially infectious to others. As high as 30-90% of infected young children may become chronic carriers and go on to develop liver cirrhosis or liver cancer.

Since 1992, hepatitis B vaccination has been recommended for all children beginning at birth. In 1996, these recommendations for vaccination were extended to include all 11 and 12-year-olds not previously vaccinated. In 1997, Washington State law began requiring that all children entering childcare or kindergarten be vaccinated for Hepatitis B. All pregnant women should be screened for hepatitis B to prevent transmission to their infants. Vaccination is also recommended for intravenous drug users, sexually active homosexual and bisexual men, heterosexual women and men with multiple sex partners or exposure to prostitutes, inmates of long-term correctional facilities, health care and public safety workers who may be exposed to blood or

blood products, hemodialysis patients, patients with bleeding disorders who may receive blood products, household contacts and sexual partners of hepatitis B carriers, and some international travelers.

Washington State Labor and Industry regulations require that workers with significant risk for exposure receive education regarding hepatitis B and other blood-borne pathogens in addition to being offered vaccination. Prior to 2001 only the acute form of hepatitis B was reportable in Washington State. Reported cases therefore underestimated the true number of cases of this disease, since chronic carriers are often asymptomatic and not counted. From 1996 to 2000, there were a total of two reported acute cases of hepatitis B in Island County. However, in 2001, there were 7 cases and in 2002 there were 5 cases. Data is not yet available on the number of chronic Hepatitis B cases. This data will give us a more accurate number of those infected with the disease.

Hepatitis C

Of the other non-A non-B types of hepatitis, hepatitis C is the most common. Prior to screening of donor blood, hepatitis C was believed to be responsible for 90% of post-transfusion hepatitis infections in the United States. In Washington, intravenous drug users are a group of people at increased risk for disease. The magnitude of transmission risk from person to person or through sexual contact has not been well documented. In the United States, almost 4 million Americans are infected with the hepatitis C virus. Approximately 600 persons die each year of liver failure after contracting hepatitis C. Almost half of all persons who get hepatitis C never fully recover and are carriers of the disease for the rest of their lives. A specific test to detect hepatitis C has only been available since 1990. There is currently no vaccine for hepatitis C. As with hepatitis B, chronic hepatitis C disease is now reportable. Island County reported no cases of hepatitis C between 1996 and 2000. However, since new reporting regulations have started to make available a more accurate number of those infected with chronic disease, Island County had 17 cases in 2001 and 25 cases in 2002.

Tuberculosis

Tuberculosis (TB) is a mycobacterial disease that usually involves the lungs, although it can occur in almost any part of the body. TB is spread through exposure to airborne droplets from the sputum of people with infectious TB. After a decades-long decrease in TB cases reported in Washington and the United States, TB has re-emerged as an important communicable disease. Contributing factors include immigration to the US from countries with epidemic HIV and transmission of TB in congregate settings, such as correctional facilities, health care facilities, and homeless shelters. TB cases peaked in 1997, when 305 cases (5.4 cases per 100,000) were reported in Washington State.

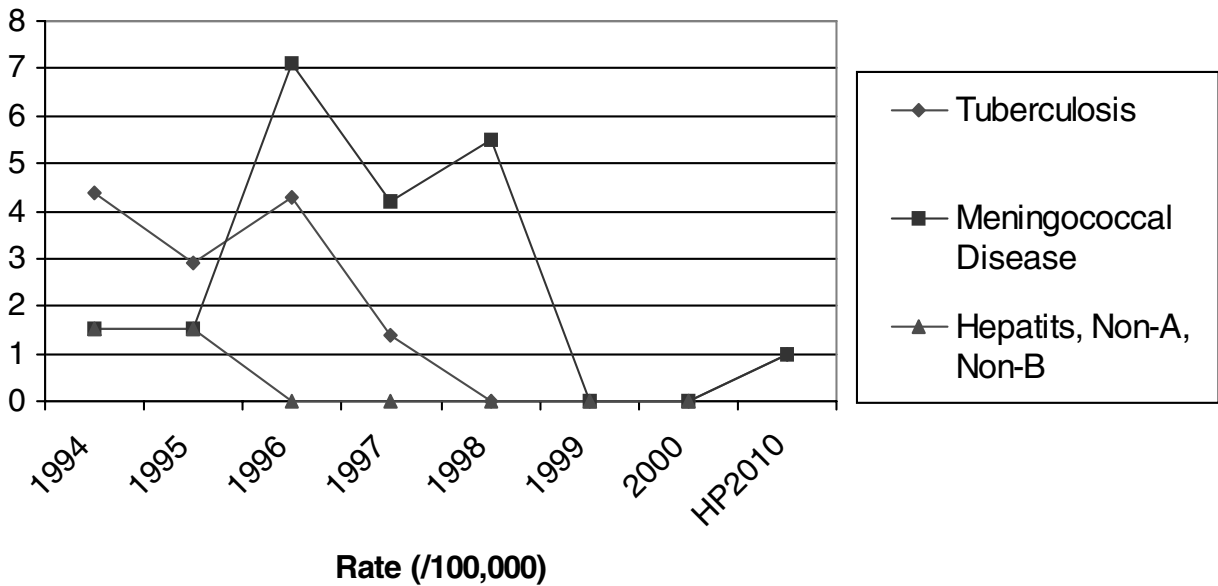
The Island County Health Department regularly performs a number of TB skin tests (PPD). In 2001 they did 525 PPDs, 25 were positive and most needed preventive medication. Only one was an active case and 24 were latent infections. In 2002, ICHD performed 352 PPDs, with 30 positive responses. Thirteen of those received INH (preventive medication) for 9 months and one was an active case.

A major concern in the treatment of TB is the emergence of drug-resistant strains. In 1994, 15% of all TB case specimens in Washington were resistant to at least one anti-tuberculosis drug, and in 1997, that number increased to 17%. Multiple-drug resistant TB, however, was found in only 2% of cases in Washington.

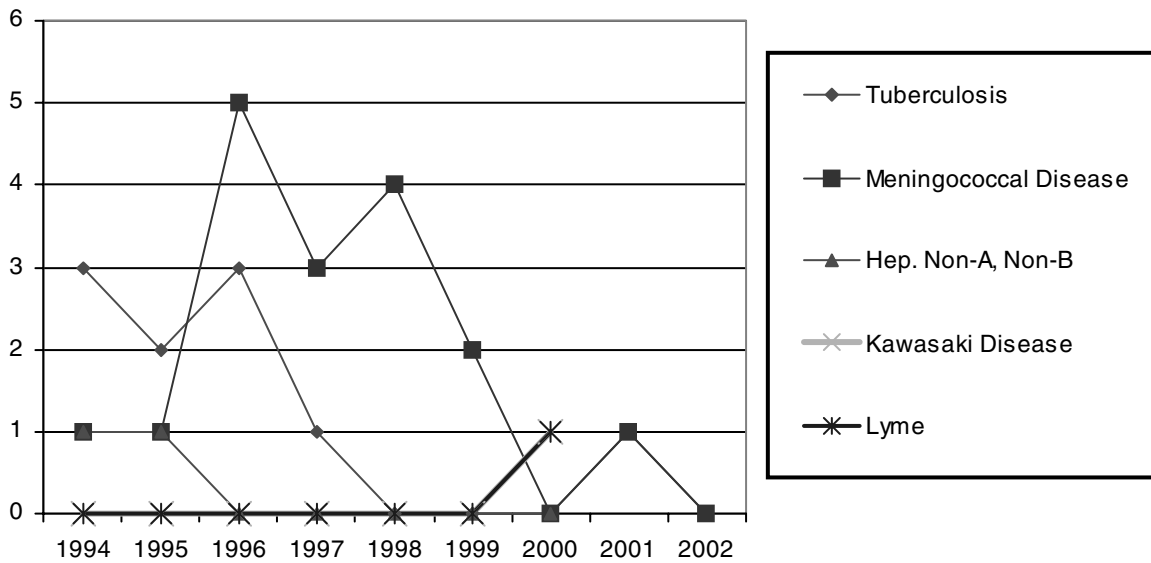
Treatment for multiple drug-resistant TB is longer, more expensive, and can be less effective.

TB surveillance and prevention efforts have increased in Washington State. People at high risk—some immigrants, as well as those in alcohol/drug treatment settings, jails, health care settings and shelters— are tested regularly. A positive skin test indicates that the person has been exposed to TB and is in need of further testing to determine if the disease is active. Positive skin tests are referred to the Public Health Department for further evaluation. In the event of active disease, Public Health communicable disease nurses investigate contacts and supervise treatment. Some individuals without active disease are also treated with antibiotics to prevent activation and transmission of the disease.

Infectious Disease (Rates), Island County, 1994-2000



Infectious Disease (Numbers), Island County, 1994-2000



Sexually Transmitted Diseases (STDs)

Sexually transmitted diseases are a serious concern to public health because they are highly infectious and can result in long-term consequences. The most prevalent reportable STDs are chlamydia, genital herpes, gonorrhea and nongonococcal urethritis (NGU). The incidence of STDs is indicative of sexual risk-taking behavior. Populations with high rates of STDs are at greater risk for HIV, hepatitis B, sterility and pelvic inflammatory disease (PID). Also, STDs can be passed from mother to baby during childbirth. Many STDs are asymptomatic and about 86% of STDs occur in people age 15-29 years old.

The sensitive nature and social stigma of STDs contribute to problems in diagnosing and reporting. A number of national studies have concluded that sexually transmitted diseases are underreported. For confidentiality reasons, people may travel outside their county of residence to be treated and may not use their actual name and address. Also, sexual contact tracing and partner notification may be incomplete, leading to undiagnosed and untreated cases. Lapses in reporting by health care providers and labs may also occur.

Sexuality education, certain contraceptives, counseling, targeting and treatment of high risk populations have been shown to be effective in slowing STDs through more responsible sexual behavior and primary prevention. In 2002, Whidbey Island had 265 cases of STDs, 41% reported by Whidbey Naval Hospital. Island County's rate of STDs in 2002 was 363 per 100,000. This compares to a Washington State rate of 330/100,000.

Syphilis

Syphilis is the oldest recognized sexually transmitted disease. Untreated syphilis infection can have serious consequences including heart abnormalities, mental disorders, blindness, neurological problems, and death. Among pregnant women, trans-placental transmission of syphilis is a potential cause of congenital abnormalities and fetal loss. Cases of primary and secondary syphilis decreased steadily in Washington State during the first half of the 1990s to all-time lows. In Washington in 2000, 66 cases were reported for an annual case rate of 1.1 per 100,000. There was 1 case of syphilis reported in Island County in 2000, 1 case in 2001, and 4 cases in 2002.

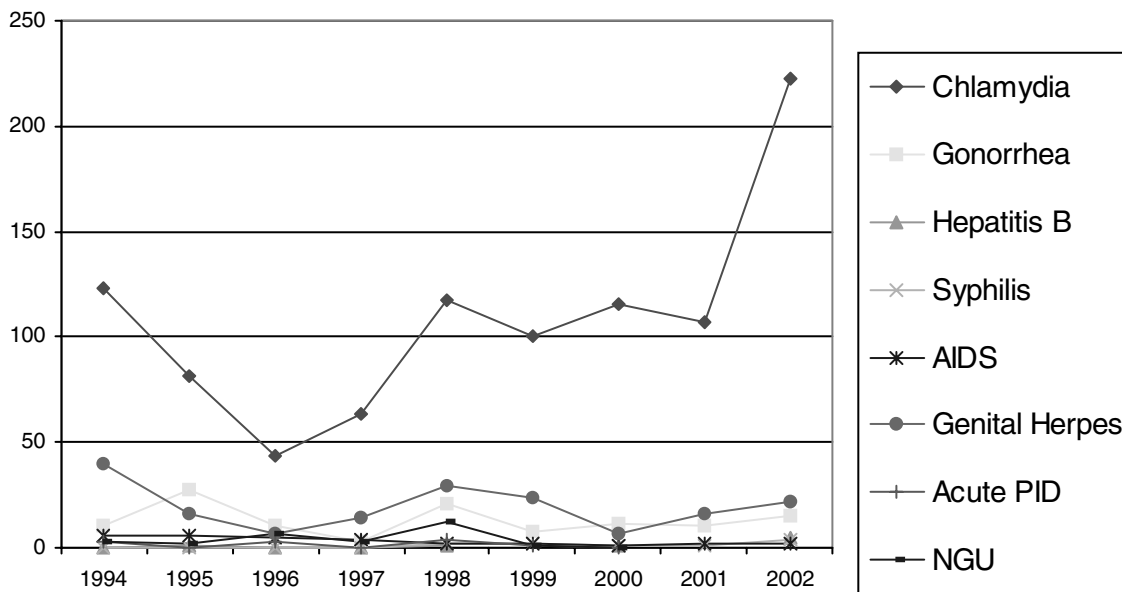
Chlamydia

Approximately 70% of women with chlamydia have few or no symptoms. If untreated, chlamydia is a major cause of pelvic inflammatory disease (PID) in women, which may lead to ectopic pregnancy, chronic pelvic pain and infertility. Men are more likely than women to have symptoms. Left untreated, chlamydia may progress to sterility in men. In Island County, an average of 111 cases were reported per year from 1998-2000.

In 1988 chlamydia screening and prevalence monitoring activities were initiated in Washington through the federally funded Region 10 Chlamydia Project. Women under age 24 who receive a pelvic exam are eligible for screening as well as women who have certain symptoms, sexual practices, a history of an STD within the past 12 months or are pregnant or planning a pregnancy. Men who are contacts to laboratory-diagnosed cases of chlamydia are also eligible.

Over 80% of these cases are in those ages 15-24. In 2000, the incident rate per 100,000 for Washington State was 221.7 (up sharply from 169.8 per 100,000 in

Sexually Transmitted Disease (Numbers), Island County, 1994-2002

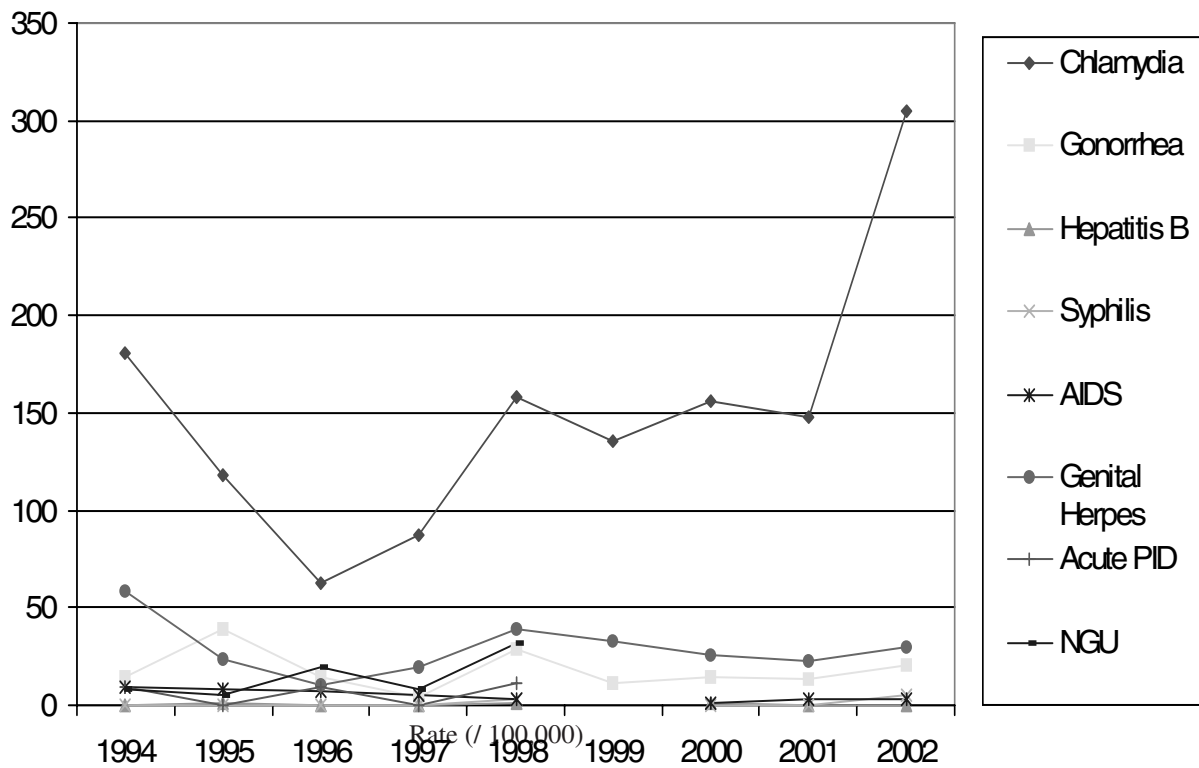


1997), while the rate for Island County was 165.9. However, the case rate for Island County in 1998 was much higher at 212.1 cases per 100,000. Island County had 116 cases reported in 2000, 107 cases reported in 2001 and 223 cases in 2002.

Gonorrhea

Common symptoms of gonorrhea are abnormal discharge and/or painful urination for both men and women. Approximately 50% of women who are infected do not experience symptoms. Left untreated, gonorrhea can also cause PID in women and sterility in men. In Washington, the reported incidence of gonorrhea has been generally declining since the 1980s and the early 1990s. In 2000, 2,419 cases of gonorrhea were reported among Washington residents; the rate was 41.0 cases per 100,000. From 1996 to 2000, the number of gonorrhea cases in Island County ranged from 3 to 21 per year. Island County had 11 cases in 2000, 10 cases in 2001, and 15 cases in 2002.

Sexually Transmitted Disease (Rates), Island County, 1994-2002



Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS)

HIV, the virus that causes AIDS, is transmitted from person to person through blood, semen, vaginal fluids and breast milk. Most frequently, the routes of transmission are unprotected sexual intercourse, the sharing of contaminated needles and other equipment used by injection drug users. Transmission can also occur from mother to baby during childbirth.

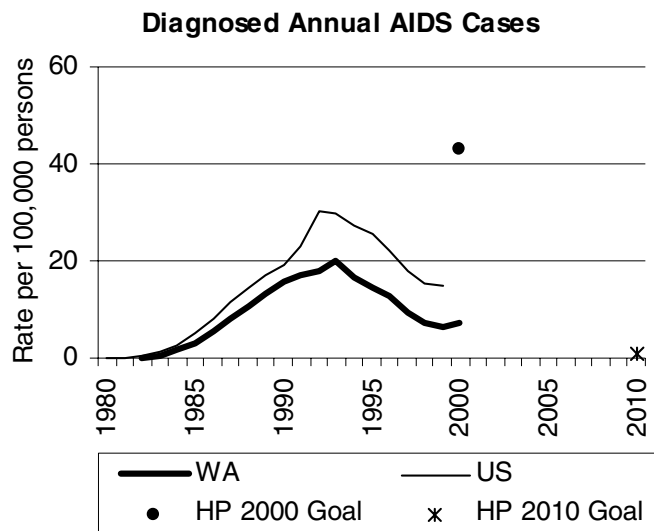
Once infected with HIV, most people do not develop symptoms for an average of ten years. However, an HIV test will reveal infection within six to twelve weeks after exposure. Advances in early detection, monitoring and developments in drug therapy to slow the progress of the virus have resulted in increased survival rates and improved quality of life.

In the United States, through December 1997, there have been 641,086 cases of AIDS. Estimates are that 650,000-900,000 people are living with HIV and that there are 40,000 new infections per year. Reporting for non-AIDS HIV infection began in Washington State in September 1999. In 2000, 416 AIDS cases were diagnosed among Washington State residents, for an annual incident rate of 7.1 per 100,000.

The dramatic declines in AIDS incidence and AIDS deaths seen in the mid-1990s appear to have leveled off in the past two years. These declines are attributed primarily to new antiretroviral drugs that slowed the progression of HIV infection. While the majority of AIDS cases between 1998-2000 continue to be with men who have sex with men (56%), the proportions of cases in women (13%), people of color (27%), and those infected through injection drug use (13%) or heterosexual contact (10%) have increased. It is estimated that approximately 12,000 people in Washington are living with HIV infection.

In Island County, 14 cases of AIDS had been reported since 1996. In total it is estimated that Island County has had 53 cases of persons with AIDS, 20 of whom are presumed living. Thirteen people have been reported as HIV positive since September 1999. That represents only a portion of those infected. In 2002, ICHD provided confidential and anonymous HIV testing to 100 individuals. The needle exchange program collected over 30,000 syringes for about 70 people. Twenty people received referrals for medical and drug treatment.

**Communicable Disease (Numbers),
Island County, 1994-2000**



Enteric Diseases

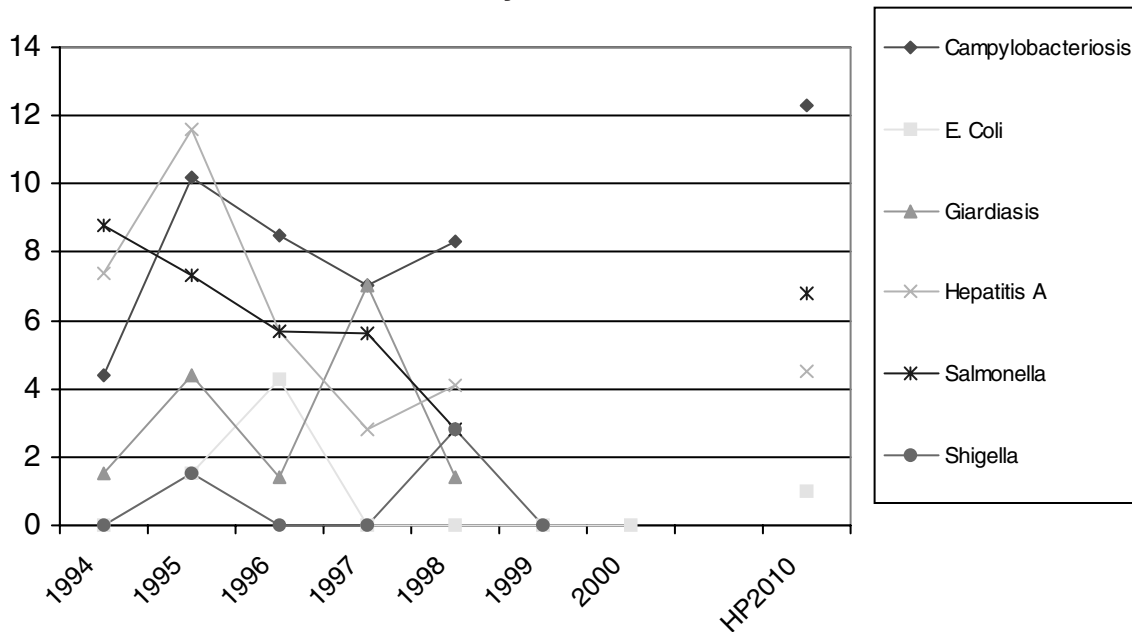
Enteric diseases are those that disrupt the body’s digestive system, typically producing nausea, vomiting, diarrhea, or all three symptoms. In general most are often a food borne illness which includes all illnesses acquired through the consumption of contaminated food but more commonly refers to those caused by an infectious agent. The Washington State Department of Health estimates that there are between 250,000 and 1.5 million acute food borne illnesses annually in the state, and most of these are unreported.

There is an average of 10-20 food-related investigations by Island County Health Department each year. Sixteen food-related investigations occurred in 2002. Some of these complaints involved illness but none were confirmed to be food borne illnesses. Several intestinal diseases are reportable but they may not necessarily be food borne. Both giardiasis and cryptosporidiosis can be food borne, water borne (more likely) or transmitted from person to person.

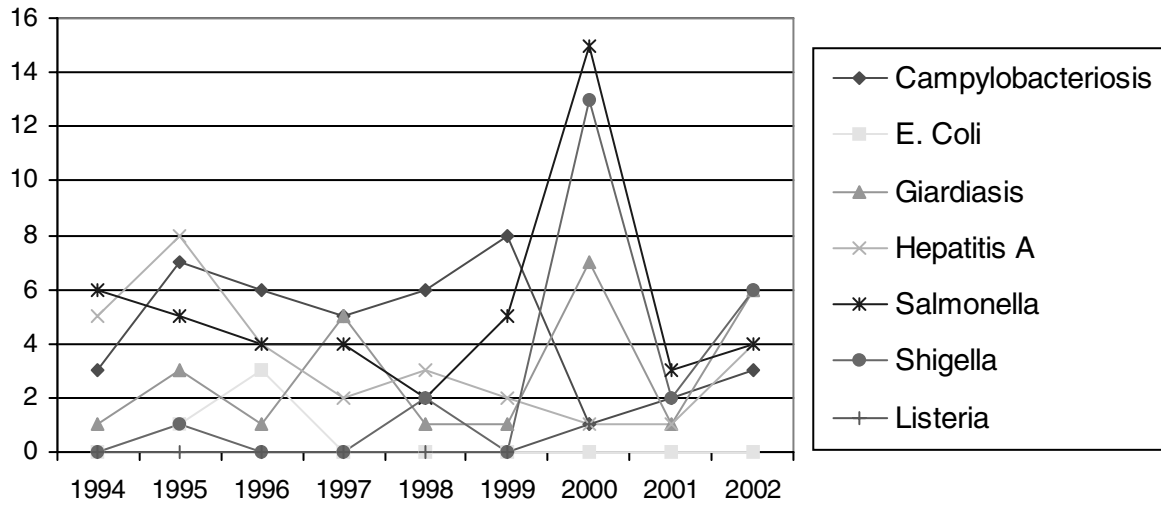
Other intestinal diseases that are reportable include campylobacteriosis, E. coli 0157:H7, salmonellosis and shigellosis. From 1996 to 2002, 25 cases of salmonellosis, 15 cases of shigellosis, and no documented cases of E coli 0157:H7 were reported in Island County. There were 15 cases of salmonellosis reported in Island County in 2000, 4 cases in 2001 and 6 cases in 2002. There were two cases of campylobacteriosis in 2001 and three cases in 2002. There were 6 cases of giardia in 2002, 1 case of vibroparaemolticus and 2 cases yersinia enterocolitia.

Prevention is the most important element in controlling food borne illness and includes education of food handlers, investigation of disease, and inspection of food service establishments. See the Environmental Health section of this report for more information regarding food safety efforts in Island County.

Enteric Disease Rates, Island County, 1994-2000



Enteric Disease (Numbers), Island County, 1994-2000



Vector-borne Diseases

Vectors or animals that carry pathogens from one host to another transmit many diseases. The health department vector program is responsible for investigation of disease exposure. The rabies virus and hantavirus are the two most important concerns. West Nile virus is an emerging issue. See the Physical Environment Chapter of this report for more information regarding vector-transmitted diseases.

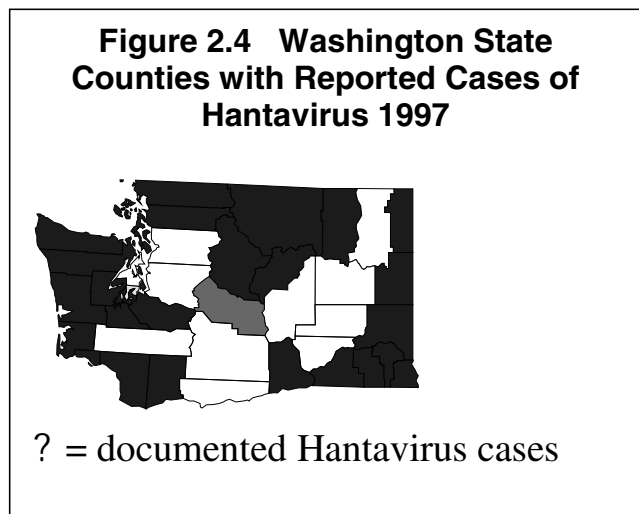
Rabies

Rabies is a severe viral disease that affects the central nervous system and is almost always fatal. Rabies is contracted by exposure, usually from a bite, to the saliva of a rabid animal. Bats are the primary reservoir in the Northwest. In Washington State, rabies is rarely found in other animals, such as dogs, raccoons and skunks, which commonly carry the virus in other areas. From 1970-2003, Island County had 177 animals tested for rabies. Island County had four confirmed cases, all in bats. Also tested, with negative results were 3 cats, 2 cattle, 25 dogs, 2 other domestic animals, 60 bats, 2 skunks, 1 fox, 7 raccoons, and 25 other rodent/wild animals. This is consistent with national data in which rabies diagnosis in humans has increased significantly since 1990, most associated with rabies strains in bats.

Hantavirus

Hantavirus can cause serious respiratory illness and frequent death. The primary reservoir is the deer mouse. Exposure to hantavirus is through contact with droppings or objects that the deer mice have handled, eaten, or lived in. Although no

Hantavirus 1997



human cases have been reported in the county, deer mice in the area have tested positive for the virus. Approximately 10-11% of deer mice statewide may carry the virus. Chipmunks and other rodents have been found to carry antibodies to hantavirus; however, there is no direct evidence that they are capable of transmitting the virus to humans.

Health People Objectives

- ◆ For children 19 to 35 months, the Healthy People 2000 goal is to increase the number who received an initial primary series of vaccines to 90%. This includes four or more doses of diphtheria and tetanus toxoids and pertussis vaccine/diphtheria and tetanus toxoids, three or more doses of poliovirus vaccine, one or more doses of measles-containing vaccine, and three or more doses of Haemophilus influenzae type b vaccine.
- ◆ The Healthy People 2000 goal is to decrease the chlamydia rate to less than 170 per 100,000.
- ◆ A HP2010 goal is to increase the proportion of persons appropriately counseled about health behaviors-including STD prevention counseling.
- ◆ For salmonellosis , campylobacteriosis, and E coli 0157:H7, the Healthy People 2000 goals are 8.9 cases per 100,000 for salmonellosis, 15.5 cases per 100,000 for campylobacteriosis, and 4.4 cases per 100,000 for E coli 0157:H7.
- ◆ Other Healthy People objectives related to food safety include: reduce infections caused by key foodborne pathogens; prevent an increase in the proportion of isolates of Salmonella species from humans and from animals at slaughter that are resistant to antimicrobial drugs; increase the proportion of consumers who follow key food safety practices; improve food employee behaviors and food preparation practices that directly relate to foodborne illnesses in retail food establishments; and reduce human exposure to organophosphate pesticides from food.

Infectious Disease

Communicable disease reporting and containment are primary activities of the local health department. There are a number of what are determined to be “Notifiable Conditions”, a listing of which is available for viewing/print at <http://www.doh.wa.gov/Notify/list.htm>. Public Health Nurses do case reporting and follow-up to provide appropriate information to the patient, family members, and community officials in order to reduce and/or eliminate the spread of communicable disease. They also provide immunizations and/or immunization information to anyone at regularly scheduled [immunization clinics](#).

Local Resources

Island County Health Department at <http://www.islandcounty.net/health/communic.htm>.

Public Health Nurses are available by phone Monday thru Friday during normal working hours at
..... (360) 679-7351
..... or (360) 240-5554

- Immunization Clinics
- HIV Counseling and Testing
- AIDS Case Management
- Tuberculosis Testing
- Tuberculosis Investigation and Case Management
- Communicable Disease Surveillance and Reporting
- Food Safety Program
- Vector Program
- Planned Parenthood Clinic
- South Whidbey Island Teen Clinic
- State Supplied Vaccine Program

Helpful Internet Sites

Animal Diseases of Public Health Concern at <http://www.avma.org/pubhlth/default.asp>

Centers for Disease Control and Prevention (CDC) at <http://www.cdc.gov>

Health Topics, A to Z, English & Spanish at <http://www.cdc.gov/health/default.htm>

Immunization and CHILD PROFILE programs at <http://www.islandcounty.net/health/immuniza.htm>

Influenza Update at <http://www.doh.wa.gov/EHSPHL/Epidemiology/CD/HTML/FluUpdate.htm>

Notifiable Diseases/Deaths in Selected Cities Weekly Information at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5102md.htm>

Seattle/King County Public health at www.metrokc.gov/health/apu is a good website with links to HIV/AIDS information

Traveler’s Health Alerts at <http://www.cdc.gov/travel/outbreaks.htm>

Tuberculosis Program information at <http://www.islandcounty.net/health/Tbc.htm>

Data Sources

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6. "National, State, and Urban Area Vaccination Coverage Levels Among Children aged 19-35 months—United States, 1997." MMWR Weekly, July 10, 1998/47(26); 547-554, Center for Disease Control and Prevention.
7. Office of Disease Prevention and Health Promotion. Prevention Report. U.S. Department of Health and Human Services, Volume 12: Issue 4 1997.
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10. 1998 Public Health Improvement Plan. Washington State Department of Health, December 1998.
11. Sexually Transmitted Disease Morbidity 1997. Washington State Department of Health. Infectious Disease and Reproductive Health: STD/TB Services and IDRH Assessment Unit, 1998.
12. The Health of Washington State. Washington State Department of Health, September 1996.
13. The Health Status of Thurston County, 1994, p. 79
14. Unpublished data, County Health Department.
15. VISTA/PH Data Assessment System. Developed by the Seattle-King County Department of Public Health using state and other public health related data sets.