About Surveillance Data

Oregon law* specifies diseases of public-health importance that must be reported to local public-health authorities by diagnostic laboratories and health-care professionals. In general, for reported communicable diseases there follows an investigation by local public-health officials to characterize the illness and collect demographic information about the case, to identify possible sources of the infection, and to take steps to prevent further transmission. Basic information about each case is forwarded to the Office for Disease Prevention and Epidemiology within the Oregon Department of Human Services. In some cases (e.g., Salmonella infection), laboratories are required to forward bacterial isolates to the Oregon State Public Health Laboratory for subtyping. Together, these epidemiologic and laboratory data constitute our communicable disease "surveillance system;" data from 2004 and trends from recent years are summarized in this report.

But caveat lector! Disease surveillance data have many limitations.

Firstly, for most diseases, reported cases represent but a fraction of the true number. The most important reason for this is that many patients — especially those with mild disease — do not present themselves for medical care. Even if they do, the health-care professional may not order a test to identify the causative microorganism. The reader may be scandalized to learn that not every reportable disease gets reported as the law requires. Cases are "lost" to surveillance along each step of the path from patient to physician to laboratory to public-health department; in the case of salmonellosis, for example, reported cases have been estimated at 1–5% of the true number.†

Secondly, cases that do get reported are a skewed sample of the total. More severe illnesses (e.g., meningococcal disease) are more likely to be reported than milder illnesses. Infection with hepatitis A virus is more likely to cause symptoms (and those symptoms are more likely to be severe) in adults than in children. Testing is not random; clinicians are more likely to test stool from children with bloody diarrhea for *E. coli* O157 than they are to test stool from adults with bloody diarrhea. Health-care professionals may be more inclined to report contagious diseases like tuberculosis — where the public-health importance of doing so is obvious — than they are to report non-contagious diseases like Lyme disease. Outbreaks of disease or media coverage about a particular disease can greatly increase testing and reporting rates.

Yet, surveillance data are valuable in a variety of ways. They help to identify demographic groups at higher risk of illness. They allow analysis of disease trends. They identify outbreaks of disease.

With this in mind, we present this communicable disease summary. For most of the diseases, we include figures showing case counts by year for the past 10 years; aggregate case counts by month to demonstrate any seasonal trends; incidence by age and sex; incidence in Oregon as compared to national incidence over the past 10 years; and incidence by county. Where appropriate, subtyping data are included. At the end of the booklet you will find a brief tally of disease outbreaks reported in the past year, disease totals by county, and a summary table of statewide case counts over the past 20 years.

We hope that, with all their limitations, you will find these data useful. If you have additional questions, please call our epidemiology staff at (971) 673-1111 or e-mail ohd.acdp@state.or.us.

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* Oregon Administrative Rules, chapter 333, division 18. Available at http://www.oshd.org/acd/oars/rules/

† Chalker RB, Blaser MJ. A review of human salmonellosis: III. Magnitude of Salmonella infection in the United States. Rev Infect Dis 1988; 10:111–24.

Table of Contents

AIDS and HIV Infection

Human immunodeficiency virus (HIV) is spread by having sex, sharing injection drug equipment, or receiving a transfusion or transplant from an infected person. It can be spread from mother to fetus or infant at the time of delivery or by breast feeding. Rarely, it is also spread by accidental exposure to bodily fluids of an infected person such as an accidental contaminated needle stick in a healthcare worker. The acquired immunodeficiency syndrome (AIDS) represents the late stage of HIV infection, indicated by either low CD4 (immune system) cell counts or the manifestation of an opportunistic infection indicative of poor immune system functioning. Although there is no cure for HIV infection treatment can prolong and enhance the quality of life.

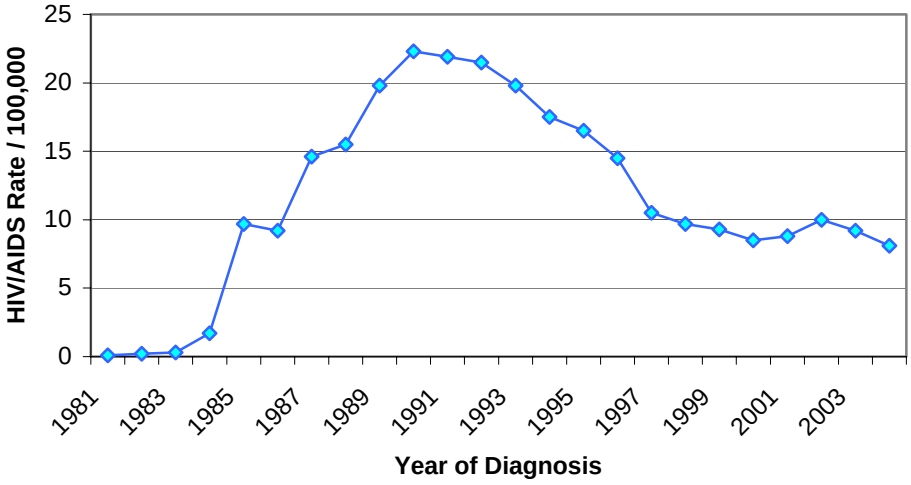
HIV infection can be prevented by abstaining from sex outside of a monogamous relationship with an uninfected partner and by not injecting recreational drugs. Those who are sexually active outside of a mutually monogamous relationship or who inject drugs can protect themselves by using a condom when engaging in sexual activity and by not sharing injection drug equipment. Pregnant women who are infected with HIV can minimize transmission of infection to their fetus by taking medication during pregnancy.

From 1981 through 2004, 5,574 cases of AIDS were diagnosed in Oregon, including 3,046 deaths. Men accounted for 92% of cases. Most AIDS cases were white (4,779, 86%) with 302 (5%) African Americans, 375 (7%) Hispanics, 43 (<1%) Asians, and 60 (1%) Native Americans reported. Only 19 cases of pediatric AIDS have been diagnosed in Oregon.

In 2004, 275 cases of HIV/AIDS were diagnosed, 36% of which had AIDS as their first diagnosis or had progressed from HIV to AIDS within 12-months.

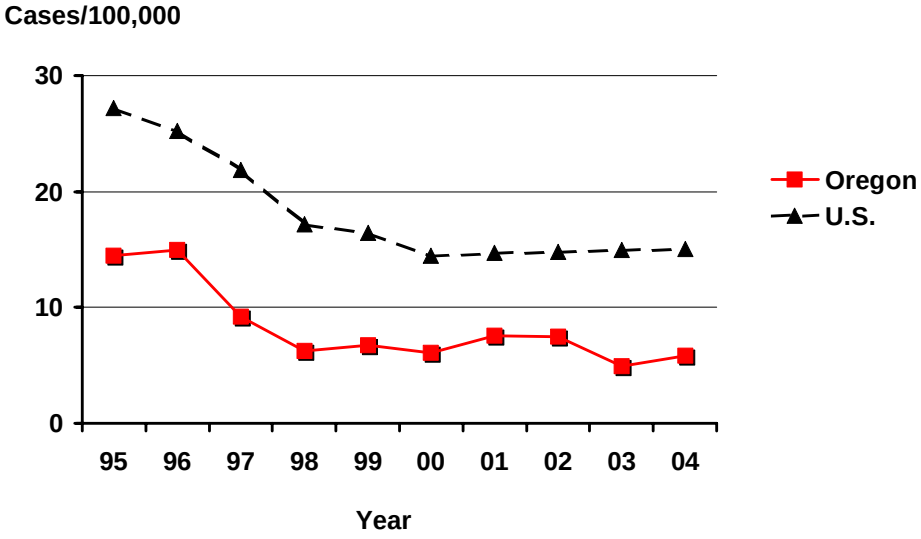
HIV infection (as opposed to AIDS) became reportable in Oregon on October 1, 2001. Through December 2004, 1,518 cases of HIV were diagnosed; 98% of which were alive at the end of 2004. The majority of HIV occurred among white males, though rates (per 100,000 population) are highest in Black-African Americans.

HIV/AIDS Incidence by Year of Diagnosis, Oregon, 1981–2004*

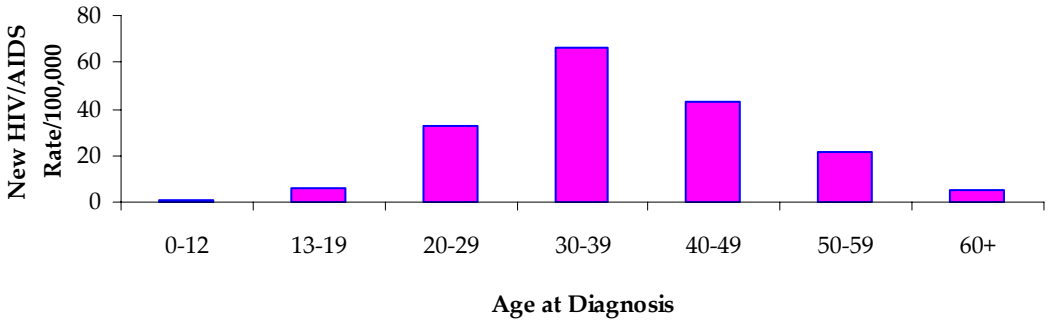


***HIV not having progressed to AIDS was first reportable in Oregon in 2001. Case reports count date of first known test indicative of HIV infection.**

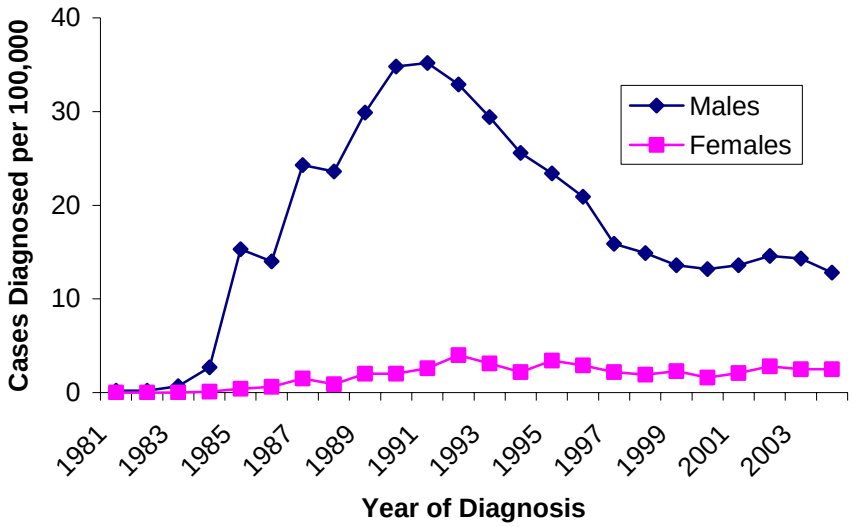
Incidence of AIDS Oregon vs. Nationwide 1995–2004



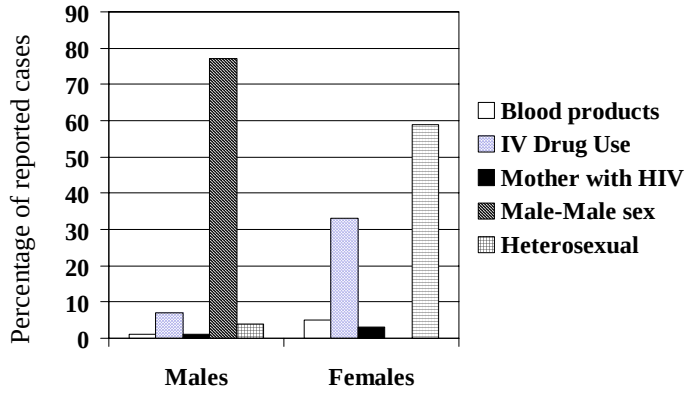
HIV/AIDS Rate by Age at First Diagnosis, Oregon, 2002–2004



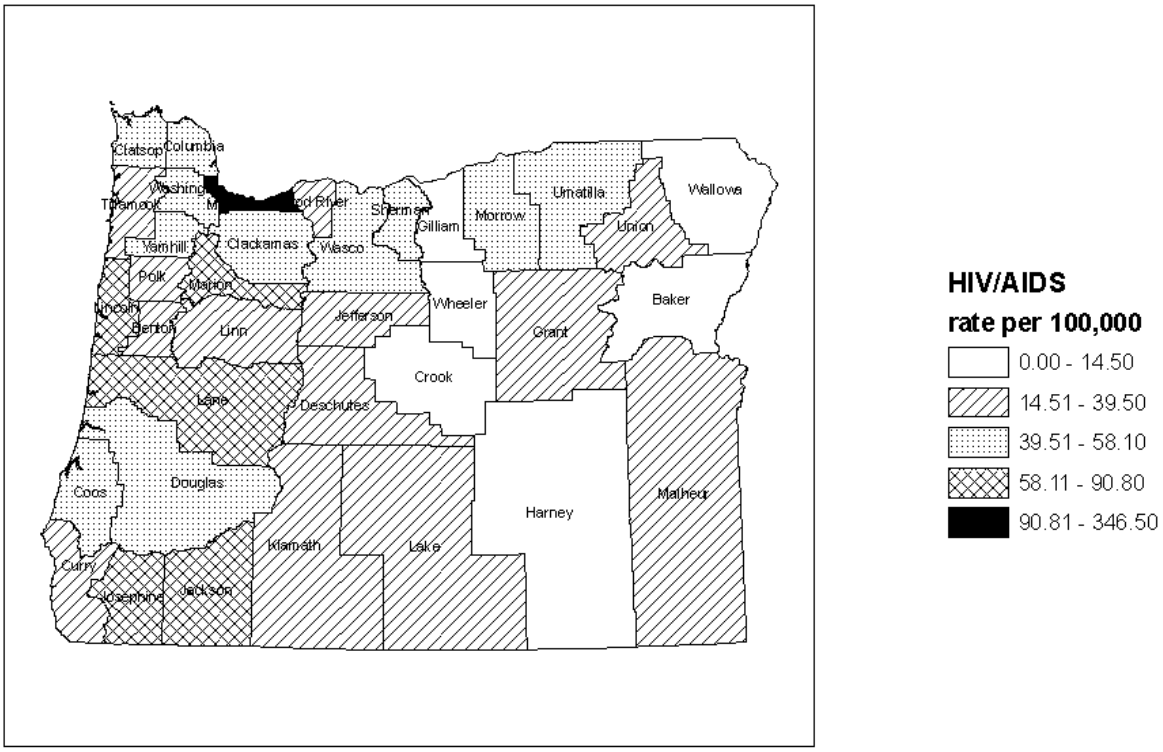
New HIV/AIDS Rate by Year and Sex at First Diagnosis, 1981–2004



Factors in HIV diagnosis, Oregon 2002-2004



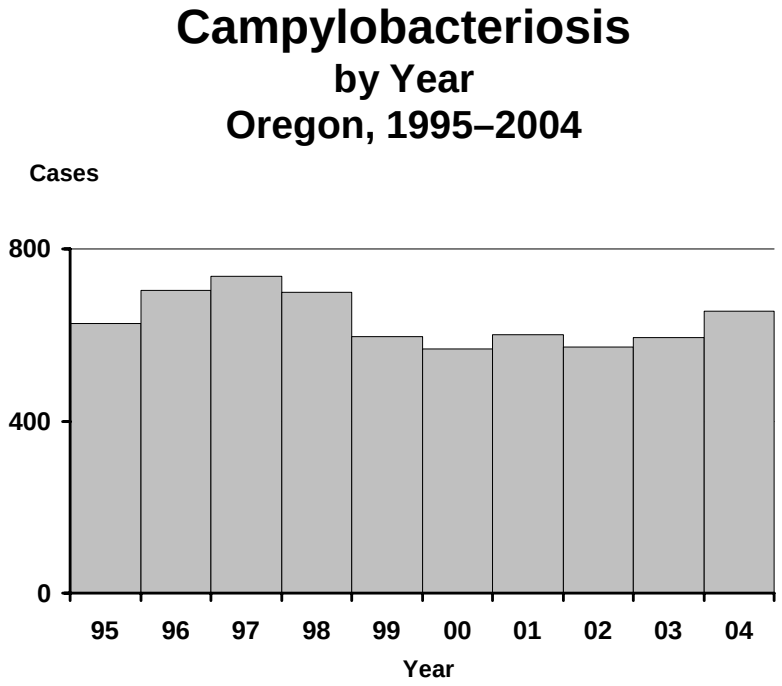
Incidence of Individuals Living with HIV/AIDS by County of Residence, Oregon 2004



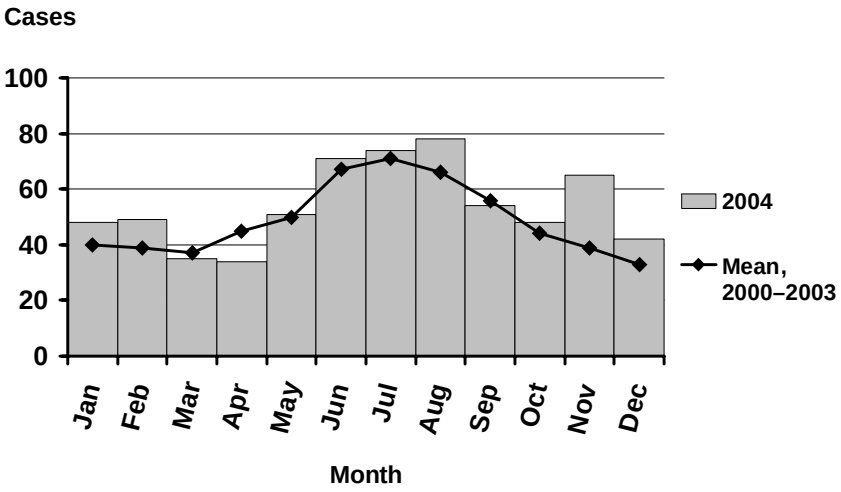
Campylobacteriosis

Campylobacteriosis is caused by a Gram-negative bacterium. Characterized by acute onset of diarrhea, vomiting, abdominal pain, fever, and malaise; it is the most common bacterial enteric infection reported. It is of worldwide epidemiologic importance due to the fecal-oral route of infection and the extensive reservoir of the organism in both wild and domestic animals.

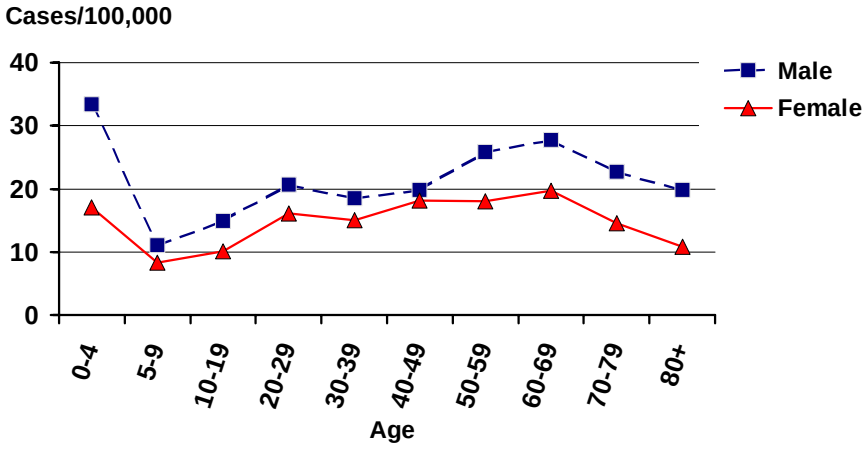
Most illnesses are sporadic and outbreaks may be associated with undercooked meat (often chicken), unpasteurized milk or non-chlorinated water. Infections occur year-round in Oregon, with peak incidence in the summer months. Proper food handling and water treatment, along with good hygienic practices (hand washing!) are the key to prevention.



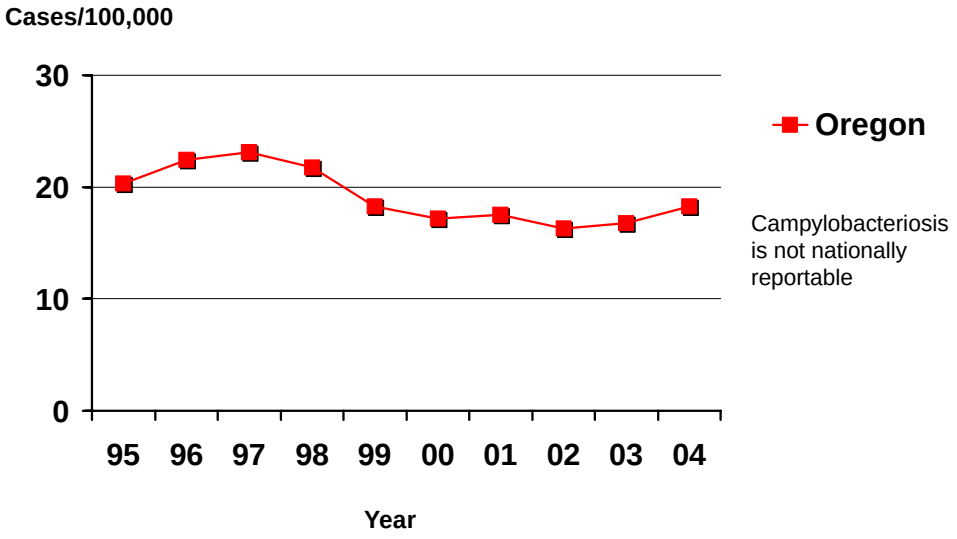
Campylobacteriosis
by Report Month
Oregon, 2004



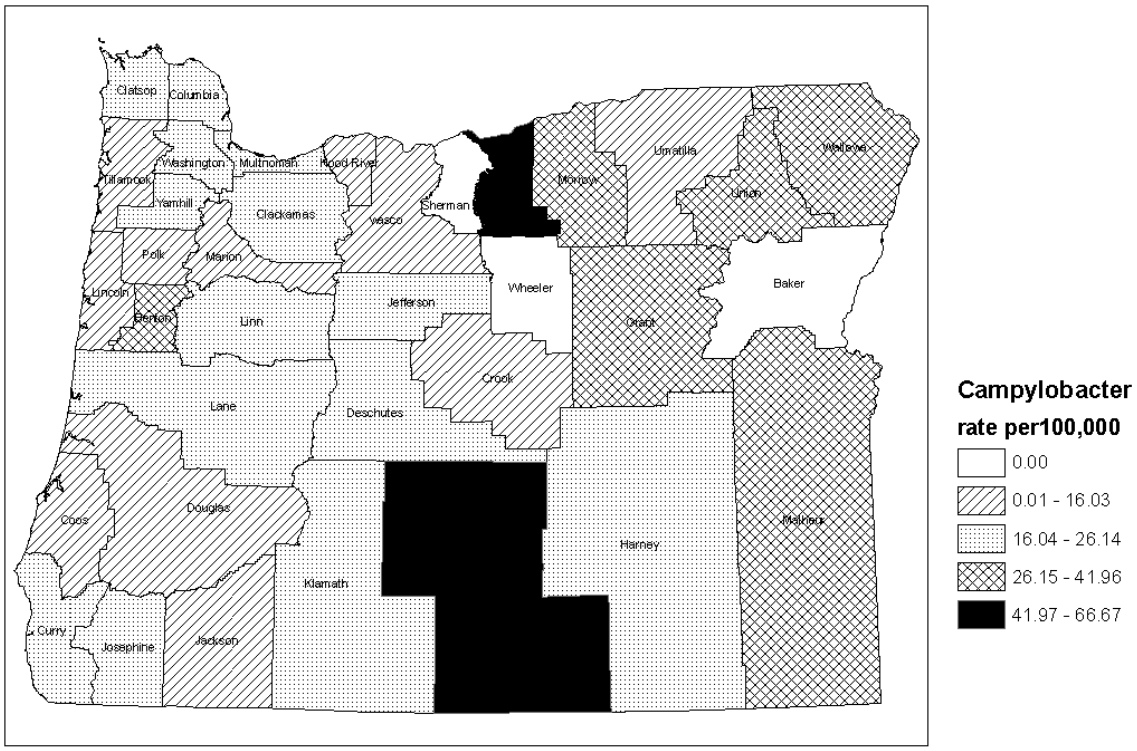
Incidence of Campylobacteriosis
by Age and Sex
Oregon, 2004



Incidence of Campylobacteriosis
Oregon
1995–2004



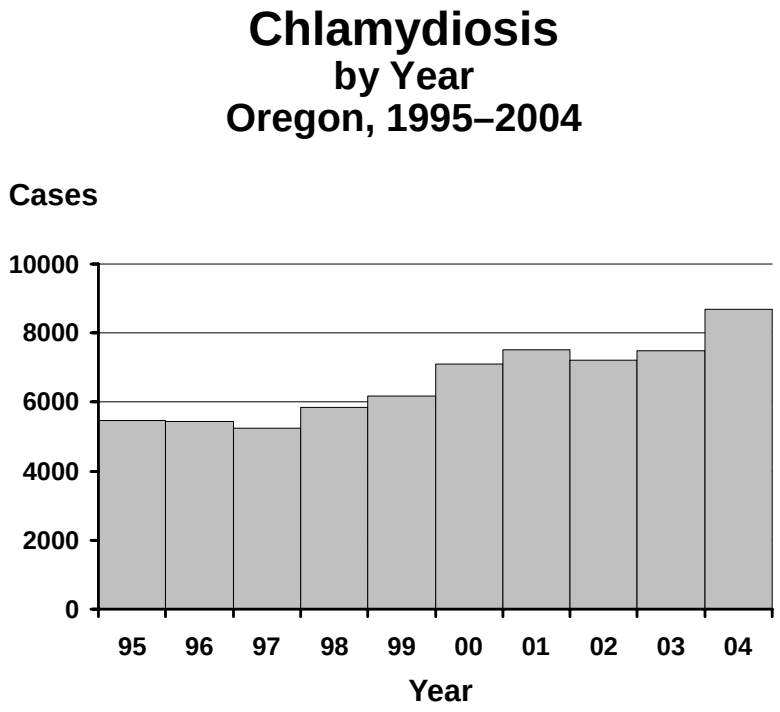
Incidence of Campylobacteriosis by County, Oregon 2004



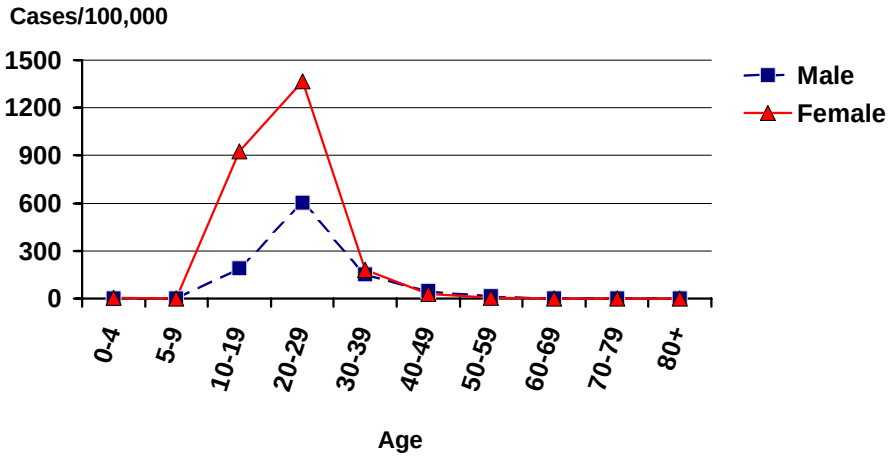
Chlamydiosis

Chlamydia trachomatis is Oregon's most commonly reported infection. In 2004, 8,690 cases were reported—1,192 (16%) greater than what was reported in 2003. The highest rates occur among young women. As with gonorrhea and syphilis, chlamydial infections are transmitted by sexual contact. Chlamydiosis can be prevented by abstaining from sex outside a monogamous relationship with an uninfected partner. Those who are sexually active outside of a mutually monogamous relationship can protect themselves by using a condom when engaging in sexual activity.

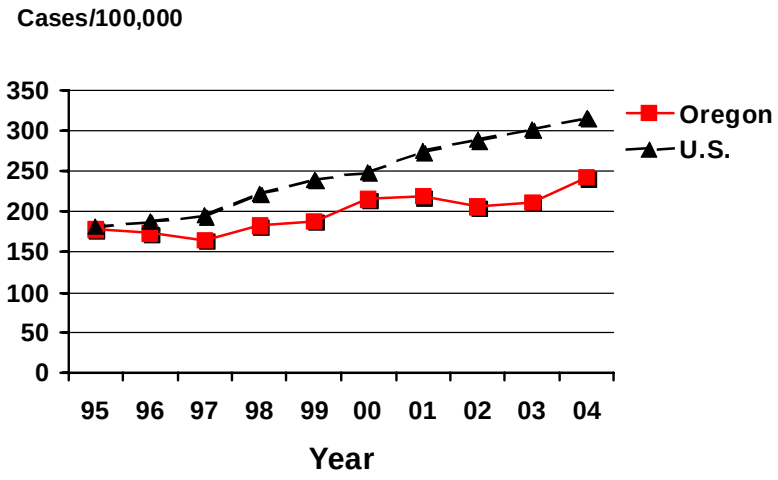
Chlamydial infections are likely to be silent, with neither men nor women having symptoms. However, reproductive health complications, especially among women, lead to infertility and an increased risk of tubal pregnancy.



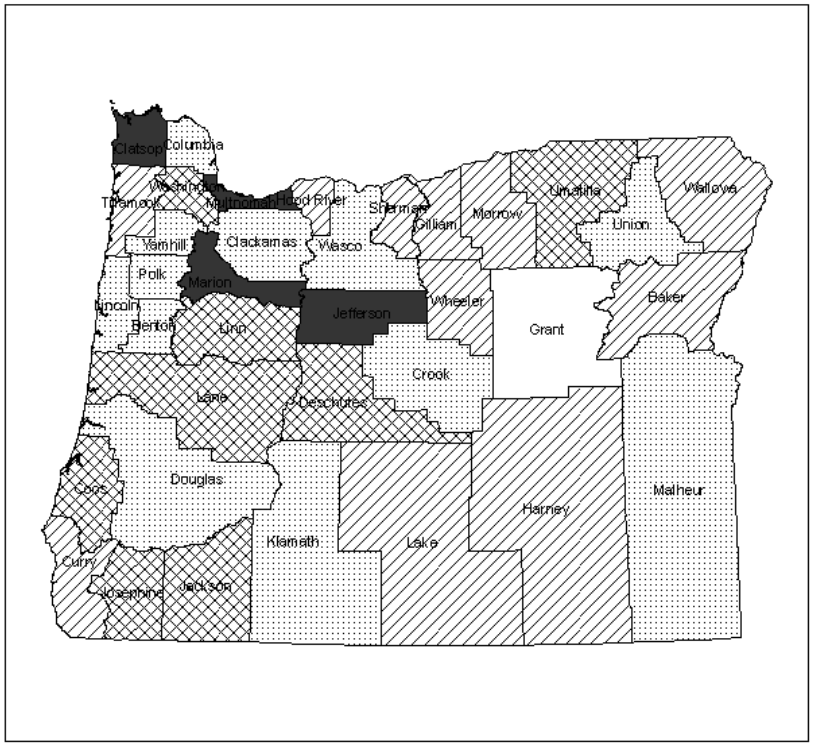
Incidence of Chlamydiosis
by Age and Sex
Oregon, 2004



Incidence of Chlamydiosis
Oregon vs. Nationwide
1995–2004



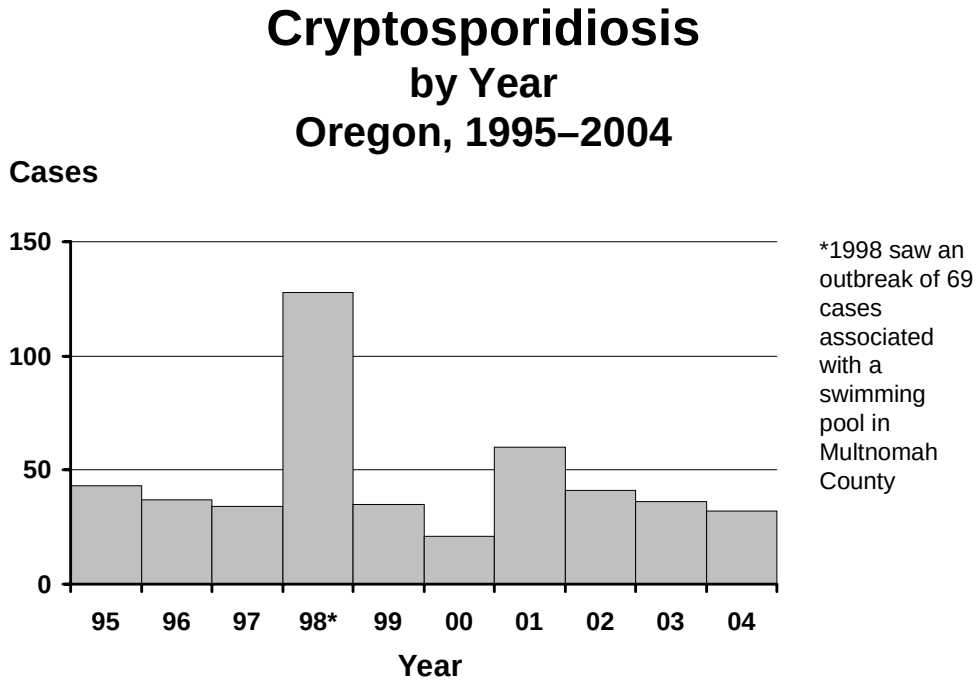
Incidence of Chlamydiosis by County of Residence, Oregon 2004



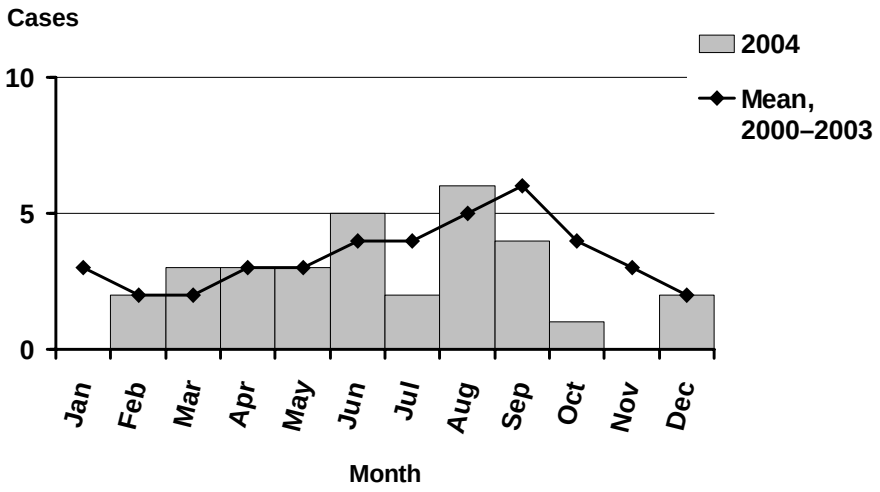
Cryptosporidiosis

Cryptosporidiosis is a relatively common parasitic infection that sometimes causes symptoms of watery diarrhea and abdominal cramps. Diagnosed infections typically resolve within 1–2 weeks in immunocompetent persons, but may be unusually protracted. Infections can be difficult to control among the immunocompromised, notably AIDS patients. Repeated studies suggest that the prevalence of cryptosporidiosis among young children, particular those in large child-care facilities, is surprisingly high. Many of these infections are asymptomatic.

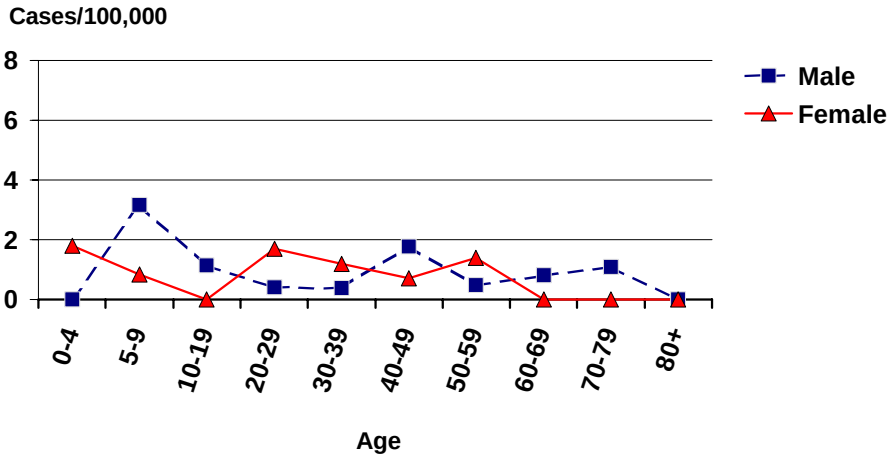
Given the number of asymptomatic and undiagnosed infections, surveillance data can be difficult to interpret, although they have been used to identify a number of outbreaks over the years, most commonly associated with childcare or water (both drinking and recreational). Theoretical concerns about the possibility of crypto transmission in unfiltered drinking water are leading a number of communities, including Portland, to consider expensive changes to routine water treatment methods.



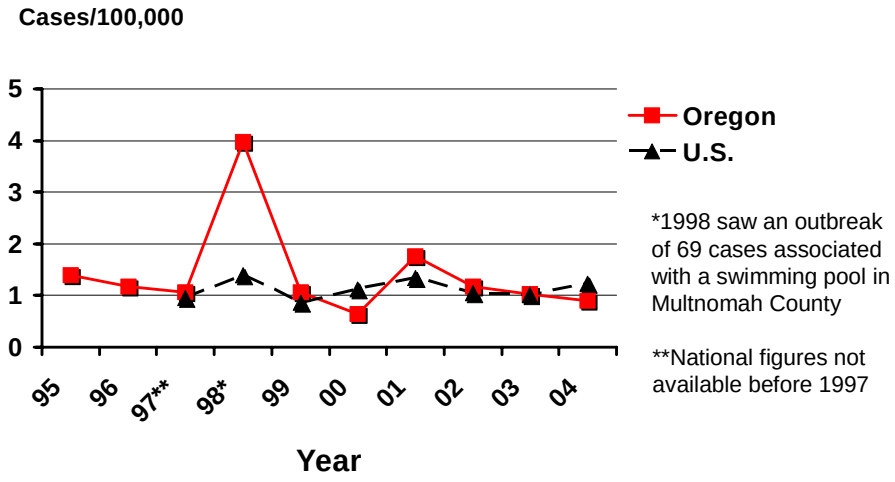
Cryptosporidiosis
by Onset Month
Oregon, 2004



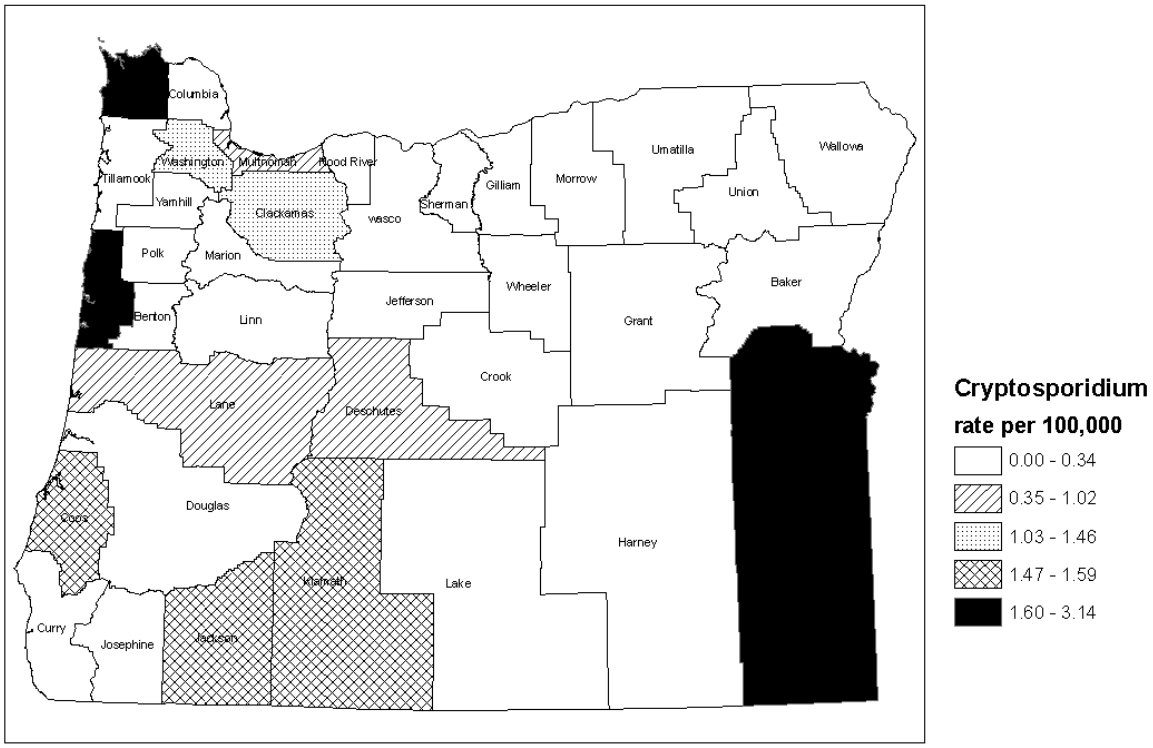
Incidence of Cryptosporidiosis
by Age and Sex
Oregon, 2004



Incidence of Cryptosporidiosis
Oregon vs. Nationwide
1995–2004



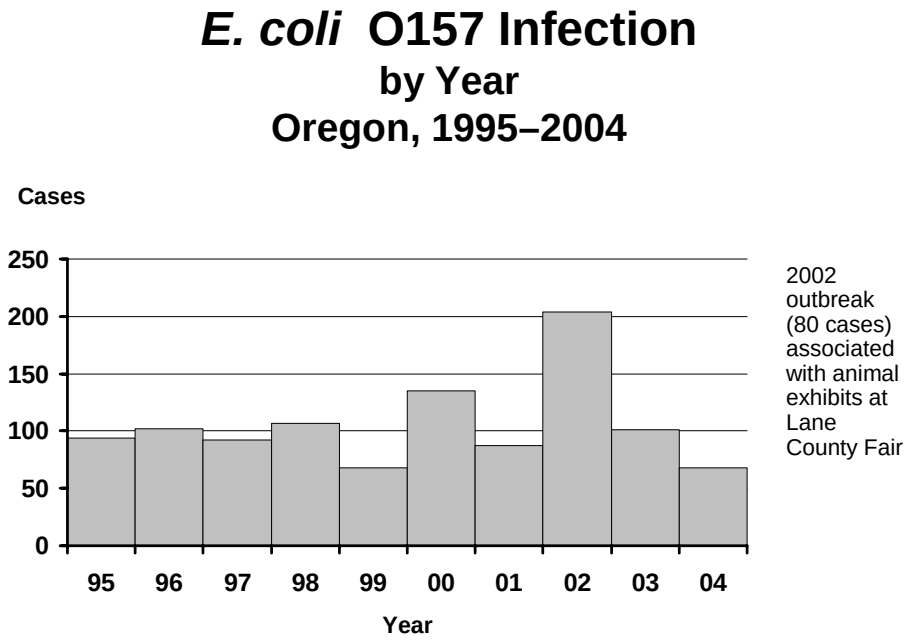
Incidence of Cryptosporidiosis by County, Oregon 2004



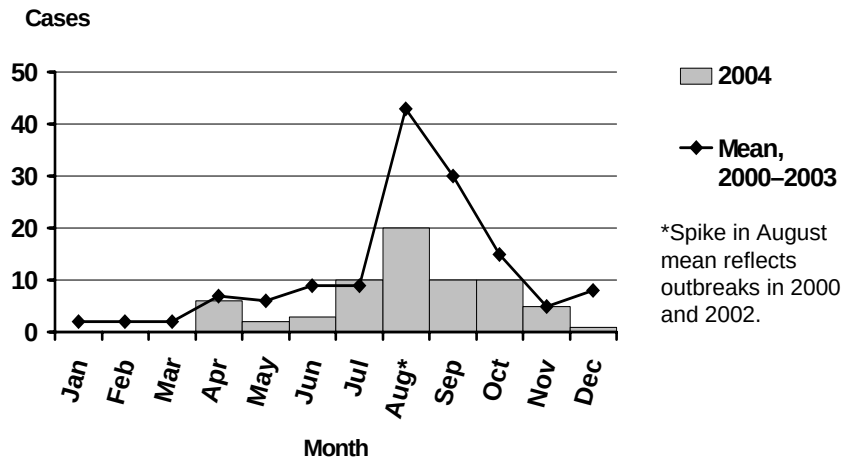
Escherichia coli O157 Infection

Over the past 20 years, O157 has emerged from obscurity to become, rightly or wrongly, perhaps the most dreaded of the common causes of infectious diarrhea. Oregon has been the setting for many O157 outbreaks, and investigations of those outbreaks combined with the analysis of other surveillance information have contributed greatly to our understanding of this pathogen. Spread by the fecal-oral route, O157 has a number of animal reservoirs, the most important of which are ruminants: including cattle, goats, sheep, deer, and elk. Transmission often occurs from consumption of contaminated food or water, as well as direct person-to-person spread.

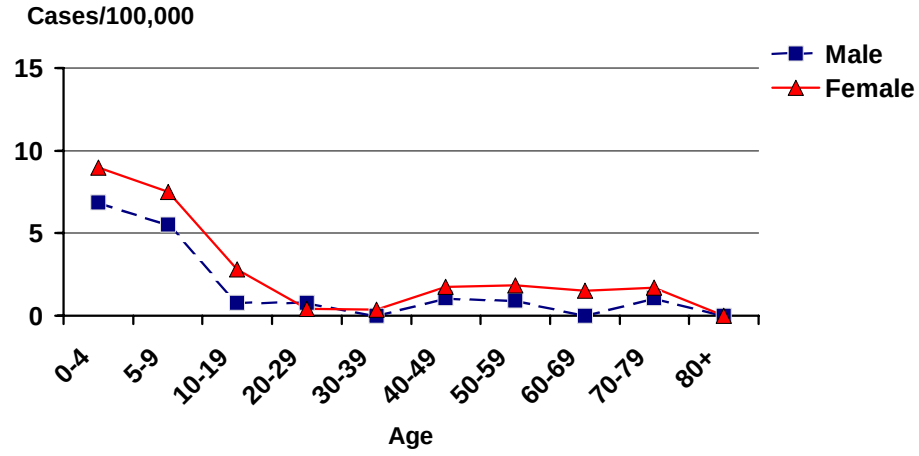
Nationally, outbreaks have involved undercooked ground beef, contaminated alfalfa sprouts and other produce, swimming in contaminated water, and drinking unpasteurized milk. In 2002, 80 of that year's 204 cases were due to an outbreak associated with animal exhibits at the Lane County Fair. Despite efforts nationally to reduce the levels of meat contamination, the rate of sporadic (i.e., not outbreak-related) cases has been essentially unchanged over the past decade. Person-to-person transmission remains an important source.



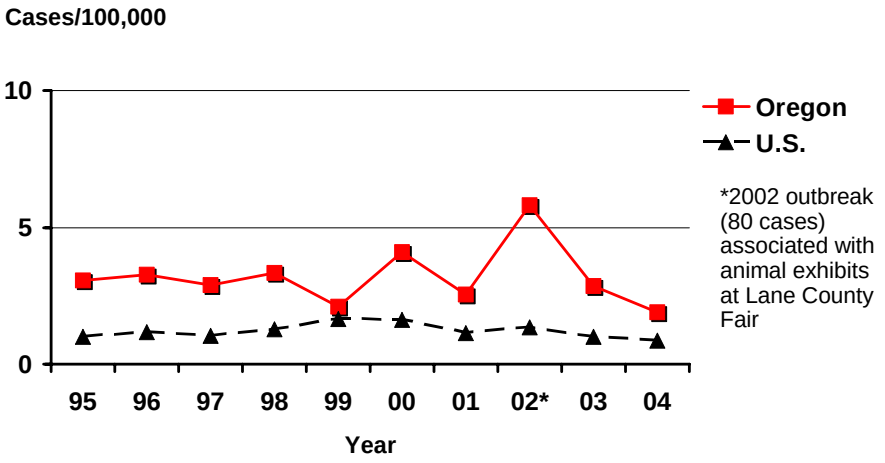
E. coli O157 Infection
by Onset Month
Oregon, 2004



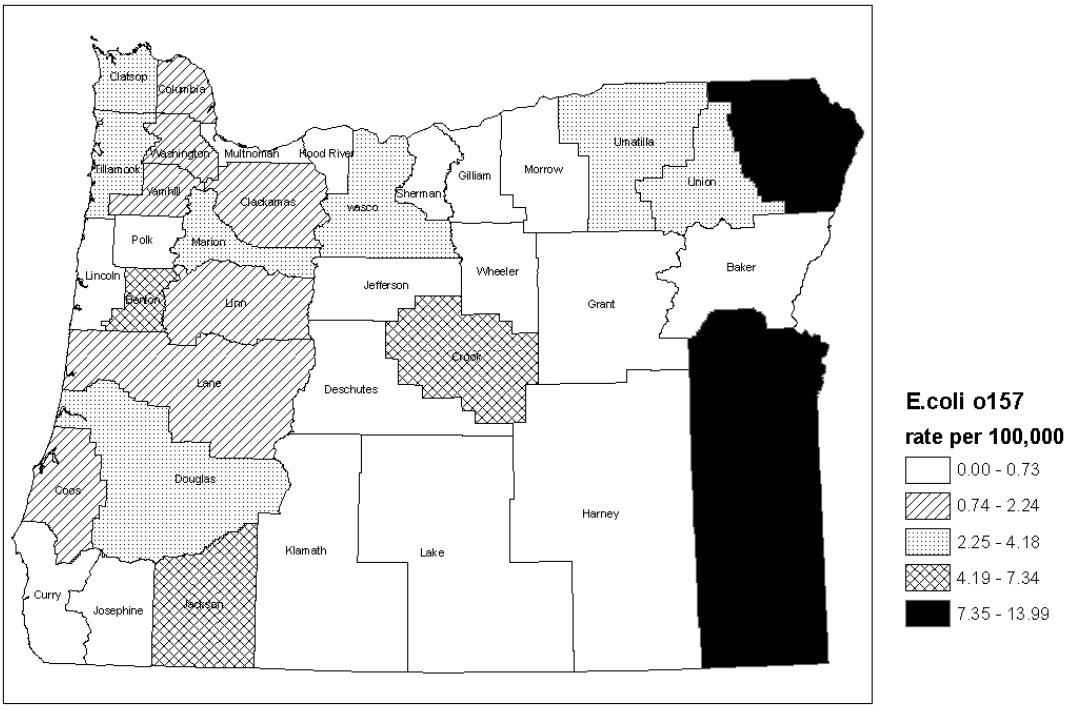
Incidence of *E. coli* O157 Infection
by Age and Sex
Oregon, 2004



Incidence of *E. coli* O157 Infection
Oregon vs. Nationwide
1995–2004



Incidence of *E. coli* Infection by County, Oregon 2004



Giardiasis

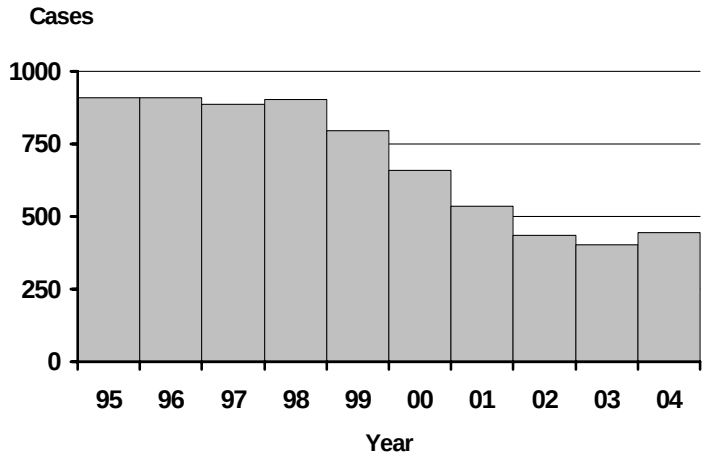
Giardia intestinalis, the flagellated protozoan originally named *G. lamblia*, is the most commonly identified parasitic pathogen in the US. Children in day care and their close contacts are at greatest risk, as are backpackers and campers (by drinking unfiltered, untreated water), persons drinking from shallow wells, travelers to disease-endemic areas, and men who have sex with men. Giardia cysts can be excreted in the stool intermittently for weeks or months, resulting in a protracted period of communicability. Transmission occurs when cysts (as few as 10) are ingested through person-to-person or animal-to-person contact, or by ingestion of fecally contaminated water or food.

The majority of Giardia infections occur without symptoms. When symptomatic, patients report a variety of gastrointestinal complaints including chronic diarrhea, steatorrhea, abdominal cramps, bloating, frequent loose and pale greasy stools, fatigue, and weight loss.

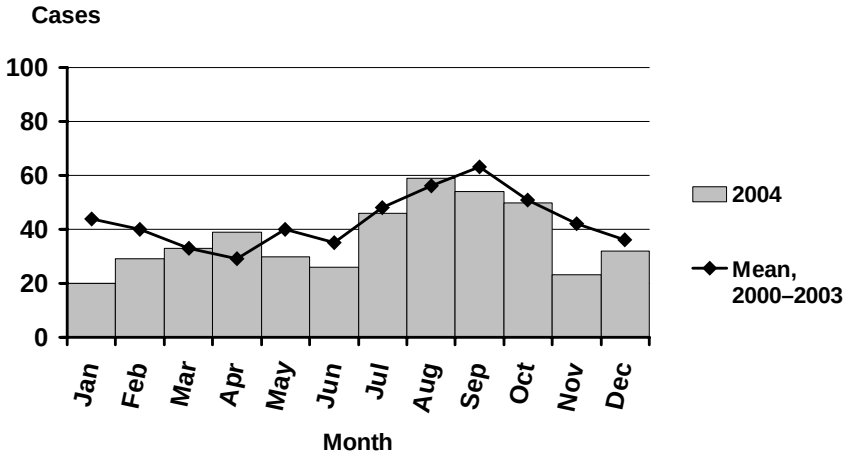
In 2004, the reported incidence of giardiasis in Oregon was nearly twice that of the rest of the US, with 12.4 cases per 100,000 population. All 2004 cases were reported as sporadic or household-associated disease; no outbreaks were detected. Children <5 years of age continue to have the highest incidence, with 33 cases/100,000.

Prevention depends upon good personal hygiene (hand washing!), and avoiding consumption of fecally contaminated water. Travel warnings on water quality should be heeded.

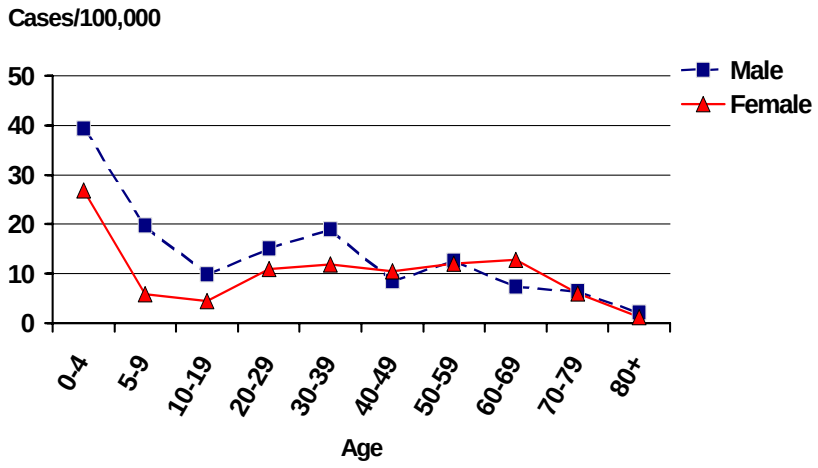
Giardiasis
by Year
Oregon, 1995–2004



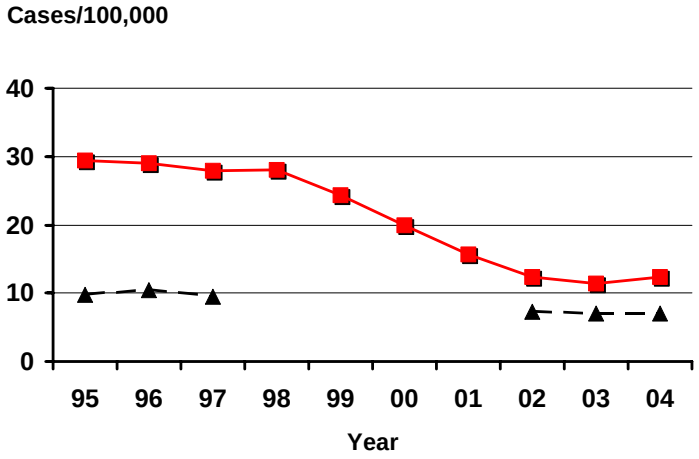
Giardiasis
by Onset Month
Oregon, 2004



Incidence of Giardiasis
by Age and Sex
Oregon, 2004

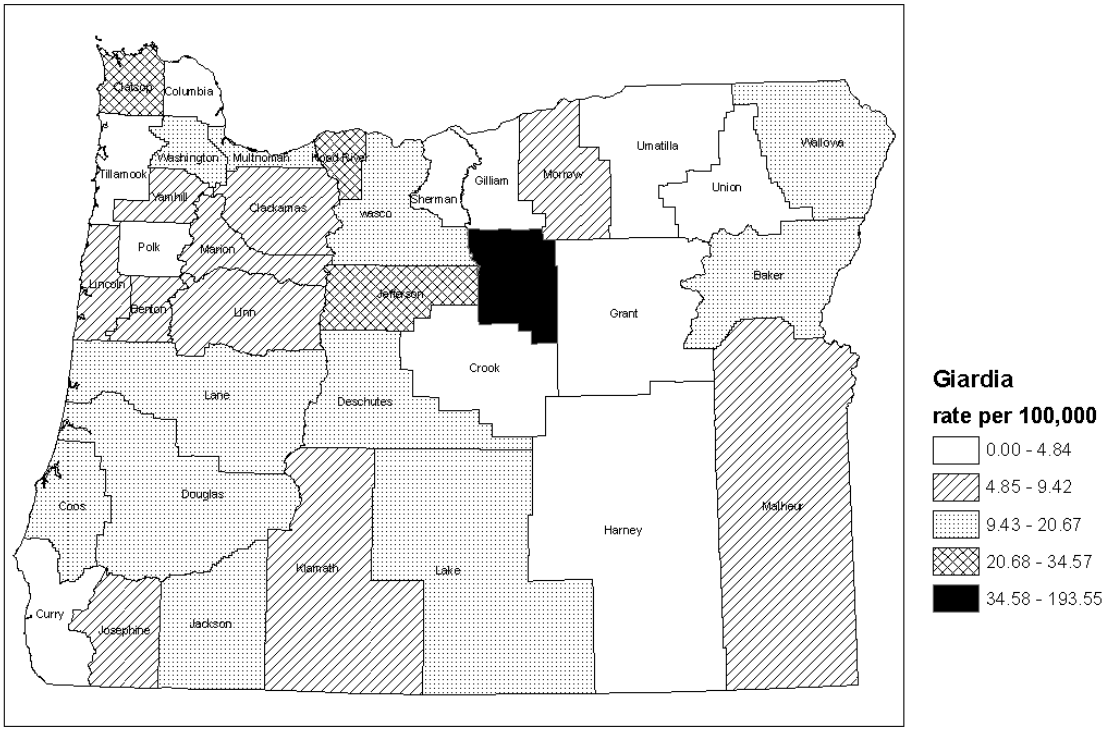


Incidence of Giardiasis
Oregon vs. Nationwide
1995–2004



Giardiasis was not nationally reportable until 2002; U.S. data from 1994–1997 were obtained from state case reports published in *MMWR* vol. 49 no. 7.

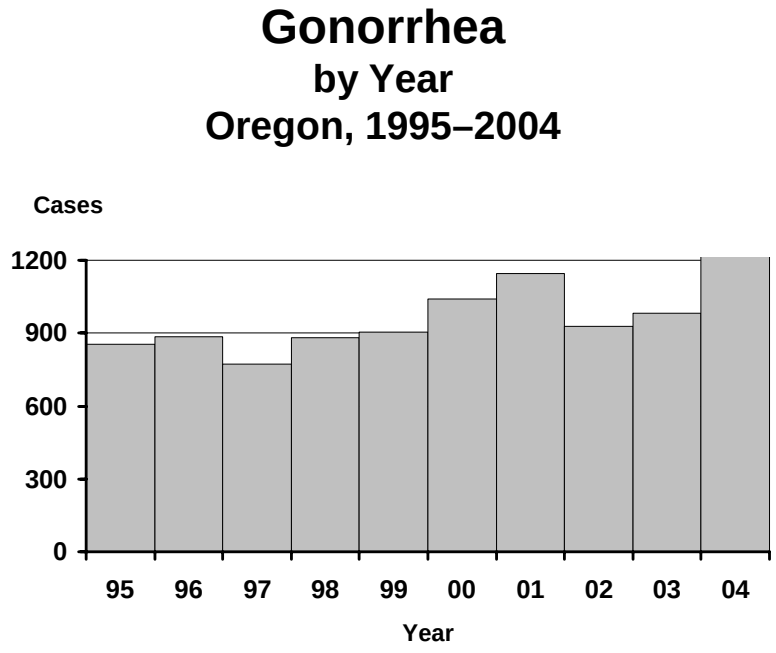
Incidence of Giardiasis by County of Residence, Oregon, 2004



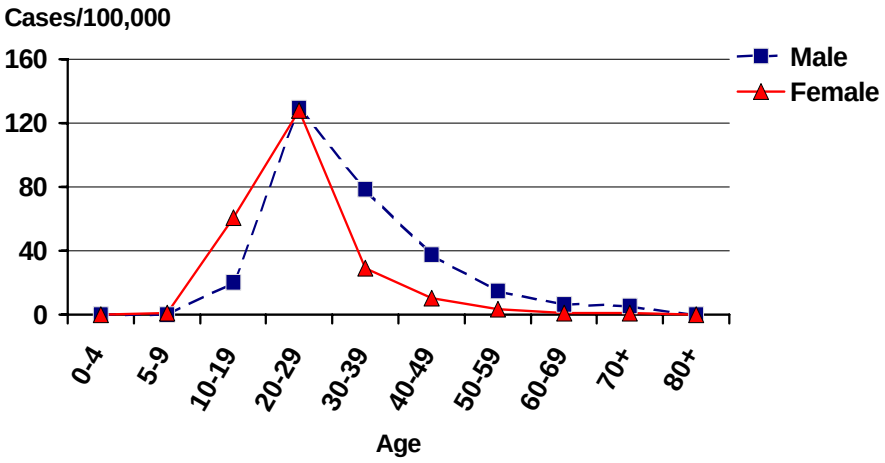
Gonorrhea

Gonorrhea, caused by the Gram-negative bacterium *Neisseria gonorrhoeae*, also known as the gonococcus, is easily transmitted from person to person through vaginal, rectal or oral sexual contact. Gonorrhea can be prevented by abstaining from sex outside a monogamous relationship with an uninfected partner. Those who are sexually active outside of a mutually monogamous relationship can protect themselves by using a condom when engaging in sexual activity.

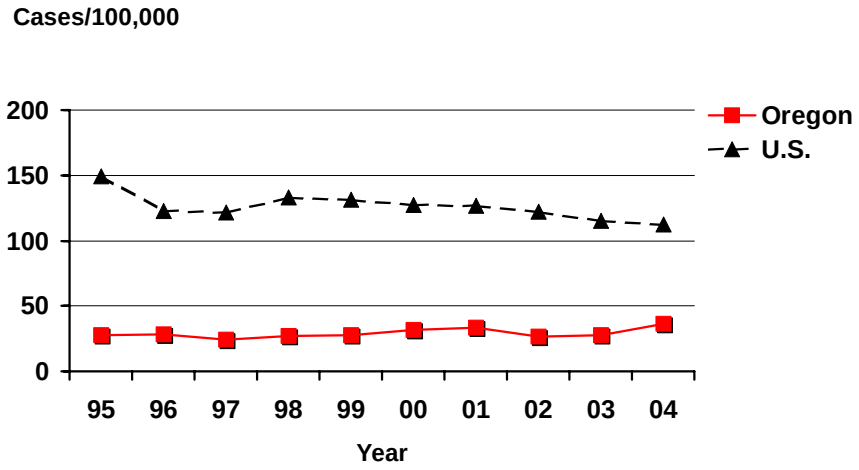
The 1,032 gonorrhea cases reported in 2004 represent an increase of 32.7% from the 981 cases reported in 2003. If untreated, gonococcal infections cause a variety of health problems for men, women, and infants. The major complications of gonorrhea are infertility and tubal pregnancies among women. Reported cases of gonorrhea among men who have sex with men increased during 2004, as did cases among women and heterosexual males. Recent sex partners of infected persons should be evaluated and treated for gonorrhea.



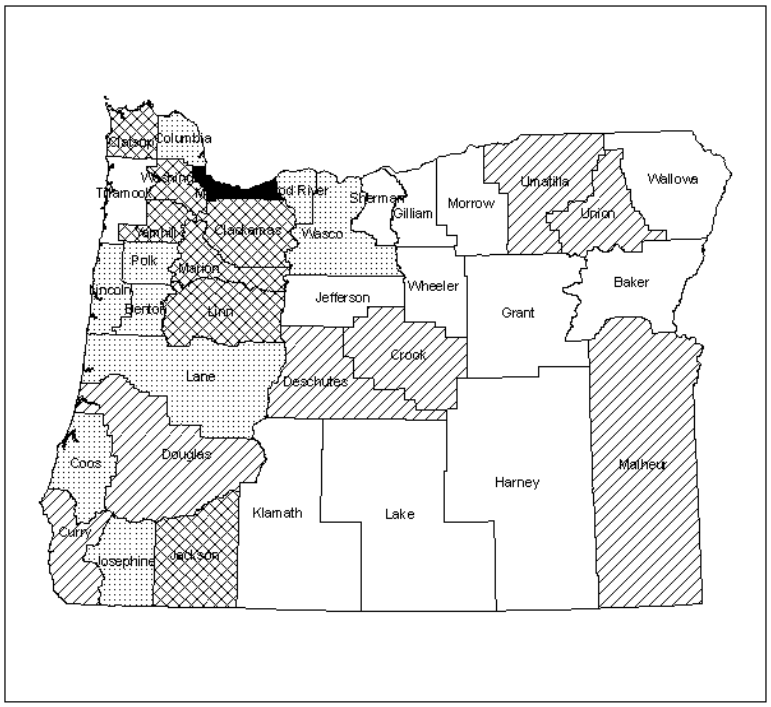
Incidence of Gonorrhea
by Age and Sex
Oregon, 2004



Incidence of Gonorrhea
Oregon vs. Nationwide
1995–2004



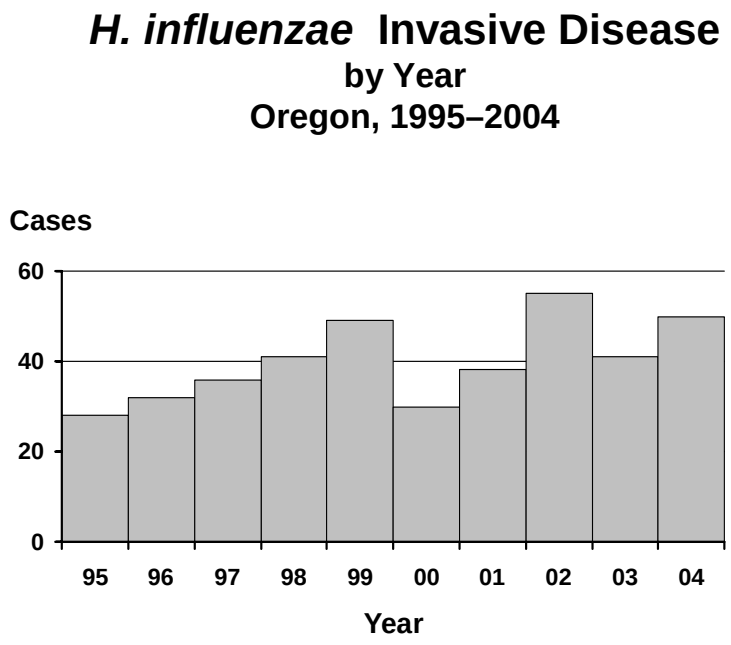
Incidence of Gonorrhea by County of Residence, Oregon 2004



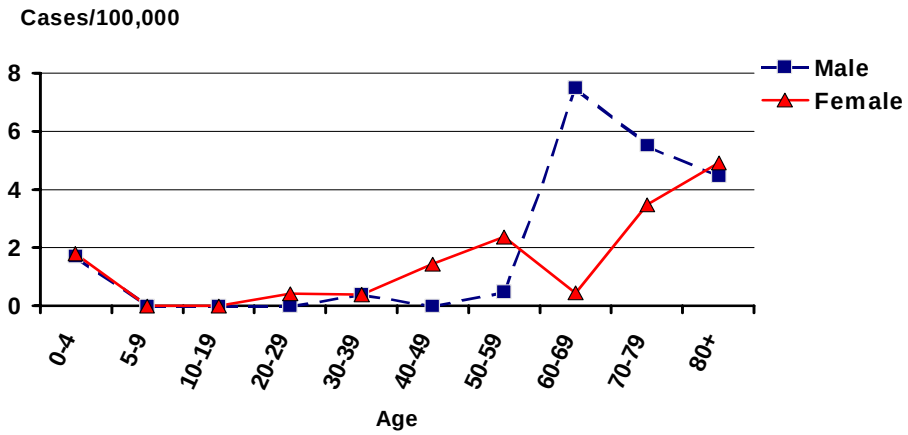
Haemophilus influenzae

Until the advent of an effective vaccine against serotype b organisms, *Haemophilus influenzae* was the leading cause of meningitis in children under 5 years of age in Oregon and elsewhere. Today it is well down the listing, with *S. pneumoniae* now in the lead. In Oregon, serotype b organisms have not been cultured in association with invasive infection of normally sterile body fluids in fully immunized children since 1999. Appropriate utilization of conjugate vaccine will help to ensure that this trend continues well into the future. Though the majority of cases are untypeable, almost ¼ of 2004 Oregon cases were identified as serotype f.

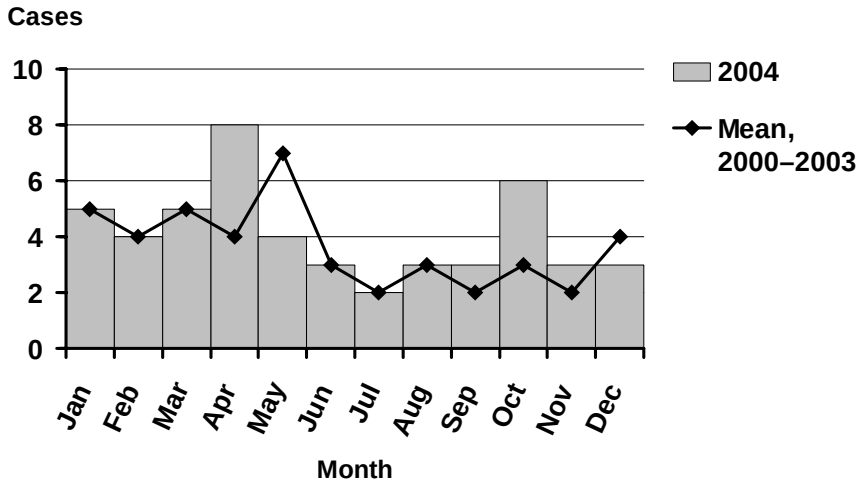
Peak incidence occurs in late winter/early spring. The majority of cases in 2004 were among those aged 60 and over.



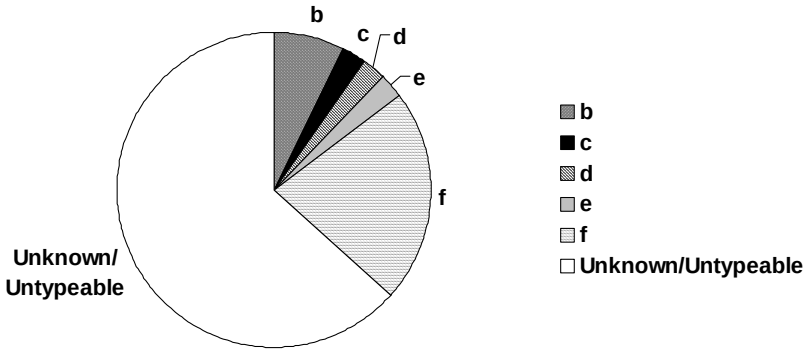
Incidence of *H. influenzae* Invasive Disease
by Age and Sex
Oregon, 2004



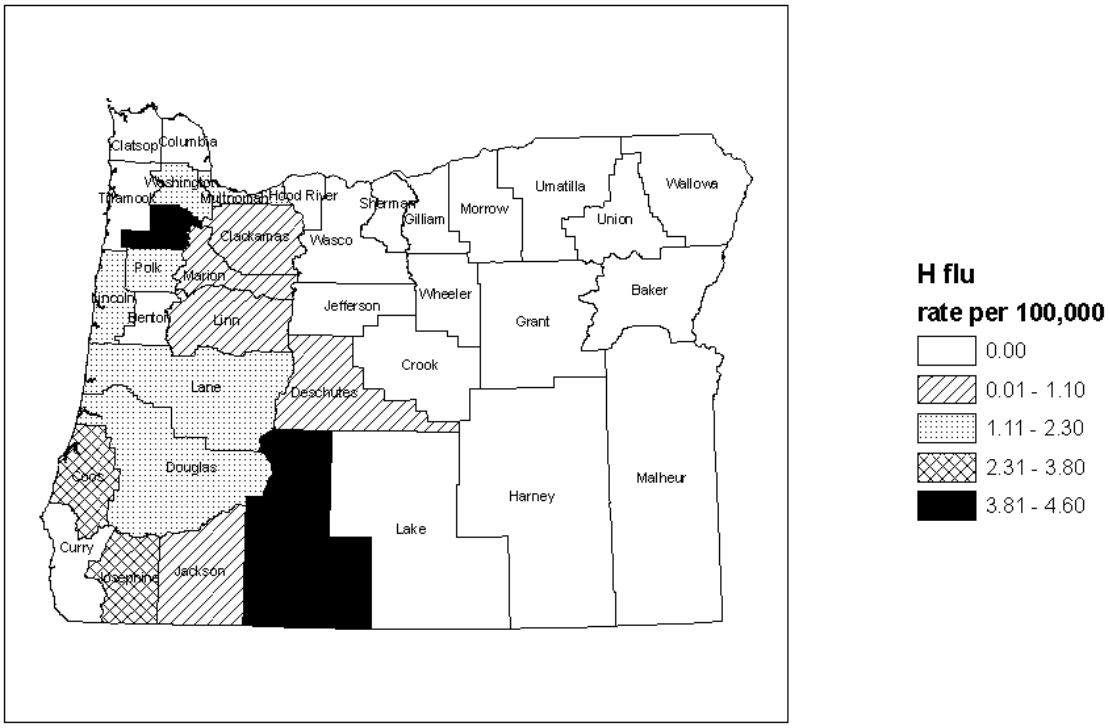
H. influenzae Invasive Disease
by Onset Month
Oregon, 2004



H. Influenzae Invasive Disease
by Serotype
Oregon, 2004



Incidence of *H. influenzae* by County of Residence, Oregon 2004

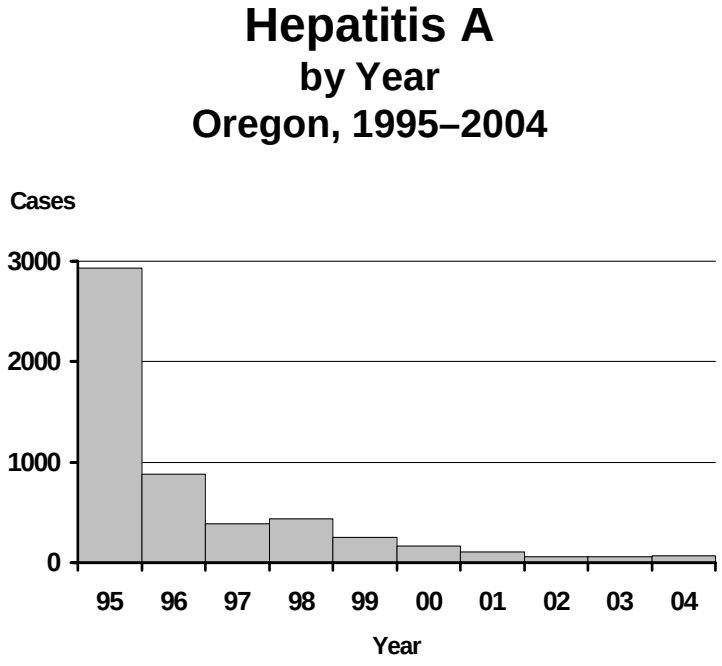


Hepatitis A

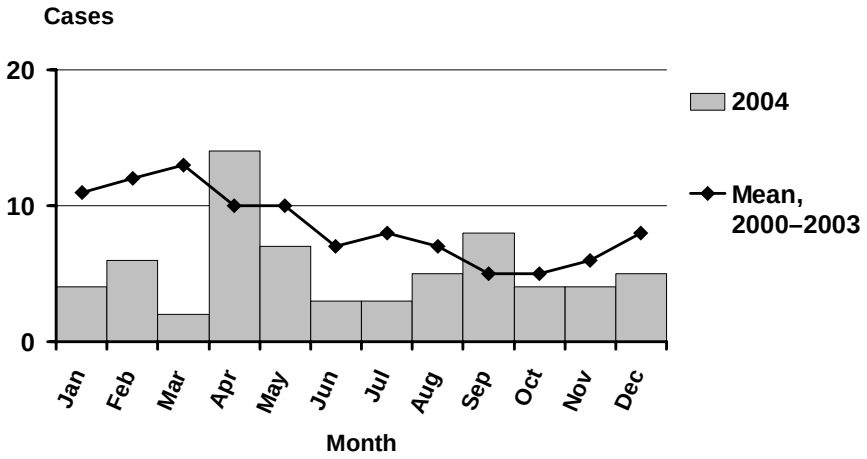
Hepatitis A is a liver disease caused by the hepatitis A virus, which infects humans via fecal-oral transmission. In Oregon, hepatitis A can occur in situations ranging from isolated cases of disease to widespread outbreaks.

Good personal hygiene and proper sanitation can help prevent hepatitis A. Vaccines are recommended for long-term prevention of hepatitis A in all Oregon children 2 years of age and older, as well as for adults in high-risk groups. Immune globulin is available for short-term prevention of hepatitis A in individuals of all ages.

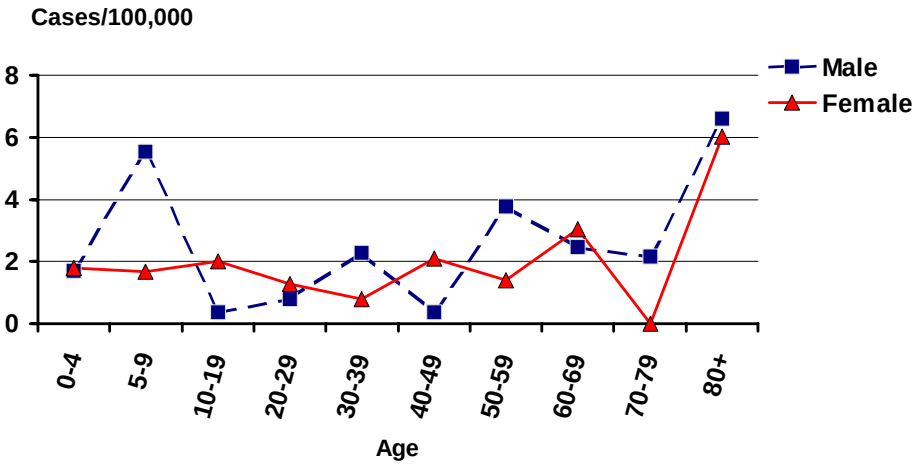
In 2004, Oregon's 62 cases represented an historic low. Most infections are acquired by venturing outside of Oregon to areas having poor practices relating to personal hygiene and environmental sanitation. Such persons placing themselves at elevated risk should seriously consider getting a hepatitis A vaccination at least two months prior to departure.



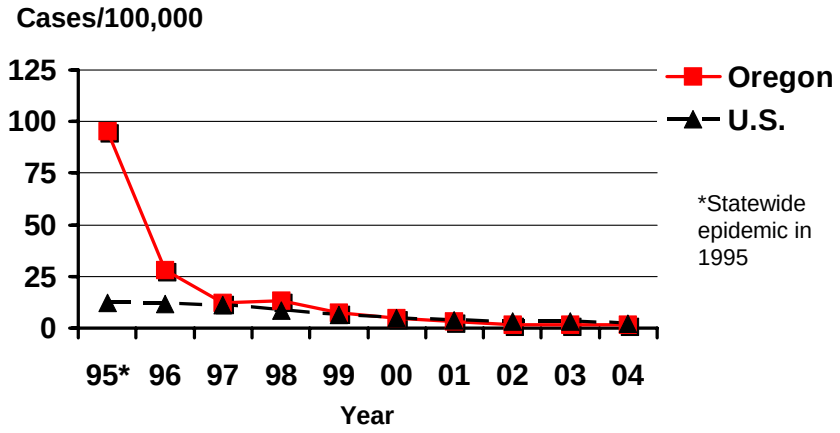
Hepatitis A
by Onset Month
Oregon, 2004



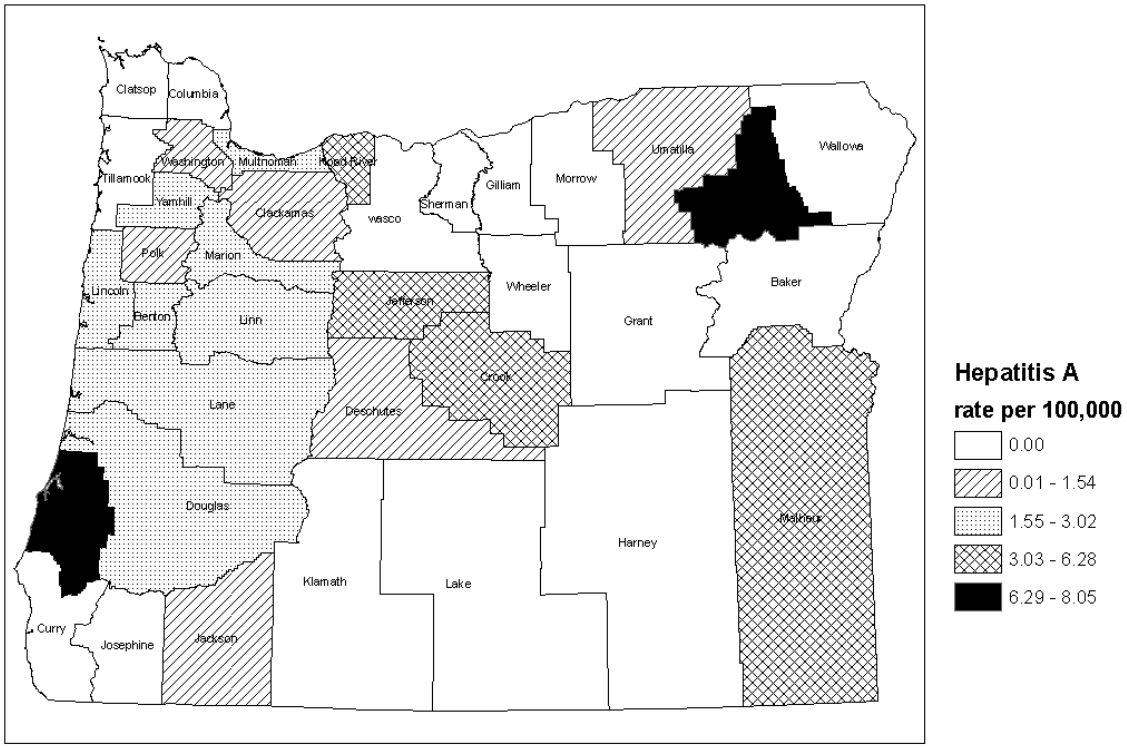
Incidence of Hepatitis A
by Age and Sex
Oregon, 2004



Incidence of Hepatitis A
Oregon vs. Nationwide
1995–2004



Incidence of Hepatitis A by County of Residence, Oregon 2004



Acute Hepatitis B

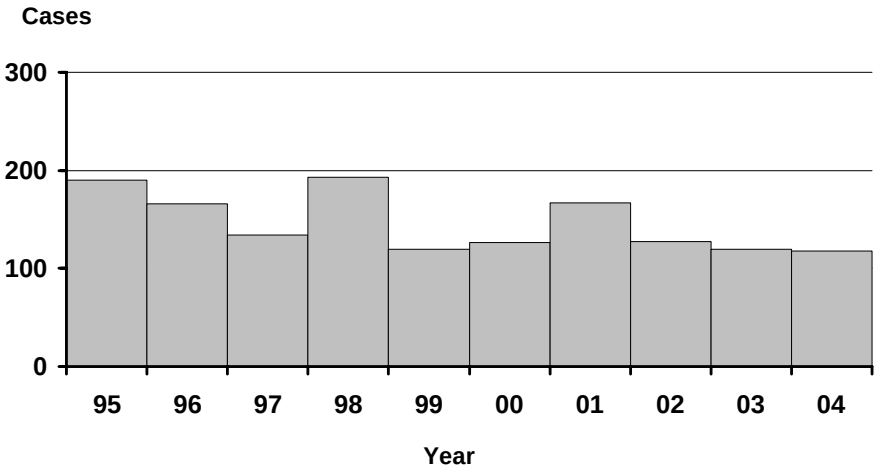
Hepatitis B is a vaccine-preventable viral disease of the liver that occurs when the virus of an infected person passes (through blood, semen, or saliva) into the blood stream of a non-immune person. Percutaneous or permucosal exposures take place when hypodermic needles are shared, when blood splashes into an eye, during sex, by biting, when improperly sterilized injection devices are used for tattooing, body piercing, and acupuncture, and when the baby of a hepatitis B carrier is being born.

Acute hepatitis B virus infection (diagnosed by the sero-presence of the IgM antibody to the hepatitis B core antigen [IgM anti-HbcAg]) usually, but not always, causes jaundice. Some infections are mild, even asymptomatic, and may go undetected. Hepatitis B has been vaccine-preventable since 1982 and, to promote universal vaccination and hence protection, was added to the recommended childhood immunization schedule in 1992 with the series starting at birth.

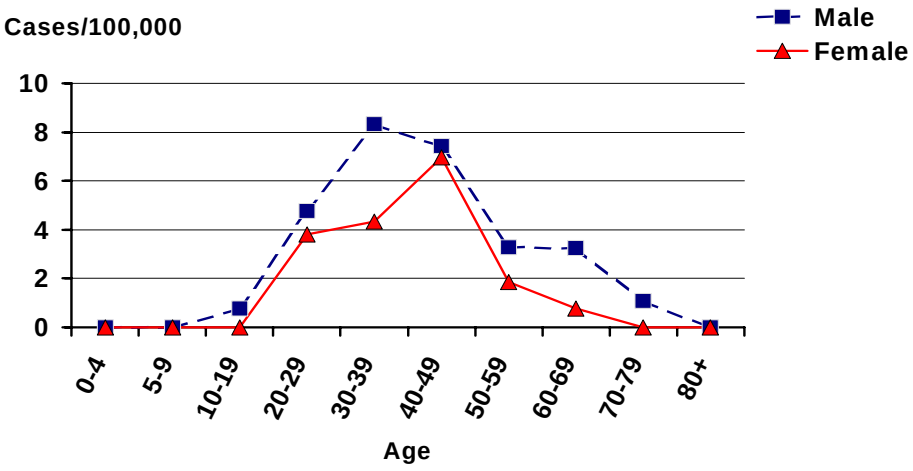
Acute hepatitis B in Oregon declined from 1993–1996 — the very end of a decade-long, 72% decline that started here after the hepatitis B vaccine was licensed in 1982 (hepatitis B declined 76% in the US as a whole over the same period of time). The number of cases leveled off in 1997, to about 150 cases per year.

In 2004, the picture of hepatitis B in Oregon was essentially unchanged. Local health departments investigated and reported 118 acute cases in 2004. There were nearly twice as many male cases as female cases. Though a quarter (26%) of all cases did not have a hepatitis B risk factor identified after intensive probing by local public-health nurses; 42% of those interviewed were IV drug users; the remainder were sexually exposed.

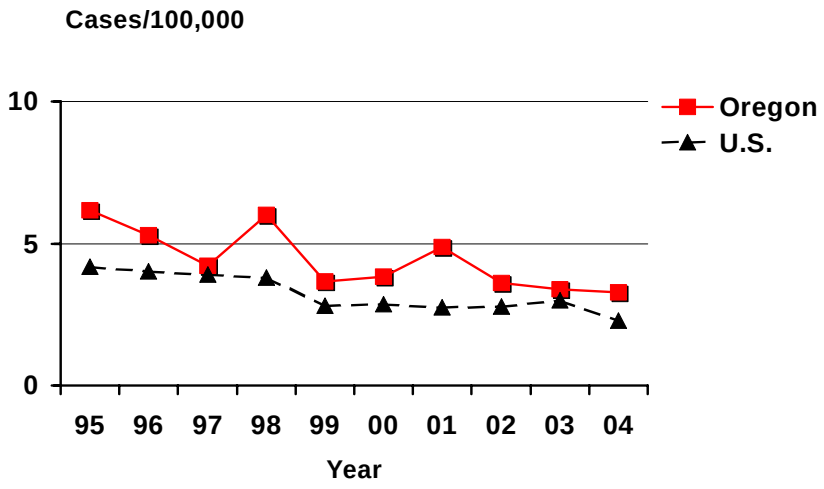
Hepatitis B (Acute)
by Year
Oregon, 1995–2004



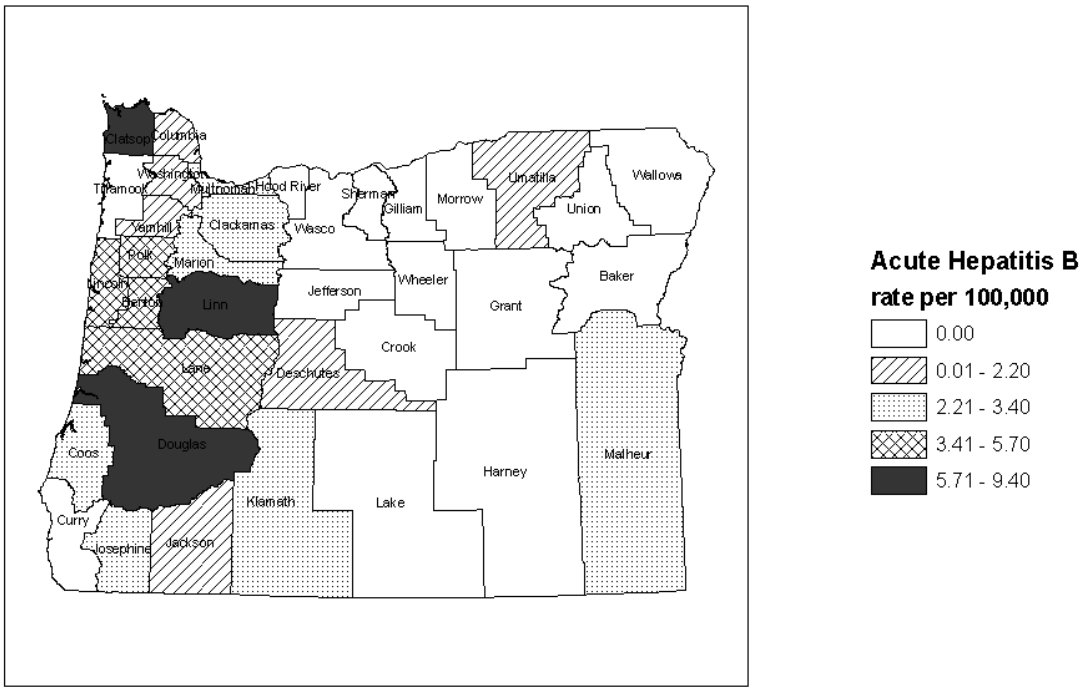
Incidence of Hepatitis B (Acute)
by Age and Sex
Oregon, 2004



Incidence of Hepatitis B (Acute)
Oregon vs. Nationwide
1995–2004



Incidence of Acute Hepatitis B by County of Residence, Oregon 2004

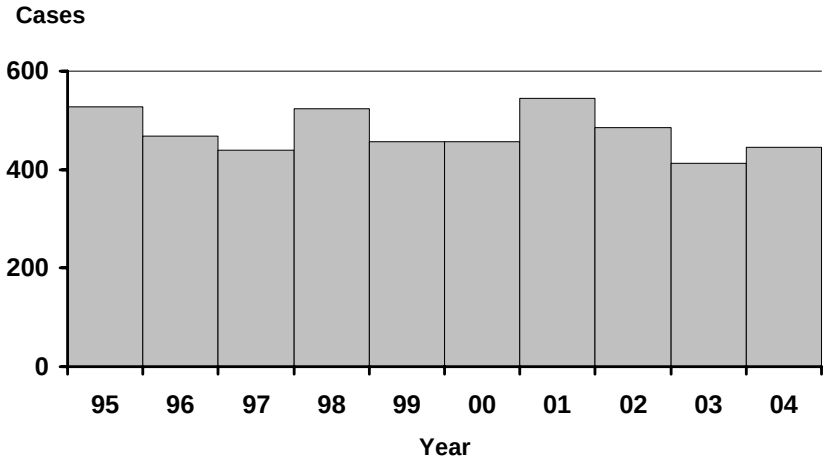


Chronic Hepatitis B

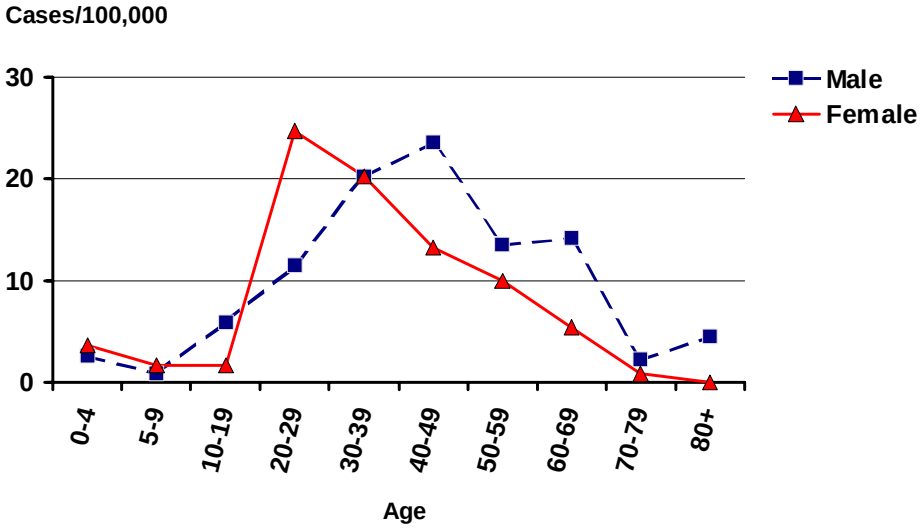
Persons with chronic hepatitis B are known as "chronic carriers" — a state of infection that exists when hepatitis B surface antigen (HBsAg) persists in the blood for more than six months. The likelihood of becoming a chronic carrier is affected by the age at infection. Fewer than 6% of acutely infected adults in the US become carriers, compared to 25% (with HBeAg-negative moms) to 90% (with HBeAg-positive moms) of children infected in early childhood or during birth. Perinatal infection can be prevented by prompt administration of hepatitis B immune globulin and initiation of the three-dose hepatitis B vaccination series. This perinatal intervention is widely practiced in the US — all states have federal funding for perinatal hepatitis B prevention programs — but not in other parts of the world, particularly Asia and sub-Saharan Africa, where the prevalence of chronic hepatitis B is higher to begin with. In Oregon, 50% of chronic carriers were born in hepatitis-B-endemic countries. Chronic carriers are at greater risk of developing life-threatening diseases (e.g., chronic active hepatitis, cirrhosis, or liver cancer) decades later. Carriers will sustain transmission of hepatitis B in the US until vaccine-induced immunity is nearly universal.

In 2004, there were 445 newly reported carriers and, as in the past, they were older than acute cases and close to evenly distributed between men and women. Women, however, are diagnosed earlier than men, perhaps due to pre-natal screening. Chronic carriers are not reportable in many of the US states, so a table comparing Oregon to the rest of the US is not given.

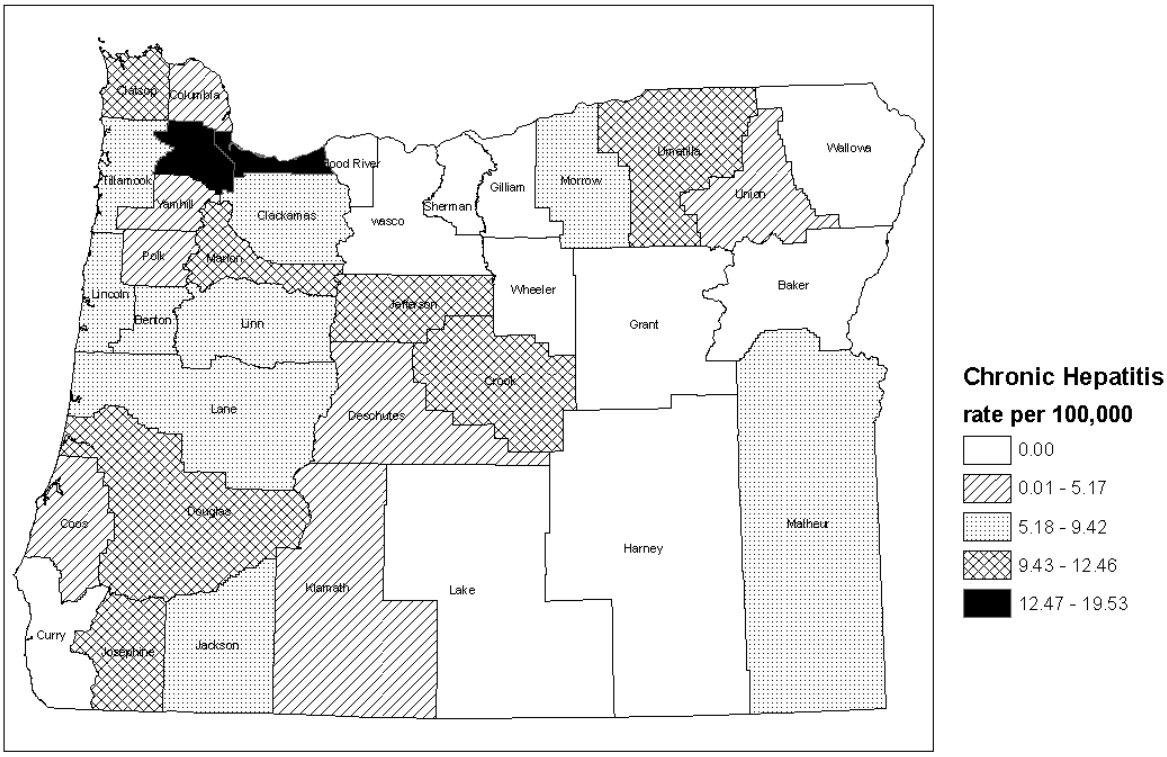
Hepatitis B (Chronic)
by Year
Oregon, 1995–2004



Incidence of Hepatitis B (Chronic)
by Age and Sex
Oregon, 2004



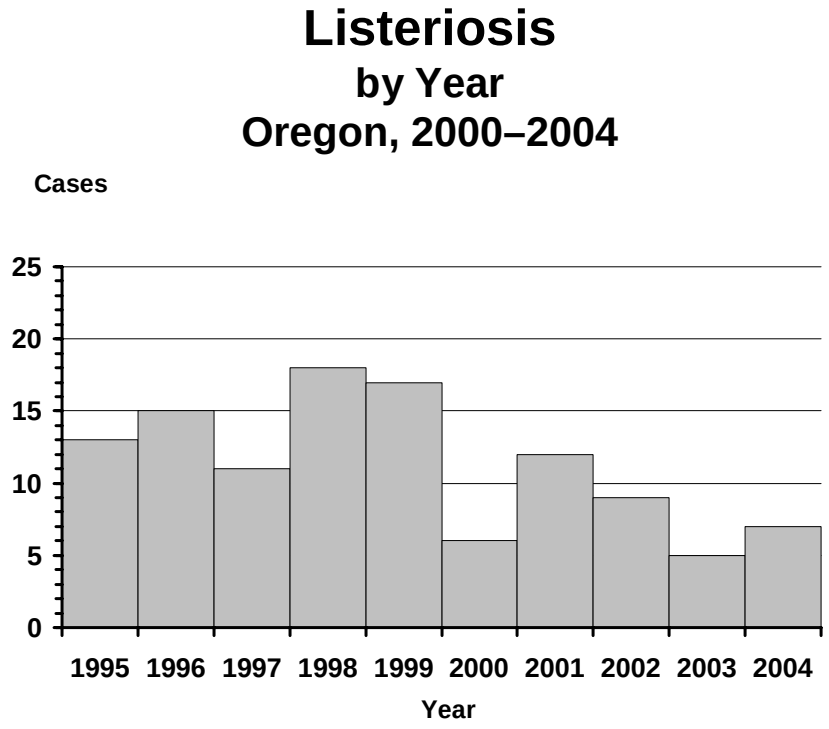
Incidence of Chronic Hepatitis B by County of Residence, Oregon 2004



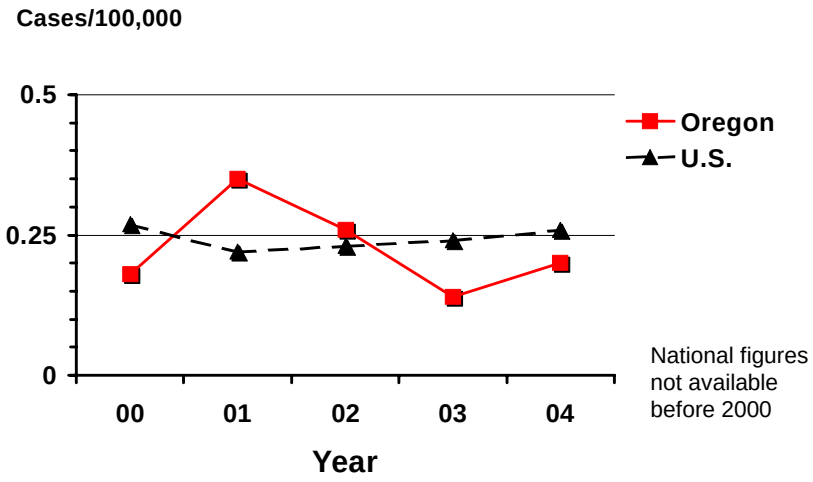
Listeriosis

Listeriosis is a bacterial infection that has different manifestations. It may present as influenza-like illness with high fever, headache and myalgias. It can also present as a gastrointestinal illness, or it can be invasive with sepsis and meningitis. In pregnant women, listeriosis may cause miscarriages or stillbirths. The case fatality rate of invasive listeriosis may be as high as 30% in infants infected prenatally, and 25-30% in non-pregnant adults.

Most cases of listeriosis are sporadic rather than epidemic. However, several large outbreaks have been associated with consumption of contaminated foods. It is important to track the incidence of this disease to limit its transmission and prevent further spread. The rate is higher among pregnant women, newborns, the elderly, and immunocompromised persons. Cooking food properly is the most important means of prevention. If diagnosed, treatment with antibiotics should be instituted promptly.



Incidence of Listeriosis
Oregon vs. Nationwide
2000–2003



Lyme Disease

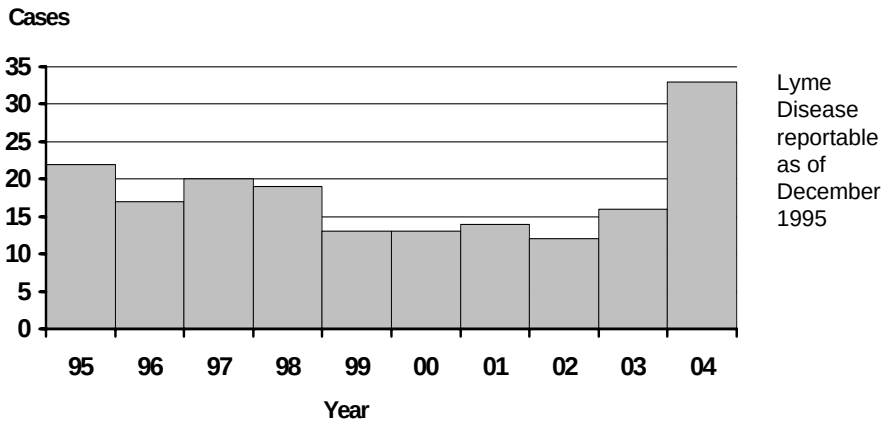
Lyme Disease is a tick-borne zoonotic disease caused by the spirochete *Borrelia burgdorferi*. The first manifestation in about 60% of patients appears as a red macule or papule that expands slowly in an annular manner, sometimes with multiple similar lesions. This distinctive skin lesion is called erythema migrans (EM). The incubation period for EM ranges from 3 to 32 days after tick exposure; however, the early stages of the illness may be asymptomatic, and the patient may later develop systemic symptoms and neurologic, rheumatologic and cardiac involvement occurring in varying combinations over a period of months to years.

Currently, increasing recognition of the disease is redefining endemic areas; cases have been reported in 47 states, and in Ontario and British Columbia, Canada. Elsewhere, related borrelioses have been found in Europe, the former Soviet Union, China and Japan.

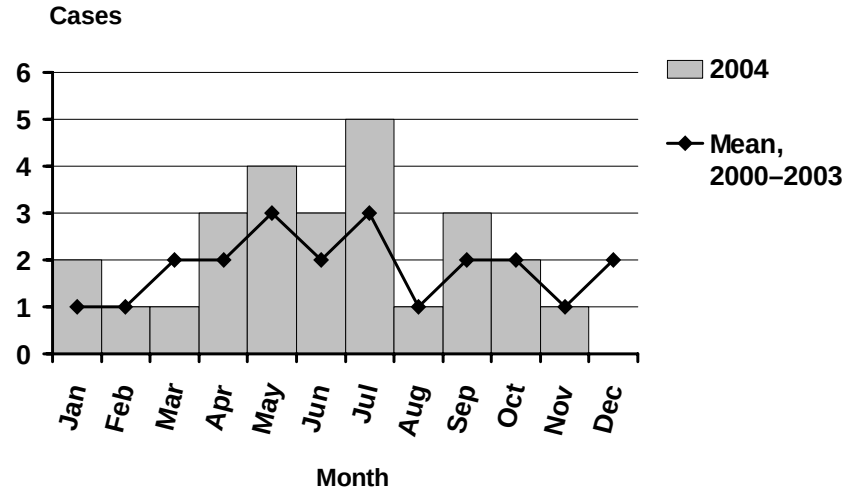
In 1997–1998, a tick identification and *Borrelia* isolation study was conducted by the CDC and the Oregon Department of Human Services. The organism was isolated in 3% of *Ixodes pacificus* ticks tested from Josephine and Jackson Counties.

Oregon Lyme disease rates pale in comparison to the national rate. Case counts increase in summer months when more Oregonians are outdoors. In 2004, 43% of cases interviewed reported seeing a tick (embedded or attached).

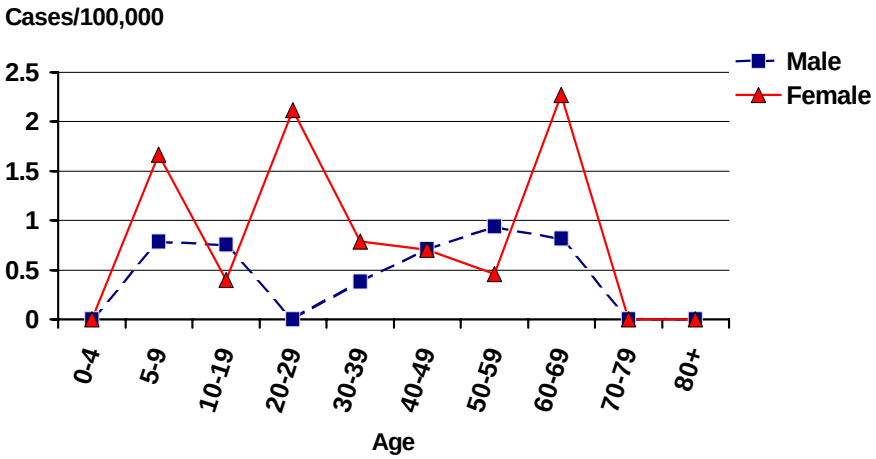
Lyme Disease
by Year
Oregon, 1995–2004



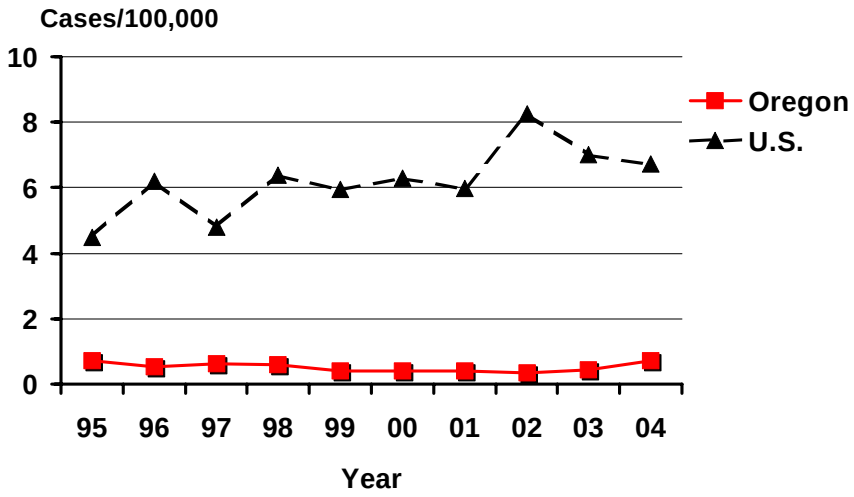
Lyme Disease
by Onset Month
Oregon, 2004



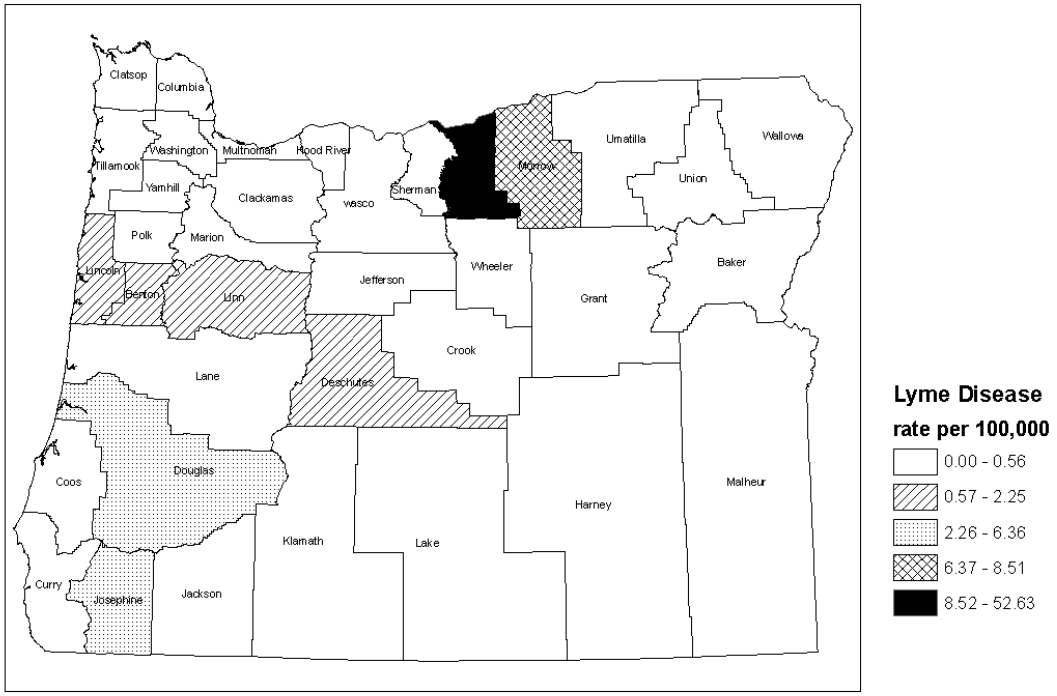
Incidence of Lyme Disease
by Age and Sex
Oregon, 2004



Incidence of Lyme Disease
Oregon vs. Nationwide
1995–2004

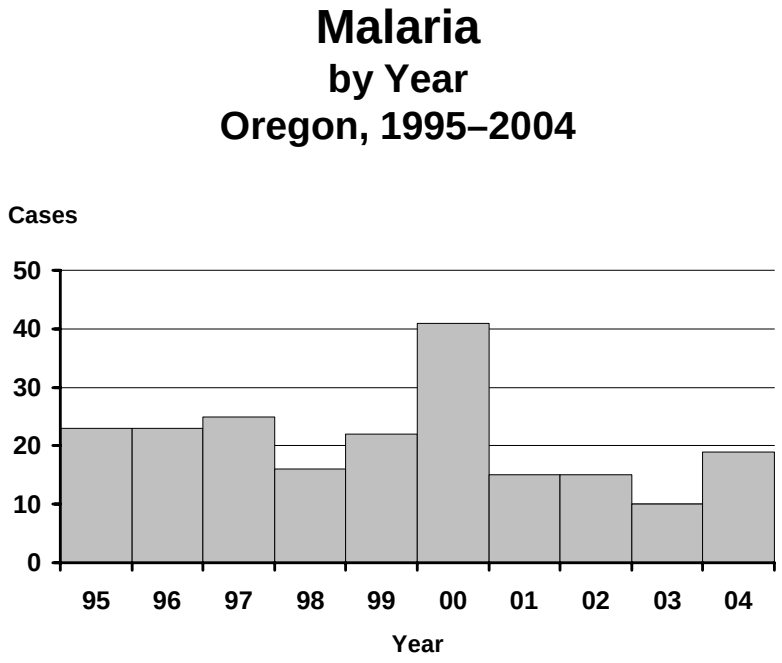


Incidence of Lyme Disease by County of Residence, Oregon 2004

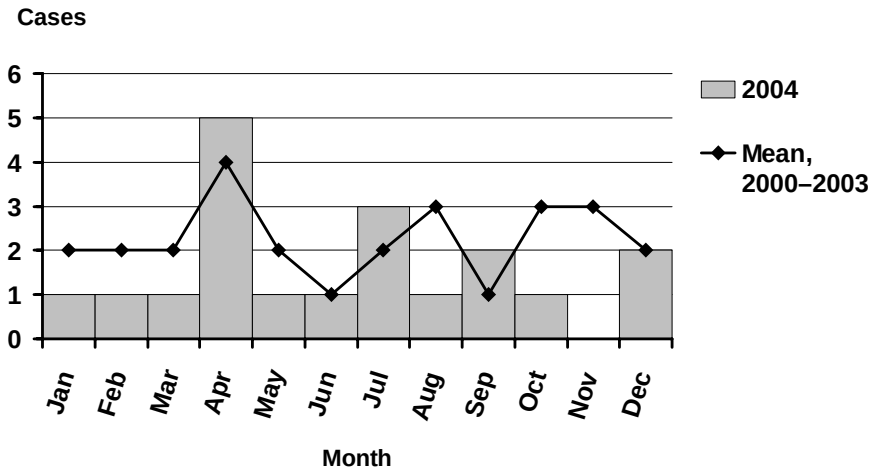


Malaria

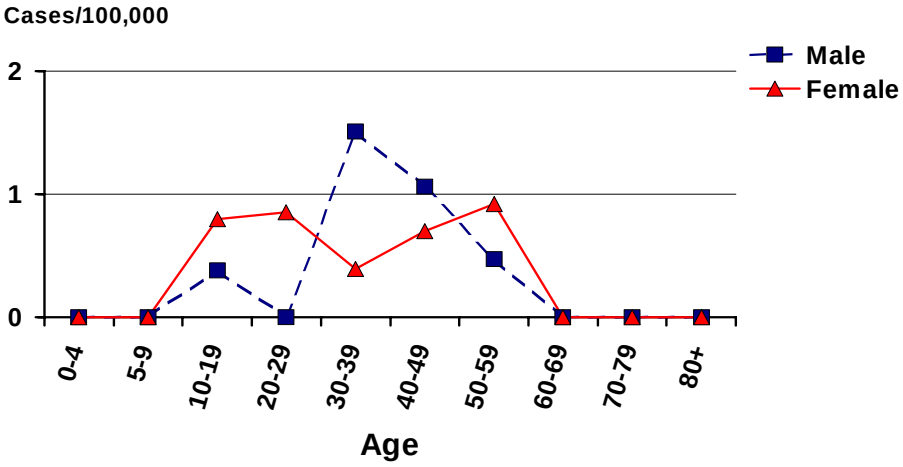
Worldwide, malaria is one of the most devastating of the communicable diseases, causing at least 1,000,000 deaths annually, not to mention an enormous burden of disability and medical costs. While transmission has not been documented in Oregon for decades, malaria remains the a commonly reported vector-borne disease in our state — all cases resulting from exposures outside the United States. Competent anopheline mosquitoes are resident in Oregon, so limited local transmission remains a theoretical possibility. Rates in Oregon are similar to the national average. Oregon surveillance data are contributed to the national database, which is used to tailor recommendations for prophylaxis and treatment.



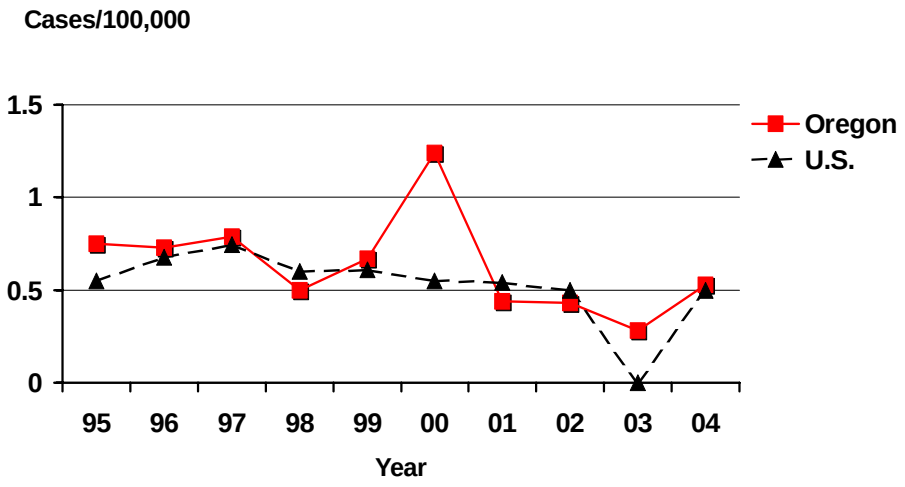
Malaria
by Onset Month
Oregon, 2004



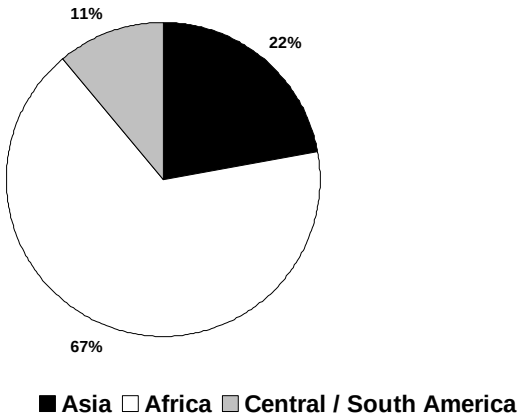
Incidence of Malaria
by Age and Sex
Oregon, 2004



Incidence of Malaria
Oregon vs. Nationwide
1995–2004



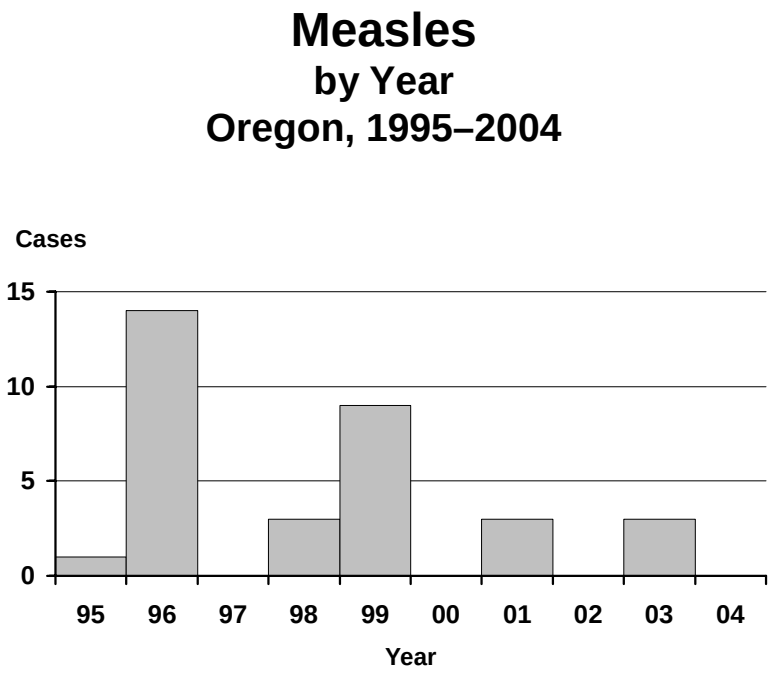
Malaria
by Region of Acquisition
Oregon, 2004



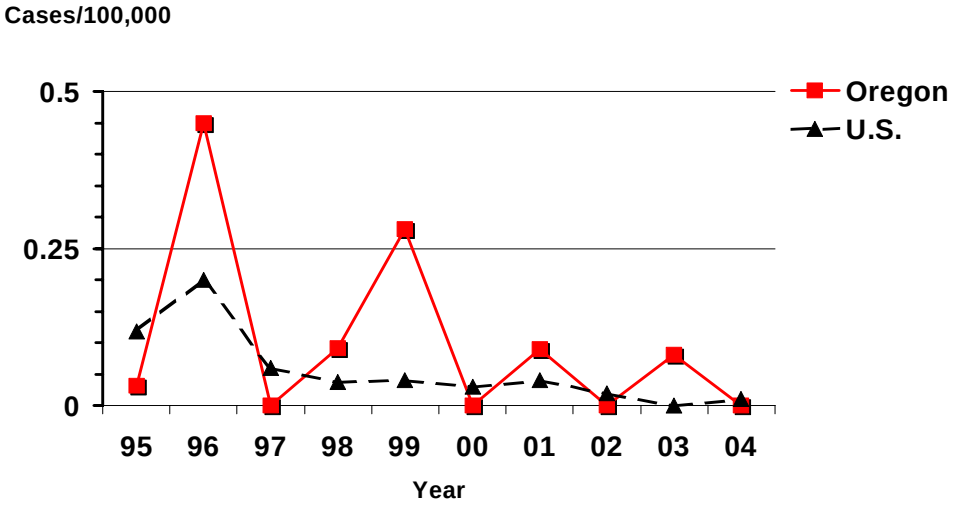
Measles

Measles is an acute, highly communicable viral illness, known for its red, blotchy rash that starts on the face and then becomes generalized. The rash is preceded by a febrile prodrome that includes cough, coryza, and conjunctivitis, and sometimes photophobia and Koplik spots. Diagnosis is confirmed by the presence of serum IgM antibodies (in a patient who has not recently been immunized).

Measles is no longer endemic in the United States; cases are occasionally imported; the 2003 cases of measles were imported from countries in Asia and Europe. No cases of measles were reported in 2004 and the risk of exposure to measles in Oregon remains low.



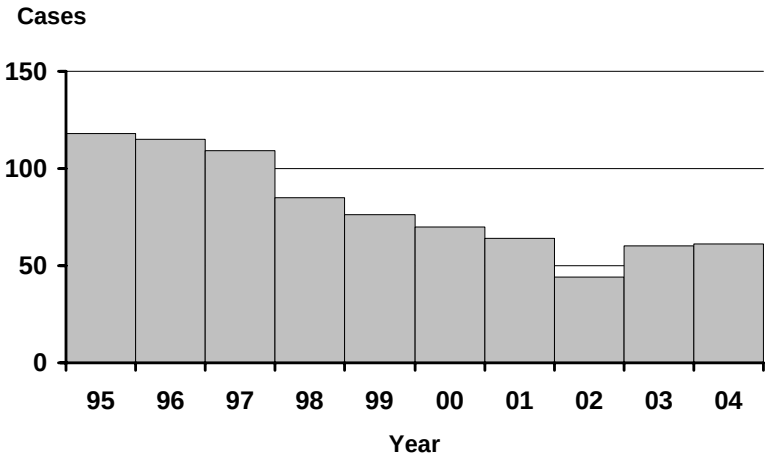
Incidence of Measles
Oregon vs. Nationwide
1995–2004



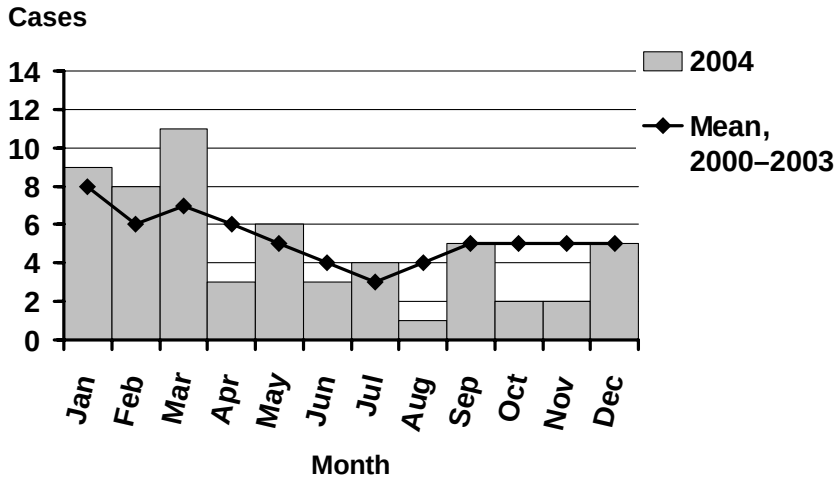
Meningococcal Disease

Reported cases of invasive meningococcal infections, including sepsis and meningitis, have declined from hyperendemic levels seen in 1993–1997 to those observed prior to the advent of the ET5 strain of serogroup B. Respiratory secretions and droplets continue to be shared among Oregonians and predispose secondary cases.
Though the overall trend in disease incidence in Oregon is declining, we continue to have higher rates than the nation. Serogroup B organisms make up more than 65% of all Oregon isolates. January through March show an increase in meningococcal activity with the highest rates of disease occurring among infants. A new vaccine for adolescents and young adults was licensed in 2005; however, this vaccine does not protect against Serogroup B disease.

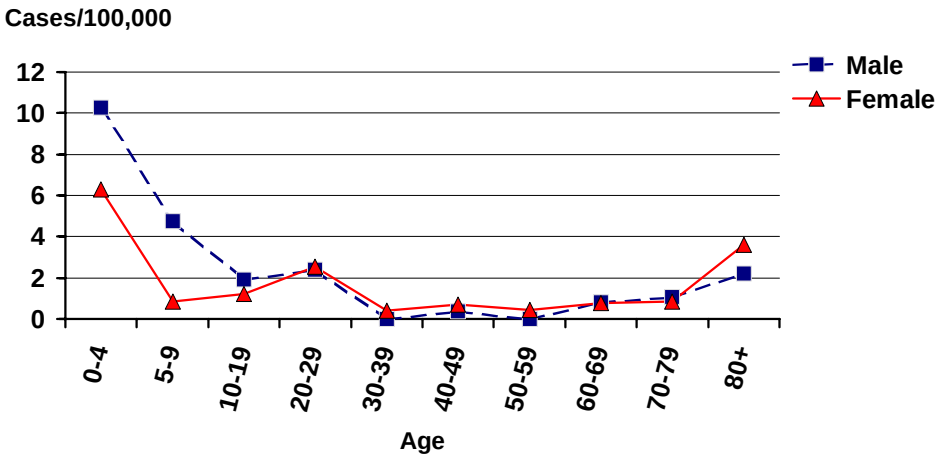
Meningococcal Disease
by Year
Oregon, 1995–2004



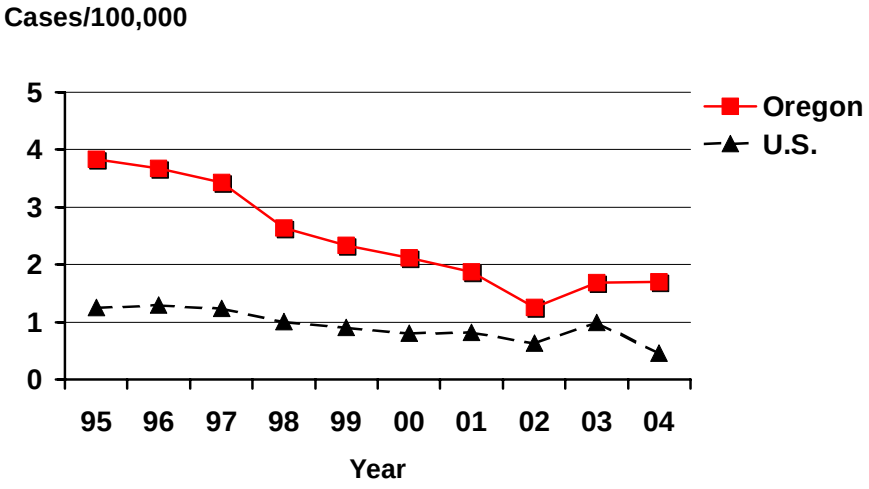
Meningococcal Disease
by Onset Month
Oregon, 2004



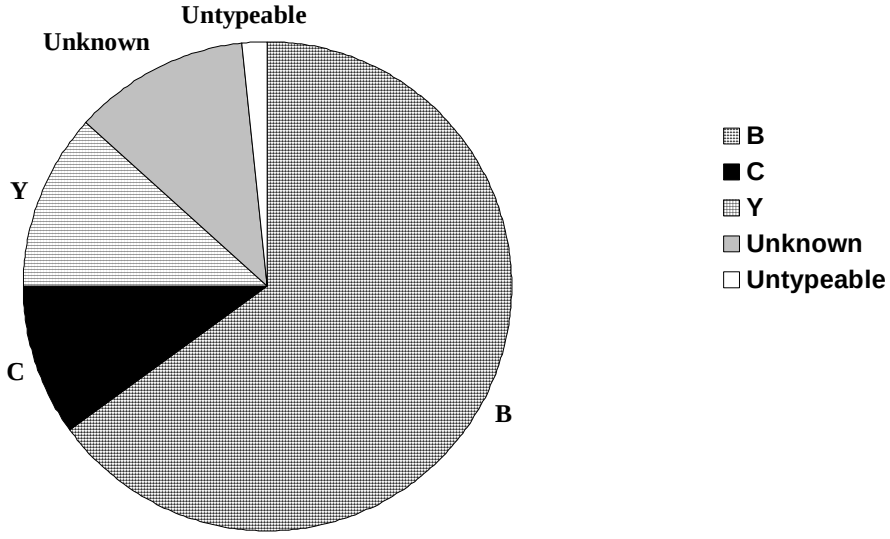
Incidence of Meningococcal Disease
by Age and Sex
Oregon, 2004



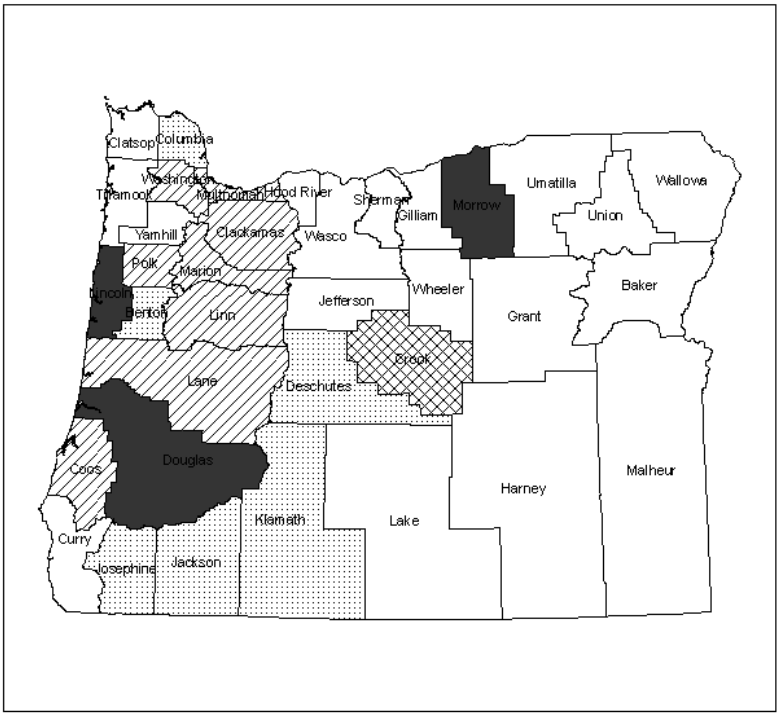
Incidence of Meningococcal Disease
Oregon vs. Nationwide
1995–2004



Meningococcal Disease
by Serogroup
Oregon, 2004

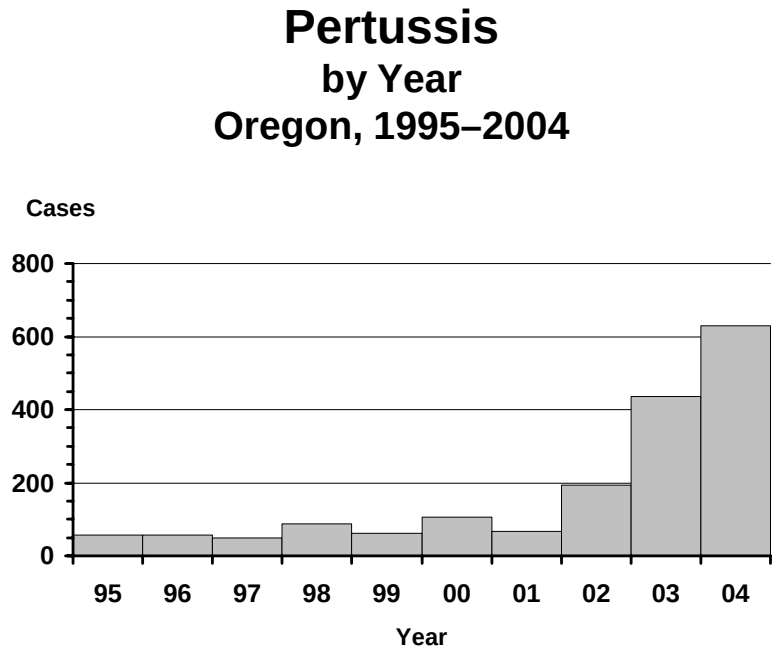


Incidence of Meningococcal Disease by County of Residence, Oregon 2004

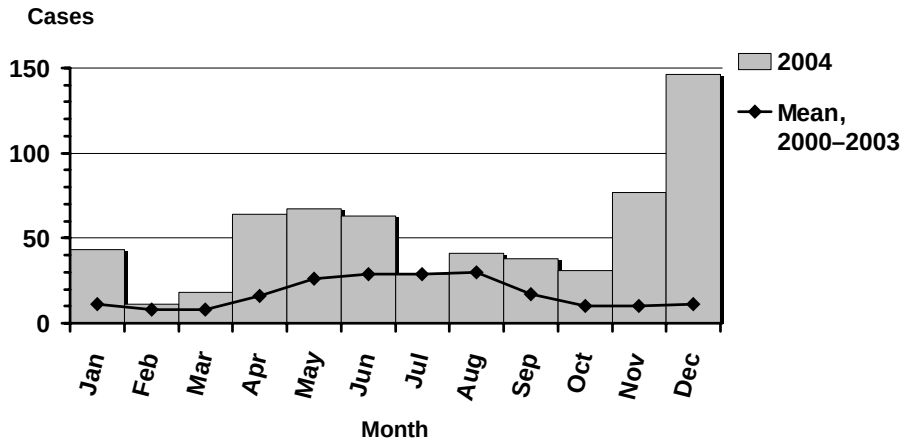


Pertussis

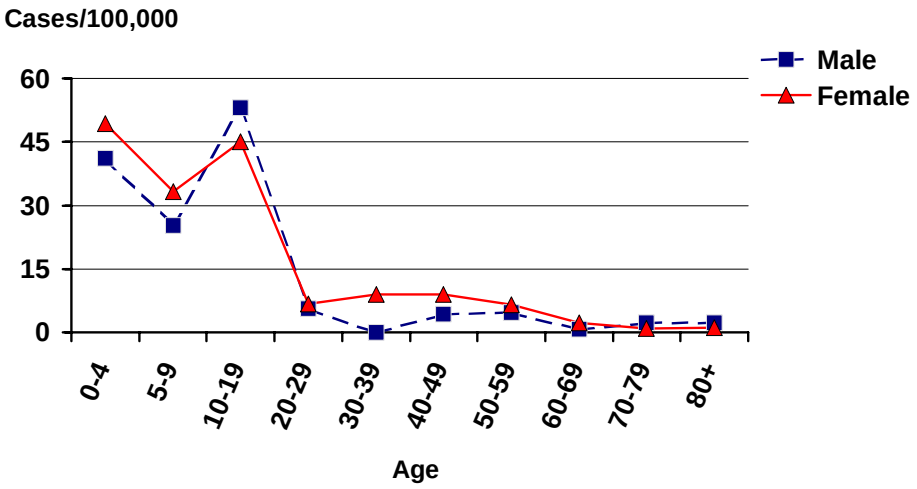
Pertussis is a highly contagious respiratory disease that is transmitted from person to person through contact with respiratory secretions (droplet transmission). Despite increasing immunization rates in Oregon children, pertussis holds the dubious distinction of being the only vaccine-preventable disease increasing in incidence. While pertussis is often a mild but lingering illness in adults, it poses significant risk for hospitalization and death of infants (<6 months). In 2004, reported cases continued to increase reaching the highest level since 1959. Benton, Clackamas, Douglas and Lane Counties reported more than 80% of all cases. We'll see how the adolescent pertussis booster vaccine effects Oregon's pertussis rate since those over age 10 now comprise more than 2/3 of reported cases.



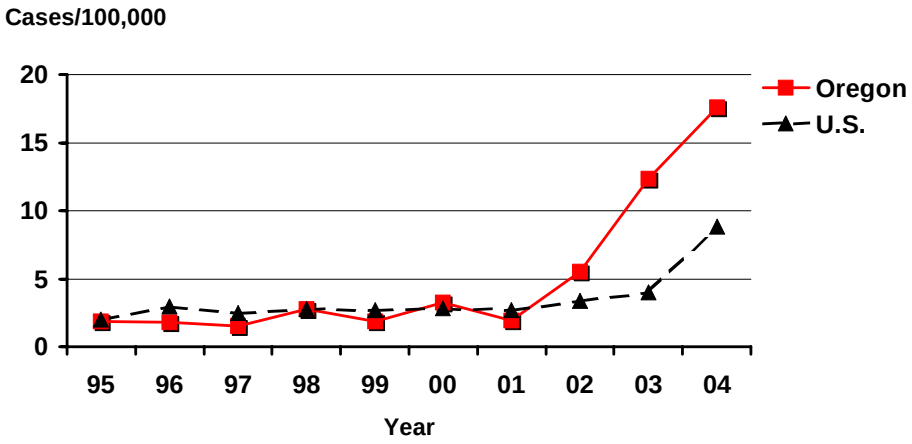
Pertussis
by Onset Month
Oregon, 2004



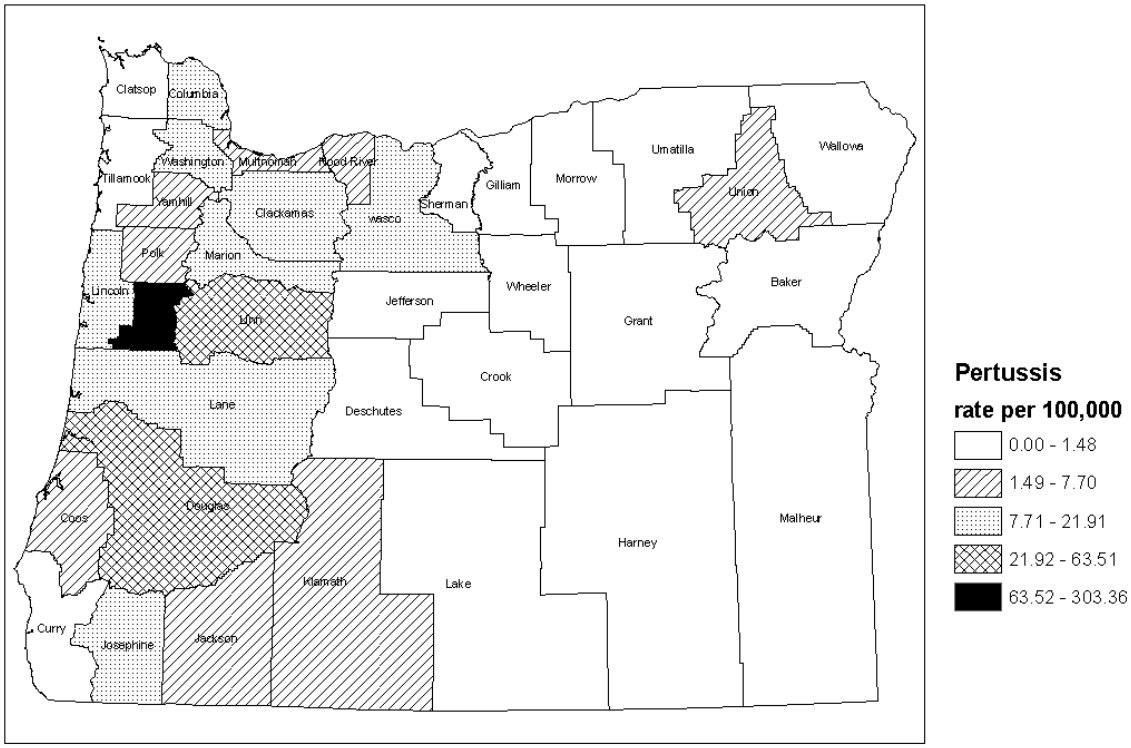
Incidence of Pertussis
by Age and Sex
Oregon, 2004



Incidence of Pertussis
Oregon vs. Nationwide
1995–2004



Incidence of Pertussis by County of Residence, Oregon 2004



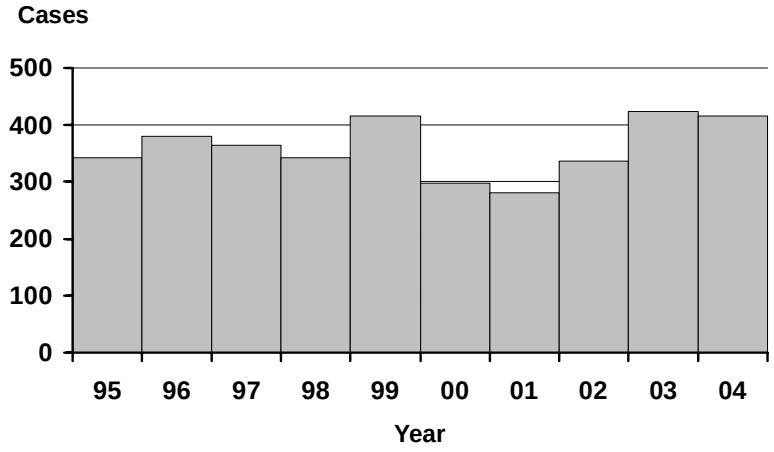
Salmonellosis

Salmonellosis is bacterial illness characterized by acute abdominal pain, diarrhea, and often fever that begins 12 hours to 5 days after infection. In cases of enterocolitis, fecal excretion usually persists for several days or weeks beyond the acute phase of illness; antibiotics generally have no effect on the illness and, in fact, may increase the duration of excretion of organisms.

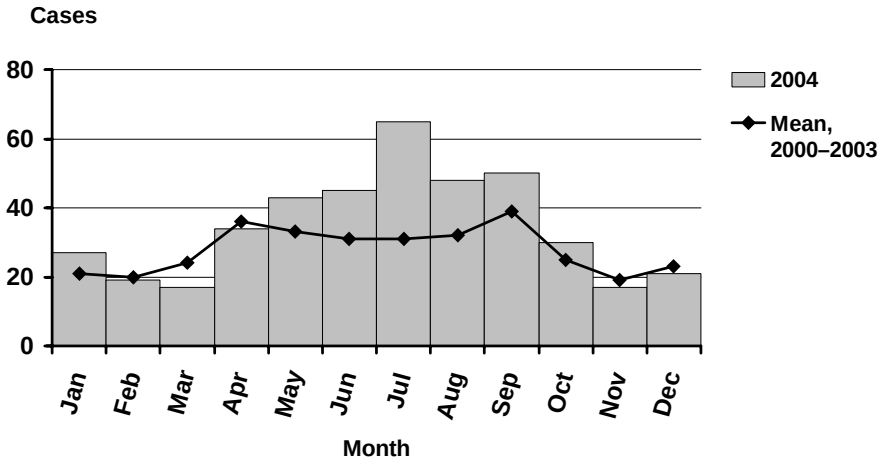
The majority of human infections are thought to result from the ingestion of fecally contaminated food or water. Undercooked or raw products of animal origin such as eggs, milk, meat, and poultry have been implicated as common sources of human salmonellosis. More recently, produce (cantaloupe, alfalfa sprouts) has been a common source of infection. A wide range of domestic and wild animals are carriers of Salmonella, including poultry, swine, cattle, rodents, iguanas, tortoises, turtles, terrapins, young poultry, dogs and cats. Though uncommon, person-to-person spread can occur in humans — via patients, convalescent carriers and, especially, mild and unrecognized cases. The incidence of infection is highest in infants and young children.

Of approximately 2,500 known serotypes, only about 200 are detected in the US in any given year. In Oregon, S. Typhimurium and S. Enteritidis are the two most commonly reported.

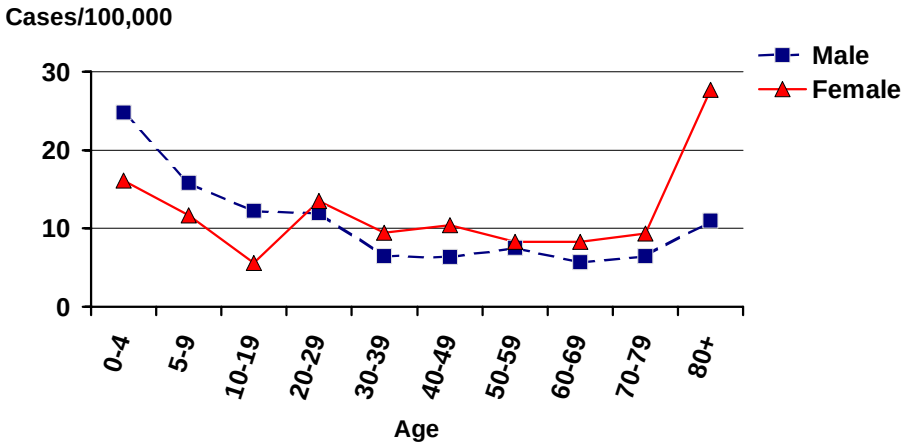
Salmonellosis
by Year
Oregon, 1995–2004



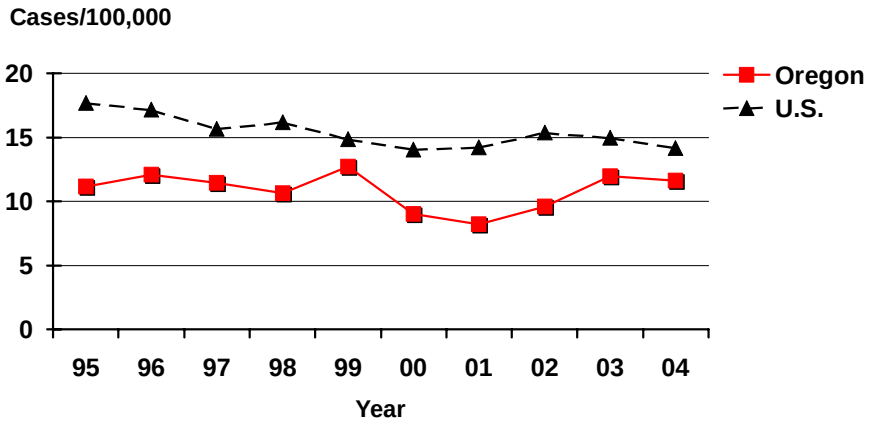
Salmonellosis
by Onset Month
Oregon, 2004



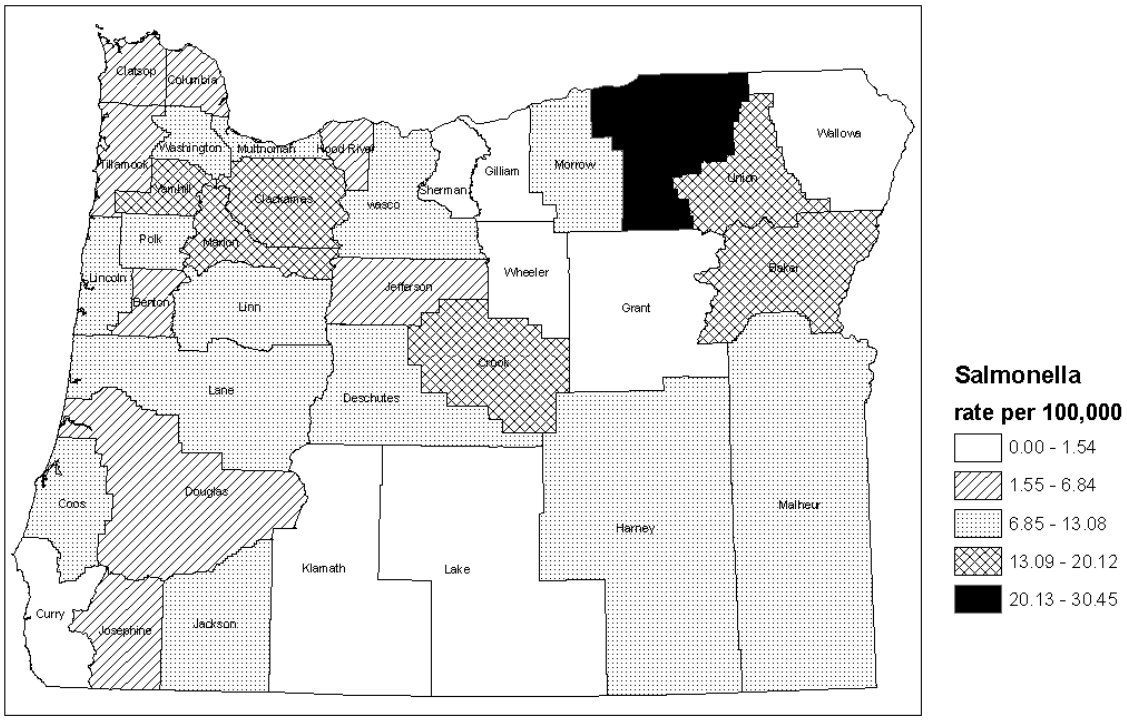
Incidence of Salmonellosis
by Age and Sex
Oregon, 2004



Incidence of Salmonellosis
Oregon vs. Nationwide
1995–2004



Incidence of Salmonellosis by County of Residence, Oregon 2004



Selected* Salmonella by Serotype, Oregon, 2004

	2001	2002	2003	2004		2001	2002	2003	2004
	#	#	#	#		#	#	#	#
Agona	1	4	8	7	**Montevideo**	13	17	16	15
Albany		1		2	**Muenchen**	8	10	5	7
Amager				3	**Muenster**			2	2
Anatum	1	2	2	6	**Newport**	16	31	38	14
Bovismorbificans				17	**Oranienburg**	10	12	13	6
Braenderup	7	4	1	2	**Oslo**	2			2
Clackamas		4	3	1	**Panama**		2	4	1
Dublin	1	1	3	3	**Paratyphi B var. Java**	9	9	9	17
Ealing				1	**Poano**			1	1
Edinburg			1	1	**Poona**	3	7	3	4
Enteritidis	34	48	78	60	**Reading**		3	1	3
Gaminara				1	**Saintpaul**	4	18	36	16
Haardt			2	1	**Sandiego**		1		1
Hadar	2	9	6	3	**Schwarzengrund**	2	1		1
Havana			1	2	**Senftenberg**		3	1	2
Heidelberg	26	27	12	37	**Singapore**				1
Ibadan				1	**Stanley**	5	4	5	2
Infantis	4	1	2	10	**Tennessee**		1		1
Jangwani				1	**Thompson**	4	1	2	1
Javiana	4	3	3	1	**Typhimurium**	86	67	79	85
Kiambu	1		2	1	**Volkmarsdorf**				1
Litchfield				2	**Other serotype**	275	319	393	30
Mbandaka			1	2	**Unknown**	5	16	31	22
Michigan				1	**Total**	**280**	**335**	**424**	**415**

* must have at least one case in 2004, other serotypes not listed might have been reported in previous years

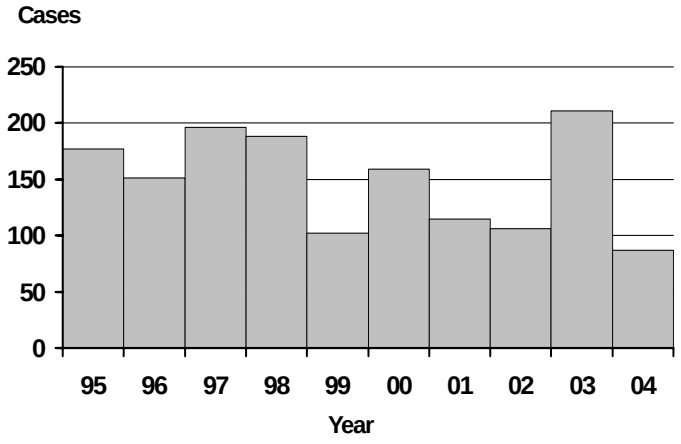
Shigellosis

Shigellosis is an acute bacterial infection characterized by (sometimes bloody) diarrhea, vomiting, abdominal cramps and often, fever. Humans are the only known reservoir. It is transmitted from person-to-person, and just a few organisms can cause illness. It is important to track the incidence of this disease to limit its transmission and prevent further spread. The rate is higher among children 1–4 years of age. The incidence of shigellosis usually increases in late summer and fall.

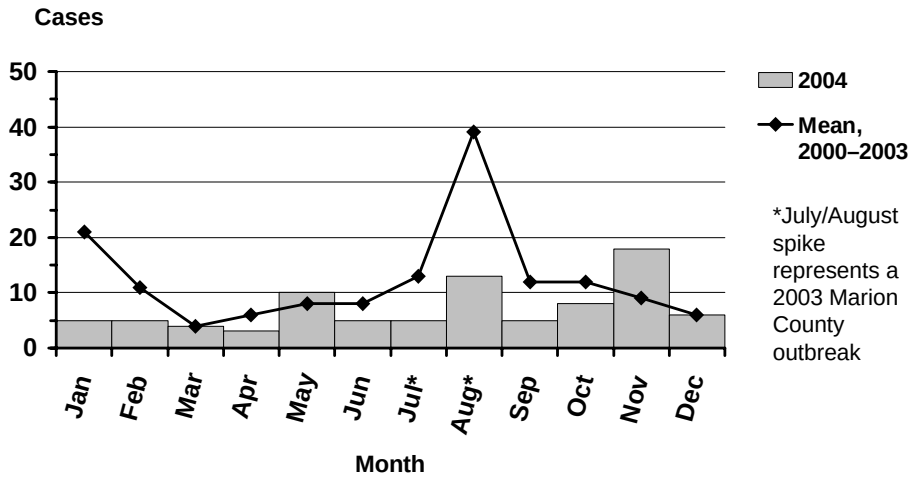
Outbreaks in day-care centers are common, mainly due to poor hygienic practices of small children. Hand washing is the most important means of prevention. Treatment reduces duration of illness, but the organism has become resistant to many antibiotics used for empiric therapy. Testing for antibiotic susceptibility is important for treatment.

Though over 200 cases were reported in 2003 (many associated with an outbreak), in 2004 the number of cases dropped to 87, the lowest since 1994.

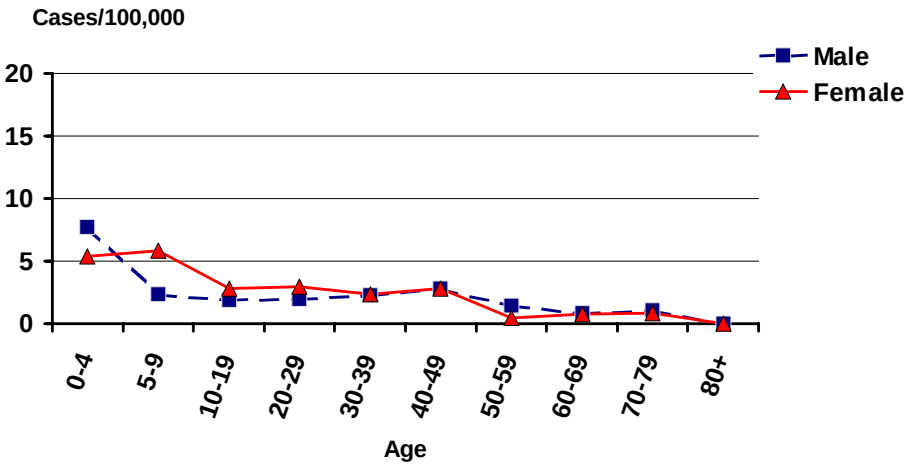
Shigellosis
by Year
Oregon, 1995–2004



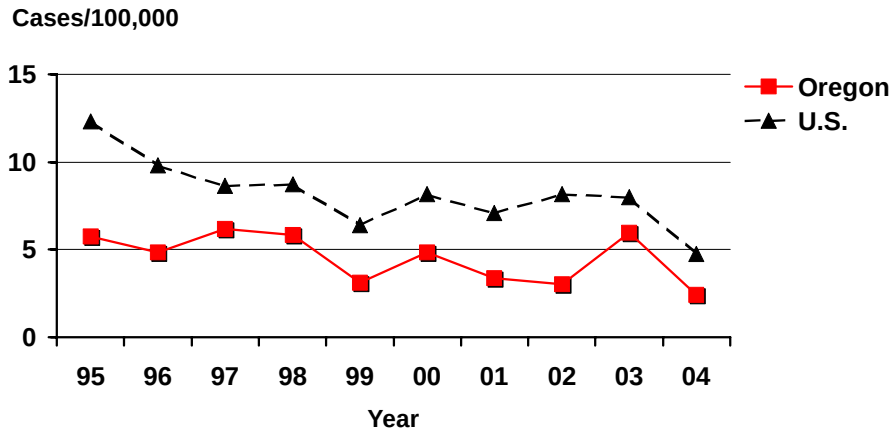
Shigellosis
by Onset Month
Oregon, 2004



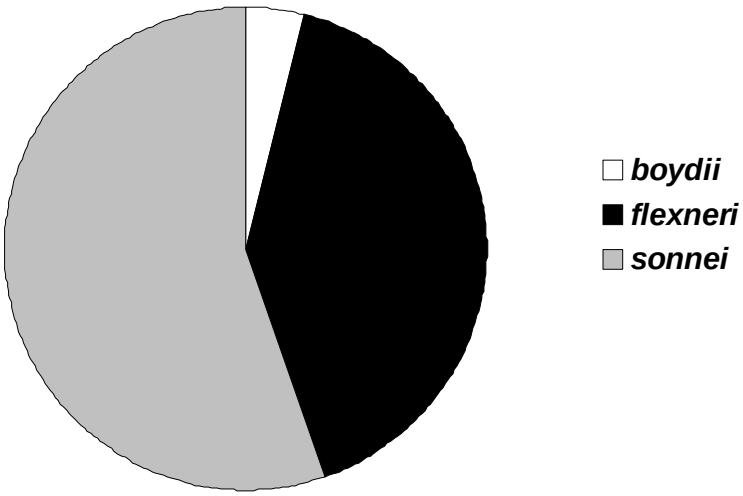
Incidence of Shigellosis
by Age and Sex
Oregon, 2004



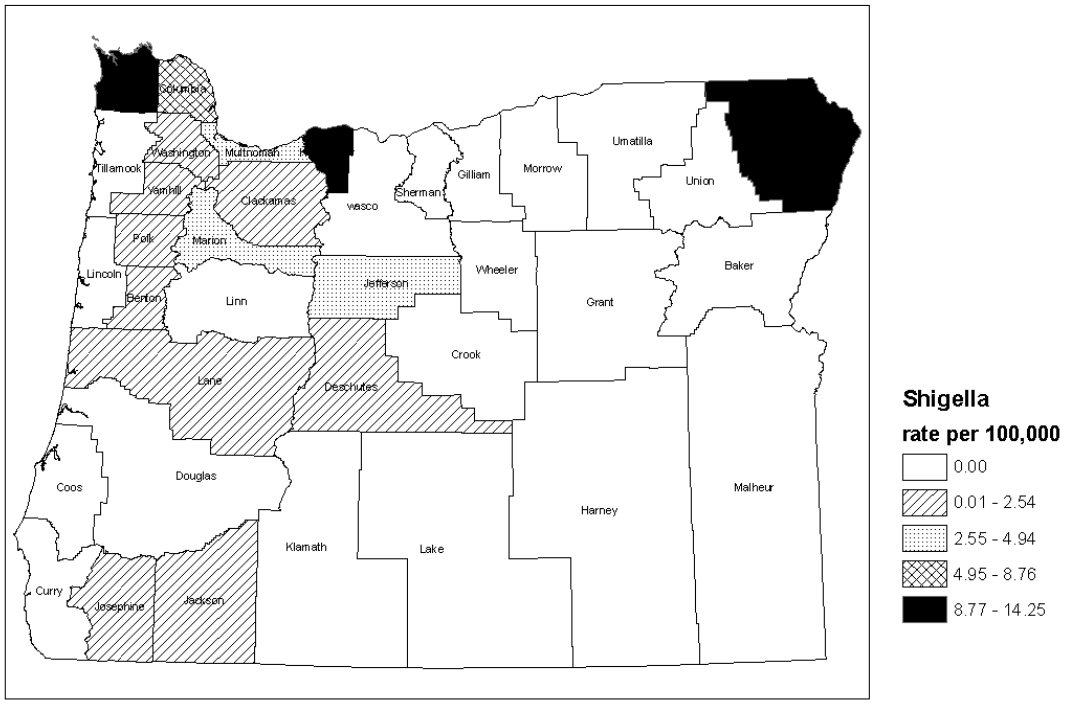
Incidence of Shigellosis
Oregon vs. Nationwide
1995–2004



Shigellosis
by Species
Oregon, 2004



Incidence of Shigellosis by County of Residence, Oregon 2004



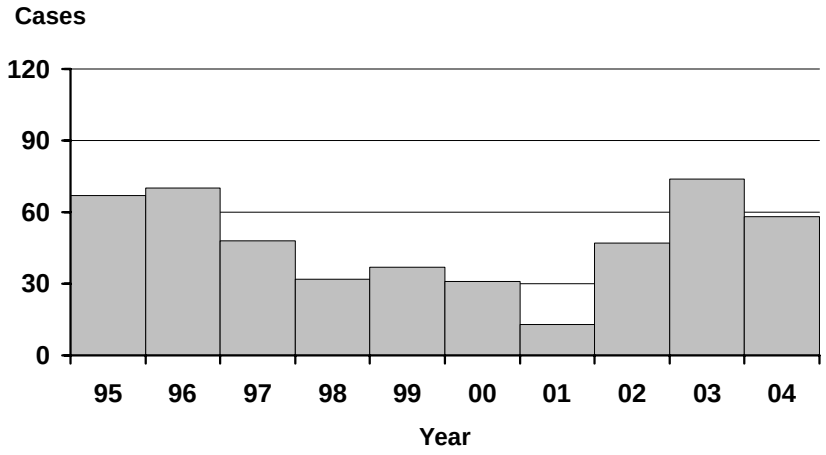
Early Syphilis

Early syphilis cases represent an aggregate of primary, secondary and early latent cases under one year's duration. The 58 early syphilis cases reported in 2003 show a 16-case (21.6%) decrease compared to 2003.

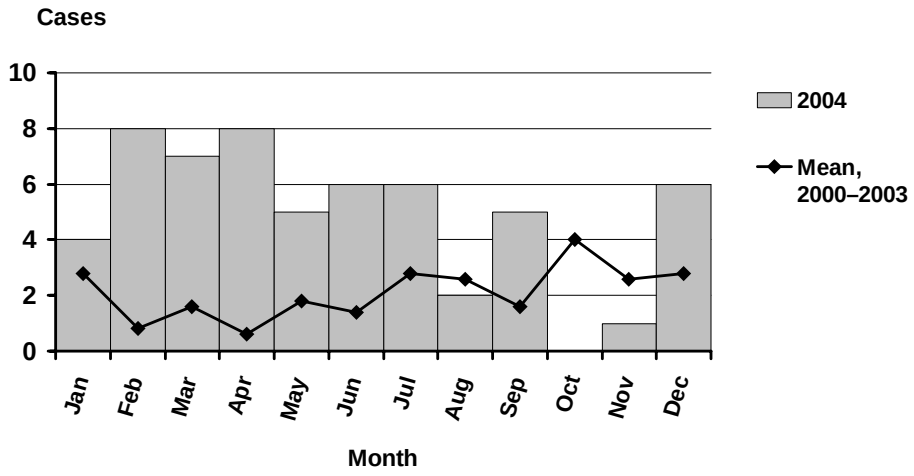
Syphilis is transmitted via vaginal, rectal or oral sex. Syphilis can be prevented by abstaining from sex outside a monogamous relationship with an uninfected partner. Those who are sexually active outside of a mutually monogamous relationship can protect themselves by using a condom when engaging in sexual activity.

The majority of the early syphilis cases reported during 2004 were among men who have sex with men. It is important to identify and treat persons with early syphilis to prevent late complications, such as brain and heart damage, and to prevent congenital infections. Moreover, people with primary and secondary syphilis more easily acquire and transmit HIV. An effective way to limit the spread of syphilis is to evaluate and treat recent sex partners of people with early syphilis.

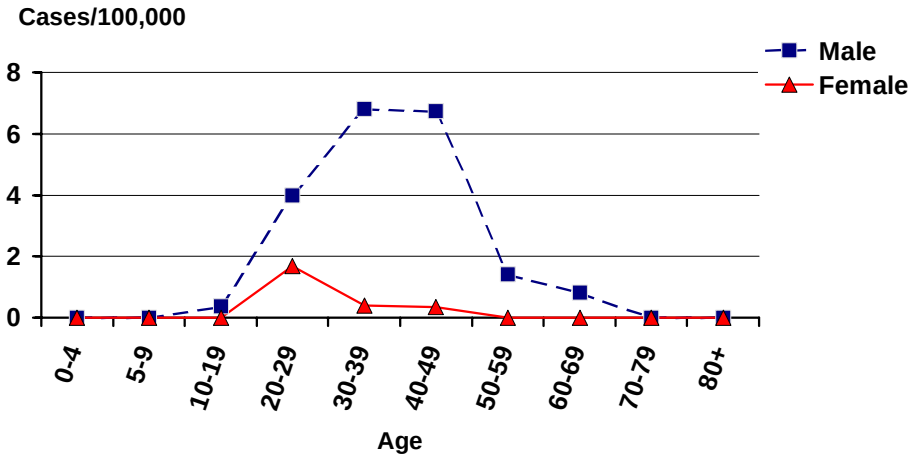
Early Syphilis
by Year
Oregon, 1995–2004



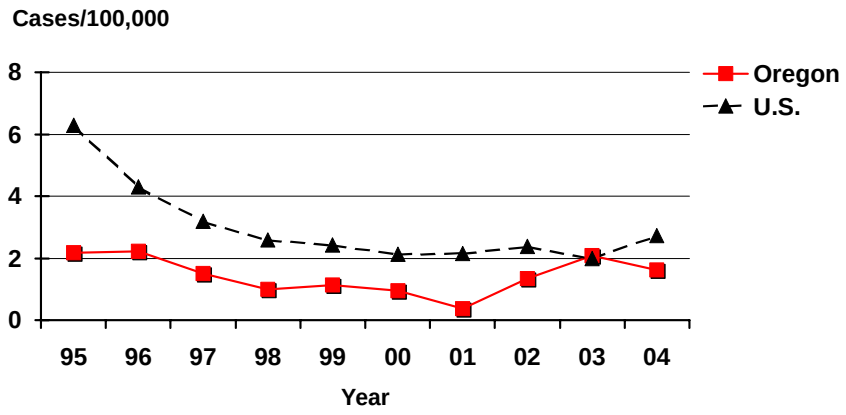
Early Syphilis
by Report Month
Oregon, 2004



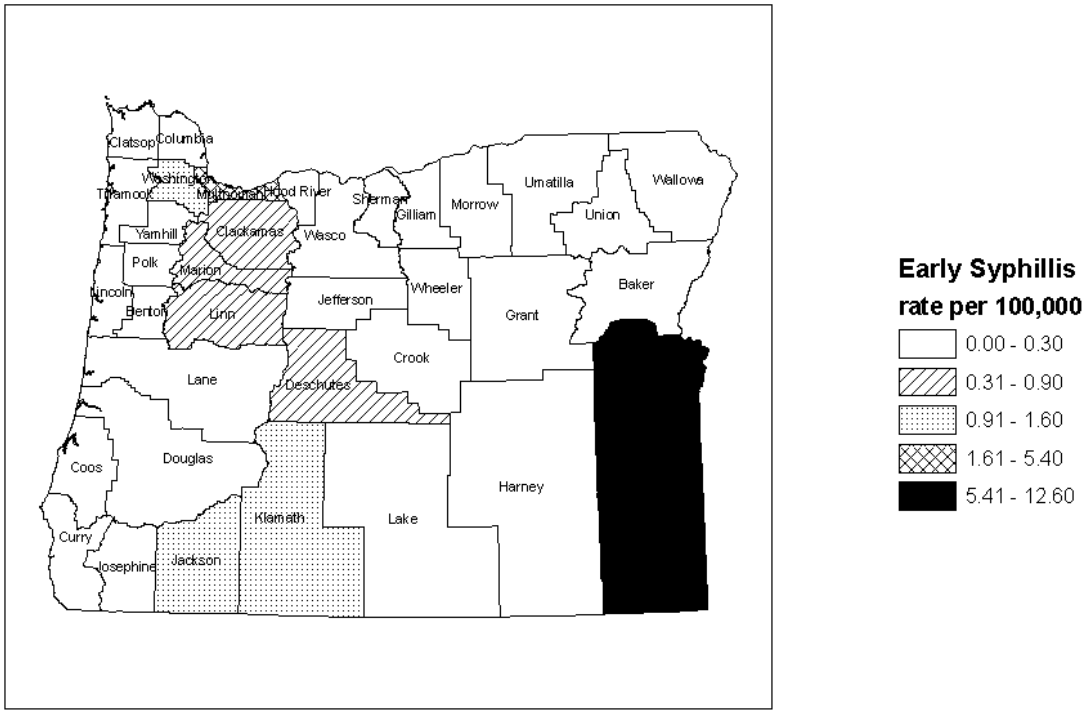
Incidence of Early Syphilis
by Age and Sex
Oregon, 2004



Incidence of Early Syphilis
Oregon vs. Nationwide
1995–2004



Incidence of Early Syphilis by County of Residence, Oregon 2004



Tuberculosis

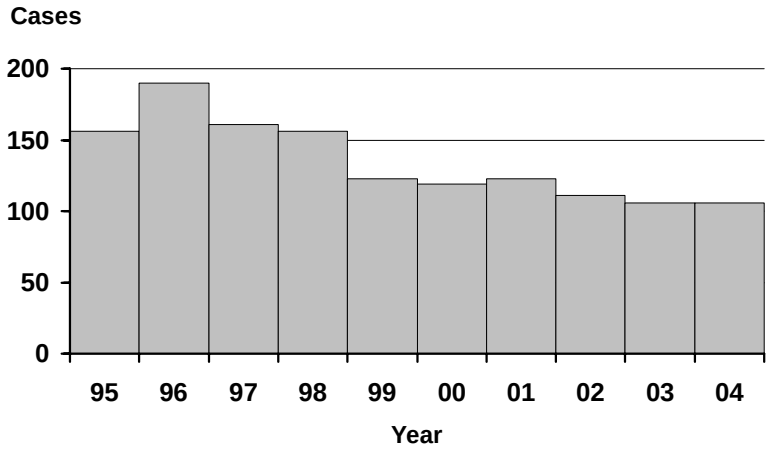
Tuberculosis (TB) is a communicable disease caused by *Mycobacterium tuberculosis*. The most common site for active TB disease is the lung; however, TB can occur in any organ in the body. TB is spread when a person develops active pulmonary or laryngeal TB, coughs the bacteria into the air, and another person inhales them into their lungs.

TB is preventable, treatable, and curable. TB can be prevented by diagnosing and treating persons with active TB disease; and by identifying and treating persons with "latent" TB infection, who, if untreated, are likely to develop active TB disease. Reporting of TB ensures that cases are treated and that contacts are identified and offered preventive antibiotics.

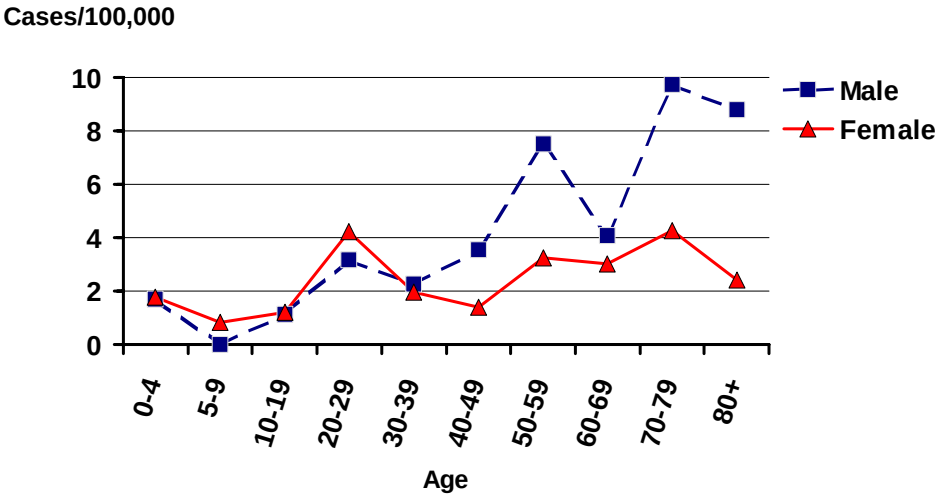
A total of 106 cases of active TB disease were verified in Oregon in 2004, for a rate of 3.0 cases per 100,000 residents. The standard initial treatment for active TB in Oregon includes four drugs: INH, rifampin, pyrazinamide, and ethambutol pending susceptibility testing.

The Oregon TB rate of 3.0/100,000 meets the Healthy People 2000 Goal of $\leq$3.5/100,000

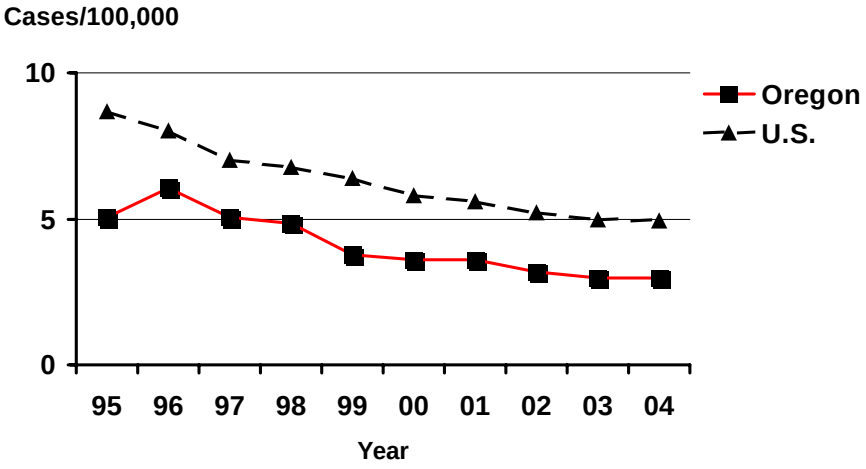
Tuberculosis
by Year
Oregon, 1995–2004



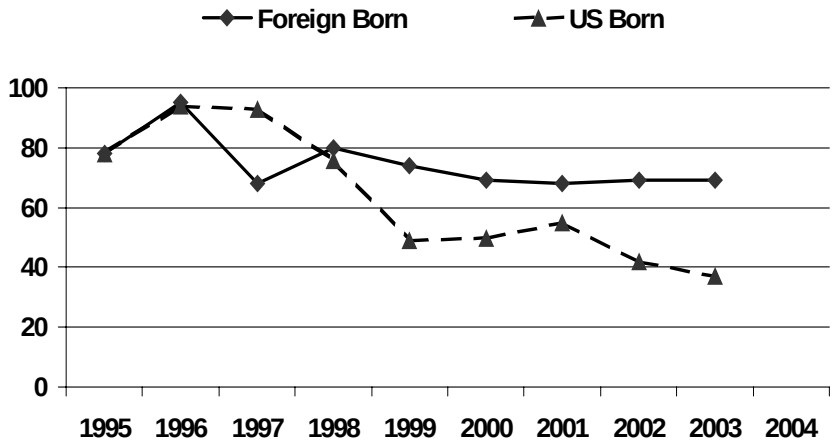
Incidence of Tuberculosis
by Age and Sex
Oregon, 2004



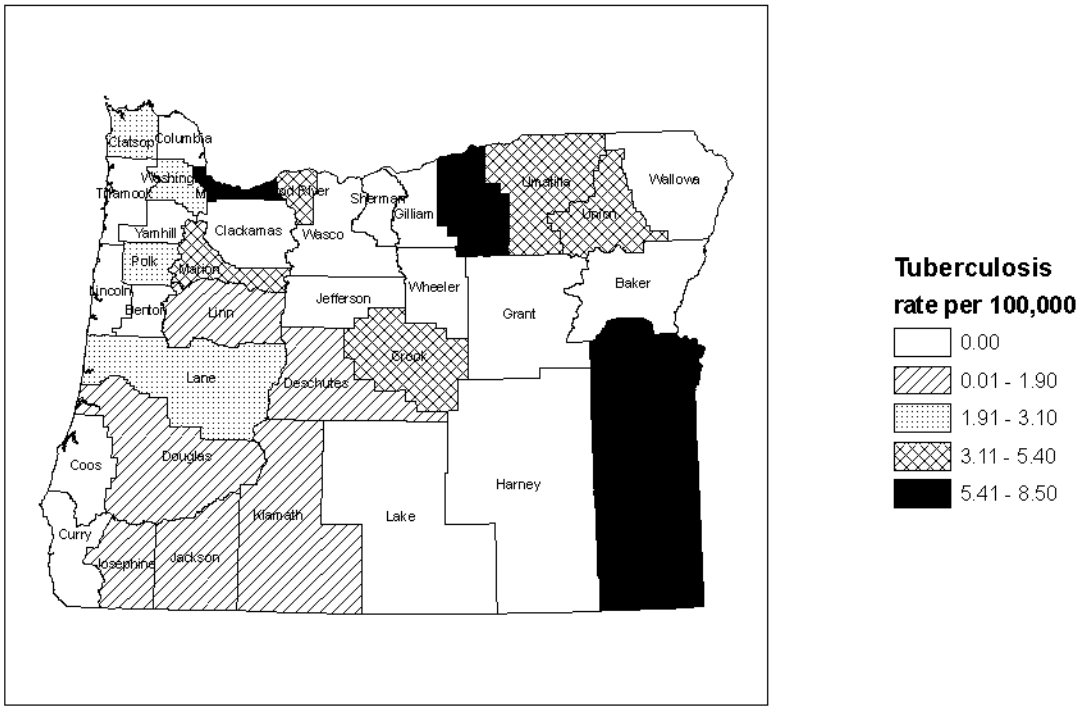
Incidence of Tuberculosis
Oregon vs. Nationwide
1995–2004



Tuberculosis
by Country of Origin
Oregon, 1995–2004



Incidence of Tuberculosis by County of Residence, Oregon 2004



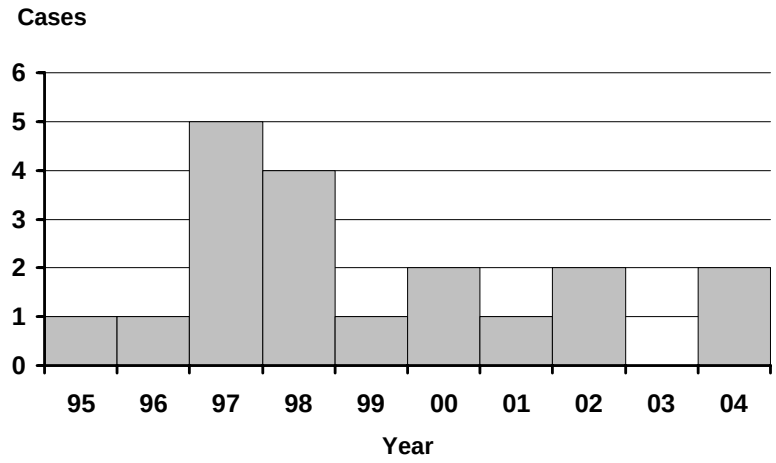
Tularemia

Tularemia, also known as rabbit or deer-fly fever, has recently gained notoriety as a possible "category A" agent of bioterrorism. Tularemia is caused by *Francisella tularensis*, a hardy organism found in rodents, rabbits, and squirrels; in ticks, flies, and mosquitoes; and in contaminated soil, water, and animal carcasses. Biovar type A is the most common type in North America and is highly virulent; as few as 10–50 organisms can cause disease.

General symptoms of tularemia include fever, malaise, myalgias, headache, chills, rigors, and sore throat. Tularemia has six clinical forms, depending on portal of entry. Ulceroglandular tularemia is the most common form of the disease, accounting for 75–85% of naturally occurring cases. Other clinical forms include: pneumonic (pulmonary symptoms); typhoidal (gastro-intestinal symptoms and sepsis); glandular (regional adenopathy without skin lesion); oculoglandular (painful, purulent conjunctivitis with adenopathy); and oropharyngeal (pharyngitis with adenopathy).

Tularemia occurs throughout the US. People become infected primarily through handling contaminated animals; the bite of infective deer flies, mosquitoes, or ticks; direct contact with or ingestion of contaminated food, water, or soil; or inhalation of infective aerosols. From 1994–2004, 19 cases of tularemia were reported in Oregon. Cases occurred n residents of 12 counties, and were evenly spread across age groups.

Tularemia
by Year
Oregon, 1995–2004

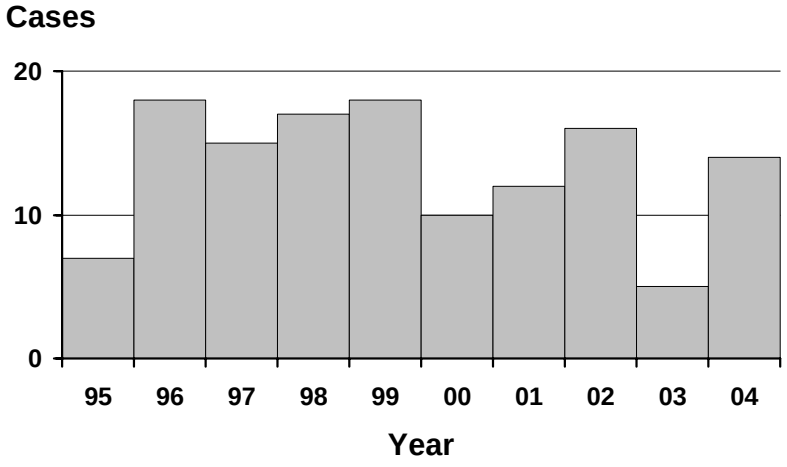


Yersiniosis

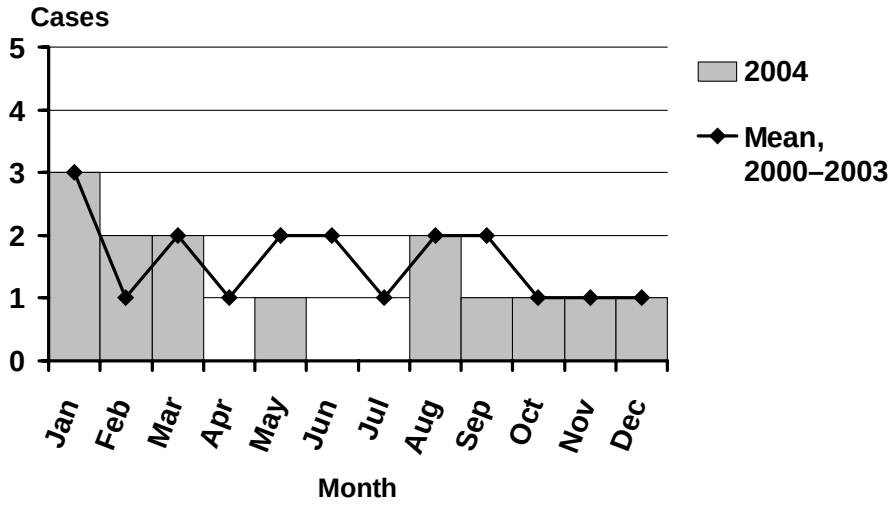
Yersiniosis is a bacterial infection characterized by (sometimes bloody) diarrhea, vomiting, and abdominal pain. The main reservoir for Yersinia is the pig. Transmission occurs via the fecal-oral route through contaminated food and water, and infected people or animals. Preventive measures include cooking food thoroughly, avoiding cross-contamination with raw food of animal origin, and washing hands after handling food.

The incidence of yersiniosis in Oregon has been fairly stable over the years. In 2003, the number of cases dropped to 5, the lowest incidence since 1995. Yersiniosis occurs throughout the year with no seasonality. By far the most common species is Y. enterocolitica, and all cases in 2004 were caused by this species. In 2004, the number of cases increased to 14 after a record low in 2003.

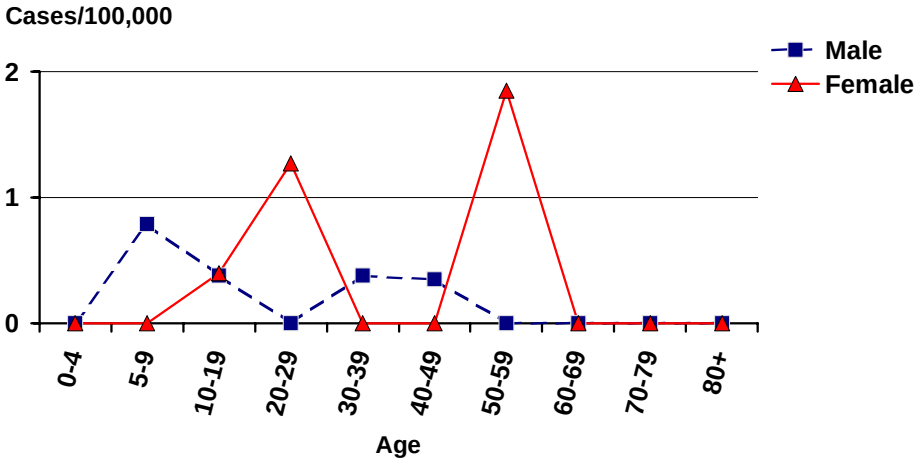
Yersiniosis
by Year
Oregon, 1995–2004



Yersiniosis
by Onset Month
Oregon, 2004

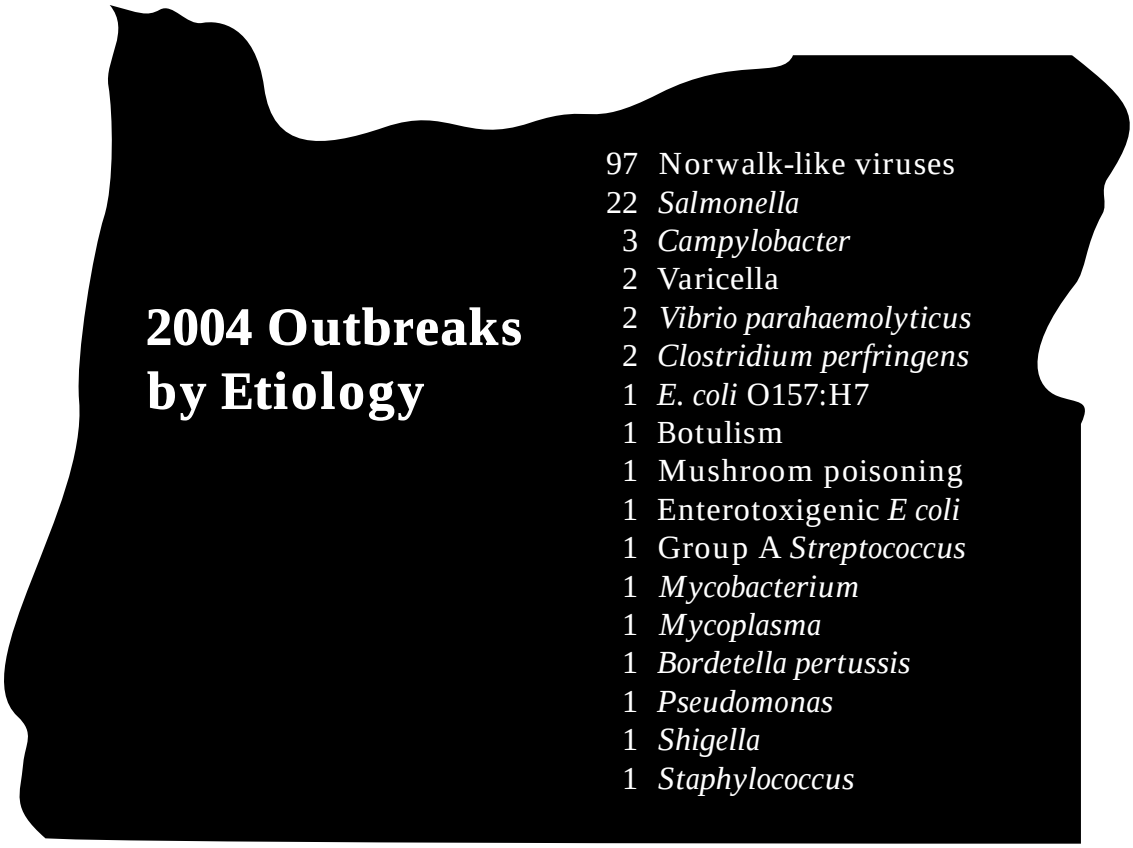


Incidence of Yersiniosis
by Age and Sex
Oregon, 2004



Disease Outbreaks

There were no large outbreaks due to any named reportable diseases in 2004; most of the 163 reported outbreaks were gastroenteritis, 97 of the 163 (59%) were Norwalk-like viruses. Though we had the garden variety of salmonellosis clusters (S. Agbeni, S. Bovismorbificans, S. Litchfield, S. Saintpaul, S. Heidelberg), a cluster of 7 confirmed cases of Salmonella Enteritidis resulted in the international recall of 13 million pounds of raw almonds.

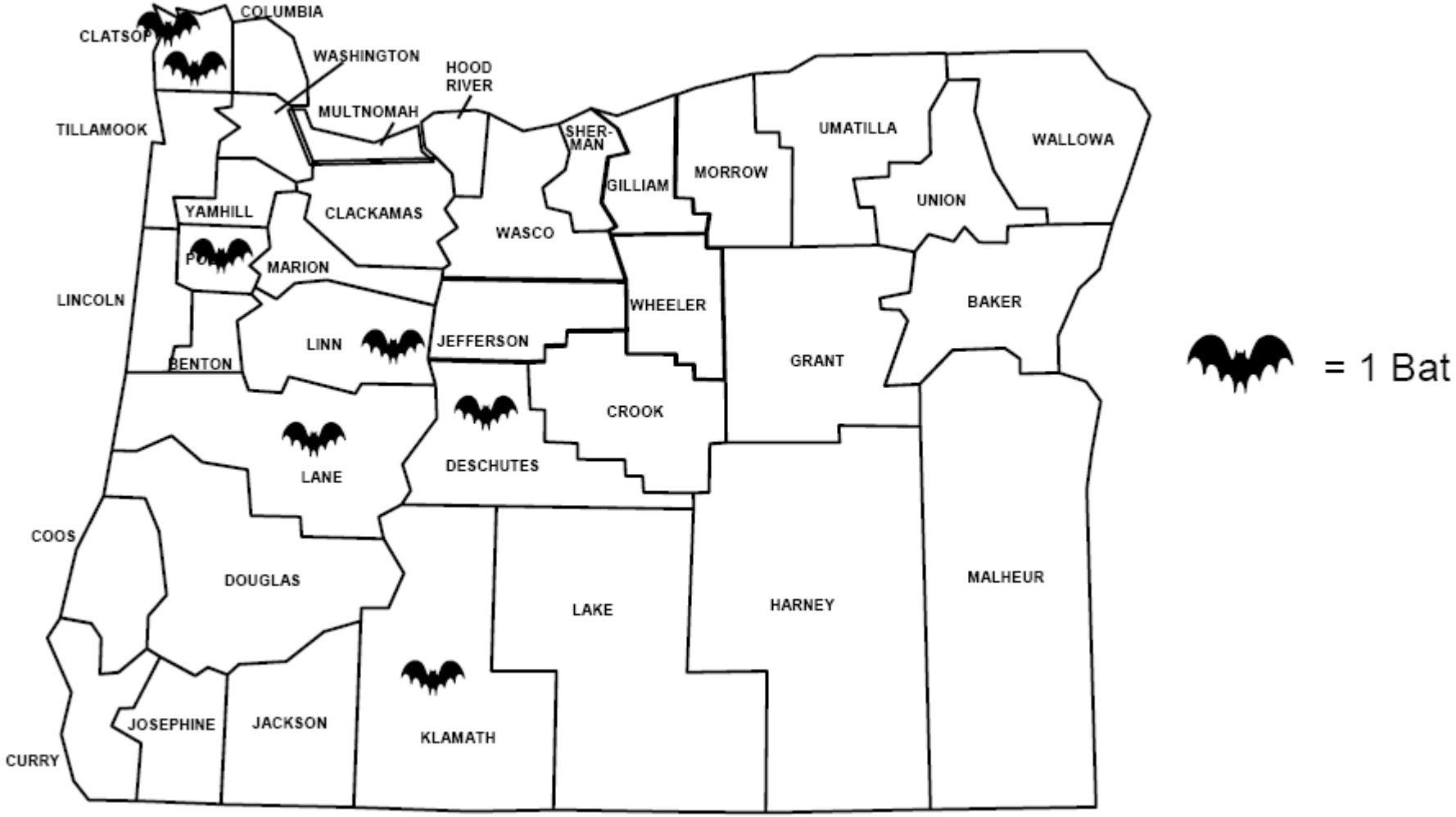


Rabies Tests in Oregon, 1990-2004

(number of positive/total tested)

Year	Bat	Cat	Dog	Fox	Other Animals
1990	1/29	0/61	0/34	0/1	0/14
1991	4/40	1/85	1/54	1/4	0/19
1992	2/29	0/98	0/54	0/4	0/54
1993	2/43	1/96	0/34	4/10	0/59
1994	10/47	0/88	0/58	3/7	0/78
1995	3/47	0/98	0/61	5/5	0/159
1996	3/48	0/51	0/33	0/5	0/58
1997	14/116	1/83	0/52	0/6	0/45
1998	6/95	0/95	0/56	0/3	0/49
1999	11/115	1/95	0/45	0/1	1/47 (Cow)
2000	8/73	0/79	0/56	1/4	0/4
2001	4/59	0/67	0/46	0/1	0/41
2002	12/134	0/102	0/27	2/4	0/29
2003	6/61	0/75	0/36	1/5	0/39
2004	7/88	0/105	0/41	0/2	0/27
Totals 1990-2004	**93/1024 (9.1%)**	**4/1278 (0.3%)**	**1/687 (0.14%)**	**17/63 (27%)**	**1/753 (0.13%)**

Rabies Positive Animals, Oregon 2004



Selected Cases of Notifiable Diseases by Onset Year, Oregon 1985-2004

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
AIDS	34	69	175	177	221	328	271	293	766	599	446	469	293	201	221	202	259	262	174	208
Campylobacteriosis	1246	1344	1039	970	999	958	941	885	720	655	644	683	755	707	593	568	600	572	593	655
Chlamydiosis				7135	6734	7387	7327	5885	5539	5494	5468	5442	5254	5857	6163	7110	7504	7200	7500	8690
***E. coli* O157 Infection**						53	108	149	244	105	90	100	87	107	69	135	87	204	101	68
Giardiasis	1223	1157	1171	1194	1078	1348	1294	1247	1011	930	915	937	910	903	810	656	536	435	402	444
Gonorrhea	6370	5471	4043	3221	3025	2549	2172	1768	1192	977	854	886	773	880	906	1039	1145	929	981	1302
H. influenzae Infection	99	70	86	85	67	68	26	27	11	26	28	33	38	42	45	30	38	55	42	50
Hepatitis A	1850	1899	1328	1483	2366	829	449	550	581	1326	2968	955	417	437	253	165	110	62	62	65
Hepatitis B	504	644	660	611	563	420	308	303	290	236	199	183	164	201	117	622	710	675	575	641
Hepatitis C	162	87	104	105	83	59	132	85	72	56	58	48	19	21	23	1	15	14	16	21
Legionellosis																1	4	9	17	8
Listeria				6	11	5	3	6	10	11	13	15	11	18	17	6	12	9	5	7
Malaria	18	19	6	19	21	20	12	19	14	17	21	25	24	17	22	40	15	15	10	19
Measles	5	12	132	7	82	212	93	3	4	2	1	14	0	0	11	0	33	0	3	0
Meningococcal Disease	39	38	37	47	59	73	61	72	109	136	117	125	122	91	76	70	64	44	60	61
Pertussis	54	16	83	55	18	123	68	47	105	106	67	64	48	89	61	106	66	193	437	630
Rubella	2	4	2	0	3	77	5	2	0	4	0	1	0	0	0	0	0	0	1	0
Salmonellosis	266	235	305	404	322	359	368	486	349	314	343	387	371	330	428	297	281	336	423	416
Shigellosis	121	127	114	112	121	178	712	292	169	166	169	164	190	196	95	158	115	106	211	87
Early Syphilis	179	202	503	515	424	261	277	218	185	100	67	70	48	32	37	31	22	47	74	58
Tuberculosis	144	136	159	161	151	148	144	146	153	165	156	190	161	155	123	119	123	111	106	106
Tularemia	1	0	5	2	5	2	2	0	3	4	1	1	5	4	1	2	1	2	0	2
Typhoid fever	5	0	3	8	6	5	6	2	4	5	4	4	3	1	5	4	8	2	4	1
Vibrio parahaemolyticus																7	6	9	5	11
Yersiniosis	7	16	12	16	20	18	17	9	16	15	8	18	16	15	19	10	12	16	5	14
TOTAL	**12405**	**11627**	**10028**	**16413**	**16467**	**15619**	**14884**	**12577**	**11631**	**11555**	**12704**	**10886**	**9757**	**10334**	**10129**	**11412**	**11689**	**11307**	**11807**	**13564**

Blank cells = not reportable. Cases as of June 31, 2005

Selected Cases of Notifiable Disease by County of Residence, Oregon 2004

	AIDS	Campylobacteriosis	Chlamydiosis	Cryptosporidiosis	E. coli O157	Giardiasis	Gonorrhea	Haemophilus influenzae	Hepatitis A	Hepatitis B (acute)	Hepatitis B (chronic)	Hepatitis C	HIV	HUS	Legionellosis	Leprosy	Listeriosis	Lyme disease	Malaria	Meningococcal Disease	Pertussis	Q Fever	Rabies, animal	Relapsing Fever	Salmonellosis	Shigellosis	Early Syphillis	Tuberculosis	Tularemia	Vibrio parahaemolyticus	West Nile	Yersiniosis	TOTAL
Baker	0	0	21	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	25
Benton	2	26	147	0	6	6	14	0	2	5	7	1	2	0	0	0	0	1	1	2	252	0	0	0	3	1	0	0	0	0	1	1	480
Clackamas	8	63	538	5	5	33	79	3	4	13	23	2	16	1	1	0	3	2	1	6	39	0	0	0	68	9	2	0	0	0	1	2	927
Clatsop	0	9	123	1	1	11	8	0	0	3	5	2	1	0	0	0	0	0	0	0	0	0	2	0	1	5	0	1	0	0	0	1	174
Columbia	1	9	72	0	1	2	9	0	0	1	1	0	1	0	1	0	0	0	0	1	10	0	0	0	3	4	0	0	0	0	0	1	117
Coos	1	9	128	1	1	8	7	2	5	2	3	0	0	0	0	0	0	0	0	1	3	1	0	0	7	0	0	0	0	0	0	0	179
Crook	0	2	30	0	1	1	1	0	1	0	2	0	0	1	0	0	0	0	0	1	0	0	0	0	4	0	0	1	0	0	0	0	45
Curry	0	4	23	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	30
Deschutes	3	34	280	1	0	28	6	1	1	3	7	2	1	0	0	0	0	1	1	3	2	0	1	2	14	2	1	1	0	1	0	0	396
Douglas	4	14	161	0	4	13	5	2	3	7	7	1	7	0	1	0	0	4	0	8	65	1	0	0	7	0	0	1	0	0	0	0	315
Gilliam	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Grant	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Harney	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	10
Hood River	0	3	26	0	0	5	3	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	3	0	1	0	0	0	0	45
Jackson	5	26	522	3	10	24	68	2	2	2	13	1	9	0	0	0	0	2	2	5	6	0	0	0	25	3	3	2	0	0	1	1	737
Jefferson	0	4	75	0	0	7	0	0	1	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	92
Josephine	6	15	160	0	0	6	12	3	0	2	8	0	3	0	0	0	0	7	0	2	10	0	0	0	4	2	0	1	0	0	0	0	241
Klamath	1	15	121	1	0	5	1	3	0	2	2	0	1	0	0	0	0	0	0	2	2	0	1	0	1	0	1	1	0	3	0	0	163
Lake	0	5	7	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Lane	21	61	841	3	5	61	38	7	7	20	31	0	28	0	0	0	0	1	1	6	62	0	1	1	35	5	1	8		1	0	3	1248
Lincoln	3	7	80	1	0	4	9	1	1	2	4	0	3	0	0	0	0	1	0	3	6	0	0	0	5	0	0	0	0	0	0	0	130
Linn	2	18	225	0	2	10	28	1	3	9	8	0	1	0	0	0	0	1	1	1	42	0	1	0	11	0	1	2	1	0	0	0	368
Malheur	1	12	58	1	4	3	1	0	2	1	3	0	1	0	1	0	0	0	0	0	0	0	0	0	3	0	4	2	0	0	2	0	99
Marion	13	44	901	1	10	22	100	2	9	9	35	0	22	0	0	0	1	2	2	4	34	0	0	0	48	9	2	16	0	0	0	0	1286
Morrow	0	4	10	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	20
Multnomah	116	129	2623	7	5	104	726	11	14	22	172	5	147	1	3	1	2	3	3	7	26	1	0	0	65	30	40	47	0	5	1	4	4320
Polk	2	6	94	0	0	3	9	1	1	3	3	1	1	0	0	0	0	0	0	1	5	0	1	0	7	1	0	2	0	0	0	0	141
Sherman	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Tillamook	3	4	27	0	1	1	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	40
Umatilla	1	11	193	0	2	2	6	0	1	2	8	0	5	1	0	0	0	0	0	0	1	0	0	0	22	0	0	3	0	0	0	0	258
Union	0	7	35	0	0	0	2	0	2	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	1	0	0	0	0	54
Wallowa	0	3	6	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	12
Wasco	1	2	39	0	1	3	3	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0	56
Washington	13	87	966	7	6	67	144	8	3	7	94	0	26	0	1	1	0	5	6	7	55	0	0	1	55	9	3	15	0	1	0	1	1588
Wheeler	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Yamhill	2	16	147	0	2	8	22	3	2	2	4	1	9	0	0	0	0	0	1	0	4	0	0	0	13	2	0	0	0	0	0	0	238
Grand Total	209	655	8690	32	68	444	1302	50	65	118	445	16	288	4	8	2	7	33	19	61	629	5	7	4	416	87	58	106	2	11	6	14	13861