Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

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Arrow icons will navigate through the narrative portions of this report. Graph icons will open the visualized data. **To return to the Table of Contents at any time,** refresh the browser in the initial window, or tab.

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v1 published April 25, 2024.

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Introduction

About communicable disease data

Oregon law specifies diseases of public health importance that diagnostic laboratories and health care professionals must report to local public health authorities. This report reflects reporting laws in effect for 2022 with the exception of COVID-19, the data for which can be found on another series of dashboards. In general, local public health officials investigate reports of a communicable disease 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 entered into a central database. 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. This report summarizes data from 2022 and trends from recent years.

Note, however, that reportable disease data have many limitations. First, 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 might 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 are estimated to account for approximately 3% of the true number.

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Second, 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 to test stool from adults with bloody diarrhea. Health care professionals may be more inclined to report contagious diseases such as measles — where the public health importance of doing so is obvious — than to report non-contagious diseases such as Lyme disease. Outbreaks of disease or media coverage about a particular disease can greatly increase testing and reporting rates. Despite these limitations, reportable disease data remain valuable in a variety of ways. They help identify demographic groups at higher risk of illness. They allow analysis of disease trends and identify outbreaks of disease.

Cases are assigned to the county of residence at the time of the report — not to the county in which the case received medical care, or the county where the exposure to infection occurred. Incidence is annualized by the date of record, which is the same as the onset date unless otherwise noted. For chronic hepatitis and Lyme disease, report date to the local health authority is used for counting purposes. Case counts include both confirmed and presumptive cases. For additional information on case definitions, see the Oregon Investigative Guidelines available online.

Population estimates for crude rate calculations by county, sex and age group were obtained from the Population Research Center at Portland State University. Population estimates by race and ethnicity were obtained from the American Community Survey's five-year estimates. Estimates of the population in the United States were obtained from the Census Bureau's Annual Population Estimates. Using rates instead of case counts allows for comparisons between populations of different sizes — e.g., United States versus Oregon. Rates are usually reported as cases per 100,000 persons per year.

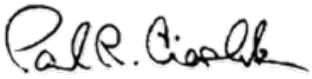
Introduction

However, if the population in which the rate is calculated is very small (e.g., in Oregon “frontier” counties), a case or two might mean the difference between a rate of zero and a very high rate. To compensate for this, some of our maps and rates by age show an average rate over multiple years of data. Even with multi-year aggregation, for some conditions the case counts remain small.

With all this in mind, we present the 2022 Oregon reportable communicable disease summary. We present 20 years of case counts whenever possible. For most diseases, you will find case counts by year, aggregate case counts by month to demonstrate any seasonal trends, incidence by age and sex, incidence in Oregon compared to national incidence over the past 20 years, incidence by race and ethnicity, and incidence by county. When appropriate, additional data on subtypes or risk factors for infection are included. At the end of this report is a tally of disease outbreaks investigated during 2022, a summary of enhanced data on gastroenteritis outbreaks, a summary table of statewide case counts over the past 20 years, counts of lower-incidence conditions, and disease totals by county.

The reader will note declines, in some instances dramatic, in case counts for many diseases during 2020. To a significant degree, these declines may be explained by milder cases of illness having a lower likelihood of seeking health care and associated testing. However, it is also likely that the precautions taken to reduce the spread of COVID-19 in our communities, including masking, avoidance of gathering and closure of businesses, reduced the transmission of many other pathogens as well.

We hope that you will find these data useful. If you have additional questions, please call our epidemiology staff at 971-673-1111 or email OHD.ACDP@odhsoha.oregon.gov.



Paul R. Cieslak, MD
Medical Director, Communicable Diseases and Immunizations

Campylobacteriosis

Campylobacteriosis is caused by the gram-negative bacterium *Campylobacter*. It is characterized by acute onset of diarrhea, vomiting, abdominal pain, fever and malaise. Symptoms generally occur within two to five days of infection.

Campylobacteriosis is the most common bacterial enteric infection reported in Oregon. It is of worldwide epidemiologic importance due to the fecal-oral route of infection and the wide variety of wild and domestic animals that can serve as reservoir hosts. Many cases are thought to result from eating raw or undercooked meat (in particular, poultry) or through cross-contamination of uncooked or ready-to-eat foods such as salad or prepared fruit. People can also get infected through contact with dog or cat feces.

In 2022, 985 cases were reported among Oregon residents. The incidence among children <5 years of age (37.4 per 100,000) exceeds that of other age groups. The incidence in West Coast states has been higher than that in the U.S. overall. Infections occur year-round in Oregon, with peak incidence in the summer months.

Most illnesses are sporadic, but outbreaks have been associated with undercooked meat (often chicken), unpasteurized milk, or direct contact with animals or untreated water.

Fifteen outbreaks of campylobacteriosis involving Oregon residents were investigated from 2010–2022: 10 foodborne, one from animal contact, one person-to-person and three where mode of transmission was not determined; two of these outbreaks (both foodborne) were reported in Oregon in 2021. No outbreaks were reported in 2022. Proper food handling and water treatment, along with careful attention to safe food handling and handwashing, are the keys to prevention.

Prevention

- Use one cutting board for raw meat and a separate cutting board for fresh fruit, vegetables and other foods.
- Thoroughly clean all cutting boards, countertops and utensils with soap and hot water after preparing foods of animal origin.
- Wash hands with soap and hot water before preparing food, after handling foods of animal origin and after contact with pet feces.
- Thoroughly cook all products of animal origin, especially poultry products.
- Do not drink unpasteurized (raw) milk or untreated surface water.
- Make sure persons with diarrhea thoroughly wash their hands with soap and warm water after using the bathroom.

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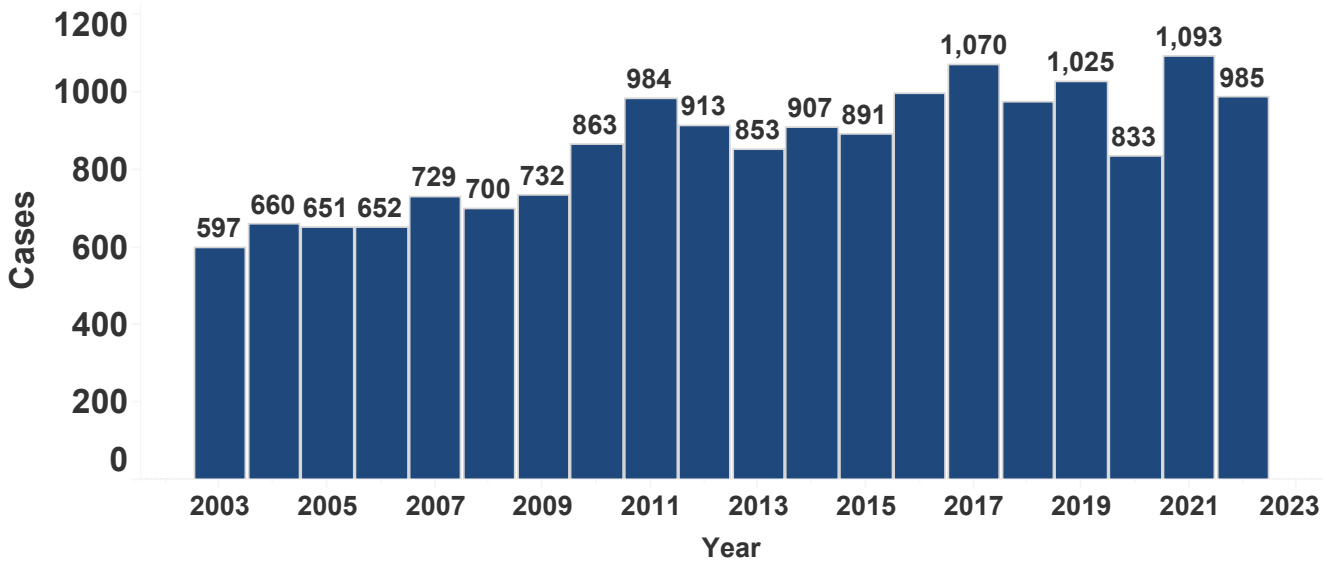
Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

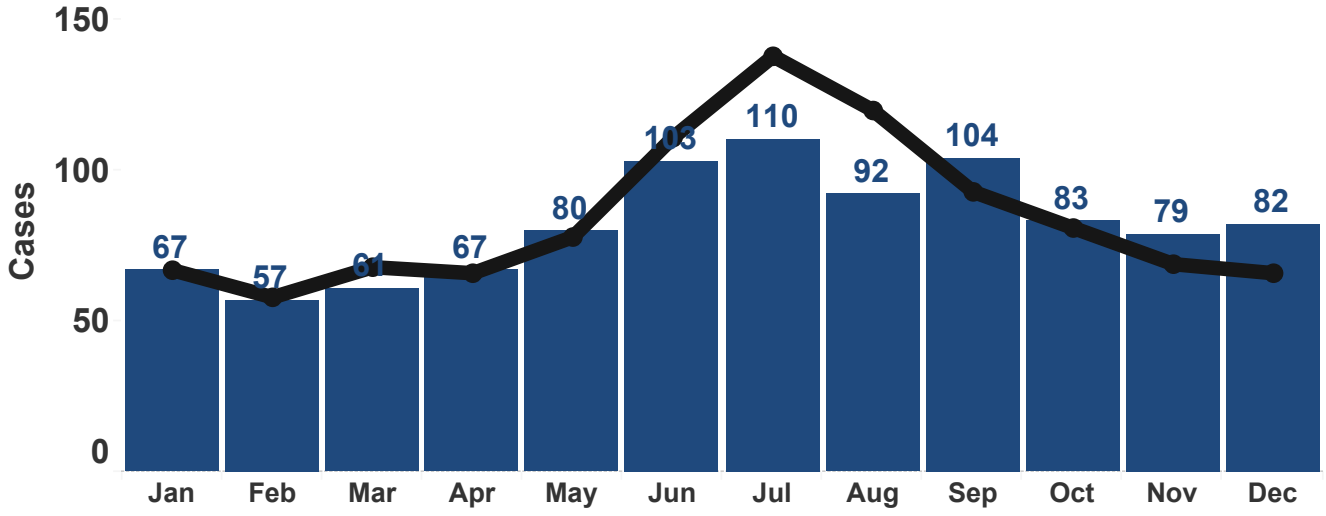
Case counts of campylobacteriosis by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case counts of campylobacteriosis by month: Oregon, 2022.

Bar chart shows case counts in 2022 while the line shows the median case counts for the previous 5 years.



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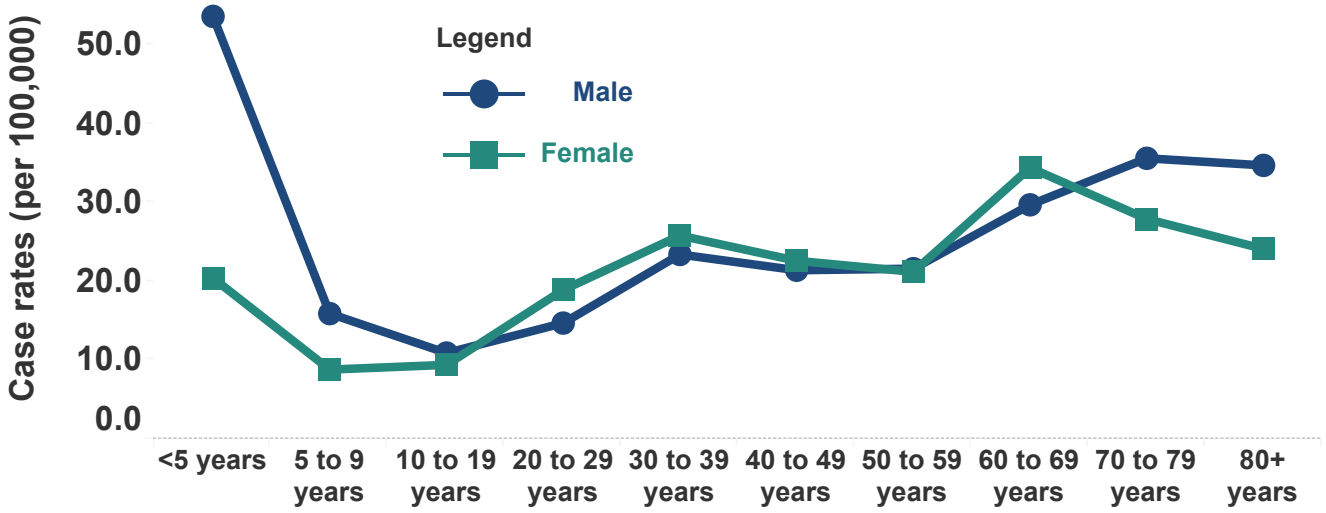
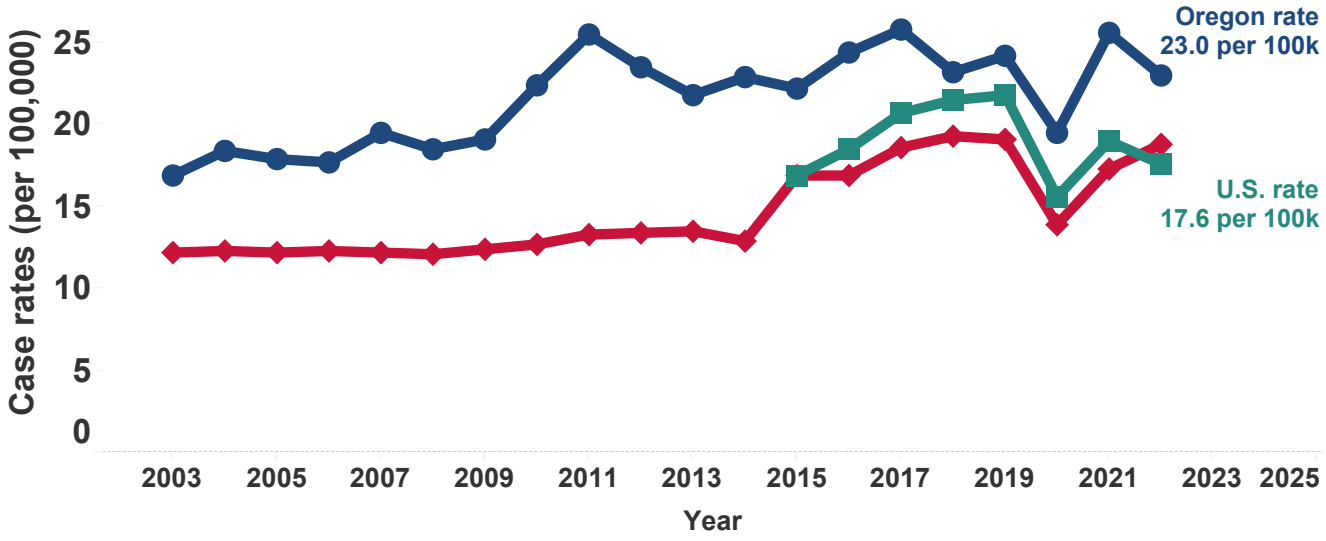
Case rates of campylobacteriosis by age and sex: Oregon, 2022.



Case rates of campylobacteriosis in Oregon vs nationwide, 2003 to 2022.

Campylobacteriosis became nationally notifiable in 2015. The increased case rate reported by FoodNet in 2015 coincides with a change to include cases identified via culture-independent diagnostic testing. U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

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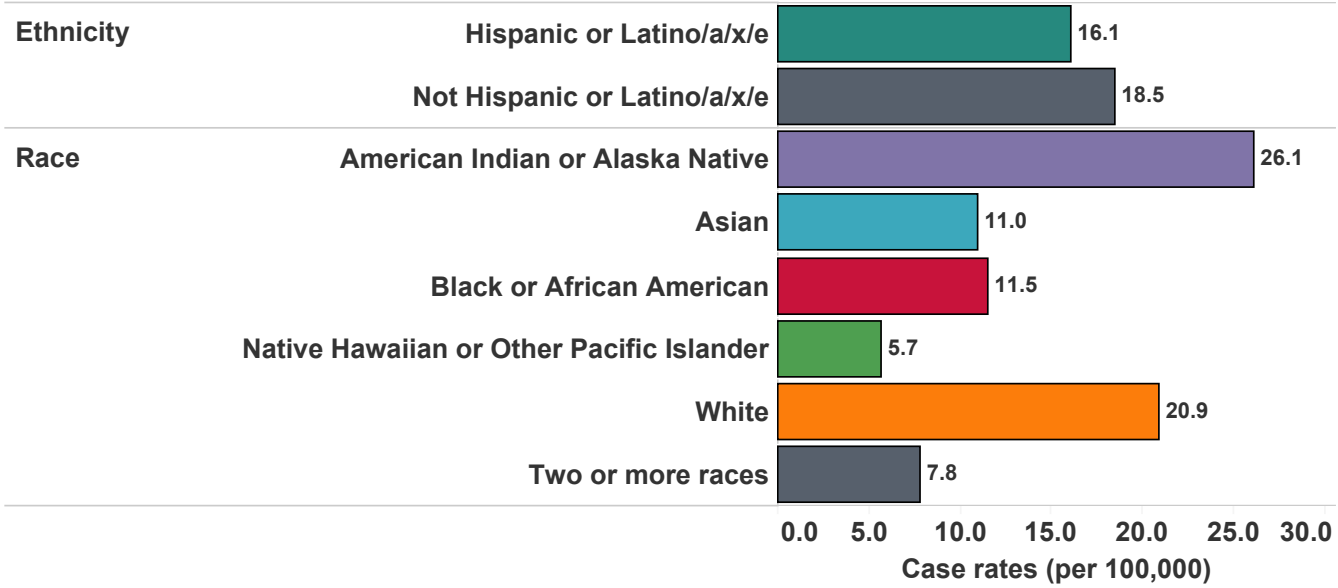
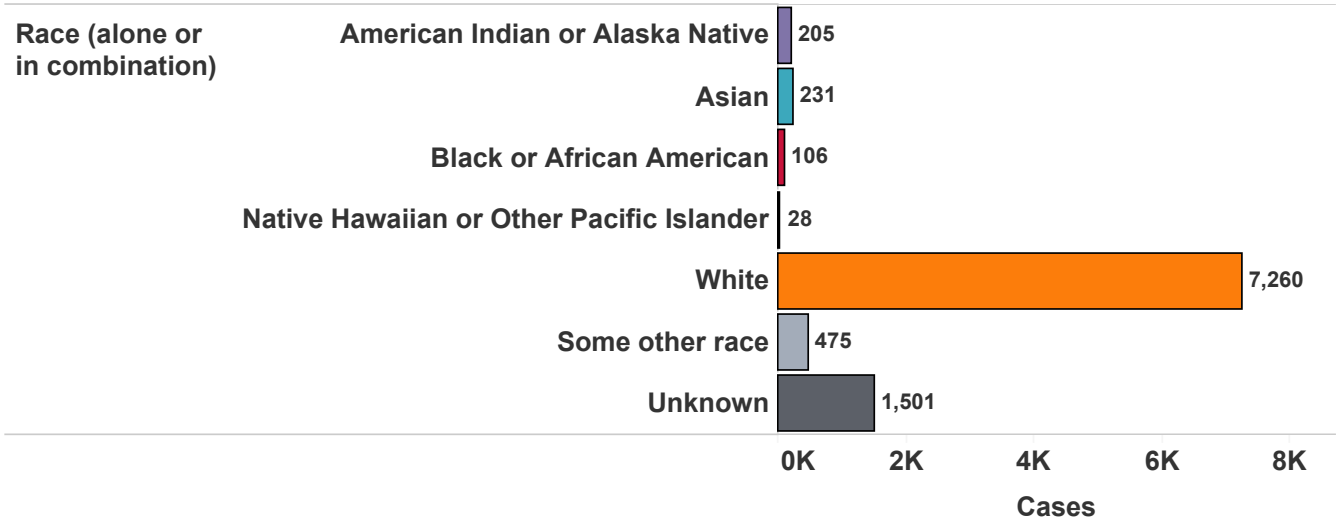
Case rates of campylobacteriosis by reported race and ethnicity: Oregon, 2013 to 2022.

Race and Ethnicity are groupings determined by the Office of Management and Budget. Due to low case counts, the average case rate over multiple years of data is shown.



Case counts of campylobacteriosis by reported race and ethnicity: Oregon, 2013 to 2022.

Race alone or in combination means cases may be counted in all races that apply.



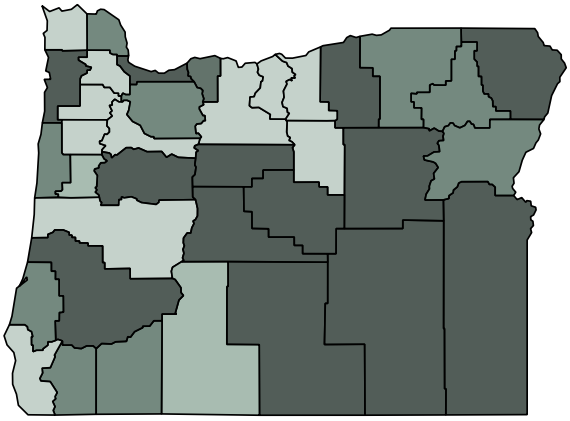
Case rates of campylobacteriosis by county of residence: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for campylobacteriosis from 2013 to 2022 was **23.3 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate



Crook	50.99
Jefferson	43.08
Deschutes	36.50
Lake	35.91
Malheur	34.27
Tillamook	31.87
Grant	28.47
Wallowa	27.77
Morrow	27.37
Harney	27.14
Multnomah	26.79
Douglas	26.40
Linn	25.99
Hood River	24.86
Coos	24.24
Baker	23.98
Columbia	23.42
Lincoln	23.18
Union	22.88
Umatilla	22.75
Clackamas	22.58
Josephine	22.40
Jackson	22.33
Benton	22.11
Klamath	21.89
Wheeler	20.71†
Clatsop	19.70
Lane	19.57
Washington	19.15
Marion	19.06
Yamhill	18.68
Polk	15.56
Gilliam	15.04†
Sherman	11.02†
Curry	10.92
Wasco	10.48

County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Carbapenem-resistant *Enterobacterales* (CRE)

The *Enterobacterales* are a large order of Gram-negative bacilli found in the human gastrointestinal tract. Commonly encountered species include *Escherichia coli, Klebsiella* spp. and *Enterobacter* spp. Carbapenem-resistant *Enterobacterales* (CRE) are resistant to carbapenem antibiotics. They are broadly categorized based on the mechanism of their resistance as carbapenemase producers (CP-CRE) and non-carbapenemase producers.

Carbapenems are broad-spectrum antibiotics typically used to treat severe health care-associated infections (HAIs) caused by highly drug-resistant bacteria. Currently available carbapenems include imipenem, meropenem, ertapenem and doripenem. Although related to the β-lactam antibiotics, carbapenems retain antibacterial activity in the presence of most β-lactamases, including extended-spectrum β-lactamases (ESBLs) and extended-spectrum cephalosporinases (e.g. AmpC-type β-lactamases). Loss of susceptibility to carbapenems is a serious problem because few safe treatment alternatives remain against such resistant bacteria.

Infections caused by CRE occur most commonly among people with chronic medical conditions through use of invasive medical devices such as central venous and urinary catheters, frequent or prolonged stays in health care settings or extended courses of antibiotics. CP-CRE are most concerning and have spread rapidly across the nation and around the globe, perhaps because carbapenemases can be encoded on plasmids that are easily transferred within and among bacterial species.

In December 2011, CRE bacterial isolates became reportable in Oregon. The CRE case definition has gone through major changes over the years, which is reflected in the big changes in case numbers from year to year. In 2013, the definition was non-susceptible (intermediate or resistant) to all carbapenems tested and resistant to any third generation cephalosporins tested. The definition was then revised in 2014 to non-susceptible to any carbapenem, excluding ertapenem, and resistant to all third generation cephalosporins tested. A CDC study found this definition to be too insensitive in picking up carbapenemase

Prevention

Think **"NICE"** if you encounter CRE:

- **Notify** the county health department, pertinent clinical groups and your antibiotic stewardship program that CRE has been spotted.
- **Intervene** in all cases with core infection control activities: hand hygiene, contact precautions, private rooms and optimized environmental cleaning. Reduce unnecessary antibiotics and use of invasive devices. Additionally, for CP-CRE, screen patient contacts as well as cohort staff and patients.
- **Communicate** CRE infection or colonization status to the receiving facility upon patient transfer.
- **Educate** patients, staff and visitors about CRE.

Carbapenem-resistant *Enterobacterales* (CRE)

producers. The current definition, which changed July 1, 2015 is *Enterobacterales* with resistance to any carbapenem antibiotic. This definition is simpler and aligned with the CDC's definition.

The Oregon State Public Health Laboratory offers specialized testing to determine whether reported CRE are carbapenemase producers, and the Oregon Public Health Division's HAI program performs detailed investigation of any reported cases.

One hundred ninety-six new cases of CRE infection or colonization were reported among Oregon residents in 2022. One hundred fifty (77%) of these cases were ≥ 60 years of age, median age was 71, and 115 (58%) were female. Urine was the most common source (78%) and *Enterobacter cloacae* accounted for 59% of all isolates. In 2022, the annual CRE case count increased by 22% from the previous 3-year average.

Between 2010 and 2022, there were 53 CP-CRE cases among Oregon residents: 21 *Klebsiella pneumoniae* carbapenemase (KPC), 18 New Delhi metallo-β-lactamase (NDM), 10 oxacillinase-48 (OXA-48), 2 imipenemase metallo-β-lactamase (IMP) and 2 with both NDM and OXA-48. Twenty-seven (51%) of the CP-CRE were from patients with histories of health care exposure in other states or out of the United States. In 2022 there were 13 new cases of CP-CRE among Oregon residents, more than double the cases in 2021.

Unlike much of the rest of the country, CP-CRE remain relatively rare in Oregon. We have instituted enhanced surveillance and prevention efforts and established the Drug-Resistant Organism Prevention and Coordinated Regional Epidemiology (DROP-CRE) Network, a statewide network to rapidly detect, respond to and prevent CRE. For more information, including our CRE toolkit, please see our webpage on Carbapenem-resistant *Enterobacterales.*

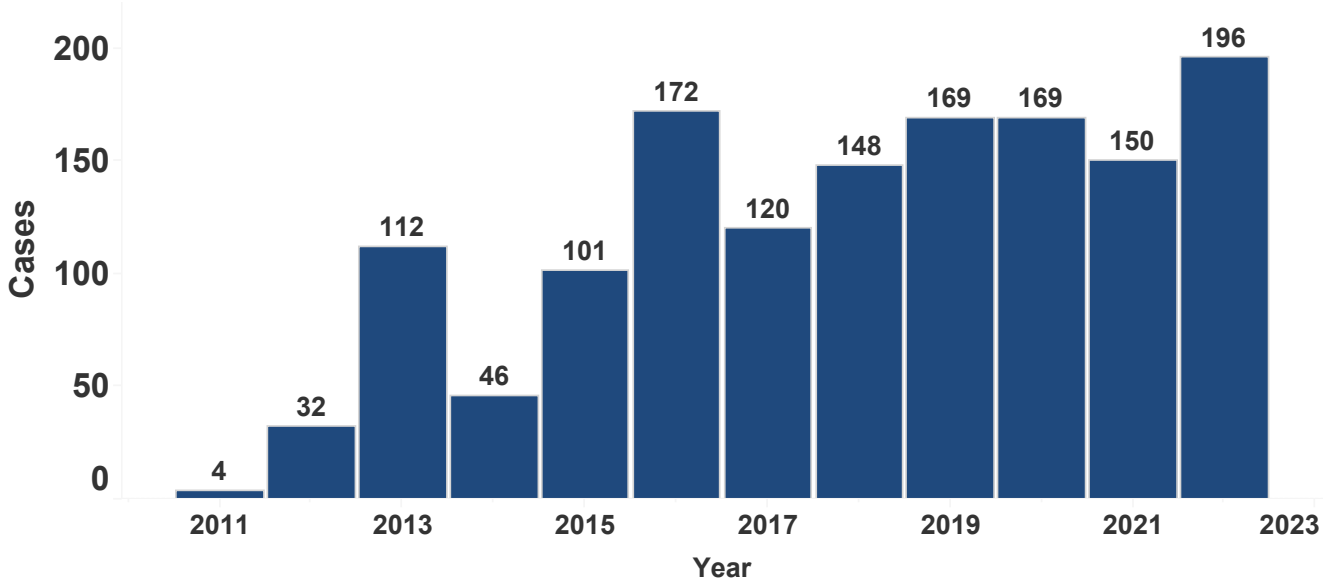
Prevention

Think **"NICE"** if you encounter CRE:

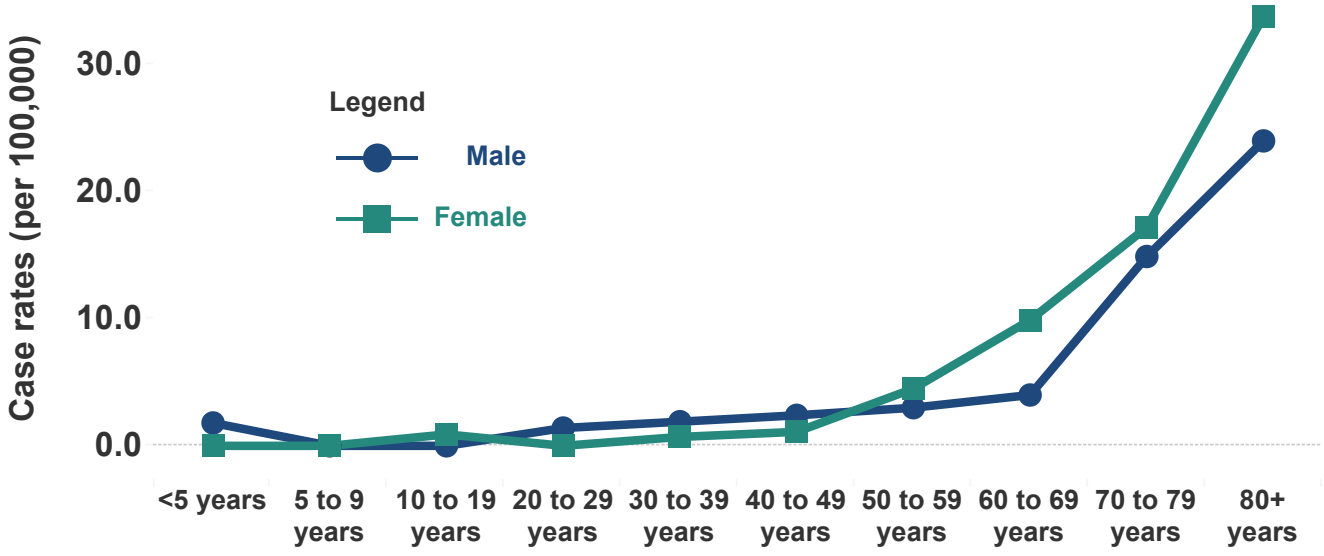
- **Notify** the county health department, pertinent clinical groups and your antibiotic stewardship program that CRE has been spotted.
- **Intervene** in all cases with core infection control activities: hand hygiene, contact precautions, private rooms and optimized environmental cleaning. Reduce unnecessary antibiotics and use of invasive devices. Additionally, for CP-CRE, screen patient contacts as well as cohort staff and patients.
- **Communicate** CRE infection or colonization status to the receiving facility upon patient transfer.
- **Educate** patients, staff and visitors about CRE.

Case counts of carbapenem-resistant *Enterobacterales* (CRE) by year: Oregon, 2011 to 2022.

Infection by CRE became reportable in December 2011. Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of carbapenem-resistant *Enterobacterales* (CRE) by age and sex: Oregon, 2022.



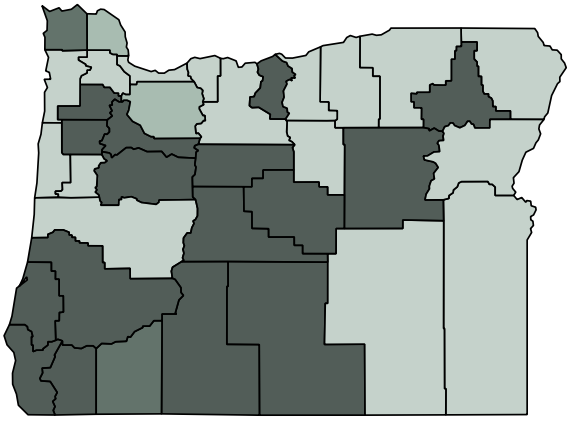
Case rates of carbapenem-resistant *Enterobacterales* (CRE) by county of residence: Oregon, 2013 to 2022.

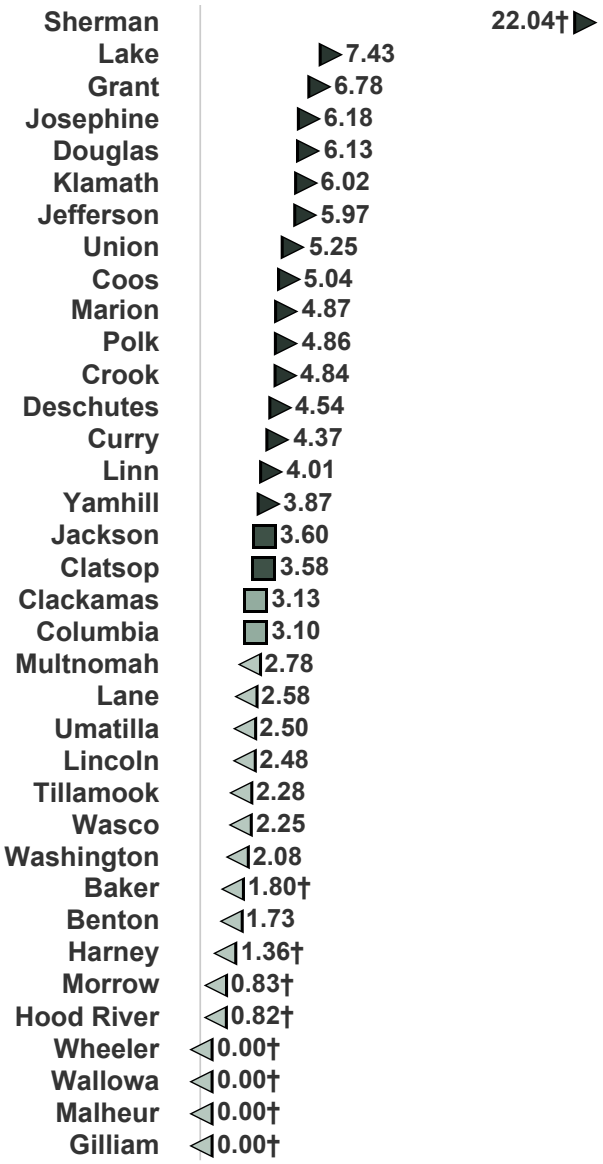
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for carbapenem-resistant *Enterobacterales* (CRE) from 2013 to 2022 was **3.3 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate

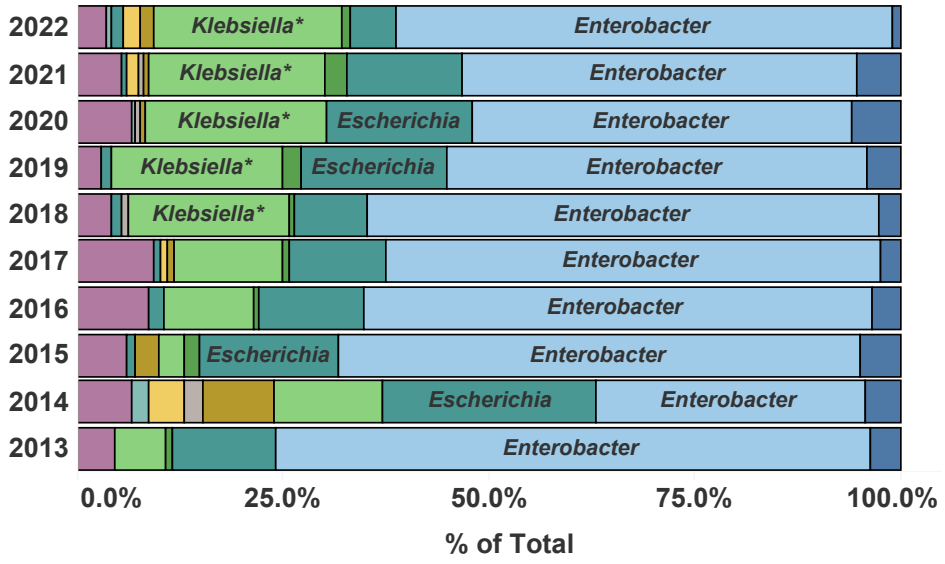




†Note: Rates based on small case counts (<5 cases) might be unstable.

Carbapenem-resistant *Enterobacterales* (CRE) cases by genus Oregon, 2013 to 2022.

Click on a genus to compare between years. **Klebsiella* data include cases of *Klebsiella aerogenes,* the species previously know as *Enterobacter aerogenes.*



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Coccidioidomycosis

Valley fever, also called coccidioidomycosis, is an infection caused by a fungus, *Coccidioides,* found in soil. There are two main types of the fungus that cause valley fever: *Coccidioides immitis* and *Coccidioides posadasii*. Approximately 60% of *Coccidioides* infections are asymptomatic. Symptomatic cases typically present with a mild respiratory syndrome characterized by non-productive cough, shortness of breath, fatigue, night sweats, myalgias and, occasionally, a rash (erythema nodosum or erythema multiforme) between one and three weeks after the individual breathes in the spores. The typical pulmonary infection is self-limiting and clinically indistinguishable from other community-acquired pneumonias.

Immunocompromised patients — e.g., persons with solid organ transplants, human immunodeficiency infection (HIV), lymphoma, or those receiving immunosuppressive therapy such as high-dose steroids or anti-TNF medications — have a higher morbidity and mortality rate than the general population. Some populations — including pregnant women, people living with diabetes, racial groups (specifically individuals who identify as Black or Filipino) and immunocompromised persons — are at elevated risk for severe illness.

Coccidioides lives in soil in areas of low rainfall, high summer temperatures and moderate winter temperatures. Unusually wet years lead to large blooms in the soil, while subsequent dry spells kick up the spores and render them airborne. *Coccidioides* is common in the Southwestern United States, including Arizona and Central California, part of Mexico and Central and South America. *Coccidioides immitis* has been found in soils of south-central Washington just across the Columbia River from Oregon. At this time, it is unknown if coccidioidomycosis is established in Oregon soil.

Prevention

- Regrettably, there are no practical methods for preventing exposure to *Coccidioides* in areas where it is common.
- People at higher risk (immunocompromised, pregnant) should avoid breathing in large amounts of dust if they are in these areas. They should also avoid activities that involve close contact with dirt or dust, such as gardening, yard work and digging.
- Patients with coccidioidomycosis can be helped with early diagnosis and treatment with antifungal drugs.

Coccidioidomycosis

Establishing a diagnosis of coccidioidomycosis may be challenging in humans and animals, and multiple tests including cytology, histopathology, culture and serology may be necessary. A chest X-ray can aid in the diagnosis; pulmonary lesions and hilar lymphadenopathy may be identified in humans and animals with respiratory disease. Isolates from potentially locally acquired cases (human or animal) of coccidioidomycosis should be sent to the Oregon State Public Health Laboratory.

Coccidioidomycosis became a reportable condition in Oregon in 2015.

In 2022, 31 cases of coccidioidomycosis were reported. From 2018 to 2022, over 80% of cases occurred in people 50 years and older. Fifty-seven percent of cases occurred in males. The highest rates were seen in males 60 to 79 years of age.

Most infections resolve without treatment, but patients should be monitored to document resolution. Patients with disseminated disease should be treated with antifungal therapy.

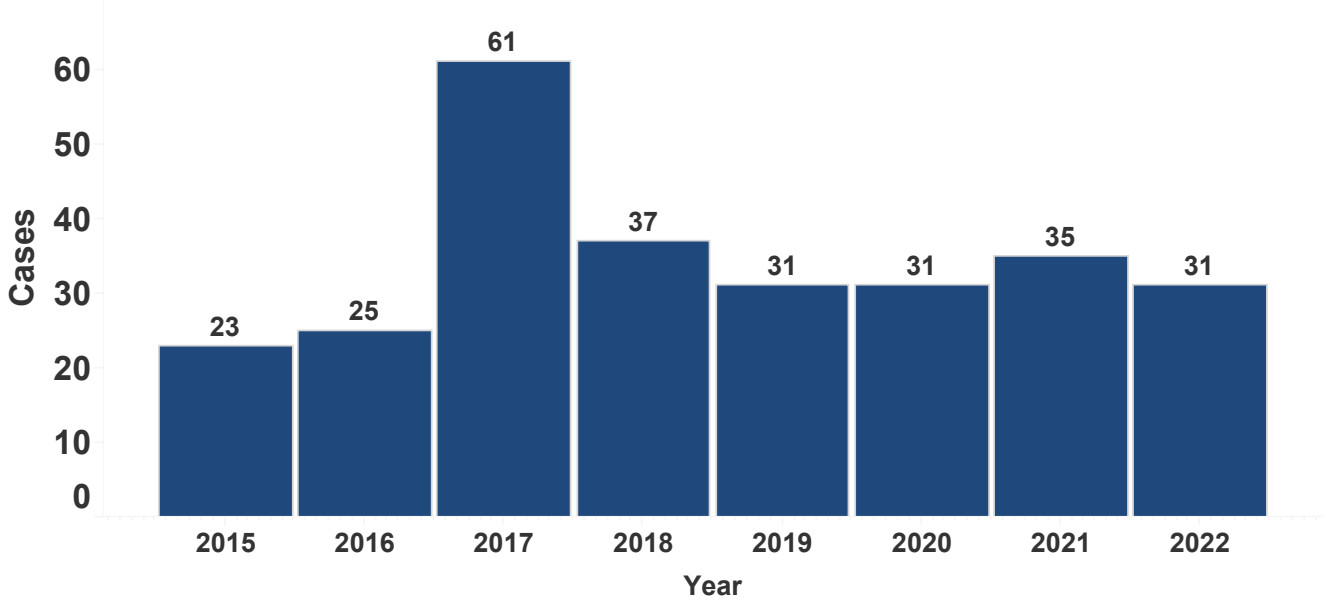
Coccidioidomycosis is not usually considered communicable from person to person; however, at least two cases of zoonotic transmission have been documented. In a recent report, a veterinary assistant developed a localized infection with osteomyelitis as the result of a bite from a cat with disseminated coccidioidomycosis. Another zoonotic case apparently acquired coccidioidomycosis by inhaling endospores during the necropsy of a horse with disseminated infection.

Prevention

- Regrettably, there are no practical methods for preventing exposure to *Coccidioides* in areas where it is common.
- People at higher risk (immunocompromised, pregnant) should avoid breathing in large amounts of dust if they are in these areas. They should also avoid activities that involve close contact with dirt or dust, such as gardening, yard work and digging.
- Patients with coccidioidomycosis can be helped with early diagnosis and treatment with antifungal drugs.

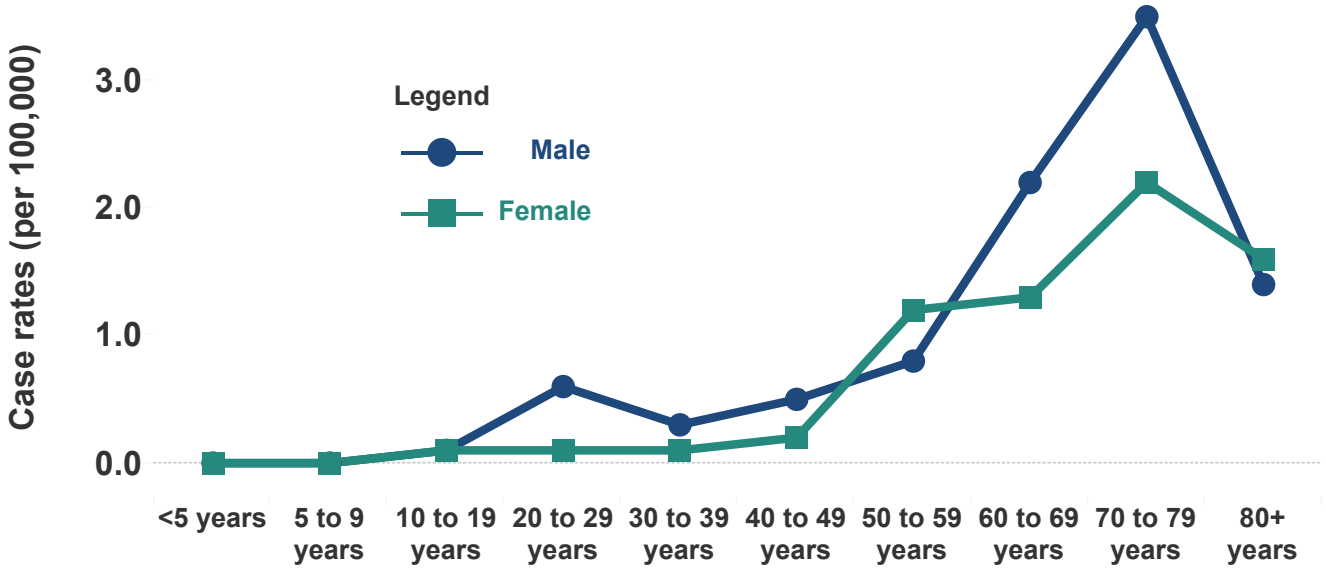
Case counts of coccidioidomycosis by year: Oregon, 2015 to 2022.

Coccidioidomycosis became reportable in 2015. Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of coccidioidomycosis by age and sex: Oregon, 2018 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.



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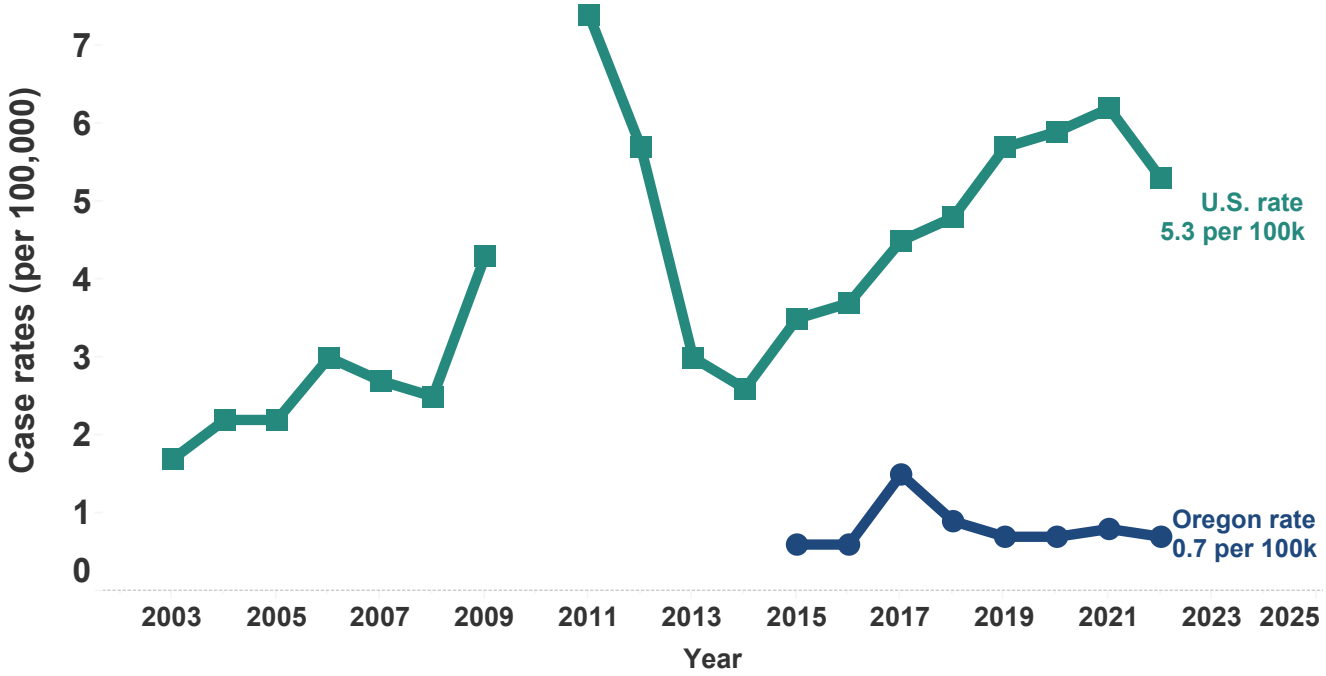
Case rates of coccidioidomycosis in Oregon vs nationwide, 2003 to 2022.

Coccidiodomycosis became reportable in Oregon in 2015. National case counts were not reported in 2010. U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

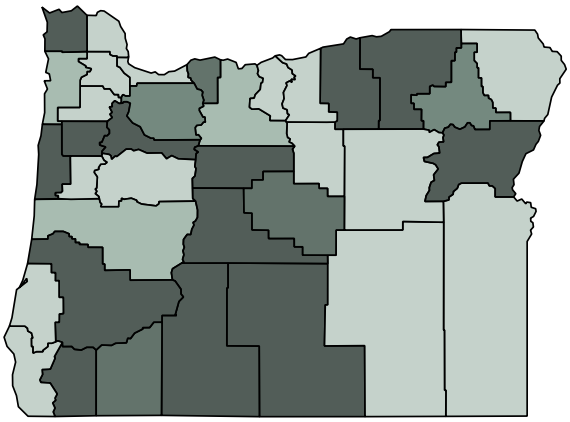
Case rates of coccidioidomycosis by county of residence: Oregon, 2018 to 2022.

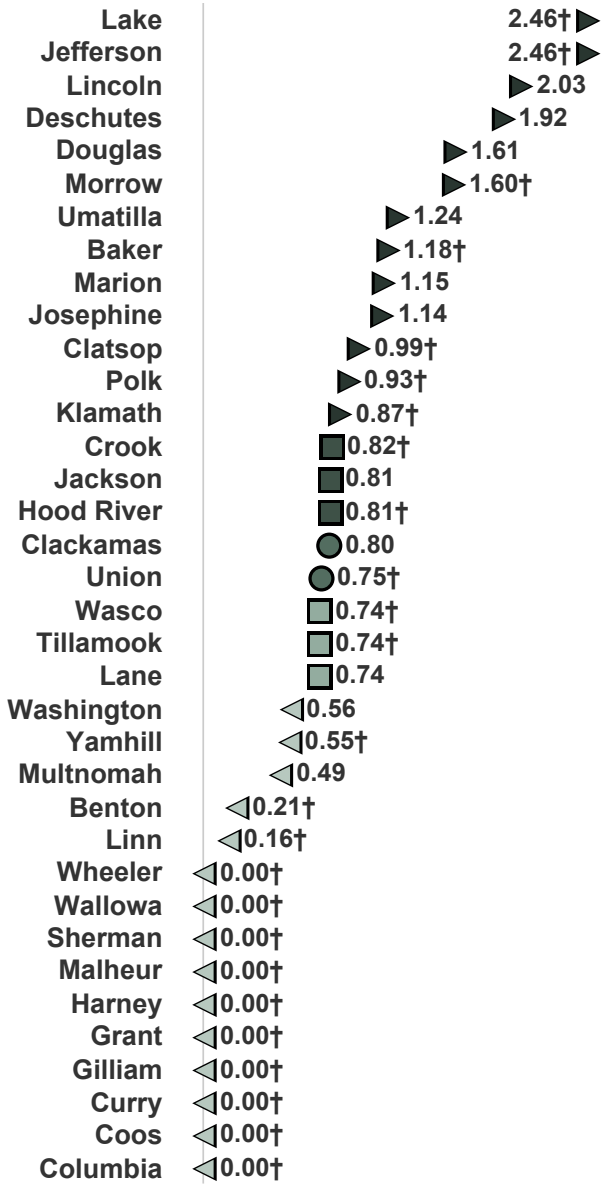
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for coccidioidomycosis from 2018 to 2022 was **0.8 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Cryptococcosis

Cryptococcus neoformans has long been identified in humans with immunosuppressive conditions, especially AIDS. Before 1999, *Cryptococcus gattii (C. gattii)* infection seemed to be mainly limited to the tropics. During 1999, *C. gattii* began appearing in animals and humans on Vancouver Island in British Columbia, Canada.

Beginning in 2004, it started appearing among mainland British Columbia residents who had no exposure to Vancouver Island. In December 2004, a case of human *C. gattii* infection was reported in Oregon, associated with an outbreak on Vancouver Island and in mainland British Columbia. Infection by *Cryptococcus* became officially reportable in Oregon Aug. 19, 2011.

Sixty-nine cases occurred among Oregon residents in 2022. The most common infection was *C. neoformans* (23), followed by *C. albidus* (18), *C. terrerus* (7), *C. uniguttulatus* (4), *C. gattii* (2) and *C. laurentii* (1).

Studies from British Columbia and elsewhere showed a median incubation period of six to seven months, with a range between two and 13 months. In addition to testing human specimens and animals, environments where animals are infected with *C. gattii* are also tested to localize the environmental reservoirs (they travel less than humans). The bottom line is *C. gattii* appears to be established in Oregon soil and serves as a source of infection.

There is no potential for zoonotic transmission.

Healthy persons appear to be at low risk. Most infections are among immunocompromised or chronically ill persons. Over the last few years, detection of cryptococcal infection has changed from culturing the organism to using the cryptococcal antigen, making it impossible to further our knowledge of the epidemiology of *Cryptococcus gattii.* Treatment with extended use of antifungal agents (six months or longer) is recommended. For current treatment information, see guidelines published by the Infectious Disease Society of America.

Prevention

- Regrettably, practical methods for preventing cryptococcosis have not been identified.
- Patients with cryptococcosis can be helped with early diagnosis and treatment with antifungal drugs.

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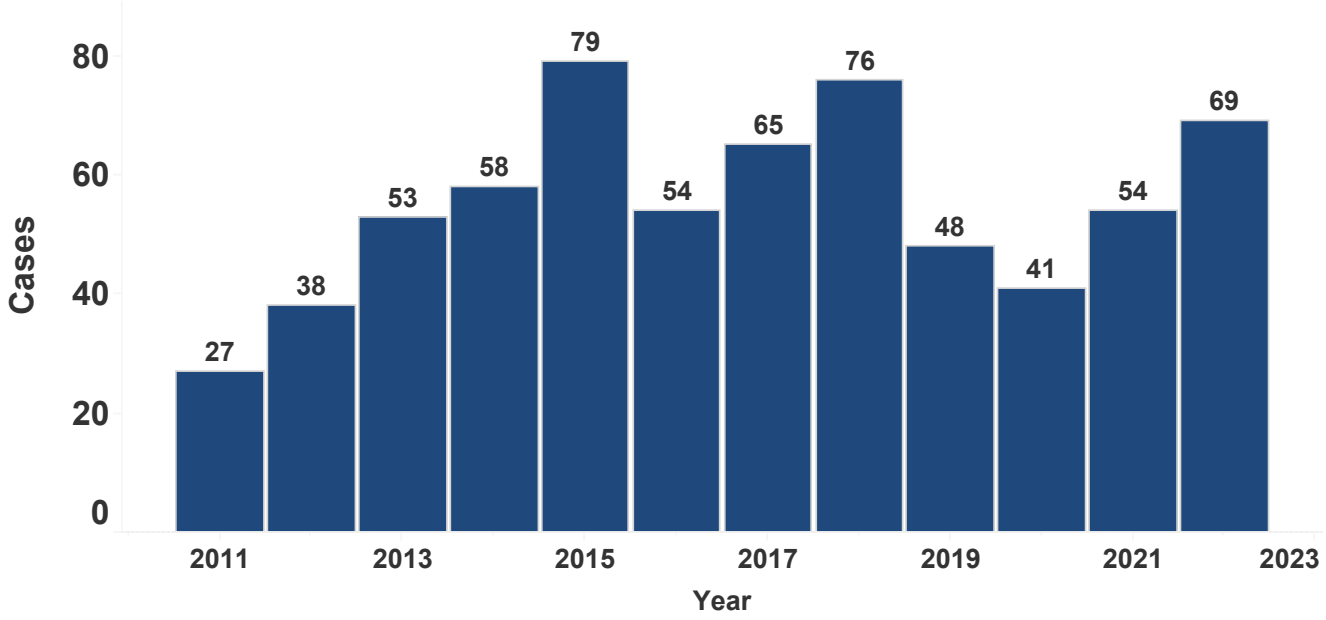
Oregon's 2022 Selected Reportable Communicable Disease Summary

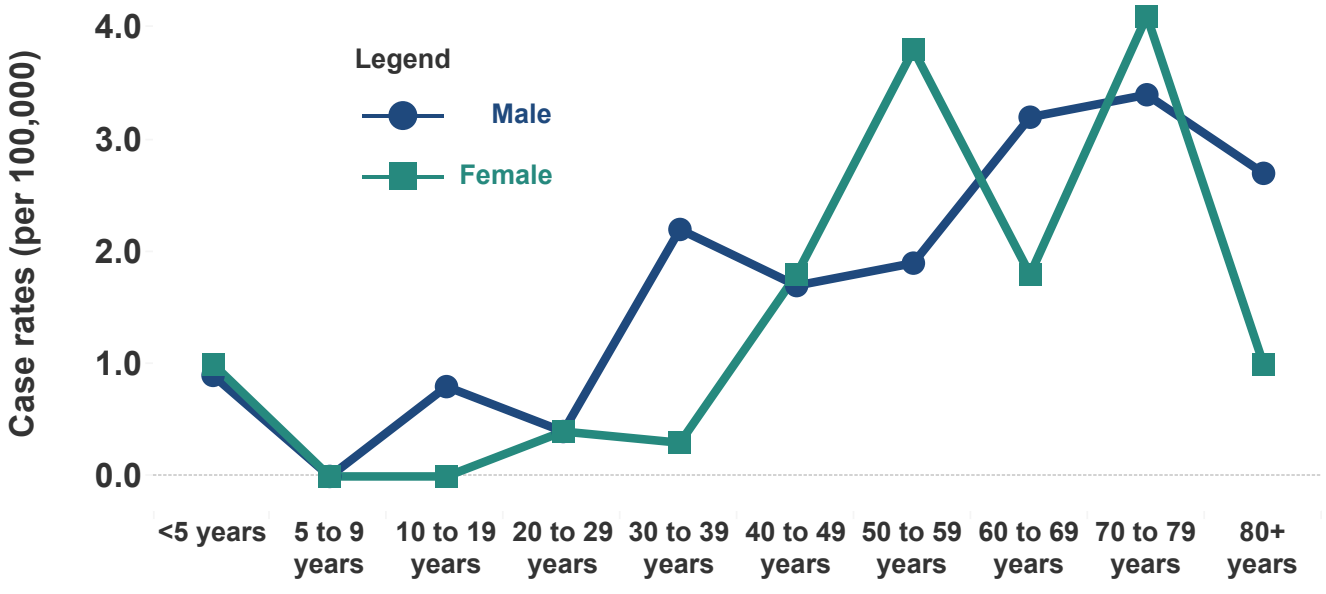
Data current as of 10/9/2023; data are provisional and subject to change.

Case counts of cryptococcosis by year: Oregon, 2011 to 2022.

Cryptococcosis became reportable in 2011. Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of cryptococcosis by age and sex: Oregon, 2022.



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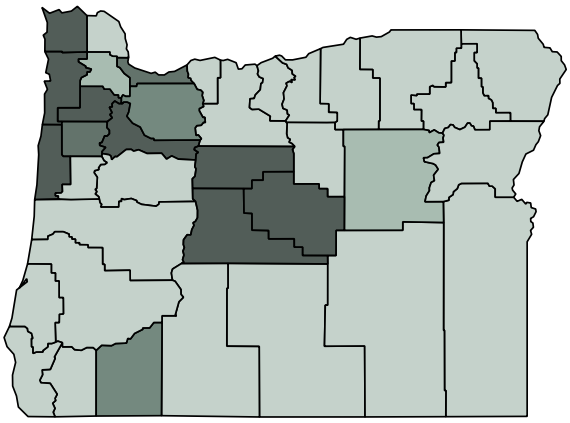
Case rates of cryptococcosis by county of residence: Oregon, 2013 to 2022.

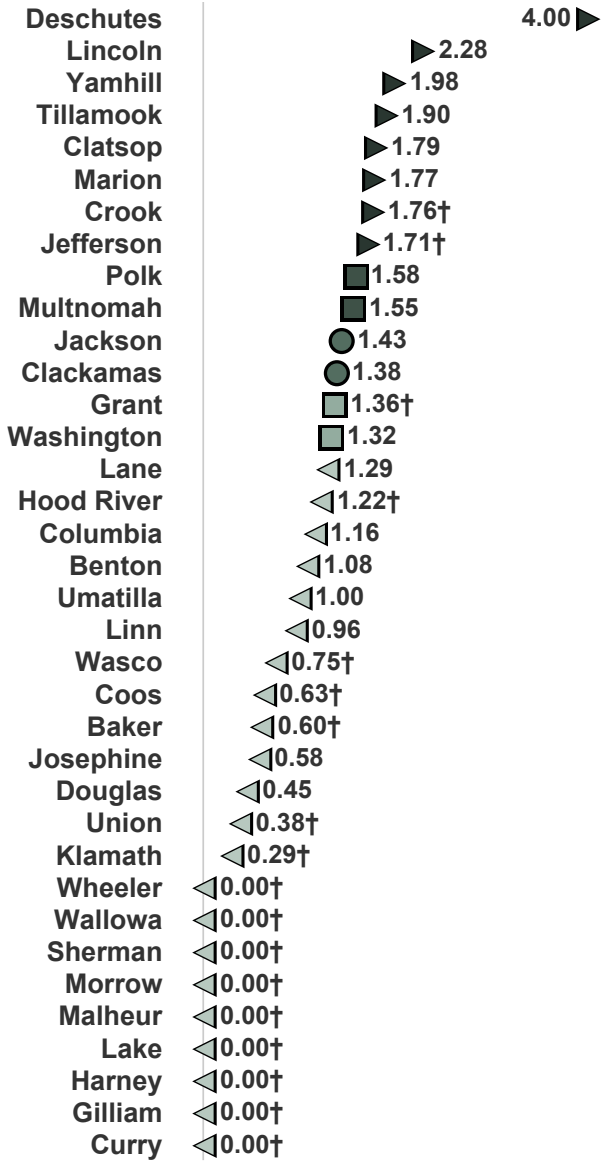
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for cryptococcosis from 2013 to 2022 was **1.4 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate

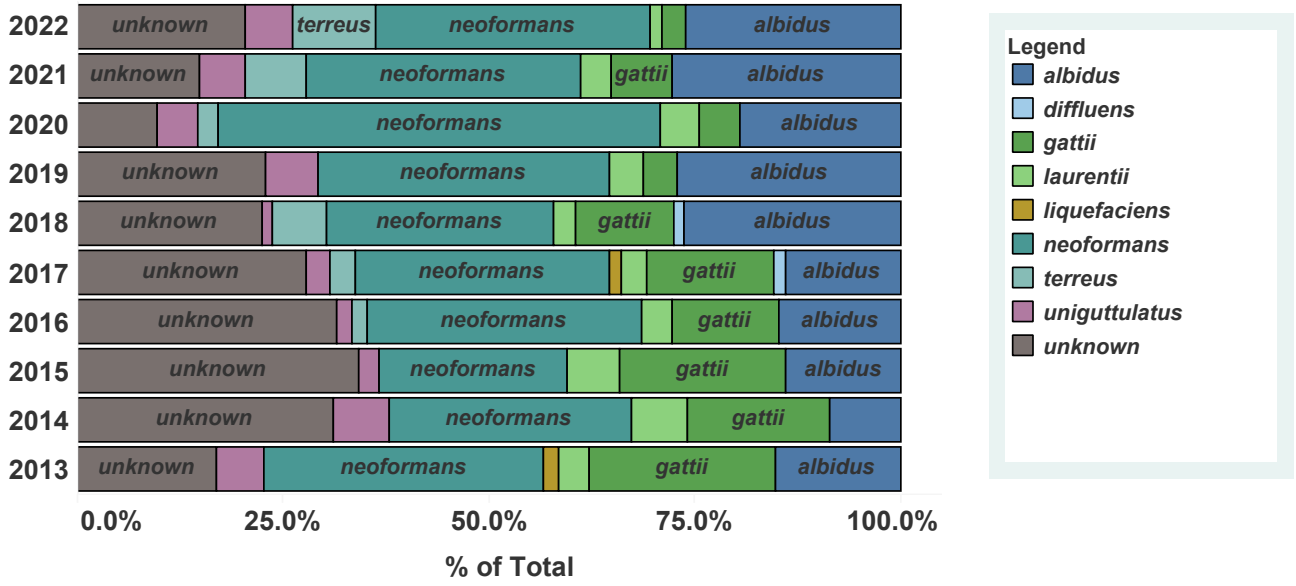




†Note: Rates based on small case counts (<5 cases) might be unstable.

Cryptococcosis cases by species Oregon, 2013 to 2022.

Click on a species to compare between years.



Cryptosporidiosis

Cryptosporidiosis in humans results from infection with protozoal parasites of the genus *Cryptosporidium* — most commonly *C. hominis* or *C. parvum*. Symptomatic infections are characterized by watery diarrhea and abdominal cramps. Many animals serve as reservoirs for *Cryptosporidium* and various protozoal species exist. Many of the species are not known to cause human illness. The most common source of infection is exposure to recreational water.

Symptoms typically resolve in one to four weeks in immunocompetent persons, but infections in immunocompromised persons can be difficult or impossible to cure. Studies suggest the prevalence of cryptosporidiosis among young children, particularly those in large childcare facilities, is surprisingly high. There are no symptoms for many of these infections.

Oregon recorded a large drop in infection rates in 2020, mirroring national trends. In 2022 case counts declined slightly, the 2022 rate was 2.8 per 100,000 persons, down from a record high of 8.1 per 100,000 in 2016. Oregon incidence of *Cryptosporidium* was below the national rate of 3.2 per 100,000 persons. Cases occur year-round although the incidence is still highest from August thru October. Rates are routinely higher in Baker County, due to the occurrence of a drinking water outbreak in 2013, as well as Tillamook County.

Rapid cartridge (ImmunoSTAT) tests and culture-independent diagnostic testing for *Cryptosporidium* might be playing a role in the apparent increase in incidence beginning in the early millennium. Many facilities are now using polymerase chain reaction (PCR) panels, which detect *Cryptosporidium* among other pathogens. These tests are superior to the rapid cartridge tests. In 2022, 118 cases were reported. All cases are routinely investigated to identify the source of infection. No outbreaks were identified in 2022. Treatment with an antiprotozoal agent has been shown effective in persons with a normal immune response; however there are no proven effective treatments in immunocompromised hosts.

Prevention

- Wash hands carefully and frequently with soap and warm water, especially after going to the bathroom, changing diapers or touching livestock. Supervise hand-washing of toddlers and small children after they use the toilet.
- Do not work or attend daycare, serve or prepare food or work in health care while ill with diarrhea.
- Refrain from recreational water activities (pools, hot tubs, splash pads) for two weeks after symptoms from a bout of cryptosporidiosis susbside.
- Do not drink untreated surface water.

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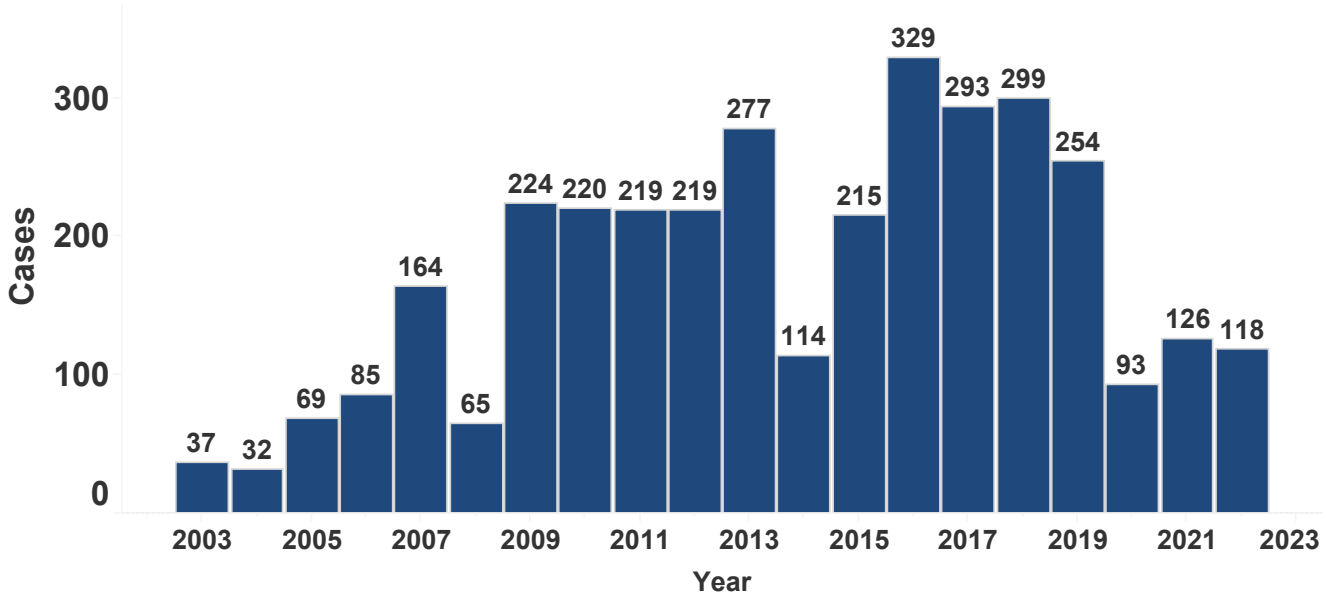
Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

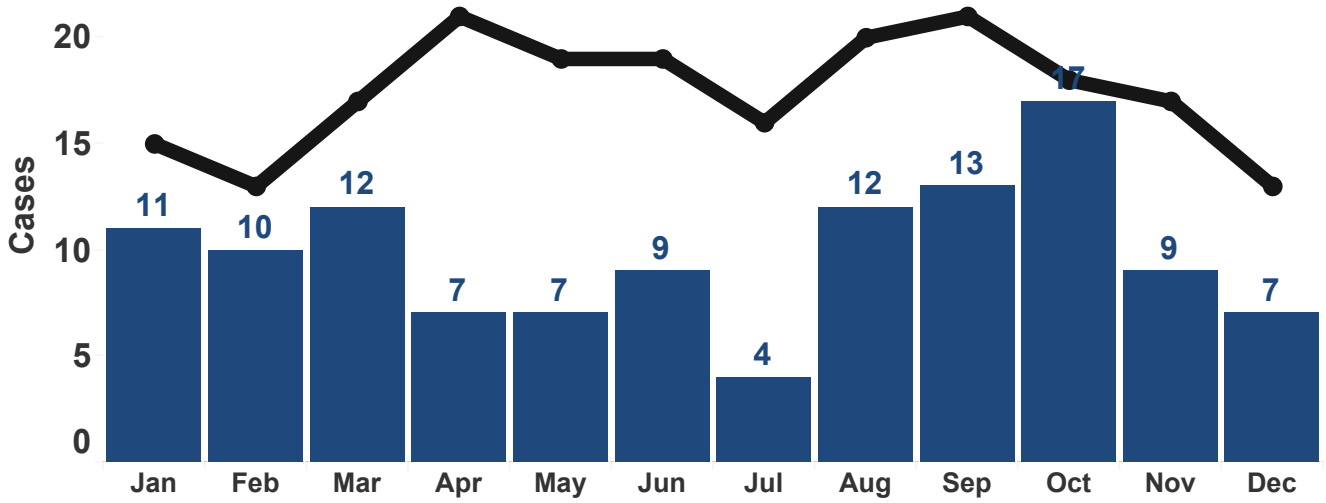
Case counts of cryptosporidiosis by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case counts of cryptosporidiosis by month: Oregon, 2022.

Bar chart shows case counts in 2022 while the line shows the median case counts for the previous 5 years.



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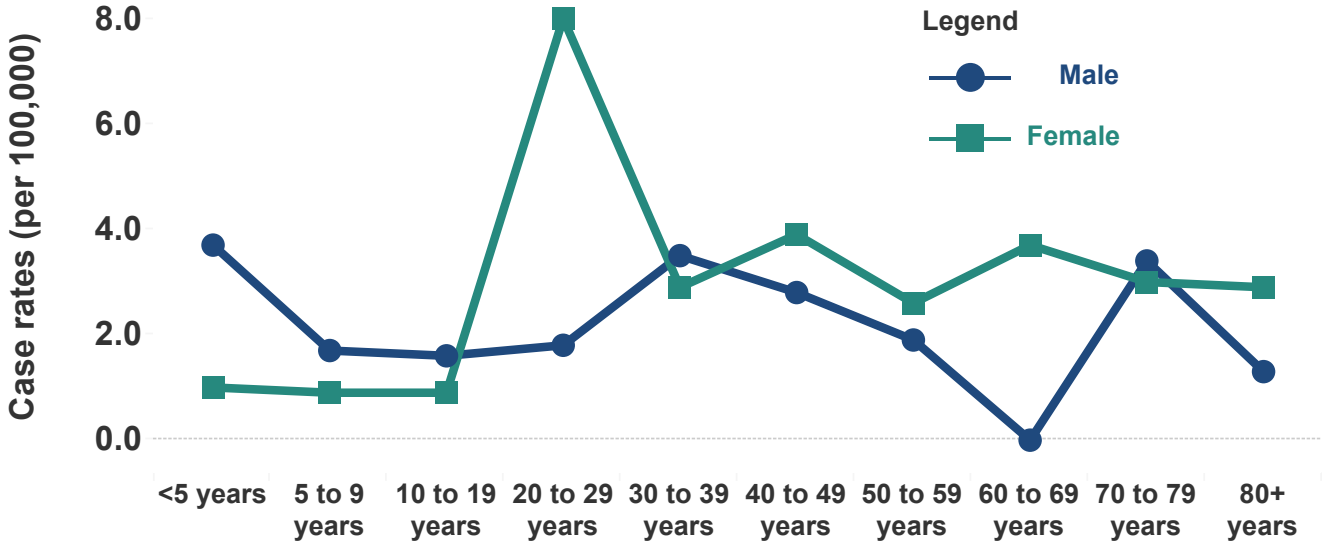
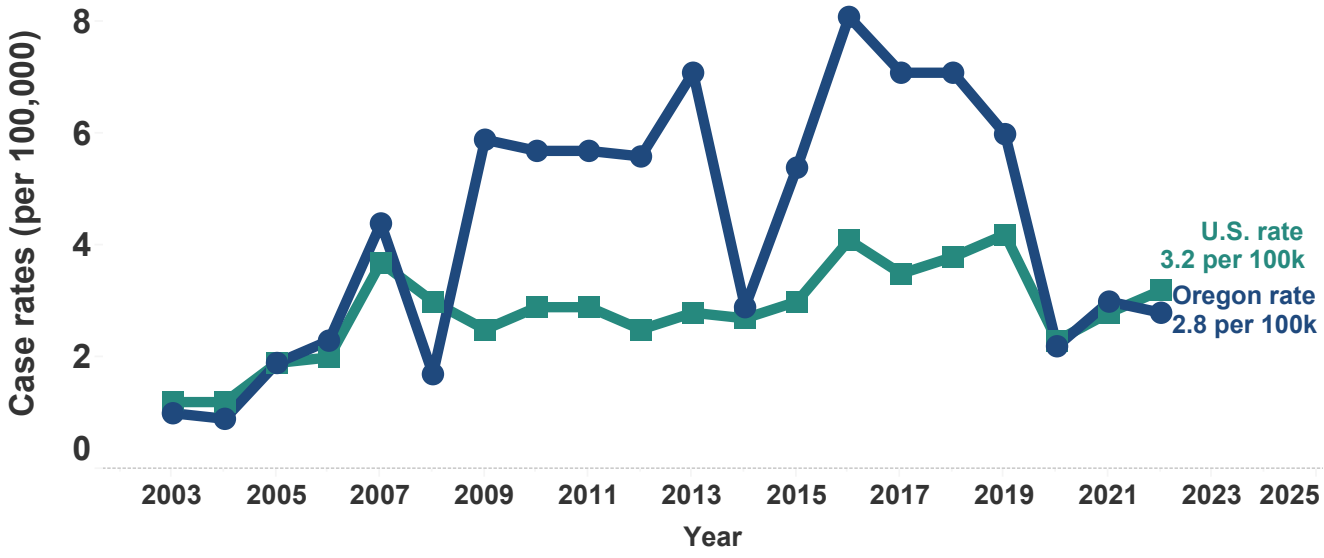
Case rates of cryptosporidiosis by age and sex: Oregon, 2022.



Case rates of cryptosporidiosis in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



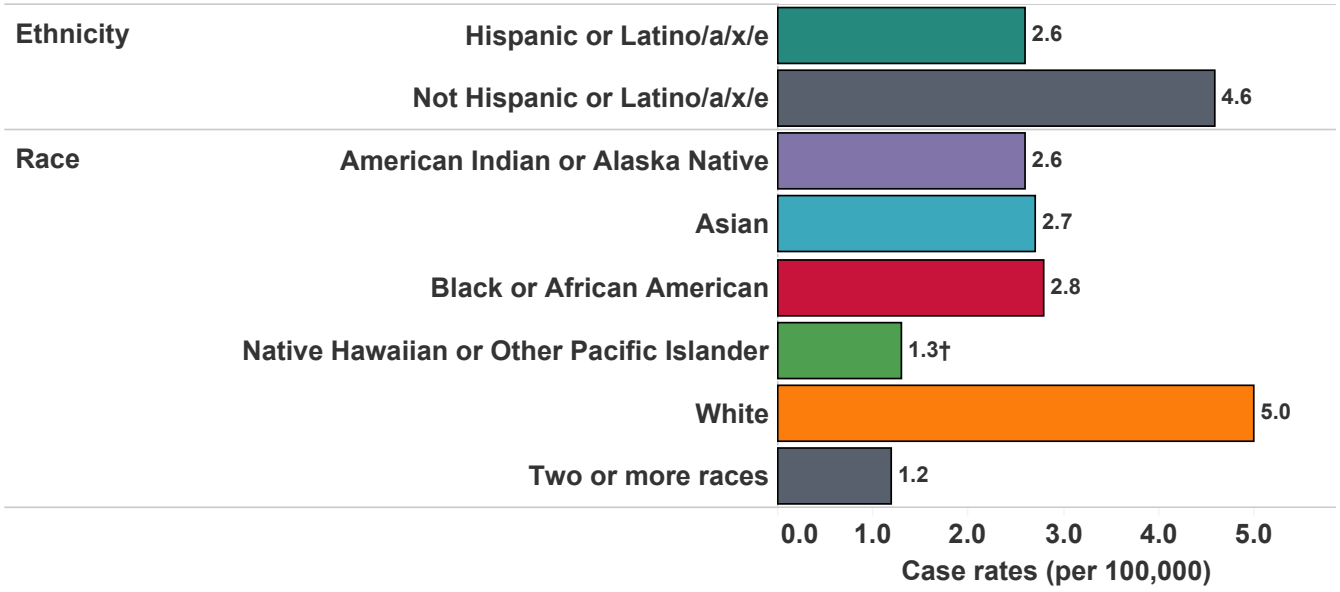
U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

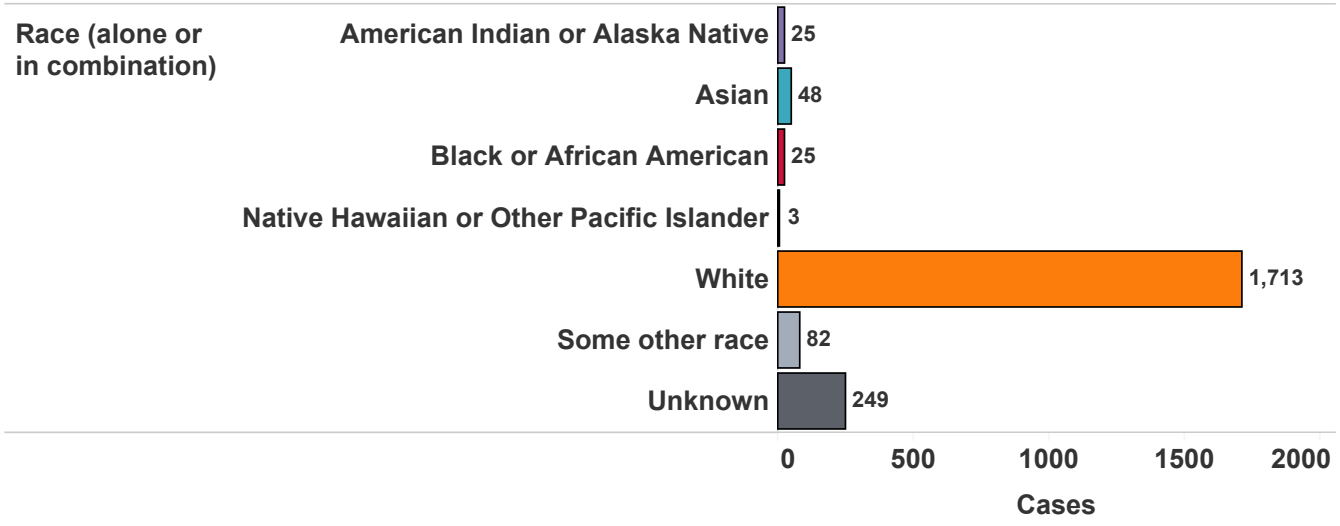
Case rates of cryptosporidiosis by reported race and ethnicity: Oregon, 2013 to 2022.

Race and Ethnicity are groupings determined by the Office of Management and Budget. Due to low case counts, the average case rate over multiple years of data is shown.



Case counts of cryptosporidiosis by reported race and ethnicity: Oregon, 2013 to 2022.

Race alone or in combination means cases may be counted in all races that apply.



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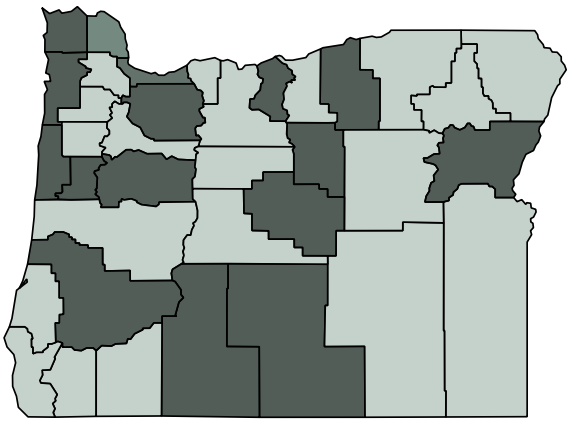
Case rates of cryptosporidiosis by county of residence: Oregon, 2013 to 2022.

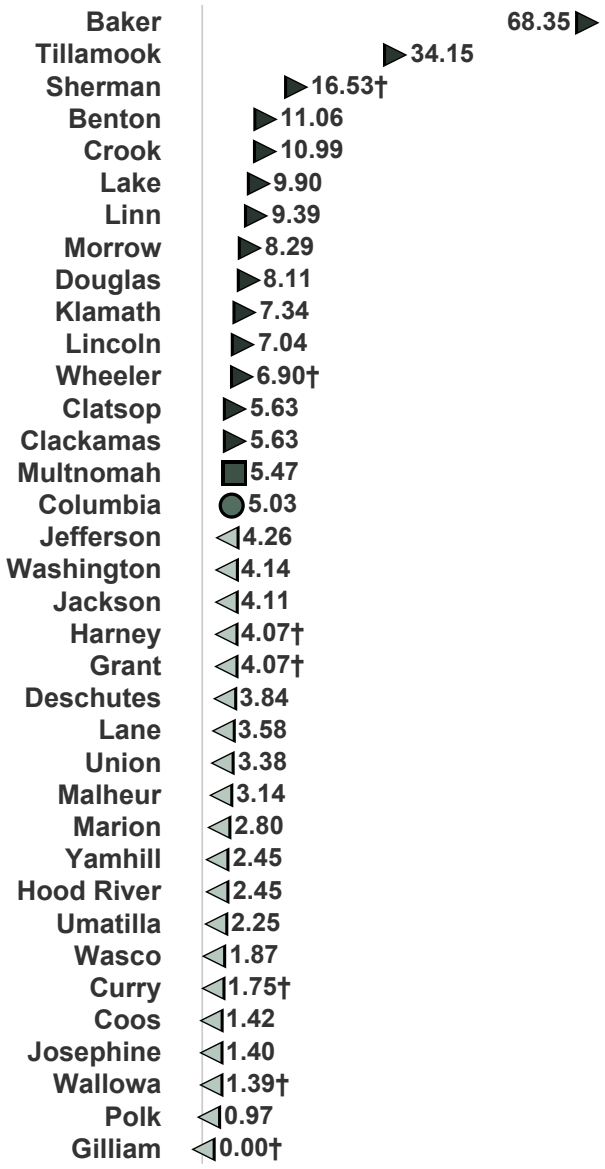
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for cryptosporidiosis from 2013 to 2022 was **5.1 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





†Note: Rates based on small case counts (<5 cases) might be unstable.

Dengue fever

Dengue is a mosquito-borne viral infection. It is caused by a *Flavivirus* (the same genus as West Nile, Zika and yellow fever viruses). There are four serotypes, identified as DENV 1–4. The disease is limited primarily to the tropics and subtropics, although imported cases occasionally occur.

Symptom severity ranges from subclinical, asymptomatic infections to high fever, headache, muscle aches and rash. A subset of patients may develop hemorrhagic fever, with bleeding and shock. Treatment for dengue is supportive. In May 2019, a vaccine against dengue was approved in the United States. It is recommended in children 9–16 years of age with previous laboratory-confirmed DENV infection who live in areas where dengue is common — including American Samoa, Puerto Rico, the U.S. Virgin Islands, the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau.

There is no evidence of transmission here in Oregon. The typical vectors, *Aedes albopictus, Aedes japonicus* and *Aedes aegypti,* are not native to Oregon, although there have been reports of all three species in California.

There were nine cases among Oregon residents in 2022, all of whom had a history of recent travel to an area where dengue is endemic.

Prevention

Primary prevention measures are geared toward avoiding mosquito bites when visiting areas where dengue is circulating:

- Use mosquito repellent.
- Wear long sleeves, long pants, shoes and socks when out and about.
- Avoid outdoor activities at dawn, dusk and early evening, when more mosquitoes are out.
- Check screens on doors and windows where you are staying to make sure they are intact.
- Sleep under a treated mosquito net when nighttime exposure to mosquitoes could occur.
- Additionally, persons acutely ill with dengue should avoid exposure to domestic mosquitoes. (We don’t want to find out the hard way that local species can harbor and transmit the virus, after all.)

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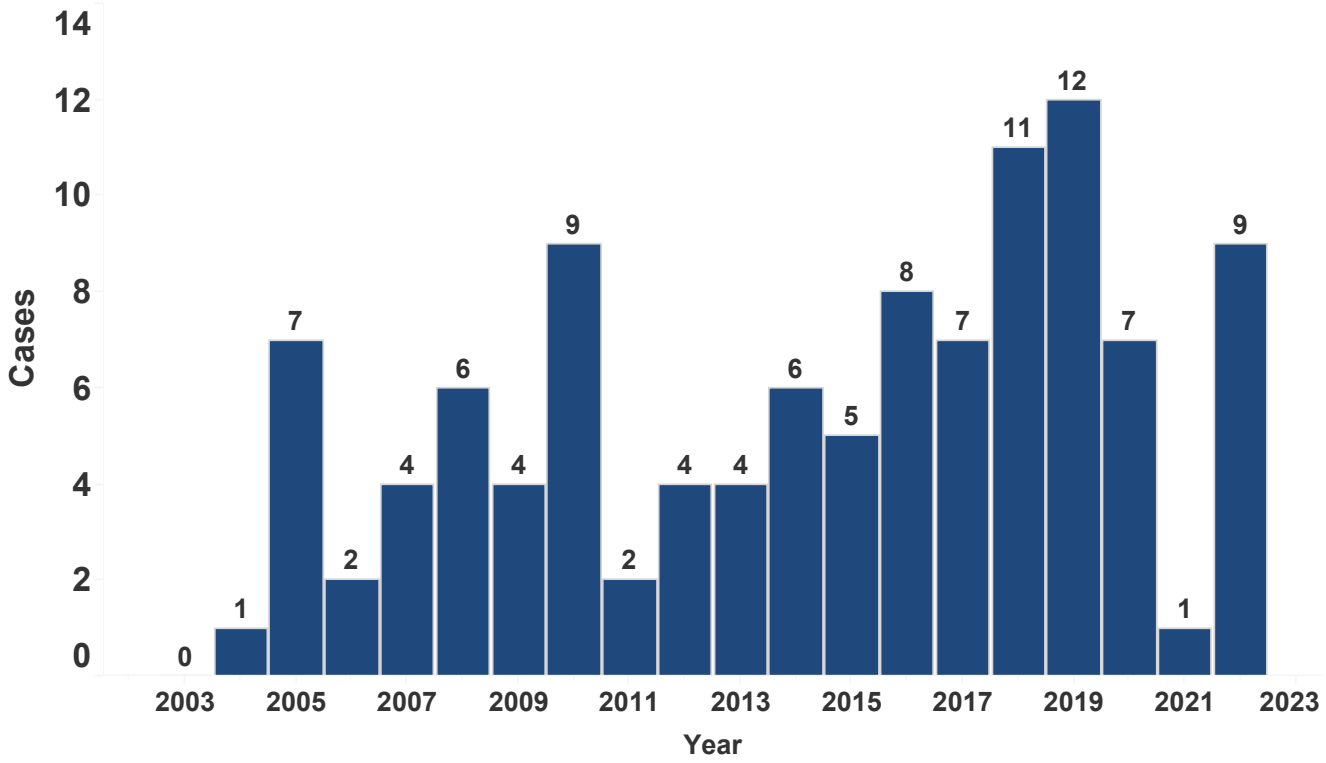
Case counts of dengue fever by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Escherichia coli O157 and other Shiga toxin-producing *Escherichia coli* (STEC) infections

Escherichia coli O157 (O157) is one of the most dreaded causes of infectious gastroenteritis. Bloody diarrhea is a hallmark of this pathogen, but the real danger is post-diarrheal hemolytic uremic syndrome (HUS). Oregon has been the setting for many O157 outbreaks, and the investigations of those outbreaks, combined with the analysis of other surveillance data, has contributed greatly to our understanding of this pathogen. Spread by the fecal-oral route, O157 has several animal reservoirs, the most important of which are ruminants: cattle, goats, sheep, deer, elk, etc. Transmission often occurs from consumption of contaminated food or water, as well as direct person-to-person spread and environmental exposures. Mid-to-late summer is the peak season for O157 infections.

With increasing deployment of diagnostic kits that identify Shiga toxin-producing *E. coli* (rather than O157 per se) comes an appreciation of the significant role that other STEC play as human pathogens. In the United States (and in Oregon), O26, O45, O103, O111, O121 and O145 are the most common "other" serogroups of the enterohemorrhagic *E. coli,* making up more than half of the reported cases since 2013. O157 infections are much more likely to result in HUS than is infection by other STEC.

The incidence of STEC infections in Oregon has generally been higher than that of the United States as a whole. Over the past 10 years, the number of O157 cases reported statewide has ranged between 41 and 106 annually. After climbing to a peak of 8.4 cases per 100,000 persons in 2019, STEC rates began declining. In 2022, the rate of 6.4 per 100,000 persons was down from the 2021 rate of 6.9 per 100,000.

Prevention

- Wash hands with soap carefully and frequently, especially after going to the bathroom, changing diapers or touching livestock. Supervise hand washing of toddlers and small children after they use the toilet.
- Do not work or attend daycare, serve or prepare food or work in health care while ill with diarrhea.
- Practice safe food handling. Rinse raw produce thoroughly under running tap water; separate uncooked meats from vegetables, cooked foods, and ready-to-eat foods; and cook meat to the proper temperatures.
- Do not drink raw milk and do not eat foods that have unpasteurized milk in them.

Escherichia coli O157 and other Shiga toxin-producing *Escherichia coli* (STEC) infections

As for the non-O157 serogroups, those case counts have increased steadily from single digits in 2007 and 2008 to a peak of 150 confirmed cases in 2017. Of the 171 confirmed STECs serotyped in 2022, 50 were O157; 121 were non-O157, including O26 (36), O103 (20), O121 (12), O111 (14), and 24 other serogroups. The remaining 103 STEC cases in 2022 were not serotyped.

Oregon residents were associated with three multi-state STEC outbreaks in 2022. One outbreak was determined to be foodborne, with a suspected vehicle of spinach. The other two were considered outbreaks but no vehicle identified. One other STEC outbreak was associated with attending a county fair. Due to the frequency of STEC outbreaks associated with leafy greens, the FDA are proposing new rules for pre-harvest agricultural water testing.

More labs are testing for the presence of Shiga toxin rather than just O157. Unfortunately, at the same time, many labs are dropping culture-based methods, leaving clinicians (and epidemiologists) in the dark as to the specifics of the etiologic agent, and putting more of the diagnostic burden on the public health reference lab.

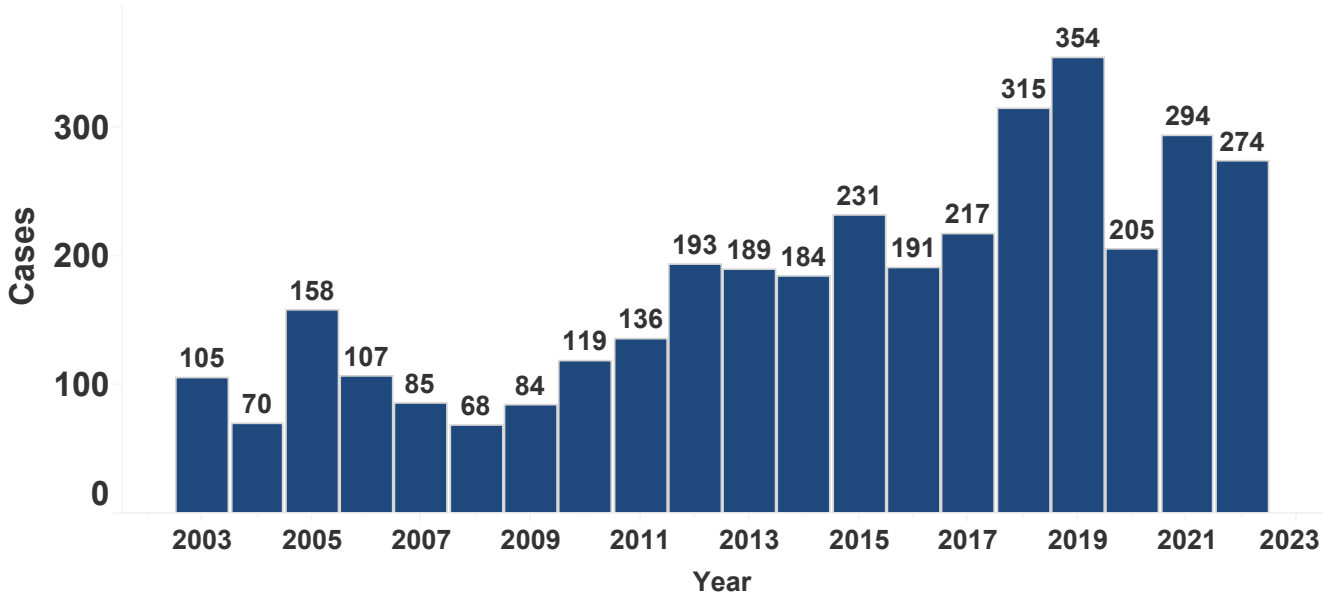
Much of the heavy lifting for prevention must be done upstream, with plans to minimize contamination of crops and processing equipment. Hazard Analysis and Critical Control Point (HACCP) practices focus on documenting and controlling risks during food processing and commercial food preparation, as well as efforts to control water and other potential environmental sources of infection.

Prevention

- Wash hands with soap carefully and frequently, especially after going to the bathroom, changing diapers or touching livestock. Supervise hand washing of toddlers and small children after they use the toilet.
- Do not work or attend daycare, serve or prepare food or work in health care while ill with diarrhea.
- Practice safe food handling. Rinse raw produce thoroughly under running tap water; separate uncooked meats from vegetables, cooked foods, and ready-to-eat foods; and cook meat to the proper temperatures.
- Do not drink raw milk and do not eat foods that have unpasteurized milk in them.

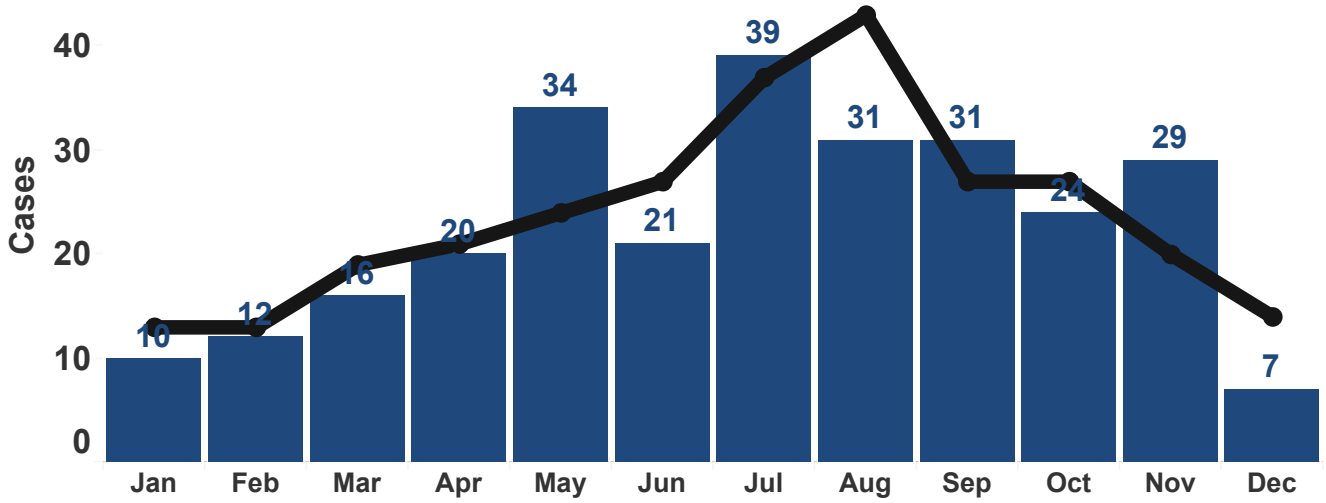
Case counts of STEC infections by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case counts of STEC infections by month: Oregon, 2022.

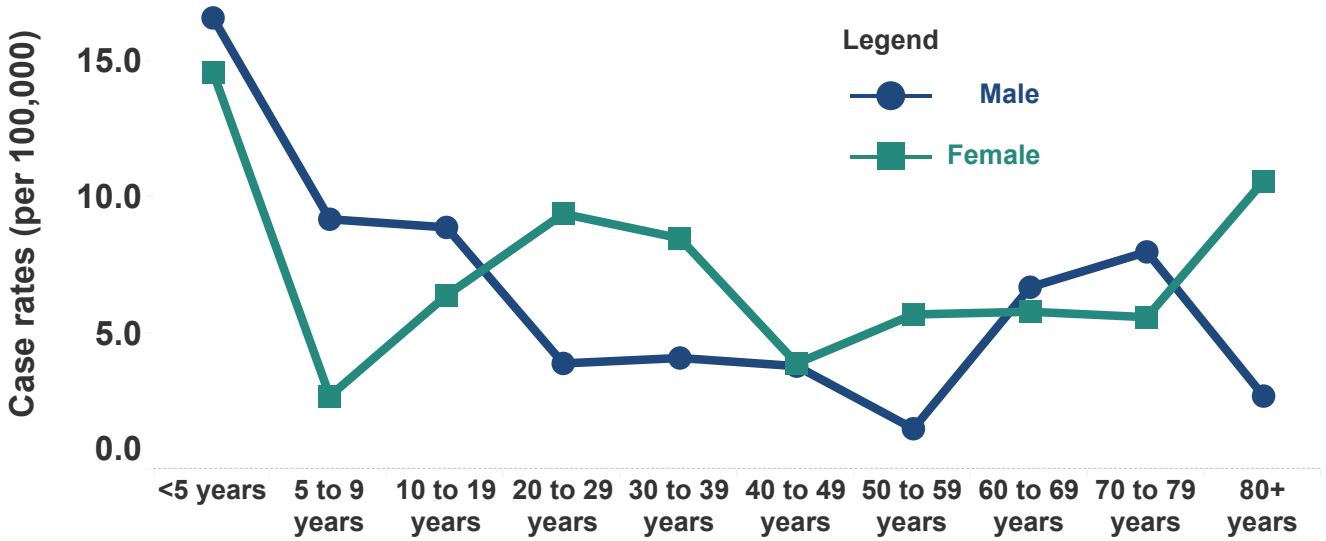
Bar chart shows case counts in 2022 while the line shows the median case counts for the previous 5 years.



Oregon's 2022 Selected Reportable Communicable Disease Summary

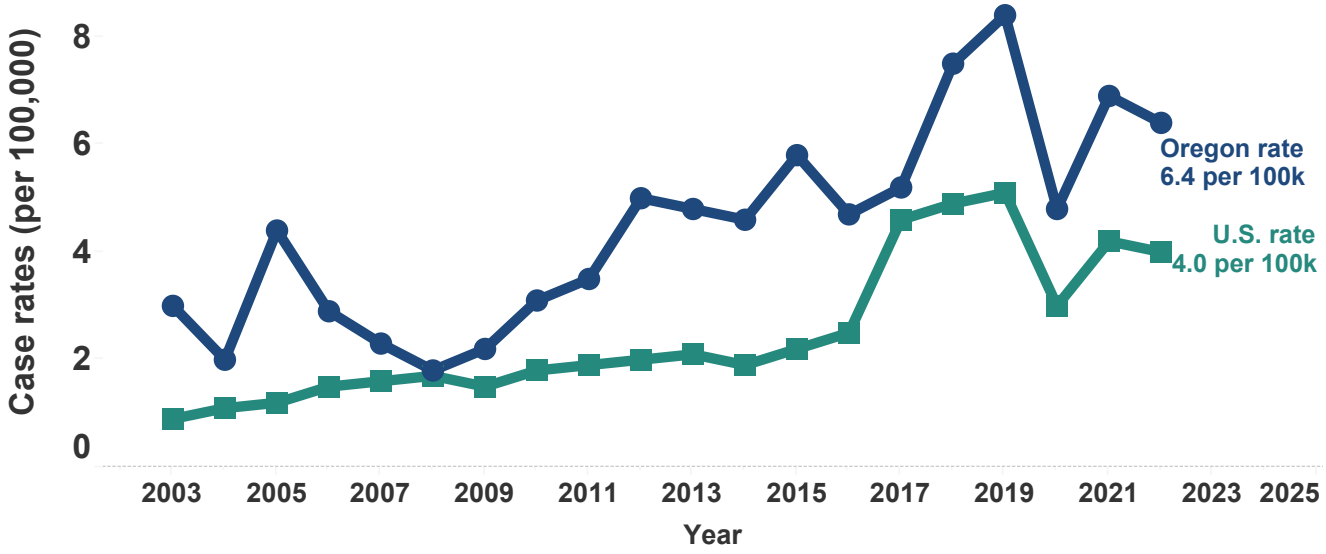
Data current as of 10/9/2023; data are provisional and subject to change.

Case rates of STEC infections by age and sex: Oregon, 2022.



Case rates of STEC infections in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

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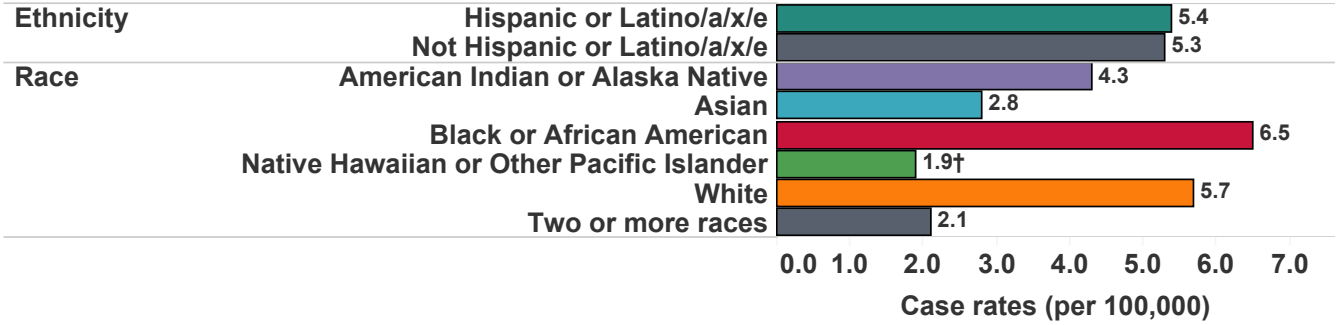
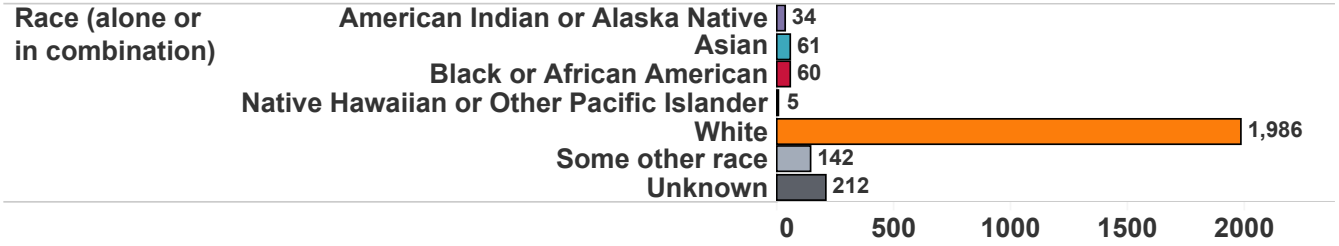
Case rates of STEC infections by reported race and ethnicity: Oregon, 2013 to 2022.

Race and Ethnicity are groupings determined by the Office of Management and Budget. Due to low case counts, the average case rate over multiple years of data is shown.

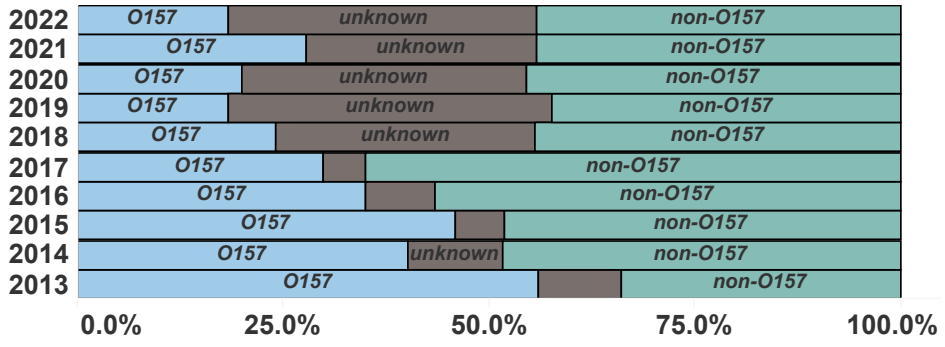


Case counts of STEC infections by reported race and ethnicity: Oregon, 2013 to 2022.

Race alone or in combination means cases may be counted in all races that apply.



Escherichia coli cases by O157 vs non-O157 type Oregon, 2013 to 2022. Click on a O157 vs non-O157 type to compare between years.



Note O157 and non-O157 case counts have updated from previous report; O157:NM cases are now correctly included as O157 cases.

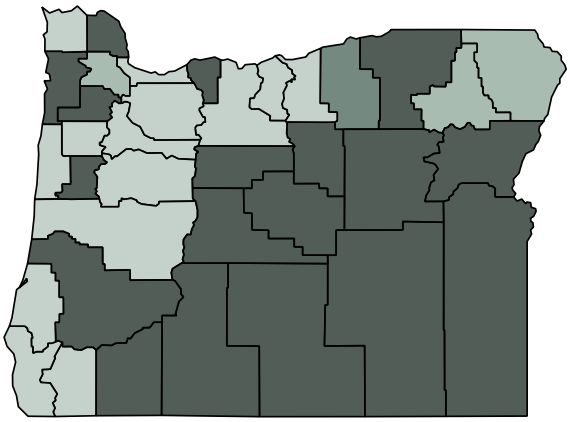
Case rates of STEC infections by county of residence: Oregon, 2013 to 2022.

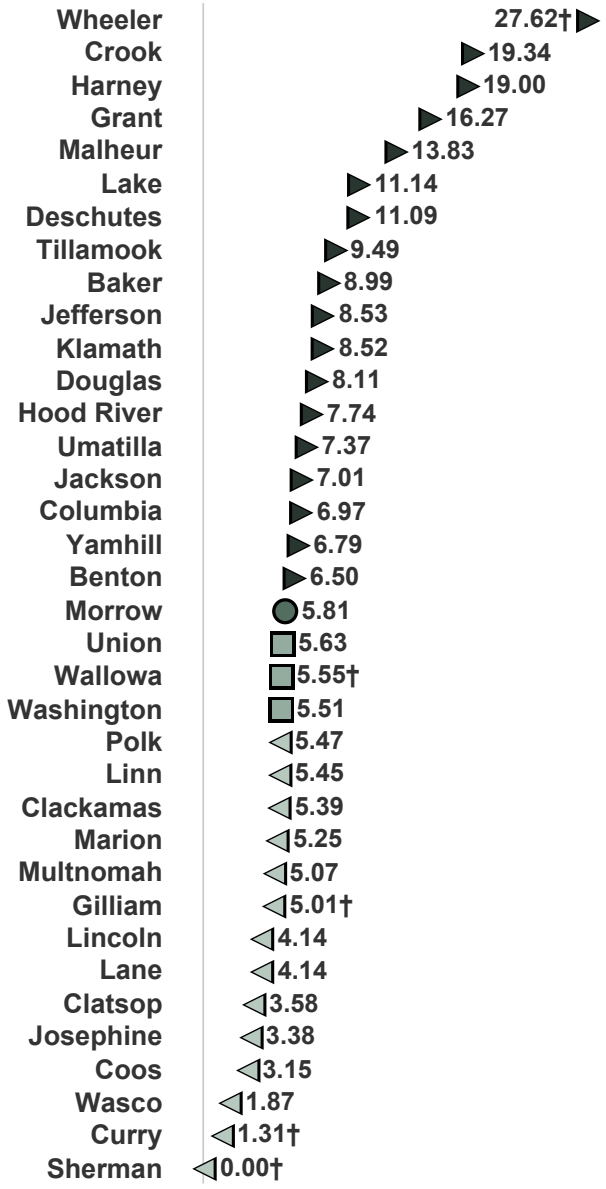
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for STEC infections from 2013 to 2022 was **5.9 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





†Note: Rates based on small case counts (<5 cases) might be unstable.

Extrapulmonary nontuberculous mycobacterial disease (NTM)

Oregon surveillance for extrapulmonary nontuberculous mycobacterial disease (NTM) started in January 2014. Case reporting identifies outbreaks and potential sources of transmission. Other objectives of reporting are to prevent further transmission, identify epidemiologic trends and educate the exposed persons about signs and symptoms of the disease.

NTM are environmental organisms, usually associated with water and soil; there are more than 169 different species identified. Disease-causing *Mycobacterium* species frequently identified in the United States include: *M. avium* complex (MAC), *M. marinum, M. abscessus, M. chelonae, M. fortuitum, M. kansasii* and *M. xenopi* (in certain regions).

Extrapulmonary NTM disease presents as cutaneous, bone, joint, lymph node or central nervous system disease. These soft tissue infections cause purplish nodules that drain and may ulcerate or scar.

Cutaneous infections present as nodules or ulcers and typically result from either:

- Direct inoculation during trauma
- Surgical or medical procedures
- Exposures to whirlpool baths, or
- Settings such as nail salons or tattoo procedures.

Lymphadenitis occurs most in otherwise healthy children, usually <5 years of age. Lymph node disease results in large, reddened and tender nodes, which can drain or ulcerate.

Prevention

- For surgical procedures, follow infection prevention best practices, which include following sterilization guidelines and not using tap water or ice in the operating room.
- Avoid dusts from potting soil.
- Adequately clean baths in nail salons.
- Tattoo ink should be diluted with sterile water.

Extrapulmonary nontuberculous mycobacterial disease (NTM)

Generally, disseminated extrapulmonary disease occurs in immunocompromised patients (e.g., HIV, cancer, transplant and others). Symptoms include cough, fatigue, weight loss, fever and night sweats.

Treatment is based on the species identified and the site of infection. For the immunocompetent, infections are usually curable with a two to three drug regimen for two to six months, depending on site of infection. Susceptibility testing of the organism determines the appropriate antibiotic treatment. For those with disseminated disease, cure is difficult to achieve without restoration of the immune system.

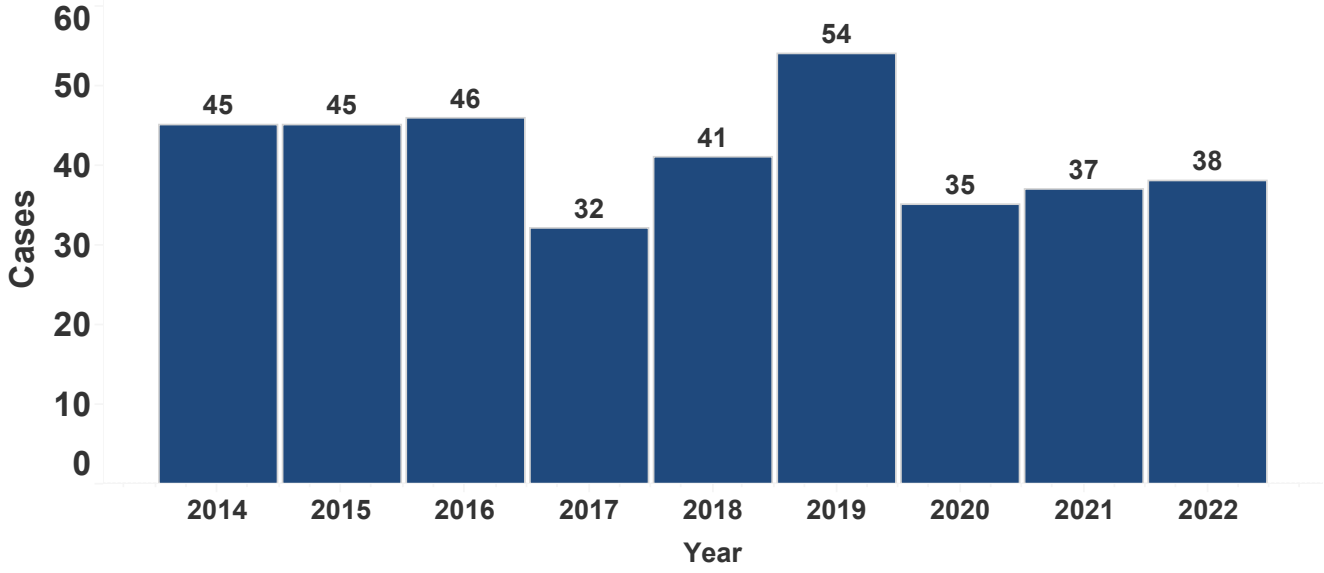
In 2022, there were 38 reported cases of extrapulmonary NTM infections among Oregon residents, resulting in an annual incidence of 0.9 cases per 100,000 population. The median age of the cases was 58, ranging from 2 months to 86 years, and 18 (47%) were female. Tissue and wound cultures accounted for 27 (71%) of the cases, followed by blood and other body fluids (6 cases or 16%). The most reported species was *M. avium complex* (16 cases or 42%), followed by *M. chelonae* (7 cases or 18%).

Prevention

- For surgical procedures, follow infection prevention best practices, which include following sterilization guidelines and not using tap water or ice in the operating room.
- Avoid dusts from potting soil.
- Adequately clean baths in nail salons.
- Tattoo ink should be diluted with sterile water.

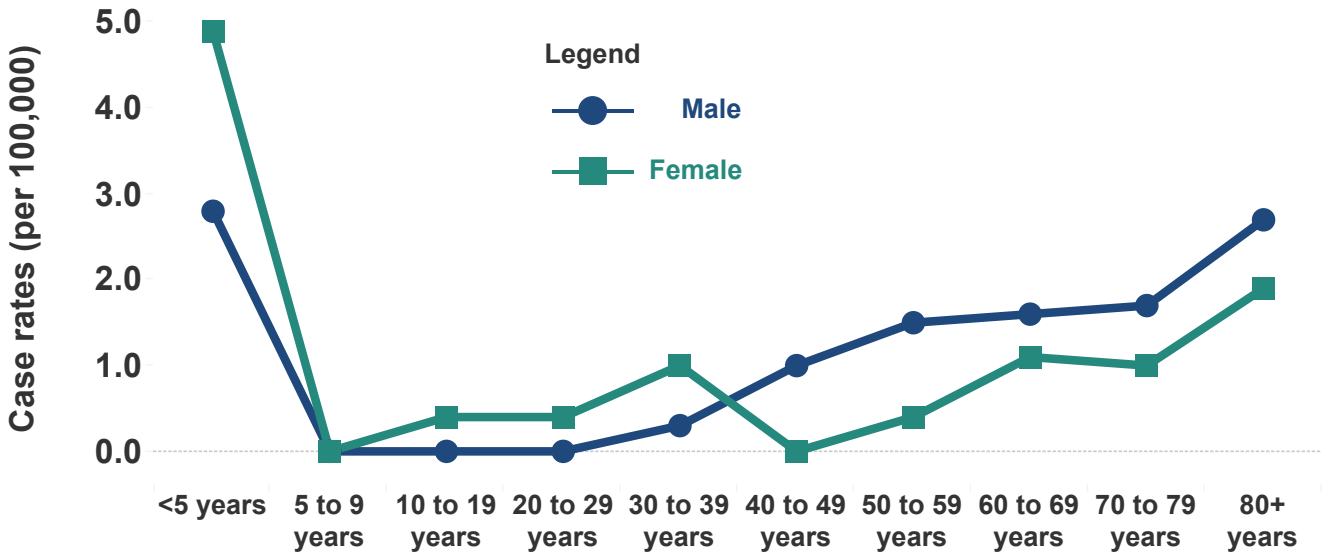
Case counts of extrapulmonary nontuberculous mycobacterial disease (NTM) by year: Oregon, 2014 to 2022.

Extrapulmonary NTM became reportable in 2014. Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Changed since the last annual report, the date of record for extrapulmonary NTM is now specimen collection date when available, else date of onset.

Case rates of extrapulmonary nontuberculous mycobacterial disease (NTM) by age and sex: Oregon, 2022.



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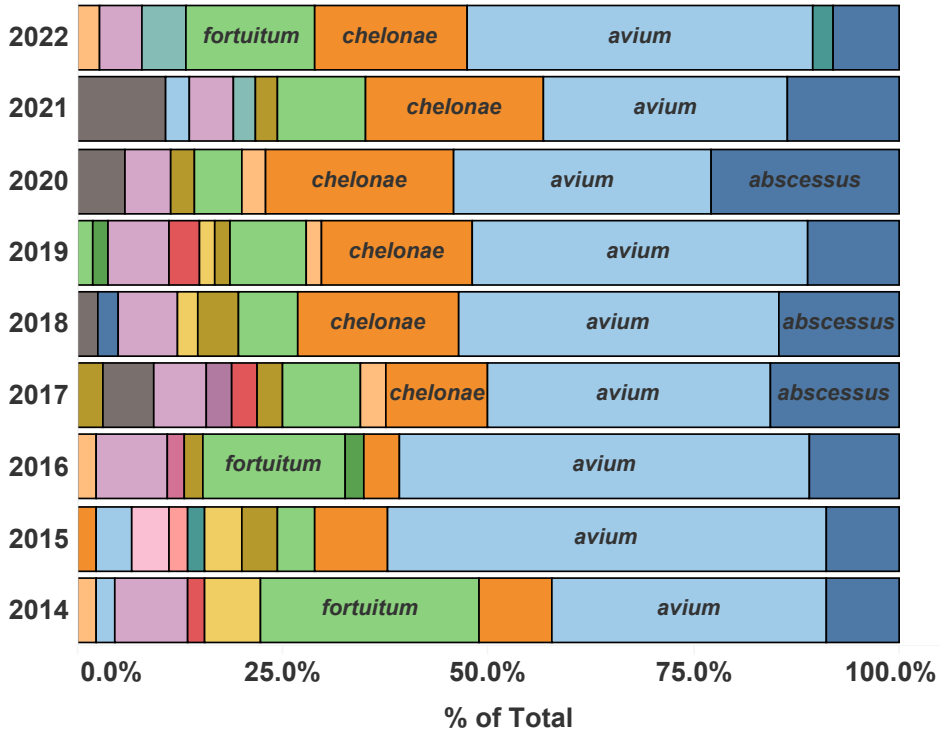
Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

Extrapulmonary nontuberculous mycobacterial disease (NTM) cases by species Oregon, 2014 to 2022.

Click on a species to compare between years.



Legend

- *abscessus*
- *alvei*
- *avium*
- *chelonae*
- *chimaera*
- *fluoranthenivorans*
- *fortuitum*
- *goodii*
- *haemophilum*
- *heckeshornese*
- *intracellulare*
- *kansasii*
- *kumamotonense*
- *lentiflavum*
- *mageritense*
- *malmoense*
- *marinum*
- *marseillense*
- *mucogenicum*
- *senegalense*
- *smegmatis*
- *ulcerans*
- *unknown*
- *wolinskyi*
- *xenopi*

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Giardiasis

Giardia intestinalis, the flagellated protozoan originally named *G. lamblia,* is the most commonly identified parasitic pathogen in the United States. Children in daycare and their close contacts are at greatest risk, as are backpackers and campers (from 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 as few as 10 cysts are ingested through person-to-person or animal-to-person contact, or by ingesting fecally contaminated water or food. Because most human cases follow person-to-person transmission, identification and treatment of giardiasis as well as management of individuals' contacts should prevent further spread of infection.

Most *Giardia* infections occur without symptoms. When symptomatic, patients report chronic diarrhea, steatorrhea, abdominal cramps, bloating, frequent loose and pale, greasy stools, fatigue and weight loss.

In 2022, the reported incidence of giardiasis in Oregon remained elevated compared to the rest of the United States, with 7.7 cases per 100,000 persons. However, cases of giardiasis have been slowly declining in Oregon since 2010. During 2022, 99% of cases were reported as "sporadic"; 1% were transmitted among household members. Males aged 50–59 years had the highest incidence in 2022, with 13.6 cases per 100,000 population, followed by males aged 30–39 years with a rate of 11.4. The elevated incidence from 2013–2022 observed among cases who identify as Black is reflective of universal screening of refugees arriving in Oregon from Africa and other nations that identify as Black. Rates of infection tend to be higher in the summer months with transmission related to outdoor activities in or near untreated water.

Giardiasis is treatable, though treatment fails 10% of the time. Treatment failure, however, is not thought to indicate resistance. A repeat course of the same or another medication may work.

Prevention

- Wash hands with soap carefully and frequently, especially after going to the bathroom, changing diapers or after touching livestock. Supervise hand washing of toddlers and small children after they use the toilet.
- Do not work or attend daycare, serve or prepare food or work in health care while ill with diarrhea.
- Refrain from recreational water activities (pools, hot tubs, splash pads) for two weeks after symptoms from a bout of giardiasis susbside.
- Do not drink untreated surface water.

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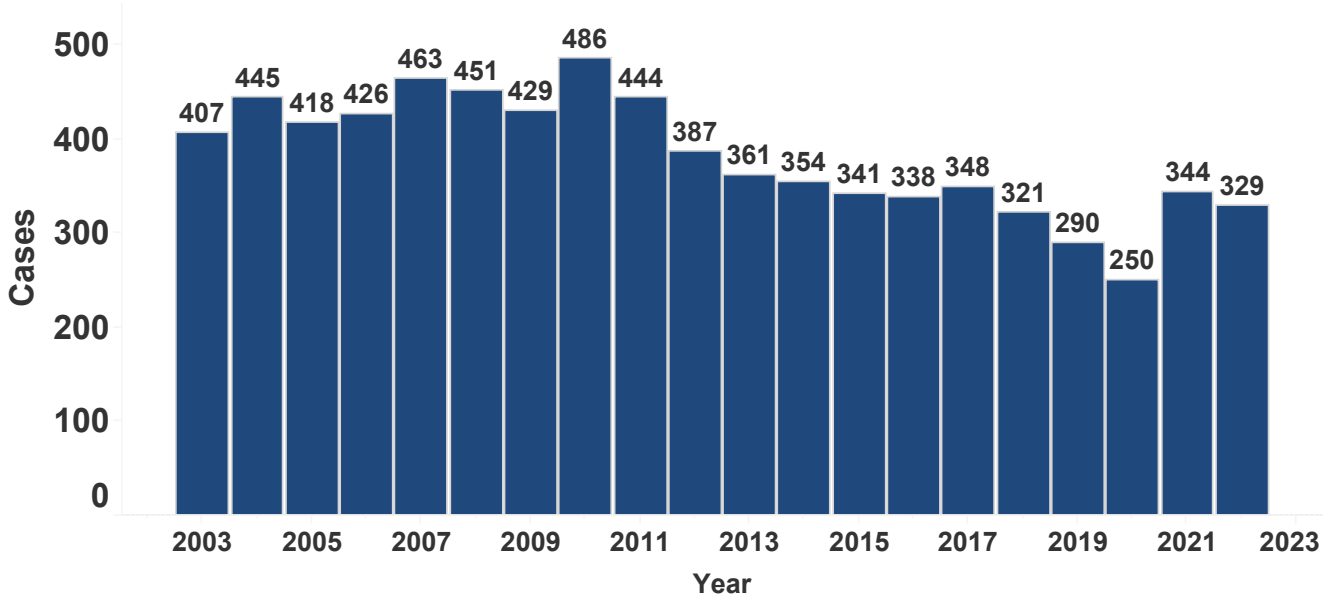
View charts.

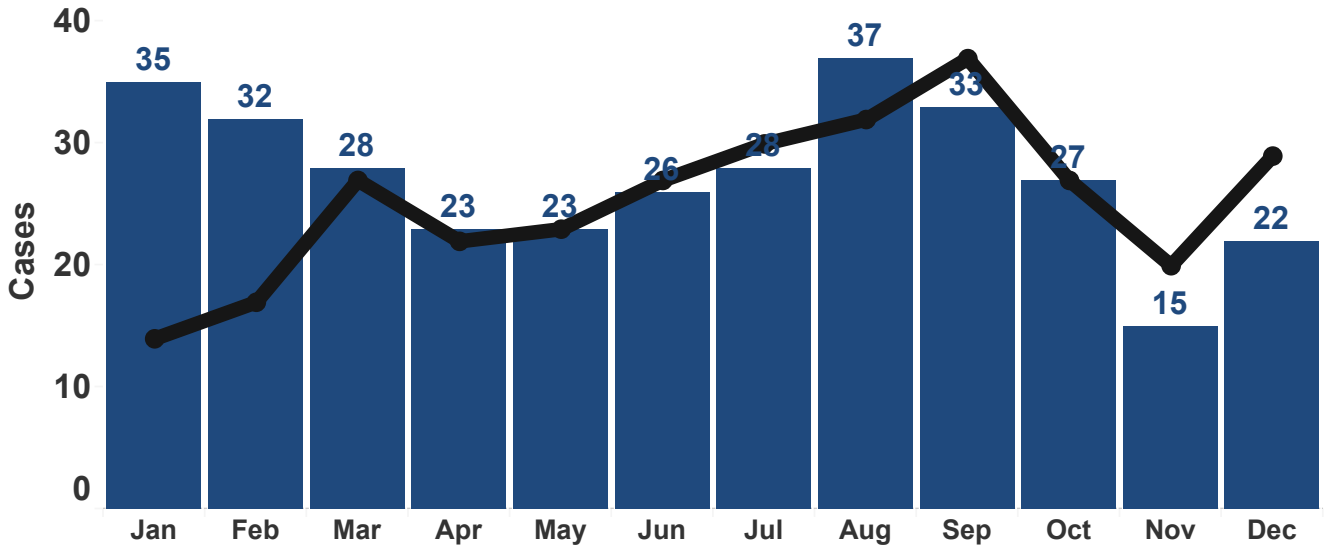
Case counts of giardiasis by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case counts of giardiasis by month: Oregon, 2022.

Bar chart shows case counts in 2022 while the line shows the median case counts for the previous 5 years.



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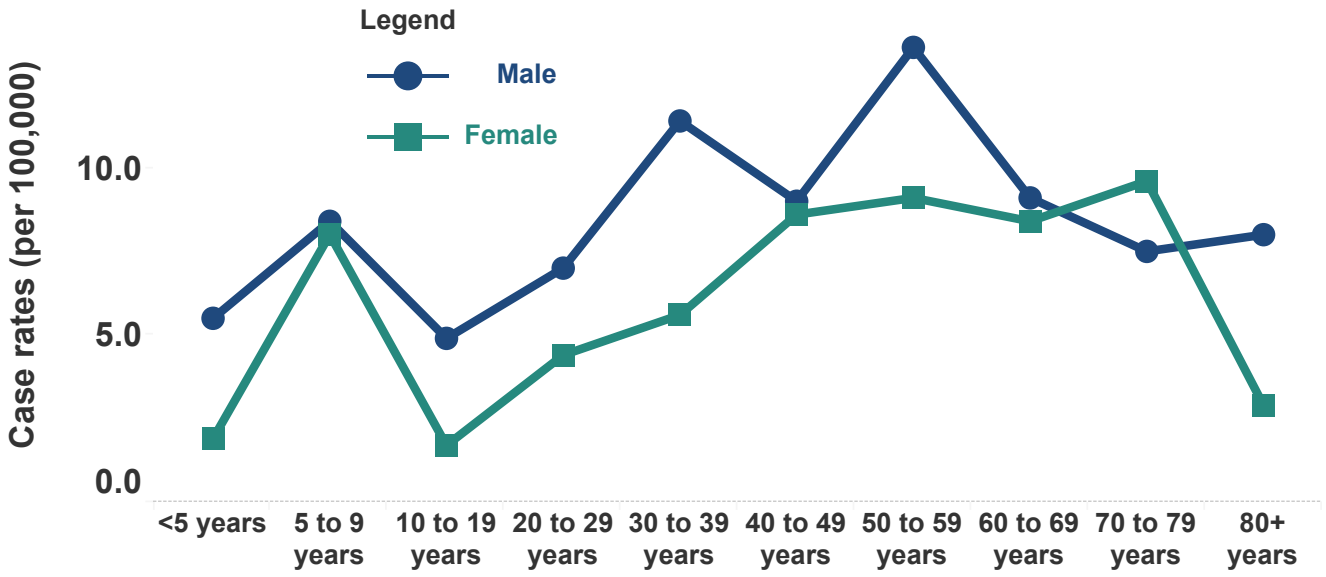
Oregon's 2022 Selected Reportable Communicable Disease Summary

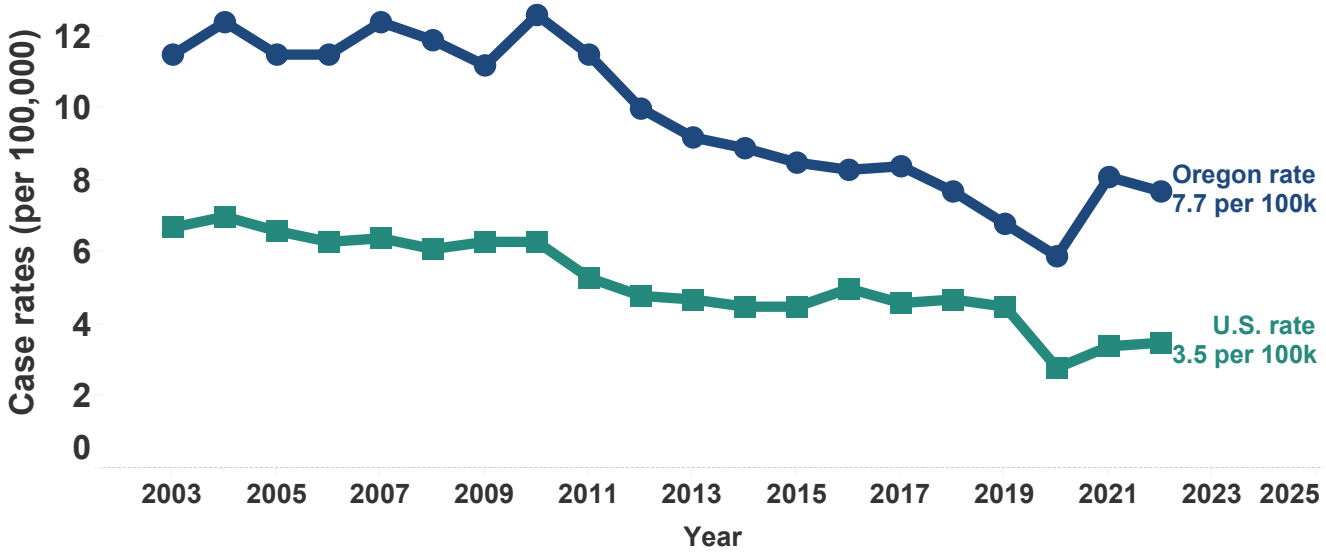
Data current as of 10/9/2023; data are provisional and subject to change.

Case rates of giardiasis by age and sex: Oregon, 2022.



Case rates of giardiasis in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

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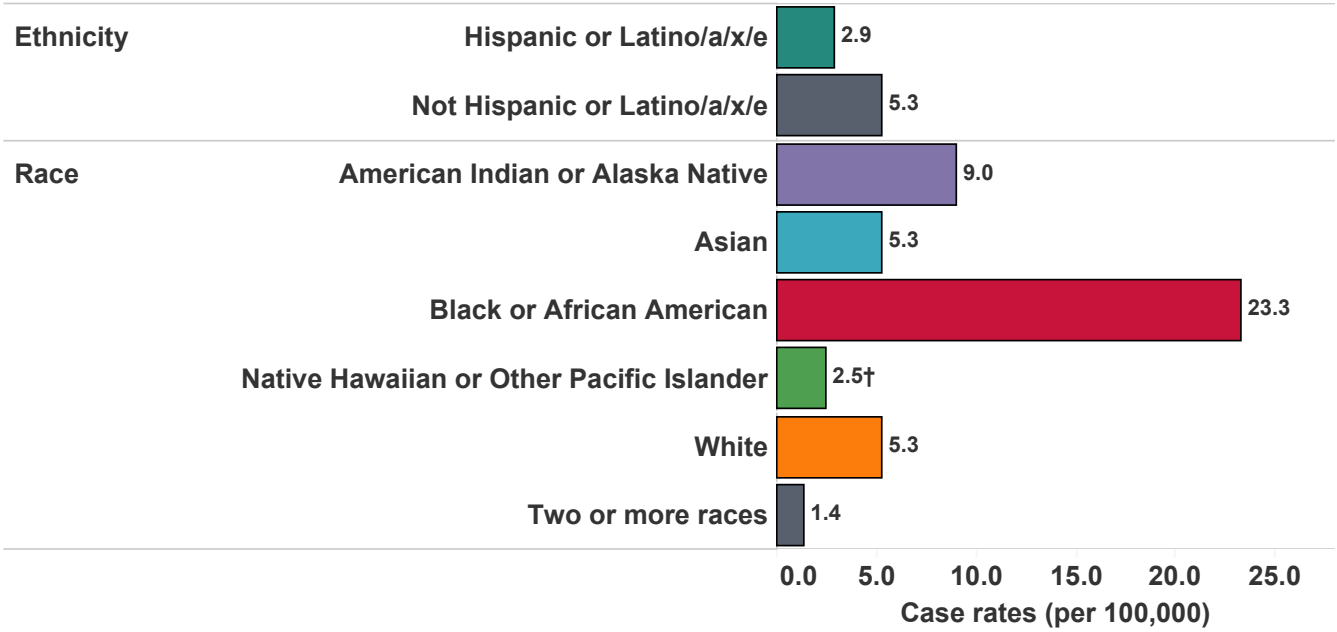
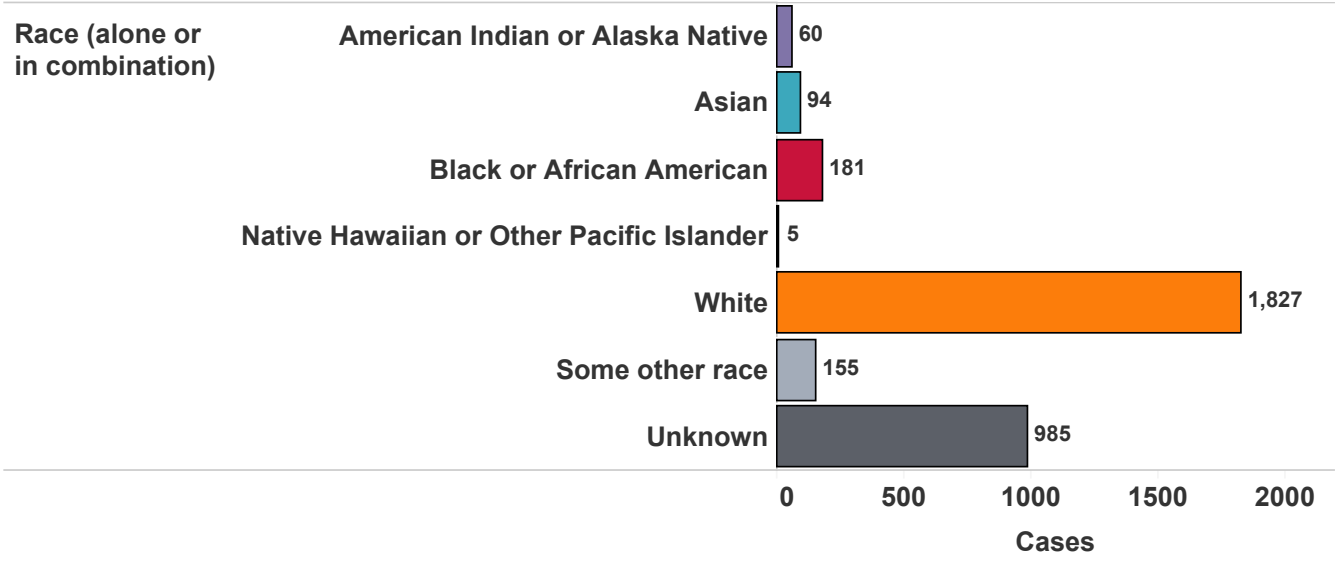
Case rates of giardiasis by reported race and ethnicity: Oregon, 2013 to 2022.

Race and Ethnicity are groupings determined by the Office of Management and Budget. Due to low case counts, the average case rate over multiple years of data is shown.



Case counts of giardiasis by reported race and ethnicity: Oregon, 2013 to 2022.

Race alone or in combination means cases may be counted in all races that apply.



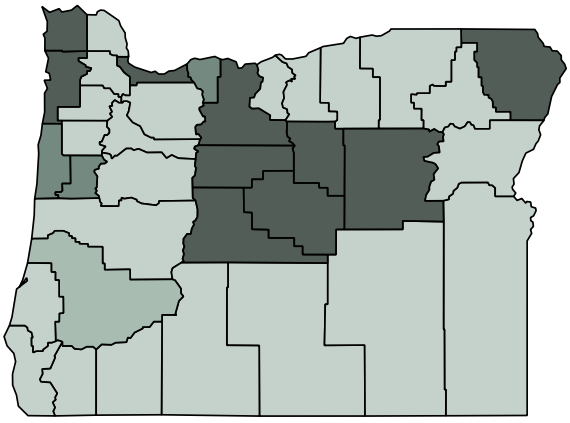
Case rates of giardiasis by county of residence: Oregon, 2013 to 2022.

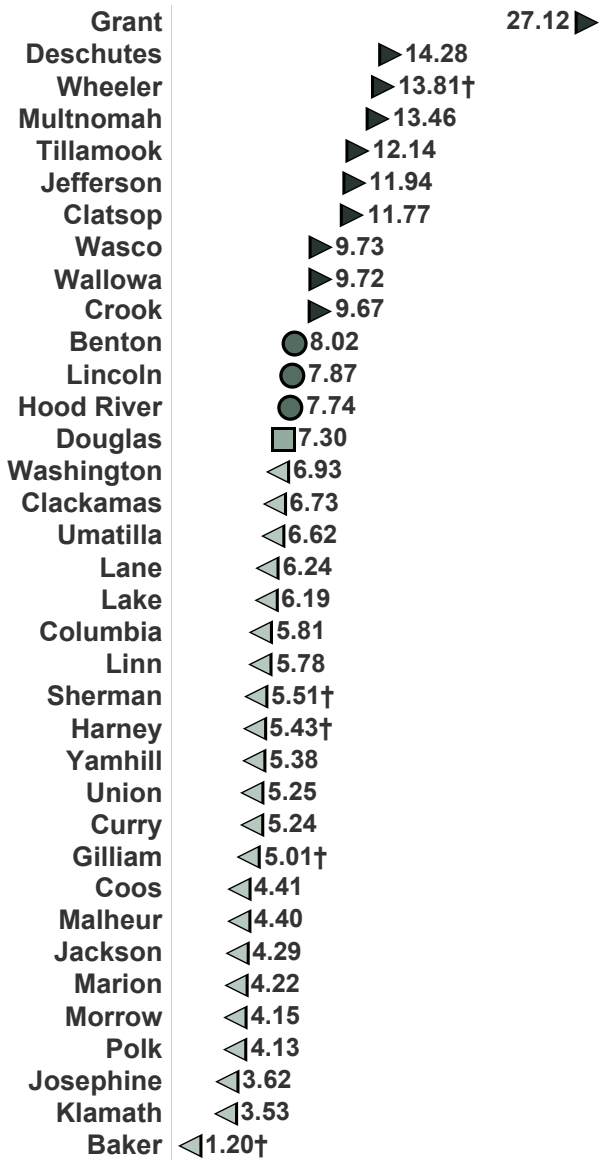
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for giardiasis from 2013 to 2022 was **7.9 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Haemophilus influenzae infection

Until the advent of an effective vaccine against *Haemophilus influenzae* serotype b (Hib) organisms, *H. influenzae* was the leading cause of bacterial meningitis in children <5 years of age in Oregon and elsewhere. It plummeted in the rankings, and *Streptococcus pneumoniae* is now in the lead. In 2021, there were two cases of Hib reported, both in children <5 years of age. Previously, the last reported Hib case in a child <5 years of age was in 2013. Appropriate use of conjugate vaccine will help ensure Hib infection remains minimal well into the future. All sterile-site *H. influenzae* isolates must be sent to the Oregon State Public Health Laboratory for additional typing.

Seventy-five cases of invasive *H. influenzae* disease (IHiD, all serotypes) occurred in 2022. With the decline in invasive Hib disease in children, there has been increased recognition of nonserotype b and nontypeable cases in persons >5 years of age, especially among those ≥65 years of age. In 2022, 73% of cases were nontypeable, 9% were serotype a, 7% were identified as serotype f, 1% were serotype b and 1% were identified as serotype e, while the remaining cases were not serotyped. The burden of IHiD in 2022 was highest among those ≥ 65 years of age (4 per 100,000 persons), followed by those 0–4 years of age and those 35–64 years of age (2 per 100,000 persons for both age groups). *Haemophilus influenzae* is treated with antibiotics. More than 90 percent of cases were hospitalized. There were 15 deaths related to IHiD infection.

Prevention

- Vaccinate all children against Hib at 2 months, 4 months, 6 months, and 12–15 months of age.
- Cover your cough and wash your hands.
- Close contacts of Hib cases can be treated prophylactically to prevent infection.

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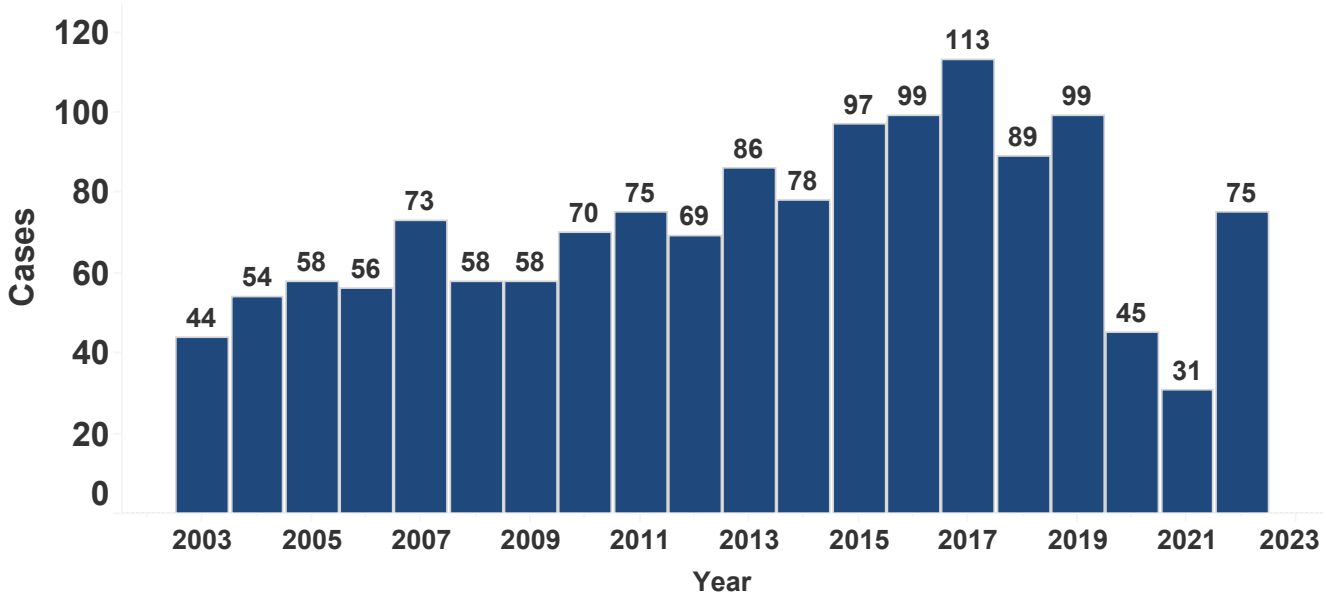
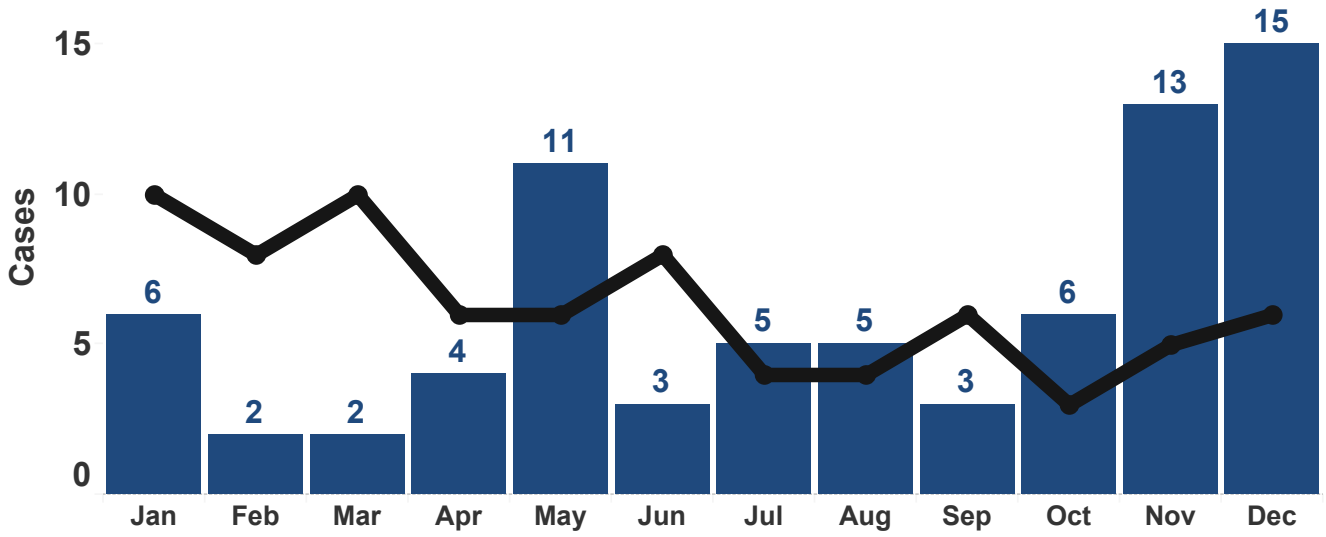
Case counts of *Haemophilus influenzae* by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case counts of *Haemophilus influenzae* by month: Oregon, 2022.

Bar chart shows case counts in 2022 while the line shows the median case counts for the previous 5 years.



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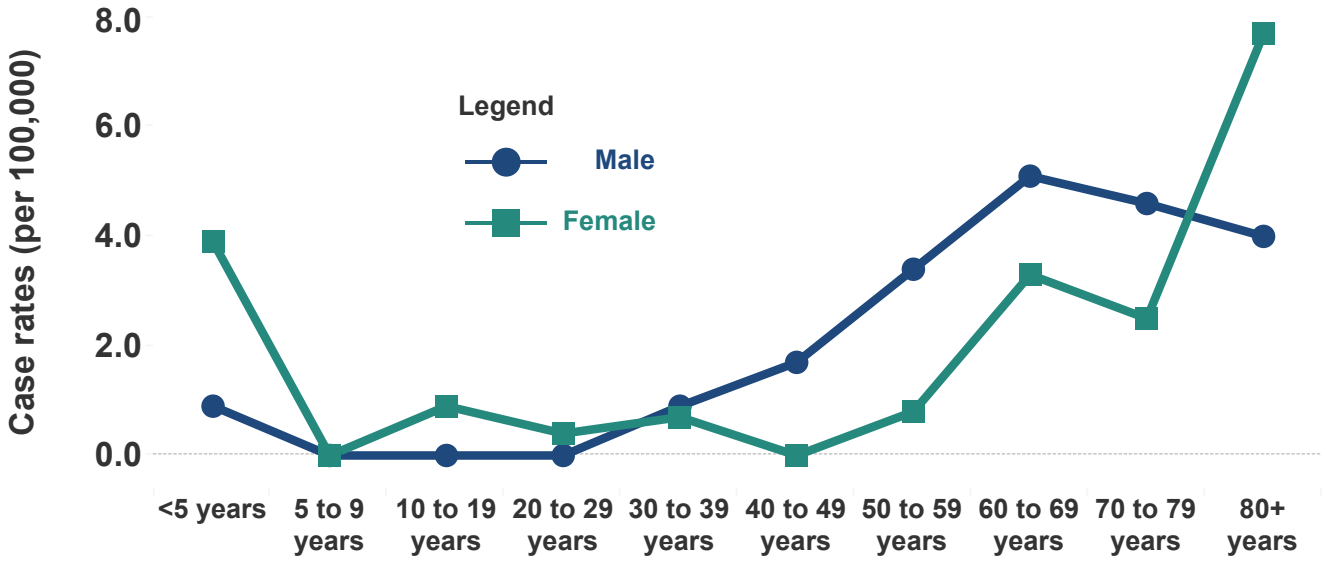
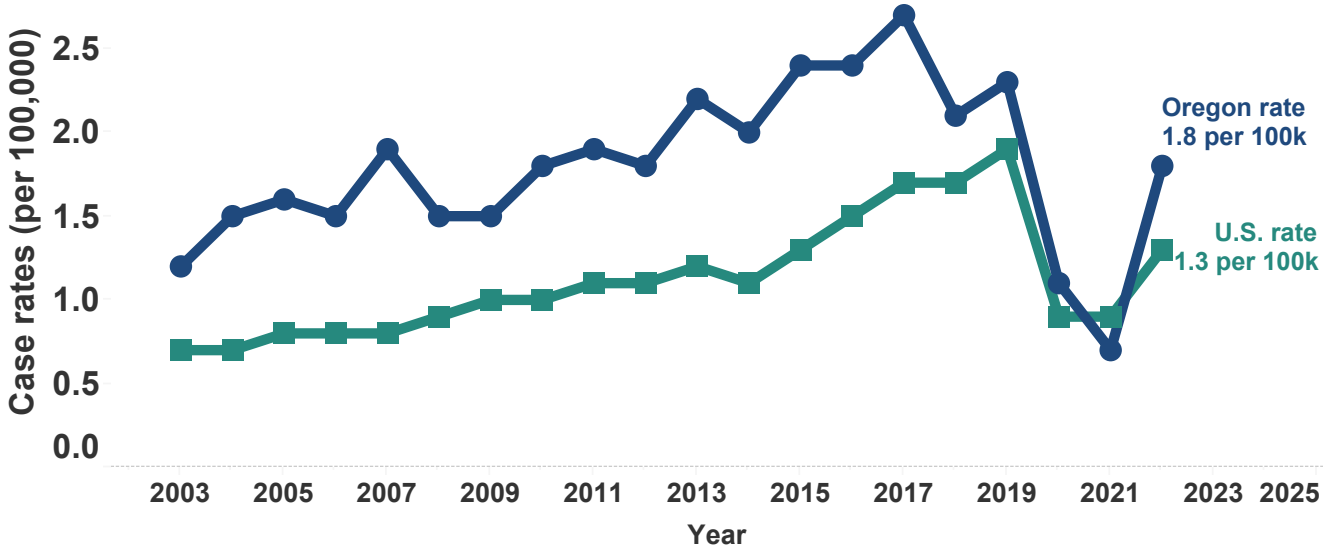
Case rates of *Haemophilus influenzae* by age and sex: Oregon, 2022.



Case rates of *Haemophilus influenzae* in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

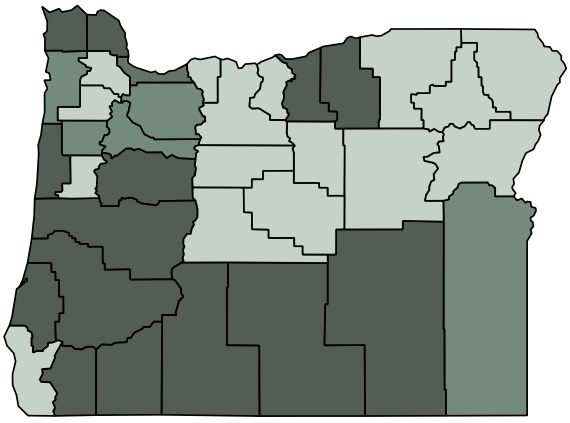
Case rates of *Haemophilus influenzae* by county of residence: Oregon, 2013 to 2022.

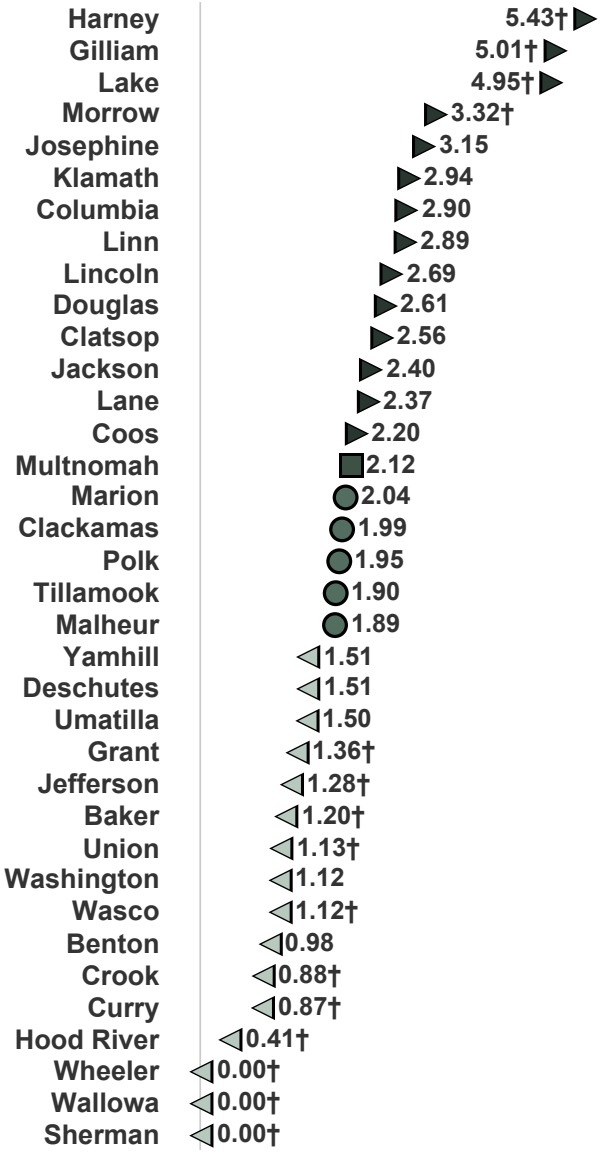
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for *Haemophilus influenzae* from 2013 to 2022 was **2.0 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate



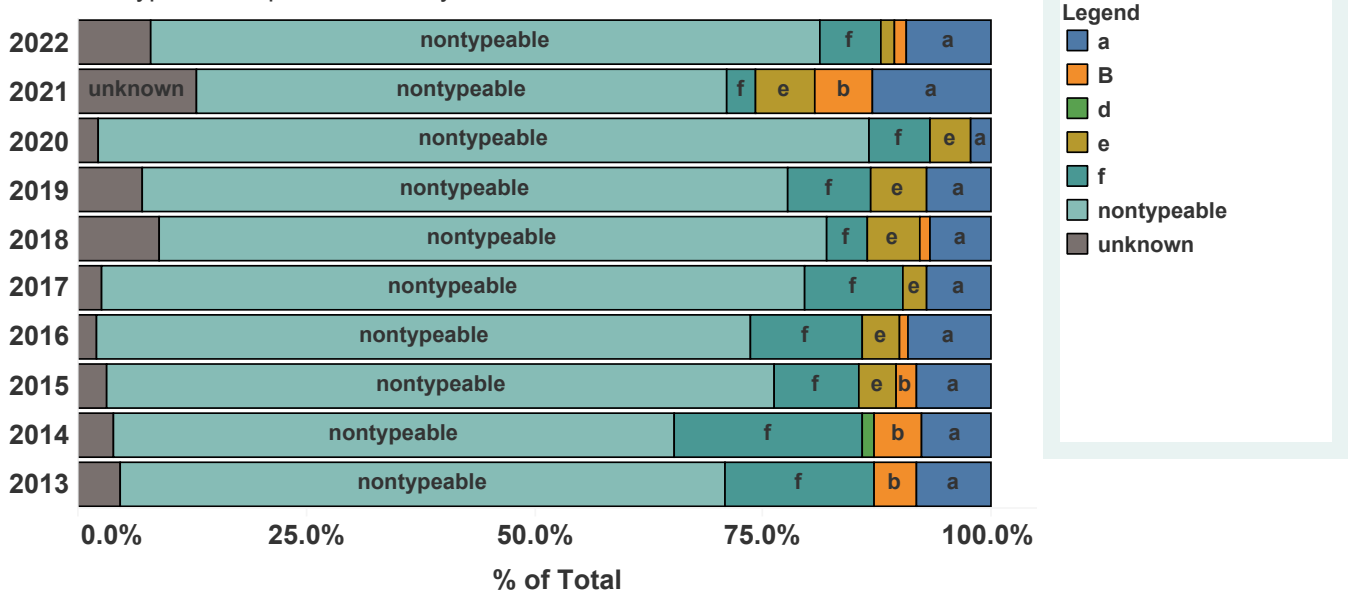


County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Haemophilus influenzae cases by serotype Oregon, 2013 to 2022.

Click on a serotype to compare between years.



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Acute hepatitis A

Hepatitis A is a vaccine-preventable liver infection caused by the hepatitis A virus (HAV), which infects humans through fecal-oral transmission. Hepatitis A can occur in situations ranging from isolated cases of disease (sporadic cases) to statewide outbreaks. However, since the licensure of the hepatitis A vaccine in 1995–1996, rates of infection have declined nationally as well as in Oregon, which had been one of the higher-incidence states. Most hepatitis A infections in Oregon are sporadic and occur mainly in persons who travel outside the United States. Oregon has seen small clusters of hepatitis A infections among people who inject drugs (PWID) and adults in custody.

In 2019, Oregon saw a cluster of five hepatitis A infections among people reporting injection drug use and unstable housing in Central Oregon. Multiple local vaccination clinics were set up to provide vaccination to this high-risk population. Hepatitis A vaccine was offered to local shelters, soup kitchens, and adults in custody in a local county jail. In 2022, Oregon logged 18 cases of acute hepatitis A, but no clusters were observed. While in 2021 foreign travel was only reported by small number of people with hepatitis A infection, in 2022, almost half of people reported foreign travel (44%), and four people (22%) reported eating frozen berries during their incubation period. No other risk factors were identified. In 2022, more than half of infections occurred in people >50 years of age (55%), more than half of people were hospitalized (55%) and one death was reported (5%).

Prevention

Vaccination with the full, two-dose series of hepatitis A vaccine is the best way to prevent infection.

- People who should be vaccinated includes but is not limited to:
- • All children aged 12–23 months.
- • Unvaccinated children and adolescents aged 2-18 years.
- • People at increased risk for hepatitis A infection (including men who have sex with men, people who use injection or noninjection drugs, and people experiencing homelessness).
- • People at increased risk for severe disease from HAV infection.

Provide post-exposure prophylaxis (vaccine and in some cases, immune globulin) to close contacts of people with acute hepatitis A.
Wash hands with soap and warm water carefully and frequently, after going to the bathroom, after changing diapers, and before preparing food or beverages.
Support hand washing of toddlers and small children after they use the toilet.
People with hepatitis A infection should not go to work, attend daycare, or serve or prepare food while ill with diarrhea.

See CDC's: Prevention of Hepatitis A Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices, 2020.

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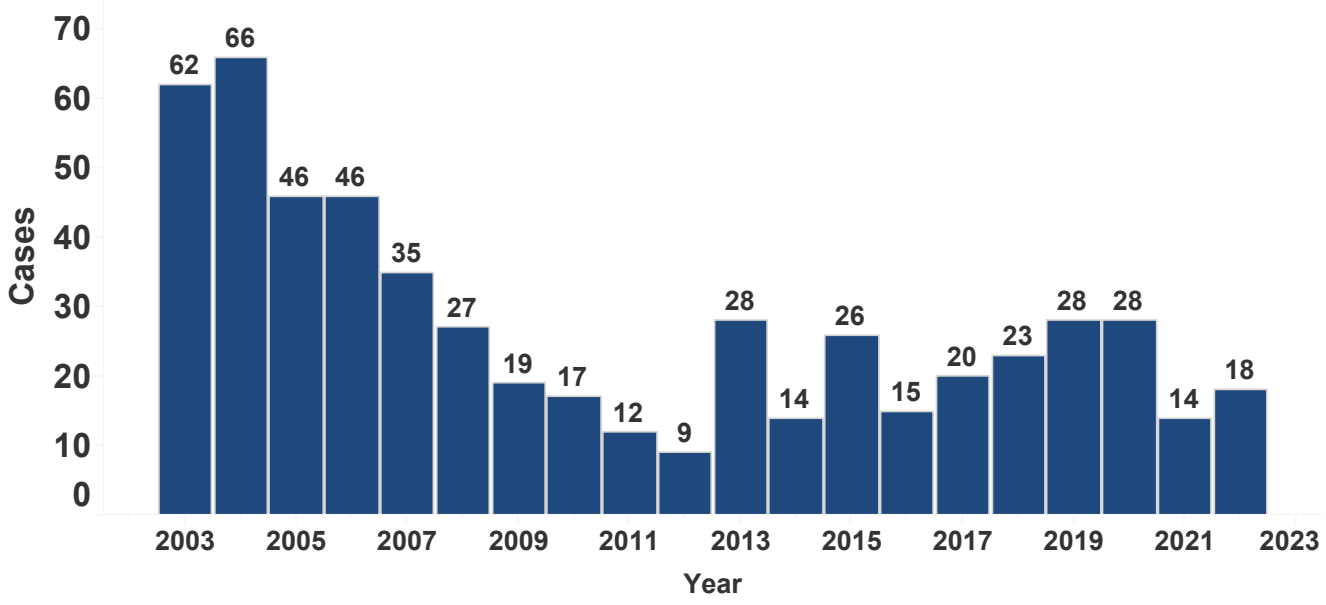
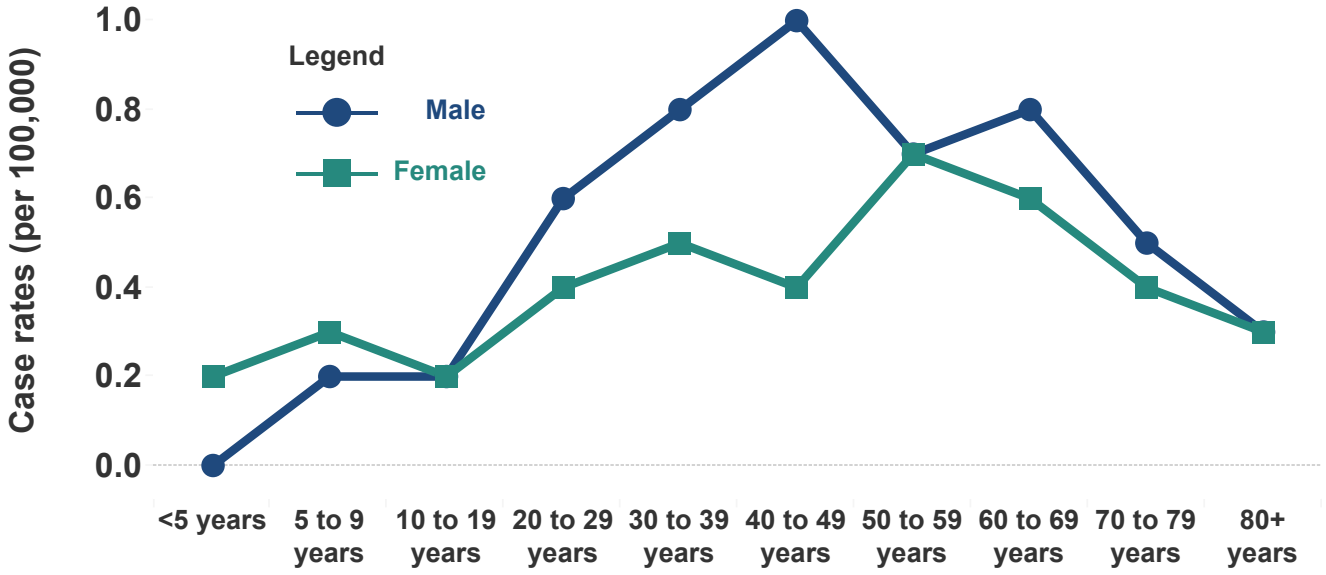
Case counts of acute hepatitis A by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of acute hepatitis A by age and sex: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.



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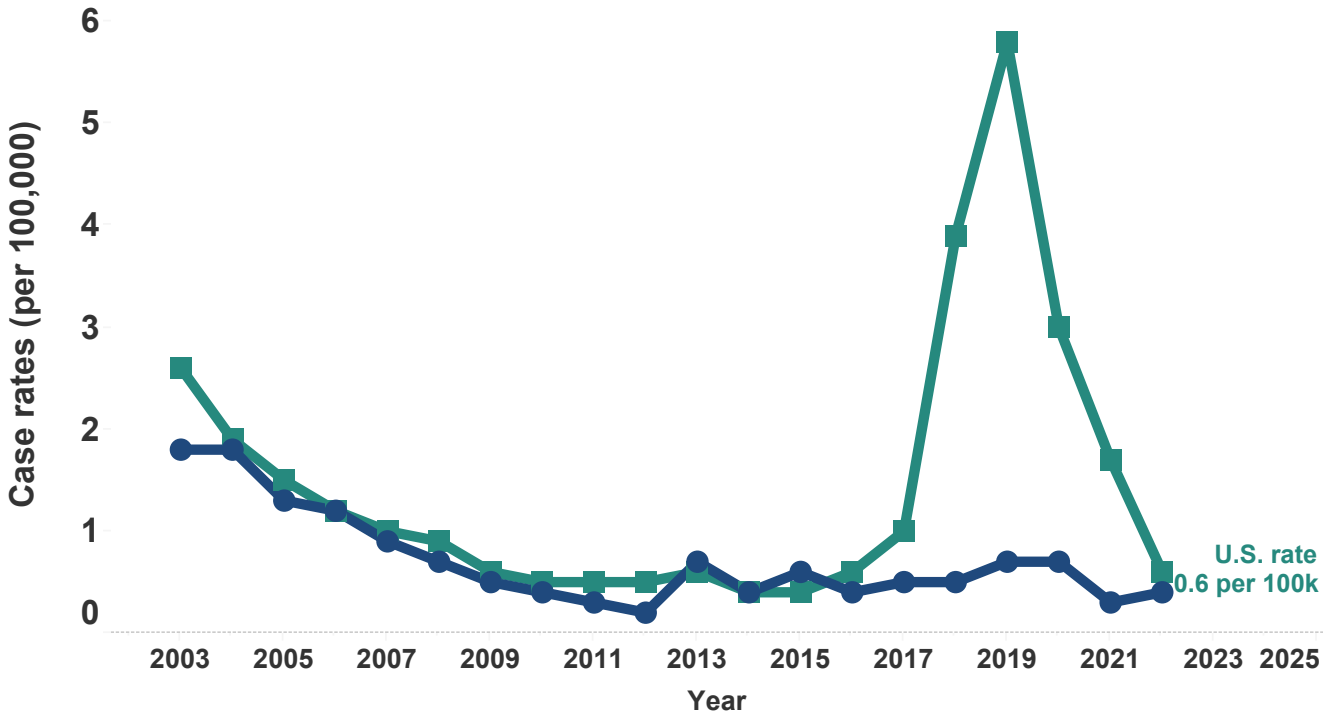
Case rates of acute hepatitis A in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

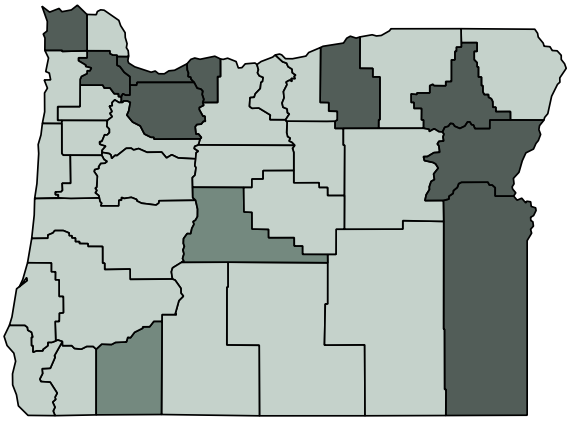
Case rates of acute hepatitis A by county of residence: Oregon, 2013 to 2022.

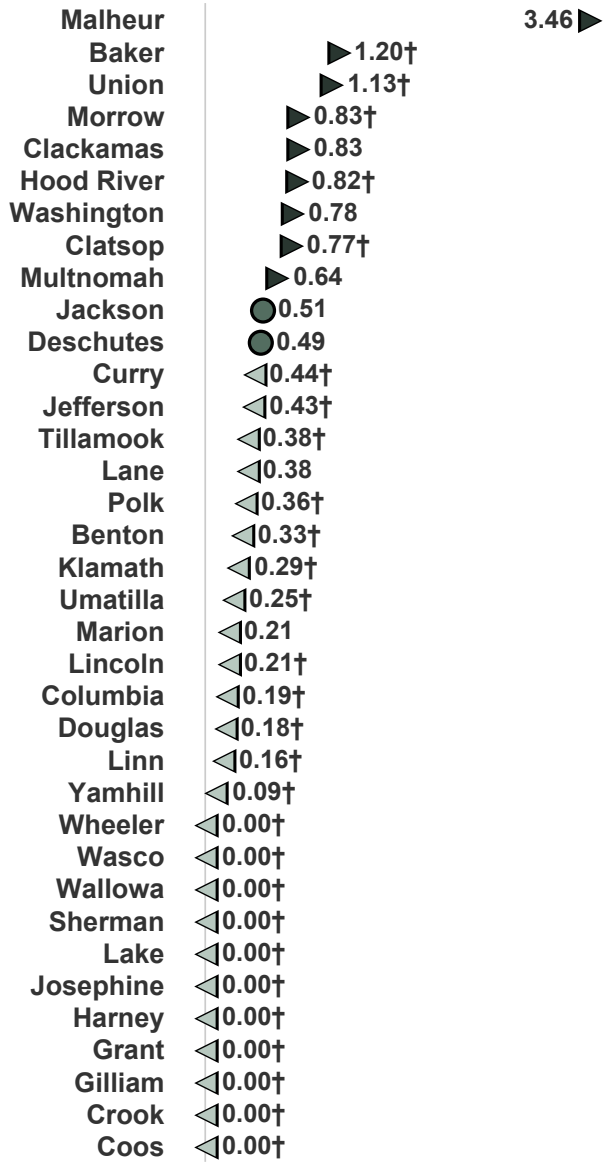
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for acute hepatitis A from 2013 to 2022 was **0.5 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Acute hepatitis B

Hepatitis B is a vaccine-preventable liver infection caused by the hepatitis B virus (HBV) that occurs when the virus passes from an infected person (through blood, semen, vaginal secretions or rarely, saliva) into the bloodstream of a non-immune person. Acute hepatitis B is a short-term illness that occurs within the first six months after someone is exposed to the hepatitis B virus. Some people with acute hepatitis B have no symptoms at all or only mild illness. For others, acute hepatitis B can cause a more severe illness that requires hospitalization. Though many people have no symptoms, they can still spread the virus to others.

People can become infected with the virus from:

- Birth to an infected person
- Sex with a partner who has hepatitis B.
- Sharing contaminated needles, syringes, or drug preparation equipment
- Sharing contaminated items such as toothbrushes, razors, or medical equipment (like a glucose monitor) with a person who has hepatitis B
- Direct contact with the blood or open sores of a person who has hepatitis B
- Exposure to the blood from a person who has hepatitis B through needlesticks or other sharp instruments.
- Poor infection control in healthcare facilities

Prevention

The best way to prevent hepatitis B is by getting vaccinated.

Who should get vaccinated:
- All infants.
- All unvaccinated children, adolescents, and adults through 59 years.
- Adults 60 years and older with risk factors.
- Adults 60 years and older who wish to be vaccinated.

CDC recommends hepatitis B testing for:
- All adults aged 18 years and older once in their lifetime.
- All pregnant people early during each pregnancy.
- Infants born to pregnant people with HBV infection.
- Periodic testing for anyone with ongoing risk for exposure.

Persons who are sexually active can use condoms properly each time they have sex and limit the number of partners.

Persons who inject drugs can avoid sharing needles or works with others; use clean needles and works each time; and purchase new, sterile needles from pharmacies.

Learn more about local harm reduction supplies through Save Lives Oregon and local peer services through Peer Support Oregon.

People with acute hepatitis B should not share personal care items (such as razors or toothbrushes) or have unprotected sexual contact.

Provide post-exposure prophylaxis (vaccine or in some cases, immune globulin) to close contacts of people with acute hepatitis B as appropriate.

Health care and laboratory workers should use universal precautions and best practices to prevent needlestick injuries; obtain post-exposure testing when warranted.

Acute hepatitis B

Although the hepatitis B virus can be found in saliva, it is not spread through kissing or sharing utensils. Hepatitis B is not spread through sneezing, coughing, hugging, breastfeeding or through food or water.

Nationwide, the hepatitis B vaccine has contributed to a 90% decline in the incidence of acute hepatitis B in the U.S. Currently, the incidence is lowest for people less than age 20 years and highest in people aged 40–49 years. Due to continued transmission in adults not previously vaccinated as children, vaccination against hepatitis B is now recommended for all adults aged 19–59 years, adults ≥60 years with risk factors for hepatitis B, or any adult ≥60 years seeking protection. Vaccination is also recommended for adults receiving care in certain settings with a high proportion of people with risk factors.

In Oregon, annual rates of infection dropped dramatically in the decade following routine vaccination of infants; from 2018–2022 the annual average number of cases was 21. Local health departments reported 21 acute cases in 2022. Eighty-one percent of people with acute hepatitis B were interviewed (n=17). Among people interviewed, the most reported risk factor was a history of injection drug use. Fifty-three percent of the people were female. Most interviewed people (41%) were in their 40s. Ten people (59%) were hospitalized, with one death reported. There were no outbreaks of acute hepatitis B in Oregon in 2022.

Prevention

The best way to prevent hepatitis B is by getting vaccinated.

Who should get vaccinated:
- All infants.
- All unvaccinated children, adolescents, and adults through 59 years.
- Adults 60 years and older with risk factors.
- Adults 60 years and older who wish to be vaccinated.

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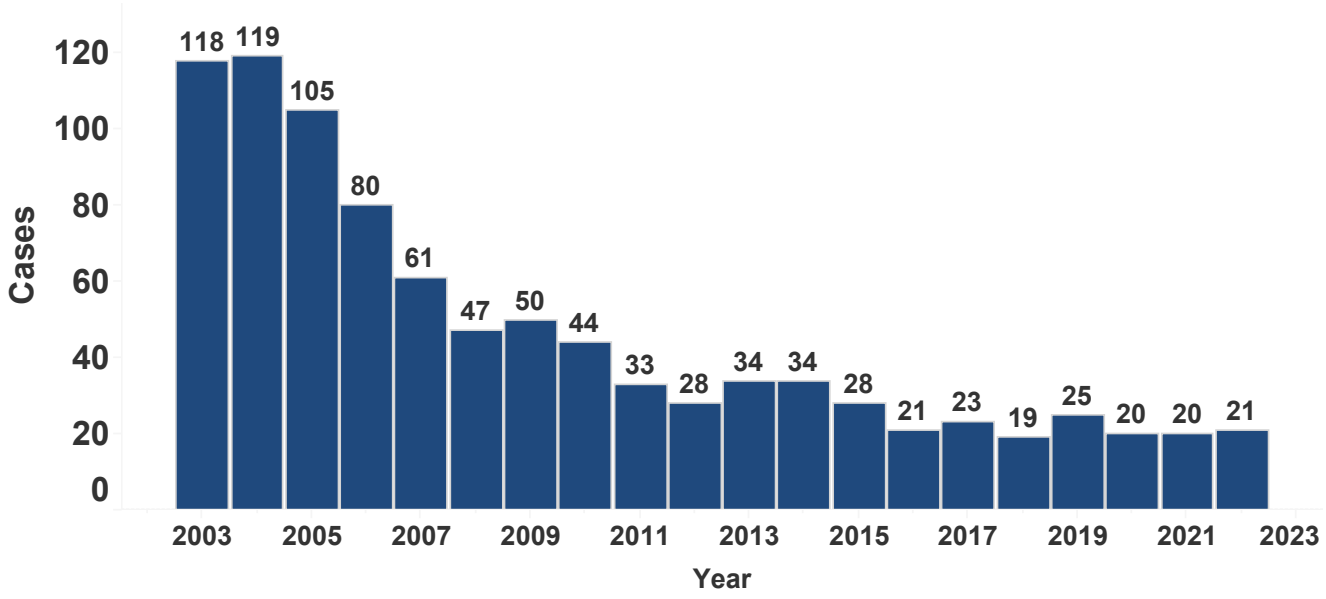
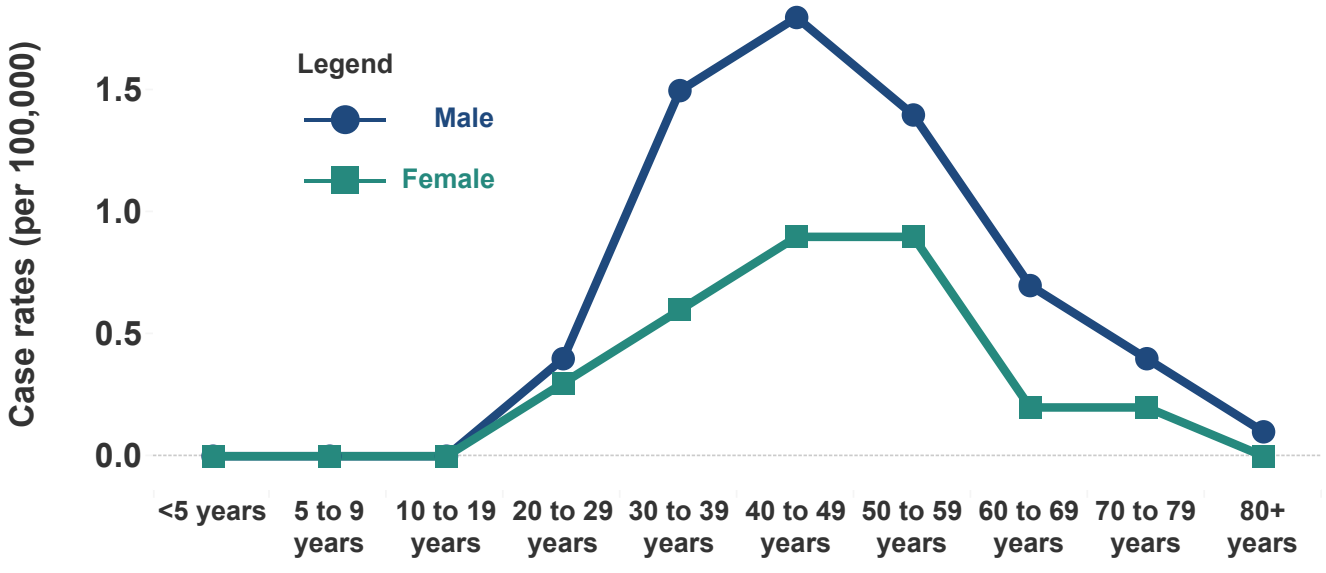
Case counts of acute hepatitis B by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of acute hepatitis B by age and sex: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.



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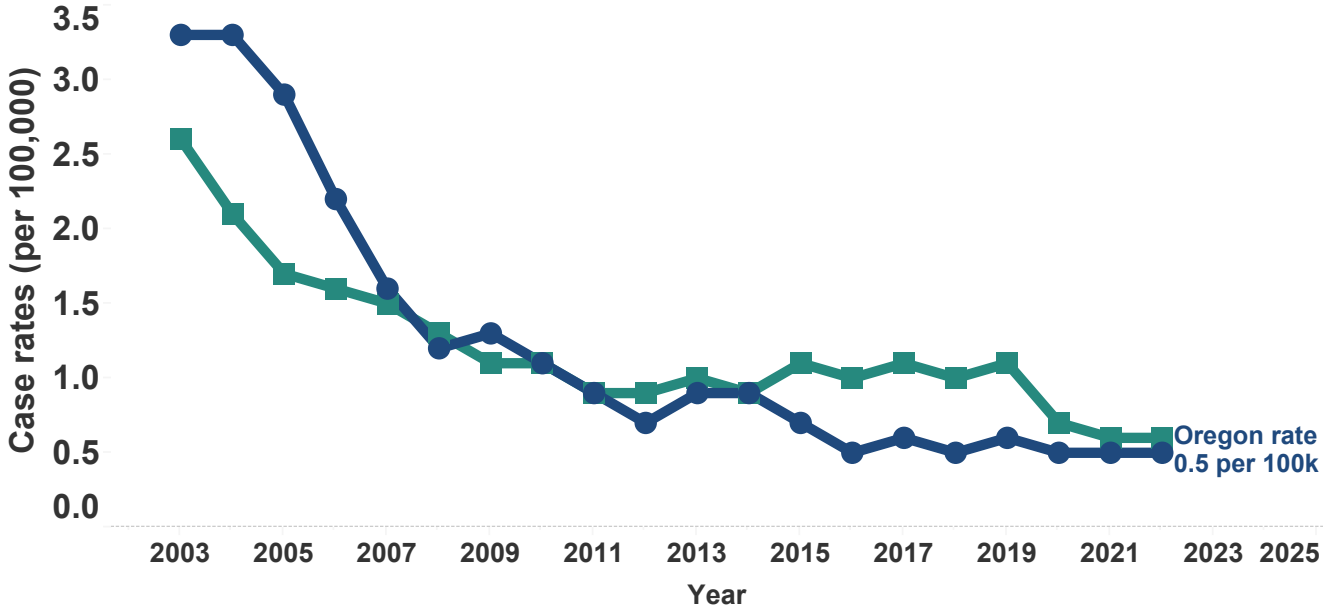
Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

Case rates of acute hepatitis B in Oregon vs nationwide, 2003 to 2022.

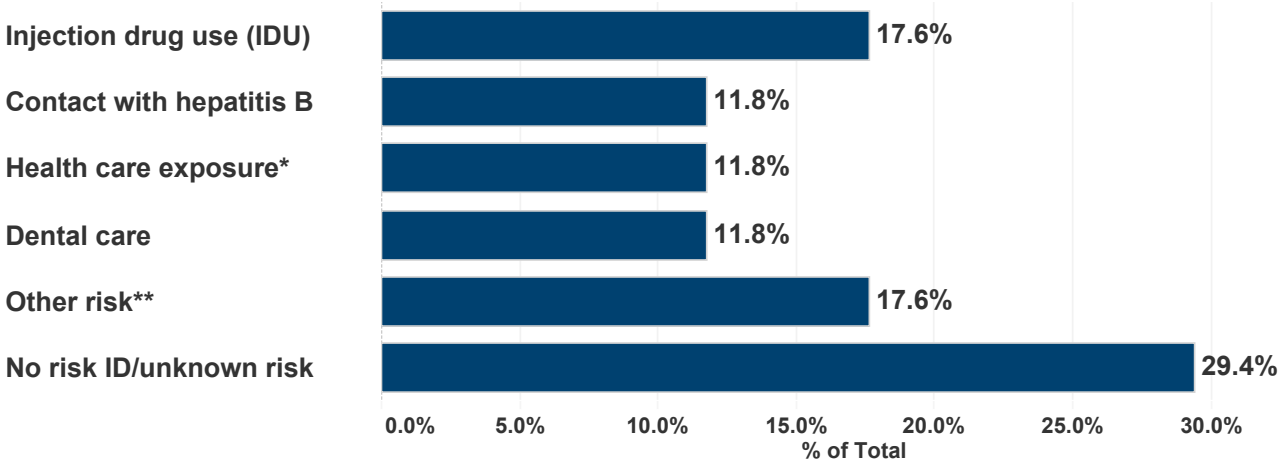
U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

Risk factors for acute hepatitis B among interviewed cases: Oregon, 2022.

Risk factors are mutually exclusive.



***Health care exposures** include transfusions. infusions, dialysis, surgery.
****Other risks** include street drugs, needlestick, tattoo, piercings, other blood exposure.

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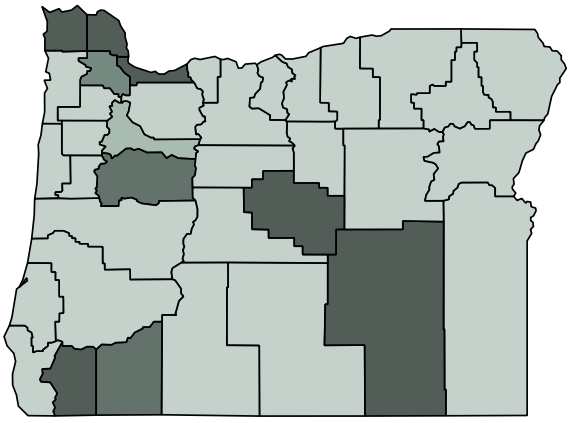
Case rates of acute hepatitis B by county of residence: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for acute hepatitis B from 2013 to 2022 was **0.6 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate



†Note: Rates based on small case counts (<5 cases) might be unstable.

Chronic hepatitis B

Persons with chronic hepatitis B are known as “chronic carriers” — a state of infection defined by the persistence of hepatitis B surface antigen (HBsAg) in the blood for more than six months. The likelihood of becoming a chronic carrier varies by age at infection. Fewer than 6% of acutely infected adults in the United States 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 (HBIG) and initiation of the three-dose hepatitis B vaccination series. This perinatal intervention is widely practiced in the United States — all states have federal funding for perinatal hepatitis B prevention programs. This is not true in other parts of the world, particularly Asia and sub-Saharan Africa, where the prevalence of chronic hepatitis B is higher. Chronic carriers are at greater risk of developing life-threatening diseases (e.g., chronic active hepatitis, cirrhosis or liver cancer) decades later. Carriers will continue to transmit hepatitis B until vaccine-induced immunity is nearly universal.

Recommendations and strategies to prevent new cases include the following: routinely vaccinating all infants at birth, screening all pregnant women for hepatitis B, administering HBIG in addition to hepatitis B vaccine to infants born to HBsAg-positive mothers, and ensuring all infants complete the hepatitis B vaccine series. Combined, the three-dose hepatitis B vaccine series and HBIG are nearly 95% effective in preventing hepatitis B disease in children born to HBV-infected mothers. In 2022, there were no cases of perinatal hepatitis B identified in Oregon.

In 2022, there were 325 newly reported carriers in Oregon, a slight decrease from the 375 reported in 2021. Forty-one percent of these were women, who tend to be diagnosed earlier than men, perhaps due to prenatal screening. Among women of child-bearing age, 35% were pregnant. A large majority, 78% of cases who reported their country of birth, were born outside of the United States. Those born in Asia and the Pacific Islands, including China, Vietnam, and Philippines, made up the majority (68%) of those cases born internationally. Chronic carriers are not reportable in many states, so a table comparing Oregon to the rest of the United States is not provided.

Prevention

- Get vaccinated & vaccinate all newborns against hepatitis B.
- Screen all pregnant women for hepatitis B. Infants born to hepatitis B-positive mothers should receive hepatitis immunoglobulin along with vaccine at birth.
- Persons who are sexually active can:
  - Limit the number of partners.
  - Use condoms properly from start to finish when having sex.
- Persons who inject drugs can:
  - Avoid sharing needles or works with others.
  - Use only clean needles and works.
  - Purchase new, sterile needles from pharmacies.
- Use universal precautions and best practices to prevent needlestick injuries.
- Chronic carriers should not share personal care items such as razors or toothbrushes.
- Investigate cases, including the identification of unvaccinated contacts to encourage vaccination.

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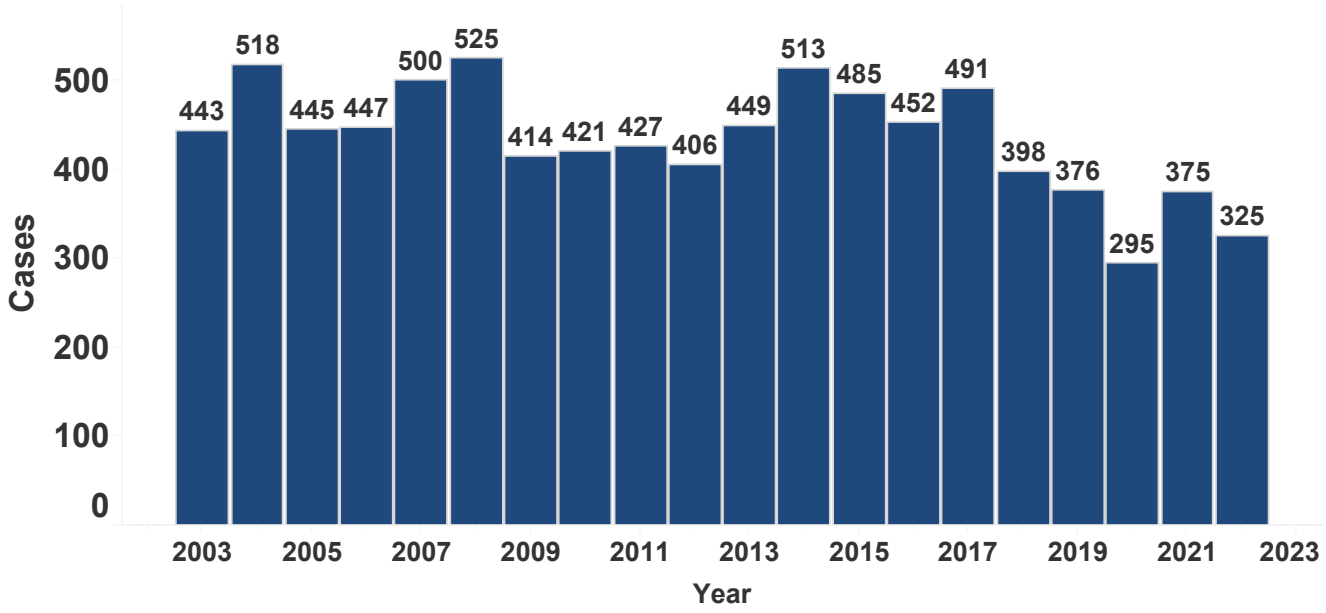
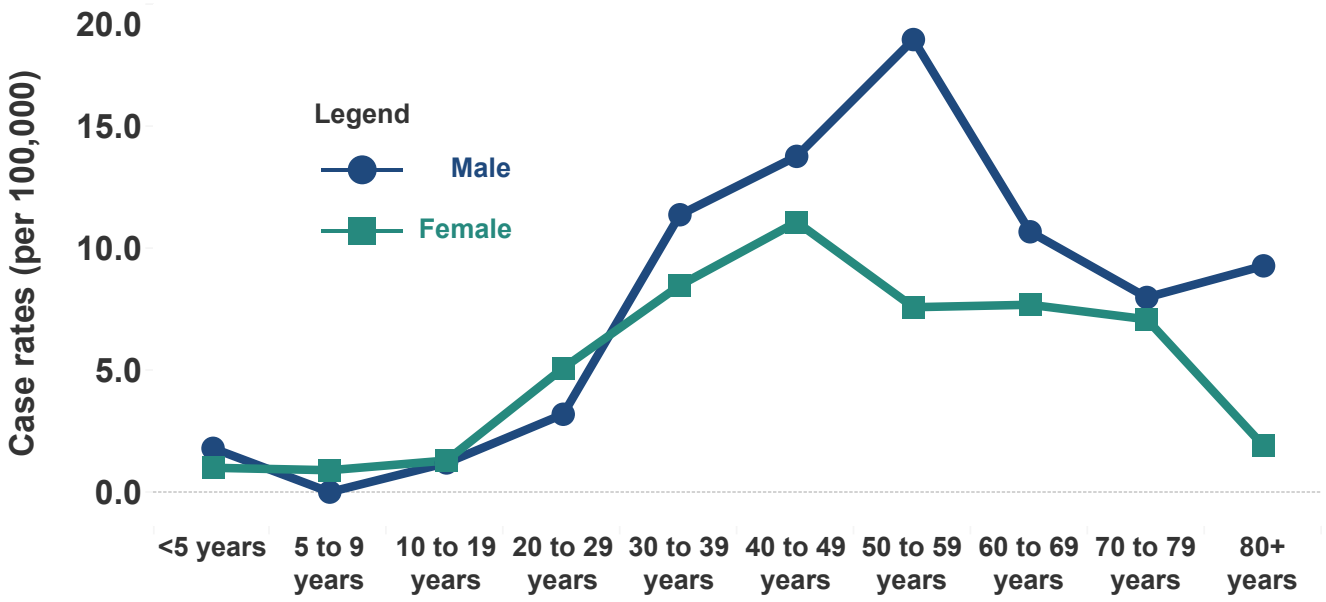
Case counts of chronic hepatitis B by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of chronic hepatitis B by age and sex: Oregon, 2022.



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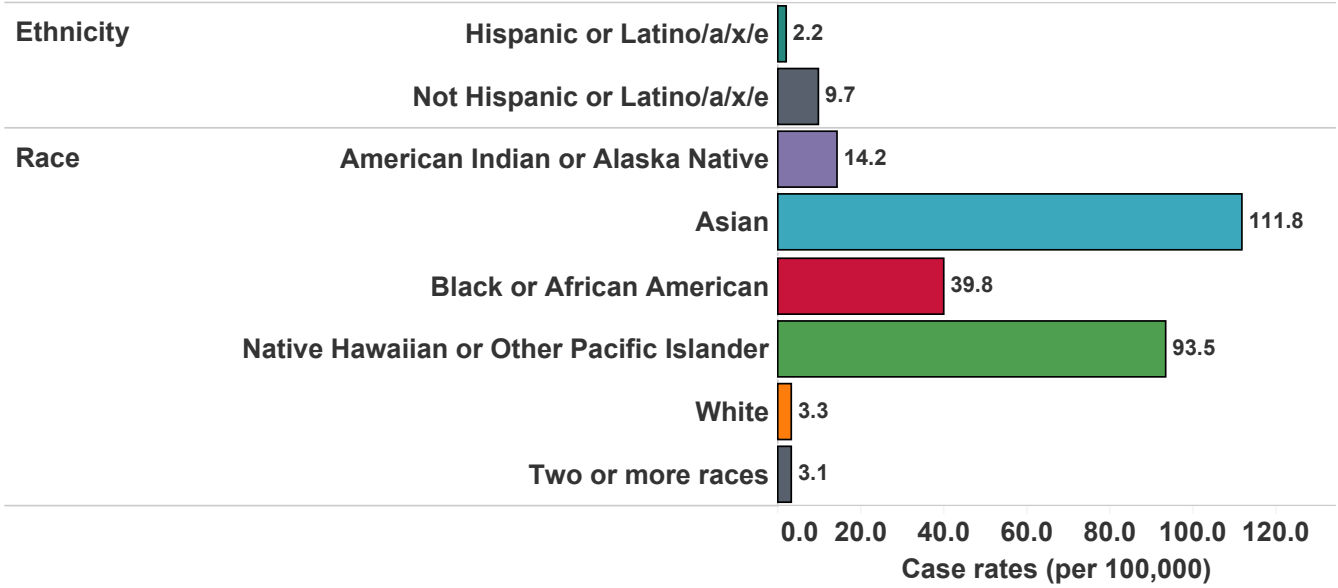
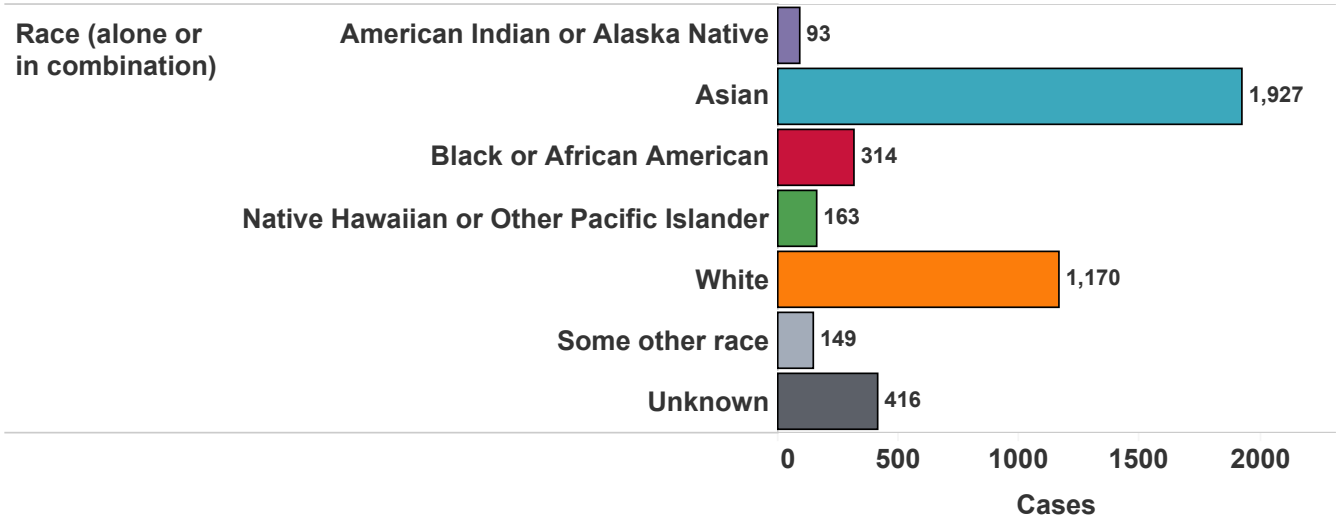
Case rates of chronic hepatitis B by reported race and ethnicity: Oregon, 2013 to 2022.

Race and Ethnicity are groupings determined by the Office of Management and Budget. Due to low case counts, the average case rate over multiple years of data is shown.



Case counts of chronic hepatitis B by reported race and ethnicity: Oregon, 2013 to 2022.

Race alone or in combination means cases may be counted in all races that apply.



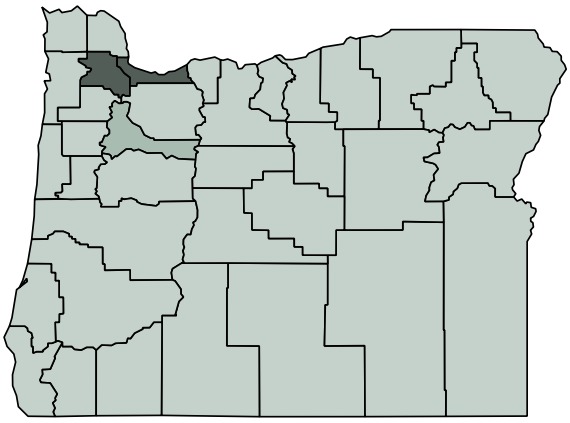
Case rates of chronic hepatitis B by county of residence: Oregon, 2013 to 2022.

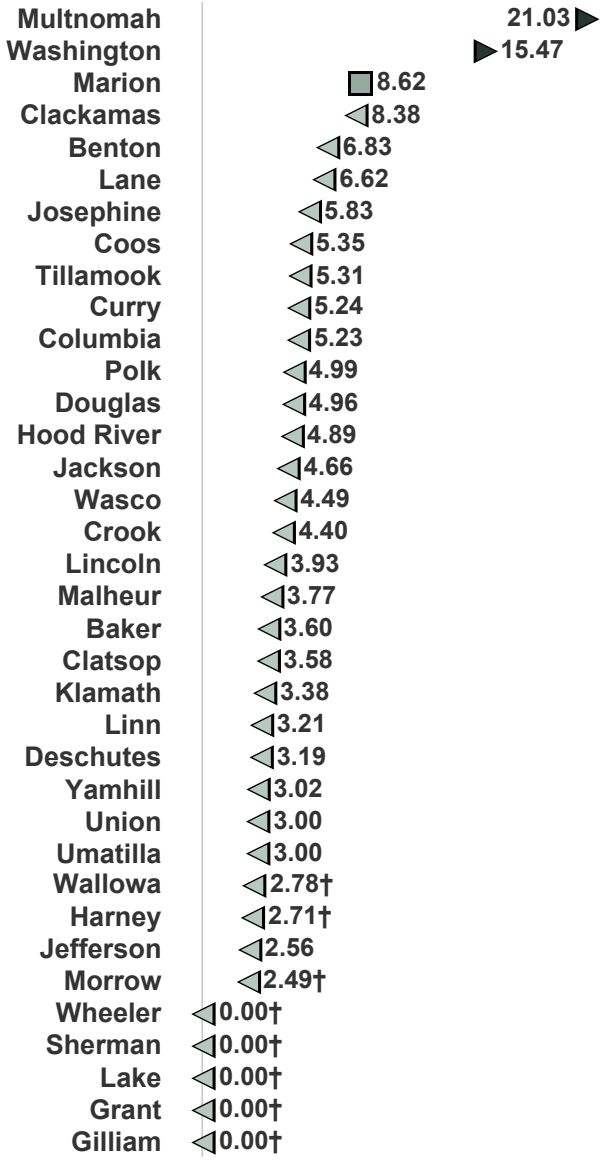
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for chronic hepatitis B from 2013 to 2022 was **10.1 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Hepatitis C

Hepatitis C is a liver infection caused by the hepatitis C virus (HCV). Though there is currently no vaccine to prevent hepatitis C, curative treatments are available. Hepatitis C can range from a mild illness lasting a few weeks to a serious, long-term illness. Acute hepatitis C occurs within the first six months after someone is exposed to the hepatitis C virus. Hepatitis C can be a short-term illness, but for most people, acute infection leads to chronic infection. Chronic hepatitis C can be a lifelong infection if left untreated and can cause serious health problems, including liver damage, cirrhosis (scarring of the liver), liver cancer and even death.

Hepatitis C is spread from one person to another primarily by percutaneous exposure to human blood. Today, most people become infected with hepatitis C by sharing needles, syringes, or any other equipment used to prepare and inject drugs. Uncommonly, the virus can also be transmitted through sexual contact and from infected mothers to their infants at the time of birth. Hepatitis C can spread when getting tattoos or body piercings in unlicensed facilities, informal settings, or with non-sterile instruments. Since the adoption of routine blood donor screening, HCV is rarely transmitted by blood transfusion. Cases can occur in health care settings, most commonly due to improper reuse of syringes or multidose vials.

In the United States, an estimated 2.0–2.8 million people are chronically-infected with HCV. The course of HCV-related chronic liver disease progresses slowly without symptoms or physical signs in most persons during the first 20 years or more following infection. Approximately 5%–25% of persons with chronic HCV will develop cirrhosis, and those with cirrhosis have a 1%–4% annual risk for a type of liver cancer known as hepatocellular carcinoma (HCC). Current hepatitis C treatments can cure more than 95% of people with minimal to no side effects. Successful cure can slow or stop liver disease progression, but people should be monitored yearly for HCC.

Prevention

Follow hepatitis C testing recommendations including but not limited to testing:

- All adults aged 18 years and older once in their lifetime.
- All pregnant people during each pregnancy.
- Infants born to pregnant people with HCV infection.
- Periodic testing for anyone currently injecting drugs or getting maintenance hemodialysis.

Use curative hepatitis C treatment to prevent transmission to others.

Persons who inject drugs can avoid sharing needles and works with others; use clean needles and works each time; and purchase new, sterile needles from pharmacies.

Learn more about local harm reduction supplies through Save Lives Oregon and local peer services through Peer Support Oregon.

People with acute hepatitis C should not share personal care items (such as razors or toothbrushes) or have unprotected sexual contact.

Persons who are sexually active can avoid sharing blood during sex by using condoms properly each time they have sex and limit the number of partners.

Health care and laboratory workers should use universal precautions and best practices to prevent needlestick injuries; obtain post-exposure testing when warranted.

Hepatitis C

In 2021, the age adjusted death rate associated with hepatitis C in the U.S. was 3.18 deaths per 100,000 population, a 23% decrease compared with the rate in 2017 (4.13 per 100,000 population). Factors associated with HCV-related deaths included chronic liver disease, HBV co-infection, alcohol-related conditions, and HIV co-infection. The highest rate was observed among non-Hispanic AI/AN persons (9.99 deaths per 100,000 population).

Paralleling national trends, annual deaths attributed to HCV in Oregon have decreased with 460 deaths on average between 2016 to 2020. Despite these decreases, Oregon's 2020 hepatitis C mortality rate of 7.4 deaths per 100,000 population was over twice the national rate. Some of the state's highest chronic hepatitis C rates are in rural areas.

Acute hepatitis C

On average during 2011–2022, there were 25 acute hepatitis C cases reported annually in Oregon. In 2022, 18 cases were reported. Thirteen (72.2%) of the cases were 20–39 years of age, and 13 (72.2) were male. Five cases (27.8%) were hospitalized; no deaths were reported. Among people interviewed (n=9), any drug use was the predominant risk factor (55.5%), followed by injection drug use (44.4%). There were no health care-associated acute hepatitis C cases in 2022.

Prevention

Follow hepatitis C testing recommendations including but not limited to testing:

- All adults aged 18 years and older once in their lifetime.
- All pregnant people during each pregnancy.
- Infants born to pregnant people with HCV infection.
- Periodic testing for anyone currently injecting drugs or getting maintenance hemodialysis.

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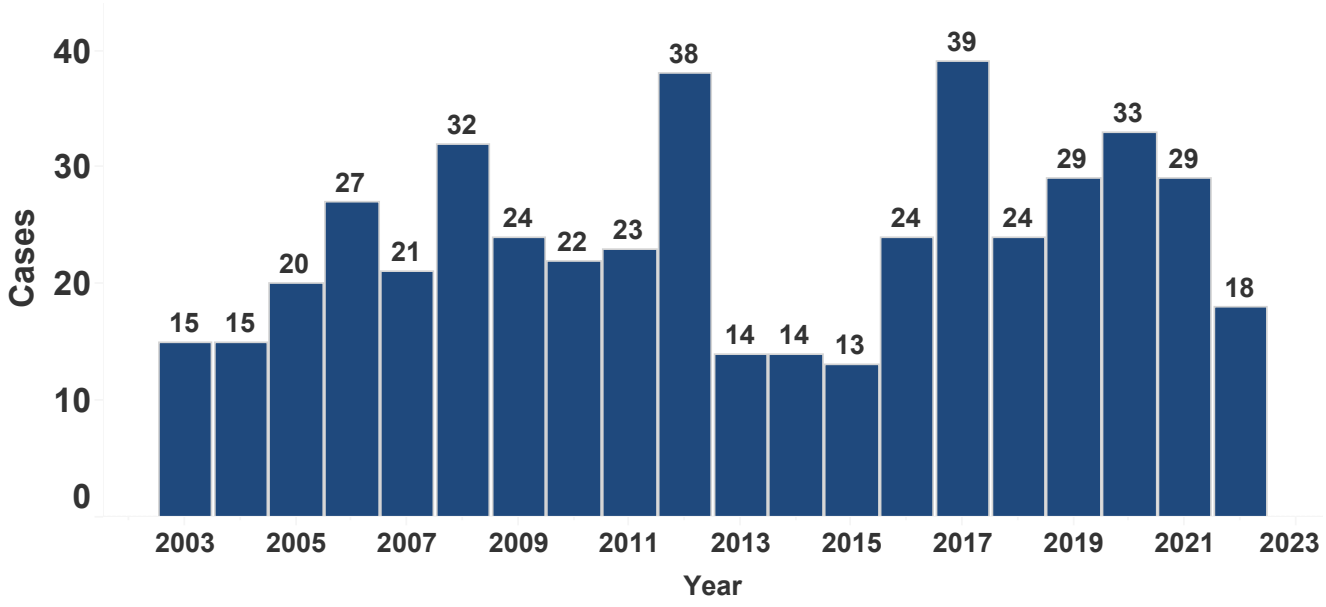
Health care and laboratory workers should use universal precautions and best practices to prevent needlestick injuries; obtain post-exposure testing when warranted.

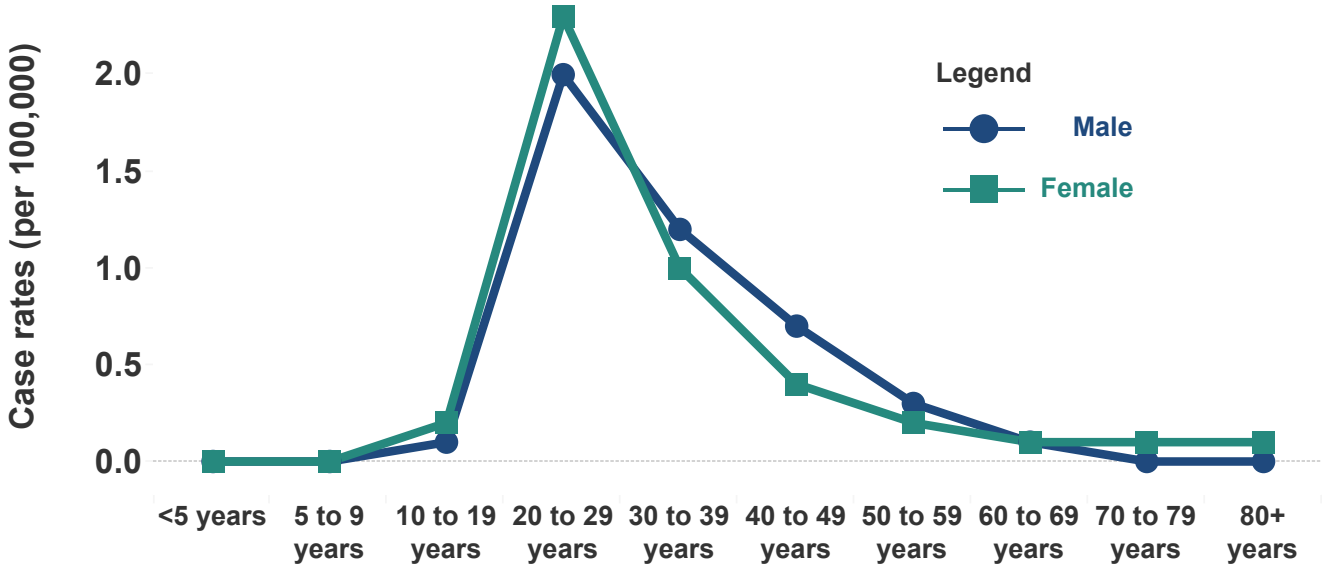
Case counts of acute hepatitis C by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of acute hepatitis C by age and sex: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.



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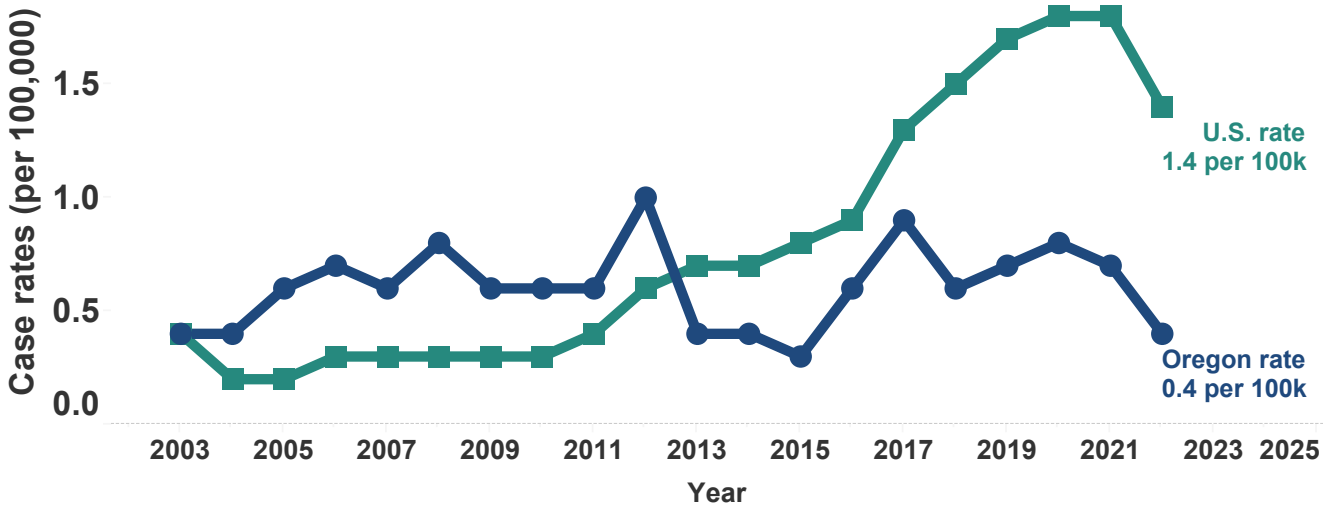
Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

Case rates of acute hepatitis C in Oregon vs nationwide, 2003 to 2022.

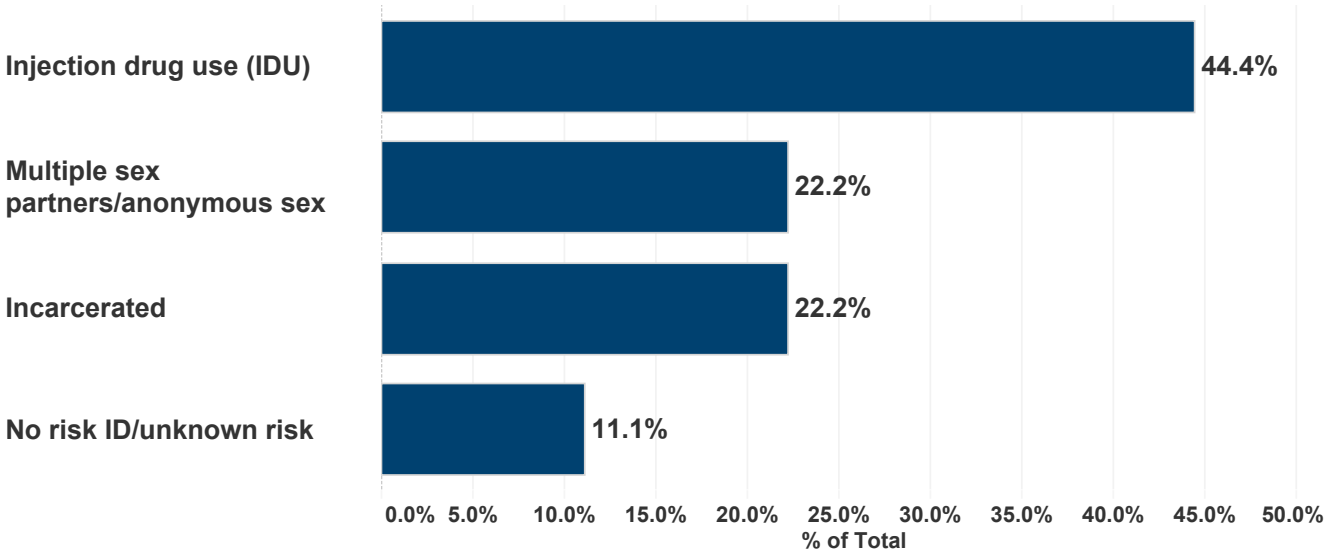
U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

Risk factors for acute hepatitis C among interviewed cases: Oregon, 2022.

Risk factors are mutually exclusive.



***Health care exposures** include transfusions. infusions, dialysis, surgery.
****Other risks** include street drugs, needlestick, tattoo, piercings, other blood exposure.

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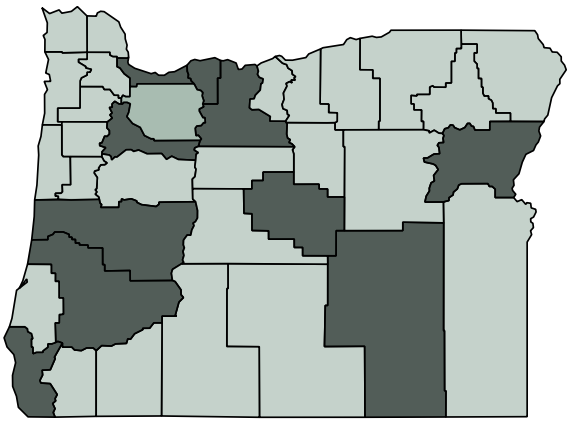
Case rates of acute hepatitis C by county of residence: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for acute hepatitis C from 2013 to 2022 was **0.6 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate



Harney	4.07†
Baker	1.20†
Wasco	1.12†
Multnomah	1.11
Lane	1.05
Crook	0.88†
Curry	0.87†
Hood River	0.82†
Douglas	0.81
Marion	0.71
Clackamas	0.49
Jefferson	0.43†
Benton	0.43†
Lincoln	0.41†
Columbia	0.39†
Malheur	0.31†
Coos	0.31†
Washington	0.30
Deschutes	0.27
Umatilla	0.25†
Polk	0.12†
Josephine	0.12†
Yamhill	0.09†
Linn	0.08†
Jackson	0.05†
Wheeler	0.00†
Wallowa	0.00†
Union	0.00†
Tillamook	0.00†
Sherman	0.00†
Morrow	0.00†
Lake	0.00†
Klamath	0.00†
Grant	0.00†
Gilliam	0.00†
Clatsop	0.00†

County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Hepatitis C

Hepatitis C is a liver infection caused by the hepatitis C virus (HCV). Though there is currently no vaccine to prevent hepatitis C, curative treatments are available. Hepatitis C can range from a mild illness lasting a few weeks to a serious, long-term illness. Acute hepatitis C occurs within the first 6 months after someone is exposed to the hepatitis C virus. Hepatitis C can be a short-term illness, but for most people, acute infection leads to chronic infection. Chronic hepatitis C can be a lifelong infection if left untreated and can cause serious health problems, including liver damage, cirrhosis (scarring of the liver), liver cancer and even death.

Hepatitis C is spread from one person to another primarily by percutaneous exposure to human blood. Today, most people become infected with hepatitis C by sharing needles, syringes, or any other equipment used to prepare and inject drugs. Uncommonly, the virus can also be transmitted through sexual contact and from infected mothers to their infants at the time of birth. Hepatitis C can spread when getting tattoos or body piercings in unlicensed facilities, informal settings, or with non-sterile instruments. Since the adoption of routine blood donor screening, HCV is rarely transmitted by blood transfusion. Cases can occur in health care settings, most commonly due to improper reuse of syringes or multidose vials.

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Prevention

Follow hepatitis C testing recommendations including but not limited to testing:
1) All adults aged 18 years and older once in their lifetime. 2) All pregnant people during each pregnancy. 3) Infants born to pregnant people with HCV infection. 4) Periodic testing for anyone currently injecting drugs or getting maintenance hemodialysis.

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People with acute hepatitis C should not share personal care items (such as razors or toothbrushes) or have unprotected sexual contact.

Persons who are sexually active can avoid sharing blood during sex by using condoms properly each time they have sex and limit the number of partners.

Health care and laboratory workers should use universal precautions and best practices to prevent needlestick injuries; obtain post-exposure testing when warranted.

Hepatitis C

In 2021, the age adjusted death rate associated with hepatitis C in the U.S. was 3.18 deaths per 100,000 population, a 23% decrease compared with the rate in 2017 (4.13 per 100,000 population). Factors associated with HCV-related deaths included chronic liver disease, HBV co-infection, alcohol-related conditions, and HIV co-infection. The highest rate was observed among non-Hispanic AI/AN persons (9.99 deaths per 100,000 population).

Paralleling national trends, annual deaths attributed to HCV in Oregon have decreased with 460 deaths on average between 2016 to 2020. Despite these decreases, Oregon's 2020 hepatitis C mortality rate of 7.4 deaths per 100,000 population was over twice the national rate. Some of the state's highest chronic hepatitis C rates are in rural areas.

Chronic hepatitis C

In Oregon, 3,375 chronic hepatitis C cases were reported in 2022, for a rate of 78.9 per 100,000, more than twice the national average of 39.8 per 100,000 from 2021 (most recent national data available). Oregon males were affected more commonly than females (92.1 per 100,000 for males, 63.4 per 100,000 in females) *, and 41.7% of cases were reported among people aged 50–69 years. Between 2016 and 2020 new cases of hepatitis C in Oregon were most common in people aged 20-29 years. These numbers are likely an underestimate of true case rates as most infections are asymptomatic and, therefore, not diagnosed or reported to public health at the time of infection.

* 29 cases had missing sex information

Prevention

Follow hepatitis C testing recommendations including but not limited to testing: 1) All adults aged 18 years and older once in their lifetime. 2) All pregnant people during each pregnancy. 3) Infants born to pregnant people with HCV infection. 4) Periodic testing for anyone currently injecting drugs or getting maintenance hemodialysis.

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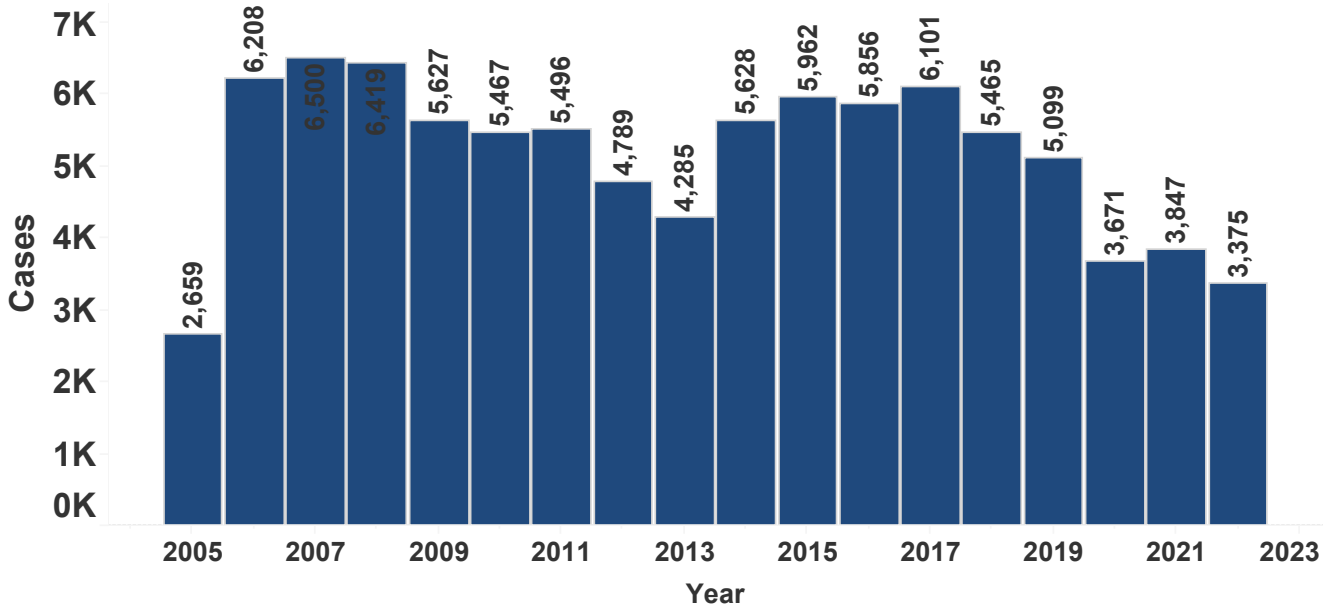
Oregon's 2022 Selected Reportable Communicable Disease Summary

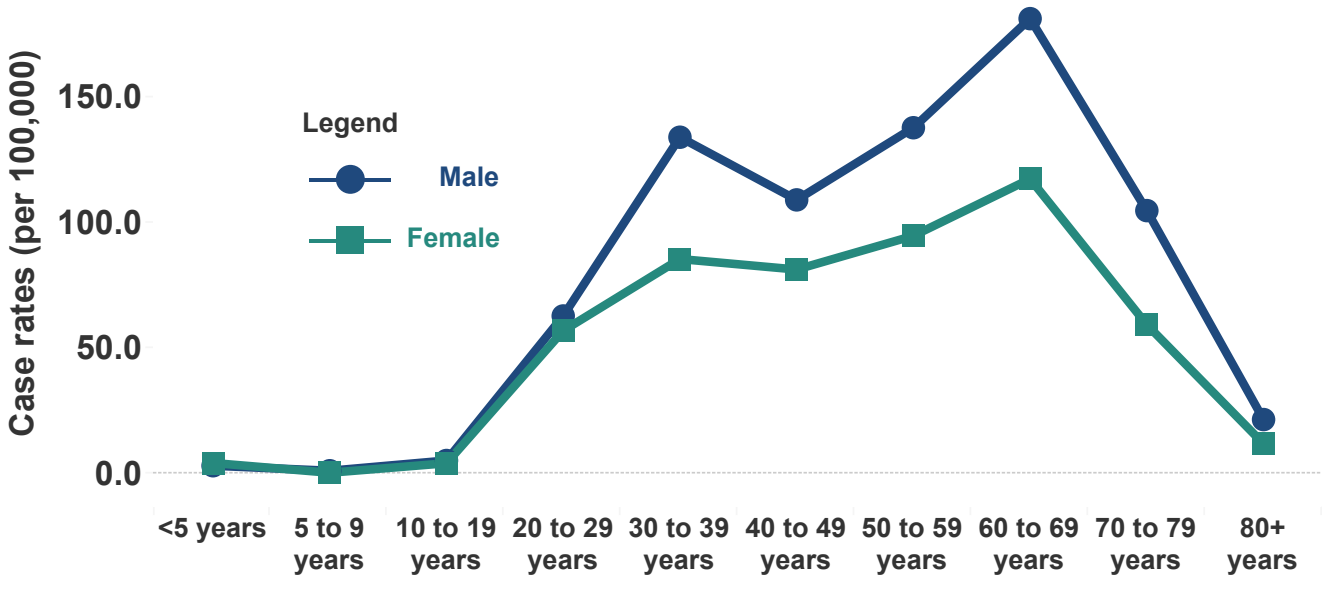
Data current as of 10/9/2023; data are provisional and subject to change.

Case counts of chronic hepatitis C by year: Oregon, 2005 to 2022.

Chronic hepatitis C became reportable in July 2005. Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of chronic hepatitis C by age and sex: Oregon, 2022.



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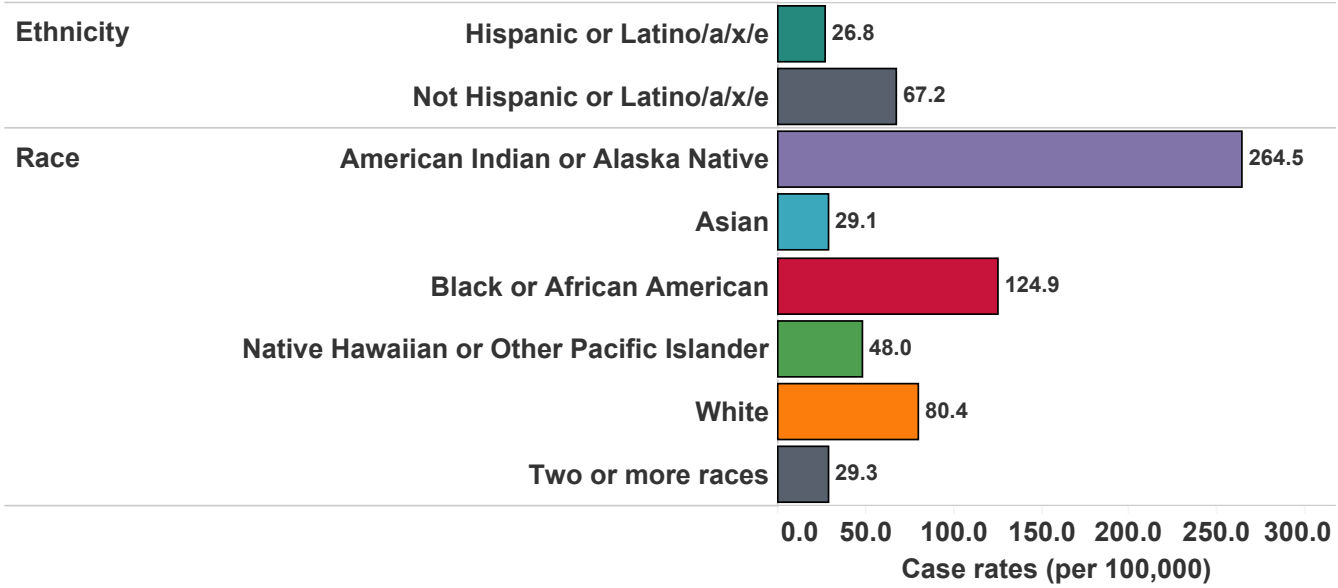
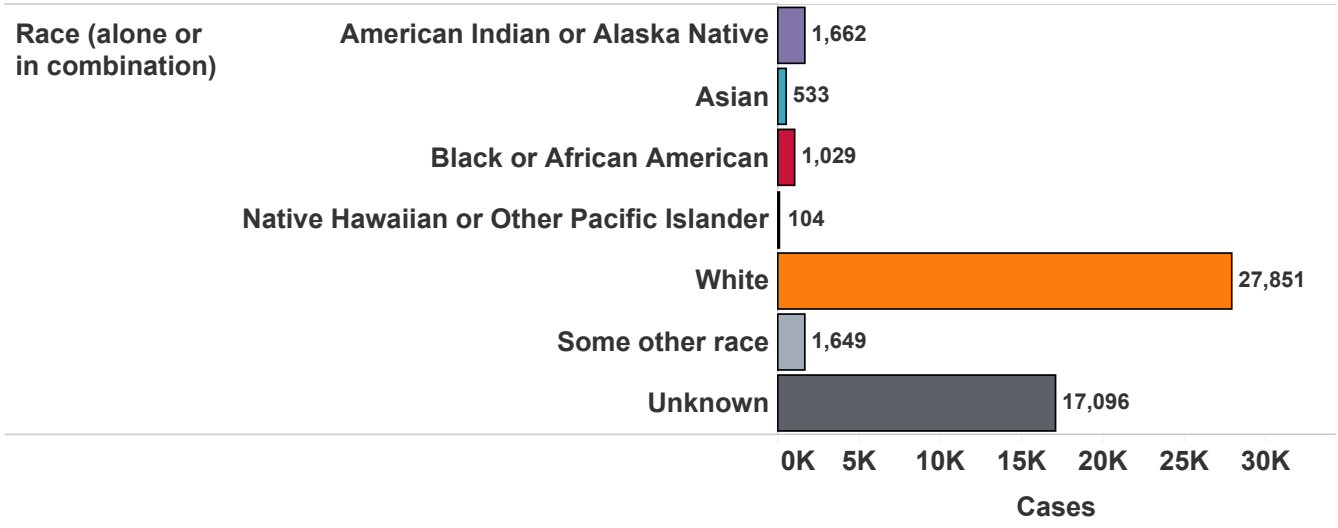
Case rates of chronic hepatitis C by reported race and ethnicity: Oregon, 2013 to 2022.

Race and Ethnicity are groupings determined by the Office of Management and Budget. Due to low case counts, the average case rate over multiple years of data is shown.



Case counts of chronic hepatitis C by reported race and ethnicity: Oregon, 2013 to 2022.

Race alone or in combination means cases may be counted in all races that apply.



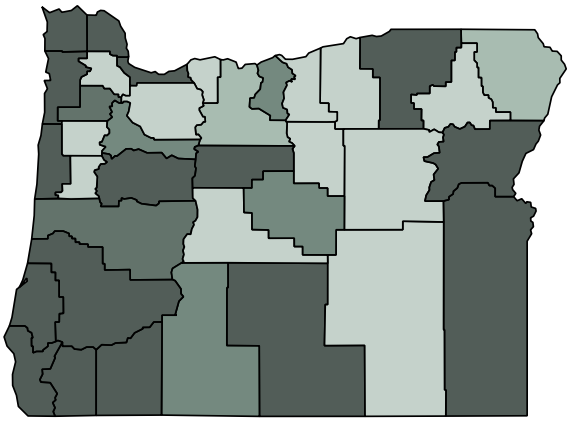
Case rates of chronic hepatitis C by county of residence: Oregon, 2013 to 2022.

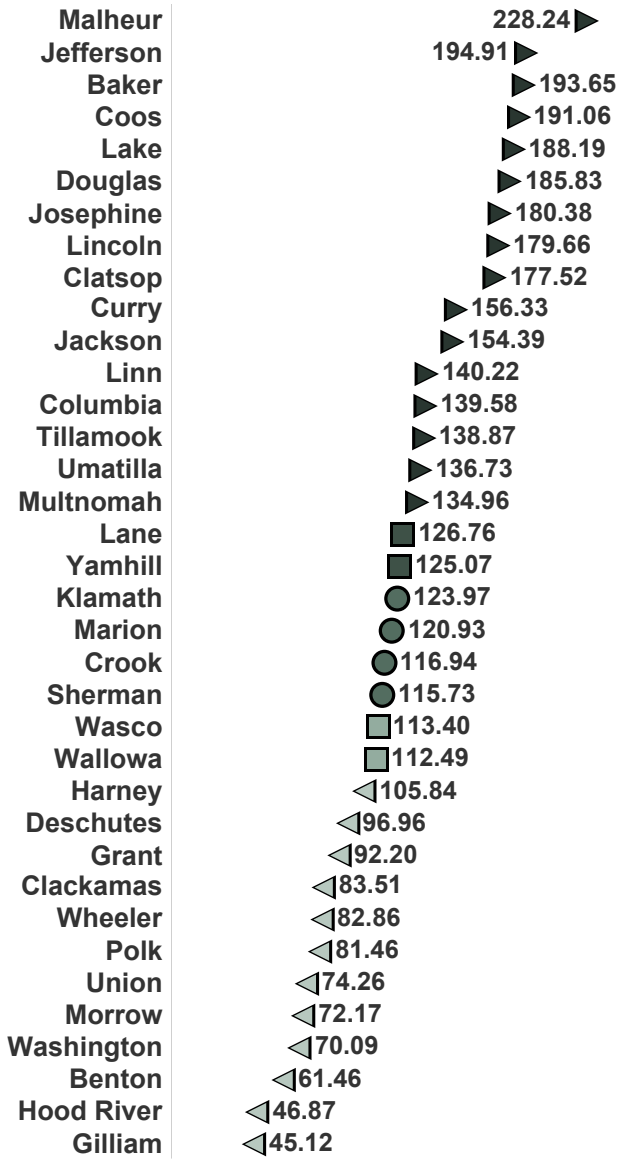
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for chronic hepatitis C from 2013 to 2022 was **119.2 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





†Note: Rates based on small case counts (<5 cases) might be unstable.

Legionellosis

Legionellosis is usually an acute respiratory tract infection that begins two to 14 days after exposure to *Legionella* spp. Signs of the disease can include a high fever, chills and cough, in addition to headache and muscle aches. Symptoms are similar to those seen in other forms of pneumonia, so the diagnosis is rarely obvious and can be difficult to make. Available confirmatory diagnostic tests include urine antigen detection, polymerase chain reaction (PCR), direct fluorescent antibody staining and culture.

"Pontiac fever," a milder illness associated with *Legionella* bacteria, is characterized by fever and muscle aches without pneumonia. It typically occurs a few hours to two days after exposure.

Legionella bacteria are found naturally in the environment, usually in water, and grow best in warm conditions such as hot tubs, cooling towers, hot water tanks, large plumbing systems or the air-conditioning systems of large buildings. They are transmitted by inhalation of aerosolized water or soil infected with the bacteria. Person-to-person transmission does not occur.

Risks for infection include older age, smoking, chronic lung disease (e.g., emphysema), renal insufficiency, diabetes and immune deficiency. Death occurs in 10%–15% of cases; a substantially higher proportion of fatal cases occur during outbreaks in hospitals or other health care facilities. Infections are treated with antibiotics.

Legionellosis became officially reportable in Oregon in 2001 and nationally in 2009. Rates of reported illness have increased each year nationally. In Oregon, rates of reported illness were increasing until a decline from 2015 to 2018. It is uncertain whether the increase in cases until 2015 represents increased awareness and testing, increased susceptibility of the population, increased *Legionella* in the environment or a combination of factors. In 2019, Oregon saw a dramatic increase in reported cases. The cause of the rise is unknown; however, increases in older persons and those with underlying

Prevention

- Not smoking can lower your chances of developing Legionnaires' disease if you are exposed to *Legionella* bacteria.
- Persons at increased risk of infection may choose to avoid high-risk exposures, such as being in or near a hot tub.
- Prevent water conditions that allow *Legionella* to grow by doing the following:
  - Maintain and clean cooling towers and evaporative condensers twice yearly, and periodically use chlorine.
  - Maintain domestic water heaters at 60°C (140°F) and water temperature at 50°C (122°F) or higher at the faucet.
  - Don't allow water to stagnate. Large water-storage tanks exposed to sunlight can produce warm conditions favorable to growth of *Legionella*. Flushing infrequently used water lines will help alleviate stagnation.

Legionellosis

disease, aging plumbing infrastructure, and increased testing, detection and reporting may have played a role. Case counts remain high in 2022.

In 2022, 64 cases of legionellosis were reported among Oregonians; 93% were hospitalized, and twelve died. Fifty-seven percent of cases were male and 71% of cases were >50 years of age. The rate of legionellosis among Oregonians has historically been lower than the national rate and that trend continues in 2022 with 1.8 cases per 100,000 reported nationally compared to 1.5 per 100,000 in Oregon. There was one outbreak of legionellosis reported during 2022. Due to an increasing number of cases in recent years, the CDC has developed a water management toolkit for building owners and managers. Facilities receiving Medicare/Medicaid funds must now have a water management plan. Effective water and infrastructure management and better testing protocols can prevent *Legionella* outbreaks.

Prevention

- Not smoking can lower your chances of developing Legionnaires' disease if you are exposed to *Legionella* bacteria.
- Persons at increased risk of infection may choose to avoid high-risk exposures, such as being in or near a hot tub.
- Prevent water conditions that allow *Legionella* to grow by doing the following:
  - Maintain and clean cooling towers and evaporative condensers twice yearly, and periodically use chlorine.
  - Maintain domestic water heaters at 60°C (140°F) and water temperature at 50°C (122°F) or higher at the faucet.
  - Don't allow water to stagnate. Large water-storage tanks exposed to sunlight can produce warm conditions favorable to growth of *Legionella*. Flushing infrequently used water lines will help alleviate stagnation.

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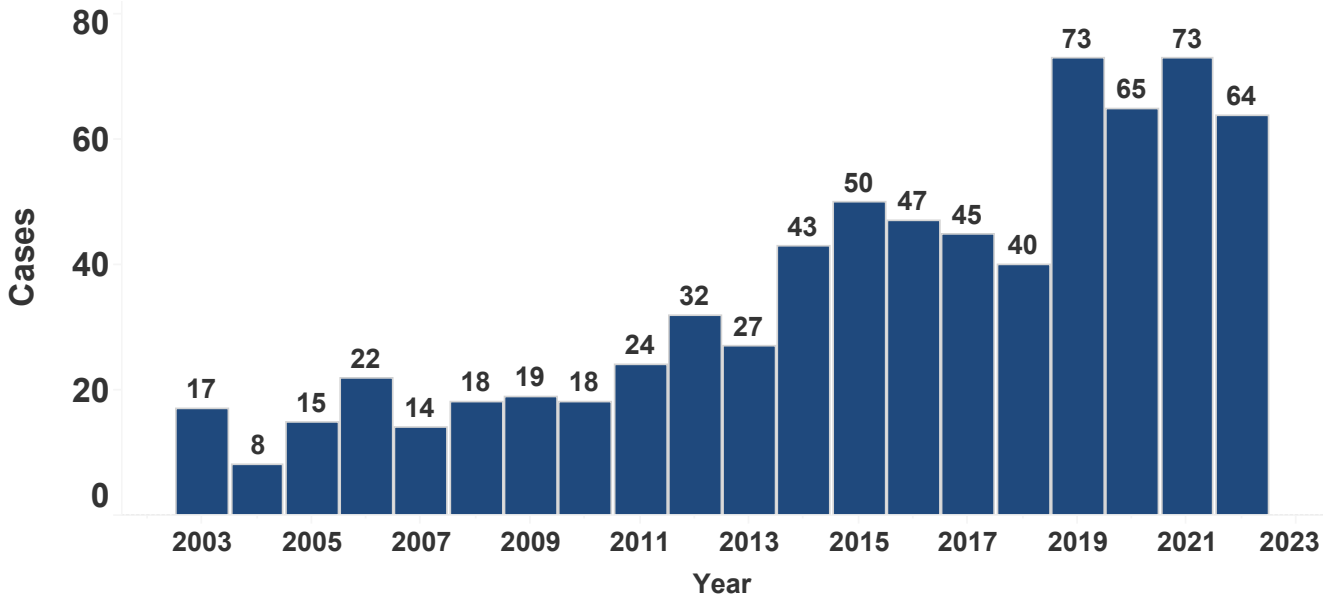
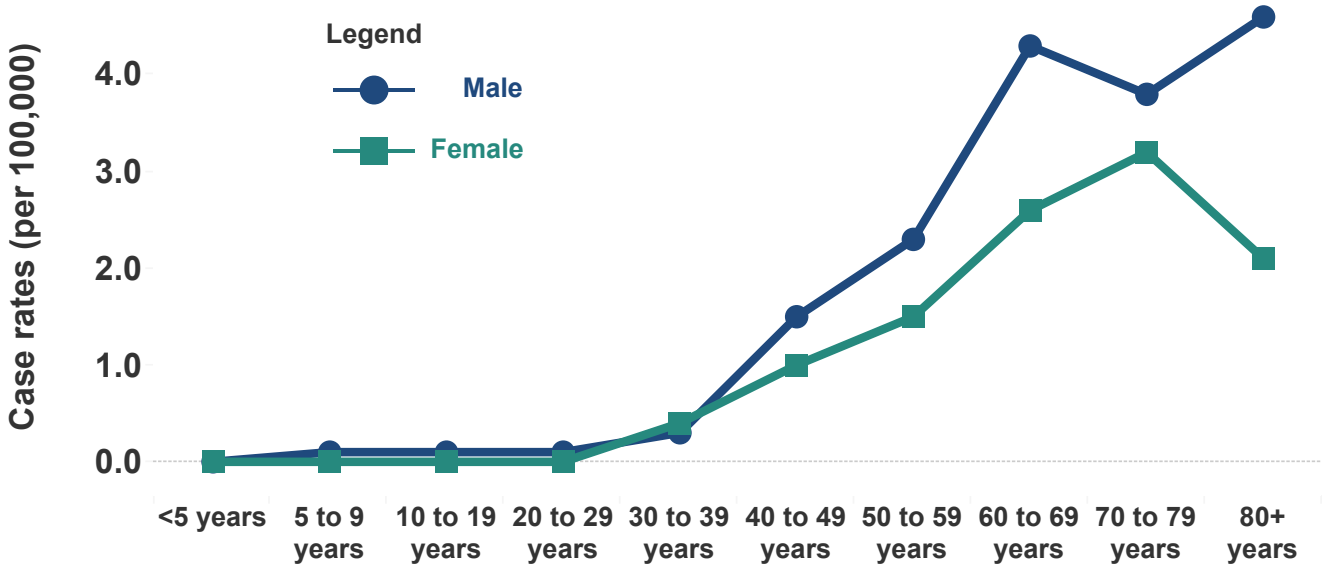
Case counts of legionellosis by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of legionellosis by age and sex: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.



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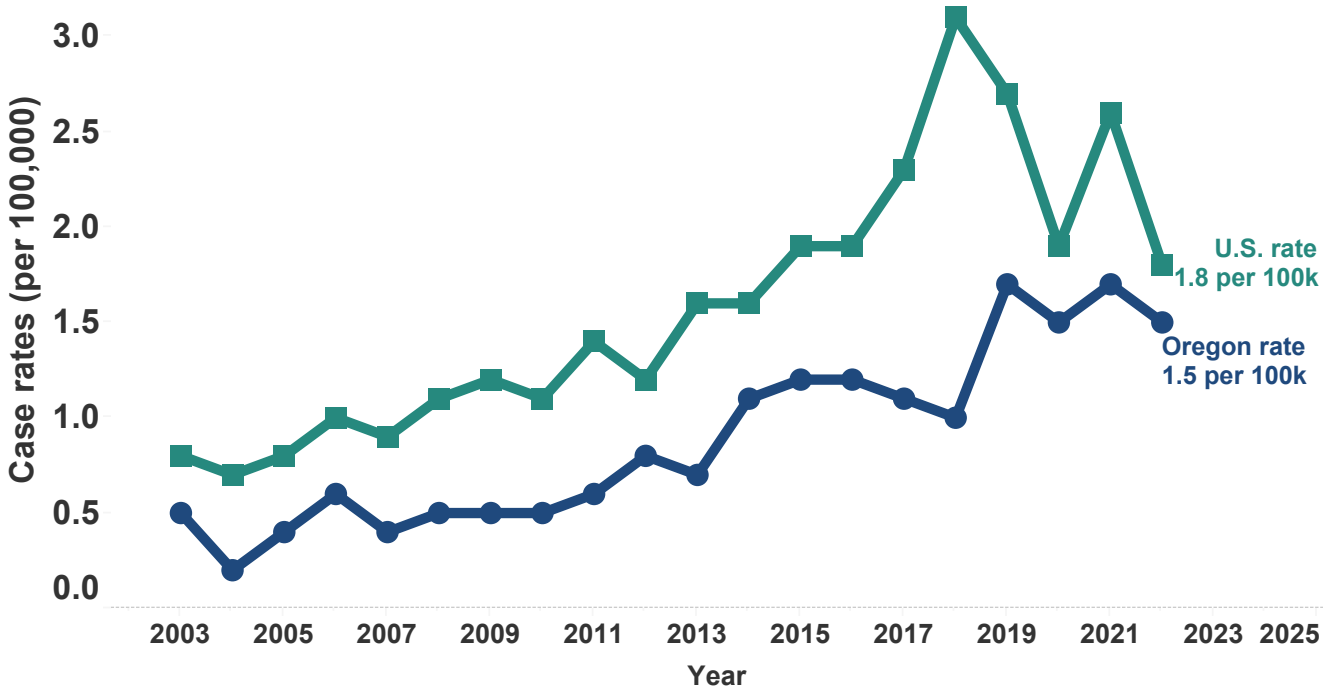
Case rates of legionellosis in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

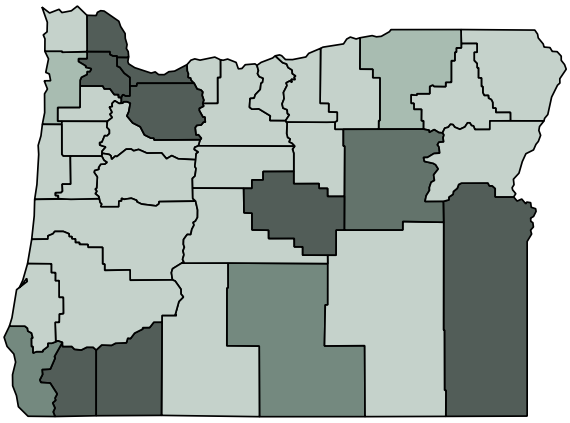
Case rates of legionellosis by county of residence: Oregon, 2013 to 2022.

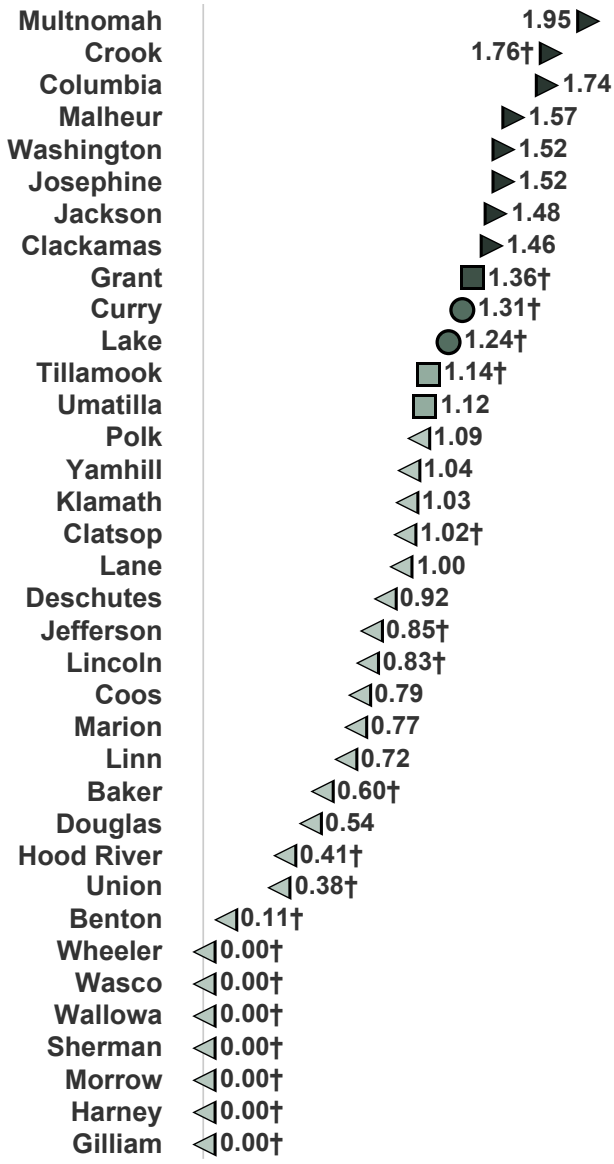
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for legionellosis from 2013 to 2022 was **1.3 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





†Note: Rates based on small case counts (<5 cases) might be unstable.

Listeriosis

Listeriosis is a bacterial infection that may present as an influenza-like illness with high fever, headache and muscle aches; as a gastrointestinal illness; or as an invasive disease with sepsis or meningitis. In pregnant women, listeriosis may cause miscarriages or stillbirths. The case fatality rate of invasive listeriosis is as high as 30% in infants infected prenatally and in non-pregnant adults.

Most cases of listeriosis are “sporadic” rather than part of outbreaks. However, several large outbreaks have been associated with consumption of contaminated foods. It is important to track the incidence of this disease to identify such outbreaks, and to identify high-risk groups. The rate is higher among pregnant women, newborns, the elderly and immunocompromised persons. Cooking food properly is the most important means of prevention. When listeriosis is diagnosed, treatment with antibiotics should be instituted promptly.

In 2022, 11 cases were reported. All were hospitalized (100%) and there were three deaths (27%). Nearly all cases of listeriosis were observed in individuals aged 59–89 (82%); no cases were observed in an infant.

Prevention

- Practice safe food handling. Rinse raw produce thoroughly under running tap water; separate uncooked meats and poultry from vegetables, cooked foods and ready-to-eat foods; cook meat and poultry to the proper temperatures.
- Do not drink raw milk and do not eat foods that have unpasteurized milk in them.
- Higher-risk persons (pregnant women, immunocompromised and elderly):
  - Avoid eating hot dogs, luncheon meats, cold cuts and other deli meats unless they are heated.
  - Do not eat soft cheese such as feta, queso fresco, Brie or Camembert unless it is labeled as made with pasteurized milk.
  - Do not eat refrigerated smoked seafood unless it is contained in a cooked dish such as a casserole.

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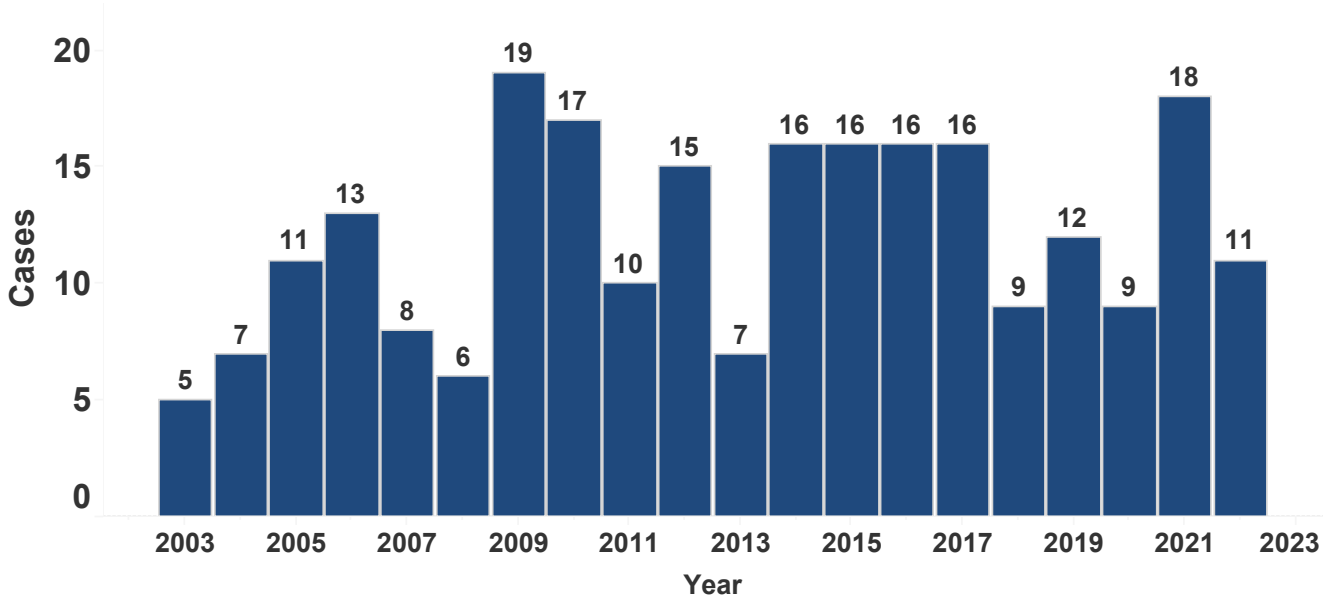
Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

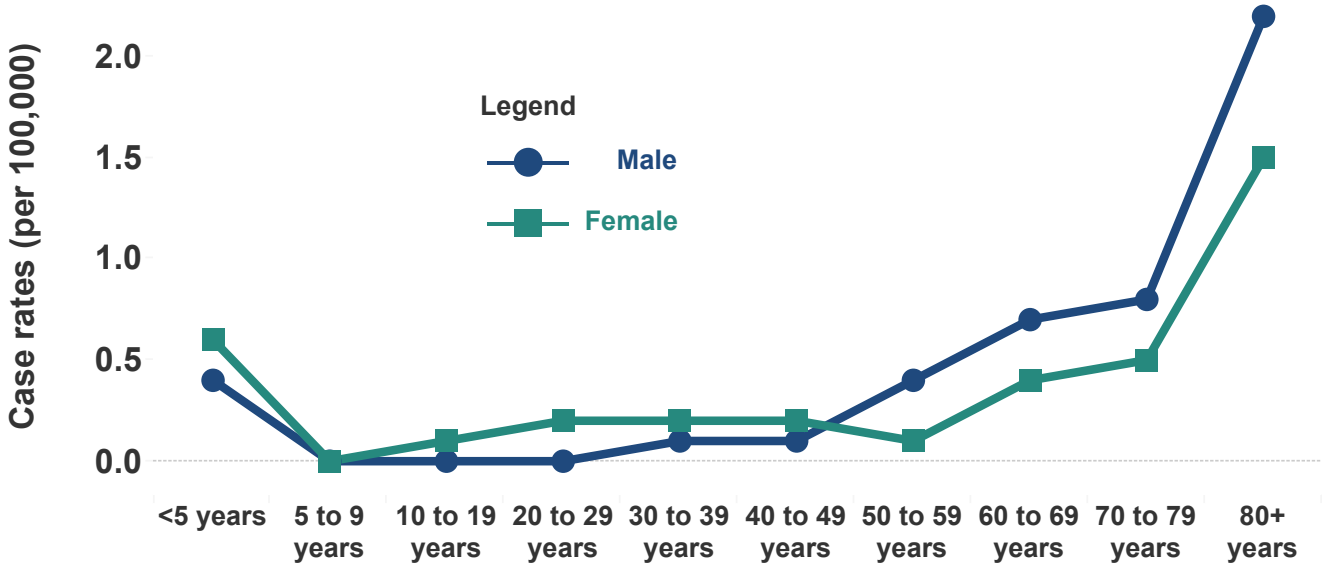
Case counts of listeriosis by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of listeriosis by age and sex: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.



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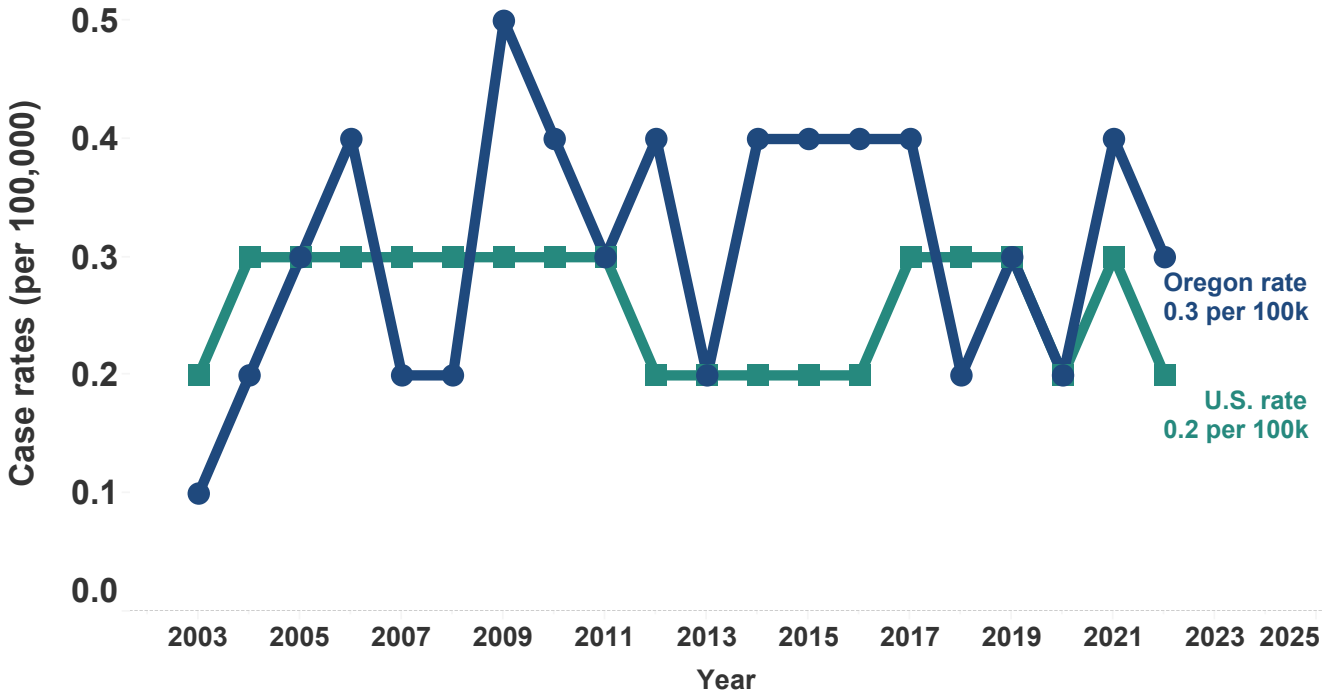
Case rates of listeriosis in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

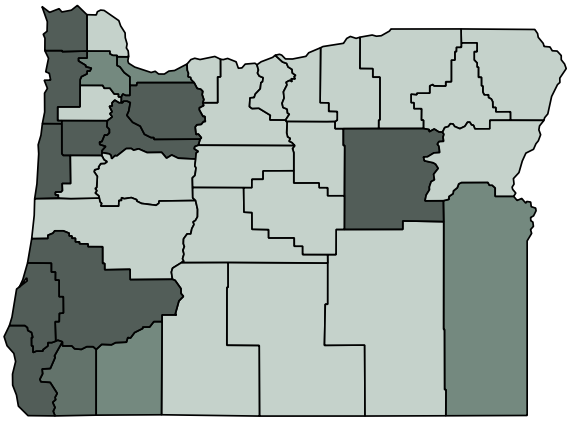
Case rates of listeriosis by county of residence: Oregon, 2013 to 2022.

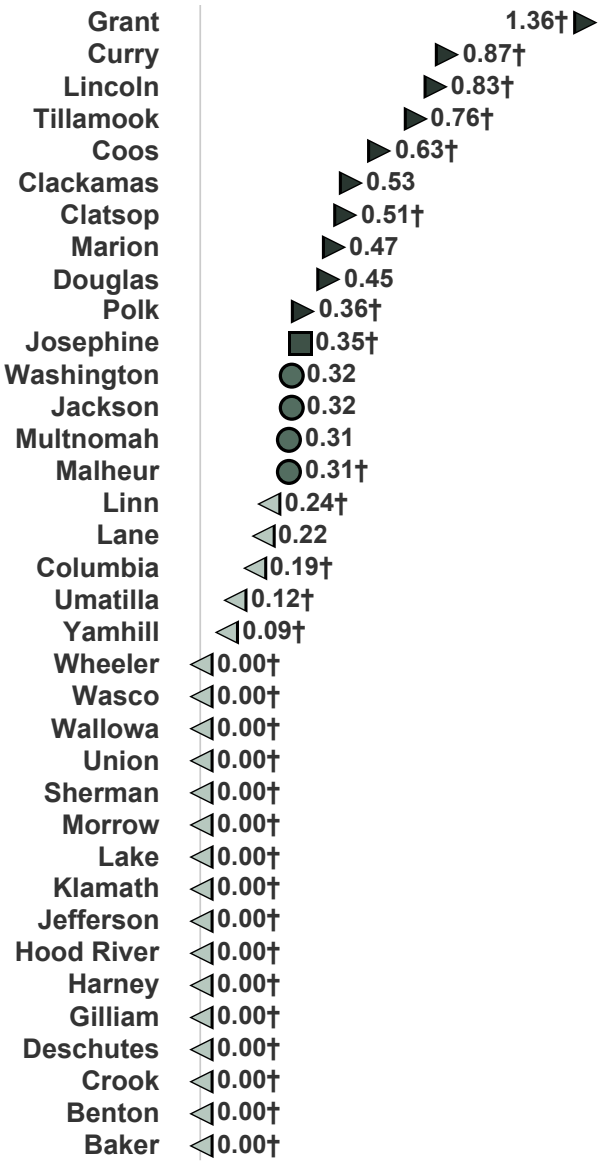
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for listeriosis from 2013 to 2022 was **0.3 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Lyme disease

Lyme disease is a tick-borne zoonotic disease caused by the spirochete *Borrelia burgdorferi*. The first manifestation in approximately 60% of patients appears as a red spot or bump that expands slowly with clearing in the middle, forming a ring or “target,” or a bull’s eye sometimes with multiple similar lesions. This distinctive skin lesion is called “erythema migrans.” In most cases, the tick must be attached for 36–48 hours or more before the Lyme disease bacterium can be transmitted. Most humans are infected through the bites of immature ticks called nymphs. Nymphs are tiny (less than 2 mm) and difficult to see, which is why they may be attached for many hours without being detected. Nymphs feed during the spring and summer months. The incubation period for Lyme disease ranges from three to 30 days after tick exposure; however, the early stages of the illness may be asymptomatic, and the patient may later develop systemic symptoms and joint, neurologic or cardiac problems in varying combinations during a period of months to years. Infections are treated with antibiotics.

Currently, increasing recognition of the disease is redefining areas where ticks may carry *B. burgdorferi*; Lyme disease cases have been reported in 49 states, and in Ontario and British Columbia, Canada. Related borrelioses have been found in Europe, the former Soviet Union, China and Japan.

During 2022, 65 cases of Lyme disease were reported in Oregon. The median age was 47 years of age. Thirty-five (55%) cases were female. The highest numbers of reported cases by residence were in Multnomah (8), Josephine (7) and Washington (7) counties. Since 2015, we have identified an upward trend in the number of cases reported with Lyme disease. This could be related to greater local interaction with ticks in the environment as well as acquiring the infections from out-of-state areas where Lyme disease is more prevalent.

Prevention

- Avoid exposure to ticks. Wear long sleeves, long pants and socks when outdoors.
- Check yourself, your children and your pets for ticks. Be especially vigilant after spending time in wooded or grassy areas. Remove a tick as soon as possible with tweezers. Gently grasp the tick near its head or mouth. Don't squeeze or crush the tick, but pull carefully and steadily.
- Use insect repellents when you go outdoors. Repellents containing DEET, picaridin, IR3535, and some oil of lemon eucalyptus and para-menthane, 2-undecanone products provide longer-lasting protection. To optimize safety and effectiveness, use repellents according to the label instructions.
- For more information about these products, please visit this EPA site.
- Do your best to tick-proof your yard. Clear brush and leaves where ticks live. Keep woodpiles in sunny areas.

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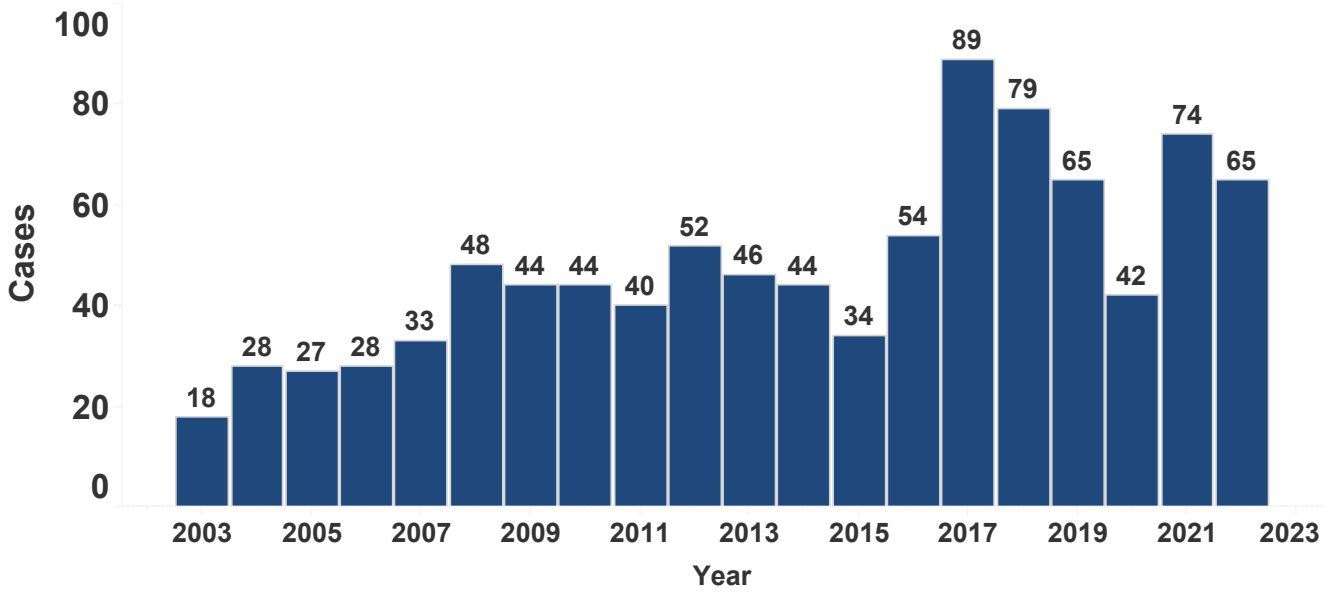
Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

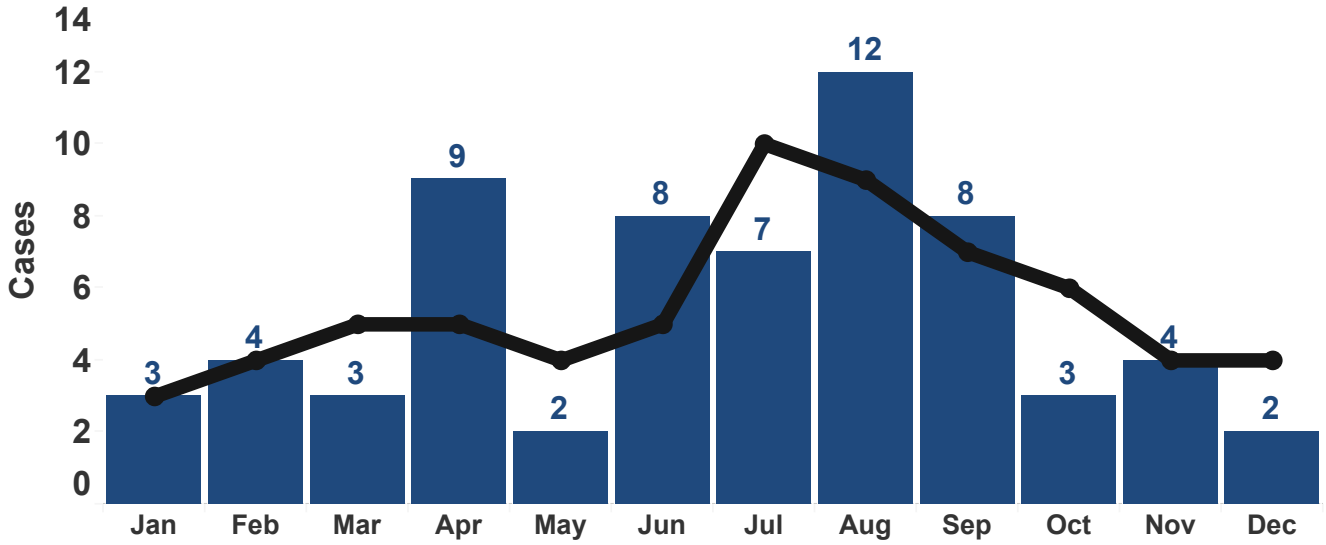
Case counts of Lyme disease by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case counts of Lyme disease by month: Oregon, 2022.

Bar chart shows case counts in 2022 while the line shows the median case counts for the previous 5 years.



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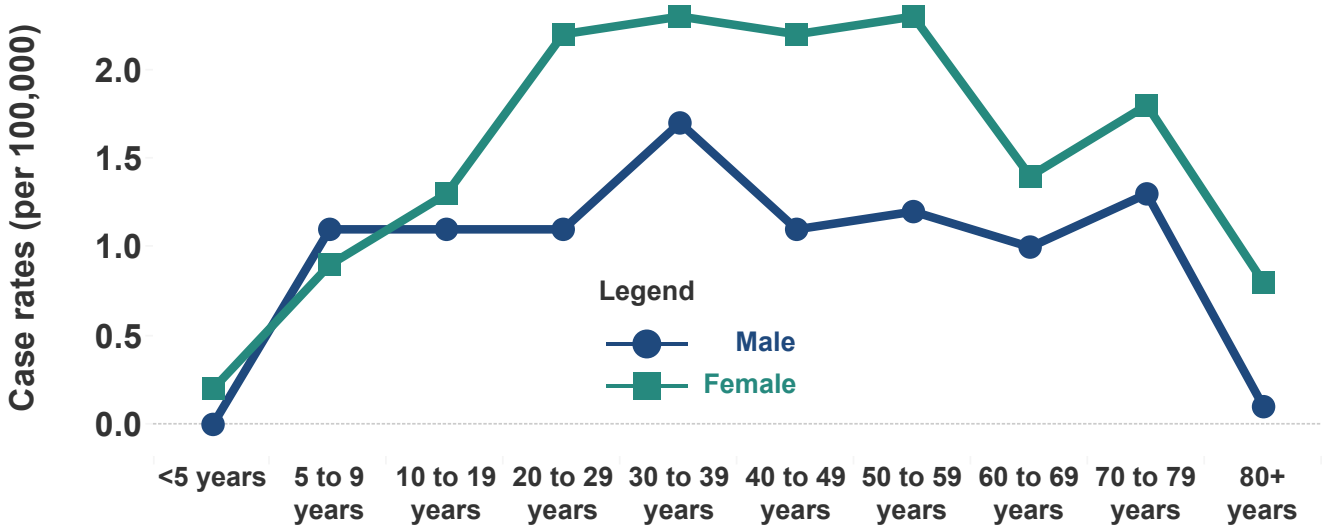
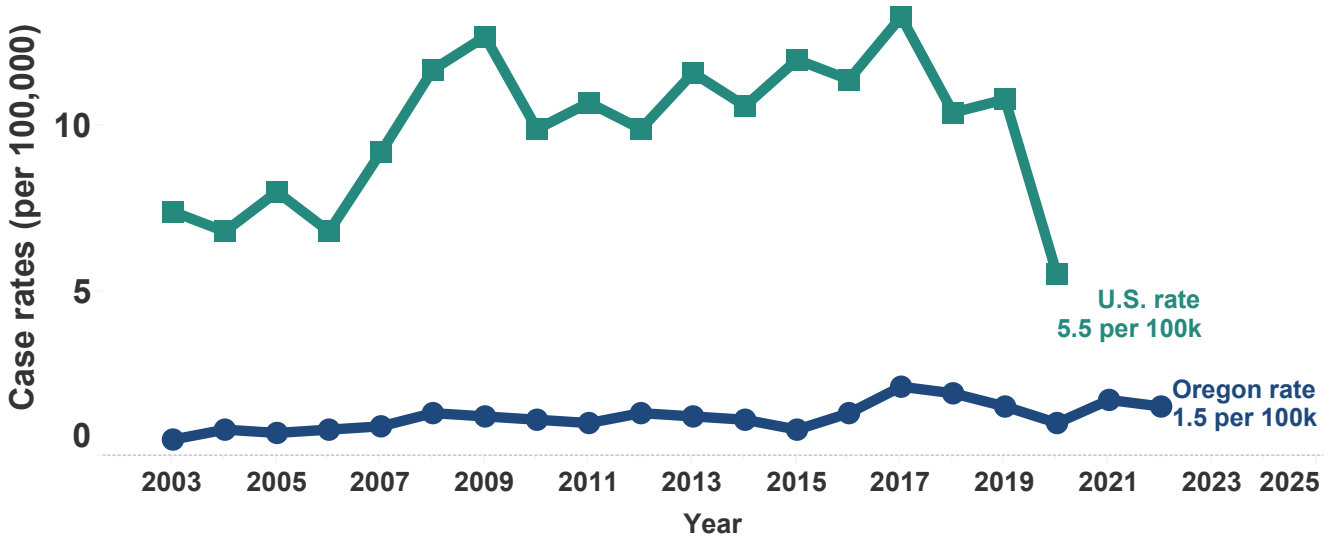
Case rates of Lyme disease by age and sex: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.



Case rates of Lyme disease in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

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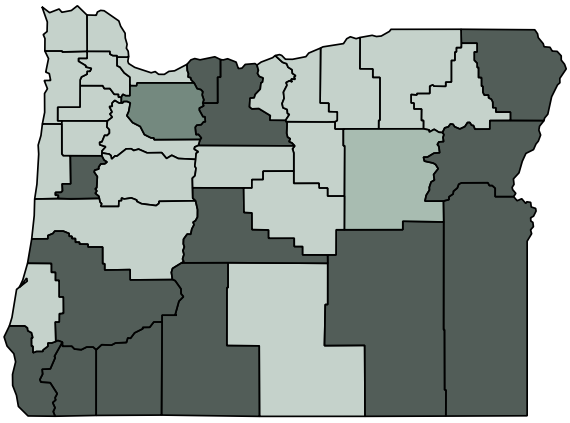
Case rates of Lyme disease by county of residence: Oregon, 2013 to 2022.

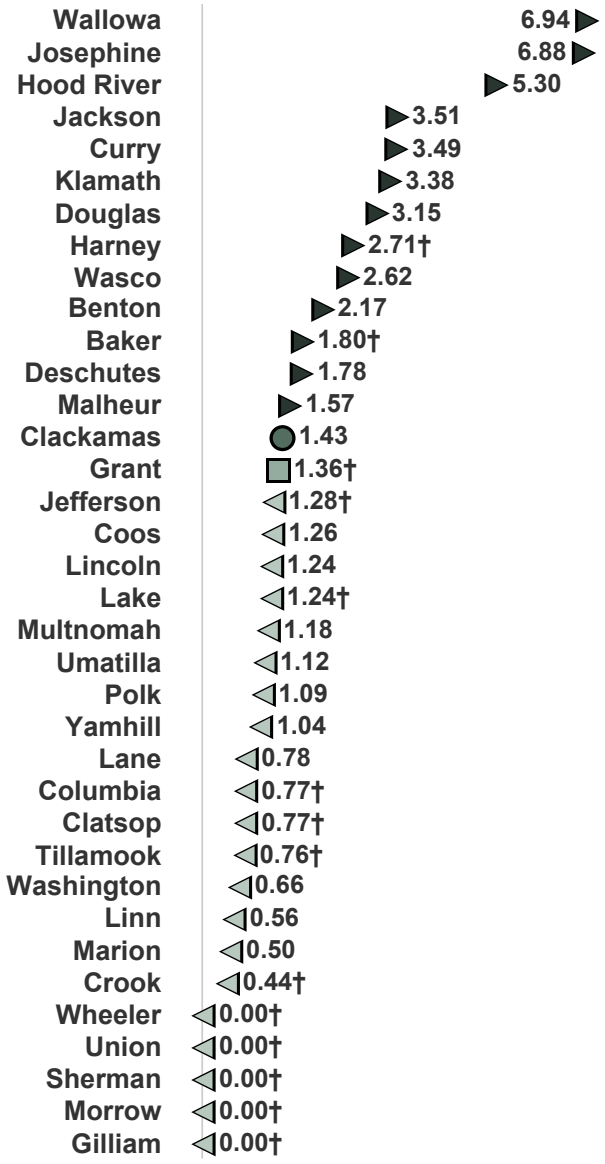
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for Lyme disease from 2013 to 2022 was **1.4 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Malaria

Globally, malaria is among the most devastating communicable disease — and more than half of the world's population is at risk for infection. Malaria is caused by parasites of the genus *Plasmodium* transmitted among humans by *Anopheles spp.* mosquitoes. While local transmission in the United States remains rare, travel-associated cases following exposure abroad are not uncommon. *Anopheles* mosquitoes capable of transmitting malaria live throughout Oregon and local transmission remains a theoretical possibility—for this reason, all malaria cases are investigated by public health.

Twenty-two cases of malaria were reported among Oregonians in 2022. *Plasmodium falciparum,* the species associated with the highest mortality, was confirmed in 15 cases. Oregon surveillance data are reported to the Centers for Disease Control and Prevention and inform national recommendations for prevention and treatment.

Chemoprophylaxis can dramatically reduce the risk of infection for travelers, and should be considered for any individual traveling to a malaria endemic area. Sleeping under bed nets and using mosquito repellants are also essential to reducing risk.

Prevention

• Understanding malaria risk during travel is essential. You can find country-specific information regarding malaria and other communicable diseases on the CDC website. Consult with a travel medicine expert or primary care provider for a prescription for antimalarial medication before you travel.
• When traveling to an area where malaria is transmitted:
•• Because *Anopheles* mosquitoes feed at night, minimize your risk of getting bitten by sleeping under an insecticide-impregnated mosquito net or in an air-conditioned room (or both if possible!).
•• If out and about at night, wear long-sleeved shirts and pants and use topical mosquito repellents.
•• Chemoprophylaxis (antimalarial medicine) provides the additional protection you need when bite prevention is imperfect — it is impossible to prevent 100% of mosquito bites.

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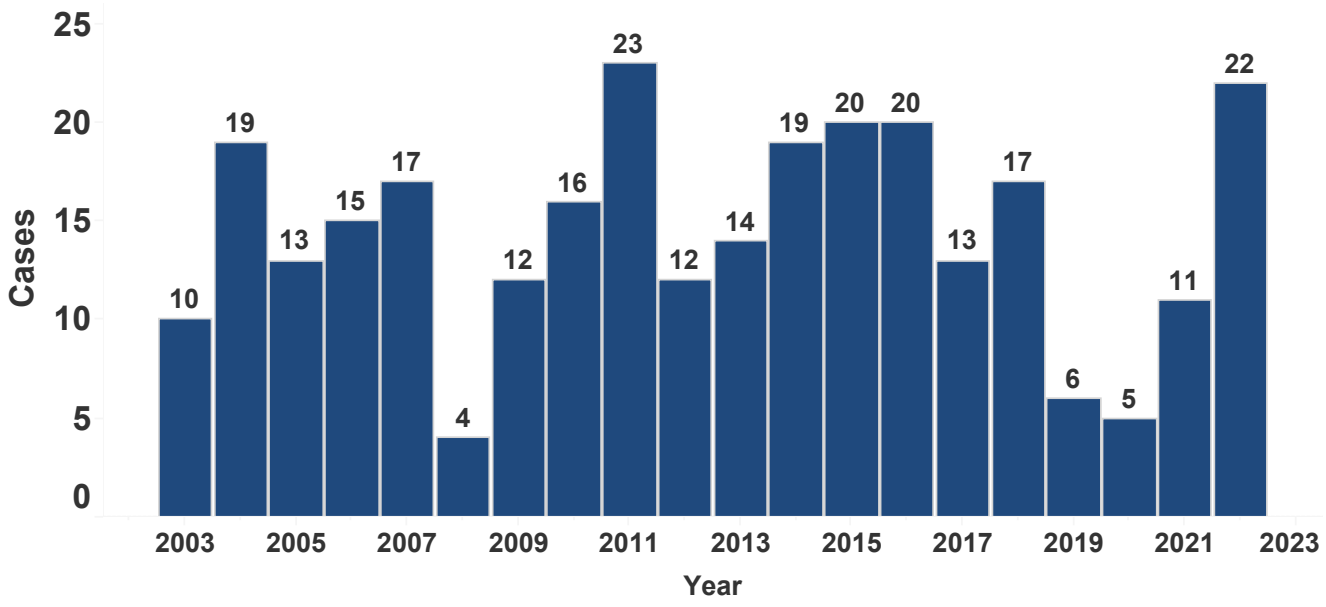
Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

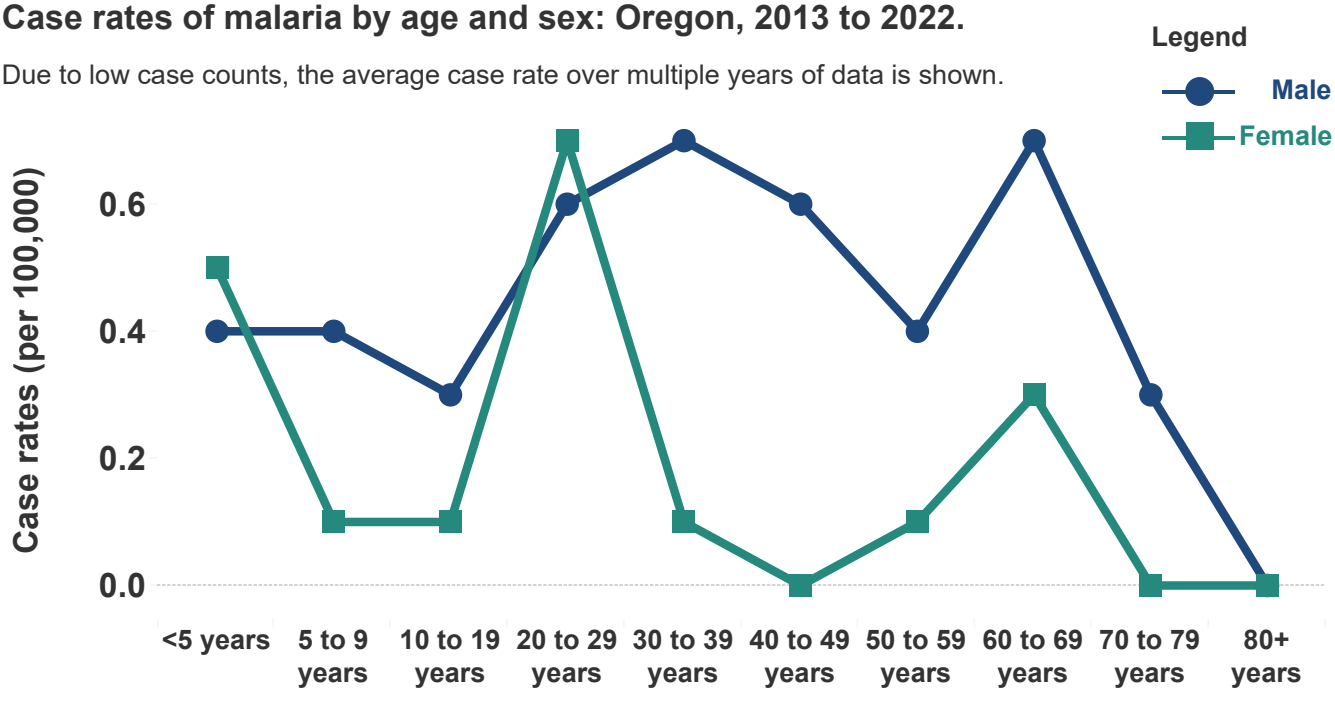
Case counts of malaria by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of malaria by age and sex: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.



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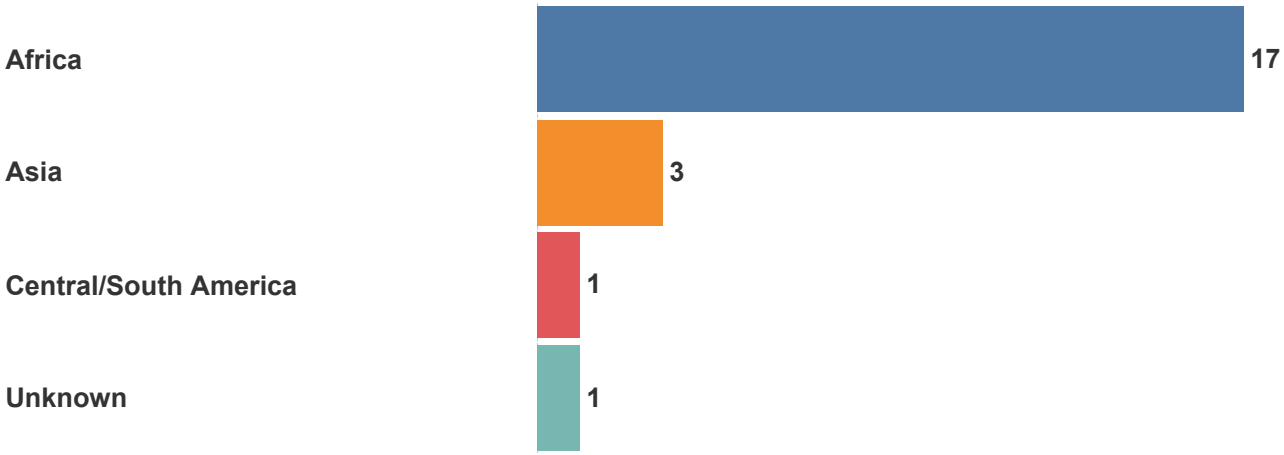
Case rates of malaria in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.

U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

Malaria cases by continent of acquisition: Oregon, 2022



Measles

Measles is an acute, highly communicable viral illness known for its red, blotchy rash. The rash starts on the face and then spreads widely over the body. It is preceded by a febrile prodrome that includes cough, coryza and conjunctivitis; photophobia and Koplik spots in the mouth also sometimes appear.

Detection of measles ribonucleic acid (RNA) by polymerase chain reaction (PCR) and detection of measles-specific immunoglobulin M (IgM) antibody are the most common methods for confirming measles infection (in a patient who has not recently been immunized). Treatment is supportive; there is no antiviral therapy for measles.

A focus on increasing vaccination among preschool children by following the 1989 recommendation for two doses of measles, mumps and rubella (MMR) vaccine resulted in a dramatic reduction in measles in the United States. In Oregon, two doses of measles-containing vaccine have been required for entry into kindergarten since 1998. In 2021 about 95% of K–12 kids had received two doses. Measles vaccination is also required for children attending childcare facilities and for students in post-secondary educational institutions in Oregon.

Since 2004, 56 cases have been reported in Oregon; 31 of these were imported and the remaining 25 were linked to imported cases. Most imported cases originated in Asia or Europe and included both Oregon citizens traveling abroad and persons visiting Oregon from other countries. The median age of cases has been 12.5 years (range, 6 months–49 years) since 2004. Forty-four (79%) cases were unvaccinated; seven were vaccinated; the vaccination status of three could not be documented; one was too young to be vaccinated; and one had a medical contraindication to vaccination.

Prevention

- Vaccinate:
  - One dose for preschool-age children >12 months of age and for most adults born during or after 1957; a second dose for school-age children and for adults at high risk of measles exposure (e.g., health care personnel, international travelers and students at post-high school educational institutions).
  - Post-exposure vaccination can prevent or lessen illness if given within 72 hours of exposure.

Measles

No cases of measles were reported in Oregon in 2022. In 2019, Oregon had four outbreaks of measles and one case of measles that was not part of an outbreak, totaling 28 cases. This is the most cases the state has seen since 1991. All cases were unvaccinated.

Though measles is highly infectious, the risk of exposure to measles in Oregon remains low. Sustaining high levels of vaccination is important to limit the spread of measles from imported cases and to prevent it from becoming re-established as an endemic disease in the United States.

Prevention

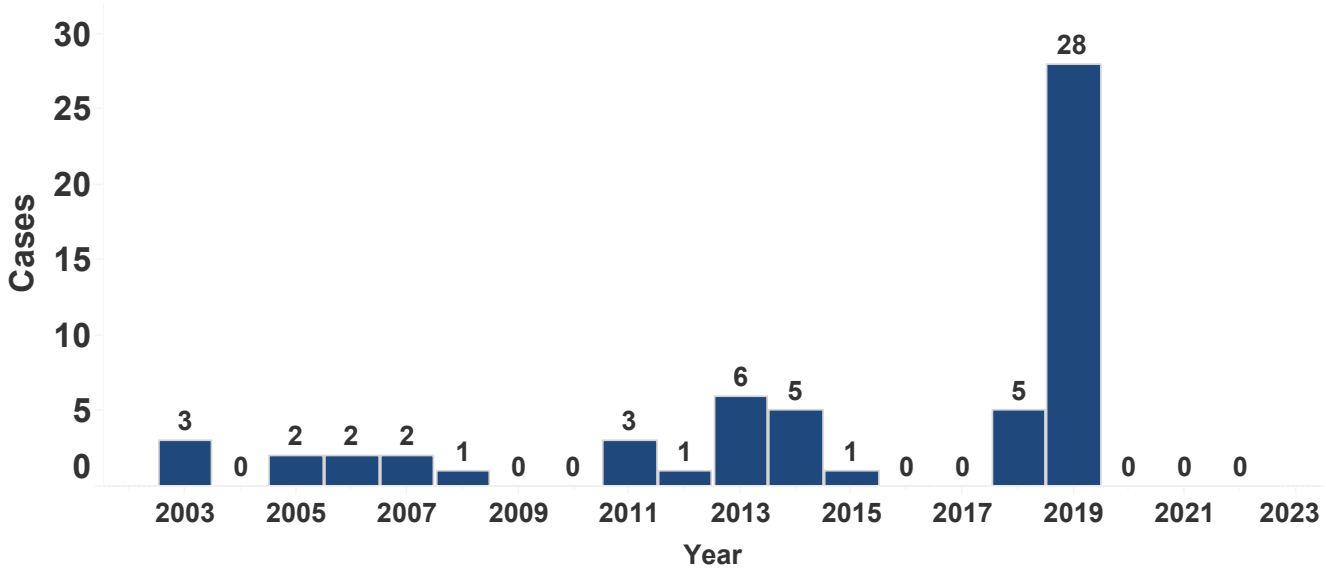
• Vaccinate:
  •• One dose for preschool-age children >12 months of age and for most adults born during or after 1957; a second dose for school-age children and for adults at high risk of measles exposure (e.g., health care personnel, international travelers and students at post-high school educational institutions).
  •• Post-exposure vaccination can prevent or lessen illness if given within 72 hours of exposure.

Oregon's 2022 Selected Reportable Communicable Disease Summary

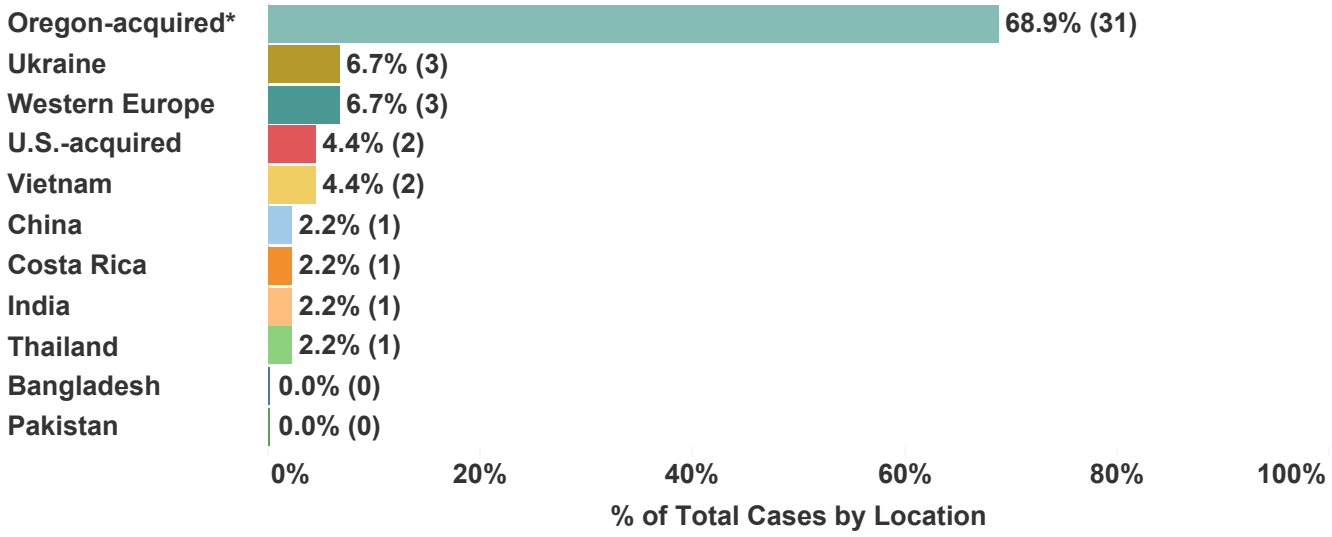
Data current as of 10/9/2023; data are provisional and subject to change.

Case counts of measles by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Measles by location of importation: 2013 to 2022



*Many cases that are acquired in Oregon or elsewhere in the United States are linked to imported measles cases from another country.

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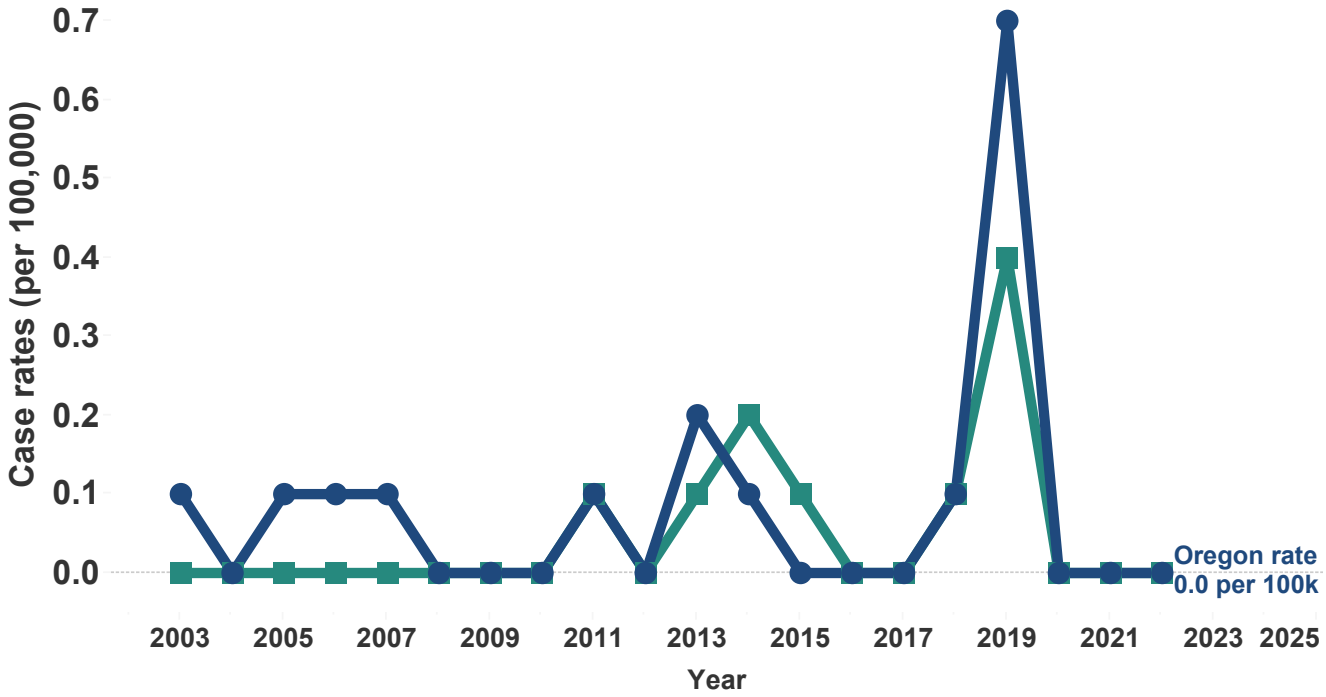
Case rates of measles in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

Meningococcal disease

Reported cases of invasive meningococcal infections, including sepsis and meningitis, have declined from the hyperendemic levels seen in 1993–1997 attributable to a clonal strain of serogroup B *Neisseria meningitidis*. Respiratory secretions and droplets continue to be shared among Oregonians and predispose us to secondary cases.

In 2022, there were 8 reported cases of meningococcal disease in Oregon, compared to zero in 2020. The dramatic decline in reported cases is likely due to the COVID-19 pandemic. Social distancing and mask adherence helped reduce the spread of COVID and other respiratory pathogens. All cases were hospitalized and no deaths were reported.

From the early 1990s through 2011, serogroup B predominated in Oregon but, for the past several years, other serogroups have been more prominent. In 2017, 40% of cases were serogroup B; serogroup C accounted for 52% of cases; 2021, 50% of cases were serogroup C; 17% were serogroup B. No cases with serogroup B were reported in 2022, serogroup C accounted for 63% of cases with no other known serogroups. Meningococcal disease is treated with intravenous antibiotics.

Advisory Committee on Immunization Practices (ACIP) recommends routine vaccination with quadrivalent (contains antigens from serogroups A, C, Y and W-135) meningococcal conjugate vaccine for all persons 11–21 years of age.

Meningococcal vaccine is also recommended for persons 2 months to 55 years of age who are at increased risk for the disease due to complement deficiency, travel to or residence in a country where meningococcal disease is hyperendemic or epidemic, or inclusion in a defined risk group during a community or institutional outbreak.

Prevention

- Vaccinate to prevent illness from serogroups A, C, Y, W-135 per ACIP guidelines.
- Vaccinate to prevent illness from serogroup B per ACIP guidelines.
- Identify and recommend prophylaxis of close contacts of confirmed and presumptive cases.
- Avoid exposing children to tobacco smoke. This behavior has been associated with an increased risk of invasive meningococcal disease in children.

Meningococcal disease

In October 2014, the Food and Drug Administration (FDA) licensed the first serogroup B meningococcal vaccine (MenB-FHbp, Trumenba®). FDA approved this vaccine for use in people 10–25 years of age as a three-dose series. On Jan. 23, 2015, FDA licensed a second serogroup B meningococcal vaccine (MenB-4C, Bexsero®). FDA approved this vaccine for use in people 10–25 years of age as a two-dose series.

MenB vaccination is now recommended for those ≥10 years of age with complement deficiencies, anatomic or functional asplenia, microbiologists who have contact with *N. meningitidis*, and others at increased risk during a serogroup B outbreak. MenB vaccine may also be administered to adolescents and young adults 16–23 years of age to provide short-term protection against most strains of serogroup B meningococcal disease.

Prevention

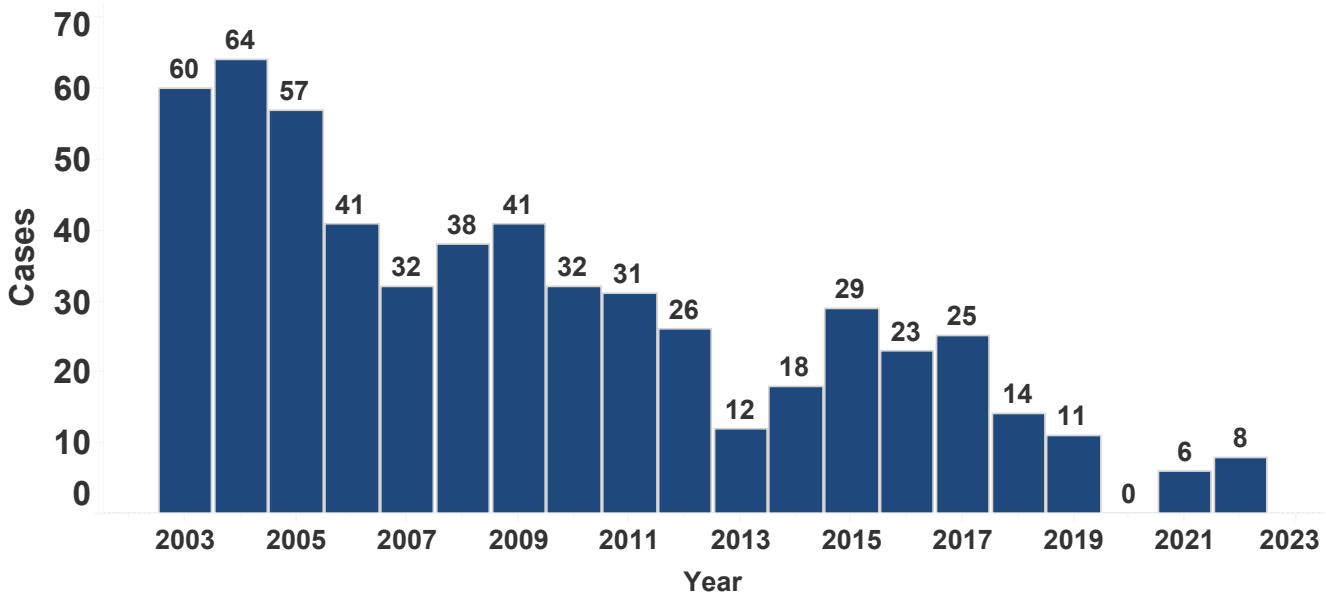
- Vaccinate to prevent illness from serogroups A, C, Y, W-135 per ACIP guidelines.
- Vaccinate to prevent illness from serogroup B per ACIP guidelines.
- Identify and recommend prophylaxis of close contacts of confirmed and presumptive cases.
- Avoid exposing children to tobacco smoke. This behavior has been associated with an increased risk of invasive meningococcal disease in children.

Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

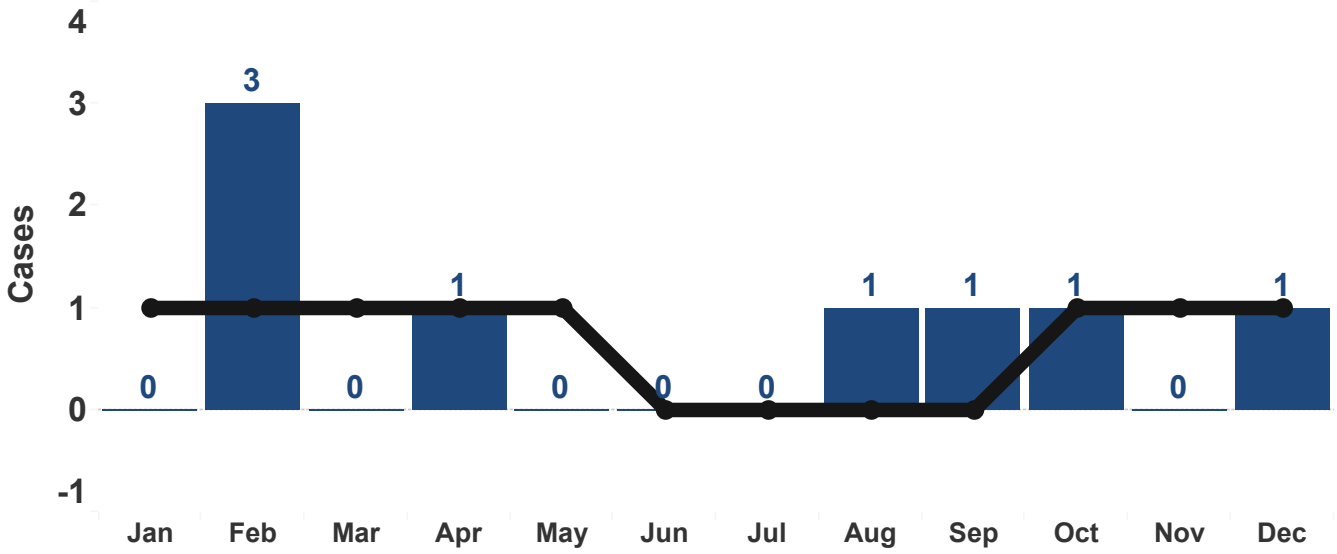
Case counts of meningococcal disease by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case counts of meningococcal disease by month: Oregon, 2022.

Bar chart shows case counts in 2022 while the line shows the median case counts for the previous 5 years.



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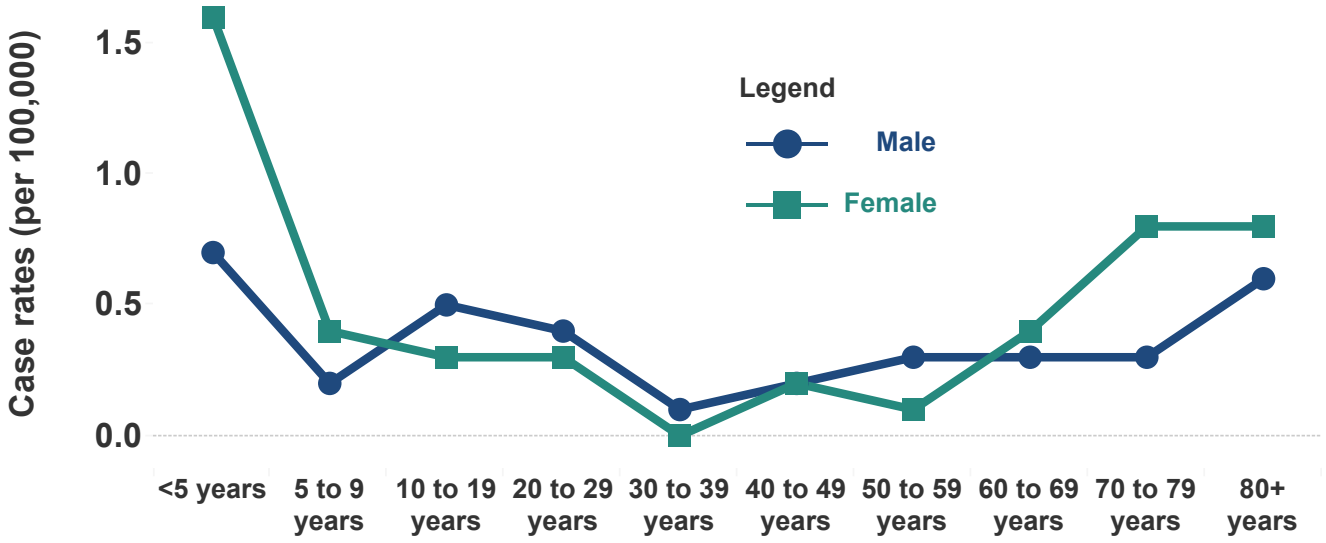
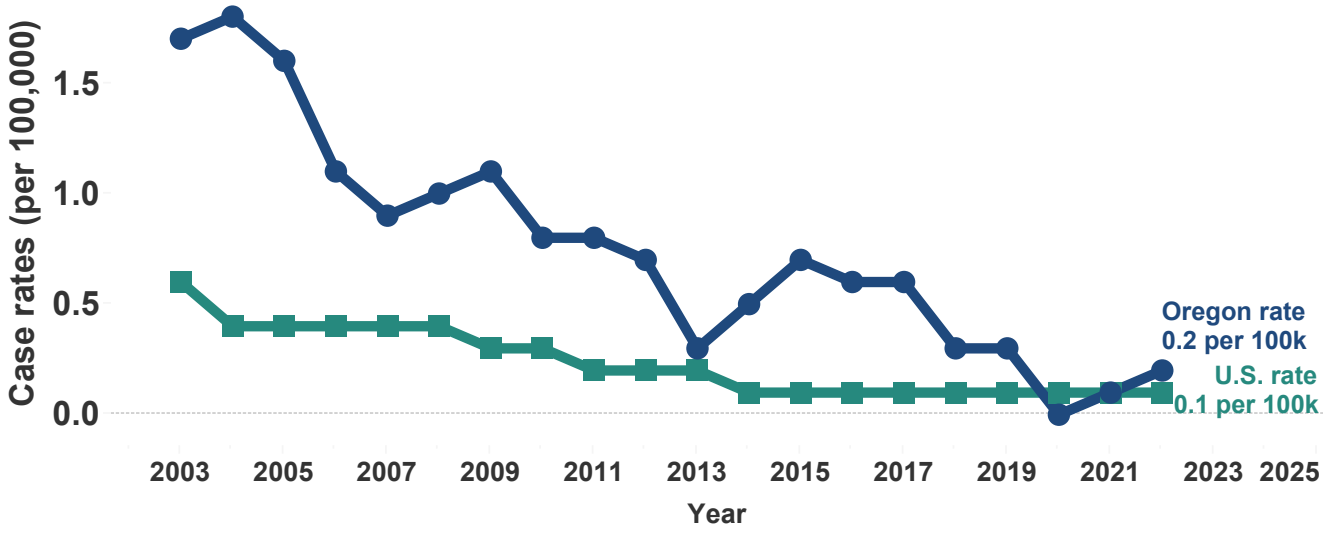
Case rates of meningococcal disease by age and sex: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.



Case rates of meningococcal disease in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

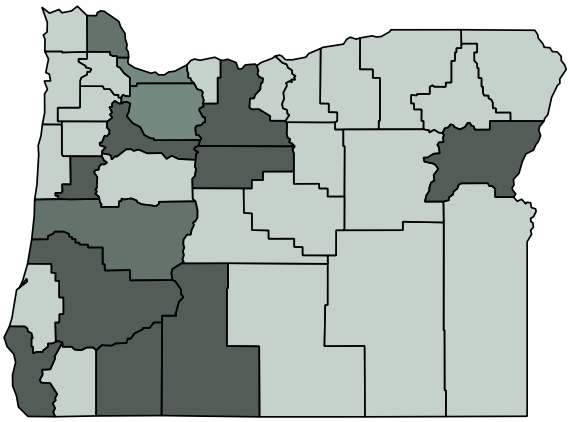
Case rates of meningococcal disease by county of residence: Oregon, 2013 to 2022.

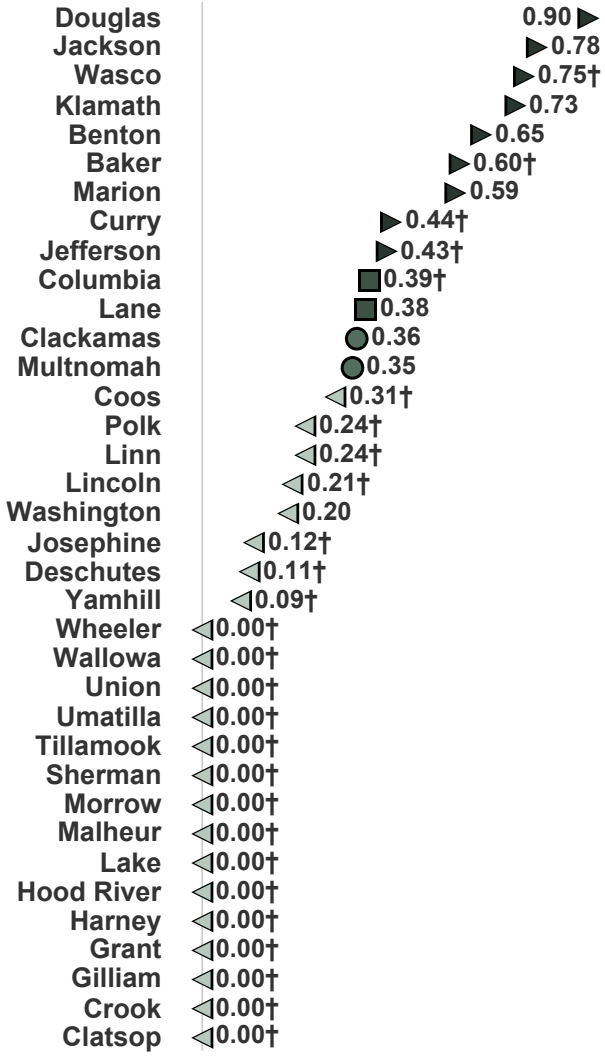
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for meningococcal disease from 2013 to 2022 was **0.4 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate

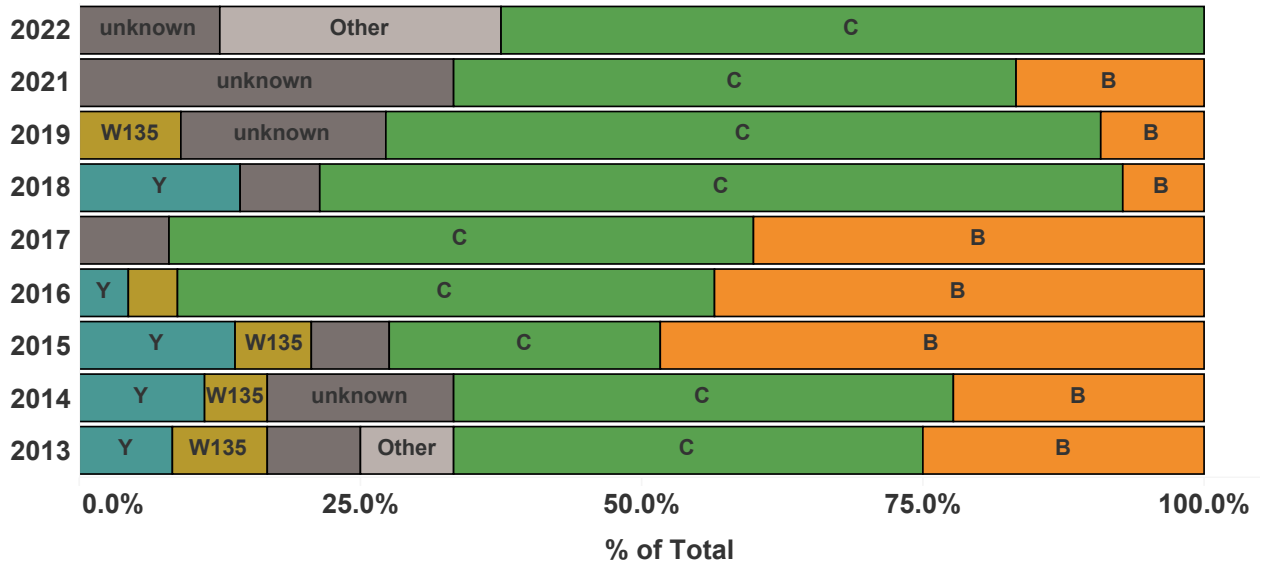




†Note: Rates based on small case counts (<5 cases) might be unstable.

Meningococcal disease cases by serogroup Oregon, 2013 to 2022.

Click on a serogroup to compare between years.



Mpox

Mpox, formerly known as monkeypox, is a disease caused by *Monkeypox virus*. Mpox is a DNA virus related to smallpox. Illness involves a rash, which often starts in the anogenital area but can also appear elsewhere. The rash is sometimes preceded by fever, malaise, and lymphadenopathy.

Historically, mpox has mostly been seen in humans after contact with animals in Central and West Africa. In 2022, there was an outbreak of mpox among humans in many countries around the world, including the United States. Since that time, mpox has continued to circulate among humans worldwide, including in Oregon.

Mpox is transmitted through close skin to skin contact. During the current global outbreak, most mpox transmission has occurred during sexual contact. Mpox has also been transmitted during other activities involving skin to skin contact, such as within households or while caring for a sick person.

Anyone can be affected by mpox. Our data shows that most Oregonians who had cases of mpox in 2022 were men and most identified as gay or bisexual. Transgender and nonbinary people have also been disproportionately affected. Oregonians who identify as Black, American Indian or Alaska Native, and Hispanic or Latino/a/x/e were also disproportionately affected compared to Oregonians who identify as White and who do not identify as Hispanic or Latino/a/x/e. These disparities have also been seen in the United States as a whole. More granular data about the Oregonians affected by mpox in the initial phase of the outbreak is available at OHA's mpox dashboard.

270 cases of mpox started having symptoms in 2022. The height of the mpox outbreak in Oregon was in August 2022, when 95 cases of mpox started having symptoms. By the end of 2022, queer-led community organizing, communications, behavior change, and vaccination events led to dramatic declines in mpox transmission. Only one case of mpox started having symptoms in December of 2022. However, we continue to see some spread of mpox in Oregon communities.

Prevention

- Vaccinate people placed at higher risk of mpox with two doses of Jynneos vaccine as part of routine healthcare maintenance.
  - Vaccine should be given to anyone who wants it and recommended to some patients as outlined in the OHA Jynneos Interim Vaccine Guidance.
  - Two doses of Jynneos are estimated to reduce the risk of mpox by 66-89% while one dose reduces the risk by 36-75%
- Test for and treat HIV infection. While anyone can be infected with mpox, almost all hospitalizations and deaths from mpox in the United States have been among people living with HIV with CD4 counts < 200 cells/mL.
- Test patients with potentially compatible symptoms for mpox.
- People who are sexually active can:
  - Receive two doses of Jynneos vaccine.
  - Pay attention to your body. If you feel unwell or have a new rash, wait until you feel better before having sex or other close skin to skin contact.
  - If you have a new rash or lesions, ask a healthcare provider about getting tested for mpox.
  - If you do choose to have sex or other close skin to skin contact when you or your partner have a rash, cover any rashes or lesions with bandages.

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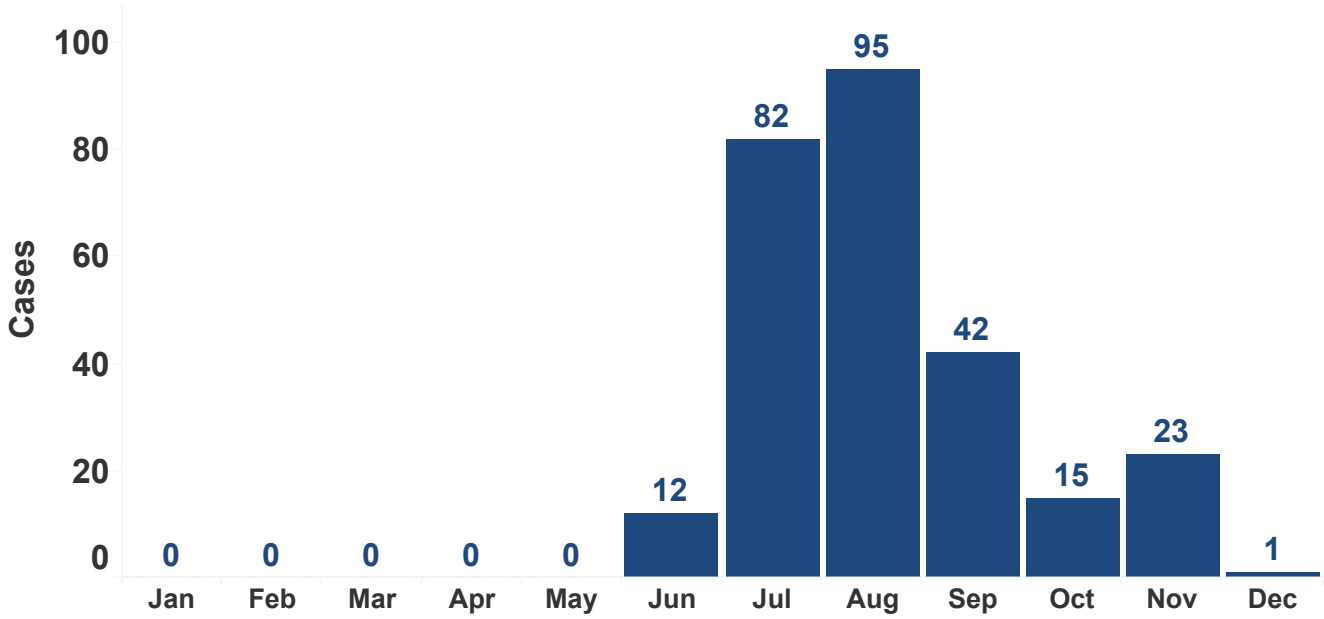
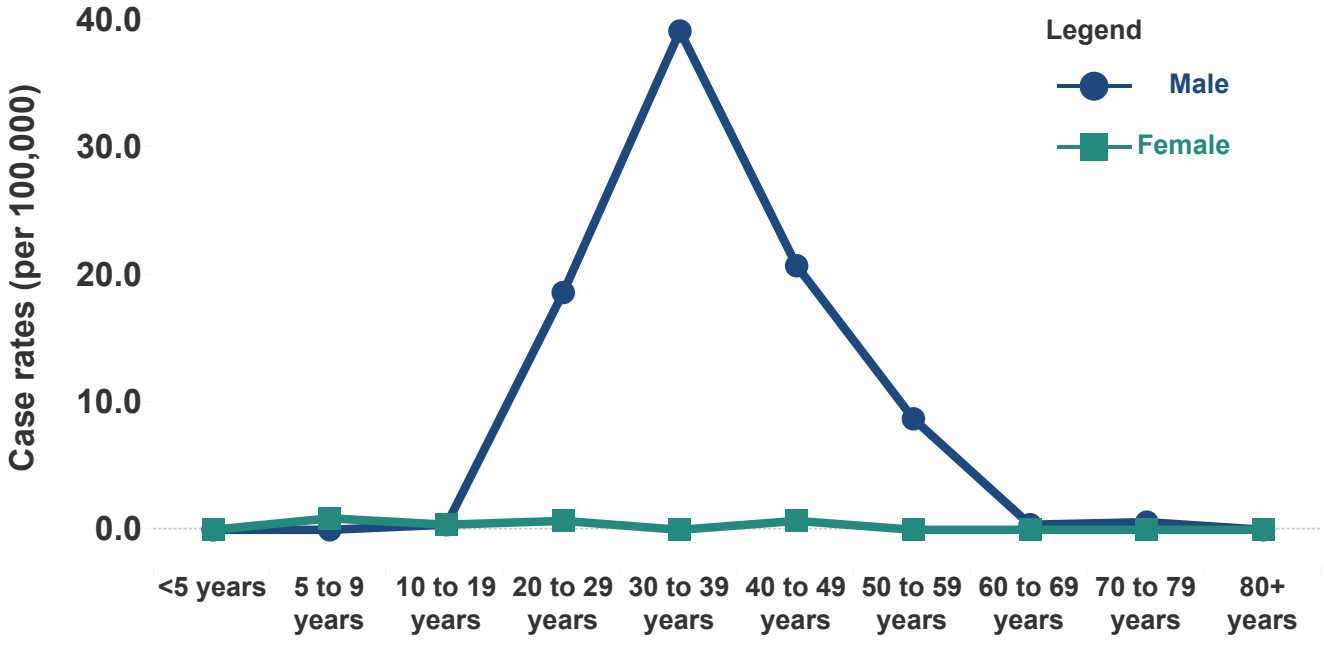
Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

Case counts of mpox by month: Oregon, 2022.



Case rates of mpox by age and sex: Oregon, 2022.



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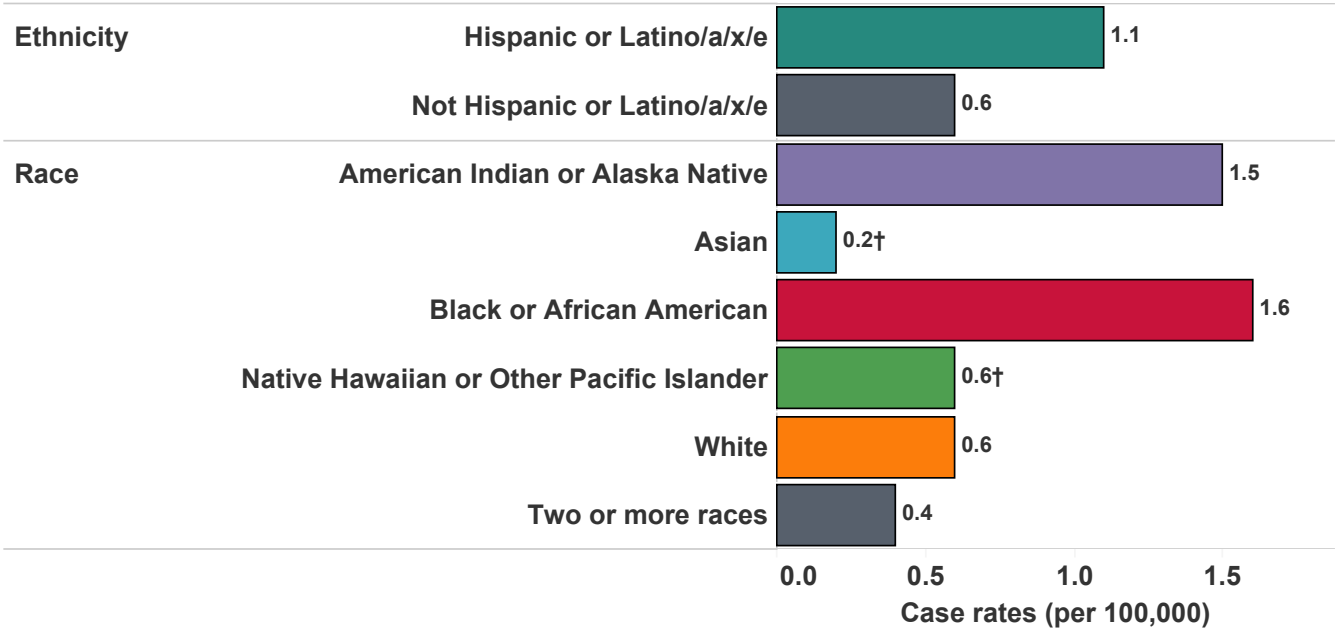
Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

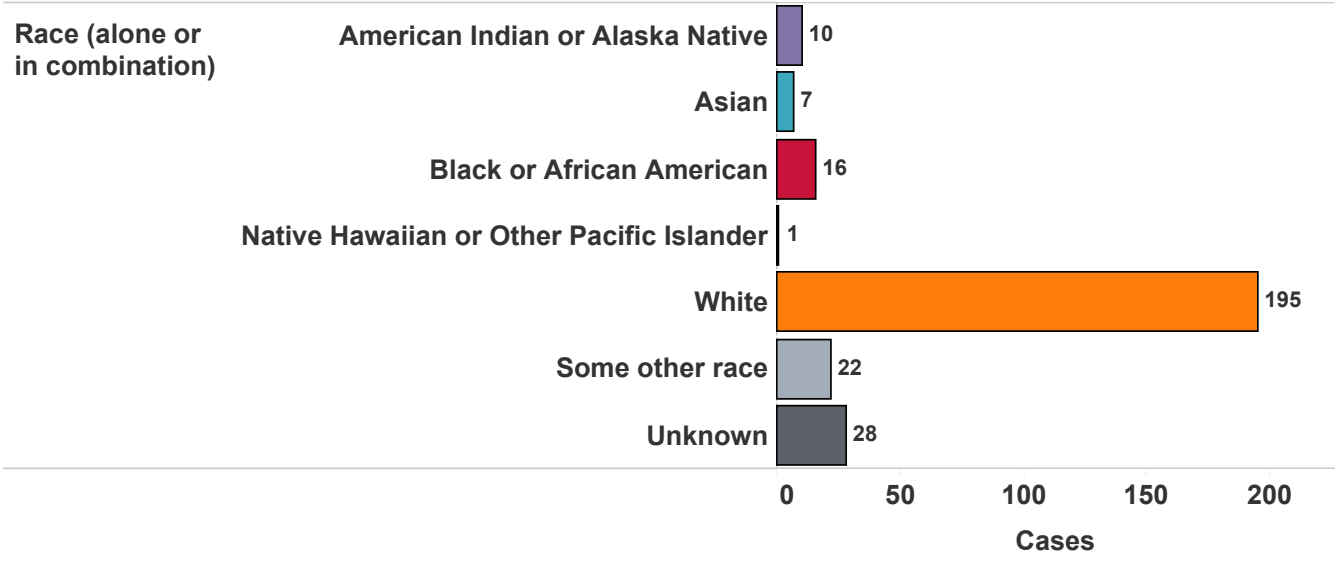
Case rates of mpox by reported race and ethnicity: Oregon, 2013 to 2022.

Race and Ethnicity are groupings determined by the Office of Management and Budget. Due to low case counts, the average case rate over multiple years of data is shown.



Case counts of mpox by reported race and ethnicity: Oregon, 2013 to 2022.

Race alone or in combination means cases may be counted in all races that apply.



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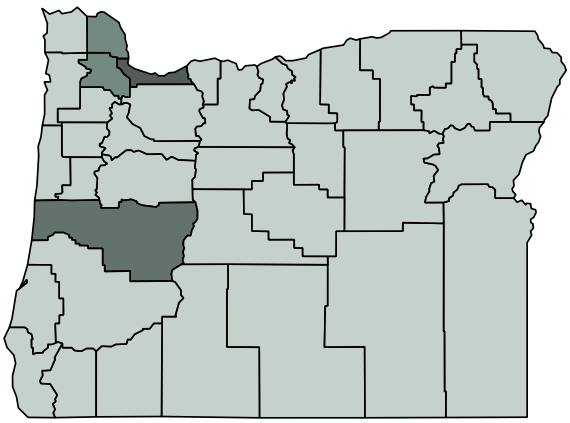
Case rates of mpox by county of residence: Oregon, 2013 to 2022.

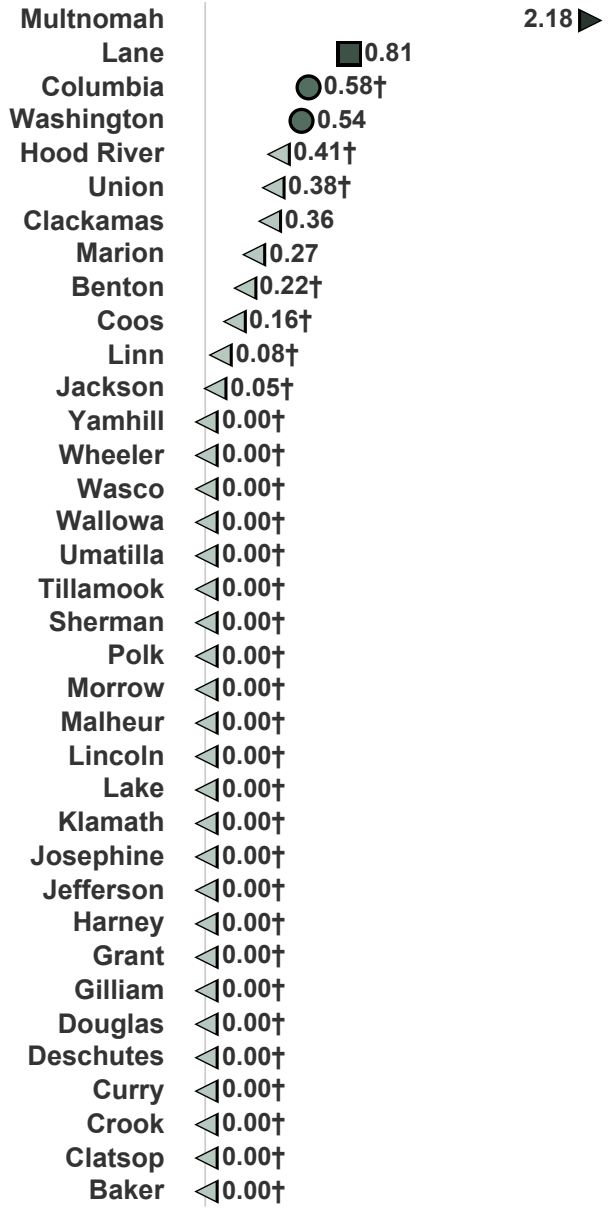
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for mpox from 2013 to 2022 was **0.7 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Mumps

Mumps is an acute viral illness characterized by fever and swelling of the salivary glands, typically the parotids. Transmission is generally through respiratory droplets or through direct contact with nasal secretions. Laboratory diagnosis of mumps in highly vaccinated populations is challenging. Studies have shown negative serologic tests in a person with true mumps as well as a negative RT-PCR if the buccal swab is collected more than three days after parotitis onset. To increase the likelihood of detecting mumps, collecting both serum and buccal swab is recommended from all patients with suspected mumps.

Once an almost universal childhood infection, mumps incidence decreased in the United States with routine childhood vaccination. Reporting of this vaccine-preventable viral infection was discontinued in Oregon in 1981 but, prompted by outbreaks, re-established July 1, 2006.

Seven cases were reported in Oregon during 2022. Because as many as 20% of mumps virus infections are asymptomatic, and nearly 50% are associated with nonspecific or primarily respiratory symptoms (with or without parotitis), mumps infections are significantly underreported.

In 2017, 67 cases were reported in Oregon. A total of 39 cases were outbreak-related. Among 25 cases <19 years of age, 15 were up to date on vaccination. Outbreaks can still occur in highly vaccinated communities, particularly in close-contact settings. Two doses of the vaccine are 88% effective at protecting against mumps; one dose is 78% effective. The driving forces for the outbreaks might be a combination of the imperfect vaccine effectiveness, waning immunity, and the intensity of exposure. Still, high vaccination coverage helps limit the size, duration and spread of mumps cases. Also, because of vaccination, complications of mumps (e.g., meningitis, orchitis) have been substantially reduced. Mumps remains endemic, and vaccination is the best prevention.

Prevention

- One dose of vaccine (as MMR) for all children at 12–15 months of age.
- A second dose (as MMR) for school-age children and for adults at high risk of mumps exposure (e.g., health care personnel, international travelers and students at post-high school educational institutions.
- One dose of vaccine (as MMR) for all other persons born during or after 1957 who are not at high risk of mumps exposure.

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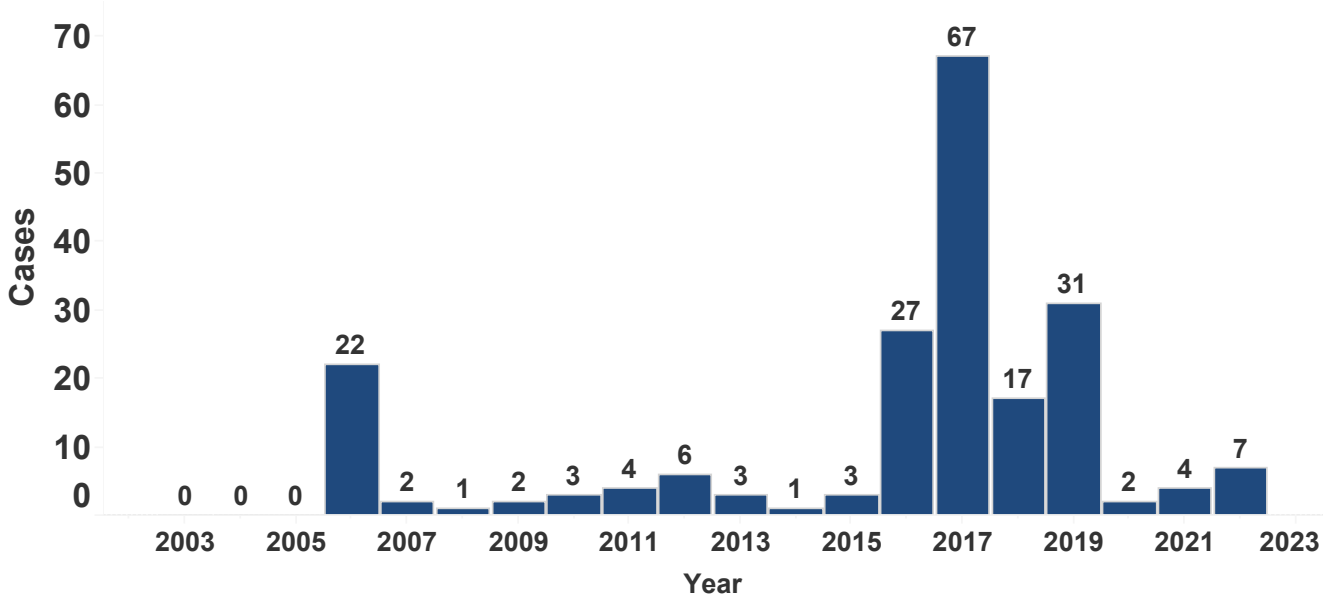
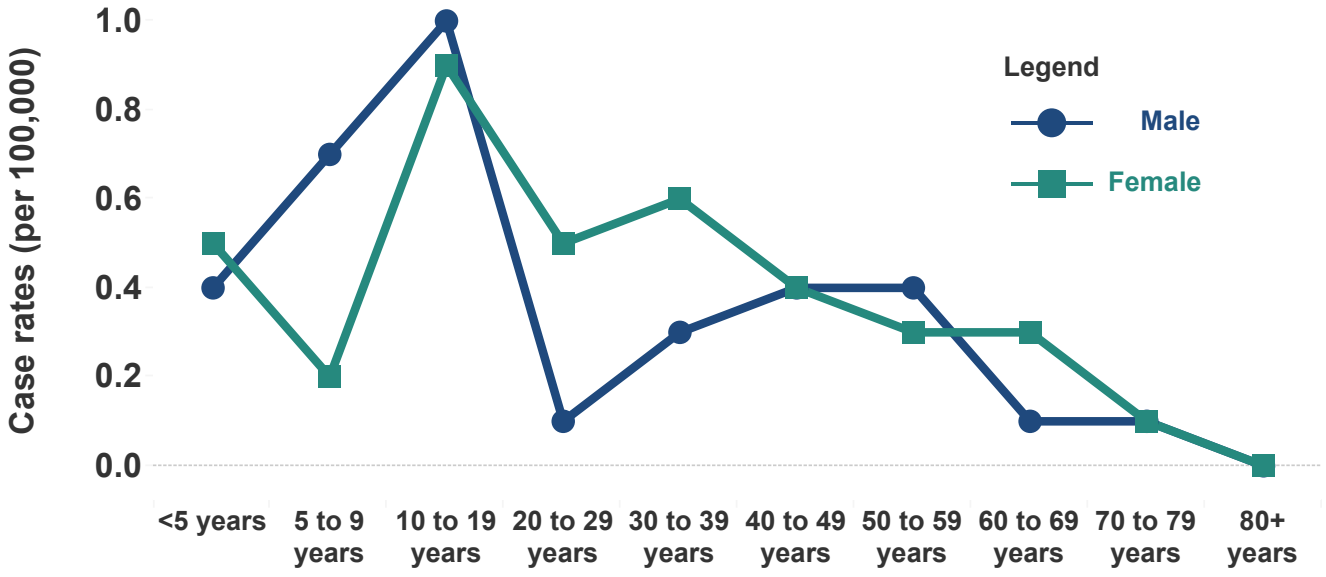
Case counts of mumps by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



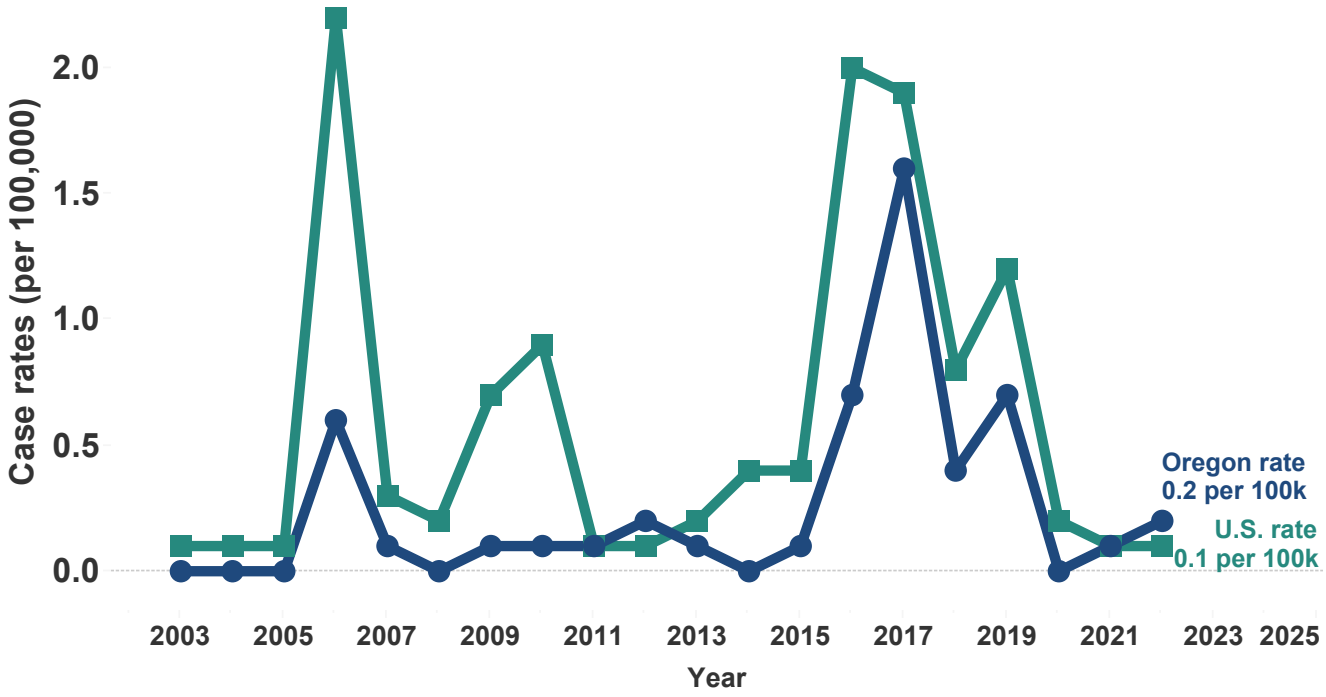
Case rates of mumps by age and sex: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.



Case rates of mumps in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

Pertussis

Pertussis is a highly contagious, acute respiratory infection caused by the bacterium *Bordetella pertussis*. It is transmitted from person to person through contact with respiratory secretions (i.e., droplet transmission). The disease is most severe in infants and young children, many of whom suffer the intense fits of coughing that may end with an inspiratory "whoop." Although the disease is generally less severe in older persons, any infected person can transmit the disease to other susceptible persons, including unimmunized or incompletely immunized infants.

Despite high childhood immunization coverage, pertussis remains endemic in the United States, with epidemics every few years. In 2012, Oregon experienced a pertussis epidemic with the most cases (910) seen in a single year since 1953.

During 2013–2022, 3,038 cases have been reported here — an average of 304 per year. In 2022, there were 17 reported cases of pertussis in Oregon. Because pertussis often goes undiagnosed, it is likely that the actual number of cases greatly exceeds the number reported.

Infants with pertussis are also the most likely to suffer complications and death. Since 2013, 57 (19%) of the 307 infants diagnosed with pertussis in Oregon have been hospitalized.

Vaccination of pregnant women so they can develop antibodies to pertussis and pass them to their babies before birth, has proved highly effective in preventing pertussis in infants — particularly those too young to be vaccinated. For these reasons, women should receive Tdap during each pregnancy, preferably at 27–36 weeks gestation, to protect their newborns. Vaccination of health care workers is also strongly encouraged. Children need a series of five DTaP vaccinations before kindergarten, starting at two months of age. Although vaccine-induced immunity wanes over time, previously

Prevention

- Immunization is the best way to prevent pertussis.
- All women should receive a Tdap vaccine during the 27th through 36th week of *each* pregnancy, preferably during the earlier part of this time period.
- Cover your cough and wash your hands.
- Keep babies away from anyone who is coughing.
- Refer to the immunization schedules from the Advisory Committee on Immunization Practices (ACIP) for more information.

Pertussis

published Oregon data have demonstrated that at any age, the risk of pertussis is higher among the unvaccinated.

Immunity wanes with time, so adolescents and adults need a Tdap booster dose, both to protect themselves and to avoid spreading it to vulnerable infants. All persons ≥10 years of age who have not already received Tdap are advised to get a single dose.

Since 2010, with funding from the Centers for Disease Control and Prevention, Oregon launched the Metropolitan Area Pertussis Surveillance (MAPS) project, with enhanced surveillance for pertussis in Clackamas, Multnomah and Washington counties. Each reported case is investigated extensively and standardized data are collected. These data help guide regional and national public health policy.

Prevention

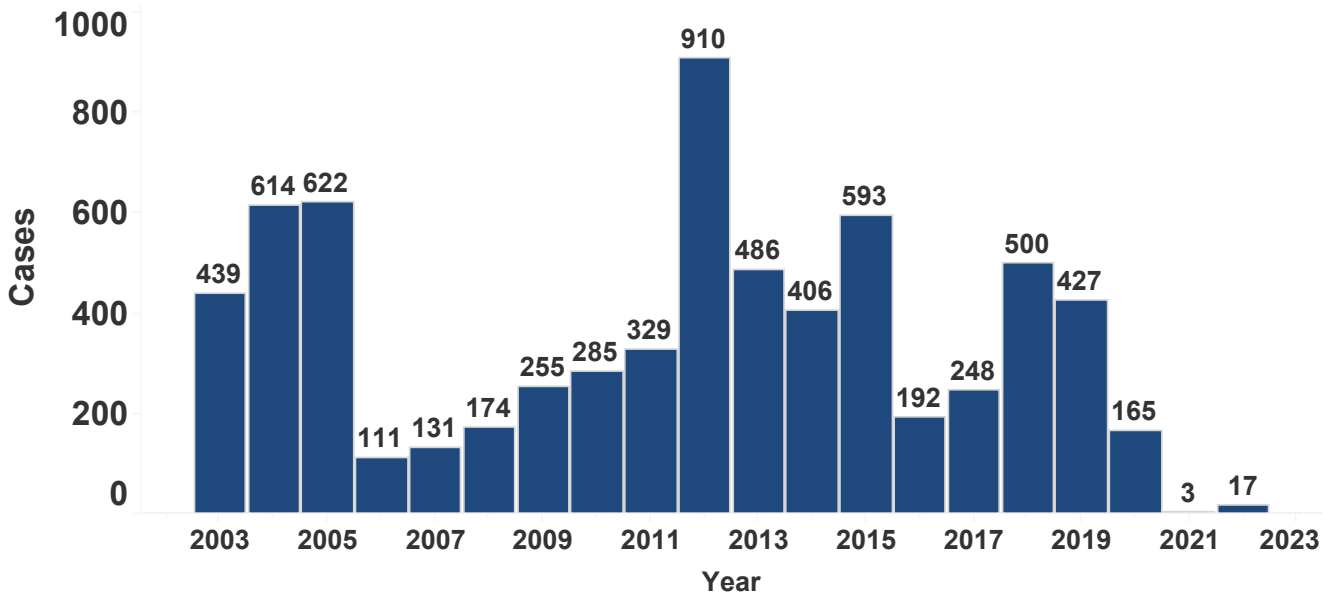
- Immunization is the best way to prevent pertussis.
- All women should receive a Tdap vaccine during the 27th through 36th week of *each* pregnancy, preferably during the earlier part of this time period.
- Cover your cough and wash your hands.
- Keep babies away from anyone who is coughing.
- Refer to the immunization schedules from the Advisory Committee on Immunization Practices (ACIP) for more information.

Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

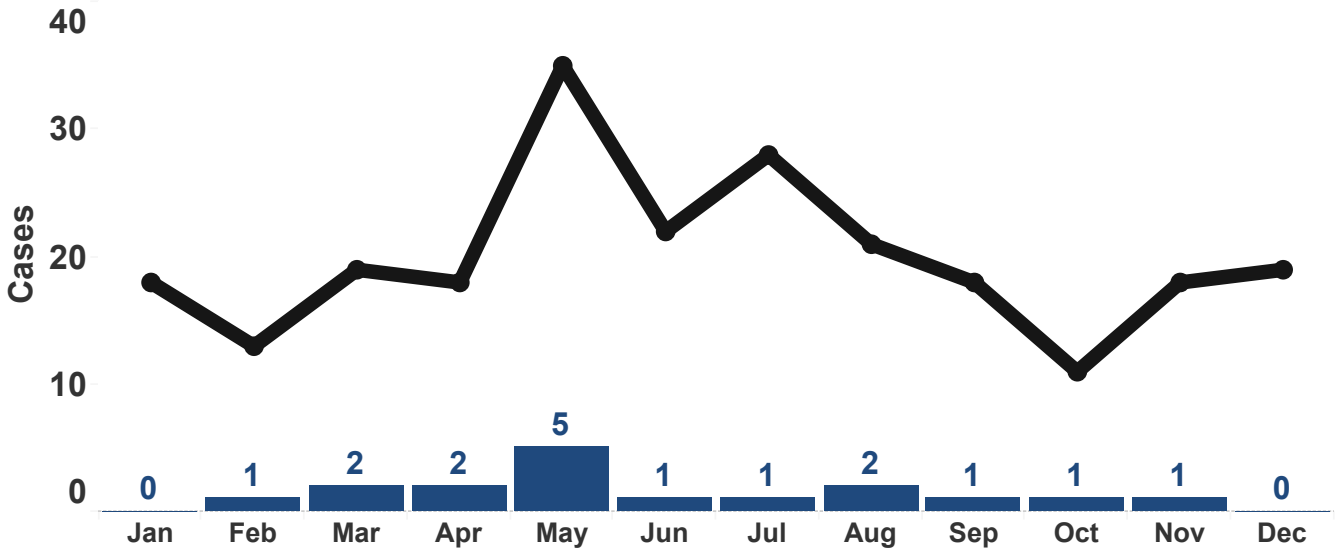
Case counts of pertussis by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case counts of pertussis by month: Oregon, 2022.

Bar chart shows case counts in 2022 while the line shows the median case counts for the previous 5 years.



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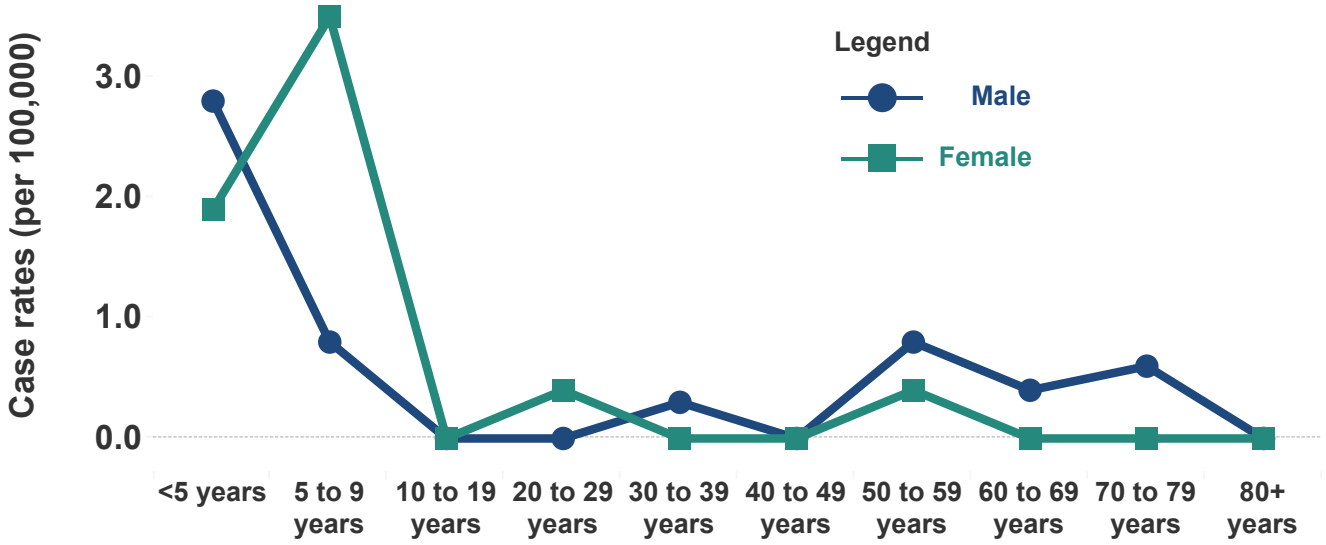
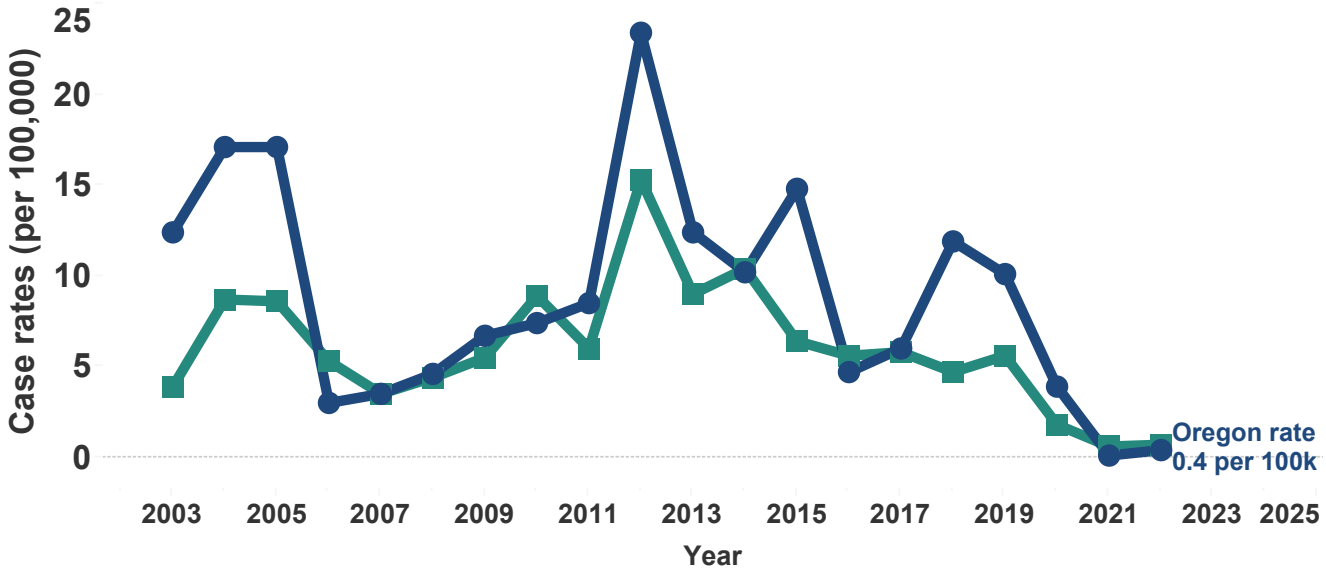
Case rates of pertussis by age and sex: Oregon, 2022.



Case rates of pertussis in Oregon vs nationwide, 2003 to 2022.

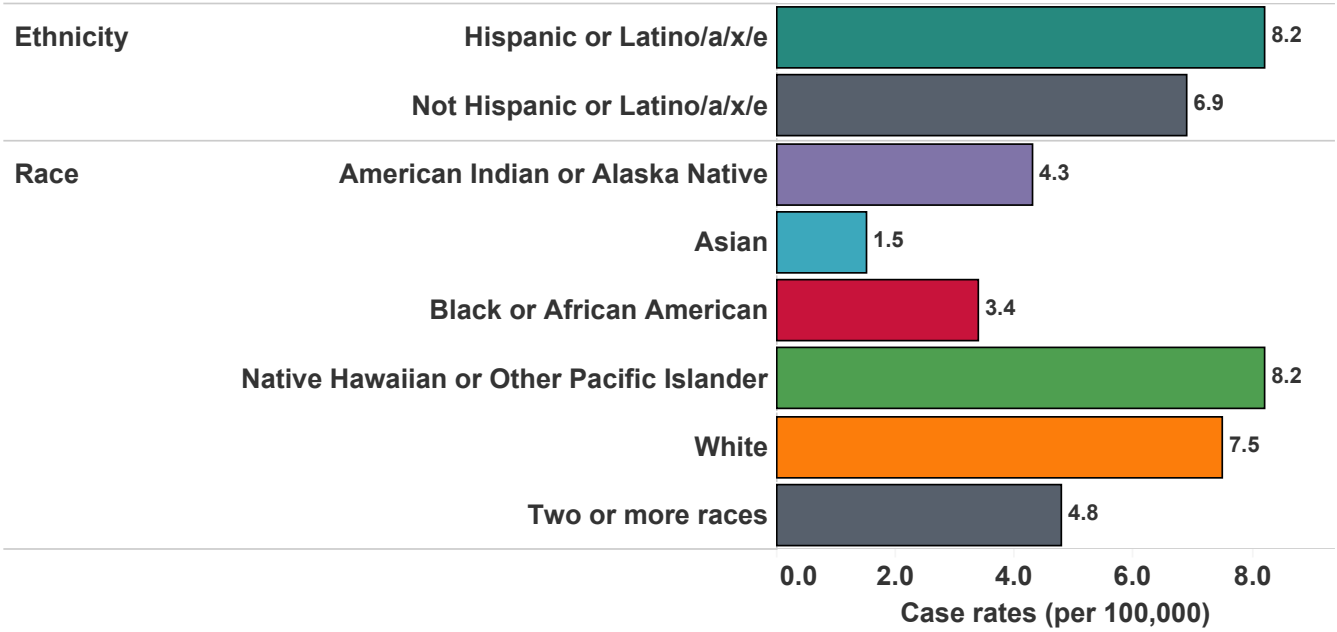
U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

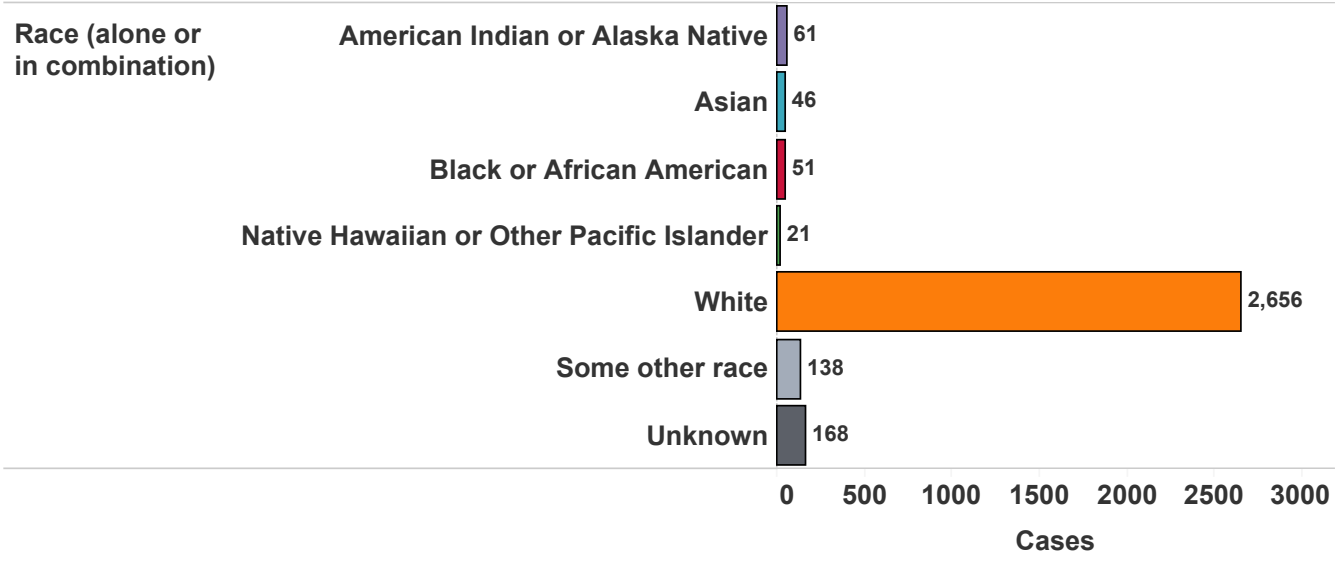
Case rates of pertussis by reported race and ethnicity: Oregon, 2013 to 2022.

Race and Ethnicity are groupings determined by the Office of Management and Budget. Due to low case counts, the average case rate over multiple years of data is shown.



Case counts of pertussis by reported race and ethnicity: Oregon, 2013 to 2022.

Race alone or in combination means cases may be counted in all races that apply.



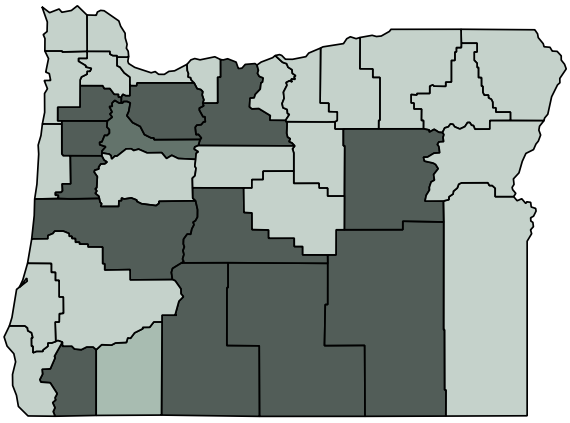
Case rates of pertussis by county of residence: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for pertussis from 2013 to 2022 was **7.3 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate



Harney	16.28
Grant	14.91
Lake	13.62
Lane	13.08
Wasco	11.98
Deschutes	11.95
Benton	9.97
Josephine	9.10
Clackamas	9.03
Polk	8.75
Klamath	8.67
Yamhill	8.30
Marion	7.94
Jackson	6.87
Washington	6.04
Jefferson	5.97
Multnomah	5.92
Linn	5.86
Sherman	5.51†
Tillamook	5.31
Coos	5.19
Columbia	5.03
Union	4.13
Clatsop	3.84
Lincoln	3.73
Malheur	2.20
Crook	2.20
Umatilla	2.12
Hood River	1.63†
Douglas	1.26
Curry	0.87†
Baker	0.60†
Wheeler	0.00†
Wallowa	0.00†
Morrow	0.00†
Gilliam	0.00†

County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Q fever

Q fever is a bacterial infection caused by *Coxiella burnetii*. It can result in acute or chronic illness in humans. It is usually acquired through inhalation of barnyard dust or aerosols contaminated with bacteria from the placentas, body fluids or excreta from infected animals. The bacteria can become airborne and travel for miles. The primary reservoirs are cattle, sheep and goats. Infection may also result from consumption of unpasteurized milk. Veterinarians and sheep, goat and dairy farmers are most at risk.

A host of symptoms can accompany acute Q fever; they include high fever, severe headache, malaise, myalgia, chills, sweats, nausea, vomiting, dry cough, diarrhea, abdominal pain and chest pain. Most people recover from acute Q fever, but some (<5%) develop chronic illness, which often manifests as endocarditis. People with valvular heart disease, pregnant women and people with compromised immune systems are at risk for chronic Q fever after an acute infection. Chronic infection can be treated with long courses of antibiotics.

Q fever reports are rare in Oregon. There was one case of Q fever reported in Oregon in 2022. Nationally, the number of cases outside of Oregon in 2022 was similar at 155.

Prevention

- Barns and laboratories housing potentially infected animals should have restricted access, and holding facilities for sheep should be located away from populated areas.
- Appropriately dispose of placenta, birth products, fetal membranes, and aborted fetuses at facilities housing sheep and goats.
- Use only pasteurized milk and milk products.

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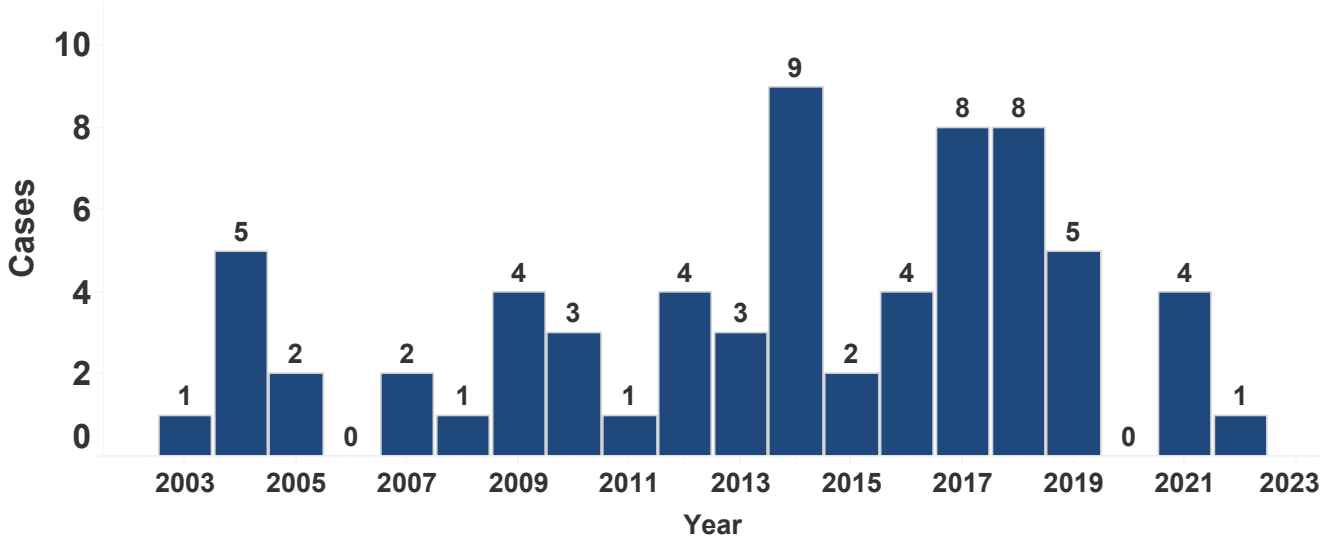
View charts.

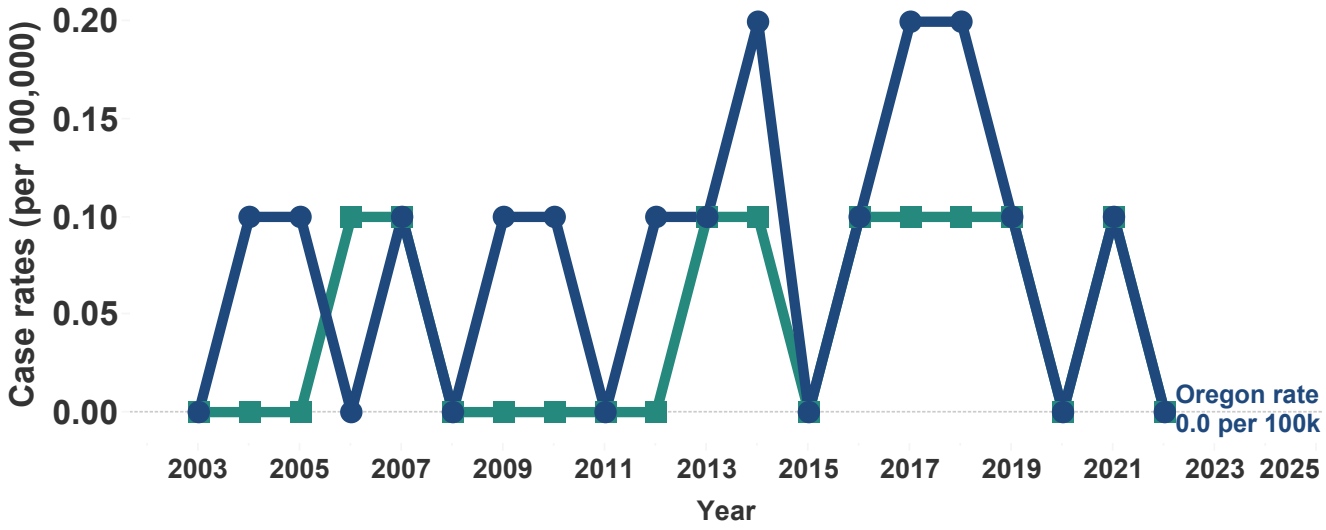
Case counts of Q fever by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of Q fever in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

Rabies

Rabies is an acute infection of the central nervous system caused by a neurotropic rhabdovirus of the genus *Lyssavirus*. All mammals, including humans, are susceptible to rabies. In humans, rabies causes a rapidly progressive and fatal encephalomyelitis. The incubation period in humans is usually 2–12 weeks, but there have been documented incubation periods as long as seven years. Bites from infected animals constitute the primary route of transmission. Transplanted organs, including corneas from patients with undiagnosed rabies, have also caused infection in recipients.

The Pacific Northwest is considered to be free of terrestrial rabies. In Oregon, the main reservoir of rabies is bats. Mammals like foxes and cats may encounter rabid bats, acquire the infection and can transmit it to humans. Since 2000, 8% of the bats tested in Oregon have been positive for rabies. This, of course, is not a random sample of Oregon's bats; rather it represents bats that were neurologically impaired enough to have bitten humans or their pets, and then to have been captured. Any contact between a bat and a human should be evaluated carefully and immediately. All potential human exposures should result in a call to a local public health department office. Testing of an exposing mammal involves killing the animal, removing the head, and sending it to a laboratory for special staining and microscopic examination of brain tissue. Oregon State University's Veterinary Diagnostic Laboratory is the only Oregon laboratory testing animals for rabies exposure. The Oregon State Public Health Laboratory no longer tests animal for rabies.

In 2022, 12 bats and one fox tested positive for rabies. Deschutes county reported 3 followed by Marion and Linncounties with 2 rabies-positive bats each. Josephine had the fox and one bat reported. Oregon has identified two rabies-positive cats; one in 2015 and one in 2017. Bat rabies variant continues to be responsible for all rabies-positive wildlife cases in Oregon. This implies that there may have been a greater interaction between rabid bats and other wildlife in the state. Despite the low rate, it is important to remember we can only protect pets' health and, in turn, human health through vaccination.

Prevention

- Keep rabies vaccinations up to date for all pet cats, ferrets and dogs.
- Maintain control of pets by keeping cats and ferrets indoors and keeping dogs under direct supervision.
- Spay or neuter pets to help reduce the number of unwanted pets that may not be properly cared for or vaccinated regularly.
- Call animal control to remove stray animals from your neighborhood because these animals may be unvaccinated or ill.
- Do not handle wildlife, especially bats and foxes.
- Seek medical attention immediately if you are bitten by a bat, fox, or stray cat in Oregon.

Rabies

Rabies in humans is 100% preventable through prompt appropriate medical care, beginning with thorough cleaning of the wound. Persons not previously immunized for rabies who are exposed to a rabid animal should be given human rabies immune globulin (HRIG), with as much as possible infiltrated into and around the bite wound(s), and the rest administered intramuscularly. They should also receive four doses of rabies vaccine, one each on days 0, 3, 7 and 14.

Before 2008, a five-dose vaccine regimen was recommended. However, review of serologic and case data indicated four doses of vaccination in combination with HRIG elicited a protective immune response and a fifth dose of vaccine provided no additional benefit.

Though bats are the reservoir for rabies in Oregon, canine rabies still accounts for most human rabies cases worldwide. Travelers to rabies-enzootic countries should be warned to seek immediate medical care if they are bitten by any mammal.

Additional information and an algorithm for assessment of rabies risk are available on the Communicable Disease website.

Prevention

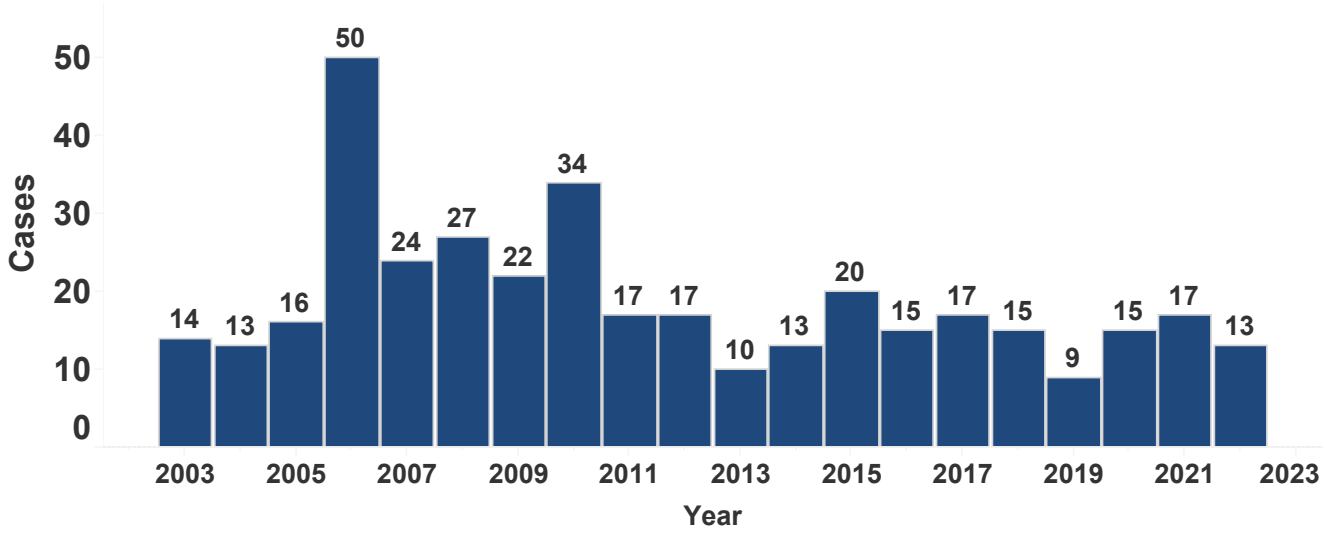
- Keep rabies vaccinations up to date for all pet cats, ferrets and dogs.
- Maintain control of pets by keeping cats and ferrets indoors and keeping dogs under direct supervision.
- Spay or neuter pets to help reduce the number of unwanted pets that may not be properly cared for or vaccinated regularly.
- Call animal control to remove stray animals from your neighborhood because these animals may be unvaccinated or ill.
- Do not handle wildlife, especially bats and foxes.
- Seek medical attention immediately if you are bitten by a bat, fox, or stray cat in Oregon.

Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

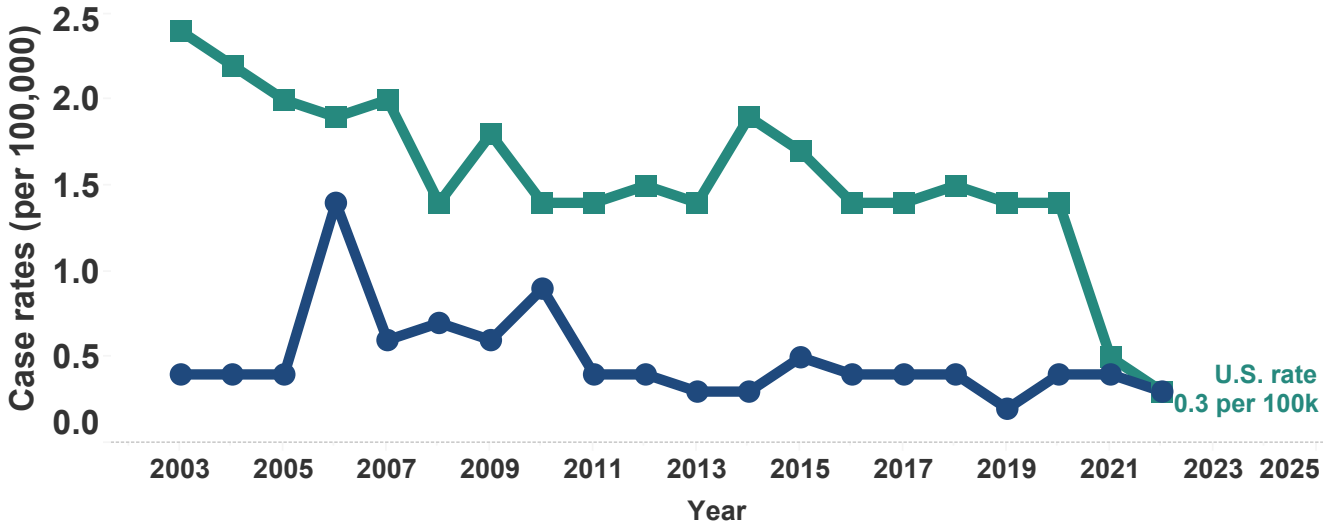
Case counts of animal rabies by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of animal rabies in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

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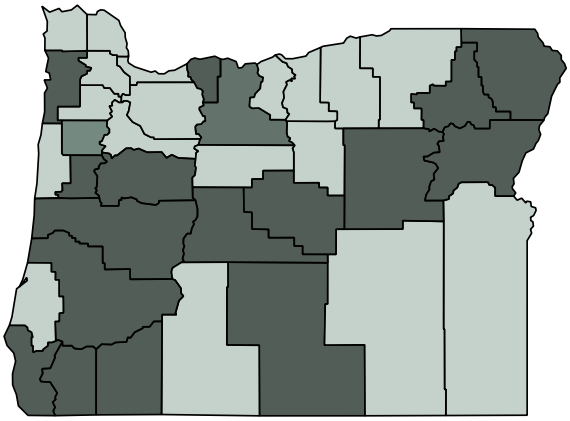
Case rates of animal rabies by county of residence: Oregon, 2013 to 2022.

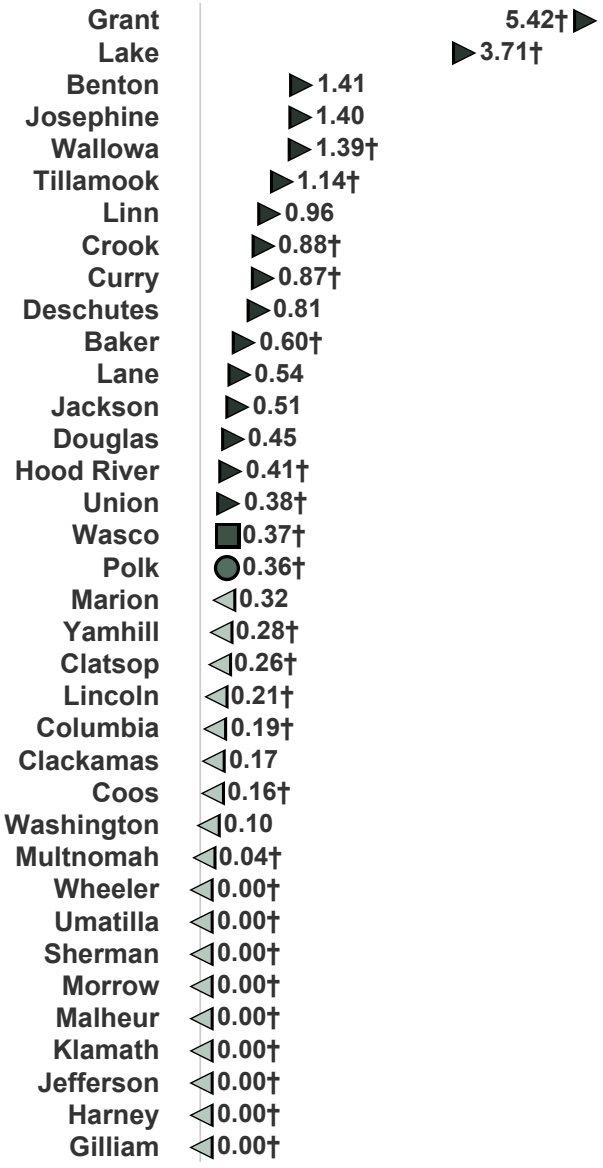
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for animal rabies from 2013 to 2022 was **0.3 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





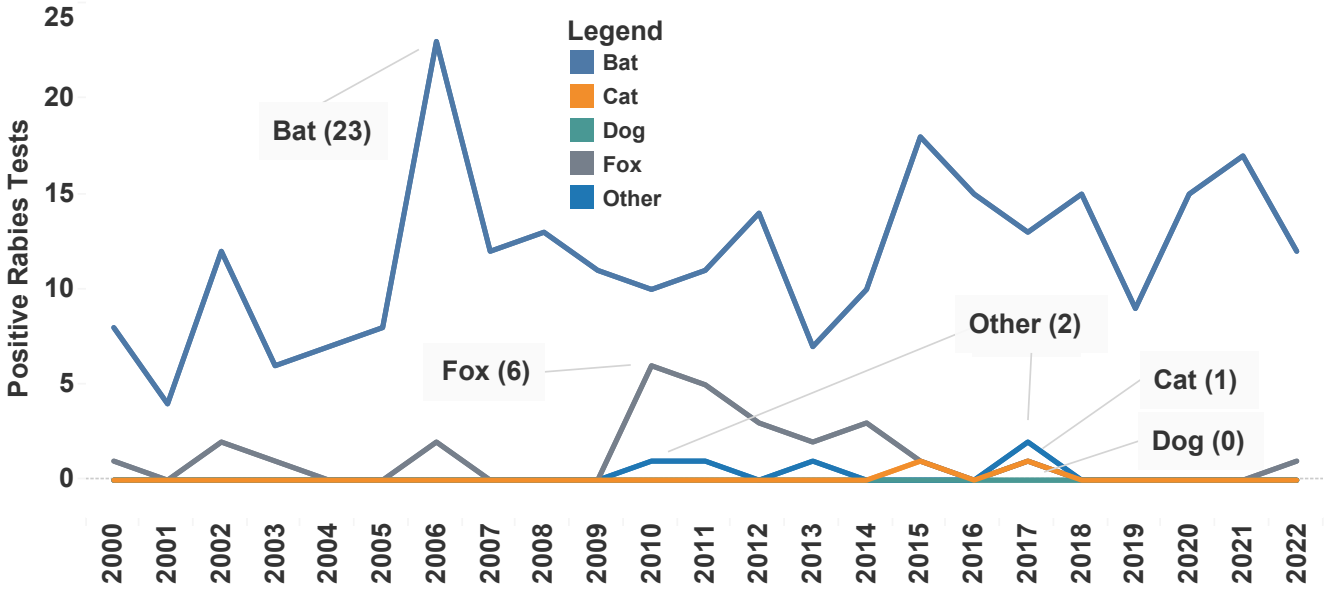
County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

Animals testing positive for rabies by species and year: Oregon, 2000 to 2022.



Animals rabies testing in Oregon, 2000 to 2022 (number of positive/total tested).

	Bat	Cat	Dog	Fox	Other
Grand Total	270/3,381	2/1,877	0/822	28/175	5/860
2022	12/180	0/77	0/55	1/9	0/60
2021	17/174	0/63	0/20	0/0	0/32
2020	15/203	0/72	0/35	0/2	0/25
2019	9/188	0/90	0/29	0/1	0/44
2018	15/205	0/87	0/27	0/1	0/32
2017	13/188	1/110	0/35	1/4	2/36
2016	15/211	0/77	0/33	0/0	0/31
2015	18/219	1/89	0/39	1/4	0/37
2014	10/148	0/79	0/39	3/7	0/31
2013	7/193	0/90	0/36	2/34	1/53
2012	14/203	0/79	0/37	3/28	0/45
2011	11/143	0/86	0/32	5/44	1/61
2010	10/104	0/67	0/41	6/15	1/48
2009	11/117	0/73	0/27	0/1	0/42
2008	13/128	0/58	0/23	0/3	0/53
2007	12/153	0/80	0/33	0/1	0/26
2006	23/126	0/72	0/26	2/4	0/41
2005	8/83	0/100	0/48	0/1	0/23
2004	7/88	0/105	0/42	0/2	0/27
2003	6/61	0/75	0/36	1/5	0/39
2002	12/134	0/102	0/27	2/4	0/29
2001	4/59	0/67	0/46	0/1	0/41
2000	8/73	0/79	0/56	1/4	0/4

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Salmonellosis

Salmonellosis is a bacterial illness characterized by acute abdominal pain, diarrhea and often fever that usually begins one to five days after exposure. Excretion of *Salmonella* may persist for several days or even months beyond the acute phase of illness. Antibiotics are not needed by most patients (the exceptions being those at high risk of invasive infection), and they may increase the duration of excretion.

A wide range of domestic and wild animals can serve as reservoirs of *Salmonella*, including poultry, swine, cattle, rodents, iguanas, tortoises, turtles, snakes, young poultry (e.g., baby chicks), dogs and cats. Most human infections are thought to come from consumption of fecally contaminated food or water, but other environmental exposures may be hard to document and, therefore, remain underreported. Raw or undercooked produce and products of animal origin — such as eggs, milk, meat and poultry — have been implicated as common sources of animal and human salmonellosis. Person-to-person transmission of salmonellosis is well documented, although it occurs less commonly than with other infections, such as *Escherichia coli* O157.

In 2022, there were 486 nontyphoidal salmonellosis cases in Oregon; 402 had lab-confirmed isolates, from which 70 different *Salmonella* serotypes were identified. Of approximately 2,500 known serotypes, only about 200 are detected in the United States in any given year. In Oregon, *S. Enteritidis* and *S. Typhimurium* have historically been the most common serotypes, comprising 26% and 11% of all lab-confirmed nontyphoidal *Salmonella* isolates in 2022, respectively. Seventy-nine percent of reported cases were sporadic, 9% were associated with an outbreak, and 7% had documented transmission within a household.

Ten outbreaks of salmonellosis were investigated in 2022, which accounted for 36 Oregon cases. Seven outbreaks were classified as foodborne and 3 as associated with animal contact. The largest outbreak included 19 cases who had contact with backyard poultry and involved multiple serotypes.

Prevention

- Cook poultry, ground beef and eggs thoroughly.
- Do not eat or drink food containing raw eggs or raw (unpasteurized) milk.
- If you are served undercooked meat, poultry or eggs in a restaurant, send it back to the kitchen for further cooking.
- Wash hands, kitchen work surfaces and utensils with soap and warm water immediately after they have been in contact with raw meat or poultry.
- Be particularly careful with foods prepared for infants, the elderly and the immunocompromised.
- Wash hands with soap and warm water after handling reptiles, birds or baby chicks, and after contact with pet feces.
- Avoid direct or even indirect contact between reptiles (turtles, iguanas, other lizards, snakes) and infants or immunocompromised persons.
- Don't work with raw poultry or meat and an infant (e.g., feeding or changing diaper) at the same time.

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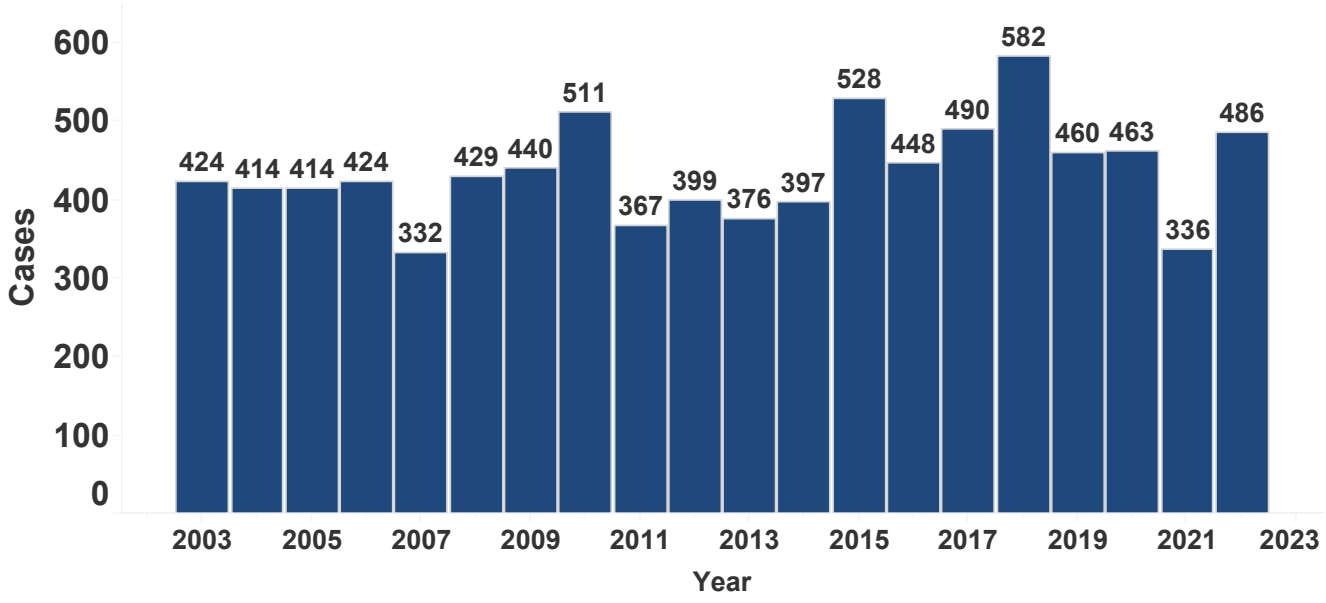
View charts.

Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

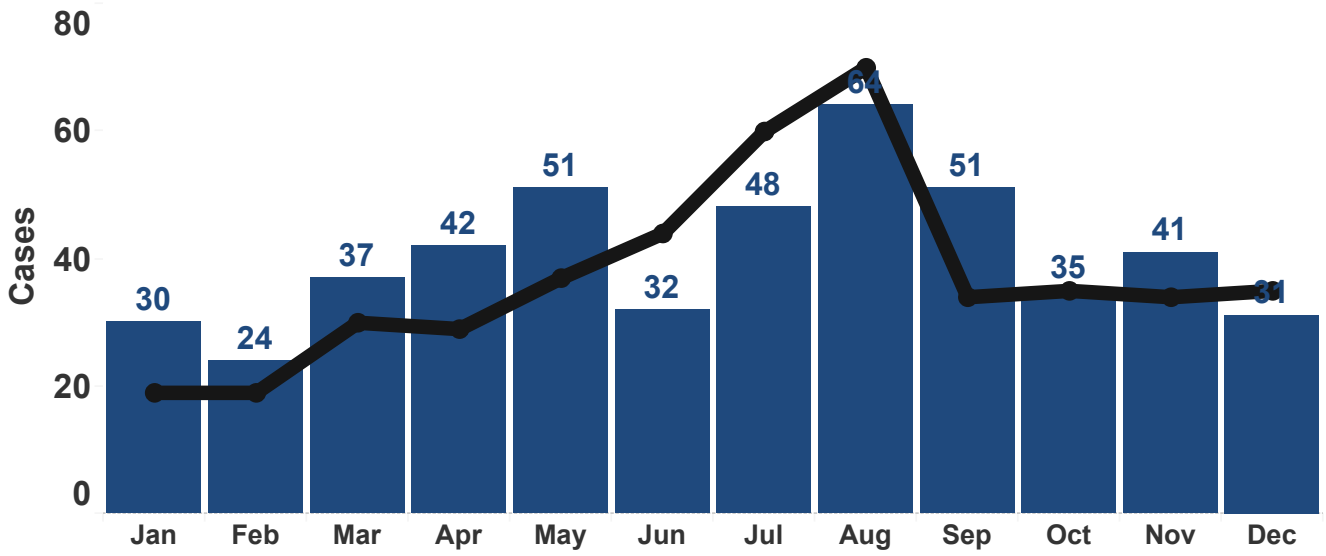
Case counts of salmonellosis by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case counts of salmonellosis by month: Oregon, 2022.

Bar chart shows case counts in 2022 while the line shows the median case counts for the previous 5 years.



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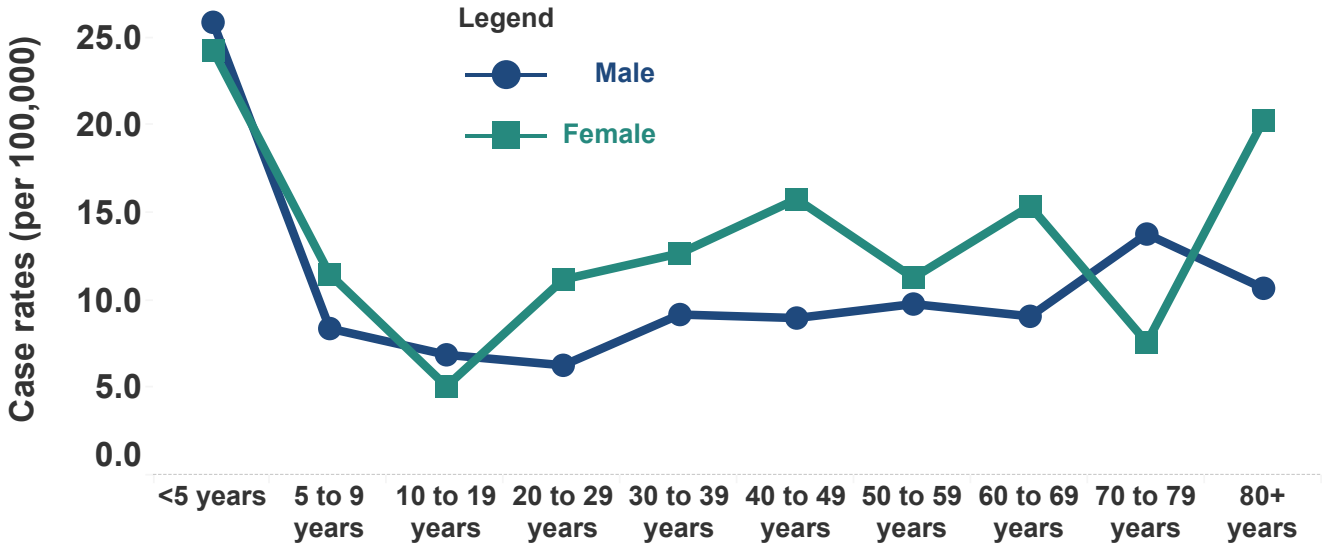
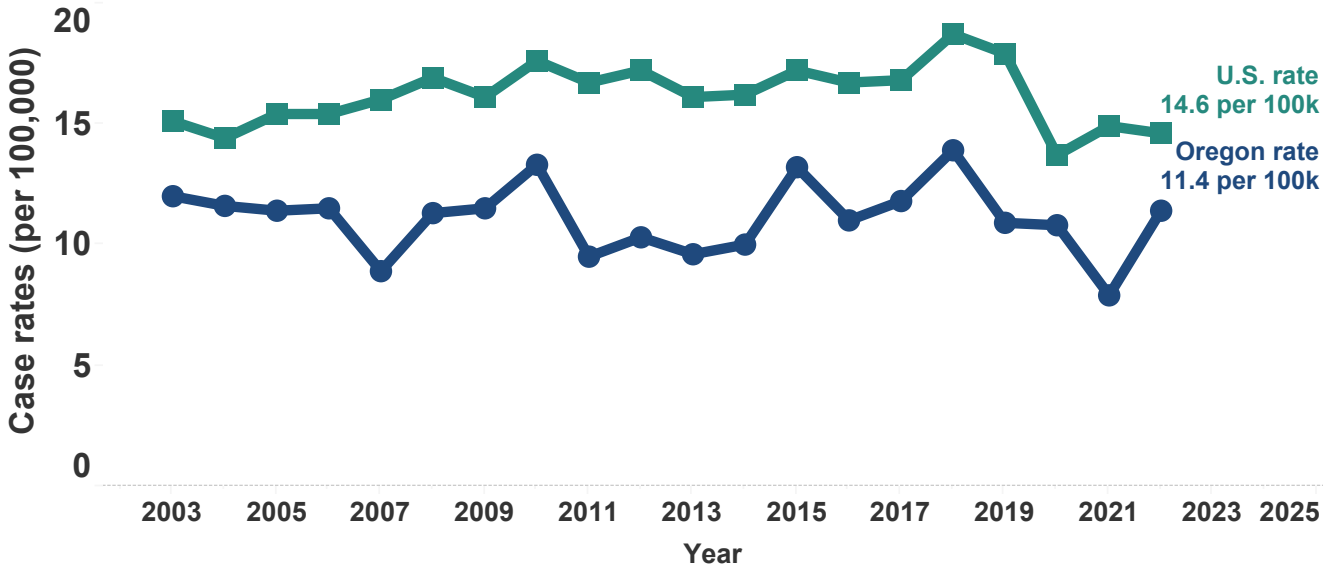
Case rates of salmonellosis by age and sex: Oregon, 2022.



Case rates of salmonellosis in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

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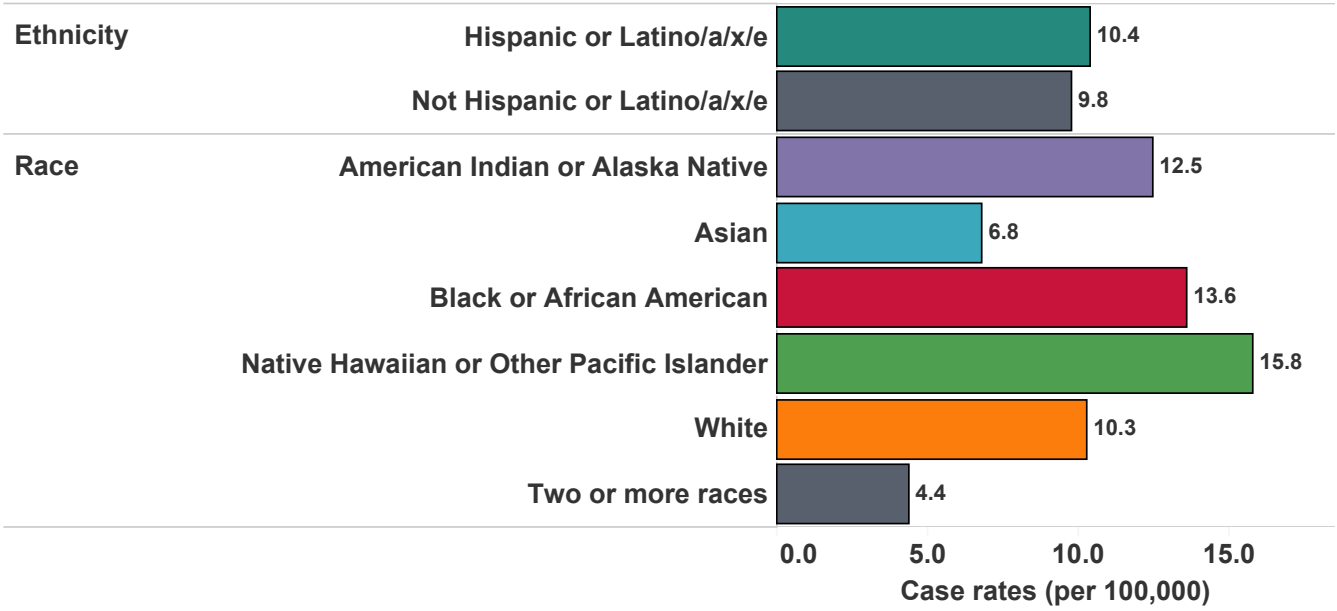
Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

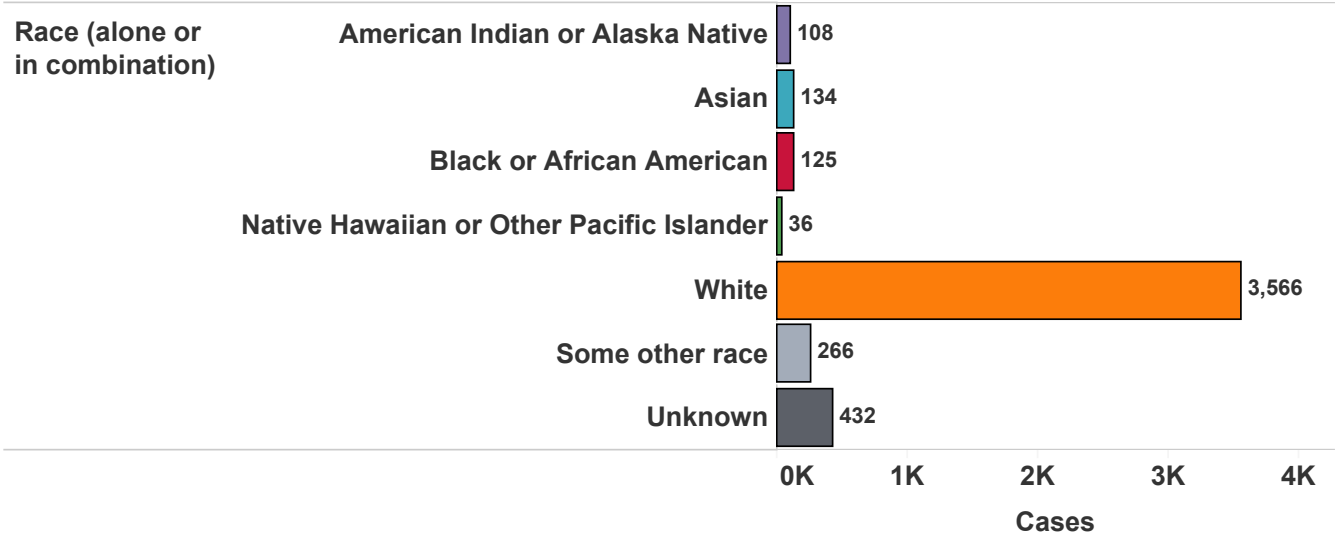
Case rates of salmonellosis by reported race and ethnicity: Oregon, 2013 to 2022.

Race and Ethnicity are groupings determined by the Office of Management and Budget. Due to low case counts, the average case rate over multiple years of data is shown.



Case counts of salmonellosis by reported race and ethnicity: Oregon, 2013 to 2022.

Race alone or in combination means cases may be counted in all races that apply.



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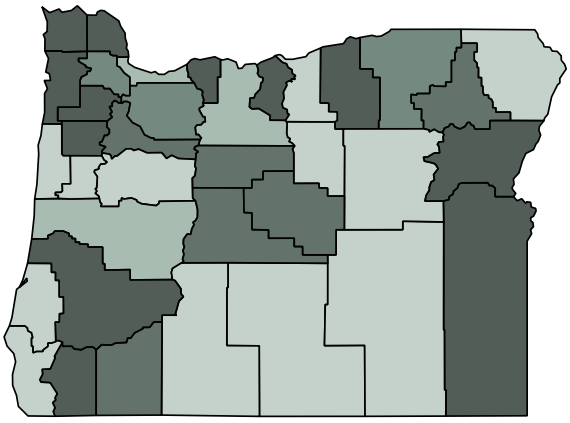
Case rates of salmonellosis by county of residence: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for salmonellosis from 2013 to 2022 was **11.0 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate



Josephine	17.97
Sherman	16.53†
Hood River	14.26
Baker	13.79
Douglas	13.70
Yamhill	13.30
Malheur	13.20
Columbia	12.97
Tillamook	12.52
Morrow	12.44
Polk	12.28
Clatsop	12.02
Deschutes	11.95
Jefferson	11.94
Crook	11.87
Marion	11.66
Union	11.63
Jackson	11.53
Clackamas	11.44
Umatilla	11.00
Washington	10.70
Wasco	10.48
Multnomah	10.43
Lane	10.36
Linn	9.22
Coos	9.13
Curry	8.30
Lincoln	8.28
Klamath	7.93
Wheeler	6.90†
Harney	6.78
Benton	6.50
Lake	6.19
Wallowa	5.55†
Gilliam	5.01†
Grant	1.36†

County Rates (per 100,000)

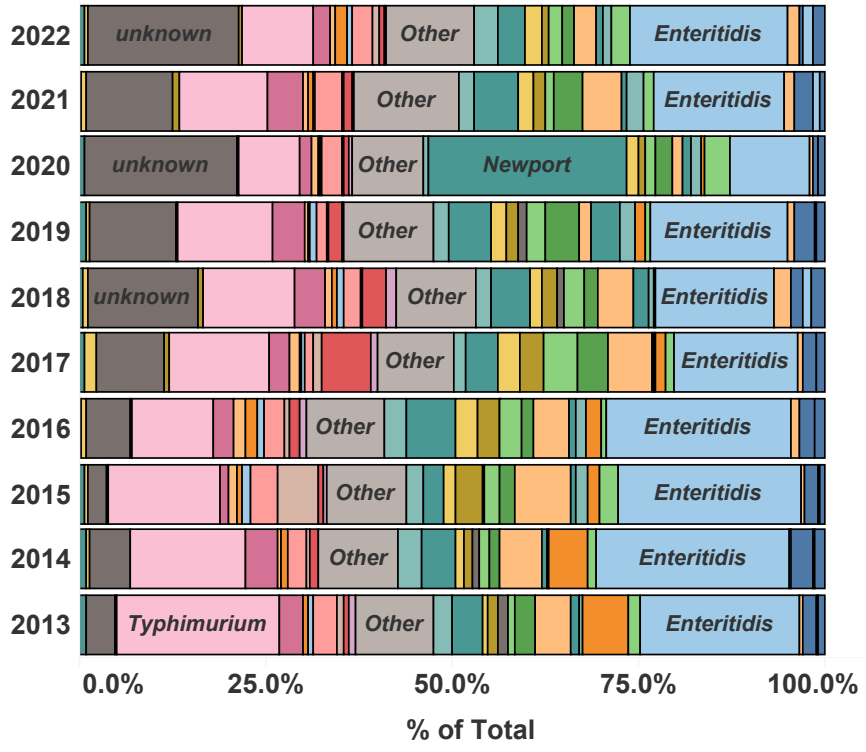
†Note: Rates based on small case counts (<5 cases) might be unstable.

Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

Salmonellosis cases by serotype Oregon, 2013 to 2022.

Click on a serotype to compare between years.



Legend

- *Agona*
- *Anatum*
- *Braenderup*
- *Dublin*
- *Enteritidis*
- *Hadar*
- *Heidelberg*
- *I 4,[5],12:b:-var.L(+) tartrate+*
- *I 4,12:i:-*
- *I 4,5,12:i:-*
- *Infantis*
- *Javiana*
- *Mbandaka*
- *Montevideo*
- *Muenchen*
- *Newport*
- *Oranienburg*
- *Other*
- *Panama*
- *Paratyphi B var. Java*
- *Poona*
- *Saintpaul*
- *Sandiego*
- *Senftenberg*
- *Stanley*
- *Thompson*
- *Typhimurium*
- *Uganda*
- *unknown*
- *Virchow*
- *Weltevreden*

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Shigellosis

Shigellosis is an acute bacterial infection characterized by (sometimes bloody) diarrhea, vomiting, abdominal cramps and, often, fever. In Oregon, shigellosis is typically caused by *S. sonnei* or *S. flexneri*. The other species — *S. boydii* and *S. dysenteriae* — are more common in developing countries. Humans are the only known reservoir. Shigellosis is transmitted from person to person, and just a few organisms can cause illness. The incidence of shigellosis typically peaks in late summer and fall. Treatment reduces duration of illness and, importantly, the period of communicability. However, the organism has become resistant to many antibiotics used for empiric therapy; for example, high levels of resistance to ampicillin and trimethoprim/sulfamethoxazole have been found in Oregon. Testing for antibiotic susceptibility is important for treatment.

Outbreaks in daycare centers are common, mainly due to the poor hygienic practices of small children. Houseless populations in Oregon also experience outbreaks of shigellosis more frequently. Hand washing is the most important means of prevention.

After an historic low of 50 cases in 2014, the number of cases jumped to 113 in 2015, peaked at 289 in 2018 with 195 reported in 2022. Of these 195 cases, 75 were *S. flexneri,* 18 were *S. sonnei*, and 3 were *S. boydii.* The species of *Shigella* is not known for many cases due to the use of culture-independent diagnostic testing.

The rate of shigellosis has historically been highest among children 1–4 years of age. Incidence rates shifted away from this trend to people in their 30s, with males accounting for 63% of the total cases reported in 2022. Seven percent of the cases reported in 2022 were in males that were houseless. Twenty-six percent of the cases required hospitalization.

Prevention

- Wash hands with soap and warm water carefully and frequently, especially after going to the bathroom or after changing diapers and before preparing food or beverages.
- Properly dispose of soiled diapers.
- Disinfect diaper changing areas after using them.
- Keep children with diarrhea out of child care settings.
- Supervise hand washing of toddlers and small children after they use the toilet.
- Do not prepare food for others while ill with diarrhea.
- Avoid swallowing water from ponds, lakes or untreated pools.

Shigellosis

There are clear racial disparities in the incidence of shigellosis in Oregon during the past decade, with individuals identifying as Native Hawaiian or Other Pacific Islander (8.8 per 100,000), as Black or African American (7.1 per 100,000) and as Hispanic or Latino (5.2 per 100,000) experiencing a relatively higher burden of disease.

No outbreaks of shigellosis were reported in 2022.

Prevention

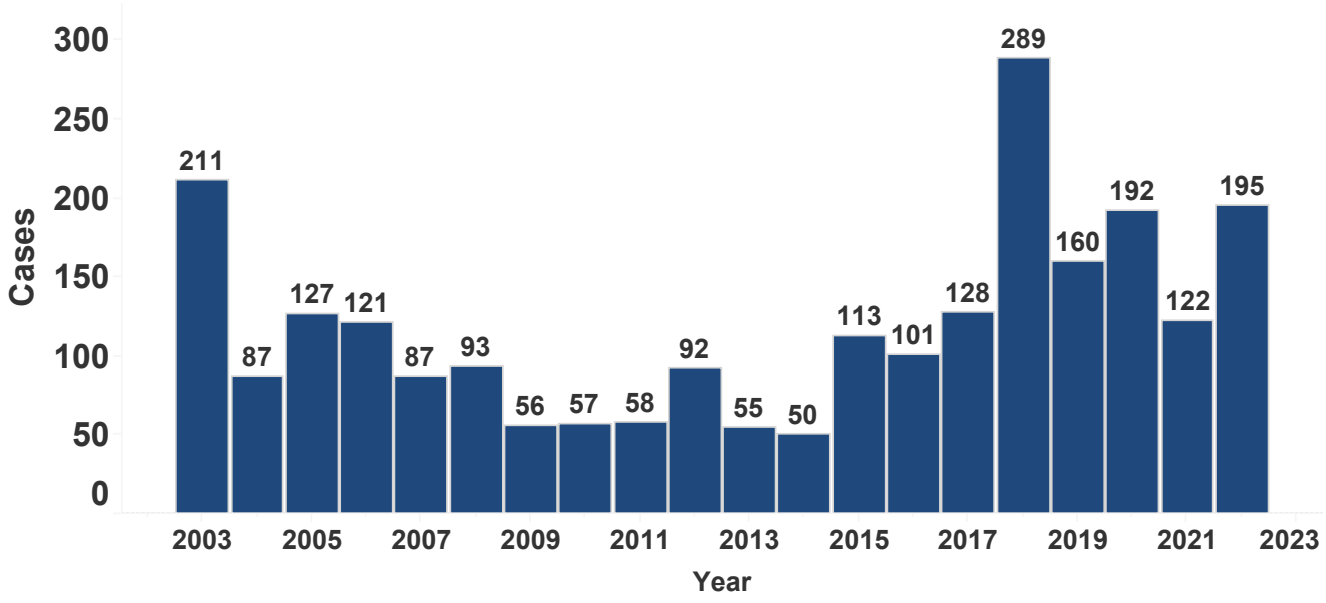
- Wash hands with soap and warm water carefully and frequently, especially after going to the bathroom or after changing diapers and before preparing food or beverages.
- Properly dispose of soiled diapers.
- Disinfect diaper changing areas after using them.
- Keep children with diarrhea out of child care settings.
- Supervise hand washing of toddlers and small children after they use the toilet.
- Do not prepare food for others while ill with diarrhea.
- Avoid swallowing water from ponds, lakes or untreated pools.

Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

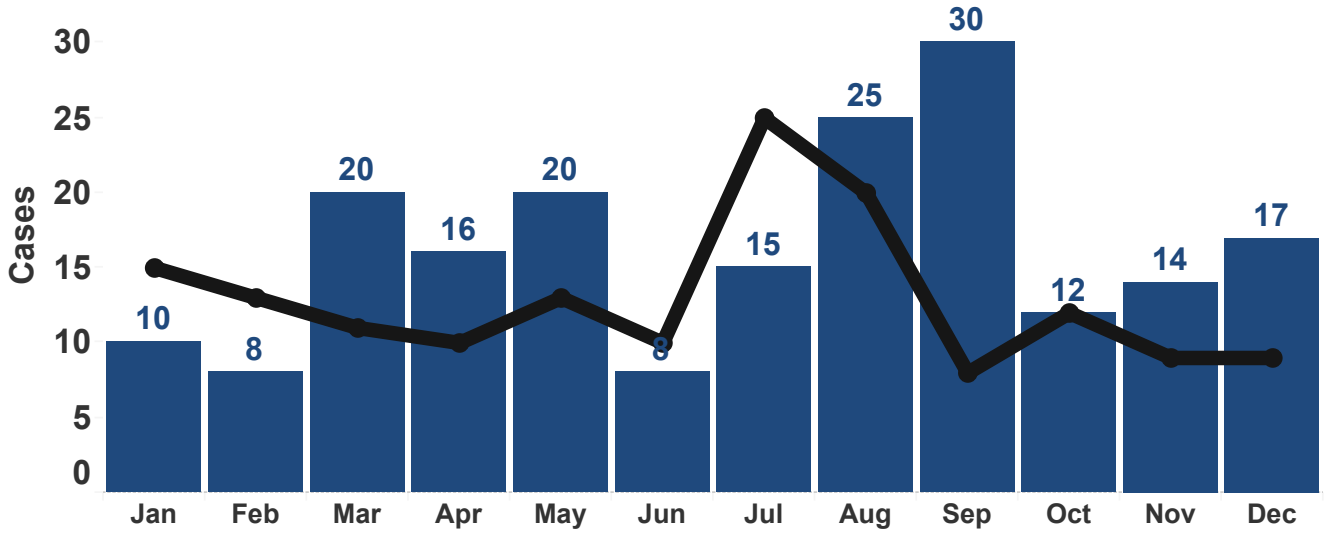
Case counts of shigellosis by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case counts of shigellosis by month: Oregon, 2022.

Bar chart shows case counts in 2022 while the line shows the median case counts for the previous 5 years.



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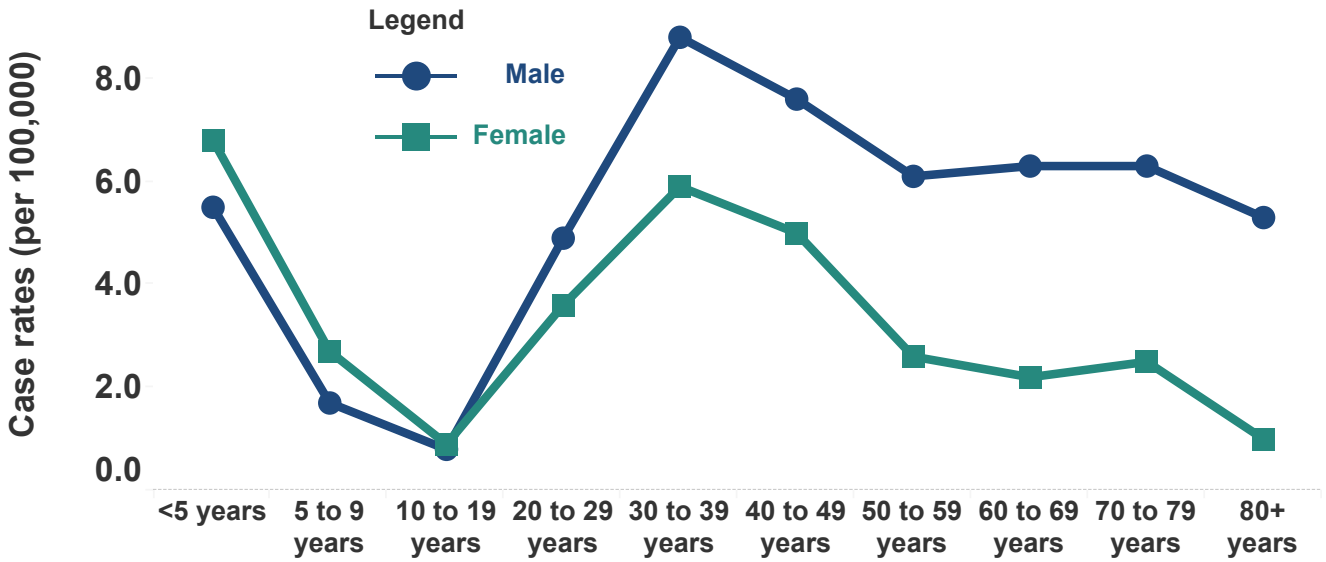
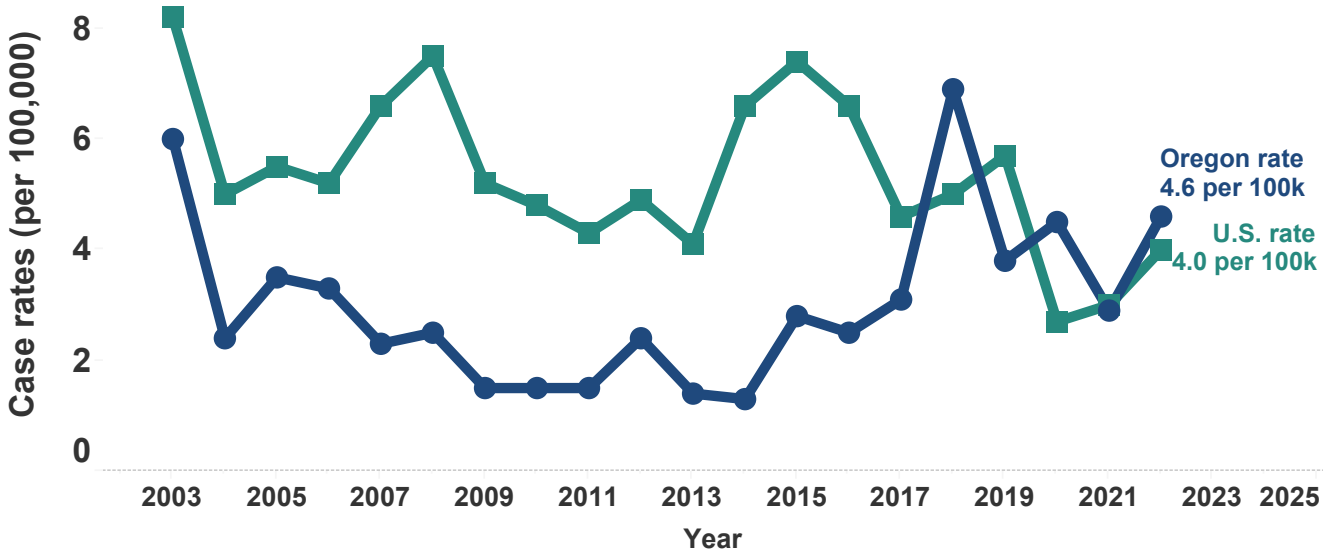
Case rates of shigellosis by age and sex: Oregon, 2022.



Case rates of shigellosis in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

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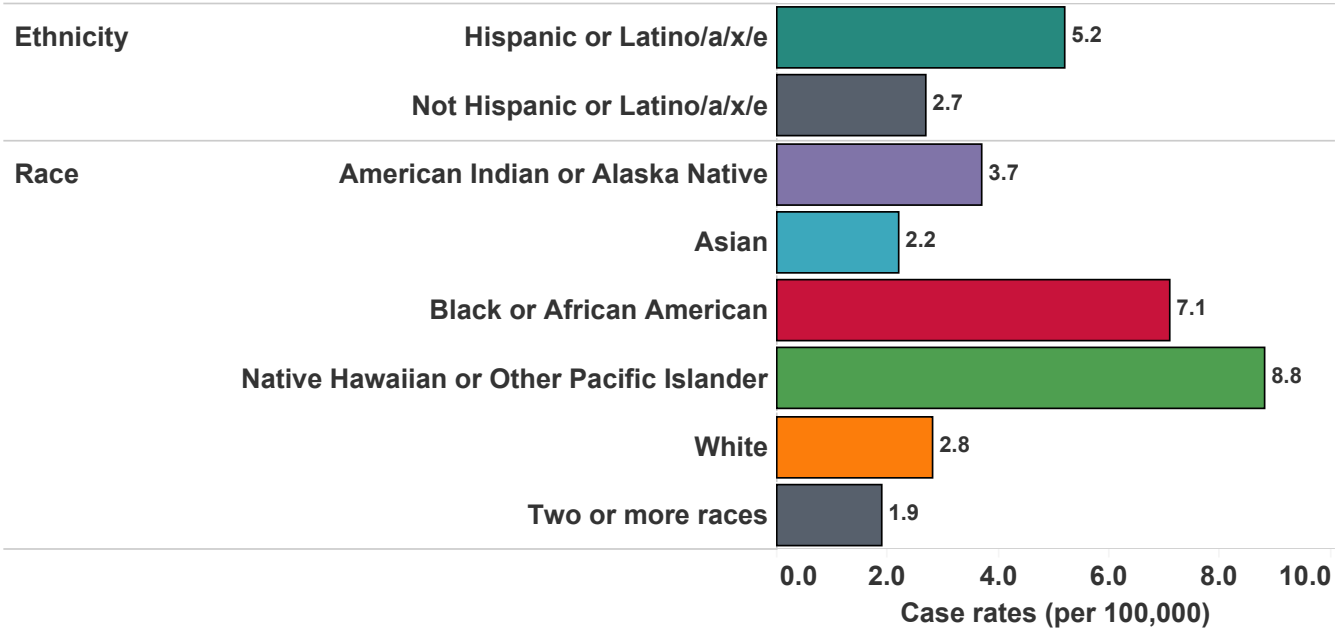
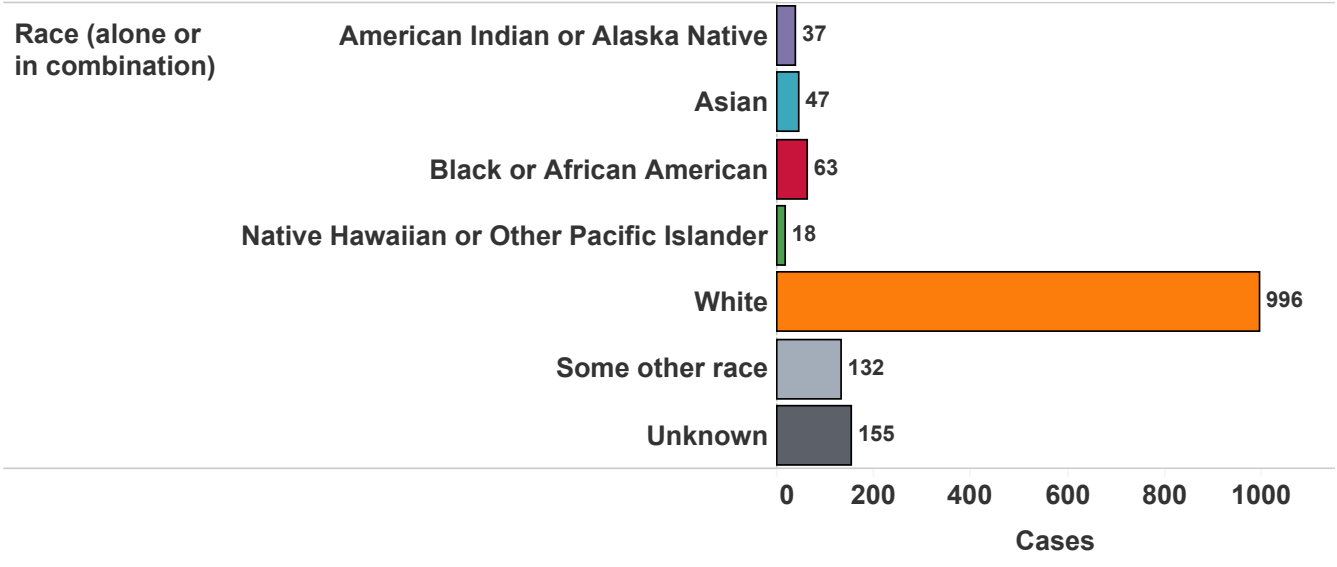
Case rates of shigellosis by reported race and ethnicity: Oregon, 2013 to 2022.

Race and Ethnicity are groupings determined by the Office of Management and Budget. Due to low case counts, the average case rate over multiple years of data is shown.



Case counts of shigellosis by reported race and ethnicity: Oregon, 2013 to 2022.

Race alone or in combination means cases may be counted in all races that apply.



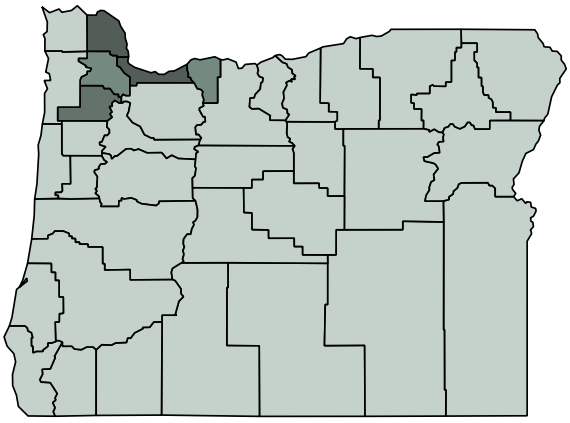
Case rates of shigellosis by county of residence: Oregon, 2013 to 2022.

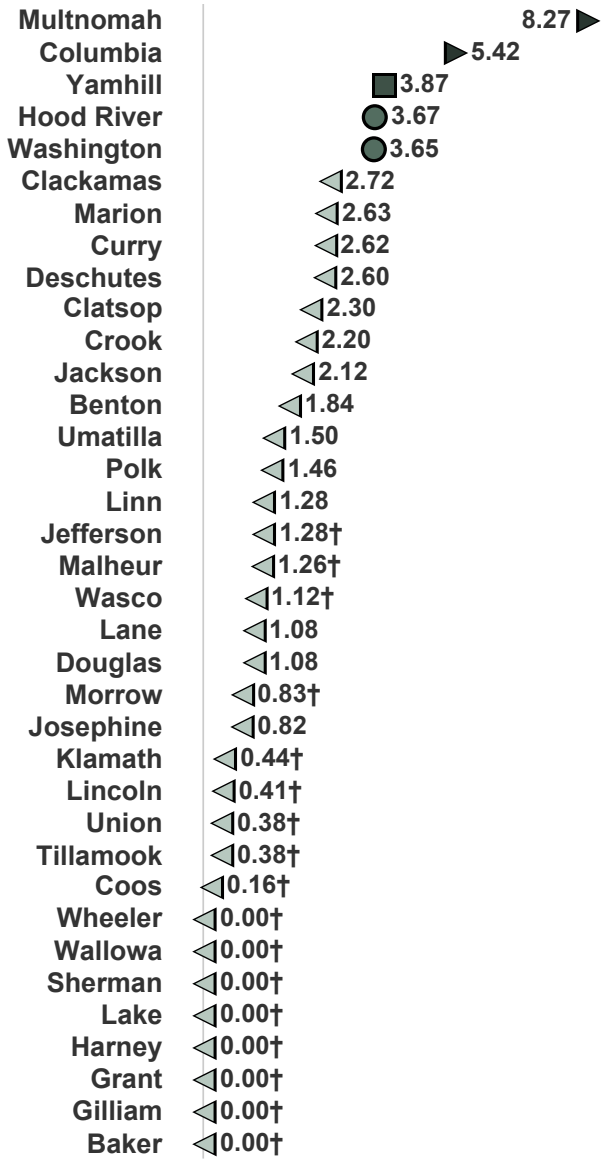
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for shigellosis from 2013 to 2022 was **3.4 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate



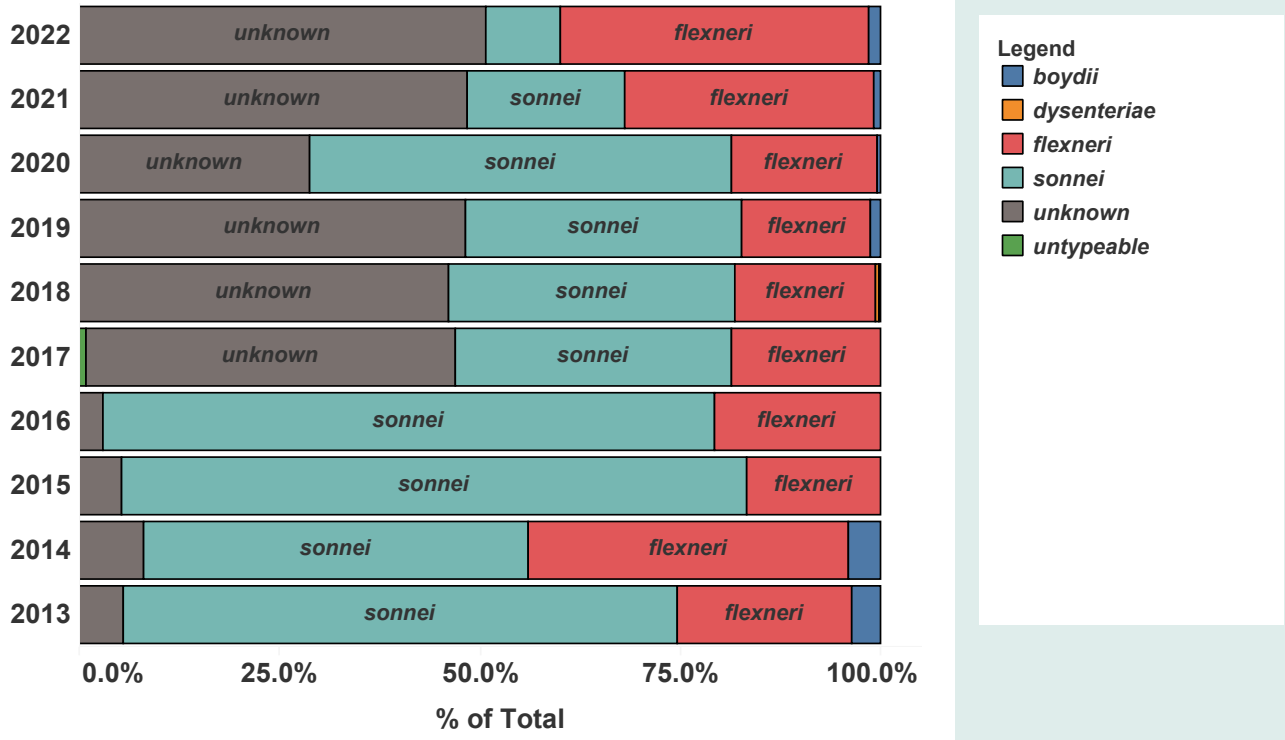


County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Shigellosis cases by species Oregon, 2013 to 2022.

Click on a species to compare between years.



Tularemia

Tularemia, also known as rabbit or deer-fly fever, is considered a “category A” agent of potential bioterrorism. It is caused by *Francisella tularensis,* a hardy organism found in rodents, rabbits and squirrels; in ticks, deer flies and mosquitoes; and in contaminated soil, water and animal carcasses. The organism is remarkably infective; as few as 10–50 organisms can cause disease.

Tularemia occurs throughout the United States, though it is most commonly reported in Arkansas, Missouri, Oklahoma, and other Great Plains states. People get 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. *Francisella tularensis* is highly infectious when grown in culture and can be a risk to microbiology laboratory workers. For potentially exposed workers, management options include a “fever watch” or antimicrobial prophylaxis.

Disease onset is usually sudden, and includes fever, malaise, myalgia, headache, chills, rigors and sore throat. Tularemia has six clinical forms, depending on the bacterium’s 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 (gastrointestinal symptoms and sepsis); glandular (regional adenopathy without a skin lesion); oculoglandular (painful, purulent conjunctivitis with adenopathy); and oropharyngeal (pharyngitis with adenopathy).

Oregon had two cases in 2022.

Prevention

- Use precautions when hiking, hunting, camping or working outdoors:
  - Use insect repellents containing 20%–30% DEET, picaridin or IR3535.
  - Wear long pants, long sleeves and long socks to keep ticks and deer flies off your skin.
  - Remove attached ticks promptly with fine-tipped tweezers.
  - Don’t drink untreated surface water.
  - Don’t run over sick or dead animals (or *an*y animals for that matter) with a lawn mower.
- If you hunt, trap or skin animals:
  - Use gloves when handling animals, especially rabbits, muskrats, prairie dogs and other rodents.
  - Cook game meat thoroughly before eating.
- Laboratory workers should use precautions when working with suspect cultures:
  - Procedures that manipulate cultures and might produce aerosols or droplets should be done under biosafety level 3 conditions.

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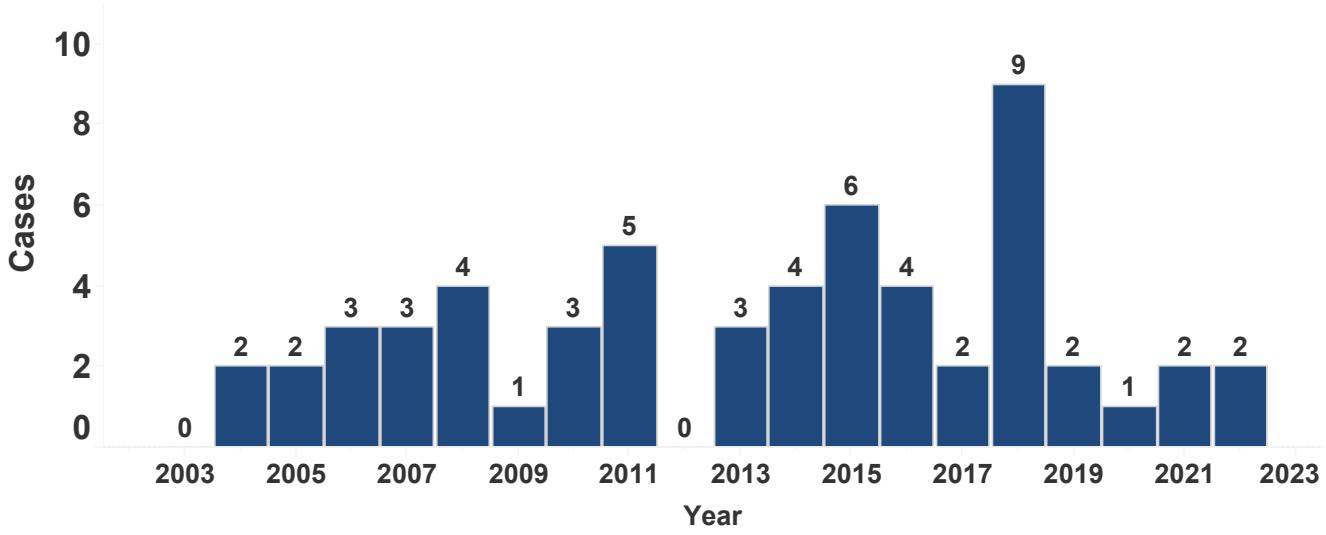
View charts.

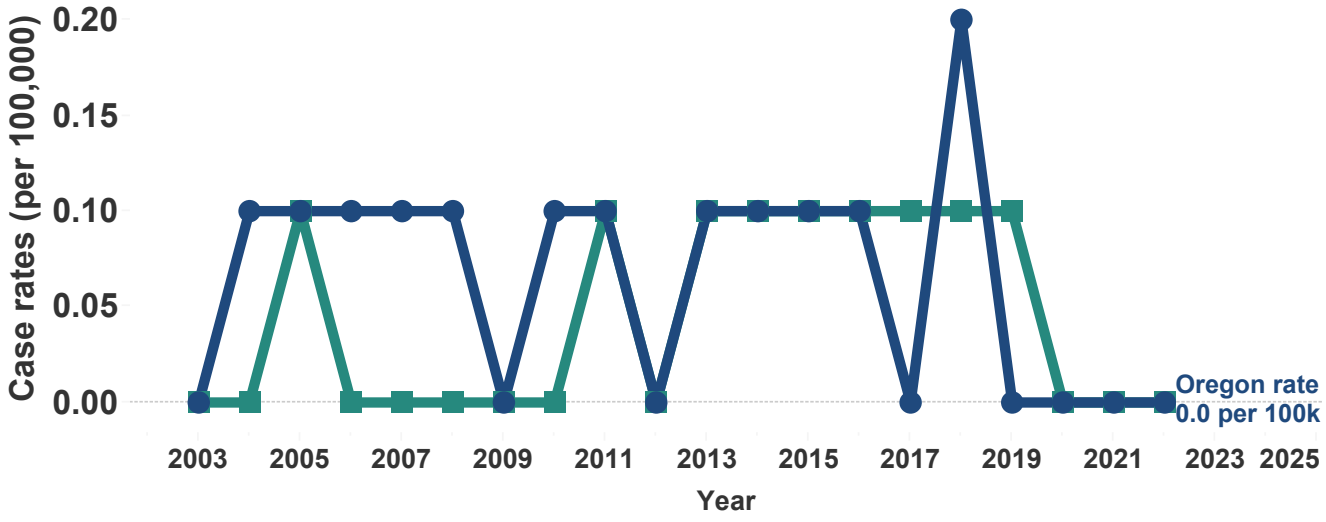
Case counts of tularemia by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case rates of tularemia in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

Vibriosis

Vibriosis is caused by infection with bacteria from the *Vibrionaceae* family. This family of bacteria includes the species that causes cholera, and public health investigators typically distinguish between either cholera (infection with toxigenic *V. cholerae*) and other "vibriosis" (infection with any other *Vibrionaceae*, including those vibrios lately rechristened as *"Grimontia"*).

Commonly, vibriosis is acquired by eating raw or undercooked molluscan shellfish and presents as watery diarrhea, abdominal cramps and fever. In Oregon, *V. parahaemolyticus* is the most frequently reported species, as this pathogen is found naturally in the coastal waters and shellfish of the Pacific Northwest, especially during summer months. Non-foodborne infections with *Vibrio* species can also occur through contact with sea or brackish water (e.g., infection with *V. alginolyticus* after swimming with an open wound, or through a laceration while shucking an oyster). These types of infections can produce bullae, cellulitis, muscle pain, fever and sepsis.

Vibriosis was not reportable until 1998 in Oregon and 2007 nationwide. Today, all *Vibrio* infections are nationally notifiable. Case reporting is essential to the identification of contaminated shellfish beds and removal of these shellfish from the raw seafood market. In 2013, the CDC FoodNet Program estimated every reported case of *Vibrio* represented 142 people not diagnosed with the infection.

Nationally, reported rates of vibriosis have trended upwards in the past decade. Scientists now believe that *V. parahaemolyticus* is an indicator of climate change; the bug requires temperatures warmer than 59°F to grow and is proliferating in waters that had historically been too cool. With warmer water temperatures in the Pacific Northwest, we can expect more bacteria in the waters and more contamination of shellfish growing in these waters.

Prevention

- Avoid eating raw oysters or other raw shellfish.
- Cook shellfish (oysters, clams, mussels) to an internal temperature of 145°F. If you don't have a food thermometer, shucked shellfish (clams, mussels and oysters without shells) become plump and opaque when cooked thoroughly, and the edges of the oysters start to curl. Shellfish in shells should open when cooked. Throw out shells that don't open during cooking.
- Uncooked spoiled seafood can have an ammonia odor. This odor becomes stronger after cooking. If you smell an ammonia odor in raw or cooked seafood, do not eat it.
- Read more from the FDA on selecting and serving fresh and frozen seafood safely and on safe food handling.

Vibriosis

There were no outbreaks of vibriosis reported in Oregon in 2022. Unlike other enteric pathogens such as *Salmonella* or Shiga toxin-producing *E.coli*, molecular typing is less likely to identify outbreaks, as the *Vibrio* species found in the Pacific Northwest are genetically similar. Case interviews and exposure histories are more helpful in identifying clusters of illness.

In 2022, Oregon counted 34 cases of vibriosis, a decrease from the 45 cases reported in 2021. Males outnumbered females (20 to 14). More than half of these cases were initially detected from a polymerase chain reaction (PCR) test. Twenty-three of the 34 cases in 2022 were culture confirmed.

The number of non-typed cases reported in 2022 (11) was similar to recent years. The rest of the cases were *V. parahaemolyticus* (20), *V. alginolyticus* (2), and *V. navarrensis* (1). These counts include 1 co-infection associated with international travel where two *Vibrio* species were identified: *V. alginolyticus* and *V. navarrensis*.

Prevention

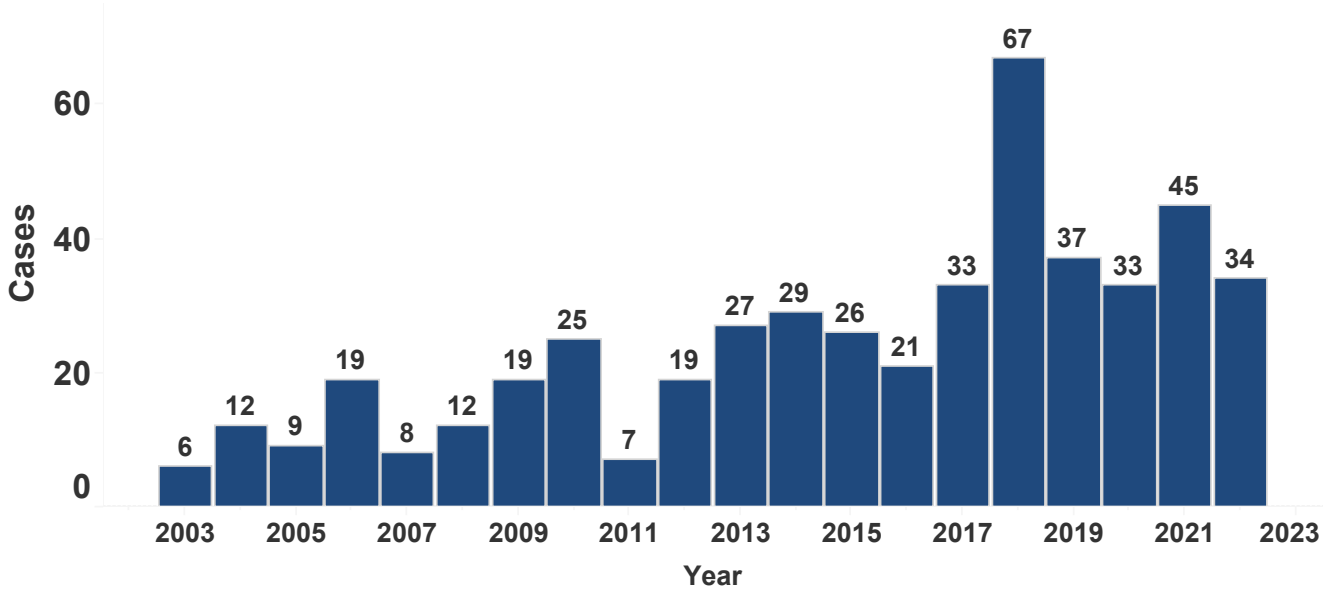
- Avoid eating raw oysters or other raw shellfish.
- Cook shellfish (oysters, clams, mussels) to an internal temperature of 145°F. If you don't have a food thermometer, shucked shellfish (clams, mussels and oysters without shells) become plump and opaque when cooked thoroughly, and the edges of the oysters start to curl. Shellfish in shells should open when cooked. Throw out shells that don't open during cooking.
- Uncooked spoiled seafood can have an ammonia odor. This odor becomes stronger after cooking. If you smell an ammonia odor in raw or cooked seafood, do not eat it.
- Read more from the FDA on selecting and serving fresh and frozen seafood safely and on safe food handling.

Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

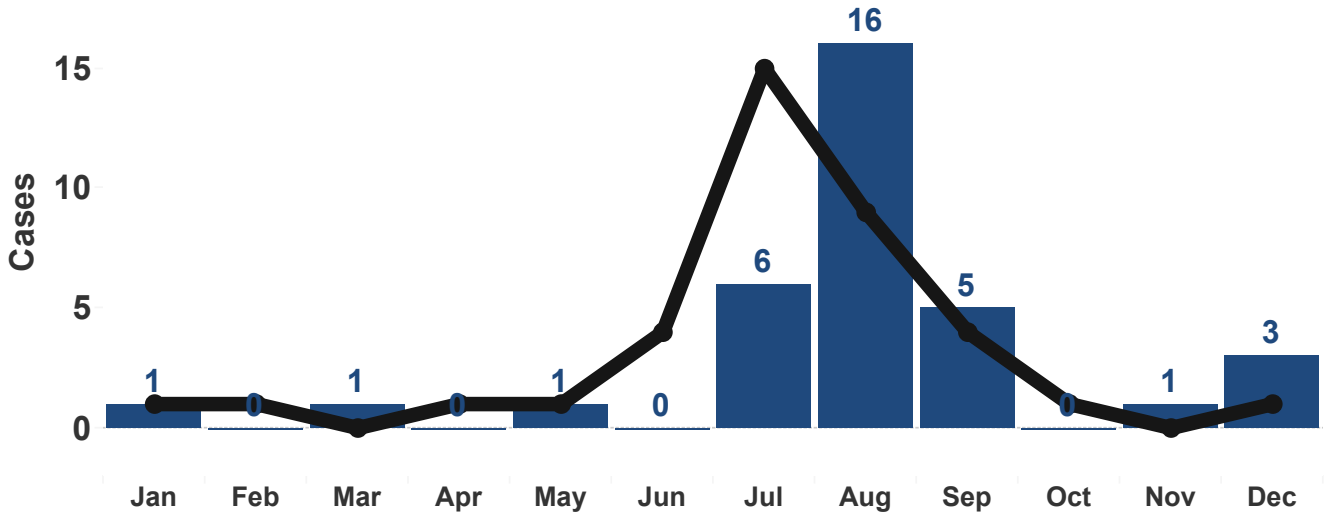
Case counts of vibriosis by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case counts of vibriosis by month: Oregon, 2022.

Bar chart shows case counts in 2022 while the line shows the median case counts for the previous 5 years.



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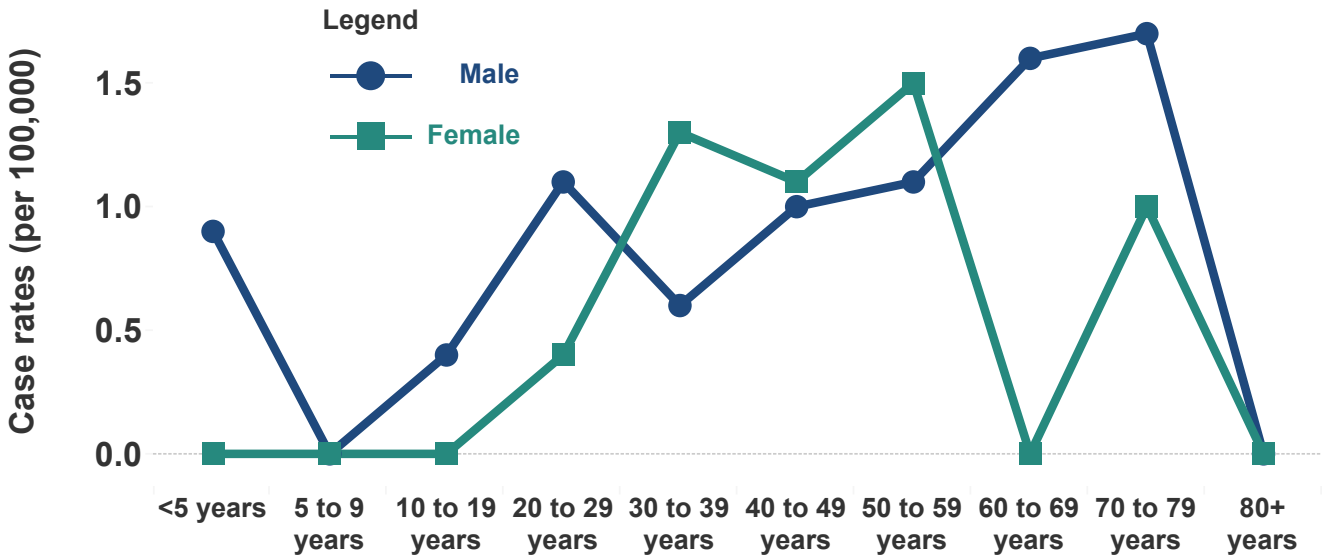
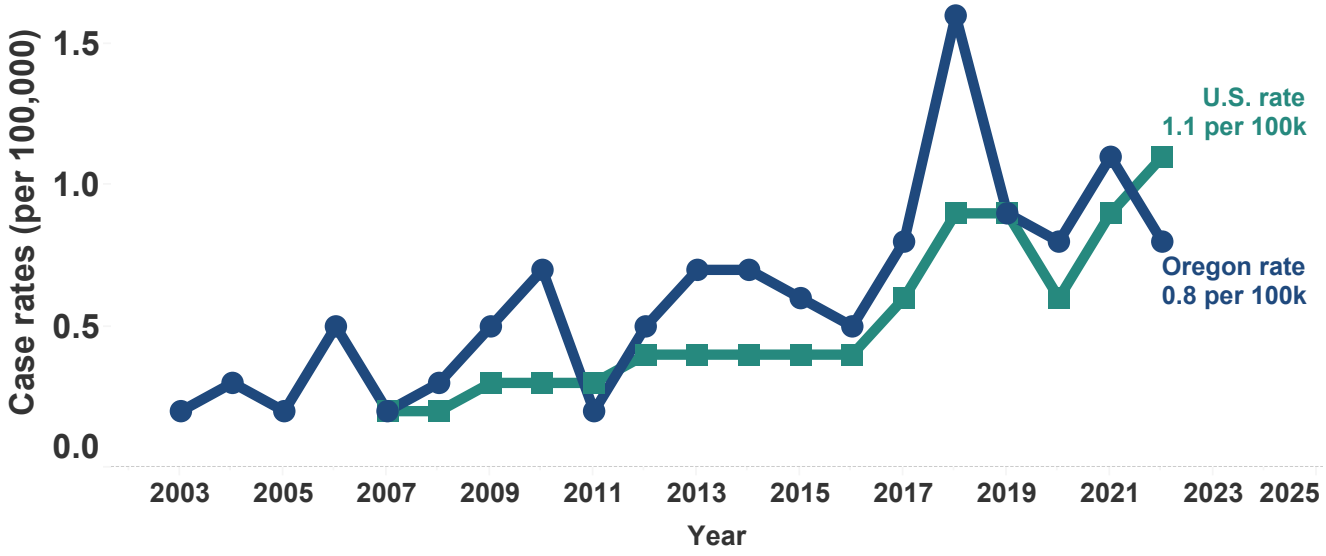
Case rates of vibriosis by age and sex: Oregon, 2022.



Case rates of vibriosis in Oregon vs nationwide, 2003 to 2022.

U.S. case counts, population and birth estimates exclude Oregon for comparison.



U.S. data sources: Nationally Notifiable Infectious Diseases and Conditions, CDC Wonder (annual, weekly); Census Bureau's Annual Population Estimates as of July 1st of each year; Births: Final Data for 2021 from National Vital Statistics Reports. **Oregon data sources:** Orpheus, Portland State University's annual population estimates, Oregon's vital statistics birth data. **FoodNet data sources**: Foodborne Diseases Active Surveillance Network, Census Bureau's Annual Population estimates as of July 1st of each year.

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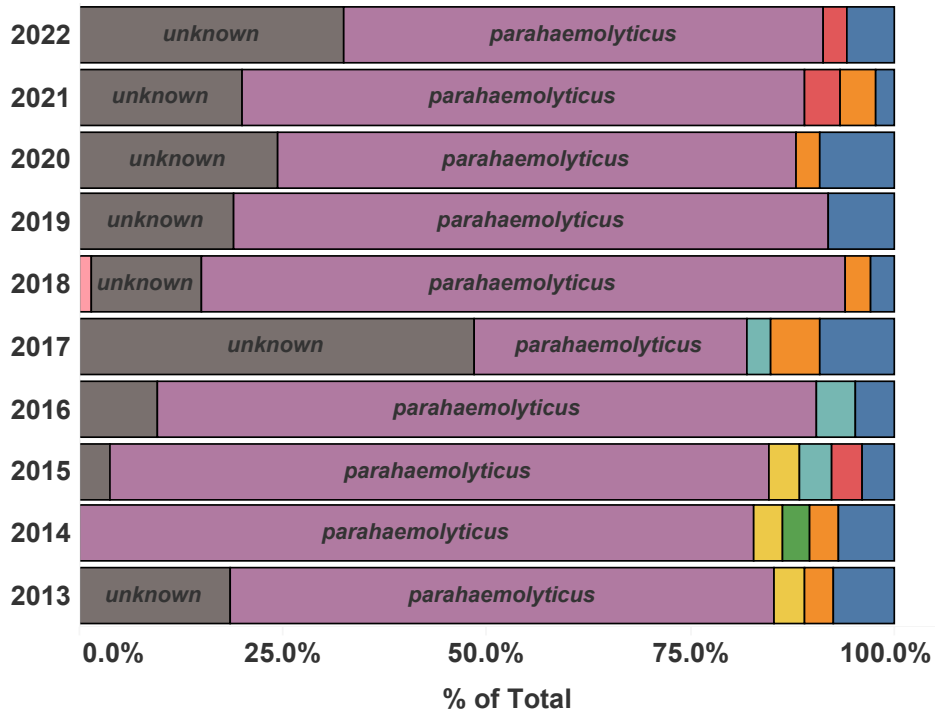
Vibriosis cases by species Oregon, 2013 to 2022.

Click on a species to compare between years. **Grimontia hollisae is formerly V. hollisae. V. cholerae include non-O1 and non-O139.*



West Nile virus

West Nile virus (WNV) first appeared in the United States on Long Island in 1999 and then moved westward across the country. In Oregon, the first indigenous case was reported in 2004. West Nile virus is a mosquito-borne *Flavivirus* that affects both animals and humans. Corvid birds (crows, ravens, jays, magpies) are the reservoir; humans and other animals are considered "dead-end" hosts — i.e., they may be infected and develop symptoms, but they do not transmit the infection further. Of human beings infected, only approximately one in five will have any symptoms at all — typically flu-like symptoms such as fever, headache and muscle aches. However, approximately one in 150 infected persons will have symptoms of central nervous system infection that may include neck stiffness, stupor, disorientation, tremors, convulsions, muscle weakness, paralysis and coma.

The risk of getting West Nile virus in Oregon has been low. Though most cases were in those aged 20–50 years, those >50 years of age have the highest risk of developing serious illness.

Incidence is highest in the summer months.

In 2022, five presumptive human cases of West Nile virus occurred in Oregon. In addition, 45 mosquito pools and 3 horses and no birds tested positive for WNV infection.

Prevention

- Avoid mosquito bites:
  - Use insect repellents when you go outdoors. Repellents containing DEET, picaridin, IR3535, and some oil of lemon eucalyptus and para-menthane-3,8-diol products provide longer-lasting protection. To optimize safety and effectiveness, repellents should be used according to the label instructions.
  - When weather permits, wear long sleeves, long pants and socks when outdoors.
  - Take extra care during peak mosquito-biting hours.
- Mosquito-proof your home:
  - Install or repair screens on windows and doors to keep mosquitoes outside. Use your air conditioning, if you have it.
  - Reduce the number of mosquitoes around your home by regularly emptying standing water from flowerpots, gutters, buckets, pool covers, pet water dishes, discarded tires and birdbaths.
- Report dead birds to local authorities.

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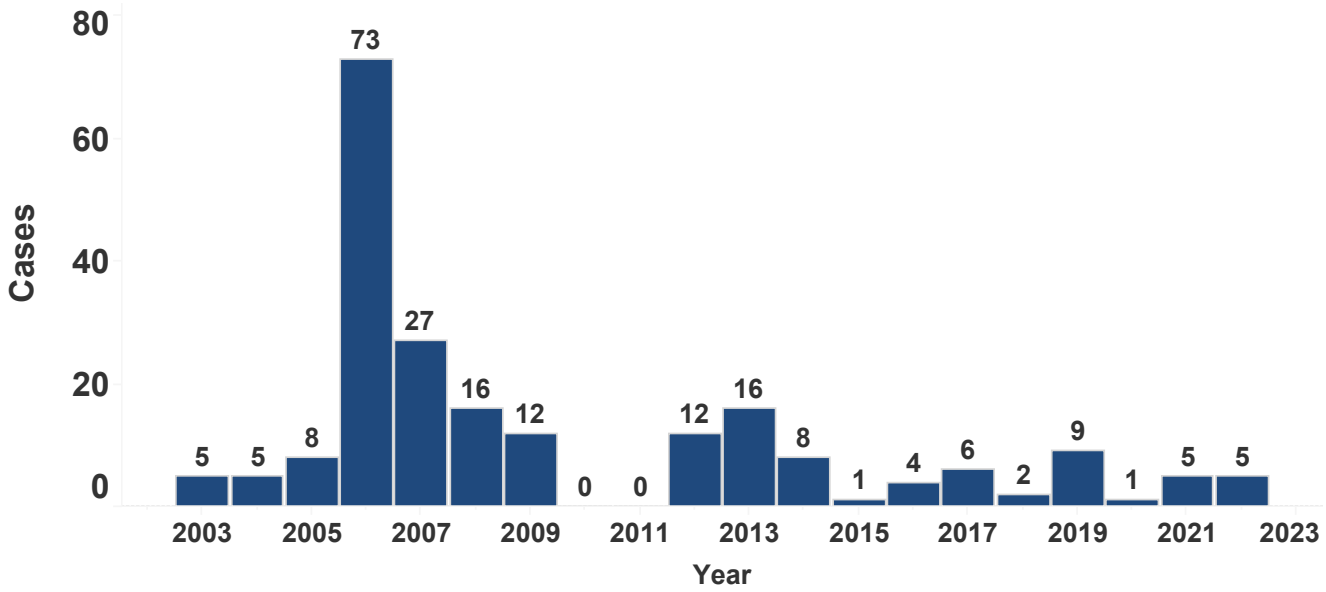
Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

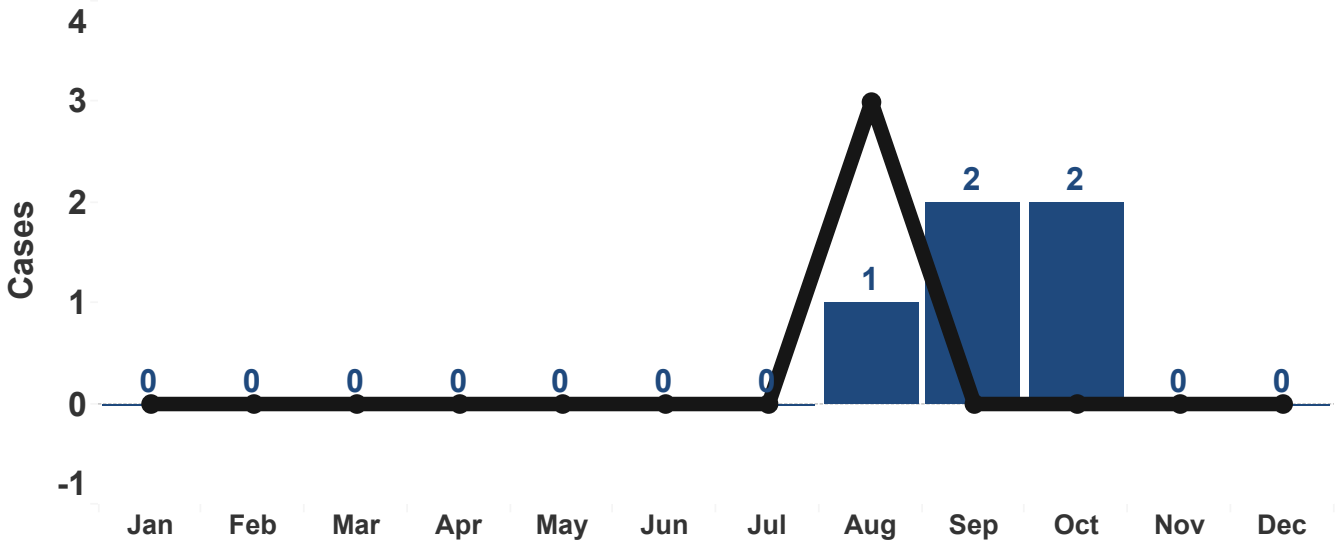
Case counts of West Nile virus by year: Oregon, 2003 to 2022.

Cases are grouped by date of record throughout this report. Other reports may use alternative dates like report date, diagnosis date, or specimen collection dates.



Case counts of West Nile virus by month: Oregon, 2022.

Bar chart shows case counts in 2022 while the line shows the median case counts for the previous 5 years.



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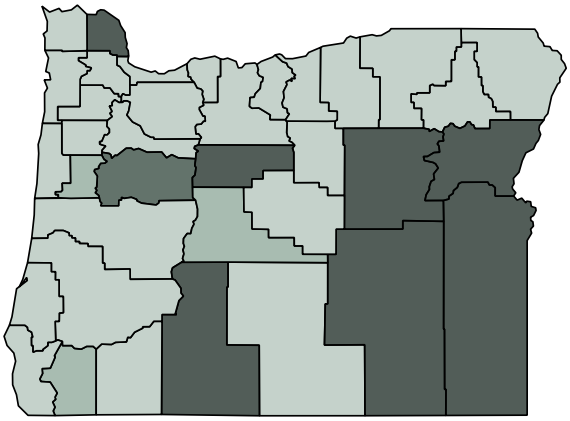
Case rates of West Nile virus by county of residence: Oregon, 2013 to 2022.

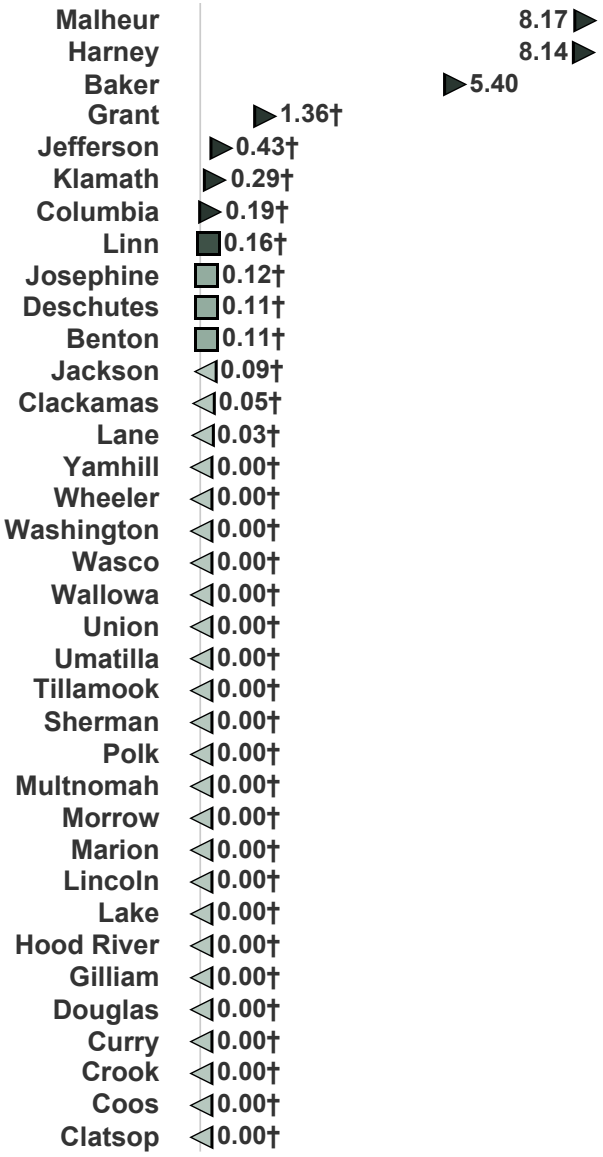
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for West Nile virus from 2013 to 2022 was **0.1 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate

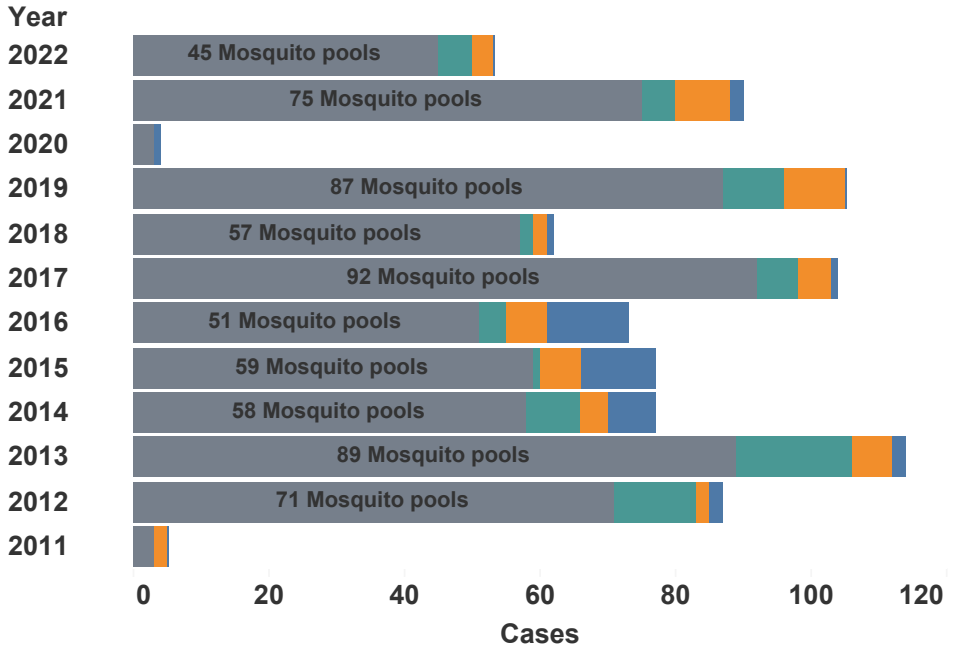




County Rates (per 100,000)

†Note: Rates based on small case counts (<5 cases) might be unstable.

Confirmed cases of West Nile Virus infection by species and year: Oregon, 2011 to 2022.



Source: Oregon State University Veterinary Laboratory and Oregon State Public Health Laboratory.

Yersiniosis

Yersiniosis is a bacterial infection characterized by diarrhea (sometimes bloody), vomiting and abdominal pain. The main reservoir for *Yersinia* is the pig.

Transmission occurs by the fecal-oral route through contaminated food and water, or through contact with infected people or animals. Infection is most often caused by eating raw or undercooked pork contaminated with *Yersinia enterocolitica.* Preventive measures include cooking food thoroughly, avoiding cross-contamination with raw foods of animal origin and washing hands after handling food.

The annual number of yersiniosis cases in Oregon increased notably in 2013 and has remained high in recent years. The increase in cases spans all age and sex categories. In 2022, there were 51 cases among Oregon residents. All cases were sporadic; no outbreaks were reported. Of the 22 cases with known species, the majority were *Yersinia enterocolitica* (20). The species is unknown for the remaining 25 cases due to the diagnosis of patients solely through culture-independent diagnostic testing (CIDT).

Infection with *Yersinia pestis*, also known as “plague,” is counted separately from other cases of yersiniosis.

Prevention

- Avoid eating raw or undercooked pork.
- Consume only pasteurized milk or milk products.
- Wash hands with soap and warm water before eating and preparing food, after contact with animals and after handling raw meat.
- After handling raw chitterlings (chitlins), clean hands and fingernails scrupulously with soap and water before touching infants or their toys, bottles or pacifiers.
- Prevent cross-contamination in the kitchen; use separate cutting boards for meat and other foods. Carefully clean all cutting boards, countertops and utensils with soap and hot water after preparing raw meat.
- Dispose of animal feces in a sanitary manner.

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Case counts of yersiniosis by year: Oregon, 2003 to 2022.

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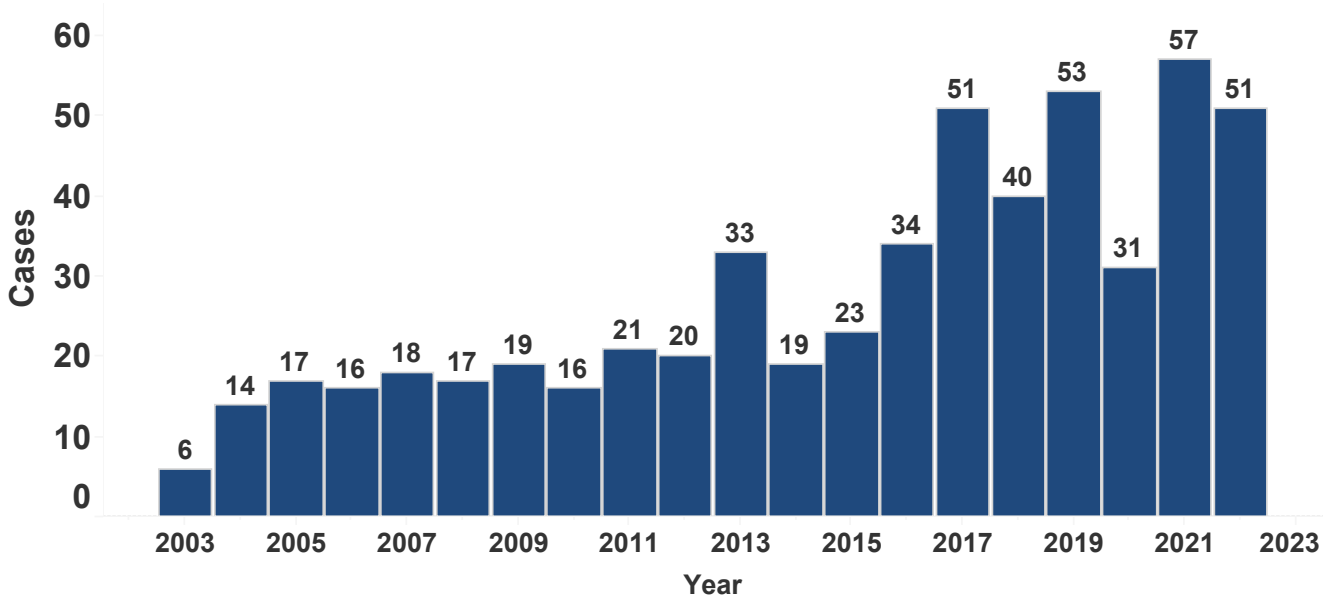
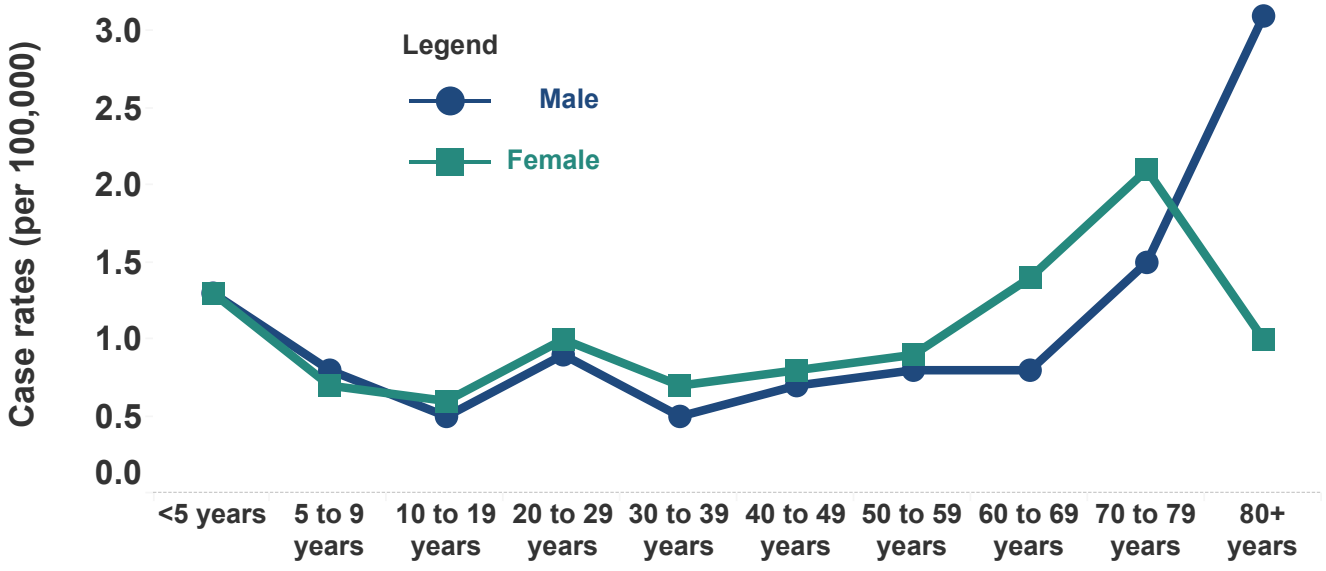


Case rates of yersiniosis by age and sex: Oregon, 2013 to 2022.

Due to low case counts, the average case rate over multiple years of data is shown.



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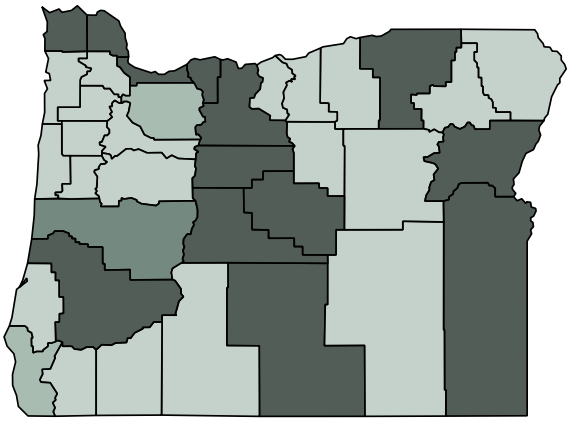
Case rates of yersiniosis by county of residence: Oregon, 2013 to 2022.

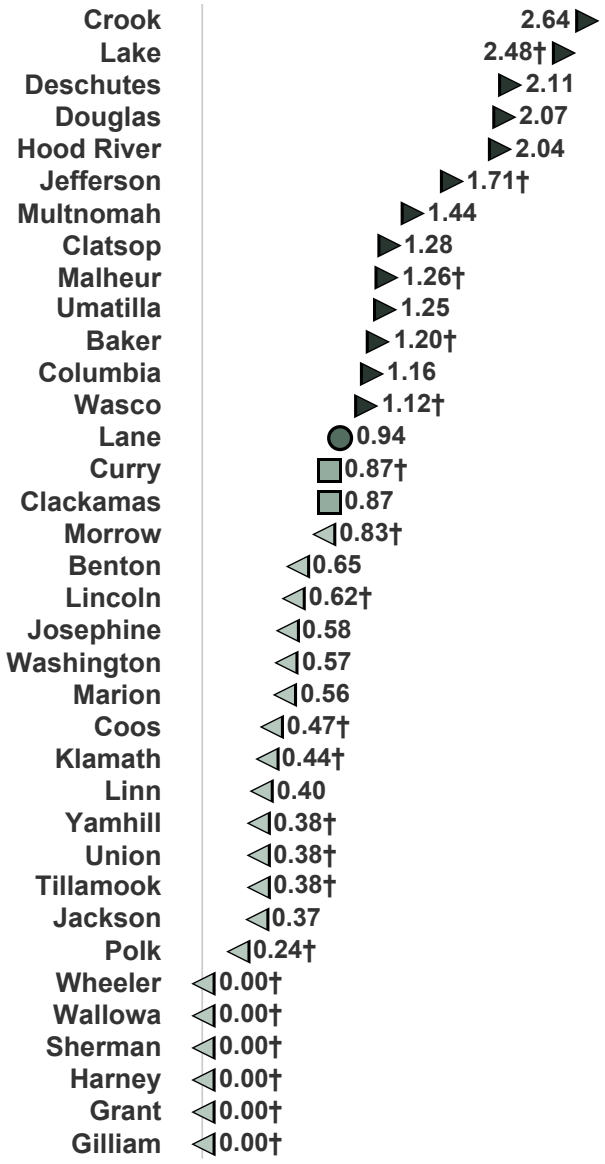
Due to low case counts, the average case rate over multiple years of data is shown.

The **statewide rate** for yersiniosis from 2013 to 2022 was **0.9 per 100,000**.

Legend for county rates

- 1 standard deviations over statewide rate
- 1 standard deviations under statewide rate
- 2 standard deviations over statewide rate
- 2 standard deviations under statewide rate
- Similar to statewide rate





†Note: Rates based on small case counts (<5 cases) might be unstable.

Disease Outbreaks

Oregon state and local health departments investigated 371 acute and communicable disease outbreaks in 2022. This number does not include the myriad outbreaks of COVID-19 investigated across Oregon in 2022. Outbreaks in 2022 were the result of multiple modes of disease transmission: fourteen outbreaks were foodborne, 238 were due to person-to-person transmission, 7 were due to animal contact, primarily back yard poultry and one waterborne *Legionella* outbreak occurred.

Outbreaks of gastroenteritis were the most common, accounting for 36% (132) of all reported outbreaks in 2022. Foods contaminated with a variety of *Salmonella*, norovirus and shiga toxin-producing *Escherichia coli* made folks ill at a variety of venues. Almost every outbreak reinforces the tried-and-true public health mantras of "wash your hands" and "cover your cough."

Respiratory outbreaks accounted for many more of the totally reported outbreaks. There were 171 respiratory outbreaks, accounting for 46% of the total, the most commonly reported type of pathogen was influenza accounting for 75% (129) respiratory outbreaks, 43 respiratory synovial virus, accounting for 25% of respiratory outbreaks investigated in 2022.Other pathogens include human metapneumovirus, *Mycobacterium*, parainfluenza, and rhinovirus.

One hundred fifty-four (42%) outbreaks investigated in 2022 were lab-confirmed. Forty percent (54) of gastroenteritis outbreaks had disease-causing agents identified, the most common being caliciviruses (norovirus and sapovirus), and disease-causing agents were identified in 57% (75) of gastroenteritis outbreaks.

As of May 1, 2019 the Oregon State Public Health Laboratory (OSPHL) discontinued testing for norovirus in long-term care facilites experiencing outbreaks of noro-like illness. OSPHL can test for sapovirus, astrovirus and rotavirus when stool specimens are norovirus-negative.

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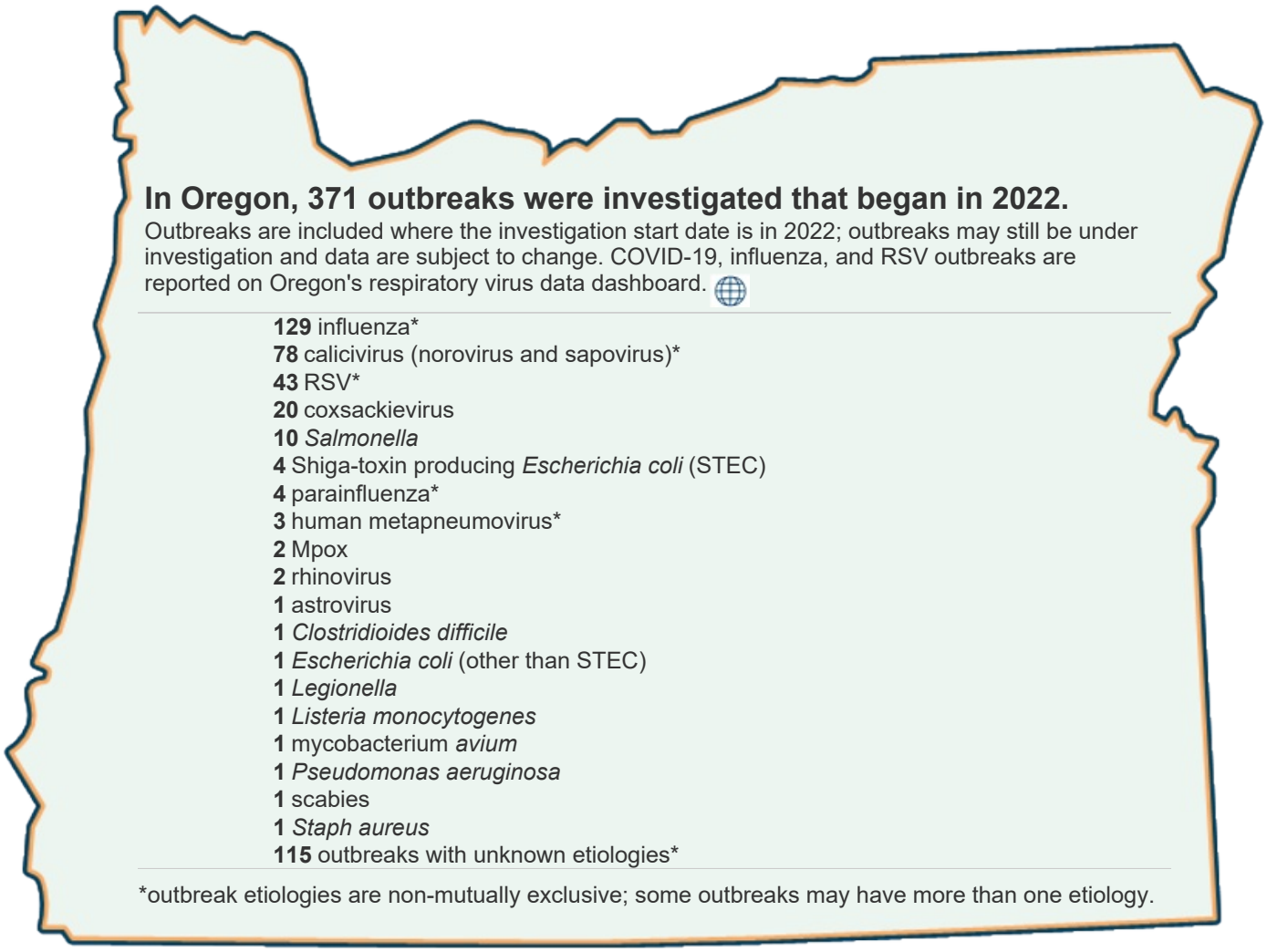

In Oregon, 371 outbreaks were investigated that began in 2022.

Outbreaks are included where the investigation start date is in 2022; outbreaks may still be under investigation and data are subject to change. COVID-19, influenza, and RSV outbreaks are reported on Oregon's respiratory virus data dashboard.

- **129** influenza*
- **78** calicivirus (norovirus and sapovirus)*
- **43** RSV*
- **20** coxsackievirus
- **10** *Salmonella*
- **4** Shiga-toxin producing *Escherichia coli* (STEC)
- **4** parainfluenza*
- **3** human metapneumovirus*
- **2** Mpox
- **2** rhinovirus
- **1** astrovirus
- **1** *Clostridioides difficile*
- **1** *Escherichia coli* (other than STEC)
- **1** *Legionella*
- **1** *Listeria monocytogenes*
- **1** mycobacterium *avium*
- **1** *Pseudomonas aeruginosa*
- **1** scabies
- **1** *Staph aureus*
- **115** outbreaks with unknown etiologies*

*outbreak etiologies are non-mutually exclusive; some outbreaks may have more than one etiology.

Gastrointestinal (GI) Outbreaks

Of the 132 gastroenteritis outbreaks investigated in 2022, person-to-person transmission was responsible for 107 outbreaks, 14 outbreaks were foodborne and seven were due to animal contact, mostly backyard poultry exposure. Five poultry associated *Salmonella* outbreaks were reported. The CDC is focusing efforts on the poultry industry and reduction of *Salmonella* among hatcheries. One hundred and seven person-to-person outbreaks occurred in institutional cohorts, especially among those in long-term care facilities (LTCFs). Fifty-six exposures occurred in school or childcare.

A variety of pathogens were implicated in the 14 foodborne outbreaks investigated in 2022. Vehicles responsible for these outbreaks include hollandaise sauce, oysters, peanut butter, raw tuna, roasted suckling pig, tomatoes, and spinach. Seven foodborne outbreaks remained unsolved as no specific food vehicle could be identified by investigators despite an investigation into the source.

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Gastrointestinal outbreaks by disease: Oregon, 2013 to 2022.

Outbreaks reported here are mutually-exclusive; the outbreaks are counted by primary etiology.

	Year										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Grand Total
Astrovirus	0	0	1	3	0	1	0	0	2	0	7
Campylobacter	0	6	0	0	2	1	0	1	2	0	12
Clostridium difficile	0	0	2	0	1	0	0	2	0	0	5
Cryptosporidium	2	2	0	3	0	0	1	0	0	0	8
Cyclospora	0	0	0	0	0	0	0	0	1	0	1
E. coli (STEC)	4	6	4	2	4	7	5	2	5	4	43
E. coli other	0	0	0	0	0	0	1	0	1	1	3
Giardia	1	0	0	0	1	0	0	0	0	0	2
Hepatitis A	0	0	0	1	1	0	0	0	0	0	2
Listeria	0	0	1	0	0	0	2	0	0	1	4
Norovirus	138	135	104	111	137	99	95	12	22	76	929
Rotavirus	0	0	4	3	7	2	2	0	0	0	18
Salmonella	16	10	13	11	13	14	14	9	15	10	125
Sapovirus	2	3	2	6	4	5	1	0	0	1	24
Scombroid poisoning	0	0	0	2	0	0	1	0	0	0	3
Shigella	3	1	2	0	1	3	4	4	0	0	18
Vibrio	4	1	0	1	0	2	1	1	4	0	14
Yersinia	1	0	1	0	0	0	0	0	0	0	2
Unknown	44	46	38	52	40	42	58	32	35	39	426
Grand Total	215	210	172	195	211	176	185	63	87	132	1,646

Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

Cases by Year | Cases by County | Low Incidence

Selected communicable disease case counts by year: Oregon and onward

	2022	2021	2020	2019	2018	2017	2016	2015
Campylobacteriosis	985	1,093	833	1,025	974	1,070	994	891
Carbapenem-resistant Enterobacterales (CRE)	196	150	169	169	148	120	172	101
Coccidioidomycosis	31	35	31	31	37	61	25	23
Cryptococcosis	69	54	41	48	76	65	54	79
Acute hepatitis A	18	14	28	28	23	20	15	26
Acute hepatitis B	21	20	20	25	19	23	21	28
Acute hepatitis C	18	29	33	29	24	39	24	13
Chronic hepatitis B	325	375	295	376	398	491	452	485
Chronic hepatitis C	3,375	3,847	3,671	5,099	5,465	6,101	5,856	5,962
Cryptosporidiosis	118	126	93	254	299	293	329	215
Dengue fever	9	1	7	12	11	7	8	5
Escherichia coli O157 and other shiga toxin-producing Escherichia coli (STEC) infections	274	294	205	354	315	217	191	231
Extrapulmonary nontuberculous mycobacterial disease (NTM)	38	37	35	54	41	32	46	45
Giardiasis	329	344	250	290	321	348	338	341
Haemophilus influenza infection	75	31	45	99	89	113	99	97
Legionellosis	64	73	65	73	40	45	47	50
Listeriosis	11	18	9	12	9	16	16	16
Lyme disease	65	74	42	65	79	89	54	34
Malaria	22	11	5	6	17	13	20	20
Measles	0	0	0	28	5	0	0	1
Meningococcal disease	8	6	0	11	14	25	23	29
Mumps								

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Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

Cases byYear | Cases by County | Low Incidence

Selected Oregon communicable disease case counts by county of residence, 2022.

	Grand Total	Baker	Benton	Clackamas	Clatsop
Campylobacteriosis	985	8	16	81	
Carbapenem-resistant Enterobacterales (CRE)	196	1	1	14	
Coccidioidomycosis	31	0	0	2	
Cryptococcosis	69	1	2	1	
Cryptosporidiosis	118	1	10	9	
Escherichia coli O157 and other shiga toxin-producing Escherichia coli (STEC) infections	274	0	3	27	
Giardiasis	329	0	10	29	
Haemophilus influenza infection	75	0	0	14	
Acute hepatitis A	18	0	0	3	
Acute hepatitis B	21	0	0	1	
Chronic hepatitis B	325	0	4	25	
Acute hepatitis C	18	1	0	0	
Chronic hepatitis C	3,375	40	51	163	
Legionellosis	64	0	0	6	
Listeriosis	11	0	0	2	
Lyme disease	65	1	1	5	
Meningococcal disease	8	0	0	0	
Pertussis	17	0	0	0	
Rabies	13	0	0	0	

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Oregon's 2022 Selected Reportable Communicable Disease Summary

Data current as of 10/9/2023; data are provisional and subject to change.

Selected low incidence disease case counts by year: Oregon 2013 to 2022.

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Babesiosis	0	3	4	2	2	5	2	5	1	0
Borrelia hermsii	4	5	3	3	2	1	4	3	4	1
Botulism	3	3	2	1	5	4	3	3	1	4
Brucellosis	2	0	0	0	4	3	1	0	1	2
Colorado tick fever	0	2	1	3	5	0	1	0	1	0
Cyclosporiasis	8	14	0	5	2	2	1	0	1	0
Dengue	9	1	7	12	11	7	8	5	6	4
Ehrlichiosis	2	0	0	0	0	1	3	1	0	0
Hantavirus	1	0	2	0	1	1	1	0	1	1
Leishmaniasis	0	0	0	3	2	1	0	0	0	1
Leptospirosis	2	2	2	2	6	2	2	0	2	0
Malaria	22	11	5	6	17	13	20	20	19	14
Mosquito (Non WNV)	0	0	0	0	0	0	1	0	0	0
Plague	0	0	0	0	0	0	0	2	0	0
Q fever	2	4	0	5	8	8	4	2	9	3
Rickettsia	4	2	0	3	4	5	7	5	2	2
Rubella	0	0	0	0	0	0	0	0	0	1
Taeniasis	0	1	4	3	3	2	3	4	3	2
Tetanus	1	0	0	0	1	2	0	1	0	1
Tick paralysis	0	1	0	0	0	1	0	0	0	0
Tularemia	2	2	1	2	9	2	4	6	4	3
West Nile virus	5	5	1	9	2	6	4	1	8	16
Zika	0	0	0	1	2	8	54	0	3	0

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