

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, 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.

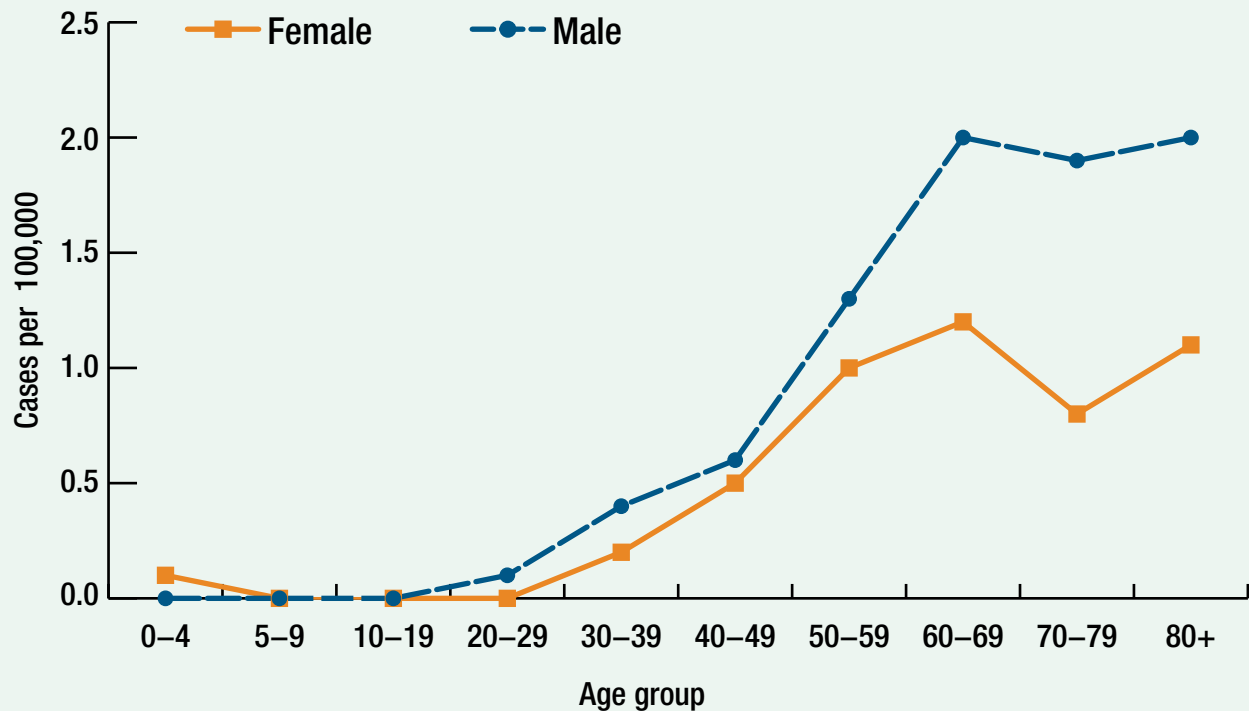
Risks for infection include older age, smoking, chronic lung disease (e.g., emphysema), renal insufficiency, diabetes and immune deficiency. Death occurs in 10–15% of cases; a substantially higher proportion of fatal cases occur during outbreaks in hospitals or other health care facilities. Infections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

Legionellosis became officially reportable in Oregon in 2001. In 2014, 41 cases of legionellosis were reported among Oregonians; all cases were hospitalized. There were six deaths. The incidence of reported cases has more than tripled during 2002–2014, from 0.3 per 100,000 persons to 1.0. While reasons for this increase are unknown, increases in older persons, persons at high risk for infection, and increased case detection and reporting may have played a role.

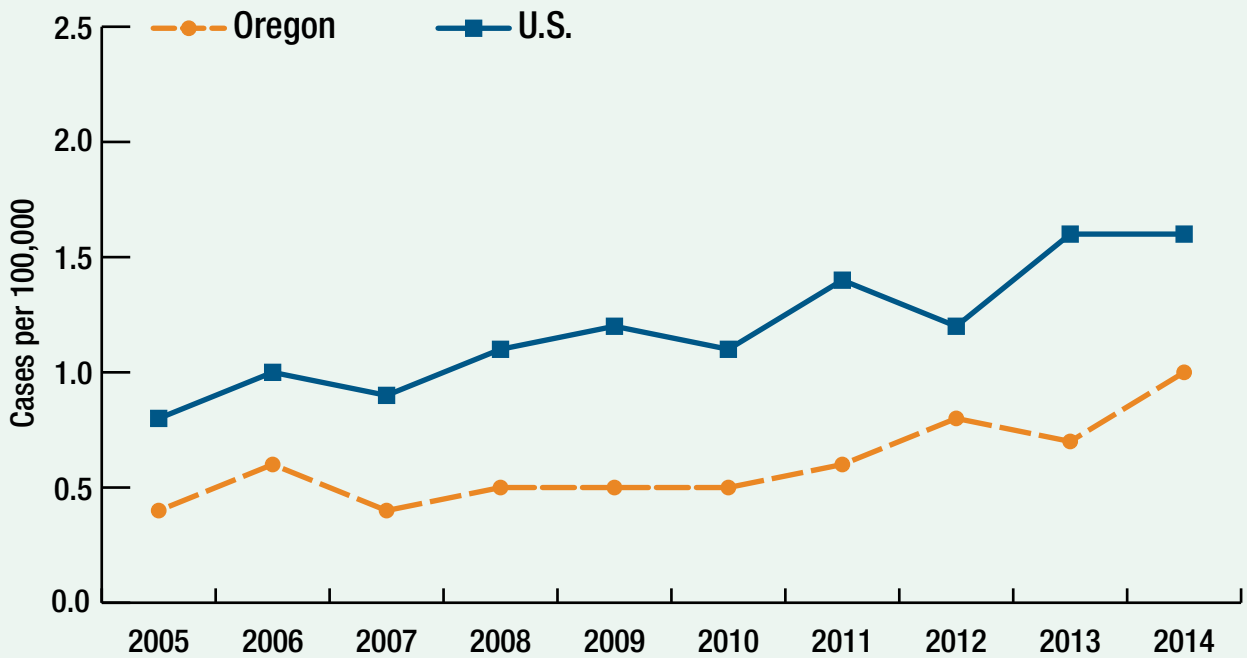
Legionellosis by year: Oregon, 2002–2014



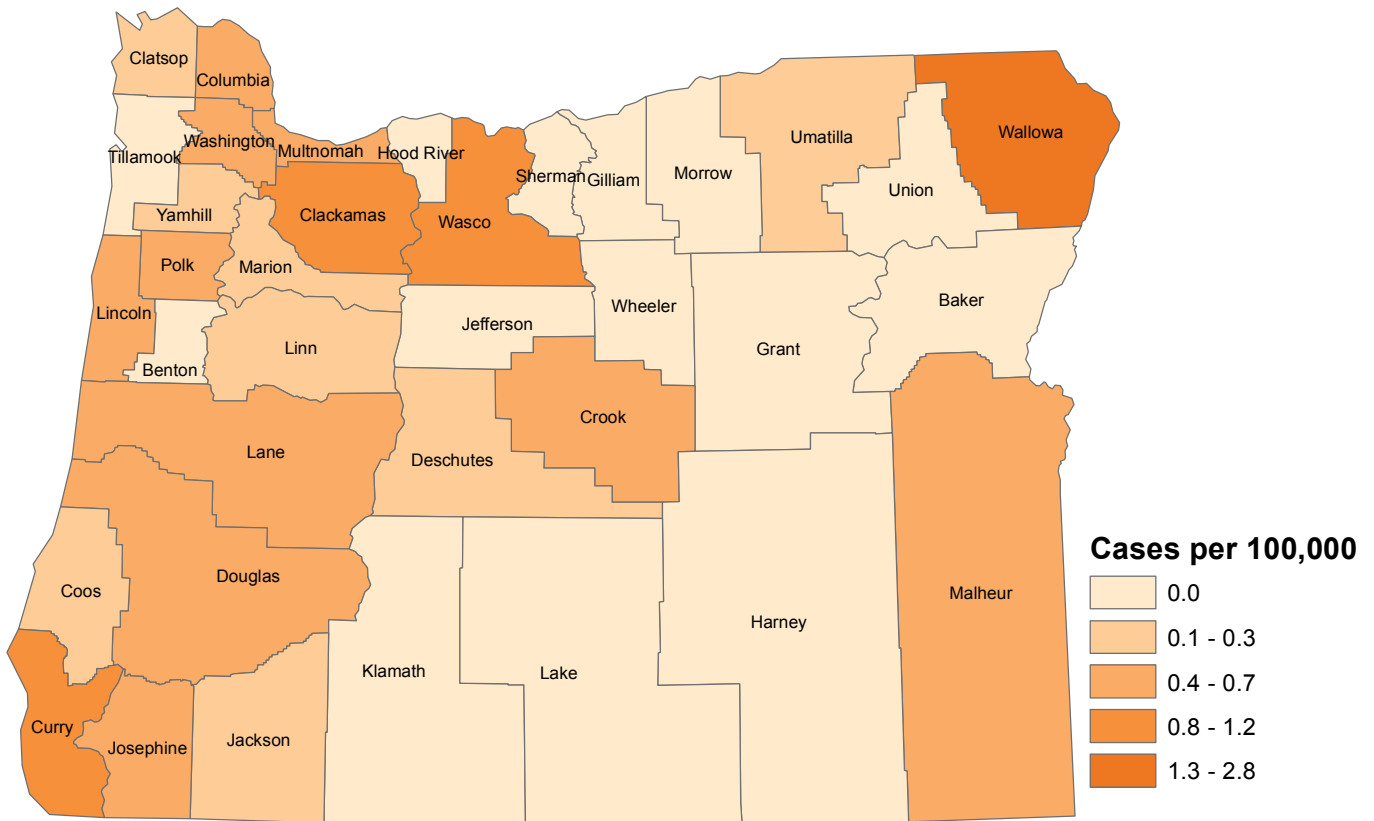
Incidence of legionellosis by age and sex: Oregon, 2005–2014



Incidence of legionellosis: Oregon vs. nationwide, 2005–2014



Incidence of legionellosis by county of residence: Oregon, 2005–2014



Prevention

- Not smoking can lower your chances of developing Legionnaire's 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:
 - › 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 the *Legionella*. Flushing of infrequently used water lines will help alleviate stagnation.