



Infectious Disease Epidemiology Report

Legionellosis, 2010



Background

Legionellosis is caused by a type of bacteria called *Legionella*. The bacteria was named in 1976, when many people who went to a Philadelphia convention of the American Legion suffered from an outbreak of this disease. Legionellosis is spread when people breathe in a mist or vapor (small droplets of water in the air) that is contaminated with the bacteria. The bacteria are not spread from one person to another person.

Legionellosis is associated with two clinically and epidemiologically distinct illnesses: Legionnaires' disease, which is characterized by fever, myalgia, cough, and clinical or radiographic pneumonia; and Pontiac fever, a milder illness without pneumonia.

Outbreaks of legionellosis can occur when there is a contaminated water source that is aerosolized, such as at a pool or spa, or with an air conditioner.

Methods

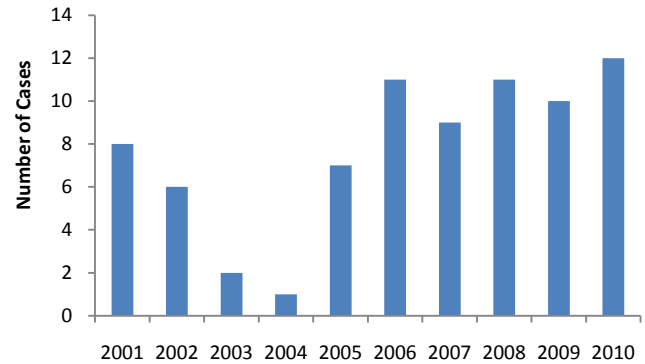
Legionellosis is a reportable disease in Maine. Maine CDC investigates all reports of positive laboratory tests and completes standardized case report forms. Risk factor information on travel history, dental work and potential hospital exposures is collected.

Legionella can be confirmed by culture, urine antigen tests, or seroconversion (fourfold or greater rise in specific serum antibody titer). The most common serogroup in the United States is *L. pneumophila* serogroup 1, and this is the only serogroup the urine antigen test detects. Other serogroups can be identified by culture or specific serology.

Results

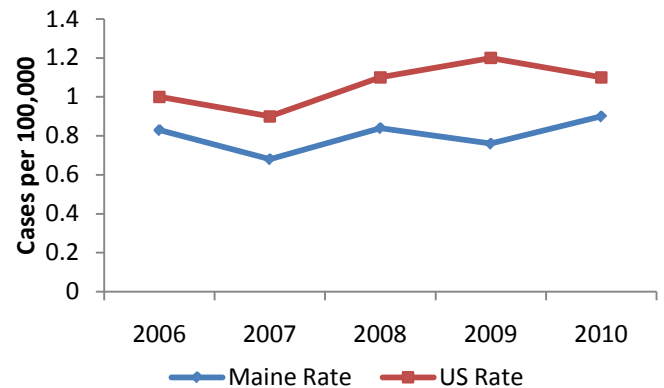
A total of 12 confirmed cases of legionellosis were reported in 2010, compared to 10 in 2009 (Figure 1).

Figure 1. Legionella Cases in Maine, 2001-2010



The rate of legionellosis in Maine in 2010 was 0.9 cases per 100,000 population; the US rate was 1.1 (Figure 2). The majority of legionellosis cases occurred among males (67%). The median age of cases was 67 years (range 42-81 years).

Figure 2: Legionella in Maine and US, 2006-2010



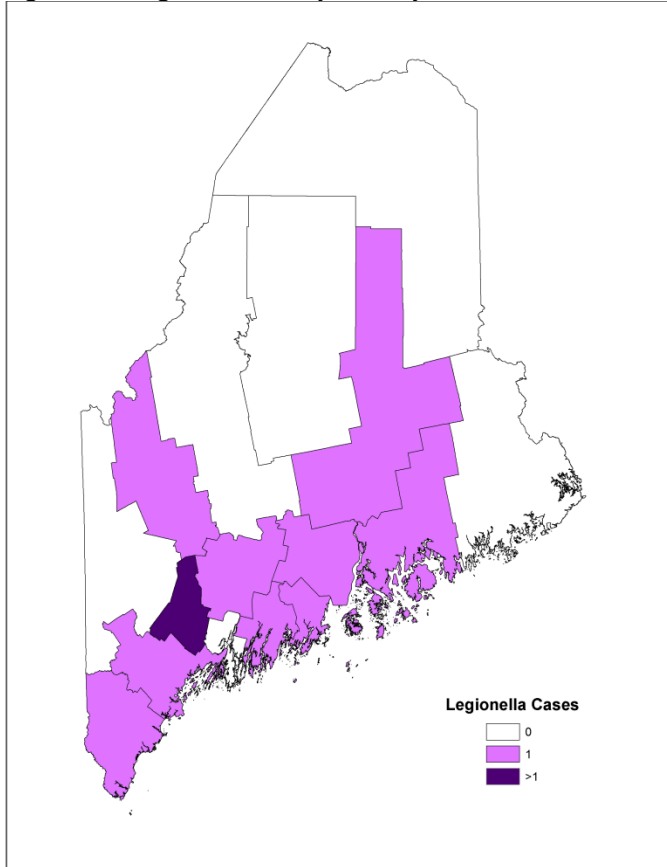
All 12 cases were clinically diagnosed as Legionnaires' disease. All cases were hospitalized as a result of their infection and 9 (75%) recovered. Laboratory findings classified 11 cases as *L. pneumophila* serogroup-1 by urine antigen and 1 case as *L. pneumophila* unknown serotype by culture.

Three (25%) of the 12 legionellosis cases reported overnight travel during the two weeks before onset of symptoms; all within the United States. None of the cases met the criteria for nosocomial (health

care associated) infections and they were not associated with other cases in Maine or the US.

Legionellosis was identified among residents of ten Maine counties in 2010 (Figure 3).

Figure 3: Legionellosis by county – Maine, 2010



Discussion

Because legionellosis can be very serious and can also be treated successfully with antibiotics, early identification of infections will improve patient outcomes.

Some people may be at greater risk for legionellosis. Risk factors include:

- People older than 50 years
- Current or former smokers
- People with chronic lung disease (i.e. emphysema)
- People with a weak immune system due to underlying conditions or drug therapy
- People with recent travel with an overnight stay outside the home
- People with exposure to whirlpool spas
- People with recent repairs or maintenance work on domestic plumbing

All cases of legionellosis in Maine must be reported by calling 1-800-821-5821 or by faxing reports to 207-287-6865.

For more information on Legionellosis

- Maine CDC website:
<http://www.maine.gov/dhhs/boh/ddc/epi/airborne/legionellosis.shtml>
- Federal CDC website:
<http://www.cdc.gov/legionella/index.htm>