



# Infectious Disease Epidemiology Report

## Legionellosis Maine, 2015



### Background

Legionellosis is an illness caused by a type of bacteria called *Legionella*. Legionellosis was first identified in 1976 when attendees at an American Legion convention in Philadelphia suffered from an outbreak of this disease. Legionellosis is spread when people breathe in small droplets of water in the air that are contaminated with the bacteria. The bacteria are not spread from person to 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, fountain, air conditioner, or humidified medical equipment used at a hospital or home.

### Methods

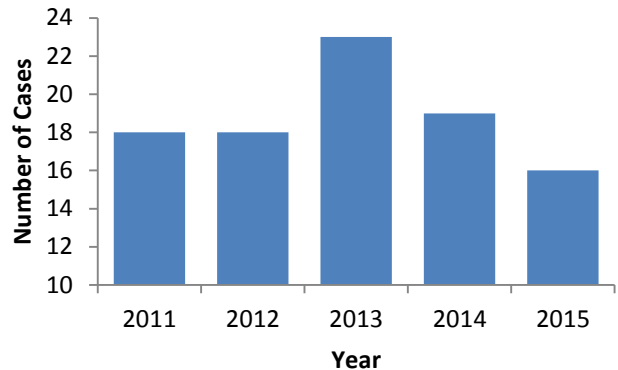
Legionellosis is a reportable disease in Maine. Maine CDC investigates all reports of the disease and completes standardized case report forms. Risk factor information on travel history, spa use, respiratory therapy exposures, and potential healthcare exposures is collected.

*Legionella* is most often confirmed by urine antigen tests, but can also be confirmed by culture 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

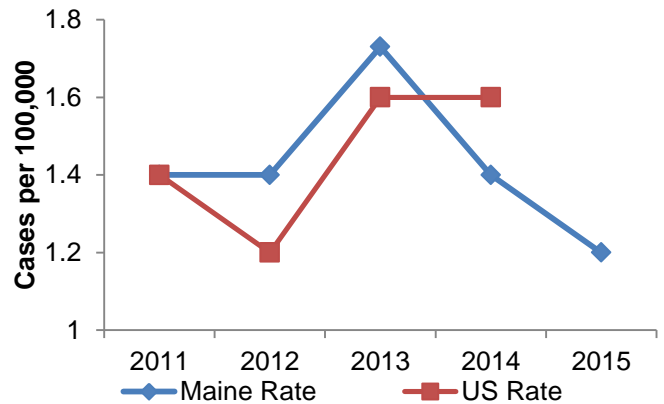
A total of 16 confirmed cases of legionellosis were reported in 2015, a decrease from 19 in 2014 (Figure 1). All 2015 cases were sporadic and no outbreaks were identified.

Figure 1. Legionella Cases in Maine, 2011-2015



The rate of legionellosis in Maine in 2015 was 1.2 cases per 100,000 population (Figure 2). The majority of legionellosis cases occurred among males (81%). The median age of cases was 61 years (range 36-85 years).

Figure 2: Legionella in Maine and US, 2011-2015



All sixteen cases were clinically diagnosed as Legionnaires' disease. Fifteen cases (94%) were hospitalized as a result of their infection and one (6%) died. Laboratory findings classified all 16 cases as *L. Pneumophilaserogroup-1* by urine antigen.

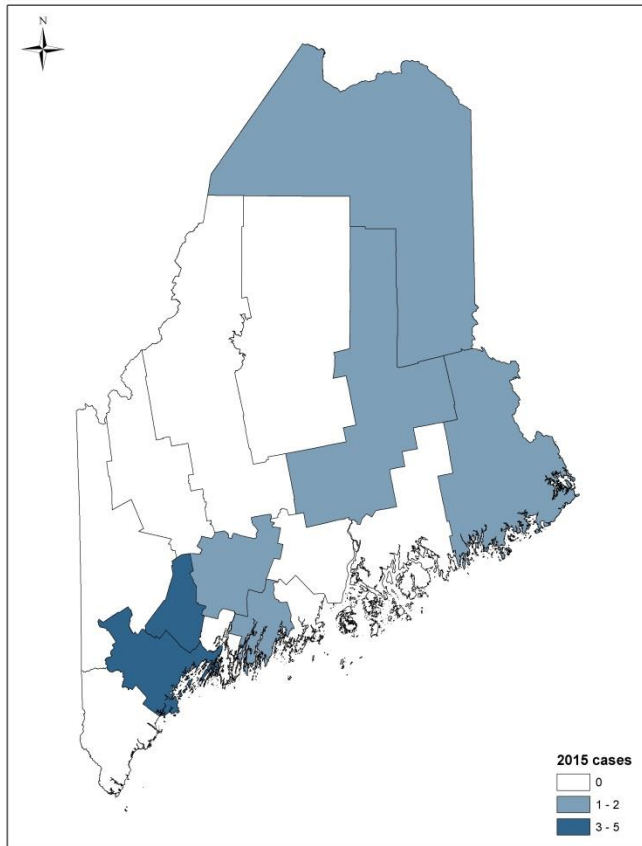
Six (40%) of 15 legionellosis cases reported staying overnight away from home in the two weeks before onset of symptoms. Four cases met the criteria for possibly being healthcare associated. However, no

## Legionellosis – Maine, 2015

source or apparent association was found in any of those four cases.

Legionellosis was identified among residents of seven Maine counties in 2015 (Figure 3).

**Figure 3: Legionellosis by County – Maine, 2015**



All cases of legionellosis in Maine must be reported by calling 1-800-821-5821 or by faxing reports to 1-800-293-7534.

For more information on legionellosis:

Maine CDC website:

<http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/airborne/legionellosis.shtml>

Federal CDC website:

<http://www.cdc.gov/legionella/index.html>

## 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 including:

- People older than 50 years
- Current or former smokers
- People with chronic lung disease (e.g. 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