FACT SHEET

LEGIONELLA: What Nurses Need to Know

Legionella is a bacteria that causes Legionnaires' disease and Pontiac fever, collectively referred to as legionellosis. Legionnaires' disease is a severe, life-threatening form of atypical pneumonia while Pontiac fever is a milder illness.

Legionella outbreaks are associated with poorly maintained building water systems and especially pose a risk in health care facilities. Legionnaire's disease has a mortality rate of 10 percent in the general population; however, the mortality rate increases to 25 percent for cases acquired in hospitals or long-term care facilities. Hospital-acquired legionellosis infections account for about 20 percent of all cases, 75 percent of which could have been prevented with better water management.

What are the symptoms of legionellosis?

The incubation time from exposure to Legionella bacteria to onset of Legionnaires' disease symptoms ranges from two to 14 days. Symptoms are similar to other types of pneumonia and include:

- Cough
- Fever
- Headaches
- Muscle aches
- Shortness of breath
- Confusion
- Diarrhea
- Stomach pain, nausea, and/or vomiting

Pontiac fever symptoms typically begin within 24 to 72 hours and are characterized by fever, chills, headache, and muscle pain.

What are the risk factors for contracting legionellosis?

Most healthy people exposed to Legionella don't get sick. People at increased risk of illness include:

- Current or former smokers
- People 50 years or older
- People with chronic health conditions like cancer, COPD, and diabetes
- People with weakened immune systems

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Where does Legionella grow and live? How is Legionella transmitted?

Legionella is found in the natural environment and building water systems like large plumbing networks, cooling towers, and hot tubs. Factors that contribute to Legionella growth include:

- Presence of biofilm (slime where Legionella can grow and multiply)
- Temperatures between 77°F and 113°F
- Not enough disinfectant
- Slow or stagnant water

Legionella transmission occurs primarily through the inhalation of aerosolized Legionella-contaminated water. In health care facilities, this can occur through devices like cooling units, showers, sinks, decorative fountains, ice machines, and hydrotherapy tubs. People can also get sick through aspirating water containing Legionella, which is when water accidentally enters the lungs while drinking. There are no confirmed cases of person-to-person transmission.

How should California health care employers prevent Legionella outbreaks?

The California Department of Public Health (CDPH) requires hospitals to have water management policies and procedures to reduce the risk of growth and spread of Legionella and other pathogens in building water systems. These facilities must have water management plans that, at a minimum, ensure each facility:

- Conducts a risk assessment to identify where Legionella and other opportunistic waterborne pathogens could grow and spread in the facility water system;
- Develops and implements a water management program that considers industry standards, including ASHRAE Standard 188-2018, and the CDC's Toolkit;
- Documents the results of testing and corrective actions when control limits are not maintained; and
- Maintains compliance with other applicable federal, state, and local requirements.

Legionellosis is a reportable disease and any suspicion of an outbreak should be reported to the local health department within 24 hours. The County of Los Angeles Public Health has also published guidelines on the surveillance, investigation, and control of legionellosis, which includes short-term mitigation strategies and long-term remediation.