

MANAGE YOUR RISK

Legionella Risk in Healthcare Facilities

Approximately 6,000 cases of Legionnaires' disease (LD) were reported in the United States in 2015. The Centers for Disease Control and Prevention (CDC) found that 76% of these cases could be traced back to healthcare facilities. Of those cases, 80% were linked to long-term care facilities, 18% were linked to hospitals and 2% were linked to both. During a 2017 media briefing, CDC Acting Director Anne Schuchat M.D. stated, "Legionnaires' disease in healthcare facilities is widespread, deadly and preventable."

LD outbreaks are commonly associated with hospitals and long-term care facilities due to their complex water distribution systems and other aerosol-generating devices along with having a large number of people who are more susceptible to the disease. To help prevent the development and transmission of Legionnaires' disease, it is important for healthcare organizations to understand their *Legionella* risk, the bacteria that causes LD, and implement ways to mitigate and possibly prevent *Legionella* growth.

Common Sources of Infection

Legionnaires' disease is caused by the bacterium *Legionella*. Although the bacterium can be found naturally in freshwater environments, it can become a health concern when it grows and spreads at high concentrations in man-made water systems.

Increased Risk Factors

While most healthy people exposed to *Legionella* do not get Legionnaires' disease, there are others who are more susceptible to infection. People with an increased risk of contracting LD include those aged 50 or older, current or former smokers, and those with a chronic disease or weakened immune system. The CDC reported that 88% of the Legionnaires' cases in 2015 occurred in patients older than 60.

Prevention and Risk Reduction

The key to preventing Legionnaires' disease is to inhibit the growth of *Legionella*. *Legionella* water management programs are the current industry standard for managing *Legionella* growth in large buildings in the United States. To provide guidance to building and facility managers on reducing the potential for *Legionella* growth, a voluntary consensus Standard, ASHRAE 188, was developed in 2015, aimed at preventing the growth and spread of *Legionella*. While this standard is not mandatory, the CDC has stated that, "following this Standard can help building and facility managers prevent many but not all cases of legionellosis." For additional information regarding ASHRAE 188, please visit <https://www.ashrae.org>.

Potential Growth Sites

Some of the potential growth sites for the bacterium that can be found in healthcare facilities include:

- Potable water systems
- Potable water outlets (especially those in or near patient rooms)
- Cooling towers and evaporative condensers
- Humidifiers (e.g., nebulizers)
- Decorative fountains
- Irrigation equipment
- Fire sprinkler systems (if recently used)
- Whirlpools and spas

DISCLAIMER: This is a sample guideline furnished to you by Glatfelter Healthcare Practice. Your organization should review it and make the necessary modifications to meet your organization's needs. The intent of this guideline is to assist you in reducing exposure to the risk of injury, harm, or damage to personnel, property, and the general public. For additional information on this topic, contact your Glatfelter Healthcare Practice Representative at (800) 233-1957.

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Some healthcare facilities are required to have water management policies and procedures in place. The Centers for Medicare and Medicaid Services (CMS) recently announced that Medicare-certified healthcare facilities, including hospitals, critical access hospitals and long-term care facilities are expected to develop and implement water management programs to reduce the growth and spread of *Legionella*. The official CMS memorandum may be found at:

<https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/Survey-and-Cert-Letter-17-30.pdf>

Water Management Program Considerations

It is recommended that all healthcare facilities, including those not participating in the Medicare program, consider implementing a *Legionella* water management program. For the water management program to be effective, it is recommended that the program include the following activities.

- Conduct a facility risk assessment to identify where *Legionella* could grow and spread in the facility water system.
- Implement a water management program that considers the ASHRAE industry standard and includes control measures such as:
 - Physical controls
 - Temperature management
 - Disinfectant level control
 - Visual inspections
 - Environmental testing for pathogens
- Specify testing protocols and acceptable ranges for control measures, and document the results of testing along with corrective actions taken when control limits are not maintained.

Additional help with evaluating, designing and implementing a *Legionella* water management program is available through the CDC. Their free toolkit, “Developing a Water Management Program to Reduce Legionella Growth & Spread in Buildings: A Practical Guide to Implementing Industry Standards” is available online at:

<https://www.cdc.gov/legionella/downloads/toolkit.pdf>

Decorative Fountains

Ornamental water fountains can promote relaxation and stress relief to sick patients. They can also provide an ideal environment for *Legionella* to grow.

Healthcare facilities with patients susceptible to Legionnaires’ disease should be aware of the risks associated with locating an ornamental water feature in any area which may be used by high risk patients. The CDC states that all healthcare facilities should “avoid placing decorative fountains and fish tanks in patient-care areas” and “ensure disinfection and fountain maintenance.”¹

Additionally, healthcare organizations with ornamental water features should include testing the water for *Legionella* levels in their risk management plans. It is recommended that facilities test the water for *Legionella* quarterly to ensure the bacterium levels are consistently less than 1 cfu (colony forming unit). If testing verifies the desired levels are being consistently maintained over the course of one year, testing frequency can then be reduced to annually.

¹ Centers for Disease Control and Prevention. (2003, June 6). Guidelines for environmental infection control in health-care facilities: recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC). MMWR. Morbidity and Mortality Weekly Reports. Retrieved from <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5210a1.htm>