What can you tell your customers about reducing their risk from *Legionella pneumophila*?

What you don't know can hurt you!

Being unaware of the potential disease risk from *Legionella pneumophila* in building water in your facility is no longer an excuse in a court of law—or in the court of public opinion.

The ANSI/ASHRAE Standard 188-2015, *Legionellosis: Risk Management for Building Water Systems*, is a definitive standard that details the minimum legionellosis risk-management requirements of potable and nonpotable water systems in both new and existing buildings. The standard provides guidance to owners and managers of human-occupied buildings (excluding single-family residential buildings) as well as individuals and companies who design, construct, install, commission, operate, maintain, and service centralized building water systems and components.[1]

You need a thorough and thoughtful water management plan

Based on the building's water system features, the ANSI/ASHRAE Standard 188-2015 establishes guidelines for water management plans to help manage the risk of legionellosis.[2] Water management plans must be tailored to each facility and must include thorough description and analysis of the building water systems, control measures, monitoring and plans for corrective action, as well as confirmation and documentation, all provided by professionals with the requisite experience. The **CDC toolkit** *Developing a Water Management Program to Reduce Legionella Growth & Spread in Buildings: A Practical Guide to Implementing Industry Standards* provides a very useful overview to what a water management plan should include and how to approach developing one, including specific recommendations for healthcare facilities.

Focus on reducing risk from the primary cause of Legionnaires' disease, *Legionella pneumophila*

Focusing detection and control efforts on *Legionella pneumophila*, the primary causative agent of Legionnaires' disease, can increase the efficiency and efficacy of your water management plan. *L. pneumophila* is the most common and clinically relevant species of *Legionella*. It thrives in low-nutrient conditions and grows as biofilms on the inner surfaces of pipes. Biofilms allow these pathogens to resist disinfectants and environmental stressors, and aid in the spread of antibiotic resistance and virulence genes. Water management plans that include measures to address these conditions and effectively control *L. pneumophila* will also control other species of *Legionella* at the same time. This focus may help building owners avoid the costs and dangers of unnecessary shutdowns and/or treatment triggered by the detection of *Legionella* species that are far less virulent than *L. pneumophila*.

Routine monitoring is the best way to ensure your water management plan is effective

Routine testing is an essential part of measuring whether a water management plan is effectively controlling a building's risk for a Legionnaires' disease outbreak. Accurate and reliable quantitative test results are required to understand where there are the greatest risks in your water system so they can be reduced. It's important to understand both the concentration of *L. pneumophila* at a given point in the system and percentage of *L. pneumophila*-positive outlets throughout the system to gauge risk, ensure control measures are working, and take any remediation steps needed. This monitoring should be done over time to detect any increases in *L. pneumophila*, including increases that result from changes to the system, such as construction, water pressure changes, or water main breaks. *L. pneumophila* is virtually impossible to completely eradicate in complex water systems, but it can be effectively controlled through proper monitoring and control measures.

References

1. ASHRAE. *Legionellosis: Risk Management for Building Water Systems*. Atlanta, GA: American Society of Heating, Refrigerating and Air-Conditioning Engineers; 2015:2. ANSI/ASHRAE Standard 188-2015.
2. ASHRAE. *Legionellosis: Risk Management for Building Water Systems*. Atlanta, GA: American Society of Heating, Refrigerating and Air-Conditioning Engineers; 2015:5. ANSI/ASHRAE Standard 188-2015.