

6-10-24 Weekly Clinical Update

There is definitely an uptick in F880 Infection Prevention & Control tags related to Water Management Plans (Legionella prevention). Every facility is required to have a Water Management Plan, but surveyors now expect, and are requiring to see documentation of the required testing in the plan.

AHCA has issued a Legionella Prevention with Water management Program “Hot Topic Brief” which addresses the subject. They also have a training webinar that can be accessed at <https://educate.ahcancal.org/products/water-safety-and-reducing-the-risk-for-legionella>. In addition to survey scrutiny, Legionnaires’ disease is increasing in frequency. “Legionnaires’ disease is very similar to other types of pneumonia and hard to distinguish from pneumonia caused by other pathogens ...including cough, shortness of breath, fever, muscle aches, headaches and in some cases diarrhea, nausea, and confusion.” “CDC encouraged healthcare facilities, including assisted living facilities and senior living facilities to have effective water management programs. A water management program is a multistep process to reduce Legionella and OPPP growth and spread; includes identifying devices where Legionella might grow or spread to people, determining control measures, monitoring control measures, and establishing remediation activities and interventions when control measures are not met.”

CMS goes further than “recommendations”. F880 says:

“Water Management

The bacterium Legionella can cause a serious type of pneumonia called Legionnaires’ Disease in persons at risk, such as those who are at least 50 years old, smokers, or with underlying medical conditions such as chronic lung disease or immunosuppression.

Legionella can grow in parts of building water systems that are continually wet (e.g., pipes, faucets, water storage tanks, decorative fountains), and certain devices can spread contaminated water droplets via aerosolization.

Legionellosis outbreaks are generally linked to locations where water is held or accumulates and pathogens can reproduce, including those found in long-term care facilities. Transmission from these water systems to humans occurs when the water is aerosolized (i.e., converted into a spray/mist in the air). Legionella is less commonly spread by aspiration of drinking water or ice.

Facilities must be able to demonstrate its measures to minimize the risk of Legionella and other opportunistic pathogens in building water systems such as by having a documented water management program. Water management must be based on nationally accepted standards (e.g., ASHRAE (formerly the American Society of Heating, Refrigerating, and Air Conditioning Engineers), CDC, U.S. Environmental Protection Agency or EPA) and include:

- An assessment to identify where Legionella and other opportunistic waterborne pathogens (e.g., Pseudomonas, Acinetobacter) could grow and spread; and
- Measures to prevent the growth of opportunistic waterborne pathogens (also known as control measures), and how to monitor them.

Examples of an assessment include a description of the building water systems using text and flow diagrams for identification. Additionally, control measures may include visible inspections, use of disinfectant, and temperature (that may require mixing valves to prevent scalding). Monitoring such controls include testing protocols for control measures, acceptable ranges, and documenting the results of testing. Water management should also include established ways to intervene when control limits are not met.

An industry standard calling for the development and implementation of water management programs in large or complex building water systems to reduce the risk of legionellosis was published by ASHRAE. The CDC and its partners developed a toolkit to facilitate implementation of this ASHRAE Standard.

Resources are available to develop and implement a water management program, such as:

- “The ASHRAE Standard 188- Legionellosis: Risk Management for Building Water Systems” <https://www.ashrae.org>;
- The CDC toolkit to facilitate implementation of the ASHRAE Standard titled “Developing a Water Management Program to Reduce Legionella Growth & Spread in Buildings: A Practical Guide to Implementing Industry Standards” <https://www.cdc.gov/legionella/wmp/toolkit/index.html>; and
- The EPA's “Technologies for Legionella Control in Premise Plumbing Systems: Scientific Literature Review” is available at <https://www.epa.gov/ground-water-and-drinking-water/technologies-legionella-control-premise-plumbing-systems>.

At this time, CMS does not require water cultures for Legionella or other opportunistic waterborne pathogens as part of routine program validation, although there may be instances when it is needed (e.g., a case of healthcare-associated legionellosis or a potential outbreak of legionellosis in the facility).

The facility should contact the local/state public health authority if there is a case of healthcare-associated legionellosis or an outbreak of an opportunistic waterborne pathogen causing disease. The facility must follow public health authority recommendations which may include, but is not limited to, remediating the pathogen reservoir and adjusting control measures as necessary. The SA should work with local/state public health authorities, if possible, to determine if the water management program was inadequate to prevent the growth of Legionella or other opportunistic waterborne pathogens and whether the facility implemented adequate prevention and control measures once the issue was identified.

Per the AHCancal LTC National Infection Prevention Forum, one participant commented, “...I have since updated our Water Management policy and we now require Maintenance Directors, Administrators and IC nurses (at minimum) to complete a "preventing legionella" self paced education which can be found on the CDC page here: www.cdc.gov/control-legionella/php/wmp/...

I found this to be a great education. (Yes, I completed the education first, before assigning it to the field and actually learned a lot). We have also implemented quarterly (or more often if needed) Water Management Program Meetings with the Water Management Team that includes Maintenance, DON, Admin, IC Nurse and other members of the IDT.

The training from CDC is a good FREE resource for training for your staff.

Suggestions for Practice and Resources from the Hot Topics article include:

- Establish a WMP (water management program) including at a minimum including Administrator, Infection Preventionist, building & grounds management and/or EVS supervisor and risk & quality manager
- Describe the building's water systems by creating a flow diagram of how the water enters the facility and flows through to different outlets including a written description of water system and devices attached to the system including: cooling tower, hot tub, decorative fountain and identifying if there is system that is centrally located within the building that is designated to control or modify the humidity levels in the air

- Identify where Legionella could grow and spread using the flow diagram such as areas where water temps change, inadequate disinfectant or water stagnation
- Describe where control measures should be applied & how to monitor them including: monitoring water temps & chlorine levels; flushing low-flow pipe runs & dead legs; and flushing infrequently used fixtures regularly
- Establish ways to intervene when control limits are not met such as water main break in neighborhood
- Verify program is running as designed
- Document and communicate all activities by keeping record of who is on team, water system description, control measures in place, corrective actions taken, verification steps to show WMP is being followed as written, validation that WPM is achieving desired results & is effective, and communications with staff about program regularly

AHCA has developed & made available a “Legionella Toolkit-Version 1.1” which was posted June 24, 2021.