



The Commonwealth of Massachusetts
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To: Massachusetts' Long-Term Care Facilities

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RE: Legionnaires' Disease in Long-Term Care Facilities

The purpose of this memorandum is to make long-term care facilities (LTCFs) aware of the recommended actions to take when a case of Legionnaires' disease is identified in a LTCF resident. Report any newly identified cases of Legionnaires' disease in LTCF residents to your local board of health (LBOH) and the Massachusetts Department of Public Health (MDPH) immediately (617-983-6800).

MDPH is committed to working with LTCFs across the Commonwealth to provide guidance on the prevention of healthcare-associated *Legionella* infections. It is our goal to provide LTCFs with information to prevent *Legionella* infections in LTCFs and provide appropriate guidance when transmission is suspected or identified.

Legionnaires' disease is a serious type of pneumonia caused by *Legionella*, which are bacteria that are found naturally in freshwater environments. *Legionella* can also cause a less serious illness called Pontiac fever which presents as a milder febrile illness without pneumonia. *Legionella* can become a health concern when it grows and spreads in building water systems. When *Legionella* grows and multiplies in a building water system, the bacteria can spread through water in droplets small enough for people to inhale and can come from showers, faucets,

air conditioning cooling towers, or even hot tubs. While healthy people typically do not get sick from *Legionella*, people at increased risk of infection include those aged 50 or older; current or former smokers; people with chronic lung disease, weakened immune systems, or those who take medicines that weaken their immune system; and people with illnesses such as diabetes, kidney failure, or liver failure. Medical complications from Legionnaires' disease include lung failure and death. About 1 out of 10 people who become sick with Legionnaires' disease will die due to complications from their illness. For those who get Legionnaires' disease during a stay in a healthcare facility, about 1 out of every 4 will die.¹

Per federal CMS requirements (June 2017)², all healthcare facilities should have a water management plan, including policies and procedures to reduce the risk of growth and spread of *Legionella* and other opportunistic pathogens in building water systems. Additionally, Legionnaires' disease is reportable to public health per 105 CMR 300: Reportable Diseases, Surveillance, and Isolation and Quarantine Requirements³. Cases of Legionnaires' disease prompt a public health investigation by the appropriate LBOH. Risk history information, including prior healthcare exposures, is obtained during case investigations. Standardized surveillance classifications are used to determine if a case is considered healthcare associated.

Healthcare-associated Legionnaires' disease surveillance case classifications⁴

The following Centers for Disease Control and Prevention (CDC) surveillance classifications are used by MDPH to inform public health follow-up recommendations:

- **Presumptive healthcare association:** A case with ≥10 days of continuous stay at a healthcare facility during the 14 days before onset of symptoms.
- **Possible healthcare association:** A case that spent a portion of the 14 days before date of symptom onset in one or more healthcare facilities but does not meet the criteria for presumptive healthcare-associated Legionnaires' disease.
- **Healthcare facility:** Includes hospitals, long-term care facilities, and clinics. Long-term care facilities include skilled nursing facilities, nursing homes, inpatient hospice, rehabilitation hospitals, and psychiatric residential treatment facilities.

¹ <https://www.cdc.gov/mmwr/volumes/66/wr/mm6622e1.htm>

² <https://www.cdc.gov/control-legionella/php/healthcare/federal-requirement.html>

³ <https://www.mass.gov/regulations/105-CMR-30000-reportable-diseases-surveillance-and-isolation-and-quarantine-requirements>

⁴ <https://www.cdc.gov/investigate-legionella/php/healthcare-resources/healthcare-facilities.html>

When a single presumptive case or two possible cases of healthcare-associated *Legionella* infection(s) occur within a 12-month period, the following recommendations are made:

- Hire a [consultant with *Legionella*-specific environmental expertise](#) to implement immediate control measures, if warranted, and conduct an environmental assessment. The environmental assessment may include *Legionella* environmental sampling.
 - Conduct remediation based on environmental assessment under the guidance of a consultant with *Legionella*-specific environmental expertise.
 - If *Legionella* is detected in one or more environmental samples, discuss next steps with your environmental consultant and LBOH. MDPH will become involved at the request of the LBOH.
- Review facility's [ASHRAE-compliant water management program](#) to ensure it is being followed.
- Conduct additional case finding:
 - Perform a retrospective chart review of patients for the past 12 months to identify pneumonia cases that could have been associated with healthcare. If additional cases are identified, determine if they were tested for *Legionella*.
 - Review laboratory results to confirm that there have not been any past or current residents diagnosed with *Legionella* infection in the prior 12 months.
- Conduct active surveillance for residents with healthcare-associated pneumonia (defined as pneumonia with onset ≥ 48 hours after admission) and ensure *Legionella*-specific testing⁵ is performed for any patients identified.
- **Report any newly identified cases of Legionnaires' disease to your LBOH and MDPH immediately (617-983-6800).**
- Evaluate trends in infections due to other water-related pathogens, such as gram-negative bacteria (e.g., *Pseudomonas*, *Burkholderia*, *Stenotrophomonas*) and nontuberculous mycobacteria (NTM).
- Report to the facility's licensing agency. Most LTCFs are licensed by the MDPH Division of Health Care Facility Licensure and Certification.

These steps are advised regardless of the results of any recent routine environmental testing that was performed. If environmental samples are positive for *Legionella*, isolates may be sent to the Massachusetts State Public Health Laboratory for banking and/or typing with clinical isolates, particularly in the event of additional cases.

⁵<https://www.cdc.gov/legionella/php/laboratories/>

Resources

CDC *Legionella* (Legionnaires' Disease and Pontiac Fever) available at the following link:

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

CDC Toolkit for Controlling *Legionella* in Common Sources of Exposure available at the following link: <https://www.cdc.gov/control-legionella/php/toolkit/control-toolkit.html>

CDC Working with *Legionella* Consultants available at the following link:

<https://www.cdc.gov/control-legionella/php/wmp/consultants-considerations.html>

CDC Environmental Assessment and Sampling Resources, including the *Legionella* Environmental Assessment Form (LEAF), available at the following link:

<https://www.cdc.gov/investigate-legionella/php/resources/environmental.html>

CDC Investigating Healthcare-associated Cases and Outbreaks available at the following link:

<https://www.cdc.gov/investigate-legionella/php/healthcare-resources/index.html>

CDC Considerations for Reducing Risk: Water in Healthcare Facilities available at the following link:

<https://www.cdc.gov/healthcare-associated-infections/php/toolkit/water-management.html>

CDC Federal Requirement to Reduce *Legionella* Risk available at the following link:

<https://www.cdc.gov/control-legionella/php/healthcare/federal-requirement.html>