

TIP SHEET for Legionellosis Case Investigations

- **Disease:** Infection with *Legionella pneumophila* bacteria can cause two distinct illnesses (collectively called legionellosis): Legionnaires' disease and Pontiac fever. Most reported cases are Legionnaires' disease which is characterized by severe pneumonia that can also include fever, cough, shortness of breath, muscle aches, and headache. Most cases are hospitalized.
- **Transmission & Incubation Period:** *Legionella* bacteria are found naturally in freshwater environments and become a health concern when they grow in human-made building water systems like showerheads, sink faucets, cooling towers, hot tubs, and decorative fountains. Legionellosis is acquired through inhalation of aerosolized water containing the bacteria. It is not spread person to person. Outbreaks of *Legionella* are often associated with buildings that have complex water systems such as hotels, cruise ships, and healthcare facilities. Older adults with weakened immune systems and health conditions are more likely to become ill with Legionnaire's Disease. The incubation period for Legionnaires' disease is most commonly 2 to 10 days.

<p style="text-align: center;">①</p> <p>Notification</p>	<ul style="list-style-type: none"> • LBOHs have primary responsibility to investigate cases of Legionellosis in their jurisdiction. New cases will flow into your "LBOH Notification for Routine Disease" workflow. <ul style="list-style-type: none"> ○ An MDPH epidemiologist will be assigned to a case if it is identified as part of an outbreak or a potential healthcare-associated case. 	
<p style="text-align: center;">②</p> <p>Get Prepared</p>	<ul style="list-style-type: none"> • Familiarize yourself with the disease: MDPH Fact Sheets, MDPH Guide to Surveillance • Review demographic and laboratory information available in MAVEN for the case. • Reviewing address is helpful to determine if the case lives in a residential healthcare setting such as a long-term care facility (LTCF). 	
<p style="text-align: center;">③</p> <p>Contact Ordering Provider</p>	<ul style="list-style-type: none"> • The name and facility of the ordering provider can be found in the lab tab in the case's MAVEN event. Given most cases are hospitalized, the ordering provider is likely to be within a hospital. Reach out to the hospital Infection Preventionist (IP) to obtain the following: <ul style="list-style-type: none"> ○ Confirm case's contact information, collect additional phone number(s) or email address. ○ Obtain symptom onset date and clinical presentation. Make sure to find out and document if the case had pneumonia. ○ Collect information on any potential exposures identified during visit (e.g., travel, hot tub exposure, healthcare exposures, whether the individual is a resident of a LTCF). ○ Request case's occupation and employer, if available. • If the IP cannot be reached in a timely matter, proceed to case interview. 	
<p style="text-align: center;">④</p> <p>Contact Case</p>	<ul style="list-style-type: none"> • Introduce yourself, why you are calling, what you will use information for, and who has access to the information they provide. • Confirm information obtained from the hospital IP and complete missing information in the Demographic and Clinical question packages. • Complete all questions in the Risk/Exposure question package for the 14 days prior to symptom onset. 	
<p style="text-align: center;">⑤</p> <p>Identify High-Risk Exposures</p>	<p style="text-align: center;">Travel</p>	<ul style="list-style-type: none"> • A travel-associated case is defined as someone with at least one night away from home (in the state of residence, another state, or another country) in the 14 days before symptom onset, not including nights spent in a healthcare facility. • Complete all variables in the Risk/Exposure question package including: Accommodation name, address, dates of stay, and room number of the lodging/accommodation the case stayed at, and any hot tub use at the location. <ul style="list-style-type: none"> ○ MDPH reports out-of-state travel to other health departments.

<p>⑤</p> <p>Identify High-Risk Exposures</p>	<p>Healthcare</p>	<p>The following exposure categories are used to define healthcare exposures for surveillance purposes:</p> <p>A presumptive healthcare-associated case is defined as a case with ≥10 days of continuous stay at a healthcare facility (i.e., LTCF, hospital) during the 14 days before onset of symptoms.</p> <p>A possible healthcare-associated case is defined as 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.</p> <ul style="list-style-type: none"> • If the case had any exposures to healthcare facilities (visited, stayed overnight, employed) during the 14 days prior to symptom onset, complete all questions in the Risk/Exposure question package including: Name of facility, address, date(s) of exposure, and room number(s). • For LTCF residents, identify which dates during the 14 days prior to symptom onset were spent at the LTCF and if the case left the facility during that time. If the case meets the definition of a presumptive or possible healthcare-associated case, notify the MDPH Division of Epidemiology within 24 hours. <ul style="list-style-type: none"> ○ LTCFs with a single presumptive healthcare-associated case or two or more presumptive/possible healthcare cases within a 12-month period will be assigned an MDPH epidemiologist to assist LBOH(s). The facility should be advised to follow guidance outlined in the LTCF Legionella Memo.
	<p>Respiratory Therapy Equipment</p>	<p>Cases reporting use of respiratory therapy equipment should be advised to:</p> <ul style="list-style-type: none"> • Follow the manufacturer's recommendations for cleaning and disinfection. • Use sterile water in devices with a humidifier and for rinsing after cleaning and disinfection. It is acceptable to use distilled water only in non-healthcare settings; respiratory therapy equipment (including but not limited to nebulizers, CPAP and BiPAP devices, etc.) in healthcare settings must use sterile water.
<p>⑥</p> <p>Notify DPH as Needed</p>	<ul style="list-style-type: none"> • Healthcare-associated cases, travel-associated cases, and suspected outbreaks should be reported to MDPH within 24 hours. Notify the Division of Epidemiology by phone: (617) 983-6800 	
<p>Other Notes</p>	<ul style="list-style-type: none"> • Given cases are often hospitalized, consider calling the nursing station and ask to be transferred to the case's room. You can also consider texting or emailing a case requesting a call back if they are not responsive. It is recommended that three call attempts are made at different times of day to reach a case for interview. • Completion of all exposure questions in the MAVEN Risk/Exposure questions is essential for detecting outbreaks and preventing further transmission. 	
<p>Additional Resources</p>	<ul style="list-style-type: none"> • May 2024 webinar: Introduction to <i>Legionella</i> Case Investigation Webinar Recording, Slides • CDC Legionella Resources • CDC Defining Healthcare Facilities and Healthcare-associated Legionnaires' Disease • MDPH Division of Epidemiology: (617) 983-6800 	