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DPH Memo BCD-2019-10  
Replaces DPH Memo BCD-2018-09

To: Wisconsin Clinicians, Infection Preventionists, Laboratorians, Local Health Departments, and Tribal Health Agencies

From: Jon Meiman, MD  
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## Increased reports of laboratory-confirmed cases of legionellosis (Legionnaires' disease)

### PLEASE DISTRIBUTE WIDELY

An increase in reported laboratory-confirmed cases of [Legionnaires' disease](#) has been detected among Wisconsin residents. Since May 1, 2019, the Division of Public Health (DPH) has received reports of 40 confirmed cases of Legionnaires' disease. Case-patients' ages range from 37 to 89 years, and the median age is 63 years.

Legionnaires' disease is on the rise in Wisconsin and nationally, with over 330 laboratory-confirmed cases reported in Wisconsin during 2018 and 180 during 2017, compared to an annual average of 120 cases (2012–2016).

We request your assistance with [diagnosing](#) and [reporting](#) cases of Legionnaires' disease to help promptly determine possible sources of exposure to *Legionella* so that we may prevent further infections. Please see detailed information below for health care providers, laboratorians, and local and tribal public health agencies.

#### For Health Care Providers

Testing for Legionnaires' disease is recommended for patients with pneumonia who:

- Have failed outpatient antibiotic therapy for community-acquired pneumonia.
- Have severe illness, such as those requiring admission to the intensive care unit.
- Are immunocompromised.
- Have traveled away from their home within 14 days before illness onset.
- Have a known or possible exposure to *Legionella* (for example, during an outbreak).
- May have healthcare-associated pneumonia (onset 48 hours or more after admission).

The urinary antigen assay **and** culture of lower respiratory secretions on selective media (buffered charcoal yeast extract [BYCE] agar) are the preferred [diagnostic tests](#) for Legionnaires' disease. **We strongly encourage clinicians to order both *Legionella* cultures and urinary antigen tests for any patients suspected of having Legionnaires' disease.** Of note, culturing lower respiratory specimens

(e.g., sputum or bronchoalveolar lavage) from patients infected with *Legionella* may allow for the detection of all species and serogroups of *Legionella*, unlike the urinary antigen test, which detects only *Legionella pneumophila* serogroup 1.

Please note that *Legionella* will not grow on standard media used for routine respiratory cultures. **Thus, *Legionella* culture must be specifically ordered to allow for isolate recovery.** Characterization of clinical isolates of *Legionella* is essential to determine linkages between clinical cases and with environmental sources.

If your laboratory does not perform *Legionella* culture, specimens should immediately be sent to the Wisconsin State Laboratory of Hygiene (WSLH) for testing. DPH will approve fee-exempt testing for *Legionella* (culture of lower respiratory specimens, pleural fluid, lung tissue, or other normally sterile site) at the WSLH for patients meeting the criteria above who have clinical or radiographic evidence of pneumonia.

To obtain approval for fee-exempt testing of these specimens, please contact the DPH Bureau of Communicable Diseases at 608-267-9003.

#### **For Laboratorians**

If your laboratory does not perform *Legionella* culture, DPH will approve fee-exempt testing for *Legionella* (culture of lower respiratory specimens, pleural fluid, lung tissue, or other normally sterile site) at the WSLH for patients meeting the criteria above who have clinical or radiographic evidence of pneumonia. To obtain approval for fee-exempt testing of these specimens, please contact the DPH Bureau of Communicable Diseases at 608-267-9003.

**For patients with a positive *Legionella* urine antigen test result, please send residual sputum or other lower respiratory specimens to the WSLH for *Legionella* culture as part of our enhanced surveillance efforts.**

Laboratories sometimes reject lower respiratory specimens during a work-up for pneumonia based on specimen quality (e.g., due to lack of white blood cells/polymorphonuclear leukocytes in the sample or contamination with other bacteria). However, laboratories should not reject lower respiratory specimens for these reasons when testing for Legionnaires' disease because *Legionella* can often be recovered on selective media (BCYE agar plus antibiotics which inhibit normal respiratory tract flora), and sputum produced by patients with Legionnaires' disease may not have many white blood cells (see the CDC-recommended [Specimen Collection](#) section).

In addition, please **forward all clinical *Legionella* isolates** to the WSLH for further characterization using pulsed field gel electrophoresis and whole genome sequencing.

Specimens should be shipped to:

Wisconsin State Laboratory of Hygiene  
2601 Agriculture Drive, Madison, WI 53718  
Attention: Bacteriology

If needed, specimens and isolates may be shipped fee-exempt to WSLH by contacting Gold Cross Courier Service at 800-990-9668 to arrange package pick-up.

If you have questions regarding specimen kits and shipping, please contact the WSLH Customer Service at 800-862-1013.

### **For Local Health Departments and Tribal Health Agencies**

Investigations of clusters of [Legionnaires' disease](#) depend on aggressive follow-up of the case-patients' history and possible exposures to *Legionella*. The case-patient or a member of their family should be interviewed to determine possible sources of their illness **as soon as possible** following diagnosis.

Please use the expanded [legionellosis hypothesis-generating questionnaire](#) for all interviews. After the patient interview, please enter data into the Wisconsin Electronic Disease Surveillance System (WEDSS), complete all exposure fields, and upload a scanned copy of the supplemental questionnaire with additional exposure information into the WEDSS Filing Cabinet.

If the case-patient reports staying in a lodging, health, or long-term care facility during the 14 days prior to illness onset, please notify the state legionellosis surveillance coordinator, Anna Kocharian, by [email](#) or phone (608-267-9003), as soon as possible.

### **Questions**

Thank you for your continued assistance in this important matter. Optimal and efficient surveillance for Legionnaires' disease requires cooperation and partnership among many agencies.

If you have any questions about the content of this memo or about [Legionnaires' disease](#), please contact [Anna Kocharian](#), Communicable Diseases Epidemiologist, at 608-267-9004, or the Bureau of Communicable Diseases at 608-267-9003.