

Legionellosis Cluster in Orillia

Attention: Physicians, Emergency Departments, Infection Control Practitioners, Walk-In Clinics/Urgent Care Clinics, Nurse Practitioners, Family Health Teams, Occupational Health Professionals, Ontario Health, Beausoleil First Nation, Moose Deer Point First Nation, Rama First Nation, Wahta First Nation, EMS

Date: October 7, 2022

The Simcoe Muskoka District Health Unit (SMDHU) is currently investigating a cluster of Legionellosis cases in the Orillia area. All 19 cases were diagnosed during their hospitalization with symptom onset between September 19, 2022 and October 3, 2022. Legionellosis is caused by the *Legionella* bacteria; most commonly associated with the species *Legionella pneumophila*.

While the bacteria is commonly found in natural, freshwater environments, it can become a health concern in human-made water systems (e.g., plumbing systems of large buildings, cooling towers, certain medical devices, decorative fountains) where conditions allow it to multiply and come in contact with vulnerable persons. People contract *Legionella* by inhaling aerosolized water droplets containing the bacteria, or, less commonly, by aspiration of contaminated drinking water. Fortunately, most people exposed to the bacteria do not become ill.

Legionellosis may present as one of the following illnesses:

- **Legionnaires' Disease** – Symptoms include anorexia, malaise, myalgia, headache, productive cough, temperature > 39 degrees Celsius, pneumonia, confusion, chills, nausea, diarrhea; or
- **Pontiac Fever** – Milder form of the illness without pneumonia. Symptoms include anorexia, malaise, myalgia, headache, productive cough, and temperature > 37.5 degrees Celsius.

Risk factors for developing Legionnaires' disease include:

- Age ≥50 years
- Smoking (current or historical)
- Chronic lung disease, such as emphysema or COPD
- Immune system disorders due to disease or medication
- Systemic malignancy
- Underlying illness, such as diabetes, renal failure, or hepatic failure



If you are investigating patients with these symptoms, please consider Legionellosis as a potential diagnosis. Signs and symptoms for Legionellosis disease are similar to pneumonia caused by other pathogens; the only way to tell if a pneumonia patient has Legionellosis is by specific diagnostic testing either:

- Detection of *L. pneumophila* serogroup 1 antigen in urine; or
- Positive *Legionella* culture from a lower respiratory tract specimen (i.e. sputum).

SMDHU is requesting that clinicians order, where possible, both a culture of a lower respiratory specimen (such as sputum) and a urinary antigen test when testing patients for Legionellosis. The sputum culture aids us in our epidemiological investigation of possible source(s) for the cluster.

Mild Legionnaires disease causing outpatient pneumonia not requiring hospitalization can be treated with a single oral antibiotic regimen that have activity against legionella pneumophila including fluoroquinolones such as levofloxacin and moxifloxacin, and macrolides like azithromycin and clarithromycin.

Serological (blood) assays can be nonspecific and are not recommended in most situations. Sputum should ideally be obtained prior to antibiotic administration, but antibiotic treatment should not be delayed to facilitate this process.

A unique investigation code has been created and can be included on the requisition: **SMD-2022-001**. Note that the respiratory specimen is to be sent to the Public Health Ontario Lab (Public Health Ontario – [General Test Requisition](#)).

Further information on Legionellosis and testing can be found at the [Public Health Ontario website](#). A general fact sheet about Legionellosis can also be found [here](#) on the SMDHU website.

Healthcare providers are to [report](#) suspected and/or confirmed cases to the SMDHU for follow-up, as Legionellosis is reportable.

If you have any questions, please contact the Infectious Diseases Team at 705-721-7520 ext. 8809.