

## Legionellosis Cluster in Orillia: Testing Recommendations and West Nile Virus Update

**Attention:** Physicians, Emergency Departments, Infection Control Practitioners, Walk-In Clinics/Urgent Care Clinics, Nurse Practitioners, NSM LHIN, Central LHIN

**Date:** October 8, 2019

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**The Simcoe Muskoka District Health Unit (SMDHU) is currently investigating a cluster of Legionellosis cases in the Orillia area. All cases were diagnosed during their hospitalization.** Legionellosis is caused by the *Legionella* bacteria; most commonly associated with the strain *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.

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-2019-002**. Note that the respiratory specimen is to be sent to the Public Health Ontario lab (Appendix: Public Health Ontario – General Test Requisition).

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

### **West Nile Virus Update (WNV)**

**To date this year, there has been one confirmed case of WNV within SMDHU. This was likely locally acquired within Simcoe County.** As of September 28, 2019, 10 probable and confirmed human cases were reported in Ontario. This is lower than what was reported for the same time frame last year.

SMDHU will continue to monitor WNV surveillance data and will notify community partners if trends demonstrate a notable increase in activity. It is important to note that 80% of infected cases are asymptomatic.

Healthcare providers are required to report suspected and/ or confirmed cases to the SMDHU for follow-up. If you have any questions, please contact the Infectious Diseases Team at 705-721-7520 ext. 8809.

# General Test Requisition

ALL Sections of this Form MUST be Completed

<b>1 - Submitter</b>  <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p style="text-align: right;">Courier Code</p>   <p>Provide Return Address:</p>   <p>Name Address City &amp; Province Postal Code</p> </div> <p>Clinician Initial / Surname and OHIP / CPSO Number</p> <p>Tel: _____ Fax: _____</p> <b>cc Doctor Information</b> <p>Name: _____ Tel: _____          Lab/Clinic Name: _____ Fax: _____          CPSO #: _____          Address: _____ Postal Code: _____</p>	<b>2 - Patient Information</b>  <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Health No.</td> <td style="width: 10%;">Sex</td> <td style="width: 50%;">Date of Birth: yyyy / mm / dd</td> </tr> <tr> <td>Medical Record No.</td> <td></td> <td></td> </tr> <tr> <td colspan="2">Patient's Last Name (per OHIP card)</td> <td>First Name (per OHIP card)</td> </tr> <tr> <td colspan="3">Patient Address</td> </tr> <tr> <td>Postal Code</td> <td colspan="2">Patient Phone No.</td> </tr> <tr> <td colspan="3">Submitter Lab No.</td> </tr> <tr> <td colspan="3">Public Health Unit Outbreak No.</td> </tr> </table> <b>Public Health Investigator Information</b> <p>Name: _____          Health Unit: _____          Tel: _____ Fax: _____</p>	Health No.	Sex	Date of Birth: yyyy / mm / dd	Medical Record No.			Patient's Last Name (per OHIP card)		First Name (per OHIP card)	Patient Address			Postal Code	Patient Phone No.		Submitter Lab No.			Public Health Unit Outbreak No.		
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<b>3 - Test(s) Requested</b> (Please see descriptions on reverse) <p>Test: Enter test descriptions below</p> <div style="border: 1px solid black; height: 100px; margin-top: 5px;"></div>	<b>Hepatitis Serology</b>  <p>Reason for test (Check (✓) only one box):</p> <p><input type="checkbox"/> Immune status  <input type="checkbox"/> Acute infection  <input type="checkbox"/> Chronic infection</p> <p>Indicate specific viruses (Check (✓) all that apply):</p> <p><input type="checkbox"/> Hepatitis A  <input type="checkbox"/> Hepatitis B  <input type="checkbox"/> Hepatitis C (testing only available for acute or chronic infection; no test for determining immunity to HCV is currently available)</p>
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<b>4 - Specimen Type and Site</b> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"><input type="checkbox"/> blood / serum</div> <div style="width: 33%;"><input type="checkbox"/> faeces</div> <div style="width: 33%;"><input type="checkbox"/> nasopharyngeal</div> <div style="width: 33%;"><input type="checkbox"/> sputum</div> <div style="width: 33%;"><input type="checkbox"/> urine</div> <div style="width: 33%;"><input type="checkbox"/> vaginal smear</div> <div style="width: 33%;"><input type="checkbox"/> urethral</div> <div style="width: 33%;"><input type="checkbox"/> cervix</div> <div style="width: 33%;"><input type="checkbox"/> BAL</div> <div style="width: 33%;"><input type="checkbox"/> other - (specify) _____</div> </div>	<b>Patient Setting</b> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"><input type="checkbox"/> physician office/clinic</div> <div style="width: 33%;"><input type="checkbox"/> ER (not admitted)</div> <div style="width: 33%;"><input type="checkbox"/> inpatient (ward)</div> <div style="width: 33%;"><input type="checkbox"/> inpatient (ICU)</div> <div style="width: 33%;"><input type="checkbox"/> institution</div> </div>
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<b>5 - Reason for Test</b>  <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> diagnostic  <input type="checkbox"/> needle stick  <input type="checkbox"/> prenatal  <input type="checkbox"/> immunocompromised  <input type="checkbox"/> post-mortem  <input type="checkbox"/> other - (specify) _____             </div> <div style="width: 33%;"> <input type="checkbox"/> immune status  <input type="checkbox"/> follow-up  <input type="checkbox"/> chronic condition             </div> <div style="width: 33%;"> <p>Date Collected: yyyy / mm / dd</p> <p>Onset Date: yyyy / mm / dd</p> </div> </div>	<b>Clinical Information</b>  <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"><input type="checkbox"/> fever</div> <div style="width: 33%;"><input type="checkbox"/> gastroenteritis</div> <div style="width: 33%;"><input type="checkbox"/> respiratory symptoms</div> <div style="width: 33%;"><input type="checkbox"/> STI</div> <div style="width: 33%;"><input type="checkbox"/> headache / stiff neck</div> <div style="width: 33%;"><input type="checkbox"/> vesicular rash</div> <div style="width: 33%;"><input type="checkbox"/> pregnant</div> <div style="width: 33%;"><input type="checkbox"/> encephalitis / meningitis</div> <div style="width: 33%;"><input type="checkbox"/> maculopapular rash</div> <div style="width: 33%;"><input type="checkbox"/> jaundice</div> <div style="width: 33%;"><input type="checkbox"/> other - (specify) _____</div> <div style="width: 33%;"><input type="checkbox"/> influenza high risk - (specify) _____</div> <div style="width: 33%;"><input type="checkbox"/> recent travel - (specify location) _____</div> </div>
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