Appendix B: Provincial Case Definitions for Diseases of Public Health Significance

Disease: Legionellosis

Effective: February 2019
Legionellosis

1.0 Provincial Reporting
Confirmed and probable cases of disease

2.0 Type of Surveillance
Case-by-case

3.0 Case Classification

3.1 Confirmed Case
Laboratory confirmation of infection with clinically compatible signs and symptoms:
- Isolation of *Legionella* spp. or detection of the antigen from appropriate clinical specimens (e.g., lung tissue, pleural fluid, sputum);
  OR
- A significant (i.e., fourfold or greater) rise in *Legionella* spp. total antibody titre between acute and convalescent sera;
  OR
- Single specimen or standing total antibody titre $\geq 1:256$ against *Legionella* spp.;
  OR
- Demonstration of *L. pneumophila* serogroup 1 antigen in urine.

3.2 Probable Case
Clinically compatible signs and symptoms with:
- Demonstration of *Legionella* spp. DNA by nucleic acid amplification test (NAAT), such as PCR;
- Detection of specific *Legionella* antigen or staining of the organism in respiratory secretions, lung tissue, or pleural fluid by direct fluorescent antibody (DFA) staining, Immunohistochemistry (IHC), or other similar method.

4.0 Laboratory Evidence

4.1 Laboratory Confirmation
Any of the following will constitute a confirmed case of Legionellosis:
- Positive *Legionella* spp. Culture;
• A significant (i.e., fourfold or greater) rise in *Legionella* spp. total antibody titre between acute and convalescent sera;
• A positive *Legionella* urinary antigen test.

### 4.2 Approved/Validated Tests

• Standard culture for all *Legionella* species with confirmation to species level.
• Serogrouping of *L. pneumophila* and other Legionellae with 2 or more serogroups.
• *L. pneumophila* serum antibody tests.
• *L. pneumophila* serogroup 1 urine antigen test.
• NAAT for *L. pneumophila* and *Legionella* spp.

### 4.3 Indications and Limitations

• Standard culture for *L. pneumophila*.
• All *Legionella* spp. [as well as former members of the genus Legionella which taxonomically belong to other genera (*Tatlockia micdadei*, *Tatlockia maceachernii*, *Floribacter bozemanae*, *Floribacter dumoffii*, and *Floribacter gormanii*), are considered to be pathogenic although they are implicated much less frequently than *L. pneumophila*.

### 5.0 Clinical Evidence

Legionellosis is comprised of two distinct illnesses:

• Legionnaires’ Disease – characterized by anorexia, malaise, myalgia, headache, productive cough, temperature > 39 degrees Celsius, pneumonia, confusion, chills, nausea, diarrhea; and
• Pontiac Fever – A milder form of the illness without pneumonia. It is characterized by anorexia, malaise, myalgia, headache, productive cough, temperature > 37.5 degrees Celsius.

### 6.0 ICD 10 Code(s)

A48.1 Legionnaire's Disease
A48.2 Pontiac Fever

### 7.0 Sources


8.0 Document History

Table 1: History of Revisions

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>Document Section</th>
<th>Description of Revisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2013</td>
<td>General</td>
<td>New template.</td>
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<tr>
<td></td>
<td></td>
<td>Section 9.0 Document History added.</td>
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<tr>
<td>January 2013</td>
<td>4.1 Laboratory Confirmation</td>
<td>Addition of the third bullet point: “A positive Legionella urinary antigen test.”</td>
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<tr>
<td>January 2013</td>
<td>4.2 Approved/ Validated Tests</td>
<td>First bullet point changed from “Standard culture for Legionella spp. with confirmation” to “Standard culture for all Legionella species with confirmation to species level.”</td>
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<td>Addition of second bullet point: “Serogrouping of L. pneumophila and other Legionellae with 2 or more serogroups.”</td>
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<td></td>
<td>Final bullet point changed from “NAT for Legionella spp.” To “NAT for L.pneumophila and Legionella spp.”</td>
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<td>Deletion of: “Direct fluorescent antibody staining”</td>
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<tr>
<td>January 2013</td>
<td>4.3 Indications and Limitations</td>
<td>Deletion of the third bullet point: “Positive specimens by urine antigen tests for the detection of Legionella pneumophila serogroup 1 are considered presumptive. When possible, patients should also be tested through accepted laboratory tests as outlined in section 4.2.”</td>
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<td>January 2013</td>
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<td>Updated.</td>
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<tr>
<td>February 2019</td>
<td>General</td>
<td>Minor revisions were made to support the regulation change to Diseases of Public Health Significance</td>
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