Appendix B: Provincial Case Definitions for Reportable Diseases

Disease: *Haemophilus influenzae* type b disease, invasive

Revised January 2014
**Haemophilus influenzae** type b disease, invasive

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
   Clinical evidence of invasive disease (see section 5.0) with laboratory confirmation of infection:
   - Isolation of *H. influenzae* type b* from a normally sterile site
     OR
   - Isolation of *H. influenzae* type b from the epiglottis in a person with epiglottitis
   *Note: only *H. influenzae* caused by serotype b is reportable; other types of *H. influenzae* (non-encapsulated or type a, c, d, e or f are not reportable).

3.2 Probable Case
   Clinical evidence of invasive disease with laboratory evidence of infection:
   - Demonstration of *H. influenzae* type b (Hib) antigen in cerebrospinal fluid
     OR
   - Detection of *H. influenzae* DNA in a normally sterile site
     OR
   - Buccal cellulitis or epiglottitis in a child < 5 years of age with no other causative organisms isolated

4.0 Laboratory Evidence

4.1 Laboratory Confirmation
   Any of the following will constitute a confirmed case of invasive *H. influenzae* type b disease:
   - Positive culture for *H. influenzae* type b obtained from a normally sterile site;
   - Positive culture for *H. influenzae* type b from the epiglottis in a person with epiglottitis.
4.2 Approved/Validated Tests

- Standard culture for *H. influenzae* with serotyping from a normally sterile site, or from the epiglottis in a person with epiglottitis.
- Antigen detection for *H. influenzae* type b. For persons treated with antimicrobial agents before specimens are obtained for culture, *H. influenzae* type b antigen detection may be used as an adjunct to culture.

Consult with laboratory about appropriate specimens for each testing methodology.

4.3 Indications and Limitations

- All invasive *H. influenzae* isolates should be serotyped to differentiate Hib from the other serotypes, as only serotype b is reportable.
- False positive and false negative reactions can occur with antigen detection. Persons should be reported as probable cases of Hib disease if *H. influenzae* type b antigen is detected in cerebrospinal fluid but not from a culture or sterile site. Alternatively, persons should not be reported as cases if antigen is detected exclusively in urine or serum specimens.
- Detection of *H. influenzae* DNA is considered probable, not confirmed, because Hib may be present in a non-pathogenic role and, thus, depending on the site, may NOT reflect the actual pathogen.
- Detection of *H. influenzae* DNA in a sterile site does NOT indicate that it is type b, since this test does not differentiate between serotypes.

5.0 Clinical Evidence

Clinical evidence of invasive disease caused by *H. influenzae* includes any of the following:

- Meningitis (most common)
- Bacteraemia
- Epiglottitis
- Pneumonia
- Pericarditis
- Septic arthritis
- Empyema

6.0 ICD Code(s)

Note: ICD codes do not differentiate between b and non-b serotypes.

6.1 ICD-10 Code(s)

- A41.3 Septicaemia due to *Haemophilus influenzae*
- A49.2 *H. influenzae* infection, unspecified site
- B96.3 *H. influenzae* as cause of disease classified elsewhere
- G00.0 Meningitis due to *Haemophilus influenzae*
- J05.1 Acute epiglottitis
J14 Pneumonia due to *Haemophilus influenzae*

P23.6 Congenital pneumonia due to *Haemophilus influenzae*

### 6.2 ICD-9/ICD-9CM Code(s)

- 038.41 Septicaemia due to *Haemophilus influenzae*
- 041.5 *H. influenzae* infection of unspecified site and in conditions classified elsewhere
- 320.0 Meningitis due to *Haemophilus influenzae*
- 464.3 Acute epiglottitis
- 482.2 Pneumonia due to *Haemophilus influenzae*

### 7.0 Comments

N/A

### 8.0 Sources


Ontario. Ministry of Health and Long-Term Care. Timely entry of cases and Outbreaks. iPHIS bulletin. Toronto, ON: Queen’s Printer for Ontario; 2012:17 (or as current).


### 9.0 Additional Resources

## 10.0 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></td>
<td>3.1 Confirmed Case</td>
<td>Addition of a note to clarify that only <em>H. influenzae</em> caused by serotype b is reportable.</td>
</tr>
<tr>
<td></td>
<td>3.2 Probable Case</td>
<td>First sentence changed from “Invasive disease with laboratory confirmation of infection (antigen detected):” to “Clinical evidence of invasive disease with laboratory evidence of infection:”</td>
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<tr>
<td></td>
<td>4.2 Approved/Validated Tests</td>
<td>The following was added to the second bullet point, Antigen detection for <em>H. influenzae</em> type b: “For persons treated with antimicrobial agents before specimens are obtained for culture, <em>H. influenzae</em> type b antigen detection may be used as an adjunct to culture.” Nucleic acid amplification test (NAT) for <em>H. influenzae</em> removed from list.</td>
</tr>
<tr>
<td></td>
<td>4.3 Indications and Limitations</td>
<td>The following bullet point was removed: “Further isolate characterization is indicated for epidemiological public health and control purposes.” The last three bullet points were added.</td>
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<td></td>
<td>8.0 Sources</td>
<td>Updated.</td>
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