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

Disease: Plague

Effective: February 2019
Plague

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 *Yersinia pestis* (*Y. pestis*) from an appropriate clinical specimen (e.g., body fluids)
  OR
- A significant (i.e., fourfold or greater) rise in serum antibody titre to *Y. pestis* fraction 1 (F1) antigen by enzyme immunoassay (EIA) or passive haemagglutination/inhibition titre

3.2 Probable Case

Clinically compatible signs and symptoms with one of the following laboratory results:

- Demonstration of elevated serum antibody titre(s) to *Y. pestis* F1 antigen (without documented significant [i.e., fourfold or greater] rise) in a patient with no history of plague immunization
  OR
- Demonstration of *Y. pestis* F1 antigen by immunofluorescence
  OR
- >1:10 passive haemagglutination/inhibition titre in a single serum sample in a patient with no history of vaccination or previous infection
  OR
- Detection of *Y. pestis* antibody by EIA
  OR
- Detection of *Y. pestis* nucleic acid

4.0 Laboratory Evidence

4.1 Laboratory Confirmation

Any of the following will constitute a confirmed case of plague:

- Positive *Y. pestis* culture with confirmation (See Section 4.2)
- A significant (i.e., fourfold or greater) rise in *Y. pestis* antibody titre
4.2 **Approved/Validated Tests**

- Standard culture for *Y. pestis* with biochemical confirmation
- *Y. pestis* serology
- Nucleic acid amplification test (NAAT) for *Y. pestis*
- Direct fluorescent antibody (DFA) for *Y. pestis* F1 antigen
- Confirmatory methods include combinations of the following methods: specific bacteriophage lysis, DFA for F1 antigen, NAAT, haemagglutination/inhibition titres, EIA for *Y. pestis* antibody
- Detection of *Y. pestis* nucleic acid

4.3 **Indications and Limitations**

Not applicable

5.0 **Clinical Evidence**

Clinically compatible signs and symptoms are characterized by fever, chills, headache, malaise, prostration, and leukocytosis that are manifested in one or more of the following principal clinical forms:

- Regional lymphadenitis (bubonic plague)
- Septicemia without an evident bubo (septicemic plague)
- Plague pneumonia, resulting from haematogenous spread in bubonic or septicemic cases (secondary pneumonic plague) or inhalation of infectious droplets (primary pneumonic plague)
- Pharyngitis and cervical lymphadenitis resulting from exposure to larger infectious droplets or ingestion of infected tissues (pharyngeal plague)

6.0 **ICD 10 Code(s)**

A20 Plague

7.0 **Sources**


<table>
<thead>
<tr>
<th>Revision Date</th>
<th>Document Section</th>
<th>Description of Revisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2014</td>
<td>General</td>
<td>New template.</td>
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<tr>
<td></td>
<td></td>
<td>Title of Section 8.0 changed from “References” to “Sources”.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Section 9.0 Document History added.</td>
</tr>
<tr>
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<td>3.2 Probable Case</td>
<td>Order of bullets rearranged: third bullet moved to last bullet.</td>
</tr>
<tr>
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<td>4.1 Laboratory</td>
<td>“Plague” changed to lower case “plague”.</td>
</tr>
<tr>
<td></td>
<td>Confirmation</td>
<td></td>
</tr>
<tr>
<td>December 2014</td>
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</tr>
<tr>
<td></td>
<td>Tests</td>
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</tr>
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<td>December 2014</td>
<td>8.0 Sources</td>
<td>Updated.</td>
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<td>Minor revisions were made to support the regulation change to Diseases of Public Health Significance.</td>
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</tbody>
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