Appendix B: Provincial Case Definitions for Reportable Diseases

Disease: Group A Streptococcal Disease, invasive (iGAS)

Revised March 2017
Group A Streptococcal Disease, invasive (iGAS)

1.0 Provincial Reporting
Confirmed cases of disease

2.0 Type of Surveillance
Case-by-case

3.0 Case Classification

3.1 Confirmed Case
- Isolation of Group A Streptococcus (Streptococcus pyogenes) or DNA detection by nucleic acid amplification test (NAAT) from a normally sterile site (e.g., blood, cerebrospinal fluid, joint, pleural, pericardial fluid) with or without evidence of clinical severity,

  OR

- Isolation of Group A Streptococcus from a non-sterile site (e.g., skin) with evidence of severity.

4.0 Laboratory Evidence

4.1 Laboratory Confirmation
Any of the following will constitute a confirmed case of invasive Group A Streptococcal (iGAS) Disease:

- Positive Group A Streptococcus culture from a normally sterile site (e.g., blood, cerebrospinal fluid, joint, pleural, pericardial fluid);

- Positive Group A Streptococcus culture from a non-sterile site (e.g., skin) with evidence of severity (refer to section 5.0 below).

4.2 Approved/Validated Tests
- Standard culture with serogrouping for Group A Streptococcus.
- Positive NAAT for S. pyogenes from a normally sterile site.

4.3 Indications and Limitations
- Isolates from iGAS cases should be forwarded to the Public Health Ontario Laboratory for further characterization.
5.0 Evidence of Severity

Evidence of severe invasive disease may be manifested as several conditions. The following are considered evidence of severe invasive disease:

- Streptococcal toxic-shock syndrome (STSS) which is characterised by hypotension (systolic blood pressure $< 90$ mm Hg in adults or $< 5$th percentile for age for children) and at least two (2) of the following signs:
  - renal impairment (creatinine $> 177$ μmol/L for adults);
  - coagulopathy (platelet count $\leq 100,000$ mm$^3$ or disseminated intravascular coagulation);
  - liver function abnormality (AST (SGOT), ALT (SGPT) or total bilirubin $\geq 2x$ upper limit of normal for age);
  - adult respiratory distress syndrome (ARDS);
  - generalized erythematous macular rash that may desquamate.

  OR

- Soft-tissue necrosis*, including necrotizing fasciitis or myositis or gangrene;

  OR

- Meningitis;

  OR

- Death;

  OR

- A combination of any of these conditions.

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* Soft-tissue necrosis should not include chronic soft-tissue necrosis/gangrene, or acute or chronic cellulitis. Soft-tissue necrosis should be acute in nature and deeper than the skin (e.g., necrotizing fasciitis, myositis and gangrene), as determined by the clinician.
6.0 ICD Code(s)

6.1 ICD-10 Code(s)
A40.0 Septicaemia due to group A streptococcus
A49.1 Streptococcal infection, unspecified
B95.0 Group A Streptococcus as the cause of diseases classified elsewhere, e.g.:
   A48.3 Toxic shock syndrome
   O85 Puerperal sepsis
   M72.6 Necrotizing fasciitis
   M00 Pyogenic arthritis
G00.2 Streptococcal meningitis

6.2 ICD-9/ICD-9CM Code(s)
038.0 Septicaemia due to group A streptococcus
041.01 Group A Streptococcal infection of unspecified site and in conditions classified elsewhere, e.g.:
   040.82 Toxic shock syndrome
   670 Major puerperal infection
   728.86 Necrotizing fasciitis
   711.0 Pyogenic arthritis
   320.2 Streptococcal meningitis

7.0 Comments
N/A

8.0 Sources
## 9.0 Document History

### Table 1: History of Revisions

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<td>General</td>
<td>New Template</td>
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<tr>
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<td>Removal of “…and probable…”</td>
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<td>4.1 Laboratory Confirmation</td>
<td>Addition of “… (e.g., skin) and “…with evidence of severity (refer to section 5.0 below)” to the second bullet point. Removal of “See section 3.1 and 5” from the second…”</td>
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