Early-onset neonatal sepsis and meningitis (NSM)

CASE DEFINITION FOR EARLY-ONSET NEONATAL SEPSIS AND MENINGITIS

Report any neonate less than seven days of age presenting with one of the following:
• Positive blood culture*
AND/OR
• Positive cerebrospinal fluid (CSF) culture* from a lumbar puncture (LP)

Neonates with possible nosocomial infections should also be reported.
* Culture growth includes bacterial or fungal pathogens.

Exclusion criteria
1) Neonates who are asymptomatic with positive culture, such as coagulase-negative Staphylococcus, Diphtheroids, Corynebacterium spp., Bacillus spp., Propionibacterium spp., Aerococcus spp., Micrococcus spp.
2) Positive CSF from a drain, reservoir, shunt, or intracranial surgical procedure.

SECTION 1 – DEMOGRAPHIC INFORMATION

A) Neonate
1.1 Date of birth: _____ / _____ / _______ Time of birth: _______
DD MM YYYY
1.2 Sex: Male ___ Female ___

B) Mother
1.3 Place of residence (province/territory): ______________________
1.4 Age at delivery (years): ___________
1.5 Ethnicity (check all that apply):
   Arab ___ Black ___ Chinese ___ Filipino ___ Japanese ___ Korean ___ Latin American ___
   South Asian (e.g., Bangladeshi, Punjabi, Sri Lankan) ___ Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian) ___ West Asian (e.g., Afghan, Assyrian, Iranian) ___ White ___
   First Nations ___ Inuit ___ Métis ___ Other (specify) ___________________________ Unknown ___
1.6 Gravida ___ Para ___ Abortions – Spontaneous: Yes ___ No ___ Unknown ___ Number(s) _____
   – Therapeutic: Yes ___ No ___ Unknown ___ Number(s) _____

SECTION 2 – MATERNAL FACTORS PREDISPOSING TO NEWBORN INFECTIONS

2.1 Maternal GBS status: Positive ___ Negative ___ Unknown ___ Gestational age tested ____________
   Yes No Unknown

2.2 Maternal urinary tract infection during pregnancy:
   If yes, specify GBS bacteriuria ___ Other, specify: __________________________
   Yes ___ No ___ Unknown ___

2.3 Prolonged rupture of membranes (PROM >18 hours prior to delivery)
   If yes, specify duration of ROM: ______ hours
SECTION 2 – MATERNAL FACTORS PREDISPOSING TO NEWBORN INFECTIONS  (cont’d)

2.4 Premature PROM
   If yes, specify gestational age at rupture _____ weeks
2.5 Elevated maternal temperature > 38ºC (after onset of labour)
2.6 Elevated maternal white blood count (WBC >10,000; after onset of labour)
2.7 Clinical diagnosis of chorioamnionitis
2.8 Maternal antibiotics (GBS prophylaxis given)
   If yes, specify: Type of antibiotic _______________ Duration: _______________

SECTION 3 – FAMILY HISTORY

3.1 Previous sibling with neonatal death(s)
   If yes, specify reason: ________________________________________
3.2 Previous sibling with neonatal sepsis
   If yes, specify type: __________________________________________

SECTION 4 – MEDICAL HISTORY

4.1 Gestational age at birth: _____ weeks completed
4.2 Type of delivery: Vaginal ___ Instrumental – Forceps ___ Vacuum ___ Cesarean section ___
4.3 APGAR score at 1 minute _____ 5 minutes _____ 10 minutes _____
4.4 Birth weight: ______ grams Height: _____ cm Head circumference: _____ cm
4.5 Date of presentation: _____ /_____ /________ Age at presentation: ____ hours (if < 24) or ____ days
   DD MM YYYY
4.6 If readmitted, date of readmission: _____ /_____ /________ Weight on readmission: _____ grams
   DD MM YYYY
4.7 Clinical signs of sepsis:

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lethargy</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Jaundice</td>
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<td></td>
<td></td>
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<tr>
<td>DIC*</td>
<td></td>
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<tr>
<td>Hyperthermia/ Hypothermia</td>
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<td>Seizures</td>
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<tr>
<td>Apnea</td>
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<td>Feeding Intolerance</td>
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<tr>
<td>Thrombocytopenia</td>
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</tbody>
</table>

* Disseminated intravascular coagulopathy
4.8 Congenital anomalies: Yes ___ No ___ Unknown ___
   If yes, specify: __________________________________________
4.9 Surgical or other invasive procedures before sepsis: Yes ___ No ___ Unknown ___
   If yes, specify: __________________________________________
4.10 Did the infant have a central line (peripherally inserted central catheter line, umbilical line, central venous line) prior to infection: Yes ___ No ___ Unknown ___
**SECTION 5 – LABORATORY INVESTIGATIONS**

5.1 Check all that apply. If a copy of the de-identified microbiology report is attached, this table does not need to be completed.

<table>
<thead>
<tr>
<th>Culture</th>
<th>Date drawn DD / MM / YYYY</th>
<th>Date of first reported positive result DD / MM / YYYY</th>
<th>Organism(s)</th>
<th>Antibiotic resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood 1</td>
<td>____ /____ /________ ____ /____ /________</td>
<td>____ ____ (If yes, specify)</td>
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<tr>
<td>Blood 2</td>
<td>____ /____ /________ ____ /____ /________</td>
<td>____ ____ (If yes, specify)</td>
<td></td>
<td></td>
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<tr>
<td>CSF</td>
<td>____ /____ /________ ____ /____ /________</td>
<td>____ ____ (If yes, specify)</td>
<td></td>
<td></td>
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<tr>
<td>Urine</td>
<td>____ /____ /________ ____ /____ /________</td>
<td>____ ____ (If yes, specify)</td>
<td></td>
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<tr>
<td>Other</td>
<td>____ /____ /________ ____ /____ /________</td>
<td>____ ____ (If yes, specify)</td>
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</tbody>
</table>

5.2 Complete blood count at the time of presentation:
- HB _______  HCT _______  WBC _______  Total neutrophils _______  Platelets __________

Smear _____________________________________________________________

Are results compatible with disseminated intravascular coagulopathy (DIC)?  Yes ___  No ___

5.3 Biochemistry at the time of presentation:
- Serum sodium _____  BUN _____  Creatinine _____
- Bilirubin _____ µmol/L  Conjugated bilirubin _____ µmol/L  Unconjugated bilirubin _____ µmol/L

**SECTION 6 – TREATMENT AND OUTCOME**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
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<tbody>
<tr>
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<tr>
<td>6.1</td>
<td>Transfusion</td>
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<tr>
<td>6.2</td>
<td>Intubation</td>
<td></td>
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<tr>
<td>6.3</td>
<td>Ionotropes</td>
<td></td>
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<tr>
<td>6.4</td>
<td>Seizures</td>
<td></td>
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<tr>
<td>6.5</td>
<td>Still in hospital</td>
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<tr>
<td></td>
<td>If yes, total length of stay: ________ days/weeks</td>
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<tr>
<td>6.6</td>
<td>Discharged home</td>
<td></td>
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<tr>
<td>6.7</td>
<td>Death</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If yes, was the infection the cause?</td>
<td></td>
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<tr>
<td>6.8</td>
<td>Neurological status at discharge: Normal ____ Unknown ____</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hearing loss ____  Vision loss ____  Motor impairment ____  Seizures ____</td>
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</tbody>
</table>

___ I agree to be contacted for further information.
___ I do not wish to be contacted for further information.
SECTION 7 – REPORTING PHYSICIAN

First name_________________________________ Surname_________________________________

Address______________________________________

City________________________________________ Province________________________ Postal code____________

Telephone number___________________________ Fax number___________________________

E-mail_______________________________________ Date completed______________________

Thank you for completing this form.

(NSM 2011-01)