Clinical Guideline
Fever ≥ 100.4°F in Infants 0-90 Days

Infant 0-90 days with recorded or reported rectal temperature ≥100.4°F

Evaluation and management in Bethel

Sick-appearing

- Perform full work-up, including:
  - CBC with manual differential
  - CRP
  - Procalcitonin
  - Blood culture
  - U/A, urine culture
  - CXR
  - LP if stable
  - RSV, flu nasal swabs

- Admit or medevac, as appropriate. Give antibiotics (see Treatment Box).

Well-appearing

- 0-28 days
  - Meets all Low Risk Criteria (see box)?
    - No
      - Strongly consider performing LP if stable. Consider giving antibiotics (see Treatment Box).
    - Yes
      - Observe in Bethel with no antibiotics with daily follow-up until cultures are negative at 48 hours. Inform family of plan. Patient Education Handout is available (Fever Follow-Up Instructions-PEDS).

- 29-90 days
  - Perform partial work-up:
    - CBC with manual differential
    - CRP
    - Procalcitonin
    - Blood culture
    - U/A, urine culture
    - Consider CXR
  - Meets all Low Risk Criteria (see box)?
    - No
      - Strongly consider performing LP if stable. Consider giving antibiotics (see Treatment Box).
    - Yes
      - Observe in Bethel with no antibiotics with daily follow-up until cultures are negative at 48 hours. Inform family of plan. Patient Education Handout is available (Fever Follow-Up Instructions-PEDS).

CSF Results

<table>
<thead>
<tr>
<th>Normal CSF</th>
<th>0-28 days</th>
<th>29-90 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBC</td>
<td>&lt;20</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Glucose</td>
<td>&gt;40</td>
<td>&gt;40</td>
</tr>
<tr>
<td>Protein</td>
<td>&lt;100</td>
<td>&lt;75</td>
</tr>
</tbody>
</table>

Absence of neutrophils (polys) makes bacterial meningitis unlikely. CSF neutrophils (polys) >75% increases likelihood of bacterial meningitis. Do not use correction formulas for traumatic LPs.

Special Circumstances

1. Immunizations within 24 hours of fever <101 and well-appearing: no work-up necessary but must follow-up in village or Bethel within 12-24 hours. If fevers persist or infant is not well-appearing, perform work-up as above.

2. Pre-treatment with antibiotics with no focal bacterial infection: infant must be observed a full 48 hours off antibiotics. This may require staying in Bethel for 48 hours of antibiotics followed by another 48 hours of observation off antibiotics with daily follow-up. Consider ordering CSF Multiplex PCR, a send-out test.

3. Unsuccessful LP: treat if appropriate and consider a repeat LP in 12-24 hours and determine treatment course based on cell counts. If repeat LP not performed or unsuccessful, either treat for 10-14 days with meningitic dosing of IV antibiotics or stop antibiotics at 48 hours and observe infant for an additional 48 hours off antibiotics. Consider admission.

HSV Work-up

- CSF HSV PCR
- Blood HSV PCR
- CMP
- Nasopharyngeal, conjunctival, and anal swabs and vesicle fluid for HSV PCR.

Risk-Stratification Resource: Kaiser Neonatal Sepsis Calculator

Treatment

No febrile infant <90 days should receive antibiotics without an LP.

- 0-7 days: please consult a pediatrician, pharmacist, or Neofax.
- 8-28 days:
  - If well-appearing and low suspicion for meningitis: ampicillin 50 mg/kg IV Q8h AND gentamicin 4 mg/kg IV Q24h
  - If well-appearing and any suspicion for meningitis: ampicillin 75 mg/kg IV Q6h AND ceftiraxone 50 mg/kg IV Q12h
  - If ill-appearing and/or positive CSF Gram stain: please consult a pediatrician and/or a pharmacist.
  - 29-90 days: ceftiraxone 75 mg/kg IV IM Q24h OR if worried about meningitis 100 mg/kg IV once then 50 mg/kg IV Q12h
  - Continue IV/IM antibiotics until cultures are negative and patient is clinically stable ≥48-72 hours or until specific organism and sensitivities are available to direct therapy.
  - If known HSV exposure, seizures, or severe illness: acyclovir 20 mg/kg IV Q8h with IVF, perform HSV work-up (see box), and consult pediatrics.
  - If suspicion for bacterial meningitis, strongly consider medevac.
  - If transferring patient, send any extra CSF on ice with patient.

Village Management

- If well-appearing, send to Bethel on next commercial flight.
- If travel to Bethel will be delayed, infant must have recheck with health aide within 12 hours and be followed closely until seen in Bethel.
- If infant is not well-appearing, consult pediatrics to discuss treatment options.
- If giving ceftiraxone IM in the village, DO NOT say “ceftriaxone per CHAM.” Give the health aide the exact dose.

This guideline is designed for the general use of most patients but may need to be adapted to meet the special needs of a specific patient as determined by the medical practitioner.

If comments about this guideline, please contact Leslie_Herrmann@ykhc.org.