Yukon-Kuskokwim HEALTH CORPORATION

Clinical Guideline

Fever ≥ 100.4°F in Infants 0-90 Days

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

Village Management

- If well-appearing and meets criteria for evaluation in Bethel, send on next commercial flight. If travel to Bethel will be delayed, infant must have recheck with health aide within 12 hours and be followed at least daily until seen in Bethel.
- If infant is not well-appearing, consult peds to discuss treatment options.
- If giving ceftriaxone IM in the village, DO NOT say "ceftriaxone per CHAM." Give the health aide the exact dose per box below.

Sick-appearing

- Evaluate patient in Bethel ED.
- Perform immediate work-up:
  - CBC with manual differential
  - Procalcitonin, CRP
  - Blood culture
  - U/A, urine culture
  - CXR
  - LP if stable
  - RSV/flu/COVID swabs

Admit or medevac, as appropriate. Give antibiotics. (See box.)

Well-appearing

0-28 days

- Evaluate patient in Bethel ED.
- Perform immediate work-up:
  - CBC with manual differential
  - Procalcitonin, CRP
  - Blood culture
  - U/A, urine culture
  - CXR
  - LP if stable
  - RSV/flu/COVID swabs

Admit or medevac, as appropriate. Give antibiotics. (See box.)

29-60 days

- Evaluate patient in Bethel ED.
- Perform work-up:
  - CBC with manual differential
  - Procalcitonin, CRP
  - Blood culture
  - U/A, urine culture
  - Consider CXR, RSV/flu/COVID swabs

Meets all Low Risk Criteria (see box)?

No

- Perform LP.
- Give antibiotics. (See box.)
- Consider admission.

Yes

Evidence of UTI, AOM, or PNA?

Yes

- Consider LP based on clinical status, age, etc. LP not mandatory in well-appearing infants.
- Admission or daily follow-up until blood culture negative at least 36 hours.
- If UTI, treat empirically with cephalexin or ceftriaxone, pending speciation of culture.
- If AOM or PNA, use clinical judgment to decide on antibiotic treatment (oral or parenteral).

No

- LP and antibiotics unnecessary unless clinical status changes.
- Daily follow-up until blood culture negative at least 36 hours.

61-90 days

No temp >101.3
AND
Fevers resolve by 48 hours
AND
Meets all Low Risk History & Exam Criteria?

No

- Evaluate patient in Bethel.
- Perform work-up:
  - U/A, urine culture
  - Consider bloodwork and LP based on history, exam, and risk factors.

Yes

- Daily rechecks in village, outpatient clinic, or ED until improving.
- Low threshold to bring to Bethel ED if any concerns.

Low Risk Criteria

History & Exam
- Well-appearing (soothable, feeding well, etc.)
- No significant prior hospitalization.
- Gestational age >37 weeks.
- Neonatal course not complicated by: chromosomal anomaly, surgery (including G-tube), or infection.
- No evidence of invasive bacterial infection like cellulitis or osteomyelitis.

Lab
- Procalcitonin <0.5
- CRP <2
- Absolute neutrophil count (ANC) 1000-4000

CSF

- Do Multiplex PCR if any suspicion for meningitis.
- See Harriet Lane (not the results in RAVEN) for normal results by day of life.
- Do not use correction formulas for traumatic LPs.

If concerned for bacterial meningitis:

- Consult pediatrics and strongly consider medevac.
- If transferring, send any extra CSF on ice.

Acetaminophen

- Acetaminophen should NOT be given prior to vaccines, as there is some evidence it blunts the immune response.
- Acetaminophen should NOT be given around-the-clock in this age group.
- Acetaminophen MAY be given after a fever has been documented and the infant evaluated by a health aide or provider **EXCEPT in babies 61-90 days old who are being managed in the village as this may blunt the fever curve. If a child in the village is already scheduled to come to Bethel for further evaluation, acetaminophen may be given.**

Special Circumstances

1. If fever within 48 hours of immunizations, well-appearing, and meets all history & exam low-risk criteria: no work-up necessary but must follow-up in village or Bethel within 12-24 hours. If fevers are rising or infant is not well-appearing, perform evaluation as above.

2. Pre-treatment with antibiotics but otherwise meeting low-risk criteria: infant must be observed a full 48 hours off antibiotics.

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

NOTE: If 22-28 days old and well-appearing with low-risk lab criteria, recent studies allow deferral of LP if admitted ± antibiotics. Discuss with pediatrician and family if considering this option.

Antibiotic Treatment

- 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 5 mg/kg IV Q24h.
  - -If well-appearing and any suspicion for meningitis: ampicillin 75 mg/kg IV Q6h AND cefepime 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:
  - -If low suspicion for meningitis: ceftriaxone 50 mg/kg IV/IM Q24h
  - -If concern for meningitis: ceftriaxone 100 mg/kg IV once then 50 mg/kg IV Q12h AND vancomycin 20 mg/kg IV Q8h.
- Continue IV/IM antibiotics until cultures are negative at least 36 hours and patient is clinically stable or until specific organism and sensitivities are available to direct therapy.
- Dose #2 of ceftriaxone may be given 12-24 hours after dose #1.
- 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.

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. Approved by MSEC 9/7/21. Click here to see the supplemental resources for this guideline.

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