<table>
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<th>Clinical Guideline</th>
<th>Fever/Abnormal Temperature Without Obvious Source</th>
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<td>Infants 0–60 days</td>
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MaineHealth

The Barbara Bush Children’s Hospital
At Maine Medical Center
Fever/Abnormal Temperature Without Obvious Source for Infants 0–60 days

### Exclusion criteria
- ILL-APPEARING
- Gestational age < 37 weeks
- Immunocompromised state
- Chronic medical conditions
- Immunizations in last 48 hours

### Inclusion criteria
- WELL-APPEARING
- Gestational age 37–42 weeks
- Age 0–60 days
- Rectal temperature < 36.0°C or > 38.0°C
- Reliable history of fever at home in past 24 hours

#### Initiate orderset
- CBC and differential
- CMP
- Procalcitonin (1, may substitute CRP)
- Catheterized urinalysis + sediment
- Urine culture
- Blood culture x 1 (pink bottle)
- CSF studies (Appendix A)
- Rapid viral testing
  
  Consider HSV testing if high risk (Appendix B)
  Consider CXR if respiratory symptoms present

#### Begin empiric treatment: (3,4)

- Amoxicillin 100 mg/kg x 1 AND
- Gentamicin 5 mg/kg x 1
  
  If suspected HSV add acyclovir 20 mg/kg IV x 1

#### Age 0-21 days?

**YES**

- Consult local pediatric team
- Consider NICU consult for infants 0–7 days

**NO**

- Infants 22–28 days old should have consultation by local pediatric team
- Patient may be discharged home if work up is negative and ALL of the following are met:
  - Evaluated by inpatient pediatric team including attending
  - Normal ANC (1000-4000)
  - Procalcitonin < 0.5 (5)
  - If no procalcitonin must have Temp < 38.5 AND CRP < 20
  - Negative lumbar puncture results (Appendix C)

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(1) Order CRP if rapid procalcitonin unavailable
(2) Combined rapid COVID and influenza and RSV or viral panel depending on hospital
(3) If infant is 22-28 days old, consider ceftriaxone instead of ampicillin and gentamicin if bilirubin is < 10, patient is well-appearing, CSF negative for meningitis, and low suspicion for listeria infection
(4) Administer empiric antibiotics after blood, urine and CSF cultures have all been obtained. If unable to obtain all specimens consult Pediatrics before administering empiric antibiotics.
(5) Elevated inflammatory Markers = ANC > 4000 OR Procalcitonin > 0.5
  
  If no procalcitonin, may substitute ANC > 4000 OR CRP > 20 OR Fever > 38.5
(6) All patients transferred to MMC from other hospitals for pediatric evaluation will be admitted

Disclaimer: Guideline is to provide guidance and recommendations for practice, but does not supersede clinician judgement and does not establish a standard of care.
29-60 Days

**Exclusion criteria**
- WELL-APPEARING
  - Gestational age 37 - 42 weeks
  - Age 0-60 days
  - Rectal temperature < 36.0°C or ≥ 38.0°C
  - Reliable history of fever at home in past 24 hours

**Inclusion criteria**
- WELL-APPEARING
  - Gestational age 37 - 42 weeks
  - Age 0-60 days
  - Rectal temperature < 36.0°C or ≥ 38.0°C

**Initiate order set**
- CBC and differential
- CMP
- Procalcitonin (1, may substitute CRP)
- Catheterized UA + sediment
- Urine culture
- Blood culture x 1 (pink bottle)
- Rapid viral testing (2)

- Consider HSV testing if high risk (Appendix B)
- Consider CXR if respiratory symptoms present

Elevated inflammatory markers? (3) (Appendix D)

- YES
  - Consult local pediatric team for evaluation and shared decision with family and ED team regarding:
    - Lumbar puncture
    - Empiric antibiotic administration
    - Disposition (admission vs discharge)

  Patient may be considered for discharge if all the following criteria are met:
  - Evaluation by pediatric team AND
  - Reliable family AND
  - Confirmed pediatrician follow up in 24-36 hours AND
  - Reliable transportation to follow up appointment

  If at MMC – consultation must include attending evaluation

- NO
  - Urinalysis positive? (Appendix E)
    - NO
      - Discharge home with PCP follow up in 24-36 hours
    - YES
      - Give first dose of antibiotics in ED Ceftriaxone 50 mg/kg IV or IM AND oral antibiotic prescription to be started the following day (4)
        - ID preferred - Cephalexin 17 mg/kg q8hr x 9 days
        - Alternative - Cefdinir 7 mg/kg q12hr x 9 days
      - Follow up with PCP in 24-36 hours

(1) Order CRP if rapid procalcitonin unavailable
(2) Combined rapid COVID and influenza and RSV or applicable viral panel depending on hospital
(3) Elevated inflammatory markers = ANC > 4000 OR Procalcitonin > 0.5
  - If no procalcitonin, may substitute ANC > 4000 OR CRP > 20 OR Fever > 38.5
(4) Ideally prescribed to MMC pharmacy and in hand prior to discharge

Disclaimer: Guideline is to provide guidance and recommendations for practice, but does not supersede clinician judgement and does not establish a standard of care
### Appendix A – CSF Studies
- Culture and gram stain
- Cell count
- Protein
- Glucose
- Consider HSV PCR
- Consider enterovirus PCR

### Appendix B – Herpes Simplex Virus (HSV) Testing
Consider HSV testing and treatment if any one of the following is true:
- Severe illness
- Hypothermia (<36.0°C)
- Seizure(s)
- Conjunctivitis
- Infants with vesicles and/or mucous membrane ulcers
- History of maternal genital HSV lesions from 48 hours before to 48 hours after delivery
- History of maternal fevers from 48 hrs before to 48 hrs after delivery without obvious source
- Postnatal HSV contact
- Cerebrospinal fluid pleocytosis in the absence of a positive Gram stain result
  - 0-28 days old >14 WBC/hpf
  - 29-60 days old >8 WBC/hpf
- Leukopenia
- Thrombocytopenia
- Elevated alanine aminotransferase (ALT) or aspartate transaminase (AST)
- Elevated CSF protein for age (see appendix C for normal values)

### Appendix C - Positive lumbar puncture result:

<table>
<thead>
<tr>
<th>Age</th>
<th>WBC Count</th>
<th>Notes</th>
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<tr>
<td>0-28 days</td>
<td>&gt;14 WBCs/hpf</td>
<td>Grossly bloody tap which is uninterpretable Elevated CSF protein for age or out of proportion to numbers RBCs present</td>
</tr>
<tr>
<td>29-60 days</td>
<td>&gt;8 WBCs/hpf</td>
<td>Grossly bloody tap which is uninterpretable Elevated CSF protein for age or out of proportion to numbers RBCs present</td>
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### Appendix D – Positive inflammatory markers (IM’s)
If any **ONE** of the following below is abnormal, it is considered positive IM’s
Conversely, if considering discharge **ALL** must be normal

- ANC > 4000 OR
- Procalcitonin > 0.5

If no procalcitonin use alternate IM’s
- ANC > 4000 OR
- CRP > 20 OR
- Fever > 38.5

### Appendix E - Positive urinalysis + sediment obtained via straight catheterization
(Any of the following if present should be considered positive)
- Positive nitrite OR
- Positive leukocyte esterase OR
- > 10 WBC/HPF

### Appendix F – Viral swabs
- Rapid COVID/Influenza - Mid-turbinate swab 5 seconds each nostril
- RSV - Nasopharyngeal swab