Obtain history and assess for HSV risk using .febrileinfanthistory

**Exclusion**
- Gestational age ≤ 37 weeks
- Weight ≤ 2,000 grams
- Need for immediate critical care
- Chronic underlining illness or immunocompromised
- CVL catheter or VP shunt in place
- Post operative patient or hospitalized for 3 days or more

Febrile infant
- Rectal temp ≥ 38°C (or reliable fever at home)
- OR
- Hypothermia with temp < 36°C

Obtain HSV workup:
- HSV PCR from conjunctiva, buccal mucosa, rectum, and any vesicular lesions
- HSV blood PCR (can add to existing CBC specimen)
- CMP

Risk for any HSV infection?
- SEM, CNS disease or disseminated

8-21 day
- Perform LP
  - (CSF studies = cell count, glucose, protein, meningitis/encephalitis panel (MEP), gram stain and culture)

22-28 day
- Start antimicrobials:
  - 8-21 days: Ampicillin + Ceftazidime
  - 21 + days: Ceftriaxone
  - Acyclovir (if HSV workup performed)*

Indications to expand antibiotic coverage:
- Recent maternal infection (e.g. UTI)
- Bulging fontanel
*Requires renal dosing

YES
- Perform LP

NO
- Consider No LP; Hold Abx

Assess risk of invasive bacteria infection (IBI) (see second page for risk factors)
- Review inflammatory markers*

Risk of invasive bacteria infection (IBI)
- High PCT ≥0.5ng/mL
- Normal PCT < 0.5ng/mL

Perform LP

Consider No LP; Hold Abx

Discontinue antimicrobial(s) and may discharge hospitalized infant if all cultures are negative at 24-36 hours and HSV PCR (if sent) is negative

Admit to Hospitalist

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ChildrensOmaha.org/Pathways
Obtain history and assess for HSV risk using .febrileinfanthistory

Exclusion
- Gestational age ≤ 37 weeks
- Weight ≤ 2,000 grams
- Need for immediate critical care
- Chronic underlying illness or immunocompromised
- CVL catheter or VP shunt in place
- Post operative patient or hospitalized for 3 days or more

Obtain
- UA with reflex to culture via catheter
- CBC with differential, blood culture
- Procalcitonin (PCT); or CRP if PCT unavailable
- SARS-COV-2 PCR (as pandemic is ongoing)

Respiratory pathogen panel not routinely recommended, unless clinically indicated

Review risk criteria and UA

Low Risk; No indication for admission
- No antimicrobials and assure close PCP follow-up within 24 hours

Low risk with normal UA; Need admission for bronchiolitis
- No antimicrobials if meets low risk criteria

Low risk with abnormal UA
- May consider LP Start Ceftriaxone; Non-meningitic dosing

Discharge

Admit to Hospitalist

Febrile infant
- Rectal temp ≥ 38°C (or reliable fever at home)
- Hypothermia with temp < 36°C

Sign of focal infection or shock?

If high suspicion of bronchiolitis continue pathway

NO

Manage off pathway

Yes

FEBRILE INFANT PATHWAY

29-60 Days

Herpes Simplex Virus (HSV) Risk Factors

Physical:
- Severe illness
- Hypothermia
- Seizures
- Depressed neuro status (not arousable)
- Vesicular rash
- Exposure or history of HSV lesions (genital or skin/oral prior to or after delivery)

Diagnostic:
- CSF with pleocytosis > 20, without clear bacterial infection (e.g. positive gram stain or positive MEP)
- Thrombocytopenia
- ALT >50

Risk Factors for Invasive Bacterial Infection (IBI)

- Ill-appearing
- Previously hospitalization or prolonged nursery course
- Procalcitonin ≥ 0.5ng/mL OR ANC > 4,000 and CRP ≥ 2mg/dL
- Fever ≥ 38.5
- If CXR performed, discrete infiltrates present
- Prior antibiotic use

ANY positive criteria equals High Risk

High Risk for IBI

- Perform LP: CSF studies (cell count, glucose, protein, meningitis/encephalitis panel (MEP), gram stain and culture)
- Start ceftriaxone (meningitic dosing)

If Risk for HSV or CSF with pleocytosis > 20 without clear bacterial infection add:
- HSV PCR from conjunctiva, buccal mucosa, rectum, and any vesicular lesions
- HSV blood PCR (can add to existing CBC specimen)
- CMP
- Start Acyclovir

No antimicrobials and may discharge hospitalized infant if all cultures are negative at 24-36 hours and HSV PCR (if sent) is negative

Children’s Hospital & Medical Center

ChildrensOmaha.org/Pathways

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01/2022
**FEBRILE INFANT PATHWAY:**

Medication Dosing

*Only applies to patients ≥ 37 weeks gestation at birth*

### Febrile Infant: Antibiotic Dosing 8-21 days

- **Acyclovir:** 20mg/kg IV every 8hr\(^1,2\)
- **Ampicillin:** 75mg/kg IV every 6hr\(^1,2\)
- **CefTAZidime:** 50mg/kg q8hr\(^1,2\)

These antibiotics require renal dosing

**References:**
1. Lexicomp Online, Pediatric and Neonatal Lexi-Drugs Online, Hudson, Ohio: UpToDate, Inc.; 2020; accessed: 8/26/2020

### Febrile Infant: Antibiotic Dosing 22-60 days

- **Acyclovir:** 20mg/kg IV every 8hr\(^1,2\)
- **CefTRIAXone:** 50mg/kg IV every 12hr (CNS infection)\(^1\)
  50-75mg/kg IV every 24hr (non-CNS infection)\(^1\)

**References:**
1. Lexicomp Online, Pediatric and Neonatal Lexi-Drugs Online, Hudson, Ohio: UpToDate, Inc.; 2020; accessed: 8/26/2020
# FEBRILE INFANT PATHWAY:

**Glossary**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABX</td>
<td>Antibiotics</td>
</tr>
<tr>
<td>ALT</td>
<td>Alanine transaminase</td>
</tr>
<tr>
<td>ANC</td>
<td>Absolute neutrophil count</td>
</tr>
<tr>
<td>CBC</td>
<td>Complete blood count</td>
</tr>
<tr>
<td>CMP</td>
<td>Comprehensive metabolic panel</td>
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<tr>
<td>CNS</td>
<td>Central nervous system</td>
</tr>
<tr>
<td>CRP</td>
<td>C-reactive protein test</td>
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<tr>
<td>CSF</td>
<td>Cerebrospinal fluid</td>
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<tr>
<td>CVL</td>
<td>Central venous line</td>
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<tr>
<td>CXR</td>
<td>Chest X-ray</td>
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<tr>
<td>HSV</td>
<td>Herpes simplex virus</td>
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<tr>
<td>IBI</td>
<td>Invasive bacterial infection</td>
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<tr>
<td>IM</td>
<td>Intramuscular</td>
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<tr>
<td>LP</td>
<td>Lumbar puncture</td>
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<tr>
<td>MEP</td>
<td>Meningitis/encephalitis panel</td>
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<tr>
<td>PCR</td>
<td>Polymerase chain reaction</td>
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<tr>
<td>SEM</td>
<td>Skin, eye, and mouth</td>
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<tr>
<td>PCT</td>
<td>Procalcitonin</td>
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<tr>
<td>UA</td>
<td>Urinalysis</td>
</tr>
<tr>
<td>VPS</td>
<td>Ventriculoperitoneal shunt</td>
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</tbody>
</table>

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