# Evaluation and Management of Well-Appearing Febrile Infants 8 to 60 Days Old

**Inclusion Criteria:**
Febrile infants who are / have:
- well appearing
- Infants who have been home from the newborn nursery or born at home
- documented rectal temperatures of ≥38.0° C or 100.4° F in the past 24 hours (at home or in clinical setting)
- gestation between ≥37 and <42 weeks
- 8 to 60 days of age

**Exclusion Criteria:**
- NICU or PICU patients
- Preterm infants (<37 weeks' gestation)
- Infants younger than 2 weeks of age whose perinatal courses were complicated by maternal fever, infection, and/or antimicrobial use.
- Febrile infants with high suspicion of herpes simplex virus (HSV) infection (e.g., vesicles).
- Infants with a focal bacterial infection (e.g., cellulitis, omphalitis, septic arthritis, osteomyelitis). These infections should be managed according to accepted standards.
- Infants with **CLINICAL** bronchiolitis, with or without positive test results for respiratory syncytial virus (RSV). *(see box)
- Infants with documented or suspected immune compromise.
- Infants whose neonatal course was complicated by surgery or infection.
- Infants with congenital or chromosomal abnormalities.
- Medically fragile infants requiring some form of technology or ongoing therapeutic intervention to sustain life.
- Infants who have received immunizations within the last 48 hours. *(see box)

| Suspected Source of Infection | 8-21d Old | 22-28d Old | 29-60d Old |
|---|---|---|---|
| **UTI** | Ampicillin IV or IM (50 mg/kg/dose every 8 hours) ***and*** Cefepime IV or IM (50mg/kg/dose every 8 hours) | Ceftriaxone IV or IM (50 mg/kg/dose every 24 hours) | Ceftriaxone IV or IM (50mg/kg/dose every 24 hour). ***Oral medications for infants older than 28d:*** Cephalexin 50-100mg/kg per day in 4 doses ***or*** Cefixime 8 mg/kg per day in 1 dose |
| **No focus identified** | Ampicillin IV or IM (50 mg/kg/dose every 8 hours) ***and*** Cefepime IV or IM (50mg/kg/dose every 8 hours) | Ceftriaxone IV or IM (50 mg/kg/dose every 24 hours) | Ceftriaxone IV or IM (50 mg/kg/dose every 24 hours) |
| **Bacterial meningitis** | Ampicillin IV or IM (75 mg/kg/dose every 6 hours) ***and*** Cefepime IV or IM (50mg/kg/dose every 8 hours) | Ampicillin IV or IM (75mg/kg/dose every 6 hours) ***and*** Cefepime IV or IM (50mg/kg/dose every 8 hours) | Ceftriaxone IV (100 mg/kg once daily or divided every 12 hours) ***and*** Vancomycin IV (15 mg/kg/dose every 6 hours) |

## Recommendations / Considerations

**Viral URI vs Bronchiolitis:**
- URI symptoms not diagnostic of bronchiolitis should not exclude infants from the care guideline.
- Increased availability for rapid respiratory PCR testing has currently outpaced the guidelines of how testing should be used.
- A review by Ralston et al of 11 studies of bronchiolitis found no cases of meningitis, and researchers in 8 studies reported no cases of bacteremia. (Pantell, et al., 2021)

**Diarrhea:**
- Infants suspected of having bacterial diarrhea should have stool culture obtained.
- Loose stools do not exclude infants from the care guideline.

**Otitis media:**
- Presumed otitis media does not exclude infants from the care guideline.

**Other:**
- Current or recent antibiotic use in this age group requires individualized interpretation for febrile infants' inclusion in the care guideline.
- Postimmunization fevers of ≥38.0° C is common and estimated to be > 40% within the first 48 hours.

## Patient/Family Education

- Cerner Well Baby
- Cerner Fever in Infants



Approved Evidence-Based Medicine Committee
5-20-15; Reviewed 9-19-18
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Revised: 4-20-2022

Reassess the appropriateness of Care Guidelines as condition changes and 24 hrs after admission. This guideline is a tool to aid clinical decision making. It is not a standard of care. The physician should deviate from the guideline when clinical judgment so indicates.

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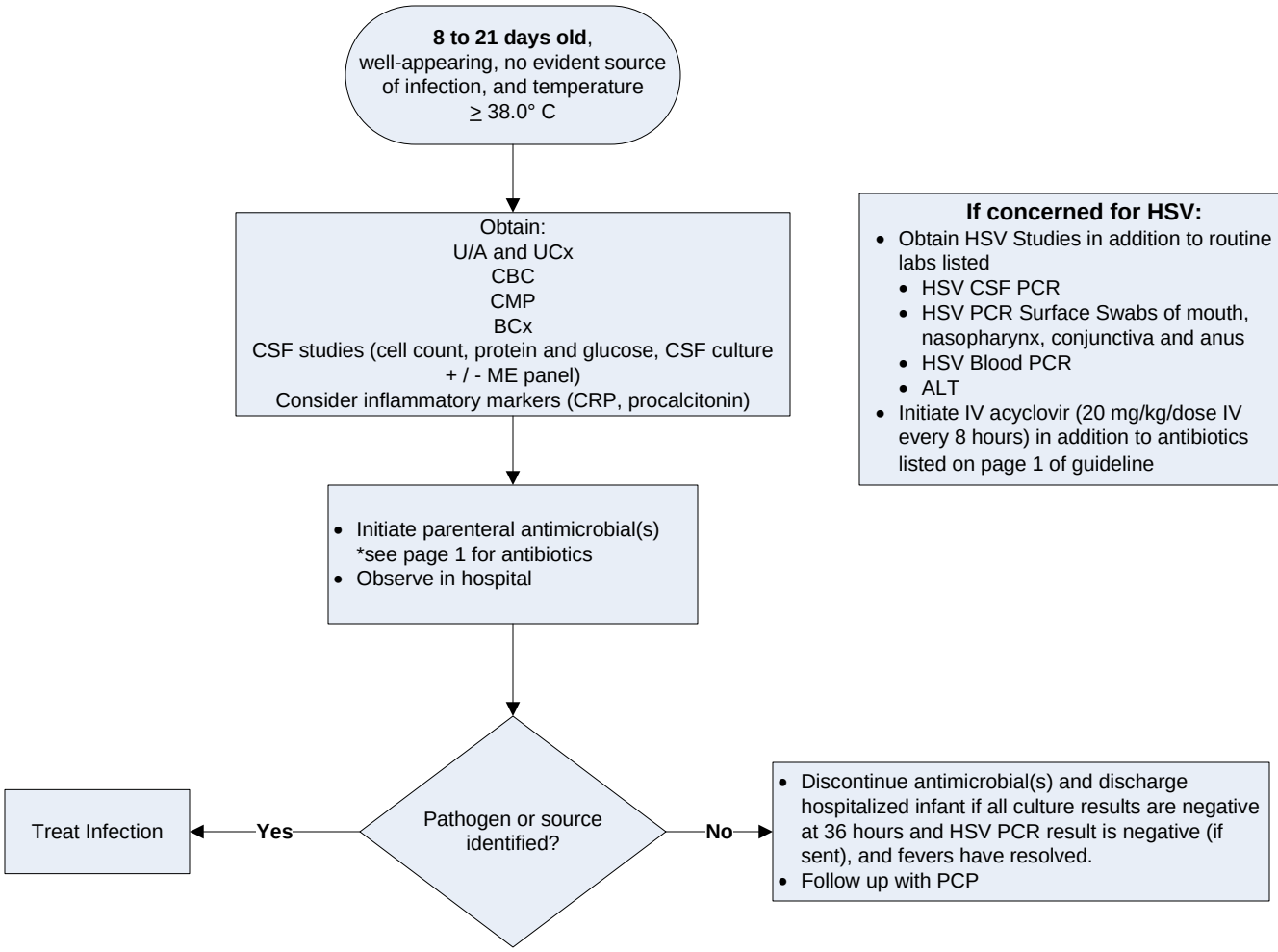


**Laboratory values of inflammation are considered elevated at the following levels:**

- ANC - > 4000, >5200 per $mm^3$
- WBC <5000 per $mm^3$ or >1500 per $mm^3$
- Procalcitonin - > 0.5ng/mL
- CRP - > 20mg/L

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**22 to 28 days old,**
well-appearing,
no evident source of infection,
and temperature ≥ 38.0° C

Obtain:
U/A and UCx
CBC
BCx
Inflammatory markers (CRP, procalcitonin)

**Laboratory values of inflammation are considered elevated at the following levels:**

- Temperature >38.5°C
- WBC <5000 per mm³ or >1500 per mm³
- ANC - > 4000, >5200 per mm³
- Procalcitonin - > 0.5ng/mL
- CRP - > 20mg/L

Positive urinalysis result?
- Yes → Treat UTI and Continue pathway
- No

Abnormal inflammatory markers
- Yes → Perform LP
- No → May consider LP

Perform LP → CSF obtained?
- No → Administer parenteral antimicrobial(s) *see page 1 for antibiotics; Observe in hospital
- Yes → CSF pleocytosis or uninterpretable?
  - Yes → Administer parenteral antimicrobial(s) *see page 1 for antibiotics; Observe in hospital
  - No → Will observation be at home?
    - Yes → Administer parenteral antimicrobial(s) *see page 1 for antibiotics; Observe at home; Reassess in 24 hours
    - No → May administer parenteral antimicrobial(s) *see page 1 for antibiotics; Observe in hospital

May consider LP → LP Performed?
- Yes → CSF obtained ?
  - Yes → CSF pleocytosis or traumatic?
    - Yes → Administer parenteral antimicrobial(s) *see page 1 for antibiotics; Observe in hospital
    - No → Will observation be at home?
      - Yes → Administer parenteral antimicrobial(s) *see page 1 for antibiotics; Observe at home; Reassess in 24 hours
      - No → May administer parenteral antimicrobial(s) *see page 1 for antibiotics; Observe in hospital
  - No → May administer parenteral antimicrobial(s) *see antibiotic table on page 1; Observe in hospital
- No → May administer parenteral antimicrobial(s) *see antibiotic table on page 1; Observe in hospital

Pathogen or source identified?
- Yes → Treat Infection
- No → Discontinue antimicrobial(s) and discharge hospitalized infant if all cultures are negative at 36 hours and HSV PCR is negative (if sent), and fevers have resolved.
  - Follow up with PCP

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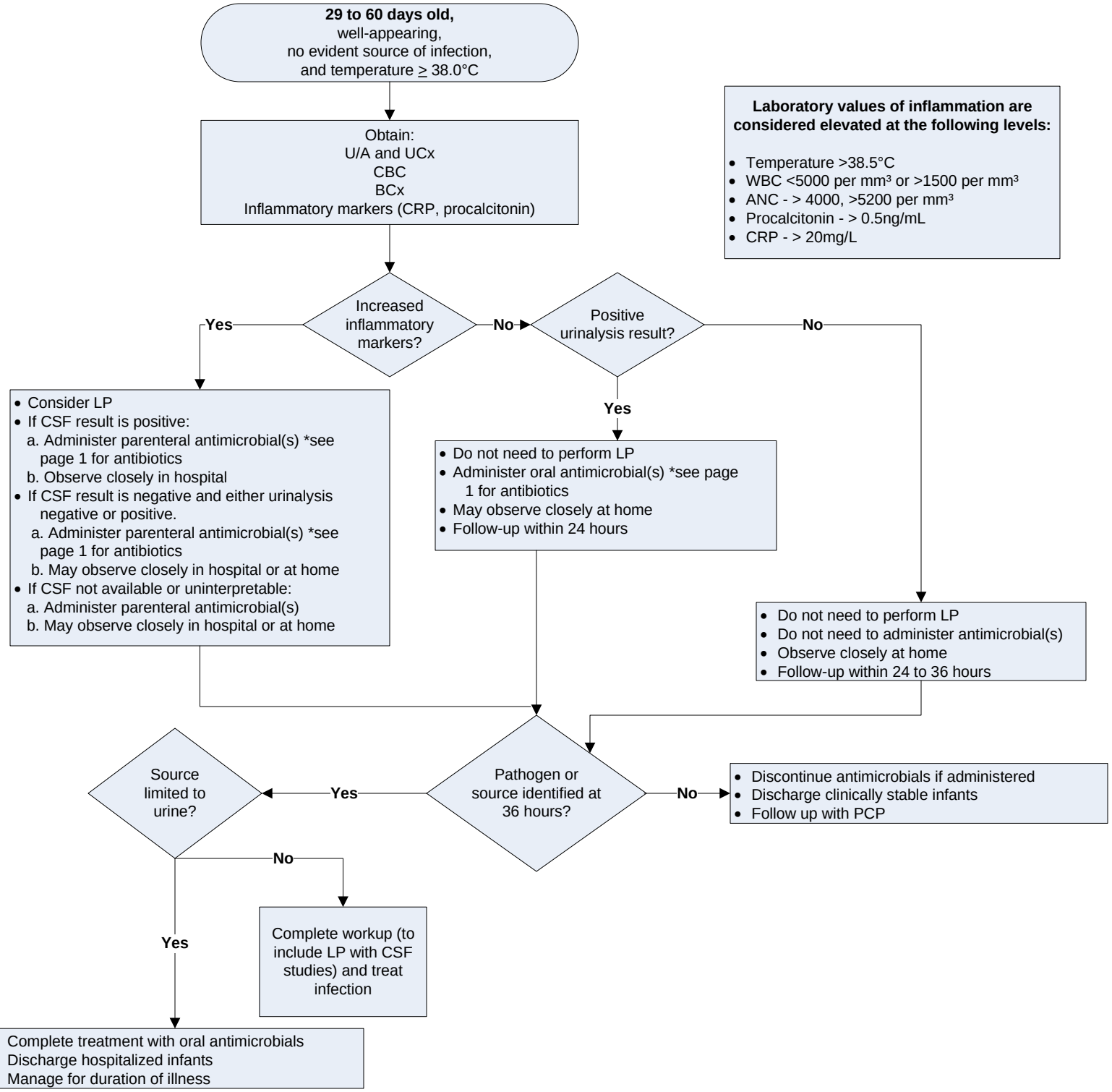

## References

Pantell, R. H., Roberts, K. B., Adams, W. G., Dreyer, B. P., Kuppermann, N., O'Leary, S. T., . . . Woods, J, C. R. (2021). Clinical Practice Guideline: Evaluation and Management of Well-Appearing Febrile Infants 8 to 60 Days Old. *Pediatrics, 148*(2), e2021052228. https://doi.org/10.1542/peds.2021-052228 **(Level V)**