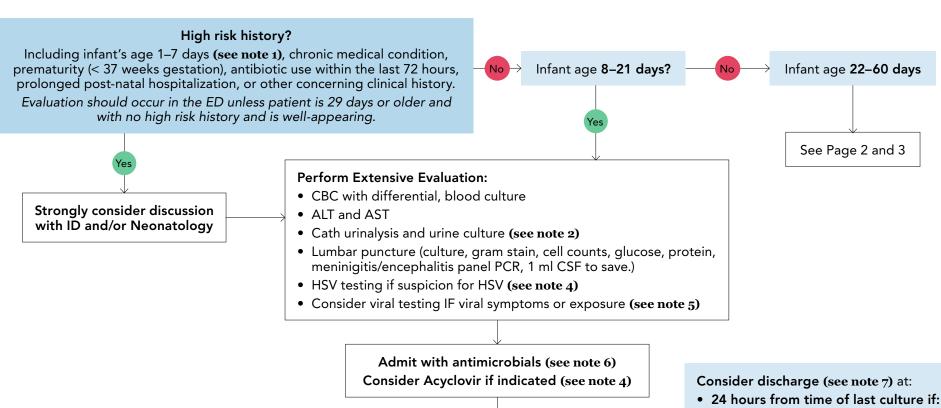
(Infants 1-60 days age)



Aim: Standardize evaluation and management of well-appearing febrile infants, safely reduce length of stay and any unnecessary interventions.



Bacterial culture or HSV positive?

Treat according to infection.

See separate UTI guideline if applicable.

EXCLUSION GUIDELINES (see **note 9** on included infants)

Patients **excluded** from this guideline:

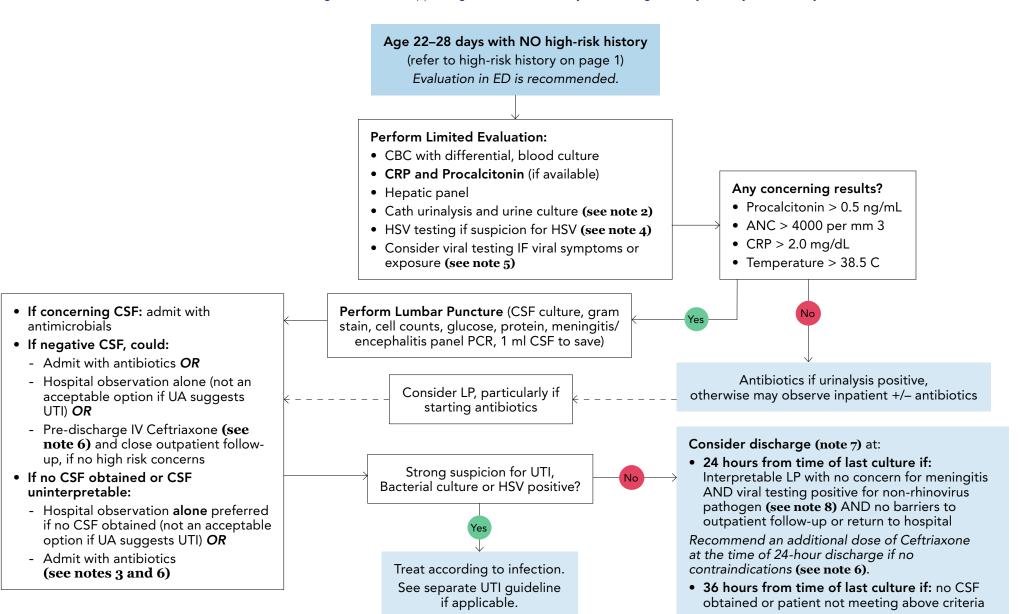
- Age > 60 days
- Ill-appearing
- Focal bacterial infection
- Clinical bronchiolitis (see Bronchiolitis Guideline)
- Immune compromise, history of neonatal infection or neonatal surgery, or chromosomal abnormality

- 24 hours from time of last culture if: Infant
 7 days old AND Interpretable LP
 with no concern for meningitis AND viral
 testing positive for non-rhinovirus pathogen
 (see note 8) AND no barriers to outpatient
 follow-up or return to hospital
- 36 hours from time of last culture if: Infant > 7 days old and not meeting above criteria
- 48+ hours from time of last culture: Infant ≤ 7 days old (see note 1)

(Infants 1–60 days age)



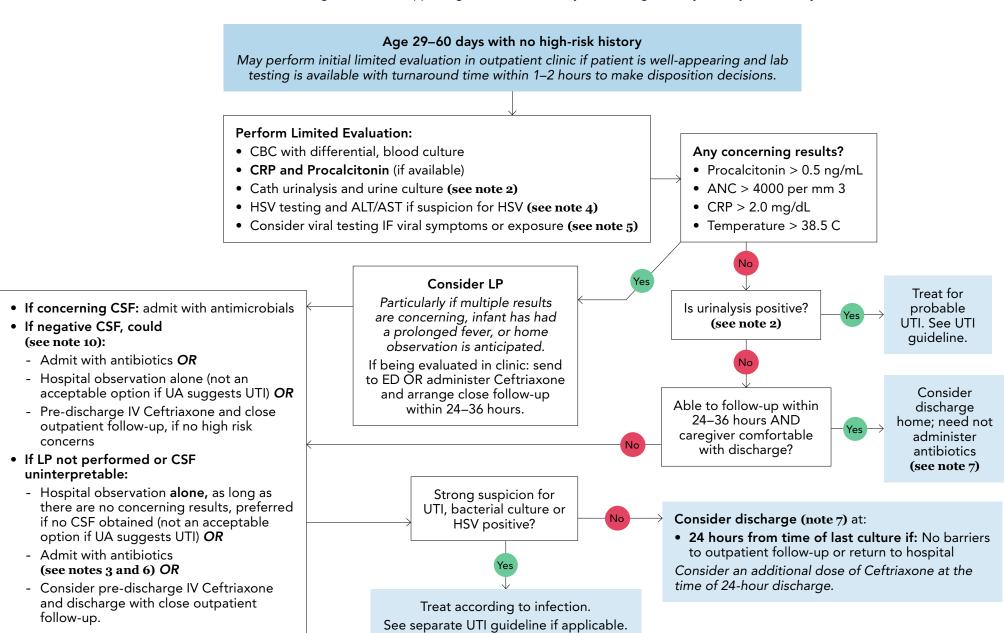
Aim: Standardize evaluation and management of well-appearing febrile infants, safely reduce length of stay and any unnecessary interventions.



(Infants 1-60 days age)



Aim: Standardize evaluation and management of well-appearing febrile infants, safely reduce length of stay and any unnecessary interventions.



CLINICAL GUIDELINE

FEVER ≥ 38°C (100.4°F) WITHOUT OBVIOUS SOURCE

(Infants 1-60 days age)



Aim: Standardize evaluation and management of well-appearing febrile infants, safely reduce length of stay and any unnecessary interventions.

NOTE 1: INFANTS 1-7 DAYS OLD

- Neonates age 1–7 days old are excluded from the AAP 2021 Guideline "Evaluation and Management of Well-Appearing Febrile Infants 8 to 60 Days Old", however based on expert input at Children's MN, they are included in this guideline with the assumption that their management will be performed in consultation with ID and/or Neonatology
- If planned or considered admission to NICU, recommend discussion of antibiotic choice with neonatologist
- Discharge of infants < 8 days old before 48 hours of negative cultures is not supported in the literature

NOTE 2: URINALYSIS AND UTI

- Urinalysis (UA) considered positive if: presence of nitrites OR pyuria (≥ trace leukocyte esterase or ≥ 5 WBC/hpf)
- Dilute/unspun urine specimen (SG < 1.015) may underestimate WBC count
- Several studies indicate very low risk of bacterial meningitis in well-appearing infants > 28 days of age with UTI.

NOTE 3: BACTERIAL MENINGITIS

- Consider longer observation in pts with high suspicion of bacterial meningitis (i.e. CSF pleocytosis.) Mean time to positivity = 28.6 hours, 81% identified by 36 hours
- "Abnormal CSF" would be CSF with values straying from the typical ranges for age listed in the table below:

| | Age, days | Median | Range |
|---------------|-----------|--------|------------|
| WBCs per mm³ | 1–28 | 5 | 0–18 |
| | 29–60 | 3 | 0–8.5 |
| Protein mg/dL | 1–28 | 73 | 15.8–131.0 |
| | 29–60 | 54 | 5.5–105.5 |
| Glucose | 1–28 | 46 | 30–61 |
| | 29–60 | 48 | 20.6–65.5 |

NOTE 4: HSV

- Recommend HSV testing if any of the following: known HSV exposure, maternal
 history of genital or mucocutaneous lesions, maternal perinatal fevers (i.e. 48 hours
 prior to, or after, delivery), persistent hypothermia, mucus membrane ulcers, skin
 vesicles, seizure, leukopenia and/or thrombocytopenia, increased ALT or AST, CSF
 pleocytosis in the absence of positive Gram stain results
- HSV testing should include:
 - PCR on whole blood
 - PCR of the eye, mouth, nasopharynx and anus
 - PCR on CSF
 - PCR of any vesicle
- Acyclovir dosing: 20 mg/kg/dose IV q 8 hours

NOTE 5: ADDITIONAL VIRAL TESTING

- · Consider rapid influenza and RSV in season, and SARS-CoV2
- · Consider Respiratory Pathogen PCR Panel
- Consider Enterovirus PCR on plasma (more prevalent in summer and fall, but can be seen year-round)

(Infants 1-60 days age)



Aim: Standardize evaluation and management of well-appearing febrile infants, safely reduce length of stay and any unnecessary interventions.

NOTE 6: ANTIBIOTIC DOSING FOR INFANTS $> 2 \text{ kg}^*$

Suspicion of Bacterial Meningitis

- 1–7 days of age: (See note 1): Ampicillin 100 mg/kg IV Q8h AND Ceftazidime 50 mg/kg IV Q12H
- 8–28 days of age: Ampicillin 75 mg/kg IV Q6H AND Ceftazidime 50 mg/kg IV Q8H
- **29–60 days of age:** Ceftriaxone 50 mg/kg IV Q12H AND Vancomycin 15 mg/kg IV Q6H

No Suspicion of Bacterial Meningitis

- 1–7 days of age (See note 1): Ampicillin 50 mg/kg IV Q8H AND Ceftazidime 50 mg/kg IV Q12H
- 8–28 days: Ampicillin 50 mg/kg IV Q8H AND Ceftazidime 50 mg/kg IV Q8H
- 29-60 days: Ceftriaxone 50 mg/kg IV Q24H

*Ceftriaxone monotherapy prior to a discharge, or Ceftriaxone plus Ampicillin in an inpatient, may be considered in the appropriate clinical setting, in term neonates 22–28 days with normal bilirubin levels and not receiving IV calcium-containing fluids (including TPN).

*If infant's weight ≤ 2 kg, consult with pharmacy and/or NICU for antibiotic dosing.

NOTE 7: SHARED DECISION MAKING — FACTORS TO CONSIDER WHEN DECIDING DISCHARGE TIMING

- · Alternative source for fever and patient's risk criteria
- · Caregiver experience and comfort
- Accessibility to reliable follow-up within 24-36 hours
- · Proximity to hospital should new concerns arise
- Infant's fever curve and other clinical status (e.g., oral intake)
- Family awareness that cultures may turn positive after discharge, potentially necessitating return to hospital

NOTE 8: RHINOVIRUS DETECTION

 Human rhinovirus detection is common in febrile infants. Detection of this virus alone does not alter risk of invasive bacterial infection in infants 1–28 days old

NOTE 9: PATIENTS INCLUDED IN THIS GUIDELINE

Febrile infants that **remain on this pathway** include:

- · Infants with diarrhea
- · Infants with acute otitis media
- Infants with mild viral URI symptoms only (not bronchiolitis) and/or only viral PCR panel positivity

NOTE 10: IF A TERM INFANT 29-60 DAYS HAS AN LP WITH UNEQUIVOCALLY CLEAR CSF, OPTIONS INCLUDE:

- Discharge home after a dose of Ceftriaxone AND follow-up within 24 hours OR
- · Observe in the hospital without antibiotics OR
- Admit to the hospital with empiric antimicrobials

 $\label{thm:considering} \textit{Use shared decision making with caregivers and clinical judgement considering additional factors such as barriers to follow-up.}$

(Infants 1-60 days age)



Aim: Standardize evaluation and management of well-appearing febrile infants, safely reduce length of stay and any unnecessary interventions.

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