

# Fever Without Source in Infants < 28 Days Care Guidelines For Emergency Department Management

**Inclusion Criteria:** Previously healthy children 0-28 days of age who have:

- Fever 38.0 ° C or greater
- No Apparent focus of infection

**Exclusion Criteria:** PICU status, < 37 weeks gestation

## Assessment

- ESI level 2
- Vital signs
- Hemodynamic stability
- Signs of sepsis
- Determination of risk for SBI
- Continuous pulse oximetry if respiratory distress, hypoxia present or **pneumonia** is suspected

## Interventions

- Blood and urine cultures
- CBC with diff, U/A
- Lumbar puncture/send CSF
- CXR if signs of pneumonia
- Apnea monitor
- Stool culture if diarrhea **plus** blood or mucus

## Antibiotics

Ampicillin **AND** Cefotaxime

## Antibiotic Dosing Guidance

### Ampicillin

- 50 mg/kg IV q 12 hours
- < 7 days, <2000g
- > 7 days, <1200g

**OR**

- 50 mg/kg IV q 8 hours
- < 7 days, > 2000g
- > 7 days, 1200g-2000g
- > 7 days, > 2000g, non-meningitis

**OR**

- 100 mg/kg IV q 8 hours
- < 7 days any weight, GBS meningitis

**OR**

- 100 mg/kg IV q 6 hours
- > 7 days any weight, GBS meningitis

**and**

### Cefotaxime

- 50 mg/kg IV q 12 hours
- < 7 days, < 2000g
- > 7 days, < 1200g

**OR**

- 50 mg/kg IV q 8 hours
- < 7 days, > 2000g
- > 7 days, 1200-2000g

**OR**

- 50 mg/kg IV q 6 hours
- > 7 days, > 2000g, non-meningitis

**OR**

- 75 mg/kg IV q 6 hours

## Signs of Pneumonia

- Respiratory signs (i.e. abnormal breath sounds, tachypnea)
- Respiratory symptoms (i.e. cough)
- Respiratory distress
- SAO2 < 95%

## Recommendations/Considerations

- **Serious bacterial infections** include bacterial sepsis, pneumonia, meningitis, UTI/pyelonephritis, cellulitis, septic arthritis, osteomyelitis, and bacterial enteritis.
- **In general, febrile infants < 28 days should be considered at high risk for SBI** and thus undergo a full septic work-up, hospital admission, and empiric antibiotics.
- **Always consider evaluation and treatment for possible herpes simplex infection (HSV PCR and intravenous acyclovir)** in meningitis or sepsis syndrome especially in infants 0-6 weeks (**See statement on Acyclovir Therapy I Neonates on next page**).
- **Consider viral studies (VRP, rapid viral screen, CSF/ blood PCR, viral culture)** in the febrile infant especially during the enteroviral season and respiratory viral season. **Keep in mind that a positive viral test does not preclude the possibility of SBI.**

## Significant Additional Management for Suspected Bacterial Meningitis

- ICU monitoring
- Conservative fluid management
- Electrolyte monitoring
- Frequent neuro checks, serial head circumference

## Admission Criteria Medical Surgical Unit

- Hemodynamically stable
- No suspicion for bacterial meningitis

Reassess the appropriateness of Care Guidelines as condition changes and 24 hours 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.

**References**  
**Fever Without Source in Infants < 90 Days**  
**Care Guideline**

Avner JR, Baker, MD. Management of Fever in Infants and Children. Emergency Medicine Clinics of North America, Feb 2002, 20(1): 49-67.  
[http://www.emed.theclinics.com/article/S0733-8627\(03\)00051-8/abstract](http://www.emed.theclinics.com/article/S0733-8627(03)00051-8/abstract)

Baraff LJ. Management of Infants and Young Children With Fever Without Source. Pediatric Annals, Oct 2008; 37(10) 673-679.  
<http://www.pediatricsupersite.com/view.aspx?rid=31888&bypass=true>

Baraff LJ Management of Fever Without Source in Infants and Children. Annals of Emergency Medicine, Dec 2000; 36: 602-614. [http://www.annemergmed.com/article/S0196-0644\(00\)09618-9/abstract](http://www.annemergmed.com/article/S0196-0644(00)09618-9/abstract)

Biondi EA, Mischler M, et. al. Blood Culture Time to Positivity in Febrile Infants with Bacteremia; Sep 2014. JAMA Pediatrics, 168(9): 844-849.

Byington CL, Enriquez FR, et al. Serious Bacterial Infections in Febrile Infants 1 to 90 days Old With and Without Viral Infections. Pediatrics 2004; 113: 1662-1666.  
<http://pediatrics.aappublications.org/cgi/content/abstract/113/6/1662>

Kadish HA, Loveridge B, et al. Applying Outpatient Protocols in Febrile Infants 1-28 Days of Age: Can The Threshold Be Lowered? Clinical Pediatrics 2000, 39: 81-88.  
<http://cpj.sagepub.com/cgi/content/abstract/39/2/81>

Levine DA, Platt SL, et al. Risk of Serious Bacterial Infection in Young Febrile Infants with Respiratory Syncytial Virus Infections. Pediatrics, Jun 2004; 113: 1728-1734.  
<http://pediatrics.aappublications.org/cgi/content/abstract/113/6/1728>