FEVER PROTOCOL

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PEDIATRIC EMERGENCY DEPARTMENT

EVALUATION GUIDELINES FOR PEDIATRIC FEVER
(Protocol deviation by EM attending physician or PEM fellow only. Document reason for deviation on EDTR)

CONSULT PEM ATTENDING OR FELLOW FOR ALL FEBRILE INFANTS 0-90 DAYS OF AGE OR EM ATTENDING IF PEM ATTENDING NOT PRESENT

Age 0-28 days

Rectal temperature ≥ 100.4 °F (38° C)

History:
Birth hx, maternal infections, +/- antibiotics at birth

Labs:
CBC with diff and platelets
Cath urine for U/A and culture
BMP or Chemistries if indicated by sx & sx
Stool cultures if clinically indicated
Blood culture (send, do not hold)
Bedside glucose test
LP for CSF examination and culture
Rapid viral testing if clinically indicated (RSV)

Chest X-ray
(If clinically indicated: Signs of pneumonia, respiratory distress, abnormal breath sounds, ↑ RR, pulse ox < 96%)

Admit and give 1st dose of IV antibiotics in ED
Ampicillin 50-100 mg/kg/dose &
Cefotaxime 50 mg/kg/dose

(If premature, check dosing in Harriet Lane Handbook or Broselow-Luten Color Coded Medication Reference)
Fever Protocol

Revise May 2007

Age 29-60 days

Rectal temperature ≥ 100.4 °F (38°C)
(Same evaluation as for 0-28 days)

Labs:
- CBC with diff and platelets
- Cath urine for U/A and culture.
- Viral or stool cultures if indicated.
- Glucose or chemistries depending on sx & sx

Blood culture (send, do not hold)
LP for CSF examination and culture

Chest X-ray
If clinically indicated

Admission
* Admit all neonates in this age group that do not meet Low Risk Criteria and begin antibiotics as above

"Low Risk" criteria for febrile infants:

Clinical criteria:
- Previously healthy, term infant with uncomplicated nursery stay
- Nontoxic clinical appearance (see Yale Infant Observation Scale)
- Absence of physical signs of a focal infection on examination (ear, eye, soft tissue)

Laboratory criteria:
- Peripheral WBC count 5-15,000/mm³
- Neutrophil band count < 1,500 bands/mm³ or band: neutrophil ratio < 0.2
- Negative Gram stain of unspun urine, negative urine leukocyte esterase and nitrite, and <5 WBCs/hpf
- When diarrhea present: <5 WBCs/hpf in stool
- CSF: <8 WBCs/mm³ and negative Gram stain with no polys; see Pediatric CSF table

If low risk criteria met and reliable caretaker is available, then d/c home after IV/IM Rocephin (50 mg/kg) is given. Arrange 24 hour follow-up in ED or PCP office.

Prior to Discharge assure availability of the following: Home telephone, transportation available, thermometer, ED travel <30 minutes and reliable caregiver.
MANAGEMENT OF FEVER WITHOUT A SOURCE**

Disposition of patients age 2-6 months with temp. of 100.4-102.2°F must be reviewed by fellow, attending or sr. resident and brief note written on EDTR

Hx: +/- Pneumococcal Vaccine, exposures to illness, +/- daycare, chronic illness, antibiotic history, +/- prematurity, hx of fever at home and antipyretics

Age 2 - 36 months
Rectal temperature

Age 2-24 months
Temperature < 102.2°F (39°C)
- Workup based on clinical assessment and timing of last antipyretic medication
- Consult PEM/ED attending or fellow if toxic or if there are clinical concerns
- Return to ED or PCP if fever persists > 48 hrs or if clinical condition deteriorates

Age > 24 months
Temperature > 102.2°F
- Clinical assessment
- Work up based on assessment
- Consider Chest X-ray and laboratory studies if temp > 105°F

Age 2-24 months
Temperature ≥ 102.2°F (39°C)

YES
Child appears toxic
Admit to hospital
- Sepsis Work-up
- Parenteral antibiotics

NO

<Toxicity is defined as a clinical picture consistent with sepsis signs:
- Lethargy
- Signs of poor perfusion
- Marked hypo or hyperventilation, cyanosis

<3 Doses Pneumococcal Vaccine (Prevnar)
*See Immunization schedule

3 or 4 Doses of Pneumococcal Vaccine

High Risk Historical Criteria
- Prematurity
- Exposure to Meningococcus

Low Risk Historical Criteria
- Workup based on clinical assessment
- UA and Urine Cx for female, male <6 mo (1 yr if uncircumcised)
- 24 hour ED/PCP followup

Over
**CBC with Diff & Platelets**  
**Hold Blood C&S**  
**U/A & Urine Culture (cath specimen)**  
- Males < 6 mo of age (uncircumcized < 1yr)  
- Females < 2 yrs of age  
**Stool culture**  
- If + blood and mucous in stool  
**Chest X-ray**  
- If + dyspnea, tachypnea, rales, ↓ breath sounds, post-tussive vomiting, or ↓ O₂ saturations

**WBC > 15,000**  
- Send blood culture  
- Ceftriaxone IV or IM 50mg/kg ± P.O. antibiotic  
- F/U in 24 hours with PCP or ED (if no PCP available)

**WBC < 15,000**  
- No blood C&S  
- F/U in 24 hours

**NOTE:** Peripheral WBC does not predict meningitis. **Don't use WBC to determine need for LP.** Occult bacteremia is most commonly seen between 6 and 18 months of age.

**Fever Without a Source (FWS)** is an acute febrile illness in which the etiology of the fever is not apparent after a careful history and physical examination. Before you consider FWS determine whether a major focus of infection such as pneumonia, UTI, osteomyelitis, septic arthritis, bacterial enteritis, sinusitis or meningitis with only minimal clinical signs exists (particularly in very young infants). Consider factors that affect the child's clinical appearance (hunger, physical discomfort, stranger or separation anxiety, hyperpyrexia, or dehydration).

**Acceptable sources of infections are as follows:**
1. Bronchiolitis (but not simple rhinorhea)
2. Pneumonia - osteomyelitis - septic arthritis - meningitis - urinary tract infection (UTI)
3. Gastroenteritis (GE) is considered a focus of infection, but in very young infants consider the possibility of UTI or bacterial enteritis presenting with Sx & Sx of GE.
4. Although otitis media (OM) could be considered as a focus of infection, the risk of occult bacteremia (OB) is the same with or without the presence of OM. Therefore, if you are concerned about the possibility of OB due to a high fever in a young infant or a child you should obtain the appropriate laboratory tests.
Temperature conversion formulas

I. TEMPERATURE

A. Calculation

To convert degrees Celsius to degrees Fahrenheit: $(9/5 \times \text{temperature}) + 32$.

To convert degrees Fahrenheit to degrees Celsius: $(\text{temperature} - 32) \times 5/9$

B. Temperature Equivalents

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Tylenol & Motrin Dosing Charts

Yale Infant Observation Scale

<table>
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<th>Observation item</th>
<th>Normal</th>
<th>Moderate impairment</th>
<th>Severe impairment</th>
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<tr>
<td></td>
<td>1 point each item</td>
<td>3 points each item</td>
<td>5 points each item</td>
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<tr>
<td>Quality of cry</td>
<td>Strong or none</td>
<td>Whimper or sob</td>
<td>Weak or moaning, high-pitched, or hardly responds</td>
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<td>Parental stimulation</td>
<td>Cries briefly or no cry and content</td>
<td>Cries off and on</td>
<td>Persistent cry with little response</td>
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<td>State variation</td>
<td>Stays awake or awakens quickly</td>
<td>Eyes close briefly, then wakes or awakens with prolonged stimulation</td>
<td>No arousal and falls asleep</td>
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<tr>
<td>Color</td>
<td>Pink</td>
<td>Pale extremities or acrocyanosis</td>
<td>Pale, cyanotic, mottled, or ashen</td>
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<td>Hydration</td>
<td>Skin/eyes normal and moist membranes</td>
<td>Mouth dry</td>
<td>Skin doughy or tented and/or sunken eyes</td>
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<td>Response to social overtures</td>
<td>Smiles or alerts</td>
<td>Brief smiles or alerts</td>
<td>No smile, anxious, dull, no alerting</td>
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The total of these items corresponds as follows:
- Appears well (score, 6-10)
- Moderately ill (score, 11-15)
- Toxic appearing (score, > 15)