Guidelines for the Management of Febrile Young Children

**Neonate age ≤ 7 days**

**CRITERIA FOR INCLUSION**
- Temperature ≥ 38 °C, documented at home or in the ED

**BASIC WORK-UP**
- Complete blood count with manual differential (CBCD), urinalysis (UA), urine culture (UC), blood culture (BC), lumbar puncture (LP)
- If diarrhea: stool smear for WBC’s and stool culture
- If respiratory symptoms: Chest x-ray (CXR)

**DECISION POINTS:**
- Irrespective of outcome of basic work-up
  - Admit for observation
  - Start IV antibiotics:
    - Ampicillin (50 mg/kg/dose) and Gentamicin (2.5mg/kg/dose)

**Neonate age > 7 days**

**CRITERIA FOR INCLUSION**
- Temperature ≥ 38 °C, documented at home or in the ED
- previously healthy, sickle cell negative
- uncomplicated antenatal/prenatal course
- non-toxic appearing
- not currently on antibiotic therapy

**BASIC WORK-UP**
- Complete blood count with manual differential (CBCD), urinalysis (UA), urine culture (UC), blood culture (BC), lumbar puncture (LP)
- If diarrhea: stool smear for WBC’s and stool culture
- If respiratory symptoms: Chest x-ray (CXR)

**NORMAL LABORATORY VALUES**
- Normal CBC: 5K<WBC<15K, absolute bands<1500
- Normal UA i.e. 10 WBC/hpf, negative leukocytes and nitrites
- Negative LP i.e. < 8 WBC/cc, no polys, normal glucose and protein, and negative gram stain
- CRP<2 (if performed)
- Stool smear < 5 WBC/hpf (if performed)
- Negative CXR i.e. no lobar infiltrate (if performed)

**DECISION POINTS:**
- Work-up negative:
  - Admit for observation
  - Consider not using antibiotics, if hospitalist concurs
- If any of the laboratory values are abnormal:
  - **Antibiotics:** Ampicillin (50 mg/kg/dose) and Claforan (50mg/kg/dose)
  - Admit for observation and therapy
Age 29 - 60 days:

**CRITERIA FOR INCLUSION**
- temp ≥ 38 °C, documented at home or in the ED
- no suspected bacterial infection
- previously healthy, sickle negative
- uncomplicated antenatal/prenatal course
- non-toxic appearance
- reliable social situation
- compliance with follow-up instructions likely, have a home phone
- not currently on antibiotic therapy

**BASIC WORK-UP**
- CBC, UA, UC, BC, LP
- If diarrhea: stool smear for WBC’s and stool culture
- If respiratory symptoms: Chest x-ray (CXR)

**NORMAL LABORATORY VALUES**
- Normal CBC: 5K<WBC<15K, absolute bands<1500
- Normal UA i.e. 10 WBC/hpf, negative leukocytes and nitrites
- Negative LP i.e. < 8 WBC/cc, no polys, normal glucose and protein, and negative gram stain
- CRP<2 (if performed)
- Stool smear < 5 WBC/hpf (if performed)
- Negative CXR i.e. no lobar infiltrate (if performed)

**DECISION POINTS:**
- **Work-up abnormal (i.e. any abnormal tests)**
  - Admit for observation
  - Start antibiotics:
    - Ampicillin: 50 mg/kg (100 mg/kg if meningitis being considered)
    - Claforan: 50 mg/kg

- **Work-up negative**
  - Normal CBC: 5K<WBC<15K, absolute bands<1500
  - Normal UA i.e. 10 WBC/hpf, negative leukocytes and nitrites
  - Negative LP i.e. < 8 WBC/cc, no polys, normal glucose and protein, and negative gram stain
  - CRP<2 (if performed)
  - Stool smear < 5 WBC/hpf (if performed)
  - Negative CXR i.e. no lobar infiltrate (if performed)
  - Reassess patient: well appearing, non-toxic, feeding well
  - Assure 24-hour follow-up (PCP or ED)
  - Discharge home without antibiotics, if PCP concurs

- **LP not interpretable and rest of work-up negative**
  - Consider admission for observation without antibiotics if hospitalist concurs

- **Temperature > 39°C**
  - Consider admission for observation without antibiotics if hospitalist concurs
Age 61 - 90 days:

CRITERIA FOR INCLUSION
- Temp > 38 °C, documented at home or in the ED
- previously healthy, sickle negative
- uncomplicated antenatal/prenatal course
- non-toxic appearance
- reliable social situation
- compliance with follow-up instructions likely, have a home phone
- not currently on antibiotic therapy

BASIC WORK-UP
- CBCD, UA, UC, BC
- If diarrhea: stool smear for WBC’s and stool culture
- If respiratory symptoms: Chest x-ray (CXR)
- If fever > 39, consider LP to screen for meningitis
- If focal bacterial infection present, requiring PO antibiotics, consider LP to screen for meningitis
- Other tests as needed

NORMAL LABORATORY VALUES
- Normal CBC: 5K < WBC < 15K, absolute bands < 1500
- Normal UA i.e. 10 WBC/hpf, negative leukocytes and nitrites
- Negative LP i.e. < 8 WBC/cc, no polys, normal glucose and protein, and negative gram stain (if performed)
- CRP < 2 (if performed)
- Stool smear < 5 WBC/hpf (if performed)
- Negative CXR i.e. no lobar infiltrate (if performed)

DECISION POINTS:
- Work-up negative
  - Reassess patient: well appearing, non-toxic, feeding well
  - Contact PCP to assure 24-hour follow-up, or arrange 24-hr follow-up in ED
  - Discharge home without antibiotics
- Work-up abnormal
  - Do LP if not already done
    - If LP abnormal or not interpretable
      - Admit for observation
        - Antibiotics: Claforan (50mg/kg/dose)
    - If LP normal
      - Reassess patient: well appearing, non-toxic, feeding well
      - Contact PCP to assure 24-hour follow-up, or arrange 24-hr follow-up in ED
      - May discharge home after Rocephin: 75 mg/kg
**Age 3 – 36 months:**

**CRITERIA FOR INCLUSION**
- Fever >39°C, documented at triage or at home
- Previously healthy
- Non-toxic appearance
- Not currently on antibiotic therapy
- Compliance with follow-up likely

**DECISION POINT 1**

**Clear source/etiology of fever present**
- **Well defined viral illness**: Examples include bronchiolitis, varicella, gingivostomatitis, herpangina, etc
- **Specific bacterial illness**: Examples include otitis media (red, bulging +/- immobile ears associated with predisposing signs and symptoms)
- **Well defined bacterial infections**: Examples include pneumonia, localized infection/cellulitis, streptococcal pharyngitis etc

Treat as appropriate

**Non-specific viral infection present**
- **Non-specific viral infection**: Examples include URI, non-streptococcal pharyngitis, gastroenteritis, viral syndromes, influenza etc. The diagnosis can be made depending on an assessment of symptoms, duration, family history/exposures

Obtain a UA and UC:
- Boys < 1 years (If circumcised: < 6 months)
- Girls < 2 years (or till diaper trained or verbal)

If urine screen negative provide symptomatic treatment of viral process

**Fever >39.5°C and no identifiable source for the fever**
- Move to DECISION POINT 2

**DECISION POINT 2**

**Age < 18 months**
- If fever ≥ 41°C move to DECISION POINT 3
- CBCD, BC (may hold pending CBCD result)
- UA, UC (age and sex dependant criteria)
- If respiratory symptoms: consider Chest x-ray (CXR)
- Decision to do an LP is based on signs and symptoms
  - If WBC ≥ 15,000, send blood culture
  - If WBC ≥ 20,000: Rocephin (50mg/kg/dose)
  - If WBC count ≥ 35,000, move to DECISION POINT 3

**Follow-up 24-hours with PCP**

**Age ≥ 18 months**
- Option 1:
• If fever $\geq 41^\circ C$ move to DECISION POINT 3
• CBCD, BC (may hold pending CBCD result), UA, UC (age and sex dependant criteria)
• If respiratory symptoms: consider Chest x-ray (CXR)
• Decision to do an LP is based on signs and symptoms
  If WBC $\geq 15,000$: send blood culture

If WBC $\geq 20,000$: Rocephin (50mg/kg/dose)
If WBC count $\geq 35,000$, move to DECISION POINT 3
Follow-up 24-hours with PCP

Option 2:
• If fever $\geq 41^\circ C$ move to DECISION POINT 3
• BC only, UA, UC (age and sex dependant criteria)
• If respiratory symptoms: Chest x-ray (CXR)
  Ensure 24-hour follow-up. No antibiotics

DECISION POINT 3
WBC count $> 35,000$

CBCD, UA, UC, BC
Decision to do an LP is based on signs and symptoms
Rocephin (50mg/kg/day)

Temperature $> 41^\circ C$

CBCD, UA, UC, BC
Decision to do an LP is based on signs and symptoms
Rocephin (50mg/kg/day)

Any work-up, testing and empiric therapy should involve discussion with parents about the very small chance of serious bacterial illness (2-4%) and the likelihood of spontaneous resolution even if there is bacteremia

Age 3 years and older

Therapy guided by history, exam and any other relevant findings
Lab screening and empiric therapy usually not required