Clinical Guideline	Fever/Abnormal Temperature Without Obvious Source Infants 0–60 days

MaineHealth

The Barbara Bush Children's Hospital
At Maine Medical Center

Clinical Guideline

Fever/Abnormal Temperature Without Obvious Source for Infants 0–60 days

STOP AND REVIEW

Inclusion criteria
WELL-APPEARING
Gestational age 37 - 42 weeks
Age 0-60 days
Rectal temperature < 36.0C or ≥ 38.0C
Reliable history of fever at home in past 24 hours

Exclusion criteria
ILL-APPEARING
Gestational age <37 weeks
Immunocompromised state
Chronic medical conditions
Immunizations in last 48 hours

0-28 Days

Initiate orderset

CBC and differential
CMP
Procalcitonin (1, may substitute CRP)
Catheterized urinalysis + sediment
Urine culture
Blood culture x 1 (pink bottle)
CSF studies (Appendix A)
Rapid viral testing

Consider HSV testing if high risk (Appendix B)
Consider CXR if respiratory symptoms present

Begin empiric treatment: (3,4)

Ampicillin 100 mg/kg x 1 AND
Gentamicin 5 mg/kg x 1

If suspected HSV add acyclovir 20 mg/kg IV x 1

Age 0-21 days?

YES

Consult local pediatric team
or
Consider NICU consult for infants 0-7 days

All febrile infants 0-21 days should be admitted

NO

Consult local pediatric team for shared decision making with ED team and family regarding disposition

Infants 22-28 days old should have consultation by local pediatric team
Patient may be discharged home if work up is negative and **ALL** of the following are met:

- Evaluated by inpatient pediatric team including attending
- Normal ANC (1000-4000)
- Procalcitonin <0.5 (5)
  If no procalcitonin must have Temp <38.5 **AND** CRP <20
- Negative lumbar puncture results (Appendix C)

(1) Order CRP if rapid procalcitonin unavailable
(2) Combined rapid COVID and influenza and RSV or viral panel depending on hospital
(3) If infant is 22-28 days old, consider ceftriaxone instead of ampicillin and gentamicin if bilirubin is < 10, patient is well-appearing, CSF negative for meningitis, and low suspicion for listeria infection
(4) Administer empiric antibiotics **after** blood, urine and CSF cultures have all been obtained. If unable to obtain all specimens consult Pediatrics before administering empiric antibiotics.
(5) Elevated inflammatory Markers = ANC > 4000 OR Procalcitonin > 0.5
If no procalcitonin, may substitute ANC >4000 OR CRP > 20 OR Fever > 38.5
(6). All patients transferred to MMC from other hospitals for pediatric evaluation will be admitted

Disclaimer: Guideline is to provide guidance and recommendations for practice, but does not supersede clinician judgement and does not establish a standard of care

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Exclusion criteria
ILL-APPEARING
Gestational age <37 weeks
Immunocompromised state
Chronic medical conditions
Immunizations in last 48 hours

29- 60 Days

Initiate orderset

CBC and differential
CMP
Procalcitonin (1, may substiture CRP)
Catheterized UA + sediment
Urine culture
Blood culture x 1 (pink bottle)
Rapid viral testing (2)

Consider HSV testing if high risk (Appendix B)
Consider CXR if respiratory symptoms present

Elevated inflammatory markers? (3)
(Appendix D)

YES

Consult local pediatric team for evaluation and shared decision with family and ED team regarding:
- Lumbar puncture
- Empiric antibiotic administration
- Disposition (admission vs discharge)

Patient may be considered for discharge if all the following criteria are met:
- Evaluation by pediatric team **AND**
- Reliable family **AND**
- Confirmed pediatrician follow up in 24-36 hours **AND**
- Reliable transportation to follow up appointment

If at MMC – consultation must include attending evaluation

NO

Urinalysis positive?
(Appendix E)

YES

Give first dose of antibiotics in ED Ceftriaxone 50 mg/kg IV or IM **AND** oral antibiotic prescription to be started the followings day (4)
ID preferred - Cephalexin 17 mg/kg q8hr x 9 days
Alternative - Cefdinir 7 mg/kg q12hr x 9 days

Follow up with PCP in 24-36 hours

NO

Discharge home with PCP follow up in 24-36 hours

(1) Order CRP if rapid procalcitonin unavailable
(2) Combined rapid COVID and influenza and RSV or applicable viral panel depending on hospital
(3) Elevated inflammatory Markers = ANC > 4000 OR Procalcitonin > 0.5
If no procalcitonin, may substitute ANC >4000 OR CRP > 20 OR Fever > 38.5
(4). Ideally prescribed to MMC pharmacy and in hand prior to discharge

Appendices

Appendix A – CSF Studies

Culture and gram stain
Cell count
Protein
Glucose
Consider HSV PCR
Consider enterovirus PCR

Appendix B – Herpes Simplex Virus (HSV) Testing

Consider HSV testing and treatment if any one of the following is true:

Severe illness
Hypothermia (<36.0C)
Seizure(s)
Conjunctivitis
Infants with vesicles and/or mucous membrane ulcers
History of maternal genital HSV lesions from 48 hours before to 48 hours after delivery
History of maternal fevers from 48 hrs before to 48 hrs after delivery without obvious source
Postnatal HSV contact
Cerebrospinal fluid pleocytosis in the absence of a positive Gram stain result
    0-28 days old >14 WBC/hpf
    29-60 days old >8 WBC/hpf
Leukopenia
Thrombocytopenia
Elevated alanine aminotransferase (ALT) or aspartate transaminase (AST)
Elevated CSF protein for age (see appendix C for normal values)

Appendix C - Positive lumbar puncture result:

0-28 days
Positive gram stain
>14 WBCs/hpf
Grossly bloody tap which is uninterpretable
Elevated CSF protein for age or out of proportion to numbers RBCs present

29-60 days
Positive gram stain
>8 WBCs/hpf
Grossly bloody tap which is uninterpretable
Elevated CSF protein for age or out of proportion to numbers RBCs present

Normal CSF protein for age (per Harriet Lane)

0-14 days	56-102
15-28 days	49-89
29-42 days	41-75
43- 60 days	36-70

Appendix D – Positive inflammatory markers (IM's)

If any **ONE** of the following below is abnormal, it is considered positive IM's
Conversely, if considering discharge **ALL** must be normal

ANC > 4000 OR
Procalcitonin > 0.5

If no procalcitonin use alternate IM's
ANC > 4000 OR
CRP > 20 OR
Fever > 38.5

Appendix E - Positive urinalysis + sediment obtained via straight catheterization

(Any of the following if present should be considered positive)

Positive nitrite OR
Positive leukocyte esterase OR
> 10 WBC/HPF

Appendix F –Viral swabs

Rapid COVID/Influenza - Mid-turbinate swab 5 seconds each nostril
RSV - Nasopharyngeal swab