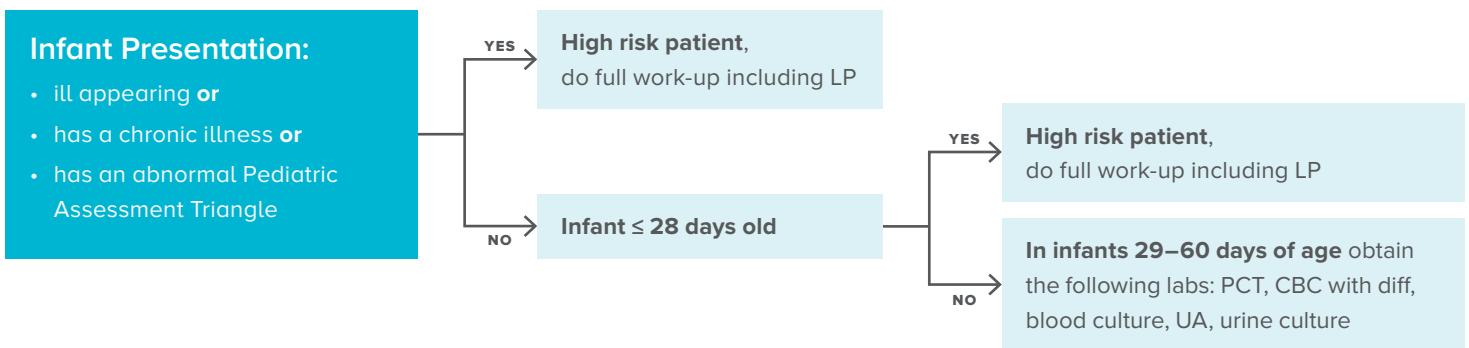


# Evidence-Based Care Guideline for Management of Infants 0 to 60 days with Fever of Unknown Source

## FUS Algorithm: Fever of Unknown Source in Infants 0 to 60 days of age



Low Risk	Intermediate Risk	High Risk	Abnormal UA
<ul style="list-style-type: none"> <li>Negative UA (UA with &lt;10 WBC per hpf) <b>AND</b></li> <li>Biomarkers below threshold: PCT ≤ 0.5 ng/mL, ANC ≤ 4,000/ mm<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Negative UA</li> <li>PCT ≤ 0.5 ng/mL <b>BUT</b> ANC &gt; 4,000/ mm<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Negative UA with</li> <li>PCT &gt; 0.5 ng/ml regardless of ANC value</li> </ul>	<ul style="list-style-type: none"> <li>Positive UA: (WBC ≥ 10 per hpf)</li> </ul>
ACTION	ACTION	ACTION	ACTION
<ul style="list-style-type: none"> <li>No antimicrobials, discharge home with close follow up with PCP in next 24 hours</li> <li>Family knowledgeable of when to call/return</li> </ul>	<ul style="list-style-type: none"> <li><b>Option 1: Proceed with LP, send CSF studies and consider empiric antimicrobials</b></li> <li><b>Option 2: Defer LP and admit for observation OFF antimicrobials</b></li> </ul>	<ul style="list-style-type: none"> <li>Proceed with LP and CSF studies</li> <li>Start empiric antimicrobials and admit to hospital</li> </ul>	<ul style="list-style-type: none"> <li><b>Option 1: Defer LP and treat empirically for presumed UTI if: PCT ≤ 0.5 ng/mL regardless of ANC value; consider admission</b></li> <li><b>Option 2: Consider LP and sending CSF studies if: PCT &gt; 0.5 ng/mL regardless of ANC value; admit to hospital</b></li> </ul>

## ABBREVIATIONS

<b>ANC</b>	Absolute neutrophil count	<b>IBI</b>	Invasive bacterial infection
<b>CSF</b>	Cerebrospinal fluid	<b>LP</b>	Lumbar puncture
<b>ED</b>	Emergency department	<b>PCT</b>	Procalcitonin
<b>EV</b>	Enteroviruses	<b>SBI</b>	Serious bacterial infection
<b>FUS</b>	Fever of uncertain source/origin	<b>UTI</b>	Urinary tract infection

## DEFINITIONS

<b>Cerebrospinal Fluid (CSF) pleocytosis</b>	Neonates age 0 to 28 days: CSF white blood cell count $\geq 15/\mu\text{L}$ Infants 29 to 60 days CSF white blood cell count $\geq 9 \mu\text{L}$
<b>Fever of uncertain source (FUS)</b>	An acute febrile illness in which the etiology of the fever is not apparent after a thorough history and physical exam
<b>Fever</b>	Temperature $> 38^{\circ}\text{C}$ ( $100.4^{\circ}\text{F}$ )
<b>Invasive bacterial infection (IBI)</b>	Bacteremia and/or bacterial meningitis in infants $\leq 60$ days of age
<b>Ill-appearing</b>	Infant described as: “toxic,” “limp,” “unresponsive,” “gray,” “cyanotic,” “apnea,” “weak cry,” “poorly perfused,” “grunting,” “listless,” “lethargic,” “irritable or any findings of the physical examination that indicates any clinical suspicion of sepsis
<b>Neonate</b>	Infant birth to 28 days of age
<b>Previously healthy</b>	Term Birth ( $\geq 37$ weeks’ gestation) Not treated for unexplained hyperbilirubinemia Not hospitalized longer than mother No current or previous antimicrobial therapy No previous hospitalization No chronic or underlying illness
<b>Serious bacterial infection (SBI)</b>	A urinary tract infection, bacterial meningitis, bacteremia, bacterial pneumonia, gastroenteritis, cellulitis, osteomyelitis, or septic arthritis
<b>Well appearing</b>	Defined by a normal Pediatric Assessment Triangle (PAT): 3 components of the PAT are appearance, work of breathing, and circulation to the skin (Horeczko, 2013 [4a]; Dieckmann, 2010 [5a]) (See Appendix C)
<b>Young infant</b>	Children 29 to 60 days of age

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