COMMUNITY MEDICAL CENTER

Febrile Infant Pathways (8-60 days)

Inclusion criteria
- Well appearing
- Documented temperature ≥ 100.4°F or ≥ 38°C by history or rectal measure in clinical setting of office or emergency department
- Gestational age at birth ≥37 and <42 weeks
- Age 8-60 days old

Exclusion criteria (If any are true, manage without this pathway!)
- Newborns 0-7 days old post hospital discharge (in this age group, perform full sepsis evaluation and start empiric treatment)
- Born preterm at less than 37 weeks gestation?
- < 2 weeks old with perinatal course complicated by maternal fever, infection or antimicrobial use?
- Febrile infant with high suspicion of HSV infection or vesicles?
- Focal bacterial infection (like cellulitis, omphalitis, septic arthritis, or osteomyelitis)?
- Clinical diagnosis of bronchiolitis, with or without positive RSV result?
- Documented or suspected immune compromise?
- Neonatal course complicated by surgery or infection?
- Congenital or chromosomal abnormalities?
- Medically fragile infant requiring technology or ongoing therapeutic intervention to sustain life?
- Received immunizations within the last 48h?

Infants who *MAY* be included:
- Upper respiratory tract infection symptoms (that are not diagnostic of viral bronchiolitis)
- Diarrhea → stool specimen testing; if negative result, then may use the clinical pathway
- Acute otitis media
- Recent antimicrobial use if current age greater than 2wo
- Positive respiratory viral testing

HSV checklist:
If any are true, proceed to full evaluation and empiric HSV treatment
- ☐ Mother with active HSV lesions
- ☐ Maternal fever 48h before or 48h after delivery
- ☐ Seizures in infant
- ☐ Vesicles on skin, scalp, or mucus membrane exam
- ☐ Hypothermia
- ☐ CSF with pleocytosis for age in absence of positive Gram stain
- ☐ Leukopenia
- ☐ Thrombocytopenia
- ☐ Elevated ALT

Abnormal inflammatory markers:
- ☐ Procalcitonin (PCT) >0.5ng/mL
- ☐ CRP >20mg/L
- ☐ ANC >4000/mm^3

For **CSF** send: cell count, Gram stain, glucose, protein, culture, and if able meningitis/encephalitis PCR panel

HSV studies: CSF PCR; HSV surface swab of conjunctiva, nasopharynx, mouth, and anus for cultures or HSV PCR; HSV blood PCR; and serum alanine aminotransferase (ALT)

Urine testing: *May* collect a clean catch urine for initial testing, but if the UA results are abnormal then a sterile urine specimen via bladder catheterization must be obtained

Abnormal UA would be:
- ☐ +Leukocyte esterase
- ☐ ≥ 5 WBCs/HPF
- ☐ ≥ 10 WBCs/mm^3

Algorithms based on the REVISE collaborative work and updated with 2021 AAP Febrile Neonate Clinical Guideline

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Febrile Infant Pathways

Antimicrobial Treatment

	No focus identified	Bacterial meningitis	Urinary tract infection	If need HSV coverage also
8-21 days old	Ampicillin 50mg/kg Q8h AND Ceftazidime 50mg/kg Q8h OR Gentamicin 4mg/kg Q24h	Ampicillin 75mg/kg Q6h AND Ceftazidime 50mg/kg Q8h	Ampicillin 50mg/kg Q8h AND Ceftazidime 50mg/kg Q8h OR Gentamicin 4mg/kg Q24h	ADD Acyclovir 20mg/kg Q8h
22-28 days old	Ceftriaxone 50mg/kg Q24h	Ampicillin 75mg/kg Q6h AND Ceftazidime 50mg/kg Q8h	Ceftriaxone 50mg/kg Q24h	ADD Acyclovir 20mg/kg Q8h
29-60 days old	Ceftriaxone 50mg/kg Q24h	Ceftriaxone 50/kg Q**12**h OR Ceftazidime 50mg/kg Q8h AND Vancomycin 20mg/kg Q8h	Ceftriaxone 50mg/kg Q24h OR Cephalexin 25mg/kg Q6h OR Cefixime 8mg/kg Q24h	ADD Acyclovir 20mg/kg Q8h

Infants can be observed/monitored at home when <u>ALL</u> of the following are met:

☐ Urinalysis is normal

☐ None of the inflammatory markers obtained are abnormal

☐ CSF analysis is normal or (+) enterovirus

☐ Verbal teaching and written instructions are provided for home monitoring:

- Change in general appearance, i.e. dusky color, respiratory distress, or other distress
- Behavior change, including: lethargy, irritability, inconsolable crying, difficulty consoling/comforting, other distress
- Difficulty feeding
- Vomiting
- Decreased urine output

☐ Follow up plans for reevaluation in 24h are developed

☐ Plans are also outlined in case of change in clinical status, including means of communication between the family and providers and access to emergency medical care

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Febrile Neonate Pathway (8-21 days)

For infants with temperature ≥100.4°F or ≥38°C AND no evident source of infection:
Is the patient well appearing?

YES

Obtain:
- UA and urine culture
- Blood culture (1-3 mL min)
- Perform lumbar puncture
- *May obtain* inflammatory markers (CBC with diff, CRP/PCT)
- Resp viral testing (if resp sx)

NO

Full sepsis evaluation, manage off the pathway

Complete **HSV Checklist**

LOW RISK

Administer antibiotics
Admit to inpatient unit

HIGH RISK

Obtain HSV surface and vesicle cultures as well as HSV CSF PCR

Administer antibiotics AND acyclovir
Admit to inpatient unit

Pathogen identified?

NO

Discontinue antimicrobial coverage and may discharge infant if all culture results negative at 24-36 hours (and HSV negative, if sent)

YES

Treat infection

HSV checklist:
If any are true, proceed to full evaluation and empiric HSV treatment
- ☐ Mother with active HSV lesions
- ☐ Maternal fever 48h before or 48h after delivery
- ☐ Seizures in infant
- ☐ Vesicles on skin, scalp, or mucus membrane exam
- ☐ Hypothermia
- ☐ CSF with pleocytosis for age in absence of positive Gram stain
- ☐ Leukopenia
- ☐ Thrombocytopenia
- ☐ Elevated ALT

Discharge checklist after inpatient observation + treatment:
- ☐ Parents comfortable monitoring child at home?
- ☐ Reliable means of communication with parents?
- ☐ Can bacterial culture results be followed daily?
- ☐ Can close follow up with the PCP be coordinated?

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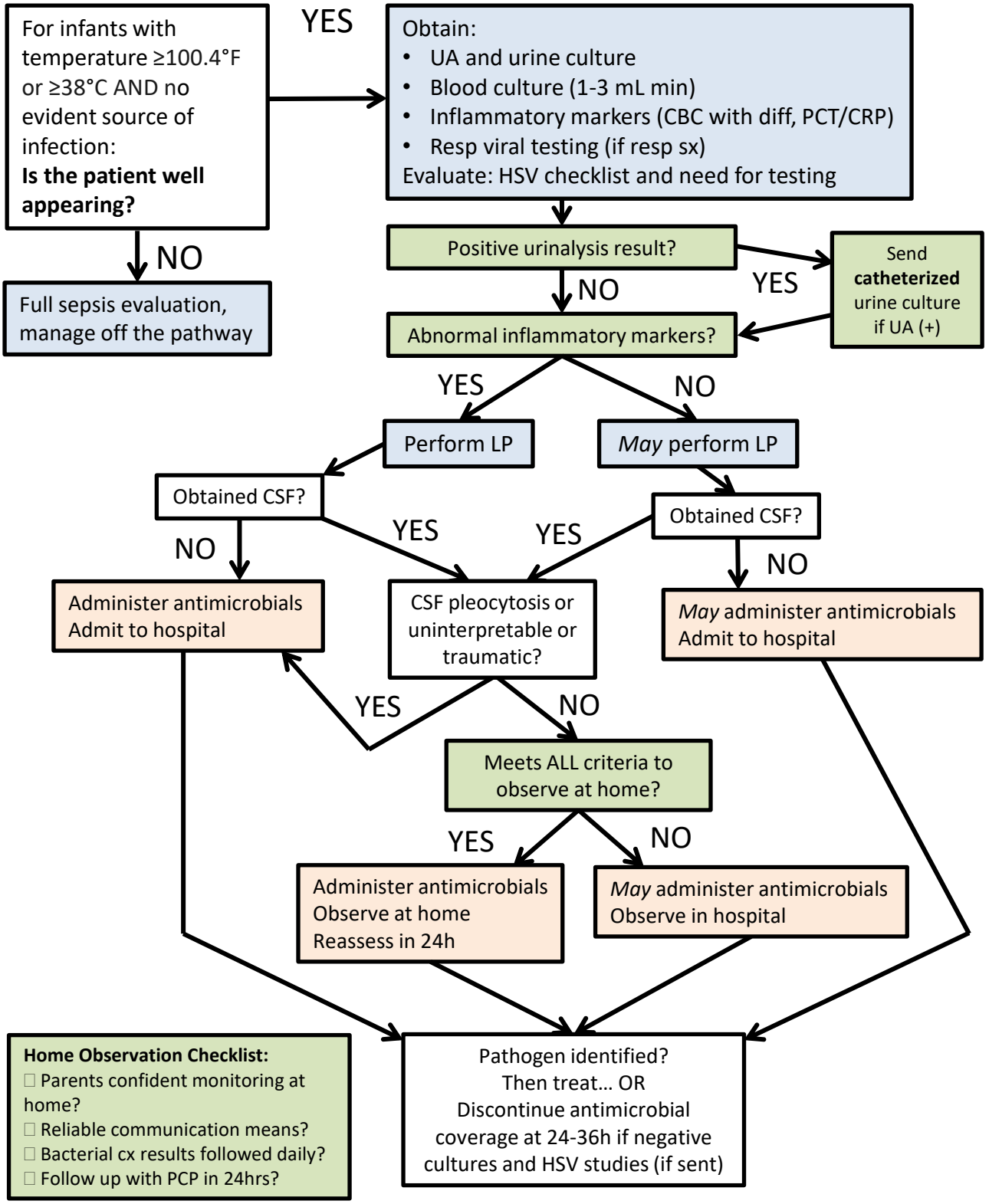
Febrile Neonate Pathway (22-28 days)



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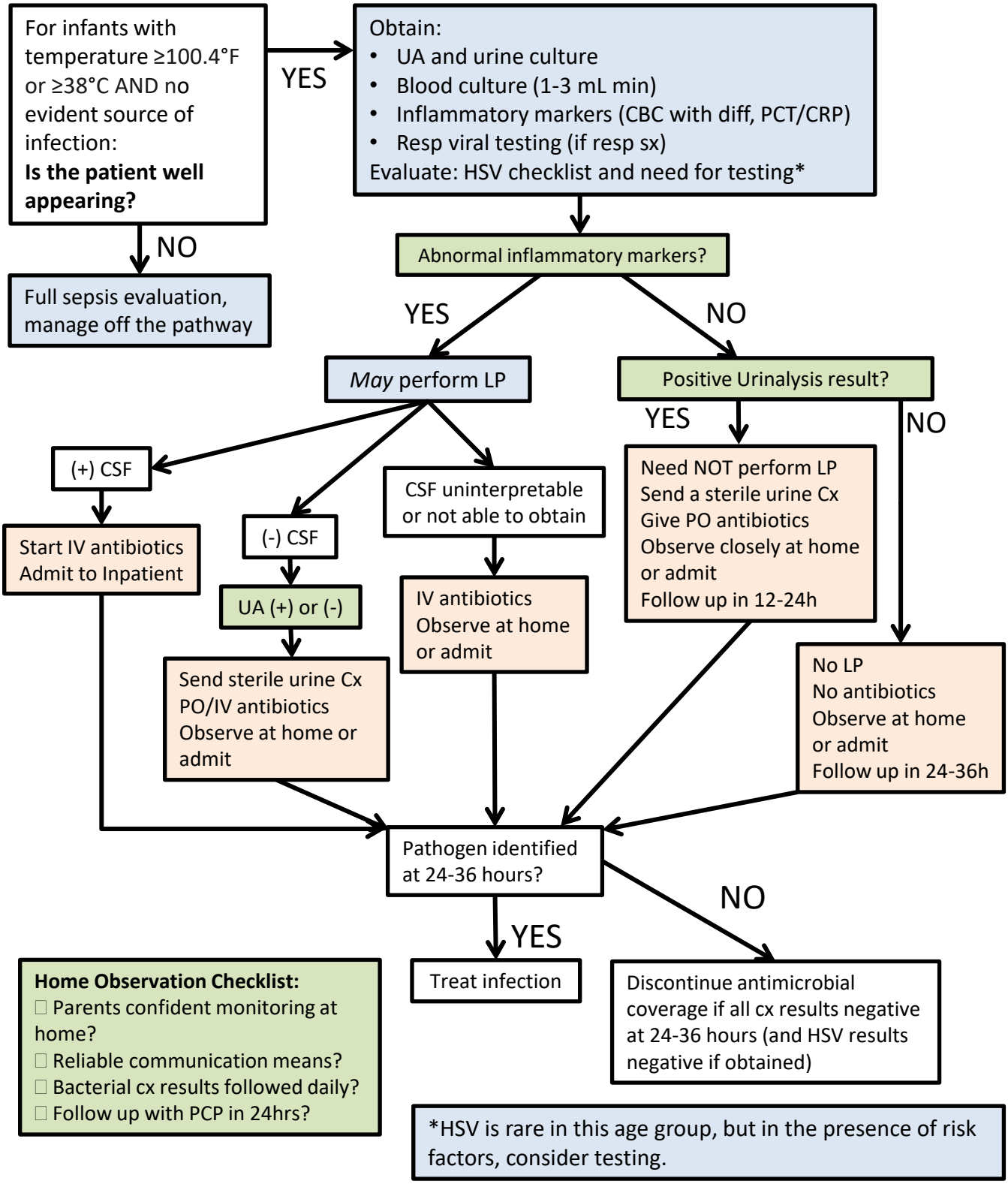
Febrile Infant Pathway (29-60 days)



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