Pediatric Sepsis Pathway

(ED, Inpatient, ICU)

START

Sepsis = ≥2 SIRS Criteria + Suspected Infection
Tachycardia (for age)
Tachypnea (for age)
Temperature <36 °C or >38 °C
WBC elevated or depressed for age or >10% immature neutrophils

Age (years)	Age (days)	WBC	HR	RR	SBP
Neonate	0 - 7	>34	>180	>50	<65
Neonate	8 - 30	>19.5 or <5	>180	>40	<75
(1 month - 2 years)	31 - 729	>17.5 or <5	>180	>34	<100
(2 - 6 years)	730 - 2189	>15.5 or <6	>140	>22	<94
(6 - 13 years)	2190 - 4744	>13.5 or <4.5	>130	>18	<105
(13 - 18 years)	4745 - 6569	> 11 or <4.5	>110	>14	<117
(18 - 21 years) IP only	6570 - 7664	>11 or <4.5	>90	>20	<90

Provider Assessment: Suspected Infection?

No → **END**
Sepsis pathway not indicated
Care per provider

Yes
(*Initiate Pathway*)

Labs

- Consider lactate, CMP, capillary glucose, biomarkers (CRP or procalcitonin as appropriate)

Cultures

- Blood: At least 1 peripheral, 2 preferred
- Include central line as 3rd culture if present
- Culture all lumens of central line
- Consider urine including UA, CSF, stool, or other cultures as appropriate
- Consider MRSA nares swab for respiratory infections and SSTI

Antibiotics

(within 1 hour of assessment)

- Neonate 0-7 days:
  - Ampicillin + Gentamicin +/- Acyclovir[1]
  - Add Cefepime if CSF gram stain is positive for gram negative rods
- Neonate 8-20 days:
  - Ampicillin PLUS Cefepime +/- Acyclovir[1]
  - Consider adding Gentamicin if CSF gram stain is positive for gram negative rods
- Neonate 21-28 days:
  - Ampicillin + Ceftriaxone[2] +/- Acyclovir
- Infant/children >28 days:
  - Non-immunocompromised AND NO central line AND No underlying GI disease: Vancomycin[3] + Ceftriaxone
  - Non-immunocompromised AND Central line WITHOUT underlying GI disease: Vancomycin[3] + Cefepime
  - Non-immunocompromised WITH underlying GI disease WITHOUT Central line: Pip/Tazo[4]
  - Non-immunocompromised WITH underlying GI disease WITH Central line: Vancomycin[3] + Pip/Tazo[4]
  - Immunocompromised, hematology-oncology patients with fever and neutropenia: Refer to Hematology-Oncology Fever Neutropenia Guidance
  - Immunocompromised, (other than hematology-oncology patients with fever and neutropenia): Vancomycin[3] and cefepime; Replace cefepime with meropenem if patient being admitted to PICU with hemodynamic compromise.

IV Fluids

- 20cc/kg bolus of crystalloid over 5-10min
- Consider repeating 20cc/kg bolus if clinically indicated
- Use hydrocortisone in addition only in cases of suspected or proven adrenal insufficiency

Active Monitoring

Urine Output (goal 0.5cc/kg/hr)
Hemodynamics
O2 Requirement
Mental Status

If shock is not reversed after initial fluid resuscitation, order norepinephrine (can start in peripheral line until central access is obtained)

Triage

Patient stabilized: Page 90054 for Pediatric Hospitalist
Patient refractory to initial measures: Page 30070 for PICU Fellow

END

[1] Consider IV acyclovir if risk factors for HSV exist (maternal history of HSV genital lesions) or otherwise clinically indicated (seizures, hypothermia, mucous membrane ulcers, vesicular rash, leucopenia, thrombocytopenia, elevated ALT, coagulopathy, CSF pleocytosis, etc.).
[2] Ceftriaxone only if gestational age ≥32 weeks, if <32 weeks default to ampicillin and cefepime.
[3] If hx of VRE: Replace Vanco with Linezolid
[4] Penicillin allergy alternatives for gram negative coverage: Ciprofloxacin. Use Cipro + Gentamicin if immunocompromised. Use Cipro+metronidazole for suspected intra-abdominal source.

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References/Appendices:

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