PEDIATRIC ACUTE SEPSIS: PHYSICIAN’S ORDERS

ORDERS: Must include physician’s signature and ID#  
STAT ORDERS MUST BE COMMUNICATED TO NURSE  

PHYSICIAN REMINDER: SUGGESTED ANTIBIOTIC REGIMENS ON BACK  
Note: These orders are for use in the treatment of acute pediatric sepsis only, NOT FOR RULE-OUT sepsis.

VITAL SIGNS:
☐ Vital signs every ______  
Patient weight: ________________ kg

DIET:
☐ NPO  ☐ Neutropenic  ☐ Other:

NURSING ORDERS:
☐ O₂ sats now  ☐ completed  
☐ Insert 1-2 peripheral IVs (as large as possible)  
☐ Pulse oximetry continuous per protocol  
☐ Oxygen via __________ at ___________  
☐ Monitor blood glucose now and every ______ hrs  
 Notify MD for serum glucose > 150 or known diabetic
Hypoglycemic treatment for d-stick or glucose < 50:
☐ Dextrose 10% in Water _____ kg X 2 mL/kg = _____ mL IV push X 1 and repeat blood glucose in 30 min

IV FLUIDS: REMINDER: For patients meeting severe sepsis parameters place central line within 4 hours. Maintain CVP > 8 in patients with central line. Consider colloids/crystalloids 20 mL/kg bolus over 5 – 10 minutes.
☐ Lactated Ringers 20 mL/kg X ______kg = ______ mL. Infuse ______ mL over 30 minutes
☐ Sodium Chloride 0.9% 20 mL/kg X ______kg = ______ mL. Infuse ______ mL over 30 minutes

For PICU only:
☐ Document Mean Arterial Pressures (MAP) every hour  
☐ Continuous Central Venous Pressure (CVP) monitoring after central line placement: Document every hour  
☐ Central venous O₂ (Venous Blood Gas) every ___________: For patients with central line placement

LABORATORY:
☐ Lactate serum (arterial for patients < 10 years and without a central line)  
☐ Central line culture all ports  
☐ Blood culture x 1  
☐ CSF culture, protein, cell count, glucose, gram stain, viral culture (Consider Herpes PCR)  
☐ ABG  
☐ CBC  
☐ Urinalysis  
☐ Trach culture  
☐ VBG: for central line only  
☐ Chest X-ray  
☐ Abdominal X-Ray  
☐ Urine culture x 1

MEDICATIONS:
Adjust medication frequency for patients with renal insufficiency
☐ Famotidine not indicated  
☐ Famotidine ______kg X 0.4 mg/kg (up to 20 mg) = _____mg IVPB every _____ hours  
☐ Famotidine ______kg X 1 mg/kg (up to 20 mg) = _____mg PO every ______ hours
☐ Acetaminophen ______kg X 15 mg/kg = ______Q 4 hrs (no PR in neutropenic pts)

MD/LIP/NP Signature:  
ID#  Date:  Time:

Nurse Signature:  
ID#  Date:  Time:

SCAN TO PHARMACY AND PLACE IN PATIENT CHART
The following are suggested antibiotic regimens for acute sepsis. For other sources or suspected sources not listed below or patients allergic to these medications, page Pediatric ID Department.

<table>
<thead>
<tr>
<th>Sepsis Source:</th>
<th>Recommended Antibiotic Regimen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PATIENTS &lt; 1 MONTH OF AGE</strong></td>
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<tr>
<td>Unclear source</td>
<td>Ampicillin AND CefoTAXime</td>
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<tr>
<td>Meningitis</td>
<td>Ampicillin AND CefoTAXime AND Vancomycin</td>
</tr>
<tr>
<td><strong>PATIENTS &gt; 1 MONTH OF AGE</strong></td>
<td></td>
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<tr>
<td>Sepsis +/- Meningitis</td>
<td>Vancomycin AND CefTRIAXone</td>
</tr>
<tr>
<td>Acute respiratory failure</td>
<td>Vancomycin AND CefTRIAXone</td>
</tr>
<tr>
<td>Abdominal focus</td>
<td>Piperacillin-tazobactam ADD Vancomycin if critically ill</td>
</tr>
<tr>
<td>Suspected toxic shock</td>
<td>Vancomycin AND Clindamycin AND CefTRIAXone</td>
</tr>
<tr>
<td>Acute encephalitis</td>
<td>Acyclovir in addition to treatment for meningitis</td>
</tr>
<tr>
<td>Patients with underlying oncological issues</td>
<td>CefePIME AND Vancomycin</td>
</tr>
<tr>
<td>Acute respiratory failure in chronic vented patients</td>
<td>Piperacillin-tazobactam AND Vancomycin</td>
</tr>
</tbody>
</table>

**Antibacterial Agents:** Administer within 1 hour of presumptive diagnosis of sepsis. Blood cultures should be drawn prior to administration of first dose. NOTE: Complete Pediatric Antimicrobial Form for subsequent doses. Consider Pediatric ID Consult

- **CefoTAXime** ______kg X 50 mg/kg/dose = ______ mg IV STAT X 1 (Max. dose: 2 gms)
- **Meningitic dose:**
  - CefoTAXime ______kg X 80 mg/kg/dose = ______ mg IV STAT X 1 (Max. dose: 2 gms)
  - Ampicillin _____kg X 50 mg/kg/dose = __________ mg IV STAT X 1 (Max. dose: 2 gms)
  - **Meningitic dose:**
  - Ampicillin _____kg X 100 mg/kg/dose = __________ mg IV STAT X 1 (Max. dose: 2 gms)
  - CefePIME _____kg X 50 mg/kg/dose = __________ mg IV STAT X 1 (Max. dose: 2 gms)
  - Vancomycin _____kg X 10 mg/kg/dose = ___ mg IV STAT X 1 (Max. dose: 1 gm)
  - Clindamycin _____kg X 10 mg/kg/dose = ___ mg IV STAT X 1 (Max. dose: 900 mg)

**Note:** For Ceftriaxone, IV is preferable to IM in most cases (Max. dose: 2 gms)

- **CefTRIAXone** ______kg X 50 mg/kg/dose = ______mg _____STAT X 1
- **Meningitic dose:**
  - CefTRIAXone ______kg X 100 mg/kg/dose = ______ mg _____ STAT X 1

**Dose based on the piperacillin component (Max. dose: 4 gms)**

- Consider dose reduction for patients with renal insufficiency
  - Piperacillin-tazobactam _____kg X 80 mg/kg/dose = _____ mg IV STAT X 1
  - Acyclovir _____kg X 10 mg/kg/dose = ___ mg IV STAT X 1 (Max. dose: 1 gm) ≥12 yrs
  - Acyclovir _____kg X 20 mg/kg/dose = ___ mg IV STAT X 1 (Max. dose: 1 gm) < 12 yrs

**MD/LIP/NP Signature:**

**Nurse Signature:**
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<th>ORDERS: Must include physician’s signature and ID#</th>
<th>Trans. Initials&gt;ID#</th>
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<tbody>
<tr>
<td>STEROIDS: Consider for catecholamine refractory shock and patients on chronic steroid therapy</td>
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<tr>
<td>□ Hydrocortisone _____ kg X 50 mg/m² = _____ IV push (over 1 minute) Q 6 hours</td>
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<td>VASOPRESSORS (PICU ONLY):</td>
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<tr>
<td>□ DOPamine (800 mg in 500 mL D5W) IV infusion. Start at ______ mcg/kg/min and titrate to keep MAP &gt; ______ mmHg to a max rate of ______ mcg/kg/min</td>
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<td>□ DoBUTamine (500 mg in 250 mL D5W) IV infusion. Start at ______ mcg/kg/min and titrate to (parameters:) ___________ to a max rate of ______ mcg/kg/min</td>
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<tr>
<td>□ Epinephrine (4 mg/250 mL D5W) IV infusion. Start at _____ mcg/kg/min and titrate to keep MAP &gt; ______ mmHg to a max rate of _____mcg/kg/min</td>
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<tr>
<td>□ Norepinephrine (LEVOPHED) (4 mg in 250 mL D5W) IV infusion. Start at _____ mcg/kg/min, titrate to keep MAP &gt; _____ mmHg to a max rate of _____ mcg/kg/min</td>
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<td>For PICU ONLY:</td>
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<tr>
<td>□ Drotrecogin Alfa (XIGRIS) (24 micrograms/kg/hour) infusion X 96 hours (Pharmacy will send XIGRIS package, which requires an attending’s signature before dispensing.)</td>
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<tr>
<td>□ Drotrecogin Alfa not indicated, because patient is less than 18 years of age.</td>
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<tr>
<td>RESPIRATORY: Reminder: Maintain Inspiratory plateau pressures &lt; 30 cmH2O</td>
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<td>Reminder: All ventilator orders should be placed in Cerner/Powerchart</td>
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<td>ADDITIONAL ORDERS:</td>
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MD/LIP/NP Signature: ID#: Date: Time: 
Nurse’s Signature: ID#: Date: Time:
RESUSCITATION OF PEDIATRIC SEPTIC SHOCK

0 min
Recognized decreased mental status and perfusion. Maintain airway and establish access according to PALS guidelines

5 min
Push 20 mL/kg isotonic saline or colloid boluses up to and over 60 mL/kg. Correct hypoglycemia and hypocalcemia, administer antibiotics

15 min
Fluid refractory shock**

Fluid responsive*
Establish central venous access, begin dopamine or dobutamine therapy and establish arterial monitoring

Fluid refractory-dopamine/dobutamine resistant shock

Observe in PICU

60 min
Begin Hydrocortisone, if at risk for absolute adrenal insufficiency

Normal Blood Pressure
Cold Shock SVCO2 Sat<70%
Add vasodilator or type III PDE inhibitor with volume loading

Low Blood Pressure
Cold Shock SVCO2 Sat<70%
Titrarte epinephrine for cold shock, norepinephrine for warm shock to normal Mean Arterial Pressure-Central Venous Pressure difference for age and SVCO2 saturation >70%

Low Blood Pressure
Warm Shock SVCO2 Sat≥70%
Titrarte volume and epinephrine

Persistent Catecholamine-resistant shock
Start cardiac output measurement and direct fluid, inotrope, vasopressor, vasodilator, and hormonal therapies to attain CI >3.3 and < 6.0 L/min/m2.

Refactory shock
Consider transfer for ECMO

*Normalization of BP and tissue perfusion
** Hypotension, abnormal cap refill or extremity coolness

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