Emergency Department Sepsis Pathway

**ED Sepsis Pathway**

**Fever or clinical scenario consistent with infection**

**Suspect sepsis?**

- **Not Sepsis**
  - Consider myocarditis, PE, other mimickers

- **Yes**

**Which criteria does patient meet?**

**Sepsis STAT Criteria:**
- Fever/hypothermia/suspected infection and any of the following:
  - Hypotension
  - Altered mentation
  - New need for positive pressure ventilation
  - Lactate greater or equal to 4 mmol/L
  - Acute kidney injury
  - New coagulopathy (DIC, thrombocytopenia)
  - New liver dysfunction
  - Acute need for resuscitation room

**Activate Sepsis STAT**

- Verbal or paging notification per site protocol
- In NOC, begin request for transport to Anschutz immediately, or at any point when a need for a higher level of care develops
- Use ED Sepsis STAT order set
- CR monitor, vital signs per order set

**IV Access x2**

- 2 peripheral IVs with largest gauge possible; antecube preferred
- 2nd peripheral IV recommended for ports
- Double lumen large central lines do not require additional access
- If no access within 15 minutes, consider I/O or other options for escalation

**Use Order Set to Order:**
- Cultures, CBC, lactate, VBG, CMP, DIC Panel, additional labs PRN

**Rapid IV Bolus, Rapid Reassess, Repeat PRN**

- Administer boluses of 10-20 ml/kg of isotonic crystalloid (use a push-pull, pressure bag or Level 1)
- Immediate clinical reassessment of volume/perfusion; repeat bolus until clinical euvoolemia achieved (usually 30-60 ml/kg)

**Administer Complete Antibiotics Coverage Immediately**

- Rapid, immediate antibiotics per antibiogram and order set

**Advanced Resuscitation**

- Oxygen/ventilation support as needed
- Start vasopressors within first 60 minutes of hypotension if hypotension does not resolve
- Dopamine/Norepinephrine/Epinephrine are all acceptable first-line vasopressors if available in less than 10 minutes
- Dopamine is acceptable and rapidly available in most locations
- Norepinephrine/Epinephrine as first or second-line vasoactive agent should be guided by assessment of the patient’s hemodynamics
- Consider steroids for adrenal insufficiency or meningitis
- Source control: consider need for drainage or removal of source of infection (e.g. abscess, hardware); consult surgical services PRN

**Sepsis Yellow Criteria:**
- Fever/hypothermia/suspected infection and any of the following:
  - Immunosuppression/immunocompromise (e.g. oncology patients, organ transplant patients, patients on immunomodulators)
  - Central venous catheter
  - Clinically concerning symptoms: changes to capillary refill, peripheral pulse quality, concerning rashes, orthostasis

**Activate Sepsis Yellow**

- Verbal or paging notification per site protocol
- In NOC, consider requesting transport to Anschutz immediately, or at any point when a need for a higher level of care develops
- Use ED Sepsis Yellow order set
- CR monitor, vital signs per order set

**Rapid Access**

- PIV or Central Line Access Immediately
  - If no access after 15 minutes, consider options for escalation

**Labs**

**Use Order Set to Order:**
- Cultures, CBC, lactate, additional labs PRN

**Consider or Push Fluids**

**Consider Fluids**

- Begin bolus of IV isotonic crystalloid if patient is hypovolemic
- Upgrade to STAT if bolus rate faster than 1 hour desired (more personnel required for non-pump administration)

**Antibiotics**

**Timely Administration of Appropriate Antibiotics**

- Immediate antibiotics are not required for all Sepsis Yellow patients but will be appropriate for most patients
- Follow disease and subspecialty-specific antibiotic recommendations where appropriate (e.g. fever/neutropenia)
- The sepsis orderset and sepsis stat antibiogram provide guidance for first-line antibiotics depending on the clinically-suspected source, but full stat antibiotic coverage may not be required for all yellow patients

**Continued Care and Disposition**

**Disposition Planning**

- NOC: Complete transfer, if needed
- Ensure all antibiotics administered
- Review lab results
  - Identify organ dysfunction; address as appropriate
  - If lactate greater than 2 mmol/L, recheck in 2 hours
  - Correct any electrolyte, glucose derangements
  - Re-assess hemodynamic stability
- If acute organ dysfunction present/unresolved, consider ICU admission

**ED Disposition**
ED Sepsis STAT Patient

Serious cephalosporin/penicillin allergy?

Yes → Levofloxacin

No → Immunocompromised or central line?

Yes → Ceftriaxone CNS/Non-CNS dosing per clinical suspicion

No → Vancomycin

Suspect anaerobe? (e.g. sinus, abdominal source, Lemierre’s)

Yes → Metronidazole

No → Suspect toxin-mediated infection? (e.g. toxic shock, skin/soft tissue source)

Yes → Clindamycin

No → Initial antibiotic algorithm complete

\[\text{Additional Considerations:}\]

- Check prior +cultures. For patients with history of resistant pathogens, add coverage based on historic susceptibilities.
- For patients on broad-spectrum antimicrobials, consider yeast coverage in consultation with subspecialty services.
- For patients with suspected meningitis, consider dexamethasone immediately before or shortly after first antibiotic dose.
- Consider ID consultation for allergies, history of resistance, yeast coverage or other complicating factors. Primary service should be consulted as soon as feasible.
- Ongoing care team should review and continue antibiotics as indicated.
- For CNS coverage, ceftriaxone may require dosing every 12 hours rather than every 24 hours. Please discuss at handoff.
Emergency Department Sepsis Pathway

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APPROVED BY
Pharmacy & Therapeutics Committee – April 5, 2018

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APPROVED BY
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REVIEW | REVISION SCHEDULE
Scheduled for full review on April 5, 2022

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