SIRS Criteria
Two of the following signs and symptoms
- Temperature > 100.9°F or < 96.8°F
- Heart rate > 90
- Respiratory rate > 20 bpm or PaCO₂ < 32
- WBC > 12,000 or < 4,000 per µL or > 10% bands

SEPSIS
Lab and Imaging Studies (Refer to ED Sepsis Order Set)
- Lactate level - repeat lactates if initial result > 2.0 (within 4 hours of initial draw or within 6 hours of recognizing severe sepsis)
- Blood cultures x2 - one percutaneous; obtain before antibiotics unless > 45 min. delay
- Broad spectrum antibiotics
- Crystalloid IV bolus – volume per provider discretion

Consider:
- Labs: CBC with diff, BMP, ABG, hepatic panel, INR, other cultures, amylase, lipase, CRP
- Imaging: CXR, CT scan
- IV fluids - maintenance
- Oxygen to maintain SpO₂ > 90%

SEVERE SEPSIS
3-hour Bundle (Goal: Complete within 3 hours of presentation of severe sepsis)
- Measure lactate level
- Blood cultures
- Broad spectrum antibiotics (within 1 hour)
- Crystalloid 30 mL/kg IV bolus for persistent hypotension or lactate >4

6-hour Bundle (Goal: Complete within 6 hours of presentation of severe sepsis)
- Re-measure lactate if initial lactate was > 2.0 (within 4 hours of initial draw or within 6 hours of recognizing severe sepsis)

Ensure:
- Frequent vital sign assessment
- Adequate IV access
- Oxygen to maintain SpO₂ > 90%
- Urinary catheter to monitor urine output

POSITIVE SEPSIS SCREEN
- Notify ED Provider and begin sepsis checklist

Is there organ dysfunction or tissue hypoperfusion?

SEPTIC SHOCK
3-hour Bundle (Goal: Complete within 3 hours of severe sepsis presentation)
- Lactate level
- Blood cultures
- Broad spectrum antibiotics
- Crystalloid 30 mL/kg IV bolus

6-hour Bundle (Goal: Complete within 6 hours of severe sepsis presentation)
- Re-measure lactate if initial lactate was > 2.0

6-hour Bundle – Shock Components
- Vasopressors to maintain MAP ≥ 65mmHg
- Reassess fluid and perfusion status
  - Repeat physical exam: vital signs, cardiopulmonary exam, capillary refill time, peripheral pulses, skin, OR
  - Two of the following:
    - Measure CVP
    - Measure ScvO2
    - CV ultrasound
    - Fluid challenge or passive leg raise

Yes
Infection + 2 SIRS = **SEPSIS**

No
Continue work up and treatment per provider discretion

Organ dysfunction or tissue hypoperfusion:
- At least one sign?
  - Do not include chronic organ dysfunction
Bedside Assessment:
- Circulatory: SBP < 90 mmHg
- MAP < 65 mmHg
- Decrease in SBP > 40 mmHg
- Pulmonary: SpO₂ < 90% or increasing O₂ needs
  - CNS: Acutely altered mental status
    - Renal: Urine output < 0.5 mL/kg/hr
    - GI: ileus (absent bowel sounds)
Labs & Tests:
- Hypoperfusion: Lactate level > 2.0 mmol/L
  - Renal: Creatinine > 2.0 or increase > 0.5mg/dL above baseline
  - GI: Bilirubin > 2 mg/dL
  - Hematologic: Platelet count < 100,000
  - INR > 1.5 or aPTT > 60sec (non-liver failure and non-anticoagulated patients)
- Pulmonary: PaO₂ / FiO₂: < 250 in the absence of PNA or < 200 in the presence of PNA

Yes
SEVERE SEPSIS

Is there hypotension refractory to fluid bolus (30 mL/kg) or is Lactate ≥ 4.0?

(YES)
Sepsis + Organ Dysfunction or Tissue Hypoperfusion = **SEVERE**

Froedtert Health
Sepsis Adult ED Flowchart
Last update 1/5/2016