Emergency Department
Adult Sepsis Protocol

Triage and Initial Screening Criteria

1. Identification of a potentially septic patient
   - CTAS level = 2 (CTAS = 1 if patient is hemodynamically compromised)
   AND
   - Known or suspected infection AND two or more of the following:
     ➢ Temperature greater than 38°C or less than 36°C
     ➢ Heart rate greater than 90 per minute
     ➢ Respiratory rate greater than 20 per minute
     ➢ Systolic blood pressure less than 90

2. Initial management
   - Notify ED Attending immediately
   - Determine Code Status and proceed accordingly
   - Initiate large bore IV access and administer 20-30 ml/kg Normal Saline over 30 minutes (use fluid warmer if patient is hypothermic)
   - Send CBC, BUN, creatinine, venous blood gas (this automatically includes lactate, electrolytes, and glucose) PT/PTT, urinalysis, blood cultures x 2.
   - Consider chest x-ray
   - Supplemental oxygen titrated to SPO2 90% or higher
   - Monitor intake and output. If an indwelling catheter is indicated, use a temperature sensing catheter.

3. For clinical presentations strongly suggestive of sepsis, the ED Attending may initiate Early Goal Directed Therapy immediately (see #4 below). Otherwise, reassess the patient after 30 minutes. If any one of the following is present after fluid administration, the patient rules in for Severe Sepsis and/or Septic Shock.
   - Systolic blood pressure less than 90 or MAP less than 65
   - SpO2 less than 91% on room air or requires mechanical ventilation
   - Urine output less than 0.5 ml/kg/hr
   - WBC less than 4,000 or greater than 12,000
   - Lactate greater than 4

4. If patient rules in for Severe Sepsis and/or Septic Shock:
   - Notify ED Attending immediately
   - Notify Charge Nurse to:
     ➢ Activate the ED STAT Team
     ➢ Page
       • Critical Care MD or ARNP - pager 2419
       • Respiratory Care - pager 9374
   - Initiate Early Goal Directed Therapy with the Adult Critical Care sepsis order packet:
     ➢ Early Goal Directed Resuscitation Orders
- Critical Care Sepsis Orders (Adults) Fast-track Antibiotics (Goal = antibiotics within 60 minutes of the diagnosis of sepsis)
- Adult ICU ARDS/ALI Protective Ventilation Orders
  - Consider repeating the serum lactate if the initial level was elevated and the specimen was not drawn under optimal conditions.
  - Start second peripheral line if central venous access is not imminent
  - Prepare to insert a central line for central venous pressure (CVP) monitoring. Note that pre-existing long-term central venous access devices can be transduced for initial CVP monitoring as long as they do not have a valve at the tip (i.e. Groshong catheters).

5. Key components of Early Goal Directed Therapy (EGDT):
   - Measure serum lactate.
   - Obtain blood cultures prior to antibiotic administration. (urine and urine cx needed as well)
   - Administer broad-spectrum antibiotics within 1 hour of diagnosis of septic shock or severe sepsis
   - In the event of hypotension and/or a serum lactate level greater than 2 mmol/L, deliver an initial minimum of 20 mL/kg of crystalloid or an equivalent.
   - In the event of hypotension and/or serum lactate greater than 2 mmol/L, apply vasopressors (norepinephrine or dopamine) for hypotension that does not respond to initial fluid resuscitation to maintain mean arterial pressure (MAP) greater than 65 mmHg.
   - In the event of persistent hypotension despite fluid resuscitation and/or lactate greater than 4 mmol/L, achieve a central venous pressure (CVP) of 8 - 12 mmHg.
   - In the event of persistent hypotension despite fluid resuscitation and/or lactate greater than 4 mmol/L, achieve a central venous oxygen saturation (ScvO2) of at least 70%.

Physiologic Goals
- Urine output greater than 0.5 ml/kg/hr
- MAP greater than 65 mmHg
- CVP 8-12 mmHg
- Serum lactate 4 mmol/L or less
- ScvO2 of at least 70%

References:


