# THE UNIVERSITY OF KANSAS HEALTH SYSTEM Surviving Sepsis Checklist

### Are there any risk factors, signs or symptoms of infection?

### **Risk Factors**

- Indwelling medical device other than peripheral IV (e.g. PICC line, dialysis catheter, urinary catheter, drain, etc)
- Recent surgery or invasive procedure (>48 hours)
- Readmission within 48 hours from hospital discharge
- Recently or currently receiving antibiotics for a confirmed/documented infection

### If "Yes" evaluate for:

### SIRS Criteria

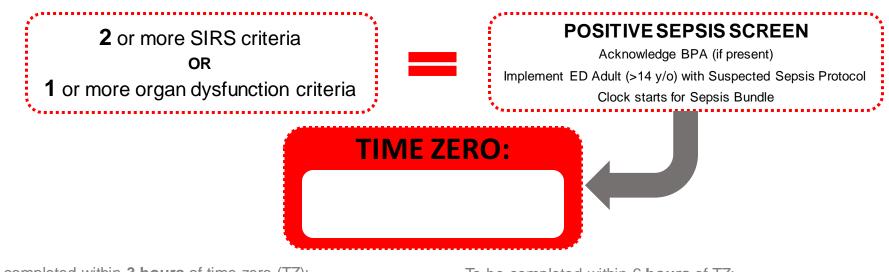
- Heart Rate > 90 bpm
- Respiratory Rate > 20 or PaCO<sub>2</sub> < 32 mmHg
- Temperature > 38 °C (100.4°F) or < 36 °C (96.8°F)
- WBC >12,000/mm<sup>3</sup>, < 4,000/mm<sup>3</sup>, or >10% bands

### <u>Signs/Symptoms</u>

- GI / Abdominal: pain, guarding, nausea, vomiting, diarrhea, rebound tenderness, rigidity
- Respiratory: cough, shortness of breath, pneumonia/empyema, endocarditis
- Skin / Musculoskeletal: wound, drainage, redness, swelling, and/or pain
- · Urinary: decreased urine output, dysuria, frequency, cloudy, odor
- Current known infection (wound infection, abscess, UTI, abdominal infection, pneumonia, endocarditis, meningitis, etc)
- Unexplained new onset of confusion within 24 hours or decreased level of consciousness

### Organ Dysfunction Criteria

- · Acutely altered mental status
- SBP <90 or MAP <70 or SBP  $\downarrow$  > 40 mmHg
- SpO<sub>2</sub> < 92% or increase FiO2 by > 2 lpm or PaO<sub>2</sub>/FiO<sub>2</sub> < 300
- Creatinine > 2.0 or increase 0.5 from baseline
- Urine output < 0.5 mL/kg/hr for > 2 hours
- Bilirubin > 2.0 or AST >90 or ALT >90
- Coagulopathy (INR >1.5 or aPTT > 60 sec or Platelets < 100K</li>
- Lactate <u>></u> 2.0



To be completed within 3 hours of time zero (TZ):

POC lactate within 1 hour of TZ

Lactate



## **Blood Cultures**

Two sets BEFORE antibiotics. ED Goal is to obtain both blood cultures within 15 minutes

## IV Fluids (for hypotension or lactate $\geq$ 4)

Fluid responsive?? Use NiCOM (PLR/fluid challenge) or bedside ultrasound

SVI change of  $\geq$  10% = fluid responsive. If MAP <65 with signs of poor perfusion, initiate fluids and then NiCOM after 250-1000 mL

To be completed within 6 hours of TZ:



## **Repeat Lactate**

Repeat POC if initial lactate >2



## Vasopressors

For hypotension that does not respond to initial fluid resuscitation to maintain MAP  $\geq$  65 mmHg

Norepinephrine (NE) is initial vasopressor of choice. Initiate at 0.01-0.05 mcg/kg/min. Titrate by 0.05 mcg/kg/min every 2-5 minutes until MAP >65 mmHg with signs of improved perfusion

Add Vasopressin once NE drip is at 0.1-0.15 mcg/kg/min. Vasopressin should run at 1.8 units/hr or 2.4 units/hr and is NOT titrated. Titrate NE down/off first, otherwise significant risk for hypotension.

30 mL/kg crystalloid (order must be placed to meet bundle) – Lactated Ringer's preferred. Use IBW for BMI >30

If fluid responsive, give 250-1000 mL and reassess NiCOM. If still fluid responsive, repeat until fluid goal met or no longer fluid responsive. If patient is not fluid responsive and showing signs of hypoperfusion, assess contractility and add vasopressors

Use .NICOMUSED smart note in O2 to document each assessment

## Antibiotics

ED Goal is to give within 30 minutes of provider order

Always administer antibiotic with broadest coverage first

- 1) Piperacillin/Tazobactam
- 2) Vancomycin
- 3) Levofloxacin
- 1) Ceftriaxone
- 2) Doxycycline OR Azithromycin
- 1) Cefepime
- 2) Vancomycin
- 3) Tobramycin OR Levofloxacin
- 1) Ertapenem OR Imipenem/Cilastatin OR Meropenem
  - 2) Vancomycin

If patient is still refractory after NE and vasopressin, give dose of steroids then add epinephrine

## **Re-Assessment**

If MAP < 65 after initial fluid resuscitation or if initial lactate  $\geq$  4, must reassess volume status and tissue perfusion

Check capillary refill – knees have highest reliability but can use nail beds or palmar surfaces

Skin mottling score (@6 hours is strongest predictor of 14day mortality in septic shock)

Focused exam by physician or ARNP including vital signs, cardiopulmonary, capillary refill, pulse and skin findings OR one of the following:

- NiCOM<sup>™</sup>, Cheetah Medical Starling etc with PLR or fluid challenge
  - Bedside cardiovascular ultrasound
- Measure ScVO2
- Measure CVP