

# Non-Invasive Protocol

## Who

Septic Patient with Lactate  $\geq 4$  or MAP  $< 65$  after 2 liters crystalloid  
**and**  
Goals of care are curative

## Initial Resus

- Administer 20-30 ml/kg isotonic **crystalloid bolus** over 20 minutes
- Send **cultures** of any possible source
- Think of **source control** (Infected catheter? Operative intervention for infection? Drainable pus?)
- **Administer antibiotics** to cover any possible source (See abx rec sheet)

## SpO<sub>2</sub>

If patient's O<sub>2</sub> saturation is  $< 90\%$  on supplemental oxygen, consider intubation and switch to invasive strategy

## Fluids

### Choose 1 Strategy

**Best: Dynamic IVC Ultrasound**-Keep giving 500-1000 ml boluses of isotonic crystalloid until there is  $< 30\%$  change in IVC size with insp. (See IVC UTS training sheet)

**OK: Empiric Fluid Loading**-Most patients with severe sepsis/septic shock will require at least 6 liters of fluid during their ED stay

## Recheck MAP

If MAP is  $< 65$  after adequate fluid loading, switch to invasive strategy

## Tissue O<sub>2</sub>

- Send repeat lactate
- If lactate has dropped by  $\geq 10\%$ , go to disposition
- If lactate is rising or has cleared by  $< 10\%$ ,

### Choose 1 Option:

**If Hb  $< 7$ :** transfuse 1 unit of PRBC

or

**Additional Fluids:** if patient had empiric fluid loading, give an additional liter of crystalloid

or

**Inotropes:** especially if heart appears hypodynamic on echo. If calcium is low, replete that first. If not, administer dobutamine 5-20 mcg/kg/min.

or

**If Hb 7-10:** consider transfusion. Especially in elderly patients or patients with coronary artery disease

- Send repeat lactate, if it still has not cleared by  $> 10\%$ , continue with the above, trending lactates every 1-2 hours or switch to the invasive strategy

## Dispo

- Patients may usually be admitted to Non-ICU monitored bed if lactate is clearing
- Periodically recheck patient for MAP  $> 65$ , good mental status, and good urine output
- Consider trending lactate every Q 2-4 hours. If it starts rising again, restart protocol