APPENDIX H:
SEVERE SEPSIS RESUSCITATION PROTOCOL:
NON-INVASIVE

Greater New York Hospital Association/United Hospital Fund Quality Initiatives

STOP SEPSIS COLLABORATIVE

SEVERE SEPSIS RESUSCITATION PROTOCOL: NON-INVASIVE

<table>
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<tr>
<th>WHO</th>
<th>Septic Patient with Lactate ≥ 4 mmol/L or MAP &lt; 65 after 2 liters crystalloid and goals of care are curative.</th>
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</table>
| INITIAL RESUSCITATION | • Administer 20–30 ml/kg isotonic crystalloid bolus over 20 minutes.  
• Send cultures of all likely sources of infection.  
• Think of source control. (infected catheter? Operative intervention for infection? Drain-able pus?)  
• Administer antibiotics to cover all likely sources of infection. |
| SpO2 | If patient’s O2 saturation is < 90% on high fIO2 supplemental oxygen (non-rebreather mask), consider intubation and switching to invasive strategy. |
| FLUIDS | Choose 1 Strategy:  
• DYNAMIC IVC ULTRASOUND: Keep giving 500–1000 ml boluses of isotonic crystalloid until there is < 30% change in IVC size with inspiration.  
• EMPIRIC FLUID LOADING: Patients with severe sepsis/septic shock may require at least 6 liters of fluid during their acute resuscitation (first 6 hours of care). |
| RE-CHECKING MAP | If MAP is < 65 after adequate fluid loading:  
  • Place a full sterile central line in the IJ or SC vein (femoral site only if neck line not feasible);  
  • Start vasopressors; titrate to a MAP ≥65;  
  • Consider switching to invasive protocol. |
| TISSUE OXYGENATION | • Send repeat lactate when above goals are accomplished (send a 2nd lactate at 3-hour mark, if not already sent).  
• If lactate has cleared by ≥ 10 % (or is not rising if original lactate was ≤ 2 mmol/L), 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 3rd lactate, if it still has not cleared by ≥10%, continue with the above, trending lactates every 1–2 hours until these two goals are met or switch to invasive strategy (send 3rd lactate at the 6-hour mark, if not already sent). |
| DISPOSITION | • Patients should get ICU consultation. If not an ICU candidate, should go to appropriately monitored bed.  
• 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. |

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