<table>
<thead>
<tr>
<th>WHO</th>
<th>Septic Patient with Lactate ≥ 4 mmol/L or MAP &lt; 65 after 2 liters crystalloid <strong>AND</strong> Goals of care are curative</th>
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| 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? Drainable 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 2<sup>nd</sup> 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 3<sup>rd</sup> 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 3<sup>rd</sup> 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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These protocols are for informational purposes only. Please review with your institution before using clinically.