

Sepsis (Critical Diagnosis)

SIRS = 2 of 4 criteria: Temp >100.4F/38C or <96F/36C, HR >90, RR >20, WBC >12

Sepsis = Organ dysfxn + infection (PNA, UTI, meningitis, skin infection etc)

SIRS + → Send SOFA labs → Organ dysfxn present → TRUE sepsis → ICU

Step 1: Screen for SIRS

SIRS present → Assess SOFA criteria

SOFA Organ dysfxn criteria:

- Labs: CBC, CMP, Lactate, Coag, UA
- PaO₂/FiO₂ (mmHg)
- GCS
- MAP

Step 2: Organ dysfxn present = **SEPSIS**

Step 3: Sepsis present

*****Within 3hrs*****

- Blood cultures
- Antibiotics

Step 4: Screen for septic shock

Sepsis + (one of) = **Septic Shock**

- Initial lactate ≥ 4
- HypoTN

Step 5: Septic shock present

- Give 30 mL/kg crystalloid
- If BP is still low start vasopressors (usually norepinephrine)

Quick Facts

- Know cold the definitions of: SIRS, sepsis, severe sepsis, and septic shock
- Septic patients have high mortality, they are some of the sickest patients on your list
- Aggressive **early** resuscitation hit mainstream after the 2001 article by Rivers et al

<http://emclerkship.com/wp-content/uploads/2017/11/Sepsis-Critical-Diagnosis.pdf>

SOFA Criteria https://en.wikipedia.org/wiki/SOFA_score

Respiratory system

| PaO ₂ /FiO ₂ (mmHg) | SOFA score |
|---|------------|
| ≥ 400 | 0 |
| < 400 | 1 |
| < 300 | 2 |
| < 200 and mechanically ventilated | 3 |
| < 100 and mechanically ventilated | 4 |

Nervous system

| Glasgow coma scale | SOFA score |
|------------------------------------|------------|
| 15 | 0 |
| 13–14 | 1 |
| 10–12 | 2 |
| 6–9 | 3 |
| < 6 | 4 |

Cardiovascular system

| Mean arterial pressure OR administration of vasopressors required | SOFA score |
|--|------------|
| MAP \geq 70 mm/Hg | 0 |
| MAP < 70 mm/Hg | 1 |
| dopamine \leq 5 μ g/kg/min or dobutamine (any dose) | 2 |
| dopamine > 5 μ g/kg/min OR epinephrine \leq 0.1 μ g/kg/min OR norepinephrine \leq 0.1 μ g/kg/min | 3 |
| dopamine > 15 μ g/kg/min OR epinephrine > 0.1 μ g/kg/min OR norepinephrine > 0.1 μ g/kg/min | 4 |

Liver

| Bilirubin (mg/dl) [μ mol/L] | SOFA score |
|----------------------------------|------------|
| < 1.2 [$<$ 20] | 0 |
| 1.2–1.9 [20-32] | 1 |
| 2.0–5.9 [33-101] | 2 |
| 6.0–11.9 [102-204] | 3 |
| > 12.0 [$>$ 204] | 4 |

Coagulation

| Platelets $\times 10^3/\mu$ l | SOFA score |
|-------------------------------|------------|
| \geq 150 | 0 |
| < 150 | 1 |
| < 100 | 2 |
| < 50 | 3 |
| < 20 | 4 |

Kidneys

| Creatinine (mg/dl) [μ mol/L] (or urine output) | SOFA score |
|---|------------|
| < 1.2 [$<$ 110] | 0 |
| 1.2–1.9 [110-170] | 1 |
| 2.0–3.4 [171-299] | 2 |
| 3.5–4.9 [300-440] (or < 500 ml/d) | 3 |
| > 5.0 [$>$ 440] (or < 200 ml/d) | 4 |