

➤ Sepsis Definitions

“Sepsis” is defined as a documented or suspected infection with one or more of the following:

General variables:

- Fever (core temperature $>38.3^{\circ}\text{C}$)
- Hypothermia (core temperature $<36^{\circ}\text{C}$)
- Heart rate $>90\text{ min}^{-1}$ or >2 SD above the normal value for age
- Tachypnea
- Altered mental status
- Significant edema or positive fluid balance ($>20\text{ mL/kg}$ over 24 hrs)
- Hyperglycemia (plasma glucose $>120\text{ mg/dL}$) in the absence of diabetes

Inflammatory variables:

- Leukocytosis (WBC count $>12,000\ \mu\text{L}^{-1}$)
- Leukopenia (WBC count $<4000\ \mu\text{L}^{-1}$)
- Normal WBC count with $>10\%$ immature forms
- Plasma C-reactive protein >2 SD above the normal value
- Plasma procalcitonin >2 SD above the normal value

Other:

- $\text{SvO}_2 >70\%$
- Cardiac index $>3.5\ \text{L}\cdot\text{min}^{-1}\cdot\text{M}^{-2.5}$

“Severe sepsis” is defined as sepsis associated with organ dysfunction, hypoperfusion or hypotension.

Organ dysfunction variables:

- Arterial hypoxemia ($\text{PaO}_2/\text{FIO}_2 <300$)
- Acute oliguria (urine output $<0.5\ \text{mL}\cdot\text{kg}^{-1}\cdot\text{hr}^{-1}$ or $45\ \text{mmol/L}$ for at least 2 hrs)
- Creatinine $>2.0\ \text{mg/dL}$
- Coagulation abnormalities (INR >1.5 or aPTT >60 secs)
- Thrombocytopenia (platelet count $<100,000\ \mu\text{L}^{-1}$)
- Hyperbilirubinemia (plasma total bilirubin $>2.0\ \text{mg/dL}$ or $35\ \text{mmol/L}$)

Tissue perfusion variables:

- Hyperlactatemia ($>2\ \text{mmol/L}$)

Hemodynamic variables:

- Arterial hypotension (SBP $<90\ \text{mm Hg}$, MAP <70 , or SBP decrease $>40\ \text{mm Hg}$)



“Septic shock” is defined as acute circulatory failure unexplained by other causes.

Acute circulatory failure is defined as persistent arterial hypotension (SBP <90 mmHg, MAP <60, or a reduction in SBP >40 mm Hg from baseline despite adequate volume resuscitation).

“Bundle” (as in “Sepsis Bundle”) is defined as the following:

A group of interventions related to a disease that, when implemented together, result in better outcomes than when implemented individually. The science behind the elements of the bundle is so well-established that their implementation should be considered a generally accepted practice. Bundle components can be easily measured as completed or not completed. As such, the overall bundle — all of the elements taken together — can also be measured as completed or not completed.