SEPSIS & SEPTIC SHOCK

ICU Quick Reference · Recognition → Resuscitation

THE FIRST HOUR
saves lives

DEFINE · Sepsis-3

SEPSIS

Life-threatening organ dysfunction from a dysregulated host response to infection.

Operationalised as an acute rise in SOFA ≥ 2 points.

SEPTIC SHOCK

Sepsis + vasopressors to keep MAP ≥ 65 **AND** lactate > 2 mmol/L despite fluids.

Hospital mortality > 40%.

SCREEN & RECOGNISE

qSOFA ≥ 2 = escalate

- **RR ≥ 22 / min**
- **Altered mentation**
- **SBP ≤ 100 mmHg**

Do not use qSOFA alone to screen - pair with NEWS2 / MEWS + clinical judgement.

LACTATE

Measure early. > 2 mmol/L = hypoperfusion. Recheck serially to guide resuscitation & track clearance.

HOUR-1 BUNDLE

start immediately - ideally within 1 hour of recognition

1. **Measure lactate** Remeasure within 2-4 h if the initial value is > 2 mmol/L.
2. **Blood cultures before antibiotics** ≥ 2 sets - but never delay antibiotics > 45 min to obtain them.
3. **Broad-spectrum antibiotics** Give immediately for septic shock / probable sepsis; cover likely source.
4. **IV crystalloid 30 mL/kg** For hypotension or lactate ≥ 4. Balanced fluid; complete within 3 h.
5. **Vasopressors if MAP < 65** Start during/after fluids. Norepinephrine first-line; a peripheral line is fine.

SOFA (acute rise ≥ 2 = sepsis): Respiratory PaO_2/FiO_2 · Coagulation platelets · Liver bilirubin · Cardiovascular MAP / vasopressor dose · CNS GCS · Renal creatinine / urine output - each 0-4.

RESUSCITATE

FLUIDS

- Balanced crystalloids over 0.9% saline.
- 30 mL/kg over first 3 h, then reassess.
- Then guide by dynamic measures (PLR, PPV).
- Avoid starch / gelatin; albumin if large volumes.

MAP TARGET ≥ 65 mmHg (60-65 if age ≥ 65)

VASOPRESSOR LADDER

1. **NOREPINEPHRINE**
   First-line. Titrate to MAP ≥ 65. Peripheral start OK to avoid delay.
2. **+ VASOPRESSIN 0.03 U/min**
   Add when NE ~0.25-0.5 µg/kg/min. Cuts catecholamine load.
3. **+ EPINEPHRINE**
   If MAP still low on NE + vasopressin.

Refractory: consider angiotensin II. Add hydrocortisone (see below).

KEEP GOING · Adjuncts & Stewardship

STEROIDS

IV hydrocortisone 200 mg/day (50 mg q6h or infusion) for shock on ongoing vasopressors.

SOURCE CONTROL

Find & control the anatomic source ASAP (ideally ≤ 6-12 h): drain, debride, remove device.

DE-ESCALATE

Narrow antibiotics on cultures; review daily; stop guided by clinical course ± procalcitonin.

PEARLS & PITFALLS

- Never wait for a lactate, imaging, or an ICU bed to give antibiotics - time-to-antibiotics drives mortality.
- MAP 65 is a floor, not a target ceiling - individualise (chronic hypertension may need higher).
- Reassess fluid responsiveness dynamically; avoid reflexive repeat boluses → fluid overload.
- Peripheral norepinephrine is acceptable while central access is being obtained.

References: Surviving Sepsis Campaign 2026 (SCCM / ESICM) · Sepsis-3 Definitions, JAMA 2016.