

SEPSIS CARE

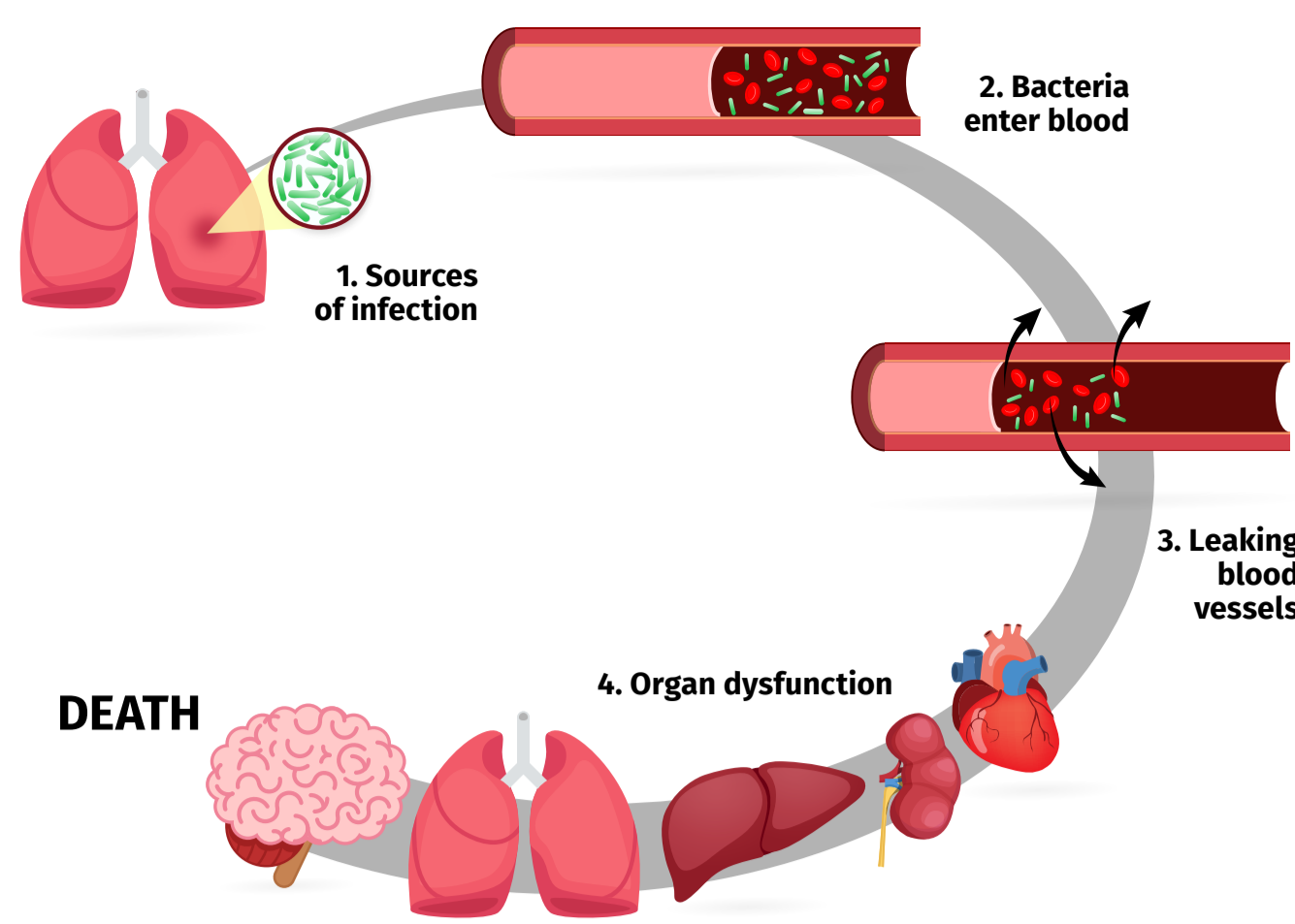
Lippincott
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2020 UPDATE

Definitions

Sepsis: Life-threatening organ dysfunction caused by a dysregulated host response to infection; clinically, sepsis is the body's overwhelming and life-threatening response to an infection which can lead to tissue damage, organ failure and death.

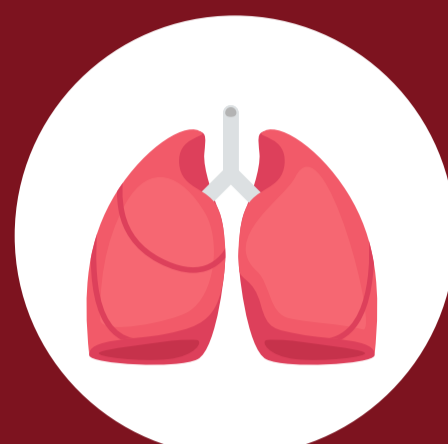
Septic Shock: A subset of sepsis with circulatory and cellular/metabolic dysfunction associated with a higher risk of mortality; clinically, septic shock refers to patients who, despite adequate fluid resuscitation, require vasopressors to maintain a mean arterial pressure (MAP) \geq 65 mmHg, and have a lactate $>$ 2 mmol/L.



qSOFA

(Quick Sequential Organ Failure Assessment Score)

Use this tool to quickly identify adult patients with suspected infection who are at high risk for a poor outcome outside of the intensive care unit (ICU). The presence of any two of these criteria in an adult should prompt further evaluation for organ dysfunction.



Respiratory rate \geq 22 breaths/minute



Altered mental status



Systolic blood pressure (SBP) \leq 100 mmHg

SOFA

(Sequential Organ Failure Assessment Score)

The SOFA tool is used in the critical care setting to assess severity of organ dysfunction. Mortality rate increases as more organs fail; the greatest risk is associated with respiratory failure requiring mechanical ventilation.

System	SOFA score based on...
Respiratory	Partial pressure of arterial oxygen (PaO ₂)/fraction of inspired oxygen (FiO ₂) ratio
Coagulation	Platelet count
Liver	Serum bilirubin
Cardiovascular	MAP and vasopressor requirement
Brain	Glasgow Coma Scale (GCS)
Renal	Serum creatinine or urine output

Clinical Presentation

Symptoms may be specific to an infectious source.



Altered mental status



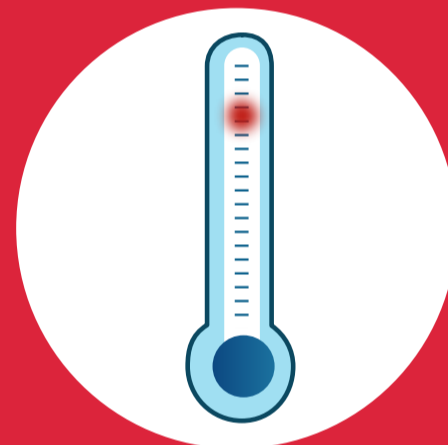
Tachycardia
(heart rate $>$ 90
beats/minute)



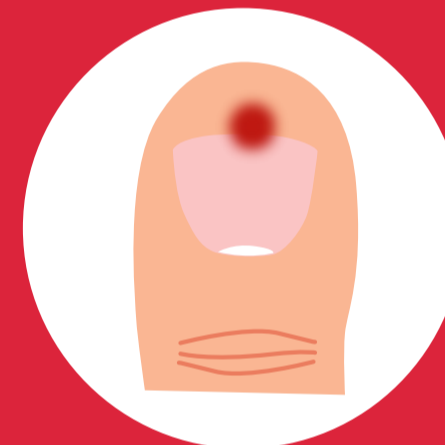
Arterial hypotension
(SBP $<$ 90 mmHg,
MAP $<$ 70 mmHg, or an SBP
decrease $>$ 40 mmHg)



Cough, dyspnea, tachypnea
(respiratory rate $>$
22 breaths/minute)



Temperature $>$ 38.3° C
or $<$ 36° C



Decreased capillary refill,
cyanosis, or mottling

Sepsis Management

Upon presentation, immediately perform the following:

- Measure lactate level. If initial lactate is $>$ 2 mmol/L, recheck in 2 to 4 hours.
- Obtain blood cultures prior to administration of antibiotics.
- Administer broad spectrum antibiotics.
- Administer 30 mL/kg crystalloid for hypotension or lactate \geq 4 mmol/L.
- Administer vasopressors to maintain MAP \geq 65 mmHg. Norepinephrine is recommended as the first-choice vasopressor.



Ongoing Hemodynamic Assessment

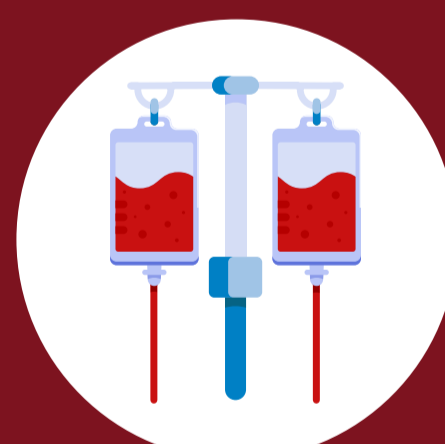
For persistent arterial hypotension despite volume resuscitation or initial lactate \geq 4 mmol/L, ongoing hemodynamic assessment is essential.



Repeat focused exam,
including vital signs,
cardiopulmonary assessment,
capillary refill, arterial oxygen
saturation, urine output,
pulses, and skin.



Perform bedside ultrasound.



Assess fluid responsiveness
using passive leg raise or
fluid challenge.

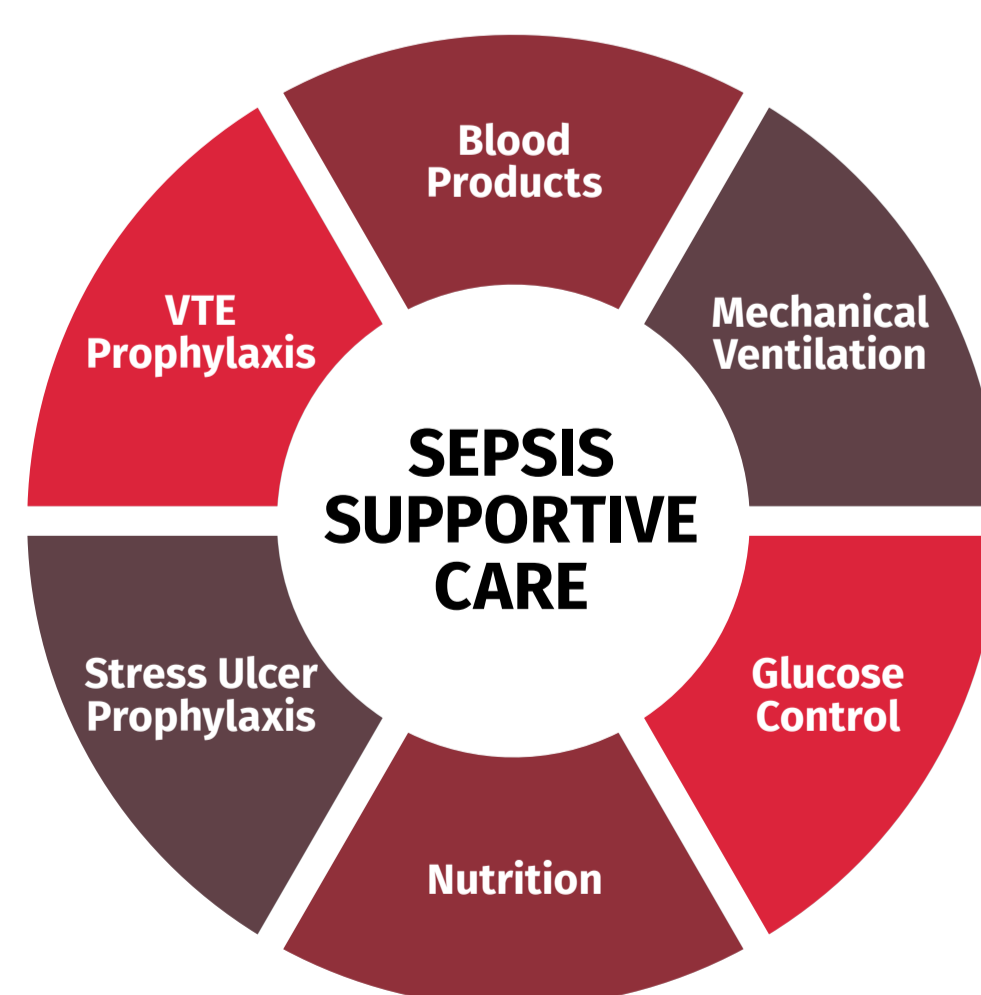


Consider alternate
etiologies if patient is not
fluid responsive.

Key Elements of Care

When caring for a patient with sepsis, supportive care is also essential. Assess patients for the need for the following and refer to current recommendations to guide care.

- Blood products
- Mechanical ventilation
- Glucose control
- Nutrition
- Stress ulcer prophylaxis
- Venous thromboembolism (VTE) prophylaxis
- Discuss goals of care and prognosis with patients and family as early as feasible, incorporating end-of-life planning and palliative care principles, when appropriate



Sepsis is a medical emergency and can be deadly when not quickly recognized and treated.

REFERENCES

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