



THE OHIO STATE  
UNIVERSITY

WEXNER MEDICAL CENTER

# Sepsis Care in 2025: From Early Recognition to Long- Term Recovery

**Kyle R. Stinehart, MD, MPH**  
September 2025

# Objectives

1. Review sepsis by the numbers, including evolving definitions.
2. Discuss early recognition of sepsis and review the one-hour bundle.
3. Review what we know, and what we don't, about:
  - Antibiotics and source control
  - Fluid resuscitation
  - Vasopressors and hemodynamic support
4. Discuss sepsis survivorship, including evolving care models to improve post-hospitalization care.

# Surviving Sepsis Campaign

Surviving Sepsis  
Campaign®



# Sepsis – Fast Facts

**1.7 million  
adults** in  
the US/year

**At least 350,000  
adults** with  
sepsis die during  
hospitalization

**1 in 3 hospital  
deaths** occur  
in patients who  
had sepsis

Most cases start  
**before  
hospitalization**

Disproportionally  
affects those with  
**underlying  
chronic disease**

**~1/4 to 1/3 of  
people with  
sepsis had a  
healthcare visit**  
the week before  
they were  
hospitalized

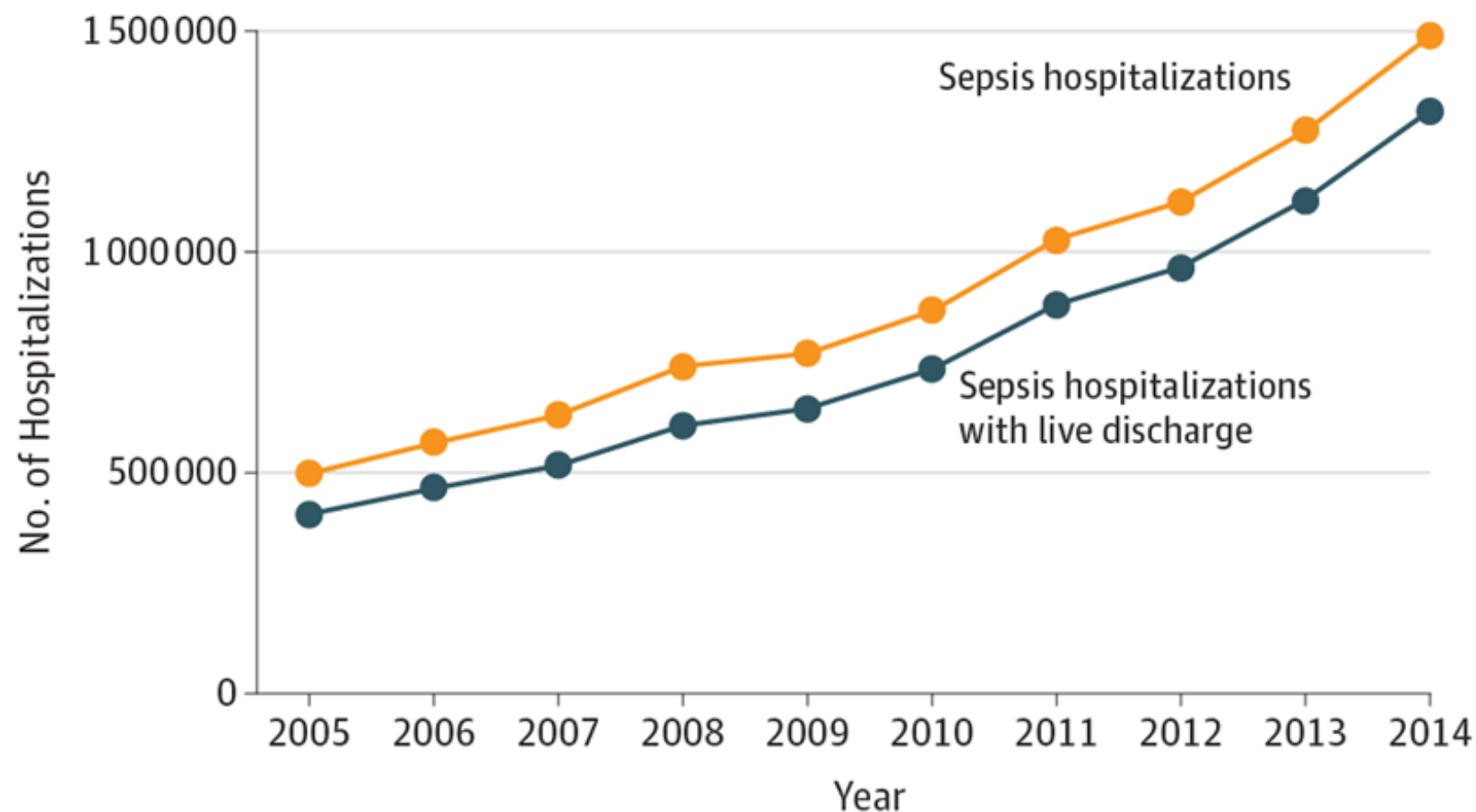
Source: CDC.gov

## Sepsis – Fast Facts

- **Cost \$23.7 billion in 2013**
  - 6% of cost for all hospitalizations
  - Acute MI: \$12.1 billion
  - CHF: \$10.2 billion
  - COPD: \$5 billion

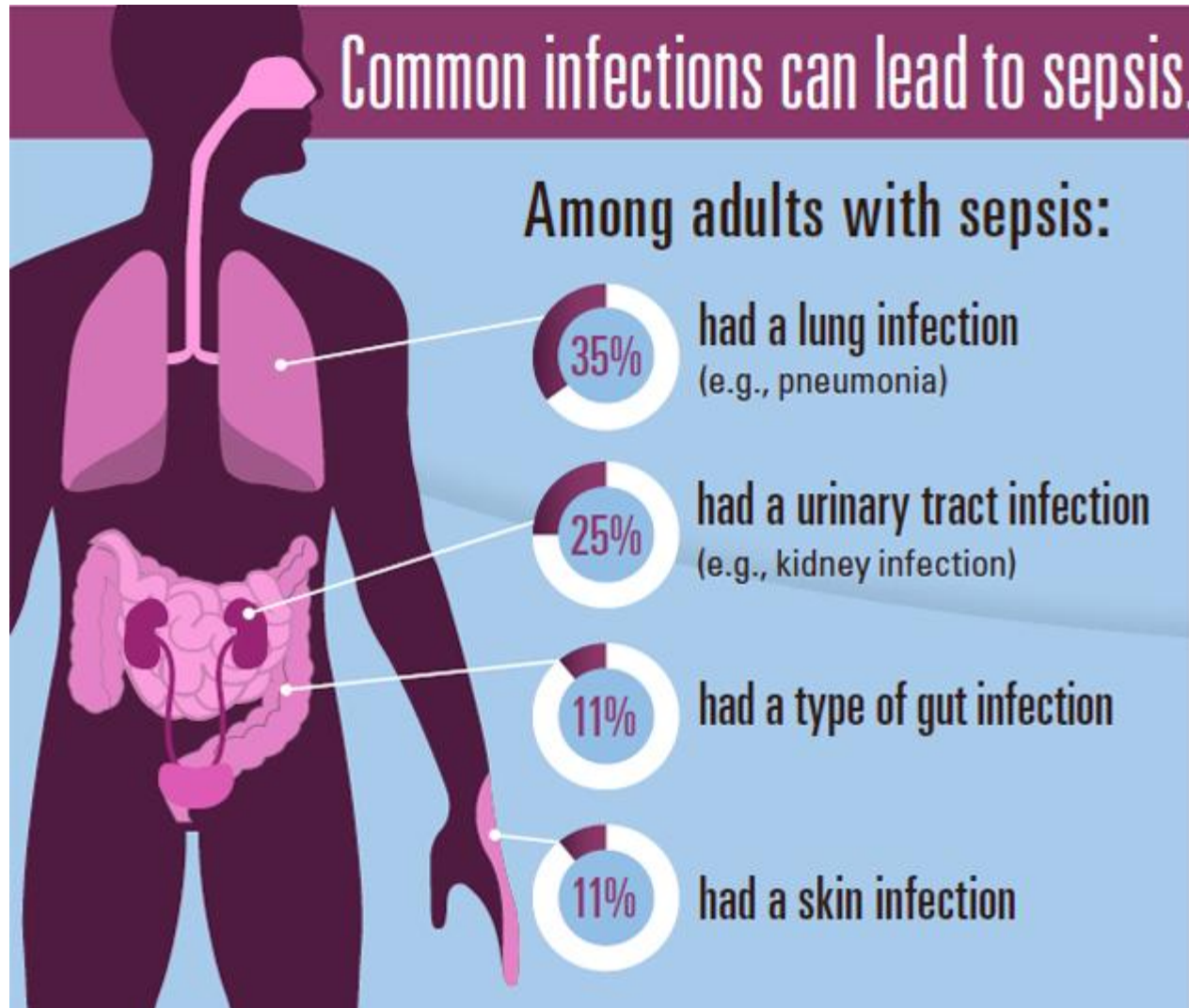
# Sepsis Hospitalizations are Increasing

Figure 1. US Hospitalizations and Live Discharges for a Diagnosis of Sepsis, 2005-2014

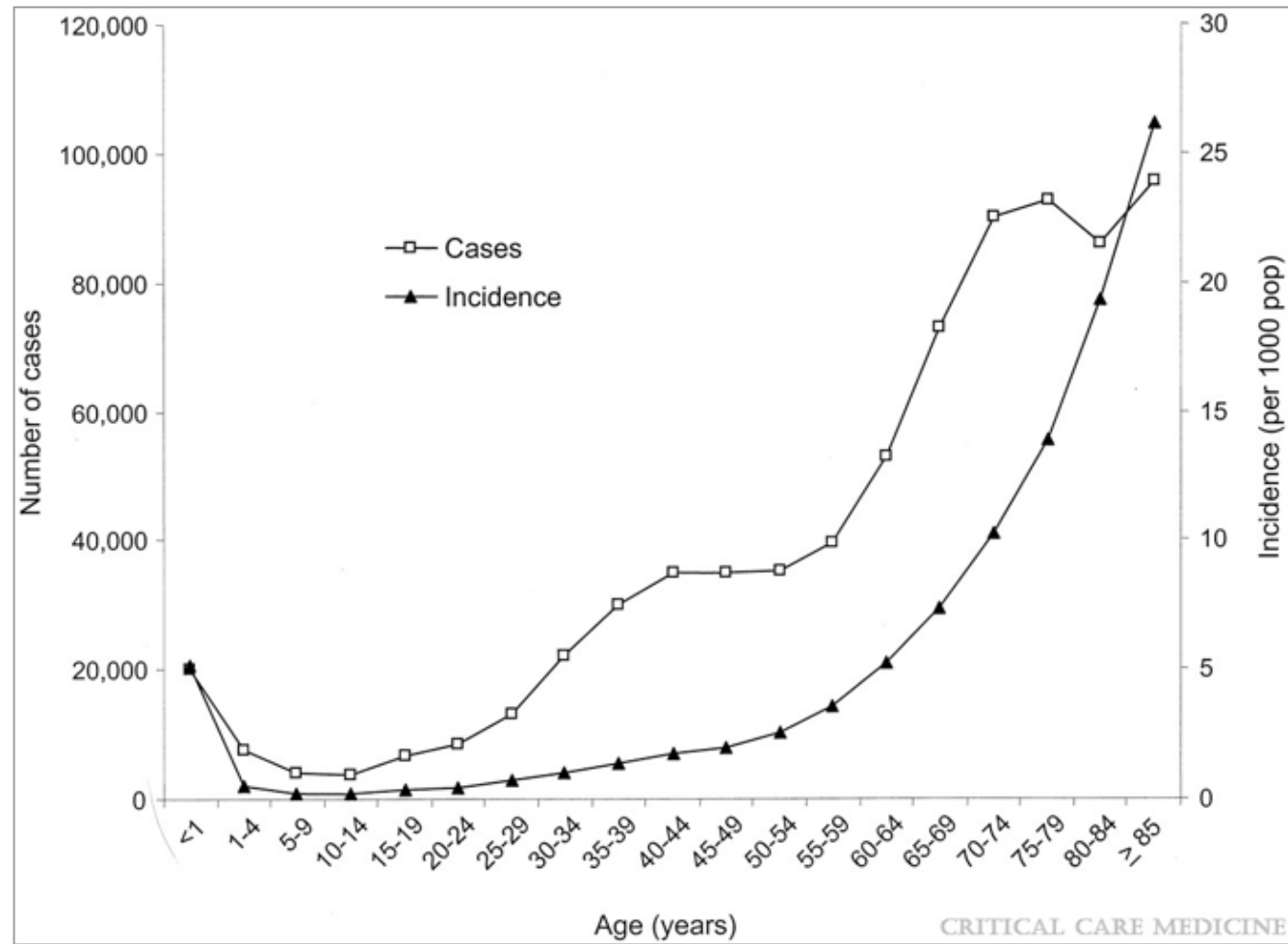


Source: Prescott JAMA 2018

## Who is at risk?



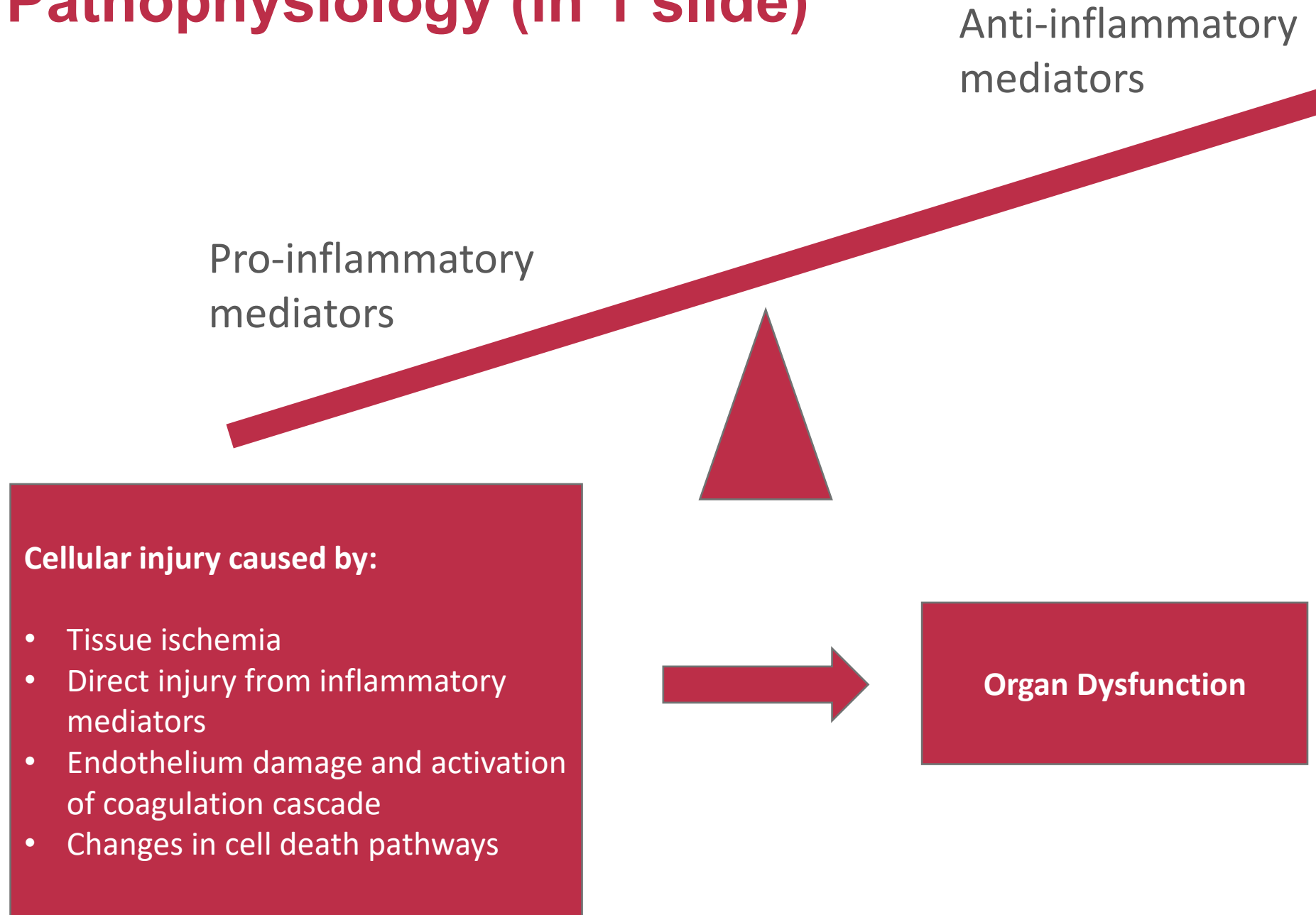
# Who is at risk?



Source: Angus et al. Critical Care Medicine. 2001.



# Pathophysiology (in 1 slide)



# Sepsis – Current Definition

- **Sepsis:**
  - *Life-threatening organ dysfunction caused by a dysregulated host response to infection (Sepsis-3, 2016).*
  - Suspected or confirmed infection **plus** acute increase in SOFA score  $\geq 2$
- **Septic Shock**
  - Sepsis with circulatory and cellular/metabolic dysfunction
  - **Clinical criteria:** vasopressor requirement to maintain MAP  $\geq 65$  mm Hg **and** lactate  $> 2$  mmol/L despite appropriate fluids

# Sepsis Defined

Definitions	Sepsis-1 (1991)	Sepsis-2 (2001)
<b>Sepsis</b>	<ul style="list-style-type: none"><li>• Systemic response to infection</li><li>• 2 or more SIRS criteria (fever, tachycardia, tachypnea, WBC abnormality)</li></ul>	<ul style="list-style-type: none"><li>• Similar to sepsis-1 with added clinical details</li></ul>
<b>Severe Sepsis</b>	<ul style="list-style-type: none"><li>• Sepsis associated with organ dysfunction</li></ul>	<ul style="list-style-type: none"><li>• Similar to sepsis-1 with added clinical details</li></ul>
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# Systemic Inflammatory Response Syndrome (SIRS)

Two or more of the following:	
Temperature	>38°C or <36°C
Heart Rate	>90 beats/min
Respiratory Rate	>20 breaths/min or PaCO <sub>2</sub> <32 mm Hg on ABG
WBC count	>12,000/mm <sup>3</sup> or <4,000/mm <sup>3</sup> , or >10% bands

# Sequential Organ Failure Assessment (SOFA) Score

Sequential Organ Failure Assessment (SOFA) Score

System	Criteria	0	1	2	3	4
Respiratory	PaO <sub>2</sub> /FiO <sub>2</sub> (partial pressure of oxygen over fraction of inspired oxygen)	≥400 mmHg (53.3 kPa)	<400 mmHg (53.3 kPa)	<300 mmHg (40 kPa)	<200 mmHg (26.7 kPa)	<100 mmHg (13.3 kPa)
					with respiratory support	
Coagulation	Platelets	≥150 x10 <sup>3</sup> /μL	<150 x10 <sup>3</sup> /μL	<100 x10 <sup>3</sup> /μL	<50 x10 <sup>3</sup> /μL	<20 x10 <sup>3</sup> /μL
Liver	Bilirubin	<1.2 mg/dL (20 μmol/L)	1.2-1.9 mg/dL (20-32 μmol/L)	2.5-5.9 mg/dL (33-101 μmol/L)	6-11.9 mg/dL (102-204 μmol/L)	>12 mg/dL (204 μmol/L)
Cardiovascular	Mean arterial pressure (MAP) or vasopressors requirement	MAP ≥70mmHg	MAP <70mmHg	Dopamine <5 μg/kg/min or dobutamine (any dose)*	Dopamine 5.1-15 μg/kg/min* or epinephrine ≤0.1 μg/kg/min or norepinephrine ≤0.1 μg/kg/min*	Dopamine >15 μg/kg/min or epinephrine >0.1 μg/kg/min or norepinephrine >0.1 μg/kg/min*
Neurologic	Glasgow coma scale score	15	13-14	10-12	6-9	<6
Renal	Creatinine (Cr) or urine output (UOP)	Cr <1.2 mg/dL (110 μmol/L)	Cr 1.2-1.9 mg/dL (110-170 μmol/L)	Cr 2.0-3.4 mg/dL (171-299 μmol/L)	Cr 3.5-4.9 mg/dL (300-440 μmol/L) or UOP <500 cc/day	Cr >5 mg/dL (440 μmol/L) or UOP <200 cc/day

\*Doses given for at least 1 hour

- **Change in SOFA score of 2 or more points from baseline =** how we define sepsis using the most updated definition (sepsis-3)
- Good sensitivity and specificity
- Not practical to use, especially outside of the ICU

## Quick SOFA (qSOFA)

- **At least two of the following:**
  - Altered mental status  
(GCS  $\leq$  13)
  - RR  $\geq$  22/min
  - SBP  $\leq$  100 mm Hg

# SSC Recommendation: Don't Screen with qSOFA



We **recommend against** using qSOFA compared with SIRS, NEWS, or MEWS as a single screening tool for sepsis or septic shock. *Strong recommendation, moderate-quality evidence.*



# MEWS and NEWS

Score	Components	Positive Threshold	Sensitivity (Sepsis)	Specificity (Sepsis)	AUROC (Sepsis)	References
<b>Modified Early Warning Score (MEWS)</b>	RR, HR, SBP, Temp, AVPU*	≥5	59–87%	69–70%	0.70-0.84	[1-4]
<b>National Early Warning Scale (NEWS)</b>	RR, O2 sat, O2 use, Temp, SBP, HR, AVPU*	≥7	71–84%	66–85%	0.80-0.91	[2-3, 5-9]

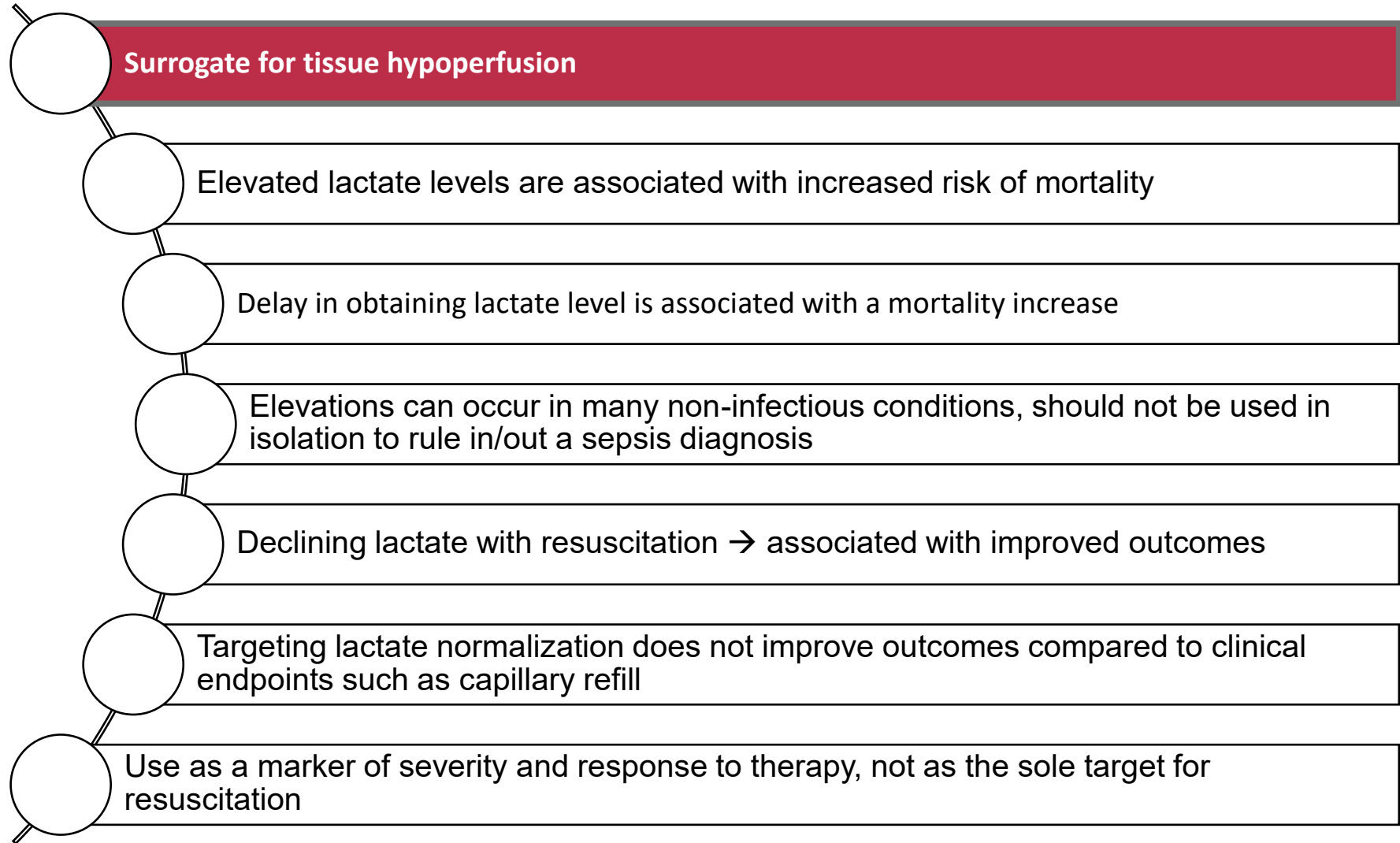
\*AVPU = mental status evaluation (Alert, Verbal, Pain, Unresponsive)

**Sources:** 1. Wattanasit and Khwannimit, AJEM 2021. 2. Guan et al, PloS One 2022. 3. Churpek et al, AJRCCM 2017. 4. Lin et al, Clinical Chemistry and Laboratory Medicine 2023. 5. Usman OA et al AJEM 2019. 6. Qiu et al, Expert Review of Anti-Infective Therapy 2023. 7. Brink et al, PloS One 2019. 8. Oduncu et al, AJEM 2021. 9. Lie VX et al, JAMA Network Open 2020.

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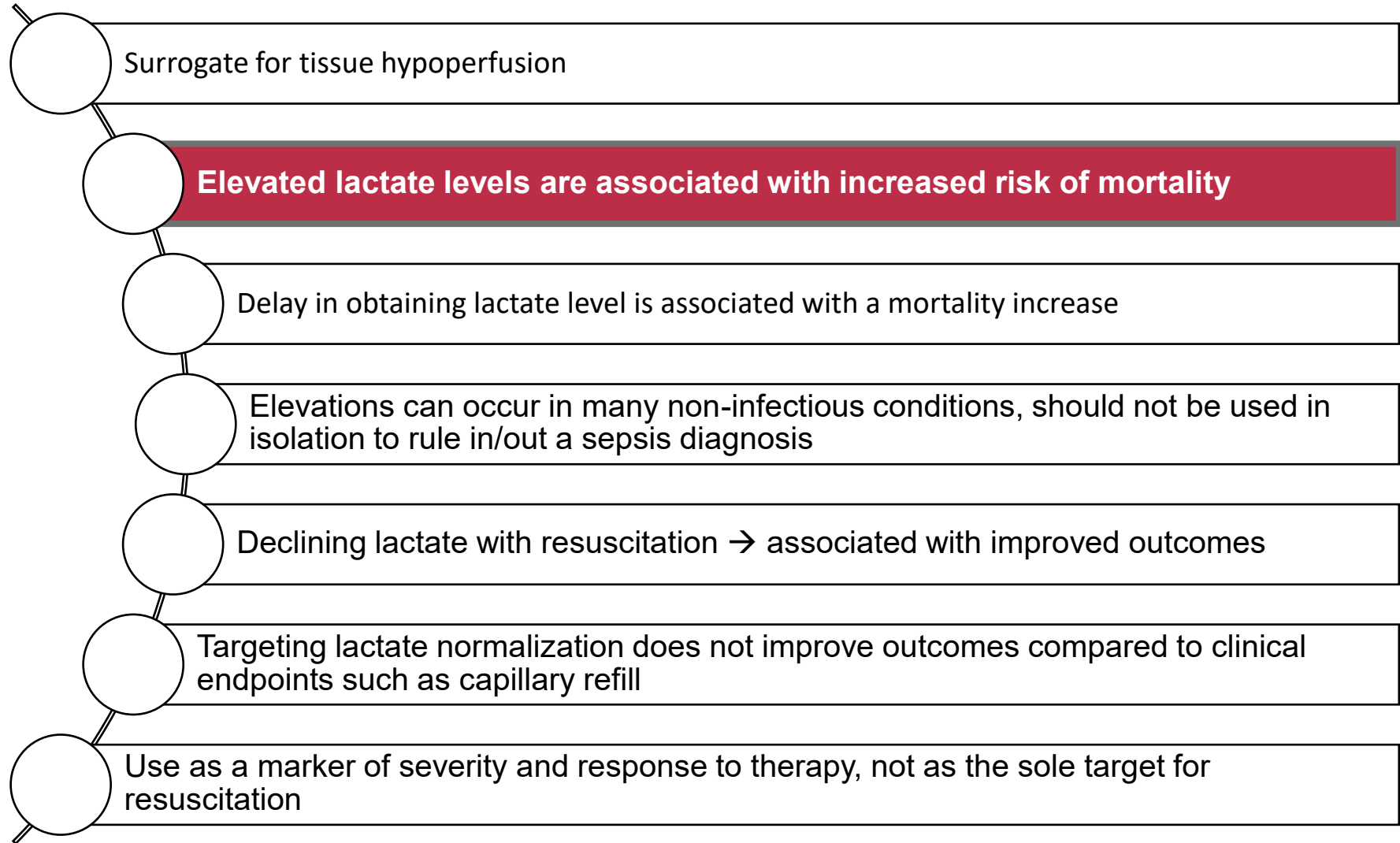
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# Lactate



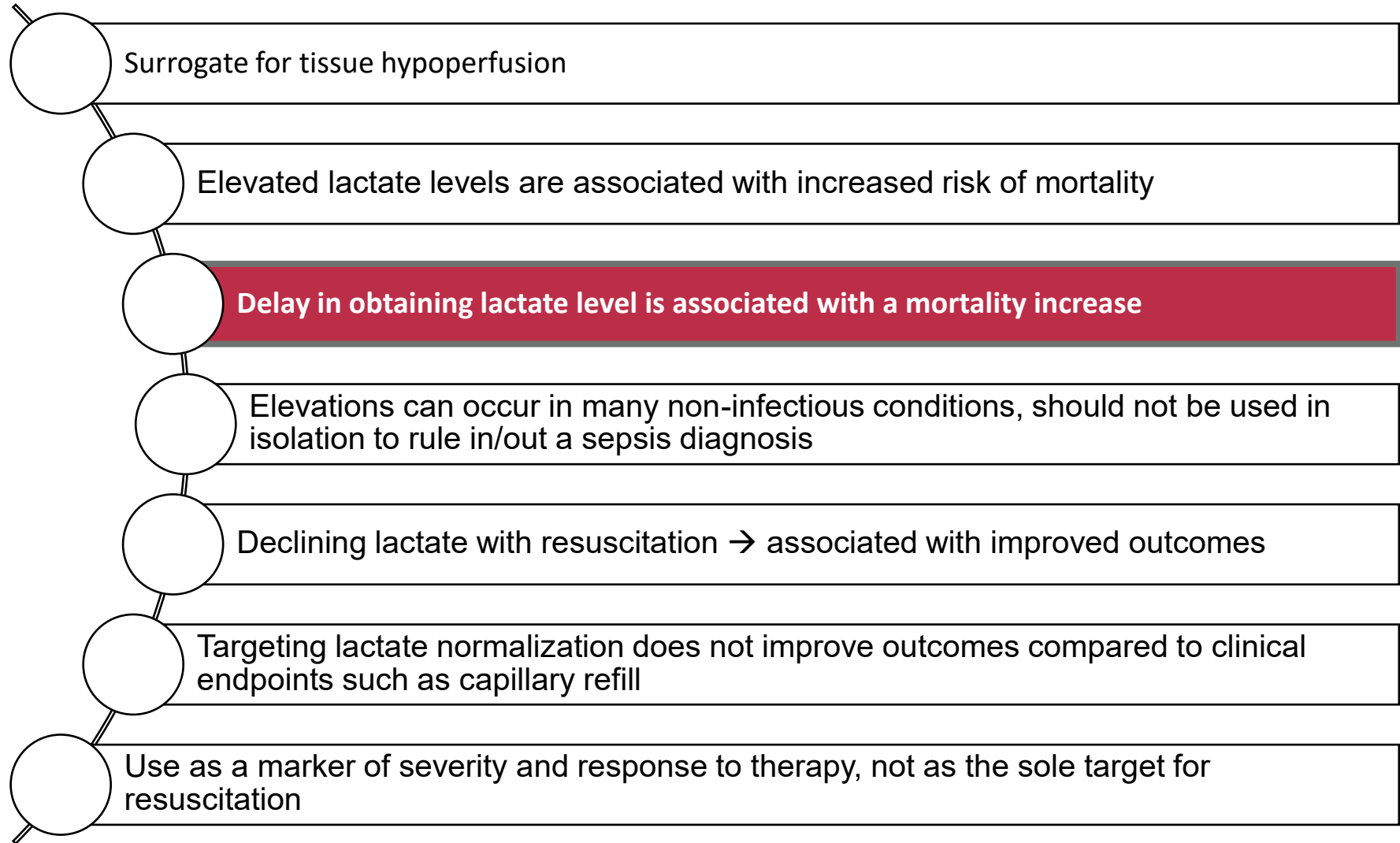
**Sources:** Surviving Sepsis Campaign, 2021. Yeealy DM et al, Annals of Emergency Medicine 2021.

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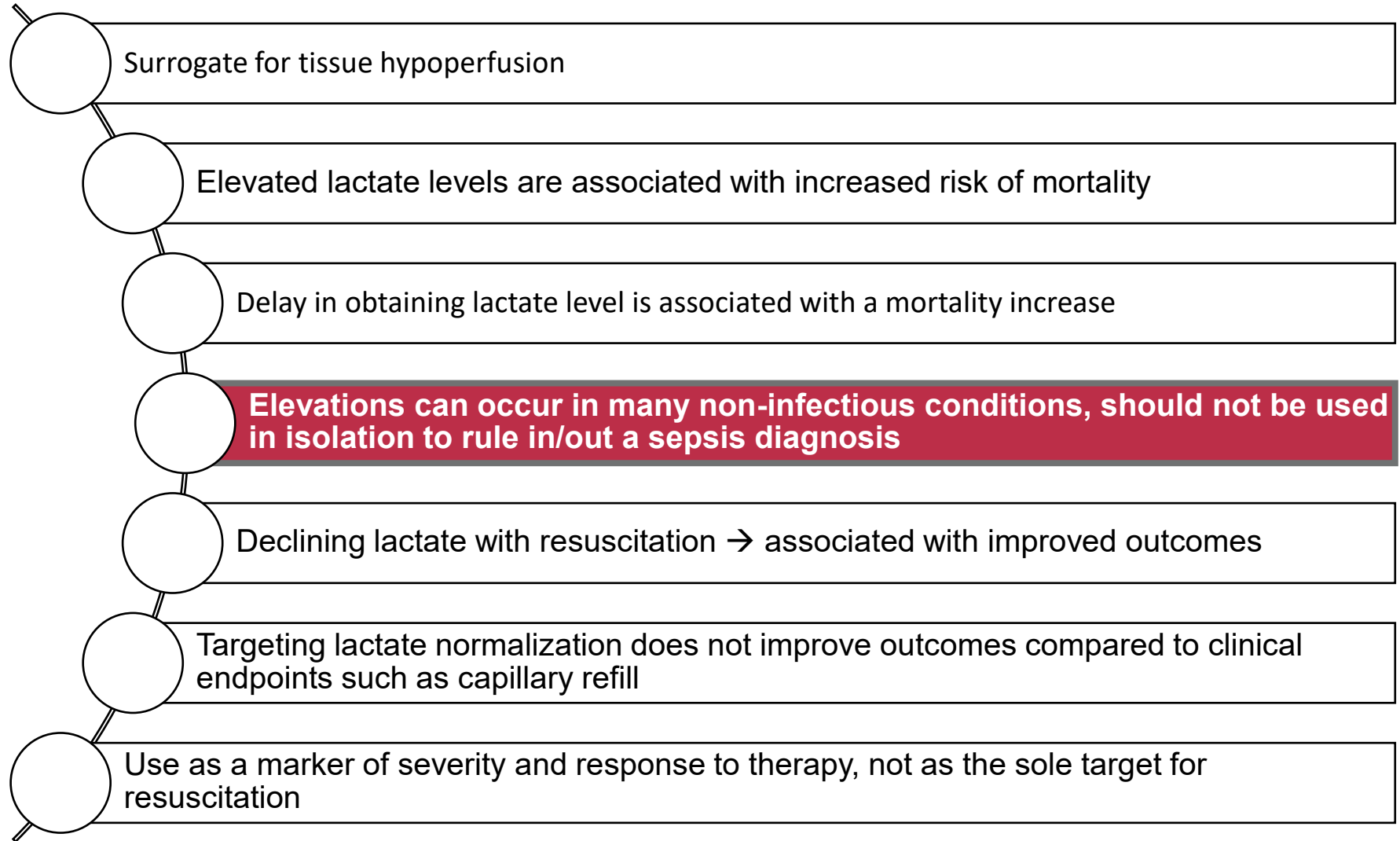
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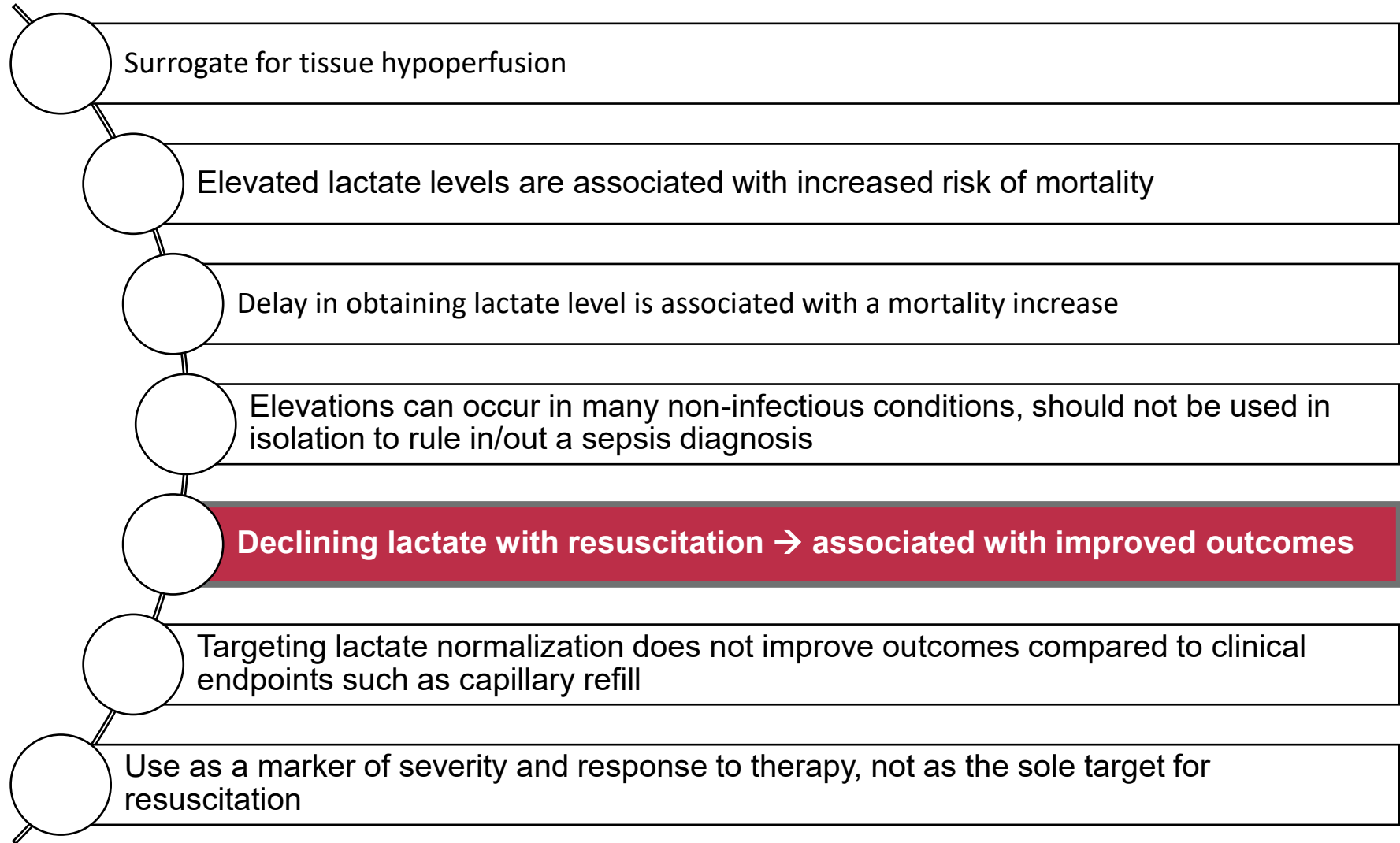
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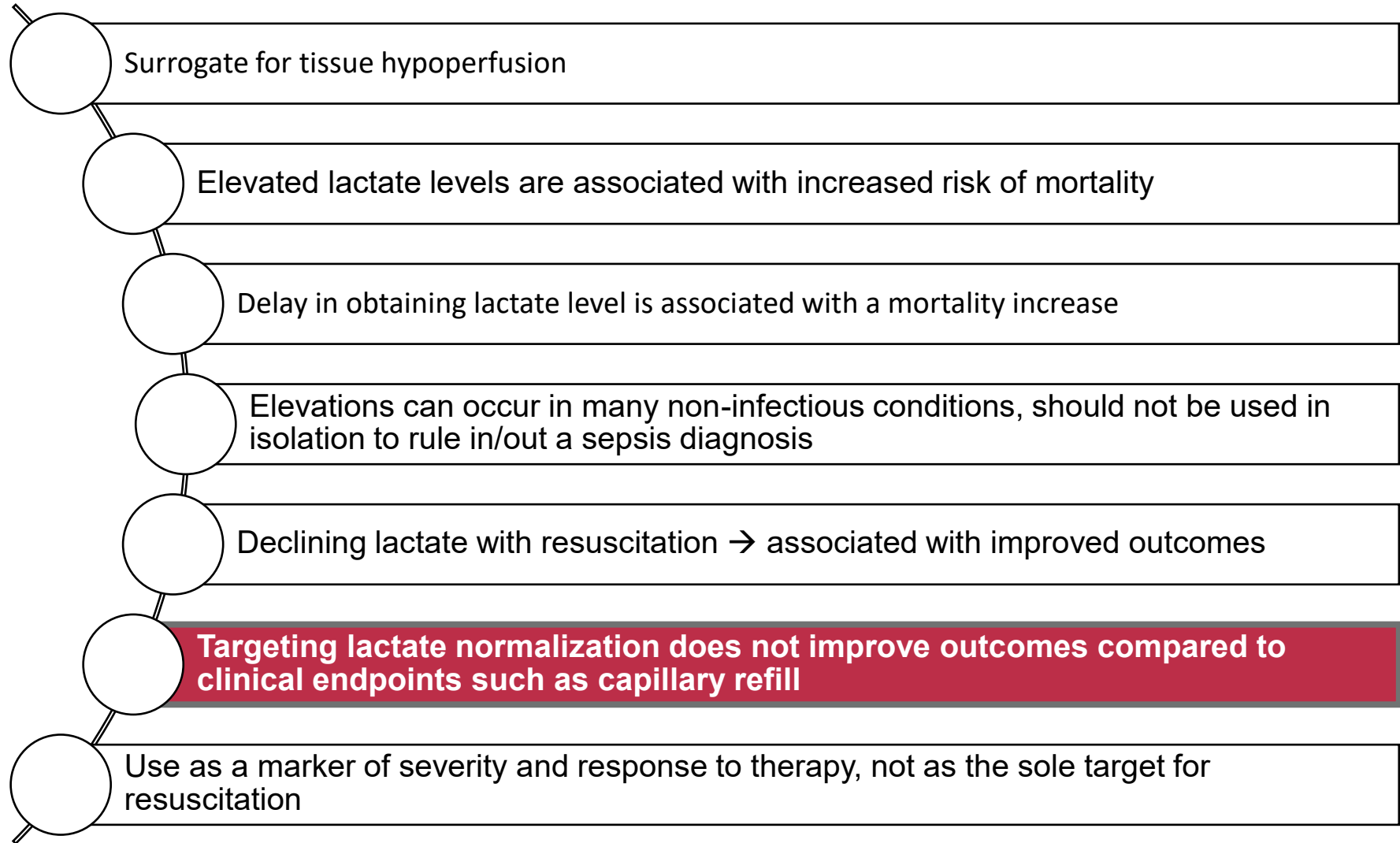
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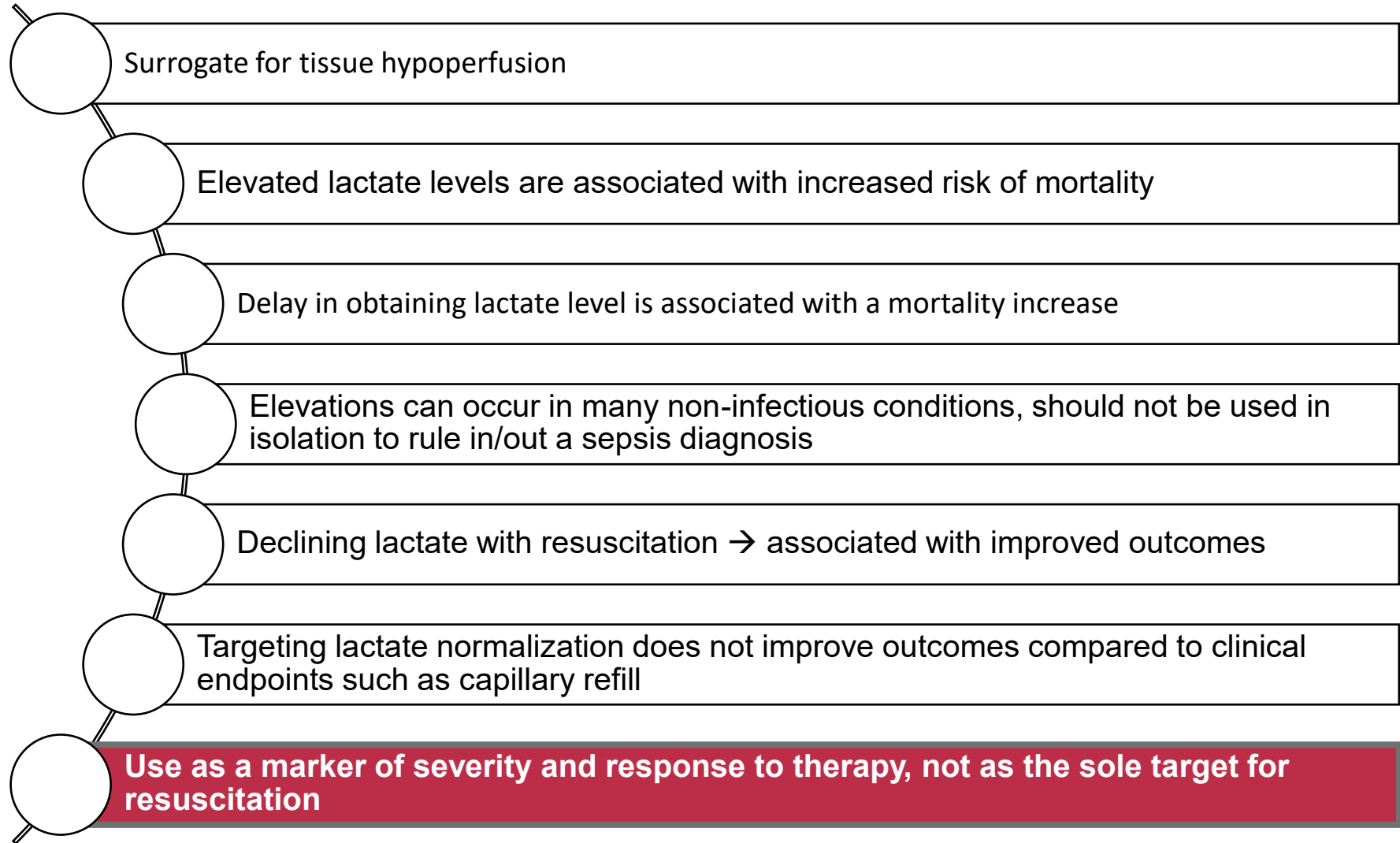
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**Sources:** Surviving Sepsis Campaign, 2021. Yeealy DM et al, Annals of Emergency Medicine 2021.



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## SSC Recommendation: Lactate



For adults suspected of having sepsis, we **suggest** measuring blood lactate.

**Source:** Surviving Sepsis Campaign, 2021.

# SSC Recommendation: The Hour-1 Bundle



Surviving Sepsis  
Campaign

BUNDLE

**HOURL-1 BUNDLE: INITIAL RESUSCITATION FOR SEPSIS AND SEPTIC SHOCK:**

- 1) Measure lactate level.\*
- 2) Obtain blood cultures before administering antibiotics.
- 3) Administer broad-spectrum antibiotics.
- 4) Begin rapid administration of 30mL/kg crystalloid for hypotension or lactate  $\geq 4$  mmol/L.
- 5) Apply vasopressors if hypotensive during or after fluid resuscitation to maintain a mean arterial pressure  $\geq 65$  mm Hg.

\*Remeasure lactate if initial lactate elevated ( $> 2$  mmol/L).

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[survivingsepsis.org](https://survivingsepsis.org)

**Source:** Surviving Sepsis Campaign, 2021.

# The Hour-1 Bundle

**Recognize sepsis/septic shock. Within one hour, begin the following:**

1. Measure lactate level. Remeasure lactate if initial lactate is  $> 2$  mmol/L.
2. Obtain blood cultures before administering antibiotics (but don't delay antibiotics).
3. Administer broad spectrum antibiotics.
4. Begin rapid administration of 30 mL/kg of crystalloid for hypotension or lactate  $\geq 4$  mmol/L.
5. Apply vasopressors if hypotensive during or after fluid resuscitation to maintain a mean arterial pressure of  $\geq 65$  mm Hg.

**Source:** Surviving Sepsis Campaign, 2021.

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2. Obtain blood cultures before administering antibiotics (but don't delay antibiotics).	<b>Antibiotic timing?</b> <b>Antibiotic choice?</b>
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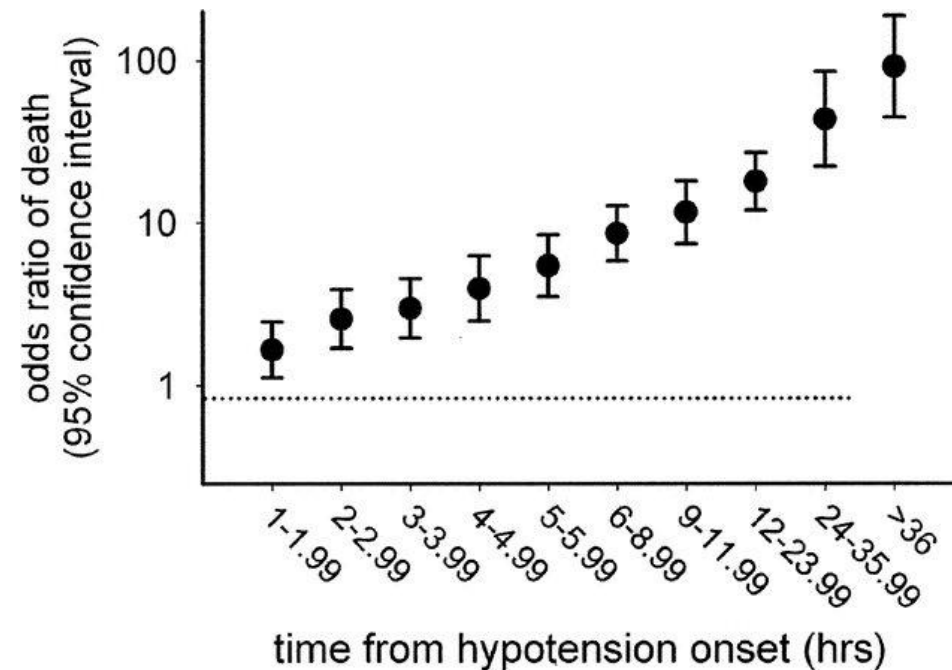
**Source:** Surviving Sepsis Campaign, 2021.

# Antibiotic Delay in Septic Shock → Higher Mortality

## Duration of hypotension before initiation of effective antimicrobial therapy is the critical determinant of survival in human septic shock\*

Kumar, Anand MD; Roberts, Daniel MD; Wood, Kenneth E. DO; Light, Bruce MD; Parrillo, Joseph E. MD; Sharma, Satendra MD; Suppes, Robert BSc; Feinstein, Daniel MD; Zanotti, Sergio MD; Taiberg, Leo MD; Gurka, David MD; Kumar, Aseem PhD; Cheang, Mary MSc [Author Information](#) 

Critical Care Medicine: June 2006 - Volume 34 - Issue 6 - p 1589-1596







# Time-to-antibiotics and clinical outcomes in patients with sepsis and septic shock: a prospective nationwide multicenter cohort study

Yunjoo Im<sup>1†</sup>, Danbee Kang<sup>2†</sup>, Ryoung-Eun Ko<sup>3</sup>, Yeon Joo Lee<sup>4</sup>, Sung Yoon Lim<sup>4</sup>, Sunghoon Park<sup>5</sup>, Soo Jin Na<sup>3</sup>, Chi Ryang Chung<sup>3</sup>, Mi Hyeon Park<sup>6</sup>, Dong Kyu Oh<sup>6</sup>, Chae-Man Lim<sup>6</sup> and Gee Young Suh<sup>1,3,7\*</sup> on behalf of the Korean Sepsis Alliance (KSA) investigators

- In patients with **sepsis *and* shock** who received antibiotics within 3 hours, **every 1-hour delay in antibiotics** showed a **35% increased risk of mortality**
- In patients with sepsis but without shock – timing less clear



# Mortality and antibiotic timing in deep learning-derived surviving sepsis campaign risk groups: a multicenter study

Ben J. Gross<sup>3</sup>, Allison Donahue<sup>1</sup>, James S. Ford<sup>1</sup>, Xiaolei Lu<sup>3</sup>, Aaron Boussina<sup>3</sup>, Atul Malhotra<sup>4</sup>, Kai Zheng<sup>5</sup>, Shamim Nemat<sup>3</sup> and Gabriel Ward<sup>1,2,4\*</sup>

	Likelihood of Sepsis	
Likelihood of shock	Shock unlikely to develop, sepsis possible	Shock unlikely to develop, sepsis probable
	Shock likely to develop, sepsis possible	Shock likely to develop, sepsis probable

- Patients with **possible sepsis and low risk of shock** had similar rates of mortality when given antibiotics within 1 hour of triage, between 1-3 hours of triage, and >3 hours after triage
- Patients with **probable sepsis** had lower mortality if antibiotics were administered within 1 hour from triage, **regardless of the risk of shock**



**Source:** Gross et al. Critical Care, 2025.

## Antibiotic Timing – Summary of Data

- Earlier administration in patients with **septic shock** *or* **high likelihood of sepsis** is associated with a lower mortality
  - **35% increase in mortality risk for every hour delay in patients with septic shock**
- Patients with **lower likelihood of shock** or **less certain sepsis**, more **lenient timing (up to three hours)** does not appear to adversely affect **outcomes** and may allow for more diagnostic clarity, reducing unnecessary antibiotic exposure

# SSC Recommendations: Antibiotic Timing



	 Shock is present	 Shock is absent
Sepsis is definite or probable	<input checked="" type="checkbox"/> Administer antimicrobials <b>immediately</b> , ideally within 1 hour of recognition.	<input checked="" type="checkbox"/> Administer antimicrobials <b>immediately</b> , ideally within 1 hour of recognition.
Sepsis is possible	<input checked="" type="checkbox"/> Administer antimicrobials <b>immediately</b> , ideally within 1 hour of recognition.	<input checked="" type="checkbox"/> Rapid assessment* of infectious vs. noninfectious causes of acute illness.  <input checked="" type="checkbox"/> Administer antimicrobials <b>within 3 hours</b> if concern for infection persists.

*\*Rapid assessment includes history and clinical examination, tests for both infectious and noninfectious causes of acute illness, and immediate treatment of acute conditions that can mimic sepsis. Whenever possible, this should be completed within 3 hours of presentation so that a decision can be made as to the likelihood of an infectious cause of the patient's presentation and timely antimicrobial therapy provided if the likelihood is thought to be high.*

Source: Surviving Sepsis Campaign, 2021.

# Antibiotic Choice

- Appropriate initial antibiotics improve survival
- What are appropriate antibiotics?
  - Broad, dependent on source and local antibiograms
  - Consider MRSA, MDR Gram negative coverage
- Early de-escalation based on microbiologic data and clinical response reduces adverse effects and resistance
- Don't forget about source control

# The Hour-1 Bundle

<b>Recognize sepsis/septic shock. Within one hour, begin the following:</b>	<b>Questions:</b>
1. Measure lactate level. Remeasure lactate if initial lactate is > 2 mmol/L.	<input checked="" type="checkbox"/>
2. Obtain blood cultures before administering antibiotics (but don't delay antibiotics).	Antibiotic timing? Antibiotic choice?
3. Administer broad spectrum antibiotics.	
4. Begin rapid administration of 30 mL/kg of crystalloid for hypotension or lactate $\geq$ 4 mmol/L.	<b>How much fluid?</b> <b>Which type of fluid is best?</b>
5. Apply vasopressors if hypotensive during or after fluid resuscitation to maintain a mean arterial pressure of $\geq$ 65 mm Hg.	

**Source:** Surviving Sepsis Campaign, 2021.

## SSC Recommendation: *Initial* Resuscitation



For patients with **sepsis induced hypoperfusion or septic shock**, we suggest that at least **30 mL/kg of IV crystalloid fluid should be given within the first 3 hours of resuscitation.**

*Weak, low quality of evidence*

## How Much Fluid: *Initial* Resuscitation

- Observational/retrospective data:
  - Under-resuscitation (<20 mL/kg) → increased mortality
  - Over-resuscitation (>45 mL/kg) → possible harm
  - Survival benefit is observed when 30 mL/kg is completed within 3 hours

**Source:** Ward, Kuttub, and Badgett. Critical Care Medicine, September 2025.



# How Much Fluid: *Subsequent* Resuscitation

## **Trial:**

- CLASSIC (Conservative vs. Liberal Approach to Fluid Therapy of Septic Shock in Intensive Care)
- All patients received initial IV fluids for resuscitation, then:
  - Restrictive group (only given for signs of severe hypoperfusion)
  - Liberal group/standard of care

## **Outcome:**

- No difference in 90-day mortality, AKI, days alive out of the hospital
- Restrictive group received about 1.6 fewer liters of fluid over five days, but no difference in survival or organ function

**Source:** Meyhoff TS et al. NEJM, 2022.

# How Much Fluid: *Subsequent* Resuscitation

## **Trial:**

- CLOVERS (Crystalloid Liberal or Vasopressors Early Resuscitation in Sepsis)
- All patients received initial IV fluids for resuscitation (30 mL/kg), then:
  - Restrictive group (vasopressor-predominant)
  - Liberal (fluid-predominant)

## **Outcome:**

- No difference in 90-day mortality, organ failure, hospital free days

**Source:** Shapiro et al. NEJM, 2023.

## How Much Fluid: *Subsequent* Resuscitation

**Assessment for further fluids should be guided by dynamic measures:**

- Passive leg raise test
- Stroke volume
- Pulse pressure
- Echocardiogram
- Capillary refill time

## SSC Recommendations: Fluid Choice



For adults with sepsis or septic shock, we **recommend** using crystalloids as first-line fluid for resuscitation.

*Strong recommendation, moderate quality of evidence.*

For adults with sepsis or septic shock, we **suggest** using balanced crystalloids instead of normal saline for resuscitation.

*Weak recommendation, low quality of evidence.*

# Fluid Choice

**Balanced crystalloids (lactated Ringers, Plasma-Lyte) preferred over normal saline**

- Rationale: balanced crystalloids have a lower chloride content, which reduces the risk of hyperchloremic metabolic acidosis and AKI
- **SMART trial**
  - 1,641 patients with sepsis
  - Balanced fluids resulted in a **lower rate of major adverse kidney events** and a **significant reduction in 30-day in-hospital mortality** (26.3% with balanced fluids versus 31.2% with normal saline)

# The Hour-1 Bundle

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1. Measure lactate level. Remeasure lactate if initial lactate is > 2 mmol/L.	<input checked="" type="checkbox"/>
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5. Apply vasopressors if hypotensive during or after fluid resuscitation to maintain a mean arterial pressure of $\geq$ 65 mm Hg.	<b>Vasopressor choice?</b> <b>When to start?</b>

**Source:** Surviving Sepsis Campaign, 2021.

## SSC Recommendations: Vasopressor Choice



For adults with septic shock, we **recommend** using norepinephrine as the first-line agent over other vasopressors.

*Strong recommendation.*

## Vasopressor Choice









- **Norepinephrine** recommended as first-line
- Add **vasopressin** if MAP is still inadequate





# Vasopressor Timing

- Newer data suggests earlier initiation of norepinephrine, **within the first 1 to 3 hours** of septic shock onset and often **in parallel with initial fluid resuscitation**, is associated with:
  - Reduced short-term mortality
  - Less fluid overload
  - Improved organ function
- Don't delay vasopressors for central line – consider starting peripherally

**Sources:** Shi et al. Critical Care, 2025. Ye et al. Shock, 2023. Li, Li, and Zhang. Critical Care, 2020. Xu et al. AJEM, 2022. Ospina-Tascon et al. Critical Care, 2020.

	<div>            Use norepinephrine as first-line vasopressor.         </div>
For patients with septic shock on vasopressors	<div>            Target a MAP of 65 mm Hg.         </div> <div>  <b>Consider</b> invasive monitoring of arterial blood pressure.         </div>
If central access is not yet available	<div>  <b>Consider</b> initiating vasopressors peripherally.*         </div>
If MAP is inadequate despite low-to-moderate norepinephrine	<div>  <b>Consider</b> adding vasopressin.         </div>
If cardiac dysfunction with persistent hypoperfusion is present despite adequate volume status and blood pressure	<div>  <b>Consider</b> adding dobutamine or switching to epinephrine.         </div>

 Strong recommendations are displayed in green  
 Weak recommendations are displayed in yellow.

\*When vasopressors are used peripherally, they should be administered only for a short period of time and in a vein proximal to the antecubital fossa.

**Source:** Surviving Sepsis Campaign, 2021.

# Sepsis Survivorship

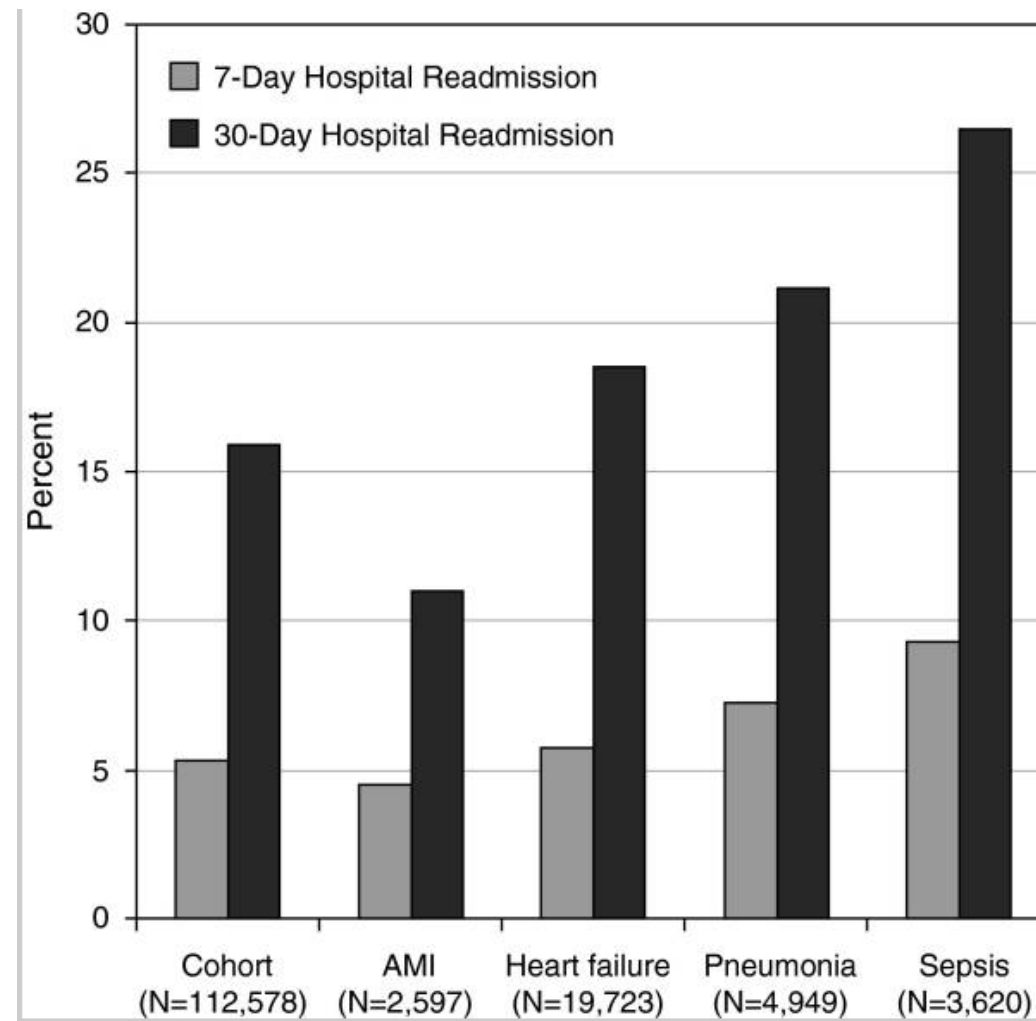
Mean 1-year mortality for patients with sepsis: **16.1%**

More severe, ICU-level cases: **~1/3**

**Sources:** Goodwin. Crit Care Med, 2015. Shankar-Hari et al. JAMA Network Open, 2020.

# Sepsis Survivorship

**40%** will be readmitted  
within 90 days



**Sources:** Goodwin. Crit Care Med, 2015. Jones. Ann Am Thorac Soc, 2015.

# Sepsis Survivorship

- **Over 30% are discharged to SNF, LTACH, or acute rehab**
- **An additional 30%** require home healthcare services, more likely than non-sepsis patients
- Majority of costs related to sepsis occur **after** the initial hospitalization

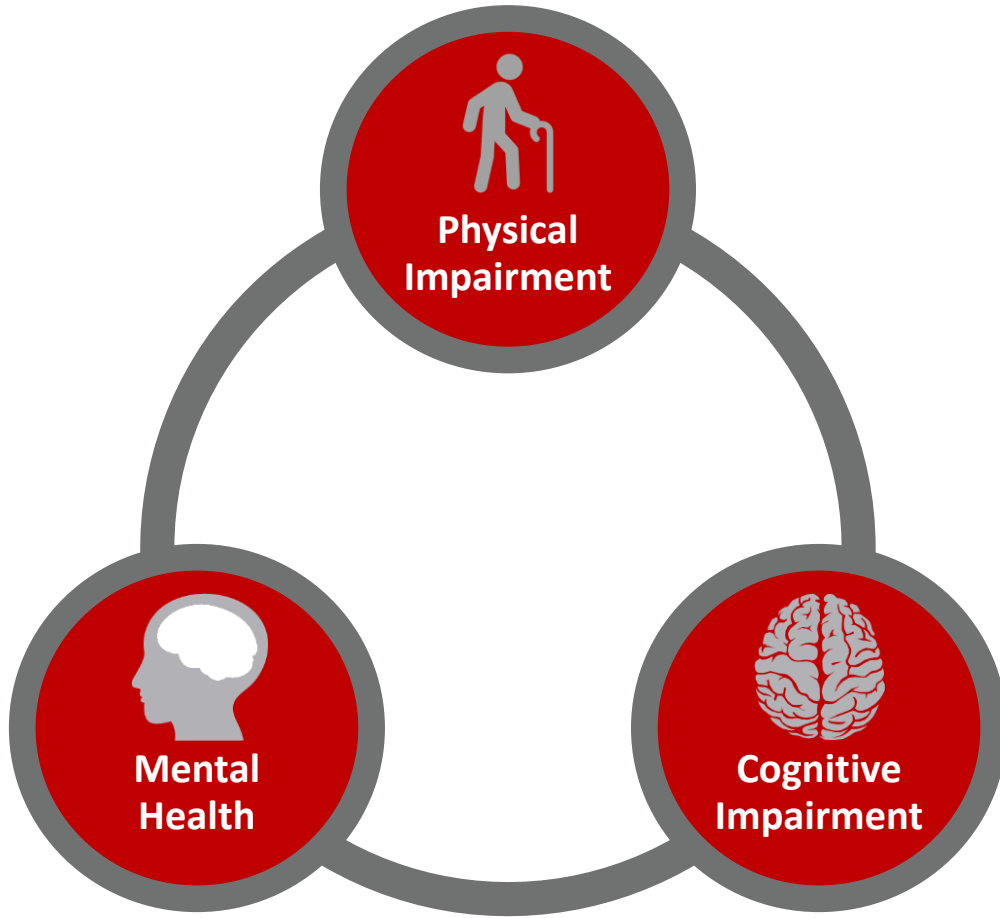


**Sources:** Tiru. Pharmaco Economics, 2015. Jones. Ann Am Thorac Soc, 2015. Prescott et al. AJRCCM, 2014.

## Sepsis and Patient Experience

- Survey from US, UK, Canada
- Survivors were “somewhat dissatisfied” to “somewhat satisfied” with the support services provided:
  - Counseling
  - PT
  - Knowledge about sepsis
  - Expectations after discharge

# Post-Sepsis (Post Intensive-Care) Syndrome



- One or more new or worsening impairments that occur after sepsis and persist beyond the hospital stay
- Common (>50%) and underrecognized

# Physical Function After Sepsis

- Fatigue, insomnia
- Weakness
- Dyspnea
- Muscle, joint pain
- Swelling
- Poor appetite
- Difficulty swallowing
- Hair loss

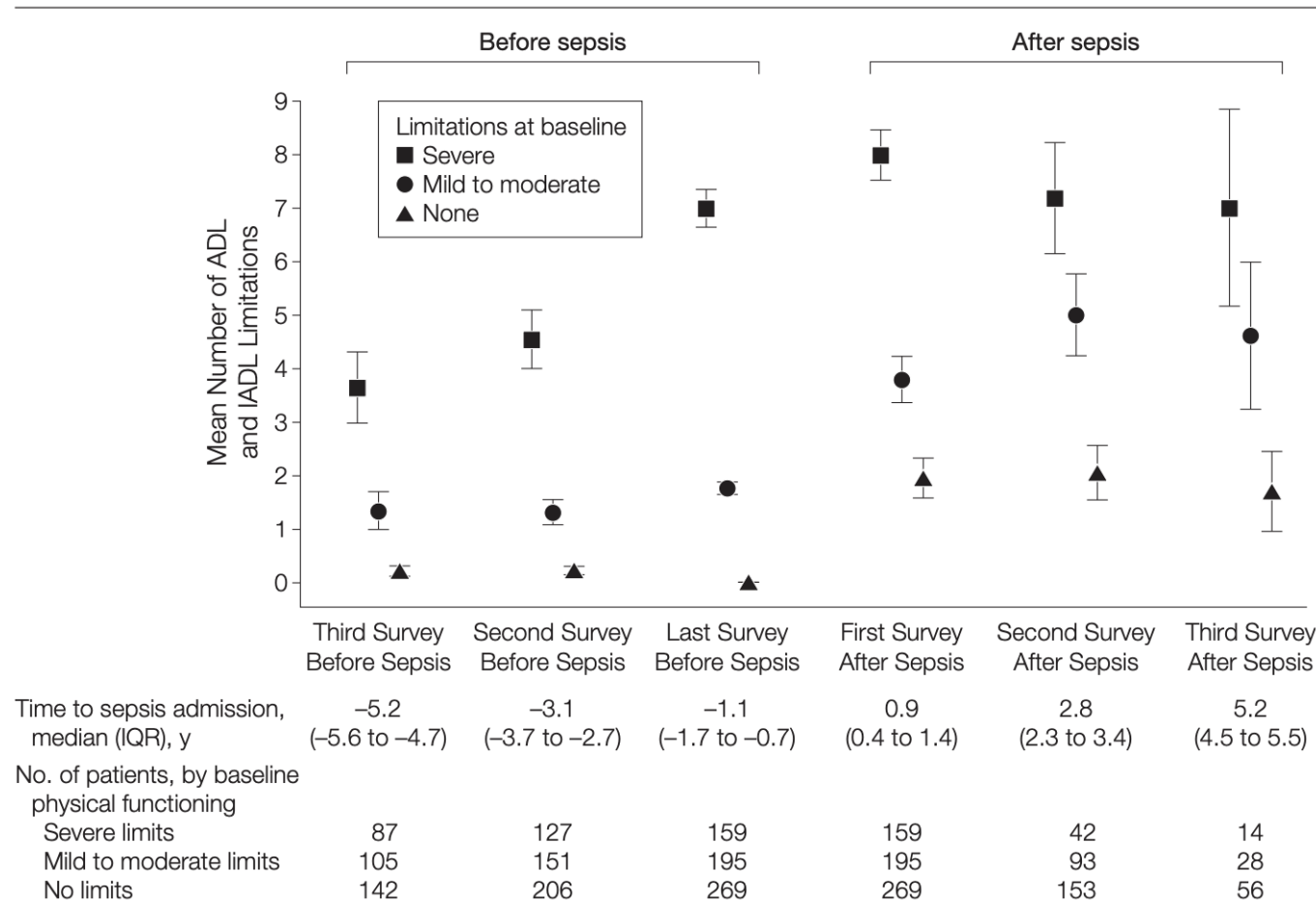


**Source:** Iwashyna et al. JAMA, 2010.



# Physical Function After Sepsis

**Figure 3.** Functional Trajectories by Baseline Functioning



Those that went into a sepsis hospitalization with no physical impairments or a mild/moderate number of impairments left with **1-2 new impairments**

Source: Iwashyna et al. JAMA, 2010.

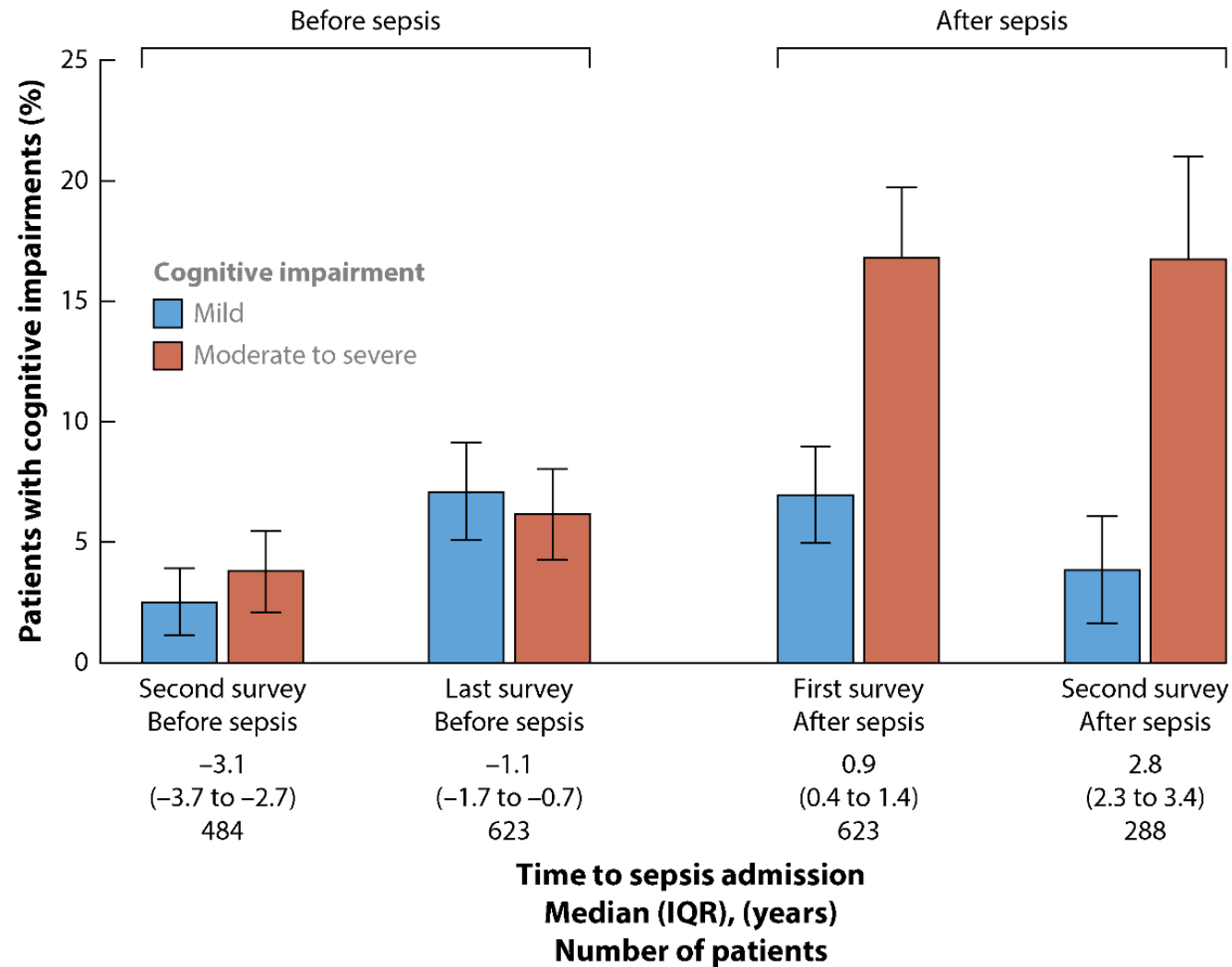
# Cognitive Function After Sepsis



- **Attention**
- **Memory**
- **Verbal fluency and word-finding**
- **Executive functioning**

**Source:** Iwashyna et al. JAMA, 2010.

# Cognitive Function After Sepsis



Source: Iwashyna et al. JAMA, 2010.

# Mental Health After Sepsis

- Anxiety
- Depression
- PTSD

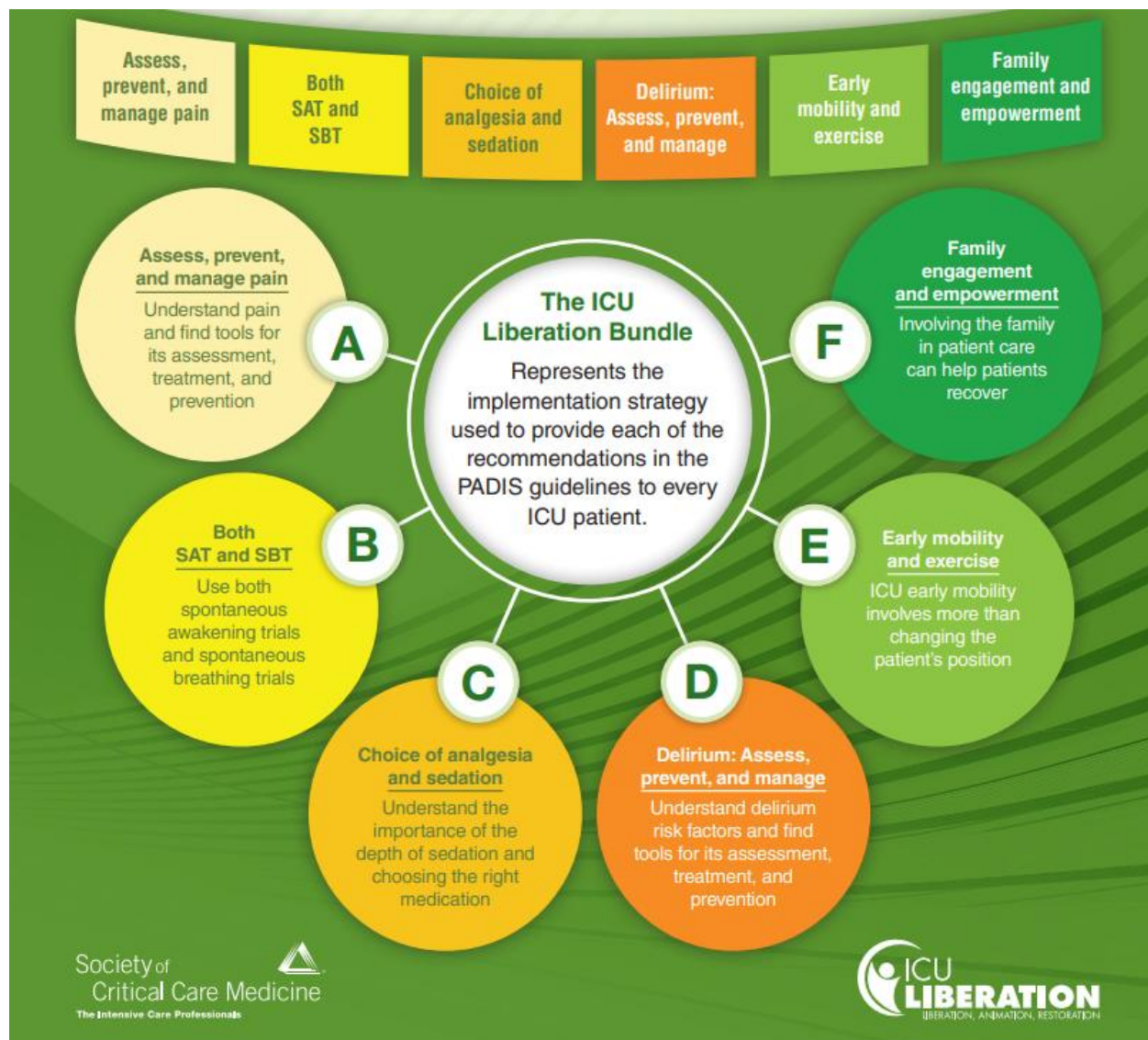


**Source:** Iwashyna et al. JAMA, 2010.

## Prevention of Post-Sepsis Impairments

- Early recognition and evidence-based treatment of sepsis to avoid prolonged hospitalizations
- Implementation of the ICU Liberation Bundle for critically-ill patients
- Early mobility to decrease physical deficits and delirium

# ICU Liberation Bundle



# SSC: Post-Hospital Recommendations



Screening for economic and social support

Referral to peer support groups

Shared decision-making regarding disposition plans and follow-up

Written and verbal sepsis education prior to discharge

Use of a critical care transition program upon transfer to the floor

Medication reconciliation prior to ICU to floor transition

Schedule follow-up with provider able to identify, support, and manage long-term sequelae

**Source:** Surviving Sepsis Campaign, 2021.

# Post-Hospital Sepsis Care

## Multicomponent Sepsis Transition and Recovery Program (STAR)

In-Hospital	Near Hospital D/C	Post-Hospital
<ul style="list-style-type: none"><li>• Assess health literacy</li><li>• Mental health screen</li><li>• Verify PT/OT consult</li></ul>	<ul style="list-style-type: none"><li>• Provide infection-specific education to patient and caregivers</li><li>• Confirm med rec with inpatient pharmacist</li></ul>	<ul style="list-style-type: none"><li>• Medication review and confirm fills</li><li>• Appointment reminder and confirm transportation</li><li>• Ongoing symptom screenings</li></ul>

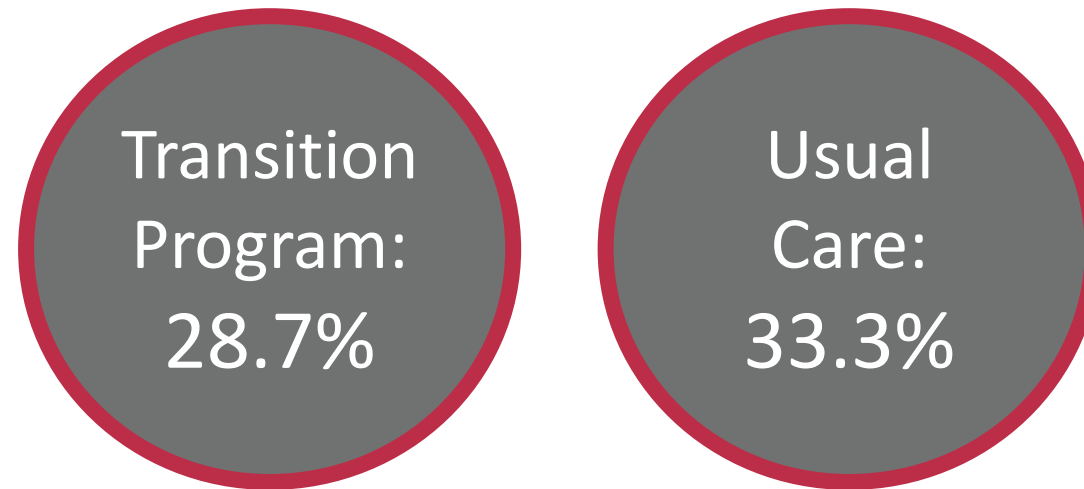
**Source:** Taylor, SP et al. Crit Care Med 2021.



# Post-Hospital Sepsis Care

## Multicomponent Sepsis Transition and Recovery Program (STAR)

**Composite mortality or hospital readmission at 30 days:**



**Source:** Taylor, SP et al. Crit Care Med 2021.

# The Critical Illness Transition and Recovery Program (CI-TRP) at OSU

**Increases access through various visit modalities:**

In-Person Clinic

Telehealth (Video and Phone)

**Uses a multidisciplinary team:**

RN  
Coordinator

MICU  
Pharmacists

Critical Care  
Provider

Social Work

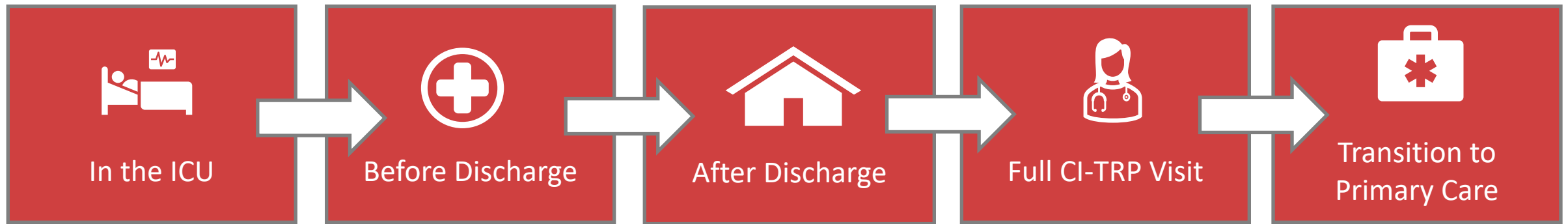
PT/OT

Cognitive and  
Behavioral Health

**Addresses two distinct clinical needs:**

1. Immediate post-hospitalization  
transition of care

2. Post-ICU Impairment Screening



# Summary

1. Sepsis is common, and early recognition is key to improve survival.
2. The SSC 1-Hour Bundle focuses on early identification, early cultures/lactate assessment, early antibiotics (1 hour for those with shock or higher probability of sepsis), and timely/appropriate volume resuscitation.
3. Treatment guidelines continue to evolve with new data, and some remain controversial.
4. Mortality is improving, so survivorship needs are evolving.
5. Post-hospital care for sepsis survivors has shown promise, and care models for post-sepsis and post-ICU care are growing.

**Always excited for opportunities to collaborate – please reach out!**

# Thank You

