Table 1 Table of statements

From: Surviving Sepsis Campaign: international guidelines for management of sepsis and septic shock 2026

SYMBOL KEY:

Strength of Recommendation
- ✓✓ Strong Recommendation For
- ✓ Conditional Recommendation For
- ✗ Conditional Recommendation Against
- ✗✗ Strong Recommendation Against

Certainty of Evidence
- ⊕◯◯◯ Very Low
- ⊕⊕◯◯ Low
- ⊕⊕⊕◯ Moderate
- ⊕⊕⊕⊕ High

Type of Recommendation
- Carry Over
- New, Revised, or Revisited but Unchanged Statements

Change in Strength of Recommendation or Change in Certainty of Evidence
- ↖ Upgraded
- ↘ Downgraded

SCREENING AND EARLY MANAGEMENT

1 For hospitals and health systems, we **recommend** using a performance improvement program for sepsis, including sepsis screening for acutely ill, high-risk patients; standard operating procedures for treatment; and implementation of sepsis quality improvement strategies.

✓✓ ⊕⊕⊕◯ *Screening*
✓✓ ⊕◯◯◯ *Standard operating procedures*
✓✓ ⊕⊕⊕◯ *Quality improvement strategies*

Remark: Performance improvement programs and quality improvement strategies may vary by setting and in accordance with a hospital/health care system's ability to implement.

2021 STATEMENT
For hospitals and health systems, we **recommend** using a performance improvement program for sepsis, including sepsis screening for acutely ill, high-risk patients and standard operating procedures for treatment.

✓✓ ⊕⊕⊕◯ *Screening*
✓✓ ⊕◯◯◯ *Standard operating procedures*

2 ✓ ⊕⊕◯◯ For hospitals and health systems, we **suggest** using a "code sepsis" or "sepsis huddle" protocol over not using such a protocol.

Remark: "Code sepsis" or "sepsis huddle" protocols involve a multi-disciplinary team huddle at bedside to discuss and expedite sepsis diagnosis and treatment following a positive sepsis screen.

3 ✓ ⊕◯◯◯ In acutely ill adults en route to hospital by ambulance or flight, we **suggest** using a standard sepsis screening tool over not using a screening tool.

4 ✓✓ ⊕⊕⊕◯ For acutely ill patients in hospital, we **recommend** using NEWS, NEWS2, MEWS, or SIRS over qSOFA as a single tool to screen for sepsis.

5 **GOOD PRACTICE STATEMENT** Sepsis is a clinical diagnosis and should not be ruled in or ruled out using a single biomarker or diagnostic test.

6 There is **insufficient evidence** to make a recommendation regarding use of novel rapid host response diagnostics.

7 ✓✓ ⊕⊕◯◯ For adults with possible, probable, or definite sepsis or septic shock, we **recommend** collecting blood cultures as soon as possible and ideally before the administration of antimicrobial therapy.

8 ✓ ⊕⊕◯◯ For adults with possible or probable sepsis or septic shock, we **suggest** measuring blood lactate.

Remark: Fluid administration should be individualized after initial fluid bolus and monitoring of lactate decrement, rather than continuing fluids until lactate normalization is achieved.

9 **GOOD PRACTICE STATEMENT** Sepsis and septic shock are medical emergencies; treatment and resuscitation should begin immediately.

10 ✓ ⊕⊕◯◯ For adults with sepsis-induced hypoperfusion or septic shock, we **suggest** administering at least 30 ml/kg of intravenous crystalloid in the first 3 hours.

Remark: Consideration should be given to individual patient characteristics and context when selecting initial fluid volume.

Remark: Clinicians prescribing fluids should perform frequent, ongoing reassessment and closely monitor patients to avoid harms of under- or over-resuscitation.

Remark: Weight-based fluid volume should be calculated based on actual body weight, or by adjusted or ideal body weight in patients with BMI > 30 kg/m².

11 ✓ ⊕◯◯◯ For adults with sepsis-induced hypotension, we **suggest** initial intravenous crystalloid fluid bolus resuscitation followed by vasopressor support if hypotension persists.

Remark: In patients with unstable septic shock, immediate concurrent administration of vasopressors together with intravenous crystalloid fluid may be warranted on a case-by-case basis. Presence of unstable shock should be determined by physical exam. Suggestive clinical features of unstable shock include severely reduced blood pressure, mottled skin, ashen appearance, cyanosis/decreased oxygen saturation, tachycardia, and altered mentation.

12 ✓ ⊕◯◯◯ In adults with septic shock, we **suggest** starting vasopressors peripherally to restore mean arterial pressure rather than delaying initiation until central venous access is secured.

Remark: Data are insufficient to recommend a duration of use, dose, or access route (size of peripheral intravenous line or anatomic location). Midline catheters were not considered.

13 ✓✓ ⊕⊕⊕◯ For adults with septic shock, we **recommend** an initial MAP target of 65 mm Hg over higher MAP targets.

Remark: In practice, it is not feasible to maintain MAP at exactly 65 mm Hg, so a reasonable range (e.g., within 5 mm Hg) should be used. Vasopressors should be titrated to maintain MAP within this range.

14 ✓ ⊕⊕◯◯ For adults with septic shock aged 65 years or older, we **suggest** an initial MAP range of 60-65 mm Hg over higher ranges.

15 ✓ ⊕⊕◯◯ For adults with sepsis or septic shock who require ICU admission, we **suggest** admitting the patients to the ICU within 6 hours.

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INFECTION

16 ✓✓ ⊕◯◯◯ For adults with possible, probable, or definite septic shock, we **recommend** administering antimicrobial therapy immediately, ideally within 1 hour of recognition.

17 ✓✓ ⊕◯◯◯ For adults with probable or definite sepsis, we **recommend** administering antimicrobial therapy immediately, ideally within 1 hour of recognition.

18 ✓ ⊕◯◯◯ For adults with possible sepsis without shock, we **suggest** a time-limited course of rapid investigation and if concern for infection persists, the administration of antimicrobial therapy within 3 hours from the time when sepsis was first suspected.

19 GOOD PRACTICE STATEMENT Clinicians should perform a rapid assessment of the likelihood of infectious versus noninfectious causes of acute illness in adults with possible sepsis without shock.

20 ✓ ⊕◯◯◯ For adults with a low likelihood of infection and without shock, we **suggest** deferring antimicrobial therapy while continuing to closely monitor the patient.

21 ✓ ⊕◯◯◯ For adults with definite or probable sepsis and hypotension (i.e., septic shock) and who have an anticipated time to in-hospital medical evaluation of over 60 minutes, we **suggest** administering antimicrobial therapy in ambulance or flight.

Remark: Prehospital antibiotic delivery should be implemented only after having a structured process in place to screen for sepsis in ambulance or flight, as discussed in recommendation 3.

22 ✓ ⊕◯◯◯ For adults with possible or probable sepsis or septic shock, we **suggest** using clinical evaluation alone over procalcitonin plus clinical evaluation to decide whether to start antimicrobial therapy.

23 GOOD PRACTICE STATEMENT Adults with sepsis or septic shock should be rapidly evaluated for specific anatomical diagnoses or sources of infection that require emergent source control.

24 ✓ ⊕◯◯◯ For adults with sepsis or septic shock and a specific anatomical diagnosis or source of infection that requires source control, we **suggest** early source control over late source control, ideally within 6 hours.

2021 STATEMENT
BEST PRACTICE STATEMENT For adults with sepsis or septic shock, we recommend rapidly identifying or excluding a specific anatomical diagnosis of infection that requires emergent source control and implementing any required source control intervention as soon as medically and logistically practical.

25 ✓ ⊕◯◯◯ For adults with sepsis or septic shock at high risk of infection with a specific multidrug resistant (MDR) pathogen, we **suggest** using empirical antimicrobial therapy with coverage for this MDR pathogen.

Remark: Risk factors for MDR pathogens include colonization with the MDR pathogen of concern, previous infection with the MDR pathogen of concern, prolonged use of broad-spectrum antibiotics, and prolonged hospitalization in a unit with a high prevalence of the MDR pathogen of concern.

26 ✗ ⊕◯◯◯ For adults with sepsis or septic shock at low risk of infection with a specific multidrug resistant (MDR) pathogen, we **suggest against** using empirical antimicrobial therapy with coverage for this MDR pathogen.

27 ✗ ⊕⊕◯◯ For adults with sepsis or septic shock, we **suggest against** empirical antifungal therapy.

Remark: Empiric antifungal therapy should be considered on a case-by-case basis in selected patients with sepsis or septic shock and risk factors for fungal infection, including immunosuppression, prolonged use of antibiotics, prolonged hospitalization, and intra-abdominal source of infection.

2021 STATEMENT
- ✓ ⊕⊕◯◯ For adults with sepsis or septic shock at high risk of fungal infection, we **suggest** using empiric antifungal therapy over no antifungal therapy
- ✗ ⊕⊕◯◯ For adults with sepsis or septic shock at low risk of fungal infection, we **suggest against** empiric use of antifungal therapy.

28 ✓ ⊕◯◯◯ For adults with sepsis or septic shock without risk factors for anaerobic infection, we **suggest** using an empiric antibiotic regimen without anaerobic coverage.

Remark: Agents with anaerobic activity that are needed to cover possible multidrug resistant (MDR) pathogens (e.g., piperacillin-tazobactam, carbapenems) are reasonable to use to provide adequate MDR coverage, if alternative agents without anaerobic coverage are inadequate.

29 ✓ ⊕◯◯◯ For adults with sepsis or septic shock with specific risk factors for anaerobic infection, we **suggest** using an empiric antibiotic regimen that includes anaerobic coverage.

Remark: Risk factors for anaerobic infection include intra-abdominal or deep seated gynecological/obstetric source of infection, necrotizing soft tissue infection, head and neck infection, and central nervous system abscesses or empyema.

30 There is **insufficient evidence** to make a recommendation regarding use of departmental (i.e., ICU-wide) microbiological surveillance samples of the upper respiratory tract to guide empirical antimicrobial therapy.

31 ✓ ⊕⊕◯◯ For adults with sepsis or septic shock, we **suggest** using pathogen-specific rapid diagnostic tests on a case-by-case basis in selected patients based on clinical features, local pathogen- and resistance patterns, seasonality, and availability of tests and antibiotic stewardship guidance.

32 ✗ ⊕⊕◯◯ For adults with sepsis or septic shock, we **suggest against** use of Candida fungal biomarkers to guide initiation of empiric antifungal therapy.

Remark: Use of Candida biomarkers to guide initiation of empiric antifungal therapy may be considered on a case-by-case basis in selected patients at high risk of Candida infection, including those with immunosuppression, prolonged exposure to antibiotics, prolonged hospitalization, and intra-abdominal source of infection.

↖ **33** ✓✓ ⊕⊕⊕◯ For adults with sepsis or septic shock, we **recommend** using prolonged infusion of beta-lactams for maintenance (after an initial loading dose) over bolus administration.

2021 STATEMENT
- ✓ ⊕⊕⊕◯ For adults with sepsis or septic shock, we **suggest** using prolonged infusion of beta-lactams for maintenance (after an initial bolus) over conventional bolus infusion.

34 ✓ ⊕◯◯◯ For adults with sepsis or septic shock, we **suggest** using antimicrobial therapeutic drug monitoring (TDM) on a case-by-case basis in selected patients, based on clinical features, local pathogen- and resistance patterns, drug class, and availability of TDM.

2021 STATEMENT
BEST PRACTICE STATEMENT For adults with sepsis or septic shock, we **recommend** optimizing dosing strategies of antimicrobials based on accepted pharmacokinetic/pharmacodynamic (PK/PD) principles and specific drug properties.

35 GOOD PRACTICE STATEMENT Clinicians should continuously reevaluate patients, search for alternative diagnoses, and discontinue empiric antimicrobial therapy if an alternative cause of illness is demonstrated or strongly suspected in adults with suspected sepsis or septic shock but unconfirmed infection.

↖ **36** ✓✓ ⊕◯◯◯ For adults with sepsis or septic shock, we **recommend** de-escalation of antimicrobial therapy over no de-escalation when a confirmed microbiological diagnosis and susceptibility profile is available.

2021 STATEMENT
- ✓ ⊕◯◯◯ For adults with sepsis or septic shock, we **suggest** daily assessment for de-escalation of antimicrobials over using fixed durations of therapy without daily reassessment for de-escalation.

Remark: De-escalation involves discontinuing unnecessary antimicrobial therapy or narrowing the spectrum of antimicrobial agents where appropriate.

37 ✓ ⊕◯◯◯ For adults with sepsis or septic shock, we **suggest** de-escalation of antimicrobial therapy over no de-escalation when no pathogens are identified on final culture results.

2021 STATEMENT
- ✓ ⊕◯◯◯ For adults with sepsis or septic shock, we **suggest** daily assessment for de-escalation of antimicrobials over using fixed durations of therapy without daily reassessment for de-escalation.

Remark: De-escalation involves discontinuing unnecessary antimicrobial therapy or narrowing the spectrum of antimicrobial agents where appropriate.

38 ✗ ⊕⊕◯◯ For adults with sepsis or septic shock who are receiving empiric antifungal therapy, we **suggest against** use of Candida fungal biomarkers to guide discontinuation of empiric antifungal therapy.

Remark: Use of Candida biomarkers to guide discontinuation of empiric antifungal therapy may be considered on a case-by-case basis in clinically improving selected patients at high risk of Candida infection, including patients with immunosuppression, prolonged use of antibiotics, prolonged hospitalization, and intra-abdominal source of infection.

39 ✓ ⊕◯◯◯ For adults with an initial diagnosis of sepsis or septic shock and adequate source control, we **suggest** using shorter over longer duration of antimicrobial therapy.

40 ✓ ⊕⊕◯◯ For adults with an initial diagnosis of sepsis or septic shock and adequate source control where optimal duration of therapy is unclear, we **suggest** using procalcitonin AND clinical evaluation to decide when to discontinue antimicrobial therapy over clinical evaluation alone.

41 ✓ ⊕⊕⊕◯ In mechanically ventilated adults with sepsis or septic shock in units with a low prevalence of antimicrobial resistance, we **suggest** using selective decontamination of the digestive tract (SDD).

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HEMODYNAMIC MANAGEMENT

42 ⊕◯◯◯ For adults with septic shock, we **suggest** using either invasive or non-invasive blood pressure monitoring.

Remark: Invasive blood pressure monitoring is advised in patients with shock who: require intermediate-to-high dose vasopressors, escalating doses of vasopressor, or multiple vasopressors; are receiving frequent arterial blood sampling; or have non-invasive blood pressure measurements which are inconsistent or repeated assessments.

2021 STATEMENT

✓ ⊕◯◯◯ For adults with septic shock, we **suggest** invasive monitoring of arterial blood pressure over noninvasive monitoring, as soon as practical and if resources are available.

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

↖ **44** ✓ ⊕⊕⊕◯ For adults with sepsis or septic shock undergoing initial resuscitation, we **suggest** using balanced crystalloids over 0.9% saline.

Remark: For patients with sepsis and traumatic brain injury, we **suggest** using 0.9% saline.

2021 STATEMENT

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

45 ✓ ⊕⊕⊕◯ For adults with sepsis or septic shock, we **suggest** using crystalloids alone over crystalloids with supplemental albumin for fluid resuscitation.

Remark: Use of supplemental albumin may be appropriate for patients who already received large crystalloid volumes or have cirrhosis. Supplemental albumin should be avoided in patients with traumatic brain injury.

2021 STATEMENT

✓ ⊕⊕⊕◯ For adults with sepsis or septic shock, we **suggest** using albumin in patients who received large volumes of crystalloids.

46 ✗✗ ⊕⊕⊕⊕ For adults with sepsis or septic shock, we **recommend against** using starches for resuscitation.

47 ✗ ⊕⊕⊕◯ For adults with sepsis and septic shock, we **suggest against** using gelatin for resuscitation.

↖ **48** ⊕⊕◯◯ For adults with sepsis or septic shock who have already received fluid resuscitation with 30 ml/kg and have persistent hypoperfusion, we **suggest** using either a liberal or a restrictive fluid resuscitation strategy based on individual patient and health system factors.

Remark: There was wide variability in the protocols used and the volume of fluids received in the liberal versus restrictive arms across trials. Patient and health system factors to be considered include patients' current clinical conditions and chronic illnesses (e.g., heart failure), and the availability of monitored beds (i.e., if a restrictive approach necessitates vasopressor use).

2021 STATEMENT

There is **insufficient evidence** to make a recommendation on the use of restrictive versus liberal fluid strategies in the first 24 hours of resuscitation in patients with sepsis and septic shock who still have signs of hypoperfusion and volume depletion after the initial resuscitation.

↖ **49** ✓ ⊕⊕◯◯ For adults with sepsis or septic shock, we **suggest** using dynamic measures to guide initial fluid resuscitation over physical examination or static measures alone.

Remark: Dynamic measures include response to a passive leg raise or a fluid bolus using stroke volume (SV), stroke volume variation (SVV), pulse pressure (PP), or pulse pressure variation (PPV).

2021 STATEMENT

✓ ⊕◯◯◯ For adults with sepsis or septic shock, we **suggest** using dynamic measures to guide fluid resuscitation, over physical examination, or static parameters alone.

50 For adults with septic shock, there is **insufficient evidence** to make a recommendation on using minimally invasive or non-invasive cardiac output monitoring in addition to usual care.

Remark: Minimally invasive cardiac output monitoring refers to devices requiring an arterial catheter. Non-invasive cardiac output monitoring refers to devices using bioreactance. Usual care refers to care without a pulmonary artery catheter. The use of critical care ultrasound was not evaluated.

51 ✓ ⊕⊕◯◯ For adults with sepsis and elevated lactate or septic shock, we **suggest** using serial lactate measurements to guide resuscitation.

Remark: Fluid administration should be individualized after initial fluid bolus and monitoring of lactate decrement, rather than continuing fluids until lactate normalization is achieved.

2021 STATEMENT

✓ ⊕⊕◯◯ For adults with sepsis or septic shock, we **suggest** guiding resuscitation to decrease serum lactate in patients with elevated lactate level, over not using serum lactate.

52 ✓ ⊕⊕◯◯ For adults with sepsis or septic shock, we **suggest** using capillary refill time to guide resuscitation as an adjunct to other measures of perfusion.

53 For adults with septic shock, we **recommend** using norepinephrine as the first-line agent over dopamine, epinephrine, or selepressin.

- ✓✓ ⊕⊕⊕⊕ *Dopamine*
- ✓✓ ⊕⊕◯◯ *Epinephrine*
- ✓✓ ⊕⊕◯◯ *Selepressin*

54 ✗ ⊕⊕◯◯ For adults with septic shock, we **suggest against** using terlipressin.

↘ **55** For adults with septic shock, we **suggest** using norepinephrine as the first-line agent over vasopressin or angiotensin II.

- ✓ ⊕⊕◯◯ *Vasopressin*
- ✓ ⊕◯◯◯ *Angiotensin II*

2021 STATEMENT

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

- ✓✓ ⊕⊕⊕◯ *Vasopressin*
- ✓✓ ⊕◯◯◯ *Angiotensin II*

56 ✓ ⊕⊕⊕◯ For adults with septic shock on escalating doses of norepinephrine, we **suggest** adding vasopressin.

↘ **57** ✓ ⊕◯◯◯ For adults with septic shock and inadequate MAP levels despite norepinephrine and vasopressin, we **suggest** adding epinephrine.

Remark: In settings where vasopressin is not available, epinephrine can be added to norepinephrine alone.

2021 STATEMENT

✓ ⊕⊕◯◯ For adults with septic shock and inadequate mean arterial pressure levels despite norepinephrine and vasopressin, we **suggest** adding epinephrine.

58 ⊕◯◯◯ For adults with septic shock with concomitant cardiac dysfunction, we **suggest** using either norepinephrine or epinephrine as first line vasopressor.

Remark: Norepinephrine may be preferred in patients with tachyarrhythmia or significant sinus tachycardia. Conversely, epinephrine may be preferred in patients with bradyarrhythmia or significant sinus bradycardia.

59 For adults with refractory septic shock and escalating vasopressor requirements, there is **insufficient evidence** to make a recommendation on IV methylene blue.

Remark: While methylene blue may improve blood pressure, there is insufficient evidence to determine if its use as rescue therapy improves survival; some patients with potentially treatable disease may value a trial.

Remark: ***In our practice,*** 69% of panelists 'never' or 'almost never' use methylene blue as rescue therapy, 23% 'sometimes' use it, 6%'usually' use it, and 1.5% 'almost always' use it.

↘ **60** ✓ ⊕◯◯◯ For adults with septic shock and cardiac dysfunction with persistent hypoperfusion despite adequate fluid status and arterial blood pressure, we **suggest** using inotropes over no inotropes.

Remark: For patients requiring vasopressors to maintain mean arterial pressure at target, inotropes should be used in addition to (not instead of) vasopressors.

2021 STATEMENT

⊕◯◯◯ For adults with septic shock and cardiac dysfunction with persistent hypoperfusion despite adequate volume status and arterial blood pressure, we **suggest** either adding dobutamine or using epinephrine alone.

↘ **61** ⊕◯◯◯ For adults with septic shock with persistent hypoperfusion and cardiac dysfunction despite adequate fluid resuscitation and arterial blood pressure, we **suggest** adding dobutamine to norepinephrine or using epinephrine alone.

Remark: Data were insufficient to make a recommendation for dobutamine versus milrinone.

2021 STATEMENT

⊕◯◯◯ For adults with septic shock and cardiac dysfunction with persistent hypoperfusion despite adequate volume status and arterial blood pressure, we **suggest** either adding dobutamine or using epinephrine alone.

62 ✗ ⊕⊕◯◯ For adults with septic shock and cardiac dysfunction with persistent hypoperfusion despite adequate volume status and arterial blood pressure, we **suggest against** using levosimendan.

63 For adults with septic shock and ongoing requirement for vasopressors, there is **insufficient evidence** to make a recommendation on use of oral midodrine.

64 ✗ ⊕◯◯◯ For adults with septic shock, we **suggest against** using beta-blockers as a treatment for septic shock.

Remark: This recommendation is based on evidence for short-acting, intravenous beta-blockers (esmolol & landiolol) prescribed for treatment of septic shock.

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RESPIRATORY SUPPORT

65 ⊕◯◯◯ For adults with sepsis, we **suggest** measuring oxygenation by either pulse oximeter (SpO_2) or arterial blood gas (SaO_2) in conjunction with physical examination and clinical acumen.

Remark: Arterial blood gas measurements are the gold standard for assessing oxygenation; include other important information such as pH, $PaCO_2$, lactate, and bicarbonate; and are preferable when available. SpO_2/FiO_2 by pulse oximeter may substitute for PaO_2/FiO_2 ratio, but is less accurate in patients in shock, with darker skin tones, and/or with oxygen saturations <90% or >97%.

66 ⊕⊕◯◯ For adults with sepsis and acute hypoxemic respiratory failure, we **suggest** titrating FiO_2 to target either higher, more liberal oxygen levels or lower, conservative oxygen levels depending on patient factors and resource limitations.

Remark: While there was variability across trials informing this recommendation, most used a lower target of approximately 90-93% SpO_2 and a higher target of $SpO_2 \geq 96$.

Remark: ***In our practice***, panelists target SpO_2 between 90% (IQR 90-92%) to 96% (IQR 94-98%) for patients with sepsis and acute hypoxemic respiratory failure.

67 ✓ ⊕◯◯◯ For adults with sepsis and acute hypoxemic respiratory failure, we **suggest** using high flow nasal cannula (HFNC) therapy over conventional oxygen therapy.

Remark: This recommendation pertains to patients with a PaO_2/FiO_2 ratio <200 or SpO_2/FiO_2 ratio <235.

68 ✓ ⊕⊕◯◯ For adults with sepsis and acute hypoxemic respiratory failure, we **suggest** using HFNC as the initial therapy over non-invasive positive pressure ventilation.

69 ✓ ⊕◯◯◯ For adults with sepsis and acute hypoxemic respiratory failure, we **suggest** using HFNC over high flow alternating with non-invasive positive pressure ventilation.

70 ✓ ⊕◯◯◯ For adults with sepsis and acute hypoxemic respiratory failure who are not intubated, we **suggest** a trial of awake proning.

Remark: The duration and frequency of proning will depend on patient tolerance. Sedation should not be used for the purposes of promoting tolerance of proning in non-intubated patients.

71 ✓✓ ⊕⊕⊕⊕ For adults with sepsis and ARDS, we **recommend** using a low tidal volume ventilation strategy (6 ml/kg) over a high tidal volume strategy (> 10 ml/kg).

72 ✓ ⊕⊕◯◯ For adults with sepsis acute hypoxemic respiratory failure without ARDS, we **suggest** using a tidal volume of 6 – 8 ml/kg IBW over a lower (4 to < 6 ml/kg IBW) tidal volume.

Remark: Patients should be screened regularly for development of ARDS, as ARDS diagnosis is often missed or delayed in clinical practice.

73 ✓✓ ⊕⊕⊕⊕ For adults with sepsis and ARDS, we **recommend** using an upper limited goal for plateau pressure of 30 cm H_2O) over higher plateau pressures.

74 ✓ ⊕⊕⊕◯ For adults with sepsis and moderate-severe ARDS, we **suggest** using higher PEEP over lower PEEP.

75 ✗✗ ⊕⊕⊕◯ For adults with sepsis and moderate-severe ARDS, we **recommend against** using an incremental PEEP titration strategy

76 ✓ ⊕⊕⊕◯ For adults with sepsis and moderate-severe ARDS, we **suggest** using prone ventilation for greater than 12 hours daily.

77 ✓ ⊕⊕⊕◯ For adults with sepsis and moderate-severe ARDS, we **suggest** using intermittent NMBA boluses over continuous NMBA infusion.

78 ✓ ⊕⊕◯◯ For adults with severe ARDS due to sepsis, we **suggest** using veno-venous ECMO when conventional mechanical ventilation fails in experienced centers with infrastructure to support its use.

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ADDITIONAL AND ADJUNCTIVE THERAPIES

↘ **79** ✓ ⊕⊕◯◯ For adults with septic shock, we **suggest** using intravenous corticosteroids.

2021 STATEMENT

✓ ⊕⊕⊕◯ For adults with septic shock and an ongoing requirement for vasopressor therapy, we **suggest** using IV corticosteroids.

80 ✗ ⊕◯◯◯ For adults with sepsis or septic shock and fever, we **suggest against** the use of antipyretic therapy, either pharmacologic or surface cooling, for the purpose of improving clinical outcomes.

Remark: This recommendation does not apply to using these interventions for pain control or patient symptom control, or patients with other indications for temperature control, such as neuro critical care patients or patients after cardiac arrest.

81 ✗ ⊕⊕◯◯ For adults with sepsis or septic shock, we **suggest against** using IV vitamin C.

82 ✗ ⊕⊕◯◯ For adults with sepsis or septic shock, we **suggest against** using intravenous immunoglobulins.

↘ **83** ✗ ⊕◯◯◯ For adults with sepsis or septic shock, we **suggest against** using blood purification therapies, including hemoperfusion, high-dose hemofiltration, or plasma exchange.

2021 STATEMENT

✗ ⊕⊕◯◯ For adults with sepsis or septic shock we **suggest against** using polymyxin B hemoperfusion.

84 ✗ ⊕⊕◯◯ For adults with sepsis or septic shock we **suggest against** using polymyxin B hemoperfusion.

85 ✗ ⊕◯◯◯ For adults with sepsis or septic shock, we **suggest against** the use of Vitamin D therapy for sepsis treatment

Remark: This recommendation does not pertain to patients who are on lower doses of vitamin D supplementation for other indications or receiving it as part of standard nutritional practice.

86 ✗ ⊕◯◯◯ For adults with sepsis or septic shock, we **suggest against** using XueBiJing injection outside of jurisdictions where it has regulatory approval.

87 ✓ ⊕⊕⊕◯ For adults with sepsis or septic shock, and who have risk factors for GI bleeding, we **suggest** the use of stress ulcer prophylaxis with the use of proton-pump inhibitors versus not using stress ulcer prophylaxis.

2021 STATEMENT

✓ ⊕⊕⊕◯ For adults with sepsis or septic shock, and who have risk factors for gastrointestinal (GI) bleeding, we **suggest** using stress ulcer prophylaxis.

88 ✗ ⊕⊕◯◯ For adults with sepsis or septic shock, we **suggest against** using probiotics.

89 ✓ ⊕◯◯◯ For adults with septic shock after the acute resuscitation phase, we **suggest** using active fluid removal.

Remark: Acute resuscitation refers to escalating doses of vasopressors, ongoing high doses of vasopressors, or needing ongoing volume expansion. Active fluid removal refers to diuretics and, if diuretics are insufficient, ultrafiltration or extracorporeal fluid removal. Factors to be considered when deciding to initiate active fluid removal include cardiorespiratory function; vasopressor dose; clinical course; peripheral edema; weight; and fluid balance.

90 ✓✓ ⊕⊕⊕◯ For adults with sepsis or septic shock, we **recommend** using a restrictive transfusion strategy over a liberal transfusion strategy.

91 ✓ ⊕◯◯◯ For adults with sepsis or septic shock, we **suggest** early (within 72 hours) initiation of enteral nutrition.

92 ✓✓ ⊕⊕⊕◯ For adults with sepsis or septic shock, we **recommend** initiating insulin therapy at a glucose level of ≥180 mg/dL (10 mmol/L)

93 ✗ ⊕⊕⊕◯ For adults with sepsis or septic shock and acute kidney injury, with no definitive indication for renal replacement therapy, we **suggest against** using renal replacement therapy.

94 ⊕⊕◯◯ For adults with sepsis or septic shock and acute kidney injury warranting renal replacement therapy, we **suggest** either continuous or intermittent renal replacement therapy.

95 ✗ ⊕⊕◯◯ For adults with septic shock and hypoperfusion-induced lactic acidemia, we **suggest against** using sodium bicarbonate therapy to improve hemodynamics or to reduce vasopressor requirements.

96 ✓ ⊕◯◯◯ For adults with septic shock, severe metabolic acidemia (pH ≤7.2), and acute kidney injury (AKIN score 2 or 3), we **suggest** using sodium bicarbonate therapy.

97 ✓✓ ⊕⊕⊕◯ For adults with sepsis or septic shock, we **recommend** using pharmacologic venous thromboembolism (VTE) prophylaxis unless a contraindication exists.

98 ✓✓ ⊕⊕⊕◯ For adults with sepsis or septic shock, we **recommend** using low molecular weight heparin over unfractionated heparin for VTE prophylaxis.

99 ✓ ⊕⊕⊕◯ For adults with sepsis or septic shock, we **suggest** using pharmacological VTE prophylaxis alone over pharmacological VTE prophylaxis plus mechanical VTE prophylaxis.

SYMBOL KEY:

Strength of Recommendation
- Strong Recommendation For
- Conditional Recommendation For
- Conditional Recommendation Against
- Strong Recommendation Against

Certainty of Evidence
- ⊕◯◯◯ Very Low
- ⊕⊕◯◯ Low
- ⊕⊕⊕◯ Moderate
- ⊕⊕⊕⊕ High

Type of Recommendation
- Carry Over
- New, Revised, or Revisited but Unchanged Statements

Change in Strength of Recommendation or Change in Certainty of Evidence
- ↖ Upgraded
- ↘ Downgraded

GOALS OF CARE

100 GOOD PRACTICE STATEMENT For adults with sepsis or septic shock, clinicians should discuss goals of care and prognosis with patients and/or families.

101 ⊕⊕◯◯ For adults with sepsis or septic shock, we **suggest** addressing goals of care early (within 72 hours) over late (72 hours or later).

102 For adults with sepsis or septic shock, there is **insufficient evidence** to issue a recommendation regarding the use of a specific standardized criterion to identify patients for goals of care discussions.

103 GOOD PRACTICE STATEMENT Health systems should implement strategies to ensure that patients being discharged from hospital after sepsis or septic shock have the opportunity to execute advance directives.

104 For adults with sepsis or septic shock, there is **insufficient evidence** to issue a recommendation on the systematic establishment of advance care directives prior to hospital discharge.

105 For adults with sepsis or septic shock, there is **insufficient evidence** to issue a recommendation regarding formal time-limited trials of critical care.

Remark: A time-limited trial (TLT) is a collaborative plan to use life-sustaining therapy for a defined duration, after which response to therapy informs the decision as to whether to continue or escalate curative intent ICU care or to instead focus on care with other goals.

106 GOOD PRACTICE STATEMENT The principles of palliative care (which may include palliative care consultation based on clinician judgment) should be integrated into the treatment plan, when appropriate, to address patient and family symptoms and suffering.

107 ⊕⊕◯◯ For adults with sepsis or septic shock, we **suggest against** routine formal palliative care consultation for all patients over palliative care consultation based on clinician judgment.

SYMBOL KEY:

Strength of Recommendation
- Strong Recommendation For
- Conditional Recommendation For
- Conditional Recommendation Against
- Strong Recommendation Against

Certainty of Evidence
- ⊕◯◯◯ Very Low
- ⊕⊕◯◯ Low
- ⊕⊕⊕◯ Moderate
- ⊕⊕⊕⊕ High

Type of Recommendation
- Carry Over
- New, Revised, or Revisited but Unchanged Statements

Change in Strength of Recommendation or Change in Certainty of Evidence
- ↖ Upgraded
- ↘ Downgraded

TRANSITIONS OF CARE

108 ⊕◯◯◯ For adults with sepsis and septic shock admitted to ICU, we **suggest** using a critical care transition program, compared with usual care, upon transfer to the floor.

109 ⊕◯◯◯ For adults with sepsis or septic shock, we **suggest** using a handoff process of critically important information at transitions of care over no such handoff process.

110 GOOD PRACTICE STATEMENT Hospitals and health systems should screen patients with sepsis or septic shock for economic and social support needs (including housing, nutritional, financial, and spiritual support) and make referrals where available to meet these needs.

111 GOOD PRACTICE STATEMENT For adults with sepsis or septic shock, comprehensive medication reconciliation should be performed at transitions in care, including at ICU and hospital discharge.

112 ⊕◯◯◯ For adults with sepsis or septic shock, we **suggest** comprehensive medication reconciliation using a pharmacist-based approach at transitions in care.

113 GOOD PRACTICE STATEMENT Clinical teams should provide adults with sepsis or septic shock and their families the opportunity to participate in shared decision making in post-ICU and hospital discharge planning to ensure discharge plans are acceptable and feasible.

114 GOOD PRACTICE STATEMENT For adult survivors of sepsis or septic shock and their families, clinicians should provide information about the hospital stay, sepsis and related diagnoses, treatments, and common impairments after sepsis in the written and verbal discharge summary.

115 GOOD PRACTICE STATEMENT For adults with sepsis or septic shock who developed new impairments, hospital discharge plans should include follow-up with clinicians able to support and manage new and long-term sequelae.

116 GOOD PRACTICE STATEMENT Healthcare systems should implement strategies to ensure that patients, their families, and their primary care providers are provided with adequate information to navigate the transition out of hospital.

117 For adults who survive hospitalization with sepsis or septic shock, there is **insufficient evidence** to issue a recommendation regarding a specific structured multi-component discharge planning process.

118 GOOD PRACTICE STATEMENT For adult survivors of sepsis or septic shock and their families, clinicians should provide information about the hospital stay, sepsis and related diagnoses, treatments, and common impairments after sepsis in the written and verbal discharge summary.

119 ⊕◯◯◯ For adults with sepsis and septic shock and their families, we **suggest** offering written and verbal sepsis education (diagnosis, treatment, post-ICU/sepsis syndrome) prior to hospital discharge and in the follow-up setting.

120 GOOD PRACTICE STATEMENT Health systems should implement strategies to ensure clinicians have the knowledge and competency to support sepsis survivors and their families during the post-hospital recovery.

121 There is **insufficient evidence** to issue a recommendation regarding providing sepsis-focused educational material to primary care providers as compared to usual care.

122 GOOD PRACTICE STATEMENT Health systems should implement strategies to support sepsis survivors and their families during the post-hospital recovery.

123 There is **insufficient evidence** to make a recommendation on early post-hospital discharge follow-up versus routine post-hospital discharge follow-up.

SYMBOL KEY:

Strength of Recommendation
- Strong Recommendation For
- Conditional Recommendation For
- Conditional Recommendation Against
- Strong Recommendation Against

Certainty of Evidence
- ⊕◯◯◯ Very Low
- ⊕⊕◯◯ Low
- ⊕⊕⊕◯ Moderate
- ⊕⊕⊕⊕ High

Type of Recommendation
- Carry Over
- New, Revised, or Revisited but Unchanged Statements

Change in Strength of Recommendation or Change in Certainty of Evidence
- ↖ Upgraded
- ↘ Downgraded

LONG-TERM OUTCOMES AND RECOVERY

124 GOOD PRACTICE STATEMENT Health systems should facilitate assessment and follow-up for physical, cognitive, and emotional problems after hospital discharge for sepsis or septic shock.

125 ⊕⊕◯◯ For adult survivors of hospitalization for sepsis or septic shock, we **suggest** offering post critical illness follow-up services.

Remark: Follow-up services may vary in format, intensity, and duration, depending on locally available resources and patient needs.

2021 STATEMENT
BEST PRACTICE STATEMENT For adults with sepsis or septic shock who developed new impairments, we **recommend** hospital discharge plans include follow-up with clinicians able to support and manage new and long-term sequelae.

126 ⊕⊕◯◯ For adult survivors of hospitalization for sepsis or septic shock who received invasive mechanical ventilation > 48 hours, we **suggest** offering physical rehabilitation services after hospital discharge.

Remark: Physical rehabilitation services may vary in format, intensity, and duration, depending on locally available resources and patient needs.

2021 STATEMENT
⊕⊕◯◯ For adult survivors of sepsis or septic shock receiving mechanical ventilation for > 48 h or an ICU stay of > 72 h, we **suggest** referral to a post-hospital rehabilitation program.

127 ⊕⊕◯◯ For adult survivors of hospitalization for sepsis or septic shock, we **suggest** offering services that support mental health after hospital discharge.

Remark: Mental health support services may vary in format, intensity, and duration, depending on locally available resources and patient needs.

128 GOOD PRACTICE STATEMENT Adult survivors of hospitalization for sepsis or septic shock who demonstrate clinical symptoms of mental health disorders should be referred to appropriate healthcare professionals for evaluation and management.

129 For adult survivors of hospitalization for sepsis or septic shock, there is **insufficient evidence** to issue a recommendation regarding cognition-targeted therapies versus usual care.

Remark: Where cognitive-targeted therapies are being used, it is reasonable to continue using them as they are likely acceptable and feasible.

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