

## Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016

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**Introduction:** Sepsis is life-threatening organ dysfunction caused by a dysregulated host response to infection. Sepsis and septic shock are major healthcare problems, affecting millions of people around the world each year, and killing as many as one in four (and often more). Similar to polytrauma, acute myocardial infarction, or stroke, early identification and appropriate management in the initial hours after sepsis develops improves outcomes.

**Objective:** The panel consisted of five sections: hemodynamics, infection, adjunctive therapies, metabolic, and ventilation. Population, intervention, comparison, and outcomes (PICO) questions were reviewed and updated as needed, and evidence profiles were generated. Each subgroup generated a list of questions, searched for best available evidence, and then followed the principles of the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) system to assess the quality of evidence from high to very low, and to formulate recommendations as strong or weak, or best practice statement when applicable.

**Results:** The Surviving Sepsis Guideline panel provided 93 statements on early management and resuscitation of patients with sepsis or septic shock. Overall, 32 were strong recommendations, 39 were weak recommendations, and 18 were best-practice statements. No recommendation was provided for four questions.

### Example recommendations:

- We recommend that, in the resuscitation from sepsis induced hypoperfusion, at least 30 mL/kg of IV crystalloid fluid be given within the first 3 hours
- We recommend that, following initial fluid resuscitation, additional fluids be guided by frequent reassessment of hemodynamic status
- Remarks: Reassessment should include a thorough clinical examination and evaluation of available physiologic variables (heart rate, blood pressure, arterial oxygen saturation, respiratory rate, temperature, urine output, and others, as available) as well as other noninvasive or invasive monitoring, as available.
- We suggest that dynamic over static variables be used to predict fluid responsiveness, where available
- We recommend that a fluid challenge technique be applied where fluid administration is continued as long as hemodynamic factors continue to improve

**Conclusion:** Substantial agreement exists among a large cohort of international experts regarding many strong recommendations for the best care of patients with sepsis. Although a significant number of aspects of care have relatively weak support, evidence-based recommendations regarding the acute management of sepsis and septic shock are the foundation of improved outcomes for these critically ill patients with high mortality.