

Surviving sepsis campaign update focuses on critical first hour

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For patients with sepsis, a serious infection causing widespread inflammation, immediate treatment is essential to improve the chances of survival. An updated "Hour-1 Bundle" of the international, evidence-based guidelines for treatment of sepsis is introduced in the June issue of *Critical Care Medicine*. The official journal of the Society of Critical Care Medicine (SCCM), *Critical Care Medicine*.

The 2018 update of the Surviving Sepsis Campaign (SSC) focuses on five treatment steps that healthcare professionals should initiate within the first hour after recognizing sepsis. "Like multiple trauma, heart attack, or stroke, sepsis is a medical emergency," comments Mitchell M. Levy, MD, MCCM, of Brown University School of Medicine, lead author of the latest SSC update. "Our revised Hour-1 Bundle reflects the clinical reality at the bedside of seriously ill [patients](#) with sepsis or [septic shock](#)—with the explicit intention of beginning resuscitation and management immediately."

Update to SSC Bundle Aims to Further Improve Survival for

Patients with Sepsis Sepsis is a common and potentially life-threatening condition, occurring when the immune system mounts an overwhelming inflammatory response to infection in the blood or elsewhere in the body. Septic shock occurs when sepsis leads to a sharp drop in blood pressure and other metabolic abnormalities, with a risk of progression to organ failure.

The SSC is a global cooperative effort to improve treatment of sepsis

and reduce its associated high mortality rate. The first SSC treatment bundle was introduced in 2004, followed by frequent updates in response to new evidence. Studies have shown significant reductions in the risk of sepsis-related death after implementation of the SSC guidelines.

Reflecting the latest evidence, the Hour-1 Bundle highlights five steps that healthcare professionals should begin as soon as sepsis is recognized:

- Measure the blood *lactate level*. A high lactate level may indicate that the tissues are not getting enough oxygen from the blood and may identify a patient at higher risk of further deterioration.
- Perform *blood cultures* to identify the cause of the infection. Blood samples should be taken before antibiotics are administered, if possible.
- Administer *broad-spectrum antibiotics* that are active against the causative organism.
- Start *intravenous fluids*. Fluid resuscitation is an essential step to stabilize the patient's condition.
- Administer *vasopressors* to raise [blood](#) pressure. This is a critical resuscitation step in patients with septic shock.

"There is no reason to delay treatment for patients with sepsis and septic shock," Dr. Levy comments. "Recognizing the urgent need to treatment, clinicians must (and many already do) begin [treatment](#) immediately, rather than waiting for 3 or 6 hours in these critically ill patients."

The authors point out that the new revision is based on the [2016 SSC guidelines update](#), which provides further discussion and evidence related to each step and to comprehensive management of sepsis. They also note some important gaps in current knowledge, including the need for further studies in important subgroups such as patients with burns and compromised immune function.

Dr. Levy and coauthors emphasize that the Hour-1 Bundle should be implemented in emergency departments, intensive care units, and throughout the hospital "as the next iteration of ever-improving tools in the care of patients with sepsis and septic shock as we all work to lessen the global burden of [sepsis](#)."

More information: "The Surviving Sepsis Campaign Bundle: 2018 Update" [DOI: 10.1097/CCM.0000000000003119](https://doi.org/10.1097/CCM.0000000000003119)

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