



3 ways point of care ultrasound can improve sepsis outcomes

Sepsis is an irrefutable problem

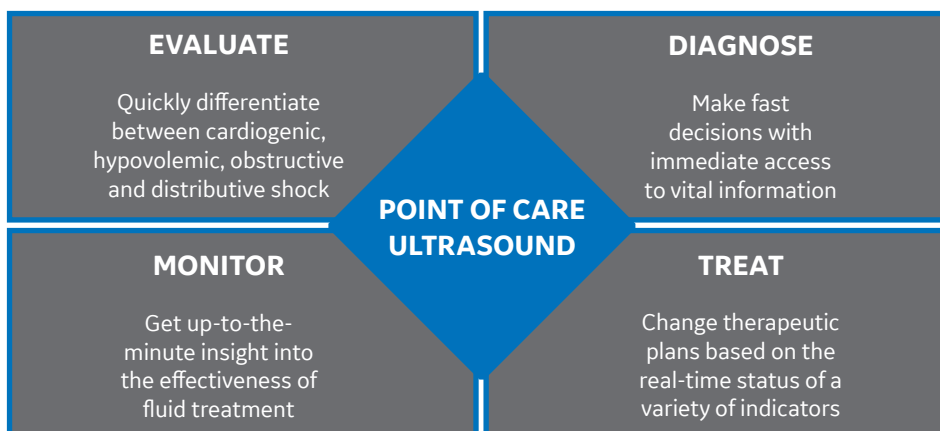
Septic shock is a leading cause of death worldwide. Severe sepsis strikes more than a million Americans every year at an annual cost of more than \$20 billion.¹ This rate is at risk of increasing due to an aging population, drug-resistant bacteria and an increase in patients with weakened immune systems. Providers recognize that increased vigilance around the prevention and early detection of sepsis is key to better outcomes for their patients but often struggle to make a significant positive impact.

Does your organization leverage every resource to prevent and treat sepsis?

There is a broad body of research that validates the effectiveness of ultrasound in the prevention, detection and treatment of sepsis. In a recent study, providers demonstrated that sepsis protocols that integrate point of care ultrasound into the initial patient assessment led to more accurate identification of septic sources within ten minutes, versus hours with traditional work-ups.²

Even though it's proven that ultrasound can bring extreme efficiency to the assessment and management of patients in medical shock it is generally an underutilized tool in sepsis prevention and treatment. It's time for that to change.

Ultrasound can add value at every step of treatment in your patients with sepsis



The potential benefits of point of care ultrasound in sepsis cases



Fast, accurate diagnoses stop cascade effects before they become irreversible



Enables clinical effectiveness by arming providers with real-time imaging results



Limits patient exposure to ionizing radiation - especially relevant in pediatric cases



Potentially reduces costs by helping providers quickly and effectively determine the root cause of sepsis

Adopt point of care ultrasound to impact sepsis outcomes

1.) Early detection of pneumonia and lung infection

From pediatric to geriatric cases, pneumonia is the leading cause of sepsis. Point of care ultrasound may improve your detection of lung infection because it is faster than a standard chest x-ray and does not expose patients to ionizing radiation. Ultrasound systems with automated B-line tools enable physicians to quickly map out zones of the lung and assess sub-pleural consolidations. Unlike traditional chest x-ray procedures this information is readily available to the treating physician in the patient's room or the ER where it may immediately impact a care plan and quickly provide insight into a patient's response to therapy.

Using point of care ultrasound to assess lungs in real-time may also improve workflow hospital-wide. During recent outbreaks of influenza viruses when emergency rooms were inundated with patients at risk of developing lung infections, ultrasound alleviated workflow bottlenecks related to the throughput of x-ray studies and reports.

2.) Timely and effective cardiac output assessment

A key question in the evaluation of a septic patient is whether or not their heart is pumping enough blood to their organs. Point of care ultrasound systems help clinicians more quickly assess cardiac activity and output. They include automated tools to measure flow through the left ventricular outflow tract. With this information, clinicians can more effectively gauge whether or not a patient will be responsive to fluids, a key part of sepsis treatment. When ultrasound is not available at the point of care these assessments may be delayed and needed therapy options may not be prescribed in time to make an impact in the early treatment of sepsis.

3.) Automatic gauge of IVC collapsibility

The collapsibility of a patient's IVC can be informative of their fluid status. Comprehensive point of care ultrasound systems can automatically calculate the IVC collapsibility and distensibility indices. When clinicians have real-time data on how much this vein collapses during a breathing cycle, they can respond and recommend the appropriate treatment for their patients.

Recruit point of care ultrasound into your sepsis prevention strategy

Sepsis remains a critical issue that requires a proactive approach from all stakeholders in a health system. In this battle critical care providers need to utilize every resource at their disposal. Equipping care teams with point of care ultrasound systems that have comprehensive shock tools is one proven way to improve early sepsis detection and shock outcomes.

To learn more contact your GE Ultrasound specialist or visit gehealthcare.com/poc-products

¹Hershey TB, Kahn JM. State sepsis mandates—a new era for regulation of hospital quality. *N Engl J Med* [Internet]. 2017 May 21; 376:2311-2313. Retrieved from: <https://www.nejm.org/doi/full/10.1056/NEJMp1611928>

²Cortellaro, F., Ferrari, L., Molteni, F. et al. *Intern Emerg Med* (2017) 12: 371. <https://doi.org/10.1007/s11739-016-1470-2>

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JB59955US



Venue™ includes a Shock Toolkit

Tools that enable clinicians to get the information they need to make fast decisions about patients at risk of sepsis shock

Auto B-line:

Highlights and counts B-lines in real-time, tracks segmental lung assessment and shows trends in response to therapy.

Auto VTI:

Helps assess flow through the left ventricular outflow tract by calculating the velocity time integral and cardiac output in a single step.

Auto IVC:

Measures IVC diameter changes and displays real-time results of respiratory cycles.