

Baxter

Starling

FLUID MANAGEMENT
MONITORING SYSTEM

SEPTEMBER IS SEPSIS AWARENESS MONTH

Time to Learn More About:

- The FRESH Trial Findings and Sepsis Patients
- The connection between COVID-19, Sepsis and Fluid Management
- Improving SEP-1 Compliance with the **Starling** System



STARLING FLUID MANAGEMENT MONITORING SYSTEM
NON-INVASIVE. PRECISE. INDIVIDUALIZED.

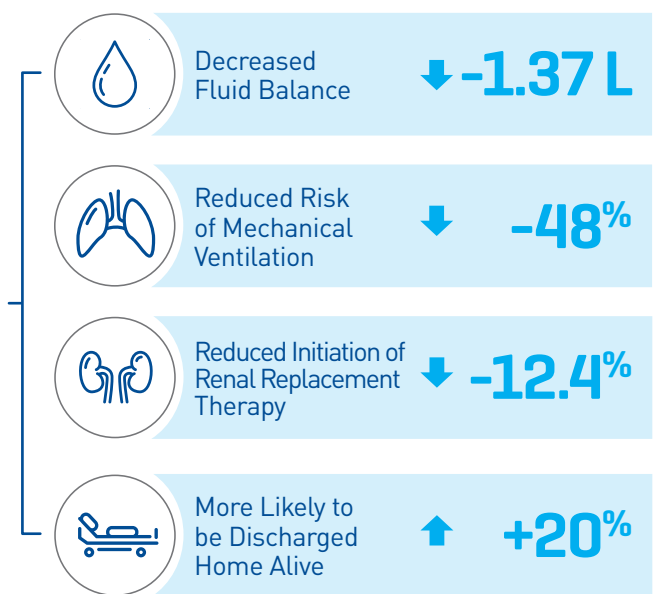
Visit USStarling.Baxter.com for more information.

THE FRESH TRIAL FINDINGS AND SEPSIS PATIENTS

IMPROVED CLINICAL AND ECONOMIC OUTCOMES

The 2020 FRESH (Fluid Responsiveness Evaluation in Sepsis-associated Hypotension) trial is the first prospective, multi-center randomized controlled clinical trial to demonstrate improved outcomes when a dynamic assessment of fluid responsiveness was used to guide treatment in sepsis patients.¹

The FRESH clinical trial involved 124 sepsis patients at 13 hospitals in the United States and the United Kingdom. Fluid management decisions guided by dynamic assessments of fluid responsiveness (passive leg raise) resulted in significantly lower net fluid balance, reduced respiratory and renal dysfunction, and increased likelihood of being discharged home alive when compared with usual care.



Estimated
POTENTIAL SAVINGS
\$14K
per treated patient

FRESH adds to the growing body of literature that supports the use of stroke volume-guided fluid resuscitation. The results of the study are consistent with a retrospective, matched, single-center study of nearly 200 patients with severe sepsis and septic shock conducted out of the University of Kansas. Researchers found that implementing a stroke volume-guided fluid management strategy in sepsis and septic shock patients may be associated with a more than \$14,000 reduction in the cost of care per patient.²

TAKE THE GUESSWORK OUT OF FLUID ASSESSMENT

The FRESH trial provides a roadmap on how to manage fluid vs. vasopressor decisions using dynamic assessments in sepsis patient care. The **Starling** Fluid Management Monitoring System can provide a complete hemodynamic profile of your sepsis patients and your COVID-19 patients to guide and tailor fluid decisions and help optimize care for these patients.

THE CONNECTION BETWEEN COVID-19, SEPSIS AND FLUID MANAGEMENT

COVID-19 — in severe cases — has the same cascading effect on the body as viral sepsis,³ and the same treatment paradigm in fluid management applies to both viral sepsis and COVID-19 patients. As with septic shock patients, volume status of COVID-19 patients is dynamic and can range from severe hypovolemia to overt hypervolemia. Managing these patients is complex, and achieving an “optimal” intravascular volume is crucial for maintaining adequate tissue perfusion while minimizing third-spacing.⁴

WHO COVID-19 Guidelines recommend the use of dynamic assessments of fluid responsiveness as one of the pathways to guide fluid decisions in COVID-19 patients⁵ and help protect them from respiratory failure and acute kidney injury.⁶

“Even before COVID-19, the global impact of sepsis was astonishing and vastly underestimated. With 150 million cases of COVID-19 leading to nearly 5 million deaths in less than 18 months, it is more important than ever to appreciate that COVID-19 may manifest as sepsis.”

- Greg S. Martin, SCCM President

The **Starling** Fluid Management Monitoring System is 100% non-invasive and helps clinicians:

- Accurately measure stroke volume and cardiac output in COVID-19 patients
- Support sepsis and COVID-19 patients hemodynamically
- Help optimize perfusion and treatment decisions regarding fluids and vasopressors
- Determine whether fluid administration will be effective
- Deliver personalized fluid therapy

IMPROVING SEP-1 COMPLIANCE WITH THE STARLING SYSTEM

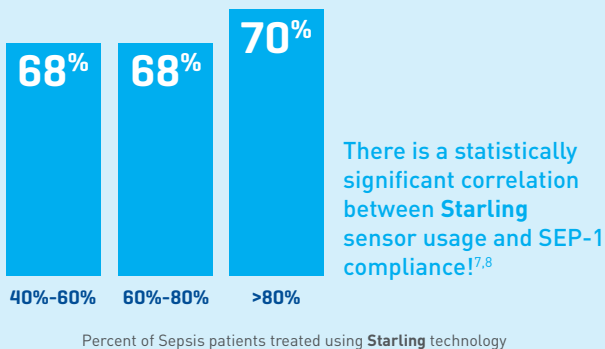
SEP-1 — a Quality Measure issued by CMS — stipulates a protocol for treating severe sepsis or septic shock patients. U.S. hospital SEP-1 compliance levels are now publicly reported at Medicare.gov Hospital Compare.*

Based on CMS data, hospitals utilizing **Starling** system technology in the treatment of sepsis exhibited significantly increased compliance with SEP-1 measures.^{7,8} Increased use of the passive leg raise to check fluid responsiveness may be an important step on the pathway to increased SEP-1 performance and improved patient care.

The **Starling** system can offer an accurate, reliable, and 100% non-invasive method to measure flow continuously at the patient’s core and deliver meaningful insights to guide clinical decision-making, helping to eliminate preventable harm and improve patient and economic outcomes.

- **Starling** allows your hospital to meet the reassessment of volume status and tissue perfusion of the 6-hour bundle, with a simple and easy to use nurse-driven PLR
- Works in mechanically ventilated and spontaneously breathing patients^{9,10}
- Not affected by vasoactive drugs or arrhythmias
- Moves seamlessly across the continuum of care: **ED > ICU > OR > RRT > Floor**

AVG SEP-1 COMPLIANCE RATES OF HOSPITALS UTILIZING STARLING TECHNOLOGY



*medicare.gov/hospitalcompare/search.html

SEPSIS AWARENESS MONTH EDUCATIONAL EVENTS

Baxter Healthcare is pleased to sponsor multiple Sepsis Awareness educational events during Sepsis Awareness Month this year.



JOIN US FOR THE SEPSIS ALLIANCE SUMMIT, SEPTEMBER 14TH-16TH.

Immerse yourself in this free event featuring three days of high-quality sepsis education. Visit sepsis.org/events for Summit dates and registration information.

Baxter-sponsored Session: Dr. Andre Holder, Grady Health System
Session Name: Chasing FRESH Dreams: The Promise of Dynamic Measures of Fluid Responsiveness to Optimize Sepsis Resuscitation
Session Time: Sept 15th 9:45AM PT/ 12:45 PM ET



LEARN ABOUT THE IMPORTANCE OF UTILIZING DYNAMIC ASSESSMENTS OF FLUID RESPONSIVENESS IN PATIENTS WITH VIRAL SEPSIS, INCLUDING COVID-19.

Dr. Patrick Troy, Division Director of Pulmonary, Critical Care and Sleep Medicine at Hartford Hospital, is being interviewed on the "SCCM Hot Topic Podcast". The podcast will be available on demand on any podcast platform starting September 1st.



THE FRESH STUDY HAS BEEN IDENTIFIED AS ONE OF THE TOP ARTICLES FROM 2020 BY CHEST!

Join us for CHEST 2021 on October 17th-20th in Orlando, Florida where Dr. Ivor Douglas, Chief of Pulmonary Sciences & Critical Care Medicine at Denver Health Medical Center and Professor at University of Colorado, will be presenting details of the FRESH Trial at the "Best of CHEST Journal" Session.

REFERENCES

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10. Raval NY, Squara P, Cleman M, Yalamanchili K, Winklmaier M, Burkhoff D. Multicenter evaluation of noninvasive cardiac output measurement by bioimpedance technique. *J Clin Monit Comput*. 2008;22(2):113-119. doi:10.1007/s10877-008-9112-5.

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US-MD6-210074 V1 07/21