



RECENTLY PUBLISHED SEPSIS STUDY SUPPORTS USING STROKE VOLUME FOR GUIDING FLUID RESUSCITATION STRATEGIES WHILE REDUCING ICU LENGTH OF STAY BY 33%

September 2017. NEWTON, Mass.–(BUSINESS WIRE)—Cheetah Medical, a Massachusetts based leader in non-invasive hemodynamic monitoring, announced the publication of a major clinical study designed to evaluate stroke volume guided resuscitation in ICU patients with severe sepsis and septic shock. Initial results of this study were previously presented at the International Symposium on Intensive Care and Emergency Medicine (ISICEM) Congress in Brussels, and the full study is now published online in the [Journal of Critical Care](#).

The results, authored by Drs. Heath Latham and Steven Q. Simpson from the University of Kansas Health System, demonstrate strong clinical value for fluid resuscitation strategies using Stroke Volume and dynamic assessments, and guided by Cheetah Medical technology:

- ICU Length of Stay: reduced by 2.89 days
- Risk of Mechanical Ventilation: reduced by 51%
- Initiation of Acute Dialysis Therapy: reduced by 13.25%
- Pressor Use: reduced by 32.78 hours
- Fluid Balance: reduced by 3.59L

Sepsis is the most expensive inpatient cost to hospitals in the United States, costing an average of \$25,000 – \$50,000¹ per episode. The positive clinical outcomes from this study, in turn, can enhance patient safety and result in a significant reduction of these costs.

Major societies, including the Surviving Sepsis Campaign and National Quality Forum, have recently updated their sepsis management guidelines to recommend dynamic assessment of fluid responsiveness. Research shows that serious complications can result from giving a patient too little or too much IV fluids, which can lead to increased length of stay, increased mortality and increased complications.

“This study builds on the broad outcome data in the surgical literature showing the value of using dynamic assessments to guide fluid management. It is exciting to see the role that Cheetah can play in these strategies to improve care in sepsis patients.” said Dr. Doug Hansell, Chief physician Executive at Cheetah Medical.

Dr. Heath Latham from the University of Kansas Health System, comments, **“We embarked on this study with the hypothesis that actively managing patients’ fluids was associated with improved clinical outcomes. The study demonstrated positive patient outcomes from actively monitoring resuscitation by optimizing stroke volume, that can be translated to significant cost savings to the hospitals caring for**

these very critical patients. University of Kansas Health System realized an associated savings of about \$14 million for 1,000 sepsis patients that were monitored by Cheetah technology.”

Details about the factors making up these financial savings can be found at www.cheetahmedical.com.

About Cheetah Medical

Cheetah Medical is the pioneer and leading global provider of 100% noninvasive hemodynamic monitoring technologies which are designed for use in critical care, operating room, general care floor, and emergency department settings. The CHEETAH NICOM™ and STARLING™ SV technologies use a proprietary algorithm to provide accurate and precise data, enabling clinicians to quickly see a patient’s full hemodynamic profile. Medical professionals use this information to assess patients’ unique volume requirements, guide volume management decisions and maintain adequate organ perfusion. Cheetah Medical technologies are designed to enable more confident, informed therapy decisions that support clinical goals of improving patient outcomes and driving economic efficiencies.

¹ Martin GS. Sepsis, severe sepsis and septic shock: changes in incidence, pathogens and outcomes. Expert Rev Anti Infect Ther 2012; 10(6) 701-706.