

# Increasing Detection and Standardizing Care for the Treatment of Severe Sepsis

## Team Members:

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## Background/Objectives:

Severe sepsis kills approximately 1,400 people world wide each day and is identified as the leading cause of death in the non-coronary ICU. Patient safety continues to be one of our hospital's leading strategic goals. Consequently, we actively engaged in the Surviving Sepsis Campaign via the Institute for Healthcare Improvement's Critical Care Learning Collaborative in January 2006. We agreed to adopt the Surviving Sepsis Campaign's goal of a 25% reduction in mortality.

## Methods/ Program Description:

Both sepsis bundles (resuscitation and management) were first tested in our surgical ICU and emergency department in January 2006. The resuscitation and management bundles were modified by our pediatric ICU medical staff for pediatric use. The modified bundles were then tested in our pediatric ICU and pediatric urgent care. The initiative continued to spread throughout the hospital, specifically to our medical ICU and medical/surgical units.

Each of our critical care units developed a severe sepsis screening tool that was pertinent to their patient population. All patients are screened in the critical care units at admission, daily and as needed. Severe sepsis screening was also built into our triage system in the emergency department. All patients presenting with suspected severe sepsis are identified as level two (e.g., high risk situation). In addition, the severe sepsis screening tool designed by the Surviving Sepsis Campaign was copied on the back of our rapid response team (RRT) form to ensure sepsis screening at each RRT call.

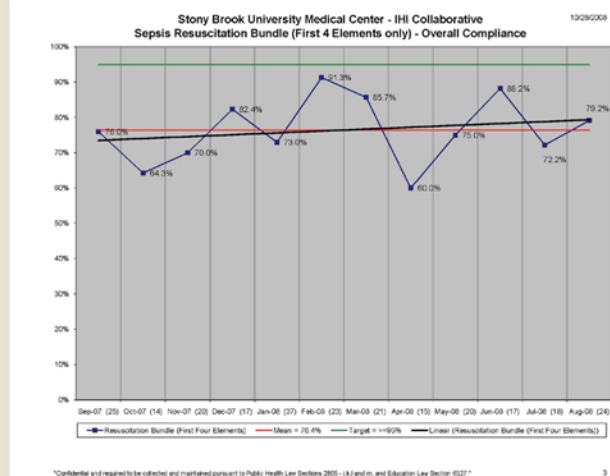
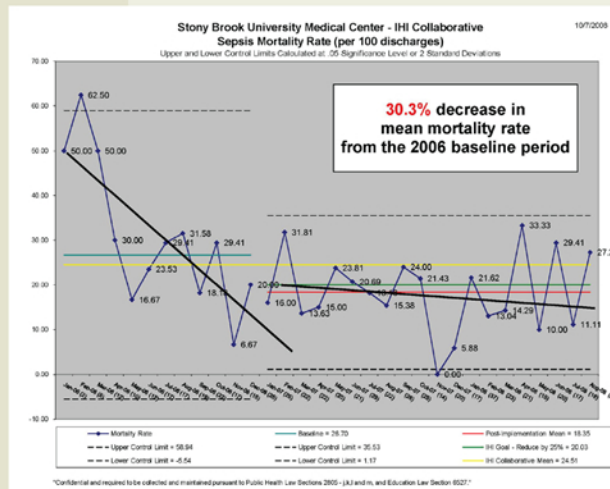
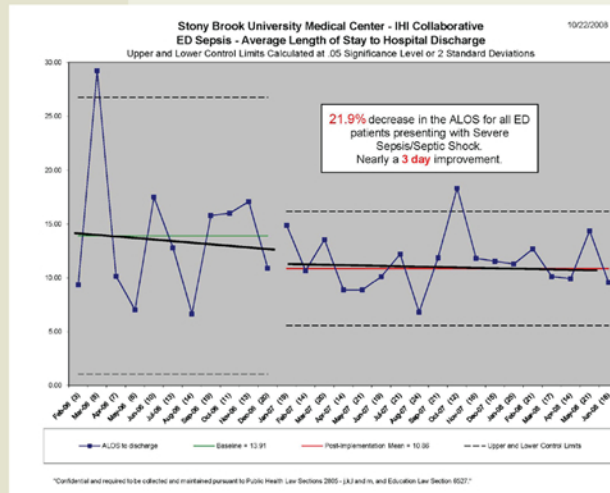
A fever panel containing the measuring of serum lactate was instituted in the emergency department. Patients presenting with a fever greater than 38.3 °C were flagged at the triage desk. This action triggered the ordering of the fever panel by the ED physician. A rule out sepsis panel was also instituted in our ED for further identification of organ dysfunction.

## Results/Evaluation/Key Findings:

- 30.3% reduction post implementation in the severe sepsis mortality rate over the baseline period;
- 16.6% increase post implementation in the compliance of the resuscitation bundle over the baseline period;
- 21.9% decrease in average length of stay post implementation for patients admitted through the emergency department as compared to the baseline period;
- Patients were discharged approximately 3 days sooner during the post implementation period as compared to the baseline period, resulting in an estimated \$3,500 - \$8,500 savings in cost of stay per patient.

## Conclusions/Lessons Learned/Implications:

People do what you inspect, not always what you expect; Perception is not always reality; Continual feedback increases reliability; Seek out your physician champion to engage in one small test of change; Drill-downs are insightful; Leadership support is key to successful hospital spread of initiatives; Small tests of change are easier to accept rather than wide-spread change; It's better to test and modify protocols from other hospitals than it is to create protocols from scratch; Standardization of care aids in the reliability of the services provided to the patient; Decreased variation in the delivery of care is associated with improved compliance and better outcomes; Breaking down the bundles into smaller, attainable steps (first 4 resuscitation bundle elements) assists in achieving compliance.



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