Implementing and Sustaining an Evidence-Based Sepsis Program in a Community Hospital
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Problem: National mortality from severe sepsis or septic shock remains 40-60%.

Evidence: Patients with severe sepsis/septic shock experience multi-system organ failure, co-morbidities, and a high mortality rate. The Society of Critical Care Medicine published the Surviving Sepsis guidelines in 2005 to provide an evidence-based approach to treating patients with severe sepsis and septic shock.

Strategy: A collaborative approach to identifying and treating sepsis started with adoption of guidelines for screening, identification, initiation of treatment, and ongoing care. Staff was educated on the program prior to initiation. Each patient with a diagnosis of severe sepsis or septic shock was monitored concurrently and retrospectively. Outcome data was reported quarterly to physicians, staff, and hospital committees.

Practice Change: Every patient admitted through the Emergency Department or identified as a possible septic patient by the Rapid Response Team was screened and entered into the treatment bundles as appropriate.

Evaluation: Baseline data from patients receiving standard therapy was collected retrospectively using the IHI Individual Chart Measurement tool and an APACHE II score. All adult patients admitted to the critical care unit with a diagnosis of sepsis from 2007-2009 were reviewed using the same tools.

Results: Patient demographics and APACHE-II scores were equal among groups. From 2006 to 2007, mortality due to use of sepsis guidelines was reduced from 61.1% to 20% (p<0.0001) with a sustained 24% rate of hospital mortality over the three years. Additionally, bundle patients received more fluids in the first 24 hours (p<0.0001), experienced fewer episodes of acute renal failure requiring dialysis (p=0.02), and fewer days on vasopressors (p=0.011). A reduction in co-morbidities has been sustained over the three years.

Recommendation: Implementation of sepsis guidelines through a multidisciplinary approach can reduce morbidity and mortality in patients diagnosed with severe sepsis and septic shock.

Lessons Learned: The key to sustaining this EBP project was ongoing data review and quarterly reporting to all departments involved, hospital committees, and leadership.