

Reducing Sepsis Mortality: A Collaborative Approach

Nicki S. Roderman, RN, MSN, CCRN

Medical Center of Plano

Hollie Gehring

Problem - National mortality from severe sepsis or septic shock is documented as 40-60% . This facility did not have a treatment guideline for patients with these diagnoses.

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's Surviving Sepsis Campaign was published with the goal of increasing awareness, improving early diagnosis, and providing treatment guidelines.

Strategy - A baseline examination of patients treated in the critical care unit for severe sepsis or septic shock was conducted. An order bundle containing a screening tool and treatment orders was created and implemented after staff education and was completed. Each patient entered into the bundle was monitored.

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 bundle as appropriate.

Evaluation - All patients treated with the bundle from January 1, 2007 through December 31, 2007 were monitored. Data collected included demographics, APACHE-II scores, ICU and hospital length of stay, vasopressor days, ventilator days, and episodes of renal failure on both the baseline group and treatment group.

Results - Patient demographics and APACHE-II scores were equal between the two groups. Patient mortality was reduced from 62.2% in 2006 to 22% in 2007. Additionally, there were fewer episodes of acute renal failure, days on the ventilator, and days on vasopressors. ICU and hospital lengths of stay were lower as well. Statistical analysis will be completed by 3/08.

Recommendation - The implementation of a sepsis bundle through a multidisciplinary approach can reduce morbidity and mortality in patients diagnosed with severe sepsis and septic shock. Cooperation between the Emergency Department, Critical Care Unit, Pharmacy and Medical Staff are imperative for a successful sepsis program.

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