Abstract

Background: Despite modern therapies, sepsis remains one of the most prevalent causes of mortality in the intensive care unit. Overwhelming evidence exists to support the notion that early recognition is the key to sepsis survival. Proper recognition is difficult, as many manifestations of progressing sepsis may be mistaken for other common intensive care unit disorders. The Third International Consensus Definitions for Sepsis and Septic Shock as well as the Surviving Sepsis Campaign recommend continual assessment of critically ill patients for sepsis via a formal screening format and improved management of patients using approved sepsis algorithms. A large southeastern academic medical center, faced with above average sepsis mortality rates, could potentially benefit from a standardized nurse-driven sepsis assessment tool.

Methods: A quality improvement study was designed and implemented to standardize the assessment and management of critically ill patients for sepsis. The sequential organ failure assessment was integrated into the hospital’s electronic health record to alert critical care nurses of patients’ worsening organ dysfunction. Retrospective data was then obtained and analyzed on two independent pre- and post- intervention samples.

Results: Sepsis-associated mortality in the intensive care unit was decreased overall by 7%. Improvements were also noted intervention metrics such as a timely lactate, obtaining blood cultures prior to antibiotic administration, and timely fluid bolus.

Conclusions: A 7% reduction in sepsis-associated mortality occurred with the implementation of a nurse-driven sepsis screening protocol and updated sepsis management algorithms. Although statistical significance was not found, clinically significant reduction in mortality as well as improved intervention metrics are efficacious.