

Title: Getting the Bugs Out of Sepsis Care to Improve Patient Outcomes

Authors: Mai Dotran\*, RN, BSN; Sierra Schneider, RN, Sepsis Coordinator; Ann Alway, MS, RN, CNS, CNRN

Problem:

Sepsis is a life-threatening response to infection which may lead to organ failure or death. Since there is no single indicator to identify sepsis and can be masked by other conditions, it is difficult to detect early and may lead to delayed treatment. A Sepsis Affinity Group gathered a multidisciplinary team to problem solve why Severe Sepsis (SvS) and Septic Shock (SSH) patients were having increased length of stay (LOS) and readmission rates (RR) which in turn increases cost for both patients and the organization.

Background/Evidence/Aim:

Per the evidenced based approaches directed by the Institute for Healthcare Improvement and Surviving Sepsis Campaign, the team used LEAN methodology to problem solve and hypothesized: If we create a system to follow evidence-based practice sepsis guidelines, then we can reduce RR to 12.5% and decrease average LOS by one day for Severe Sepsis and Septic Shock patients

Strategies:

Multifocal tactics were implemented in the Emergency Department (ED), Intensive Care Unit (ICU), Intermediate Care Unit (IMCU), Adult Health providers. First of all, ED teams developed a sepsis screening tool. They also created a severe sepsis alert to increase rapid interventions for high risk patients. Next steps included bundle compliance efforts at every patient position using a clinical pathway in ICU and IMCU, where nurses received one-on-one training on the purpose and function of the pathway. Providers revised a sepsis order set to increase rapid interventions on patients who have had the sepsis clinical pathway initiated.

Outcomes:

The use of the revised sepsis screen in ED increased from 54 to an average of 106 per month. The LOS with SvS has improved from 7.46 to 6.63, while the RR dropped from 17.6% to 15.8%. In SSH, the LOS improved from 9.51 to 7.9, with minimal change in RR; 20.7% to 20.1%. Since project inception, cost saving in LOS over a 12 month rolling period is \$1,251,867.00 and RR savings are \$67,262.00. Clinical pathway use increased from 30/month during the first test of change (TOC) to 80/month in the last TOC.