Aspiring to Make a Difference: Positive Outcomes for Sepsis Patients

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The Problem
- Sepsis is a condition that is difficult to identify and treat, with a mortality rate between 28-50%
- Baseline data revealed:
  - Mortality - 19.6%
  - Length of Stay - 13.6 days

The Goals
- Develop and implement a multi-disciplinary program aimed at early identification of sepsis
- Prompt implementation of evidence-based sepsis treatment
- Reduce sepsis mortality and length of stay (LOS).

The Setting
- Hospital system in Northeast Ohio serving three counties, nearly 500,000 people through
  - One tertiary care, Level 1 Trauma Center
  - One rural Level 3 Trauma Center
  - One community hospital
  - Two free-standing Emergency Departments (ED)
  - Two Urgent Care centers

The Process
- A Multidisciplinary Sepsis Team Approach
- Developed structures and processes necessary to improve the management of sepsis
- Developed policies and procedures based on evidence-based guidelines from the Surviving Sepsis Campaign
- Recognized the need for a Registered Nurse dedicated Sepsis Coordinator.

Sepsis Coordinator Role
- Monitors and evaluates compliance with guidelines for sepsis patients
- Educates nurses, physicians and residents on sepsis guidelines and best practices for sepsis management
- Develops tools to facilitate compliance with guidelines
- Monitors compliance to standards and reports results to performance improvement and quality committees
- Community education on sepsis through a variety of venues
- Work with local long-term care facilities to identify and treat sepsis sooner

Early Identification
- Sepsis screening of all patients entering through the ED
- Sepsis screening on all inpatients, every shift, every day, on every unit
- Sepsis Alert implementation when severe sepsis or septic shock is identified

Early Treatment
- Obtain lactic acid level within 3 hours of identification
- Obtain blood cultures within 3 hours of identification, prior to administration of antibiotics
- Initiate broad-spectrum antibiotics within 1 hour of identification
- Administer 30 ml/kg fluid bolus over one hour for hypotension or lactic acid level greater than 4 mmol/L

The Outcomes
- After two complete years of implementation of the sepsis bundle and sepsis coordinator role
- Mortality for severe sepsis and septic shock decreased to 16.1%
- Average LOS decreased to 8.7 days

Two Years After Implementation
- 29.93 lives saved
- 2693.88 hospital days saved
- $808,164 cost savings

The Implications
- A sepsis coordinator can effectively engage the nursing and medical staff to ensure evidence-based standards for the management of sepsis are implemented immediately
- The implementation of the sepsis coordinator demonstrated reductions in mortality and length of stay, as well as increased compliance with evidence-based interventions
- Collaboration among the sepsis coordinator, medical and nursing staff, continuous education, and consistent monitoring of compliance to standards are essential to improving outcomes for sepsis patients