Evaluation of a Sepsis Management Program

Velee Patel, BSN, RN, CCRN

DNP Chair: Amita Avadhani, PhD, DNP, CNE, DCC, ACNP-BC, FAANP, FCCM
DNP Team: Rosemary Oruebor, DNP, AGACNP-BC, APN, CCRN & Victoria Correale, DNP, RN, NPD-BC

Rutgers School of Nursing

Introduction

- Sepsis is an infection anywhere in the body, resulting in inflammation and may lead to organ dysfunction

SIRS → Sepsis → Severe Sepsis → Septic Shock

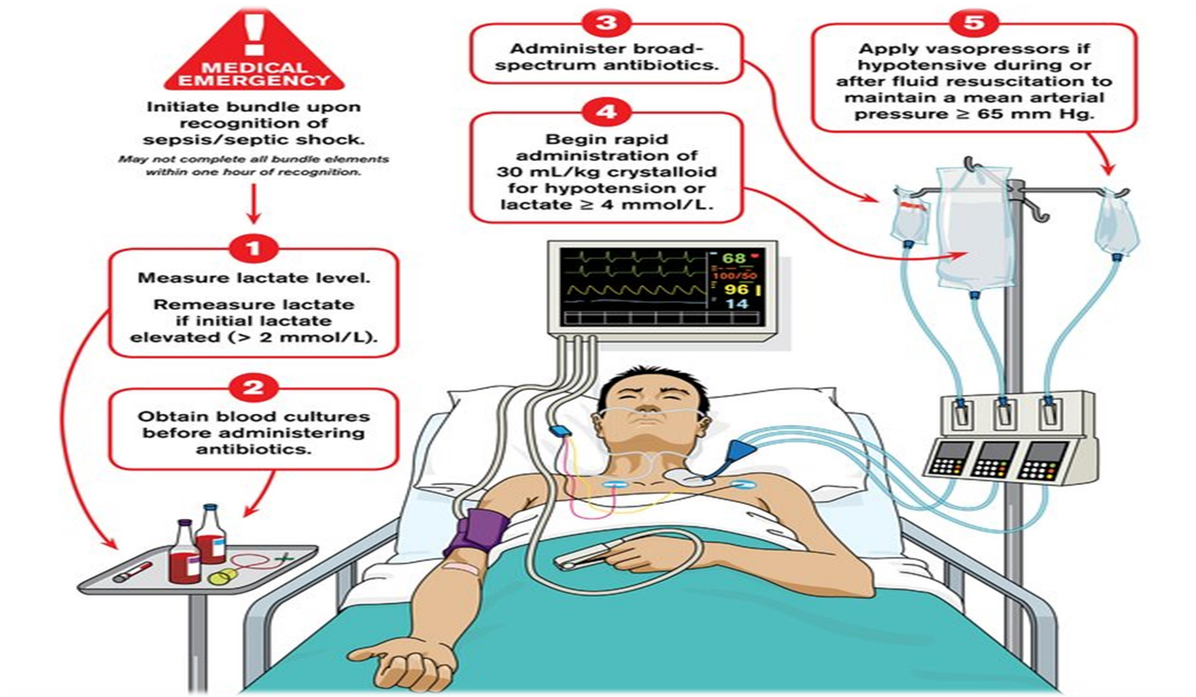
Background

Global Burden of Sepsis
- 49 million worldwide cases
- ~11 million sepsis-related deaths (1/5 global mortality)
- Half of all sepsis deaths occur due to preventable opportunistic infections (WHO 2020)

Financial Burden of Sepsis
- $200 billion spent annually in sepsis-related costs after COVID-19 pandemic
- 20% of patients discharged after sepsis care are readmitted in 30 days → $4 million incurred penalties and lost reimbursements

Problem at Project Site
- Sharp decline in sepsis bundle (SEP-1) compliance rates between ED and inpatient units
- SEP-1 compliance in ED was 70% and in inpatient units was 4%
- Lack of standardized SEP-1 compliance

Sepsis Hour 1 (SEP-1) Bundle



Methodology

Project Design
- Program evaluation of sepsis management program, using CIPP Model

Project Interventions

- **C** CONTEXT: Stakeholders survey
- **I** INPUT: Questionnaire for nurses
- **P** PROCESS: Gap analysis
- **P** PRODUCT: Recommendations

Setting
- ED and one Medical/Surgical Unit

Target Sample Size
- 25 stakeholders: Sepsis QI Committee
- 125 nurses in ED and M/S Unit

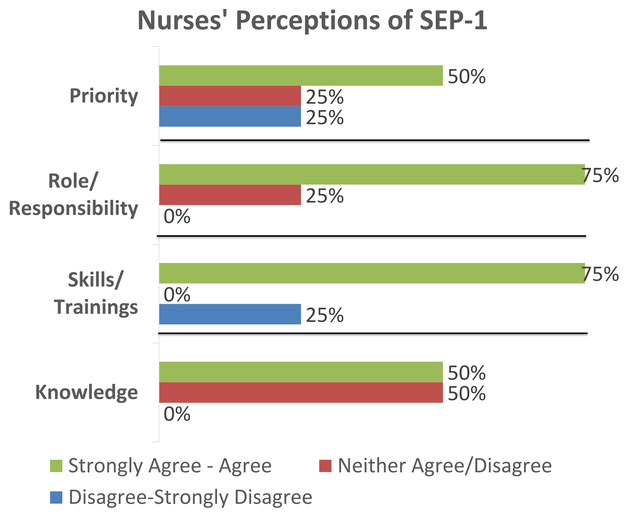
Results

Context Evaluation

Goals	Barriers	Facilitating Resources
Rapid sepsis recognition and intervention	Competing diagnoses	Team approach
Decrease mortality	Unclear triggers of electronic sepsis alerts	Sepsis champions
Educate team, patients, and families	Unable to reach all nurses for sepsis education	Real-time electronic alerts
Decrease readmission		

Participation Rate: 16%

Inputs Evaluation

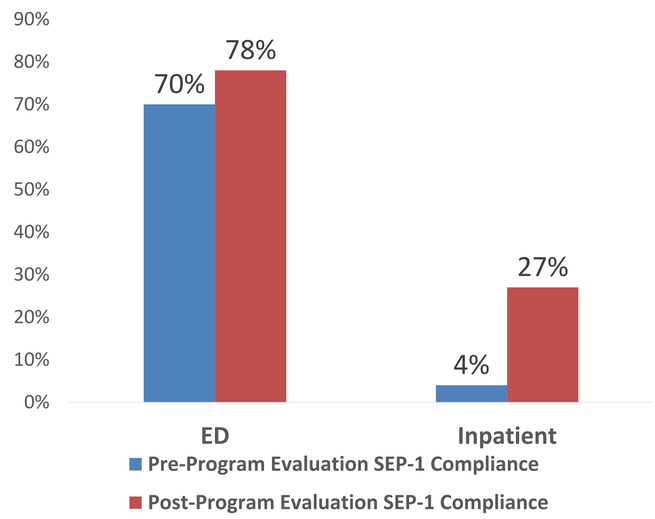


Participation Rate: 0.032%

Commonly Reported Barriers to SEP-1
Staffing shortages
Delayed RRT responses and inputting of Providers' orders
Unclear causes for electronic sepsis alarms

Process Evaluation – *Gap Analysis*
- Revise initial fluid resuscitation strategies
- No systems in place to routinely reevaluate antibiotic therapy
- Include MRSA screening
- Include prompt removal of IVAD and other potential sources of sepsis infection

SEP-1 Compliance Rates



Product Evaluation – *Recommendations*
- Continued use of SIRS sepsis screening tool
- Enforce safe alarm management
- Increased education measures to improve alarm safety
- Sepsis champions
- Collaboration with pharmacy for efficient ABX delivery
- Broadcast sepsis alert system

Discussion
- Drastic increase in sepsis bundle compliance rates
- Hawthorne effect
- Low participation rate yields incomplete picture of nursing's perceptions of sepsis bundle compliance barriers
- Leadership team dedicated to improving sepsis care
- Limited to data provided by Risk Management dept.

Implications
- Potential to reduce overall sepsis-related mortality
- Cost-saving with reduced length of stay
- Standardization of sepsis care
- Improved sepsis education
- Improved patient outcomes from earlier identification

References / Contact

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Velee Patel
vmp87@sn.rutgers.edu
(973)452-9140