

Early Recognition of Sepsis: Beyond the ICU/ED - Taking it to the Acute Care Units



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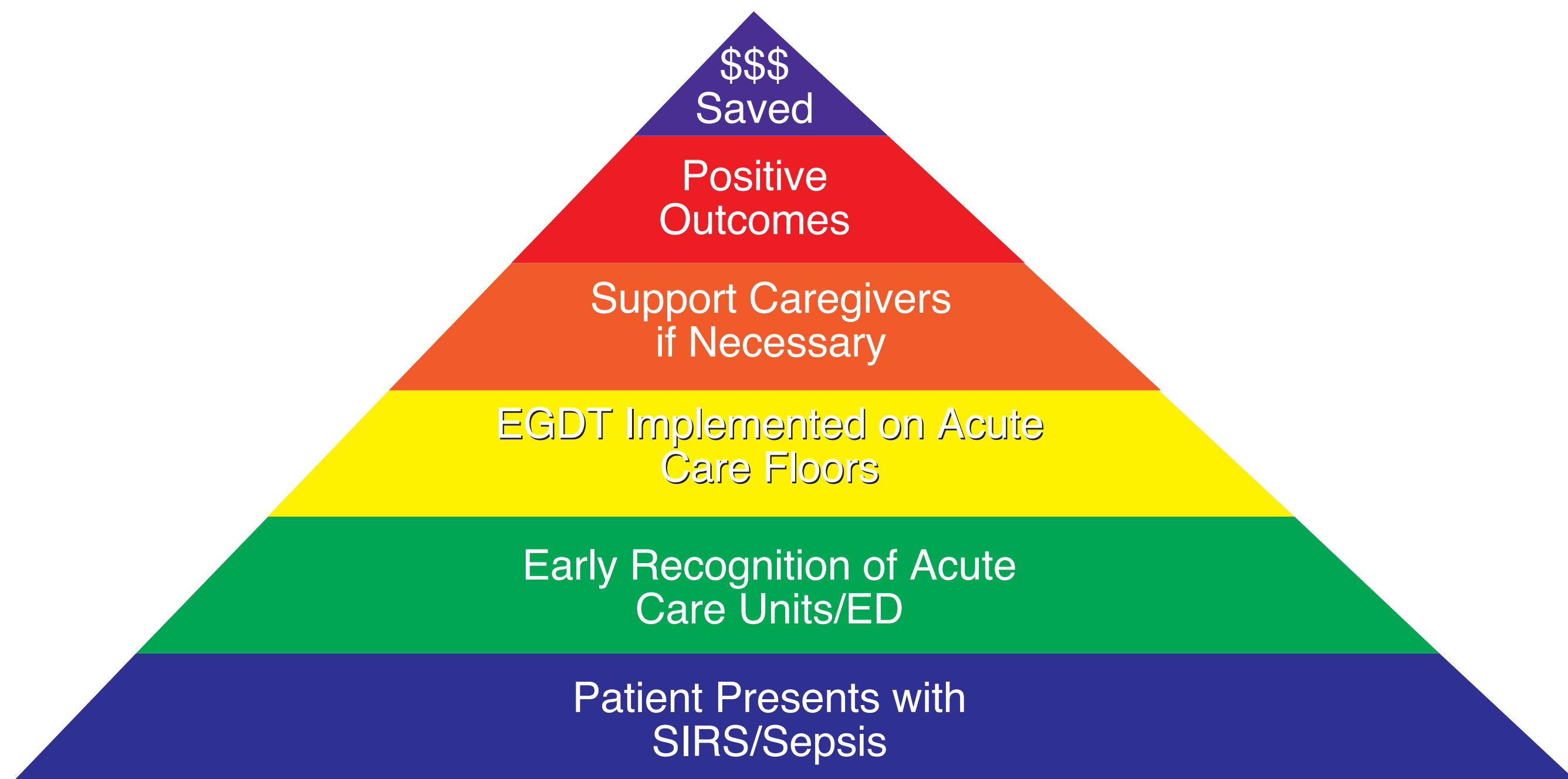
Introduction

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- Sepsis is deadly and often elusive for hospitalized patients, especially the geriatric patient population, which accounts for 60% of all sepsis cases.
- Research suggests that early recognition and implementation of key strategies within the first six hours are critical to positive outcomes.
- The 2008 Surviving Sepsis Campaign (SSC) guidelines promote early recognition and implementation of early goal directed therapies (EGDT).
- Sepsis often begins in the acute care setting, not only in the ICUs and EDs. Therefore, an acute care nurse must be well-trained to recognize early sepsis and have the means to begin early interventions.

Purpose

- Healthcare facilities are challenged with comprehensive implementation of the 2008 SSC guidelines.
- The greatest improvement in outcomes can be made through staff education and process changes in the *non-ICU* setting.



Strategy and Implementation

Phases of the Intervention

Phase 1:

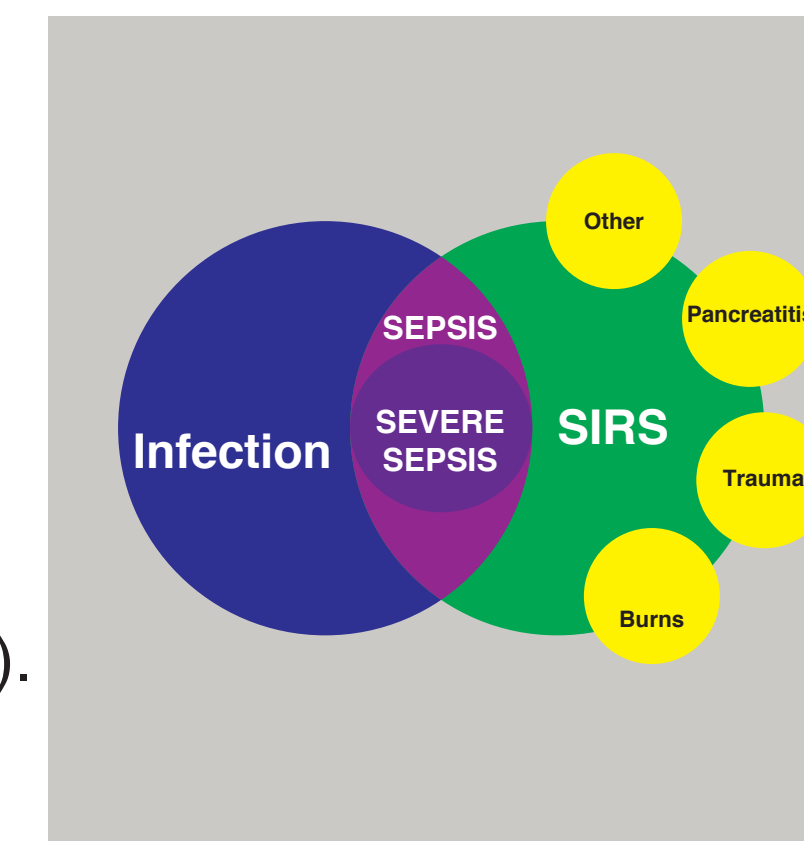
- Sepsis protocol developed to support 2004 SSC guidelines.
 - Focus was on the critical care units and ED only
 - Data collected and analyzed
 - Positive outcomes post-implementation realized
- Original sepsis protocol developed and implemented in ICU/ED setting.
- Post-implementation data yielded statistically significant reductions in mortality, length of stay and cost.

Phase 2: 2008-2009

- Developed an interdisciplinary Sepsis Task Force team.
- Revised and modified existing sepsis protocol to meet 2008 SSC guidelines and to facilitate earlier implementation of treatment, outside of the ICU setting.
- Developed and provided a house-wide comprehensive education plan, focusing on early recognition and treatment of sepsis.
- Developed electronic alerts to notify staff when their patients met inclusion criteria.
- Involved unit managers, nursing supervisors, medical staff and rapid response team.
- Initiated a Rapid Turnaround Unit to accommodate higher acuity patients (higher nursing ratios), thus averting ICU admissions when possible.
- Positive outcomes for 2009 yielded in all areas (see chart).

Phase 3: 2009-2010

- Continue to refine systems and processes.
- Continue with data collection.
- Continue with data analysis.
- Develop early identification tool for post surgical patients.
- Address identified barriers.
- Develop sepsis resource nurses.
- Consider the expansion of Rapid Response Team (sepsis team).
- Refine the sustainability plan with a focus on the progressive evolution of the sepsis protocol.



Evaluation

Statistically Significant Decrease with Multiple Indicators

Severe Sepsis/ Septic Shock (995.92 & 785.52)	Post Initiative 4/06-6/07	CY 2007	CY 2008	Q1CY 2009
Cases	322	284	360	106
Mean LOS (Obs)	19.29	17.22	21.01	20.50
St Dev LOS (Obs)	22.29	15.72	23.59	22.46
Mean LOS (Exp)	15.23	15.07	16.48	16.63
LOS Index	1.27	1.14	1.27	1.23
LOS Variance (days)	1,306	610	1631	410
% ICU Cases	99.07	100.00	97.50	98.11
Mean ICU Days	14.71	12.82	16.78	14.16
% Deaths (obs)	38.20	41.55	41.94	34.91
% Deaths (exp)	32.27	32.79	31.26	33.15
Mortality Index	1.18	1.27	1.34	1.05
% Early Deaths	8.70	9.86	5.28	4.72

Implications of Practice

Implementation of a sepsis protocol in the ICU setting improved patient outcomes and organizational outcomes. However, in order to reduce time-to-treatment, it is necessary for acute care RNs to recognize and initiate the six-hour bundle of the sepsis protocol in their setting. Organizational support, such as a Rapid Turnaround Unit, provides acute care RNs the assistance to balance their patient load while caring for the newly recognized septic patient. Further defined roles of the Rapid Response Team and Rapid Turnaround Unit are indicated.

