The Impact of Education, Audit & Feedback on Improving Sepsis Care Guideline Adherence

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625 bed University Medical Center
30,699 annual admissions in 2009
47,767 ED visits in 2009
Sepsis

- Sepsis is a complex condition that occurs as a result of the systemic manifestation of infection.
- Severe sepsis, which occurs when sepsis progresses to involve acute organ system dysfunction, contributes to increased severity of illness, length of stay and mortality rates of 20% to 50%.

Special Article

Surviving Sepsis Campaign: International guidelines for management of severe sepsis and septic shock: 2008

R. Phillip Dellinger, MD; Mitchell M. Levy, MD; Jean M. Carlet, MD; Julian Bion, MD; Margaret M. Parker, MD; Roman Jaeschke, MD; Konrad Reinhart, MD; Derek C. Angus, MD, MPH; Christian Brun-Buisson, MD; Richard Beale, MD; Thierry Calandra, MD, PhD; Jean-Francois Dhainaut, MD; Herwig Gerlach, MD; Maurene Harvey, RN; John J. Marini, MD; John Marshall, MD; Marco Ranieri, MD; Graham Ramsay, MD; Jonathan Sevransky, MD; B. Taylor Thompson, MD; Sean Townsend, MD; Jeffrey S. Vender, MD; Janice L. Zimmerman, MD; Jean-Louis Vincent, MD, PhD; for the International Surviving Sepsis Campaign Guidelines Committee

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Sepsis Protocol Implementation

Surveys conducted prior to protocol implementation

N=240 respondents

Sepsis Survey Respondents

- ED: 34%
- MICU: 29%
- SICU: 20%
- CCU: 9%
- Neuro ICU: 8%

Legend:
- ED
- MICU
- SICU
- CCU
- Neuro ICU
How Well is Sepsis Currently Identified?

N=240 ICU & ED practitioners
How Well is Sepsis Currently Managed?

N=240 ICU & ED practitioners
I am Familiar with the Early Goal Directed Therapy Guidelines

N=240 ICU & ED practitioners
I Am Familiar with the Surviving Sepsis Campaign Guidelines

N=240 ICU & ED practitioners
Guideline Implementation Phases

• Pre-implementation surveys to assess clinician awareness of guidelines
• Educational campaign
  – ED and ICUs (August to October 2007)
• Formal roll-out of sepsis protocol
  – October 2007
• Post-implementation surveys
• Continued performance audits
Measures to Enhance Compliance

• Exploration of point of care lactate for ED
• Transitioning of order set to computerized order entry
• Continued educational beyond ED and ICU
• Email and meeting updates on project status and outcomes
I Am Familiar with EGDT

Comparison of ICU & ED Staff perceptions
N=240 Pre
N=163 Post

Before

After

61%

39%
I Am Familiar with SSC Guidelines

Comparison of ICU & ED Staff perceptions
N=240 Pre
N=163 Post

Before

After

63%

37%
Impact of Educational Initiative

• There is improved ability to rapidly diagnosis sepsis
• Sepsis protocol is being implemented earlier in the ED
• There is improved communication between nursing and the physicians with appropriate discussion of sepsis treatment
• There is better integration of care between the ED and ICU for sepsis patients
• There is more familiarity with the sepsis protocol
Guideline Use Process

• Conducting 6 month interval chart reviews to assess protocol use
• Evaluate protocol compliance
• Implement point of care lactate in the ED
• Monitor patient outcomes
• Continue to reinforce sepsis protocol
• Transition to EPIC order set
Percent of Patients Meeting Antibiotic Time Goal (60 min)

- 03/08 to 08/08: 89%
- 09/08 to 03/09: 94%
- 04/09 to 09/09: 91.3%
- 10/09 to 3/10: 95.8%
Percent of Patients Meeting Fluid Time Goal (30 min)

- 3/08 to 08/08: 78%
- 09/08 to 03/09: 75%
- 04/09 to 09/09: 91.3%
- 10/09 to 3/10: 83.3%
Percent of Patients Meeting BOTH Antibiotic and Fluid Goals

- 3/08 to 08/08: 69%
- 09/08 to 03/09: 77.8%
- 04/09 to 09/09: 82.6%
- 10/09 to 3/10: 83.3%
Time from Admission to Lactate Level (Minutes)

- 3/08 to 08/08: 92.8 minutes
- 09/08 to 03/09: 57.7 minutes
- 04/09 to 09/09: 51.6 minutes
- 10/09 to 3/10: 64.5 minutes
Summary

• Focused education and reinforcement of sepsis guidelines resulted in significant improvements in adherence to sepsis management recommendations

• Continued efforts are aimed at monitoring guideline components and providing ongoing audit & feedback