

Surviving Sepsis Guidelines in CKD and CHF

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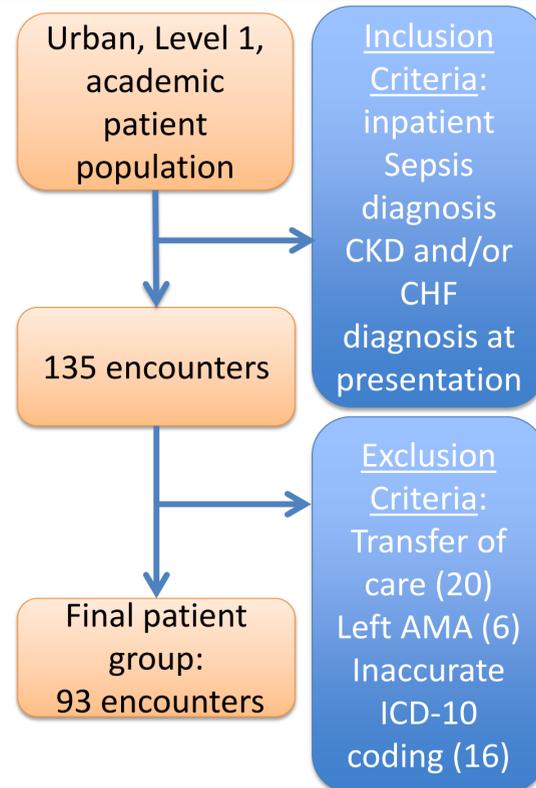
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Introduction

- Surviving Sepsis Campaign (SSC) developed in 2016; revisions 2018
- Administration of 30cc/kg IV crystalloid fluid within first 3 hours after suspicion of sepsis.
- Strong recommendation with low evidence
- Not specifically studied in patients at risk for fluid overload.
- Is there a difference in mortality in patients with chronic kidney disease or congestive heart failure who received at least 30cc/kg of IV crystalloid fluid within 3 hours of suspicion of sepsis compared to those who did not?

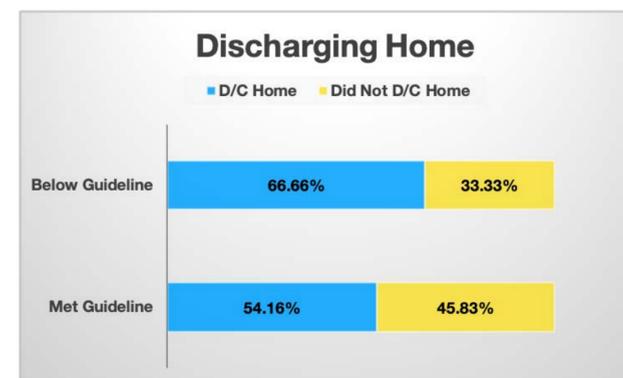
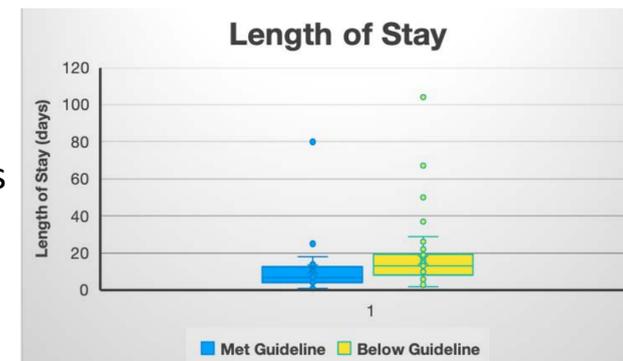
Methodology

- IRB approved.
- Data queried June 2016 – May 2018; ICD-10 coding for inpatient stays, sepsis diagnosis during stay, and CKD and/or CHF diagnosis at time of presentation;
- Chart review was conducted.
- 135 encounters found; 42 encounters excluded.
- Exclusion criteria: transfer for sepsis management, left against medical advice during admission, inaccurate ICD-10 coding.
- Final patient group: 93 encounters between 86 patients.



Results

- Only 24 out of 93 encounters met SSC guidelines
- Population 63% male, 46% AA.
- No statistical significance in mortality; 10.1% below guideline v. 16.7% met guideline (p=0.394).
- No statistical significance in length of stay; 13+/- 15.1 days below guideline v. 7+/- 15.7 days met guideline (p=0.163).
- No statistical significance in discharging home; 66.7% under guideline v. 54.2% met guideline (p=0.273).



Summary/Conclusion

- The Surviving Sepsis Campaign fluid resuscitation guideline is generalized without strong evidence supporting recommendation.
- Many intensivists are instead choosing to guide initial resuscitation based on fluid responsiveness.
- Fear due to complications related to fluid overload?
- Clinically significant decrease in mortality by 6.1% in group that did not meet guidelines.
- Clinically significant decrease in ability to discharge home by 12.5% in group that did not meet guideline.
- These decreases are associated with a longer length of stay.
- Suspect statistically significant differences to appear with increase in studies power.
- May be beneficial to address application in CKD and CHF in a prospective randomized trial.
- Need evidence-based guidelines to better manage sepsis in specific patient population.

References

- Rhodes A, Evans LE, Alhazzani W, et al. Surviving Sepsis Campaign. *Critical Care Medicine*. 2017;45(3):486-552. doi:10.1097/ccm.0000000000002255.
- Levy MM, Evans LE, Rhodes A. The Surviving Sepsis Campaign Bundle: 2018 update. *Intensive Care Medicine*. 2018;44(6):925-928. doi:10.1007/s00134-018-5085-0.