The insertion of central venous catheters and access to a critical care physician during sepsis treatment are important capabilities in hospitals that transfer fewer sepsis patients” Ilko et al (2019).

Abstract:

OBJECTIVES: Severe sepsis is a complex, resource intensive, and potentially lethal condition and rural patients have worse outcomes than urban patients. Early identification and treatment are important to improving outcomes. The objective of this study was to identify hospital-specific factors associated with inter-hospital transfer.

DESIGN: Mixed method study integrating data from a telephone survey and retrospective cohort study of state administrative claims.

SETTING AND SUBJECTS: Survey of Iowa emergency department administrators between May 2017 and June 2017 and cohort of adults seen in Iowa emergency departments for severe sepsis and septic shock between January 2005 and December 2013.

INTERVENTIONS: None.

MEASUREMENTS AND MAIN RESULTS: Multivariable logistic regression was used to identify independent predictors of inter-hospital transfer. We included 114 institutions that provided data (response rate = 99%), and responses were linked to a total of 150,845 visits for severe
sepsis/septic shock. In our adjusted model, having the capability to place central venous catheters or having a subscription to a tele-ICU service was independently associated with lower odds of inter-hospital transfer (adjusted odds ratio, 0.69; 95% CI, 0.54-0.86 and adjusted odds ratio, 0.69; 95% CI, 0.54-0.88, respectively). A facility’s participation in a sepsis-specific quality improvement initiative was associated with 62% higher odds of transfer (adjusted odds ratio, 1.62; 95% CI, 1.10-2.39).

CONCLUSIONS: The insertion of central venous catheters and access to a critical care physician during sepsis treatment are important capabilities in hospitals that transfer fewer sepsis patients. In the future, hospital-specific capabilities may be used to identify institutions as regional sepsis centers.

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