ACCP Research in Progress Abstract - 2019

Title: Medication regimen complexity score as an indicator of fluid balance in the intensive care setting

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Introduction: Deresuscitation of critically ill patients is associated with improved mortality but identifying which patients are at highest risk for fluid overload remains a challenge for clinicians. The medication regimen complexity scoring tool (MRC-ICU) has been externally validated as correlating to patient mortality, length of stay, and patient acuity in addition to pharmacist interventions and drug-drug interactions. The purpose of this study is to determine if the MRC-ICU score correlates to fluid balance in critically ill patients.

Research question: Does the MRC-ICU score correlate to positive fluid balance in critically ill patients?

Study Design: Retrospective cohort study

Methods: Patients admitted to the medical intensive care unit between January 1, 2017 to April 1, 2018 will be included. Patient data will be collected via chart review of the electronic medical record (EMR). Patients 18 years and older who were admitted to the ICU for over 72 hours will be included. Total fluid and specific IV medication administration data were collected over the first 3 ICU days. The MRC-ICU was scored at 24 hours. Demographic information, including patient age and gender, will be collected. Descriptive and inferential stats will be used as appropriate. This project has been IRB approved and will be completed by August 1, 2019. Sample size was estimated to be 50 patients.

Results: Data collection is underway. Projected completion and data analysis is August 2019.

Conclusions: A positive, direct relationship between MRC-ICU score and the fluid balance of patients is anticipated. This project will serve as single-center preliminary data with the plan to expand to a multi-center analysis.