

# Anchoring Sepsis Management: A Retrospective Cohort Study on Fluid Resuscitation in Advanced and End-Stage Renal Disease with Sepsis.

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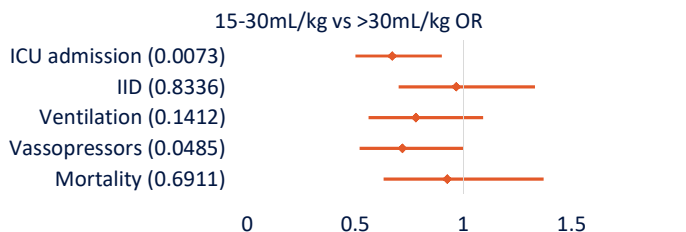
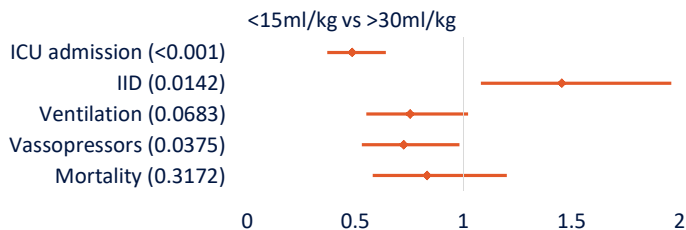
## Introduction

Physicians are hesitant to give full fluid boluses to dialysis dependent patients, which is significant given the frequency of ESRD patients developing sepsis and septic shock. The aim of this study is to assess a relationship between volume of fluid given for sepsis in patients with advanced CKD and ESRD.

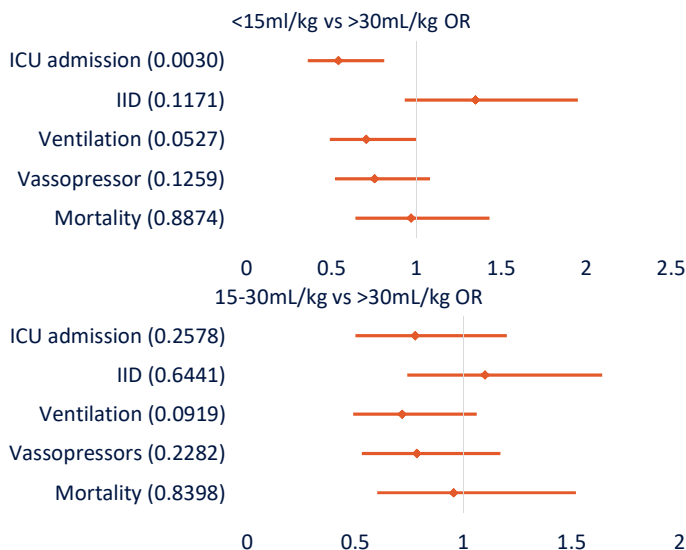
## Design

- Multicenter retrospective cohort study of 16 hospitals in southwest Florida that included 4,265 patients with further subgroup analysis of 2,344.
- Population of CKD4/5 and ESRD patients who were admitted for Sepsis
- CKD4, CKD5 and ESRD patients were stratified into groups based on the volume of fluid boluses given within 6 hours after admission.
- Sub analysis was performed on those patients who were either oliguric (less than 0.5mL/kg/hr), or anuric status.
- Inclusion criteria: 2021-2022, non-pregnant patients over 18 years age admitted for Sepsis with CKD4, CKD5 or ESRD who received fluid bolus within 6 hours of admission and had a length of stay greater than 24 hours.
- Patients were placed into groups based on either standard (greater than 30mL/kg), Conservative (15-30mL/kg) and Ultra Conservative (less than 15mL/kg) fluid groups.
- Primary outcome: mortality.
- Secondary outcomes: ICU LOS, mechanical ventilation, and inpatient initiation of Dialysis (IID).

## Analysis



## Oliguric/ Anuric sub-analysis



## Results

- Significant relationship in Ultraconservative volumes in vasopressor use, mechanical ventilation and IID
- Significant relationship in conservative volumes in vasopressor use only
- Anuric and oliguric: significant relationship in ultra conservative volumes in vasopressor use and mechanical ventilation
- Anuric and oliguric patients: significant relationship between conservative and standard volumes in mechanical ventilation.

## Discussion & Conclusion

- <30mL/kg in septic patients with advanced CKD and ESRD with or without anuria or oliguria, was non-inferior to those who received >30mL/kg in terms of in-hospital mortality.
- Furthermore, CKD and ESRD patients with or without anuria or oliguria had significantly less vasopressor and mechanical ventilation use when receiving <15mL/kg.
- Significantly more IID was seen in the CKD and ESRD without anuria or oliguria when receiving <15mL/kg.
- Suggests conservative fluid boluses provide adequate resuscitation in patients with ESRD.
- While patient is requiring less mechanical ventilation they require more dialysis indicating that lower intravascular volume may be leading to less pulmonary edema but also lower renal perfusion