



Pharmacist role in fluid stewardship related to the evacuation phase in medically critically ill adults

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BACKGROUND

- Fluid therapy plays a vital role in the management of hospitalized patients
- Fluids do not come without risk and overload has been associated with acute kidney injury, pulmonary edema, increased length of stay, and death in critically ill adults^{1,2}
- Fluid stewardship aims to optimize hemodynamic status and improve patient outcomes³
- The Rescue, Optimization, Stabilization, Evacuation (ROSE) model helps guide decisions related to fluid administration⁴
- Evacuation, also referred to as de-resuscitation, targets fluid removal to achieve euvolemia
- Purpose:** To assess the frequency of pharmacist recommendations related to fluid stewardship and the evacuation phase

OUTCOMES

Primary

- Percentage of all fluid recommendations related to the evacuation phase

Secondary

- Percentage of pharmacist recommendations that pertain to fluid stewardship
- Characterize frequency of evacuation phase recommendations

METHODS

- IRB approved, single-center, retrospective review
- Adult patients admitted to the medical intensive care unit (MICU) at a 450-bed community hospital with documentation of recommendations between June 2016 and June 2019 were included
- Patients were excluded if they were not followed by the academic rounding team
- Recommendations that were related to fluid stewardship were categorized based on the ROSE model
- Categorization of each fluid stewardship recommendation was defined and agreed upon by the investigators a priori
- Data were analyzed using descriptive statistics

RESULTS

Figure 1. ROSE Model

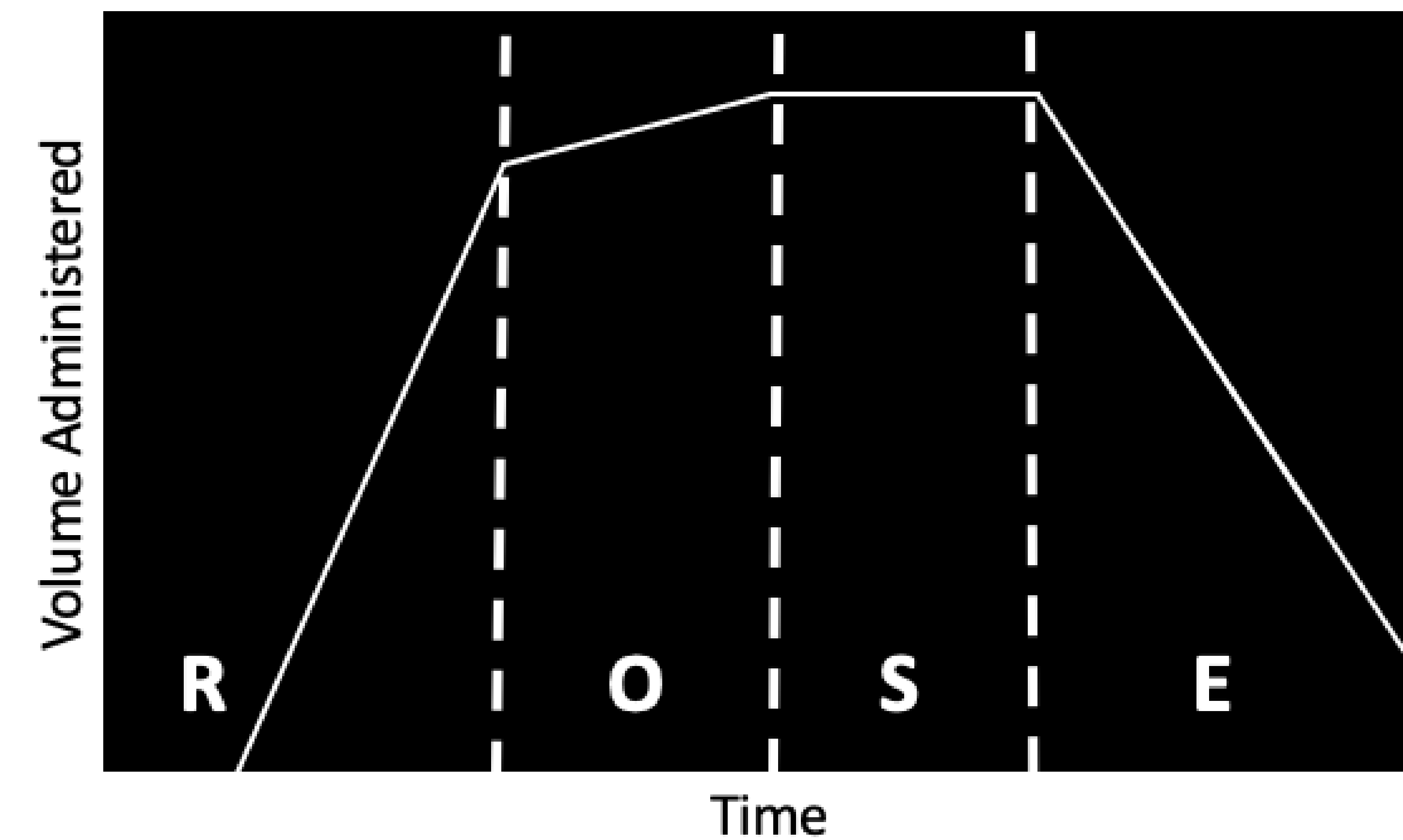


Figure 2. Inclusion and recommendation type



Figure 3. Percentage of recommendations by ROSE model

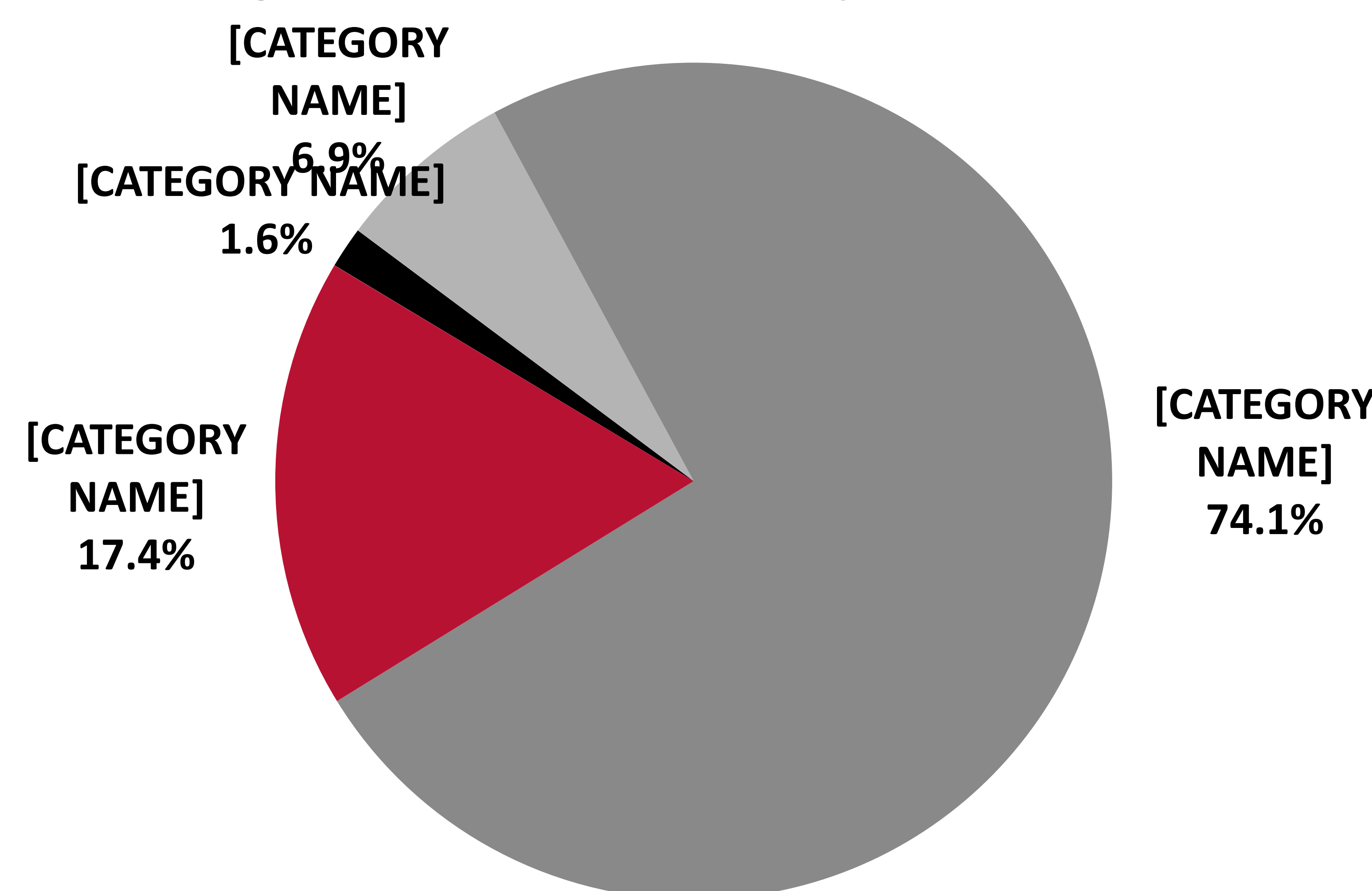


Table 1. Evacuation phase recommendations (N=33)

Recommendation	n (%)
Initiation of loop or thiazide diuretic	18 (55)
Discontinuation of diuretic	6 (18)
Adjust the dose of diuretic	4 (12)
Adjust timing of diuretic administration	3 (9)
Initiation of spironolactone*	2 (6)

*if for liver disease

CONCLUSIONS

- Pharmacists play a role in identifying patients in need of fluid evacuation and initiating therapy to achieve this goal
- Almost 18% of all fluid stewardship recommendations are related to the evacuation phase of fluid administration
- Initiation of diuretics is the most common evacuation phase recommendation
- Future Research:**
 - Assess acceptance rate of recommendations
 - Evaluate impact of pharmacist recommendations related to fluid stewardship on patient outcomes

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