

Examination and Cost Analysis of Inappropriate Continuation of Stress Ulcer Prophylaxis During ICU Transfer and Hospital Discharge

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Goal

Examine inappropriate stress ulcer prophylaxis (SUP) medication continuation at ICU transfer and hospital discharge along with affiliated costs

Background

Stress ulcers can occur in critically ill patients and result in gastrointestinal bleeding (GI).

SUP medications decrease gastric acid secretions and include:

- Histamine (H2) antagonists and
- Proton-pump inhibitors (PPI)

SUP medications associated with:

- Enteric infections
- Drug interactions
- Vitamin malabsorption
- Possible unnecessary medical charges

Intensive Care Unit (ICU) transferred patients may no longer meet SUP criteria

Vision Statement

Prudent stress ulcer prophylaxis use and cost-based selection.

Methods

Institutional Review Board approval (IRB) obtained for a retrospective review of medical and pharmacy records.

Inclusion Criteria:

- Hospital admission: 07/01/2013 – 09/14/2013
- SUP initiated in ICU or directly prior to transfer to ICU

Exclusion Criteria:

- At home use of PPI/H2 antagonist
- First PPI or H2 antagonist dose on medicine floor
- GI bleed during admission
- Deceased in ICU

Results

A chart review of 322 ICU patients on PPI or H2 antagonist revealed a study sample of 185 eligible patients.

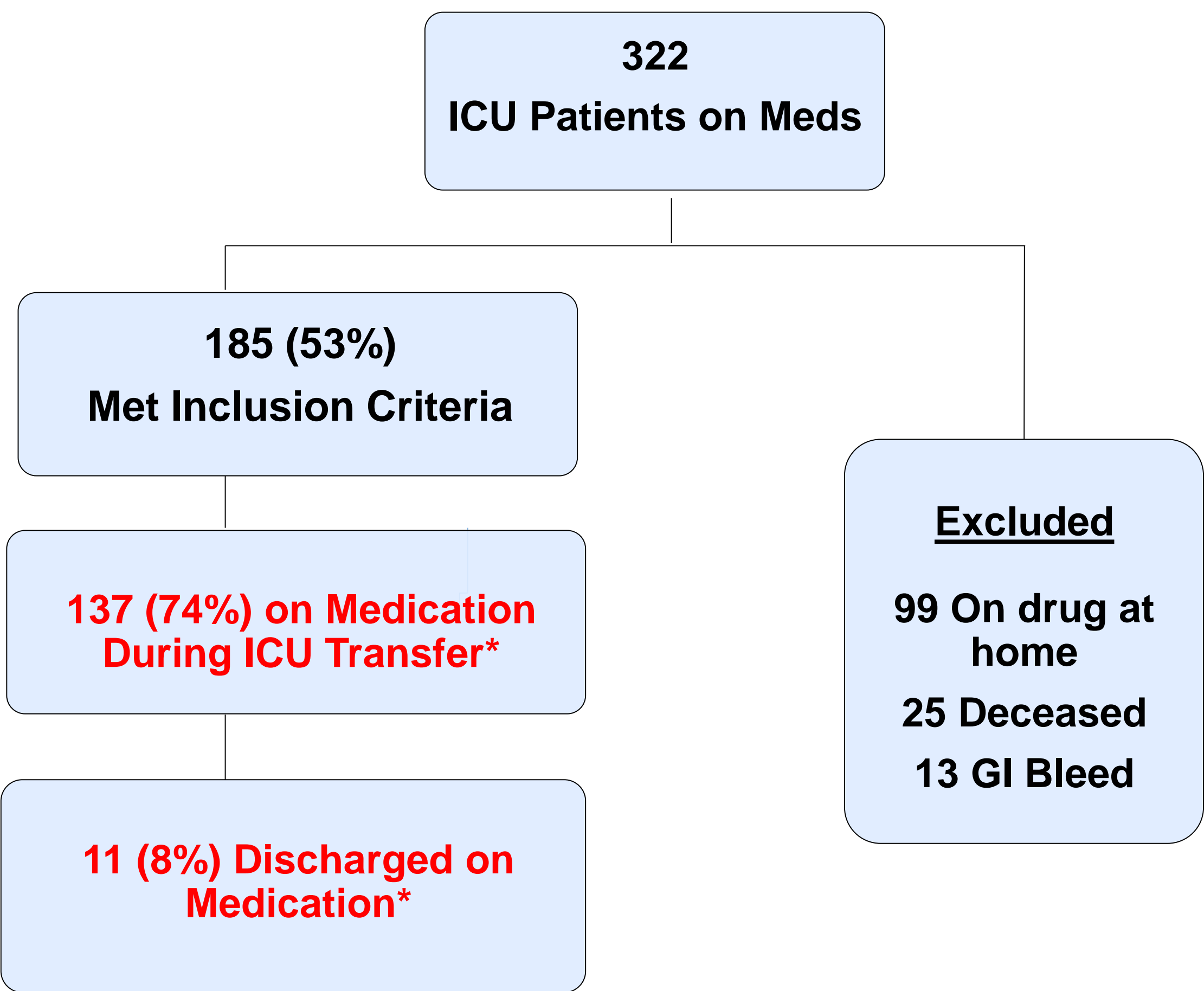


Fig. 1 Sample of ICU patients on SUP medications; *74% (95% CI: 68-80%); 8%(95% CI: 3-13%).

Table 1. SUP medication dosages after transferred from ICU (n=185)

Medication (Route)	Dosages Outside ICU	Hospital Cost per Dose	Hospital Charge per Dose	Total Unnecessary Charges
Famotidine (PO)	50	\$0.10	\$1.15	\$58
Famotidine (IV)	76	\$0.39	\$89.10	\$6772
Lansoprazole (PO)	66	\$11.12	\$14.35	\$947
Omeprazole (PO)	34	\$0.38	\$1.75	\$60
Pantoprazole (PO)	341	\$0.30	\$1.50	\$512
Pantoprazole (IV)	225	\$5.00	\$97.50	\$21,937
Grand Total:				\$30,286*

*Extrapolated to 1 year = \$145,000 in patient charges

Discussion

SUP medications discontinued at discharge but not regularly at time of ICU transfer

Substantial costs associated w/ some meds (eg, IV)

Project provided resident engagement in quality improvement, accountability, and IRB procedures

Limitations: Use of secondary data with possible concerns related to true home med lists, reason for initial administration and continuation

Conclusions

Discontinuation appears to be an issue at study hospital. Project will be continued and incorporate education/interventions with resident involvement.