Implementation of an Automatic Electronic Pharmacy Consult for Stress Ulcer Prophylaxis Management in the ICU

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Background

- High incidence of inappropriate stress ulcer prophylaxis (SUP) in inpatient setting^{1,5}
 - 22% of SUP is initiated inappropriately in low risk ICU patients
- Overuse of proton pump inhibitors (PPIs) linked to risk of *C.difficile* infections (CDIs) and other harmful adverse drug event^{1,2} PPIs considered an independent risk factor for C.diff.
- Currently no standardized process at Edward Hospital to manage SUP in the ICU, however pharmacist involvement in SUP management can increase appropriate use⁶

Objective

Describe the development and implementation of a novel pharmacy consult for the appropriate discontinuation of SUP in the ICU

Service Description and Implementation

- Institutional guidelines for SUP were developed in collaboration with the ICU Medical Director and a gastroenterologist
 - · Critical care committee
 - Pharmacy and therapeutics committee
- The consult was embedded within two highly utilized order sets for ICU patients
 - · Critical Care admission order set
 - Mechanical ventilation and sedation order set
- · A process work flow was established

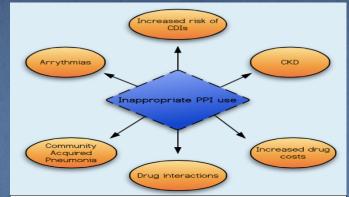


Fig. 1. Risks and adverse events due to inappropriate PPI use^{2,3,4,7}

Step 1 SUP discontinuation Daily pharmacy review Pharmacist receiving During daily When the indication consult reviews medication profile for SUP is no longer indication for SUP. review, the present, the pharmacist assesses pharmacist will the presence of the discontinue the SUP SUP indication is indication for SUP agent per protocol documented in the under the provider's **Pharmacy Scoring** name that ordered the Report (pharmacists' Pharmacists will also consult. monitoring tool). ensure that the patient is still using the SUP agent for The pharmacist then If no indication is prophylaxis and did documents the present at the time not develop a true intervention in an of consult, skip to indication for EMR progress note. Step 3 treatment with a PPI The original indication for SUP and the or H2RA resolution of that indication are documented.

Fig. 2. Description of consult workflow

Impact

- Improve appropriate prescribing of SUP through pharmacist involvement
- Potential to decrease medication costs and improve patient outcomes
 - · Decrease drug interactions
 - Decrease incidence of CDI rates and other adverse events
- Increase ICU pharmacist's role in drug safety

Limitations

- Use of consult limited due to lack of auto checking the consult option
- Ensure all physician groups agree with the use of the consult
- Time needed to train ICU pharmacists

Transferability and Future Plans

- Expansion into Cardiac Neuro ICU including order sets such as intracranial hemorrhage, stroke,TIA
- Inappropriate use of SUP on general medicine floors is widespread-a role exists outside of the ICU
- Consult can later be applied to the discharge medication reconciliation pharmacist role, preventing inappropriate prescriptions

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