Stress Ulcer Prophylaxis (SUP) for Adults
Per Dr. Christopher Carlson (HMC GI)

**Who should receive SUP?**
While the majority of ICU patients will have significant reductions in mucosal blood flow and endoscopic e/o mucosal damage, clinically-important bleeding is uncommon (2-6% of patients) (1). Splanchnic hypoperfusion is the primary etiology of mucosal damage, and thus aggressive resuscitation and maintenance of adequate visceral perfusion is key in preventing stress related mucosal damage (2, 3, 4). In addition, acid suppressive therapy to keep pH > 3.5 has been shown to reduce clinically important bleeding – defined as hematemesis, gross blood in NG aspirate, hematochezia, or melena with at least one of the following in the absence of other causes:

- Hypotension (decrease in BP by 20 mmHg)
- Drop in hemoglobin by >=2 g/dL w/ subsequent transfusion not achieving the expected increase in hemoglobin (5).

SUP with acid suppressive therapy is NOT necessary for most adult patients outside of ICU and post-surgical settings (6). SUP is not w/out risks (bacterial colonization w/ potential for nosocomial pneumonia and/or C. difficile infection) and thus should be reserved for those patients at greatest risk for clinically important bleeding.

**SUP should be implemented in ICU patients with:** (1, 6)

- Respiratory failure requiring >48 hours of mechanical ventilation
- Coagulopathy in non-oncology patients (plt <50K, INR >1.5, PTT >2X the ULN)

**Prescribers will need to assess the risks vs. benefits of SUP in ICU patients w/ the following risk factors for stress related mucosal damage:**

- Hypotension
- Sepsis
- Hepatic and/or renal failure
- Head injury w/ GCS of <10
- Thermal injury w/ >35% of BSA
- Multiple trauma w/ Injury Severity Score of >=16
- Spinal cord injury
- Organ transplant and/or >250 mg of hydrocortisone or equivalent per day

**References:**