RISK FACTORS

- Mechanical ventilation for more than 48 hours without enteral feeding.
- •Chronic liver disease.
- •Bleeding diathesis: Thrombocytopenia [platelet count < 50,000 per m³], elevated international normalized ratio >1.5, or a partial thromboplastin time >2 times the control value.
- •Gl ulceration or bleeding within the past year.
- Traumatic brain or spinal cord injury.
- Severe burns >35 percent of the body surface area.
- Nonsteroidal antiinflammatories or antiplatelet agents.
- •Two or more minor risk factors (eg, sepsis, acute kidney injury, shock, mechanical ventilation with enteral nutrition, intensive care unit stay >1 week, occult GI bleeding ≥ 6 days, glucocorticoid therapy).

1. Determine risk

SUP-ICU trial investigators. Acta Anaesthesiol Scand. 2019 Oct;63(9):1184-1190. Krag et al. N Engl J Med. 2018 Dec 6;379(23):2199-2208. Marker et al. Intensive Care Med. 2019 May;45(5):609-618 Toews et al. Cochrane Database Syst Rev. 2018 Jun 4;6(6):CD008687

BESTPRACTICES

STRESS ULCER PROPHYLAXIS IN CRITICALLY ILL ADULTS

PPI VS H₂RA

- •Both histamine-2 receptor antagonists (H₂RA) and proton pump inhibitors (PPIs) effectively reduce the rate of GI bleeding in critically ill patients compared to placebo.
- •PPIs are preferred over H₂RA or sucralfate.
- This preference is based upon randomized trials and meta-analyses which report that PPIs are more effective than other agents.
- Data supporting an infectious adverse risk associated with acid suppressants are conflicting and many of the studies had several flaws.
- Data suggesting possible increased mortality with PPIs are not confirmed with multiple meta-analyses.
- There are no comparative data among PPIs (omeprazole, lansoprazole, rabeprazole, pantoprazole, esomeprazole) or among H₂RA (cimetidine, famotidine, or nizatidine) to suggest one is superior to another.

2. Choose an agent

ORAL VS IV

- Oral PPIs are preferred and may be more cost-effective than intravenous agents due to the lower cost of oral medications and fewer treatment failures in the oral PPI.
- For patients in whom an oral PPI is not tolerated, an oral H2 blocker is an appropriate alternative.
- In rare cases where PPIs or H2RA cannot be administered, sucralfate is a suitable oral alternative.
- For critically ill patients who cannot receive enteral medications, an intravenous (IV) PPI is preferred over IV H2 blocker can be administered, but an IV PPI is preferred

3. Select route

Wang et al. BMJ. 2020 Jan 6;368:16744 PEPTIC investigators. JAMA. 2020 Feb 18;323(7):616-626. Wang et al. Intensive Care Med. 2020 Nov;46(11):1987-2000 Alhazzani et al. Intensive Care Med. 2018 Jan;44(1):1-11.

DURATION

- Prophylaxis should be discontinued when the patient is no longer at risk for stress ulceration (i.e. discharged from ICU, extubated and no bleeding diathesis).
- Criteria that indicate when it is safe to withhold stress ulcer prophylaxis are lacking.

4. Determine duration