### deprescribing.org | Proton Pump Inhibitor (PPI) Deprescribing Algorithm

# Indication still unknown?

### Why is patient taking a PPI?

If unsure, find out if history of endoscopy, if ever hospitalized for bleeding ulcer or if taking because of chronic NSAID use in past, if ever had heartburn or dyspepsia

- · Mild to moderate esophagitis or
- GERD treated x 4-8 weeks (esophagitis healed, symptoms controlled)
- Peptic Ulcer Disease treated x 2-12 weeks (from NSAID; H. pylori)
- · Upper GI symptoms without endoscopy; asymptomatic for 3 consecutive days
- ICU stress ulcer prophylaxis treated beyond ICU admission
- Uncomplicated *H. pylori* treated x 2 weeks and asymptomatic

- Barrett's esophagus
- Chronic NSAID users with bleeding risk
- Severe esophagitis
- Documented history of bleeding GI ulcer

# Recommend Deprescribing

Strong Recommendation (from Systematic Review and GRADE approach)

Decrease to lower dose

(evidence suggests no increased risk in return of symptoms compared to continuing higher dose), or  $% \left\{ 1,2,...,n\right\}$ 

Stop and use on-demand

(daily until symptoms stop) (1/10 patients may have return of symptoms)

Stop PPI

**Continue PPI** 

or consult gastroenterologist if considering deprescribing

### Monitor at 4 and 12 weeks

If verbal:

- Heartburn
   Dyspepsia
- Regurgitation Epigastric pain

If non-verbal:

- Loss of appetite Weight loss
- Agitation

Use non-drug approaches

 Avoid meals 2-3 hours before bedtime; elevate head of bed; address if need for weight loss and avoid dietary triggers Manage occasional symptoms

- Over-the-counter antacid, H2RA, PPI, alginate prn (ie. Tums®, Rolaids®, Zantac®, Olex®, Gaviscon®)
- H2RA daily (weak recommendation GRADE; 1/5 patients may have symptoms return)

If symptoms relapse:

If symptoms persist x 3 – 7 days and interfere with normal activity:

- 1) Test and treat for *H. pylori*
- 2) Consider return to previous dose

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## Proton Pump Inhibitor (PPI) Deprescribing Notes

### **PPI Availability**

PPI	Standard dose (healing) (once daily)*	Low dose (maintenance) (once daily)
Omeprazole (Losec°) - Capsule	20 mg <sup>+</sup>	10 mg <sup>+</sup>
Esomeprazole (Nexium®) - Tablet	20 <sup>a</sup> or 40 <sup>b</sup> mg	20 mg
Lansoprazole (Prevacid*) - Capsule	30 mg <sup>+</sup>	15 mg <sup>+</sup>
Dexlansoprazole (Dexilant®) - Tablet	30 <sup>c</sup> or 60 <sup>d</sup> mg	30 mg
Pantoprazole (Tecta <sup>°</sup> , Pantoloc <sup>°</sup> ) - Tablet	40 mg	20 mg
Rabeprazole (Pariet°) - Tablet	20 mg	10 mg

### Legend

a Non-erosive reflux disease

b Reflux esophagitis

c Symptomatic non-erosive gastroesophageal reflux disease

d Healing of erosive esophagitis

+ Can be sprinkled on food

\* Standard dose PPI taken BID only indicated in treatment of peptic ulcer caused by *H. pylori*; PPI should generally be stopped once eradication therapy is complete unless risk factors warrant continuing PPI (see guideline for details)

#### Key

 ${\sf GERD} = gastroes op hage al\ reflux\ disease$ 

SR = systematic review

NSAID = nonsteroidal anti-inflammatory drugs

GRADE = Grading of Recommendations Assessment, Development and Evaluation

H2RA = H2 receptor antagonist

# Engaging patients and caregivers

Patients and/or caregivers may be more likely to engage if they understand the rationale for deprescribing (risks of continued PPI use; long-term therapy may not be necessary), and the deprescribing process

#### PPI side effects

- When an ongoing indication is unclear, the risk of side effects may outweigh the chance of benefit
- PPIs are associated with higher risk of fractures, C. difficile infections and diarrhea, community-acquired pneumonia, vitamin B12 deficiency and hypomagnesemia
- Common side effects include headache, nausea, diarrhea and rash

### Tapering doses

- No evidence that one tapering approach is better than another
- Lowering the PPI dose (for example, from twice daily to once daily, or halving the dose, or taking every second day) OR stopping the PPI and using it on-demand are equally recommended strong options
- Choose what is most convenient and acceptable to the patient

#### On-demand definition

Daily intake of a PPI for a period sufficient to achieve resolution of the individual's reflux-related symptoms; following symptom resolution, the medication is discontinued until the individual's symptoms recur, at which point, medication is again taken daily until the symptoms resolve

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