

Patriot Clinic Proton-Pump Inhibitor Review and Therapy De-Escalation (PCP-PIRATE) at the Orlando VA Healthcare System

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Background

- Proton pump inhibitors (PPIs) are one of the most commonly prescribed medications in the primary care setting
- PPI prescriptions at Veterans Health Administration (VHA) account for about 11 million 30-day prescriptions and nearly \$50 million in costs annually. (1)
- Studies show that long term use of high-dose PPIs affects the absorption of calcium, vitamin B12 and magnesium by decreasing the production of acids in the stomach. (2)
- When used beyond indicated time, PPIs increase risk of chronic kidney disease, infections, osteoporosis, fractures (3)(4), vitamin deficiencies, and dementia.
- As part of a quality improvement initiative, PPI de-escalation was assessed among patients receiving PPIs.

Objective

- Attempt de-escalation of PPIs in 50% of eligible patients in the Patriot clinic by May 30, 2024 as tracked by self report by residents and attendings.

Methods

- A retrospective chart review was conducted among all patients prescribed PPIs in 2023 in the Patriot Clinic at the Orlando Veteran Affairs (VA) Healthcare System to identify patients with de-escalation indication (Figure 1).
- Inclusion criteria consisted of all patients on PPIs (omeprazole, pantoprazole, esomeprazole, rabeprazole).
- Patients with indication for long term PPI were excluded.
- Following data review and root cause analysis, a multifaceted intervention was then carried out involving provider education and reminders (Figure 2), posters aimed at patients in the exam rooms (Figure 3), and patient education pamphlets, as well as a competition between resident groups on who could attempt to de-escalate the most patients on PPIs (Figure 4).
- Primary outcome: self-reported PPI de-escalation attempts by providers in the Patriot Clinic.
- Secondary outcome: theoretical and actual cost savings annually from PPI de-escalation.

Tables and Figures

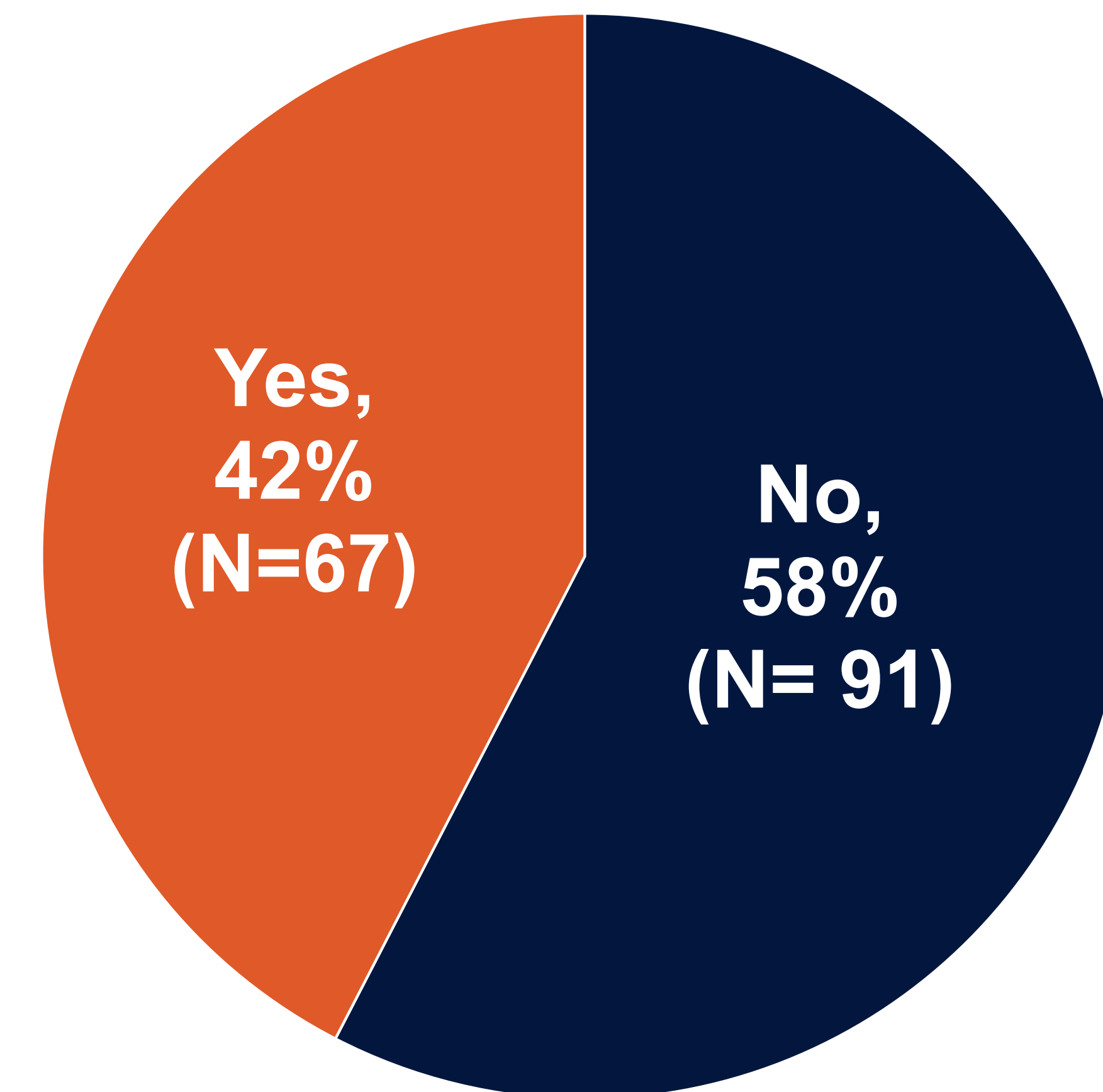
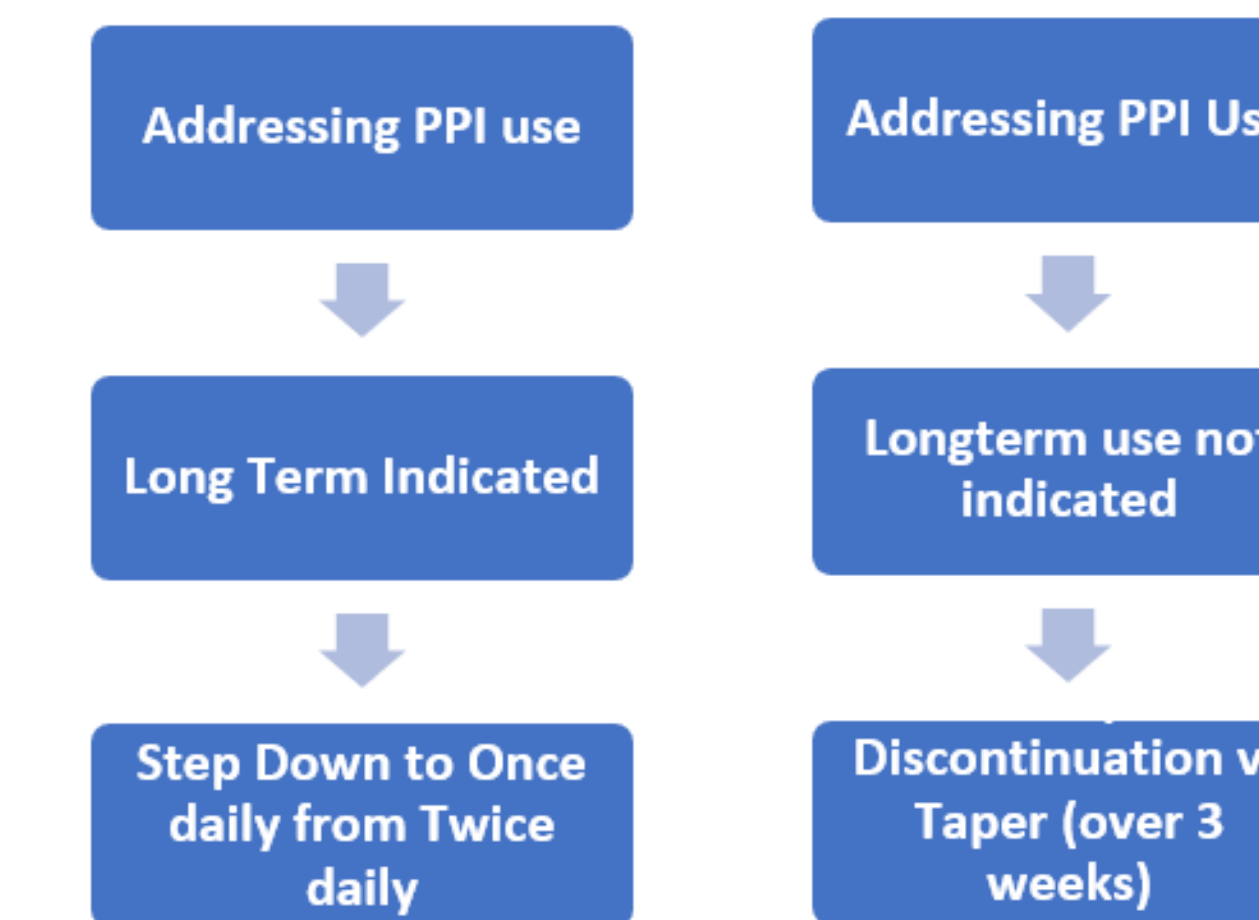


Figure 1. Chart review of Patients on PPI prescribed in the Patriot Clinic in 2023 with active prescriptions in March 2024 that are potentially able to be de-escalated.

(Avoid de-escalating if High-risk for GIB: 2 or more of following: ASA/NSAID/High dose steroid+>60yo+ Taking Anticoagulation)

Practice of Deprescribing



-If its 40 mg BID -> 40 Daily -> 20 Daily -> stop

-If its 20 mg BID -> 20 Daily -> Stop

Each step down should be every 5-7 days in duration

Figure 2. De-escalation protocol: Assess for GI Bleed Risk

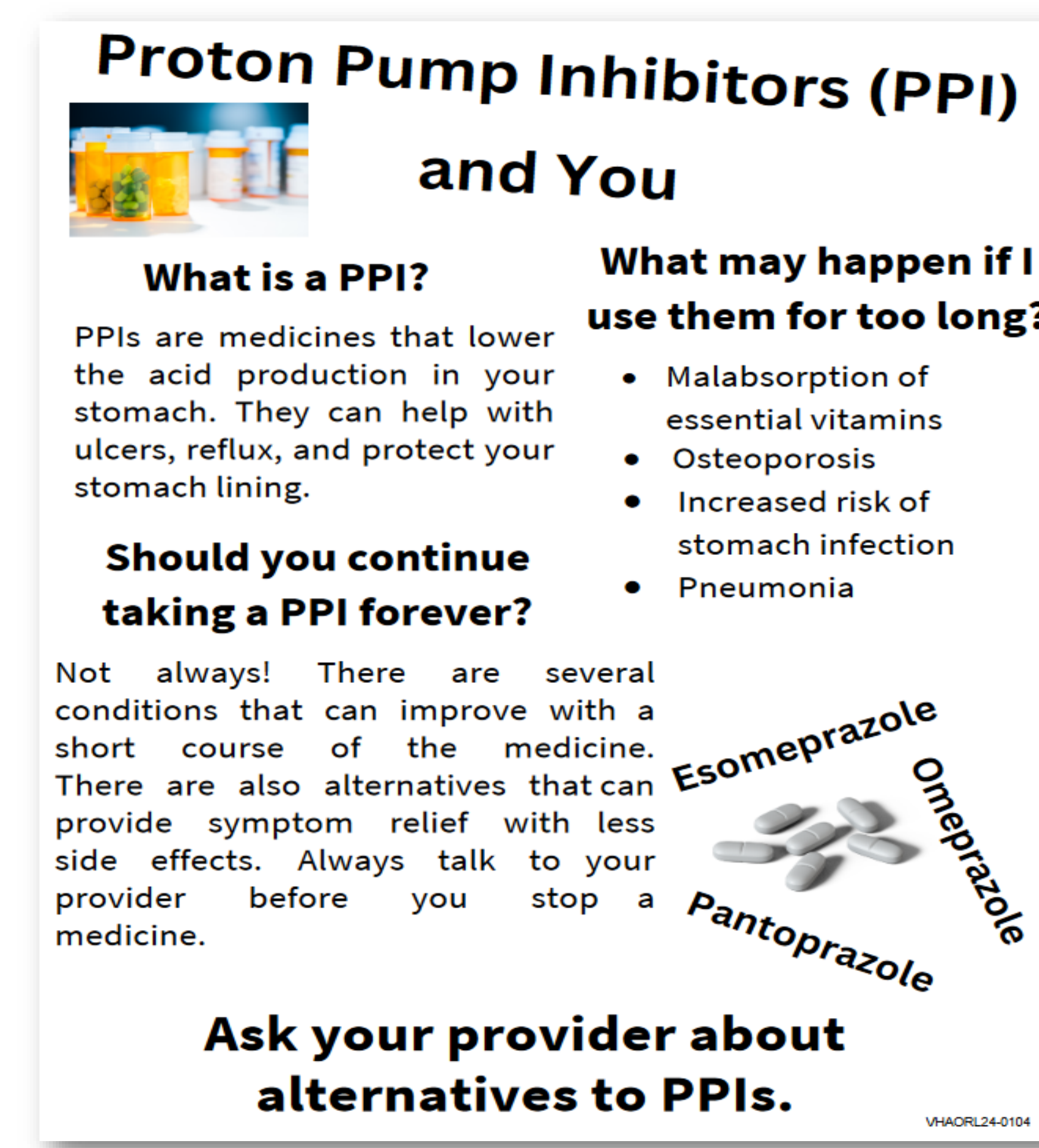


Figure 3. PPI Patient Education

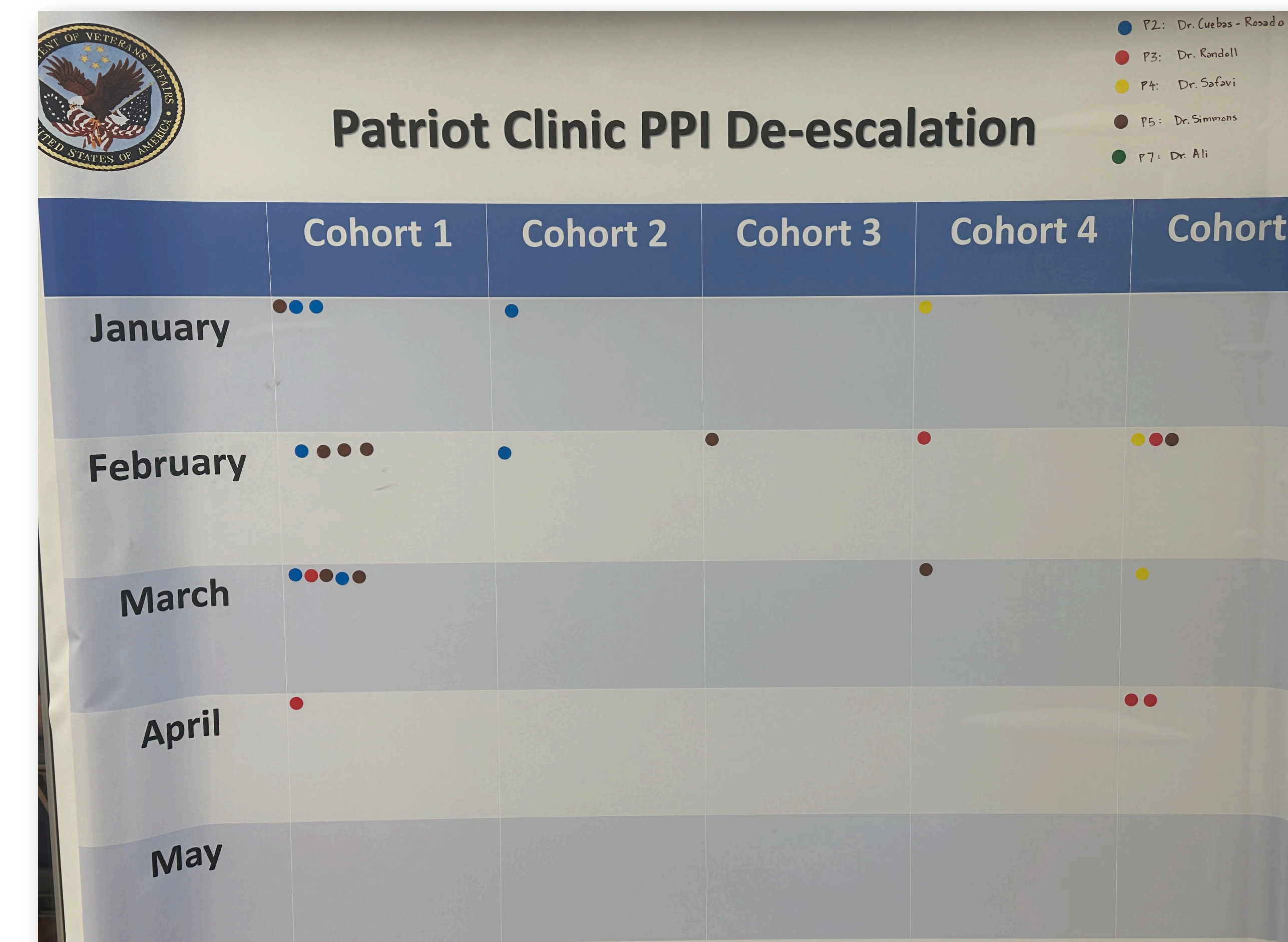


Figure 4. Number of Attempted De-Escalations by Month and Resident Group (N = 25)

Results and Clinical Implications

- This study showed an effective intervention for PPI de-escalation in the Patriot Clinic with 25 de-escalations from January 1 to April 16, 2024.
- The range of cost savings annually based on the number of patients with attempted de-escalation are as follows: pantoprazole (\$351 to \$909), omeprazole (\$153 to \$306), and esomeprazole (\$1,971 to \$6,192).
- There are more potential cost savings when accounting for decreased number of Clostridium difficile infections and bone fractures.

Conclusions

- Long term PPIs can lead to significant health care costs in terms of the medication itself as well as in terms of adverse effects.
- This study demonstrates that there is room for improvement in the de-escalation of PPIs in primary care clinics.
- Incorporating PPI de-escalation into the Active Panel Management curriculum will keep this project sustainable in our resident clinic.
- A successful intervention to reduce polypharmacy and increasing healthcare costs is illustrated here.

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