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12-2023

Evaluation of Ambulatory Care Proton Pump Inhibitor Use

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BACKGROUND

- Proton Pump Inhibitors (PPIs) are a superior pharmacotherapy option for acid-related disorders compared with histamine₂-receptor antagonists (H₂RAs) and anticholinergics.^{1,2}
- PPIs may be used in various conditions such as^{1,2}:



- The American College of Gastroenterology (ACG) recommends an 8-week course of an empiric PPI for classic GERD symptoms.³
 - Many patients are treated long-term or indefinitely, increasing healthcare expenditures over large populations.⁴⁻⁷
- Value-based programs aim to provide improved individual care, enhanced population health, and lower overall healthcare costs, including medication stewardship.
- PPIs were identified as the second highest cost-savings opportunity within a value-based program for our health system.

OBJECTIVES

- Assess appropriateness of PPI utilization.
- Identify possible opportunities for alternative PPI or step-down therapy.

METHODS

Study Design

- Retrospective analysis of subjects on PPI therapy who have established with a Parkview Physicians Group provider
- Time frame: January 1, 2023, through June 30, 2023
- Treatment history of PPIs and H₂RAs assessed dating back to January 1, 2013

Study Population

- Inclusion: active order for PPI on ambulatory medication list within the specified study period
- Exclusion: recurrent GERD, severe erosive esophagitis, gastrointestinal bleeds, esophageal ulcer, peptic stricture, Barrett's esophagus, eosinophilic esophagitis, Zollinger-Ellison syndrome, *Helicobacter pylori* infection, and idiopathic pulmonary fibrosis

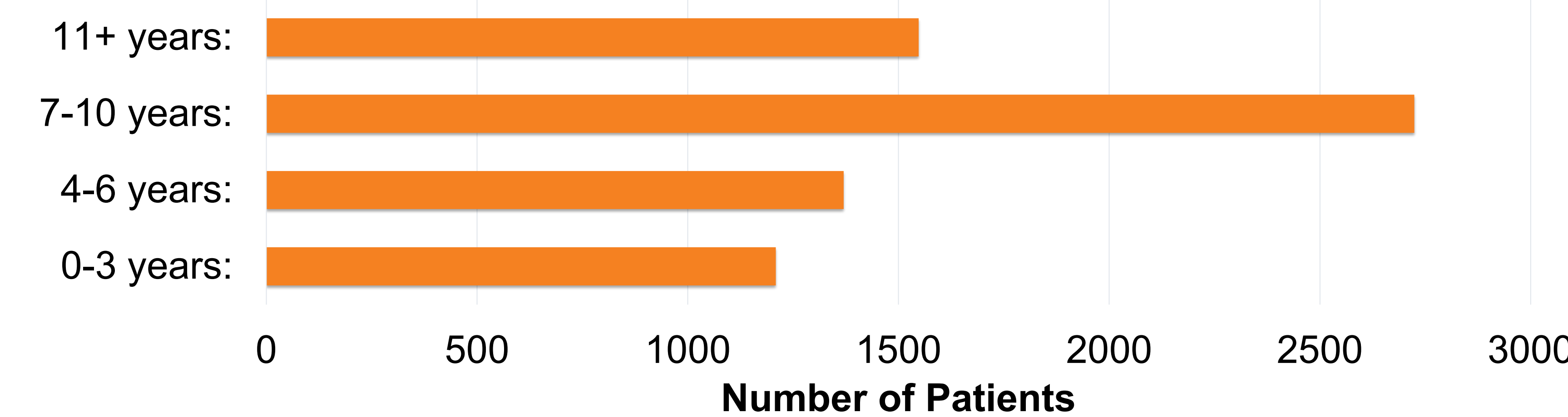
Endpoints

- Primary: appropriateness of PPI utilization
- Secondary: identification of opportunities for alternative therapy, assessment of drug-drug interactions, prescriber specialty, association between PPI choice and cost, insurance payer, use of an alternative PPI, and concurrent use of a H₂RA

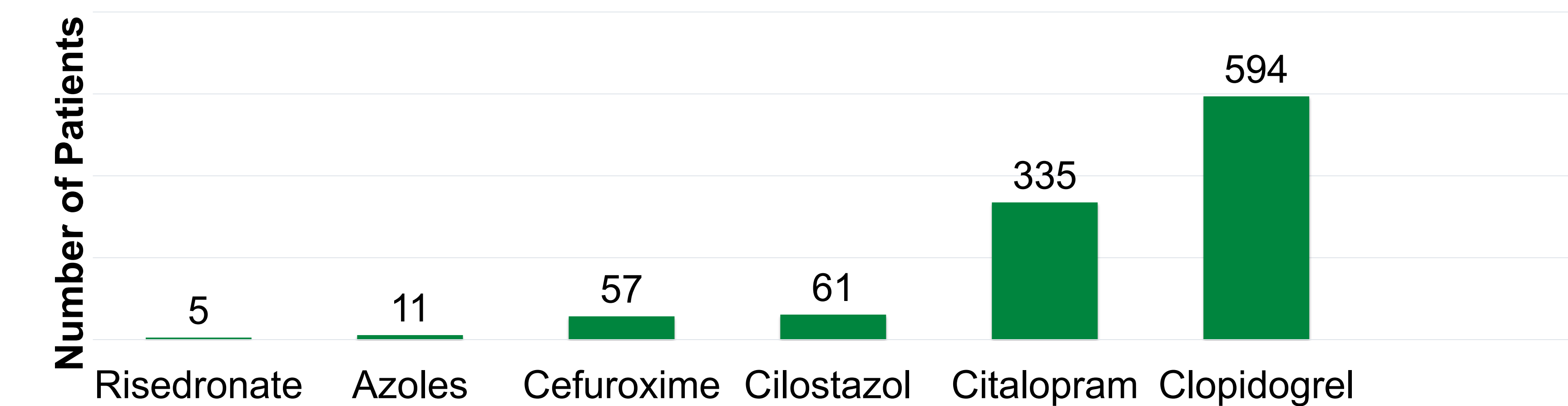
RESULTS

Baseline Characteristics		Study Subjects n=7263
Mean Age, year		72
Insurance	Aetna	663
	Anthem	1077
	Humana	3301
	United Healthcare	2222
Exclusion Criteria (not included in subject total)	Gastrointestinal Bleeding	904
	Eosinophilic Esophagitis	20
	Esophagitis	37
	Recurrent GERD	180
	<i>Helicobacter Pylori</i> Infection	21
	Idiopathic Pulmonary Fibrosis	20
	Ulcer	64
	Zollinger-Ellison Syndrome	1
	Barrett's Esophagus	343

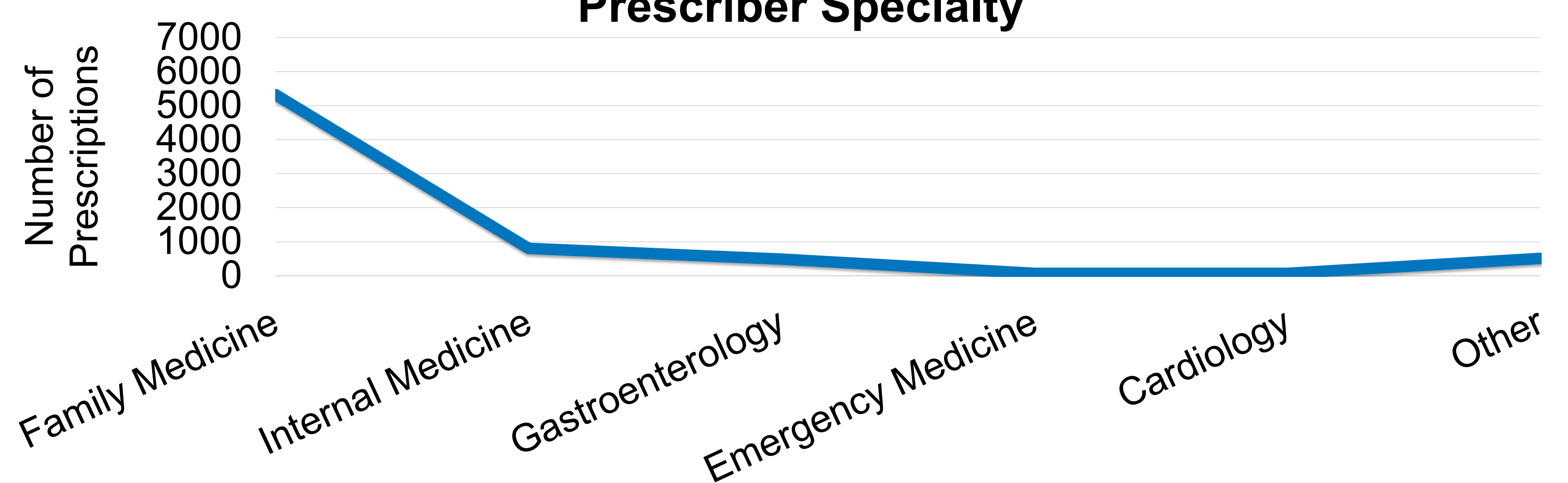
Duration of PPI Therapy



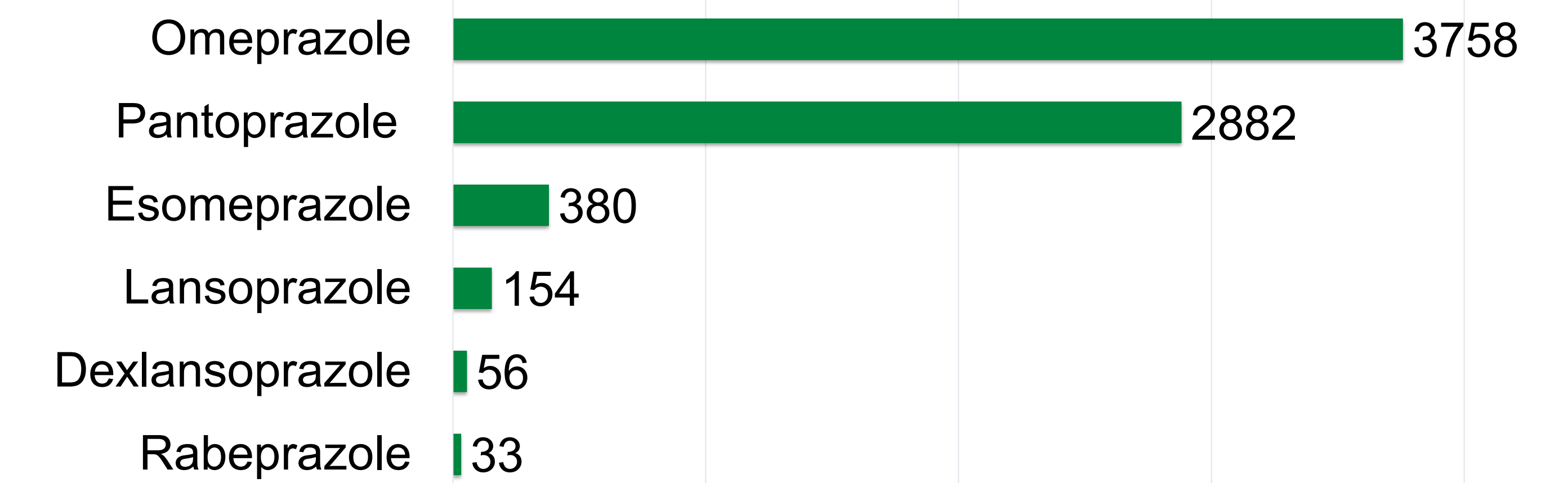
Drug-Drug Interactions



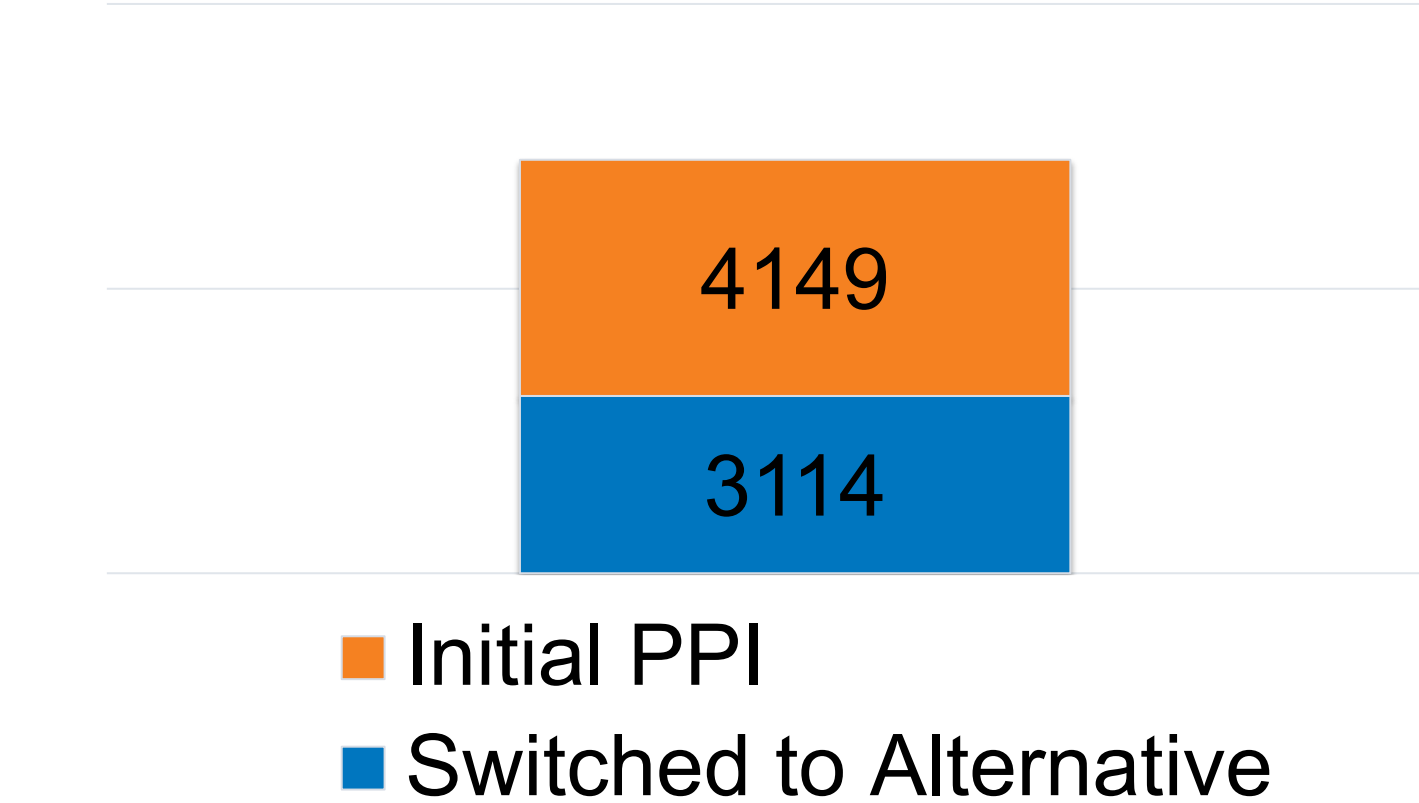
Prescriber Specialty



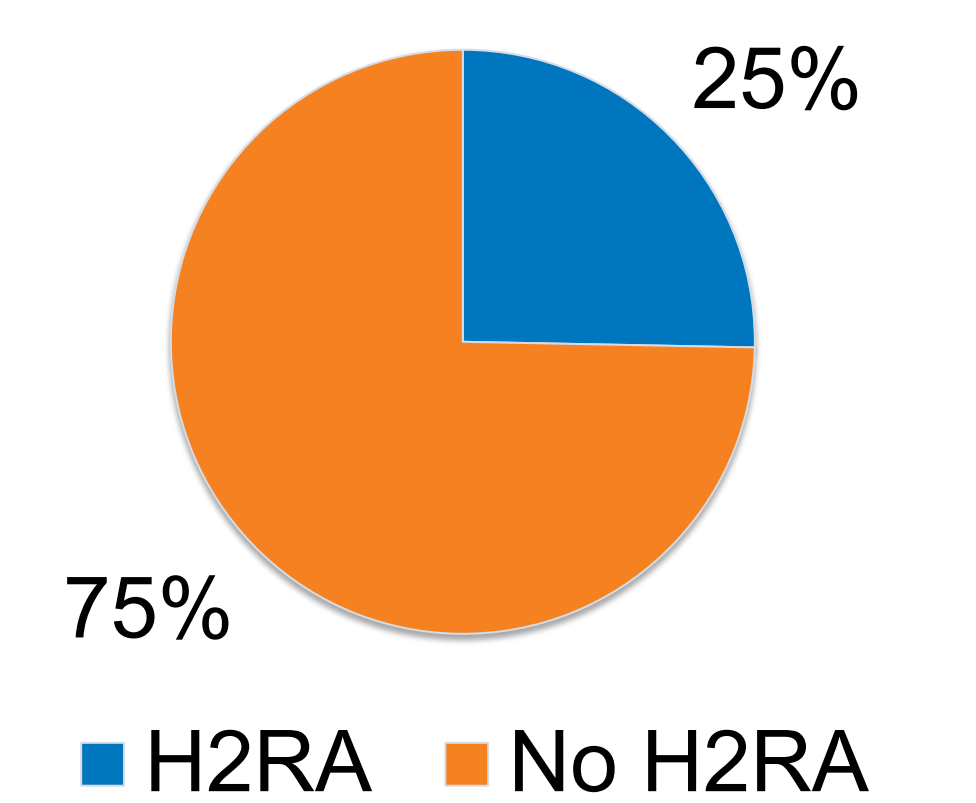
Choice of Agent



Use of Alternative PPI



Concurrent H2RA Use



DISCUSSION & CONCLUSIONS

- Approximately 30% of subjects did not have a corresponding diagnosis for use.
- On average, subjects were on a PPI for a duration of seven years, despite ACG recommendations.
- The most expensive PPIs per prescription are esomeprazole, dexlansoprazole, lansoprazole, and rabeprazole; if patients on these therapies switched to omeprazole, there would be an estimated cost savings of \$24,088.01.
- Almost half of the patients switched to an alternative PPI; this may be higher due to internal medicine prescribers following therapeutic interchange policies.
- Limitations consist of the following: difficulty differentiating ICD10 diagnosis codes, historical medication entries, inpatient prescribing practices, and variable end dates determined by provider input.
- Based on therapy duration, choice of agent, and lack of diagnoses, there is opportunity for alternative or de-prescribing therapy among patients.
- Next steps will include education to providers and colleagues within Parkview Physicians Group clinics and investigation of alerts at ordering.

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Disclosure

All authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.