

## **REDUCING INAPPROPRIATE PROTON PUMP INHIBITOR PRESCRIPTIONS IN A PRIMARY CARE CLINIC**

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**Category:** Quality, Cost, Value

### **Background**

Proton pump inhibitors (PPI) are commonly prescribed in the ambulatory setting. Common indications for PPI include gastroesophageal reflux disease (GERD), peptic ulcer disease, and chronic nonsteroidal anti-inflammatory drug use. In Harris County clinics, PPI were prescribed over 57,000 times in 2017. Recent studies have shown that chronic PPI use is associated with risk of chronic kidney disease, bone fractures, and various infections.

### **Objectives**

The study aims to assess rate of inappropriate PPI prescriptions at a resident-run ambulatory clinic, assess baseline physician knowledge about PPI use, and reduce inappropriate PPI prescriptions through implementation of a PPI tapering order set and physician education.

### **Methods**

A pre-intervention survey of PPI knowledge was distributed to internal medicine residents and included questions regarding Food and Drug Administration (FDA) approved indications for the use of PPI, potential adverse side effects, and methods of discontinuation. A retrospective chart review was conducted to assess baseline appropriateness of PPI prescriptions in a resident clinic. A PPI tapering order set was added to the Harris County EPIC system. Educational flyers and announcements were made which displayed PPI indications and how to use the order set.

### **Results**

One hundred and ten residents responded to the pre-intervention survey. The survey revealed poor baseline knowledge of FDA approved indications for the use of PPI. This was true for both short term (17.3% correct) and long-term treatment indications (26.4% correct). However, a majority of residents were able to correctly answer questions regarding potential adverse effects of long-term PPI use (73.64% correct) and recommended methods of PPI discontinuation (61.8%).

Retrospective chart review of records from a resident clinic revealed a substantial percentage of inappropriate PPI prescriptions (86.4%). Of inappropriate PPI prescriptions, a majority (73.7%) were chronic prescriptions initially made for gastroesophageal reflux disease (GERD). The PPI tapering order set has been implemented and more data is expected in a few months to analyze PPI prescriptions after intervention.

### **Discussion**

Based on preliminary data from an ambulatory clinic, PPI are frequently prescribed inappropriately and this could potentially lead to adverse side effects as well as substantial health care costs. In general, medicine residents could use more training about FDA indications for PPI. Assessment of whether implementation of a PPI tapering order set and education about PPI indications can lead to decrease in inappropriate prescriptions is ongoing.