



Generic over Brand-name Proton Pump Inhibitors Prescribed at Hospital Discharge

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Background and Aims

The use of proton pump inhibitors (PPIs) in the United States has increased over recent years. In 2009, 119 million prescriptions for PPIs accounted for \$13.6 billion in sales, making this class of drugs the third most profitable class of drugs in this country. In 2010, esomeprazole (Nexium) alone accounted for \$2.6 billion in sales. Studies have shown that generic PPIs are similarly effective and cost at least \$200 less per month than a comparable brand-name drug.

According to Consumer Reports, a 30-day supply of Nexium 40mg is \$248 as opposed to \$24 for an comparable supply of generic omeprazole which has equivalent therapeutic efficacy. Consequently, many insurance companies require preauthorization for Nexium because there are generic options.

Anecdotal evidence suggests that:

- Many patients are discharged from New York Presbyterian Hospital – Weill Cornell Medical Center with a prescription for esomeprazole (Nexium) because this is the preferred proton pump inhibitor (PPI) on formulary.
- Inpatient providers are often unaware of medication cost differences and of insurance preferences when discharge medications are prescribed, causing patients to have difficulty obtaining Nexium following discharge as it frequently requires prior authorization.

As part of an 8-week Internal Medicine Residency Quality Improvement curriculum (June to August 2012), we designed an educational initiative to decrease the proportion of new PPI prescriptions of Nexium compared to generic omeprazole given to patients being discharged from one general medicine unit by 40% over a 4 week period.

Methods

Study Design

- Residents organized a multidisciplinary team of Internal Medicine residents, pharmacists, and the Patient Care Director on Greenberg 5-North (5N) and developed:
 1. A brief educational session with all team members (interns, residents, physician assistants, students).
 2. A workflow intervention for medication review by a clinical pharmacist during interdisciplinary rounds triggering a page to the medical team preferentially recommending discharge prescriptions for omeprazole over other PPIs if a new PPI prescription was indicated.

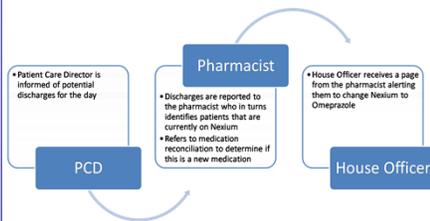
Study Population

- General medicine patients admitted to 5N were included in the study if:
 - They were started on a PPI while hospitalized and required a new prescription on discharge AND
 - They were discharged from one of the three general medicine teams localized on 5N (Med Green, Gold or Platinum)
- Patients who were taking a PPI prior to admission were excluded.

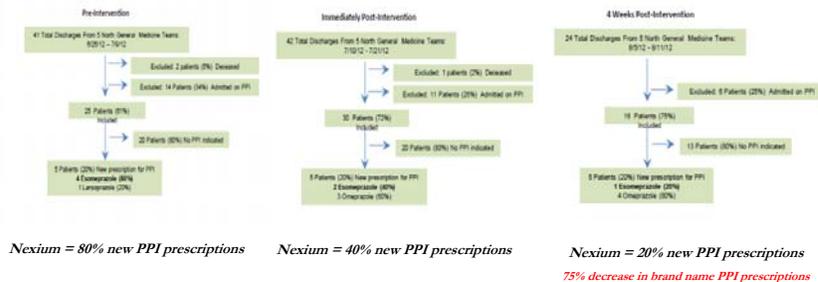
Data Collection

- Discharge medication lists were reviewed for each patient discharged from 5N over three time periods: pre-intervention, immediately post-intervention, and 4 weeks post-intervention.
- Cost savings was calculated using publicly available PPI cost data.

Workflow Intervention



Results



Discussion

Using a multidisciplinary approach, residents were able to successfully design and implement a QI project which:

- Exceeded their 40% benchmark for decrease in the number of brand-name PPI prescriptions on one general medicine unit in eight weeks.
- Met their goal of improving the prescribing behavior of co-residents in a cost-conscious manner.
 - If extrapolated to our institution for a year, the potential savings of healthcare dollars could result in a net savings of over \$400,000. This calculation only includes drug costs; it does not factor in administrative costs to manage prior authorizations for esomeprazole prescriptions or other downstream savings.
- Demonstrated their ability to spearhead an intervention applying the key principles of improvement science that resulted in measurable outcomes.

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