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## Hospitalist Update

### Proton-Pump Inhibitors: Reducing their Unnecessary Use

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Proton-pump inhibitors are the third largest class of medications prescribed in the United States, with more than 113 million prescriptions filled annually [4]. The use of proton pump inhibitors in hospitalized patients has increased significantly over the past several years, with 40-70% of medical inpatients receiving acid-suppressive medications. [2].

While proton-pump inhibitors (PPIs) have beneficial therapeutic and prophylactic indications for many patients, increasing evidence suggests that these medications are not without risk; inpatient use of PPIs has been shown to increase the risk of hospital-acquired pneumonia by up to 30% [2]. Community-acquired pneumonia is also more common in patients who have started PPI therapy within the past 30 days [5]. The use of proton-pump inhibitors has been associated with an increased risk of primary and recurrent *Clostridium difficile* infections [3]. Their long term use has also been linked to an increased risk of fractures in older adults, though the mechanism for this association remains unclear; PPI use has not been clearly linked to osteoporosis or increased loss of bone mineral density [1].

Massachusetts General Hospital recently implemented standardized guidelines for prescribing PPIs for their medical inpatients. The guidelines were reviewed with house staff during a single didactic session and were also sent out via email. While it was emphasized that clinical judgment must be used in each individual case, the guidelines limited the recommendations for IV PPIs to patients with EGD evidence of peptic ulcer disease or with non-variceal lesions at high risk of recurrent bleeding. The prophylactic use of oral PPIs was recommended for ICU patients with coagulopathy or for those requiring mechanical ventilation. The guidelines also suggested that oral PPIs be considered for prophylaxis in patients with a history of peptic ulcer disease, especially when taking NSAIDs or antiplatelet therapy [6].

Overall, 49% of non-ICU medical inpatients were prescribed PPIs during their hospital course, 36% of admitted patients were already on PPIs and 21% had documentation of appropriate indications for PPI outpatient therapy prior to release of the guidelines. After implementation, significant differences were found in the subgroup (cont)



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(continued) of patients who were not taking a PPI prior to admission: in this subgroup, inpatient use of a PPI fell from 27% to 16% and prescriptions for a PPI at discharge decreased from 16% to 10% [6].

There is clearly room for improvement in reducing the unnecessary use of proton-pump inhibitors in both the inpatient and outpatient settings. As with all medications, it is important to use PPIs only when indicated and to periodically re-evaluate the need for their continued use.

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## HOSPITALIST LUNCH CONFERENCE

at the

**2010 Missouri ACP Scientific Meeting**

September 23-26

Tan Tar A Resort, Osage Beach, Missouri

Hospitalist Lunch Conference at 12:15, Saturday, September 25

**Presentations by Amy Sheldahl MD, Maniza Ehtesham MD & Dilip Beareilly MD**

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