

PPIs – taking the stress out of ulcer bleeds

Proton pump inhibitors (PPIs) are more effective and less costly than H₂-receptor antagonists (H₂RAs) in preventing stress ulcer bleeding (SUB) in high-risk patients, according to results of a cost-effectiveness analysis published in *Value in Health*.

Both PPIs and H₂RAs can prevent SUB in patients at high risk, although disparate results have been reported in the medical literature for their comparative efficacies and the risk of ventilator-assisted pneumonia (VAP) as a complication of SUB prophylaxis. In view of the high costs associated with SUB, a cost-effectiveness analysis was undertaken from the third-party payer perspective in the USA to better assess the efficiency of these therapeutic prophylactic agents.

The decision-tree model used a 60-day time horizon, as the analysis focused on inpatient costs only. Patients at high risk of developing SUB in the intensive care unit received prophylactic therapy with a PPI (omeprazole 40 mg/day PO or IV) or an H₂RA (famotidine 40 mg IV twice daily). Three possible health states were modelled, including SUB, VAP or no complication.

PPIs had greater efficacy in preventing SUB than H₂RAs, and mean costs per patient were \$US1250* lower with PPIs. The main outcome was the cost per averted complication, which was \$US58 699 for PPIs compared with \$63 921 for H₂RAs, indicating that PPIs were the dominant strategy.

* 2010 values

Barkun AN, et al. Cost-effectiveness analysis: stress ulcer bleeding prophylaxis with proton pump inhibitors, h₂ receptor antagonists. *Value in Health* 16: 14-22, No. 1, Jan 2013. Available from: URL: <http://dx.doi.org/10.1016/j.jval.2012.08.2213>

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