

Indiana Medicaid Therapeutics Committee
Therapeutic Class Review Summary

Therapeutic class:

H₂ receptor antagonists

Overview:

H₂ receptor antagonists are used in the treatment and maintenance of duodenal and gastric ulcers, the treatment of GERD, and in the treatment of pathological hypersecretory conditions. The first agent, Tagamet[®], was introduced in 1977. This class of drugs works by competitively inhibiting the binding of histamine to H₂ receptors thereby reducing basal and nocturnal gastric acid secretions. These agents do not affect H₁ receptors. Therefore, they do not produce any anticholinergic effects. The length of treatment varies with indication. Treatment should be at least eight weeks for gastric or duodenal ulcers, six weeks for GERD, and lifetime for hypersecretory conditions.

There are four H₂ receptor antagonists currently on the U.S. market, all with multiple generics available. In addition, all agents in this class are available over-the-counter. The head to head clinical trials have not shown any significant difference in efficacy or safety among the various agents. However, more drug interactions are documented for cimetidine and ranitidine than for famotidine or nizatidine.

| Generic Name | Brand Name | Manufacturer |
|---------------------|--|-----------------------------------|
| Cimetidine | Tagamet [®] , Tagamet [®] HB | GlaxoSmithKline, Various |
| Famotidine | Pepcid [®] , Pepcid AC [®] , Pepcid [®] Complete, Fluxid [™] | Merck, Schwarz Pharma, Various |
| Nizatidine | Axid [®] , Axid [®] AR | Reliant, Various |
| Ranitidine | Zantac [®] , Zantac [®] 75 | GlaxoSmithKline, Various |

Summary:

H₂ receptor antagonists are safe and effective medications. Selection of the preferred agent should be based upon safety and cost.