

DYSPEPSIA

Time to step down?

The success of treatments for dyspepsia is often unsatisfactory, and guidelines for the initial management of this disorder are inconsistent. Findings from a new study that compared two dyspepsia treatment strategies—a step-up and a step-down approach—revealed that both strategies are equally effective in patients with new-onset dyspepsia. Although the costs of the step-up approach were lower than those of the step-down approach, the earlier response of patients to treatment in the step-down group may influence decisions on treatment choice.

Dyspepsia is a common medical condition. The symptoms of dyspepsia are heterogeneous, and are thought to arise from a variety of causes. The complexity of symptoms and etiologies linked with dyspepsia probably contributes to the difficulties associated with treatment of this disorder. The paucity of information on the initial management of dyspepsia and the cost-effectiveness of initial management strategies prompted Dr van Marrewijk and colleagues to investigate the effect and cost-effectiveness of two treatment strategies for dyspepsia.

In the DIAMOND study, the researchers compared the effectiveness of step-up and step-down treatment strategies in 664 patients with new-onset dyspepsia in The Netherlands. They undertook an analysis of cost-effectiveness that took into account direct medical costs, such as medications and consultations, and indirect costs, such as loss of paid work. The investigators randomly allocated eligible patients to receive either step-up treatment, which involved administration of an antacid, followed by a histamine H2 receptor antagonist, followed by a PPI, or a step-down treatment, which involved administration of the same drugs in the reverse order (Figure 1). After 6 months of treatment, the researchers found no difference in effectiveness between the strategies: 72% and 70% of patients reported successful treatment in the step-up and the step-down groups, respectively.

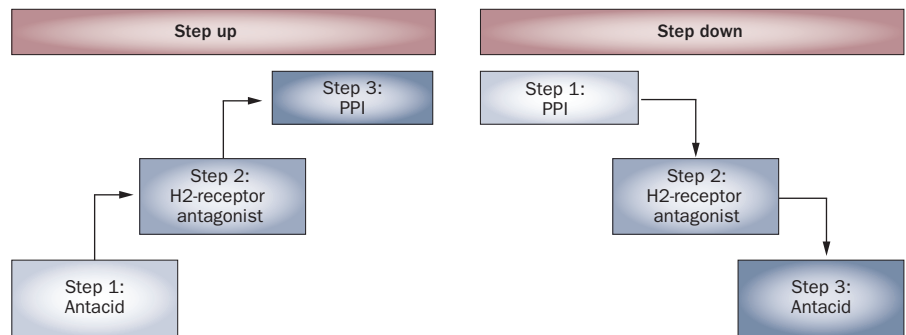


Figure 1 | Step-up treatment approach versus step-down treatment approach to dyspepsia management. Permission obtained from C. J. van Marrewijk *et al.*, Radboud University Nijmegen Medical Center, Nijmegen, The Netherlands.

Quality of life and symptom severity also improved to a similar extent in patients in both treatment arms. However, despite the similar effectiveness of the treatment strategies, “...patients on initial empirical treatment with a PPI (step-down approach) show an earlier response, especially in the small subgroup with predominant reflux symptoms,” van Marrewijk from the DIAMOND study group explains.

However, the step-up approach had lower medical and overall costs than the step-down one; “...based on cost-effectiveness, step-up should be the preferred strategy,” suggests van Marrewijk. The difference in overall cost between the two approaches derived from the costs of the prescribed medications. Costs associated with productivity loss and other indirect expenses accounted for approximately half of the total amount, and did not significantly differ between the two groups. Thus, the step-up approach was more cost-effective because of the increased cost of PPIs compared with antacids and the increased use of PPIs in the step-down group. Interestingly, when cost calculations were reanalyzed using the prices of generic drugs, the difference in medical costs remained, but the mean overall costs of the two treatments were no longer significantly different. Whether generic and branded PPIs are similarly effective, however, was not investigated, and an important point

to note is that treatment outcomes might change with the use of generic medications.

The DIAMOND researchers advise that decisions on which treatment strategy to use in a patient with new-onset dyspepsia should consider the approach that will most rapidly alleviate symptoms, and the cost to the patient and to health-care resources. On the basis of this Dutch study, the costs of treatment strategies were dependent on the prices of medication, and use of a step-down strategy might be recommended because of the earlier response associated with this approach. The DIAMOND study group hopes that their research will result in an update of the existing Dutch guidelines that will clarify recommendations for the management of patients with new-onset dyspepsia. The researchers are now investigating the best way to implement new guidelines by asking general practitioners for feedback on how the results from this study affect their clinical practice. “The report of this work will be submitted as an advice to all participating stakeholders,” says van Marrewijk.

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Original article van Marrewijk, C. J. *et al.* Effect and cost-effectiveness of step-up versus step-down treatment with antacids, H2-receptor antagonists, and proton pump inhibitors in patients with new onset dyspepsia (DIAMOND study): a primary-care-based randomised controlled trial. *Lancet* 373, 215–225 (2009).