from the authors' efforts to expand the literature that investigates enhanced compliance with preventive health measures.

David L. Smith, MD Voorhees, NJ

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The above letter was referred to the authors of the article in question, who offer the following reply.

To the Editor: We appreciate Dr. Smith's interest in our study on improving vaccination rates in the elderly. This study investigated the impact of a patient education intervention on the pneumococcal vaccination rate in elders. It was, therefore, a study of patient behavior rather than physician behavior. All elderly patients who had not received pneumococcal vaccination were provided patient education in the waiting room by a research nurse before seeing their physician. Each patient was offered the opportunity to be vaccinated that day. All physicians had previously agreed to provide vaccination to their patients who consented to receive it that day, unless there were contraindications. The flagging of the patient chart was simply a way to alert the physician to the patient's consent for vaccination.

Sudah Elangovan, MD, PhD Ken J. Kallail, PhD Wichita, Kan

Breath Test, Endoscopy, and Peptic Ulcer Disease

To the Editor: The recently published letter by Dr. Zoorob in the *Journal* was appreciated (Zoorob RJ. NIH consensus on *Helicobacter pylori* in peptic ulcer disease. J Am Board Fam Pract 1996;9:392). Dr. Zoorob's emphasis on the presenting complaint of dyspepsia as opposed to the pathophysiologic disease of ulcer is well taken.

On the other hand, I am not very optimistic about the breath test as a means of diagnosis or guiding therapy for *H pylori* eradication. Certainly more studies should be done, but at this time I think the continuing high occurrence in asymptomatic patients makes the actual detection of *H pylori* less than definitive.

During the 10 years that I have been performing esophagogastroduodenoscopy (EGD) in family practice, I think the most powerful background I bring to each patient encounter is my psychosocial foundation in the medical specialty of family practice. At least 35 percent of the patients within our teaching practice come to each endoscopy with substantial psychosocial co-morbidity. Of course they have dyspepsia or other gastrointestinal symptoms that merit investigation; however, these symptoms do not lead to pure gastrointestinal diagnoses. The most powerful management usually combines all of the various conditions affecting the patient. I therefore totally agree with the need for family physicians to be involved in the process of formulating clinical guidelines. It is my hope that family physicians will continue to produce the clinical research leading to the optimal management of common conditions such as the peptic disease syndrome. H pylori eradication is one dimension within this larger problem.

Pending further definitive research, primary care EGD is probably going to be the best approach for patients who fail empirical therapy with H_2 receptor antagonists. Widespread empirical prescriptions of antibiotics in the hope of eradicating *H pylori* run the risk of producing drug-resistant strains.

A shotgun approach regarding H pylori eradication in all patients with positive breath tests is unlikely to be helpful for the majority of patients with garden variety dyspepsia in family practice.

> Wm. MacMillan Rodney, MD Memphis, Tenn

The above letter was referred to the author of the letter in question, who offers the following reply.

To the Editor: Dr. Rodney brings up several important points regarding the presentation of peptic ulcer disease and dyspepsia in primary care settings. I agree that psychosocial issues and nonulcer dyspepsia, which are usually unrecognized by subspecialists, are the predominant factors in primary care. I could not emphasize more that symptomatic treatment for dyspepsia should always precede investigation or endoscopy. Although I am in an academic center, I still find it hard as a family physician to accept that primary care endoscopy be performed on all nonresponders to symptomatic treatment.

I admire Dr. Rodney's procedural experience and efforts to train family physicians in endoscopy. Nevertheless, it is not nationally feasible at this time to recommend EGD by family physicians for all nonresponders to H₂-blockers. Moreover, although antibiotic resistance is a legitimate concern, empirical treatment is by far most effective in patients with high pretest probability for *Helicobacter pylori*.¹ Similarly, cost-benefit analysis has echoed the same recommendation, especially when the cost of EGD and biopsy are incorporated into the decision process.² Initial noninvasive testing and empiric treatment of symptomatic persons with peptic ulcers are also suggested by other researchers.³

Since the publication of my last letter in this journal, the breath test has been approved by the Food and Drug Administration. Family physicians now have the ability to use a highly sensitive and specific (greater than 90 percent) test that is a cheaper alternative to EGD in primary care practice.^{4,5} Obviously, endoscopy should be recommended for nonresponders to empiric therapy, and appropriate sensitivities for H pylori should be assessed.

I am in complete agreement with Dr. Rodney regarding the need to develop family practice evidencebased guidelines for peptic ulcer disease. Guidelines might include EGD training for family physicians once the evidence supports that such training results in more cost-effective eradication of *H pylori*. This evidence is still lacking, as are many other scientific pieces of the "ulcer" puzzle.

Roger J. Zoorob, MD, MPH Lexington, Ky

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