

a fundamental transformation in the attitudes of the public, physicians, and pharmacists themselves.

However, we need a degree of healthy skepticism. My colleagues and I performed a randomized, controlled trial of a comprehensive pharmaceutical care program for 1113 patients with reactive airway disease who were receiving drugs from 36 community drugstores.<sup>1</sup> Although we involved the pharmacists in developing the intervention,<sup>2</sup> they seldom used the intervention materials, despite continued reinforcement and financial incentives. The intervention had no effect on clinical or patient-centered outcomes, and patients who were randomly assigned to receive "pharmaceutical care" from pharmacists had significantly more emergency department vis-

its for acute respiratory disease than did control patients.

The new paradigm of team-oriented health care should include pharmacists if such inclusion would improve pharmacotherapy and reduce the rate of adverse drug events. However, this hypothesis should be rigorously tested.

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## Suspected Appendicitis

**TO THE EDITOR:** Paulson et al. (Jan. 16 issue)<sup>1</sup> propose an algorithmic approach to the evaluation of right-lower-quadrant pain. The approach to the evaluation of suspected appendicitis has changed with technology. Although the history and the physical examination remain paramount, imaging studies, including computed tomography and ultrasonography, have an increasingly important role in cases of equivocal presentation. However, there is concern that the algorithmic approach may be skewed toward equivocal presentation, given evidence that the physical-examination skills of U.S. medical graduates in evaluating possible appendicitis are deficient. One study showed that only 5 of 113 examinees (4 percent) correctly elicited the psoas sign,<sup>2</sup> a sign with 95 percent specificity.<sup>1</sup> More emphasis should be given in the medical curriculum to instruction in physical-examination skills.<sup>3</sup> The recommendation of diagnostic imaging for "equivocal cases" must bear in mind that the determination of what is equivocal lies in the hands of the examiner.

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**THE AUTHORS REPLY:** As we state in our article, the history and physical examination remain the diagnostic cornerstone in evaluating patients with pain in the right lower quadrant. However, in many such patients, acute appendicitis remains a difficult diagnosis to establish, even for the most experienced physicians. The rate of error in managing right-lower-quadrant pain can approach 40 percent in some groups of patients.<sup>1</sup> With the judicious use of carefully performed diagnostic imaging, most patients with an equivocal clinical presentation can be given an accurate diagnosis of acute appendicitis or another disease that mimics acute appendicitis or told they have a normal appendix. Prompt use of imaging can save patients unnecessary appendectomy, unnecessary hospitalization for observation, and the associated costs.

We agree that teaching physical-examination skills should be a mainstay of any medical curriculum. The more difficult task is to determine the best strategy for integrating appropriate diagnostic imaging with history taking, physical examination, and laboratory evaluation.

It has come to our attention that some of the values presented in Table 1 of our article are incorrect. These values were based in part on data in an article by Wagner et al., which were subsequently corrected.<sup>2,3</sup> The correct values for the sensitivity and specificity of right-lower-quadrant pain are 84 percent and 90 percent, respectively, rather than 81 percent and 53 percent, as stated in Table 1 of our article. In addition, the correct values for the sensitivity and

specificity of anorexia are 68 percent and 36 percent, respectively, rather than 84 percent and 66 percent, as stated in Table 1. We regret these errors.

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## Painful Sensory Neuropathy

**TO THE EDITOR:** Virtually all clinicians I know routinely order tests for vitamin B<sub>12</sub> deficiency, folate deficiency, and hypothyroidism as part of the initial workup for peripheral neuropathy. However, none of these disorders are mentioned by Mendell and Sahenk in their Clinical Practice article on painful sensory neuropathy (March 27 issue).<sup>1</sup> Are they in fact not truly underlying causes, or is the diagnostic yield so low that testing is not warranted?

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1. Mendell JR, Sahenk Z. Painful sensory neuropathy. *N Engl J Med* 2003;348:1243-55.

**TO THE EDITOR:** Mendell and Sahenk note that in painful neuropathy, only skin-biopsy and quantitative sensory testing can document small-fiber damage but that these tests have limitations. On the basis of a thorough review of the literature that we performed as part of a task force of the European Federation of Neurological Societies to prepare European guidelines for the assessment of neuropathic pain, we believe that laser-evoked potentials also warrant mention. Laser pulses selectively activate A-delta and C nociceptors in the superficial skin layers, thus providing a selective nociceptive input,<sup>1</sup> and they evoke scalp potentials that can easily be measured after 10 to 30 stimuli. Laser-evoked potentials have proved to be reliable in assessing nociceptive pathways in peripheral and central neuropathic pain,<sup>2-4</sup> and we believe it is the most sensitive and specific test for evaluating small-fiber function. Although this method is not yet widely available, physicians should be aware of

it, particularly because it may circumvent the need for biopsy.

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**THE AUTHORS REPLY:** In our article on painful sensory neuropathy, we recommend an evaluation that specifically targets causes of conditions affecting the small nerve fibers that mediate pain. Other neuropathies, such as the ones mentioned by Leiner, present a much different clinical picture and would be included in the evaluation of other neuropathic disorders. For example, in vitamin B<sub>12</sub> deficiency, the major problem results from loss of function of the large nerve fibers (which normally mediate proprioception and vibration), with accompanying hyperreflexia. Hypothyroid neuropathy also causes injury to the large nerve fibers but results in little or no pain in the arms and legs. Folate deficiency does not cause neuropathy.