ERRATUM

In "Getting to Goal: How Thiazide-type Diuretics, Following the Guidelines, and Improving Patient Adherence Can Help" (supplement, *J Fam Pract*. 2012;61: S1-S36), the references in Module 4 were incorrectly numbered. In addition, chlorthalidone was incorrectly referred to as CHT; the correct acronym is CTD. The corrections have been made in the online version of the supplement, available at http://www.jfponline.com/Pages.asp?id=10673.

Macrolide resistance: Cause for concern?

In the PURL, "Consider adding this drug to fight COPD that's severe"(*J Fam Pract*. 2012;61:414-416), Drs. Hobbs and Brown state that "there was an increase in the prevalence of macrolide-resistant respiratory pathogens in patients on daily azithromycin." This statement is technically correct but terribly misleading. It implies that azithromycin caused increased resistance, which it did not.

Prevalence is a proportion, and in this case refers to the proportion of all isolates that were macrolide resistant. An increased proportion may be due to either an increased numerator (resistance) or a decreased denominator (isolates).

In the study in question[1] there were actually *fewer* macrolide-resistant pathogens isolated during treatment with azithromycin compared with placebo. All else being equal, this would have resulted in a decreased prevalence. However, there were also far fewer total isolates in the azithromycin group. This relatively larger decrease in the denominator prevailed, resulting in "increased" prevalence, due to fewer pathogens, not more resistance. This finding (of fewer pathogens isolated) has a clinical correlate. The 2 largest trials comparing azithromycin with placebo both found decreased acute respiratory illnesses in the azithromycin groups compared with the placebo groups.[2,3]

The correct way to assess resistance would have been to calculate the incidence of newly detected resistant pathogens over a defined period of time in both the azithromycin and placebo groups. In fact, the incidence of macrolide resistance was 24% *lower* in the azithromycin group (11.1 per 100 patients per year vs 14.9 per 100 per year in the placebo group).[4] Thus, the increased "prevalence" referred to by Hobbs and Brown does not indicate increased resistance, but rather decreased pathogens.

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1. Albert RK, Connett J, Bailey WC, et al. Azithromycin for prevention of exacerbations of COPD. *N Engl J Med*. 2011;365:689-698.
2. O'Connor CM, Dunne MW, Pfeffer MA, et al. Azithromycin for the secondary prevention of coronary heart disease events: the WIZARD study: a randomized controlled trial. *JAMA*. 2003; 290:1459-1466.
3. Grayston JT, Kronmal RA, Jackson LA, et al. Azithromycin for the secondary prevention of coronary events. *N Engl J Med*. 2005;352:1637-1645.
4. Hahn DL. Azithromycin for prevention of exacerbations of COPD. *N Engl J Med*. 2011;365:2236.

Drs. Hobbs and Mounsey respond

We thank Dr. Hahn for his comments and agree that further clarification of the impact of azithromycin on macrolide resistance is appropriate. As Dr. Hahn notes, the number of colonized patients in the azithromycin group (66/479) was lower than in the placebo group (172/476), as would be expected because they had been on azithromycin for one year.[1] Dr. Hahn calculates the incidence of macrolide resistance using as the denominator all the patients in both the azithromycin and placebo groups and shows that the rate is higher in the azithromycin group.

We chose to determine macrolide resistance by comparing resistance rates only in

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the colonized patients (66 on azithromycin and 172 on placebo), not the whole group—the majority of whom were not colonized at all. Albert et al used similar methodology, reporting that "the incidence of resistance to macrolides was 81% [in the azithromycin group] and 41% [in the placebo group]."[1]

So as Dr. Hahn states, patients on azithromycin were less likely to become colonized with bacteria, but when they did, the organisms were more likely to be macrolide resistant.

Whichever way the data are presented, the finding of macrolide-resistant organisms in 81% of the isolates after only a year must raise concern about the long-term use of prophylactic azithromycin. In a recent commentary on the use of prophylactic azithromycin, Wenzel et al called this a "major concern" and stated that the Albert trial was not long enough to elucidate the extent or clinical implications of the problem.[2]

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1. Albert RK, Connett J, Bailey WC, et al. Azithromycin for prevention of exacerbations of COPD. *N Engl J Med*. 2011; 365:689-698.
2. Wenzel RP, Fowler AA 3rd, Edmond MB. Antibiotic prevention of acute exacerbations of COPD. *N Engl J Med*. 2012;367:340-347.

A heavy-handed interference with a student's career path is anathema to a free society.

Fix medical education

I could not agree more with Dr. Susman's commentary regarding the current state of medical education ("Where medical education goes wrong" (Editorial, *J Fam Pract*. 2012;61:382-383). What we really need today is a physician who can actually communicate with patients instead of worrying about a lab result or an obscure diagnosis.

I have been a primary care physician for 20+ years. I also have a master's in public health (epidemiology), and this has served me more than my actual medical degree in regard to patient communication.

Competencies are great for those who plan our education. But they are useless, in my opinion, in measuring our ability to function efficiently in everyday clinical practice.

I agree with Dr. Susman's assertion that we need to emphasize the social sciences, communication skills, and basic statistical concepts (the *why* and not the *how*). As many wise physicians have observed, most astute clinicians can come up with the correct diagnosis the majority of the time by listening to patients and asking the right questions—usually within the first 5 minutes of the clinical encounter.

If we're unable to communicate effectively with patients, all the training in the world won't help. Let's start focusing our limited resources on the basics of medical education, which will serve us (and our patients) better in years to come.

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… but don't mess with specialty choice

While I respect Dr. Susman's motivation for writing "Where medical education goes wrong," a heavy-handed interference with a student's career path is anathema to a free society. I am surprised that he would suggest such a thing.

Physicians are not society's chattel.

I realize Dr. Susman was trying to "stir the pot," but words are dangerous. Health and Human Services Secretary Kathleen Sebelius may take you seriously and, once again, initiate a program that is unproven (think Accountable Care Organizations), adds little to quality (EHRs), worsens efficiency while providing no savings (prior authorization), interferes with the patient-physician relationship (patient-centered medical homes, adversarial chart review, etc.), and further restricts the noble profession we have been so lucky to join.

Would you like an academician or editor directing—and restricting—your career? God knows where physicians in training will end up. I sure don't, and neither do you, or some well-intentioned medical board. Ultimately, we need to discern only one thing in applicants to medical school: Do they care deeply?

Keeping altruism alive in medical students is the essential first step in improving medicine. It always has been and always will be our greatest professional asset.

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