Despite an obesity epidemic and the increasing burden of chronic, diet-related disease in the United States, medical schools have continued to neglect nutrition education over the last several decades. In August 2013, I saw this neglect firsthand. As a second-year medical student, I completed the Introduction to Clinical Nutrition course at the school I attend. My classmates and I had encountered occasional nutrition content in other places: lipid metabolism in biochemistry, vitamin absorption in gastrointestinal physiology, and some talks hosted by student clubs. But we had yet to receive focused teaching in nutrition, along with most other topics that address patient lifestyle.

The course had some great components. The lecturers were passionate and experts in their fields. The course directors convened panels to discuss the relevance of nutrition to clinical practice and patient health. For homework, we watched segments from the HBO documentary series Weight of the Nation and read articles on the diagnostic criteria for metabolic syndrome and the utility of the body mass index. On the last day, we gave presentations to our classmates on controversial subjects like daily sodium intake recommendations and the effectiveness of various fad diets.

Yet the course spanned just 3 afternoons, for a total of 9 hours of instruction. In contrast, my medical school’s curriculum includes roughly 60 classroom hours of cardiology instruction during the second year alone. The course directors told us it would be the only time for dedicated nutrition education during our 4 years as medical students. There were no examinations nor interactions with patients. The 1 lecture on obesity lasted 45 minutes.

The neglect of nutrition education is in no way specific to my medical school. It was my personal exposure to a broader phenomenon, a national indifference that has affected generations of physicians. In 1962, the Council on Foods and Nutrition of the American Medical Association held a seminal conference highlighting the problems with nutrition teaching in medical schools.1

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At the time, nutrition instruction focused on uncommon nutrient-deficiency diseases, despite the emerging recognition that diet was important in the prevention and treatment of chronic diseases.

More than 2 decades later, in 1985, the National Academy of Sciences reevaluated the state of nutrition-related instruction in medical schools. The organization addressed findings by the Liaison Committee on Medical Education that revealed only 34 (27%) of 127 medical schools across the nation had a required nutrition course. In addition, the Academy examined 39 schools more closely—some had dedicated nutrition courses and some did not—and found that, among these institutions, the average amount of required nutrition education was a mere 21 hours.2

The numbers affirmed that nutrition education in medical schools was woefully inadequate. Among other initiatives, the Academy recommended a minimum of 25 to 30 hours of preclinical instruction in nutrition for all medical students.

The most recent statistics on the hours of instruction were released in 2010.3 A study of 109 medical schools found that the state of nutrition education had barely changed, if not deteriorated, in the 25 years since the National Academy of Sciences report. The share of schools requiring a dedicated course in nutrition had fallen to 25%, and the average amount of nutrition education for students was down to 19.6 hours.

The Importance of Nutrition Education

There are 2 principal reasons why the lack of commitment to nutrition education is problematic. First, the public considers physicians to be among the most trusted sources for nutrition-related information, after only registered dietitians and nutritionists.4 Still, physicians—across the spectrum of experience and specialties—often lack the confidence and competencies to properly counsel their patients about nutrition and diet-related disease.5-7

Second, poor nutrition is a leading cause of morbidity and mortality in the United States. Dietary risks now compete with, and in many ways outpace, the deleterious effects of tobacco, physical inactivity, and other historically substantial health risks.8 Almost 70% of adults are now obese or overweight, and nutrition-related issues are estimated to account for more than 25% of visits to primary care providers.5

Deficiencies in nutrition education help explain this disturbing mismatch between the skills of physicians and the needs of patients. Of course, even if physicians were better trained, they would have little influence over the myriad structural causes of diet-related disease—for example, federal agriculture policies that subsidize processed foods and the lack of healthy foods available for people who reside in poor, urban communities. Nevertheless, a poorly trained physician workforce should be viewed, in and of itself, as a structural contributor to diet-related disease. To stem the surging tide of chronic illness in the United States, physicians should become part of the solution rather than remain potential contributors to the problem.

Prior Proposals

The National Academy of Sciences report2 prompted many newspaper editorials, dozens of studies, and even…
new laws. In 1989, the American Society for Clinical Nutrition developed a list of various topics from acid-base balance to obesity prevention considered to be essential for nutrition course work in medical school.15 In 1990, Congress enacted the National Nutrition Monitoring and Related Research Act, which declared that medical students and physicians should receive sufficient training in nutrition, and required the federal government to publish a report on dietary guidelines for Americans every 5 years. In 1998, the National Heart, Lung, and Blood Institute, with support from the National Institute of Diabetes and Digestive and Kidney Diseases, established the Nutrition Academic Award to promote integration of nutrition content into medical curricula. There have been proposals ranging from establishing regional curriculum networks to increasing the number of nutrition specialists on medical school faculties. Yet nutrition content during medical training remains paltry, and many physicians continue to lack the needed knowledge and counseling skills in the subject.

**Paths Forward**

Still, recent innovations bring exciting prospects—and reason to hope again. The integration of web-based resources into medical curricula is one example of progress, transforming the manner in which students learn about nutrition and clinicians incorporate guidelines into practice. In particular, over the last 2 decades, a team of physicians, nutritionists, and computer scientists based at the University of North Carolina, Chapel Hill have developed the Nutrition in Medicine project (www.nutritioninmedicine.org).10 The project offers a free online nutrition curriculum that is now used throughout US medical schools by thousands of students.

The curriculum includes virtual case studies as well as the biochemical, clinical, and epidemiologic elements of nutrition science and preventive and therapeutic perspectives on nutrition. It also offers free evidence-based clinical nutrition education for medical residents and fellows, including 15-minute modules that fit the schedules of practicing physicians.

Medical schools and hospitals are also using new methods of evaluating physicians-in-training.11 For instance, high-tech dummy simulations and standardized patient interviews with video review provide dynamic means of assessing clinical competencies. Such approaches can be easily applied to nutrition education.

**Conclusions**

As a medical student, I cannot fathom why medical schools continue to neglect nutrition education. There are so many opportunities in this regard to help physicians-in-training make a difference for their future patients. Medical students gain knowledge and familiarity with prescription drugs, complicated late-stage treatments, and specialized care. But physicians need other skills as well. The health care community has no shortage of model curricula or good ideas about how medical schools and academic medical centers can improve nutrition education. However, specific educational reforms are likely to make little difference without real institutional commitment to get nutrition education right. History has repeated itself for decades. The time is long past due for a change of course.

**REFERENCES**