

## A global deficiency of nutrition education in physician training: the low hanging fruit in medicine remains on the vine



According to the 2019 Global Burden of Disease Study of 195 countries,<sup>1</sup> dietary factors are the single leading cause of death, exacting an even greater health burden than smoking. For that reason, if medical education were to be based solely on the needs of patient and population health, nutrition would surely be meaningfully addressed.

But, in defiance of the obvious need for physicians to possess, at minimum, solid foundational skills in clinical nutrition, medical education in nutrition across the globe is decidedly lacking. That is the conclusion of the study by Jennifer Crowley and colleagues in *The Lancet Planetary Health*.<sup>2</sup>

The report summarised findings from 24 studies of nutrition education in medical schools throughout USA, Europe, the Middle East, Africa, Australia, and New Zealand. The studies examined several facets of the nutrition-related experience of medical students, including attitudes, knowledge, and confidence in recommending nutritional interventions. Although the methods and survey tools varied among the studies evaluated, the findings worldwide were remarkably similar. Nutrition knowledge and confidence in counselling among medical students were uniformly low, as was the students' perception of both the quality and quantity of their nutrition education.

Despite the paucity of nutrition curriculum in medical school, the study found that interest among medical students in nutrition is uniformly high. Previous research has shown that keen interest in nutrition among incoming medical students typically wanes by the time of graduation.<sup>3</sup> It is easy to imagine why. When medical students do not see nutrition substantively incorporated into their curriculum and do not observe clinical mentors incorporating nutritional interventions into their care plans, what else can they conclude but that nutrition is not as important as they had once believed?

The review by Crowley and colleagues<sup>2</sup> adds to the existing medical literature<sup>4</sup> in framing the gap in nutrition education in medical school as a global phenomenon as well as providing a glimpse of a blueprint for moving forward.

The obstacles to delivering meaningful nutrition education are well described in this study and appear to

be similar on every continent studied—a perceived lack of interest and expertise among faculty members in nutrition, low-quality nutrition curriculum that did not appear to be prioritised, and few examples of nutritional counselling during clinical years to serve as models for emerging physicians.

Each geographic region has a unique set of predominant nutritional challenges and opportunities, nevertheless, a global need exists for physicians to understand the strong connection between nutrition and health. For example, in the past 30 years, the global prevalence of diabetes has nearly doubled.<sup>5</sup>

Beyond the lost opportunities for improving patient health, this study correctly frames the global lack of nutrition education in medicine as an issue that impacts planetary health, as described in the EAT-Lancet Commission on healthy diets from sustainable food systems.<sup>6</sup> This Commission emphasises the importance of a global tilt toward a more plant-based diet both for individual as well as environmental health.

But if physicians are not adequately trained in nutrition, how can they take a meaningful role in aiding this dietary shift toward a plant sourced diet so necessary for both personal and planetary health?

There is no question that dietary intake, both on an individual and population basis, is a function of a great many inputs including food access, economics, cultural traditions, marketing, and more. Nevertheless, patients generally rely on their physicians for guidance and there is ample evidence that physician discussions of diet make a positive impact on patient dietary choices.<sup>7</sup> As aptly described in the review by Crowley and colleagues “a poorly trained medical workforce can be viewed in and of itself as one structural contributor to diet-related disease.”<sup>2</sup>

Also noted in the study, nutritional interventions in medicine are best considered a team effort delivered by a group of health professionals skilled in nutritional care. But without a solid foundation of clinical nutrition knowledge and skills, physicians worldwide are generally not equipped to even begin to have an informed nutrition conversation with their patients and to fully identify opportunities for referral.

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There is much to learn about the most effective strategies to incorporate nutrition curriculum into medical training. Promising approaches to enhance nutrition education in medical education include integration of nutrition-related topics in lectures on disease pathogenesis and treatment, self-paced online curriculum, teaching kitchens, and greater utilisation of interprofessional education. Identification and training of clinical mentors in nutrition is a key challenge.

But what is already crystal clear, is that the worldwide state of nutrition education in medicine is inadequate. Our patients deserve much better. And so does our planet.

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nutrition courses for sale to health professionals. The courses are developed entirely through philanthropy to the Gaples Institute, a non-profit that does not seek or receive corporate support. SD reports that he receives compensation from the Gaples Institute but receives no royalties or other personal financial consideration from the sale of these courses.

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