Editorial

Nutrition in the medical curriculum: A vital missing ingredient

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Physicians, and in particular, general practitioners (GPs), are often the first point of contact for patients into the health care system. Patients confide in their GPs – they trust that they are competent to recognize, diagnose, treat and provide long-term management for their conditions, and they hold their advice in high regard.[1] Physicians are also viewed as trusted and reliable sources of nutrition information, with the expectation that they can provide accurate information.[2,3] Despite this expectation and physicians' recognition of the importance of nutrition to health and disease progression, many do not feel equipped to address their patient's nutritional needs.[4-8] A Canadian study demonstrated that more than 80% of physicians believed their nutrition training was inadequate, including in medical school.[8] A recent systematic review also showed that these knowledge deficits in nutrition impeded physician's confidence when delivering nutrition information to patients.[9] Given the importance of nutrition in chronic disease progression, management, and prevention, it is important to highlight this gap in the medical curriculum, with the goal of improving nutrition education in medical schools to optimize patient care.

Globally, nutrition education in medical curricula has been shown to be insufficient.[10-13] In the United States, the absence of standardized competencies has resulted in inconsistent training, varying from no nutrition education to brief lectures or nutrition rotations.[10,11] Medical students in Ghana have also identified nutrition education as inadequate, noting its low priority within the curriculum and poor translation into clinical practice.[12] Interestingly, an Australian study involving interviews with medical students revealed that nutrition education in their curriculum was not graded.[13] This led to frustration among students as they were trying to prioritize other subjects that were testable on exams, such as physiology.

Similarly, Canadian medical schools have been found to lack adequate nutrition education. In a survey of 933 medical students, 87.2% expressed the need for more nutrition education in their undergraduate programs, and many students reported dissatisfaction with the nutrition training they received and their confidence in providing appropriate nutrition counseling.[14] Moreover, a recent study at Dalhousie University revealed that medical students felt the curriculum did not adequately equip them with confidence in their nutrition knowledge and skills.[15]

Consequently, inadequate nutrition education for physicians can negatively impact patient outcomes, as diet and nutritional status play a critical role in maintaining good health. Poor diet is the second leading cause of death worldwide, with dietary risk factors contributing to 11 million global deaths in 2017.[1,16] Nutrition has been identified as a key modifiable factor in the prevention and management of non-communicable diseases, including cardiovascular disease, hypertension, and diabetes.[17] To address the growing burden of preventable chronic diseases, physicians play a vital role in delivering nutrition interventions in primary care. Due to the trust that patients place in physicians, physicians have potential to improve patient's dietary habits by providing evidence-based nutrition advice and resources, and advocating the importance of good nutrition.[1] Physicians should also be confident in recognizing patients 'at risk' and refer them to dietitians, who are health care professionals with specialized training in nutrition.[18] However, physicians have been shown to lack evidence-based nutrition knowledge, confidence, and the ability to apply this knowledge in practice, which can limit the nutritional advice that physicians offer their patients.[9] This also impacts physician's referral rates to dietitians, as shown by Pojednic et al. who demonstrated that physicians who do not provide nutrition counselling are less likely to refer patients to dietitians for diet therapy.[19] As a result, patients with chronic disease who would benefit from nutrition counselling may lack appropriate care. Evidently, inadequate nutrition education poses a risk to patient health, particularly for those with chronic diseases who could benefit from nutrition counseling but may not receive adequate care.

Collaboration between physicians and dietitians is vital for providing effective healthcare to patients.[20] A study in 2020 showed that medical students found collaboration with dietitians to be helpful when providing nutrition care, and believed that dietitians provide more effective nutrition care than physicians.[13] Supporting this, clinical guidelines recommend that patients be referred to dietitians to receive nutrition therapy when required.[19] Studies also show that there is value in a multidisciplinary team approach when managing patients with chronic disease.[1,21] This approach emphasizes that physicians can focus on the diagnosis and treatment plans, while dietitians can integrate their nutrition knowledge into the patient care plan to optimize patient outcomes.

The medical curriculum clearly places insufficient emphasis on nutrition education for future physicians. To address this gap, medical students at Dalhousie University proposed several recommendations to improve the nutrition curriculum in Canadian medical schools.[15] One key suggestion was to incorporate a longitudinal nutrition program throughout the four-year curriculum. This program would deliver evidence-based nutrition content, including the role of nutrition in disease prevention and management, nutrition support, and nutrient requirements across the lifespan. Students also recommended that dietitians teach nutrition-related topics and participate in relevant tutorials. Additionally, they emphasized the importance of opportunities for medical students to collaborate with dietetic interns and dietitians during clinical training. Finally, they suggested formally assessing nutrition knowledge through methods such as multiple-choice questions and objective structured clinical examinations (OSCE). These recommendations highlight that medical students recognize the importance of nutrition education and have a strong desire for it, yet they currently lack adequate training in this area.

In summary, nutrition education in the medical curriculum is historically and globally inadequate. Despite medical students' and physicians' recognition of the importance of nutrition, they lack the knowledge and confidence to provide sufficient nutrition advice to patients. Particularly, dietary support is crucial to prevent and manage chronic disease, and a lack of nutrition support for patients can compromise patient health. Moving forward, emphasis should be placed on the prioritization of relationships between dietitians and physicians through a multidisciplinary team framework, as well as the improvement of nutrition education in medical training to improve patient care.

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