DATA SNAPSHOT

Nutrition in Medical Education Curricula: A Recipe for Increased Competency-Based Teaching and Learning

August 2025

Background

Nutrition plays a critical role in the prevention, management, and treatment of many chronic health conditions, including cardiovascular disease, Type 2 diabetes, obesity, hypertension, and certain cancers. As these conditions continue to drive morbidity, mortality, and health care costs, physicians must be equipped with the appropriate knowledge and skills to incorporate nutrition counseling and interventions into patient care. Medical education must prepare future physicians not only to recognize the impact of poor dietary patterns on health outcomes but also to integrate evidence-based nutritional strategies into clinical decision-making.

While earlier concerns about insufficient nutrition training had merit, recent data demonstrate an increase in nutrition-related content across foundational, clinical, and interprofessional learning experiences. Rather than stand-alone or siloed lectures, medical students are increasingly exposed to nutrition education through multiple integrated experiences. This evolution reflects a broader commitment within medical education to prepare future physicians to address diet-related health challenges with both scientific understanding and practical competence. For too long, some critiques of nutrition education in medical schools have relied on an outdated or misunderstood metric — the number of hours teaching this topic — failing to capture the more nuanced and integrated approaches that have emerged in today's competency-based educational landscape.

Despite the growing integration of nutrition education into medical education, there remains room for improvement. Key areas in need of greater emphasis include enhancing students' knowledge and skills related to food allergies, drug-nutrient interactions, food labeling, and the environmental impacts of dietary choices on health. Additionally, medical curricula can further strengthen interprofessional collaboration by recognizing that licensed dietitians and nutritionists play a key role in nutrition counseling and dietary management and by equipping future physicians to communicate more effectively about nutrition and diet, support culturally responsive nutrition counseling, and connect patients with community resources to address food insecurity.

Key Findings

The response rate for the survey was 88% (182 of 208) among U.S. and Canadian MD- and DO-granting schools. Of 157 eligible U.S. MD-granting schools, 149 (95%) participated in the survey; of 38 eligible U.S. DO-granting schools, 30 (79%) participated in the survey; of 13 eligible Canadian medical schools, three (23%) participated in the survey.

All respondents (100%) reported covering nutrition content in some form throughout their required curricula, which is an improvement compared to five years earlier (89%).[2] Most schools in the 2023-24 survey (82%) also offered nutrition content in elective or optional curricula, with the same percentage (82%) incorporating nutrition in both required and elective components. However, less than half (45%) reported that nutrition was included in multiple courses or rotations and only 17% reported that this information was fully integrated across all years or phases of their curriculum.

Over 90% of respondents reported covering topics such as obesity and bariatric care, food access, and food security. All responding schools (100%) covered at least one of these topics — nutrition, food access and security, and obesity and bariatric care — in required curricula, and 88% offered curricula in both required and elective formats. According to curricular data from academic year 2018-19, although gathered through a different survey method and not directly comparable, emerging nutrition content was addressed in 49% of schools.

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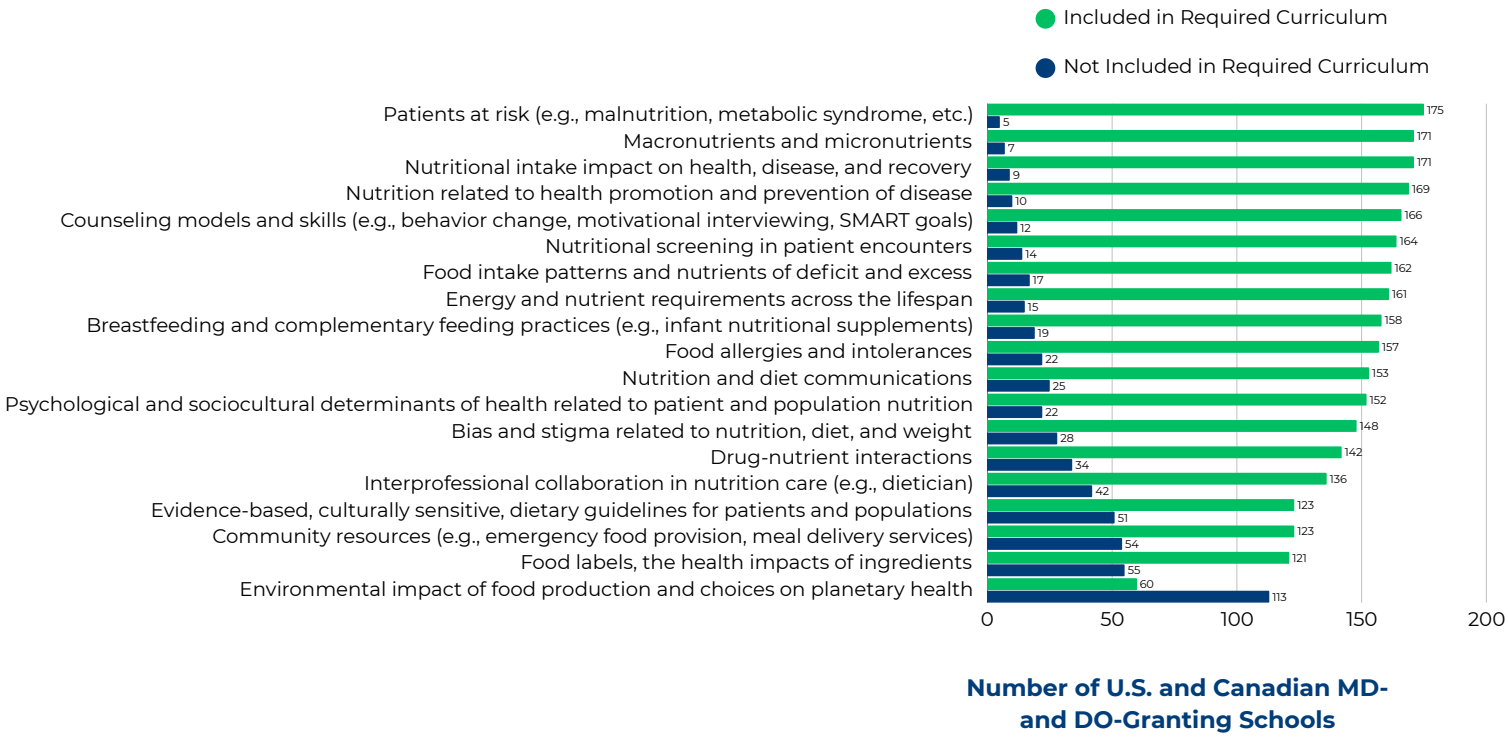
Implications for the Future

The data demonstrate that while nutrition education has achieved universal inclusion in medical school curricula, significant variation exists in how it is integrated. Few schools have implemented nutrition as a fully integrated longitudinal thread throughout their curricula, suggesting an important area for continued mapping and development. Increased attention could be afforded to nutrition topics such as the environmental impact of food production and choices on health, food labels and the health impacts of ingredients, and community food resources.

A longitudinal competency-based approach to nutrition education will prepare students to apply evidence-based nutrition outcomes across diverse patient populations and clinical contexts. Table 1 includes teaching and learning examples that align with the six foundational competencies developed by the AAMC, AACOM, and Accreditation Council for Graduate Medical Education (ACGME) and the nutritional subcompetencies proposed by Eisenberg et al.[1]

Additionally, adopting freely available MedEdPORTAL publications on nutrition is recommended. These high-quality, peer-reviewed resources are growing in number and currently include interprofessional nutrition education, pediatric nutrition, nutrition in critical care addressing social determinants, food insecurity, weight bias, and more.[3-7]



In 2023-2024, 182 (88%) of US and Canadian MD and DO-granting medical schools responded to the survey. Participation in the Curriculum SCOPE Survey was voluntary, and all survey items excluding contact information were optional. A lack of response to a given survey item cannot be interpreted as a no, or that a medical school did not cover a topic or offer a service. For more information about the AAMC AACOM Curriculum SCOPE Survey please visit www.aamc.org/SCOPE. Contact curriculum@aamc.org with questions.

Figure 1. Nutrition topics in required medical school curriculum 2023-24.

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Table 1. Competency-Based Teaching and Learning Opportunities

Competency	Classroom, Center, or Lab Setting	Clinic, Acute Care, Hospital, or Community Setting
Patient Care and Procedural Skills Competency Example: Assesses the nutritional status of a patient with a brief diet and food history or questionnaire, anthropometric measurements, and appropriate laboratory tests.	**Standardized Patient Encounters:** Students practice taking dietary histories and assessing nutritional status including allergies and drug-nutrient interactions. **Simulation Labs:** Conduct anthropometric measurements and order and interpret appropriate laboratory tests.	**Clinical Rotations:** Integrate nutrition assessments into patient encounters. **Interdisciplinary Rounds:** Collaborate with dietitians to develop nutrition care plans.
Medical Knowledge **Competency Example:** Demonstrates knowledge of the nutritional content of foods, including the major dietary sources of macronutrients and micronutrients.	**Integrated Lectures:** Incorporate nutrition topics into physiology and pathology courses (e.g., the impact of micronutrient deficiencies). **Case-Based Learning:** Analyze cases where nutrition plays a key role, such as in metabolic syndrome.	**Grand Rounds:** Present cases highlighting nutritional interventions in chronic disease management. **Board Review Sessions:** Include nutrition-related questions to reinforce and contextualize knowledge.
Practice-Based Learning and Improvement Competency Example: Demonstrates awareness of one's biases about food, food choices, obesity, and "healthy eating."	**Reflection Activity:** Read and write about personal biases and experiences with obesity stigma. Administer a weight bias internalization scale or implicit association test and discuss implications of professional (clinician) bias. **Interprofessional Case Discussions:** Discuss a clinical case involving obesity or nutrition and hold a structured reflection with interprofessional learners (e.g., dietitians, nurses) to surface implicit judgments and alternative framings.	**Audit and Feedback:** Review patient charts to assess biased and stigmatized language. **Reflective Practice:** Encourage trainees to reflect on their nutrition counseling experiences, especially in interprofessional teams.
Interpersonal and Communication Skills Competency Example: Starts a sensitive, nonjudgmental conversation about food and lifestyle in a brief consultation within a primary or secondary care setting.	**Role-Playing Exercises:** Practice delivering nutrition advice in a culturally sensitive manner. Provide several food labels and ask students to rank choices for a patient with diabetes or heart failure. **Communication Workshops:** Focus on motivational interviewing techniques related to nutrition and behavior change.	**Patient Education Sessions:** Lead discussions on nutrition topics during clinic visits. **Feedback From Preceptors:** Invite constructive feedback on communication skills during patient interactions.
Professionalism Competency Example: Demonstrates sensitivity to the social, cultural, emotional, economic, educational, and psychological factors that may affect an individual's nutrition, behavior, food choices, and health status.	**Ethics Seminars:** Discuss ethical considerations in nutrition, such as food insecurity. **Community Engagement:** Participate in programs addressing the nutritional needs of underserved populations.	**Advocacy Projects:** Develop initiatives to improve access to healthy foods in the community. **Reflective Essays:** Explore personal biases and their impact on nutritional counseling. Administer a weight bias internationalization scale or implicit association test and discuss implications of professional (clinician) bias.
Systems-Based Practice Competency Example: Identifies community-based nutrition resources for patients experiencing food and nutrition insecurity.	**Health Policy Lectures:** Learn about policies affecting nutrition and public health including environmental impacts. **Resource Mapping:** Identify local and national nutrition resources for patients.	**Interdisciplinary Collaboration:** Work with health care teams to coordinate nutrition services for the community. **Case Management:** Interview the **clinic referral coordinator** or **billing specialist** to understand insurance coverage and referrals for nutrition services.

[a] Derived from the AAMC, AACOM, and ACGME Foundational Competencies for UME.[8]

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Conclusions

Nutrition plays a critical role in the prevention, management, and treatment of many chronic health conditions. Medical schools across the U.S. have universally incorporated nutrition education into their programs and further enhancements are coming — particularly, integrated curricular models that span all years of training rather than isolated modules. The competency-based teaching and learning opportunities presented offer educators a structured pathway to further integrate nutrition education, while existing MedEdPORTAL peer-reviewed educational resources provide immediately accessible tools to support implementation and improve student preparation for clinical practice.

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Use of Report

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