

systematic review of 24 studies published in *The Lancet Planetary Health* journal.

The authors recommend that [nutrition education](#) be made compulsory for all medical students, a global benchmark on the required level of [nutrition](#) knowledge for future doctors be established, and more funding be put towards developing new ways to teach nutrition in [medical school](#).

Globally, 11 million deaths annually are attributable to [poor diet](#), making it the leading risk factor for death across the world. Accordingly, many countries recommend that doctors apply nutrition knowledge in practice to support patients to manage lifestyle-related chronic disease and other diet-related conditions. However, these findings suggest that nutrition in [medical education](#) is lacking in all countries studied.

Author of the study, Dr. Lauren Ball from Griffith University, Australia, said: "It is clear that despite the importance of nutrition for healthy lifestyles, graduating medical students are not supported with the required nutrition knowledge to be able to provide effective nutrition care to patients—a situation that has gone on for too long. Nutritional education for medical students must be improved and made a compulsory and meaningful part of the [curriculum](#) to support future doctors for the 21st century."

To give a broad overview of nutrition education provided to medical students, the review looked at studies assessing recently graduated (ie, ≤ 4 years) or current medical students' nutrition knowledge, attitudes, skills, or confidence (or all three) in nutrition or nutrition counselling; the quality of nutrition curriculum initiatives for medical students; or recently graduated or current medical students' perceptions of nutrition education.

The review included 24 studies conducted between 2012-18, including

16 quantitative, three qualitative and five studies on curriculum initiatives. The studies came from USA (11), Europe (four), the Middle East (one), Africa (one), and Australasia (seven), and the methodological quality of the studies ranged from very low to high. No published articles from Asia met the criteria for inclusion in the review.

The reviewed studies consistently found that medical students wanted to receive nutrition education to develop their skills in nutrition care but perceived that their education did not equip them to do so. Students cited both quantity and quality of their education as reasons for this —poor quality and under prioritisation of nutrition in the curriculum, lack of interest and expertise in nutrition among faculty members, and few examples of nutritional counselling during clinical years to serve as models for emerging doctors.

Furthermore, students uniformly reported having a lack of required nutrition knowledge, which was also found through testing. For instance, one study found that when nutrition knowledge was assessed in a test, half of [medical students](#) scored below the pass rate.

Five studies assessing curriculum initiatives found that they had a modest positive effect. However, most nutrition initiatives were employed opportunistically as a once-off activity, rather than being integrated in a sustained way into the medical curricula. Innovative initiatives—such as online curriculum, hands on cooking experiences, and learning from other health professionals such as dietitians—showed short-term and long-term benefits for patients and health systems. Therefore, the authors call for more funding for innovative curriculum initiatives to be developed and implemented.

The authors underline that ongoing inadequate nutrition education identified in their study is likely to affect the standard of care doctors are providing to patients, not least in preventative care. Therefore, they

stress the importance of institutional commitments to making nutrition education compulsory in medical training through accreditation standards and establishing benchmarks of nutritional knowledge needed by doctors before graduation.

The authors note some limitations of their study. The most frequent limitations of the studies included in the review were the absence of control groups (for the curriculum initiatives), absence of validated survey instruments to test nutritional knowledge, poor response rates, small study samples, and insufficient representativeness of the study population.

Writing in a linked commentary, Dr. Stephen Davies from the Northwestern University, Feinberg School of Medicine, Chicago, USA, notes that the beyond improving patient health, increased nutrition education could also help doctors advise on healthy diets from sustainable food systems, such as that advised by the EAT-Lancet Commission. He says: "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."

More information: Jennifer Crowley et al. Nutrition in medical education: a systematic review, *The Lancet Planetary Health* (2019). [DOI: 10.1016/S2542-5196\(19\)30171-8](https://doi.org/10.1016/S2542-5196(19)30171-8)

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