



FOOD LAW
and POLICY CLINIC
HARVARD LAW SCHOOL

DOCTORING OUR DIET II

Nutrition Education for
Physicians is Overdue

June 2024

AUTHORS

This report was written by the following staff and students at the Harvard Law School Food Law and Policy Clinic: Trevor Findley, Kristen McEnroe, Gabriel Babuch, Caleb Kim, and Emily Broad Leib.

Additional authors from the Harvard T. H. Chan School of Public Health, Department of Nutrition include: David M. Eisenberg, MD, and Stephen Devries, MD.



ABOUT THE HARVARD LAW SCHOOL FOOD LAW AND POLICY CLINIC

The Harvard Law School Food Law and Policy Clinic (FLPC) serves partner organizations and communities by providing guidance on cutting-edge food system legal and policy issues, while engaging law students in the practice of food law and policy. FLPC focuses on increasing access to healthy foods, supporting sustainable food production and food systems, and reducing waste of healthy, wholesome food. For more information, visit www.chlpi.org/FLPC.



ABOUT THE TEACHING KITCHEN COLLABORATIVE

The Teaching Kitchen Collaborative is a network of thought-leading organizations using teaching kitchen facilities as catalysts of enhanced personal and public health across medical, community, school, and corporate settings. For more information, visit www.teachingkitchens.org.



FUNDING SUPPORT FROM THE VITAMIX FOUNDATION

The research included in this report is possible through funding by the Vitamix Foundation. The findings, conclusions, and recommendations presented in this report are those of FLPC alone and do not necessarily reflect the opinions of the Vitamix Foundation.

Report design by Najeema Holas-Huggins.

TABLE OF CONTENTS

- Introduction.....1**
- Background on the Need for More Nutrition Education.....3**
- Current Status and Key Policy Opportunities.....5**
 - Undergraduate Medical Education.....5
 - Graduate Medical Education.....5
 - Step and Board Exams.....7
 - Continuing Medical Education.....7
- Recent Efforts.....8**
 - House Resolution 1118.....8
 - White House Conference on Hunger, Nutrition, and Health.....8
 - Private Commitments at the White House Conference.....9
 - Summit on Medical Education in Nutrition.....10
- Next Steps to Meaningfully Implement Nutrition Education for Physicians.....11**
 - Federal.....11
 - Nutrition Education for Federally-Employed or Federally-Funded Doctors.....11
 - Condition Medicare Funding for GME on Inclusion of Nutrition Education.....12
 - Grant Funding for Nutrition Education.....13
 - State.....14
 - Continuing Medical Education.....14
 - Medicaid Funding of GME.....15
- Accreditation Bodies.....16**
- Conclusion.....18**

INTRODUCTION

The leading cause of death in the United States is poor diet.¹ When poor diet and high Body Mass Index are considered jointly, no other risk factors shear off as many years of life.² Yet, most physicians are not currently equipped to provide patients with accurate, practical nutrition advice. This is because historically, doctors have received little to no nutrition training.³ Most medical students receive less than 20 hours of nutrition education over four years of medical school.⁴ The few hours spent on nutrition training tend to focus on macronutrients like proteins and carbohydrates rather than more practical measures like meal planning and interviewing a patient about their access to food, dietary intake, and exercise habits that would allow doctors to provide more meaningful recommendations to their patients.⁵ Adding meaningful nutrition education throughout the course

of a physician's training and career could dramatically improve public health by providing individuals with reliable access to science-based advice.

In 2019, the Harvard Law School Food Law and Policy Clinic (FLPC) published the report *Doctoring Our Diet*, which identified recommendations for policy change at each level of medical training to improve nutrition education for physicians.⁶ The report recommended concrete steps to increase nutrition training in the undergraduate (medical school), graduate (residency and fellowship), and post-graduate stages of medical education.⁷ Since the report was published, calls to advance nutrition education within the medical community have grown. Although the COVID-19 pandemic understandably slowed progress on incorporating nutrition into medical education, it



only further highlighted the deleterious effects of diet-related disease as an underlying risk for poor outcomes in infectious diseases such as COVID-19.⁸ The pandemic drew attention to the interconnected nature of diet, lifestyle, and disease.

In the United States today, 20% of adolescents and 42% of adults are living with obesity, which increases the risk of developing certain cancers, diabetes, and heart disease.⁹ Moreover, 87% of older Americans have one or more chronic diseases related to diet, such as congestive heart failure, diabetes, or high blood pressure, all of which can be improved with better nutrition.¹⁰ In 2016, the aggregate medical cost of obesity among adults in the United States was \$260.6 billion.¹¹ Increasing access to nutrition information and resources can help prevent and treat the risks associated with these chronic diseases, improve the lives of countless Americans, and decrease costs to the healthcare system.

A key to increasing access to nutrition information, and creating healthier diets, is improving nutrition education for physicians. Ensuring basic nutrition education for physicians will promote better patient outcomes because physicians enjoy the trust of their patients¹² and, as a result, can influence patient behavior around nutrition and other dietary habits.¹³ Integrating nutrition education into the medical profession will enable physicians to become conversant in diet as a component of lifestyle, so they can more effectively conduct nutrition assessments, offer accurate information to patients, and refer their patients to appropriate professionals when warranted.¹⁴

A recent survey revealed that the majority of cardiologists referred 10% or fewer patients to see diet and nutrition specialists.¹⁵ However, cardiologists who received even minimal nutrition education following specialty training were nearly twice as likely to make referrals to diet and nutrition specialists compared to those who did not receive nutrition education.¹⁶ Incorporating nutrition into medical education is a rising tide that can lift all boats by increasing physician awareness of the role and skillset of registered dietitians and nutritionists, and

advancing interprofessional collaboration with the ultimate benefit of aiding patients.¹⁷

Over the past two years, Congress and the Executive branch have made efforts to raise awareness about the need to increase nutrition education for doctors and have taken concrete steps to encourage incorporating nutrition into medical education more broadly. In May 2022, the U.S. House of Representatives passed a bipartisan resolution that established goals to increase nutrition education in medical school curricula and develop effective nutrition education for physicians throughout their medical career.¹⁸ In September 2022, the Biden-Harris Administration convened the historic White House Conference on Hunger, Nutrition, and Health, which included a national strategy calling for increasing nutrition education for physicians.¹⁹ Following the conference, in March 2023, the medical education governing bodies—including the Accreditation Council for Graduate Medical Education (ACGME), the American Association of Osteopathic Medicine (AACOM), and the Association of American Medical Colleges (AAMC)—collaborated to bring together over 100 medical education professionals for the Summit on Medical Education in Nutrition.²⁰ These efforts are part of the growing momentum to increase nutrition education in the medical profession and are discussed in further detail below.

This follow-up report provides an update on efforts to increase nutrition education for physicians over the past several years and discusses the most pressing next steps to make progress on this vital issue. The Background section provides an overview of the problem with the current approach to nutrition education for physicians and the key recommendations of the *Doctoring Our Diet* report. The Recent Efforts section will explore the three major developments mentioned above: House Resolution 1118; the White House Conference on Hunger, Nutrition, and Health; and key takeaways from the summit hosted by ACGME, AACOM, and AAMC. The report concludes with a section that suggests the most relevant and timely policy opportunities to increase nutrition education for physicians.

BACKGROUND ON THE NEED FOR MORE NUTRITION EDUCATION

Each year, 1.5 million Americans die from diet-related diseases like cardiovascular disease, cancer, and diabetes.²¹ These diseases come at a cost to individuals and the nation as a whole. In 2020, health care spending accounted for close to 20% of the United States Gross Domestic Product.²² In 2018, about one-fourth of \$1.5 trillion in government spending on healthcare was for three diet-related diseases (cardiovascular disease, diabetes, and cancer).²³

Despite these statistics, physicians and healthcare professionals in the United States feel unequipped to offer nutritional advice to their patients.²⁴ Throughout a four-year medical degree, the average medical school provides only 19 hours of nutrition education.²⁵ The National Research Council (NRC)²⁶ of the National Academies of Sciences, Engineering, and Medicine has, since the 1980s, recommended that medical schools provide at least 25 hours of nutrition education,²⁷ yet only 29% of U.S. medical schools offer students this amount.²⁸

The dearth of education on food and nutrition has a clear impact on medical trainees. In a survey of 114 internal medicine interns (first year of residency), 92% agreed that specific advice about how to make dietary changes could help patients improve their eating habits, yet 86% felt that most physicians are not trained to discuss nutrition issues with patients.²⁹ Most students enter medical school believing that nutrition will be integral to the study and practice of medicine, but a majority leave believing the opposite: specifically, in a 2006 survey of more than 2,300 first-year medical students, 72% believed that nutrition counseling would be highly relevant, but by their final year, this number dropped to 46%.³⁰

This discrepancy between student attitudes before and after medical school (known as undergraduate

medical education or UME), as well as the lack of competencies (basic skills physicians-in-training should be able to demonstrate³¹), highlights the need to incorporate nutrition education, particularly in the early stages of medical education. While a growing number of medical schools are offering new elective courses in nutrition, food, and even culinary medicine, these courses are still not required in most schools and has not made its way into the majority of curricula. By failing to provide medical trainees with adequate nutrition education, medical schools are sending trainees into the workforce without the knowledge they need to do their job, and patients suffer the consequences.

At the graduate medical education (GME) level (the residency/fellowship stage of medical education), nutrition competency requirements are not included in the general requirements for GME programs – known as the Common Program Requirements – and are limited or absent in the specialty-specific requirements for most specialties.³² In a 2017 survey of 646 cardiologists, 90% reported that they did not receive adequate nutrition education to advise their patients on nutrition, even though 95% believed it was their personal responsibility to provide this type of advice.³³

In addition to health issues caused by obesity and diet-related disease, individuals suffer from the effects of stigma associated with weight. Worse yet, providers may explicitly endorse stereotypes about obese patients, or perpetuate poor treatment strategies that treat patients with obesity different than those without.³⁴ This can leave patients feeling misunderstood and judged because their physicians do not have sufficient training to connect a patient's diet and lifestyle to underlying or potential health conditions or broader social determinants of health. Patients may go so far as to avoid clinical

care to escape feelings of embarrassment, further exacerbating any underlying conditions.³⁵ This issue is even more concerning because the prevalence of obesity and diabetes is higher among people of color and those with lower income levels, in part due to disparities in economic and physical access to food.³⁶ In 2021, Black Americans were three times more likely to face hunger than white Americans.³⁷ Ensuring that doctors are equipped to provide evidence-based nutrition advice and lifestyle interventions to their patients must be coupled with strategies to increase

physicians' cultural competence and reduce weight bias and related stigma surrounding body image. Thus, education on nutrition should include training on social determinants of health, cultural sensitivity, and awareness and avoidance of bias and stigma related to obesity and diet-related disease. It should also equip physicians with the knowledge needed to better identify individuals with food or nutrition insecurity, which often lead to diet-related illnesses, and direct them to food assistance and other social benefit programs.³⁸

COVID-19 IMPACT ON NUTRITION AND FOOD INSECURITY

Since the outbreak of the COVID-19 pandemic, researchers have been investigating the relationship between nutrition and COVID-19 infection and severity, as well as the effects of COVID-19 on nutrition and lifestyle. A meta-analysis of 22 studies from seven countries in North America, Europe, and Asia found that obesity is associated with an increased likelihood of more severe COVID-19 symptoms, admittance to an intensive care unit, undergoing mechanical ventilation, and developing acute respiratory distress syndrome.³⁹ One study found that a high-quality diet was associated with a lower risk of contracting COVID-19 and lessened severity in participants with COVID-19 infections.⁴⁰ Findings also suggest that a 10% reduction in the prevalence of diet-related conditions like obesity and type 2 diabetes would have prevented around 11% of the COVID-19 hospitalizations among US adults.⁴¹

In addition to the relationship between nutrition and immune system response, the COVID-19 pandemic exacerbated issues relating to food security and access. As the COVID federal emergency response programs have come to an end, food insecurity in the United States has again increased,⁴² which can exacerbate diet-related health conditions.⁴³



CURRENT STATUS AND KEY POLICY OPPORTUNITIES

UNDERGRADUATE MEDICAL EDUCATION

Undergraduate Medical Education (UME), commonly referred to as “medical school,” is the first stage of medical education in the United States. During the first two years of UME, students traditionally spend a majority of their time in the classroom studying the underlying science and concepts of medicine. The last two years of UME focus on developing clinical skills and learning how to provide patient care. More recently, undergraduate medical education has been evolving to provide an earlier introduction to clinical work.

In a 2023 publication, a survey of medical students found they received an average of 1.2 hours of nutrition education per year and that most had not taken even a single course that provided formal education in nutrition.⁴⁴ Nutrition education can and should be incorporated into both the classroom and clinical components of UME.

Since *Doctoring Our Diet* was published in 2019, progress has been made with nutrition education in UME. New ways of integrating nutrition into the existing basic science curriculum have been developed.⁴⁵ Some medical schools now offer elective courses in nutrition, including a growing number of medical schools with teaching kitchens that offer highly rated culinary medicine electives.⁴⁶

The addition of nutrition education through elective experiences is a positive development. However, elective experiences do not assure foundational knowledge for all students and, when they comprise the bulk of the nutrition education offered, risk conveying the message that nutrition education is an optional “elective” topic, rather than a priority.

The educational nonprofit Gaples Institute has been successful in delivering a condensed, online nutrition

course for health professionals that, as of 2024, is required in the curriculum of nine medical schools.⁴⁷ This approach holds promise for the rapid, scalable delivery of nutrition education.

Looking forward, the medical education accrediting bodies (AAMC/ACGME/AACOM) are in the process of developing “foundational competencies” for UME that will prepare them for successful transition to graduate medical education.⁴⁸ An initial draft of these competencies was opened for notice and comment in early 2024, representing expected outcomes in six broad areas that were widely endorsed across the field in 2014 (Professionalism, Patient Care and Procedural Skills, Medical Knowledge, Practice Based Learning and Improvement, Interpersonal and Communication Skills, and Systems Based Practice), with a final draft of the competencies expected to be published later in the year.⁴⁹ This initial draft did not include any reference to diet or nutrition⁵⁰ and given the broad overarching categories and higher-level competencies included in the draft document, it seems unlikely that future iterations of the competencies will include nutrition education, despite its impact on health outcomes.

GRADUATE MEDICAL EDUCATION

Graduate medical education (GME), which includes residency and fellowship programs, is a formal, hospital- or clinic-based or hospital-sponsored training program for individuals who have completed medical school and earned an MD or DO (Doctor of Osteopathic Medicine) degree.⁵¹ The Accreditation Council on Graduate Medical Education (ACGME) is the governing body for GME programs, and they establish both Common Program Requirements applicable to all accredited residency and fellowship programs as well as specialty requirements that apply to specific specialties or subspecialties (e.g. pediatrics, cardiology). ACGME routinely updates all

program requirements and provides an opportunity for public input as part of its process.

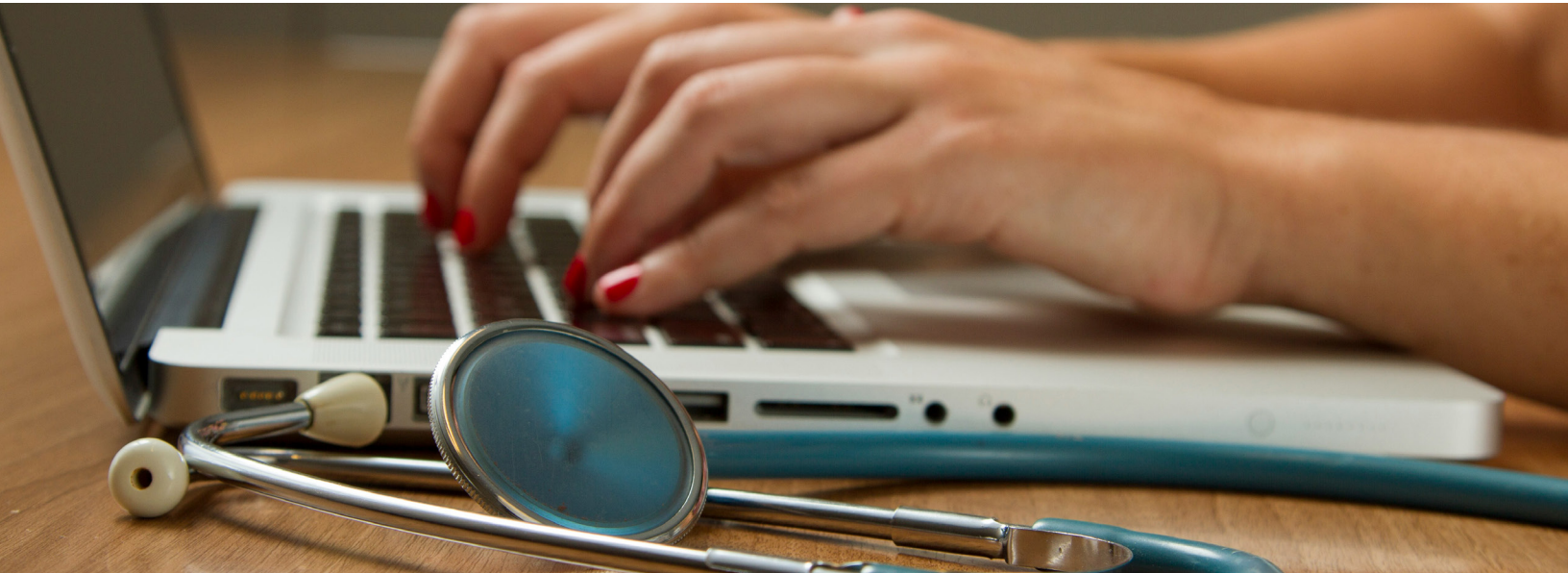
There is a lack of focus on nutrition education at the graduate medical education level. The Common Program Requirements do not mention nutrition competency, and nutrition is lacking in most specialty-specific requirements, even within relevant medical specialties. For example, the current ACGME program requirements for internal medicine residency and cardiovascular residency do not mention the word “nutrition,”⁵² and the requirements for nutrition curriculum and competency are limited or absent from the educational standards for key medical specialties.⁵³ Even in light of the growing progress described below, in February 2024, almost a year after the convening of the Summit on Medical Education in Nutrition by ACGME, AACOM, and AAMC, ACGME published an update to the program requirements for GME in Pediatrics and these updated requirements still do not include any nutrition competencies.⁵⁴ The fact that physicians responsible for the medical care of children, in the face of the current epidemic of childhood obesity, are not required to learn about nutrition is an issue that demands immediate attention.

ACGME could amend the Common Program Requirements or the specialty program requirements to include nutrition education. By updating requirements to include nutrition education, ACGME

would ensure physicians receive foundational nutrition education in their field sufficient to help guide patients and make appropriate referrals needed to address some of the most common and ubiquitous problems facing patients.

GME programs rely heavily on federal funding, with an estimated \$16.2 billion in resources for GME coming from Medicare funding alone in 2020.⁵⁵ In the 2021 Consolidated Appropriations Act (CAA), the federal government increased this commitment, making 1,000 additional GME full-time equivalent slots available for residency programs, to be phased in at a rate of no more than 200 slots per year, beginning in 2023.⁵⁶ The irony of Medicare funding, however, is that the same pot of funding paying for Medicare patients – the majority of whom suffer from diseases caused by or exacerbated by diet – is also used to pay for the education of physicians who learn nothing about nutrition.

Medicaid programs also serve as a major funding source for GME. States are afforded considerable flexibility in designing and distributing their Medicaid GME payments,⁵⁷ enabling states to select which settings and organizations are eligible to receive support. This means states are able to choose to spend Medicaid dollars to support GME; those that do receive a federal match. In 2022, federal and state Medicaid payments for GME reached over \$7 billion.⁵⁸



STEP AND BOARD EXAMS

As part of assessing medical knowledge, medical students, residents, and fellows must take exams that occur at specific intervals during medical education. Increasing the number of nutrition-related questions in these examinations, called step and board exams, would encourage schools to acknowledge the importance of nutrition education and increase relevant coursework.

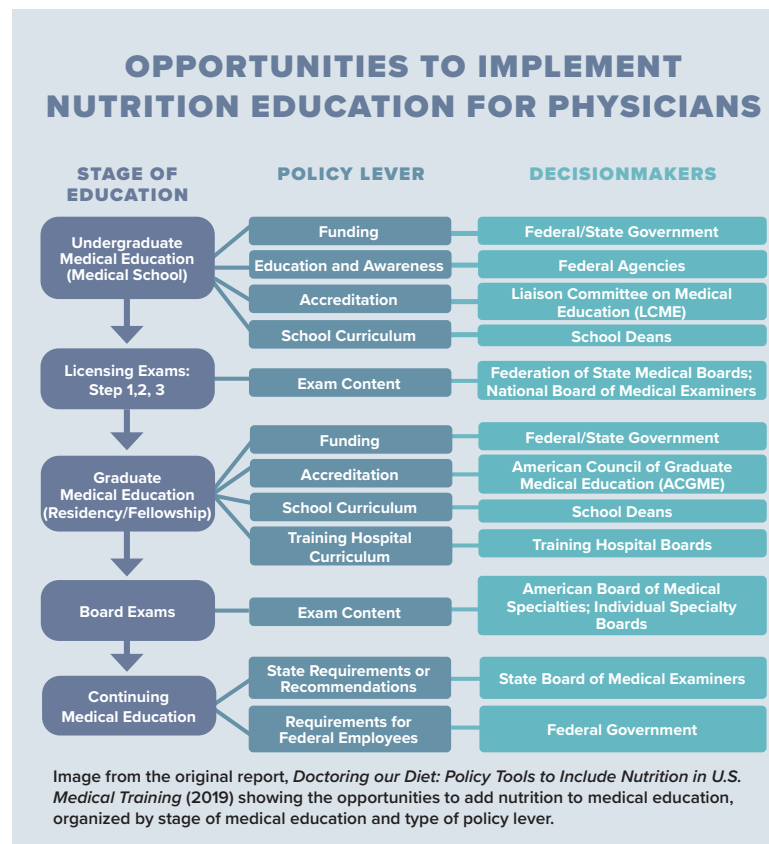
The National Board of Medical Examiners (NBME) and the Federation of State Medical Boards (FSMB) sponsor three medical licensing exams that make up the United States Medical Licensing Examination (USMLE), which administers the step examinations.⁵⁹ Step 1 and Step 2 exams occur during UME, while Step 3 occurs around the time resident physicians complete their first year of residency, also called their internship year. Reportedly, nutrition topics are rarely tested. The exams do not generally relate nutrition to disease prevention and chronic disease management.⁶⁰ Nutrition questions on these exams historically have focused on vitamin and mineral deficiencies rather than preventing or treating diet-related disease.⁶¹ Because medical schools are incentivized to teach content that will appear on the test, leading to better performance by their students and graduates,⁶² incorporating questions about nutrition within all three step examinations would motivate medical schools and GME programs to teach nutrition so their trainees are better equipped to meet the needs of their patients.

Most physicians opt to specialize in their medical training, making specialty-specific board examinations another viable avenue to incorporate testing nutrition knowledge.⁶³ The American Board of Medical Specialties (ABMS) provides board certifications for 40 specialties and 88 subspecialty areas.⁶⁴ Each specialty has its own board, whose exam committees can add nutrition questions to the assessments required for specialty certification. For example, the American Board of Internal Medicine (ABIM) has twenty committees responsible for developing relevant, clinically valid, rigorous exams and assessment innovations for certification and Maintenance of Certification (MOC) credentials.⁶⁵ Boards for specialties in which nutrition is highly relevant, such

as internal medicine, pediatrics, family medicine, OB/GYN, and preventive medicine, could incorporate questions into assessments that demonstrate the connection between the specialty subject matter and nutrition, food, and lifestyle. At this point, to our knowledge, they do not.

CONTINUING MEDICAL EDUCATION

Continuing Medical Education (CME) is a professional requirement that helps physicians keep abreast of medical and scientific developments post-medical school and drive improvements in practice.⁶⁶ While CME requirements vary by state, as state medical boards govern medical licensure requirements, the average number of CME hours required per year is between 40-50 hours, and most states (37) have at least some requirements for CME to cover specific topical areas.⁶⁷ Including nutrition education in state CME requirements can ensure that practicing physicians achieve a basic level of competence in nutrition and provide up-to-date advice to their patients, as states may require whatever licensure criteria they view as necessary.⁶⁸



RECENT EFFORTS

Since the *Doctoring Our Diet* report was published in 2019, there have been a number of efforts to highlight the importance of incorporating nutrition education into medical education. Efforts range from passage of a House Resolution urging medical schools to include nutrition education, to inclusion of the topic in the White House Conference on Hunger, Nutrition, and Health National Strategy, to commitments from industry alongside that strategy to support nutrition training for medical professionals. These recent developments highlight the growing awareness of the lack of adequate nutrition education within the medical profession and the widespread consensus around the need for change, and offer an insight into the direction that nutrition education in the medical education context will take.

HOUSE RESOLUTION 1118

House Resolution 1118 was a bipartisan resolution sponsored by Representatives James McGovern (D-MA) and Michael Burgess (R-TX).⁶⁹ While resolutions are not binding law, they serve to express the collective opinion of the House on a particular issue. The passage of H.R. Res. 1118 in 2022 signals that the House of Representatives recognizes the burden of diet-related disease in the United States and the important role that medical professionals play in alleviating this burden through adequate nutrition training. The resolution urges those responsible at all levels of medical education—medical schools, residency and fellowship programs, and continuing medical education programs—to increase nutrition education.⁷⁰ In addition, the resolution urges federal agencies to ensure that federal funding goes to programs that provide training for physicians and health professionals to “meaningfully incorporate nutrition interventions and dietary referrals into medical practice.”⁷¹ The resolution also includes several goals focused on supporting research to determine the optimal curricula for nutrition education, dissemination of best practices to support nutrition education in medical schools, and generally raising awareness about how nutrition affects patient health.

WHITE HOUSE CONFERENCE ON HUNGER, NUTRITION, AND HEALTH

In September 2022, the White House convened its first Conference on Hunger, Nutrition, and Health in over 50 years.⁷² Recognizing that food insecurity and diet-related chronic diseases continue to plague America today, the Biden-Harris Administration convened the conference to find ways to eliminate hunger and reduce diet-related disease by 2030.⁷³ Alongside the conference, the Administration produced the National Strategy on Hunger, Nutrition, and Health that “calls for a whole-of-government and whole-of-America approach” to eliminating hunger and reducing diet-related disease, organized around five pillars.⁷⁴ Pillar 2 focuses on integrating nutrition and health.

The White House National Strategy on Hunger, Nutrition, and Health focuses on the role of nutrition and food security in overall health through concrete initiatives within the health care system.⁷⁵ The Strategy includes a call to action for a whole-of-society response, which recommended that health professional schools and licensing boards expand nutrition education in GME curricula, board exams, and post-graduate training.⁷⁶

Another aspect of Pillar 2 was screening for food security and connecting people to nutrition services. The Biden-Harris Administration announced their support for universal screening for food insecurity in federal health care systems, such as the Department of Defense (DoD) implementing food insecurity screening for all active-duty military members and conducting referrals if needed.⁷⁷ These initiatives would increase the need for medical professionals to be competent in nutrition in order to effectively screen individuals for food insecurity and make referrals to the appropriate nutrition professionals.

The third component of Pillar 2 involves strengthening and diversifying the nutrition workforce. For example,

the Strategy commits that the HHS Health Resources and Services Administration, through its Maternal and Child Health Nutrition Training Program, will train over 4,500 future nutrition professionals and over 30,000 practicing professionals over the next five years on key topics such as pediatric obesity prevention, household food security, and nutrition during pregnancy.⁷⁸

PRIVATE COMMITMENTS AT THE WHITE HOUSE CONFERENCE

Alongside the Strategy, the White House published a list of private commitments to support its efforts. Various stakeholders, from physician associations to private companies, committed more than \$8 billion in efforts to work with the White House in realizing the goals of the conference.⁷⁹ These commitments from private entities, nonprofit organizations, and trade associations signal a recognition and desire to improve access to nutritious food and raise awareness about the connection between diet, lifestyle, and overall health.

Among those private commitments, several specifically relate to nutrition education for health professionals. The ACGME, AACOM, and AAMC committed to holding a nutrition in medical education summit to bring together physicians, members of medical education specialty governing bodies, nutritionists, dietitians, and experts to discuss strategies to ensure that medical professionals are equipped to address nutrition when treating patients.⁸⁰ The American College of Lifestyle Medicine (ACLM) pledged an in-kind donation of \$24.1 million to enhance nutrition training for medical professionals working in under-served communities.⁸¹ This donation serves two purposes. First, \$22 million will be used to provide a free 5.5-hour CME accredited course on nutrition to 100,000 physicians.⁸² Additionally, ACLM, together with the American Board of Lifestyle Medicine, will use the remaining \$2.1 million to fund half the cost of training and certification in lifestyle medicine for one primary care provider at each of the Federally Qualified Health Centers across the United States.⁸³

Several trade associations—including the National Medical Association, National Hispanic Medical Association, Children’s Oral Health Institute, and the American Association of Colleges of Pharmacy—made a pledge to strengthen nutrition education for healthcare professionals.⁸⁴ By making this commitment, these associations pledged that they will work with their partners to ensure that by 2024, professional training programs have at least one professional with nutrition expertise and ensure that hunger, nutrition, and lifestyle related questions comprise at least 5% of the board certification exam questions for both primary and subspecialty professional training programs.⁸⁵

The American Academy of Pediatrics (AAP) pledged “to train all AAP pediatricians on food insecurity screening and equip them to connect patients to community and federal nutrition resources.”⁸⁶ This initiative is conducted together with the anti-hunger nonprofit organization Share Our Strength.⁸⁷ The University of South Carolina School of Medicine Greenville (SOMG), in partnership with the ACLM, pledged a \$4.8 million in-kind donation to help interested medical schools around the world implement its Lifestyle Medicine curriculum.⁸⁸

As the White House works to implement the National Strategy, it has continued to announce new commitments. In February 2024, the White House highlighted a new commitment by the nonprofit Gaples Institute, which committed to offering its nutrition course to 100 additional U.S. medical schools and health professional training programs.⁸⁹ The Teaching Kitchen Collaborative committed to optimizing how cooking for health and pleasure is taught and helping to establish national standards for teaching kitchen environments and programs.⁹⁰ The Augusta University/University of Georgia Medical Partnership’s Office of Personalized Health and Well-Being pledged a 10-year, \$25 million in-kind commitment to launch an open-source platform for medical educators and health professionals to integrate nutrition, exercise, and sustainable behavior change into the current standard of care.⁹¹



SUMMIT ON MEDICAL EDUCATION IN NUTRITION

As mentioned above, ACGME, AACOM, and AAMC made a private commitment alongside the White House Conference to host a Summit on Medical Education in Nutrition. Together, ACGME, AACOM, and AAMC are the governing bodies of medical education in the United States. ACGME sets professional educational standards and oversees the accreditation of residency and fellowship programs in America.⁹² AACOM establishes standards for accreditation of colleges of osteopathic medicine.⁹³ AAMC represents all 157 medical schools in the United States that are accredited by the Liaison Committee on Medical Education, approximately 400 teaching hospitals, and more than 70 academic societies.⁹⁴

The Summit on Medical Education in Nutrition was hosted in March 2023 and brought together 100 medical education stakeholders including leaders of undergraduate and graduate medical education, leaders of various medical specialty organizations, physician experts in nutrition, and registered dietitians and nutritionists.⁹⁵ The summit focused on determining what physicians need to know about nutrition to counsel their patients on the connection

between food and health as well as how nutrition education fits into medical education in UME and GME, how to improve interprofessional relationships with registered dietitians, and considerations related to cultural competence and social determinants of health.⁹⁶ The summit involved speakers, panels, and group work on competencies related to nutrition in undergraduate and graduate medical education.⁹⁷

The discussions identified a range of topics of interest in four key categories: education and curriculum development, sustaining efforts to address nutrition, the connection between nutrition education and patient-centered care as well as medical student well-being, and addressing the impact that culture and socioeconomic status have on nutrition.⁹⁸ The proceedings of the Summit were posted on the ACGME site, alongside other useful resources on nutrition in medical education.⁹⁹

The Summit on Medical Education in Nutrition signaled a recognition among accreditation bodies and medical professionals that integrating nutrition into medical education is a worthwhile goal. ACGME, AACOM, and AAMC have added to the growing momentum to ensure that medical students and physicians have the competency to address patient concerns about nutrition, lifestyle, and diet-related disease.

NEXT STEPS TO MEANINGFULLY IMPLEMENT NUTRITION EDUCATION FOR PHYSICIANS

The recent efforts described above highlight the growing awareness of the importance of nutrition education within the medical community and beyond. From House Resolution 1118 to the Summit on Medical Education in Nutrition, stakeholders are gaining momentum to ensure that physicians are well-equipped to provide patients with relevant nutritional advice that will improve overall health. Actors like federal and state governments as well as accreditation bodies like ACGME, AACOM, and AAMC should build on this momentum by incorporating nutrition into medical education at the UME, GME, and CME levels. While the *Doctoring Our Diet* report includes detail on many policy opportunities for change, below is a list of some of the most timely opportunities, based on where we are now and the momentum of the past several years. The lack of nutrition competency of physicians is a matter of national concern, as it impacts the ability of patients to receive high-quality care, accurate nutritional advice, and referrals or connections to appropriate services. There are ample opportunities on both the federal, state, and institutional level to increase the level of nutrition knowledge among medical students and practicing physicians. Below are the most relevant and timely policy recommendations with the greatest potential to create change in the field.

FEDERAL

Nutrition Education for Federally-Employed or Federally-Funded Doctors

Federally-employed doctors should be required to complete a nutrition-focused CME course or training program, through a requirement from either Congress or the President. Congress could introduce legislation

to require federally-employed doctors to complete a one-time CME course or training program in nutrition. Outside of Congressional action, the President could sign an executive order directing federal agencies to require any federally-employed physician to complete a nutrition CME course or training program. In the alternative, the Secretary of Health and Human Services (HHS) could implement a nutrition CME requirement for all doctors employed in HHS's 12 operating divisions. The Secretary of the Department of Veterans Affairs could require doctors working in the Veterans Health Administration (VHA) to complete a nutrition-focused CME course or training program.

In September 2022, Representatives Raúl Grijalva (D-AZ) and James McGovern (D-MA) introduced the Education and Training (EAT) for Health Act. If passed, the Act would require the Secretary of HHS to issue guidelines to each federal agency that employs full-time primary care health professionals, such as the Centers for Disease Control and Prevention (CDC), the Indian Health Service (IHS), and the Federal Bureau of Prisons (BOP), to develop procedures and requirements for federally-employed health professionals to undergo CME training on nutrition.¹⁰⁰ Continuing education courses relating to nutrition “shall include at least content on the role of nutrition, in the prevention, management, and, as possible, reversal of obesity, cardiovascular disease, diabetes, or cancer.”¹⁰¹

Requiring federally-employed physicians to complete CME that includes nutrition and lifestyle would be particularly effective because the federal government is one of the largest employers of physicians in America.¹⁰² In particular, the VHA employs more than 350,000 health care professionals and delivers care to more than nine million enrolled veterans, making it America's largest health care system.¹⁰³ In 2014, the U.S. Department of Veterans Affairs estimated

that 78% of veterans are overweight or obese and nearly a quarter of all VA patients have diabetes.¹⁰⁴ In addition to ensuring that federally-employed doctors have adequate expertise to counsel patients dealing with diet-related diseases or poor nutrition, a CME requirement could also have spill-over effects by making nutrition CME content more available, allowing more physicians to access this content, and hopefully leading states to implement their own nutrition-focused CME requirements for physicians operating within their states.¹⁰⁵

Instead or in addition, a requirement could be created for nutrition education for federally-funded physicians. The President could direct HHS's National Health Services Corps (NHSC), which provides scholarships and loan repayment programs to health care providers in exchange for a period of service in a health professional shortage area (HPSA),¹⁰⁶ to add a requirement for CME in nutrition to be eligible for federal scholarship and loan repayment services through NHSC. Although program participants are not federal employees, they do receive federal funding in exchange for serving in a HPSA. There are currently 7,795 primary care providers participating in this program.¹⁰⁷ Accordingly, the President or the Secretary of HHS should direct NHSC to include a requirement that all program participants complete a certain amount of CME in nutrition. Because these individuals are serving in HPSA's, where there's a demonstrated lack of healthcare professionals, such a requirement would be a powerful step towards ensuring individuals living in these areas have access to nutrition education in an area where other healthcare professionals, like dietitians, may also be difficult to find.

Condition Medicare Funding for GME on Inclusion of Nutrition Education

As discussed above, Medicare provides the lion's share of all funding for GME. In 2020, HHS provided about \$16.2 billion for physician training through Medicare GME payments.¹⁰⁸ Congress should make Medicare funding for GME conditional on providing some level of nutrition education.

By conditioning Medicare funding on the inclusion of nutrition education in GME curricula, residency and fellowship programs would only receive funding if they satisfy the requisite training dedicated to nutrition or demonstrate adequate nutrition competency amongst graduates. Congress could accomplish this by including a provision in an annual appropriations bill that includes a nutrition education requirement for programs that receive federal funding. Congress should amend § 1886(h) of the Social Security Act,¹⁰⁹ through an appropriations bill, to tie payments for graduate medical education programs costs to the inclusion of nutrition education.¹¹⁰ There is precedent for using the annual appropriations bill to direct GME funding to a specific purpose in response to a healthcare crisis. For example, the 2021 Consolidated Appropriations Act made available 1,000 additional GME full-time equivalent (FTE) resident slots, to be phased in at a rate of no more than 200 slots per year beginning in 2023, with a percentage of slots targeted to rural areas and other underserved areas.¹¹¹ The 2023 Consolidated Appropriations Act made 200 additional residency positions available at the GME level, with 100 of the positions reserved for a psychiatry or psychiatry subspecialty residency.¹¹²

A nutrition education requirement in an appropriations bill could take several forms: (1) a requirement to provide a certain number of nutrition education training hours or inclusion of nutrition competencies, (2) providing additional funds to programs that provide nutrition education, by reallocating existing GME funding or providing new, additional funding, or (3) a mandate to report the nature and amount of nutrition education provided in each GME program. Aspects of these approaches could also be combined. For instance, Congress could mandate all programs report on existing nutrition education efforts to establish a baseline while also providing additional funds for programs that want to create better outcomes for their trainees and patients by providing more robust training and education on nutrition.

First, Congress could mandate GME programs provide a certain number of hours of nutrition training, or require that doctors-in-training demonstrate specific competencies related to nutrition and patient care.

This straight-forward approach could be phased in over several years to provide GME programs sufficient time to add nutrition education where it is currently lacking and has the benefit of remaining budget neutral.

Second, an appropriations bill could incentivize nutrition education by allocating additional funds only to be provided to programs that provide a certain number of hours of training in nutrition to residents and fellows. For example, the 2019 Labor, HHS, & Education Appropriation Bill allocated \$325 million for Children’s Hospital Graduate Medical Education (CHGME) to support children’s hospitals training of resident physicians, research capabilities, and care for vulnerable and underserved children.¹¹³ Using this funding, HHS is able to provide additional funds to programs that include certain training criteria.¹¹⁴ Congress could similarly provide funds that HHS could use to incentivize GME programs to meet a threshold level of nutrition training for residents and fellows. If passed, CMS would then draft and finalize rules to implement the GME provisions related to nutrition education.¹¹⁵

Using a similar but budget neutral approach, Congress could offer performance-based incentive payments tied to nutrition education within the existing Medicare GME funding framework.¹¹⁶ Under this approach, similar to the Graduate Medical Education Reform Act proposed in 2012,¹¹⁷ existing Medicare payments to GME programs would be reduced by a small percentage to create a pool of funds that would be used to incentivize nutrition education. GME programs that include a certain amount of nutrition education would then be eligible for this additional funding. This could serve as a model to tie performance to nutrition education without increasing overall Medicare GME funding and impact only a small portion of existing funds.¹¹⁸ Third, Congress could require GME programs to report the amount and nature of nutrition-focused training provided to residents. Currently, teaching hospitals and other sponsoring organizations of Medicare GME programs are only required to report to CMS the data elements needed to calculate payments for these programs.¹¹⁹ Other federal programs, however, require GME programs to report on the content of the training programs. For example, under

CHGME, training programs are required to report on the types and number of programs by specialty and subspecialty, the types of training related to the needs of underserved children, the first practice location of graduates, and the curricular focus of training programs, among other details.¹²⁰ Congress could incorporate a similar nutrition education reporting requirement into an annual appropriations bill, which CMS would then implement. This initiative would highlight areas where nutrition education fell short within GME programs and encourage more programs to incorporate nutrition into medical education and training as data on the type and amount of nutrition education could be made publicly available.

Grant Funding for Nutrition Education

Congress should use grant funding to accelerate inclusion of nutrition education within UME and GME programs. Grants would provide a larger amount of money to fewer schools, but institutions receiving these funds could serve as models for other programs, at least initially, as different programs develop different models to increase nutrition education.¹²¹ The federal government could do this by adapting existing grant programs or creating a new program dedicated to UME and/or GME nutrition education.¹²² These grants can take the form of direct financial support to hospitals, outpatient facilities, or residency and fellowship programs that include nutrition in their training of medical professionals.¹²³ For example, the Health Resources and Services Administration (HRSA)’s Preventive Medicine Residency Program awards grant funding to programs that support preventive medicine residency to increase the number of physicians and residents trained in preventive care.¹²⁴ This program could be used as a model for the inclusion of nutrition education by providing funding to grant applicants who create curricula or training programs that incorporate nutrition education.¹²⁵

Alternatively, UME and GME programs that meet a specified threshold of nutrition education in the form of lecture hours or clinical training hours on nutrition could be given additional points in grant applications for other programs. For example, the Substance Abuse and Mental Health Services Administration (SAMHSA) Provider’s Clinical Support System grant

program provides funding for states, health facilities, and other public or private non-profit entities to expand graduate-level substance use disorder (SUD) education.¹²⁶ In the grant proposal requirements for programs like the Provider's Clinical Support System, UME and GME programs should be asked to include information about the amount of nutrition education they provide. Grant proposal reviewers could then allocate additional points to UME and GME programs that meet a threshold level of nutrition education when assigning an overall score to the grant application.

STATE

Continuing Medical Education

At the state level, states should create CME requirements with a minimum number of hours of nutrition education necessary for continued licensure. State medical boards set specific CME standards for physicians, including the number of credit hours physicians must complete and the deadline by which these credits must be completed for continuing



licensure. The number of hours or type of CME courses required for continuing licensure varies by state.¹²⁷ State governments can require certain topics to be included within CME. For example, in response to court cases regarding poor care and pain control at the end of life, the California legislature passed a bill in 2001 to require all physicians and surgeons to complete a CME course in pain management and the treatment of terminally ill and dying patients.¹²⁸ While 37 states have required CME credits in discrete medical topics like palliative care, pain management, and substance use disorder identification, no state has yet created a requirement for nutrition.¹²⁹

States have introduced legislation that would require nutrition education as part of their state CME requirements, which could serve as a model for others. For example, The Council of the District of Columbia introduced a bill in 2019 that, if passed, would have required two credits of instruction on nutrition education for physicians.¹³⁰ The bill further directed the DC Department of Health to develop a free course to make available to DC healthcare professionals.¹³¹

For states that do not require any CME or do not require physicians to complete CME in specific topic areas, they should consider requiring a one-time pre-licensure course designed to educate physicians on the importance of nutrition within their practice. For example, a 2021 bill introduced by the New York State Assembly sought to require the introduction of coursework or training in nutrition for physicians.¹³² The bill proposed that physicians licensed within the state complete three hours of coursework or training regarding nutrition within one year of being licensed and once within each four-year period that follows.¹³³ While this bill did not become law, the New York State Assembly's proposal to require physicians to complete nutrition-related CME training could be replicated by other states. This change could ensure that physicians have baseline knowledge of nutrition to apply in their practices.¹³⁴ Many state boards already have similar first-time licensure requirements for other specialties such as awareness around domestic violence, reporting of child abuse, and incorporating palliative care.¹³⁵

States also could consider developing a repository

of nutrition education materials that physicians could use to fulfill their general CME requirements. For example, in February 2023, New York State Senator Lea Webb sponsored a bill (S4401A) that requires the Department of Health to develop, maintain, and distribute a resource library showing CME and other nutrition-based training opportunities for licensed physicians in the state.¹³⁶ The bill was signed into law by Governor Kathy Hochul in December 2023.¹³⁷ While S4401A does not impose any CME requirements on state physicians, it highlights the importance of providing nutrition education resources to practicing medical professionals.

Medicaid Funding of GME

After Medicare, the second largest provider of GME funding is Medicaid, a joint program between the federal government and states.¹³⁸ While the federal government articulates general rules that all state Medicaid programs must follow, each state runs its own Medicaid program.¹³⁹ The federal government does not require states to allocate Medicaid funds towards GME, but many states elect to use funds for GME.¹⁴⁰ If a state does opt to cover GME costs, the federal government provides matching funds.¹⁴¹ As of 2022, 44 states, including Washington, DC, chose to provide Medicaid funding to GME.¹⁴² Total Medicaid support for GME in 2022 reached \$7.49 billion¹⁴³, up from \$5.58 billion in 2018.¹⁴⁴ States can use Medicaid funding to design GME to meet state-specific needs. For example, state Medicaid funding is used to support resident positions in primary care and designated specialties and residents trained in rural and medically underserved areas.¹⁴⁵ However, no state requires programs receiving Medicaid funding to ensure adequate nutrition education for its trainees. States should leverage the flexibility of Medicaid funding to ensure a baseline level of nutrition competency in residency and fellowship programs to receive Medicaid funds, which could include requiring a minimum number of hours on nutrition education or achievement of specific competencies.

As an alternative to a requirement, states could implement a performance-based incentive payment model, similar to the suggestion for Medicare above. The federal Centers for Medicare and Medicaid Services (CMS) give state Medicaid programs



significant flexibility in designing and executing GME payments, including which professions, settings, and organizations are eligible to receive support.¹⁴⁶ Using this flexibility, states could provide incentives for GME programs rather than mandates. States could provide incentive payments to programs that complete a certain amount of training, either based on hours or competencies, or they could provide incentive payments to programs that increase nutrition education by a certain threshold, add new or innovative curricula, or otherwise improve upon their existing training related to nutrition education.

Many states also fund GME through avenues other than Medicaid. These alternative avenues further provide opportunities for states to condition funding on nutrition education and encourage nutrition education in GME. For example, Texas funds GME through the Texas Higher Education Coordinating Board.¹⁴⁷ Minnesota funds GME through its Medical Education and Research Cost trust fund, funded by a tax on cigarettes.¹⁴⁸ States should look at existing alternative GME funding mechanisms and use them as leverage to require or incentivize nutrition education

as a vital component of GME training.

ACCREDITATION BODIES

In the absence of, or in addition to, efforts on the federal and state level, changes should be made by the accreditation bodies responsible for overseeing medical education in the United States. Because accreditation is one of a limited number of requirements to be eligible for federal funds, requiring nutrition competency as part of accreditation would be particularly impactful. These and other shifts can be made at the UME and GME levels. Similar recommendations were made in a November 2023 report by the Bipartisan Policy Center, a Washington, D.C.-based non-profit organization, which urged UME and GME accreditation bodies to establish clinically meaningful nutrition-specific competencies and publicly report metrics that ensure compliance with these competencies beginning in 2025.¹⁴⁹

The LCME publishes accreditation standards for allopathic medical education programs in the United States while ACGME accredits GME programs and institutions that sponsor them.¹⁵⁰ The most recent LCME standards do not explicitly mention nutrition and, as of 2023, the ACGME Common Program Requirements do not include nutrition competencies and such competencies are lacking in most specialty program requirements.¹⁵¹

LCME should amend their accreditation standards to incorporate nutrition education. To do so, LCME could amend Standard 6.2, which relates to required clinical experiences, to include using non-pharmacological approaches such as nutrition counseling and education in the skills to be performed by medical students.¹⁵² Standard 7 pertains to curricular content that must be included within medical education program to prepare students for entry into residency programs and LCME could amend Standard 7.2 to include content and clinical experiences related to recognizing wellness, determinants of health, opportunities for health promotion and disease prevention, including through diet and nutrition.¹⁵³ By doing so, LCME would signal the importance of nutrition education in medical school curricula and clinical training and ensure that medical schools provide this type of instruction to achieve accreditation.

At the GME level, ACGME could require competency in nutrition through the Common Program Requirements and in more detail through specialty program requirements. The primary criteria for eligibility for Medicare GME funding is that the program is “an approved medical residency training program.”¹⁵⁴ Thus, ACGME, as the group responsible for accrediting medical residency training programs, serves as a gatekeeper for this \$16 billion dollar per year funding from taxpayers. ACGME should uphold the public trust bestowed upon it and ensure that physicians are trained to meet the healthcare challenges of today by incorporating meaningful nutrition competencies in the Common Program Requirements and relevant specialty-specific requirements.

Changing the Common Program Requirements would impact over 800 institutions including over 11,000 residency and fellowship programs for trainees who have obtained an MD (Doctor of Medicine) and a DO (Doctor of Osteopathic Medicine).¹⁵⁵ Directly incorporating training in nutrition, diet, and lifestyle interventions into the Common Program Requirements would ensure that physicians are able to provide meaningful nutrition advice to their patients.¹⁵⁶ ACGME should also adjust requirements for key specialties and subspecialties, especially those that have close connections to nutrition. For example, integrating nutrition education into specialties like preventive medicine, internal medicine, pediatrics, OB/GYN, cardiology, and family practice would provide doctors with relevant knowledge to advise patients on the impact that nutrition has on diet-related diseases and overall wellbeing.¹⁵⁷

Unless or until they incorporate specific competency requirements in nutrition, LCME and ACGME should implement a reporting requirement for UME and GME programs, respectively. Programs should be required to publicly report on an annual basis metrics related to achievement of relevant nutrition competencies of medical students and trainees, which would help clarify the current state of nutrition education and encourage robust offerings beyond the bare minimum that is currently taught. In addition, programs should be obligated to report on their efforts to incorporate educational opportunities that enable medical trainees to demonstrate relevant competencies in nutrition. ACGME requires residency and fellowship programs to report on the “Milestones”, which are competency-based development outcomes.¹⁵⁸ While residents and fellows may successfully complete their programs even if they have not achieved all of the Milestones, the reporting requirement provides an opportunity to evaluate whether medical trainees have demonstrated competency in outcomes such as knowledge, attitude, and skill.¹⁵⁹ Accordingly, ACGME should require programs to report on competencies related to nutrition within the Milestones. Requiring medical schools and residency and fellowship programs to report on their efforts to include nutrition education would highlight programs that do incorporate training on nutrition and lifestyle.

Similarly, LCME could also add a data reporting requirement on nutrition education to Standard 7 of its Data Collection Instrument that medical schools complete as part of the accreditation process.¹⁶⁰ In addition to reporting, LCME and ACGME could

recognize model UME or GME programs that include a specified number of lecture hours, clinical training, or required coursework focused on nutrition, diet, and lifestyle interventions.

CONCLUSION

This issue brief highlights recent efforts by the government, private and non-profit stakeholders to increase nutrition education for physicians, along with an array of policy options to build on these efforts. Since publication of the *Doctoring Our Diet* report in 2019, House Resolution 1118 was passed to encourage quality nutrition education in medical training. The White House held its landmark Conference on Hunger, Nutrition, and Health, alongside which private stakeholders committed more than \$8 billion to, among other commitments, improve nutrition education for physicians. AAMC, AACOM, and ACGME held their first ever Summit on Medical Education in Nutrition to discuss concrete steps to improve nutrition education for physicians. While these efforts suggest progress, more concrete actions must be taken to successfully improve population

health and reduce diet-related disease. Federal and state governments have a variety of policy options available to promote physician competency and training in nutrition. In addition, governing bodies like AAMC, ACGME, AACOM, LCME, Federation of State Medical Boards, and the National Board of Medical Examiners should undertake efforts to integrate nutrition education into all levels of medical education. Increased nutrition education will improve the health of Americans by ensuring physicians can provide accurate basic nutrition information, answer patients' questions and provide them with knowledge about the importance of nutrition to health, and make referrals to nutrition professionals and relevant services and interventions, ultimately supporting better individual and population-level health.



ENDNOTES

- 1 US Burden of Disease Collaborators, *The State of US Health, 1990-2016: Burden of Diseases, Injuries, and Risk Factors Among US States*, 319 JAMA 1444, 1451 fig.2 (2018).
- 2 *Id.*
- 3 Committee on Nutrition in Medical Education, *Nutrition Education in U.S. Medical Schools*, National Research Council 12 (1985), https://www.ncbi.nlm.nih.gov/books/NBK216797/pdf/Bookshelf_NBK216797.pdf.
- 4 Adams et al., *The State of Nutrition Education at US Medical Schools*, 2015 Journal of Biomedical Education 1, 4 tbl.2.
- 5 *See id.*
- 6 See Emily Broad Leib et al., *Doctoring Our Diet: Policy Tools to Include Nutrition in U.S. Medical Training I* (1st ed. 2019) [hereinafter *Doctoring Our Diet I*].
- 7 *See id.*
- 8 *Obesity, Race/Ethnicity, and COVID-19*, Ctrs. for Disease Control and Prevention (last visited Apr. 17, 2024), <https://www.cdc.gov/obesity/data/obesity-and-covid-19.html>.
- 9 *See Poor Nutrition*, Ctrs. for Disease Control and Prevention (last visited Apr. 17, 2024), <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/nutrition.htm>.
- 10 Committee on Nutrition Services for Medicare Beneficiaries & Food and Nutrition Board, *The Role of Nutrition in Maintaining Health in the Nation's Elderly* 7 (2000).
- 11 John Cawley et al., *Direct Medical Costs of Obesity in the United States and the Most Populous States*, 27 J. Managed Care and Specialty Pharmacy 354, 354 (2020).
- 12 Bipartisan Policy Ctr. et al., *Teaching Nutrition and Physical Activity in Medical School: Training Doctors for Prevention-Oriented Care* 16 (2014).
- 13 *Id.*; see also *Doctoring Our Diet*, *supra* note 6.
- 14 Stephen Devries et al., *Assessment of the Low Referral Rate of Cardiologists to Dietitians/Nutritionists*, 4 Int'l J. Disease Control and Prevention (2022).
- 15 *Id.*
- 16 Anne Marie Crutolo et al., *Integrating Nutrition Services into Primary Care*, 51 Can. Fam. Physician 1647, 1649 (2005).
- 17 Bethany Agusala et al., *The Time Is Ripe: The Case for Nutrition in Graduate Medical Education in the United States*, 11 J. of Med. Educ. and Curricular Dev. 1, 1 (2024).
- 18 H.R. Res. 1118, 117th Cong. (2022).
- 19 The White House, *FACT SHEET: The Biden-Harris Administration Announces More Than \$8 Billion in New Commitments as Part of Call to Action for White House Conference on Hunger, Nutrition, and Health* (Sep. 28, 2022), <https://perma.cc/8FMK-WV3Q>.
- 20 Proceedings of the Summit on Medical Education in Nutrition (Oct. 2, 2023), <https://www.acgme.org/globalassets/pdfs/nutritionsummit/nutrition-summit-proceedings.pdf>.
- 21 U.S. Gov't Accountability Off., GAO-21-593, *Chronic Health Conditions: Federal Strategy Needed to Coordinate Diet-Related Efforts* (2021), at 15.
- 22 Tricia Psota et al., *Driving Transformative Change to End Hunger and Reduce Diet-Related Diseases and Disparities: The White House Conference on Hunger, Nutrition, and Health*, 117 Am. J. Clinical Nutrition 649, 650.
- 23 GAO-21-593, *supra* note 21, at 15.
- 24 *Doctoring Our Diet I*, *supra* note 6, at 2; see also Marion L. Vetter et al., *What Do Resident Physicians Know About Nutrition? An Evaluation of Attitude, Self-Perceived Proficiency, and Knowledge*, 27 J. Am. C. Nutrition 287, 287 (2008).
- 25 *Doctoring Our Diet I*, *supra* note 6, at 2.
- 26 The name "National Research Council" described the operating arm of the National Academy of Sciences and the National Academy of Engineering until 2015, when it was supplanted publicly by the National Academies of Sciences, Engineering, and Medicine. See Laura Harbold DeStefano et al., *A History of the National Academy of Medicine: 50 Years of Transformational Leadership* 43 (National Academies Press 2022).
- 27 Committee on Nutrition in Medical Education, *Nutrition Education in U.S. Medical Schools* 5 (Evelynn Hammonds et al. eds., National Research Council 1985).
- 28 Kelly M. Adams et al., *The State of Nutrition Education at US Medical Schools*, 2015 J. Biomed. Ed. 1, 3.
- 29 Vetter et al., *supra* note 24.
- 30 Nicole Harkin et al., *Physicians' Dietary Knowledge, Attitudes, and Counseling Practices: The Experience of a Single Health Care Center at Changing the Landscape for Dietary Education*, 13 Am. J. Lifestyle Med. 292, 293 (2019).
- 31 Celeste Eno et al., [Milestones Guidebook for Residents and Fellows, Accreditation Council for Graduate Medical Education](#), 2 (2020).
- 32 H.R. Res. 1118, 117th Cong. (2022)
- 33 Stephen Devries et al., *A Deficiency of Nutrition Education and Practice in Cardiology*, 130 Am. J. Med. 1298, 1299 (2017).
- 34 Sean M. Phelan et al., *Impact of Weight Bias and Stigma on Quality of Care and Outcomes for Patients with Obesity*, 16 Obesity Revs. 319, 321 (2015).
- 35 *Id.*
- 36 Angel S. Byrd et al., [Racial Disparities in Obesity Treatment](#), 7(2) Curr. Obes. Rep. 130, 132-4 (2018).
- 37 Feeding America, *Hunger Hits Black Communities Harder*, <https://www.feedingamerica.org/hunger-in-america/black-communities>.
- 38 Sara N. Bleich et al., *Opportunities to Promote Food and Nutrition Security as the Federal Public Health Emergency Ends*, 4 JAMA Health F. 1, 2 (2023).
- 39 Philip Calder, *Nutrition and Immunity: Lessons for COVID-19*, 75 Eur. J. of Clinical Nutrition 1309, 1313 (2021).
- 40 Jordi Merino et al., *Diet Quality and Risk and Severity of COVID-19: A Prospective Cohort Study*, 70 Gut 2096, 2102.

41 *Id.*

42 *Food Security and Nutrition Assistance*, U.S. Dep’t of Agric. Econ. Res. Serv., <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/food-security-and-nutrition-assistance/#:~:text=In%202022%2C%2012.8%20percent%20of,of%20a%20lack%20of%20resources> (last visited Nov. 23, 2023).

43 Bipartisan Policy Ctr. et al., *supra* note 12 at 16.

44 Michael P. Duggan et al., *Survey of Nutrition Education Among Medical Students*, 4 J. Wellness 1, 2 (2023).

45 See generally Stephen Devries et al., *Nutrition Education in Medical School, Residency Training, and Practice*, 321 JAMA 1351 (2019).

46 David M. Eisenberg et al., *Perspective: Teaching Kitchens: Conceptual Origins, Applications and Potential for Impact Within Food Is Medicine Research*, 15 Nutrients 2859, 2867 (2023).

47 *MedEd Nutrition Education for Medical Schools and Residency Programs*, Gaples Institute, <https://www.gaplesinstitute.org/nutrition-cme/meded-medical-school-nutrition-resident-nutrition/#medschools> (stating that MedEd is required at Harvard, Johns Hopkins, Tufts, UNC, Uniformed Services University, University at Buffalo, Texas Tech, University of Nebraska, and University of Texas Southwestern).

48 Ass’n Am. Med. Colls. Et al., *Foundational Competencies for Undergraduate Medical Education*, <https://www.aamc.org/media/72526/download>.

49 *Id.*

50 *Id.*

51 *GME Fast Facts*, Michigan Health & Hospital Association (2022), https://www.mha.org/wp-content/uploads/2022/04/GME_FastFacts_infographic_2022_508.pdf.

52 The ACGME program requirements for internal medicine residency and cardiovascular residency do mention “food,” but only in relation to providing access to food and refrigeration to store food for residents while on duty. See *ACGME Internal Medicine*, Accreditation Council Graduate Med. Ed. 7–8 (2023), https://www.acgme.org/globalassets/pfassets/programrequirements/140_internalmedicine_2023.pdf [hereinafter *ACGME Internal Medicine*]; *ACGME Program Requirements for Graduate Medical Education in Cardiovascular Disease*, Accreditation Council Graduate Med. Ed. 9–10 (2023), https://www.acgme.org/globalassets/pfassets/reviewandcomment/rc/141_cardiovascular_disease_rc_012023.pdf [hereinafter *ACGME Cardiovascular*].

53 See generally *ACGME Internal Medicine*, *supra* note 52; *ACGME Cardiovascular*, *supra* note 52.

54 See generally *ACGME Internal Medicine*, *supra* note 52.

55 American Medical Association, *Compendium of Graduate Medical Education Initiatives: Report 3* (2023).

56 *Frequently Asked Questions on Section 126 of the Consolidated Appropriations Act (CAA), 2021*, Centers for Medicare and Medicaid Services (2021), <https://www.cms.gov/files/document/frequently-asked-questions-section-126.pdf> at 1.

57 *Medicaid Graduate Medical Education Payments: Results from the 2022 50-State Survey*, Assoc. of Am. Med. Colls. 11 (2023), https://store.aamc.org/downloadable/download/sample/sample_id/590/https://store.aamc.org/downloadable/download/sample/sample_id/590/.

58 *Medicaid Graduate Medical Education Payments: Results from the 2022 50-State Survey*, Association of American Medical Colleges 7 (2023), https://store.aamc.org/downloadable/download/sample/sample_id/590/.

59 Robert F. Kushner et al., *Obesity Coverage on Medical Licensing Examinations in the United States. What is Being Tested?*, 29 Teaching & Learning Med. 123, 123–24 (2017).

60 Shaily Patel et al., *Nutrition Education in U.S. Medical Schools: An Assessment of Nutrition Content in USMLE STEP Preparation Materials*, 4 J. Curriculum and Teaching 108, 108, 111 (2015).

61 *Id.* at 111.

62 See Bipartisan Policy Ctr. et al., *supra* note 12 at 16, 18.

63 *Doctoring Our Diet I*, *supra* note 6, at 24.

64 *Specialty and Subspecialty Certificates*, American Board of Medical Specialties, <https://www.abms.org/member-boards/specialty-subspecialty-certificates/>.

65 American Board of Internal Medicine, *ABIM Announces New Specialty Board and Exam Committee Members Who Will Join Ongoing Efforts to Enhance MOC Assessments* (July 06, 2016), <https://www.abim.org/media-center/press-releases/abim-announces-new-specialty-board-and-exam-committee-members>.

66 *Why Accredited CME Matters*, Accreditation Council for Continuing Medical Education, <https://www.accme.org/why-accredited-CME-matters>.

67 See, e.g., *Continuing Med. Ed. Requirements for Physician License Renewal in Mass.*, Mass. Med. Soc., <https://www.massmed.org/Continuing-Education-and-Events/Continuing-Medical-Education-Requirements-for-Physician-License-Renewal-in-Massachusetts/>; *Renewals*, Miss. State Bd. Med. Licensure., <https://www.msbml.ms.gov/Renewals>.

68 *Navigating State Medical Licensure*, American Medical Assoc., <https://www.ama-assn.org/medical-residents/transition-resident-attending/navigating-state-medical-licensure>.

69 H.R. Res. 1118, 117th Cong. (2022).

70 James P. McGovern, *As White House Conference Approaches, now Is the Time for a National Plan to Address the Link Between Hunger, Nutrition Education, and Health*, 116 Am. J. Clinical Nutrition 841, 842 (2022).

71 Elynn Ferguson, *McGovern Nudges Medical Schools to Invest in Nutrition Education*, Roll Call (Nov. 11, 2021), <https://rollcall.com/2021/11/11/mcgovern-nudges-medical-schools-to-invest-in-nutrition-education/>.

72 Biden-Harris Admin., *White House National Strategy on Hunger, Nutrition, and Health* 2 (2022).

73 *Id.* at 2.

74 *Id.*

75 *Id.* at 4.

76 *Id.* at 21.

77 *Id.* at 19.

78 *Id.* at 20.

79 Kimberly Flowers, *What Will Come from the White House Conference on Hunger, Nutrition, and Health?*, Ctr. Strategic & Int'l Studs. (Oct. 20, 2022), <https://perma.cc/G7GN-USK7>.

80 Beth Frates, *The Evolving State of Nutrition Education*, 17 Am. J. Lifestyle Med. 759, 760 (2023).

81 The White House, *FACT SHEET: The Biden-Harris Administration Announces More Than \$8 Billion in New Commitments as Part of Call to Action for White House Conference on Hunger, Nutrition, and Health* (Sep. 28, 2022), <https://perma.cc/8FMK-WV3Q> [hereinafter White House, *FACT SHEET*].

82 White House, *FACT SHEET*, *supra* note 81.

83 Am. Col. Lifestyle Med., *ACLM Commits \$22 Million to Free Lifestyle Medicine Training*, <https://perma.cc/7Y3X-2ZWZ>.

84 White House, *FACT SHEET*, *supra* note 81.

85 *Id.*

86 *Id.*

87 Melissa Jenco, *White House Spotlights AAP Initiative to Reduce Nutrition Insecurity*, Am. Acad. Pediatrics (Sept. 28, 2022), <https://perma.cc/35KD-NN4H>.

88 White House, *FACT SHEET*, *supra* note 81.

89 *Id.*

90 Dept. Health and Hum. Servs., *White House Challenge to End Hunger & Build Healthy Communities*, <https://perma.cc/6TNN-LZMF>.

91 *Id.*; *see also* Augusta University/University of Georgia Medical Partnership, *Office of Personalized Health and Well-Being*, <https://perma.cc/7VK6-QD99>.

92 Accreditation Council for Graduate Med. Educ., *Overview*, <https://perma.cc/633A-83DR>.

93 Am. Ass'n. Colls. Osteopathic Med., *About Us*, <https://perma.cc/UT4G-6Y9R>.

94 Ass'n. Am. Med. Colls., *About the AAMC*, <https://perma.cc/D87D-HJ7N>.

95 Accreditation Council for Graduate Med. Educ., *Proceedings of the Summit on Medical Education in Nutrition* at 3 (Oct. 2, 2023), <https://perma.cc/4X6P-CPTF>.

96 *Id.*

97 *Id.*

98 *Id.*

99 *Id.*

100 Education and Training for Health Act, H.R. 8964, 117th Cong. § 3(a) (2022).

101 *Id.* § 3(c).

102 Cynthia M.A. Geppert, *What is the VA? The Largest Educator of Health Care Professionals in the U.S.*, 2016 Fed. Prac. 6, 6.

103 U.S. Dep't Veterans Affs., *Veterans Health Administration*, <https://perma.cc/9EMA-JUCK>.

104 Off. Rsch. & Dev., *VA Research on Obesity*, <https://perma.cc/MB6Q-YMPJ>.

105 *Doctoring Our Diet I*, *supra* note 6, at 7.

106 Elayne J. Heisler, Cong. Rsch. Serv., R44970, *The Nat'l Health Serv. Corps 1* (2022).

107 Bureau of Health Workforce Field Strength and Students and Trainees Dashboards, Health Res. And Serv. Admin. (Nov. 2023), <https://data.hrsa.gov/topics/health-workforce/field-strength>. Number of primary care providers determined by deselecting "All" under provider type and selecting "Primary Care," then using the "Grand Total" figure under the "State" column. Number of other healthcare providers determined by selecting "All" under "Provider Type," then subtracting the number of primary care providers (7,795) from the "Grand Total" of 22,791 in the "State" column (22,791-7,795=14,996), and rounding.

108 U.S. Gov't Accountability Off., GAO- 21-391, *Physician Workforce: Caps on Medicare-Funded Graduate Medical Education in Teaching Hospitals 2* (2021).

109 42 U.S.C. § 1395ww.

110 *See* Consolidated Appropriations Act of 2023, § 4122, 136 Stat. 5903.

111 Consolidated Appropriations Act of 2021, Pub. L. No. 116-260, § 126, 134 Stat. 1662 (2020).

112 Consolidated Appropriations Act of 2023, § 4122, 136 Stat. 5904.

113 Senate Comm. on Appropriations, *Summary: FY2019 Labor, HHS, & Education Appropriations Bill Gains Subcommittee Approval* (June 26, 2018), <https://perma.cc/BP69-HN5B>.

114 Elayne J. Heisler, Cong. Rsch. Serv., R44970, *Children's Hospitals Graduate Medical Education (CHGME) 1* (June 13, 2023).

115 Allison M. Cohen, *CMS Releases Final Rule Implementing New GME Policies and Finalizing the Methodology to Distribute 1,000 Medicare GME Slots*, Baker Donelson (Dec. 21, 2021), <https://perma.cc/7A69-S5RW>.

116 *Doctoring Our Diet I*, *supra* note 6, at 17.

117 *See* Graduate Medical Education Reform Act, S. 3201, 112th Cong. (2012); Resident Physician Shortage Reduction and Graduate Medical Education Accountability and Transparency Act, H.R. 6352, 112th Cong. (2012).

118 *Doctoring Our Diet I*, *supra* note 6, at 20.

119 Jill Eden et al., *Graduate Medical Education That Meets the Nation's Health Needs* 115 tbl.4-2 (National Academy of Sciences 2014).

120 *Id.*

121 *Doctoring Our Diet I*, *supra* note 6, at 21.

122 *Doctoring Our Diet I*, *supra* note 6, at 21.

123 Accreditation Council for Graduate Med. Educ., *Funding for Graduate Medical Education* (May 3, 2022), <https://www.acgme.org/globalassets/pdfs/funding-for-graduate-medical-education-5.3.2022.pdf>.

124 Bureau of Health Workforce, Health Res. & Servs. Admin., *Preventive Medicine and Public Health Training Grant Program Fiscal Year 2021* at 6-7, <https://perma.cc/5MHY-APJV>.

125 *Doctoring Our Diet I*, *supra* note 6, at 22.

¹²⁶ Substance Abuse and Mental Health Servs. Admin., *Provider’s Clinical Support System — Universities* (Feb. 15, 2024), <https://perma.cc/Q6YW-YUQK>.

¹²⁷ Fed’n State Med. Bds., *Continuing Medical Education Board-by-Board Overview* (2024) [hereinafter *CME Overview*].

¹²⁸ Cal. Bus. & Prof. Code § 2190.5; see also L. Leong et al., *Evaluating the Impact of Pain Management (PM) Education on Physician Practice Patterns — A Continuing Medical Education (CME) Outcomes Study*, 25 J. Cancer Educ. 1, 3 (2010).

¹²⁹ *CME Overview*, *supra* note 127.

¹³⁰ Council of D.C., *Improving Obesity Education Through Policy: Continuing Medical Education*, <https://perma.cc/823X-9Y3Y>.

¹³¹ *Id.*

¹³² A. 7858, 2021 Leg., 244th Sess. (N.Y. 2021).

¹³³ *Id.*

¹³⁴ Emily M. Broad Leib et al., *Nutrition Education for Physicians and Health Professionals: Policy Opportunities for Massachusetts* at 11 (Sept. 2020), <https://perma.cc/Y8LE-LW7Q>.

¹³⁵ *Id.* at 12.

¹³⁶ 2024 N.Y. Pub. Health Law § 264.

¹³⁷ *Id.*

¹³⁸ Nat’l. Conf. State Legislatures, *Graduate Medical Education Funding* (Jan. 9, 2024), <https://perma.cc/2PTW-EB56>.

¹³⁹ U.S. Dep’t Health and Human Servs., *What’s the Difference Between Medicare and Medicaid?* (Dec. 8, 2022), <https://perma.cc/CSR4-XQ8U> [hereinafter HHS, *Medicare vs. Medicaid*].

¹⁴⁰ *Id.*

¹⁴¹ Jill Eden et al., *Graduate Medical Education That Meets the Nation’s Health Needs* (National Academies Press 2014).

¹⁴² Ass’n. Am. Med. Colls., *Medicaid Graduate Medical Education Payments: Results from the 2022 50-State Survey* (2022), <https://perma.cc/ECT6-XDBN> [Hereinafter *Medicaid Graduate Medical Education Payments*].

¹⁴³ *Id.*

¹⁴⁴ Am. Med. Ass’n., *2023 Compendium of Graduate Medical Education Initiatives Report* at 4 (2023), <https://perma.cc/U25E-3D9C>.

¹⁴⁵ *Medicaid Graduate Medical Education Payments*, *supra* note 142.

¹⁴⁶ See generally Thomas M. Henderson, *How Accountable to the Public Is Funding for Graduate Medical Education? The Case for State Medicaid GME Payments*, 111 Am. J. Pub. Health 1217 (2021).

¹⁴⁷ Tex. Higher Educ. Coordinating Bd., *Graduate Medical Education Expansion Programs*, <https://perma.cc/WF9Y-S27J>.

¹⁴⁸ See Minn. Dep’t. Health, *MERC History*, <https://perma.cc/H97G-P3TA> (“Currently, funds for the MERC distribution come from cigarette tax revenues, a carveout of medical education funds from the Prepaid Medical Assistance Program, and federal Medicaid matching funds obtained by the Department of Human Services.”).

¹⁴⁹ Dan Glickman et al., *Healthy Eating Rx: Improving Nutrition Through Health Care*, Bipartisan Policy Center at 6 (Nov. 13, 2023), <https://perma.cc/568E-UJSG>.

¹⁵⁰ Accreditation Council Graduate Med. Educ., *Frequently Asked Questions (FAQs)*, <https://perma.cc/Q3UH-SMDK>.

¹⁵¹ Liaison Comm. Med. Educ., *Functions and Structure of a Medical School* (2023) [hereinafter *LCME, Medical School*]; see also Accreditation Council for Graduate Med. Educ., *Common Program Requirements (Residency)* (2023); Accreditation Council for Graduate Med. Educ., *Common Program Requirements (Fellowship)* (2023).

¹⁵² *LCME, Medical School*, *supra* note 151, at 8.

¹⁵³ *Id.* at 10.

¹⁵⁴ Marco A. Villagrana, Cong. Rsch. Serv., IF10960, *Medicare Graduate Education Payments: An Overview 1* (2022).

¹⁵⁵ *Doctoring Our Diet I*, *supra* note 6, at 14. In 2020, the American Association of Colleges of Osteopathic Medicine (AACOM), which represents 41 accredited colleges of osteopathic medicine in the United States, transitioned to a single accreditation system for GME with ACGME being the sole accrediting body. See generally Andy Brown, *The 5-Year Transition to a Single GME System Ended June 30*, The DO (June 30, 2020), <https://perma.cc/P9Y6-MTR4>.

¹⁵⁶ *Id.*

¹⁵⁷ *Id.* at 15.

¹⁵⁸ Accreditation Council for Graduate Med. Educ., *Frequently Asked Questions, The Milestones* (Jan. 2023), <https://perma.cc/5CGE-24AF>.

¹⁵⁹ *Id.*

¹⁶⁰ Liaison Comm. on Med. Educ., *Data Collection Instrument for Full Accreditation Surveys* (Apr. 2024), <https://perma.cc/9LUX-483W>.



DOCTORING OUR DIET II: NUTRITION EDUCATION FOR PHYSICIANS IS OVERDUE

© JUNE 2024