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PERSPECTIVE
Obesity in the USMLE Step 1 examination: A call to action

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As one of the most grueling aspects of medical school, the United States Medical Licensing Examination (USMLE) serves as a rite of passage toward a career as a physician. It comprises three exams: Step 1, which assesses the application of science concepts to the practice of medicine; Step 2, Clinical Knowledge (CK), which assesses clinical medicine; and Step 3, which evaluates the application of medical knowledge. For all physicians, these tests evoke memories of long hours of preparation, extreme anxiety, and significant pressure to excel. Although Step 1 was recently changed to pass/fail, medical students across the country still dedicate weeks to months preparing for the seven-hour exam that marks the transition between preclinical and clinical years and prepares students for careers as physicians.

Despite the countless hours medical students spend preparing for the USMLE Step 1 exam, there is an apparent paucity of obesity content in both the preparation materials and the exam itself. This is perplexing given the sheer prevalence, health impacts, and economic costs of obesity. Obesity affects more than 42.4% of the U.S. adult population and interacts with every body organ [1]. It is one of the most significant contributors to the burden of non-communicable diseases and has been touted as one of the most critical risk factors for COVID-19 morbidity and mortality [1]. Further, the direct medical cost for obesity in the United States was estimated at $173 billion in 2019, and it is projected to increase by $48–66 billion over the next decade [2, 3]. Despite this, no questions on the USMLE Step 1 exam directly test medical students on their knowledge of obesity. Sure, questions state a patient's body mass index (BMI) or describe an "obese" patient with a complication of their obesity, but they fail to cover obesity pathogenesis and treatment. Meanwhile, Step 1 tests medical students on rare metabolic conditions—like glycogen storage diseases, lysosomal lipid storage disorders, and homocystinuria—that most future physicians will never see in their careers. But every licensed physician will see patients with obesity.

Recent medical breakthroughs have also changed the way obesity will be treated by future physicians. In the last two years, two new highly effective medications to treat obesity—one FDA approved in 2021—have provided new life to treatment options for a disease that typically receives little attention from the medical community [4]. Medical students should be tested on these pharmacotherapy options for obesity, just like they are tested on the pharmacotherapy options for other chronic diseases. How can medical students be tested on managing most other chronic diseases but not the most common and costly one—obesity?

A 2015 study by Kushner and colleagues examined the obesity content of USMLE exams and found the coverage of obesity-related questions to be relatively low, with most questions focused on obesity-related comorbidities (e.g., type 2 diabetes, obstructive sleep apnea, and polycystic ovarian syndrome) rather than the disease of obesity itself [5]. The authors hypothesized several reasons for the lack of coverage, including obesity not fitting within a particular organ system, the novelty of the practice and subspecialty of obesity medicine, and the lack of obesity experts on USMLE writing committees [5]. Based on their findings, the authors recommended that obesity could be included in topics within the framework of USMLE Step 1, including genetics, epidemiology, physiology, behavioral science, and pharmacology [5]. But eight years later, the Step 1 test still has not improved its coverage of obesity.

Unfortunately, the lack of obesity coverage on USMLE Step 1 is consistent with the lack of obesity education at every level of medical training, leaving physicians unprepared to treat a disease that affects more than 40% of adults in the U.S. [6] Medical education has comprehensively trained future physicians on chronic diseases like diabetes and hypertension. However, obesity is treated differently. It is often not thought of as a disease but instead attributed to a lack of willpower or moral failing [6]. A 2020 study aiming to describe the extent of obesity coverage in undergraduate medical education found that only 10% of medical schools reported that their students are very prepared to treat patients with obesity. One-third of schools reported there were no obesity education programs in place and no plans to develop one. Half of the schools reported obesity education as a low priority or not a priority at all [6]. We know the chronic disease of obesity is one of the most alarming threats to public health. But the medical community has yet to sufficiently educate and train the next generation of physicians to treat it.

Whether licensure examinations should reflect what is taught or what should be taught in medical schools remains to be clear. Regardless, medical school curricula must improve their obesity coverage alongside the USMLE. Medical schools can use core obesity competencies, developed by the Obesity Medicine Education Collaborative (OMEC) and based on the Six Core Domain Competencies of the Accreditation Council for Graduate Medical Education (ACGME), as a resource to develop their obesity curricula [7]. As the most significant barrier to improving obesity education is the lack of space in the curriculum, medical schools may choose to focus on smaller, more realistic changes in already established curricula. For example, ensuring the use of person-first language

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(using "person with obesity" instead of "obese person") throughout all curricular materials and using patients with obesity in standardized patient cases may help address weight bias and help assess communication skills among future physicians. Other realistic changes that capitalize on already established curricula include learning how to counsel patients with obesity when practicing motivational interviewing, discussing obesity and the effects of weight loss in the context of its associated comorbidities, and including a discussion about obesity as a disease when learning about metabolic diseases.

As formal assessment in the USMLE tests often drives curricular decisions, improving coverage of obesity on USMLE Step 1 will provide a necessary impetus for expanding obesity education nationally. This may have a profound and long-lasting effect on future generations of physicians. However, to continue the current poor coverage of obesity on these exams will only perpetuate the existing bias that obesity is a behavioral problem and exacerbate the large percentage of physicians that are ill-prepared to manage obesity. We know that the USMLE can change. The USMLE Step 1 has added clinical science, including diagnosis and preventative care, to its foundational science core in the last ten years [8]. If the USMLE has changed in response to the changing competencies required of practicing physicians, it can and should evolve again.

In a world where the disease of obesity is falsely considered a personal choice and its treatments are poorly covered by insurance, the National Board of Medical Examiners has an opportunity to improve the coverage of obesity on the USMLE exams. This is a promising route toward creating a future healthcare system more competent in treating obesity. And although medical students are woefully unprepared to treat patients with obesity, we are hopeful the USMLE can seek out experts in obesity medicine to guide new content development and revise current weight-stigmatizing content found in the USMLE Step 1 exams.

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