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MEDICAL EDUCATION

It Is Time for Obesity Medicine

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There is an epidemic affecting more than 400 million people in the world today. It has an ability to cross national, cultural, and socioeconomic boundaries. It affects even the youngest among us. The condition leads to myriad structural, physiological, and psychosocial disturbances, which in turn diminish the quality of life of the afflicted and threaten the long-term survival of entire generations.

Excluding the numbers, the above description could refer to many well-known conditions such as HIV, influenza, or type 2 diabetes. Today, our role as physicians in addressing each of these diseases is clear. We aim to *understand* our patients and their disease by combining our well-honed history-taking and physical examination skills with appropriate diagnostics, we *treat* them using safe and effective measures, and we *advocate* for their best interests.

The above description, however, refers not to HIV or diabetes but to obesity. Although it is a common condition with a greater global impact than most other disorders, our role as physicians in the care of patients with obesity is much less clear. In this article, we examine the challenges physicians face in understanding, treating, and advocating for patients with obesity, and we describe how the field of obesity medicine is emerging as a response to those challenges.

Understanding Obesity

American society has long viewed obesity as a self-induced, voluntary state. The consequences of applying this psychosocially conditioned understanding of energy balance to our patients have been profound. Patients with obesity are frequently as stigmatized in the health care setting as they are in their daily lives. The built environment of health care facilities, including the shape of waiting room chairs, the size of hospital beds, and the weight limitations of most imaging modalities are common barriers to optimal medical care for many patients with obesity [1-3]. Medical professionals are not immune to carrying weight-related biases that are reflected both in their approach to obesity generally and in the lower rates of age-appropriate cancer screening among patients with high BMIs [4]. Moreover, many health care professionals feel uncomfortable directly addressing overweight and obesity with patients because of the attitudes, assumptions, and stigma associated with these conditions [5-8].

Many physicians appear to be out of their element when approaching obesity and instituting any form of weight loss therapy. The complexity and heterogeneity of

obesity, leading to different manifestations and outcomes in different patients, can be a barrier to understanding. Information about body weight regulation and the physiology of obesity emerging from the basic science laboratory has yet to be translated to the classroom or the bedside. Other than BMI calculation, waist circumference measurement, and a preliminary staging of the disorder into mild, moderate and severe forms (class I, II, and III, respectively), there are few diagnostic or prognostic indicators to differentiate obesity's diverse manifestations and subtypes. As a result, many clinicians are ill-equipped to educate patients about obesity, overcome their own weight-related biases, and effectively implement the limited therapies that are currently available—let alone to adopt the more complex emerging therapies that are likely to be required for effective management.

Treating Obesity

When obesity is acknowledged during the patient encounter, the conversation is frequently shaded by our incomplete understanding of the condition and its complex etiology, by the perceived scarcity of appropriate therapeutic options, and by a lack of clear guidelines for the appropriate use of available interventions. Although more than 130 million adult Americans meet the National Heart, Lung and Blood Institute (NHBLI) BMI criteria for overweight and obesity [9], few physicians are comfortable prescribing weight loss medications [10]. Similarly, nearly 15 million adult Americans meet the eligibility criteria for weight loss surgery [9], but these operations are performed on fewer than 2 percent of them yearly [11]. It is unclear to what degree this low rate of application of pharmacologic and surgical therapy reflects the risk associated with the medications and procedures, misperceptions of the causes of obesity, weight bias among physicians and patients, or simple ignorance about their potential benefit and appropriate use.

Much clinician resistance to pursuing medical and surgical treatment of obesity appears to reflect the widespread perception of obesity as a lifestyle choice or characterological flaw for which the use of strictly medical treatment is inappropriate. But the resistance to offer treatment also stems from the lack of defined practice standards or evidence-based guidelines, which leaves many physicians unprepared for treating obesity and many patients without the benefit of an expert, professional approach to this problem. Among the approximately 11,000 physicians in the U.S. who routinely use pharmacologic therapy either in a primary care or weight management practice, there is no clear consensus approach to treatment. The current clinical (NHBLI) guidelines do not address practical aspects of treatment regimens such as dosages, duration, combinations, or appropriate monitoring, leaving gaps that allow for a great deal of variability in the interpretation of the guidelines by individual practitioners.

The surgical guidelines, too, are merely eligibility criteria, insufficient to guide treatment recommendations; they do not address many relevant variables, including patient age, status of comorbidities, psychosocial well-being, functional status, compliance, quality of life, etiology of obesity, and anticipated response to therapy, all of which must be factored into a risk-benefit analysis. Consensus has not yet been

reached about the definition of these variables or their impact on the patient's response to therapy. Assessing these factors and their contribution to clinical outcomes requires a sophisticated understanding of the pathophysiology of obesity and the physiologic mechanisms by which these therapies exert their effects. As described above, rapidly evolving knowledge in these areas remains untranslated into diagnostic and prognostic indicators that would facilitate appropriate therapeutic decision-making.

Education in Obesity Medicine

Obesity causes or exacerbates more than 60 medical illnesses, influencing diagnosis, treatment and outcomes in nearly every medical discipline. No established discipline is adequate to address the complexity of medical issues facing the patient with obesity. As a result, the number of physicians specializing in this area remains too limited to meet the rapidly increasing need for such services. Both the level of training and the treatment strategies employed by this small group of physicians vary considerably. Developing obesity medicine as a more formal discipline through training and research can help to overcome these limitations and promote more optimal care for patients with obesity.

Obesity medicine takes a comprehensive approach to the patient with obesity:

- Its organization reflects the recognition that the etiology of obesity is multifactorial and includes genetic, developmental, physiologic, psychosocial, behavioral, nutritional, and environmental contributors.
- It recognizes the phenotypic diversity of obesity, including the variations in severity, age of onset, distribution of body fat, eating behaviors, energy regulation, comorbidities, and responses to treatment.
- It anticipates the need for a variety of behavioral, nutritional, pharmacologic, and surgical therapies for obesity and provides an arena in which to develop, explore, and test numerous potential combinations of these therapies.
- Most importantly, it acknowledges the profound and diverse medical, psychological, and socioeconomic impacts of obesity. The narrower field of bariatric medicine focuses largely on helping patients lose weight through known behavioral, nutritional, and more recently, pharmacological approaches. Obesity medicine is concerned not merely with reducing adiposity but with addressing the other medical needs of patients with obesity, including detection and treatment of the spectrum of obesity-related comorbidities, specialized diagnostic tools and treatment algorithms, better rates of cancer screening, and adjustments in the built environment.

Through education and by example, obesity medicine specialists strive to reduce weight- and obesity-related stigma, disparities in care, and barriers to effective and efficient treatment.

The goal of specialized training in obesity medicine is to develop a cadre of clinicians and clinician-investigators who are experts in this area. Clinicians with a strong foundation in the science of obesity will be better equipped to diagnose and manage obesity and its myriad complications and to educate other providers,

patients, and the general public. The comprehensive body of knowledge acquired through training and research in obesity medicine will promote the development of more appropriate standards of care and clinical guidelines that will enhance the efficacy of our interventions and improve the outcomes realized by our patients. The expertise of clinicians with a broad understanding of obesity physiology and disease can also help inform the efforts of policymakers, public health workers, investigators, and clinicians in multiple disciplines, so that more obesity-specific and effective preventive and therapeutic strategies can be developed and implemented.

The need for physicians who specialize in obesity medicine will be inevitable as the number of treatment options grows and the complexity of treatment planning makes it inaccessible to generalists. A small number of committed clinicians from diverse fields is responding to this need by dedicating their practices to the care of patients with obesity or by establishing academic or private weight management centers. Creation of a robust, recognized specialty, however, requires more. By shaping the trajectory of specialization through formal training and research in obesity medicine, we can best leverage the efforts of physicians already drawn to this area and attract new talent to this important discipline. Training and research in this area will be necessary to propel the development of the formal body of knowledge, curriculum, and means of competency testing that are required for the establishment of a subspecialty. To have a complete and lasting impact on patient care, obesity medicine will have to penetrate all levels of medical education. Its impact must reach medical schools where the physiology of energy regulation, the basics of nutrition, and the pathophysiology of obesity are incorporated into the preclinical curriculum. And it must reach teaching hospitals where the assessment, diagnosis, and treatment of patients with obesity are routinely addressed in clinical training at all levels.

The Obesity Medicine and Nutrition Fellowship Program

To this end, we have recently established the first subspecialty fellowship training program in obesity medicine and nutrition. The program combines 1 year of clinical training with 1 to 2 years of research training. The clinical training is conducted predominantly within the multidisciplinary obesity medicine practice at the Massachusetts General Hospital Weight Center, an integrated clinical and research center that brings together obesity medicine specialists, dietitians, bariatric surgeons, behavioral psychologists, and other health care professionals in the comprehensive care of obesity and its complications. Training is guided by a formal curriculum and accomplished through a comprehensive program that includes precepted obesity medicine clinic sessions and inpatient consultation, electives in nutrition, surgery and subspecialty practices relevant to the care of patients with obesity, interdisciplinary team meetings, didactic sessions, journal clubs, obesity medicine grand rounds, and obesity medicine interhospital rounds. During the clinical year, the fellow takes part in regular meetings at our Obesity Research Center, through which he or she is introduced to myriad clinical, translational, and basic research opportunities.

The subsequent years of the fellowship are designed to complement the clinical knowledge and expertise gained in the first year through a rigorous program of

obesity-related clinical or basic research. The program emphasizes the importance of mentorship and collaboration with other experts in the field, enabling fellows to view obesity from different perspectives and witness the application of diverse approaches to the study, treatment, and prevention of this disorder. The clinical and research activities of the MGH Weight Center provide opportunities for research training and a model for effective translational research. By combining scientific and clinical activities, the program trains physicians to speak the often disparate languages of science and clinical care, an essential skill for obesity medicine specialists.

It is time to recognize the need and value of obesity medicine as a discipline that can improve health care, clinical outcomes, and quality of life for the millions of patients with obesity and related disorders. To come into its own, however, obesity medicine must have a stable and effective practice model to attract clinicians to its ranks. Third-party payments for medical obesity therapy are limited, and so far there are no routinely reimbursed procedures for obesity medicine specialists. For these reasons, a sustainable practice model does not currently exist outside of self-pay by wealthy individuals. A practice model will emerge, however, as the novel therapies and diagnostic procedures that increase the complexity of care and drive specialization also improve the effectiveness of clinical care. More effective care of patients with obesity should lead to better reimbursement for direct patient care and allow for more attractive clinical practice opportunities. In this way, a viable practice model in obesity medicine will evolve and this emerging specialty can take root.

References

1. Friedman KE, Ashmore JA, Applegate KL. Recent experiences of weight-based stigmatization in a weight loss surgery population: psychological and behavioral correlates. *Obesity (Silver Spring)*. 2008;16 Suppl 2:S69-S74.
2. Kaminsky J, Gadaleta D. A study of discrimination within the medical community as viewed by obese patients. *Obes Surg*. 2002;12(1):14-18.
3. Buckley O, Ward E, Ryan A, et al. European obesity and the radiology department. What can we do to help? *Euro Radiol*. 2009;19(2):298-309.
4. Cohen SS, Palmieri RT, Nyante SJ, et al. Obesity and screening for breast, cervical, and colorectal cancer in women: a review. *Cancer*. 2008;112(9):1892-1904.
5. Jay M, Kalet A, Ark T, et al. Physicians' attitudes about obesity and their associations with competency and specialty: a cross-sectional study. *BMC Health Serv Res*. 2009;9:106.
6. Teachman BA, Brownell KD. Implicit anti-fat bias among health professionals: is anyone immune? *Int J Obesity Relat Metab Disord*. 2001;25(10):1525-1531.
7. Kristeller JL, Hoerr RA. Physician attitudes toward managing obesity: differences among six specialty groups. *Prev Med*. 1997;26(4):542-549.
8. Puhl RM, Brownell KD. Psychosocial origins of obesity stigma: toward changing a powerful and pervasive bias. *Obes Rev*. 2003;4(4):213-227.
9. National Institutes of Health, National Heart, Lung, and Blood Institute, North American Association for the Study of Obesity. The practical guide:

identification, evaluation and treatment of overweight and obesity in adults. http://www.nhlbi.nih.gov/guidelines/obesity/prctgd_c.pdf. Accessed March 15, 2010.

10. Ferrante JM, Piasecki AK, Ohman-Strickland PA, Crabtree BF. Family physicians' practices and attitudes regarding care of extremely obese patients. *Obes (Silver Spring)*. 2009;17(9):1710-1716.
11. Kohn GP, Galanko JA, Overby DW, Farrell TM. Recent trends in bariatric surgery case volume in the United States. *Surgery*. 2009;146(2):375-380.

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