

Virtual Mentor
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Medical Ethics Confronts Obesity

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FROM THE EDITOR

Obesity Takes Center Stage

Aside from health system reform, obesity is perhaps the most-discussed topic in health care in the United States, and certainly in the American media. Healthy People 2010, a nationwide health-promotion plan developed by the U.S. Department of Health and Human Services in January 2000, named overweight and obesity as leading indicators of health and set the goal of bringing the obesity rate under 15 percent by the year 2010. (Unfortunately, we are far from reaching this anticipated goal. Colorado is the only state that has been able to maintain an obesity rate of less than 20 percent.) Recently, First Lady Michelle Obama, in conjunction with U.S. Secretary of Health and Human Services Kathleen Sebelius and Surgeon General Dr. Regina Benjamin, instituted the Let's Move program to reduce pediatric obesity. It has been widely acknowledged that improvements in American health made by the success of tobacco cessation efforts are under threat from the climbing rate of obesity and obesity-related conditions such as type 2 diabetes mellitus and hypertension. As the topic of obesity takes center stage, ethical treatment, diagnosis, and legislation have become more necessary than ever.

This month's issue of *Virtual Mentor* examines many of the ethical questions that arise when physicians confront the need to talk to and treat patients who are obese. Some authors explore physician bias toward patients who are overweight and its sometimes dire effects on the health of those patients; they examine how physicians can best cultivate self-awareness and bring professionalism to the sensitive and effective treatment of the whole patient, not merely the number on the scale or the tape measure. They also point out that respect for the patient does not necessarily mean avoiding the topic of weight; studies have documented patients' desires for assistance from their doctors and the salutary effect a diagnosis of obesity can have on patient motivation to improve health. Other authors discuss how to overcome impediments to broaching weight loss with patients—impediments that spring from lack of appropriate training on the topic or the assumption that primary care visits are too short to allow for effective counseling. The majority of this month's contributors stress that only a nuanced understanding of the complex relationship between environmental, genetic, behavioral, and other contributors to obesity will allow clinicians to become more compassionate and more useful to their patients.

The authors in the law, policy and society sections discuss the legislative and policy efforts made in the U.S. to combat obesity, increase physical activity, and encourage the consumption of health-promoting foods. A number of contributors mention that policy efforts to date have been strongly influenced by the American view of obesity as almost entirely caused by lack of willpower, pointing to American individualism

and staunch resistance to perceived paternalism as primary obstacles to health-related legislation. Again and again, these articles emphasize the need for collaborative, sustained action to improve America's health—particularly the health of its children.

Our esteemed authors represent a breadth of expertise in the field and offer unique perspectives on the topic of obesity and our role in either alleviating or perpetuating it in our country. We truly hope that you gain insight from this, the first *Virtual Mentor* issue dedicated to the topic of obesity.

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CLINICAL CASE

Weight-Based Stigma and Physician Bias

Commentary by Lawrence J. Cheskin, MD, Scott Kahan, MD, MPH, and Gail Geller, ScD, MHS

Mrs. Williams visited her primary care physician, Dr. Smith, for a hospital follow-up (2 days after discharge) and evaluation of type 2 diabetes mellitus, hypertension, and hypercholesterolemia. She was obese (BMI of 50) and had been hospitalized for acute renal failure due to dehydration, respiratory distress, and poor-healing chronic decubitus ulcers. Her family believed the medical staff was to blame for Mrs. Williams' current medical problems. They stated that she was receiving "inappropriate care" and that the physicians involved in treatment were "just putting a band-aid on her and trying to discharge her as quickly as possible" during each admission. This hospitalization marked her 10th in the last 5 months for similar symptoms.

During her last hospitalization, the medical team had spoken with Mrs. Williams about her weight's being the primary confounding factor in treatment of her other medical conditions. Dr. Smith asked, "Mrs. Williams, do you understand how your weight has complicated the care that we are able to provide? We are just treating these acute flare-ups until we can address the fact that each of them will improve with weight loss." She replied, "I'm tired of you doctors telling me I'm fat. I know that, but I think that you're using it as an excuse not to try hard enough to address my other issues. I've seen how you look at me. I just wish someone would treat me like a human being."

Mrs. Williams has changed her primary care physician several times over the last few years because of "maltreatment" and "disrespect" by her physicians. She believes that as she has gained weight over the years, she has been treated more poorly by her physicians. She has been on a quest to find a physician who will treat her as he or she would treat a thinner patient, but each physician that she has seen has focused on her morbid obesity as a primary cause of her current diagnoses. While all of them have given her information on dietary changes and physical activity recommendations, she has not heeded their advice, due in part to their abrasive approach.

Commentary

Mrs. Williams' case highlights the difficulties we may face as well-intentioned caregivers in communicating and, indeed, empathizing and connecting with some of our patients who are very obese. As with many problematic areas we face as clinicians, the challenge may stem from our own biases.

It is well documented that health professionals often carry the negative biases of our society toward individuals who are obese [1-3]. Cultivating an awareness of our own biases is the best way to avoid acting on them. Self-awareness, however, is difficult when these biases are unconscious. In *The Silent World of Doctor and Patient*, psychiatrist Jay Katz, one of the fathers of American bioethics, highlights the ways in which unquestioned professional attitudes can interfere with the development of a trusting and respectful relationship with patients [4]. According to Katz, “these attitudes include the need to appear authoritative, the importance of hiding uncertainties from patients, the need to view patients as incompetent to participate in decision-making, and the belief that patients’ welfare depends on patients’ trusting doctors’ capacities to know what is in patients’ best interests” [4].

When caring for patients whose obesity or other disease requires significant and often difficult lifestyle changes, doctors may not know or may disagree with patients’ perceptions of what is in their best interests or may feel inadequate to help their patients achieve medical goals. It is important for doctors to reflect on their own feelings of hopelessness and helplessness to make a difference in their patients’ lives, as well as their personal or familial experiences or challenges with weight management, in order to overcome the impediments to a trusting and respectful relationship with their patients.

Problems with patients like Mrs. Williams may also arise because of our failure to fully grasp the situation, the patient’s “issues,” or both. What appears to be occurring in Mrs. Williams’ case is common among patients, obese or not; i.e., when things are not going well in treatment, the patient and family members tend to become progressively disenchanted with the care and the caregivers, especially the “lead” caregivers, the medical staff. Our reaction to this is also a commonly experienced one: as humans who believe we generally do our best for people under our care, we will listen to the criticism and attempt to evaluate it objectively but, after doing this, typically reject the “blame” and pass some of it back to the patient.

Mrs. Williams provides grist for this reaction, since she has an obvious risk factor—her extreme obesity—and has not responded to advice to lose weight. It is important for her caregivers to step back from their emotional reaction to her criticism and her lack of response to their well-meaning advice and decide whether they can examine their own motivations and feelings of inadequacy, put themselves in the patient’s shoes, and do a better job partnering with her in this effort.

It is unfortunate but true that the amount of time spent on nutrition and exercise teaching during medical school and residency is paltry compared to the important role these factors play in determining both medical risks and outcomes. In fact, it has been noted that physicians usually report feeling inadequately trained to help patients lose weight, yet seldom refer such patients to other professionals for that purpose [5]. Thus, it is likely that the dietary and exercise advice offered to Mrs. Williams was ineffectively general (e.g., “just eat less, exercise more”), and based on unwarranted

and possibly derogatory assumptions about her habits (e.g., “just stop eating junk food”), knowledge (e.g., “try the South Beach diet”), means (e.g., “join a health club”), or abilities (e.g., “start jogging a couple of miles a day”). Moreover, physicians are not always skilled at assessing their patients’ motivation to lose weight [6].

Patient motivation for making difficult behavioral changes in the face of our “obesigenic” society is a complex phenomenon that requires sensitivity, flexibility, and persistence on the part of the clinician to effectively manage. An oft-observed phenomenon is the limited power of health improvements to serve as motivators for weight change. The potency of small improvements can be increased by emphasizing more subjective measures, such as how the patient feels after weight loss (e.g., more energy, reduced fatigue, greater mobility and ability to enjoy life) rather than focusing on the number-driven medical criteria that we tend to use (e.g, blood pressure, cholesterol, cardiac risk). Establishing initially modest expectations, providing consistent feedback, monitoring adherence, and offering constructive encouragement are elements of successful weight loss, both short-term and in the long run.

Not establishing accountability is the kiss of death to reaching goals. There is a risk, of course, that holding some individuals accountable for nonadherence to mutually established goals will cause resentment or result in their dropping out of treatment. It is in such cases that one’s skill in the art of medicine is most sorely tested. The key is to observe carefully the patient’s words and nonverbal cues and respond appropriately. The most effective response will vary by patient and situation, but will involve trial and error and will always require respect and trust.

Respect and trust are frequently invoked as integral aspects of ethics and professionalism in medicine [7]. Too often, however, respect is narrowly construed as “respect for autonomy.” In fact, the broader moral obligation imposed on health professionals is “respect for *persons*,” which ought to be independent of a patient’s personal characteristics and accorded equally to all, even to patients like Mrs. Williams who have been unsuccessful at weight loss.

Similarly, the role of trust in the patient-clinician relationship is often confined to a focus on the trust that patients should have in their physicians. But Katz prefers a model of mutual trust that extends from physician to patient, as well as from patient to physician. It is a trust that requires physicians “to trust themselves to face up to and acknowledge the tragic limitations of their own professional knowledge; their inability to impart all their insights to all patients; and their own personal incapacities...to devote themselves fully to their patients’ needs” [4]. Katz proclaims that if mutual trust were ever to govern physician-patient relations, the high rate of noncompliance with doctors’ orders would significantly decrease.

The capacities to respect and to trust are not easily acquired. Acknowledging Mrs. Williams’ life experience and knowledge of her body, inquiring about and listening

to her emotional experience (including the degree to which she feels frustrated and disrespected), gently disclosing some aspects of the clinician's own feelings and conflicts, and conveying confidence that her health can be improved, with or without major weight loss, may help to restore respect and trust in the relationship. Once the relationship is strengthened, an attempt to interest Mrs. Williams in specific, gradual steps towards weight control can be revisited.

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CLINICAL CASE

Does Pediatric Obesity Indicate Child Neglect?

Commentary by Todd Varness, MD, MPH

At 9 years old, Tiffany is morbidly obese (above the 150th weight percentile for her age, with a BMI of 35). Tiffany was referred to a pediatric obesity clinic by her pediatrician. Over the years, her weight problem had become more pronounced, leading to impaired fasting glucose and hyperlipidemia. Her pediatrician felt the significant increase in her weight over the last 3 years warranted an intensive approach to her obesity. As the pediatric obesity clinic physician took Tiffany's history, it became clear that she lived in an environment in which physical activity was not encouraged and fast food was a staple. Tiffany's mother bragged that she frequented fried chicken and hamburger franchises so much that the managers and salespeople knew her by name. When questioned about whether or not she planned on making changes in her daughter's diet, Tiffany's mother emphatically stated, "I do not plan on making any changes to Tiffany's diet. She's my kid, and I call the shots about what she eats. Fast food tastes better than the stuff you're proposing. I know she's bigger than many of her classmates, but at least she's happy. All of you doctors are rich anyway, and you think I can afford all that stuff you're telling me to feed my child."

Since the mother has been the primary contributor to this patient's learned behavior (poor dietary choices and sedentary lifestyle), can this be seen as medical maltreatment? Should the physician ask for a child neglect ruling and advise authorities to speak with child protective services for Tiffany?

Commentary

With the rapid increase in the incidence of childhood obesity and obesity-related comorbid conditions, this type of case is becoming more common. When families cannot or will not follow through with steps needed to decrease the impact of their child's obesity, the question of whether such noncompliance constitutes reportable child neglect arises.

Child Neglect

"Child neglect" is typically defined as failure of caregivers to seek or provide necessary medical care, thus placing the child at risk of serious harm. An argument for classifying childhood obesity as neglect could apply when the caretaker of an affected child fails to seek medical care, fails to provide recommended effective medical care, or fails to control their child's behavior to a degree that places the child at risk of serious harm, including death. When possible medical neglect is reported, child protective services typically investigates the allegations, conducts a

comprehensive family assessment of safety and risk, determines the family's need for additional social and financial services, and if necessary, recommends additional interventions ("check-ins" to determine compliance with recommendations, home visits, removal of child from the home, etc.) to protect the child from harm. Among the many available interventions, removing the child from the home is the most severe. The threshold for doing so in cases of medical neglect is usually high, due to the need to balance the goal of protecting a child from medical harm with the risk of causing serious psychological harm by removing the child from the home.

In general, physicians should report medical neglect only when all three of the following conditions are present:

1. A high likelihood of serious and imminent harm;
2. A reasonable likelihood that an available intervention will result in effective treatment;
3. The absence of alternative options for addressing the problem.

These three criteria can serve as a framework for determining when a particular case might approach the threshold for reporting medical neglect [1].

Is there a high likelihood of serious and imminent harm for Tiffany? The mere *presence* of childhood obesity, even severe, does not by itself predict serious and imminent harm. Rather, it is the presence of *serious comorbid conditions* (at any level of obesity) that is relevant when assessing the criteria of "serious and imminent harm."

What might constitute a serious obesity-related comorbid condition? Childhood obesity is associated with a spectrum of risk [1]. In the vast majority of cases, the child's excess weight is not associated with a serious comorbid condition *during childhood*. And, while childhood obesity increases risk for development of multiple diseases *as an adult*, this does not constitute "serious and imminent harm." In some cases, however, childhood-obesity-induced morbidities can create a high risk of serious and imminent harm, which could be reversed or improved with weight loss. These conditions include severe obstructive sleep apnea with cardiorespiratory compromise, uncontrolled type 2 diabetes, and advanced fatty liver disease with cirrhosis [2-4].

Tiffany has hyperlipidemia and impaired fasting glucose—do these constitute "serious and imminent" harm? Both conditions are associated with increased risk for adult disease (i.e., type 2 diabetes and cardiovascular disease), but, because outcomes vary widely for individuals with these risk factors, and the feared outcome is in the distant future, the clinical picture at present would not constitute a high likelihood of serious and imminent harm.

Are there effective interventions for Tiffany's obesity? Is it reasonable to demand that families be able to achieve effective weight loss for their children? And, if it has been impossible for the biological family to reduce a child's weight, what evidence is there to suggest that a foster family would be more successful?

Lifestyle interventions (diet and exercise) are the cornerstones of treatment for obesity and related complications. Lifestyle interventions are safe and simple in concept, and a sustained negative caloric balance (expending more energy than is consumed) will result in meaningful weight loss. While lifestyle interventions are frequently judged to be ineffective, a recent systematic review from the U.S. Preventive Services Task Force found support for the effectiveness of medium-to-high-intensity behavioral interventions for children and adolescents who were obese [5]. Such interventions typically promote weight loss through diet and exercise modification, but also employ family-based interventions and cognitive management techniques. For Tiffany and other children with obesity-related comorbid conditions, the goal is not resolution of obesity but rather whatever (perhaps modest) weight loss is needed to alleviate the comorbid conditions. In cases of severe obesity with comorbid conditions, the goal need not be a child who is normal weight, but a child who is less obese.

In summary, effective interventions for weight reduction are available for Tiffany, and it is not unreasonable to expect that weight loss occur in either the child's current setting or with a specifically trained foster family (if removal from the home was pursued). While Tiffany's current environment may not be the ideal setting for effective weight loss, the family does have access to the pediatric obesity clinic, where behavioral interventions of medium-to-high intensity would certainly be available.

Are there less-drastic alternatives to address this problem than charging medical neglect? In most cases of obesity, families make a good-faith effort to address the problem when made aware of the condition and the potential adverse health consequences. The development of a serious comorbidity can serve as a wake-up call for families, prompting full cooperation with intensified medical services. Whenever obesity is detected during childhood, physicians should recommend available nutrition, exercise, and behavioral interventions, as well as referrals to professionals with appropriate expertise, to ensure that reporting the situation as medical neglect is an option of last resort. It is important to understand that a report of suspected neglect need not lead to the child's removal from the home; social service agencies and child protective services have less invasive alternatives. Additionally, raising the possibility of removal from the home may affect Tiffany's mother's thinking and behavior sufficiently to bring about compliance with the needed changes.

Suggested Course of Action

Tiffany does not appear to be at high risk for serious and imminent harm related to her obesity at this time, although, if she continues on this course, risk for serious harm will increase. Effective treatment is available for Tiffany's obesity-related conditions and is not being implemented. Alternatives to reporting medical maltreatment, however, have not been exhausted. Therefore, based on analysis of the criteria discussed above, I would discourage the physician from reporting medical neglect at the present time. While Tiffany's health has been neglected, the

consequences of the neglect have not yet reached the threshold for reporting and a request for coercive state intervention.

However, the doctor still has an obligation to vigorously attempt to address Tiffany's obesity, and to do so now, before the case progresses to one that might indeed meet the criteria for reporting medical maltreatment. Tiffany's mother's resistance, although daunting, highlights the need for immediate intervention before the comorbid conditions result in serious harm. While her response to suggested interventions reflects misunderstanding or denial of the risks of obesity, it also exposes social realities and obstacles that will need to be confronted over time. The first step is to establish a trusting relationship with the mother, therefore I recommend refraining from excessive preaching or information overload at the first visit. Rather, I would obtain more information on the child's environment, reasons why her mother does not perceive or accept the risks inherent in Tiffany's condition, and possible community resources that might be available as we move forward. With subsequent visits, I would discuss nutrition and physical activity with the initial goal of maintaining Tiffany's current weight, as opposed to weight loss. I would try to utilize other professional resources (nutrition counseling, health psychologists, etc.) when I felt that Tiffany's mother was ready for such information.

Finally, and very importantly, I would recommend involving local social services earlier rather than later. Social services should *not* be reserved only for situations that convincingly meet the criteria for reportable neglect. Social service agencies and child welfare professionals are experts at comprehensive family assessments and identifying a family's need for services. Their in-home assessment would complement the continued efforts of the medical team, and clarify the seriousness of the physician's concern about the situation. Recommendations and follow-up regarding healthy food availability in the home and strategies to increase physical activity could keep Tiffany's health from deteriorating to the point where a charge of medical neglect is unavoidable and may even yield concrete health benefits.

Conclusion

While Tiffany's case clearly involves neglect, it does not appear to constitute reportable medical neglect. Nonetheless, her case highlights the need for the physician to pursue a number of alternatives before the case progresses to one that would necessitate a report of medical neglect: namely, full efforts at behavioral modification and the involvement of social services. If these efforts fail and Tiffany's risk progresses to the point of serious and imminent harm, then her physician should report the case as medical neglect.

It is unfortunate that state intervention requires the language of "neglect," implying some moral judgment about the parent(s). As in many other instances requiring state intervention to protect children, the purpose is not to make moral judgments about parents, or to punish them, but to protect the child from serious harm. Although poverty, lack of affordable healthy food, and even lack of adequate space for exercise may play a role in many cases of severe childhood obesity, the state—and

physicians—still have an obligation to protect children if they are at risk of serious and imminent harm.

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Related in VM

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Editor's note: This commentary was written and accepted for publication prior to passage of the Patient Protection and Affordable Care Act on March 21, 2010.

CLINICAL CASE

Weight-Related Denial of Insurance for an Infant

Commentary by Nancy F. Krebs, MD, MS

When Robert's parents took him to Dr. Cartwright's office for his 6-month well-baby check, the nurses measured his length, weight, and head circumference to plot on the growth charts. While his length and head circumferences were within normal range (both approximately 50th percentile), Robert's weight was above the 97th percentile; his weight-for-length was well above the 95th percentile. His parents stated that he had been doing well, tolerating breast milk and vitamin D supplementation, and meeting all developmental milestones. When Dr. Cartwright evaluated the measurements obtained at the 4-month visit, it became apparent that Robert was at the 90th percentile with regard to weight-for-length. The doctor told Robert's parents, "According to our growth charts, Robert is overweight. We should make some efforts to determine how to reduce the number of calories he consumes on a daily basis." His mother responded, "Actually, Doctor, we know he's obese by medical standards. We just sought to add him to our medical insurance, and he was denied coverage after we submitted his weight measurements. I think all of this is a little absurd. He's just a happy, healthy baby. However, I am concerned that he's being denied insurance at such an early age with no other health problems. Is there anything that you can do to help?"

Commentary

There are three primary matters to be considered in this case: the baby's health, the ethical status of the insurance company's denial of coverage, and the physician's role in mediating that denial.

Should We Be Concerned About Obesity in Such a Young Patient?

Although longitudinal data indicate that the risk for persistent overweight is much lower in a young child than in an adolescent, there are a number of reasons to be concerned when an infant's weight gain is excessive. Rapid weight gain in the first 6 months of life has been associated with higher body mass index (BMI) in early childhood [1-3]; this has been observed for both formula-fed and breastfed infants [4]. Further, infants who are overweight at the end of the first year are more likely to remain overweight at the end of the second and third years [5]. Finally, while breastfeeding is at least modestly protective against later obesity, genetics and environmental factors can certainly override this effect. A critical consideration in assessing the risk of any infant's or young child's weight is the parents' (especially

the mother's) weight and health status. If one or both parents is obese, the risk for persistence of the infant's overweight status is greatly increased [6]. If not, an "overweight" breastfed infant at 6 months of age has a very good chance of progressing to normal weight status as he or she begins to wean, eat a diversified diet, and walk.

Several aspects of infant growth and anticipatory guidance are illustrated by this case and warrant comment. First, for infants and toddlers under 2 years of age, "obese" is not accepted terminology. Rather, weight-for-length (weight relative to length, rather than absolute weight or weight-for-age) above the 95th percentile is termed "overweight." Moreover, judgment about risk of a pre-existing condition at 6 months of age, particularly with the overall protective effect of breastfeeding, is premature.

Once a weight pattern of concern is identified in a 6-month-old, what is the appropriate response? The case refers to a need to "reduce calories." A preferable approach would be to review feeding and activity patterns and to provide anticipatory guidance related to age-appropriate practices. As complementary foods are (appropriately) introduced at this time, it is a relevant opportunity to encourage nutrient-rich foods and avoidance of excessive juice- or sugar-sweetened drinks, commercial infant desserts, candies, and snacks of little nutritional value. Responsive feeding—watching and responding to the infant's hunger and satiety cues—should be encouraged, and feeding as a way of pacifying should be discouraged. From 6 months onward, the infant's feeding schedule will become progressively more integrated with that of the rest of the family; continuous access to snacks and non-milk liquids should be avoided. It is also important to assess the opportunities for gross motor development, or physical activity, even in early infancy, inasmuch as television viewing, excessive car-seat or stroller time, and inadequate "tummy time" are frequently seen in infants and toddlers [7]. Age-appropriate physical activity should be encouraged, with plenty of time for active exploration and movement.

Is It Ethical for an Insurance Company to Deny Patients Coverage Based on Their Weight?

While denial of insurance for "pre-existing conditions" is controversial for individuals of any age, denying coverage for an infant is particularly difficult to justify. The health risks associated with obesity, for both children and adults, are well known. The risks for development of comorbidities associated with obesity, however, are not equal for all individuals or at all times. This case seems to be a prime example of the adage "children are not little adults." For many reasons, it is a gross oversimplification to deny insurance to a 6-month-old on the basis of "obesity." First, this infant, having been exclusively breastfed for 6 months, was fed according to recommendations from virtually all professional health organizations, from the American Academy of Pediatrics to the World Health Organization. These recommendations are based on the recognition that human milk provides numerous short- and long-term benefits to the infant, including a protective effect against later obesity that has been consistently reported. Second, an infant's risk for persisting obesity is strongly related to his or her parents' weight status [6]. For children less

than 3 years of age, maternal weight has been found to be a stronger predictor of later obesity than the infant's or child's weight [6]. Thus, to assess risk for the infant described above, the parents' (especially the mother's) weight status would be a more appropriate indicator of the infant's long-term prognosis. The final irony of this case is the fact that, compared to formula-fed infants, breastfed infants are demonstrably healthier and require fewer health care expenditures [8, 9]. If the insurance company's action was an effort to reduce its risk burden, the decision to deny coverage to a young breastfed infant demonstrates a remarkably misguided and ill-informed choice.

Does the Physician Have an Ethical Responsibility to Advocate for This Patient?

Whether one views health insurance as a right for all people or a privilege is currently a politically charged question as the U.S. addresses health care reform. I believe that a country with a standard of living among the very highest in the world is not only obligated to direct its considerable resources to universal health care but would be acting prudently if it did so. From an economic standpoint, children who are uninsured incur significantly higher medical costs and thus increase the demand for cost-shifting to cover such expenses. For example, uninsured children and those without medical homes have been reported to receive more care in emergency rooms and have more hospitalizations, higher morbidity and mortality rates, and lower immunization rates [10]. Thus, philosophical differences aside, assuring health insurance coverage for children makes economic sense. The age of the infant described above is a time in the life cycle when preventive care is especially critical, and when opportunities for health promotion are myriad. Physicians already are frequently asked to appeal denials for coverage for particular aspects of recommended care. Such efforts require physician (and support staff) time but are undertaken because of the perceived value to the patient's care and well-being. In the case presented above, the physician would have an exceptionally good reason to advocate for coverage, be it on an ethical or practical basis.

Conclusion

In summary, rather than viewing the infant in this scenario as high-risk, the pediatrician should take the opportunity to recognize the outstanding commitment to health the family has already demonstrated by feeding their infant according to "best practices" recommendations. Rather than cutting them off from coverage, the insurance carrier should leap at the opportunity to carry an individual who has been given the optimal start in life that is likely to *reduce* risk, not increase it. The pediatrician must be knowledgeable about assessment of normal infant growth and the critical importance of optimal nutrition and feeding at this stage of development. Physicians must also be on the alert for policy decisions that adversely and inappropriately impact children's access to medical care.

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MEDICAL EDUCATION

It Is Time for Obesity Medicine

Nadia N. Ahmad, MD, MPH, and Lee M. Kaplan, MD, PhD

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.

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MEDICAL EDUCATION

Applying the Principles of Professionalism to Preventing, Treating, and Identifying Obesity

Colleen Gillespie, PhD, and Melanie Jay, MD, MS

In response to the burgeoning obesity epidemic, a number of studies over the past decade have assessed residents' training needs to determine how best to improve the care of patients who are obese. The studies have described obesity-related training and curricula offered in residency programs and assessed residents' perceived skills and competence. Studies have also reported on residents' attitudes toward obesity treatment in general and the patients who need it. Here, we seek to summarize the results of these needs assessments and, in so doing, find that many of the identified needs can be constructively viewed through the broader lens of the core skills and competencies of professionalism.

The literature and our own work in this area support the view that residents need further training to obtain basic, obesity-specific medical knowledge and counseling skills. We believe, however, that full integration and sustained implementation of best practices in preventing, assessing, and treating obesity may require a shift from defining obesity topics narrowly to exploring professionalism in general and the professional challenges of treating obesity. While it has not been easy to come to agreement about the definition of professionalism, recent work has gone a long way in clarifying its domains or categories [1-3]. On the basis of this work, we focus on the following aspects of professionalism: commitment to carrying out professional responsibilities; sensitivity to a diverse patient population; commitment to self-awareness, life-long learning, self-improvement, and excellence; and ability to work effectively in multidisciplinary and coordinated practice teams and settings [1, 4, 5]. It is our view that training efforts should apply these aspects of professionalism to the effective prevention, identification, and treatment of obesity.

Carrying Out Professional Responsibilities

A number of studies have shown that physicians, including residents, do not provide obesity counseling as often as they should [6-9]. One reason for this may be physicians' attitudes about the value of obesity interventions and treatment. Residents, faculty, and practicing physicians appear to be pessimistic about patients' prospects for responding effectively to the complex challenges of obesity. In one survey, close to a third of internal medicine residents felt that treating obesity was futile [10]. In another, half or more residents and faculty agreed that their patients would not lose a significant amount of weight and reported that treating patients who are obese is very frustrating and that they have not been successful in doing so [11]. These beliefs about the potential effectiveness of obesity prevention and treatment

options—called “treatment expectations”—may shape physicians’ willingness to broach the topic with patients, encourage the development of “blame-the-victim” attitudes toward patients, and undermine physicians’ motivation to learn and put into practice the kinds of skills that have been shown to work.

Review of the outcome evidence for obesity interventions directly challenges these negative treatment expectancies. True, when outcomes are measured as mean weight loss, they often do not appear to achieve clinical significance and may discourage providers from investing time in treating patients. But when data are re-analyzed to show clinically meaningful weight loss—5 percent or more of body weight—they start to seem more worthwhile, with 29 to 54 percent of participants, depending on the intensity of the interventions, achieving clinically meaningful weight loss [12]. Other approaches change or expand the definition of success by shifting to a more patient-centered perspective. Many studies reveal, for example, that patients ask for physician help in tackling the subject of obesity and strongly advocate for physicians to take a primary role in counseling, treatment, and referral [13-15].

More immediate, observable, and measurable indicators, such as patient motivation and intention to lose weight, appear to be sensitive to the quality of counseling [16] and have been associated with long-term behavior change and weight loss. Patient activation [17], the degree to which patients are knowledgeable, active, responsible partners in managing their health and care, offers promise as an intermediate outcome and has been shown to be associated with improvements in management of diabetes, asthma, and hypertension [18, 19]. Physicians (and residency programs) could set their sights on activating patients and use that to assess effectiveness in educating and counseling [20]. Using this alternative goal could contribute to physicians’ overall sense of making a difference in the fight against obesity. Helping residents to view obesity interventions as a more prevention-focused, long-term process [21] and from a population, rather than an individual, perspective may go a long way toward encouraging them to take on the challenge. Recent developments in our understanding of smoking cessation and the relapse-prone process of recovery from substance abuse teach us that ongoing efforts should be acknowledged, and residents should be helped to transfer this new understanding to the treatment of obesity.

Another possible reason for physicians’ failure to take on obesity counseling may have to do with the stigma of obesity, which can cause them to be reluctant to broach the sensitive and loaded topic of weight or to lack faith that patients can and will lose weight. Such challenges call for enhancement of residents’ ability to respond sensitively to the diversity of patients they encounter.

Sensitivity to Patients

Sensitivity to patients requires, perhaps, equal measures of respect, compassion, concern, and collaboration. A number of studies that have explored residents’ attitudes toward patients who are obese suggest that stigma and bias are still problems [22-25]. And, not surprisingly, we found that faculty attitudes are similar to

those of residents: 45 percent of internal medicine, pediatrics, and psychiatry faculty in our institution reported agreeing with the statement “I have negative reactions towards the appearance of obese patients” [11]. Bias like this has been shown to affect clinical care [26, 27], and patients who are obese have consistently reported that stigma and perceived bias and discrimination are major barriers to receiving high-quality, effective care [28, 29]. In fact, after our study on attitudes of faculty was published, we received many e-mails from patients attesting to the impact of physicians’ negative attitudes on their struggles with and commitment to losing weight. While exploring the sources for these views is beyond the scope of this paper, it is clear that they conflict directly with one of the essential aspects of professionalism: demonstrating sensitivity to a diverse patient population through respect, courtesy, empathy, compassion and concern [1]. As one person wrote us, “*Nothing* will help the obese patient until the physician really *hears* them. Not until they really *see* them. Not until they finally take *care* of them.”

Beliefs about the causes of obesity may also reflect negative attitudes about personal versus physician versus specialty responsibility for continued obesity. The complexity of these beliefs is illustrated by findings that between one-third [10] and one-half [30] of surveyed physicians agreed that “most obese patients could reach a normal weight if motivated to do so.” This belief may put too much emphasis on willpower and fails to acknowledge real environmental, genetic, and metabolic influences on weight gain. At the same time, roughly equivalent majorities of residents simultaneously endorsed each of the following attribution beliefs: obesity is primarily caused by genetic factors, by environmental factors, and by behavioral factors [10]. While this acknowledges the multidimensional nature of obesity, it may reflect an attitude that the causes of obesity are too complex for them to address. Curricula could address these negative attitudes through efforts to help residents understand patient perspectives and experiences of stigma as well as through exposure to new understandings of the metabolic underpinnings of obesity. Some have recommended promoting empathy by encouraging residents to take stock of their own health behavior and wellness orientation, and we have found some preliminary evidence that suggests that residents’ self-efficacy in their own weight management may influence the impact of an obesity curriculum [21].

Self-Awareness, Lifelong Learning, and Self-Improvement

Residents’ ability to recognize that attitudes about obesity can influence quality of care and decision making are essential elements of professionalism. Physicians should constantly strive to improve their competence, and, if negative attitudes interfere with their ability to provide the highest quality of care, they have a responsibility to explore those attitudes, recognize when they are operating, and work to counter them. Attitudes do appear to be related to competence: we found that faculty with greater perceived competence in assessment held less-biased attitudes toward and felt less uncomfortable treating patients who were obese [11]. Others have found that residents who felt less qualified to treat obesity were more likely to agree that behavioral factors were the primary cause of obesity [10].

Efforts to improve residents' ability to treat obesity, therefore, must begin with a focus on identifying negative attitudes—either because these attitudes hinder the development of competence or because they are the product of inadequate competence. If the former, attempts should be made to change attitudes through role modeling and mentoring and through faculty development [21], if necessary, and also by assisting residents in recognizing and investigating (debunking) those attitudes. If inadequate competency is the problem, residency programs should seek to foster and evaluate competence in managing obesity-related conditions and also to single out the least-competent residents for remediation and attitude change interventions. Evidence that attitudes may worsen as residents progress through their residency training and that 3rd-year residents feel no more qualified than 1st- or 2nd-year residents [30] supports this need for early and ongoing intervention.

Commitment to self-improvement and excellence pays off when physicians know of and are able to implement best, evidence-based, practices. In the arena of obesity prevention and treatment, evidence is mounting that comprehensive behavior change approaches are effective when they build motivation and self-efficacy in managing weight and being healthy and then set and monitor individualized, specific goals [31-33]. These approaches include motivational interviewing and the 5As model of counseling [34, 35]. Recent work has adapted these interventions so that they can be carried out in a primary care visit and integrated into decision-support, electronic health record systems. It appears, however, that residents do not currently feel qualified to make good use of these counseling strategies: 40 percent report feeling inadequate in assisting patients in setting goals; 59 percent, in using motivational interviewing to change behavior; and 39 percent, in providing brief counseling interventions [36]. Such findings led a working group at the National Heart, Lung and Blood Institute to point to gaps in training in the areas of behavioral medicine and motivational interviewing skills [37]. More generally, physicians report receiving inadequate training in obesity counseling and treatment [10, 38, 39] despite evidence that training in this area can be effective [40, 41].

To be considered professionals, residents are expected to demonstrate a commitment to improvement and excellence that requires that they strive to assess their skills, ensure awareness of best practices, seek out and use feedback data and opportunities, and take action to improve their competence. Residency programs could support this principle of professionalism by teaching residents how to review the evidence to identify best practices and then how to secure the kinds of data (e.g., through patient surveys, electronic health records, chart review, faculty supervision and feedback, and academic detailing) that would give them information on their effectiveness in identifying and treating obesity within their practice settings (e.g., academic detailing and use of electronic information systems [37]). Of course, faculty role modeling and mentoring can facilitate this commitment or can serve as a barrier—in the latter case, faculty development is called for, using some of the strategies identified above for residents to change faculty attitudes and treatment expectancies.

Multidisciplinary and Coordinated Practice Teams and Settings

Lastly, we are experiencing a clear paradigm shift from the model of the physician-as-solo-professional to a much more multidisciplinary, coordinated approach to care. Guidelines call for residents to be trained in team-based (consisting of clinicians, nutritionists, and physical activity specialists) obesity management and to be educated about facilitating evidence-based obesity management within the system of care [37]. The limited time available to physicians to counsel patients calls for maximum use of allied health professionals and health system and community resources and supports.

Residents report not feeling competent in these areas: 37 percent report feeling unable to effectively collaborate with registered dietitians and refer to community nutrition resources when appropriate [36]. Residents also report difficulty collaborating with health care professionals from other disciplines [2]. To close this gap, residency programs will have to ensure that disciplines train together and that educational efforts be directed toward transferring individual competencies into the team context and building collaboration skills. Residents must also learn to understand and improve the system through quality improvement projects that create and sustain change.

Conclusion

While needs assessments clearly suggest that residency programs must better prepare physicians to address the obesity epidemic, we believe that much of that work can be situated within the context of professionalism, building obesity prevention, assessment, and treatment into programs' existing goals of producing effective, competent, continuously learning physicians. Viewing training needs for obesity care through this professionalism lens serves to focus efforts on core principles of responsibility, self-monitoring and -regulation, patient-centered care, and teamwork and on ensuring that physicians take on an active and effective role in preventing, identifying, and treating obesity.

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THE CODE SAYS

AMA Code of Medical Ethics' Opinion on Respect for All Patients

Opinion 9.123 - Disrespect and Derogatory Conduct in the Patient-Physician Relationship

The relationship between patients and physicians is based on trust and should serve to promote patients' well-being while respecting their dignity and rights. Trust can be established and maintained only when there is mutual respect.

Derogatory language or actions on the part of physicians can cause psychological harm to those they target. Also, such language or actions can cause reluctance in members of targeted groups to seek or to trust medical care and thus create an environment that strains relationships among patients, physicians, and the health care team. Therefore, any such conduct is profoundly antithetical to the Principles of Medical Ethics.

Patients who use derogatory language or otherwise act in a prejudicial manner toward physicians, other health care professionals, or others in the health care setting, seriously undermine the integrity of the patient-physician relationship. Such behavior, if unmodified, may constitute sufficient justification for the physician to arrange for the transfer of care.

Issued December 2003, based on the report [Disrespect and Derogatory Conduct in the Patient-Physician Relationship](#).

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JOURNAL DISCUSSION

Weight Bias in Health Care

Natasha Schvey

Puhl R, Brownell K. Confronting and coping with weight stigma: an investigation of overweight and obese adults. *Obesity (Silver Spring)*. 2006;14(10):1802-1815.

There is no question that the U.S. medical community faces significant challenges brought on by the dramatic increase in overweight and obesity in the past several decades [1]. The most recent prevalence data indicate that more than two-thirds of all Americans over the age of 20 are currently overweight and nearly 34 percent of them are obese [2]. Despite the fact that the majority of Americans are now medically defined as overweight, stigma against individuals who are obese remains a widespread phenomenon; the reported incidence of weight discrimination has increased by 66 percent since 1995 [3] and is now on par with rates of racial discrimination, especially among overweight women [4]. Unfortunately, health care professionals are not immune to this bias; even those specializing in the field of obesity [5] have been shown to both endorse and display weight bias at an alarming frequency. In fact, one study [6] that investigated attitudes towards individuals who were obese and presumed to be seeking medical care found that physicians viewed patients who were obese as less self-disciplined and more “annoying” and reported less desire to help them than to help thinner patients.

In “Confronting and Coping with Weight Stigma: An Investigation of Overweight and Obese Adults,” Puhl and Brownell investigate the myriad sources, correlates, and consequences of weight stigma in nearly 3,000 adults who were overweight and obese [7]. Using one sample of more than 2,000 women (with a mean BMI of 37.6) and a second sample of more than 200 adult men and women matched for age and BMI, the authors asked the participants, all of whom were members of a weight-loss support organization, about their experiences of weight-based stigmatization, coping responses to stigmatizing situations, psychological functioning, and eating behaviors [7].

To assess weight-based stigmatization, participants completed a modified version of Myer and Rosen’s Stigmatizing Situations Inventory, in which they ranked the frequency of numerous stigmatizing situations on a four-point Likert scale from 0 (never) to 3 (multiple times). To assess sources of possible weight stigma, participants were provided a list of 22 types of individuals, ranging from spouses to servers at restaurants. Respondents indicated if, and to what extent, the listed individuals had been sources of weight-based stigmatization (again, on a four-point

Likert scale from 0 to 3). They also self-reported demographic information, as well as height and weight, from which the researchers calculated BMI.

Results indicated that weight-based stigmatization was a common experience, especially instances such as “others making negative assumptions” (for instance, expecting poorer performance due to one’s weight), “nasty comments from children,” “physical barriers and obstacles,” and, notably, “inappropriate comments from doctors.” In fact, over half of the sample reported that they had experienced “inappropriate” comments from doctors regarding their weight at some point in their lives.

When asked about the interpersonal sources of weight stigma, participants in sample 1 cited doctors as the second most common source (reported by 69 percent), preceded only by family members. Similar results were obtained in sample 2; women cited doctors as the most common source of weight bias, while men cited doctors as the second most frequent source (following classmates). Taken together, these data reveal that weight bias among health care professionals is not only present, but prevalent.

Puhl and Brownell also assessed various coping strategies employed in response to weight stigmatization (using a modified version of Myers and Rosen’s Coping Responses Inventory). Participants were provided with 99 possible coping methods and asked to indicate if, and to what extent, they employed various coping methods in response to an experience of weight bias.

Notably, 79 percent of respondents from sample 1 reported using food to cope with weight stigma on multiple occasions; 90 percent reported using food to cope with weight bias at least one time in their lives. Similarly, in the matched sample, 80 percent of “both women and men reported coping with stigma by eating more food on at least one occasion” [7]. In fact, using food to cope with experiences of weight bias was reported by both sexes to be one of the most frequently employed coping strategies [7]. A startling three-quarters of participants also reported “refusing to diet” as a means of coping.

Puhl and Brownell’s article indicates that health care professionals are common sources of stigmatization for individuals who are overweight. Furthermore, a frequent coping strategy involved either consuming extra calories or refusing to diet. These data suggest that, despite their best intentions, health care professionals who display weight bias may, in fact, be helping to perpetuate our nation’s obesity crisis.

Do perceptions of weight bias reported by the subjects in Puhl’s and Brownell’s study reflect health professionals’ actual attitudes or behaviors? The findings in the literature spanning several decades indicate that they do. Numerous studies have documented negative attitudes and beliefs about individuals who are obese among medical students, physicians, nurses, mental health professionals, and dietitians [6, 8-12]. For example, studies have shown that medical students believe that patients who

are obese lack self-control, are less likely to adhere to treatment, and are more “sloppy,” “unsuccessful,” and “unpleasant” than thinner patients [8, 13, 14]. In one study, medical students reported that patients who were morbidly obese were the most common target of derogatory humor among attending physicians, residents, and students [15]. In another study, 24 percent of nurses reported that they felt “repulsed” by patients who were obese and 12 percent reported that they did not want to touch these patients [11], while another study found that 31 percent to 42 percent of nurses indicated that they would prefer not to treat patients who are obese [12].

Weight bias is also prevalent in health care in more subtle ways. For example, many health care facilities are ill-equipped to effectively and accurately treat patients who are obese. In a study of bariatric patients, many reported dissatisfaction with ill-fitting hospital gowns, small blood pressure cuffs, and examination and x-ray tables not equipped to support their weight [16]. In fact, in a study by Amy et al., 91 percent of health care professionals reported that their facility did not have scales readily available for patients over 350 pounds, 79 percent of facilities did not have gowns sized for larger patients, more than half did not have armless chairs, and 40 percent did not have exam tables that could accommodate a patient who was obese [17]. Puhl and Brownell found that being confronted with physical barriers and obstacles was ranked third among stigmatizing situations; the injurious effect of this type of indirect weight discrimination must be noted because it is common and easily overlooked [7].

Compounding the fact that individuals who are overweight and obese might be less likely to seek medical care [17-19] are the myriad psychological consequences that can result from weight bias. Individuals who have been stigmatized due to their weight report increased vulnerability to depression, anxiety, body image disturbance, binge eating, decreased self-esteem, and suicidality [20, 21]. Despite the psychological correlates associated with weight stigmatization, Puhl and Brownell found that for the men in the sample, receiving inappropriate comments from doctors regarding their weight was *inversely* associated with seeking therapy.

The extant literature shows that the experience of weight stigmatization can give rise to a host of negative outcomes, both physical and psychological. Those in the medical community can play an important role in attenuating the adverse impact of weight bias among patients who are overweight and obese. Research and teaching should better attend to the treatment of such individuals, and medical facilities should be better equipped for them. Perhaps more pressing is the need for awareness among the medical community of the pervasive weight bias constantly faced by overweight individuals. Our physicians, residents, medical students, nurses, and medical researchers must confront the deleterious effects of our country’s rampant weight bias and make substantive efforts to be a part of the solution.

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CLINICAL PEARL

Diagnosing Obesity: Beyond BMI

Francisco Lopez-Jimenez, MD, MSc, and William R. Miranda, MD

About a third of Americans are obese and another third are overweight. The prevalence of obesity has been increasing over the last four decades and affects men and women of all ages, races, and ethnic groups [1]. Obesity is a major risk factor for numerous diseases and a major cause of disability and mortality; it affects quality of life and accounts for huge expense to the health care system [2].

A Brief History of the Diagnosis of Obesity

For decades, actuarial tables from the Metropolitan Life Insurance Company were used to estimate ideal weight and then determine the percentage of excess weight [3, 4]. Since the 1980s, the diagnosis of obesity has come to rely more on the use of the body mass index (BMI), defined as one's weight in kilograms divided by the square of his or her height in meters. BMI is now the most common anthropometric method to diagnose obesity. The BMI was first described in the 19th century by a Belgian mathematician who noticed that, in people he considered to be "normal frame," the weight was proportional to the height squared [5]. However, the BMI was not first used in epidemiologic studies until 1972 [6] and introduced in clinical practice more than a decade later.

In 1995, the World Health Organization defined obesity as a BMI equal to or greater than 30 (kilograms of weight per squared meter of height) based on a consensus of scientists and experts. This cutoff was selected because the mortality curve from many epidemiologic studies showed an upward inflection at this level, suggesting a threshold effect. The WHO also defined overweight as a BMI equal to or greater than 25 [7].

The Importance of Diagnosing Obesity

Regardless of the method used to diagnose obesity, there is overwhelming evidence of an association and, indeed, a causal relationship between obesity and many comorbidities and even mortality. Epidemiologic studies have demonstrated that obesity is a major risk factor for cardiovascular disease, hypertension, type 2 diabetes mellitus, degenerative joint disease, obstructive sleep apnea, dyslipidemia, gastroesophageal reflux disease, nonalcoholic fatty liver disease, and many forms of cancer. Obesity has also been associated with decreased survival, poor quality of life, low functional status, and disability. An accurate diagnosis of obesity prevents patients at risk due to excess adiposity from being erroneously labeled as "normal" and avoids labeling patients with no excess fat as overweight or obese.

Evidence suggests, moreover, that a doctor's diagnosis of obesity may lead to weight loss [8]. In the study by Singh et al., people with coronary artery disease who reported receiving a diagnosis of obesity from a health care professional were more likely to have attempted and succeeded in weight loss than those who did not recall receiving such a diagnosis [9]. Other studies have shown similar results. Despite the major implications of obesity and the evidence suggesting that diagnosing obesity may encourage weight loss and weight-loss attempts, many individuals with BMI-defined obesity do not receive this diagnosis [10].

Limitations of BMI as a Diagnostic Tool

Several studies have compared using BMI calculations to detect body adiposity with techniques known to accurately measure body composition. The results of these studies have varied, but there is conclusive evidence that standard BMI cutoffs for obesity appear to underestimate body adiposity. A BMI equal to or greater than 30 has a sensitivity of 50 percent in detecting excess adiposity, meaning that half of those with a high body fat percent will *not* be called obese. Furthermore, because BMI calculations use total weight in the denominator, some lean subjects with preserved muscle mass may be labeled overweight. On the other hand, BMI does not take fat distribution into account, so people who are normal weight or slightly overweight but who have abnormal body fat distribution, and may therefore be at increased risk for cardiovascular events, type 2 diabetes mellitus, and overall mortality [11], will not be considered at risk by BMI criteria.

Measures of Central Obesity

Waist-to-hip ratios have been used as a proxy measure for body fat distribution in assessing the health consequences associated with obesity. Measures of central obesity very likely help refine the clinical evaluation of obesity-related risk [12]. "Central obesity" generally refers to abdominal deposition of fat, although investigators have suggested that it may also mean truncal or axial deposition of fat, which includes visceral adiposity and subcutaneous fat from the abdomen, thorax, and proximal segments of the upper extremities. Central obesity correlates well with excessive visceral fat, which appears to be the most metabolically active fat, causing insulin resistance, hypertriglyceridemia, small LDL particles, and low HDL levels, features considered pro-atherogenic [13, 14].

Different methods have been proposed for measuring waist circumference. Some include the perimeter of the abdominal wall above the upper edge of the iliac crest, others use the umbilicus as the reference point [15], and some investigators have used the largest abdominal circumference, regardless of its location [16]. All correlate well with the total amount of visceral fat in grams as measured by more accurate techniques like abdominal CT or magnetic resonance. The hip circumference is measured at the level of the major trochanters or the largest circumference at the level of the buttocks. Standard cutoffs to define central obesity are listed in table 1.

Table 1. Diagnostic criteria for obesity and central obesity

Obesity by body mass index	
<i>Category</i>	<i>BMI</i>
Underweight	18.5 or less
Normal weight	18.5-24.9
Overweight	25-29.9
Obesity class I	30-34.9
Obesity class II	at least 35
Central obesity by waist circumference[†]	
<i>Population</i>	<i>Cutoff (cm)</i>
American men*	at least 102 (40 in)
American women*	at least 88 (35 in)
Asian men	at least 90 (35 in)
Asian women	at least 80 (32 in)
Central obesity by waist-to-hip ratio	
<i>Population</i>	<i>Cutoff</i>
Men	more than 0.90
Women	more than 0.85

[†]Note: Cutoffs recommended for other groups: for the Japanese population, the Japanese Obesity Society suggests at least 85cm for men and at least 90cm for women; the Cooperative Task Force suggests at least 85cm for Chinese men and at least 80cm for Chinese women; IDF suggests at least 94cm for men and at least 80cm for women for Middle Eastern, Mediterranean and Sub-Saharan populations, and at least 90cm for men and 80cm for women for ethnic Central and South American populations.

*According to AHA/NHLBI (ATPIII); although those cutoffs are recommended for Caucasian individuals, there is no strong evidence supporting the use of different values for Hispanic Americans, African Americans or Native Americans.

The diagnosis of central obesity has several limitations. It is not clear whether waist-to-hip ratio provides more prognostic information than measuring waist circumference alone, and there is controversy about which of the two measurements has the stronger association with mortality, incidental diabetes, or cardiovascular disease. The waist-circumference measurement has shown a fair reproducibility in research studies, but the variability can be significant in clinical practice. The existence of multiple ways to measure waist is also a source of inconsistencies.

Body Fat Content

Despite the fact that the word “obesity” is defined as excessive adiposity, there has never been a formal attempt to diagnose obesity in clinical practice based on direct or indirect measurements of body fat; there is no consensus on what percent of body fat is normal and what percent is abnormal. Investigators in the field generally

identify excessive adiposity as more than 30 or 35 percent body fat for women and more than 20 or 25 percent for men.

The methods of calculating body fat composition—specifically body fat percentage and lean mass content—have been traditionally considered either too complex (e.g., water immersion plethysmography, isotope dilution techniques) or inaccurate (e.g., the skinfold method, body impedance measured with over-the-counter scales). But other methods like DEXA (dual energy X-ray absorptiometry), multi-frequency bioimpedance, and air displacement plethysmography are relatively simple, reproducible and valid. Although there is limited data about usage of these methods in health care centers, it appears that only a minority of medical institutions use them in clinical practice [17].

Normal Weight Obesity

Recent reports have suggested that individuals with normal body weight as defined by BMI might still be at risk for metabolic syndrome, cardiometabolic dysregulation, and even increased mortality. A recent study demonstrated that men of normal weight in the upper tertile of body fat percentage (more than 23 percent fat) were four times more likely to have metabolic syndrome and had a higher prevalence of diabetes mellitus, hypertension, dyslipidemia, and cardiovascular disease than those in the lowest tertile [18]. Women in the highest tertile of body fat (more than 33 percent of body weight) were seven times more likely to have metabolic syndrome. Interestingly, women with normal weight obesity were almost twice as likely to have died at follow-up than women in the lowest tertile of body fat. These associations were not explained by the slightly higher prevalence of these risks among men and women with central obesity. Although further research is needed to clarify these results, it is clear that subjects with normal weight as defined by BMI may need more detailed classification to better define their adiposity-related risk.

Proposed Algorithm for Diagnosing Obesity

Figure 1 shows an algorithm for diagnosing obesity based on the best scientific evidence. Although BMI has several limitations, its simplicity and good specificity guarantees the universal measurement of BMI as the first step in screening for obesity. Because at least 90 percent of people with BMIs equal to or greater than 30 have excess adiposity, and at least 95 percent of them have an enlarged waist circumference, most individuals with a BMI equal to or greater than 30 can be diagnosed as obese, with no further measurement necessary [19]. The only exceptions are bodybuilders and professional or extreme athletes, who may have large amounts of muscle mass. Individuals with a BMI less than 18.5 will be diagnosed as underweight, and clinicians should rule out chronic wasting conditions, anorexia nervosa, malnutrition, or fragility. Those individuals have a mortality risk even higher than subjects with a BMI equal to or greater than 30 [20].

Because individuals who are normal weight or overweight might have abnormal fat distribution or high body fat percentages that increase their risk for metabolic dysregulation and mortality, we recommend additional steps to better stratify their

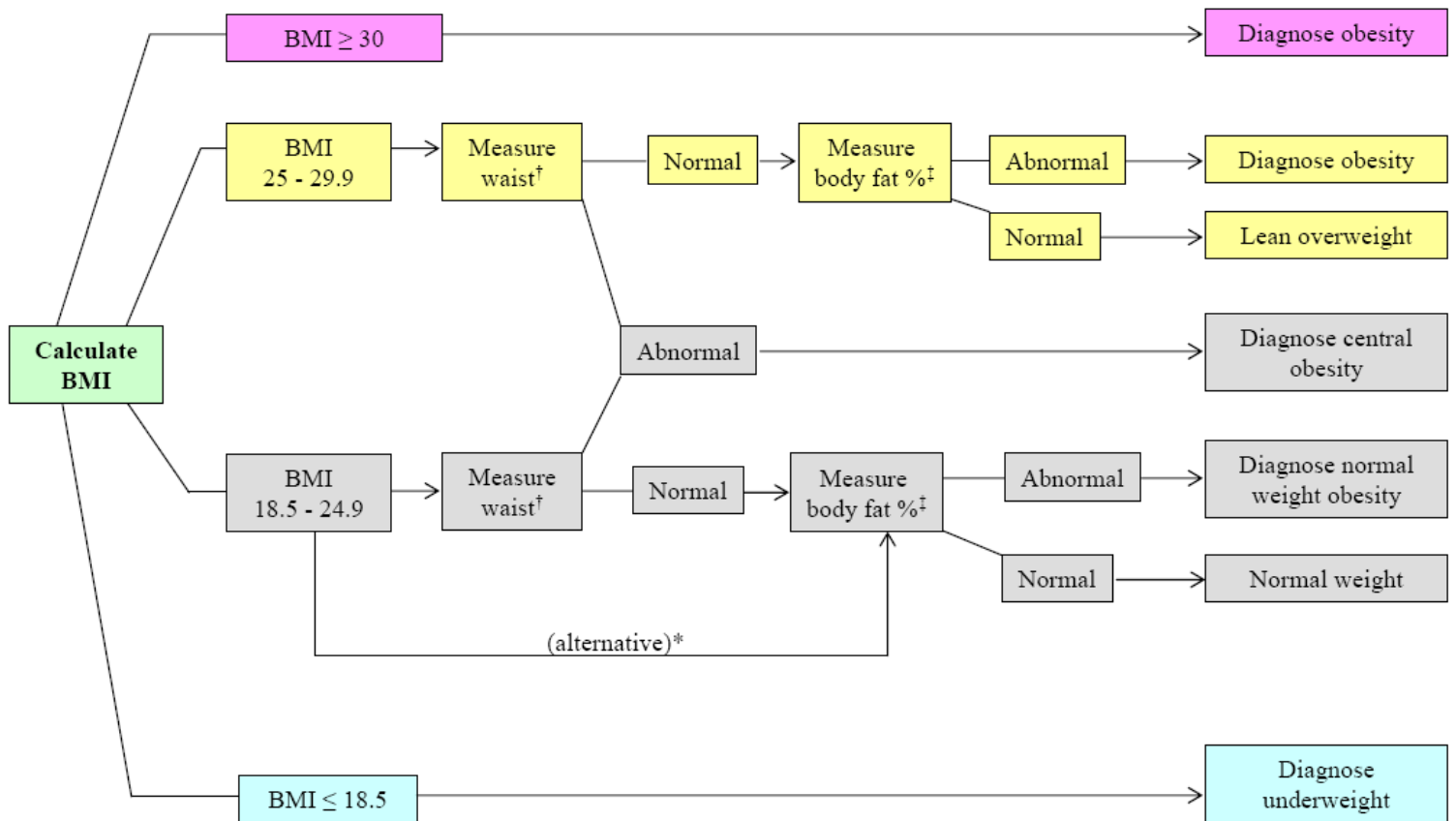


Figure 1. Proposed algorithm to diagnose obesity.

*The U.S. prevalence of central obesity in men with a normal BMI is less than 2% and less than 15% in women. Therefore, an alternative path for individuals with a normal BMI is to directly measure body fat percentage instead of waist circumference.

†Normal waist circumference cutoffs are described in table 1.

‡Normal body fat percentage cutoffs have not been clearly defined—recommended values are less than 35% for women and less than 25% for men.

adiposity-related risk. The steps displayed in figure 1 for people with a BMI between 18.5 and 29 are meant to identify individuals with either central obesity or normal weight obesity. If BMI falls into this range, the next step is to determine if they have central obesity or excess fat by direct fat percentage calculation. Individuals with central obesity or increased adiposity despite a BMI below the obesity cutoff should be strongly encouraged to make changes in their food choices and level of physical activity. Subjects with normal weight obesity, who tend to have low percentages of lean mass, might improve their body composition through strength or resistance training. The steps in figure 1 can also identify individuals who are lean and should not be labeled “pre-obese.”

Conclusions

A diagnosis of obesity might be the first step toward initiating behavioral changes leading to weight loss. BMI is the most widely used method of diagnosing obesity, and it is effective, but it is also important to identify subjects with central obesity or increased total body fat percentage, particularly among those with normal or mildly elevated BMIs, and to avoid misclassifying people without any obesity-related risk as overweight or obese. A complete assessment of adiposity-related risk appears to be as important as many other elements of clinical practice.

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CLINICAL PEARL

“Can We Talk About Your Weight for a Few Minutes, Mr. Jones?”

Adam Gilden Tsai, MD, MSCE, and Nia Mitchell, MD

The combination of obesity and physical inactivity ranks, after smoking, as the second leading cause of preventable death in the United States [1]. Obesity-related reduction in life expectancy in the U.S. is predicted to outstrip the life-expectancy gains achieved through the decrease in tobacco use [2]. Obesity is a root cause for many of the medical problems treated by primary care physicians (PCPs). Among the many diagnoses associated with excess weight are diabetes, hypertension, hyperlipidemia/dyslipidemia, coronary artery and cerebrovascular disease, sleep apnea, musculoskeletal problems, liver disease, polycystic ovarian syndrome, and erectile dysfunction. Medical professional societies and public health organizations recognize the consequences of the epidemic and have published guidelines for the evaluation and treatment of obesity [3-6]. The U.S. Preventive Services Task Force (USPSTF) recommends that weight-loss interventions be “high-intensity” (at least two visits per month for the first 3 months) [3]. Considering these facts, it should follow that primary care physicians would be actively involved in treating obesity.

Despite the incontrovertible facts about obesity, PCPs are not consistently able to provide the high-intensity treatment for obesity recommended by the USPSTF. Several studies show that less than half of patients who are obese receive weight-loss counseling [7-9]. Barriers to providing counseling include lack of time, physician training, and confidence in patients’ ability to change their eating and exercise behavior, as well as inadequate reimbursement [10-13]. With the increased complexity of the primary care visit, time may be the most important of these barriers [14]. PCPs have an average of 3.8 minutes to address each clinical item during a visit [15], and thus cannot reasonably be expected to provide high-intensity weight-loss counseling themselves.

Despite these limitations, we believe that PCPs can play a critical role in guiding their patients’ efforts at weight loss [16]. They can increase patients’ awareness of which medical diagnoses are weight-related. Most patients realize intuitively, for example, that knee pain is related to excess weight, but they may not be aware of the potential impact of obesity on other conditions such as non-alcoholic fatty liver disease. PCPs also can review the importance of a 5 to 10 percent weight loss, a modest but achievable goal that can have significant health benefits [17, 18].

One systematic approach to obesity treatment is the “5A” method. The 5As have been used widely for smoking cessation, and some evidence suggests that they can also be successful for weight loss [19, 20]. While this approach is not the intensive

intervention recommended by the USPSTF, it provides a framework for the PCP and patient to begin a worthwhile weight-management intervention.

The 5As

Assess. Assess the patient's body mass index (BMI), waist circumference, and other cardiovascular disease risk factors (fasting glucose and lipids, blood pressure). Most electronic medical record systems calculate BMI automatically, so that it is available at the point of care. Patients with a BMI equal to or greater than 25 should undergo routine screening with fasting lipids and glucose [21].

Ask/Agree. Ask permission to talk about weight and agree that the patient is interested in losing weight, avoiding use of the word "obese" in the initial approach. While some physicians do not agree that the word "obesity" should be avoided, research shows that patients dislike the term [22, 23]. Patients may misunderstand the word as connoting morbid obesity.

The conversation can begin like this: "Mr. Jones, could we talk about your weight for a few minutes?" Most patients will respond, "Yes, Doctor, I know I need to lose weight. I've been trying, but it's not working." If the patient does not wish to discuss his or her weight, the PCP should continue to evaluate and treat other risk factors for cardiovascular disease [16]. The conversation about weight management can be re-initiated at a later time.

Advise. Advise weight loss, personalizing it to the patient's comorbid conditions.

"Mr. Jones, we should increase the dose of insulin that you're taking so that we can get tight control of your diabetes and prevent complications. If you are able to lose 5 to 10 percent of your current weight, we might be able to use less insulin and still keep your diabetes well controlled. Losing 5 to 10 percent of your weight might not seem like a lot, but it's often enough to improve health."

It is important to briefly mention the clinical significance of a 5 to 10 percent weight loss, given that patients' expectations often are unrealistic [24].

Assist. Assist in making a referral. A brief assessment of the patient's previous weight-loss attempts can guide the conversation [5]. For example, if the patient's previous attempts have been self-directed, then referral to a structured program may be helpful. If the patient has already participated in several programs, more aggressive interventions should be considered. These could include medically supervised regimens, pharmacotherapy, or consultation for bariatric surgery.

Arrange. Arrange follow-up. Patients should be directed to high-intensity interventions, as recommended by the USPSTF. If a high-intensity intervention is not available, data from one study suggest that monthly visits with the PCP, combined

with weight-loss medication and the patient's use of food records, can lead to a clinically significant weight loss [25].

The 5A approach can be conducted in several minutes. Of the 5 model components, the most important is “assist”—where can the PCP refer the patient for intensive treatment? The recommendation will depend largely on the practice setting and available resources. PCPs who practice in integrated health care systems may have access to stepped care interventions that include intensive dietary counseling. The Veterans Health Administration MOVE (Motivating Overweight/Obese Veterans Everywhere) Program is one such intervention [26]. For PCPs in private practice, available resources may vary widely. All clinicians should become familiar with one or two local programs that offer high-intensity weight-loss services at a reasonable cost. Commercial programs, such as Weight Watchers, are widely available and moderately priced [27]. PCPs who practice in underserved areas should be aware of low-cost options available to their patients. The authors recommend nonprofit programs, such as Take Off Pounds Sensibly (www.tops.org). Other low-cost approaches include the self-directed use of meal replacements (Slim-Fast- and Glucerna-brand products are two examples) and Web sites with free information and self-monitoring tools (www.mypyramidtracker.gov; www.eatright.org; www.calorie-count.com). Weight-loss medication can be added to any lifestyle intervention, taking into account potential side effects (e.g., increased blood pressure). Of the available agents, phentermine is the least expensive.

PCPs have much to do during a visit, and the list continues to grow [28]. Clearly, not every indicated service can be provided to every patient at every visit. Clinicians have to decide whether weight management is a high enough priority for an individual patient before spending several minutes providing counseling. Even if primary care clinicians provide weight management, the current reimbursement structure of the U.S. health care system disproportionately favors procedures (e.g., bariatric surgery) over nonprocedural medicine (e.g., weight-loss counseling). Despite these challenges, we believe that PCPs have an important role in opening the discussion and in directing weight management for their patients.

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Disclosure

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HEALTH LAW

Obesity-Related Legislation Meets American Individualism

Drew McCormick, MA

America: the nation where “more is better.” This phrase has long described Americans’ preferences in the square footage of houses and the horsepower in cars, but seems increasingly applicable to the American waistline. Recent statistics show that more than 60 percent of American adults are overweight [1]. In response to such a pervasive public health threat, state legislatures and the federal government have stepped in, using law in an attempt to alter health-related behaviors. In a country that has historically valued independence and abhorred paternalism, resistance is predictable. Difficulty in winning the battle of the bulge is compounded by the connection between obesity and food and the fact that weight is an emotionally charged matter in U.S. culture. Oppositional forces—ranging from lobbyists representing the major players in the food and hospitality industries to the American tradition of individualism—have impeded the implementation of obesity-related legislation. What follows is an overview of legislative efforts to combat obesity, as well as some important considerations that should guide the strategy for future measures.

Public health legislation to control obesity can be divided into two predominant categories: those aimed at improving the built environment and physical activity and those that attempt to curtail the creation and consumption of unhealthy food and promote better food choices.

Built environment efforts involve infrastructural accommodations, such as creating pedestrian passageways to facilitate walking and biking or providing recreational areas, such as parks [2]. For instance, Chicago’s Complete Streets program mandates that the safety of and usefulness to pedestrians must be considered in all transportation projects [3]. Another example is the concept of joint-use agreements, whereby schools and other local government-owned facilities are made available to the public when they are not being used for their primary purpose [4]. These efforts encourage physical activity in ways that are unintrusive, expanding the scope of individual choice.

In contrast, state and federal efforts to regulate the nutritional content of the food supply have at times been quite contentious because they often involve the commission of cardinal American sins: interfering with the market economy and encroaching on individual autonomy by narrowing the range of available options. Recent examples include state bans on the use of harmful trans fats and mandated menu labeling for restaurant chains [5]. Mirroring the economic disincentive

approach used to reduce rates of smoking by taxing cigarettes, many states have also taxed or considered taxing foods that can have deleterious health consequences, such as salty foods that contribute to hypertension or sugary foods and drinks that can add weight and contribute to diabetes [6]. Though some consumers might take umbrage at such regulation, empirical evidence demonstrates its effectiveness for reducing obesity [7]. All told, it is unclear whether such measures will have a substantial long-term effect, absent more concerted individual efforts to increase physical activity and reduce caloric intake [8].

Some legislative approaches to food have focused on increasing consumer choice and information. A new type of food-focused policy combines the notions of facilitating more healthful choices, expanding individual options, and increasing the environmental sustainability of the food economy by creating consumer incentives to buy locally grown fresh fruits and vegetables. New York City has created the Health Bucks Program, which brings otherwise unavailable foods to socioeconomically depressed areas (“food deserts”) and doubles the value of food stamps when they are used to purchase from farmers’ markets [9]. Boston has a similar program, called Boston Bounty Bucks, which gives vouchers that double the value of food stamps at several area farmers’ markets [10]. Hartford, Maryland, has a coupon program that promotes new farmers’ markets and encourages participants in the Women, Infants and Children (WIC) program to purchase locally grown fruits and vegetables [11].

The existent programs theoretically help the problem by supplementing local food economies, but the desire for fresh produce is something that must be cultivated. Individuals who eat a highly processed diet tend to disfavor healthier options in favor of those they perceive as having more robust flavors from sugar, sodium and fat [12]. Thus, it is unclear whether merely removing physical and economic barriers to healthful foods will be sufficient. Nutrition education and exposure to fresh foods from early in life may prove to be crucial preconditions for maximizing the benefit of these types of programs.

Some of the least controversial and most effective measures for reducing obesity are those directed at children. State legislatures have a great deal of control over educational content and institutional practices in their public school systems. As of 2009, 49 states had legislation mandating certain physical fitness requirements—physical education classes for some grade levels or fitness tests for public school students [13]. Research demonstrates that providing proper health education related to physical fitness and nutrition in childhood is effective in ingraining positive lifelong health behaviors [14]. The converse is also true. Advertising that markets high-sugar foods to children has been wildly successful in driving the sale of those products [15]. Consequently, many states have limited the amount of television advertising allowable per hour and the informational content permitted for such commercials [16]. An additional benefit of focusing on children is that the resentment typically accompanying perceived paternalistic governmental intervention is muted when the measures pertain to children [17]. Based on the effectiveness of early education and the prevailing opinion that children are the

appropriate subjects of protective legislation, additional legislative measures for combating obesity in youth would be worthwhile.

Public health efforts to facilitate behavior change run the risk of being ignored if they are not either mandatory or perceived as attractive alternatives. Because of a dearth of public support for compulsory measures, informing consumers and enhancing available choices for positive health-related behaviors seem to be the most politically palatable approaches. As noted above, however, the attractiveness of health-promoting options is dependent on whether the intended consumers place a high social value on those options. Consequently, health education, especially when started early in life, appears to be a powerful tool in the attempt to trim America's waistlines. In the culture of "more is better," more education about better health behaviors might be the answer.

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POLICY FORUM

A Rationale for Policy Intervention in Reducing Obesity

Robin A. McKinnon, PhD, MPA

Certain aspects of the obesity epidemic in United States are not in question. We know, for instance, that rates of obesity (defined as BMI equal to or greater than 30) for all sociodemographic groups have risen to a startling degree in the past 50 years, and that 33.8 percent of U.S. adults are classified as obese, as are 16.9 percent of children [1, 2]. The health and psychosocial effects of obesity also are well-documented and include various forms of cancer, diabetes mellitus, cardiovascular disease, osteoarthritis, sleep apnea, asthma, non-alcoholic fatty liver disease, social stigma, and many others [3-6]. Generally accepted methods for decreasing body mass include consuming fewer calories and increasing physical activity.

The solutions to this epidemic of obesity are less clear. Although many individual-level interventions to reduce weight often show impressive short-term results, diet and activity changes are generally not maintained.

The magnitude of the rise in obesity in the U.S., the failure of interventions to sustain reductions in body mass, and the implications for public health—as well as costs to the U.S. economy in terms of health care, absenteeism, and increased disability rates [7-9]—are profound. These statistics and their implications have led to calls for increased intervention by policymakers at all levels of government to improve Americans' diet and activity level and reduce weight [10-12].

Is it desirable that policymakers play a role in what people eat or how active they are? Many think not. Dietary behavior—and to some extent, physical activity—are intensely personal and are influenced by numerous factors, including genetics, biology, and environment [13]. At issue is the perpetual tension of pluralistic democracies: identifying an appropriate balance between individual liberty and the well-being of the community as a whole. This tension is a common concern for the field of public health, with its focus on the population, rather than on the individual [14]. (Parsing the balance between individual and community rights is not restricted to public health and may be seen in many other policy fields such as, notably and currently, national security.) Certainly, policy action to improve population health has ample precedent. Examples include seat belt laws, vaccinations, speed limits, water fluoridation, vitamin fortification of food, alcohol avoidance while driving, and tobacco taxes and regulations.

So, should government intervene in the case of obesity? In his 1859 treatise *On Liberty*, John Stuart Mill argued that the only justification for infringing upon

personal liberties was prevention of harm to others. This perspective has become dominant in political thinking in the United States [15]. Even freedom of speech—one of the most cherished civil liberties in the U.S.—may be curtailed in certain cases. One may not shout “fire” in a crowded theater, for instance, without justification. Economics offers more detailed criteria for the circumstances under which policy intervention is warranted, in some ways expanding and codifying Mill’s notion of harm to others.

The views of Mill and economists are by no means the only perspectives on which to base the need for policy (intervening to address inequality of opportunity and social injustice are other compelling reasons), but, given their impact on political thought and policy justification [16], they make a useful starting point from which to examine the rationale for public policies regarding obesity.

According to conventional economic theory of perfect markets, the collective decisions of individual, rational actors seeking to maximize utility (i.e., their happiness) create “the invisible hand” of the market, which distributes goods in the most efficient manner [17]. In this case, to be rational means to be capable of assessing one’s own best interests, whether or not others agree with those assessments. However, under certain circumstances, the market “fails,” with resulting inefficiencies. Policy solutions are considered warranted in the event of “market failure.” Market failure can occur when there is information asymmetry (in which one party in a transaction has more information than the other), when there is a monopoly (in which one company or group of companies is so large it can dictate terms to the market), when there are externalities (positive or, more often, negative effects that transactions may have on others), and when there is an attempt to create or maintain public goods, which, though their existence benefits all, few may be motivated to fund voluntarily (e.g., national parks) [16-19].

Given these parameters, does widespread obesity in the U.S. provide a sufficiently strong basis for intervention in the market? Evidence suggests that it does, on three grounds: (1) imperfect rationality (which, though it is not universally accepted as an instance of market failure, undermines fundamental assumptions about the functioning of the market); (2) asymmetric information, and (3) financial externalities.

1. Imperfect rationality. It is well accepted in economic literature that children are not rational actors. In other words, they are not capable of judging their own welfare accurately [20]. Indeed, the brain’s prefrontal cortex—responsible for executive-function activities such as planning and emotional and impulse control—continues to develop throughout adolescence [21, 22]. Recognizing this, there are many instances where society restricts activities for children to a far greater degree than in adults, such as with smoking and alcohol consumption. Imperfect rationality in children has been proposed as an example of market failure in the context of obesity [20, 23-25].

Research from the emerging field of behavioral economics suggests that adults often depart from rational behavior in “highly systematic and predictable ways” [26]. Perhaps most relevant to diet and activity behavior is research from behavioral economics on three manifestations of imperfect rationality: the impact of default options, behavior that is inconsistent over time, and behavior that may be subconscious.

Work in behavioral finance demonstrates that default options greatly influence behavior. For example, automatic enrollment—or not—in 401(k) plans dramatically alters plan participation, which would not be the case if financial investment behavior were fully rational [27, 28]. Similarly, a default food environment that is high in calories and low in nutrients may well affect dietary behavior, and a default physical environment that is not conducive to physical activity may well reduce activity behavior. Research shows a strong connection between food and activity environments and corresponding behavior [29-34], although more longitudinal studies are needed to infer causality.

Another common departure from rational behavior is inconsistency over time. As Thaler and Sunstein have noted, “in the context of inter-temporal choice, people exhibit dynamic inconsistency, valuing present consumption much more than future consumption. In other words, people have self-control problems” [35]. Inconsistency is common in diet and activity behavior; people may value good health, but often make poor short-term diet, activity, or other choices that are out of line with their long-term health goals [36].

Finally, the concept of rational choice assumes fully conscious decision making. However, research suggests that at least some eating behavior may be subconscious [36]. Some innovative recent research by nutritionists—such as studies investigating the relationship between container size and consumption and the effects of self-refilling bowls on diners’ intake of soup [37-40]—suggests that dietary choices are often influenced by social and environmental cues and that many of these choices are subconscious.

2. Asymmetric information. In the context of obesity, there is evidence of information failure, particularly underprovision of information. Cawley has said that government information about diet and physical activity is “underprovided and disseminated” compared with that provided by food and beverage manufacturers [24]. Accessing and using appropriate dietary information may be difficult and time consuming. People may be unaware, for example, of the caloric content of the food they consume; nutrition labels on packaged foods provide calorie and other macronutrient information, but this information may be difficult for some consumers to understand and use [41]. Moreover, nutritional information is less readily available for food prepared outside the home [42], consumption of which has increased greatly in the past several decades [43]. Reduced access to relevant information inhibits accurate assessment of one’s welfare.

3. *Financial externalities.* Research shows that widespread obesity increases costs related to health care, as well as absenteeism, disability, and reduced productivity at work [7, 44, 45]. Indeed, medical costs related to obesity were recently estimated at as much as \$147 billion per year [9]. Further, estimates of lifetime health care costs, assessing the medical-related costs over a lifetime, show that any earlier mortality due to high BMI does not offset health care costs. In fact, lifetime health care costs may average as much as \$29,000 more for those with BMIs over 35 than for those of normal weight [8]. Importantly, those who are obese often do not bear the full cost associated with increased weight, unless their insurance plan is cost-adjusted for weight status [46]. Instead, increased health care costs are borne by others, such as employers, those in the insurance risk pool, and taxpayers, depending on the specific plan and health insurance status.

The rationale for policy intervention to reduce obesity rates therefore appears compelling. But what exactly should be done? Adequate discussion of appropriate policy interventions is not possible here, but the following comments may provide starting points for effective decision making. Justification for intervening in the case of children is particularly strong, and precedent suggests that society will more readily accept appropriate restrictions to youth behavior. Adults are less likely to accept the kinds of direct restrictions often considered for children. Instead, policies that harness insights from behavioral science may be especially helpful in nudging behavior towards improvements in activity and diet. Examples of effective policies might include those that:

- alter the environments in which people make diet and activity decisions so that the easiest option is the most healthy;
- create short-term incentives that align with people's long-term health goals; and
- improve availability of relevant information to facilitate informed, and fully conscious, decision making.

Other effective policies might address inequality of opportunity regarding optimal diet and activity behavior. For example, availability of and access to nutritious foods are restricted in many communities in the U.S. [47]. Rigorous evaluation of policy interventions will be required to assess their effectiveness in altering behavior.

Current rates of obesity in the U.S. and their health and economic implications are sobering. Policymakers at all levels of government are in a position to enact community and other environmental changes needed to support improvements in diet and activity behavior, thereby improving health outcomes for all Americans.

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POLICY FORUM

What's Wrong with the U.S. Approach to Obesity?

Barry M. Popkin, MS, PhD

Introduction

Overweight and obesity levels in the U.S. and the U.K. are fairly similar [1]. In both, more than two-thirds of adults are overweight and obese. At the upper levels—the 95th percentile of the body mass index (BMI) distribution—U.K. women are approaching the size of the United States' heaviest individuals [2]. The U.S. has a slightly higher prevalence of obesity (as distinct from overweight); at the rate of increase of the past decade, however, U.K. adult women will be as heavy as U.S. women at the 95th percentile in a decade. Though the U.S. population is not significantly fatter overall than the U.K. population, we are in far worse shape in that our societal views of and approach to addressing obesity are less effective.

The major difference is that the U.S. focuses on *psychological* rather than *sociological* origins for problems. We blame the individual—sloth and gluttony are the causes of obesity—and conclude that individual medical treatment is needed if the individual cannot change. In contrast, the U.K. views the problem from a sociological perspective, instituting systematic changes to the toxic food environment felt to contribute to obesity in their nation.

Why the U.S. Is Worse Off

At the start of the new millennium, the two countries are not so different. I will briefly review how each has tackled the child, adult, and overall national obesity epidemic.

The U.K.'s sociological perspective. The U.K. introduced the Foresight Tackling Obesities: Future Choices Project in 2005, the goal of which was to produce a sustainable response to obesity in the U.K. over a 40-year period [3-5]. This systematic government effort began with quantitative modeling of the increase in obesity, its economic effects, and the impact on the national health system [6]. It then created a fairly complex systems map of the causes of energy imbalance, which laid out societal as well as individual causes of food consumption and activity. From this came a broad examination of all potential leverage points with the causal linkages weighted according to their contribution.

Similar research has been done in the U.S. by the Institute of Medicine and others. The major difference is that the U.K.'s was a government initiative, leading directly to a dialogue with all the major stakeholders and policymakers in the U.K. It also emphasized the environmental causes. A strong case was made for the necessity of

environmental changes to support individual change. The U.K.'s goal is to be the first developed nation to reverse the rising tide of obesity.

A partial list of actions taken in the U.K. based on Foresight's obesity research provide some sense of the thinking and, significantly, the funding that supported these initiatives:

- Junk food such as chocolate bars and chips have been banned from primary and secondary school vending machines and sharply curtailed in cafeterias; beverages are restricted to water, milk, and juice [7]. School meal guidelines have become increasingly nutrition-oriented in recent years [8].
- Advertisement of unhealthy foods has been banned from children's television (and adult shows watched by children) in the U.K. [9].
- Children aged 11 to 14 will be required to receive classes about food, its preparation, and handling starting in 2011 (cooking facilities are currently being constructed where needed) [10].
- The U.K. food industry is being encouraged to adopt the "traffic light" nutrition information system for package labels [11].
- Some local governments have banned fast food restaurants near schools and parks [12].
- The ministry of health has undertaken a trial project to stock and promote produce in convenience stores in deprived areas [13].
- The government routinely conducts nutrition surveys [14, 15].

The U.K. continues to study causes and solutions and remain active in addressing obesity throughout the life cycle.

The U.S.'s psychological perspective. The Institute of Medicine and many others have mapped causal networks similar to Foresight's [16]. Members of Congress have discussed the need to regulate beverages and vending in the schools, among many other steps. There has been, however, no systematic approach involving any major environmental changes in the U.S. Here are some of the actions taken in the U.S. to address obesity:

- Dozens of states have mandated more physical education classes, but only a few have provided funding [16];
- Neither state nor federal government has banned vending and promoted drinking water in schools [17];
- No national or other media bans or controls exist to protect children;
- Minimal federal funding has been put toward improving nutrition in school cafeterias [17];
- A number of state and local governments have implemented subsidies to provide supermarkets in food deserts (communities with limited access to affordable, healthy food), but the research backing these activities is limited [18];
- One or two municipalities have supported providing education and improved facilities and food supplies to food stores in poor areas [18];

- The promotion of sustainable agriculture has led the government to allot major funding for farmers' markets for the poor [18].

Many U.S. actions, such as enhancing farmers' markets or subsidizing selected foods to be used in school lunch meals, were taken based on political support rather than proven usefulness of the initiative to public health; others were token gestures that received only minimal funding; and there has been no systematic effort aimed at any age group. Unlike the U.K.'s systematic banning of vending in schools, even the Institute of Medicine (IOM) reports and analyses emphasize limiting, rather than banning, some sugary beverages. In contrast to the government's inconsistent efforts, the media have made strides in fighting obesity by repeatedly bringing public attention to some issues, such as sugar-sweetened beverages' effects on children's health, causing the beverage industry to respond by emphasizing comparatively less harmful sports drinks and juices.

In the end, the environment in the U.S. has not changed significantly, despite a decade of discussion about child obesity; only small-scale, localized efforts have been made. The treatment of this issue has been unlike the successful campaigns for seat belt regulations, water fluoridation, and tobacco prevention—all of which were seen as societal issues requiring regulations, taxes, and systematic efforts.

Ethical Implications

Is it unethical to allow a generation of children to grow up in an environment that fosters obesity and diabetes? Is it unethical to stand by and do nothing while the U.K. makes systematic changes? Is the food industry, arguably the entity with the most interest in the status quo, behaving unethically? It is critical that the medical profession consider obesity as seriously as we do diabetes, fatty liver disease, hypertension, osteoarthritis, and many other major chronic conditions that are depriving future generations of a healthy life.

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MEDICINE AND SOCIETY

Media Portrayal of People Who are Obese

John Whyte, MD, MPH

Numerous surveys have demonstrated that the American public is affected by bias against people who are overweight and obese [1-3]. Physicians, too, express these biases. A survey involving a nationally representative sample of primary care physicians revealed that, not only did more than half of respondents think that patients who are obese were awkward and unattractive, but more than 50 percent believed that they would be noncompliant with treatment [4]. One-third thought of them as “weak-willed” and “lazy.” Another study found that as patients’ weight increased, physicians reported having less patience, less faith in patients’ ability to comply with treatment, and less desire to help them [5]. Other studies have added to the evidence that bias against patients who are obese is common in health care settings [6].

These prejudices are somewhat peculiar, given the fact that the majority of Americans are themselves overweight or obese. Many who are overweight, however, do not perceive any problems in their individual circumstances. In a study of 6,000 people, 8 percent of people who were obese thought they were healthy and did not need to lose weight, despite the fact that 35 percent had high blood pressure, 15 percent had dyslipidemia, and 14 percent were diagnosed with type 2 diabetes. Pejorative connotations are ascribed to obese folks “out there,” not oneself.

This prejudice may be partly due to how the media portray people who are obese. Greenberg et al. reported on their findings of television actors’ BMI after analyzing 5 episodes of the top 10 prime time shows [7]. In comparing television actors’ BMI to that of the American public, they found that only 25 percent of men on television were overweight or obese, compared to almost 60 percent of American men. The statistics are even more staggering for women. Almost 90 percent of women on TV were at or below normal weight, compared to only 50 percent of American women.

Popular television shows that include people who are obese portray them either as comedic, lonely characters, or freaks. On *The Drew Carey Show*, the main character often joked about and expressed disappointment about his weight; his main “nemesis,” Mimi, was portrayed as being unattractive partially because of her weight (though also for reasons having to do with her personality and fashion choices). *Ugly Betty* focuses on an overweight young woman who, although she is comfortable with her weight, is often mocked for her size and awkwardness. On *Chuck*, Fernando is not only a nerd, but also a “fat nerd” who has little, if any, real character development. And who can forget Roseanne, who was loud, obnoxious, and

slovenly? Rarely if ever are they romantic leads, successful lawyers or doctors, or action stars. Flip through the numerous reality shows on television where women are battling for a modeling contract. There is often considerable negative discussion about the one or two contestants who have “extra weight” and are therefore lacking what is perceived as a model’s body, and only one plus-size model has won any such contest. Keep in mind that the average American adult is overweight or obese, so the person at normal weight is actually in the minority. There are many successful people who are overweight and obese in today’s society, but that is not reflected in popular entertainment.

It is hard to discuss media portrayal of people who are overweight without mentioning *The Biggest Loser*, a highly successful television program and publishing enterprise. This type of show—that selects participants on the basis of a particular feature—does not focus on the typical person. Most people who are overweight are not morbidly obese, nor do they have armies of personal trainers, dietitians, and life coaches. *The Biggest Loser* promotes the perception that obesity is caused by individual failure rather than a mixture of individual, environment, and genetic sources.

There is good news. The media have the potential to promote health and discourage prejudice. The current negative portrayal of obesity in media seems analogous to the portrayal of homosexuality in the recent past. Remember when gay characters were either drag queens or overtly promiscuous? For instance, Jack from *Will and Grace* (itself considered a step up from previous portrayals of homosexuality, as it was one of the first highly popular sitcoms with gay protagonists) was campy, superficial, and sex-crazed. Such portrayals helped to promote stereotypes of gay men and women. Some debate remains about current portrayals, but views of same-sex relationships, especially, have improved dramatically over the last decade. Examples include episodes from ABC’s *Brothers and Sisters*, which show a married relationship between two men in a manner similar to the portrayal of heterosexual relationships, and the Fox network’s *Glee*, which features Kurt, a glee club member who announces to his father that he is gay. His father’s response is supportive and nonjudgmental. This is a considerable improvement from the time when gay characters were either flamboyant, overly promiscuous, or simply invisible.

There is no doubt that the media can play an important role in educating the public on health topics. According to a CDC survey of U.S. residents who watch television at least twice weekly, more than half of the respondents believed that health information presented on TV is accurate, and 26 percent cited prime-time TV programs as one of their top three sources for health information [8]. Just last year, a survey of 550 moms with at least one child under 18 years of age listed pediatricians as the most trusted source of health information—but this was followed closely by evening news, Internet searches, Web sites, and morning talk shows [9].

The challenge for media is to provide entertainment to viewers. If a news outlet wants to schedule programming about obesity or healthy living, it almost has to do a

story about cutting a 500-pound woman out of her home in order to get people to tune in. It is difficult to get viewers to tune in for programming about lifestyle, but not impossible. Many folks are beginning to use the terms “edutainment” or “medutainment”—trying to create shows that are entertaining but also educational, especially on medical or health matters. Several years ago, a popular soap opera had a subplot about a character infected with the HIV virus [10]. At that time, 4.5 million viewers watched soap operas. The network displayed the National STD and AIDS hotline toll-free numbers after two episodes. The number of calls during the 1-hour time slots just after the broadcast rose dramatically, nearly 10-fold. Although soap opera viewing is down, and there are fewer soap operas in production, 53 percent of all women who report viewing soap operas regularly, 56 percent of Hispanic women who view soap operas, and 69 percent of African American women who view soap operas recently responded that they had learned something about diseases or how to prevent them from soap operas in the previous year [11]. The media can be a force for good.

Media can and should be used to address the obesity epidemic. The media can play a pivotal role in providing credible and evidence-based information to increase health literacy, help people live healthy lives, and decrease discrimination against people who are overweight or obese.

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Virtual Mentor

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MEDICAL NARRATIVE

Plus Seating

Audiey C. Kao, MD, PhD

I am shackled by my frequent flyer miles. Taking a flight that is not on my “home” airline is a rare thing. On a recent business trip, I had to do just that.

As I settled into 6C, I realized that my seat space did not have the extra legroom to which I have become accustomed as a frequent flyer. A tall person, I need the few inches that economy plus seating affords me, especially on longer trips. Fortunately, this flight was going to take fewer than 90 minutes.

As the plane was about to close its doors in preparation for takeoff, a late-arriving passenger of extreme girth walked onto the plane and sat down in his row 5 seat. When he did so, I thought the seat was going to break. I thanked god his seat wasn't 5C because its back would have severely intruded into my space, as it did on the passenger's who sat behind him.

Should he have purchased two seats as a matter of courtesy to his fellow passengers? I had read that some airlines were requiring travelers who could not reasonably fit into their seats to purchase an adjoining seat. Is such a policy discriminatory? Supposing there are no extra seats to purchase, would such passengers have to deplane and take a later flight where an extra seat was available?

I am not sure whether it was the doctor in me or the fact that I knew we were publishing an issue of *Virtual Mentor* on the topic of obesity, but my attention was riveted to this individual during the flight.

He was so large that he could not buckle his seatbelt. I am not sure if the flight attendants just didn't notice or simply ignored it as an unwritten and accepted violation of air safety rules in these situations. Supposing we had to deplane due to an emergency, as the safety video overhead was just now discussing, would this passenger slow down the deplaning process or, worse, block the exit routes of the other passengers? Can someone's size constitute a safety hazard for others? Could an airline justifiably restrict travel of people who are obese on safety grounds? Or have they designed exit plans so that passengers who are obese do not obstruct others?

This passenger appeared to be fairly young, and I wondered whether he had seen a physician about the fact that his weight was placing his health at risk. Maybe he had seen a doctor and had already lost many pounds. Was he on an exercise plan? Was he on a proper diet? Did he or will he get bariatric surgery? Medical questions to

which I will never know the answers. All I learned was that he ordered a Diet Coke when asked for his beverage choice by the flight attendant.

In a strange way, I admired him for getting on a plane. Were I his size, I would probably have been too embarrassed to be seen in public. On the other hand, social isolation can itself exacerbate behavioral patterns that contribute to obesity. Yet, I couldn't get over how uncomfortable he looked squeezed into his seat. His abdomen reached the seat back in the row ahead of him, and he had to raise his armrest so his left leg could find some extra room in the aisle. I figured he also must have been happy that our plane trip was short.

As the flight began its descent, I slipped on the shoes I had taken off and brought my chair back to its upright position, squeezing myself back into my non-plus seat.

Audiey C. Kao, MD, PhD, is a 6-foot, 1-1/2-inch tall Chinese-American and the vice president of the ethics group at the American Medical Association.

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OP-ED

A Call for Collaborative Action against America's Greatest Health Threat

Richard H. Carmona, MD, MPH

During my term as surgeon general of the United States, it was clear to me that the obesity epidemic in the United States was a significant and growing source of preventable disease and economic burden. Today, the evidence is even more compelling. Obesity is the major risk factor for type 2 diabetes, acts as a cause or accelerator of chronic diseases, and impacts national security by diminishing the viable workforce that qualifies for uniformed service. As a nation, we have an imperative to immediately and expeditiously address the complex variables that contribute to the health, economic, and ethical dilemmas imposed by our nation's obesity epidemic, which we are also exporting to the world.

While our nation fights two wars, attempts to avert global economic implosion, and simultaneously addresses many other national and global challenges, it has been difficult to gain traction and appropriate national attention for efforts to address obesity. Regardless of the perspective from which it is viewed—prevention, policy, health reform, diagnosis, clinical care, ethics, or potential regulation—obesity has proven to be an elusive and sometimes deadly adversary.

It has taken since the 1960s for our nation to make progress in overcoming the use of tobacco. We are on the verge of negating the health and economic gains from reduced tobacco use by supplanting one health problem with another. We may, in fact, be raising the first generation of American children who will have shorter lifespans than their parents, in great part due to the chronic diseases so closely associated with overweight and obesity.

Well-informed professionals are divided on to how to approach the crisis effectively and efficiently. To resolve differences in approach that initially appear to be irreconcilable, and to balance individual freedoms and the needs of society, will require diplomacy and sensitivity.

In our democratic political system, public health issues such as obesity, stem cell research, emergency contraception, and abortion become currency for polarized political platforms. In that charged political atmosphere, true science is lost, marginalized, or ignored, with the result that the public remains health illiterate and less able to make informed health decisions for themselves and their families. We, as health professionals, must resist all attempts to politicize obesity and stay focused on using the best science available in making recommendations to our patients, our communities, and policymakers.

Pursuing Solutions to the Obesity Crisis

In sharp contrast to the many special-interest interpretations of the obesity problem are two large nonpartisan, national groups that I have the privilege to chair: the Strategies To Overcome and Prevent (STOP) Obesity Alliance and the Partnership to Fight Chronic Disease (PFCO). Both organizations comprise public, private, academic, business, and government thought leaders and are directly and indirectly addressing obesity in an ethical manner on the clinical, community, and policy levels. The STOP and PFCO coalitions are clearly demonstrating the momentum and impact that can be generated with a collaborative approach and shared goals.

All of us who are pursuing solutions to the obesity epidemic face clinical, ethical, and regulatory challenges. First among them is the significant role of individual lifestyle and behavior choices in causing obesity. When you are able to choose where to live and what to eat, your individual and family decisions are different from those of the millions of Americans who are pushed down the ladder of good health by social and economic realities. There is no simple solution to the incongruities and variables that stratify our society along cultural, language, geographic, and educational lines.

Given these stratifying differences, what is the correct approach for addressing obesity? Do we reward healthful behavior or penalize behavior that puts health at risk? Should we tax “bad” foods? How do we define bad foods, and how would such a tax process be enforced? Would we need “food police”? Would infractions be misdemeanors or possibly felonies if significantly egregious? Society and health care payors certainly feel they have a right to control costs by preventing obesity and reducing the instance of chronic diseases like type 2 diabetes, heart disease, and cancer. Whose job should it be to regulate what foods can be bought and sold? If the market fails to address the needs of those who have few or no choices in what they eat, whose responsibility is it to ensure access to fresh healthy foods and to create areas where people can exercise safely?

Next, what is the role of industry in the obesity debate? Are businesses ethically or legally bound to advertise foods that promote health and to disclose all food content? Some groups want to restrict the advertising and promotion to children of foods and drinks that are high in fat, salt, and sugar. This issue is critical because food purchasing and eating habits are ingrained at an early age and contribute significantly to adverse health behaviors and choices in adult life.

Third, what part should government play in fighting the obesity epidemic? Should government ensure that all children have appropriate health education by seeing that schools teach diet, nutrition, and the benefits of physical activity? If so, what is the parent’s role in providing a home environment that is consistent with the health curricula being taught in schools? Should there be federal tax and mandated warnings on non-nutritious food as there are on cigarettes and alcohol?

Looking further at government's role, the U.S. Farm Bill has been declared by some to be a major contributor to the obesity epidemic because it subsidizes crops such as sugar and corn. Can we therefore consider the U.S. government partially responsible for contributing to the obesity epidemic? Inasmuch as the government has been made aware of the deleterious health effects of the Farm Bill, does it have an ethical and legal obligation to help eradicate the associated variables that are contributing to the nation's obesity?

Finally, how can health professionals do a better job of identifying and managing obesity? In August 2009, the STOP Obesity Alliance, assisted by researchers from George Washington University, conducted a roundtable and follow-up interviews with physicians and other health care professionals to identify innovative approaches for obesity treatment. They identified three: monitoring health and explaining standard health measures to patients, goal setting and patient motivation, and care coordination and system integration.

Numerous issues and questions lie within those three areas. Is there acceptance and use of the incremental definitions of success in weight loss that result in improved health? Is it feasible to track weight and health indicators over time to help patients understand how weight impacts health? Can health care practices, small and large, be positioned within integrated systems where care is coordinated for optimal outcomes? How do we ensure that the stigma of obesity does not find footing in medical settings or treatment protocols?

Efforts to achieve solutions to the obesity epidemic must be widespread and in-depth. At every turn, the potential for unintended consequences of policies in any sector is exacerbated by the multifactorial nature of a health condition that is often misunderstood by those who suffer from it and treat it. Inaccurate media portrayals and stereotypes add to the confusion. Any other health threat of a similar magnitude and consequence would be deemed a national emergency.

Achieving sustainable solutions to the widespread obesity in our country will require cooperation on the part of all sectors of society—individuals, families, communities, businesses, industry, health professionals, faith-based organizations, and all levels of government. The good news is that, through decades of research, observation and learning, we have deciphered many of the contributors to the epidemic.

We must now turn our collective attention to initiating and sustaining an intergenerational undertaking that will demand an unprecedented coordination of resources at all levels. We must all become engaged in and committed to the process of transforming our nation's health culture. We must begin by delivering care and services that are sensitive to cultural differences. Information must be presented, not just in plain language, but in a manner that will convey to those with low health literacy the importance of making the desired behavioral changes.

Policy formation, in particular, is an extremely complex process that involves balancing myriad inputs with timing and opportunity. To succeed in this far-reaching endeavor we must subordinate our own interests to creating a seamless, integrated, and holistic approach that benefits society at large, not merely one group—no matter how loud or demanding the constituents of that group may be.

By engaging in a new straightforward, results-oriented process of change, we will improve our nation's health and economic viability for the long-term. We must collectively move beyond the divisiveness that exhausts our limited resources and, without reservation, engage all Americans in a best effort to make our great nation a healthier nation.

Richard H. Carmona, MD, MPH, was the 17th surgeon general of the United States (2002-2006). He is currently a distinguished professor at the University of Arizona's Zuckerman College of Public Health. His professional interests include protecting, promoting, and advancing the health, safety, and security of the United States. As surgeons general say, "Once a surgeon general, always a surgeon general."

Acknowledgement

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Related in VM

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OP-ED

Physician BMI and Weight Counseling

Pamela M. Peeke, MD, MPH

Many people who want to lose weight seek help from their doctors. How much does the physician's own weight affect the outcome of this interaction? If it appears that the doctor lives a healthy lifestyle, will the patient be more likely to heed his or her advice? The answer is "yes"—with a twist.

Are doctors hypocrites if they do not practice what they preach? Is it ethical to say one thing and do another? The modern version of the Hippocratic Oath states "I will prevent disease whenever I can, for prevention is preferable to cure" [1]. One would think that to promote prevention by teaching it demands practicing it, too.

Furthermore, the American Medical Association's *Code of Ethics* asserts that

to preserve the quality of their performance, physicians have a responsibility to maintain their health and wellness.... When health or wellness is compromised, so may the safety and effectiveness of the medical care provided.... Physicians whose health or wellness is compromised should take measures to mitigate the problem [2]

and that there is an obligation on the part of the medical profession to establish "physician health programs that provide a supportive environment to maintain and restore health and wellness" [2]. This sounds like an ethical call to arms (and legs) for physicians to be healthy and effective role models.

Physicians, like much of the American population, are not immune to the challenges of girth control [3]. A recent study of male physicians revealed that 44 percent of them were overweight and 6 percent were obese [4]. Less is known about female physicians. The Nurses' Health Study noted that 28 percent of nurses are overweight and 11 percent are obese [5]. As in the population at large, some overweight doctors are in denial about their weight [6]. Research has also demonstrated that doctors are susceptible to the same kinds of triggers (e.g. stress at home, skipping meals, grabbing junk food at the office) for overeating and sedentary behavior as the rest of the population [7].

Patient confidence in the advice of physicians who are obese is significantly lower than in the advice of physicians who are not obese [8]. Not surprisingly, physicians with poor personal habits are less likely to counsel patients about a healthy lifestyle [9]. It is more difficult for physicians who are not practicing health-promoting behaviors to be perceived as sufficiently credible teachers [10]. Physicians who are walking the walk appear to be the most effective messengers to communicate

behavior change because they are more likely to assertively address the topic and provide realistic guidance to their patients [11].

Primary care physicians, in particular, are held to a high standard of personal behavior. When seeking a surgery intervention, the patient is chiefly interested not in what the doctor looks like, but in his or her technical prowess. Family physicians, on the other hand, provide preventive services and counseling about lifestyle matters, and patients have a higher level of expectation about the doctor's appearance and behavior. Findings from the Women Physicians' Health Study noted that being a primary care physician and also practicing healthy habits were the most significant predictors for optimal prevention-related counseling and screening behaviors in clinical practice [12].

The twist is that appearances don't tell the whole story. Having a healthy BMI (under 25) is no guarantee that the physician is fit, practicing healthy living behaviors, or effectively teaching patients about healthy lifestyle practices. There are many physicians of normal weight whose habits leave much to be desired and who are not physically fit; some physicians who are overweight or obese may make healthy lifestyle choices, including efforts to reduce their own weight. Thinking the heavier physician is less credible, patients may dismiss his or her advice. If, however, that physician initiates an open and authentic dialogue about his or her experience and the realities and challenges of long-term weight management, the patient may recognize the physician as an especially credible guide.

On January 28, 2010, Surgeon General Dr. Regina Benjamin unveiled "The Surgeon General's Vision for a Healthy and Fit Nation." In her address, she singled out physicians as "powerful role models for healthy lifestyle habits" and then challenged the health care system to:

1. Encourage clinicians and their staffs to practice healthy lifestyle behaviors and be role models for their patients.
2. Use best practice guidelines to teach health professional students and clinicians how to counsel patients on effective ways to achieve and maintain healthy habits [13].

During her first interview, Dr. Benjamin noted that she, too, struggles with her weight and personally identifies with the frustrations experienced by overweight and obese adults who are striving to improve their eating and activity habits. *New York Times* medical writer and physician Perri Klass also noted that she, like her patients, continues to have difficulty managing her weight. She states that she relates more deeply with her overweight and obese patients because she understands only too well their frustration [14]. Genuine empathy for the obese patient's plight is often born of the physician's own weight management challenges. Does sharing one's humanity and fallibility resonate well with patients? There is a paucity of literature on this subject, but we do know that effective communication about healthy lifestyle is enhanced when the physician can draw from direct experience [15].

The achievement of a mythical “right” BMI is not the goal for physicians. Instead, like all aspects of the art of medicine, the ability to reach an obese patient most effectively is more complex. There are three matters to consider in effectively counseling patients about weight: the physician’s body composition, his or her practice of health-promoting behaviors, and his or her ability to effectively convey the healthy-living message to each patient. First, the physician must aim to achieve and sustain a healthy body composition. This is a dynamic, lifelong process often fraught with weight gains and reductions over time. Second, to achieve their most fit body, the physician must practice healthy lifestyle behaviors. The doctor must walk the walk. Third, the physician must effectively and authentically preach these tenets to each patient. The ultimate reward of health and wellness is thus shared by teacher and student, physician and patient.

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Suggested Readings and Resources

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Virtual Mentor

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