Rethinking Patient and Medical Professional Perspectives on Bariatric Surgery as a Medically Necessary Treatment

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Abstract

The prevalence of class 3 obesity (body mass index $\geq 40$ kg/m$^2$) is 7.7% of the United States adult population; thus, more than 25 million people may be medically appropriate for consideration of bariatric surgery as therapy for severe obesity. Although bariatric surgery is the most effective therapy for patients with severe obesity, the surgery is performed in less than 1% of patients annually for whom it may be appropriate. Patients’ and medical professionals’ misperceptions about obesity and bariatric surgery create barriers to accessing bariatric surgery that are not given adequate attention and clinical consideration. Commonly cited patient barriers are lack of knowledge about the severity of obesity, the perception that obesity is a lifestyle problem rather than a chronic disease, and fear that bariatric surgery is dangerous. Medical professional barriers include failing to recognize causes of obesity and weight gain, providing recommendations that are inconsistent with current obesity treatment guidelines, and being uncomfortable counseling patients about treatment options for severe obesity. Previous research has revealed that medical professional counseling and accurate perception of the health risks associated with severe obesity are strong predictors of patients’ willingness to consider bariatric surgery. This article reviews patient and medical professional barriers to acceptance of bariatric surgery as a treatment of medical necessity and offers practical advice for medical professionals to rethink perspectives about bariatric surgery when it is medically and psychologically appropriate.

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he prevalence of class 3 obesity (body mass index [BMI; calculated as weight in kilograms divided by height in meters squared] $\geq 40$ kg/m$^2$) is 7.7% of the US adult population; thus, more than 25 million people may be medically appropriate for consideration of bariatric surgery as therapy for severe obesity.\(^1\) In 2017, however, the number of bariatric operations performed in the United States was only 228,000, which emphasizes the gap between the number of operations performed annually and the number of people whose health and quality of life may benefit greatly from bariatric surgery.\(^2,3\) In part, this gap can be explained by access to health care and by financial barriers. For example, some patients may lack health insurance benefits for bariatric surgery or they may not be able to afford copayments and time away from work for medical appointments and recovery from surgery.\(^4,5\) However, other important barriers that are given much less empirical attention and clinical consideration include misperceptions about obesity and bariatric surgery by patients and medical professionals alike.

Commonly cited patient barriers are the lack of knowledge about the severity of obesity, the perception that obesity is a lifestyle problem rather than a chronic disease, and the fear that bariatric surgery is too risky and dangerous.\(^6,7\) Medical professional barriers include failing to recognize the causes of obesity and weight gain, providing recommendations that are inconsistent with
current obesity treatment guidelines, and having discomfort in counseling patients about treatment options for severe obesity.\textsuperscript{8,9} Previous research has revealed that medical professional counseling and accurate perception of the health risks associated with severe obesity are strong predictors of patients’ willingness to consider bariatric surgery.\textsuperscript{10,11} The purpose of this article is to review the patient and medical professional barriers to acceptance of bariatric surgery as a treatment of medical necessity and to provide a medical visit vignette with practical advice for medical professionals on how to rethink when bariatric surgery is medically and psychologically appropriate.

**PATIENT BARRIERS TO EFFECTIVE TREATMENT**

**Misperception of Weight Status**

Among adults in the United States, misperception of weight status—the discrepancy between actual measured weight and perceived weight status—is common and presents a barrier to efforts to reduce weight.\textsuperscript{12,13} A recent randomized population survey of US households investigated public attitudes about obesity, including perceptions of weight status.\textsuperscript{5} The data from that study revealed that participants who self-reported height and weight and were categorized according to BMI frequently misclassified their weight status. Specifically, 59% of participants whose BMI was in the overweight range (BMI, 25-29.9 kg/m\(^2\)) considered themselves to be of normal weight (BMI, 18-24.9 kg/m\(^2\)), while 47% of participants whose BMI met the criterion for obesity (BMI, \(\geq 30\) kg/m\(^2\)) classified themselves as being in the overweight range instead. Of the participants who met BMI criteria for obesity but underestimated their weight status, only 57% had spoken to a medical professional about treatment options for weight loss. Similarly, only 35% of participants for whom bariatric surgery was medically indicated, according to their BMI, had considered that treatment option. These findings are unfortunate because medical professional counseling about overweight status has been reported to enhance efforts to lose weight in high-risk patients with cardiovascular disease and central obesity.\textsuperscript{14}

Another survey of US adults that investigated weight perception and the acceptance of bariatric surgery concurred that participants frequently misperceived their level of overweight and obesity.\textsuperscript{7} The percentage of participants who misperceived their weight status as overweight was 63% for those with class 2 obesity (BMI, 35-39.9 kg/m\(^2\)) and 42% for those with class 3 obesity (BMI, \(\geq 40\) kg/m\(^2\)). Moreover, accurate perception of weight status was associated with acceptance of bariatric surgery as a treatment option. Participants who had class 3 obesity but misperceived their weight status as overweight were significantly more likely to disregard bariatric surgery as an acceptable treatment compared with participants who had appropriately identified their weight status as having obesity (\(P=0.03\)). Participants’ reasons for deeming bariatric surgery as unacceptable included “too risky,” “doesn’t work,” and “don’t need it.” The authors concluded that the participants most likely to receive the greatest benefit had the most fear and held the most misconceptions about bariatric surgery. Taken together, these results from population studies suggest that many people struggling with obesity may underestimate their weight status and the associated health risk of their weight classification. Therefore, when patients present for medical visits, they may neither initiate a discussion about weight concerns nor inquire about the most effective therapy for obesity with their medical professionals.

**Misperception of Obesity as a Lifestyle Problem**

When adults in the United States were surveyed on their beliefs about obesity, they appeared to be generally well informed about health risks given that they correctly identified heart disease and type 2 diabetes mellitus (T2DM) as the most serious health consequences associated with obesity.\textsuperscript{7} Participants in the survey also considered obesity, like cancer, to be a serious health problem in the United States. However,
they appeared to be less well informed about the causes of obesity. For example, nearly half the participants viewed obesity as a consequence of poor diet and exercise habits alone and did not consider other potential causes such as genetics, the obesity-promoting environment, medical problems, and other factors that may contribute to the development of obesity during a lifetime. The most important barrier to weight loss was perceived to be the lack of will power. Furthermore, participants who believed that obesity is a lifestyle problem were less likely to address weight concerns with their medical professionals and overestimated the effectiveness of lifestyle change as a long-term method for weight control. The perception that obesity is a lifestyle problem alone is likely to be a barrier to effective treatment of obesity and the most dangerous in terms of health and longevity for patients with the highest BMIs.

In the United States, cultural values related to hard work and a thin body are inextricably interwoven. That is, a slim body is obtained through hard work and self-discipline, and people who struggle with obesity are often perceived to be lazy and immoral and to have poor self-control. The common societal perception that obesity is a lifestyle choice supports the long-standing internal dialogue that many patients have about self-reliance: “I should be able to lose this weight on my own.” Patients may believe that with enough hard work they can achieve any body weight and shape they desire; this falsehood is most detrimental to patients with the highest BMIs and multiple medical problems. Moreover, a persistent culture of shame exists, prompting patients to desire secrecy and fear negative judgment about their decision to undergo bariatric surgery.

This culture of shame likely persists because the media perpetuates a singular theme that individual choices related to nutrition and physical activity are primarily responsible for the development of obesity. Images in the media also suggest that bariatric surgery is a trick or gimmick and is unnecessary to achieve substantial weight loss and that people commonly lose 45 kg or more with lifestyle change alone and keep the weight off indefinitely. Patients internalize the message that resorting to bariatric surgery is a moral failure and an easy way out. These misperceptions perpetuate the stigma and imply a false equivalency that having bariatric surgery is low effort and cheating at weight loss (Table 1). On the contrary, losing a large amount of weight and maintaining lost weight with lifestyle change alone is uncommon because it requires an indefinite reduction in caloric intake and a high level of daily physical activity (up to 60 minutes of moderate-intensity exercise). This magnitude of behavioral effort is unsustainable for most patients in the obesity-promoting environment of modern society.

In a recent qualitative investigation, in-depth structured interviews were conducted with patients about their experiences during their preparation for bariatric surgery and

| TABLE 1. Patients’ Internal Dialogue About Obesity and Bariatric Surgery |
| --- | --- |
| Patient misconceptions | Rethinking perspectives about bariatric surgery |
| My weight is not that bad | Weight gain is complicated and multifactorial |
| I can do this on my own | Identifying potential contributors and treatment options is important |
| I just need to have more will power | A team approach that includes my doctors and medical resources will be more effective |
| I did this to myself | But how? |
| I have given up on myself if I have surgery | Diet and exercise alone have not worked for me |
| Surgery is cheating at weight loss | Perhaps I should consider other options |
| Bariatric surgery may result in remission of my medical problems | Bariatric surgery is a lifesaving tool that will support my effort |
| Bariatric surgery requires substantial effort and long-term commitment | |
the postoperative adjustment up to 24 months after surgery.\textsuperscript{17} For patients in this study, the decision to have surgery was ultimately one of medical necessity that outweighed the societal stigma and negative judgment of family and friends. Furthermore, the decision was made after many unsuccessful attempts at weight loss through conventional diet and exercise strategies and a worrisome decline in health status. Patients appeared to reach a point at which poor health status, fatigue, and limited mobility became the primary motivators for seeking bariatric surgery.\textsuperscript{23} Before undergoing bariatric surgery, patients described the medical work-up process as a substantial commitment in time away from work and family, financial resources, and behavioral effort to learn the extensive lifestyle changes necessary for optimal outcome after bariatric surgery.\textsuperscript{21} Before undergoing bariatric surgery, patients described the medical work-up process as a substantial commitment in time away from work and family, financial resources, and behavioral effort to learn the extensive lifestyle changes necessary for optimal outcome after bariatric surgery; this commitment directly contradicts the common belief that having bariatric surgery requires minimal effort and is taking the easy way out.\textsuperscript{16,17} After having bariatric surgery, patients considered the operation to be a necessary, lifesaving tool when all previous attempts at weight loss had been unsuccessful. Indeed, surgery was viewed as a tool to support their efforts to make and sustain long-term changes in eating behavior and level of physical activity.

**Misperception of Treatment Efficacy Compared With Risk**

A persistent public misperception is that lifestyle modification alone (ie, eat less and exercise more) is the most effective therapy for any level of obesity.\textsuperscript{3} On the contrary, lifestyle modification alone is the least effective in terms of the magnitude of weight loss and the duration of maintaining the lower weight for patients who struggle with class 2 or class 3 obesity.\textsuperscript{19,20} Similarly, in the short-term, treatments such as very low-calorie diets and medications may induce large weight losses and improvements in health status, but long-term maintenance of the lower weight is improbable. When patients desire to lose at least 10% of their body weight, lifestyle change alone is likely to be ineffective in part because of metabolic adaptation to weight loss.\textsuperscript{24} Even after years of unsuccessful attempts at dieting, patients continue to believe that they simply need to try harder to eat less and make more time to exercise. They have little understanding of
the concepts of set point for fat mass (ie, the genetically determined range of body weight and body fat) and how fat loss increases metabolic efficiency, priming the body to regain weight.\textsuperscript{10} Thus, they continue to choose low-risk treatment options that generally are more appropriate for patients with lower weights (BMI <35 kg/m\textsuperscript{2}) and believe that surgical treatment is not necessary because they have successfully lost weight in the past.\textsuperscript{25}

When patients feel desperate to lose weight, they often attempt extreme diets and exercise programs, but these efforts are usually temporary. Unfortunately, patients may then abandon their efforts to lose weight altogether after experiencing an endless cycle of losing and regaining weight, which culminates in the perception of personal failure.\textsuperscript{26} Nevertheless, patients appear to maintain the belief that body weight is completely under volitional control and is modifiable through diet, physical activity, and will power.\textsuperscript{5}

These beliefs are likely to be barriers to consideration of a higher-risk treatment option such as bariatric surgery when it is medically indicated. Not only do patients overestimate the effectiveness of lifestyle change alone for treatment of obesity, but they also overestimate the medical and surgical risks associated with bariatric surgery and favor lower-risk options.\textsuperscript{27} Patients with class 2 or class 3 obesity need guidance with considering more accurate perspectives about low-risk treatment options. That is, even with their best efforts at adherence, lifestyle modification alone may be ineffective in terms of the magnitude and duration of weight loss necessary to achieve remission of medical comorbidities. With medical professional guidance, perhaps patients can appropriately view the continuum between treatment efficacy and potential risks associated with the outcome of bariatric surgery (Figure).\textsuperscript{28}

At present, no low-risk, highly efficacious treatments exist for severe obesity, and bariatric surgery may be necessary to achieve the desired improvements in health status, mobility, and quality of life.\textsuperscript{17} However, patients appear to harbor exaggerated fears about the risks associated with bariatric surgery.\textsuperscript{6,11} Even after attending an information session, patients perceive bariatric surgery to be too invasive or risky, and they fear postoperative complications.\textsuperscript{29}

The reasons for the difference between the actual mortality risk from bariatric surgery (the 30-day mortality rate, 0.1%, is similar to that for total knee arthroplasty)\textsuperscript{30,31} and patients’ perceived risk of complication and death are not well understood, yet pose a barrier to pursuit of this treatment option.\textsuperscript{11} One possible explanation is that patients may not fully appreciate the potential for remission of serious medical problems such as T2DM after bariatric surgery.\textsuperscript{25} Research has consistently documented that bariatric surgery is more efficacious than medical therapy for T2DM for patients with class 2 or class 3 obesity.\textsuperscript{32} Patients also have concerns about weight regain and their ability to commit to the required lifestyle changes.\textsuperscript{11,29} These concerns are well founded given patients’ past experiences with unsuccessful attempts at weight loss through lifestyle change alone. However, patients are unaware that the metabolic changes induced by the surgery, such as reduced hunger and increased satiety, will facilitate a higher likelihood of successful long-term maintenance of lost weight than lifestyle change alone.\textsuperscript{33}

MEDICAL PROFESSIONAL BARRIERS TO EFFECTIVE TREATMENT

Misperception of Obesity and Weight Regain

Obesity is a complex disease comprising multiple disorders that affect energy intake, energy expenditure, and metabolic efficiency (ie, the degree at which the body uses fat as an energy source). Development of obesity is likely related to dysregulation of metabolic, biochemical, and central nervous system pathways that are responsible for regulating energy balance and fat storage.\textsuperscript{34} Environmental influences of modern society that are associated with increased fat storage are alterations in the chemical composition of foods (eg, highly processed, poor-quality...
foods that are palatable but calorie dense) and reduced need for daily physical activity with the advent of multiple energy-saving devices. Furthermore, factors that may contribute to excess fat storage include chronic stress, chronic sleep loss, and increased use of obesity-promoting medications (eg, antidepressants, mood stabilizers, T2DM medications, corticosteroids, β-blockers, and nerve-dampening agents).

Research has found that some medical professionals hold misperceptions about the classification of obesity as a disease. Since 2013, obesity has been recognized by the American Medical Association as a chronic disease that currently has no cure and is only managed with behavioral, medical, and surgical treatments. Funk et al conducted focus groups at which medical professionals were asked their opinions about the American Medical Association’s decision to classify obesity as a disease. Some medical professionals were unaware that obesity was considered a disease, and they believed that obesity is simply a risk factor for treatable diseases such as T2DM and hypertension rather than a complex disease process (ie, a disorder of bodily function that produces excess adiposity). Moreover, medical professionals believed that if patients were informed that obesity is a disease, they would feel less accountable for their behaviors and would have less motivation to make lifestyle changes. Physicians were also concerned that patients who had access to their electronic health records may be offended by the use of the term obesity. Conceivably, for descriptions of a disease process, use of the term obesity (which refers to a chronic medical condition) rather than obese (which refers to a character trait) may help to reduce stigma and barriers to appropriate care for patients with class 2 or class 3 obesity. Nonetheless, uncertainty and confusion still exist among patients and medical professionals about the potential causes of obesity, which may be a disease process, behavioral disorder, food addiction, or something else.

Medical professionals also have misperceptions about the interplay between biology, behavior, and weight regain. Survey results from medical professionals attending continuing medical education primary care courses were compared with results from those completing a continuing medical education course in preparation for the board certification examination in obesity medicine. All medical professionals were asked questions about their understanding of biological and behavioral factors that contribute to obesity and weight regain. The most important finding from this study was that both groups of medical professionals rated lifestyle modification alone as more effective in treating obesity than medications and bariatric surgery. This belief directly contradicts the medical literature, in which bariatric surgery is the most effective treatment, in terms of medical comorbidity remission, for patients with class 2 or class 3 obesity. Not surprisingly, medical professionals who specialized in obesity medicine, compared with primary care physicians, rated medications and surgery as more effective, but they rated the effectiveness of medication as lower than lifestyle modification alone. Another remarkable finding was that both groups of physicians rated behavioral factors as the most important contributors to weight regain after initial weight loss, and they rated biological factors such as the following as less important: increases in hormones that stimulate hunger, decreases in hormones that stimulate satiety, reduction in 24-hour energy expenditure, and increase in sensitivity to food cues in the environment. The contribution of biological factors to weight regain was rated higher by obesity medicine medical professionals than by primary care medical professionals, but responses from both groups revealed that the medical professionals continued to believe that behavior is the primary driver of weight regain. Metabolic adaptation to weight loss makes maintenance of lost weight with lifestyle change alone nearly impossible for patients with class 2 or class 3 obesity.

Misperception of Obesity Treatment Guidelines

Multiple research studies have reported that medical professionals who are not obesity
medicine specialists provide recommendations for weight loss, particularly related to medications and bariatric surgery, that are inconsistent with obesity treatment guidelines. Medical professionals appear to support bariatric surgery as a therapy for obesity and are aware that surgery is indicated for patients with BMI greater than 40 kg/m² (or BMI >35 with ≥1 medical comorbidity). However, in a study that surveyed patients about how they had been referred for their initial consultation with a bariatric surgery specialist, most patients reported that they were self-referred for the appointment. This finding suggests that although medical professionals recognize potential health benefits of bariatric surgery, they often do not communicate those benefits to their patients nor do they offer a referral to a bariatric surgery center. Referral rates from internal medicine and family practice medical professionals ranged from 24% to 35%, whereas referral rates from specialty care medical professionals (eg, in cardiology and endocrinology) were even lower (11%-27%).

Similarly, other studies have reported that medical professionals do not discuss bariatric surgery for reasons that include overestimation of the risk of surgery and potential complications, concerns about the long-term effectiveness, and uncertainty about the appropriate time for a referral. Overestimation of surgical risk is likely an important barrier because medical professionals often cannot correctly identify 30-day morbidity and mortality rates for different bariatric procedures, and so they may be unaware that the morbidity and mortality rates for bariatric surgery are actually similar to those for common procedures such as cholecystectomy. Thus, patients themselves are more likely to initiate the conversation or self-refer to a bariatric surgery center because medical professionals continue to be most comfortable offering advice related to lifestyle change alone. More specifically, research has revealed that medical professionals are likely to overvalue low-risk strategies (eg, exercise to initiate weight loss) when other treatments (eg, medications and bariatric surgery) are likely to be more effective. Many medical professionals still consider bariatric surgery to be the treatment of last resort rather than the best option for resolution of serious medical problems (in particular, T2DM). A description of bariatric surgery as the least desirable treatment of last resort is unlikely to instill confidence in a patient’s decision to undergo surgical intervention for treatment of obesity.

**Discomfort When Counseling Patients About Obesity**

Medical professionals report that they lack confidence in their skills to effectively address their patients’ struggle with class 2 or class 3 obesity and that these patients may present with unique and challenging problems. When surveyed about their experiences treating patients with severe obesity, medical professionals perceived that patient barriers to treatment in a brief office visit included low socioeconomic status and lack of family support, limited ability to engage in physical activity, lack of time or desire to exercise, emotion-based eating or food addiction, and previously unsuccessful attempts at weight loss. Low motivation and previously unsuccessful attempts at weight loss, however, are likely misinterpreted as barriers to weight loss. Instead, patients with severe obesity may have little confidence that lifestyle change alone will effectively help them lose a large amount of weight. Many patients have already attempted lifestyle change several times and have had large yet unsustainable weight losses. Consequently, patients feel ambivalence toward making another attempt at weight loss when their medical professionals may be overestimating the effectiveness of lifestyle change alone for treatment of obesity. When patients voice concerns, medical professionals may unwittingly misinterpret ambivalence for lack of motivation, desire, or readiness to make lifestyle changes. Medical professionals may conclude that counseling patients about weight loss is likely to be less effective and instead focus more on the medical problems that are easiest to address (eg, hypertension).
or on problems that are perceived to be the most immediate risks to health.45 Medical professionals may be reluctant to recommend bariatric surgery when they themselves are uncertain about the appropriate time for a referral, the safety and efficacy profile of bariatric surgery, and their ability to provide aftercare for surgical patients.11,45-47 Likewise, if medical professionals are uncertain about the role of bariatric surgery in obesity treatment, they may also lack confidence in their ability to address patients’ misperceptions, such as an underestimation of the severity of their obesity with its associated risk of premature death and an overestimation of the risk associated with bariatric surgery.45,11 Medical professionals may also feel apprehensive about engaging in a thoughtful discussion about treatment efficacy and risk. That is, patients may say that they are not interested in surgical intervention for their obesity and insist on self-reliance (eg, “I just need to give dieting one more try”), and they may have poor comprehension of why lifestyle change alone is likely to be ineffective even after they have had many previous unsuccessful attempts at weight loss, or patients may want to consider bariatric surgery but harbor feelings of shame. Medical professionals may feel unprepared to address misperceptions about bariatric surgery that patients have from exposure to the Internet and social media. Over 75% of patients look online for information about the surgery and for discussions about other patients’ experiences with surgery.49 Patients are also likely to be influenced by their friends and family members who have undergone bariatric surgery and to have questions for their medical professionals about potential positive or negative outcomes.49

RETHINKING PERSPECTIVES ABOUT EFFECTIVE OBESITY TREATMENT

In the United States, the prevalence of class 2 and class 3 obesity has continued to increase for the past 35 years50; therefore, it is crucial that perspectives about effective therapy for obesity concomitantly evolve as safe and efficacious treatments become increasingly available. Bariatric surgery is a treatment of medical necessity, yet less than 1% of patients who would derive medical benefit undergo this option.2 Lack of access to bariatric surgery is related to patient and medical professional barriers alike, and discussion about bariatric surgery requires informed choices and shared decision making that supports patient autonomy. In a systematic review of patient and medical professional barriers, medical professional counseling was the strongest predictor that patients would consider bariatric surgery for treatment of obesity. Thus, all patients who have class 2 or class 3 obesity, a good support system, and stable mental health should be offered the opportunity to learn more about bariatric surgery if they desire. Some patients, however, have psychological problems, including mood disorders, maladaptive eating behaviors, or substance use disorders, that should be addressed by the multidisciplinary care team at the bariatric surgery center before considering bariatric surgery.51-54

Lifestyle changes are the foundation of any successful weight loss approach, yet they should not constitute the only recommendation for patients with higher BMIs. This is particularly important with the common scenario of patients who have had multiple unsuccessful attempts at weight loss. Lifestyle change recommendations alone will reinforce patients’ misperception that severe obesity is a lifestyle problem and perpetuate ambivalence about attempting weight loss. For most patients with class 2 or class 3 obesity, no amount of will power will help them lose and sustain large weight losses without the biological support from bariatric surgery in combination with lifestyle changes. Severe obesity currently cannot be cured, but with bariatric surgery it can be in remission and managed as a chronic illness. In other words, patients will live with obesity indefinitely; however, the metabolic changes induced by bariatric surgery, in combination with their efforts to make lifestyle changes, will dramatically reduce the risk of weight regain. Furthermore, medical professional counseling needs to engage
TABLE 2. Recommendations for Addressing Class 2 and Class 3 Obesity in a Brief Office Visit

<table>
<thead>
<tr>
<th>Activity</th>
<th>Topics for discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure BMI and waist circumference</td>
<td>Risk associated with BMI category&lt;br&gt;Risk associated with waist circumference ≥87.5 cm for women or ≥100.0 cm for men</td>
</tr>
<tr>
<td>Take a brief weight history</td>
<td>Identify the lowest adult weight, the heaviest adult weight, and the current weight trend (ie, stable, gaining, or losing)&lt;br&gt;Timeline and precipitating events for weight gain&lt;br&gt;Potential contributors to weight gain: changes in eating, activity, medications, sleep, and stress level</td>
</tr>
<tr>
<td>Take a brief history of attempts at dieting</td>
<td>Number of attempts&lt;br&gt;Most weight lost&lt;br&gt;Duration of maintenance of lost weight</td>
</tr>
<tr>
<td>Ask what patient is already doing to manage weight</td>
<td>What is going well with eating habits?&lt;br&gt;What is going well with physical activity?&lt;br&gt;What is one step that can be taken right now toward changes in diet and physical activity?&lt;br&gt;Recommendations: ≥150 min/wk of moderate-intensity aerobic activity in addition to resistance training on 2 or 3 d/wk</td>
</tr>
<tr>
<td>Identify high-risk patients who may benefit most from bariatric surgery</td>
<td>Metabolic syndrome, T2DM, and cardiovascular disease&lt;br&gt;Sleep apnea and fatty liver disease&lt;br&gt;Functional impairment and limitations</td>
</tr>
<tr>
<td>Be cognizant of overestimation of the effectiveness of lifestyle change and the risks of bariatric surgery</td>
<td>Lifestyle change alone—even with the patient’s best effort—will induce only 5%-10% weight loss&lt;br&gt;Risk associated with bariatric surgery is similar to risk with other common minimally invasive operations&lt;br&gt;Untreated psychiatric comorbidities must be addressed before bariatric surgery is considered</td>
</tr>
<tr>
<td>Consider referral to an obesity medicine specialist or an MBSAQIP-designated surgery center</td>
<td>Patients with BMI ≥35 kg/m² and medical comorbidities or BMI ≥40 kg/m²&lt;br&gt;Desire to lose weight to improve health and mobility&lt;br&gt;History of multiple unsuccessful attempts at dieting</td>
</tr>
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BMI = body mass index; MBSAQIP = Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program; T2DM = type 2 diabetes mellitus.

patients in a thoughtful conversation about the patient’s level of obesity and associated health risks. Patients are probably unaware that bariatric surgery, unequivocally, produces reliable improvements in health status that are well maintained over time.32,39 Likewise, patients may have a limited understanding of how certain medical problems, mobility problems, or medications will hinder even their best efforts to achieve more than 5% to 10% weight loss with lifestyle change alone. Medical professionals need to effectively and delicately communicate that a higher-risk treatment is indicated for patients to achieve their personal goals for improvement in health status and quality of life. Bariatric surgery should never be discussed as a treatment of last resort, particularly when mental comorbidities are imminent or have become urgent. Moreover, making assumptions or negative judgments about patients’ willingness, desire, or ability to adhere to treatment recommendations should be avoided.55 Sogg et al38 have provided guidance on talking with patients about severe obesity and on how the use of pejorative words may communicate negative attitudes and shape perceptions about obesity for both patients and medical professionals.

To engage in a shared decision about whether bariatric surgery is the right treatment for their patients, medical professionals must better educate themselves about their patients’ struggle with obesity as a chronic medical condition. First, medical professionals should learn how bariatric surgery has evolved in the past 20 years. The most commonly performed minimally invasive operations in the United States are the laparoscopic vertical sleeve gastrectomy (VSG) and the Roux-en-Y gastric bypass (RYGB), which is performed laparoscopically or robotically.2,36 With guidance from the bariatric medicine and surgical team, most patients for whom bariatric surgery is medically appropriate can choose which operation they desire.57 Medical professionals must
### TABLE 3. Vignette of an Office Visit With a Patient for Whom Bariatric Surgery Is Medically Indicated<sup>a,b</sup>

The patient is a 50-year-old man (height, 178 cm; weight, 122.7 kg; BMI, 39 kg/m²) who has impaired fasting blood glucose, hypertension, obstructive sleep apnea, and no mental health history.

**Patient:** I did not want to come in today—I almost canceled. At my last visit, we talked about me trying to lose weight, and I think I’ve actually gained weight instead.

**Medical professional:** I’m glad you decided to come today so we can talk through what’s been going on with you. I want you to know that I am here to support you. Your medical record shows that your weight 6 months ago was 118 kg, or about 260 pounds, so you’ve gained nearly 5 kg, or about 10 pounds, since we last met. Does that sound right to you?

**Patient:** Honestly, I’m not surprised. I’ve been under a lot of stress at work, and I eat when I’m stressed. How bad are my numbers?

**Medical professional:** Your fasting glucose level today is 115 mg/dL, and your hemoglobin A₁c concentration is 6.3%, which is up from 6.1% last time. This means you are approaching a diagnosis of type 2 diabetes mellitus. Fortunately, your blood pressure continues to be controlled with medication.

**Patient:** Yes, I’m good about taking my blood pressure medication, but I have to be honest: I’m not great with my CPAP machine.

**Medical professional:** A lot of my patients have that same issue. Would a return visit to the sleep medicine clinic be helpful for you?

**Patient:** No, the machine fits fine— I just don’t wear it. My wife would be happy if I did. She complains about my snoring. I just need to do better with wearing it.

**Medical professional:** That’s a great idea. You may already know that untreated sleep apnea can cause weight gain and may make it hard for you to lose weight. Is there anything that is going well with your eating and physical activity right now?

**Patient:** Eating no, but I do try to get to the gym after work at least 3 days per week.

**Medical professional:** That’s great. Physical activity helps with weight control and can be good for stress reduction as well. Generally, the goal is 150 minutes of moderate-intensity physical activity per week and resistance training with weights or exercise bands 3 days per week.

**Patient:** I definitely could do better. Maybe I could add another day or 2 at the gym on weekends. My wife has been asking me to go with her.

**Medical professional:** Yes, social support can be very helpful. What is concerning you most about your health right now?

**Patient:** Definitely my weight—I keep gaining. I’ve never had any success with losing weight and actually keeping it off.

**Medical professional:** Yes, I’m concerned about that too. What’s the most weight you’ve ever lost?

**Patient:** Probably 50 pounds, but it never stays off, and then I gain back more. It’s frustrating, and sometimes I even think, why bother with trying to lose weight.

**Medical professional:** That’s a pretty common experience for people who have struggled with weight for a while. I am concerned, though, about your health getting worse.

**Patient:** I am, too.

**Medical professional:** I see a lot of patients like you who have tried dieting multiple times, and even with their best efforts weight loss is very difficult. What you may not know is that you have some health issues that are likely to make it difficult for you to lose a lot of weight. Although changes in eating habits and physical activity are the foundation of any weight loss program, it may not be enough to achieve the amount of weight loss and health benefits you need.

**Patient:** I’m not sure what you mean.

**Medical professional:** You have what’s called metabolic syndrome. This means that your body is probably developing resistance to your own insulin, which promotes abdominal fat storage and other problems that cause weight gain. Metabolic syndrome, insulin resistance, and sleep apnea make it more difficult for you to lose weight with just dietary change and increased physical activity.

**Patient:** When I was in my 30s, I could easily lose weight, but not anymore. I’m just getting heavier.

**Medical professional:** We could keep doing what we are doing, recognizing its limitations, or we can consider other options to help you with weight loss. Another option may be to consider bariatric surgery not only for weight loss but also for treatment of metabolic syndrome and sleep apnea.

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also understand the mechanisms of action of bariatric surgery. For example, patients commonly ask, “Why can’t I just follow the postsurgery diet and lose weight on my own?” The answer is that both VSG and RYGB are metabolic treatments that change physiologic signals between the brain and the gut and result in reduced hunger, increased satiety, changes in food preference, increased energy expenditure, and lowering of body fat storage or set point.58-60 What patients feel after having bariatric surgery may be the opposite of what they feel while dieting, which can be intense hunger and cravings. Thus, the biological changes induced by surgery support patients’ efforts to make lifestyle changes typically for the first 12 months after surgery.

Second, medical professionals must be prepared to address patients’ fears and the disparity between perceived and actual risks of postoperative complications. For example, patients often refer to a friend or family member who had a poor outcome after surgery.49 A useful approach may be to give patients empirically validated data on the risks and short- and long-term complications of both VSG and RYGB in contrast to other commonly performed laparoscopic operations such as laparoscopic cholecystectomy.38 Patients’ understanding may also improve if the surgical risk is compared with the complication risks of common widely accepted operations. The patient may be pleasantly surprised to learn that the risk of complications after laparoscopic RYGB is similar to that after cholecystectomy and hysterectomy, and the mortality risk is similar to that with total knee arthroplasty.31 In addition, short-term outcomes after bariatric surgery are better than after more invasive vascular or cardiac operations.

Third, medical professionals must be aware of patients’ concerns about suboptimal weight loss and an inability to adhere to the lifestyle change required after surgery. Although many patients have experienced multiple unsuccessful attempts at weight loss through lifestyle change alone, that lack of success does not portend that they will have a similar experience after bariatric surgery. Although maintenance of lost weight after surgery requires effort, it is entirely plausible because of the metabolic changes after bariatric surgery.

Finally, medical professionals should become familiar with a local or regional bariatric Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program—accredited center as a potential referral source for their patients.
Table 2 summarizes suggestions for addressing class 2 and class 3 obesity in a brief office visit. Table 3 presents a vignette of an office visit conversation with a 50-year-old man who has a BMI of 39 kg/m², metabolic syndrome, and obstructive sleep apnea.

CONCLUSION
Patients’ and medical professionals’ misperceptions about obesity and bariatric surgery create barriers to accessing bariatric surgery, which is the most effective treatment for severe obesity. Commonly cited patient barriers are lack of knowledge about the severity of obesity, the perception that obesity is a lifestyle problem rather than a chronic disease, and fear that bariatric surgery is dangerous. Medical professional barriers include failing to recognize causes of obesity and weight gain, providing recommendations that are inconsistent with current obesity treatment guidelines, and being uncomfortable counseling patients about treatment options for severe obesity. Patients’ willingness to consider bariatric surgery is strongly influenced by medical professional counseling and an accurate perception of the health risks associated with severe obesity. Therefore, medical professional must better educate themselves about their patients’ struggle with obesity as a chronic medical condition and about how bariatric surgery may be necessary for patients to achieve their personal goals for improvement in health status and quality of life. If they are interested, all patients who have class 2 or class 3 obesity, a good support system, and stable mental health should be offered the opportunity to learn more about bariatric surgery.

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Abbreviations and Acronyms: BMI = body mass index; RYGB = Roux-en-Y gastric bypass; T2DM = type 2 diabetes mellitus; VSG = vertical sleeve gastrectomy

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