




# The Most Undertreated Chronic Disease: Addressing Obesity in Primary Care Settings

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## Abstract

**Purpose of Review** While obesity-related comorbidities are frequently addressed and treated in primary care (PC), obesity itself is undertreated. We review the current treatments for obesity and provide potential provider and system-level strategies for integrating weight management and improving longer term obesity care within PC settings.

**Recent Findings** We now understand that the body develops multiple mechanisms to resist weight loss and promote weight regain, making both weight loss and weight loss maintenance challenging. Therefore, weight management often requires medically supervised interventions and should be treated on a long-term basis. However, there are multiple barriers to improving obesity care within PC settings.

**Summary** Clinically, utilizing strategies such as a shared decision-making approach and the 5As to discuss treatment options can facilitate formulating an obesity treatment plan. Utilizing telehealth, a team-based approach, and community partnering can increase patient access to intensive behavioral interventions. Future studies should evaluate other cost-effective methods to implement obesity care into the PC setting.

**Keywords** Obesity · Weight management · Primary care · Challenges/barriers · Shared decision making

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## Introduction

Obesity was defined as a disease by the World Health Organization and Centers for Medicaid and Medicare in 2013 [1]. Worldwide, the prevalence of obesity has tripled since 1975 [1], and it is one of the leading causes of death in the United States (US) and worldwide [2]. Obesity is caused by complex interactions between genetic, behavioral, and environmental influences [3–5]. These influences lead to accumulation of adipose tissue and dysregulation of the body's energy regulatory systems, making weight loss difficult [5]. Obesity is associated with reduced quality of life, poorer mental health, and serious comorbid conditions including cardiovascular disease, diabetes, and cancer [6, 7].

While obesity-related comorbidities are frequently addressed in primary care (PC), obesity itself is chronically undertreated [8–11]. A cross-sectional study of National Health and Nutrition Examination Survey (NHANES) data between 2011 and 2018 showed that only 40% of adults with overweight or obesity reported that they received counseling to lose weight [12]. By under-treating obesity in PC, we miss a valuable opportunity to reach many patients and improve their

overall health. Considering there are over 480 million PC visits per year across the US [13], successfully integrating obesity treatment into PC could have a substantial public health impact and meaningfully address the obesity epidemic. However, there are several challenges to improving the care of obesity in PC settings.

The authors of this article are a group of primary care and obesity clinicians and researchers, committed to improving obesity-related treatment in PC settings. We will review the evidence for current treatments and provide examples and recommendations to incorporate established clinical guidelines into a PC practice.

## Diagnosis and Classification of Obesity

In this review, we will refer to the following terms: overweight (BMI 25.0–29.9 kg/m<sup>2</sup>), class I obesity (BMI 30–34.9 kg/m<sup>2</sup>), class II obesity (BMI 35–39.9 kg/m<sup>2</sup>), and class III obesity (BMI ≥ 40 kg/m<sup>2</sup>). When evaluating and treating obesity, it is important to classify obesity to help guide treatment, as higher obesity class is associated with increased mortality [14–16].

## A Review on Current Treatments for Obesity

### Lifestyle and Behavioral Therapy

Structured lifestyle intervention is fundamental to the treatment of obesity, even when pharmacotherapy and surgery are indicated [17]. The United States Preventive Services Task Force (USPSTF) recommends that clinicians offer or refer patients with obesity (BMI ≥ 30 kg/m<sup>2</sup>) to intensive, multicomponent behavioral interventions as a grade B recommendation [18].

Behavioral interventions are meant to improve adherence to lifestyle recommendations. These can include self-monitoring, goal-setting, stimulus control (e.g., reducing the availability of tempting foods), stress reduction, improved sleep quantity and quality, and/or psychological therapy [17, 18].

To qualify as “intensive”, the USPSTF recommends at least 12 sessions where weight management is discussed over 1 year. The intervention should last at least 1–2 years, with a 3–12 month “core” phase where the majority of the weight loss occurs followed by a 9–12 months “maintenance” phase [18]. Evidence supports making small incremental changes with frequent and long-term follow-up to provide accountability and make adjustments to the approach when needed [17].

A “multicomponent” intervention combines behavior modification with other strategies (e.g., cognitive therapy, group sessions, dietary education) to change one’s lifestyle habits [19]. One well-known example of an intensive, multicomponent intervention is the Diabetes Prevention Program (DPP),

which was originally provided as one-on-one sessions and has been adapted to group sessions [20]. Healthcare system-based weight management programs or interventions such as the MOVE! Weight Management Program at the Veterans Health Administration (VHA) [21, 22] or commercial programs such as WW (Weight Watchers) have also been found to be effective [23].

### A Healthy Meal Plan

Reduced caloric intake is necessary to create an energy deficit and promote weight loss [17]. The American Heart Association/American College of Cardiology/The Obesity Society (AHA/ACC/TOS) guidelines discuss three different strategies for prescribing a reduced calorie diet. These include (1) 1200–1500 kcal/day for women and 1500–1800 kcal/day for men, (2) 500–750 kcal/day energy deficit (e.g., cutting out soda and snack foods), or (3) prescribing one of the evidence-based diets that restrict certain food types to create an energy deficit (e.g., DASH, Mediterranean, or low carbohydrate diet) [24–26, 27•].

Studies show that the relationship between different macronutrients is complex and that adjusting the macronutrient components of a patient’s meal plan can facilitate weight loss [26]. Food properties such as satiety value, taste, and energy density are powerful determinants of total calories ingested. For instance, high fat diets tend to have higher energy density, complex carbohydrates can facilitate reduction in energy intake, and protein has a high satiety effect [26]. We encourage clinicians to consider these properties when discussing dietary recommendations with patients. For instance, if a patient reports hunger shortly after having a meal, increasing their protein content of each meal may prolong their satiety and stave off hunger.

Meal replacements can also be incorporated into a patient’s meal plan to help them adhere to a reduced calorie diet. Multiple studies have shown that incorporating meal replacements even for just one or two meals per day can lead to greater weight loss, compared to a meal plan comprised of the same calorie target using only “conventional” foods [28]. Meal replacements have several benefits that allow patients to adhere to their meal plans besides calorie control, including portion control, structured eating, stimulus narrowing and control, and palatability [11]. Meal replacements can successfully be used in the PC setting for weight loss and weight maintenance [29, 30]. Currently, there is no established definition of a “meal replacement”, and food products can include beverages, snacks/bars, and prepared meals/entrees and can be purchased at a weight loss clinic, commercial weight loss center, or over the counter. Generally, we recommend that each meal replacement contain 20–30g of protein, at least 5 g of fiber, fewer than 10g of carbohydrates, fewer than 5g of fat, and be supplemented with all essential vitamins and

nutrients. A prescribed meal plan with meal replacements should last for at least 2 weeks and can be prescribed indefinitely without any laboratory monitoring if it has at least 1200 kcal/day [27]. However, to most effectively incorporate meal replacements and prevent attrition, regular follow-up is needed to provide continued education, counseling, and track progress [31]. Patients with diabetes especially require intensive self-monitoring of blood glucose [31].

While patients may inquire about a specific or popular diet, there is not enough evidence to prescribe one diet over another. A reduced calorie meal plan should be selected to reflect patients' personal and cultural preferences to promote adherence. It is also important to meet patients where they are in their dietary behaviors. For one patient, it may be reasonable to recommend a high protein, low carbohydrate diet. For another patient who is eating fast food for each meal, focusing on making more meals at home and on ensuring fruits and vegetables are consumed with each meal may be a more achievable starting goal.

## Physical Activity

Increasing physical activity (PA) and decreasing number of sedentary hours should be discussed at every visit, as PA is important for both initial weight loss and weight maintenance. Multiple meta-analyses have shown that doing  $\geq 150$  min/week of moderate intensity activity leads to weight loss when combined with a reduced calorie diet [32–34]. In terms of weight-loss maintenance, studies show that 200–300 min/week is required to attenuate weight regain [35] and increased exercise is associated with longer term weight loss [36–38]. Aerobic activity should be the major component of a PA plan, as it has been shown to have the highest potential to reduce visceral adipose tissue [39]. Resistance training should also be included to preserve lean muscle [17], which is particularly important in post-menopausal women [40]. We recommend assessing patients' current PA levels and capabilities to individualize PA plans [17]. For some patients, a reasonable first goal may be to reduce recreational screen time to reduce prolonged sitting.

## Pharmacotherapy

### Medication Reconciliation — Reconsider Medications that Promote Weight Gain

Before prescribing weight-loss medications, a PC provider (PCP) should use their longitudinal relationship to ensure current medications are not contributing to weight gain. Although medication reconciliation is typically done at all clinic visits, for patients with overweight or obesity, special attention should be taken to attempt to replace medications that promote weight gain with alternative medications that are weight neutral or promote weight loss, as this may attenuate weight gain.

The Obesity Action Coalition (OAC) offers a succinct list of common medications to consider replacing with a medication that is weight neutral or promotes weight loss ([https://www.obesityaction.org/wp-content/uploads/prescription\\_medications.pdf](https://www.obesityaction.org/wp-content/uploads/prescription_medications.pdf)).

### Benefits of Pharmacotherapy

Prescription medications used to treat overweight and obesity are currently referred to as “anti-obesity medications” to emphasize the goal of treating a disease.

In the 2018 USPSTF systematic review, pharmacotherapy-based weight loss trials showed greater weight loss and decrease in waist circumference, higher likelihood of losing 5% of body weight, and better weight-loss maintenance compared with placebo groups [41]. The expected weight loss with lifestyle is 5–10%, and the addition of medications increases the likelihood of attaining clinically significant weight loss [17]. While lifestyle-based interventions are at the foundation of any obesity treatment plan, we often see less success when used alone, in part due to the pathophysiology of obesity [17]. Once obesity develops, metabolic adaptations and alterations in hunger and satiety signals often lead to weight regain [41]. The purpose of medications is to help patients adhere to the reduced calorie diets by combating the body's mechanisms to resist weight loss. Typically, anti-obesity medications do this by controlling appetite and regulating hunger and satiety signals. As with other diseases such as diabetes and hypertension, PCPs must understand the key biological underpinning of obesity and use any tools available for treatment, including pharmacotherapy. Additionally, some anti-obesity medications, such as glucagon-like peptide 1-receptor agonists (GLP-1RAs), have beneficial effects on cardiovascular outcomes and mortality [42, 43].

### Who Should Be Started on Pharmacotherapy?

Current indications for anti-obesity medications are BMI  $\geq 30$  kg/m<sup>2</sup> or BMI  $\geq 27$  kg/m<sup>2</sup> with obesity-related comorbidities [24, 44]. Pharmacotherapy should especially be considered for patients who have not met weight-loss goals ( $\geq 5\%$  of total body weight at 3–6 months) with lifestyle intervention alone. The decision to initiate drug therapy should be individualized, weighing the risks and benefits of all treatment options. Medications should always be used as an adjunct to lifestyle modifications. A medication should be continued for no longer than 3 months if no significant weight loss is seen [45], at which point the medication options should be reassessed.

### Off-Label Medications for Weight Loss

**Metformin** Consider metformin for patients with pre-diabetes or diabetes with overweight or obesity who are not already on

medical therapy. While studies have shown that metformin can lead to greater weight loss compared to placebo even in people who do not have diabetes or insulin resistance [46, 47], greater weight loss is achieved in patients that have some evidence of insulin resistance [46].

**Topiramate** Topiramate is FDA-approved for migraine prophylaxis and epilepsy. For weight management, topiramate has been well-studied in patients with and without type 2 diabetes. In patients with overweight/obesity and type 2 diabetes, topiramate produced significantly greater weight loss compared to placebo, improvements in hemoglobin A1c [48, 49], and body fat [49]. Similarly, in patients without type 2 diabetes, topiramate was more likely to produce clinically significant weight loss compared to placebo [50].

Topiramate has also been found to be effective in preventing weight gain associated with binge eating disorder. Binge eating disorder (BED) is treatable eating disorder that is characterized by recurrent episodes of eating large quantities or food, often associated with a feeling of a loss of control during these episodes and shame and/or distress, and without regular compensatory measures to prevent weight gain [51, 52]. Multiple studies have shown that when used to treat binge eating disorder in patients with obesity, topiramate can reduce the number of binge episodes per week and per day, weight, and BMI [53–55]. We do highly recommend considering and discussing psychotherapy for treatment of BED even in cases where pharmacotherapy is utilized [56].

Lastly, topiramate has also been shown to lead to weight loss in co-administration with antipsychotics for treatment of schizophrenia [57, 58].

**GLP-1RAs** The American Diabetes Association recommends adding a GLP-1RA or an SGLT-2 inhibitor for patients with type 2 diabetes as the next step in therapy for patients already on metformin with a need to lose weight or minimize weight gain if there are no contraindications [59]. Currently, only two GLP-1RAs are approved for treatment of obesity — liraglutide 3.0mg daily and semaglutide 2.4mg weekly. However, a systematic review showed that compared to placebo, all GLP-1RAs, except for albiglutide, significantly reduced weight [60]. Given this data, we do encourage clinicians to highly consider this medication class when treating patients with type 2 diabetes and obesity.

Table 1 provides an overview of common FDA-approved anti-obesity medications as well as medications often used off-label for weight management.

### Bariatric Surgery

Patients with BMI  $\geq 40$  kg/m<sup>2</sup> or with BMI  $\geq 35$  kg/m<sup>2</sup> and 1 or more obesity-related comorbidities (e.g., diabetes, hyperlipidemia, or hypertension) qualify for bariatric surgery.

Qualifications for bariatric surgery will vary by health insurance. Bariatric surgery is a proven intervention that can safely lead to substantial weight loss. Expected weight loss is 20–30% for laparoscopic sleeve gastrectomy (LSG) and 25–35% for Roux-en-Y gastric bypass (RYGB) [61]. Referral for bariatric surgery should be considered for patients who fit these criteria and are motivated to lose weight [24].

LSG and RYGB are currently the most common bariatric surgeries performed currently. Bariatric surgery should especially be considered in patients with uncontrolled type 2 diabetes, as multiple studies have shown greater weight loss, decreased number of glucose-lowering medications including insulin, and higher quality of life in surgical patients compared to intensive diabetes medical therapy at 3 and 5 years after surgery [62, 63]. More recent studies suggest that RYGB may have better potential at inducing diabetes remission than LSG [64].

### Endoscopic Procedures

Bariatric endoscopic procedures are emerging as another treatment option for patients with obesity [65–67]. These therapies include a variety of devices and procedures, (e.g., intragastric balloons and sleeve gastropasty) are minimally invasive, and can serve as a safer option for poor surgical candidates [65, 66]. Currently, however, endoscopic procedures have minimal coverage by insurance which currently limits their use in the US.

### A Word on Weight Maintenance

PCPs should be ready to support patients who have intentionally lost weight to help them maintain their weight loss. For many patients, this can be a challenging phase; in fact, most people who lose weight through lifestyle interventions regain weight [68]. Data suggest that sustained lifestyle support and continued self-monitoring of diet, PA, and weight are helpful in promoting weight loss maintenance [69]. A recent international systematic review indicated that increased PA was the most consistent positive correlate of weight loss maintenance [70]. Increased exercise is required because there is a decrease in basal metabolism with weight loss, so increasing exercise allows for a higher calorie intake per day, which may be more sustainable. Additionally, eating more restaurant meals has been associated with weight regain [71], so encouraging patients to prepare most of their meals at home may help.

### Barriers and Challenges to Integrating Weight Management Treatments and Improving Obesity Care Within the PC Setting

While the number of board-certified physicians in obesity medicine continues to increase, there are not enough obesity

**Table 1** Weight-loss medications used in primary care

Medication	Mechanism, adverse effects	Contraindications	Dosing	Monitoring/cautions
<b>FDA-approved medications</b>				
Orlistat	Intestinal lipase inhibitor. SEs: GI side effects — diarrhea, fecal urgency, decreased absorption of fat-soluble vitamins	Malabsorption disorder, cholecystitis	60-mg TID or 120-mg TID with meals	Consider checking levels of fat-soluble vitamins, when indicated
Phentermine (FDA-approved duration varies by state)	Norepinephrine reuptake inhibitor SEs: elevated BP, tachycardia, insomnia, dry mouth, serotonin syndrome	Uncontrolled hypertension, cardiovascular disease, congestive heart failure, seizures glaucoma, MAOI use.	Once daily dosing: 8mg; 15mg; 30mg; 37.5mg	Check BP and HR monthly for 3 months, then every 3 months after patient loses 5% of body weight
Phentermine-topiramate	See separate sections for phentermine and topiramate	Phentermine 3.75 mg/topiramate 23 mg, phentermine 7.5 mg/topiramate 46 mg, phentermine 11.25mg/topiramate 69mg, phentermine 15 mg/topiramate 92 mg	Week 1: 1 tab in AM Week 2: 1 tab in AM and 1 tab in PM Week 3: 2 tabs in the AM, 1 tab in the PM Week 4: 2 tabs in AM 2 tabs in the PM	Monitor BP, HR, suicidal ideation, neuropsychiatric symptoms, signs of withdrawal. Medication reconciliation (opioids medications) and MAOIs. Careful social history for current and recent opioid and alcohol use
Naltrexone-bupropion	Naltrexone is a $\mu$ -opioid receptor antagonist. Bupropion is a dopamine and norepinephrine reuptake inhibitor. SEs: nausea, which usually subsides, headache, vomiting, dizziness, insomnia, and dry mouth, elevated BP, HR and constipation, usually avoidable with slow dose increases Other SEs: cholecystitis and pancreatitis	Personal or family history of medullary thyroid cancer or multiple endocrine neoplasia type 2, or chronic pancreatitis	0.6 mg daily for 1 week; increase by 0.6 mg at 1- to 2-week intervals to 3mg daily. Efficacy has not been established for <3 mg/day but consider using highest tolerated dose.	Patients currently on insulin and being started on this GLP-1 agonist should be monitored for hypoglycemia and must be given clear and direct guidelines on how to titrate their insulin down accordingly.
Liraglutide 3.0 mg	GLP-1 receptor agonist. SEs: nausea, diarrhea, and constipation, usually avoidable with slow dose increases	Same as above	Initiate at 0.25 mg once weekly for 4 weeks, then increase the dose every 4 weeks (0.5 mg, 1 mg, then 1.7 mg) until maintenance dose of 2.4 mg weekly is reached. If patients do not tolerate the maintenance 2.4 mg dose, the dose can be temporarily decreased to 1.7 mg weekly for a maximum of 4 weeks and then increase to 2.4 mg weekly.	Same as above
Semaglutide 2.4mg	Same as above	Same as above	Initiate at 0.25 mg once weekly for 4 weeks, then increase the dose every 4 weeks (0.5 mg, 1 mg, then 1.7 mg) until maintenance dose of 2.4 mg weekly is reached. If patients do not tolerate the maintenance 2.4 mg dose, the dose can be temporarily decreased to 1.7 mg weekly for a maximum of 4 weeks and then increase to 2.4 mg weekly.	Same as above
<b>Off-label medications for weight loss (not FDA approved for obesity treatment)</b>				
Metformin	Anti-diabetic agent, biguanide Decreases hepatic glucose production, decreases intestinal absorption of glucose, and improves insulin sensitivity by increasing peripheral glucose uptake and utilization. SEs: nausea, loose stools, abdominal discomfort.	Acute or chronic renal dysfunction (eGFR <30 mL/min)	Start 500mg daily IR (immediate release) or ER (extended release). Increase to max dose tolerated (up to 2500mg daily). IR is taken across divided doses. ER may be taken as once or divided doses.	Basic metabolic panel at initiation to assess GFR. About 10–20% of individuals will experience loose stool, GI upset. It will usually go away and will be decreased by having metformin at the end of a meal or by using the ER form.
Topiramate	Carbonic anhydrase inhibitor. SEs: paresthesias, dysgeusia, cognitive dysfunction (poor concentration, psychomotor slowing), suicidal ideation, kidney stones, and hypokalemia.	Women of child-bearing age (must be on contraception), glaucoma, MAOI use, and hyperthyroidism	25-mg BID Can increase AM or PM dose as needed)	Use with caution in women of child-bearing age, as topiramate is teratogenic. Ensure they are on contraception.

\*SE Side effects, GI gastrointestinal, BP blood pressure, HR heart rate, TID three times daily, BID twice daily, MAOIs monoamine oxidase inhibitors

specialists to treat all patients requiring treatment. As of February 2019, 2577 physicians were certified by the American Board of Obesity Medicine (ABOM) [72]. With the increasing number of persons with obesity, there are approximately 11,000 new persons with obesity per every new ABOM diplomat [73]. Thus, PCPs must be able to provide succinct and practical weight loss advice to their patients.

On the provider level, lack of training and perceived lack of time are among the most commonly reported barriers to addressing weight management in PC [74, 75]. One study showed that while 94% of internal medicine residents agreed it was their role to discuss nutrition with patients, only 14% felt adequately trained to provide nutrition counseling [76]. For PCPs who already have a disproportionate amount of work outside of the-face to-face encounter, it is difficult to find more time to conduct chart reviews, monitor patients, and communicate with patients about their progress with medications. When integrating weight management into clinical practice, it is important to allot time for the physician to review lifestyle modifications, behavioral changes, and monitoring measures (if indicated), to prescribe medications safely and effectively for obesity.

Apart from these logistical barriers, providers' beliefs about obesity and obesity stigma can also impact quality of care and medical decision-making [77]. Most Americans (59%) still believe that obesity is caused by lack of willpower [78]. We know that this is not the case — the cause of obesity is multi-factorial and largely to do to factors (e.g., genetics, environment) that are beyond a person's individual control. For instance, the heritability index of obesity is 40–70% [79], which is similar to height, and there are >120 loci for polygenic forms of obesity [80]. A national web-based survey of health care providers showed that 59% of healthcare providers wait for the patient to bring up their weight before discussing treatment [75]. However, many patients report feeling stigmatized not only in their daily life, but also in healthcare settings and consequently avoid seeking healthcare [81–84]. Creating a welcoming and comfortable environment, taking on the responsibility to discuss patients' weight, and using neutral terms may help decrease stigma in the healthcare setting.

On the practice level, lack of reimbursement and infrastructure make obesity care challenging [85]. The Strategies to Overcome and Prevent (STOP) Obesity Alliance recommends that all personnel staffs are provided education and training on avoiding bias and stigma and that all resources are cataloged [86••]. This requires a collective staff effort, time, and investment, and cannot be done alone by one provider. While some clinics may have the infrastructure and support to implement these measures, many do not. Furthermore, there may be few services available, such as dietitians, intensive behavioral programs, or even gyms. Another significant problem is the poor reimbursement by health insurance for obesity

counseling and for anti-obesity medications [75, 87]. A national web-based survey of healthcare professionals showed that 53% of providers indicated that improved reimbursement would improve their ability to counsel patients about obesity [75].

## Integrating Clinical Guidelines into PC

### Counseling Frameworks for Obesity

**Shared Decision-Making** The shared decision-making (SDM) approach helps the provider and patient arrive at a mutually agreed upon treatment plan and can increase acceptance of medical or surgical treatment for obesity [88]. Patients' weight loss expectations largely overestimate what is achievable with any weight loss treatment [89]. Current studies show that only ~10% of people with obesity lose 20% of their weight with intensive lifestyle and behavioral therapy [90], compared to over 70% of patients that lose greater than 20% of their weight with bariatric surgery, and 32% of patients with semaglutide 2.4mg weekly [91, 90]. This dichotomy in expectation and biologic reality may lead to a feeling of failure even though the intervention was unlikely to give the anticipated results. PCPs can utilize an SDM model for obesity treatment counseling to discuss risks, benefits, and treatment expectations to enable patients to choose a treatment approach that will help them reach their health goals [92].

**The 5As Model** One counseling framework for having conversations about obesity is the 5As approach (assess, advise, agree, assist, and arrange) which has been studied for behavioral change in PC [19, 93]. The STOP Obesity Alliance guide recommends using this approach with a 6th “A” (ask) added for weight management counseling in PC [86]. Rueda-Clausen et al. showed that applying the 5As to weight management increases the initiation of treatment of obesity. On that same note, Jay et al. showed that when physicians utilized more components of the 5As framework and were patient-centered in their approach, patients reported higher motivation to lose weight and intentions to change behavior [94] and patients of physicians trained in the 5As lost more weight at 12 months [93]. Since addressing all the “As” (described in more detail below) may not be feasible in one visit unless it is a dedicated weight management visit, these can be discussed over multiple visits [95•].

### Suggested Approach to Discussing Treatment Options

**Incorporating the 5As Model and SDM** Ask permission to address weight — “can we talk about your weight today?” Using language such as “I am concerned about how your weight may be affecting your health. Today there are many effective treatments for obesity”. Following with a question such as “would you be interested in having a visit to discuss

effective treatments for obesity?” is a way to make the diagnosis and open discussion on treatment options.

Assess the patient’s desired weight loss goal and reasons for wanting to lose weight. The clinician should also assess prior weight loss attempts and current diet and physical activity behaviors.

Advise about treatment options that match the patient’s goals and are most likely to produce the desired results. Consider using the obesity treatment pyramid (Fig. 1) as a tool to guide this discussion. This is where the risks and benefits of treatment options should be discussed with the patient using the SDM approach.

Agree on weight loss, lifestyle, and behavioral goals with the patient. If health goals are not achieved, consider escalating the intervention or adjusting treatment goals.

Assist the patient by creating a plan. Documenting an obesity treatment plan can inform the care team of the patient goals and current treatment plan to improve individual patient success.

Arrange for patient engagement in the treatment plan and close follow-up.

**Formulating an Obesity Treatment Plan** When formulating a treatment plan, we recommend using a multi-modal approach that matches treatment efficacy with disease burden. Much like cancer is treated with a combination of modalities, treating obesity in a similar fashion can enhance long-term outcomes. Matching treatment to severity of disease is also important to avoid harmful failure experiences, which may limit future attempts at weight loss and likelihood of success. An obesity treatment plan might include lifestyle interventions, medications, self-monitoring, referrals (e.g., bariatric surgery), goals for next visit, and a follow-up plan. **Figure 1** summarizes the expected weight loss for each treatment

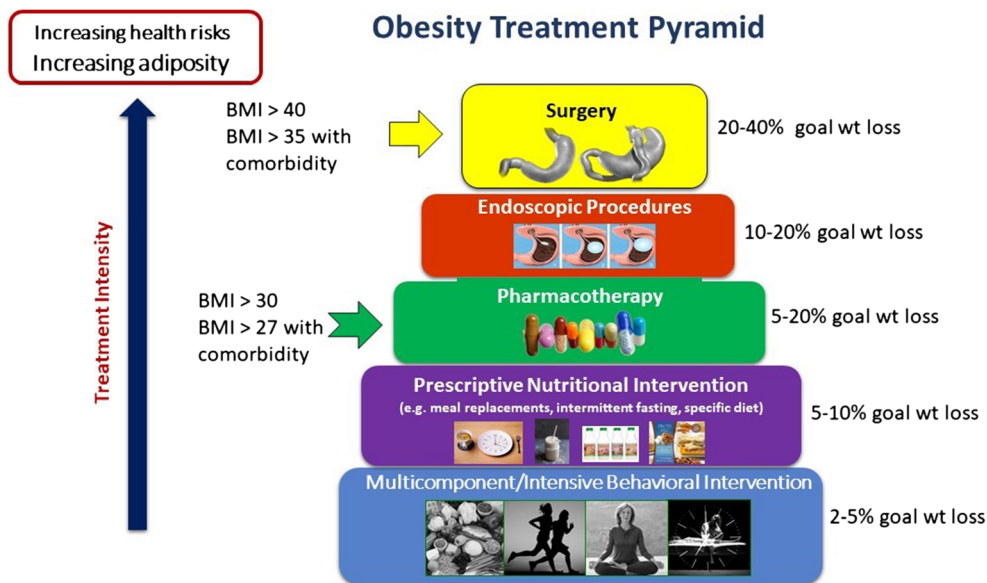
modality and may be a useful tool when speaking to patients. We provide further recommendations for PCPs in **Table 2** based on clinical guidelines and expected health benefits from current treatments. Most importantly, an obesity treatment plan must be individualized to the patient’s disease severity and health risks, health goals, and personal preferences.

**Expanding Access to Obesity Care in the PC setting** In addition to providing one-on-one counseling, there are several ways to change systems of care to improve obesity care in PC settings.

**Telehealth visits:** The Covid-19 pandemic has brought sweeping change to how medical care is provided, and the option of remote clinic visits will likely remain. With the ability to remotely monitor patients’ weights and blood pressure, remote clinic visits may be an ideal option for obesity management, as an in-depth physical exam is usually not necessary for every obesity medicine visit [101]. Most visits will center around reviewing behavior changes, weight loss barriers and progress, and monitoring for pharmacotherapy side effects. Remote visits may even help patients avoid feelings of stigma produced by the structural environment of clinics (e.g., chairs and exam tables not being able to accommodate their size); the act of being weighed in public; and social stigma from medical staff and providers [102–105].

**Team-based care:** Team- and systems-based approaches can be utilized for lifestyle-focused treatment. Many research studies done in the PC settings have demonstrated the effectiveness of using various healthcare team members to deliver weight management services including nurses, lay educators, registered dietitians, behavioral

Fig. 1 Obesity treatment pyramid developed by Angela Fitch, MD



**Table 2** Recommendations to potentially improve patient treatment success

- Diagnose obesity as class I, II, or III to identify appropriate treatment intensity.
- Aim for a 5–10% weight loss for class I and/or if the goal is to prevent diabetes and/or promote remission of a mild–moderate complication (e.g., hypertension, dyslipidemia) [17]. Consider adding pharmacotherapy early on to increase the chance of a 5% weight loss.
- Aim for a 10–20% weight loss for patients with class II or III and/or a moderate complication (e.g., nonalcoholic fatty liver disease [96, 97], obstructive sleep apnea (OSA) [98, 99], or mild–moderate type 2 diabetes [100]). Consider discussing surgery if lifestyle and pharmacotherapy are insufficient.
- Aim for a >20% weight loss for class II or III and/or a severe complication (e.g., poorly controlled diabetes) and consider bariatric surgery early on as it is the most efficacious in reaching this desired weight loss goal, especially in the setting of diabetes (65).
- Create and document an obesity treatment plan.
- Develop a system for routine follow-up at a minimum of every 3 months (more frequent if possible) during the “core” weight loss phase, increasing interval follow-up during the “maintenance” phase (every 6–12 months).

therapists, and health coaches to reinforce lifestyle modifications [106–111]. A systematic review of PC-based interventions for obesity showed that several interventions delivered both in-person and remotely by interdisciplinary team members were more effective than usual care [112•]. Few trials of weight maintenance interventions have been conducted in primary care settings, but both telephone- and EHR-based supportive coaching have been shown to help prevent weight regain after intentional weight loss [113, 114]. When available, PCPs can also consider utilizing “e-consults” for brief discussions with a weight management specialist.

Still, a challenge remains to sustainably staff and fund a PC-based weight management program. One potential mechanism for funding is to use chronic care management (CCM) codes, which can be used for patients with obesity and at least one other comorbid medical condition to appropriately increase the complexity of each visit and facilitate more frequent visits.

### Community Partnering

Providing adequate obesity care in PC settings can be overwhelming, with limited time to provide in-depth behavioral counseling, so we encourage clinics to consider partnering with local community resources. The STOP Obesity Alliance recommends leveraging community providers and programs and online commercial programs [86••]. There is evidence to support the use of commercial programs like WW (formerly Weight Watchers) as a way to augment clinical care with a high-intensity weight loss program via increased self-monitoring and group support [115]. Clinics can also build relationships with local programs like YMCAs or free/lower cost programs (e.g., NYC Shape Up or Take Off Pounds Sensibly [TOPS] [116, 117]) to connect patients with local options for supporting behavior change between clinic visits. Additionally, multiple studies have shown that faith-

based organizations can deliver effective weight loss and health behavior interventions, especially in predominantly African-American communities [118, 119]. Consider compiling a list of such resources to provide to patients who are interested, as these may be their only opportunity to engage in safe exercise or other healthy behaviors [86, 120].

### Conclusion

Obesity is the most common chronic disease that PCPs encounter. In this article, we reviewed the current treatments for obesity including lifestyle and behavioral interventions, anti-obesity medications, bariatric surgery, and endoscopic procedures. Clinically, utilizing strategies such as a SDM approach and the 5As to discuss treatment options can facilitate formulating an obesity treatment plan. Utilizing telehealth, a team-based approach, and community partnering can increase patient access to intensive behavioral interventions. We hope this article helps PCPs feel more comfortable discussing obesity and current treatment options with their patients and if needed, begin looking into ways to implement or improve obesity care in their practice. Future studies should evaluate other cost-effective and efficient ways to implement obesity care into the PC setting.

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