

Bariatric Surgery for Primary Care: When to Refer and How to Support Patients Pre- and Post-Surgery

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ABSTRACT

OBJECTIVE: To review the primary care provider's (PCP's) role in the management of obese patients who may be candidates for metabolic and bariatric surgery, including early identification and referral, preoperative preparation, risk assessment, and long-term postoperative care. He we synthesize current guidelines and evidence to equip PCPs with practical strategies for management of metabolic and bariatric surgery patients.

KEYWORDS: Primary Care, Referral, Metabolic and Bariatric Surgery, Obesity Management

INTRODUCTION

The obesity epidemic is well documented and the rates of obesity have steadily been rising for the last several decades. According to the World Health Organization, globally obesity has nearly tripled since 1975 and one in eight people are classified as obese.¹ In the United States, the Centers for Disease Control and Prevention reports that the prevalence of adult obesity was 41.9% in 2020.² It is not surprising that with increasing prevalence of obesity that metabolic and bariatric surgery (MBS) is an increasingly utilized option for weight management and comorbidity reduction. In the United States, greater than 250,000 MBS procedures are performed annually.³ Thankfully with the advent of minimally invasive techniques and improvements in perioperative care the safety and efficacy of MBS has improved over the past two decades. In the modern era perioperative morbidity and mortality from MBS has decreased to levels comparable with other common surgeries. In fact, large-scale analyses estimate 30-day mortality rates as low as 0.1–0.3% for primary procedures, a figure that is likely to continue to improve.⁴ Beyond safety, controlled trials confirm the most superior long-term metabolic outcomes, superior to medical management alone. As compared to medical management and dieting, MBS consistently has demonstrated the greatest degree of weight loss, the most durable results, superior remission rates of obesity-related comorbidities, and improvements in all-cause mortality.^{5–7}

Despite the demonstrated efficacy of MBS, patients are often under referred by PCPs. Some studies have reported as few as 1% of eligible patients are referred for MBS.⁸ The

reasons for this are likely multifactorial and may represent a number of issues regarding access and patient-related factors. However, introspection is necessary to ensure referral patterns are not affected by implicit weight bias or misconceptions about surgery's risks and long-term outcomes, as surveys continue to reveal higher rates of weight biases and poor understanding of MBS complication rates among referring providers.^{9,10} However, with better education we may mitigate this bias and improve equitable access to care. Regardless, it remains a fact that the PCP plays a pivotal role in the early identification of patients who may benefit from bariatric surgery and will remain a vital member of the patients healthcare team throughout the weight loss journey. Additionally, lifelong support is needed to mitigate the risk of unique complications. This article aims to equip physicians with tools to manage this growing population and reviews the PCP's responsibilities in referral, preoperative preparation, risk assessment, and long-term care.

IDENTIFYING CANDIDATES FOR BARIATRIC SURGERY

BMI Criteria for Metabolic and Bariatric Surgery

MBS is currently the most effective evidence-based treatment for obesity across all body-mass index (BMI) classes. Historically, eligibility for MBS followed the 1991 National Institutes of Health (NIH) Consensus Guidelines. However, these criteria have recently been updated in response to the growing body of evidence that improvements in metabolic health can occur in patients with lower BMI after MBS.¹¹ It is important for the referring provider to understand that these shifts not only broaden eligibility to patients with lower BMIs, but also have specific considerations for Asians populations. This is due to the fact that these patients have higher cardiometabolic risk at lower BMI thresholds [Table 1]. Despite the fact that these guidelines are evidence-based, insurance coverage remains variably aligned with these newer BMI thresholds. We encourage referring providers to adhere to the more modern BMI thresholds when referring to weight loss centers.

Early Identification and Referral

Due to the high prevalence of obesity, we recommend systematic obesity screening protocols to ensure that PCPs can

Table1. Updated ASMBS/IFSO Indications for Metabolic and Bariatric Surgery

1991 NIH Consensus Guidelines	2022 ASMBS/IFSO Guidelines
BMI ≥ 40 kg/m ² with or without associated comorbidities.	BMI ≥ 35 kg/m ² with or without associated comorbidities.
BMI ≥ 35 kg/m ² with associated obesity-related comorbidity $\pm$.	BMI ≥ 30 kg/m ² with associated obesity-related comorbidity $\pm$. [‡]
	Asian populations: BMI ≥ 27.5 kg/m ²

[‡] Type 2 diabetes mellitus, Hypertension, Dyslipidemia, Obstructive sleep apnea, Non-alcoholic fatty liver disease (NAFLD), Gastroesophageal reflux disease (GERD), Osteoarthritis

identify all eligible patients and ensure they are informed about all evidence-based obesity treatment options.⁹ Essential to delivering high quality, equitable, patient-centered care is recognizing obesity as a chronic, relapsing, neuro-behavioral disease.¹² Longitudinally measuring BMI and waist circumference, and a thorough assessment of obesity-related comorbidities, is crucial for early identification of those who may benefit from intervention.¹³ When patients are identified, PCPs should initiate compassionate and nonjudgmental conversations about weight and provide the patient with education of the metabolic health benefits of the various available interventions and their impact on long-term survival.¹⁴ Emphasis should be on the fact that obesity is a chronic disease and reviewing effective treatment options, such as intensive lifestyle changes, medications, and metabolic and bariatric surgery. Structured tools may support this approach. For example, integrating the Edmonton Obesity Staging System (EOSS) and a standardized quality-of-life questionnaire into annual physicals may help stratify patients obesity and metabolic health and flag high-risk patients whose comorbidities or impaired quality of life may warrant a more prompt referral to a bariatric center.^{15,16} When patients are identified as candidates for medical or surgical weight loss they should be promptly referred to a weight loss specialist.

Psychosocial and Behavioral Readiness

Beyond lifestyle changes, successful weight loss requires a foundation of psychological stability. A routine psychological examination is generally performed by the bariatric team; however, integrating behavioral health support early in the process will enhance patient readiness, safety, and the overall appropriateness of surgical candidacy. Moreover, untreated psychiatric illness may increase postoperative complication risk and reduce adherence to care plans. For these reasons, the PCP should aim to identify patients with complicating psychosocial factors. This is best done by routine screening of mental health histories, including screening for mood disorders, post-traumatic stress disorder (PTSD), eating disorders, and prior suicide attempts. Furthermore, substance use history is equally critical and

candidates for bariatric surgery should be screened using validated tools such as AUDIT-C or the Drug Abuse Screening Test (DAST).

Contraindications to Bariatric Surgery

Not all patients will be candidates for metabolic and bariatric surgery. While there are no absolute contraindications, relative contraindications include: severe heart or lung disease, active cancer treatment, uncontrolled substance abuse, major psychiatric disorders, impaired intellectual capacity, pregnancy, Crohn's disease, multiple suicide attempts or suicidal ideation, poor adherence to preprocedural instructions, inability to manage self-care, and lack of a support system.¹⁷ We would encourage PCPs to proactively identify and address modifiable risk factors through coordinated management with weight loss specialists and other relevant clinicians to optimize surgical eligibility.

PREOPERATIVE WEIGHT LOSS

The referring provider plays a critical role in preparing patients for MBS. One of the most impactful interventions during the period between referral and the bariatric surgery evaluation is supporting preoperative weight loss. Often it can take weeks to months for the initial visit with a surgeon to occur and this offers an ideal opportunity to begin documented counseling on weight reduction goals and strategies. Moreover, many insurance providers require a number of months of documented weight loss discussions either in the PCPs office or in the bariatric surgeons office. Starting this process sooner helps set realistic expectations, reinforces the importance of lifestyle change, and ensures more rapid progression through the evaluation for MBS.

Additionally, preoperative weight loss can improve perioperative and postoperative outcomes, as it has been shown that decreasing liver volume and visceral fat, facilitates laparoscopic access and reduces operative time and conversion to open rates.^{18,19} Additionally, while not required in most centers, preoperative weight loss may also serve as a practical test of patient compliance and readiness.²⁰ Primary care providers can support these goals through evidence-based interventions such as high protein, low carbohydrate diets, pharmacotherapy with GLP-1 receptor agonists such as semaglutide or tirzepatide, and structured behavioral counseling. Proactively addressing weight loss in primary care also ensures patients feel supported throughout the preoperative process and lays the groundwork for lifelong behavioral change.

POSTOPERATIVE AND LONG-TERM FOLLOW-UP CARE

Immediate Postoperative Phase

The first six months following bariatric surgery represent

a critical period and requires coordinated care between the bariatric surgeon and the PCP. Patients are going through rapid physiological change in addition to recovering from surgery. The primary goal in this phase is to monitor for early postoperative complications; such as, anastomotic leaks, thromboembolic events, bleeding, or infections. Beyond monitoring for surgical complications, nutrition management involves a protocolized dietary progression. Patients are generally advanced from a clear liquid diet to purees, soft solids, and eventually regular textured foods. Dietary counseling should include education on portion control and hydration. Patients should be advised to avoid high-sugar foods to prevent dumping syndrome. Finally, careful attention to patients' medication regimen is vital. With substantial weight loss and metabolic improvements, it is frequently necessary to adjust or discontinue of medications for obesity-related comorbidities. While patients will be closely monitored by the bariatric surgery team, close communication enhances safety during this period.

Nutritional Surveillance and Management

Although bariatric centers typically conduct intensive follow-up during the first one to two years postoperatively, responsibility for ongoing micronutrient surveillance often transitions to the primary care provider thereafter. Lifelong supplementation with a bariatric-specific multivitamins and routine annual vitamin and micronutrient labs are mandatory [Table 2]. Guidelines recommend routine assessment of key nutrients annually, given the persistent risk of deficiencies even years after surgery.¹⁷ Primary care physicians should be familiar with these monitoring protocols and ensure adherence to lifelong supplementation regimens to prevent serious complications such as anemia, neuropathy, osteoporosis, and neurologic syndromes.

Weight Regain: Detection and Management

Despite the substantial and sustained weight loss achieved by most patients after bariatric surgery, up to 30% may experience clinically significant weight regain.^{17,21} Patients with a history of MBS should be screened annually to identify early signs of weight regain and implement interventions. Contributing factors include poor dietary habits, sedentary behavior, and anatomical changes over time, such as dilation of the gastric sleeve or the formation of a gastro-gastric fistula. Typically, management begins reinforcement of nutritional and behavioral strategies. If unsuccessful, pharmacologic therapies such as GLP-1 receptor agonists and other anti-obesity medications can be considered; however, for patients with significant regain, referral back to the bariatric surgeon is required to rule out an anatomical reason for weight recidivism and to discuss surgical if revision is indicated.

Psychosocial Considerations

The psychosocial dimension of bariatric surgery is critical to long-term management of these patients. Patients often face profound identity changes, emotional volatility, and risk for disordered eating, including binge eating or "transfer addiction" to substances such as alcohol or drugs.^{22,23} Therefore, it is recommended that routine screening for depression, anxiety, and maladaptive eating behaviors be performed annually to ensure early detection and intervention. Additionally, PCPs should facilitate access to support groups (often available through the bariatric surgery center), behavioral health professionals, and specialized counseling services that can provide coping strategies and reinforce the patient's commitment to lifestyle changes. Regular motivational counseling in the primary care setting can help sustain behavioral modifications, prevent relapse into unhealthy patterns, and promote emotional resilience.

Table 2. Recommended Long-Term Micronutrient Screening After Bariatric Surgery

Nutrient	Monitoring	Common Deficiency Symptoms
Thiamine (B1)	Every 6–12 months	Wernicke's encephalopathy (confusion, ataxia, ophthalmoplegia)
Vitamin B12	Every 6–12 months	Fatigue, neuropathy, glossitis
Iron	Every 6–12 months	Anemia, pica
Calcium/Vitamin D	Annually	Osteopenia, secondary hyperparathyroidism, fractures
Folate	Annually	Anemia, neural tube defects in pregnancy
Protein	Annually	Edema, weakness, muscle wasting
Vitamin A	Annually	Night blindness, xerophthalmia, impaired immunity
Vitamin E	As indicated	Neuropathy, ataxia, hemolytic anemia
Vitamin K	As indicated	Easy bruising, bleeding diathesis
Copper	Annually	Anemia, neutropenia, neuropathy, myelopathy
Zinc	Annually	Dermatitis, alopecia, impaired wound healing, taste changes

Special Populations

Certain patient groups require tailored counseling and management to ensure safe and effective outcomes after bariatric surgery. Women of childbearing age should be advised to delay pregnancy for 12–18 months postoperatively to avoid pregnancy complications derived from nutrient deficiencies or rapid weight loss.²⁴ For those planning pregnancy after surgery, prenatal care must include micronutrient surveillance with particular attention to iron, folate, vitamin B12, calcium, and fat-soluble vitamins. In older adults, bariatric surgery can improve metabolic health and functional status but requires careful risk-benefit assessment due to higher perioperative risks, sarcopenia concerns, and the

potential for nutritional deficiencies exacerbated by age-related changes in absorption and bone health.

CONCLUSION

Bariatric surgery is a proven, effective intervention for the management of severe obesity and its associated comorbidities, offering patients meaningful and sustained weight loss, improved metabolic health, and reduced mortality. However, it is not a stand-alone cure, but rather one component of a lifelong, multidisciplinary treatment plan that requires ongoing commitment from patients and providers alike. PCPs play a central role in this continuum of care from early identification and referral of appropriate candidates, to pre-operative optimization, to vigilant long-term monitoring for nutritional deficiencies, weight regain, and psychosocial challenges. By adopting structured screening protocols, fostering empathetic, stigma-free discussions about obesity as a chronic disease, and collaborating closely with surgical, nutritional, and behavioral health teams, PCPs can help ensure that patients derive the full benefits of bariatric surgery while minimizing risks.

References

1. Obesity and overweight. World Health Organization. 2025; <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>
2. Hales CM, Carroll MD, Fryar CD, Ogden CL. Prevalence of Obesity Among Adults and Youth: United States, 2015-2016. NCHS Data Brief. Oct 2017;1288:1-8.
3. ASMBS. <https://asmbs.org/resources/estimate-of-bariatric-surgery-numbers/>
4. Stenberg E, Szabo E, Agren G, et al. Early complications after laparoscopic gastric bypass surgery: results from the Scandinavian Obesity Surgery Registry. Ann Surg. Dec 2014;260(6):1040-7. doi:10.1097/SLA.0000000000000431
5. Schauer PR, Bhatt DL, Kirwan JP, et al. Bariatric Surgery versus Intensive Medical Therapy for Diabetes - 5-Year Outcomes. N Engl J Med. Feb 16 2017;376(7):641-651. doi:10.1056/NEJMoal600869
6. Mingrone G, Panunzi S, De Gaetano A, et al. Bariatric-metabolic surgery versus conventional medical treatment in obese patients with type 2 diabetes: 5 year follow-up of an open-label, single-centre, randomised controlled trial. Lancet. Sep 5 2015;386(9997):964-73. doi:10.1016/S0140-6736(15)00075-6
7. Soroceanu RP, Timofte DV, Danila R, et al. The Impact of Bariatric Surgery on Quality of Life in Patients with Obesity. J Clin Med. Jun 23 2023;12(13):doi:10.3390/jcm12134225
8. Liu N, Funk LM. Bariatric Surgery Trends in the U.S.: 1% is the Loneliest Number. Ann Surg. Feb 2020;271(2):210-211. doi:10.1097/SLA.00000000000003714
9. Phelan SM, Burgess DJ, Yeazel MW, Hellerstedt WL, Griffin JM, van Ryn M. Impact of weight bias and stigma on quality of care and outcomes for patients with obesity. Obes Rev. Apr 2015;16(4):319-26. doi:10.1111/obr.12266
10. Lopez EKH, Helm MC, Gould JC, Lak KL. Primary care providers' attitudes and knowledge of bariatric surgery. Surg Endosc. May 2020;34(5):2273-2278. doi:10.1007/s00464-019-07018-z
11. Eisenberg D, Shikora SA, Aarts E, et al. 2022 American Society of Metabolic and Bariatric Surgery (ASMBS) and International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) Indications for Metabolic and Bariatric Surgery. Obes Surg. Jan 2023;33(1):3-14. doi:10.1007/s11695-022-06332-1
12. Rubino F, Puhl RM, Cummings DE, et al. Joint international consensus statement for ending stigma of obesity. Nat Med. Apr 2020;26(4):485-497. doi:10.1038/s41591-020-0803-x
13. Moyer VA, Force USPST. Screening for and management of obesity in adults: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med. Sep 4 2012;157(5):373-8. doi:10.7326/0003-4819-157-5-201209040-00475
14. Kim J, Eisenberg D, Azagury D, Rogers A, Campos GM. American Society for Metabolic and Bariatric Surgery position statement on long-term survival benefit after metabolic and bariatric surgery. Surg Obes Relat Dis. Mar-Apr 2016;12(3):453-459. doi:10.1016/j.soard.2015.11.021
15. Swaleh R, McGuckin T, Myroniuk TW, et al. Using the Edmonton Obesity Staging System in the real world: a feasibility study based on cross-sectional data. CMAJ Open. Oct-Dec 2021;9(4):E1141-E1148. doi:10.9778/cmajo.20200231
16. Zevin B, Sivapalan N, Chan L, Cofie N, Dalgarno N, Barber D. Factors influencing primary care provider referral for bariatric surgery: Systematic review. Can Fam Physician. Mar 2022;68(3):e107-e117. doi:10.46747/cfp.6803e107
17. Mechanick JL, Apovian C, Brethauer S, et al. Clinical Practice Guidelines for the Perioperative Nutrition, Metabolic, and Nonsurgical Support of Patients Undergoing Bariatric Procedures - 2019 Update: Cosponsored by American Association of Clinical Endocrinologists/American College of Endocrinology, the Obesity Society, American Society for Metabolic & Bariatric Surgery, Obesity Medicine Association, and American Society of Anesthesiologists - Executive Summary. Endocr Pract. Dec 2019;25(12):1346-1359. doi:10.4158/GL-2019-0406
18. Alami RS, Morton JM, Schuster R, et al. Is there a benefit to pre-operative weight loss in gastric bypass patients? A prospective randomized trial. Surg Obes Relat Dis. Mar-Apr 2007;3(2):141-5; discussion 145-6. doi:10.1016/j.soard.2006.11.006
19. Fris RJ. Preoperative low energy diet diminishes liver size. Obes Surg. Oct 2004;14(9):1165-70. doi:10.1381/0960892042386977
20. Cassie S, Menezes C, Birch DW, Shi X, Karmali S. Effect of pre-operative weight loss in bariatric surgical patients: a systematic review. Surg Obes Relat Dis. Nov-Dec 2011;7(6):760-7; discussion 767. doi:10.1016/j.soard.2011.08.011
21. Courcoulas AP, King WC, Belle SH, et al. Seven-Year Weight Trajectories and Health Outcomes in the Longitudinal Assessment of Bariatric Surgery (LABS) Study. JAMA Surg. May 1 2018;153(5):427-434. doi:10.1001/jamasurg.2017.5025
22. Green DD, Engel SG, Mitchell JE. Psychological aspects of bariatric surgery. Curr Opin Psychiatry. Nov 2014;27(6):448-52. doi:10.1097/YCO.0000000000000101
23. Sarwer DB, Thompson JK, Mitchell JE, Rubin JP. Psychological considerations of the bariatric surgery patient undergoing body contouring surgery. Plast Reconstr Surg. Jun 2008;121(6):423e-434e. doi:10.1097/PRS.0b013e3181772aa8
24. American Society for Reproductive M, American College of O, Gynecologists' Committee on Gynecologic P. Prepregnancy counseling: Committee Opinion No. 762. Fertil Steril. Jan 2019;111(1):32-42. doi:10.1016/j.fertnstert.2018.12.003

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Disclosures

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