

02-40000-10

Original Effective Date: 10/15/99

[Reviewed: 01/23/25](#)

Revised: 02/15/25

Subject: Bariatric Surgery

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

Position Statement	Billing/Coding	Reimbursement	Program Exceptions	Definitions	Related Guidelines
Other	References	Updates			

DESCRIPTION:

Bariatric surgery is a treatment for morbid obesity in individuals who fail to lose weight with conservative measures. There are numerous gastric and intestinal surgical techniques available. While these techniques have heterogeneous mechanisms of action, the result is a smaller gastric pouch that leads to restricted eating. However, these surgeries may lead to malabsorption of nutrients or eventually to metabolic changes.

Review and Analysis of Evidence: The evidence for bariatric surgery for adults with class III obesity is characterized by a preponderance of single-arm clinical series from individual institutions. These types of studies can be used to determine the amount of weight loss expected from surgery, the durability of the weight loss, and the rate of adverse events. However, these studies are not adequate for determining the comparative efficacy of bariatric surgery versus conservative treatment, or the comparative efficacy of different bariatric surgery techniques. RCTs are difficult in bariatric surgery because many experts consider it inappropriate or unethical to randomize patients to bariatric surgery. The Swedish Obese Subjects (SOS) trial is the most influential study of bariatric surgery versus conservative treatment. A 2023 UpToDate review titled "Obesity in adults: Overview of management" (Perreault et al) states "Bariatric surgical approaches can achieve as much as a 40 percent weight loss at 12 to 18 months post-procedure, with better long-term weight loss maintenance than nonsurgical approaches. In addition to resulting in greater weight loss, bariatric surgery may also reduce obesity related morbidity more than nonsurgical weight loss approaches. In the Swedish Obese Subjects (SOS) after 10 to 20 years of follow-up, patients receiving bariatric surgery (including gastric banding, vertical banded gastroplasty, gastric bypass) had greater reductions in obesity-related morbidity (diabetes, hypertension, dyslipidemia) and overall mortality than those in the conventionally treated group (hazard ratio [HR] 0.71, 95% CI 0.54-0.92). Further, in systematic reviews and meta-analyses of randomized trials comparing bariatric surgery to nonsurgical treatment of obesity (diet, exercise, weight-reducing

drugs, behavioral therapy), there was greater weight loss and higher remission rates of type 2 diabetes in the bariatric surgery group.” Regarding bariatric surgery for adolescent children, Qi et al (2017) published a systematic review and meta-analysis on the use of bariatric surgery for the treatment of adolescents with obesity. Overall results showed significant improvements in BMI as well as glycemic and lipid control with various bariatric surgery techniques. RYGP showed the largest improvements compared with other procedures, with LAGB and SG also showing improvements in this population.

POSITION STATEMENT:

Bariatric surgery may be excluded by contract. Please refer to the individual member contract benefit language.

When **selection criteria** are met, the following bariatric surgery procedures performed for the treatment of clinically severe (morbid) obesity **meet the definition of medical necessity**:

- Open or laparoscopic Roux-en-Y gastric bypass (RYGB) (up to 150cm)
- Laparoscopic adjustable gastric banding (LAGB)
- Open or laparoscopic biliopancreatic diversion with or without duodenal switch
- Sleeve gastrectomy (SG)
- Vertical banded gastroplasty (VBG)

Selection criteria

Adults

- Class III obesity (**BMI \geq 40 kg/m²**), **OR**
- Class II obesity (**BMI 35.0 to 39.9 kg/m²**), with at least one comorbidity refractory to medical management (e.g., Type 2 diabetes, hypertension, coronary artery disease, obstructive sleep apnea, GERD, osteoarthritis, [pseudotumor comorbidities](#)), **AND**
- Does not have a medically treatable cause for obesity (e.g., thyroid or other endocrine disorder), **AND**
- Has made multiple attempts at non-surgical weight loss (e.g., diet, exercise, medications), **AND**
- Has received psychological or psychiatric evaluation with counseling as needed, prior to surgical intervention

Adolescents (< age 18 years)

- **Class III obesity (BMI \geq 40 kg/m²), OR**
- **Class II obesity (BMI 35.0 to 39.9 kg/m²)**, with at least one serious comorbidity refractory to medical management (e.g., Type 2 diabetes, hypertension, coronary artery disease, obstructive sleep apnea, GERD, osteoarthritis, pseudotumor comorbidities), **AND**

- Does not have a medically treatable cause for obesity (e.g., thyroid or other endocrine disorder), **AND**
- Has attained a minimum of [Tanner stage](#) 4 or 5 pubertal development and final or near-final adult height, **AND**
- Has made multiple attempts at non-surgical weight loss (e.g., diet, exercise, medications), **AND**
- Psychological evaluation confirms the stability and competence of the family unit

The bariatric surgery procedures listed below are considered **experimental or investigational**, as there is insufficient clinical evidence in the peer-reviewed literature to support safety, effectiveness and long-term effects on health outcomes.

- Any bariatric surgery procedure performed as the primary treatment for gastroparesis, intractable nausea, gallstones, urinary stress incontinence, gynecological abnormalities, osteoarthritis, infertility, or idiopathic intracranial hypertension
- Any bariatric surgical procedure as a treatment of type 2 diabetes in individuals with a BMI < 35 kg/m²
- Aspiration therapy (e.g., AspireAssist device)
- Endoscopic closure device (Over the Scope [OTSC]; Apollo OverStitch; StomaphyX)
- Intragastic balloons (including, but not limited to Obalon Balloon System and ReShape Integrated Dual Balloon System)
- Long-limb gastric bypass
- Laparoscopic gastric plication (also known as laparoscopic greater curvature plication)
- Mini-gastric bypass
- Mini-sleeve gastrectomy
- Natural orifice transoral endoscopic surgery (NOTES) techniques for bariatric surgery (including, but may not be limited to gastrointestinal liners, endoscopic duodenal-jejunal bypass, endoscopic gastrointestinal bypass devices such as EndoBarrier and ValenTx Endo Bypass System)
- One-anastomosis gastric bypass (OAGB) (loop gastric bypass)
- Open adjustable gastric banding
- Restorative obesity surgery, endoluminal (ROSE) procedure
- Silastic ring vertical gastric bypass (Fobi pouch)
- Single anastomosis duodenoileal bypass with sleeve gastrectomy (SADI-S)
- Sleeve gastrectomy with single anastomosis duodeno-ileal bypass (SIPS)
- Transoral gastroplasty (TG) (vertical sutured gastroplasty; endoluminal vertical gastroplasty; endoscopic sleeve gastroplasty)
- Transoral outlet reduction (TORe)
- Two-stage bariatric surgery procedures (e.g., sleeve gastrectomy as an initial procedure followed by biliopancreatic diversion at a later time)

Revision bariatric surgery

Revision bariatric surgery to address perioperative or late complications of a bariatric procedure (e.g., obstruction, stricture, erosion, band slippage/herniation, fistula, disruption/leakage of a suture/staple line, pouch enlargement due to vomiting, documented gastroesophageal reflux disease (GERD) refractory to maximal medical management, nonabsorption resulting in hypoglycemia or malnutrition, weight loss of 20% or more below ideal body weight) **meets the definition of medical necessity**.

Revision of a primary bariatric procedure that has failed due to dilation of the gastric pouch or dilation proximal to an adjustable gastric band **meets the definition of medical necessity** when **ALL** of the following are met:

- The dilation is documented by upper gastrointestinal examination or endoscopy
- The initial procedure induced weight loss prior to pouch dilation
- The individual has been compliant with a prescribed nutrition and exercise program

Revision bariatric surgery to correct stretching of a stomach pouch created by a previous bariatric surgery procedure, due to overeating, is not considered a surgical complication. Revision surgery for this condition **does not meet the definition of medical necessity**.

BILLING/CODING INFORMATION:

CPT Coding:

0813T	Esophagogastroduodenoscopy, flexible, transoral, with volume adjustment of intragastric bariatric balloon (investigational)
43290	Esophagogastroduodenoscopy, flexible, transoral; with deployment of intragastric bariatric balloon (investigational)
43291	Esophagogastroduodenoscopy, flexible, transoral; with removal of intragastric bariatric balloon(s) (investigational)
43621	Gastrectomy, total; with Roux-en-Y reconstruction
43633	Gastrectomy, partial, distal; with Roux-en-Y reconstruction
43644	Laparoscopy, surgical, gastric restrictive procedure; with gastric bypass and Roux-en-Y gastroenterostomy (Roux limb 150 cm or less)
43645	Laparoscopy, surgical, gastric restrictive procedure; with gastric bypass and small intestine reconstruction to limit absorption [NOTE: 43645 was introduced in 2005 to specifically describe a laparoscopic malabsorptive procedure. However, the code does not describe any specific malabsorptive procedure]
43770	Laparoscopy, surgical, gastric restrictive procedure; placement of adjustable gastric restrictive device (e.g. gastric band and subcutaneous port components)
43771	Laparoscopy, surgical, gastric restrictive procedure; revision of adjustable gastric restrictive device component only
43772	Laparoscopy, surgical, gastric restrictive procedure; removal and replacement of adjustable gastric restrictive device component only
43773	Laparoscopy, surgical, gastric restrictive procedure; removal and replacement of adjustable gastric restrictive device component only
43774	Laparoscopy, surgical, gastric restrictive procedure; removal of adjustable gastric restrictive device and subcutaneous port components

43775	Laparoscopy, surgical, gastric restrictive procedure; longitudinal gastrectomy (i.e, sleeve gastrectomy)
43842	Gastric restrictive procedure, without gastric bypass, for morbid obesity; vertical-banded gastroplasty
43843	Gastric restrictive procedure, without gastric bypass, for morbid obesity; other than vertical-banded gastroplasty
43845	Gastric restrictive procedure with partial gastrectomy, pylorus-preserving duodenoileostomy and ileoileostomy (50 to 100 cm common channel) to limit absorption (biliopancreatic diversion with duodenal switch)
43846	Gastric restrictive procedure, with gastric bypass for morbid obesity; with short limb (150 cm or less) Roux-en-Y gastroenterostomy (may be done laparoscopically)
43847	Gastric restrictive procedure, with gastric bypass for morbid obesity; with small intestine reconstruction to limit absorption (may be done laparoscopically)
43848	Revision, open, of gastric restrictive procedure for morbid obesity, other than adjustable gastric restrictive device (separate procedure)
43886	Gastric restrictive procedure, open; revision of subcutaneous port component only
43887	Gastric restrictive procedure, open; removal of subcutaneous port component only
43888	Gastric restrictive procedure, open; removal and replacement of subcutaneous port component only

NOTE: CPT code 43847 may be used to report biliopancreatic bypass (Scopinaro procedure) **OR** long-limb gastric bypass (> 150 cm). CPT code 43846 explicitly describes a short limb (< 150 cm) Roux-en-Y gastroenterostomy, and thus is not appropriate to report long-limb gastric bypass.

HCPCS Coding:

S2083	Adjustment of gastric band diameter via subcutaneous port by injection or aspiration of saline
-------	--

LOINC Codes:

The following information may be required documentation to support medical necessity: physician history and physical (including co-morbidities and history of attempt(s) of non-surgical weight-loss program(s), physician progress notes, laboratory studies (including most recent TSH level), psychosocial assessment, height, weight and BMI.

Documentation Table	LOINC Codes	LOINC Time Frame Modifier Code	LOINC Time Frame Modifier Codes Narrative
Physician history and physical	28626-0	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Attending physician progress notes	18741-9	18805-2	Include all data of the selected type that represents observations made six months or

			fewer before starting date of service for the claim.
Laboratory studies	26436-6	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Psychosocial well-being, addressed in care plan	58168-6	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Body mass index	39156-5	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Height and weight	54567-3	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Co-morbidities and complications	42126-3	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Endocrine screen assessment	39177-1	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.

REIMBURSEMENT INFORMATION:

Bariatric surgical procedures are reimbursed based on the procedure performed and not the surgical technique used (e.g., microsurgical, laser, laparoscopic, robot-assisted).

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage:

The following National Coverage Determinations (NCDs) were reviewed on the last guideline reviewed date: Bariatric Surgery for Treatment of Co-Morbid Conditions Related to Morbid Obesity (100.1), located at cms.gov.

The following Local Coverage Determination (LCD) was reviewed on the last guideline reviewed date: Surgical Management of Morbid Obesity (L33411) located at cms.gov.

If this Medical Coverage Guideline contains a step therapy requirement, in compliance with Florida law 627.42393, members or providers may request a step therapy protocol exemption to this requirement if based on medical necessity. The process for requesting a protocol exemption can be found at [Coverage Protocol Exemption Request](#)

DEFINITIONS:

Gastric banding: a synthetic band rather than staples is used to divide the stomach into a small upper pouch and a lower portion).

Jejunioileal bypass: shunts food from the jejunum into the ileum, bypassing the small intestine.

Pseudotumor cerebri: when elevated intracranial pressure occurs with no obvious cause; symptoms mimic those of a brain tumor, but no tumor is present.

Skeletal maturity: when the bones and spine have stopped growing; a system of fused skeletal bones, which occurs when bone growth ceases after puberty.

Tanner staging: also known as the sexual maturity rating; breaks down the visible changes during puberty into stages of sexual development.

RELATED GUIDELINES:

[Gastric Electrical Stimulation, 01-91000-04](#)

[Reconstructive Surgery/Cosmetic Surgery, 02-12000-01](#)

[Vagus Nerve Stimulation, 02-61000-22](#)

OTHER:

None applicable.

REFERENCES:

1. Abdelbaki TN, Huang CK, Ramos A, Neto MG, Talebpour M, Saber AA. Gastric plication for morbid obesity: a systematic review. *Obes Surg*. 2012 Oct;22(10):1633-9.
2. AHRQ National Guideline Clearinghouse. NGC-6413 SAGES Guideline for clinical application of laparoscopic bariatric surgery. 2003 Jul (revised 2008 Oct).
3. AHRQ National Guideline Clearinghouse. NGC-6609. Role of endoscopy in the bariatric surgery patient. *Gastrointest Endosc* 2008 Jul;68(1):1-10.
4. AHRQ National Guideline Clearinghouse. NGC-6638 Expert panel on weight loss surgery executive report. 2004 Aug 4 (revised 2007 Dec 12).

5. AHRQ National Guideline Clearinghouse. NGC-6716 American Association of Clinical Endocrinologists, The Obesity Society, and American Society for Metabolic and Bariatric Surgery medical guidelines for clinical practice for the perioperative nutritional, metabolic and nonsurgical support of the bariatric surgery patient. 2008 Jul-Aug.
6. AHRQ Comparative Effectiveness Review Number 82. Bariatric Surgery and Nonsurgical Therapy in Adults With Metabolic Conditions and a Body Mass Index of 30.0 to 34.9 kg/m². Prepared by: Southern California Evidence-based Practice Center. June 2013.
7. AHRQ National Guideline Clearinghouse. NGC-10217. Clinical practice guidelines for the perioperative nutritional, metabolic, and nonsurgical support of the bariatric surgery patient – 2013 update: cosponsored by American Association of Clinical Endocrinologists, The Obesity Society, and American Society for Metabolic and Bariatric Surgery. *Endocr Pract.* 2013 Mar-Apr;19(2):337-72.
8. American Association of Clinical Endocrinologists, The Obesity Society, and American Society for Metabolic & Bariatric Surgery Medical Guidelines for Clinical Practice for the Perioperative Nutritional, Metabolic, and Nonsurgical Support of the Bariatric Surgery Patient. *Surgery for Obesity and Related Diseases* 4 (2008) S109-S184.
9. American College of Gastroenterology. Clinical guideline: Management of Gastroparesis (2013). *Am J Gastroenterol.* 2013 Jan;108(1):18-37.
10. American College of Gastroenterology. Guidelines for the diagnosis and management of gastroesophageal reflux disease. *Am J Gastroenterol.* 2013 Mar;108(3):308-28.
11. American Association of Clinical Endocrinologists/American College of Endocrinology (AAACE/ACE). Position Statement on the Prevention, Diagnosis and Treatment of Obesity (1998 Revision).
12. American Diabetes Association. Standards of Medical Care in Diabetes-2009. *Diabetes Care*, Vol 32 Supplement 1, January 2009. Accessed 03/05/09.
13. American Diabetes Association. Standards of Medical Care in Diabetes-2010. *Diabetes Care*, Vol 32 Supplement 1, January 2010.
14. American Diabetes Association. Standards of Medical Care in Diabetes-2011. *Diabetes Care*, Vol 34 Supplement 1, January 2011.
15. American Gastroenterological Association Medical Position Statement on Obesity. *Gastroenterology* 2002;123:879-881.
16. American Society for Bariatric Surgery (ASBS) and the Society of American Gastrointestinal Endoscopic Surgeons (SAGES). Guidelines for laparoscopic Bariatric Surgery. SAGES, 03/25/08.
17. American Society for Bariatric Surgery (ASBS) and the Society of American Gastrointestinal Endoscopic Surgeons (SAGES). Guidelines for laparoscopic and open surgical treatment of morbid obesity (ASBS/SAGES, 2000).
18. American Society for Bariatric Surgery (ASBS). Position Statement on Sleeve Gastrectomy as a Bariatric Procedure. (ASMBS 06/17/07).
19. American Society for Metabolic & Bariatric Surgery. Position Statement on Preoperative Supervised Weight Loss Requirements. *Surgery for Obesity and Related Diseases* 7 (2011) 257–260.
20. American Society for Metabolic & Bariatric Surgery. Updated Position Statement on Sleeve Gastrectomy as a Bariatric Procedure, 10/28/11.
21. American Society for Metabolic and Bariatric Surgery. ASMBS Endorsed Procedures and FDA Approved Bariatric Devices. 2019. Accessed at <https://asmbs.org/resources/endorsed-procedures-and-devices>.
22. American Society for Metabolic and Bariatric Surgery Statements and Guidelines. Bariatric surgery in class I obesity (body mass index 30–35 kg/m²). *Surgery for Obesity and Related Diseases* 9 (2013) e1–e10.

23. American Society for Metabolic and Bariatric Surgery. Pediatric Best Practice Guidelines (January 2012). Accessed at <https://asmbs.org/resources/pediatric-best-practice-guidelines>.
24. American Society for Metabolic and Bariatric Surgery. ASGE/ASMBS Task Force on Endoscopic Bariatric Therapy. White Paper: A pathway to endoscopic bariatric therapies. *Surgery for Obesity and Related Diseases* 7 (2011) 672–682.
25. American Society for Metabolic and Bariatric Surgery. Updated position statement on sleeve gastrectomy as a bariatric procedure. *Surg Obes Relat Dis*. May-Jun 2012;8(3):e21-26.
26. American Society for Metabolic and Bariatric Surgery. Policy Statement on Gastric Plication (May 2011). Accessed at <https://asmbs.org/resources/policy-statement-on-gastric-plication>.
27. Aminian A, Chang J, Brethauer SA, Kim JJ. ASMBS updated position statement on bariatric surgery in class I obesity (BMI 30–35 kg/m²). *Surgery for Obesity and Related Diseases*. 2018;14:1071-87.
28. Andrade CG, Lobo A. Weight loss in the first month post-gastroplasty following diet progression with introduction of solid food three weeks after surgery. *Arq Bras Cir Dig*. 2014;27 Suppl 1:13-6.
29. Appel LJ et al. Comparative Effectiveness of Weight-Loss Interventions in Clinical Practice. *N Engl J Med* 2011;365:1959-68.
30. Arias E, Martínez PR, Ka Ming Li V, Szomstein S, Rosenthal RJ. Mid-term Follow-up after Sleeve Gastrectomy as a Final Approach for Morbid Obesity. *Obes Surg*. 2009 Mar 12.
31. August GP, Caprio S, Fennoy I et al. Prevention and treatment of pediatric obesity: an endocrine society clinical practice guideline based on expert opinion. *J. Clin. Endocrinol. Metab*. 2008; 93(12):4576-99.
32. Bianchi A, Pagan-Pomar A, et al. Biliopancreatic Diversion in the Surgical Treatment of Morbid Obesity: Long-Term Results and Metabolic Consequences. *Obes Surg*. 2020 Nov;30(11):4234-4242. Doi: 10.1007/s11695-020-04777-w. Epub 2020 Jun 19. PMID: 32562130.
33. Bleich SN et al. Impact of Bariatric Surgery on Health Care Utilization and Costs Among Patients With Diabetes. *Medical Care* Volume 50, Number 1, January 2012.
34. Blue Cross Blue Shield Association Evidence Positioning System®. 7.01.47- Bariatric Surgery, 05/24.
35. Blue Cross Blue Shield Association TEC Assessment; Laparoscopic adjustable gastric banding for morbid obesity (2006).
36. Blue Cross Blue Shield Association TEC Assessment; Laparoscopic gastric bypass surgery for morbid obesity (2005).
37. Blue Cross Blue Shield Association TEC Special Report: The relationship between weight loss and changes in morbidity following bariatric surgery for morbid obesity. BCBSA TEC Assessment Program, 2003; 18:1-25.
38. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC), TEC Assessment Program. Bariatric Surgery In Patients With Diabetes And Body Mass Index Less Than 35 kg/m² . October 2012; Volume 27, Tab E.
39. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC), TEC Assessment Program. Laparoscopic Adjustable Gastric Banding In Patients With Body Mass Index Less Than 35 kg/m² With Weight-Related Comorbidity. October 2012; Volume 27, Tab F.
40. Bolen SD, Chang HY, Weiner JP, Richards TM, Shore AD, Goodwin SM, Johns RA, Magnuson TH, Clark JM. Clinical outcomes after bariatric surgery: a five-year matched cohort analysis in seven US states. *Obesity Surgery* 22, no. 5 (2012): 749-763.

41. Bolton J, et al. Endoscopic Revision (StomaphyX) versus Formal Surgical Revision (Gastric Bypass) for Failed Vertical Band Gastroplasty. *Journal of Obesity* Volume 2013, Article ID 108507. Hindawi Publishing Corporation.
42. Brethauer SA, Kothari S, Sudan R, et al. Systematic review on reoperative bariatric surgery: American Society for Metabolic and Bariatric Surgery Revision Task Force. *Surg Obes Relat Dis*. Feb 22 2014.
43. Brito JP, Montori VM, Davis AM. Metabolic Surgery in the Treatment Algorithm for Type 2 Diabetes: A Joint Statement by International Diabetes Organizations. *JAMA*. 2017 Feb 14;317(6):635-636. Doi: 10.1001/jama.2016.20563.
44. Caio EG, Reis J, Alvarez-Leite I, Bressan J, Alfenas RC. Role of Bariatric-Metabolic Surgery in the Treatment of Obese Type 2 Diabetes with Body Mass Index < 35kg/m²: A Literature Review. *Diabetes Technology & Therapeutics*. April 2012, 14(4): 365-372.
45. California Technology Assessment Forum (CTAF). Laparoscopic Adjustable Silicone Banding for Morbid Obesity, (02/28/07).
46. Canadian Agency for Drugs and Technologies in Health (CADTH). Laparoscopic Adjustable Banding for Weight Loss in Adults: Clinical and Economic Review. (09/07).
47. Centers for Medicare & Medicaid Services (CMS). National Coverage Determination for Bariatric Surgery for Treatment of Co-Morbid Conditions Related to Morbid Obesity (100.1) (09/24/13).
48. Centers for Medicare & Medicaid Services (CMS). Local Coverage Determination (LCD): Surgical Management of Morbid Obesity (L33411) (10/01/15) (revised 10/01/19).
49. Chakhtoura G, Zinzindohoué F, Ghanem Y, Ruseykin I, Dutranoy JC, Chevallier JM. Primary results of laparoscopic mini-gastric bypass in a French obesity-surgery specialized university hospital. *Obes Surg*. 2008 Sep;18(9):1130-3.
50. Chiapaikeo D, et al. Analysis of reoperations after laparoscopic adjustable gastric banding. *JLS*. 2014 Oct-Dec;18(4). Pii: e2014.00210.
51. Clarke MG, Wong K, Pearless L, Booth M. Laparoscopic Silastic Ring Mini-gastric Bypass: a Single Centre Experience. *Obesity Surgery* November 2013, Volume 23, Issue 11, pp 1852-1857.
52. ClinicalTrials.gov. NCT01685177: Single Anastomosis Duodeno-Ileal Bypass vs Standard Duodenal Switch as a Second Step After Sleeve Gastrectomy in the Super-Morbid Obese Patient (SADI vs CD). September 2012.
53. ClinicalTrials.gov. Advanced Medical Therapy vs. Advanced Medical Therapy Plus Bariatric Surgery for the Resolution of Type 2 Diabetes. Identifier NCT00432809. Phase IV. Verified by The Cleveland Clinic. (11/07).
54. ClinicalTrials.gov. Effects Of Bariatric Surgery on Insulin. Identifier NCT00535600. Verified by National Institute of Health Clinical Center, (09//07).
55. ClinicalTrials.gov. Longitudinal Study of Bariatric Surgery. Identifier NCT00433810. Verified by National Institute of Diabetes and Digestive and Kidney Disease (NIDDK). (12/07).
56. ClinicalTrials.gov. Teen-Longitudinal Assessment of Bariatric Surgery (Teens-LABS) Adolescent Bariatrics: Assessing Health benefits and Risk. Identifier NCT00474318. Verified by Children's Hospital Medical Center, Cincinnati. (05/07).
57. ClinicalTrials.gov. NCT02142257: Comparison of Gastric Bypass and AspireAssist Aspiration Therapy for Treatment of Morbid Obesity. Blekinge County Council Hospital (January 2016).
58. ClinicalTrials.gov. NCT01766037: Pivotal Aspiration Therapy With Adjusted Lifestyle Therapy Study (PATHWAY). Boston Medical Center, Brigham and Women's Hospital, Cornell University, Howard University, and Mayo Clinic (January 2017).

59. Coleman KJ, Wellman R, Fitzpatrick SL, Conroy MB, Hlavin C, Lewis KH, Coley RY, McTigue KM, Tobin JN, McBride CL, Desai JR, Clark JM, Toh S, Sturtevant JL, Horgan CE, Duke MC, Williams N, Anau J, Horberg MA, Michalsky MP, Cook AJ, Arterburn DE, Apovian CM; PCORnet Bariatric Study Collaborative. Comparative Safety and Effectiveness of Roux-en-Y Gastric Bypass and Sleeve Gastrectomy for Weight Loss and Type 2 Diabetes Across Race and Ethnicity in the PCORnet Bariatric Study Cohort. *JAMA Surg.* 2022 Oct 1;157(10):897-906. Doi: 10.1001/jamasurg.2022.3714.
60. Colquitt J, Clegg A, Loveman E, Royle P, Sidhu MK. Surgery for morbid obesity. *Cochrane Database of Systematic Reviews* 2005, Issue 4. Art. No.: CD003641. DOI: 10.1002/14651858.CD003641.pub2.
61. Consalvo V, Canero A, Salsano V. Bariatric Surgery and Infertility: A Prospective Study. *Surg Technol Int.* 2017 Dec 22;31:327-330. PMID: 29316601.
62. Coskun H, Cipe G, Bozkurt S, Bektasoglu HK, Hasbahceci M, Muslumanoglu M. Laparoscopic sleeve gastrectomy in management of weight regain after failed laparoscopic plication. *Int J Surg Case Rep.* 2013;4(10):872-4.
63. Cottam A, Cottam D, Zaveri H, et al. An Analysis of Mid-Term Complications, Weight Loss, and Type 2 Diabetes Resolution of Stomach Intestinal Pylorus-Sparing Surgery (SIPS) Versus Roux-En-Y Gastric Bypass (RYGB) with Three-Year Follow-Up. *Obes Surg.* 2018 Sep;28(9):2894-2902. Doi: 10.1007/s11695-018-3309-6. PMID: 29790130.
64. Courcoulas AP, Patti ME, Hu B, Arterburn DE, Simonson DC, Gourash WF, Jakicic JM, Vernon AH, Beck GJ, Schauer PR, Kashyap SR, Aminian A, Cummings DE, Kirwan JP. Long-Term Outcomes of Medical Management vs Bariatric Surgery in Type 2 Diabetes. *JAMA.* 2024 Feb 27;331(8):654-664. Doi: 10.1001/jama.2024.0318.
65. Currie A, Bolckmans R, Askari A, et al. Bariatric-metabolic surgery for NHS patients with type 2 diabetes in the United Kingdom National Bariatric Surgery Registry. *Diabet Med.* 2023 Jun;40(6):e15041. Doi: 10.1111/dme.15041. Epub 2023 Jan 19. PMID: 36648127.
66. Dailey G. Early and Intensive Therapy for Management of Hyperglycemia and Cardiovascular Risk Factors in Patients With Type 2 Diabetes. *Clinical Therapeutics/Volume 33, Number 6, 2011.*
67. de Jonge C, Rensen SS, Verdam FJ, Vincent RP, Bloom SR, Buurman WA, le Roux CW, Schaper NC, Bouvy ND, Greve JW. Endoscopic duodenal-jejunal bypass liner rapidly improves type 2 diabetes. *Obes Surg.* 2013 Sep;23(9):1354-60.
68. DeMaria, E J, Sugerman, H J, Meador, J G, et al. High Failure Rate After Laparoscopic Adjustable Silicone Gastric Banding for Treatment of Morbid Obesity. *Annals of Surgery* 2001;233:809-818.
69. Dang H, Arias E, Szomstein S, Rosenthal R. (2009). Laparoscopic conversion of distal mini-gastric bypass to proximal Roux-en-Y gastric bypass for malnutrition: case report and review of the literature. *Surgery for Obesity and Related Diseases*, 5(3), 383-386.
70. Darabi S, Talebpour M, Zeinoddini A, Heidari R. Laparoscopic gastric plication versus mini-gastric bypass surgery in the treatment of morbid obesity: a randomized clinical trial. *Surg Obes Relat Dis.* 2013 Nov-Dec;9(6):914-9.
71. Dixon JB, Eaton LL, Curry T, et al. Health Outcomes and Explant Rates After Laparoscopic Adjustable Gastric Banding: A Phase 4, Multicenter Study over 5 Years. *Obesity (Silver Spring).* 2018 Jan;26(1):45-52.
72. Dixon JB, O'Brien PE, Playfair J, Chapman L, Schachter LM, Skinner S, Proietto J, Bailey M, Anderson M. Adjustable Gastric Banding and Conventional Therapy for Type 2 Diabetes. A Randomized Controlled Trial. *JAMA* 2008;299 (3): 316-323.
73. Dolan K, Hatzifotis M, Newbury L et al. A clinical and nutritional comparison of biliopancreatic diversion with and without duodenal switch. *Ann. Surg.* 2004; 240(1):51-6.

74. Dorman RB, Rasmus NF, al-Haddad BJS, Serrot FJ, Slusarek BM, Sampson BK, Buchwald H, Leslie DB, Ikramuddin S. Benefits and complications of the duodenal switch/biliopancreatic diversion compared to the Roux-en-Y gastric bypass. *Surgery* (2012).
75. Duarte MI, et al. Impact on quality of life, weight loss and comorbidities: a study comparing the biliopancreatic diversion with duodenal switch and the banded Roux-en-Y gastric bypass. *Arq Gastroenterol*. 2014 Oct-Dec;51(4):320-7.
76. Dumont PN, Blanchet MC, Gignoux B, Matussière Y, Frering V. Medium- to Long-Term Outcomes of Gastric Banding in Adolescents: a Single-Center Study of 97 Consecutive Patients. *Obes Surg*. 2018 Jan;28(1):285-289.
77. ECRI Institute. Comprehensive Technology Assessment. Bariatric Surgery for Obesity (2007).
78. ECRI Institute. Hotline Custom . Safety and Efficacy of StomaphyX Device for Gastric Pouch Reduction after Gastric Bypass Surgery. (Updated 02/11/08).
79. ECRI Institute. Hotline Custom Resonse. Laparoscopic Sleeve Gastrectomy (LSG) for Morbid Obesity. (Updated 01/22/07).
80. ECRI Institute. Hotline Custom Response. Adjustable Gastric Banding for Morbid Obesity (Updated 01/12/07) 9.
81. ECRI Institute. Windows on Medical Technology. Laparoscopic Bariatric Surgery for Morbid Obesity, Issue 126, (05/02).
82. ECRI Institute Emerging Technology Evidence Report. Metabolic Surgery for Resolving Type 2 Diabetes Mellitus in Patients with BMI <35 kg/m². July 2013.
83. ECRI Institute Health Technology Forecast. Metabolic (Bariatric) Surgery for Treating Type 2 Diabetes Mellitus in Patients with BMI <35 kg/m². April 2013.
84. ECRI Institute Health Technology Forecast. Endoluminal Sleeve (EndoBarrier) for Preoperative Weight Loss or Treating Obesity. April 2013.
85. Eisenberg D, Shikora SA, Aarts E, Aminian A, Angrisani L, Cohen RV, de Luca M, Faria SL, Goodpaster KPS, Haddad A, Himpens JM, Kow L, Kurian M, Loi K, Mahawar K, Nimeri A, O’Kane M, Papasavas PK, Ponce J, Pratt JSA, Rogers AM, Steele KE, Suter M, Kothari SN. 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*. 2023 Jan;33(1):3-14. Doi: 10.1007/s11695-022-06332-1. Erratum in: *Obes Surg*. 2022 Nov 29.
86. Emerging Technologies and Clinical Issues Committees of the ASMBS. American Society for Metabolic and Bariatric Surgery Position Statement on emerging endosurgical interventions for treatment of obesity. *Surg Obes Rel Dis* 2009; 5(3):297-8. Available online at: http://www.asmb.org/Newsite07/resources/emerging_tech_position.pdf.
87. Evidence Report/Technology Assessment: Bariatric Surgery in Women of Reproductive Age: Special Concerns for Pregnancy. AHRQ Publication No. 08-E013, prepared by the Southern California Evidence-based Practice Center. Santa Monica, Ca. November 2008.
88. Evidence Report/Technology Assessment: Effectiveness of Weight management Programs In Children and Adolescents. AHRQ Publication No. 08-E014, prepared by the Oregon Evidence-based Practice Center, Portland OR. September 2008.
89. Finkelstein EA et al. Financial implications of coverage for laparoscopic adjustable gastric banding. *Surgery for Obesity and Related Diseases* 7 (2011) 295–303.
90. Gagner M. Safety and efficacy of a side-to-side duodeno-ileal anastomosis for weight loss and type-2 diabetes: duodenal bipartition, a novel metabolic surgery procedure. *Ann Surg Innov Res*. 2015; 9: 6.

91. Glaysher MA, Moekotte AL, Kelly J. Endoscopic sleeve gastroplasty: a modified technique with greater curvature compression sutures. *Endosc Int Open*. 2019 Oct;7(10):E1303-E1309. Doi: 10.1055/a-0996-8089. Epub 2019 Oct 7.
92. Hayes Alert – Clinical Studies. Adjustable Gastric Banding Study Raises New Issues for Patient Selection. Vol IX, Number 5 (05/06).
93. Hayes Alert – Clinical Studies. Long-Term Health Outcomes 10 Years After Bariatric Surgery. Vol. VIII, Number 1 (01/05).
94. Hayes Alert – Clinical Studies. Study Finds Laparoscopic Gastric Bypass Better than Banding for Super-Obese Patients. Vol IX, Number 8 (08/06).
95. Hayes Brief – Bariatric Surgery for Pediatric Morbid Obesity, (01/19/06, revised 02/22/06).
96. Hayes Brief – Laparoscopic Mini-Gastric Bypass for Morbid Obesity (08/28/06).
97. Hayes Medical Technology Directory – Biliopancreatic Diversion with Duodenal Switch for Treatment of Obesity, (10/26/03).
98. Hayes Medical Technology Directory – Health Outcomes After Bariatric Surgery, (01/07/04).
99. Hayes Medical Technology Directory – Laparoscopic Bariatric Surgery – (11/03; Update report 12/24/06).
100. Hayes Medical Technology Directory – Laparoscopic Bariatric Surgery: Roux-en-Y Gastric Bypass, Vertical Banded Gastroplasty and Adjustable Gastric Banding. (06/07/07).
101. Hayes Medical Technology Directory – Obesity Management, Surgical Approaches. (10/99; updated 01/11/07).
102. Hayes Medical Technology Directory – Open and Laparoscopic Biliopancreatic Diversion. (06/07/07).
103. Hayes Medical Technology Directory – Open Malabsorptive Bariatric Surgery: Roux-en-Y. (06/07/07).
104. Hayes Medical Technology Directory – Open restrictive Bariatric Surgery: Gastroplasty and Gastric Banding. (06/07/07).
105. Hayes Medical Technology Directory – Pediatric Bariatric Surgery for Morbid Obesity. (06/07/07).
106. Hayes News Service – Clinical Study. Safety and Effectiveness of Laparoscopic Adjustable Banding. (10/17/08).
107. Hayes News Service Clinical Study – Bariatric Surgery Associated with long-term Weight Loss and Decreased Mortality. (09/04/07).
108. Hayes Search and Summery. Endoscopic Revision of Failed Bariatric Surgery. (11/21/08).
109. Helmiö M, Victorzon M, Ovaska J, Leivonen M, Juuti A, Jaser N, Peromaa P, Tolonen P, Hurme S, Salminen P. SLEEVEPASS: A randomized prospective multicenter study comparing laparoscopic sleeve gastrectomy and gastric bypass in the treatment of morbid obesity: preliminary results. *Surgical endoscopy* 26, no. 9 (2012): 2521-2526.
110. Ikramuddin S, et al. Roux-en-Y gastric bypass for diabetes (the Diabetes Surgery Study): 2-year outcomes of a 5-year, randomised, controlled trial. *Lancet Diabetes Endocrinol*. 2015 Jun;3(6):413-22.
111. Ikramuddin S, et al. Roux-en-Y Gastric Bypass vs Intensive Medical Management for the Control of Type 2 Diabetes, Hypertension, and Hyperlipidemia The Diabetes Surgery Study Randomized Clinical Trial. *JAMA*, June 5, 2013—Vol 309, No. 21.
112. International Diabetes Federation (IDF). Bariatric Surgical and Procedural Interventions in the Treatment of Obese Patients with Type 2 Diabetes. A position statement from the International

Diabetes Federation Taskforce on Epidemiology and Prevention. Accessed 09/27/13 at: [.idf.org/webdata/docs/IDF-Position-Statement-Bariatric-Surgery.pdf](http://idf.org/webdata/docs/IDF-Position-Statement-Bariatric-Surgery.pdf).

113. Jantz EJ et al. Number of weight loss attempts and maximum weight loss before Roux-en-Y laparoscopic gastric bypass surgery are not predictive of postoperative weight loss. *Surgery for Obesity and Related Diseases* 5 (2009) 208–211.
114. Jay M et al. Physicians' attitudes about obesity and their associations with competency and specialty: A cross-sectional study. *BioMed Central (BMC) Health Services Research* 2009, 9:106.
115. Ji Y, Wang Y, Zhu J, Shen D. A systematic review of gastric plication for the treatment of obesity. *Surg Obes Relat Dis.* 2013 Dec 12. Pii: S1550-7289(13)00396-1.
116. Johnson WH, Fernanadez AZ, Farrell TM, Macdonald KG, Grant JP, McMahon RL, Pryor AD, Wolfe LG, DeMaria EJ. Surgical revision of loop ("mini") gastric bypass procedure: multicenter review of complications and conversions to Roux-en-Y gastric bypass. *Surg Obes Relat Dis.* 2007 Jan-Feb;3(1):37-41.
117. Kang JH, Le QA. Effectiveness of bariatric surgical procedures: A systematic review and network meta-analysis of randomized controlled trials. *Medicine (Baltimore).* Nov 2017;96(46):e8632.
118. Karcz WK, Kuesters S, Marjanovic G, Grueneberger JM. Duodeno-enteral omega switches – more physiological techniques in metabolic surgery. *Wideochir Inne Tech Malo Inwazyjne.* 2013 Dec;8(4):273-9.
119. Kassir R, Giudicelli X, Lointier P, Breton C, Blanc P. Omega Loop Gastroileal Bypass (OLGIBP/SAGI) Versus One Anastomosis Gastric Bypass (OAGB): Medium-Term Results. *Obes Surg.* 2021 Apr;31(4):1597-1602. Doi: 10.1007/s11695-020-05165-0. Epub 2021 Jan 7. PMID: 33409980.
120. Kim Z, Hur KY. Laparoscopic mini-gastric bypass for type 2 diabetes: the preliminary report. *World J Surg.* 2011 Mar;35(3):631-6.
121. Klein S et al. Economic Impact of the Clinical Benefits of Bariatric Surgery in Diabetes Patients With BMI ≥ 35 kg/m². *Obesity* (2011) 19, 581–587.
122. Kochis M, Bizimana C, Stetson A, Sy M, Lee H, Singhal V, Gee D, Pratt JSA, Griggs CL. Metabolic and bariatric surgery outcomes in adolescents: a single center's seven-year update. *Surg Endosc.* 2024 Nov;38(11):6908-6917. Doi: 10.1007/s00464-024-11273-0. Epub 2024 Sep 25. PMID: 39317907.
123. Kourkoulos M, Giorgakis E, Kokkinos C, Mavromatis T, Griniatsos J, Nikiteas N, Tsigris C. Laparoscopic gastric plication for the treatment of morbid obesity: a review. *Minim Invasive Surg.* 2012;2012:696348.
124. Kumar N. Endoscopic therapy for weight loss: Gastroplasty, duodenal sleeves, intragastric balloons, and aspiration. *World J Gastrointest Endosc.* 2015 Jul 25;7(9):847-59.
125. Laferrère B, Teixeira J, McGinty J, et al. The Journal of Clinical Endocrinology & Metabolism Vol. 93, No. 7 2479-2485. Effect of Weight Loss by Gastric Bypass Surgery Versus Hypocaloric Diet on Glucose and Incretin Levels in Patients with Type 2 Diabetes. Copyright © 2008 by The Endocrine Society.
126. Lee WJ, et al. Laparoscopic Roux-en-Y Versus Mini-Gastric Bypass for the Treatment of Morbid Obesity: A Prospective Randomized Controlled Clinical Trial. *Annals of Surgery* Volume 242, Number 1, July 2005.
127. Lee WJ, et al. Gastric Bypass vs Sleeve Gastrectomy for Type 2 Diabetes Mellitus: A Randomized Controlled Trial. *Arch Surg/Vol 146 (No. 2) February 2011.*
128. Lee WJ, Lee YC, Ser KH, Chen SC, Chen JC, Su YH. Revisional surgery for laparoscopic minigastric bypass. *Surg Obes Relat Dis.* 2011 Jul-Aug;7(4):486-91.

129. Lee WJ, Ser KH, Lee YC, Tsou JJ, Chen SC, Chen JC. Laparoscopic Roux-en-Y vs. mini-gastric bypass for the treatment of morbid obesity: a 10-year experience. *Obes Surg*. 2012 Dec;22(12):1827-34.
130. Mahawar KK, Carr WR, Balupuri S, Small PK. Controversy surrounding 'mini' gastric bypass. *Obes Surg*. 2014 Feb;24(2):324-33.
131. Mahawar KK, Jennings N, Brown J, Gupta A, Balupuri S, Small PK. "Mini" gastric bypass: systematic review of a controversial procedure. *Obes Surg*. 2013 Nov;23(11):1890-8.
132. Mahendran V, Ricart P, Levine F, et al. Bariatric Surgery as a Viable Treatment for Idiopathic Intracranial Hypertension: a Case Series and Review of Literature. *Obes Surg*. 2021 Oct;31(10):4386-4391. Doi: 10.1007/s11695-021-05587-4. Epub 2021 Jul 28.
133. Manco M, Mosca A, De Peppo F, et al. The benefit of sleeve gastrectomy in obese adolescents on nonalcoholic steatohepatitis and hepatic fibrosis. *J Pediatr*. Jan 2017;180:31-37 e32.
134. Mans E, et al. Sleeve gastrectomy effects on hunger, satiation, and gastrointestinal hormone and motility responses after a liquid meal test. *Am J Clin Nutr*. 2015 Sep;102(3):540-7.
135. Marchesini JB, Nicareta JR. Comparative study of five different surgical techniques for the treatment of morbid obesity using BAROS. *Arq Bras Cir Dig*. 2014;27 Suppl 1:17-20.
136. Mechanick JI, et al. Clinical Practice Guidelines for the Perioperative Nutritional, Metabolic, and Nonsurgical Support of the Bariatric Surgery Patient—2013 Update: Cosponsored by American Association of Clinical Endocrinologists, The Obesity Society, and American Society for Metabolic & Bariatric Surgery. *Obesity | VOLUME 21 | NUMBER S1 | MARCH 2013*.
137. Miller K, Pump A, Hell E. Vertical banded gastroplasty versus adjustable gastric banding: prospective long-term follow-up study. *Surg Obes Relat Dis* 2007; 3(1):84-90.
138. Milone M, Di Minno MN, Leongito M, Maietta P, Bianco P, Taffuri C, Gaudio D, Lupoli R, Savastano S, Milone F, Musella M. Bariatric surgery and diabetes remission: sleeve gastrectomy or mini-gastric bypass? *World J Gastroenterol*. 2013 Oct 21;19(39):6590-7.
139. Mirghani H, Alamrani SAS, Alkonani AA, Al Madshush AM. The Impact of Bariatric Surgery on Weight Loss and Glycemic Control in Patients With Obesity and Type 2 Diabetes: A Systematic Review. *Cureus*. 2023 Nov 20;15(11):e49122. Doi: 10.7759/cureus.49122.
140. Musella M, Susa A, Greco F, De Luca M, Manno E, Di Stefano C, Milone M, Bonfanti R, Segato G, Antonino A, Piazza L. The laparoscopic mini-gastric bypass: the Italian experience: outcomes from 974 consecutive cases in a multicenter review. *Surg Endosc*. 2014 Jan;28(1):156-63.
141. Mustafa A, Rizkallah NNH, Samuel N, Balupuri S. Laparoscopic Roux-En-Y gastric bypass versus one anastomosis (loop) gastric bypass for obesity: A prospective comparative study of weight loss and complications. *Ann Med Surg (Lond)*. 2020 May 18;55:143-147. Doi: 10.1016/j.amsu.2020.04.040. Erratum in: *Ann Med Surg (Lond)*. 2020 Nov 18;60:701.
142. National Institutes of Health Consensus Development Conference on Gastrointestinal Surgery for Severe Obesity Statement (March 25-27, 1991).
143. National Institutes of Health, National Heart, Lung and Blood Institute, Expert Panel on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults. Executive Summary. Bethesda, MD: National Institutes of Health; September 1998.
144. National Institutes of Health, National Heart, Lung and Blood Institute, Expert Panel on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults. Executive Summary. Bethesda, MD: National Institutes of Health; (09/98).
145. Neto MG, Moon RC, de Quadros LG, et al. Safety and short-term effectiveness of endoscopic sleeve gastroplasty using overstitch: preliminary report from a multicenter study. *Surg Endosc*.

2020 Oct;34(10):4388-4394. Doi: 10.1007/s00464-019-07212-z. Epub 2019 Oct 17. PMID: 31624939.

146. Norén E, Forssell H. Aspiration therapy for obesity; a safe and effective treatment. *BMC Obes.* 2016 Dec 28;3:56.
147. Noun R, Skaff J, Riachi E, Daher R, Antoun NA, Nasr M. One thousand consecutive mini-gastric bypass: short- and long-term outcome. *Obes Surg.* 2012 May;22(5):697-703.
148. Noun R, Slim R, Nasr M, Chakhtoura G, Gharios J, Antoun NA, Ayoub E. Results of Laparoscopic Sleeve Gastrectomy in 541 Consecutive Patients with Low Baseline Body Mass Index (30-35 kg/m²). *Obes Surg.* 2016 Dec;26(12):2824-2828. Doi: 10.1007/s11695-016-2224-y. PMID: 27185176.
149. Novak K. Bariatric Surgery: More than Expected. *American Gastroenterological Association Journal.* 09/08/11. Accessed at wordpress.com/tag/effects-of-bariatric-surgery/.
150. Ochner CN et al. Pre-bariatric surgery weight loss requirements and the effect of preoperative weight loss on postoperative outcome. *International Journal of Obesity* (2012) 1–8.
151. Olbers T, Beamish AJ, Gronowitz E, et al. Laparoscopic Roux-en-Y gastric bypass in adolescents with severe obesity (AMOS): a prospective, 5-year, Swedish nationwide study. *Lancet Diabetes Endocrinol.* Mar 2017;5(3):174-183.
152. Overcash WT. Natural orifice surgery (NOS) using StomaphyX for repair of gastric leaks after bariatric revisions. *Obes Surg.* 2008 Jul; 18(7): 882-5. Epub 2008 Apr 26.
153. Pattanshetti S, Tai CM, Yen YC, Lin HY, Chi SC, Huang CK. Laparoscopic adjustable gastric banded plication: evolution of procedure and 2-year results. *Obes Surg.* 2013 Nov;23(11):1934-8.
154. Peraglie C. Laparoscopic mini-gastric bypass (LMGB) in the super-super obese: outcomes in 16 patients. *Obes Surg.* 2008 Sep;18(9):1126-9.
155. Piazza L, Ferrara F, Leanza S, Coco D, Sarvà S, Bellia A, Di Stefano C, Basile F, Biondi A. Laparoscopic mini-gastric bypass: short-term single-institute experience. *Updates Surg.* 2011 Dec;63(4):239-42.
156. Poirier P, et al. Bariatric Surgery and Cardiovascular Risk Factors: A Scientific Statement From the American Heart Association. *Circulation.* 2011;123:1683-1701.
157. Pontiroli AE, Laneri M, Veronelli A, Frigè F, Micheletto G, Folli F, Adami G, Scopinaro N. Biliary pancreatic diversion and laparoscopic adjustable gastric banding in morbid obesity: their long-term effects on metabolic syndrome and on cardiovascular parameters. *Cardiovasc Diabetol.* 2009 Jul 20; 8:37.
158. Position Papers/Statements published on: 04/09 by the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES). SAGES Position Statement on Endolumenal Therapies for Gastrointestinal Diseases – Therapies for Obesity.
159. Qi L, Guo Y, Liu CQ, et al. Effects of bariatric surgery on glycemic and lipid metabolism, surgical complication and quality of life in adolescents with obesity: a systematic review and meta-analysis. *Surg Obes Relat Dis.* Dec 2017;13(12):2037-2055.
160. Rao WS, Shan CX, Zhang W, Jiang DZ, Qiu M. A Meta-Analysis of Short-Term Outcomes of Patients with Type 2 Diabetes Mellitus and BMI \leq 35 kg/m² Undergoing Roux-en-Y Gastric Bypass. *World Journal of Surgery* August 2014.
161. Rutledge MD, Robert. "The Mini-Gastric Bypass: Experience with the First 1,274 Cases"; *Obesity Surgery* 2001; 11:276-280.
162. Rutledge R, Kular K, Manchanda N. The Mini-Gastric Bypass original technique. *Int J Surg.* 2019 Jan;61:38-41. Doi: 10.1016/j.ijsu.2018.10.042. Epub 2018 Nov 24.

163. Ruze R, Liu T, Zou X, Song J, Chen Y, Xu R, Yin X, Xu Q. Obesity and type 2 diabetes mellitus: connections in epidemiology, pathogenesis, and treatments. *Front Endocrinol (Lausanne)*. 2023 Apr 21;14:1161521. Doi: 10.3389/fendo.2023.1161521.
164. Ryou M, Thompson CC. Current Status of Endolumenal Bariatric Procedures for Primary and Revision Indications. *Gastrointest Endosc Clin N Am*. Apr 2011; 21(2): 315–333.
165. Schauer PR, et al. Bariatric Surgery versus Intensive Medical Therapy in Obese Patients with Diabetes. *N Engl J Med* 2012;366:1567-76.
166. Schauer PR, et al. Bariatric surgery versus intensive medical therapy for diabetes--3-year outcomes. *N Engl J Med*. 2014 May 22;370(21):2002-13.
167. Sjostrom L et al. Bariatric Surgery and Long-term Cardiovascular Events. *JAMA*. 2012;307(1):56-65.
168. Society of American Gastrointestinal and Endoscopic Surgeons (SAGES), with input from the Clinical Issues Committee of the American Society for Metabolic and Bariatric Surgery (ASMBS). Guidelines for Clinical Application of Laparoscopic Bariatric Surgery. March 2008. Accessed at [.sages.org/publications/guidelines/guidelines-for-clinical-application-of-laparoscopic-bariatric-surgery/](http://www.sages.org/publications/guidelines/guidelines-for-clinical-application-of-laparoscopic-bariatric-surgery/) on 11/13/15.
169. Srivastava G. Bariatric surgery in adolescents-a vital treatment option. *Transl Pediatr*. 2024 Aug 31;13(8):1287-1289. Doi: 10.21037/tp-24-160. Epub 2024 Aug 8.
170. Stenberg E, Näslund E. Major adverse cardiovascular events among patients with type-2 diabetes, a nationwide cohort study comparing primary metabolic and bariatric surgery to GLP-1 receptor agonist treatment. *Int J Obes (Lond)*. 2023 Apr;47(4):251-256. Doi: 10.1038/s41366-023-01254-z. Epub 2023 Jan 20.
171. Studer AS, Magdy M, Bacon SL, Denis R, Pescarus R, Garneau PY, Atlas H. Five-year outcomes after surgery for class 1 obesity: a retrospective analysis of a Canadian bariatric centre's experience. *Can J Surg*. 2022 Nov 16;65(6):E763-E769. Doi: 10.1503/cjs.021820.
172. Styne DM, Arslanian SA, Connor EL, et al. Pediatric Obesity-Assessment, Treatment, and Prevention: An Endocrine Society Clinical Practice Guideline. *J Clin Endocrinol Metab*. Mar 2017;102(3):709-757.
173. Sudan R, Nguyen NT, Hutter MM, Brethauer SA, Ponce J, Morton JM. Morbidity, Mortality, and Weight Loss Outcomes After Reoperative Bariatric Surgery in the USA. *J Gastrointest Surg*. 2014 Sep 4.
174. Sullivan S, et al. Aspiration therapy leads to weight loss in obese subjects: a pilot study. *Gastroenterology*. 2013 Dec;145(6):1245-52.e1-5.
175. Sun Z, et al. Surgical treatment of medically refractory gastroparesis in the morbidly obese. *Surg Endosc*. 2015 Sep;29(9):2683-9.
176. Surve A, Cottam D, Medlin W, et al. Long-term outcomes of primary single-anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S). *Surg Obes Relat Dis*. 2020 Nov;16(11):1638-1646. Doi: 10.1016/j.soard.2020.07.019. Epub 2020 Jul 31.
177. Talebpour M, Motamedi SMK, Talebpour A, Vahidi H. Twelve year experience of laparoscopic gastric plication in morbid obesity: development of the technique and patient outcomes. *Ann Surg Innov Res*. 2012; 6: 7.
178. Tarnoff, T., Rodriguez, L., Escolona, A., Ramos, A., Neto, M., Alamo, M., Reyes, E., Pimentel, F., Ibanez, L. Open label, prospective, randomized controlled trial of an endoscopic duodenal-jejunal bypass sleeve versus low calorie diet for pre-operative weight loss in bariatric surgery. *Surg Endosc* (2009) 23:650-656.
179. The American Society for Metabolic and Bariatric Surgery Emerging Technologies and Clinical Issues Committees of the ASMBS. Approved by the ASMBS Executive Council January 2009.

Emerging Endosurgical Interventions for Treatment of Obesity Position Statement and Standard of Care.

180. Tremaroli V, Karlsson F, Werling M, Ståhlman M, Kovatcheva-Datchary P, Olbers T, Fändriks L, le Roux CW, Nielsen J, Bäckhed F. Roux-en-Y Gastric Bypass and Vertical Banded Gastroplasty Induce Long-Term Changes on the Human Gut Microbiome Contributing to Fat Mass Regulation. *Cell Metab.* 2015 Aug 4;22(2):228-38.
181. UpToDate. Bariatric procedures for the management of severe obesity: Descriptions. 2024. Accessed at [uptodate.com](https://www.uptodate.com).
182. UpToDate. Bariatric surgery for management of obesity: Indications and preoperative preparation. 2024. Accessed at [uptodate.com](https://www.uptodate.com).
183. UpToDate. Management of persistent hyperglycemia in type 2 diabetes mellitus. 2024. Accessed at [uptodate.com](https://www.uptodate.com).
184. UpToDate. Obesity in adults: Overview of management. 2024. Accessed at [uptodate.com](https://www.uptodate.com).
185. UpToDate. Outcomes of bariatric surgery. 2024. Accessed at [uptodate.com](https://www.uptodate.com).
186. UpToDate. Surgical management of severe obesity in adolescents. 2024. Accessed at [uptodate.com](https://www.uptodate.com).
187. U.S. Food and Administration (FDA) Talk Paper, FDA Approves Implanted Stomach Band To Treat Severe Obesity, T01-26, 06/05/01.
188. U.S. Food and Drug Administration (FDA) LAP-BAND Adjustable Gastric banding System approval.
189. Updated Position Statement on Sleeve Gastrectomy as a Bariatric Procedure Clinical Issues Committee of the American Society for Metabolic and Bariatric Surgery American Society for Metabolic and Bariatric Surgery, Gainesville, Florida. Received November 8, 2009; accepted November 9, 2009.
190. U.S. Preventive Services Task Force (USPSTF). Screening for and Management of Obesity in Adults. June 2012.
191. Varban OA, Bonham AJ, Finks JF, Telem DA, Obeid NR, Ghaferi AA. Is it worth it? Determining the health benefits of sleeve gastrectomy in patients with a body mass index <35 kg/m². *Surg Obes Relat Dis.* 2020 Feb;16(2):248-253. Doi: 10.1016/j.soard.2019.10.027. Epub 2019 Nov 7. PMID: 31831336.
192. Vargas EJ, Bazerbachi F, Rizk M, et al. Transoral outlet reduction with full thickness endoscopic suturing for weight regain after gastric bypass: a large multicenter international experience and meta-analysis. *Surg Endosc.* 2018 Jan;32(1):252-259. Doi: 10.1007/s00464-017-5671-1. Epub 2017 Jun 29. PMID: 28664438.
193. Vilallonga R, Fort JM, Caubet E, Gonzalez O, Balibrea JM, Ciudin A, Armengol M. Robotically Assisted Single Anastomosis Duodenoileal Bypass after Previous Sleeve Gastrectomy Implementing High Valuable Technology for Complex Procedures. *J Obes.* 2015;2015:586419.
194. Virk CS, Leitman IM, Goodman ER. Endoscopic gastric pouch plication – a novel endoluminal incision free approach to revisional bariatric surgery. *J Surg Case Rep.* 2010 Apr 1;2010(2):1.
195. Wadden TA et al. A Two-Year Randomized Trial of Obesity Treatment in Primary Care Practice. *N Engl J Med* 2011.
196. Werling M, Fändriks L, Björklund P, Maleckas A, Brandberg J, Lönroth H, le Roux CW, Olbers T. Long-term results of a randomized clinical trial comparing Roux-en-Y gastric bypass with vertical banded gastroplasty. *Br J Surg.* 2013 Jan;100(2):222-30.
197. Whitlock KA, et al. Early Outcomes of Roux-en-Y Gastric Bypass in a Publically Funded Obesity Program. ISRN Obesity Volume 2013, Article ID 296597. Hindawi Publishing Corporation.

198. Wiebe N, Tonelli M. Long-term clinical outcomes of bariatric surgery in adults with severe obesity: A population-based retrospective cohort study. *PLoS One*. 2024 Jun 6;19(6):e0298402. Doi: 10.1371/journal.pone.0298402.
199. Wu CC, Lee WJ, Ser KH, Chen JC, Tsou JJ, Chen SC, Kuan WS. Gastric cancer after mini-gastric bypass surgery: a case report and literature review. *Asian J Endosc Surg*. 2013 Nov;6(4):303-6.
200. Yip S, Plank LD, Murphy R. Gastric Bypass and Sleeve Gastrectomy for Type 2 Diabetes: A Systematic Review and Meta-analysis of Outcomes. *Obes Surg*. 2013 Aug 17.
201. Znamirovski P, Bryk P, Lewitowicz P, Kozielec D, Głuszek S. GERD-A Burning Problem after Sleeve Gastrectomy? *Int J Environ Res Public Health*. 2021 Oct 15;18(20):10829. Doi: 10.3390/ijerph182010829.

COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 01/23/25.

GUIDELINE UPDATE INFORMATION:

10/15/99	Medical Coverage Guideline developed.
09/15/01	Various revisions.
01/01/02	Coding changes.
10/15/02	Annual review. Added Roux-en-Y anastomosis or vertical-banded as covered services. Added biliopancreatic bypass with duodenal switch and very long limb gastric bypass procedure (e.g., greater than 100 cm) as non-covered services.
05/15/03	Revised to clarify coding of the various procedures; criteria revised and is consistent with Inter-Qual criteria.
09/15/03	Coverage criteria for psychological testing/counseling revised.
10/15/03	Reversed investigational status for CPT code 43847 and provided coverage criteria for long-limb Roux-en-Y procedures up to 150 cm.
01/01/04	Annual HCPCS coding update.
04/01/04	2 nd Quarter HCPCS coding update; added S2082 and S2083.
07/15/04	Scheduled review; no changes.
01/01/05	HCPCS coding update. Added 43644, 43645, 43845, S2082, and S2083. Revised descriptor for 43846, and deleted S2085.
05/15/05	Unscheduled review of the non-covered statement for laparoscopic adjustable gastric banding (Lap-Band); coverage statement unchanged.
01/01/06	Annual HCPCS coding update (added 43770 – 43774; deleted S2082).
04/15/06	Scheduled review; removed investigational statement for laparoscopic adjustable gastric banding and biliopancreatic diversion with duodenal switch; updated coding, index terms, and references.
05/15/06	Scheduled review; removed investigational statement for laparoscopic adjustable gastric banding and biliopancreatic diversion with duodenal switch; updated coding, index terms, and references; added age limitation of 18 years and older.

05/15/07	Scheduled annual review; reformatted guideline; modified coverage criteria regarding non-surgical weight loss programs; added description information and investigational statement regarding sleeve gastrectomy; updated references.
01/01/08	Annual HCPCS coding update: descriptor revisions for codes 43770 – 43774. Revised verbiage regarding adjustable gastric banding.
05/15/08	Scheduled annual review. Add investigational statement for endoscopic procedures. Update references.
05/15/09	Scheduled review; add CPT language for postoperative adjustment of gastric band to reimbursement section; updated position statement and description for long limb Roux-en Y greater than 150 cm; add presence of comorbidities to position statement; revise investigational statement to include transoral surgical procedures.
01/01/10	Annual HCPCS coding update: added CPT code 43775.
06/15/10	Annual review; no change in position statement. References updated.
10/01/10	4 th Quarter HCPCS coding update consisting of adding ICD-9 diagnosis codes V85.41, V85.42, V85.43, V85.44 and V85.45.
11/15/10	Revision; position statement revised to include coverage criteria for Long-limb Gastric Bypass and Sleeve Gastrectomy; Medicare Advantage exception added; related ICD-10 codes added; Certificate of Medical Necessity added; references updated; guideline reformatted.
06/15/11	Annual review; no change in position statements. Updated Medicare Advantage program exception (delete CPT code 43775). Updated references.
09/15/11	Revision; formatting changes.
04/01/12	Revision; updated ICD10 coding with new and revised codes.
08/01/12	Scheduled review. Revised description section. Revised position statement; added coverage criteria for Biliopancreatic Bypass (i.e., the Scopinaro procedure) and designated Long-Limb Roux-en-Y (LLRY) as E/I. Removed time requirements for duration of BMI and attempts at non-surgical weight loss. Revised Medicare Advantage program exception. Updated references and reformatted guideline.
11/15/13	Scheduled review. Revised MCG title and description section. Revised position statement (added criteria for adolescents, designated vertical banded gastroplasty as E/I). Revised ICD9/ICD10 coding sections, program exception section (Medicare Advantage), related guidelines, and definitions. Updated references.
05/15/14	Unscheduled review (mini-gastric bypass); position statement maintained. Revised CPT coding section and updated references.
01/01/15	Scheduled review. Revised description section, position statement and program exceptions. Updated references.
12/15/15	Scheduled review. Revised position statement (added coverage for vertical banded gastroplasty). Updated Program Exceptions section and references.
04/15/16	Revision; added coverage statement (E/I) for anastomosis duodenoileal bypass with sleeve gastrectomy (SADI-S).
10/01/16	Revision: Billing/Coding Information section updated.
06/15/17	Scheduled review. Revised description section. Added coverage statement (E/I) for aspiration therapy. Updated references.

09/15/17	Revision: added coverage statement for bariatric surgery performed as primary treatment for conditions other than morbid obesity. Added code 43633. Updated references.
12/15/18	Revision; added code 43621.
03/15/20	Scheduled review. Revised description and position statement. Updated references.
05/15/22	Scheduled review. Revised position statement and updated references.
01/01/23	Annual CPT/HCPCS coding update. Added 43290, 43291.
05/25/23	Update to Program Exceptions section.
08/15/23	Revision. Updated references and maintained position statement.
01/01/24	Annual CPT/HCPCS coding update. Added 0813T.
02/15/24	Scheduled review. Revised description, maintained position statements, and updated references.
02/15/25	Scheduled review. Maintained position statement and updated references.