

Clinical Policy Title: Body contouring surgery after massive weight loss

Clinical Policy Number: 18.03.03

Effective Date:	July 1, 2016
Initial Review Date:	April 27, 2016
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Policy contains:

- Skin redundancy.
- Body contouring.
- Panniculectomy.
- Abdominoplasty.
- Massive weight loss.

Related policies:

CP# 16.03.08	Cosmetic, plastic, and scar revision surgery
CP# 16.03.05	Breast reduction surgery
CP# 08.03.02	Bariatric surgery for adults
CP# 16.03.07	Reduction mammoplasty for male gynecomastia

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Coverage policy

AmeriHealth Caritas considers body contouring surgery following massive weight loss (MWL) to be clinically proven and, therefore, medically necessary when all of the following criteria are met:

- A plastic surgeon performs the surgical procedure to modify the skin envelope, subcutaneous layer, and/or investing fascia.
- To correct functional impairment caused by excessive skin and subcutaneous tissue redundancy.
 - A functional impairment is defined as a direct and measurable reduction in physical performance of an organ or body part, resulting in difficulties in physical and motor tasks, independent movement, or performing basic life functions.
- Photographic documentation of any of the following chronic or recurring conditions related to excess tissue and skin folds:
 - Intertrigo (bacterial or fungal infections).

- Cellulitis.
- Folliculitis.
- Panniculitis.
- Skin ulceration.
- Skin or subcutaneous abscesses.
- Monilial infection or fungal dermatitis.
- Skin necrosis.
- Documentation of failure of at least three months of conservative management by a physician other than the operating physician to treat the above skin conditions (e.g., analgesics, antibacterials, antifungals, cortisone ointments, drying agents, strict attention to hygiene, topically applied skin barriers, and supportive garments).
- Maintenance of a stable body weight during the most recent six months or longer.
 - In addition, if MWL occurs as a result of bariatric surgery, the procedure should not be performed for at least 12 to 18 months after the bariatric surgery.

AmeriHealth Caritas considers panniculectomy after MWL to be clinically proven and, therefore, medically necessary when all of the above criteria are met, and there is photographic documentation (with member standing) of panniculus that hangs to or below the level of the pubis.

AmeriHealth Caritas considers abdominoplasty to be clinically proven and, therefore, medically necessary when performed in conjunction with a panniculectomy that meets the above criteria. In this case abdominoplasty is considered part of the panniculectomy procedure and is not separately reimbursable.

Limitations:

All other indications for body contouring surgery after MWL are considered not medically necessary, including, but not limited to:

- Improving cosmesis in the absence of a functional impairment.
- Relieving neck or back pain, as there is no evidence that reduction of redundant skin and tissue results in less spinal stress or improved posture or alignment.
- Repairing a diastasis recti.
- Minimizing the risk of hernia formation or recurrence.

Endoscopic abdominoplasty or mini-abdominoplasty is not medically necessary for any reason.

Panniculectomy when performed in conjunction with a primary abdominal surgical procedure will be considered as part of the primary surgery (e.g., incisional hernia repair) and not separately reimbursable.

• Note: All requests for panniculectomy in conjunction with repair of an incisional, umbilical, epigastric, or ventral hernia must be documented by the patient's medical record and computed tomography (CT) scan recording the diameter of the fascial defect.

Alternative covered services:

- Analgesics.
- Antibiotics.
- Cortisone ointments.
- Drying agents.
- Topically applied skin barriers and supportive garments.

Background

Obesity and its associated medical morbidities carry substantial health risk. Treatments for obesity, including bariatric surgery, often result in MWL. MWL may be defined in several ways: 100 pounds (approximately 45.45 kg) or more; 50 percent or greater loss of excess weight; or greater than 100 percent above the person's ideal body weight (Constantine, 2014; Michaels, 2011; Manahan, 2006). While MWL is most commonly found in bariatric surgery settings, plastic surgeons should distinguish between patients who have undergone bariatric or metabolic surgery and those who have lost weight through other means (e.g., diet and exercise or post-pregnancy). Bariatric surgical techniques are associated with various metabolic complications and deficiencies, which can disturb wound healing, not typically found in other conditions resulting in MWL (Giordano, 2015; Chandawarkar, 2006).

After rapid MWL, a sudden change in body mass index (BMI) leads to redundant skin and soft tissue with poor tone. Surplus skin and malpositioned adipose deposits result in musculoskeletal strain from increased tissue weight and can cause functional limitation with walking, maintaining adequate hygiene, bowel and bladder habits, and sexual activity (Giordano, 2015). Deformity caused by skin and soft tissue redundancy of the trunk, buttocks, breasts, upper arms, and thighs following MWL may result in psychosocial issues associated with poor body image. Reshaping procedures may relieve these symptoms in the patient following MWL.

The term body contouring (BC) can be applied to any surgical procedure used to modify the skin envelope, subcutaneous layer, and/or investing fascia to rid the functional and esthetic impairment from skin. BC includes a wide range of procedures that can be performed for cosmetic and reconstructive purposes tailored to each patient. Several surgical techniques, each with its own modifications, may be used to address the needs of these patients, including (Giordano, 2015):

- Rhytidectomy (face and neck lift).
- Brachioplasty (arm lift) with or without liposuction.
- Mastopexy (breast lift) with or without mammoplasty.
- Abdominoplasty.
- Body lift:
 - Belt lipectomy (or lower body lift in which the lower body is treated front and back in its entirety).
 - Upper body lift that treats excess skin folds in the back.
- Panniculectomy.
- Thighplasty.

Strategic skills in assessment of each patient and his or her expectations, careful planning, and timing, especially for patient safety and technique, are fundamental to the success of these often complex and extensive procedures (Chandawarkar, 2006). Skin redundancy and quality, lipodystrophy, and adherent folds, as well as the presence of varicose veins, lymphedema, and overall scar evaluation, should be considered. The extent of the procedures and the patient's health and comorbidities will determine the facility setting, the type of anesthesia needed, recovery time, and physician follow-up visits. Patients may be seen intermittently for one to two years as final body contour continues to mature (American Society of Plastic Surgeons [ASPS], 2007).

Searches

AmeriHealth Caritas searched PubMed and the databases of:

- UK National Health Services Centre for Reviews and Dissemination.
- Agency for Healthcare Research and Quality's National Guideline Clearinghouse and other evidence-based practice centers.
- The Centers for Medicare & Medicaid Services (CMS).

We conducted searches on March 5, 2017. Search terms were: "weight loss" (MeSH), "reconstructive surgical procedures" (MeSH), and free text terms "panniculectomy," "abdominoplasty," "brachioplasty," "mastopexy" and "body lift."

We included:

- **Systematic reviews**, which pool results from multiple studies to achieve larger sample sizes and greater precision of effect estimation than in smaller primary studies. Systematic reviews use predetermined transparent methods to minimize bias, effectively treating the review as a scientific endeavor, and are thus rated highest in evidence-grading hierarchies.
- Guidelines based on systematic reviews.
- Economic analyses, such as cost-effectiveness, and benefit or utility studies (but not simple cost studies), reporting both costs and outcomes sometimes referred to as efficiency studies which also rank near the top of evidence hierarchies.

Findings

We found six systematic reviews/meta-analyses, 14 additional individual studies, two professional guidelines, and no economic analyses for this policy. The evidence primarily consists of single-arm, retrospective case series with few controls. Most patients were female and had achieved MWL after bariatric surgery. The majority of procedures involved abdominal contouring most commonly performed for the treatment of skin conditions that were unresponsive to or required frequent medical treatment and had a negative effect on quality of life. Study objectives were to identify risk factors for complications, complication rates, and patient-reported outcomes associated with BC procedures after MWL.

The optimal patient selection criteria for these procedures are difficult to determine due to the retrospective nature of the studies. In general, weight stability and lower BMI at the time of the BC procedure reduce the rate of complications and lead to better surgical outcomes. However, the evidence conflicts with respect to preoperative BMI as an independent predictor of surgical complications, and there is no clear BMI cut-off above which surgery should be refused (van der Beek, 2011; Au, 2008; Constantine, 2014). Based on limited evidence professional guidelines support a stable weight close to normal for at least two to six months, typically requiring 12 to 18 months post-bariatric surgery, or at the 25 kg/mg² to 30 kg/mg² weight range (Mechanick, 2013; ASPS, 2007). Assessment tools such as the Pittsburgh weight loss deformity scale and the Regnault breast ptosis scale can facilitate preoperative planning and quantifying improvement after surgery (Giordano, 2015; Zammerilla, 2014).

Complications occurred in up to 50 percent of patients and depended on the extent and type of procedure. Most were related to wound healing and were considered minor and medically treatable. Minor complications included seroma, dehiscence, infection, and hematoma. Other complications following BC surgery in general may include (ASPS, 2007):

- Lymphedema.
- Deep vein thrombosis or pulmonary embolus.
- Psychiatric difficulty.
- Residual localized fat and/or fat necrosis leading to contour irregularities.
- Temporary or permanent numbness.
- Unattractive or hypertropic scarring.
- Malposition of the umbilicus.
- Relapse or recurrent laxity.

Complications after BC surgery are likely multifactorial (Hasanbegovic, 2014; Fischer, 2013; Albino, 2009). Multiple comorbidities, bleeding disorders, abnormal preoperative albumin levels, and malnutrition contribute to poor surgical outcomes, as do procedural complexity and pre-operative functional status. Complication rates were higher among patients with post-bariatric MWL than MWL from other causes. Abdominal contouring procedures, in particular, are associated with excessive blood loss and risk for postoperative hypovolemia.

Evidence from research and professional guidelines regarding indications for surgery and choice of surgical techniques is lacking. Surgical approaches vary through incision length, incision placement, use of liposuction, and concomitant BC procedures. Surgeon and patient preferences and clinical presentation play major roles in determining choice of procedure. There are few validated patient-reported outcome measures for most BC procedures, with the exception of reduction mammoplasty. Troublesome skin condition was the most common indication for surgery, but its status was rarely reported as an outcome. The ASPS notes there are few alternatives to surgery for such patients, as the excess skin and fat folds are virtually impossible to correct by diet, weight loss, or exercise (ASPS, 2007).

In summary, BC procedures appear to be safe and improve well-being and quality of life in carefully selected persons with skin redundancy after MWL. Patient satisfaction is high, but pre-operative counseling

is essential to achieving realistic expectations. Patients generally tolerate the potential for minor complications to achieve better functional and aesthetic outcomes. The evidence base with respect to indications, treatment methods, and outcomes should be strengthened through well-planned prospective studies and a patient registry. There is a particular need for documentation of treatment outcomes in patients with BMI \geq 30 kg/m², who comprise a significant and growing portion of this surgical population.

Policy update:

We added an update of a previous Hayes report (Hayes, 2016) and one new meta-analysis of 28 studies with 1,380 total patients that assessed complication rates following circumferential contouring of the lower trunk (Carloni, 2016). Carloni, et al., found an overall complication rate of 37 percent (95 percent confidence interval [CI] 30 percent to 44 percent). Seroma, wound dehiscence, and scar irregularities comprised the majority of complications. Lower body lift-related techniques were associated with a higher rate of overall complications than belt lipectomy-related techniques (P = .002), but the authors had no explanation for that finding. These authors called for higher-quality evidence from randomized controlled trials (RCTs) to confirm these results. The new information is consistent with previous findings. Therefore, no policy changes are warranted.

Citation	Content, Methods, Recommendations		
Hasanbegovic (2014)	Key points:		
Complication rates of BC surgery after MWL from bariatric surgery or dietary changes and/or exercise	 Meta-analysis of seven studies. Complication rate was 60% higher in patients who had bariatric surgery than diet/exercise (fixed-effects pooled risk ratio [RR] = 1.60; 95% CI 1.30 to 1.96; P < 0.00001; I² = 48%). In patients who had only one BC procedure, complication rate was 87% higher in the post-bariatric population (RR = 1.87; 95% CI 1.46 to 2.40; P < 0.00001; I² = 0%). 		
Fischer (2013)	Key points:		
Incidence and predictors of surgical and medical morbidity following BC procedures	 Analysis of 30-day morbidity rates from the American College of Surgeons National Surgical Quality Improvement Program database of 1,797 patients who underwent BC from 2005 to 2010. 89% female. Average BMI was 31.6 kg/m; 239 patients had BMI ≥ 40 kg/m. Most common area of intervention: 91.9% abdominal contouring and/or hips and buttocks. Minor wound complications (6.3%); associated with multiple comorbidities, presence of bleeding disorder, preoperative albumin level, and malnutrition. Major surgical morbidity (6.8%); associated with inpatient procedures and functional status. 		
Modarressi (2013)	Key points:		
Effect of post-bariatric BC surgery on health-related quality of life (HRQoL)	 Prospective cohort study of 98 consecutive patients who had BC surgery post-gastric bypass for obesity (BMI > 40) compared to 102 matched controls who had only gastric bypass. 		

Summary of clinical evidence:

Citation	Content, Methods, Recommendations	
	Compared to gastric bypass only, BC procedures significantly improved patients'	
	HRQoL in all sub-domains: self-esteem, social life, work ability, sexual activity, and physical activity ($n < 0.001$) and remained stable over time.	
van der Beek (2011)	Key noints:	
Predictors of complications	Retrospective case series of 465 post-bariatric patients; 61 patients underwent BC	
in BC surgery in the post-	surgery following MWL, 43 responded to follow-up questionnaire.	
bariatric population	 The overall complication rate = 27.9%; major complication rate = 8.8%. Most frequent procedures = abdominoplasty (61%) and breast reduction/mammopexy (25%). 	
	 A stable weight for at least three months prior to BC surgery is associated with a significantly lower complication rate. 	
	 Percentage excess weight loss was an independent predictor of post-BC 	
	complications.	
Reavey (2011)	Key points:	
Quality of life and nationt	Custometic review of actionst reported outcome (DDO) measures (supetionspines)	
satisfaction after BC	 Systematic review of patient-reported outcome (PRO) measures (questionnaires) developed for patients undergoing BC surgery 	
	 Five PRO questionnaires identified. 	
	Reliable, valid, and responsive PRO measures are available for patients undergoing	
	breast reduction, but are lacking for the majority of BC procedures.	
Albino (2009)	Key points:	
Wound basling complication	Compositive analysis and systematic mains of CE studies	
rates of BC procedures after	 Comparative analysis and systematic review of 65 studies. Wound healing complication rates: cancer (45.8%) hum (30.4%) nost transplant 	
MWL in various populations	(36%), and obesity (43%).	
	 Complications after BC surgery are likely multifactorial; however, molecular 	
	imbalances may contribute to poor surgical outcomes.	
Mastopexy		
Vindigni (2015)	Key points:	
Post-bariatric breast	 Retrospective case series of 90 patients who underwent post-bariatric breast 	
reshaping	reshaping in the previous five years. The average age was 40 years old. The follow-up	
	period ranged from six months to five years.	
	 Most represented grade 2 ptosis; mastopexy with parenchymal remodeling and augmentation with autologous tissue was most often used 	
	 Mean duration of surgery was three hours. The most common complications were 	
	delayed healing, unfavorable scarring, hematoma, and seroma.	
	 Statistically significant improvements in satisfaction with breast appearance and psychological and physical well-being using BREAST-O survey tool 	
Khavanin (2014)	Key points:	
Single-stage augmentation-	 Systematic review of 23 studies (4,856 patients). 	
mastopexy	Overall quality: low. High study heterogeneity due to differences in surgical	
	techniques, outcome definitions, and follow-up durations.	
	Overall complication rate = 13.1% (95% CI 6.7 to 21.3).	
	 most common individual complications: recurrent prosis, poor scarring, capsular contracture, and tissue-related asymmetry. Infection, hematoma, and seroma were 	

Citation	Content, Methods, Recommendations	
	rare (< 2% each).	
	• The reoperation rate obtained from 13 studies was 10.7% (95% CI 6.7 to 15.4).	
Brachioplasty		
De Runz (2015)	Key points:	
Liposuction-assisted medial brachioplasty after MWL	 Retrospective case series of 66 patients (mean age, 44.4 years). Average BMI was 30.2 kg/m; mean weight reduction was 50.72 kg. Thirty-seven patients (56.1%) developed at least one complication, including six (9.1%) with a nonaesthetic complication versus 31 (47.0%) with an aesthetic complication. Complications were significantly associated with a longer operative time (p = 0.015). Fifty-three patients answered the questionnaire. High overall satisfaction (68%). All patients rated the functional outcome superior or equal to the aesthetic outcome. Quality of life was better after than before the intervention for 77.4%. 	
Bossert (2013)	Key points:	
Liposuction of the arm concurrent with brachioplasty after MWL	 Case series of 144 patients (139 women and five men; mean BMI 29.6 +/- 4.1 kg/m; mean age 46 +/- 10.7 years); 64 patients had concomitant arm liposuction and brachioplasty, 80 patients underwent excisional brachioplasty alone. No significant differences in complication rates or revision rates between the liposuction and excision-alone cohorts. Liposuction can be performed safely and effectively outside the region of excision at the time of brachioplasty without the need for prior debulking or staged arm-contouring procedures. 	
Gusenoff (2008)	Key points:	
Brachioplasty and concomitant procedures after MWL	 Registry data analysis of 101 patients who underwent brachioplasty after MWL (97 women, four men; mean age, 45.9 +/- 10.1 years; mean BMI, 29 +/- 3.9);mean time since gastric bypass 28.5 months (range, seven to 252 months). 96% had concomitant BC procedures (23.8% had concomitant arm liposuction). Brachioplasty is safe and effective for treating upper arm deformity after MWL. Patients with greater weight loss are likely to present for longer contouring procedures and are at highest risk for wound-healing complications, which generally occur most in areas other than the arms. 	
Abdominoplasty		
Masoomi (2015)	Key points:	
Frequency and risk factors of blood transfusion in post- bariatric abdominoplasty	 Multivariable regression analysis of clinical data from the Nationwide Inpatient Sample database of 20,130 patients who underwent post-bariatric abdominoplasty from 2007 to 2011. The blood transfusion rate in post-bariatric surgery abdominoplasty patients is significant. Chronic anemia and congestive heart failure are the two major predictors of transfusion. Modifying risk factors such as anemia before abdominoplasty might significantly decrease the possibility of blood transfusion. 	
Zammerilla (2014)	Key points:	
Classifying severity of	• 1,006 patients from 2002 to 2012, abdomens graded using a modified Pittsburgh	

Citation	Content, Methods, Recommendations		
abdominal contour	weight loss deformity scale.		
deformities after MWL	 Patients with a larger change in BMI had higher deformity grades (p < 0.001). Patients 		
	with higher deformity grades were more likely to undergo more aggressive contouring		
	procedures, such as a fleur-de-lis abdominoplasty (p < 0.001).		
Staalesen (2012a)	Key points:		
Outcompos of	Custometic review of 16 studies sublished through Ostaher 2011		
abdominoplasty	Systematic review of 16 studies published through October 2011.		
Staalaaan (2012b)	Overall quality: very low for all studied outcomes.		
Staalesen (2012b)	Rey points:		
Complications of	 Retrospective case series of 190 consecutive patients from January 2006 to 		
abdominoplasty after MWL	December 2008 at one hospital.		
from bariatric surgery or	 Early complication rates: post-bariatric patients (48%) versus no weight loss surgery 		
dieting/post-pregnancy	(29%).		
	Resection weight was significantly higher for patients with early local complications		
	compared with patients without early local complications.		
	Max BMI, change in BMI or pre-operative BMI had no influence on complication rates.		
Panniculectomy			
Hayes (2016)	Key points:		
Panniculectomy for	 Systematic review of 11 retrospective, uncontrolled case series. 		
treatment of symptomatic	Overall quality: low.		
punnoun	Studies focused on surgical complications, with poor documentation of resolution of		
	panniculus-related skin disorders or pain.		
	Conflicting evidence for effect of BMI, diabetes, and concurrent surgery on		
	panniculectomy-related complications. Limited evidence suggests patients are		
Lower body lift	generally satisfied following surgery, despite the high rate of complications.		
Carloni (2016)	Key noints:		
Circumferential contouring	 Systematic review of 28 studies (1,380 total patients). All but one study were 		
of the lower trunk	retrospective cohorts or case series.		
	Overall quality: low.		
	• Overall complication rate 37% (95% CI 30 to 44): seroma, wound dehiscence, and		
	scar irregularities were the most common complications, followed by infection, skin		
	necrosis, hematoma, thromboembolism.		
	 Revision rate for complications 5% (95% CI 3% to 8%). 		
	Higher overall complication rate with lower body lift-related techniques than belt		
	lipectomy-related techniques ($P = .002$), but no difference compared to a gluteal		
	augmentation with flap.		
	Confirmation in KUTS is needed.		
Shvastava (2015)	rey points:		
Lower body lift after MWL	Retrospective review of 42 patients who underwent auto-augmentation and 55 who did		
auto-augmentation versus	not		
no augmentation	Overall quality: low.		
	 Auto-augmentation in lower body lift procedures has a higher rate of complications. 		
Lower body lift after MWL: auto-augmentation versus no augmentation	 Retrospective review of 42 patients who underwent auto-augmentation and 55 who did not. Overall quality: low. Auto-augmentation in lower body lift procedures has a higher rate of complications, 		

Citation	Content, Methods, Recommendations	
	primarily because of dehiscence. Physician's rate aesthetics higher for auto-	
	augmentation, but patient satisfaction is similar between the groups.	
Thighplasty		
Bruschi (2009)	Key points:	
Limb contouring after MWL	 Retrospective case series of 35 (73%) medial thigh lifts, 13 (27%) brachioplasties performed between 2003 and 2006. Most frequent comorbidity was gallstones (28%). Most frequent complications: acute anemia (43% in thigh lift and 54% in arm lift). High patient satisfaction. Complication rate in limb contouring after MWL is higher than the analogue esthetic procedures. 	

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CMS National Coverage Determinations (NCDs):

No NCDs identified as of the writing of this policy.

Local Coverage Determinations (LCDs):

A52729 Cosmetic vs. Reconstructive Surgery. CMS website. <u>https://www.cms.gov/medicare-coverage-database/details/article-details.aspx?articleId=52729&ver=2</u>. Accessed April 12, 2017.

L33428 Cosmetic and Reconstructive Surgery. CMS website. http://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?LCDId=33428&ver=22. Accessed April 12, 2017.

L34698 Cosmetic and Reconstructive Surgery. CMS website. http://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?LCDId=34698&ver=21. Accessed April 12, 2017.

L35090 Cosmetic and Reconstructive Surgery. CMS website. http://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?LCDId=35090&ver=13. Accessed April 12, 2017.

L35163 Plastic Surgery. CMS website. http://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?LCDId=35163&ver=2. Accessed April 12, 2017.

Commonly submitted codes

Below are the most commonly submitted codes for the service(s)/item(s) subject to this policy. This is not an exhaustive list of codes. Providers are expected to consult the appropriate coding manuals and bill accordingly.

CPT Code	Description	Comments
15828	Rhytidectomy; cheek, chin, and neck	
15829	Rhytidectomy; superficial musculoaponeurotic system (SMAS) flap	
15830	Excision, excessive skin and subcutaneous tissue (includes lipectomy); abdomen,	
	infraumbilical panniculectomy	
15832	Excision, excessive skin and subcutaneous tissue (includes lipectomy); thigh	
15833	Excision, excessive skin and subcutaneous tissue (includes lipectomy); leg	
15834	Excision, excessive skin and subcutaneous tissue (includes lipectomy); hip	
15835	Excision, excessive skin and subcutaneous tissue (includes lipectomy); buttock	
15836	Excision, excessive skin and subcutaneous tissue (includes lipectomy); arm	
15837	Excision, excessive skin and subcutaneous tissue (includes lipectomy); forearm or hand	
15838	Excision, excessive skin and subcutaneous tissue (includes lipectomy); submental fat pad	
15839	Excision, excessive skin and subcutaneous tissue (includes lipectomy); other area	
+15847	Excision, excessive skin and subcutaneous tissue (includes lipectomy), abdomen (eg,	
	abdominoplasty) (includes umbilical transposition and fascial plication) (List separately in	
	addition to code for primary procedure)	
15876	Suction assisted lipectomy; head and neck	
15877	Suction assisted lipectomy; trunk	
15878	Suction assisted lipectomy; upper extremity	
15879	Suction assisted lipectomy; lower extremity	
19316	Mastopexy	

ICD-10 Code	Description	Comments
Z98.84	Bariatric surgery status	

HCPCS Level II Code	Description	Comments
N/A		