Bariatric and Metabolic Surgery – Hosted by the Connecticut Chapter of The American Society of Bariatric And Metabolic Surgery

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Is BMI ≥60 kg/m2 too risky for primary bariatric surgery? A MBSAQIP database study

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Background: It is well established that obesity severity is associated with the number and severity of comorbid diseases and may contribute to increased adverse postoperative outcomes. Few studies have evaluated surgical outcomes for patients with BMI≥60kg/m^2.

Objective: Evaluate the association between BMI≥60kg/m^2 and 30-day outcomes following sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB).

Methods: We queried the MBSAQIP database for patients undergoing primary SG (CPT:43775) or RYGB (CPT:43644) in 2020-2021 and compared 30-day outcomes between patients with BMI≥60kg/m^2 vs. BMI<60kg/m^2. Logistic regression models estimated the probability of adverse postoperative outcomes as a function of BMI classification for SG and RYGB separately while controlling for age, sex, and race.

Results: For SG, 14 deaths occurred among the 10,652 cases with BMI≥60kg/m^2 (0.13%) and 101 deaths among 218,922 with BMI<60kg/m^2 (0.05%; OR:3.01). For RYGB, 9 deaths among 3,822 with BMI≥60kg/m^2 (0.24%) and 73 deaths among 78,668 with BMI<60kg/m^2 (0.09%; OR:3.68). For SG, BMI≥60kg/m^2 was associated with a significantly higher risk of ICU admission (OR:3.10), GI bleeding (OR:2.04), septic shock (OR:2.80), acute renal failure (OR:4.03), ventilator support > 48hours (OR:3.41), unplanned intubation (OR:5.22), readmission (OR:1.35), and ED visit (OR:1.21). For RYGB, BMI≥60kg/m^2 was associated with a higher risk of conversion to open technique (OR:5.38), acute renal failure (OR:2.62), ventilator support > 48hours (OR:2.41). There were no significant differences in venous thromboembolism or anastomotic/staple line leak.

Conclusion: BMI≥60kg/m^2 is associated with higher 30-day mortality for SG and RYGB. Interventions to facilitate weight loss before surgery should be encouraged in this patient population.

Is Poor Glycemic Status an Indicator of Delayed Achievement of Desired Weight Loss Goals Post Bariatric Surgery? : A Bariatric Center of Excellence Perspective

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Introduction: In recent years, bariatric surgery has emerged as a highly effective intervention for individuals struggling with obesity, offering not only significant weight loss but also remarkable improvements in comorbidities and overall health outcomes. An innate characteristic in this patient population is a suboptimal glycemic status. Understanding the intricate interplay between preoperative glycated hemoglobin and postoperative weight loss becomes not only scientifically intriguing but also clinically significant, for the best possible outcomes for our patients. The objective of our study, from a bariatric center of excellence, is to evaluate the relationship between preoperative HbA1c and postoperative outcomes in patients, particularly achieving the personal goals of desired weight loss.

Methods: An institutional bariatric database was created by retrospectively reviewing patients undergoing elective minimally invasive bariatric procedures in 2020 & 2021 in a community hospital. Groups were created based on glycemic status: Non-diabetic(HbA1c<5.7), Pre-Diabetic(HbA1c 5.7-6.5) and Diabetic(HbA1c >6.5). Percent excess weight loss (%EWL) was calculated and compared immediately pre op then at 30 days followed by at 6 months. Other postoperative outcomes, including length of stay, complications rate, follow up compliance rates, etc were calculated and were analyzed. Statistical analysis was completed using Strata. A p-value of 0.05 or less was considered significant.

Results: A total of 101 patients were analyzed. 80(79.2%) of the patients were female and 80(79.2%) of patients were white. Patients with a lower HbA1c were found to have a greater reduction in %EWL post op when compared to patients with higher pre-op HbA1c. Interestingly, this trend was not significant at the 30 day follow up(8.5% vs 7.7% vs 7.7%, p=0.2985), however it was significant at the 6 month follow up(23.3% vs 18.8% vs 16.6%, p=0.0407). About 68% of the patients in each group were compliant for their 6 month follow up.

Conclusions: Pre-op HbA1c is a significant predictor for post-op %EWL at six months. Our data suggest that tighter preop glycemic control, especially in prediabetic and diabetic cohorts may lead to better weight loss outcomes after bariatric surgery.

	Non-Diabetic (n=33)	Pre-Diabetic (n=32)	Diabetic (n=36)	p-value
Mean Pre-Op HbA1c (%)	5.4	6	8.1	< 0.001
Mean Pre-Op BMI (kg/m^2)	46.1	46.2	43.3	0.2391
Mean length of stay (hours)	32.6	37.2	35.3	0.3347
Mean %EWL at 30 days	8.5%	7.7%	7.7%	0.2985
Mean %EWL at 6 months	23.3%	18.8%	16.6%	0.0407

Table 1: % Excess Weight loss was higher in patients with lower Preop HbA1c, and this trend was significant at six months post op

Length of stay and length of procedure as early indicators for weight loss outcomes in sleeve gastrectomy bariatric patients at a community surgical center

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Introduction: Minimally invasive sleeve gastrectomy offers patients an opportunity for effective weight loss and comorbidity management as a first line bariatric surgery; however, there remains a significant portion of patients who are poor responders and ultimately require conversion to gastric bypass. Early identification of patients who may struggle with achieving weight loss after surgery seeks to improve positive outcomes in bariatric patients with targeted postoperative outreach and support via specialized concierge services. Risk factors that increase LOS include higher BMI prior to surgery, patients with Medicaid/Medicare insurance and disease burden. In this study we sought to better understand how LOS post-operatively, and length of procedure (LOP) intra-operatively may affect weight loss outcomes.

Methods: Retrospective review of patients undergoing sleeve gastrectomy using data from January 1, 2020 to December 31, 2021 was conducted. We collected patient demographics, LOS in days, and LOP in minutes, initial weight and weight at 30 days. The weight loss percentage was calculated from the weight at thirty days divided by the weight preoperatively. LOS was broken into three groups: 0-1 day, 2 days and >3 days. LOP was broken down into three groups: fastest, slowest and average duration based on average length of procedure for the entire cohort. An ANOVA was used to compare the means between each group. Stata version 17 was for statistics.

Results: 423 sleeve gastrectomy patients were identified from January 1, 2020 to December 31, 2021. However, only 398 patients had weight data at 30 days and were included in the final analysis. The mean amount of weight loss at 30 days was 20.8 lbs (95% confidence interval of 17.7-24). Within the cohort of patients, 83.7% (333) were female and 80.7% (321) were white. The mean procedure length was 54.9 minutes (95% confidence interval 53.6-56.2).

Conclusion: Our study indicates that LOS postoperatively has a significant effect on short term weight loss in this cohort of patients undergoing gastric sleeve at a single community surgical center. This could indicate the need for improved care and support for these patients to ensure effective weight loss before leaving the hospital. This could also help to identify patients who may require more education and closer follow up. Effective ERAS programs have been shown to decrease length of stay (LOS) without increasing risk of postoperative complications. Further research should examine specific variables for increased LOS to better understand the reason for less weight loss and evaluate ways to reduce poor outcomes in sleeve gastrectomy bariatric patients.

Length of Stay (days)	n	Weight loss percentage	p-value
0-1	305	7.8	
2	73	9	
>3	20	2.5	0.0077

Length of Procedure (mins)	n	Weight loss percentage	p-value
Fastest	102	7.3	
Average	199	8.3	
Slowest	97	7.2	0.4434

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Low Rate of Bariatric Surgery in Eligible Female Patients with History of Hormone Related Malignancies in a Community Hospital

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Introduction: The relationship between malignancy and obesity has been well studied particularly in hormone related malignancies like breast and endometrial cancer. Patients with an elevated body mass (BMI) index are not only at higher risk for developing these malignancies but also have a higher rate of recurrence. They also are prone to the other medical conditions associated with obesity. We sought to understand the rate of bariatric surgery a community hospital setting of patients with history of diagnosis of hormone related malignancy and BMI to qualify for bariatric surgery.

Method(s): Female patients older than 18, admitted to a single community hospital from July 2017 through July 2022, with history of a diagnosis of either breast, endometrial or ovarian cancer based on international classification for disease version 10 (ICD-10) were first identified. Patients were only counted once if they had multiple admissions. The patients highest BMI was used for the results and only those with a BMI greater than 35 kg/m2 were included. Patients with bariatric surgery (either gastric sleeve or gastric bypass) were identified using current procedural terminology.

Results: We identified a total of 2,028 patients who had a diagnosis of one of the included malignancies. A total of 821 patients had a BMI greater than or equal to 35 and were included in the analysis. Of the 821 patients, 684 patients had breast cancer (83.3%), 53 patients had ovarian cancer (6.5%) and 85 patients had endometrial cancer (10.4%). Only one patient had two malignancies (breast and ovarian). A total of 13 patients (1.6%) had bariatric surgery which were all gastric sleeves. 12 of these patients were breast cancer patients and 1 was endometrial cancer.

Conclusion(s): In our cohort of female patients with a history of a hormone related malignancies we found a low rate of bariatric surgery in patients with a qualifying BMI. We would suggest including a discussion on the importance of weight loss for these patients who are at high risk of recurrence given their previous history and weight status.

Table 1 – Demographics for Cancer Cohort (n=821)

Variable	Result
Mean Age (95% confidence interval)	67.9 (67.1-68.8)
Mean BMI (95% confidence interval)	40.3 (39.8-40.9)
Malignancy type (%)	
Breast	684 (83.3%)
Ovarian	53 (6.5%)
Endometrial	85 (10.4%)
Race of Patients	
White of Caucasian	695 (84.7%)
Black or African American	68 (8.3%)
Asian	9 (1.1%)
Other/Unknown	49 (6%)

Multimodal Approach Utilizing a Weight Management Program prior to Bariatric Surgery in Patients with BMI>50: A Retrospective Analysis

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Introduction: The number of patients with super obesity (BMI>50 kg/m^2) in the US has increased significantly since 1986 at a rate greater than that observed for lower classifications of obesity. Metabolic and bariatric surgery (MBS) is the primary treatment for patients with BMI≥50 kg/m^2. However, MBS is more technically demanding in patients with BMI≥50 kg/m^2, who may be at an increased risk for worsened postoperative complications. Despite these concerns, research on multimodal treatment approaches that incorporate medical and surgical intervention when treating patients with BMI≥50 kg/m^2 is limited. The aim of this study is to investigate the effect of a preoperative medical weight management (MWM) program on the following outcomes in patients with BMI>50 kg/m^2 being seen by an obesity medicine team: 1) time from initial bariatric intake to surgery, 2) percent total weight loss prior to surgery, and 3) weight change at 6 months post-surgery.

Method(s): A retrospective electronic medical record review identified patients of both sexes with BMI≥50 kg/m^2, ages 18-77, who received primary laparoscopic sleeve gastrectomy (LSG) between 2017 and 2019. Patients who accepted referral to the preoperative MWM program were prescribed anti-obesity medications and received nutritional support from an Obesity Medicine practitioner. Patients presenting between 2014 and 2016 were not exposed to MWM and served as the control group (non-MWM). Body weight was collected at an initial bariatric intake visit, an initial visit for medical weight loss treatment, on the day of surgery, and at six months post-surgery (as per MBSAQIP guidelines). T-tests or Wilcox ranked sum tests were used to compare MWM and non-MWM groups.

Results: 190 patients (MWM, 27; non-MWM, 163) met inclusion criteria. Patients referred to MWM had significantly higher BMI at bariatric intake (60.2 vs 55.6, p=0.002), but not at the time of surgery (54.8 vs. 51.2, p=0.12) (Table 1). Preoperative MWM provided significantly greater percent total weight loss at surgery (11.1% vs 6.04%, p=0.021) with no delay to the treatment plan of bariatric surgery (Table 2). Preoperative MWM did not alter percent total weight loss at 6 months post-surgery.

Conclusion(s): The results from this study demonstrate weight loss effects of MWM exposure prior to MBS. Patients' exposure to MWM prior to surgery provided a lower BMI without delaying time to surgery, findings that are relevant to surgical practice and may encourage surgeons to consider incorporating MWM in their preoperative care. Although preoperative MWM did not lower the percent total weight loss at 6 months post-surgery, other studies suggest that MWM may influence the success of postoperative outcomes. Future research should implement a prospective study design to confirm the findings as well as the long-term effects of preoperative MWM on weight loss after MBS. *(See tables next page)*

TABLE 1. CHANGES in WEIGHT, PRE- and POST-SURGERY IN N=162 PATIENTS WITH 6 MO FU DATA. DATA ARE MEDIANS [1st, 3rd quartile].

VARIABLE	MWM Treatment: Not treated (N=135)	MWM Treatment: Treated (N=27, incl n=7 who continued MWM post surg)	p value
Age at IC (years)	39.9 (29.8, 51.6)	44.6 (32.5, 55.7)	0.247
BMI at IC (kg/m²)	55.6 (52.9,59.8)	60.2 (54.1,67.9)	**0.002***
BMI at Surg (kg/m²)	51.2 (48.9, 55.8)	54.8 (49.6,59.7)	0.122
BMI at 6m FU (kg/m²)	44.5 (41.8, 47.7)	47.1 (42.4, 54.6)	**0.022***
BMI Chg IC to Surg	-3.84 (-1.99, -5.97)	-6.40 (-2.69, -8.96)	**0.015***
BMI Chg Surg to 6m FU	-7.29 (-5.02, -9.95)	-5.47 (-4.39, -8.26)	0.074
BMI Chg IC to 6m FU	-11.19 (-8.67, -14.34)	-12.17 (-9.60, -14.63)	0.394
Weight at IC (lbs)	345.0 (316.1, 381.3)	366.0 (334.0, 400.8)	**0.040***
Weight at Surg (lbs)	316.9 (293.7, 352.7)	328.6 (294.7,365.1)	0.256
Weight, 6m FU (lbs)	273.0 (242.0, 308.0)	292.0 (250.0, 323.0)	0.076
Wt Chg, IC to Surg (lbs)	-23.6 (-12.8, -37.4)	-39.3 (-16.7, -54.1)	**0.029***
Wt Chg, Surg to 6m FU (lbs)	-46.8 (-29.8, -62.2)	-36.0 (-29.5, -50.1)	0.175
Wt Chg, IC to 6m FU (lbs)	-70.1 (-51.0, -89.0)	-72.0 (-57.0, -92.0)	0.420
% TWL, IC to 6m FU (%)	19.9% (15.5, 24.6)	20.6% (14.9, 24.0)	0.909

TABLE 2. ALL PATIENTS – CHANGES in WEIGHT, PRE-SURGERY. DATA ARE MEDIANS (INTERQUARTILE RANGE). DATA ARE MEDIANS [1st, 3rd quartile]

VARIABLE	MWM Treatment: Not Treated N=163	MWM Treatment: Treated N=27	p value
Weight at initial consult	341.0 (314.8, 373.9)	366.0 (334.0, 400.8)	**0.015***
Weight at surgery	315.6 (291.0,351.1)	328.6 (294.7,365.1)	0.256
Weight loss, initial consult to surgery	21.7 (12.0,35.6)	39.3 (16.7,54.1)	**0.014***
Weight loss per week, initial consult to surgery	0.55 (0.24,0.97)	0.76 (0.44,1.20)	0.109
%TWL, initial consult to surgery	6.04 (3.36,10.43)	11.1 (4.64,14.17)	**0.021***

Outcomes of Patients with COVID-19 within 14 Days Prior to and 30 days After MBS in MBSAQIP

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Introduction: Perioperative COVID-19 diagnosis may increase the risks associated with elective surgery, including bariatric surgery. To evaluate the association between COVID-19 diagnosis and 30-day outcomes following primary sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB).

Method(s): We queried the 2021 participant use file of the MBSAQIP database for patients undergoing primary laparoscopic SG (CPT 43775) or RYGB (CPT 43644) in 2021 and compared 30-day outcomes between patients with and without a confirmed COVID-19 diagnosis within 14 days before surgery.

Results: A total of 173,468 patients met inclusion/exclusion criteria (127,705 SG, 45,763 RYGB). COVID-19 infection before surgery was associated with high mortality risk (OR: 6.32; 1.50-26.54) for RYGB but not for SG. COVID-19 infection after SG was associated with higher odds of mortality (OR: 7.64; 2.30-25.38), sepsis (OR: 6.27; 2.27-17.29), acute renal failure (OR: 7.85; 1.75-35.21), blood transfusion at any point (OR: 2.05; 1.01-4.16), reoperation (OR: 2.83; 1.62- 4.95), readmission (OR: 5.86; 4.69-7.33), intervention (OR: 2.02; 0.99-4.10), and ED visit within 30 days (OR: 4.95; 4.21-5.83). For RYGB, postoperative COVID-19 infection was associated with higher odds of sepsis (OR: 5.97; 1.82-19.56), ventilator support > 48hours (OR: 7.94; 1.75-36.02), readmission (OR: 5.41; 4.09-7.16), post-operation to discharge greater than 1 day (OR: 1.3; 1.03-1.63), intervention (OR; 2.32; 1.26-4.26), and ED visit within 30 days (OR: 4.57; 3.61-5.79).

Conclusion(s): Laboratory-confirmed COVID-19 diagnosis either up to 14 days before or up to 30 days following primary bariatric surgery is associated with significantly higher odds of mortality and of a host of complications in the 30 days following surgery.
(See tables next page)

Table 3. Logistic regression of the effect of having confirmed COVID diagnoses after surgery vs. not having any COVID diagnoses after surgery on post-operative outcomes: adjusted* odds ratios and statistical probability

	SG (N=127,705, 73.6%)			RYGB (N=45,763, 26.4%)		
Outcome	**OR**	**95% CI**	**P**	**OR**	**95% CI**	**P**
Death	7.64	2.30 – 25.38	0.001	3.72	0.50 – 27.41	0.198
Cardiac arrest	NA	NA	NA	NA	NA	NA
MI	NA	NA	NA	NA	NA	NA
Pneumonia	NA	NA	NA	NA	NA	NA
Renal failure (acute)	7.85	1.75 – 35.21	0.007	4.38	0.57 – 33.61	0.155
Stroke (CVA)	NA	NA	NA	NA	NA	NA
Ventilator (post, >48hr)	2.74	0.30 – 25.15	0.372	7.94	1.75 – 36.02	0.007
Unplanned intubation	NA	NA	NA	NA	NA	NA
Anastomotic/Staple Line Leak	NA	NA	NA	NA	NA	NA
Pulmonary Embolism	NA	NA	NA	NA	NA	NA
Vein Thrombosis Requiring Therapy	NA	NA	NA	NA	NA	NA
Gastrointestinal Tract Bleeding	NA	NA	NA	NA	NA	NA
Transfusion First 72h	1.89	0.93 – 3.85	0.079	1.01	0.32 – 3.17	0.985
Sepsis	6.27	2.27 – 17.29	<0.001	5.97	1.82 – 19.56	0.003
Septic Shock	NA	NA	NA	3.39	0.45 – 25.24	0.234
Bowel Obstruction	NA	NA	NA	NA	NA	NA
Intervention (30 days)	2.02	0.99 - 4.10	0.051	2.32	1.26 –4.26	0.007
Readmission (30 days)	5.86	4.69 – 7.33	<0.001	5.41	4.09 – 7.16	<0.001
Reoperation (30 days)	2.83	1.62 – 4.95	<0.001	1.78	0.94 – 3.36	0.076
ED visit (30 days)	4.95	4.21 – 5.83	<0.001	4.57	3.61 – 5.78	<0.001
ICU Admission (30 days)	NA	NA	NA	NA	NA	NA
Surgery to DC >1 Day	1.09	0.93 – 1.29	0.292	1.30	1.03 – 1.63	0.024
Surgery to DC >2 Days	1.62	1.23 - 2.15	0.001	1.20	0.82 – 1.75	0.344
Blood Transfusion	2.05	1.01 – 4.16	0.048	0.75	0.19 – 3.03	0.687
Robotic Assistance	1.10	0.93 – 1.30	0.266	1.27	0.99 – 1.61	0.060
Procedure Converted	0.40	0.06 – 2.86	0.361	NA	NA	NA
Procedure Converted to Open	NA	NA	NA	NA	NA	NA

Note. Abbr. SG=sleeve gastrectomy; RYGB= Roux-en-Y Gastric Bypass; OR=odds ratio. Significant results in bold; OR > 1 indicate patients having confirmed COVID diagnoses after surgery are more likely to have that outcome; OR < 1 indicates patients having confirmed COVID diagnoses after surgery were less likely to experience that outcome. *All odds ratios were adjusted for age, sex, race, BMI, and pre-op comorbidities/medical history. NA=not enough observation for analysis.

Table 2. Logistic regression of the effect of having confirmed COVID diagnoses before surgery vs. not having any COVID diagnoses before surgery on post-operative outcomes: adjusted* odds ratios and statistical probability

	SG (N=127,705, 73.6%)			RYGB (N=45,763, 26.4%)		
Outcome	**OR**	**95% CI**	**P**	**OR**	**95% CI**	**P**
Death	NA	NA	NA	**6.32**	**1.50 – 26.54**	**0.012**
Cardiac arrest	NA	NA	NA	NA	NA	NA
MI	NA	NA	NA	NA	NA	NA
Pneumonia	NA	NA	NA	NA	NA	NA
Renal failure (acute)	4.29	0.58 – 31.61	0.154	NA	NA	NA
Stroke (CVA)	NA	NA	NA	NA	NA	NA
Ventilator (post, >48hr)	NA	NA	NA	NA	NA	NA
Unplanned intubation	NA	NA	NA	NA	NA	NA
Anastomotic/Staple Line Leak	NA	NA	NA	NA	NA	NA
Pulmonary Embolism	NA	NA	NA	NA	NA	NA
Vein Thrombosis Requiring Therapy	NA	NA	NA	NA	NA	NA
Gastrointestinal Tract Bleeding	NA	NA	NA	NA	NA	NA
Transfusion First 72h	0.93	0.35 – 2.49	0.879	1.01	0.32 – 3.19	0.980
Sepsis	1.52	0.21 – 10.90	0.680	2.20	0.30 – 16.04	0.438
Septic Shock	NA	NA	NA	2.69	0.37 – 19.79	0.332
Bowel Obstruction	NA	NA	NA	NA	NA	NA
Intervention (30 days)	1.03	0.38 - 2.76	0.957	1.35	0.60 –3.04	0.469
Readmission (30 days)	0.78	0.47 – 1.30	0.340	1.24	0.77 – 2.02	0.373
Reoperation (30 days)	0.61	0.20 – 1.91	0.400	1.27	0.60 – 2.70	0.534
ED visit (30 days)	0.88	0.67 – 1.17	0.388	0.96	0.65 – 1.40	0.820
ICU Admission (30 days)	NA	NA	NA	NA	NA	NA

Note. Abbr. SG=sleeve gastrectomy; RYGB= Roux-en-Y Gastric Bypass; OR=odds ratio. Significant results in bold; OR > 1 indicate patients having confirmed COVID diagnoses before surgery are more likely to have that outcome; OR < 1 indicates patients having confirmed COVID diagnoses before surgery were less likely to experience that outcome. *All odds ratios were adjusted for age, sex, race, BMI, and pre-op comorbidities/medical history. NA=no observation for analysis.

Single Anastomosis Duodenal-ileal Bypass (SADI) as Weight Loss Revision after Sleeve Gastrectomy

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Introduction: About 20-30% of patients either fail to reach their target weight goals or fail to maintain the achieved weight loss following bariatric surgery. Single Anastomosis Duodenal-Ileal Bypass with Sleeve Gastrectomy (SADI-S) had been introduced in 2007 as revisional surgery after failed sleeve gastrectomy or as part of a planned two-stage surgery. Advantages of SADI-S are higher average weight loss and better control of diabetes than sleeve gastrectomy, gastric bypass or Lap-Band® as well as mitigating the risk of marginal ulcer in gastric bypass. This is a more complex procedure and may results in malabsorption, leading to diarrhea, vitamin or mineral deficiencies. At Saint Mary's Hospital, the first robotic-assisted SADI-S was performed on 18 October 2021. We aim to describe our first SADI-S patient cohort and their short-term postoperative outcomes.

Methods: This is a retrospective chart review of SADI-S performed between the January 2021 and December 2022. We are reporting a series of six patients who underwent SADI-S in our institution by a single surgeon.

Results: In our series, the age of our patients ranges between 30 and 52. All six patients presented to us following failure to achieve weight loss after sleeve gastrectomy, and SADI-S was performed as revisional surgery. Pre-SADI-S BMI of our patients ranges between 47.73 and 55.35. Post SADI-S BMI at 6 month follow up ranges between BMI post-SADI-S ranged between 33.78 to 45.4 At present, interval follow up data are available from 4 months to 1 year postoperatively. Excess body weight loss percentage post SADI-S ranged between 18.9% to 64.7%. In our series, no patients experience postoperative complications or readmissions within 30 days of surgery. The average duration of the procedure was 141 minutes. Five out of 6 patients were discharged on postoperative day 1. One out of six patients had diagnosis of diabetes mellitus and is now able to achieve glycemic control off medications. No patients experience significant diarrhea or malabsorptive symptoms at follow up.

Conclusion: SADI-S is a safe surgical technique when performed by experienced bariatric surgeon in a high-volume bariatric center of excellence and may be offered to patients after failure of optimal weight loss as revisional surgery.

Social Vulnerability of Bariatric Patient's Postoperative Outcomes from a Single Community Bariatric Center

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Introduction:

Bariatric patients require intensive preoperative evaluation for eligibility to undergo a procedure. However, postoperatively the intensity of the weight loss often relies on a patient's own motivation. Social Vulnerability Index (SVI), was initially created to identify areas within communities that would benefit from increased emergency services, but has been used as a method to understand patient's own community struggles within the literature. We sought to understand bariatrics patient's postoperative outcomes in terms of their SVI to identify those who might benefit from increased support.

Method(s):

An institutional bariatric database was created by retrospectively reviewing patients undergoing elective minimally invasive bariatric procedures from 2020-2021. Demographics reviewed included age, gender, diabetic status, and pre-op body mass index (BMI, kg/m2). Social vulnerability index was identified from patient's address at time of surgery. Follow-up at six months and one year, utilization of emergency department (ED) visits, requiring intravenous infusions and complication rates were also reviewed. Patients were excluded if an address within the state could not be identified. Statistical analysis was performed with t-test; a p-value less than 0.05 was considered significant.

Results:

A total of 305 patients met inclusion criteria of which 261 (85.6%) were female with an average age of 40.8 (95% confidence interval of 39.4-42.2). There was no significant difference in SVI for patients without follow-up at six months (p=0.5) or one year (p=0.33). Patients who visited the emergency department also did not have a significantly higher SVI (p=0.59). However, patients who required intravenous infusions did have a statistically higher SVI (0.71 vs 0.88, p=0.03).

Conclusion(s): Patients with a higher SVI more often require additional assistance although only intravenous infusion reached statistical significance. Patients identified with a higher SVI preoperatively may benefit from increased social support to prevent complications following bariatric surgery.

Table 1: Mean SVI for Outcomes of Bariatric surgery (n=305)

Variable	Yes/No	Number of patients	Mean SVI	95% Confidence Interval	p-value
Six month follow-up	Yes	146	0.71	0.67-0.75	0.50
	No	159	0.73	0.69-0.76	
One year follow-up	Yes	126	0.73	0.69-0.76	0.33
	No	179	0.70	0.66-0.74	
Emergency Department Visit	Yes	22	0.74	0.65-0.84	0.59
	No	283	0.72	0.69-0.74	
Intravenous infusions	Yes	10	0.88	0.82-0.93	0.03

Successful Weight Loss Prior to Bariatric Surgery is Associated with Improved Short Term Weight Loss and Lower Rate of Perioperative Complications

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Introduction: While the majority of bariatric patients lose weight postoperatively and see resolution of multiple comorbidities, many remain clinically obese and weight loss goals are not always sustained. Successful preoperative weight loss has been associated with decreased 30 day mortality rates and overall postoperative (post-op) complications; however, it is unclear which factors contribute to sustained long term weight loss and post-op patient compliance. We seek to investigate the effect of pre-op weight loss across multiple outcomes.

Methods: An institutional bariatric database was created by retrospectively reviewing patients undergoing minimally invasive bariatric procedures from 2020-2021. Demographics included age, gender, diabetic status and pre-op body mass index (BMI, kg/m^2). Percent excess weight loss (%EWL) was calculated and compared pre-op then at 30 days, 6 months and 1 year post-op. Length of stay, post-op emergency department (ED) visits and complication rates were reviewed. Patients were stratified into groups based on pre-op weight loss. Statistical analysis was performed with one way ANOVA testing; a p-value less than 0.05 was considered signficant.

Results: Patients who lost more than 5% of their excess body weight prior to surgery (n= 202) had less complications (0.5% vs 5.8%, p= 0.004) when compared to patients who failed to lose weight pre-op (n= 207). While %EWL was also significantly higher in this group at the 6 month mark (64.94% vs 60.88%, p < 0.0001), there was no significant difference at 12 months in %EWL or compliance to follow up.

Conclusions: Successful weight loss prior to bariatric surgery is associated with more rapid short term weight loss and lower complication rates but does not appear to affect long term patient compliance or outcomes.

	Pre-op %EWL < 1% (n= 207)	Pre-op %EWL 1-5% (n= 165)	Pre-op %EWL > 5% (n= 202)	p-value
Preoperative				
Mean %EWL	-4.23	3.33	**17.95**	**< 0.0001**
30 day				
Mean %EWL	23.02	20.95	23.51	0.08
6 months				
Mean %EWL	60.88	52.70	**64.94**	**< 0.0001**
12 months				
Mean %EWL	62.08	61.54	70.47	0.11
Average Pre-op BMI	48.96	45.23	**41.68**	**< 0.0001**
Complication Rate	5.80	1.81	**0.50**	**0.004**

Table 1: Patients who are most successful at weight loss prior to minimally invasive bariatric surgery have significantly lower complication rates and more rapid weight loss within the first six months of surgery.