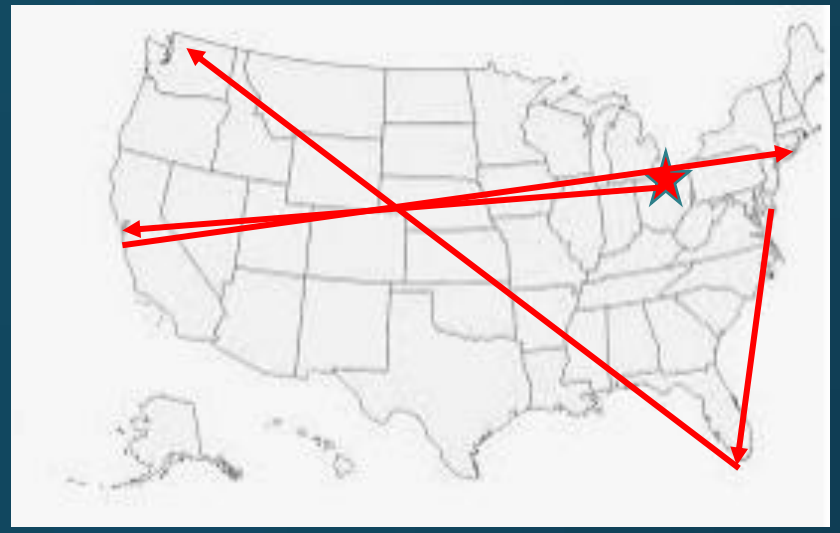
David Swedler, DO
Virginia Mason Franciscan Center for Weight Management
St. Francis Hospital- Federal Way, WA

Metabolic and Bariatric Surgery Where We Are Today

Outline

- Problem of obesity
- Evolution of the field of bariatric surgery, accomplishing safe surgery
- Common procedures performed today
- Outcomes
- Identifying the bariatric patient
  - Logistics with insurance coverage
  - About our program/what to expect/patient pathway

David Swedler, DO



- Grew up in Akron, Ohio; undergrad at The Ohio State University
- Medical school in Vallejo, CA- Touro University
- General Surgery Residency in Brooklyn, NY at Lutheran Medical Center, now NYU Brooklyn
- Advanced GI Minimally Invasive Fellowship in Miami, FL at Jackson South Hospital, part of the UM system
- 7 years in practice, all with Franciscan, 5 years full time bariatrics

Franciscan Center for Weight Management Federal Way, WA

Haroon Anwar, MD

Troy Houseworth, MD

David Swedler, DO

- Highest volume robotic bariatric center in the U.S.
- One of the highest volume bariatric surgery center in the state
  - 759 cases in 2020

Now…. Virginia Mason Franciscan Center for Weight Management

Virginia Mason Medical Center

Lily Chang, MD, FACS
Seattle

Shanley Deal, MD
Federal Way, Seattle

Mohan K. Mallipeddi, MD
Lynnwood, Seattle

St. Michael Medical Center

Kevin Clive, MD, FACS, DABOM
Silverdale

Angel Reyes-Villanueva, MD, FACS, FASMBS, DABOM
Silverdale

The Obesity Epidemic

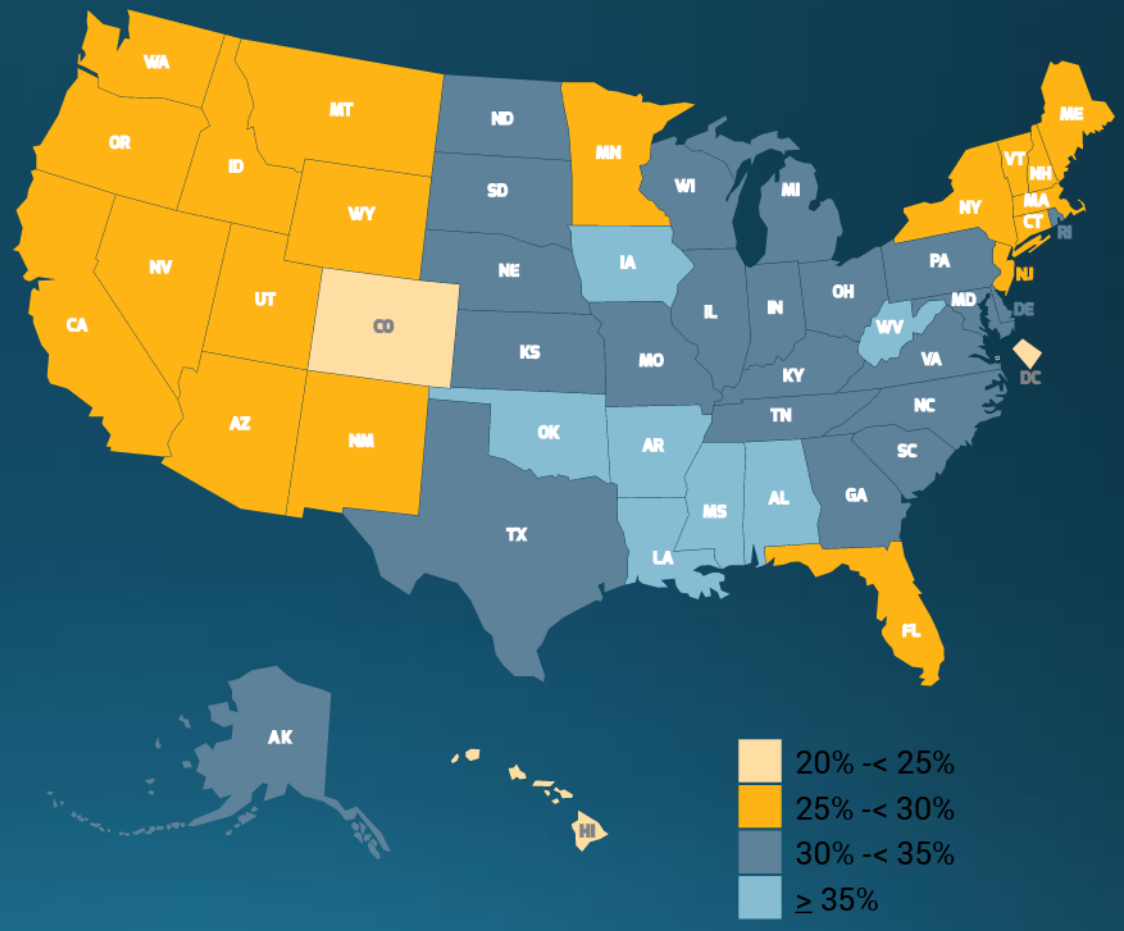
39.6% of Americans are obese

7.7% of Americans are morbidly obese

Worldwide, **obesity rate has tripled** since 1975

Why?

- Genetics or other health reasons
- Community, culture and environment
- Behavior and habits
- Life changing events, stress



Source: Behavioral Risk Factor Surveillance System

Obesity in Washington State

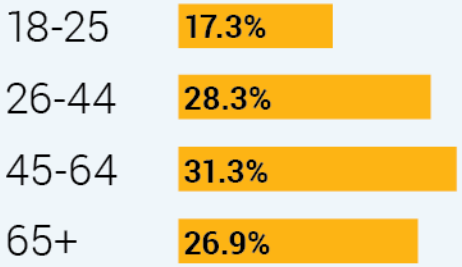
Current adult obesity rate (2017)

27.7%

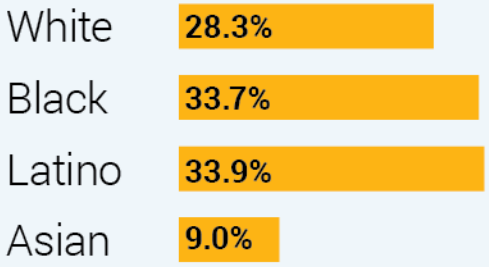
Rank among states (2017)

39/50

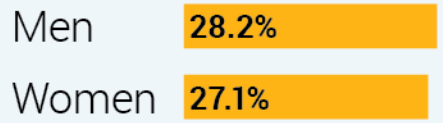
Obesity rate by age (2017)



Obesity rate by race (2017)



Obesity rate by gender (2017)

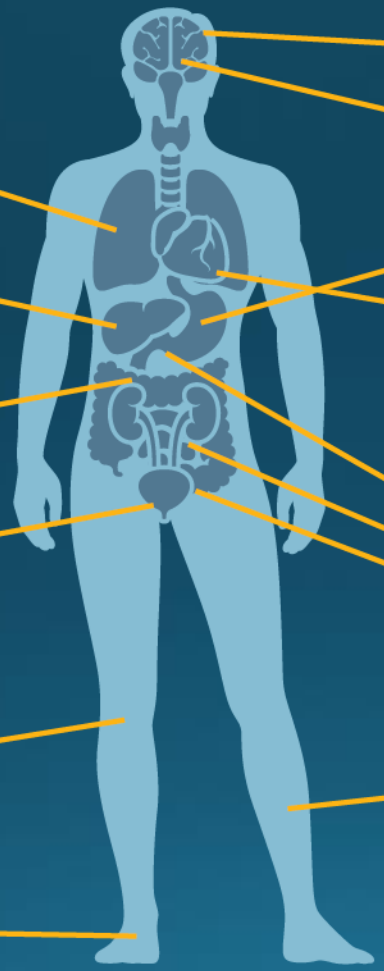


Source: Trust for America's Health and Robert Wood Johnson Foundation. The State of Obesity 2018.

How does obesity effect our patients?

Unable to enjoy life like before being overweight

Obesity related health problems



Pulmonary disease
- Obstructive sleep apnea
- Hypoventilation syndrome

Nonalcoholic fatty liver disease
- Steatohepatitis
- Cirrhosis

Gall bladder disease

Gynecologic abnormalities
- Infertility
- Polycystic ovarian syndrome
- Stress incontinence

Osteoarthritis

Gout

Depression

Stroke

GERD

Cardio / Metabolic Syndrome
- Diabetes
- Dyslipidemia
- Hypertension

Cancer
- Breast, Uterus, Cervix, Colon, Esophagus, Pancreas, Kidney, Prostate

Phlebitis
- Venous Stasis

Premature Death

So what do we, as doctors, do about this?

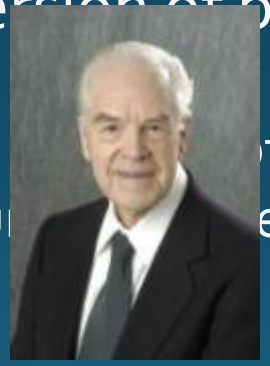
- Recommend diet and exercise
  - <5% excess body weight loss (usually gain more weight)
- Medical weight loss
- Surgery
  - ***"Oh, you do the band surgery, right??"***
  - ***"My cousin's friend's aunt had that and she gained all her weight back."***
  - ***"Someone I work with did horribly after that."***

Obesity rates in the U.S. during the 50's was about 10%

Parikh, N. et al. Increasing Trends in Incidence of Overweight and Obesity Over 5 Decades. Am J Med (2007) 120, 242-250.

Metabolic/Weight Loss/Bariatric Surgery

- 1952- Henrickson- 105cm small bowel resection on a 32 y/o obese Swedish woman
- 1953: Varco—end-to-end jejunoileostomy with ileocecostomy—unpublished
- 1963- Payne- Jejunal-ileal bypasses, diversion of proximal small bowel into the colon, jejunal clonic shunts
  - 10% mortality rate, bypass enteritis, severe [illegible]tion, liver dz……etc.
  - More than 30,000 of these types of procedu[illegible]efore they recognized the complications were unacceptable
- 1966- Mason- first gastric bypass
  - Showed much safer than JIB, remission of diabetes in 83% of patients



Buchwald, H. The Evolution of Metabolic/Bariatric Surgery. *OBES SURG* **24,** 1126–1135 (2014). https://doi-org.offcampus.lib.washington.edu/10.1007/s11695-014-1354-3

Metabolic/Weight Loss/Bariatric Surgery

- 1973 Printen and Mason- First form of vertical banded gastroplasty
- 1986 Kuzmak- Adjustable gastric band
- 1993 Belachew, Forsell- Laparoscopic adjustable gastric band

Gained experience in malnourishment, anastomotic dehiscence, bleeding, reoperations, and weight regain.

1992 study by experts- 10% complication rate with median postoperative length of stay of 12 days for those patients.

Mason EE, Renquist KE, Jiang D. Perioperative risks and safety of surgery for severe obesity. Am J Clin Nutr. 1992 Feb;55(2 Suppl):573S-576S. doi: 10.1093/ajcn/55.2.573s. PMID: 1733130.

Buchwald, H. The Evolution of Metabolic/Bariatric Surgery. *OBES SURG* **24,** 1126–1135 (2014). https://doi-org.offcampus.lib.washington.edu/10.1007/s11695-014-1354-3

Revision Bariatric Surgery in 1980's

- "Between 1976 and 1987, 43 patients underwent reversal of jejunoileal bypass operations because of metabolic complications of the operation. Electrolyte imbalance, malnutrition, and diarrhea (16 patients); cirrhosis (9); nephrolithiasis (9); arthritis (7); and pathologic fractures (1) were the primary indications for reconstruction. Many patients had multiple complications of the jejunoileal bypass operation."
- "Two patients with cirrhosis died of liver failure after reconstruction; the distinguishing preoperative characteristic was ascites."
- "Although the survival rate in these patients at last follow-up was 95 percent, 28 percent were incapacitated. "

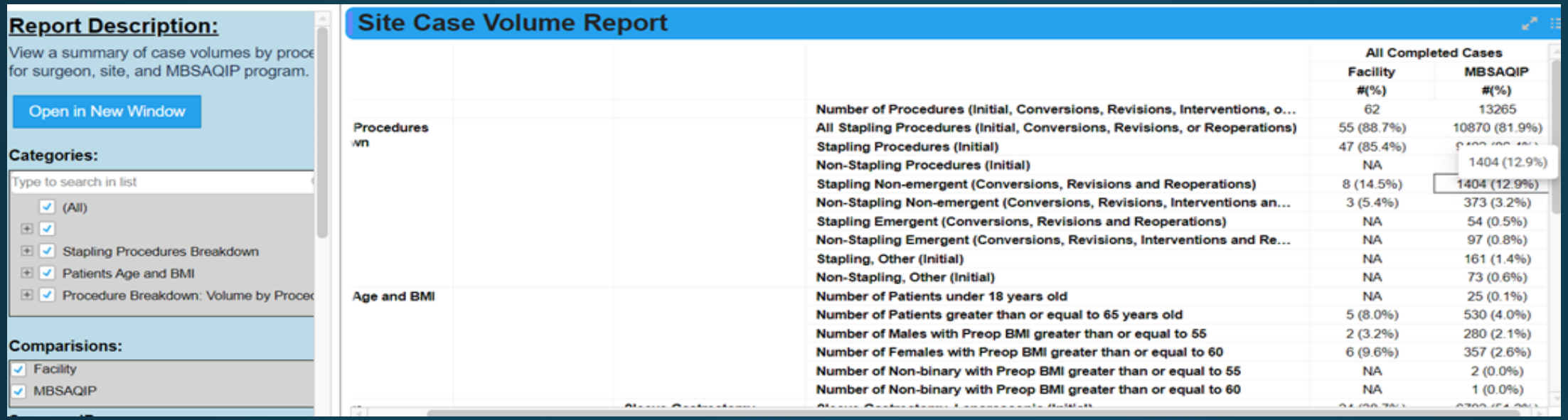
Dean, et al. Long-term outcome of reversal of small intestinal bypass operations.1990 Jan;159(1):118-23; discussion 123-4.

Creation of the American Society of Metabolic and Bariatric Surgery

Founded in 1983, foremost American surgeons have formed the society's leadership and have established an excellent organization with educational and support programs for surgeons and integrated health professionals. The mission of the society is to advance the art and science of metabolic and bariatric surgery by continually improving the quality and safety of care and treatment of people with obesity and related diseases by:

- Improving the care and treatment of people suffering from obesity.
- Advancing the science and understanding of metabolic and bariatric surgery.
- Fostering communication between health professionals on obesity and related conditions.
- Being the recognized authority and resource on metabolic and bariatric surgery.
- Advocating for the health care policy that ensures patient access to high quality prevention and treatment of obesity.
- Serving the educational and professional needs of our diverse membership.

Volume Report



Report Description:

View a summary of case volumes by proce for surgeon, site, and MBSAQIP program.

Open in New Window

Categories:

Type to search in list

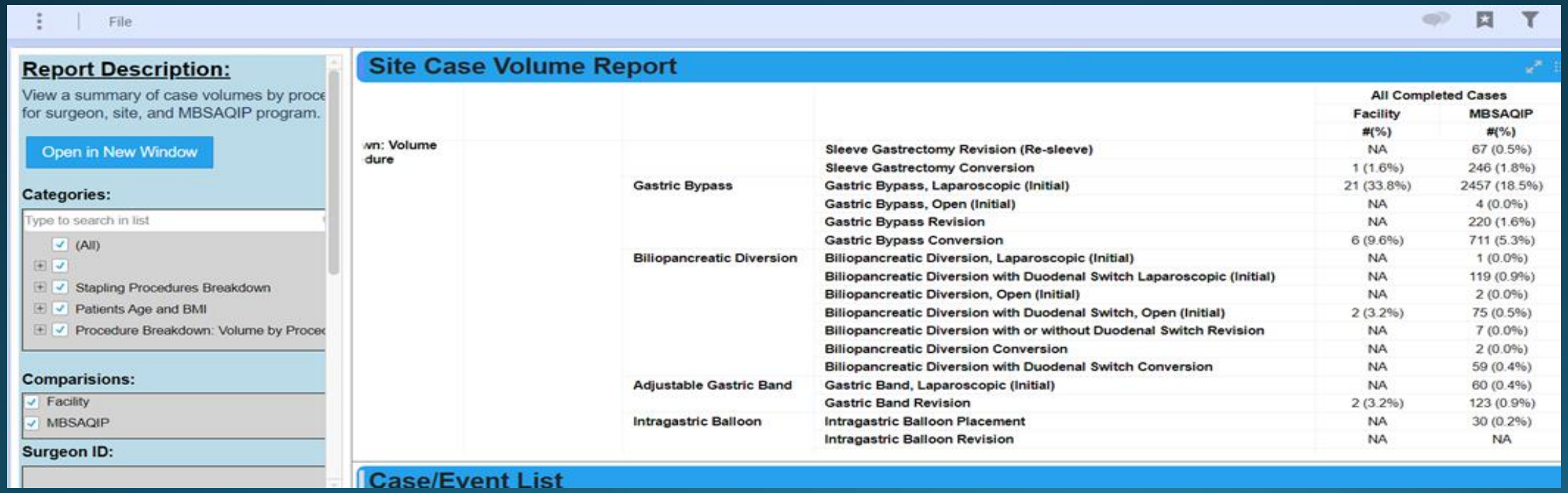
- (All)
- Stapling Procedures Breakdown
- Patients Age and BMI
- Procedure Breakdown: Volume by Proce

Comparisions:

- Facility
- MBSAQIP

Site Case Volume Report

			All Completed Cases	
			Facility	MBSAQIP
			#(%)	#(%)
		Number of Procedures (Initial, Conversions, Revisions, Interventions, o...	62	13265
Procedures wn		All Stapling Procedures (Initial, Conversions, Revisions, or Reoperations)	55 (88.7%)	10870 (81.9%)
		Stapling Procedures (Initial)	47 (85.4%)	
		Non-Stapling Procedures (Initial)	NA	
		Stapling Non-emergent (Conversions, Revisions and Reoperations)	8 (14.5%)	1404 (12.9%)
		Non-Stapling Non-emergent (Conversions, Revisions, Interventions an...	3 (5.4%)	373 (3.2%)
		Stapling Emergent (Conversions, Revisions and Reoperations)	NA	54 (0.5%)
		Non-Stapling Emergent (Conversions, Revisions, Interventions and Re...	NA	97 (0.8%)
		Stapling, Other (Initial)	NA	161 (1.4%)
		Non-Stapling, Other (Initial)	NA	73 (0.6%)
Age and BMI		Number of Patients under 18 years old	NA	25 (0.1%)
		Number of Patients greater than or equal to 65 years old	5 (8.0%)	530 (4.0%)
		Number of Males with Preop BMI greater than or equal to 55	2 (3.2%)	280 (2.1%)
		Number of Females with Preop BMI greater than or equal to 60	6 (9.6%)	357 (2.6%)
		Number of Non-binary with Preop BMI greater than or equal to 55	NA	2 (0.0%)
		Number of Non-binary with Preop BMI greater than or equal to 60	NA	1 (0.0%)



File

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- MBSAQIP

Surgeon ID:

Site Case Volume Report

			All Completed Cases	
			Facility	MBSAQIP
			#(%)	#(%)
wn: Volume dure		Sleeve Gastrectomy Revision (Re-sleeve)	NA	67 (0.5%)
		Sleeve Gastrectomy Conversion	1 (1.6%)	246 (1.8%)
	Gastric Bypass	Gastric Bypass, Laparoscopic (Initial)	21 (33.8%)	2457 (18.5%)
		Gastric Bypass, Open (Initial)	NA	4 (0.0%)
		Gastric Bypass Revision	NA	220 (1.6%)
		Gastric Bypass Conversion	6 (9.6%)	711 (5.3%)
	Biliopancreatic Diversion	Biliopancreatic Diversion, Laparoscopic (Initial)	NA	1 (0.0%)
		Biliopancreatic Diversion with Duodenal Switch Laparoscopic (Initial)	NA	119 (0.9%)
		Biliopancreatic Diversion, Open (Initial)	NA	2 (0.0%)
		Biliopancreatic Diversion with Duodenal Switch, Open (Initial)	2 (3.2%)	75 (0.5%)
		Biliopancreatic Diversion with or without Duodenal Switch Revision	NA	7 (0.0%)
		Biliopancreatic Diversion Conversion	NA	2 (0.0%)
		Biliopancreatic Diversion with Duodenal Switch Conversion	NA	59 (0.4%)
	Adjustable Gastric Band	Gastric Band, Laparoscopic (Initial)	NA	60 (0.4%)
		Gastric Band Revision	2 (3.2%)	123 (0.9%)
	Intragastric Balloon	Intragastric Balloon Placement	NA	30 (0.2%)
		Intragastric Balloon Revision	NA	NA

Case/Event List

File

Report Description:

View and drill down on intraoperative and postoperative occurrences.Benchmark non-risk adjusted results against other MBSAQIP program participants.Displays surgeon specific, site specific, and comparison data by procedure type

Open in New Window

Categories:

Type to search in list

- (All)
- General Information
- Cases with Events
- Post-Procedural Information
- Cases with Intraop/Postop Occurrence
- Patients with IV Treatment as an Outpatient
- New Postop COVID-19 Diagnosis

30-Day Occurrences Report

				All Completed Cases	
				Facility	MBSAQIP
				#(%)	#(%)
General Information			Number of Cases	42	7207
			Postop Occurrence Rate	NA	2.2%
			Mean Number of Occurrences/Cases with Occurren...	NA	1.3
			30-Day Follow-Up Rate	100.0%	96.2%
			Mean Total Length of Stay in Days	1.1	1.2
			Median Total Length of Stay in Days (Q1, Q3)	1.0 (1.00,1.00)	1.0 (1.00,2.00)
			Median Surgical Length of Stay in Days (Q1, Q3)	1.0 (1.00,1.00)	1.0 (1.00,2.00)
			Cases with Surgical LOS >= 7 Days	NA	17
			Mean Duration of Procedure in Minutes (SD)	89.4 (39.48)	83.3 (127.63)
			Mean Age in Years (SD)	46.2 (14.41)	42.6 (11.93)
Cases with Events			30-Day Readmissions	NA	158 (2.2%)
			30-Day Related Readmissions	NA	130 (1.8%)
			30-Day Reoperations	NA	35 (0.5%)
			30-Day Related Reoperations	NA	18 (0.2%)
			30-Day Interventions	NA	56 (0.8%)
			30-Day Related Interventions	NA	40 (0.6%)
			30-Day Mortality (Facility only)	NA	3 (0.0%)

File

Report Description:

View and drill down on intraoperative and postoperative occurrences.Benchmark non-risk adjusted results against other MBSAQIP program participants.Displays surgeon specific, site specific, and comparison data by procedure type

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30-Day Occurrences Report

				All Completed Cases	
				Facility	MBSAQIP
				#(%)	#(%)
Post-Procedural Information	VTE Prophylaxis			42 (100.0%)	7207 (100.0%)
			Mechanical Only	NA	598 (8.3%)
			Pharmacologic Only	NA	75 (1.0%)
			Mechanical and Pharmacologic	42 (100.0%)	6277 (87.1%)
			None	NA	257 (3.6%)
Cases with Intraop/Postop Occurrence			Total # of Cases with Occurrences	NA	160
		Wound Occurrences		NA	42 (0.6%)
			Superficial Incisional SSI	NA	21 (50.0%)
			Deep Incisional SSI	NA	NA
			Organ/Space SSI	NA	19 (45.2%)
			Wound Disruption	NA	3 (7.1%)
		Respiratory Occurrences		NA	20 (0.3%)
			Pneumonia	NA	8 (40.0%)
			Unplanned Intubation	NA	4 (20.0%)
			Pulmonary Embolism	NA	8 (40.0%)
			On Ventilator > 48 Hours	NA	2 (10.0%)

https://idataresearch.com/top-laparoscopy-companies-in-the-united-states/

Arrival of Minimally Invasive Surgery

- 1994- Witgrove- first laparoscopic gastric bypass
- 2003 Regan- Free-standing sleeve gastrectomy as outgrowth of the duodenal switch

Modali..	Number of Records	Readmit Flag	Avg. LOS Days	Avg. Readmit R..	Avg. Conversion..	Avg. Mortality R..	Avg. SSI Rate	Avg. ICU Admit Rate	Avg. OR Time Mins	Avg. tranfusion ..
Lap	2,647	144	2.8	5.44%	0.87%	0.30%	0.1511%	2.00%	203	1.21%
Open	456	49	13.5	10.75%	0.00%	4.82%	3.2895%	25.22%	203	14.25%
Grand ..	**3,103**	**193**	**4.4**	**6.22%**	**0.74%**	**0.97%**	**0.6123%**	**5.41%**	**203**	**3.13%**

CHA - CHI ~2018 Oct – 2019 Sept

Open Surgery

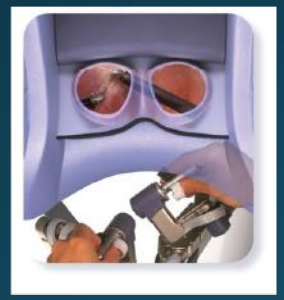
Laparoscopic Surgery

Robotic Surgery

Leaders in Robotic Bariatric Surgery

3D HD Vision

EndoWrist® Instrumentation



Intuitive® Motion

- Better visualization
- Ergonomically better
- Full articulation of instruments
- Four arms to operate
- And more…..

St. Francis Group: Robotic Bypass vs. Open & Lap National Cohort

Procedure Primary	Number of Records	Readmit Flag	Avg. LOS Days	Avg. Readmit R..	Avg. Conversio..	Avg. Mortality ..	Avg. SSI Rate	Avg. ICU Admit Rate	Avg. OR Time Mins	Avg. tranfusion..
Gastric Bypass	312.0	13.0	1.3	4.17%	0.00%	0.00%	0.00%	0.32%	177.0	0.64%
Grand Total	**312.0**	**13.0**	**1.3**	**4.17%**	**0.00%**	**0.00%**	**0.00%**	**0.32%**	**177.0**	**0.64%**

- Patients going elsewhere are likely to stay in the hospital three times as long and are more likely to be admitted to the ICU. They are nearly twice as likely to be readmitted, and their operative time is 26 minutes longer.

Modali..	Number of Records	Readmit Flag	Avg. LOS Days	Avg. Readmit R..	Avg. Conversion..	Avg. Mortality R..	Avg. SSI Rate	Avg. ICU Admit Rate	Avg. OR Time Mins	Avg. tranfusion ..
Lap	2,647	144	2.8	5.44%	0.87%	0.30%	0.1511%	2.00%	203	1.21%
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CHA - CHI ~2018 Oct – 2019 Sept

High Volume Robotic Bypass Surgeons Achieving Superior Outcomes

1.5 days vs. 4.7 days

↓68%

Decrease in
*Hospitalization Days

153 vs. 253 min

↓40%

Decrease in
*Surgical OR Time

0.11 vs. 8.53% ICU admits

↓99%

Decrease in
*ICU Admissions

The experienced Robotic bypass surgeon is $6505 less expensive per case

Surgeons >50 cases = Experienced ***N= 1425*** *CHA Data Base 2016 – 2019* **p value >.05*

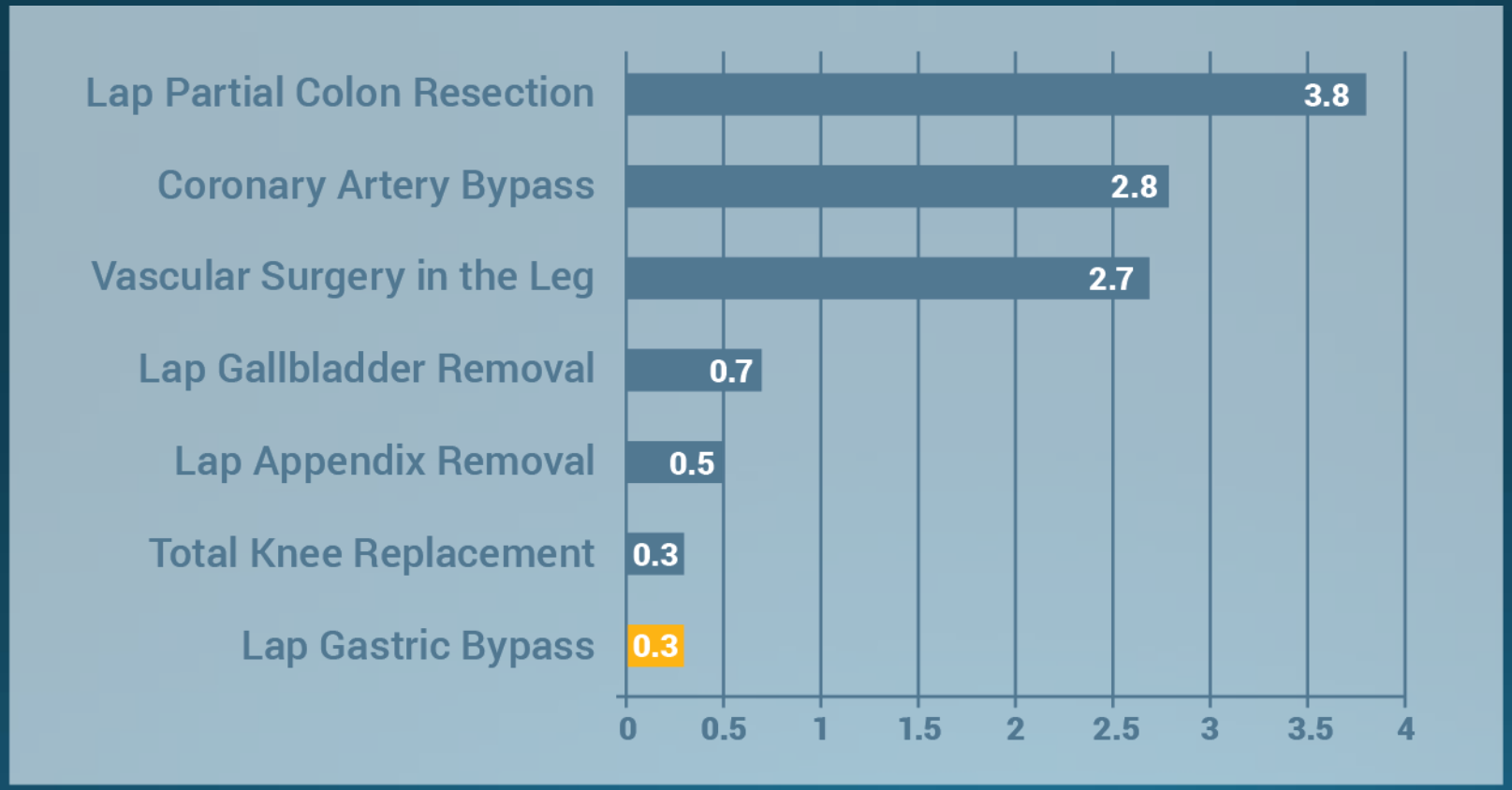
Bariatric Surgery is Safe

	Roux-en-Y gastric bypass (n = 43,354)	Sleeve gastrectomy (n = 98,292)	Total (n = 141,646)
30-Day mortality (%, n)	0.2% (73)	0.1% (88)	0.1% (161)
30-Day reoperation (%, n)	2.5% (1104)	1% (940)	1.4% (2044)
30-Day readmission (%, n)	6.5% (2807)	3.5% (3396)	4.4% (6203)
30-Day intervention (%, n)	2.8% (1207)	1.2% (1131)	1.7% (2338)

Progress in Cardiovascular Diseases 61 (2018) 253–269

Bariatric Surgery is Safe

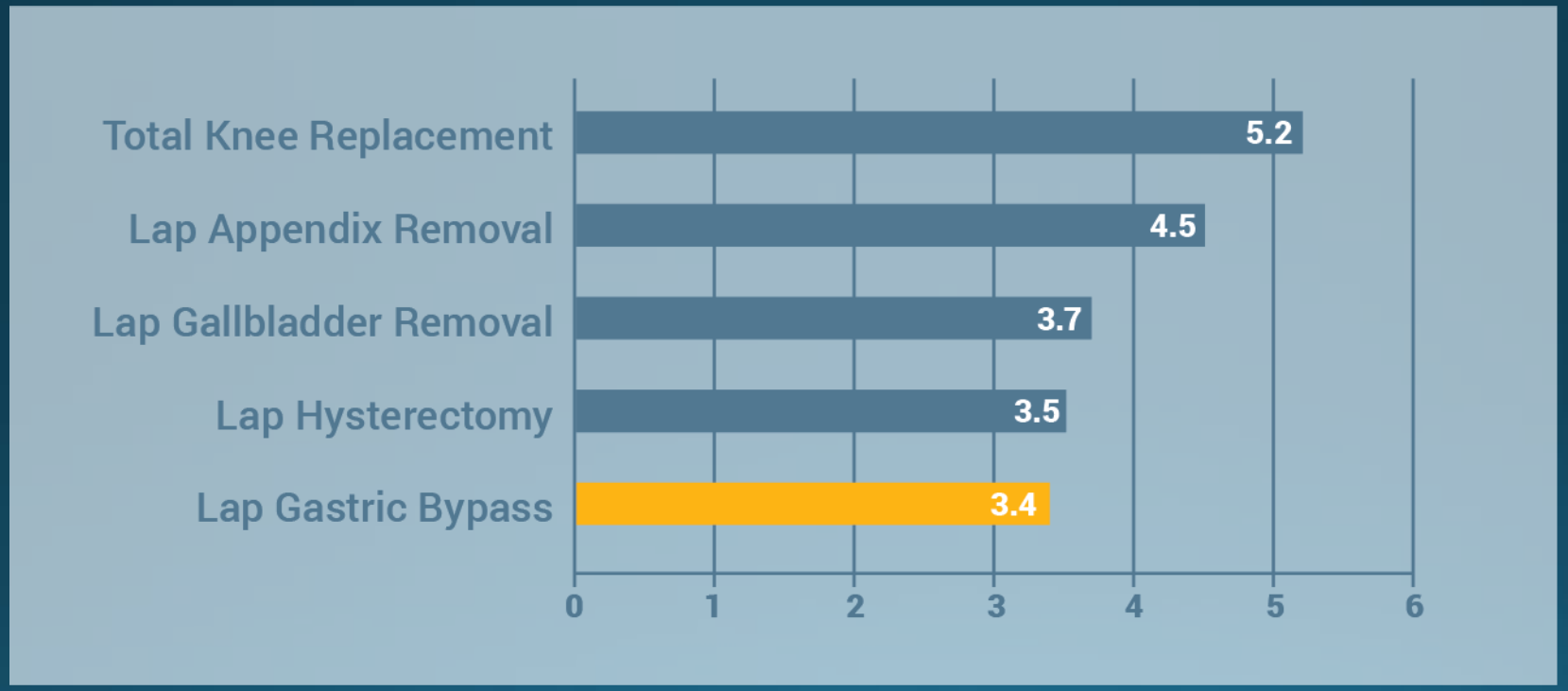
Comparative Mortality Rate (%)



Progress in Cardiovascular Diseases 61 (2018) 253–269

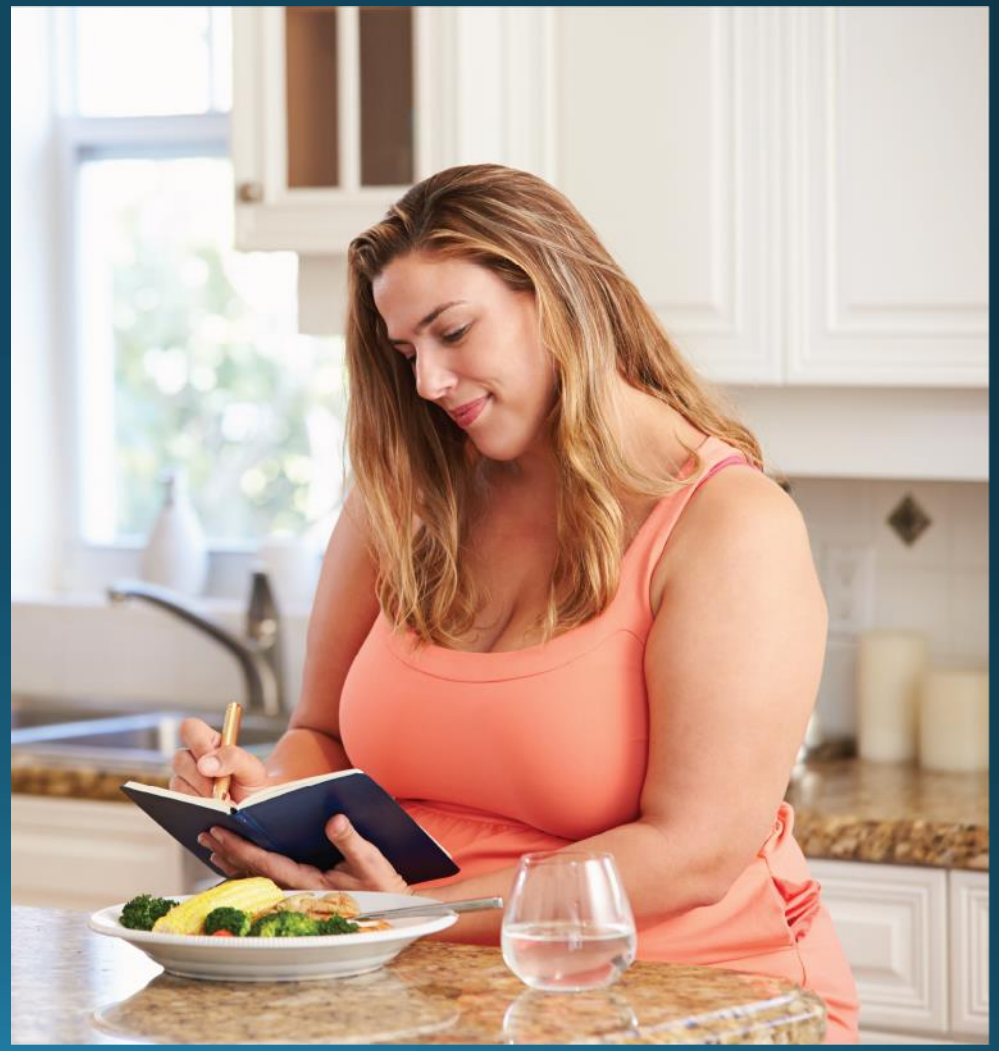
Bariatric Surgery is Safe

Comparative Complication Rate (%)



Progress in Cardiovascular Diseases 61 (2018) 253–269

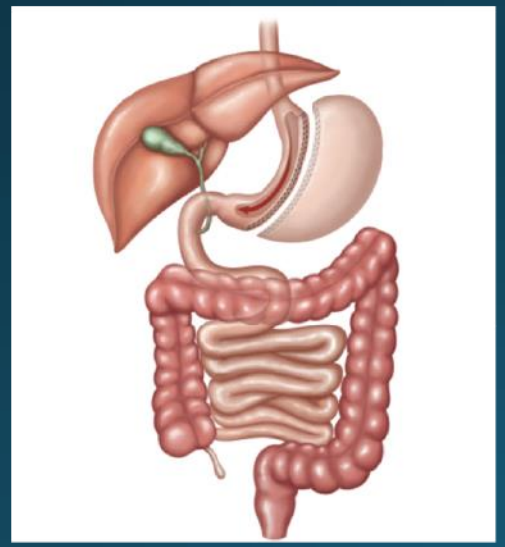
Common Metabolic Bariatric Procedures Today



Common Metabolic Bariatric Procedures

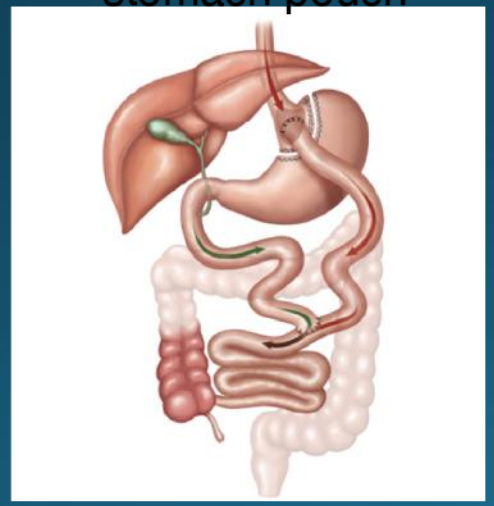
Sleeve Gastrectomy 54.3%

Resect approximately three-fourths of the stomach



Roux-en-Y Gastric Bypass 43%

Bypass a portion of the small intestine and create a 15-30cc stomach pouch



Single-Anastomosis Duodenal Switch 2.7%

Sleeve gastrectomy with bypass portion of small intestine

Revisional Surgery

Converting one form of bariatric surgery to another form

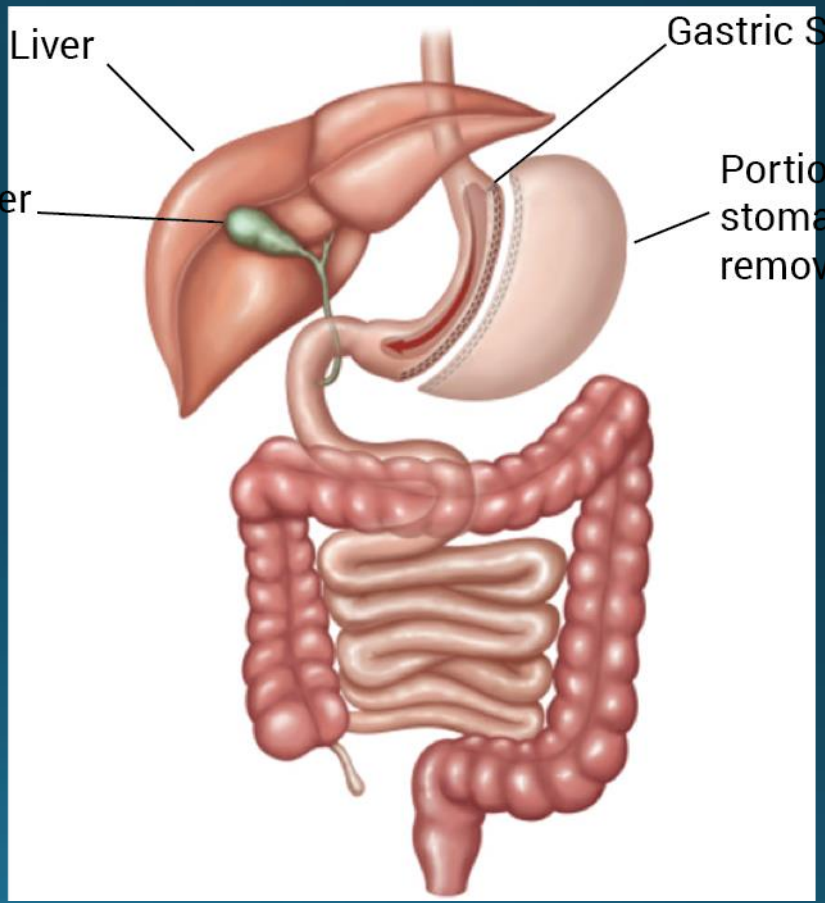
Alternative Procedures

- Gastric Band
- Intragastric Balloon
- Others

Sleeve Gastrectomy

Operative steps

- Divide blood vessels from the outside curve of the stomach
- Divide the stomach making a long, narrow stomach tube
- Remove the divided stomach



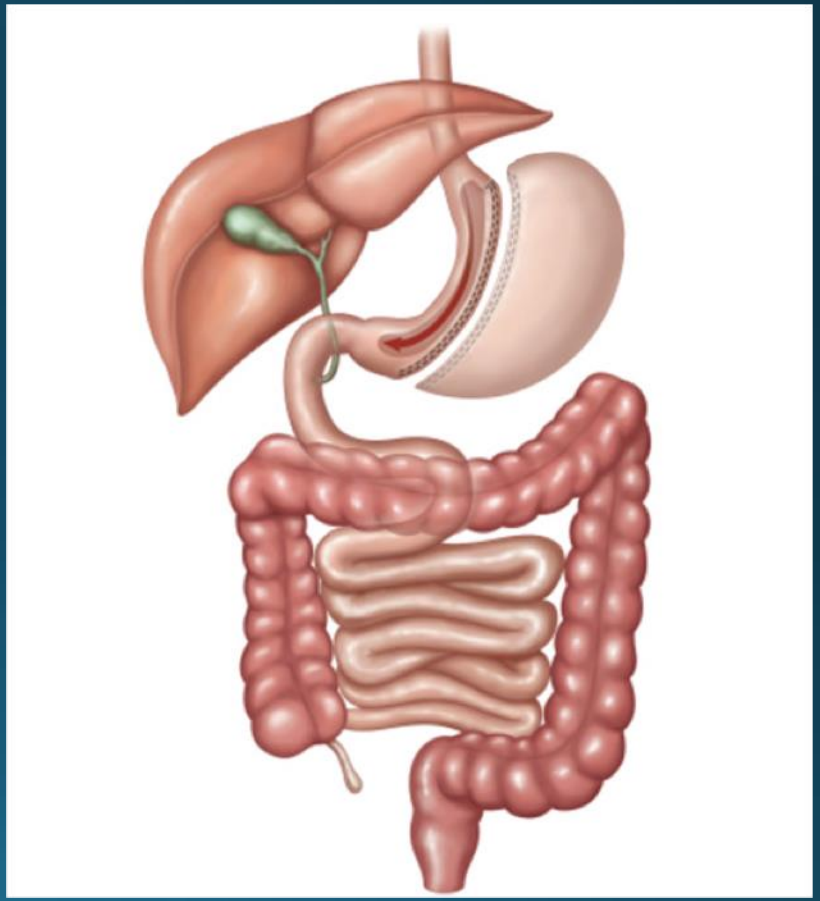
Sleeve Gastrectomy

Outcomes on your health

- Expect to lose and sustain 55-65% of excess body weight
- Reduce medication use
- Able to be more active
- Less long-term complications to worry about
- Enjoy healthy food in smaller amounts

Potential Complications

- Narrowing of the stomach
- Staple line leak
- Worsening reflux disease (heartburn)
- Possible more weight regain

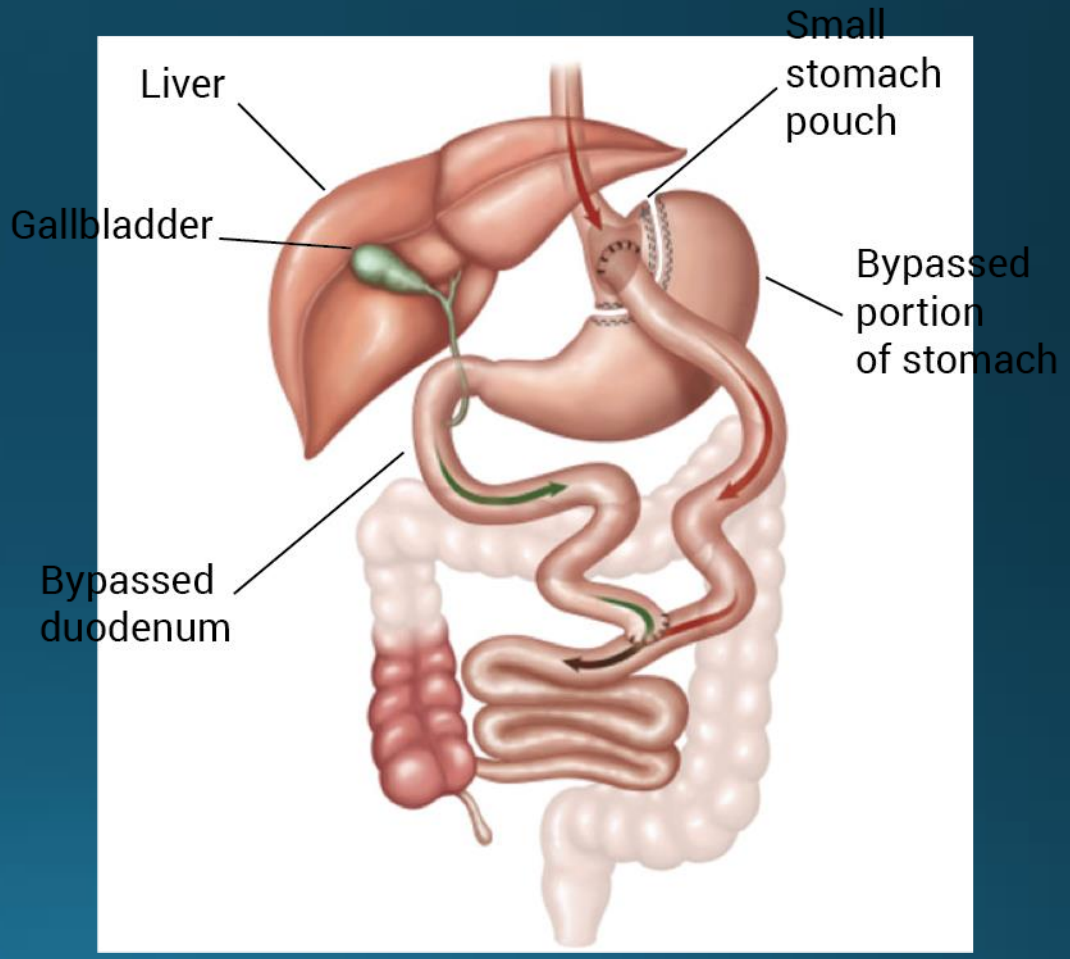


Roux-en-y Gastric Bypass*

Operative steps

- Make a small “pouch” of the stomach
- Cut and re-route the small intestine by attaching one end to the stomach pouch
- Attach the digestive enzyme limb to the small intestine further down

*Also referred to as Gastric Bypass, the Roux, Bypass, RNYGB



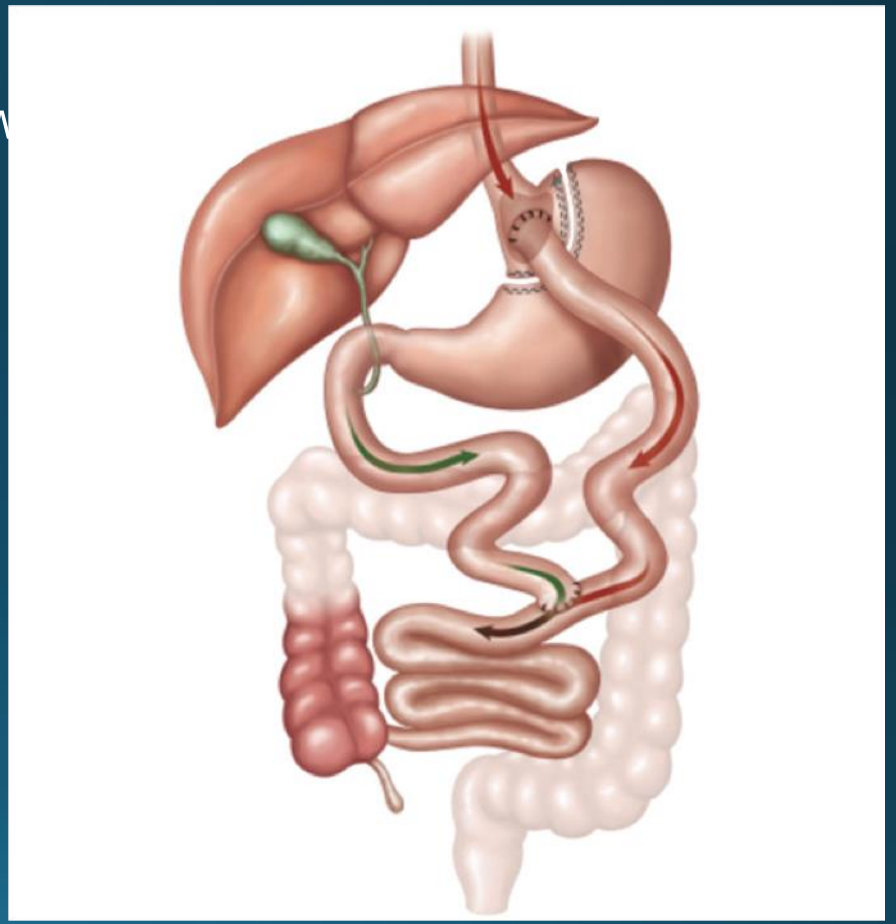
Roux-en-y Gastric Bypass

Outcomes on your health

- Expect to lose and sustain about 65-75% of excess body w
- Reduce medication use
- Able to be more active
- Enjoy healthy food in smaller amounts
- Improve reflux disease (heartburn)

Potential Complications

- Intestinal leaks or narrowing
- Marginal ulcers
- Small bowel obstruction
- Dumping syndrome
- Higher chance of nutritional deficiency

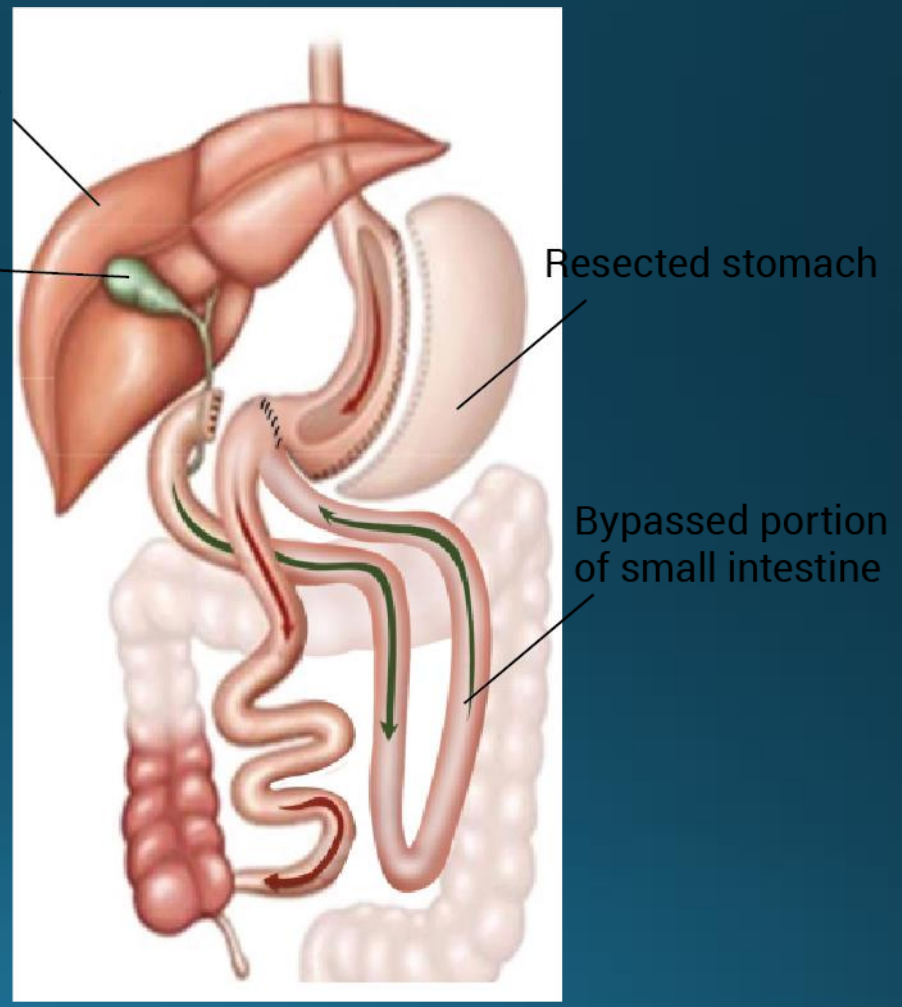


Single-Anastomosis Duodenal Switch*

Operative steps

- Create a sleeve gastrectomy
- Cut the small intestine just after the stomach
- Create one connection of the small intestine to the bottom portion of the sleeve

*Also known as SIPS, SADS, SADI-S, LDS, others



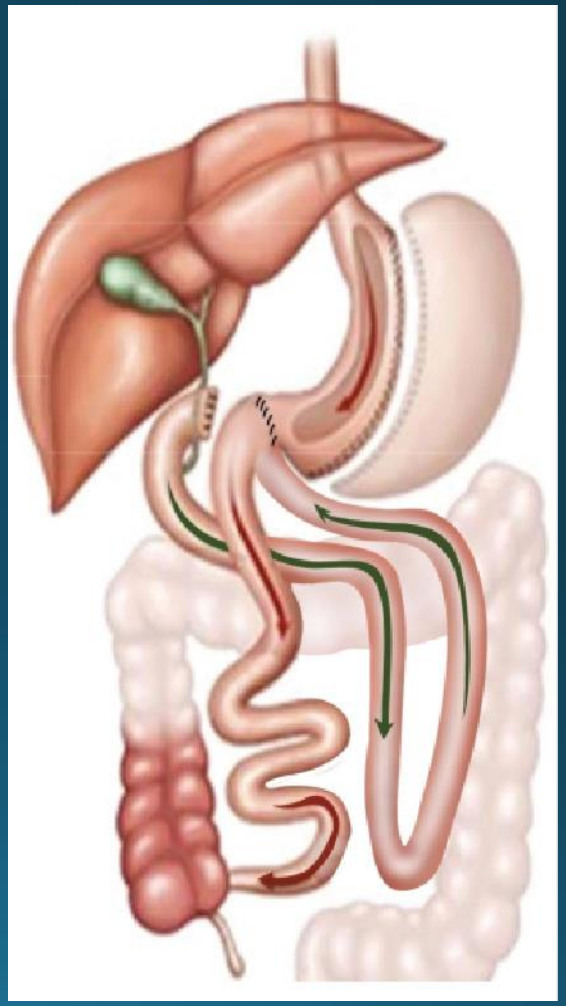
Single-Anastomosis Duodenal Switch

Outcomes on your health

- Expect to lose and sustain 75-85% of excess body weight
- Reduce medication use
- Able to be more active
- Enjoy healthy food in smaller amounts
- Excellent for diabetes control

Potential Complications

- Diarrhea due to malabsorption
- Increased risk of nutritional deficiencies, including possible protein eficiency
- Small bowel leaks or strictures
- Worsening reflux disease (heartburn)



Estimate of Bariatric Surgery Numbers, 2011-2019

Published March 2021

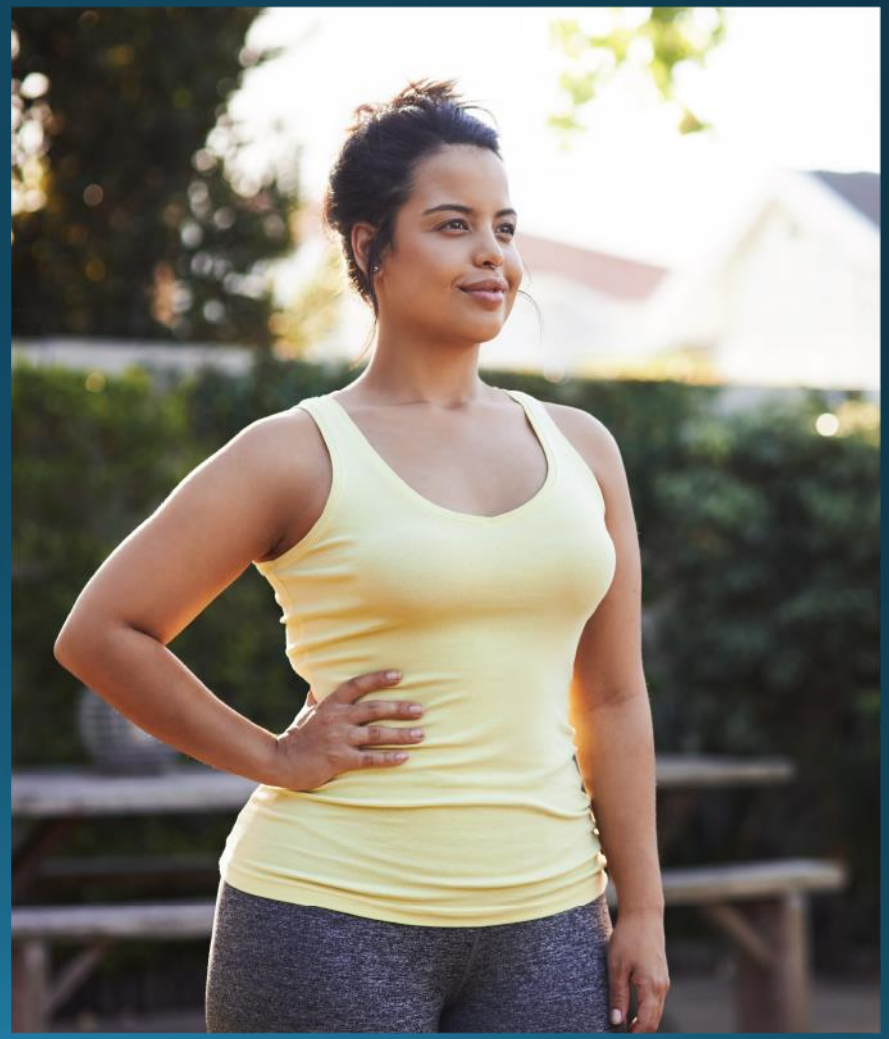
The ASMBS total bariatric procedure numbers are based on the best estimation from available data (BOLD,ACS/MBSAQIP, National Inpatient Sample Data and outpatient estimations).

**New methodology for estimating outpatient procedures done at non-accredited centers.*

	2011	2012	2013	2014	2015	2016	2017	2018	2019*
Total	**158,000**	**173,000**	**179,000**	**193,000**	**196,000**	**216,000**	**228,000**	**252,000**	**256,000**
Sleeve	17.8%	33.0%	42.1%	51.7%	53.6%	58.1%	59.4%	61.4%	59.4%
RYGB	36.7%	37.5%	34.2%	26.8%	23.0%	18.7%	17.8%	17.0%	17.8%
Band	35.4%	20.2%	14.0%	9.5%	5.7%	3.4%	2.7%	1.1%	0.9%
BPD-DS	0.9%	1.0%	1.0%	0.4%	0.6%	0.6%	0.7%	0.8%	0.9%
Revision	6.0%	6.0%	6.0%	11.5%	13.6%	14.0%	14.1%	15.4%	16.7%
Other	3.2%	2.3%	2.7%	0.1%	3.2%	2.6%	2.5%	2.3%	2.4%
Balloons	—	—	—	—	0.3%	2.6%	2.8%	2.0%	1.8%

https://asmbs.org/resources/estimate-of-bariatric-surgery-numbers

Metabolic Bariatric Surgery is Effective



Expected Weight Loss

Surgery is proven to be the best long-term weight loss solution

Procedure	Expected Excess Weight Loss
Diet and Excercise	<5%, or gain weight
Sleeve Gastrectomy	55-65%
Gastric Bypass	65-75%
Single-Anastomosis Duodenal Switch	75-85%

Lose the weight, lose the medical problems

Migranes 46% improved

Depression 47% reduced

Pseudotumor cerebri
96% resolution of headaches

Obstructive sleep apnea
45% to 76% resolved

High cholesterol
71% to 94% improved

Asthma 39% resolved

High blood pressure
42% to 66% resolved

Nonalcoholic fatty liver disease
37% resolution of steatosis

Metabolic syndrome 80% resolved

Gastroesophageal reflux
72% to 95% resolved

Type 2 diabetes 45% to 68% resolved

Polycystic ovarian syndrome
52% resolution of hirsutism,
100% resolution of mentrual dysfunction

Urinary stress incontinence 50% resolved

Osteoarthritis/degenerative joint disease
41% resolved

Venous stasis disease
95% resolution of venous stasis ulcers

Progress in Cardiovascular Diseases 61 (2018) 253–269

Table 1. Primary and Secondary End Points at 5 Years.*

End Point	Study Group			P Value†		
	Medical Therapy (N=38)	Gastric Bypass (N=49)	Sleeve Gastrectomy (N=47)	Gastric Bypass vs. Medical Therapy	Sleeve Gastrectomy vs. Medical Therapy	Gastric Bypass vs. Sleeve Gastrectomy
Primary end point						
Glycated hemoglobin ≤6.0%						
In analysis of patients who completed the trial — no. of patients (%)	2 (5.3)‡	14 (28.6)	11 (23.4)	0.01 (unadjusted); 0.03 (adjusted)	0.03 (unadjusted); 0.07 (adjusted)	0.53 (unadjusted); 0.53 (adjusted)
Estimated rate from imputed analysis — %§	7.3	26.4	20.4	0.08	0.17	0.48
Secondary end points						
Glycated hemoglobin — no. of patients (%)						
≤6.0% without diabetes medications	0	11 (22.4)	7 (14.9)	0.006¶	0.04¶	0.34
≤6.5%	6 (15.8)	19 (38.8)	17 (36.2)	0.06	0.06	0.79
≤6.5% without diabetes medications	0	15 (30.6)	11 (23.4)	0.003‖	0.002‖	0.43
≤7.0%	8 (21.1)	25 (51.0)	23 (48.9)	0.012	0.016	0.84
Glycated hemoglobin level — %						
At baseline	8.8±1.1	9.3±1.4	9.5±1.7			
At 5 yr	8.5±2.2	7.3±1.5	7.4±1.6			
Change from baseline	−0.3±2.0	−2.1±1.8	−2.1±2.3	0.003	0.003	0.67
Median fasting plasma glucose (IQR) — mg/dl						
At baseline	157 (120 to 193)	196 (143 to 231)	164 (129 to 229)			
At 5 yr	129 (97 to 172)	110 (92 to 150)	111 (93 to 141)			
Change from baseline‖	−14 (−60 to 23)	−72 (−114 to −29)	−49 (−120 to −4)	0.003	0.02	0.35
Body weight — kg						
At baseline	105.0±14.4	106.8±14.9	100.4±16.8			
At 5 yr	99.0±17.0	83.4±15.3	81.9±15.0			
Change from baseline	−5.3±10.8	−23.2±9.6	−18.6±7.5	0.003	0.003	0.01

Schauer PR, Bhatt DL, Kirwan JP, Wolski K, Aminian A, Brethauer SABariatric S, Navaneethan SD, Singh RP, Pothier CE, Nissen SE, Kashyap SR; STAMPEDE Investigators. urgery versus Intensive Medical Therapy for Diabetes - 5-Year Outcomes. N Engl J Med. 2017 Feb 16;376(7):641-651

Weight Recidivism after Metabolic and Bariatric Surgery

- Literature review (29 studies)
  - Only papers with sleeve and bypass as primary procedure, avg. follow up of 62 months
  - Criteria was weight regain of >10%
  - Pro/retrospective, interventional, or observational
- 17.6% of people had weight regain
- Factors associated with weight regain

	Common factors related with weight regain
Correlation	*Positive correlation* Gastrojejunal stoma diameter, gastric volume following sleeve, anxiety, time after surgery, sweet consumption, emotional eating, portion size, food urges and binge eating, loss of control/disinhibition when eating, genetics *Negative correlation* Postprandial GLP-1, eagerness to change physical activity habits, self-esteem, social support, fruit consumption, zinc consumption, HDL, quality of life
No correlation	Preoperative BMI, calorie intake, length of gastric pouch, fasting and postprandial ghrelin, fasting GLP-1, fasting and postprandial GIP, waist circumference, clinic follow-up adherence, cravings to eat, preoperative obstructive sleep apnea and hyperlipidemia
Mixed results	Fasting leptin levels, physical activity, depression, postoperative %fat mass, postoperative weight loss, age, gender, protein, carbohydrate, fat consumption, picking and nibbling eating, postoperative hyperlipidemia, preoperative hypertension and diabetes type-II

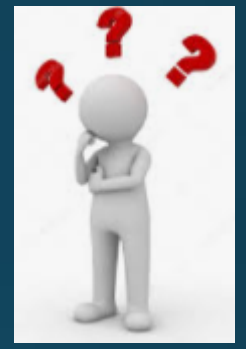
Athanasiadis, D.I., Martin, A., Kapsampelis, P. *et al.* Factors associated with weight regain post-bariatric surgery: a systematic review. *Surg Endosc* **35,** 4069–4084 (2021).

Who is a Metabolic and Bariatric Surgery Candidate?

1991 National Institute of Health

- BMI > 40
- BMI >35 with medical comorbidities
- History of failed attempts at weight loss

What percent of ELIGIBLE bariatric surgery patients ACTUALLY get surgery??

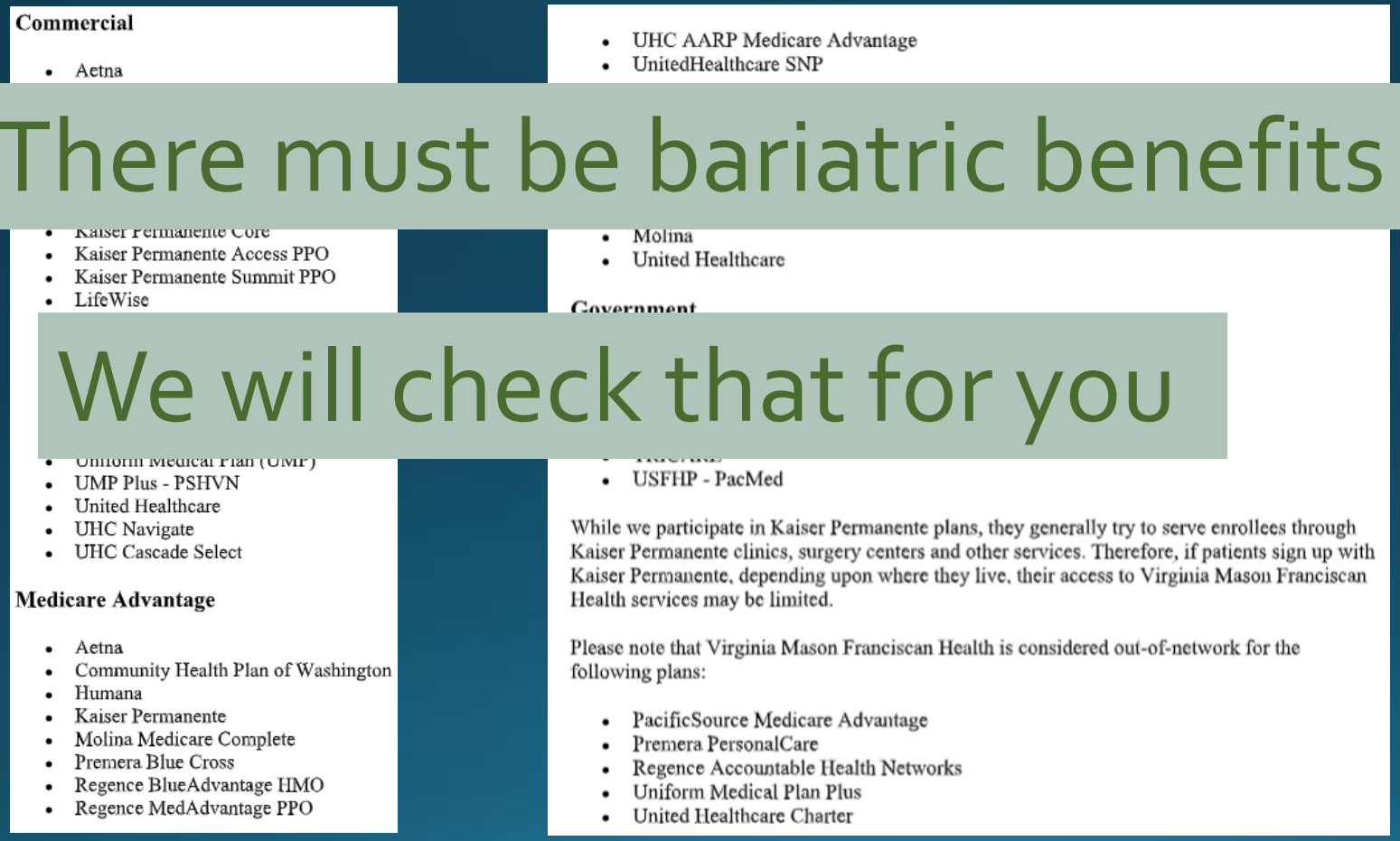


1% !!!

Insurances accepted at St. Francis

There must be bariatric benefits

We will check that for you



Commercial

- Aetna
- Kaiser Permanente Core
- Kaiser Permanente Access PPO
- Kaiser Permanente Summit PPO
- LifeWise
- Uniform Medical Plan (UMP)
- UMP Plus - PSHVN
- United Healthcare
- UHC Navigate
- UHC Cascade Select

Medicare Advantage

- Aetna
- Community Health Plan of Washington
- Humana
- Kaiser Permanente
- Molina Medicare Complete
- Premera Blue Cross
- Regence BlueAdvantage HMO
- Regence MedAdvantage PPO
- UHC AARP Medicare Advantage
- UnitedHealthcare SNP
- Molina
- United Healthcare

Government

- USFHP - PacMed

While we participate in Kaiser Permanente plans, they generally try to serve enrollees through Kaiser Permanente clinics, surgery centers and other services. Therefore, if patients sign up with Kaiser Permanente, depending upon where they live, their access to Virginia Mason Franciscan Health services may be limited.

Please note that Virginia Mason Franciscan Health is considered out-of-network for the following plans:

- PacificSource Medicare Advantage
- Premera PersonalCare
- Regence Accountable Health Networks
- Uniform Medical Plan Plus
- United Healthcare Charter

The Metabolic and Bariatric Surgery Journey

Online or In-Person Seminar

Initial consultation

- At bariatric office with the surgeon

Your checklist:

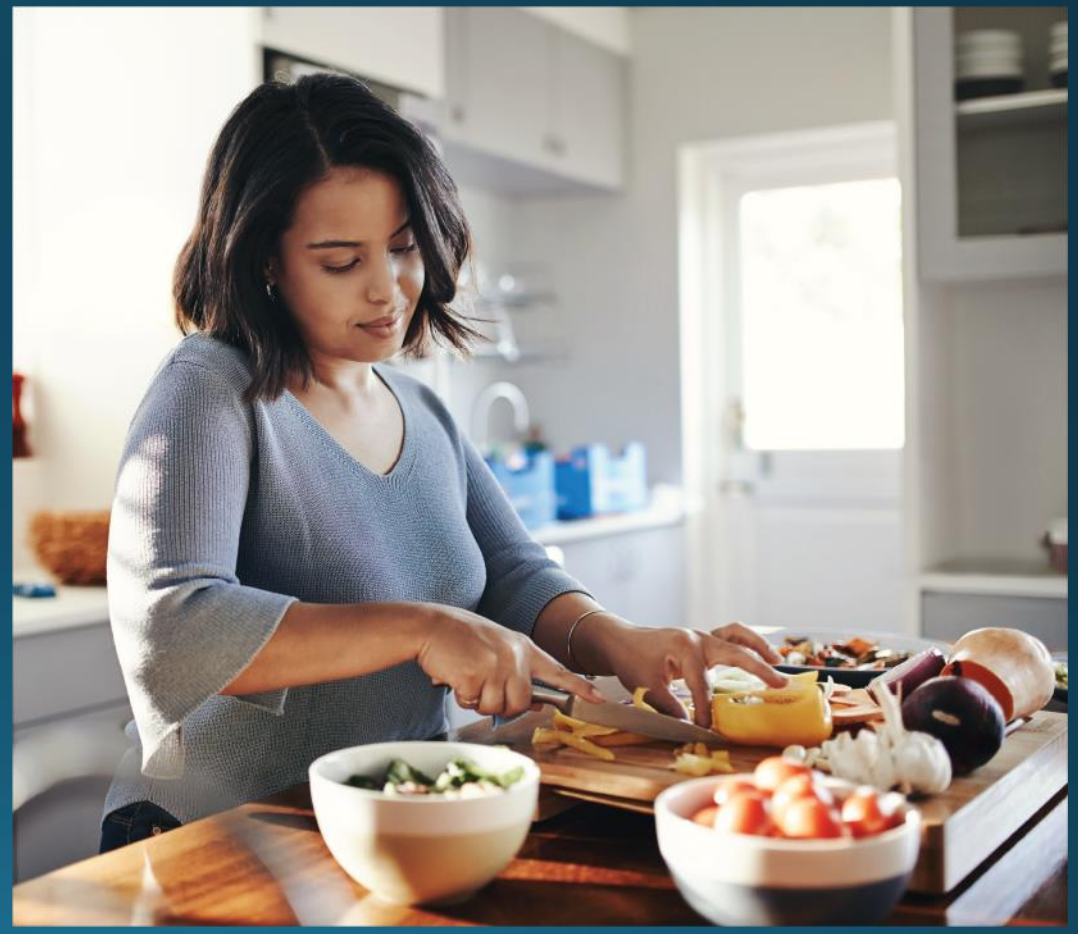
- ❑ Nutrition courses

  One to seven, must be 30 days apart

- ❑ Psychiatric evaluation

  In-person or on-line

- ❑ Pre-op labs, ECG
- ❑ Imaging studies
- ❑ Medical evaluations



The Next Steps of the Journey

Once all requirements and pre-op evaluations are complete, patients call our office so we can start the pre-approval process.

Once approved for surgery, we will notify them patient and arrange:

- FCWM Pre-surgery Nursing course
- FCWM Nutrition course
- The pre-op office visit
- The surgery date
- The first post-op appointment, two weeks after surgery

Lifelong Follow-up

- Follow up visits at 2 wks, 6 wks, 6 months and then yearly! Every year.
- Keep on track with diet and exercise
- Yearly labs
  - B1, B12, folate, copper, iron, zinc, Vit A, Vit D and baseline labs
- May recommend medical weight loss evaluation
- Follow up with dietician
- Support groups

The Journey Begins

“You can’t go back and change the beginning, but you can start where you are and change the ending.”

— C.S. Lewis