Bariatric Care Center

2013 Outcomes
Dear Colleagues,

I am pleased to share the 2013 quality outcomes for Summa’s Bariatric Care Center.

As you have noticed in your practice, obesity is a growing epidemic for our country and globally. Using body mass index (BMI) as a guide, in 2013, the total number of severely overweight individuals in Summa’s nine service area markets was 578,409. This number includes 257,200 obese individuals and 37,258 individuals with morbid obesity.¹

While there is not yet agreement on a single best approach to non-surgical weight loss management, there is now consensus that the most effective and long-lasting treatment for morbid obesity is surgical weight loss intervention.

Our approach to weight loss management is two-fold. We offer patients both a surgical and non-surgical approach for successful weight loss management. Each patient is carefully assessed and provided with an individually tailored recommendation. Since starting our surgical program in 2004, we have performed a total of 2,005 surgeries and have continued to expand annually, performing 427 surgeries in 2013.

While we have continued to grow the number of patients we serve, our focus on patient satisfaction has never wavered. We are proud that our patient experience scores for both inpatient and outpatient care have placed us in the 95th percentile nationally for the past six years.

Weight Loss Management will continue to be an important initiative at Summa in 2015. We look forward to expanding our services beyond the Summa Akron City Hospital Campus to Barberton and other regions to better serve your patients.

Thank you for taking the time to review our results. While cosmetic improvements are frequently a result of significant weight loss, the primary goal is to help cure our patients of the medical problems caused by their obesity and to help them reclaim their life. As always, please do not hesitate to contact me directly if you have any questions, or if you need information for your patients.

John G. Zografakis, M.D., FACS
Director, Bariatric Care Center
Summa Health System

Did You See This Patient in Your Office Today?

45 Year Old Female
BMI: 47.7 kg/m²

Medical comorbidities
- Type 2 Diabetes Mellitus
- Obstructive Sleep Apnea
- Hypertension
- Hypertriglyceridemia
- Depression

54 Year Old Male
BMI: 45.8 kg/m²

Medical comorbidities
- Type 2 Diabetes Mellitus
- Obstructive Sleep Apnea
- Hypertension
- Hypertriglyceridemia
- Gastroesophageal Reflux Disease
Surgical Weight Loss Intervention
Reclaims Lives

Meet Elizabeth
Laparoscopic Roux-en-Y Gastric Bypass
Date of Surgery: 10/27/11

19 Months Post-Surgery
Weight Lost: 130 lbs
BMI: 29.7 kg/m²
Percentage of Excess Body Weight Loss: 82%
Type 2 Diabetes Mellitus: RESOLVED
Obstructive Sleep Apnea: RESOLVED
Hypertension: RESOLVED
Hypertriglyceridemia: RESOLVED

Meet Terry
Laparoscopic Roux-en-Y Gastric Bypass
Date of Surgery: 8/24/11

18 Months Post-Surgery
Weight Lost: 130 lbs
BMI: 27.9 kg/m²
Percentage of Excess Body Weight Loss: 75%
Type 2 Diabetes Mellitus: RESOLVED
Obstructive Sleep Apnea: RESOLVED
Hypertension: RESOLVED
Hypertriglyceridemia: RESOLVED
Gastroesophageal Reflux Disease: RESOLVED

BARIATRIC CARE CENTER
2013 OUTCOMES
Bariatric Surgery Center of Excellence

Summa’s Bariatric Care Center became accredited by the American Society for Metabolic and Bariatric Surgery (ASMB) in 2007. The introduction of accreditation standards has resulted in a significant decrease in mortality from surgical weight loss intervention, from one in 200 patients, to one in 1,750 patients.2

The ASMBS joined with the American College of Surgeons in 2012 to form the new Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) standards.

The new standards include the following:
- Accurate reporting of bariatric surgery cases
- Focus on data-based quality improvement at each center
- Continued emphasis on the development of a multidisciplinary approach to care
- Ongoing accreditation based upon safety monitoring, with a focus on mortality and lengths of stay greater than 14 days

Summa’s program has three surgeons, all of whom are fellowship-trained in advanced laparoscopic and bariatric surgery. They have performed a combined total of more than 2,000 surgeries at Summa since the program began in 2004.

Surgical weight loss procedures performed at Summa include:
- Laparoscopic Roux-en-Y Gastric Bypass
- Laparoscopic Sleeve Gastrectomy
- Robotic Assisted Laparoscopic Sleeve Gastrectomy
- Laparoscopic Revisional Surgery

Revisional surgeries are offered to patients with complications from weight loss surgery. Lifelong follow up is provided for all of our patients.

NIH Criteria for Surgical Weight Loss Intervention
- BMI 35 – 39.9 kg/m² with comorbid condition (DM, OSA, HTN)
- BMI ≥ 40 kg/m²
- Multiple efforts at conservative weight loss without success

2 Blackstone, R and Nguyen, N. Letter to Bariatric Surgery Centers of Excellence regarding MBSAQIP Draft Standards; 12/19/12
Obesity is a global epidemic. In 1990, approximately 50% of our states had populations with 10 to 14% obesity. By 2001, only 10 years later, more than half of our states had obesity rates of 20 to 29%, and three states had reached obesity rates of > 30%. In 2013, 19 states reached obesity rates >30%, 2 of which exceeded 35%.

Although weight loss surgery has been performed for more than 50 years, it is only in the past 10 to 15 years that the minimally invasive surgical approach has been refined. This has resulted in a decreased length of stay, less postoperative pain and fewer incisional complications.

The current gold standard of surgical weight procedures is the Roux-en-Y gastric bypass, which results in weight loss via both restriction and malabsorption. The sleeve gastrectomy and the adjustable gastric band are also performed, both of which are restrictive only. The sleeve gastrectomy has been increasing in popularity in recent years as a good procedure for patients with very high BMIs, often performed as the first step in a staged procedure with gastric bypass as the end result of the second procedure.

All procedures at Summa are performed using a laparoscopic approach by fellowship-trained surgeons, supported by a clinical team which is well-trained and highly experienced.

Summa’s Proven Results

Following weight loss surgery, patients experienced improvement in these comorbid conditions at five years:

• **61%** of patients have resolution and/or improvement of their hypertension
• **81%** have resolution of their obstructive sleep apnea
• **66%** have resolution of their gastroesophageal reflux disease
• **72%** have resolution and/or improvement of their type 2 diabetes

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Medical

Medical Weight Loss Management

Summa’s Bariatric Care Center provides non-surgical weight loss management in two different ways.

Pre-Operative Physician-Supervised Diet & Exercise

Patients planning to undergo weight loss surgery are often required by their insurance company to complete a program of physician-supervised diet and exercise. Patients can choose to complete this with their primary care physician, or work with our weight loss management specialist. Patients who choose to complete their diet and exercise requirement at the Bariatric Care Center meet monthly with our physician, and are also seen by one of the program dietitians to assist them in meeting their insurance company’s requirements for pre-surgical weight loss.

Medical Weight Loss Management Program

Patients with a BMI between 25 and 34.9 kg/m² are overweight/obese, but do not meet the criteria for surgical weight loss intervention. Additionally, patients with a BMI between 35 and 39.9 kg/m² who do not have another co-morbid condition caused by their obesity, do not qualify for surgery. The Medical Weight Loss Management program at the Bariatric Care Center offers a comprehensive, multi-disciplinary, six-month intensive program for these patients.

Patients in this program undergo an evaluation with our board-certified internist, who has specialized in weight loss management for the past ten years. Following medical clearance to participate in this program, patients undergo three core assessments with our psychologist, dietitian and clinical exercise specialist. A set of five weekly intensive outpatient weight loss groups are completed next, followed by five more monthly visits with our physician. Because chronic diseases such as obesity require lifelong management for optimal control, patients are slowly weaned from frequent follow up after they complete the intensive six-month program. The frequency of their follow up is determined by our physician based upon the amount of weight they have lost, their long term weight loss goals and the amount of support they need for continued weight loss. Summa evaluated 81 patients in 2013 for medical weight loss management.

“My goal is to empower our patients with the latest nutrition and exercise tools in order to help them achieve an optimal health and lifestyle.”

Ken Wells, M.D.
Medical Director
Medical Weight Loss Management Program
The most successful weight loss management programs include strategies for addressing the behavioral aspects of the conditions of overweight and obesity. All of the weight loss management programs at Summa’s Bariatric Care Center include a formal psychological assessment, followed by appropriate behavioral intervention.

**Pre-Operative Psychological Assessment**

Patients planning to undergo weight loss surgery are required to have psychological clearance for surgery by their insurance company and by our program. The decision to undergo surgery is a big one, and patients need to demonstrate the ability to understand the surgery they will have, as well as all of the changes they will need to make after surgery. All patients of Summa’s Surgical Weight Loss Management program undergo a psychological evaluation, psychological testing and some degree of psychological counseling.

**Behavioral Weight Loss Management**

Patients with a BMI between 25 and 34.9 kg/m², or with a BMI between 35 and 39.9 kg/m² who do not have another co-morbid condition caused by their obesity, do not qualify for surgery. They may already be very knowledgeable about the eating and exercise components of an effective weight loss plan, but find themselves unable to act on that information.

Behavioral weight loss management at the Bariatric Care Center is a key component of both the surgical and medical weight loss programs. Following the psychological evaluation, patients will complete either a set of five weekly intensive outpatient weight loss group sessions or individual counseling sessions focusing on weight-related behaviors. The frequency of their follow up is determined by our psychologist based upon the amount of weight they have lost, their long term weight loss goals and the amount of support they need for continued weight loss.

Jennifer Duncan, Psy.D.  
Clinical Psychologist

Christina Rummell, Ph.D.  
Clinical Psychologist
Bariatric Care Center Team

Summa’s program is comprehensive. The primary goal of our experienced multidisciplinary team is to make sure patients achieve the best possible outcomes, whether they are undergoing surgical or non-surgical weight loss management.

Surgeons
Drs. Zografakis, Dan and Pozsgay have performed more than 2,000 laparoscopic weight loss surgeries at Summa since 2004.

Psychologists
Our psychologists work closely with patients in our surgical and non-surgical weight loss management programs to help them identify and overcome behavioral barriers to successful weight loss.

Physician
Our board-certified internist provides physician-supervised diet and exercise for patients enrolled in our surgical or non-surgical weight loss management programs.

Inpatient Case Managers
Our inpatient case managers are registered nurses. They provide intensive education and support before, during and after surgery, and work hard to make sure every patient receives the best care possible throughout their stay.

Nurse Practitioner
Our nurse practitioner works closely with our surgeons and physicians to provide comprehensive care to patients enrolled in our surgical or non-surgical weight loss management programs.

Dietitians
Our dietitians work closely with patients in our surgical or non-surgical weight loss management programs, to make sure all patients understand their diet and get all of their questions answered.
Introductory Visit
Patients are offered a same day or next day introductory visit where they receive assistance in completing their required paperwork while their insurance benefits are verified. They also attend an educational seminar taught by one of our surgeons, which explains the basics of obesity and weight loss surgery. After completing the introductory visit and seminar, patients are scheduled for their initial surgical evaluation.

Initial surgical evaluation
The surgeon completes a thorough individual evaluation of each patient, and based upon his/her medical history determines whether surgery is an option, explains the types of surgical procedures available and helps patients decide which procedure is their best option.

After the evaluation
Once determined to be a surgical candidate, patients may enroll in the Surgical Weight Loss Management Program, which is followed by:
- Completion of the pre-operative work-up ordered by the surgeon based upon medical history and insurance company requirements
- A meeting of our interdisciplinary team to review test results and determine whether additional support or education is needed
- A final review of all test results

Prior to surgery
Patients complete an intensive pre-operative education class taught by our nurse case managers and dietitians, which prepares them for their hospital stay and immediate post-operative recovery. In addition, patients are assisted in developing a post-operative exercise plan.

The initial 12 months after surgery
Patients are seen frequently for post-operative care during the first year following surgery. Multiple members of the team work together to assist patients in making the necessary adjustments to their diet and activity regimens. The goal of the bariatric care team is to help each patient maximize his/her long term success with weight loss.

Lifetime follow-up and support
Patients of Summa’s Bariatric Care Center are strongly encouraged to continue post-operative follow up for life. This consists of annual visits for life with more frequent follow-up if needed. The most successful patients also regularly attend our monthly surgical support group, where they benefit from education facilitated by our dietitians, and networking and support of other patients.
Surgical weight loss procedures performed at Summa include laparoscopic Roux-en-Y gastric bypass, laparoscopic sleeve gastrectomy, laparoscopic adjustable gastric banding and laparoscopic revisional procedures. Our bariatric surgeons are fellowship-trained in advanced laparoscopic and weight loss surgery. Some procedures can be done using a single incision or robotic-assisted approach.

Quality of Care

Summa’s bariatric care team collects and monitors quality of care data and works continuously to refine and improve its processes and program to make sure each patient receives the highest level of care.

<table>
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<th>Procedure</th>
<th>Summa’s Bariatric Care Center Percentage</th>
<th>National Percentage*</th>
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</thead>
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<tr>
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<td>0.20%</td>
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<tr>
<td>Sleeve Gastrectomy</td>
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<table>
<thead>
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<th>Procedure</th>
<th>Summa’s Bariatric Care Center Number of Days</th>
<th>National Average Number of Days*</th>
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<tbody>
<tr>
<td>Roux en Y Gastric Bypass</td>
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<td>2.40</td>
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<tr>
<td>Sleeve Gastrectomy</td>
<td>1.60</td>
<td>2.0</td>
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*National Data for 2013 taken from American College of Surgeons MBSAQIP Database
Demographics

Candidates for a primary weight loss procedure at Summa range in ages from 17 to 70. These are patients with morbid obesity, with or without comorbid diseases such as type 2 diabetes, obstructive sleep apnea, hypertension and gastroesophageal reflux disease. The typical patient has usually tried many different approaches to weight loss but has been unsuccessful in sustaining weight loss. In many cases, patients also struggle with underlying issues such as binge eating, emotional eating or other behavioral health conditions which have contributed to their obesity.
Laparoscopic Roux-en-Y Bypass

The average percentage of excess body weight loss as a result of laparoscopic Roux-en-Y bypass is 63% after three years.

Laparoscopic Sleeve Gastrectomy

The average percentage of excess body weight lost as a result of a laparoscopic sleeve gastrectomy as a primary weight loss procedure is 52% after three years.

Laparoscopic Adjustable Gastric Band

The average percentage of excess body weight loss as a result of an adjustable gastric band is 42% after three years.

Long-term weight loss for patients with diabetes using a non-surgical, conservative weight loss method is 6% at one year and 4% at three years.6

5 Beginning in 2010, the laparoscopic sleeve gastrectomy was performed as a primary weight loss surgery and as the first step in a staged procedure leading to a roux-en-y gastric bypass

Type 2 Diabetes Mellitus

530 of 1,771 (30%) patients undergoing weight loss surgery had type 2 diabetes preoperatively.

Following weight loss surgery:

Two years post-operatively:
- 58% of patients have complete resolution of type 2 diabetes
- 70% of patients experienced resolution and/or improvement of their type 2 diabetes

Five years post-operatively:
- 72% of patients experienced resolution and/or improvement of their type 2 diabetes

Hypertension

1,020 of 1,771 (58%) patients undergoing weight loss surgery had hypertension preoperatively.

Following weight loss surgery:

Two years post-operatively:
- 42% of patients have complete resolution of their hypertension
- 57% of patients experienced resolution and/or improvement of their hypertension

Five years post-operatively:
- 61% of patients experienced resolution and/or improvement of their hypertension

Resolution = Patient not taking prescription medication for comorbidity
Improvement = Reduction in usage of prescription medication for comorbidity
Surgical Comorbidity Resolution

Obstructive Sleep Apnea

Following weight loss surgery:

Two years post-operatively:
- 74% of patients experienced complete resolution of their obstructive sleep apnea

Five years post-operatively:
- 81% of patients experienced resolution of their obstructive sleep apnea

Gastroesophageal Reflux Disease

Following weight loss surgery:

Two years post-operatively:
- 59% of patients experienced complete resolution of their gastroesophageal reflux disease

Five years post-operatively:
- 66% of patients experienced resolution of their gastroesophageal reflux disease

Hypertriglyceridemia

Following weight loss surgery:

Two years post-operatively:
- 54% of patients experienced complete resolution of their hypertriglyceridemia

Five years post-operatively:
- 67% of patients experienced resolution of their hypertriglyceridemia

Resolution = Patient not taking prescription medication for comorbidity

998 of 1,771 (56%) patients undergoing weight loss surgery had obstructive sleep apnea preoperatively.

995 of 1,771 (56%) patients undergoing weight loss surgery had gastroesophageal reflux disease preoperatively.

585 of 1,771 (33%) patients undergoing weight loss surgery had hypertriglyceridemia preoperatively.
Fellowship training offer physicians the opportunity to obtain additional specialty-focused education after the completion of residency training. The ability of a hospital to provide care by fellowship-trained physicians is a strong indicator of a higher level of care. Completion of a fellowship means a surgeon has spent additional time developing in-depth knowledge and surgical expertise in his/her chosen specialty.

Summa Health System offers a one-year fellowship in minimally invasive surgery with a focus on advanced laparoscopic and weight reductive surgery. The fellow works closely with the three attending surgeons in Summa’s bariatric program, performing high volumes of minimally invasive weight reductive and general surgeries. The fellow also works with the bariatric care center team, developing expertise in the clinical management of patients.

Summa’s fellowship is now in its fourth year and is dually accredited by the MIS Fellowship Council for Minimally Invasive Surgery (MIS) and Bariatric Surgery. Led by fellowship primary program director, John G. Zografakis, M.D., FACS, it is Summa’s only general surgery fellowship.

The three participating faculty surgeons at Summa’s Bariatric Care Center are fellowship-trained as follows:

- John G. Zografakis, M.D., FACS: Evanston Northwestern Healthcare
- Adrian G. Dan, M.D., FACS: Cleveland Clinic Foundation (program co-director)
- Mark Pozsgay, D.O.: University of Pittsburgh Medical Center

**Summa’s Surgical Fellows**

Chandroutie Latchman, D.O., 2011-2012
Andrew Standerwick, M.D., 2012-2013
Mark Nuqui, D.O., 2013-2014

(Pictured)
Expanded Weight Loss Management Solutions

As stated by the American Medical Association in 2013, obesity is a chronic disease\(^7\). As such, it merits the same level of physician management as other chronic diseases such as diabetes and hypertension.

The Center for Disease Control reports that in 2013 no state had a prevalence of less than 20%, 7 states had a prevalence between 20% and <25%, and 23 states had a prevalence between 25% and <30%. The prevalence of obesity continues to worsen with 18 states having a prevalence between 30% and <35% and 2 states now with <35% or greater. Ohio’s obesity prevalence rate is between 30% and <35%, indicating a continued need for effective weight loss solutions\(^8\).

In response to this need, Summa’s Bariatric Care Center is planning significant expansion of both its surgical and non-surgical weight loss solutions. Beginning in 2015, the Bariatric Care Center will add an additional office on the Summa Akron City Hospital campus for its non-surgical program. Some services will also expand to Summa Barberton Hospital.

\(^8\)CDC website: http://www.cdc.gov/obesity/data/prevalence-maps
Research and Education

Research is an integral component of a large, quality focused program. Summa contributed to research regarding surgical weight loss intervention as follows:

**Invited Lectures**

- “Emergent Surgical Care of the Bariatric Surgical Patient for the General Surgeon”; Ohio Chapter, American College of Surgeons, May 2014.
- “Metabolic Surgery”; Grand Rounds, Department of Obstetrics and Gynecology, Summa Akron City Hospital, Summa Health System; August 2014.
- “The Emergency Department Evaluation of the Weight Loss Surgery Patient”; Grand Rounds, Department of Emergency Medicine, Summa Akron City Hospital, Summa Health System; March 19, 2013
- “Common Questions in the Office: The Postoperative Management of the Weight Loss Surgery Patient”; ASMB, Ohio State Chapter Meeting 2012; May 11, 2012, Columbus, OH.

**Publications**

- Dan AG, Mirhaidari S, Pozsgay M, Standerwick AB, Bohon AN, Zografakis JG. Two-Trocar Cholecystectomy by Strategic Laparoscopy for Improved Cosmesis. Accepted in 2012 for publication in JSLS, Journal of the Society of Laparoendoscopic Surgeons.
- Pohle-Krauza RJ, McCarroll ML, Pasini D, Dan AG, Zografakis JG. “Pathological findings of intra-operative liver tissue biopsy in patients undergoing weight loss operations”; Presented at the AHPBA Annual Meeting (Americas Hepato-Pancreato-Biliary Association) February 2014.

**Poster Presentations**

- Pasini D, Hanna E, Hawn K, Zografakis JG, Dan AG, Pozsgay M; “Case Management of Bariatric Surgical Patients Results in Improved Patient Satisfaction Scores”; Poster Presentation; OHA Quality Institute’s 6th Annual Quality Summit, Columbus, OH, June 2013.
Walk from Obesity

This national event, hosted by ASMBS, raises money for obesity research. On an annual basis, Summa collaborates with Akron General Medical Center to sponsor an Akron-based site. In 2013, Summa raised $2,799.00.
To refer a patient or for more information, call

(330) 375-6590

or go to summ*ahealth.org/weightloss