Bariatric Care Center
2012 Outcomes
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Dear Colleagues,

I am pleased to share the 2012 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 2012, 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.\(^1\)

Obese (BMI 30-34.4 kg/m\(^2\)) and morbidly obese (BMI > 35 kg/m\(^2\)) individuals are at significant risk of developing other diseases. The most common diseases include type 2 diabetes, hypertension, obstructive sleep apnea, gastroesophageal reflux disease and other cardiovascular diseases. As the BMI rises, the severity of these diseases also rises. In fact, the degree to which these comorbid conditions become life threatening is directly proportional to BMI.

While there is not yet agreement on a single best approach to nonsurgical 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 three-pronged. We offer patients a surgical, medical or behavioral weight loss management solution. 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 1,575 surgeries and have continued to expand annually, performing 297 surgeries in 2012.

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.

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

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Bariatric Surgery Center of Excellence

Summa’s Bariatric Care Center became accredited by the American Society for Metabolic and Bariatric Surgery (ASMBS) 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. Expected to be released in 2013, these new standards will include the following:

• Accurate reporting of bariatric surgery cases
• Focus on data-based quality improvement at each center
• Continued emphasis and development of the multidisciplinary team 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 1,500 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
• Laparoscopic Adjustable Gastric Band

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

²Blackstone, R and Nguyen, N. Letter to Bariatric Surgery Centers of Excellence regarding MBSAQIP Draft Standards; 12/19/12
Obesity has been established as 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%.3

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 post-operative pain and fewer incisional complications.4

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 the gastric bypass as the result.

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:

- **73% percent 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**
- **71% have resolution and/or improvement of their type 2 diabetes**

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Medical

Medical Weight Loss Management Program

For patients with a BMI between 25 and 34.9 kg/m², Summa’s Medical Weight Loss Management Program offers a six-month non-surgical weight loss option. Patients are assessed by our board-certified internist who has treated overweight patients for more than 10 years. Patients who enroll in our program receive intensive evaluation, treatment and education from our physician, psychologist, diettian and clinical exercise specialist. Additionally, those patients who either do not qualify for surgery or do not wish to undergo surgery may benefit from our Medical Weight Loss Management Program.

“Developing healthy eating habits that they can maintain for life is our overall emphasis. People that learn coping skills for issues like chronic stress or depression are better able to succeed with their weight loss goals.”

Shannon Perkins, Ph.D.
Clinical Psychologist

Behavioral

Behavioral Weight Loss Management Program

Ten years of experience in the field of weight loss management has taught us that identifying and overcoming the behavioral barriers to successful weight loss is a critical part of a positive outcome. Our psychologists therefore work closely with patients in our surgical and medical weight loss management programs, but they also offer all overweight patients the option of focusing primarily on the behavioral aspects of weight loss. Patients enrolling in our Behavioral Weight Loss Management Program undergo a thorough psychological evaluation and work with our psychologists to recognize and overcome those behaviors which are preventing them from engaging in a successful weight loss effort.

“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
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, medical or behavioral weight loss management.

Surgeons
Drs. Zoogafakis, Dan and Pozsgay have performed more than 1,500 laparoscopic weight loss surgeries.

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

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.

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

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

Dietitians
Our dietitians work closely with patients in our surgical and medical weight loss management programs, to make sure all patients understand their diet and get all of their questions answered.
Standardized Surgical Program

Summa’s Surgical Weight Loss Management Program is standardized to ensure every patient receives the highest level of care. All patients complete an evaluation, pre-operative testing and intensive education before, during and after surgery. Patients experience the standardized clinical pathway for their procedure, which is individualized to meet the specific needs of their medical conditions. Support is provided at every step by our bariatric care team.

1. Prior to evaluation
   Patients attend an educational seminar taught by one of our surgeons, which explains the basics of obesity and weight loss surgery. After completing all required paperwork, patients are scheduled for an initial surgical evaluation.

2. During the evaluation
   The surgeon will complete a thorough individual evaluation of each patient, and based upon his/her medical history will determine whether surgery is an option, explain the types of surgical procedures available and help patients decide which procedure is their best option.

3. 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 by the surgeon to determine readiness for surgery

4. 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.

5. After surgery
   Patients are seen frequently for post-operative care. 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.

6. Lifetime support
   Patients of Summa’s Bariatric Care Center are strongly encouraged to continue post-operative follow up for life. This consists of frequent visits during the first year; then annual visits for life. 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.
**Volume**

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.

### 30-day Mortality

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Summa’s Bariatric Care Center Percentage</th>
<th>National Percentage*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roux en Y Gastric Bypass</td>
<td>0.06%</td>
<td>0.10%</td>
</tr>
<tr>
<td>Sleeve Gastrectomy</td>
<td>0.00%</td>
<td>0.10%</td>
</tr>
<tr>
<td>Adjustable Gastric Band</td>
<td>0.00%</td>
<td>0.10%</td>
</tr>
</tbody>
</table>

### Average Length of Stay

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Summa’s Bariatric Care Center Number of Days</th>
<th>National Average Number of Days*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roux en Y Gastric Bypass</td>
<td>2.36</td>
<td>2.40</td>
</tr>
<tr>
<td>Sleeve Gastrectomy</td>
<td>1.68</td>
<td>1.90</td>
</tr>
<tr>
<td>Adjustable Gastric Band</td>
<td>1.04</td>
<td>0.70</td>
</tr>
</tbody>
</table>

*National Data for 2012 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 62% 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 since 2009 is 73%.

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.\(^7\)
Type 2 Diabetes Mellitus

447 of 1,469 (30%) patients undergoing weight loss surgery had type 2 diabetes preoperatively.

Following weight loss surgery:

Two years post-operatively:
• 59% of patients have complete resolution of type 2 diabetes
• 72% of patients experienced resolution and/or improvement of their type 2 diabetes

Five years post-operatively:
• 71% of patients experienced resolution and/or improvement of their type 2 diabetes

Hypertension

850 of 1,469 (58%) patients undergoing weight loss surgery had hypertension preoperatively.

Following weight loss surgery:

Two years post-operatively:
• 48% of patients have complete resolution of their hypertension
• 68% of patients experienced resolution and/or improvement of their hypertension

Five years post-operatively:
• 73% 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
818 of 1,469 (56%) patients undergoing weight loss surgery had obstructive sleep apnea preoperatively.

838 of 1,469 (57%) patients undergoing weight loss surgery had gastroesophageal reflux disease preoperatively.

503 of 1,469 (34%) patients undergoing weight loss surgery had hypertriglyceridemia preoperatively.

Resolution = Patient not taking prescription medication for comorbidity

Obstructive Sleep Apnea

Following weight loss surgery:

Two years post-operatively:
• 72% 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:
• 51% of patients experienced complete resolution of their hypertriglyceridemia

Five years post-operatively:
• 71% of patients experienced resolution of their hypertriglyceridemia
Fellowship training offers 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 team, developing expertise in the clinical management of patients.

Summa’s fellowship is now in its third year and was recently reaccredited by the MIS Fellowship Council for the maximal length of three years for dual 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
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
- “Evaluation and Management of the Weight Loss Surgery Patient”; Northeast Ohio Medical University (NEOMED); February 28, 2012.
- “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, Mirhaideri S, Pozsgay M, Standerwick AB, Bohon AN, Zografakis JG. “Two-Trocar Cholecystectomy by Strategic Laparoscopy for Improved Cosmesis. Accepted in 2012; for publication in JLS, Journal of the Society of Laparoendoscopic Surgeons.”

Oral Presentations
- Pedersen J, Wagner D, Parker P. “Panniculectomy as a Gateway”; Presented at the Twentieth Annual Summa Health System Postgraduate Day June 4, 2012.

Poster Presentations
- Dan AG, Regstad K, Morroco M, Salem J, Mirhaideri S, Pozsgay M, Shaheen W, Zografakis JG. “Totally Robotic Adrenalectomy – Technical Details and Initial Results.” MICSS (Minimally Invasive Surgery Symposium); February 20-23, 2012; Salt Lake City, UT.
- Zografakis JG, Dan AG, Pozsgay M, Latchman C, Pasini D. “A Novel Approach to the Repair of Incisional Hernias in Patients with Morbid Obesity.” Abdominal Wall Reconstruction (AWR); June 2012.

- Dan AG. “Strategic Laparoscopy for Improved Cosmesis-Cholecystectomy: A Retrospective Review of 8 Patients Undergoing SLIC-Cholecystectomy”; Presented at the Twentieth Annual Summa Health System Postgraduate Day June 4, 2012.

Book Chapters

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 2012, Summa raised $4,615.75.
To refer a patient or for more information, call (330) 375-6590 or go to summahealth.org/weightloss