Mike Ambrosio lost 153 pounds in 11 months and considered the surgery the best decision of his life.

Shelley Heinz had laparoscopic Roux-en-Y surgery in November 2003, after two years spent researching the procedure. Eighteen months after surgery, Shelley had lost 147 pounds and had no surgical complications.

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Dear Colleagues,

Last year brought program advancements, staff additions, expanded surgical options, and well-deserved recognition of excellence in bariatric care at Munson Medical Center (MMC).

Goals for each patient in the bariatric program are weight loss by improving eating behavior, preventing secondary complications of morbid obesity, reducing life-threatening factors, and increasing daily activities. Our support team, which includes a clinical coordinator or registered nurse, a psychologist, and an exercise physiologist or personal trainer, plays a vital role in our patients’ successes. Comprehensive care during the program, and lifelong follow-up after surgery, make our program among the best in the country.

During 2008, the lives of more than 340 patients were improved through their commitment to positive lifestyle changes.

Recognition of Excellence

The American Society for Metabolic and Bariatric Surgery named MMC and three surgeons from Grand Traverse Surgery, PC a Bariatric Surgery Center of Excellence. Through demonstrated short- and long-term outcomes, MMC and the recognized surgeons prove our programs exceed national standards for bariatric surgical care.

My colleagues, Roche J. Featherstone, MD, Steven Slikkers, MD, and I, join just 657 surgeons nationwide with this recognition, based in part on physician practices demonstrating the most advanced treatment and program options possible for their patients.

In addition, MMC was designated a Blue Distinction Center for Bariatric Surgery by Blue Cross Blue Shield of Michigan. Blue Distinction provides objective information to help patients make informed decisions when choosing a provider.

This recognition confirms that Grand Traverse Surgery and Munson Medical Center are committed to providing bariatric services that are among the most respected in the country.

Top 100 11 Times

Thomson Reuters named MMC a 100 Top Hospital for the 11th time in 2008. MMC is among five hospitals nationwide recognized with this honor 11 or more times. Munson was also one of 23 hospitals in the nation selected by Thomson Reuters for its first Everest Award to honor the hospitals that are setting national performance benchmarks. MMC also was singled out nationally for the 2008 American Hospital Association-McKesson Quest for Quality Prize™. These achievements are further evidence of MMC’s outstanding clinical quality, and operating and financial efficiency. In addition, MMC has achieved the Magnet Award for Nursing Excellence, placing nurses at Munson in the top 5 percent in the nation.
On the Horizon

With the goal of expanding care to more patients, Grand Traverse Surgery, PC added David Kam, MD, to its surgical team in 2008. Kam’s extensive bariatric care and experience augments our patient care.

Grand Traverse Surgery also has become an approved provider for the Ontario Health Insurance Plan (OHIP) for Canadian patients.

Enhancing bariatric care at MMC is an exciting endeavor. We look forward to the progressive techniques and advances on the horizon, and to expanding our support initiatives as we continue to improve the lives of our patients.

Sincerely,

Michael A. Nizzi, DO
Medical Director, Bariatric Surgery Program

Munson Medical Center’s Bariatric Program

During the last six years, Munson Medical Center’s (MMC) Bariatric Surgery Program has achieved more than 1,000 surgical successes and national recognition as a Bariatric Surgery Center of Excellence, highlighting MMC’s surgeons for demonstrating the most advanced treatment and program options possible for bariatric patients.

With a growing obesity population in Michigan, especially among children and adolescents, Munson Medical Center physicians have treated patients for medical conditions associated with obesity – uncontrolled hypertension, hyperlipidemia, type 2 diabetes, degenerative osteoarthritis, sleep apnea, cardiac disorders, gastroesophageal reflux, and depression – for many years.

continued on page 6
That treatment, coupled with managing patients who experience problems after bariatric surgery because of inadequate support, sparked Michael A. Nizzi, DO, Medical Director of MMC’s bariatric program, to create a Bariatric Center at MMC in 2002.

“It just made sense for us to offer a comprehensive weight-loss program and include bariatric surgery to address both the medical conditions and the follow-up care problems at their source,” Nizzi said.

Clear Objectives
The bariatric surgical and support team identifies clear surgical objectives, and offers extensive education and support to help patients with lifestyle commitments required to achieve the following goals:
• Weight loss by reducing caloric intake through improved eating behavior
• Prevention of secondary complications of morbid obesity
• Reduction of life-threatening factors
• Daily living improvements

Skilled Surgeons and Support Staff
MMC’s bariatric surgeons are experts in performing bariatric procedures and using specialized equipment, instruments, and techniques for each procedure. All members of the MMC weight-loss surgery team belong to the American Society for Metabolic and Bariatric Surgery, which means they have received specialty training in the bariatric field.

Medical Director of the Bariatric Surgery Program, Nizzi recognizes obesity as an epidemic that requires comprehensive care. He attended medical school at Des Moines University-Osteopathic Medical Center in Des Moines, Iowa. He completed his residency at Michigan State University-College of Osteopathic Medicine/Mount Clemens General Hospital. He joined the MMC staff in 1999.

Slikkers has been part of the bariatric surgical team since 2004. He graduated from Loma Linda University School of Medicine in California and completed his residency at Mayo Clinic in Rochester, Minn.

Kam joined Grand Traverse Surgery, PC in 2008, after performing more than 800 bariatric procedures as founder of the Sparrow Hospital Bariatric Surgery program in Lansing. Board certified in surgery and surgical critical care, Kam graduated from Wayne State University School of Medicine, completed his residency at Butterworth Hospital, and his fellowship in surgical critical care at the University of Pittsburgh.

Featherstone, board certified general surgeon, joined the MMC staff in 1996 and has performed bariatric surgery since 2003. He attended Wayne State University School of Medicine and completed his residency at St. John Hospital in Detroit.
Family nurse practitioner Mary Kay Williams brings more than 25 years of nursing experience to the bariatric program. She leads educational seminars for those learning about the program, and provides dedicated care for patients. She holds a bachelor’s degree in nursing from Ferris State University, where she graduated with highest distinction, and a master’s degree in nursing from Grand Valley State University. Williams has been associated with Grand Traverse Surgery, PC since 2002.

**Long-term Care Management**

Comprehensive care is a critical component of MMC’s Bariatric Surgery Program. By focusing on medical management, nutrition, exercise, nursing care, and psychological needs of each patient, the support staff offers patients optimum opportunity to succeed. Follow-up protocol includes lifelong connection to patients, and has proven to be essential to success. After surgery, follow-up care occurs at one week, three weeks, six weeks, three months, six months, nine months, 12 months, 18 months, 24 months, then yearly thereafter.

Support groups offer information and encouragement to patients after surgery. “Meeting with other patients who have undergone the surgery is vital to our patient’s success,” said Williams. “They share in each others’ struggles and victories, and that brings them comfort and strength.”

*Munson Medical Center’s Bariatric Surgery Program was named a Bariatric Surgery Center of Excellence by the American Society for Metabolic and Bariatric Surgery in 2008. This designation is awarded to programs that meet high quality standards and perform a minimum of 125 cases annually.*

**Total Bariatric Cases**

CY 2003 - CY 2008

*Volume = 1,195*

<table>
<thead>
<tr>
<th>Year</th>
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<tbody>
<tr>
<td>2003</td>
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<td>2007</td>
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<tr>
<td>2008</td>
<td>359</td>
</tr>
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</table>
Bariatric Surgery: A Cure for Diabetes?

A growing number of studies and research indicate potential reversal of type 2 diabetes with bariatric surgery. According to the American Society for Metabolic and Bariatric Surgery (ASMBS), existing and emerging research is promising, particularly in patients with BMIs of 30 to 34. In 2007, the society added “metabolic” to its name and stated that mounting evidence suggests bariatric surgery may be among the most effective treatments for conditions including type 2 diabetes, hypertension, high cholesterol, non-alcoholic fatty liver disease, and obstructive sleep apnea.

“Surgery for severe obesity goes way beyond weight loss,” said Kelvin Higa, MD, President of ASMBS. “This surgery results in the complete remission or significant improvement of type 2 diabetes and other life-threatening diseases in most patients.”

Surgeons at Grand Traverse Surgery, PC who participate in Munsen Medical Center’s Bariatric Surgery Program are optimistic about use of gastrointestinal surgery as a treatment for diabetes. “We are seeing evidence that bariatric surgery results in type 2 diabetes remission,” said Michael A. Nizzi, DO, Medical Director of Munsen’s Bariatric Surgery Program. “A high percentage of our patients have normalization of their hemoglobin AIC within two months of gastric bypass.”

The ASMBS states that new research indicates metabolic surgery may improve insulin resistance and secretion by mechanisms independent of weight loss – most likely involving changes in gastrointestinal hormones. Many patients with type 2 diabetes experience complete remission within days of surgery, long before significant weight comes off. This has led to new thinking that surgery may also be appropriate for diabetic patients who are of normal weight or only slightly overweight.

In the American Diabetes Association’s (ADA) 2009 Standards of Care Clinical Guidelines, the ADA bolstered its section on bariatric surgery and its affect on type 2 diabetes and said “bariatric surgery should be considered for adults with BMI greater than 35 and type 2 diabetes. ASMBS and many other national medical organizations also support using bariatric and metabolic surgery in type 2 diabetes patients with BMIs of less than 35 under a research protocol.”

An article in the January 2008 issue of Journal of the American Medical Association (JAMA) written by David Cummings, MD, and David Flum, MD, MPH, both from the University of Washington in Seattle, reported on a two-year randomized controlled trial involving type 2 diabetes patients with a BMI of 30 to 40:

- “The results were clear and striking. Complete remission of diabetes at two years was achieved in 73 percent of the patients in the laparoscopic adjustable gastric banding group versus only 13 percent in the medical/behavioral therapy group. The surgical group experienced continued on page 12
larger reductions in blood glucose levels, glycated hemoglobin levels, estimated insulin resistance, use of diabetes medication, and several features of the metabolic syndrome.”

- “Among the approximately 84 percent of patients with diabetes whose disease remits entirely after Roux-en-Y gastric bypass, one-third have blood glucose levels within reference range without use of anti-diabetes medications before discharge from their surgical hospitalization, at an average of less than three post-operative days.”

- “Gastrointestinal tract surgery . . . offers a novel end point: the notion of complete disease remission. Discussing remission as an option for patients necessitates rethinking the current approach to counseling, disease management, and resource allocation.”

- “Addressing (costs and risks of surgical interventions) requires time and resources, but in this era of advanced diabetes research, the insights already beginning to be gained by studying surgical interventions for diabetes may be the most profound since the discovery of insulin. As a result, the future looks brighter for patients.”

- “Gastric bypass and other malabsorption procedures (intestinal bypass) will become the procedure of choice for type 2 diabetes mellitus remission,” Nizzi said. “This is still investigational, but consensus is growing to decrease the BMI threshold of which patients are candidates for surgery.”
We practice extensive patient screening, education, and follow-up, which leads to our patients’ success, as well as our recognized success as a team.”

The LAP-BAND® System

In 2007, MMC’s bariatric team began using laparoscopic adjustable gastric banding, or the LAP-BAND® system. This minimally-invasive procedure is the only reversible, FDA-approved surgical obesity treatment. A silicone band is placed around the upper part of the stomach to create a new, smaller stomach pouch. The band also narrows the stomach outlet, regulating the flow of food. It limits food intake, reduces appetite, and slows digestion.

LAP-BAND® is appropriate for patients who have a lower BMI and limited co-morbidities, and who prefer less invasive procedures,” said Michael Nizzi, DO, Medical Director of the program.

Although current procedures yield above-average success for MMC patients, the bariatric team looks to advancements that include genetic therapy, gastric pacemaker, and intragastric balloons, all of which provide options to widen the bariatric care MMC provides.

Roux-en-Y

Surgeons perform this laparoscopic procedure through tiny incisions, during which the stomach is made into a small pouch that restricts food intake. The duodenum and first portion of the jejunum are bypassed, thereby reducing calorie and nutrient absorption, so careful attention is placed on patient education and dietary evaluation post-surgery.

Vertical Sleeve Gastrectomy

Vertical sleeve gastrectomy surgery involves only the stomach, and consists of reshaping it from a pouch into a long narrow tube and removing two-thirds of the stomach. The narrower stomach restricts food intake by allowing only a small amount of food at one time. New connections are not made between the stomach and small intestine, and there is no re-routing of the intestine, or reduced absorption of nutrients.

Laparoscopic Roux-en-Y gastric bypass, laparoscopic adjustable gastric banding, and laparoscopic sleeve gastrectomy are the most common bariatric procedures performed at Munson Medical Center.

Bariatric Cases by Type

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<th></th>
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</thead>
<tbody>
<tr>
<td>Open Roux-en-Y</td>
<td>29</td>
<td>37</td>
<td>56</td>
<td>20</td>
<td>2</td>
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<tr>
<td>Laparoscopic Roux-en-Y</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>LAP-BAND</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Open Vertical Sleeve Gastrectomy</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Laparoscopic Vertical Sleeve Gastrectomy</td>
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</table>
As the first providers who can help improve or save the lives of their patients through bariatric care, primary care physicians are the gatekeepers for the Munson Medical Center (MMC) Bariatric Surgery Program.

"Before primary care physicians can help their patients, it's important for them to understand obesity is a disease with both environmental and genetic components," said Michael Nizzi, DO, Medical Director of the MMC Bariatric Surgery Program.

MMC has taken definitive steps to provide the best opportunity for patient success in the bariatric program. The criteria and steps that follow can help physicians determine if their patients are eligible, and what to expect.

**Step 1: Meet Bariatric Surgery Criteria**

MMC bariatric surgeons follow the National Institute of Health (NIH) guidelines for weight-loss surgery candidates to include one of the following:

- Body mass index (BMI) of 40 or greater (100 pounds or more above normal weight)
- BMI of 35 to 40 (50 to 100 pounds above normal weight) with two or more co-morbidities

Other guidelines include:

- Patient age: 18 - 65 years
- Patient record of unsuccessful attempts to lose weight in a medically-supervised program
- Patient obesity-associated co-morbidities under medical care

**Step 2: Attend Educational Seminar**

If patients meet the program criteria, they must attend a two-hour educational seminar. The seminar is offered once a month, and is coordinated by Mary Kay Williams, MSN, FNP-C, coordinator of the Bariatric Surgery Program. Patients receive extensive education about nutrition, exercise and lifestyle changes, plus information about a psychological evaluation.

"The seminar is an important opportunity to teach patients about the lifelong commitment to proper nutrition, exercise, smoking cessation, and other behavioral modifications," Williams said.

Once patients make the commitment, have the recommendation of their primary physician, and the support of
Complication rates for bariatric surgery at Munson Medical Center remain significantly below national rates – even as bariatric surgery is becoming safer and more cost effective across the nation, according to a recent major government study.

“Complication rates, I believe, are lower at Munson because of the extensive pre-op evaluation bariatric surgery patients undergo,” said Michael A. Nizzi, DO, Medical Director of Munson’s Bariatric Surgery Program. “In addition, highly skilled operative teams and dedicated postoperative nursing care aids in fewer complications.”

A new study by the Department of Health & Human Services’ (HHS) Agency for Healthcare Research and Quality (AHRQ) found that the average rate of post-surgical and other complications in patients who have bariatric surgery declined 21 percent between 2002 and 2006.

The study, “Recent Improvements in Bariatric Surgery Outcomes,” published in the May 2009 Medical Care, found that the complication rate among patients initially hospitalized for bariatric surgery dropped from approximately 24 percent to roughly 15 percent. Much of this was driven by a reduction in the post-surgical infection rate, which plummeted 58 percent. Abdominal hernias, staple leakage, respiratory failure, and pneumonia fell by between 50 percent and 29 percent.

Complication rates at Munson Medical Center are slightly higher than 2 percent. Of 1,195 bariatric surgeries performed since 2003, 24 cases have involved complications within the first 30 days. The highest incidence was hemorrhage, followed by leaks and wound complication.

“At Munson, the clinical pathway ensures that all patients are receiving equal evidence-based therapies and limits omission in the care plan that could possibly lead to sub-optimal results,” Nizzi said. “Our program is also different from most other programs in that, with the exception of gastric banding, all other primary and revisional bariatric procedures are performed by two surgeons, rather than being assisted by a physician extender or surgical assistant.”

Nationally, rates for complications, such as ulcers, hemorrhage, wound reopening, deep-vein thrombosis and pulmonary embolism, heart attacks and strokes remained relatively unchanged. Rates ranged from 2.4 percent to 0.1 percent.

Hospital readmissions because of complications fell 31 percent, from roughly 10 percent to 7 percent. At Munson Medical Center, 21 patients (less than 2 percent) have been readmitted within 30 days of surgery.

“Physicians considering making a referral for bariatric surgery at Munson Medical Center should feel very confident that their patient will be safe and successful because we have established...”
Complication rates at Munson Medical Center were 2.51 percent in 2008, well below national averages.

Complication Rates
- 2008
- 2003-2008

<table>
<thead>
<tr>
<th>Complication</th>
<th>2008</th>
<th>2003-2008</th>
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<tbody>
<tr>
<td>ER visits within 30 days</td>
<td>2.78%</td>
<td>2.26%</td>
</tr>
<tr>
<td>Readmits within 30 days</td>
<td>2.51%</td>
<td>1.76%</td>
</tr>
<tr>
<td>Re-operations within 30 days</td>
<td>1.67%</td>
<td>1.09%</td>
</tr>
<tr>
<td>Complications within 30 days</td>
<td>3.06%</td>
<td>2.01%</td>
</tr>
</tbody>
</table>

Complication rates fell in spite of an increase in the percentage of older and sicker patients having operations. The proportion of bariatric surgery patients over age 50 increased from 28 percent to 44 percent and the average number of underlying illnesses in patients, such as diabetes, high blood pressure, or sleep apnea, more than doubled.

Nationally, improvements are largely due to a combination of three factors: increased use of laparoscopy; increased use of banding procedures without gastric bypass, such as LAP-BAND®; and increased surgeon experience arising from the growth in the number of bariatric surgeries performed by hospitals.

For more information about the study, contact AHRQ Public Affairs at (301) 427-1539 or (301) 427-1855.