

Editorial Opinion

Bariatric surgery

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Obesity

Abstract. Bariatric surgery is a growing segment of minimally invasive surgery. Laparoscopic bariatric procedures are considered some of the most technically challenging surgeries, requiring advanced surgical skills. Successful care of the morbidly obese patient requires a multidisciplinary team approach. These unique requirements are difficult to meet during residency and surgeons interested in bariatric surgery should pursue fellowship training in bariatric surgery.

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Bariatric surgery is a growing segment of minimally invasive surgery (MIS)/laparoscopic surgery. Laparoscopic bariatric procedures are considered some of the most technically challenging laparoscopic surgeries requiring advanced MIS skills including suturing. Although MIS plays a vital role in residency training in a number of surgical disciplines, including general surgery, surgical oncology, colorectal surgery, and pediatric surgery, resident exposure to bariatric surgery can be variable depending on the training program and the service rotations. Most general surgery residencies include basic laparoscopic procedures and the American Board of Surgery requires a minimum number of basic (60) and advanced (25) laparoscopic procedures. The requirements for advanced laparoscopic procedures are inclusive and do not specify bariatric procedures. Bariatric surgery requires advanced laparoscopic skills and these can be hard to develop fully during a general surgery residency. Many residencies that have bariatric programs will have fellows, physician assistants, or surgical assistants who participate in the bariatric surgical procedures rather than residents. Several publications have suggested that the learning curve for laparoscopic Roux-en-Y gastric bypass is at least 75 to 100 cases as the primary surgeon.^{1,2} This level of hands-on experience is best obtained in a fellowship with a busy and dedicated bariatric surgery team. In addition, a successful bariatric surgery program requires a multidisciplinary team to take care of patients. Residents rarely interact with the entire bariatric program and all the team members. It is critical to know how to partner with the right

psychologist, nutritionist, nurse, patient educator, scheduler, endocrinologist, and cardiologist. Having these team members work together is the basic foundation for the successful care of the morbidly obese. It also is important to ensure that the clinic and hospital is fully equipped to care for morbidly obese patients. Many insurance companies require that surgeons and hospitals providing bariatric surgery obtain Center of Excellence accreditation for coverage and reimbursement. This level of attention to the scope of the program beyond preoperative, intraoperative, and immediate postoperative care of patients is best learned in a fellowship program in which the fellow has the opportunity to be involved in every aspect of the bariatric surgery program.

This career resource guides the interested medical student and physician to opportunities for fellowship training in bariatrics.

Training Requirements

Residency requirements

Most bariatric fellowships require completion of a general surgery residency program and that the applicant be board-eligible in general surgery.

Bariatric fellowship

The MIS Fellowship Council was created to promote high-quality fellowship training in MIS, including bariatric surgery. Currently, more than 130 programs have received accreditation from the council. Some of these are considered MIS fellowships that include little to no bariatric training,

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some are considered advanced MIS/bariatric fellowships, and some are considered bariatric fellowships in which the predominant focus is on bariatric surgery (see later). Most fellowships focused on bariatrics training are 1 year in length. They may include other MIS cases and flexible endoscopy. It is important to look carefully at case numbers to be sure the fellowships you desire will give you the type of training you desire. The fellowship match process is managed by the National Resident Matching Program. The application deadline is in September and the match list submission deadline is in November.

Fellowship Council Accreditation Guidelines and Definitions

Below are listed the accreditation Guidelines and definitions developed by the Fellowship Council³

Bariatrics

A bariatric fellowship provides exclusively or predominantly bariatric surgical training. The institution sponsoring the fellowship must be certified as a Center of Excellence by either the American Society for Metabolic and Bariatric Surgery (ASMBS) or the American College of Surgeons, or be actively engaged in the application process. Fellows finishing bariatric fellowships should have completed the minimum number of cases required to allow them to be certified as bariatric surgeons at the completion of their training. Current ASMBS guidelines require a minimum of 100 cases, with 51 as primary surgeon, and must include a combination of restrictive procedures (bands and sleeves) and malabsorptive procedures. In addition, fellows must have demonstrable experience in the preoperative evaluation and assessment as well as postoperative follow-up evaluation and assessment of patients.

Advanced MIS/Bariatric

An advanced MIS/bariatric fellowship consists of a mixture of bariatric surgery training and broad advanced MIS training. To be dually accredited as an MIS/bariatric program, the bariatric experience must meet the requirements for a pure bariatric fellowship (see guidelines for Bariatrics), and also must provide exposure to broad-based advanced MIS training as evidenced by performance of an additional 150 advanced MIS cases. Basic MIS procedures do not count toward these minimum requirements, and these excluded procedures include laparoscopic cholecystectomy, appendectomy, and diagnostic laparoscopy; and ventral hernias should not represent a preponderance of the cases. Single incision, robotic, or Natural Orifice Translumenal Endoscopic Surgery (NOTES) basic MIS procedures as defined earlier will be counted as advanced MIS procedures

and should be identified accordingly in the case log system. Credit for minimally invasive bariatric procedures is allowed for up to 50 of these required 150 procedures—thus the minimum total number of cases required for advanced MIS/bariatric accreditation ranges from 200 to 250 bariatric and/or advanced MIS cases.

Board Certification

At present, there is no board certification in MIS or bariatric surgery.

Bariatric Surgery Research Opportunities and Funding

Medical students interested in bariatric surgery should identify a faculty member at their medical school who has a background in bariatric surgery and an interest in mentoring. The medical student's advisor or dean may be helpful in identifying such faculty. The student should meet with the faculty member to discuss shadowing in the operating room and possible research opportunities. Funding opportunities for medical students may be available at their institution.

Surgery residents interested in bariatric surgery should approach faculty members who focus on bariatric surgery at their institution to find research opportunities. Intramural funding opportunities may be available at their institution.

There are several funding opportunities for research in bariatric surgery. The Society for American Gastrointestinal and Endoscopic Surgery (SAGES) offers research awards annually that can be applied to bariatric surgery research projects. The ASMBS is a possible source for funding as are the American College of Surgeons and the Society of University Surgeons. State and local public health departments and local charitable organizations also may offer research support. Given the focus on obesity as a public health concern, increased sources of government funding are now available including the National Institutes of Health.

Professional Societies for Bariatric Surgery

ASMBS

The vision of the ASMBS is to improve public health and well being by lessening the burden of the disease of obesity and related diseases throughout the world.

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 purpose of the society is to advance the art and science of

bariatric surgery by continued encouragement of its members to carry out the following mission:

- To improve the care and treatment of people with obesity and related diseases.
- To advance the science and understanding of metabolic surgery.
- To foster communication between health professionals on obesity and related conditions.
- To be the recognized authority and resource on metabolic and bariatric surgery.
- To advocate for health care policy that ensures patient access to high-quality prevention and treatment of obesity.

SAGES

SAGES was founded in 1981 primarily as an organization for surgeons performing flexible endoscopy. Since then, SAGES has embraced both endoscopy and MIS, including bariatric surgery. For more information, please see the Career Development Resource (CDR) on MIS.

Journals

Many journals publish articles on obesity and bariatric surgery. There are 2 journals specifically dedicated to this topic: (1) *Obesity Surgery* and (2) *Surgery for Obesity and Related Disorders*. Students and residents interested in this field will learn what the current research topics are and will learn who the leaders in the field are by reading these journals.

Contact Information

Contact the following organizations for more information on bariatric surgery training or funding:

1. The Fellowship Council: 1300 West Olympic Blvd., Suite 600, Los Angeles, CA 90064. Phone: 310-437-0555; <http://fellowshipcouncil.org>.
2. ASMBS: 100 SW 75th St., Suite 201, Gainesville, FL 32607. Phone: 352-331-4900. <http://www.asmbms.org>.
3. SAGES: 1300 West Olympic Blvd., Suite 600, Los Angeles, CA 90064. Phone: 310-437-0544. <http://SAGES.org>.
4. American College of Surgeons: 633 N Saint Clair St., Chicago, IL 60611. Phone: 312-202-5000. <http://www.facs.org>.
5. Society of University Surgeons: 341 N Maitland Ave., Suite 130, Maitland, FL 32751. Phone: 407-647-7714. <http://www.susweb.org>.

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