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Constructing a competency-based bariatric surgery fellowship training curriculum

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Abstract

Background: Bariatric fellowship training after general surgery has historically been time based and competence was determined at completion based on a minimum number of cases during the fellowship. Graduate medical education is moving toward competency-based medical education where learners are evaluated during the course of their training and competence assessment occurs throughout.

Objectives: The Executive Council of the American Society of Metabolic and Bariatric Surgery (ASMBS) at the direction of the American Board of Surgery wanted to transition the bariatric surgery fellowship curriculum from its traditional format to a competency-based curriculum using competency-based medical education principles.

Methods: The ASMBS Education and Training Committee established a task force of 9 members to create a new curriculum and all of the necessary evaluation tools to support the curriculum, and initiate a pilot program.

Results: A competency-based curriculum consisting of 6 modules with cognitive and technical milestones, and the innovative evaluation tools needed to evaluate the learners, was created. A pilot program consisting of 10 programs and 19 fellows has been undertaken for the 2016–2017 academic year.

Conclusion: The Education Committee of the ASMBS is leading the charge in curriculum development for competency-based medical education for bariatric fellowship. (Surg Obes Relat Dis 2016;▮:00–00.)

Keywords: Competency-based medical education; Entrustable professional activities; Bariatric fellowship; Milestones

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Fellowship in bariatric surgery is designed to provide a structured educational and training experience in all aspects of bariatric surgery. The training is provided after completion of a general surgery residency. Before the fellowship council formation, each fellowship program was responsible for their own training curriculum. With the formation the fellowship council, each of the subspecialty national societies formulated a fellowship training curriculum for their particular area of specialty.[1] The bariatric surgery fellowship training curriculum was created by the American Society for Metabolic and Bariatric Surgery's Bariatric Surgery Training Committee and approved by its executive council.

The bariatric surgery fellowship training curricula to date has been based on the goal that by the completion of fellowship, the fellow will be able to "provide comprehensive, state-of-the art medical and surgical care to patients with morbid obesity and obesity-related diseases" [1]. The fellowship was expected to provide education in 5 units during the course of 1 year of training. These units of learning were (1) understanding morbid obesity, (2) Nonoperative management of morbid obesity, (3) primary operative management, (4) revisional operative management, and (5) management of complications. Each unit has objectives and proposed content and clinical skills that should be taught. The evaluation tools have evolved over the 9 years since the training curriculum was first put in place. The tools include a fellowship assessment survey that includes domains such as: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalisms, and system-based practice.

The minimum requirement is 1 assessment per fellow per quarter, but the fellowship director(s) may choose to perform more assessments and provide more feedback than the minimum requisite. For the 2014–2015 academic year, the Global Operative Assessment of Laparoscopic Skills (GOALS) was added to give more in-depth feedback on the technical skills of the fellow. For the GOALS, the fellow is assessed for his or her technical skills and decision-making. If 4 GOALS assessments are performed over the course of the year, then these assessments are expected to be performed on the same type of procedure so that the learner can be evaluated for progress. For the 2015–2016 academic year, the requirement was changed so that the GOALS evaluation was required for both laparoscopic Roux-en-Y gastric bypass and laparoscopic sleeve gastrectomy [2]. In addition to the skills evaluation that occurs throughout the year, the fellowship training curriculum required the fellows to complete a specific number of bariatric cases during the training year. The ASMBS acknowledges that "there is a general consensus that skill improves with more experience, however, the minimum number of procedures to attain competence in primary and revisional bariatric surgery remains unclear" [1]. Over time, the number of requisite bariatric cases has been a controversial topic of discussion and debate. The current requisite case volume based on the current Bariatric Surgery Fellowship Training Curriculum is stated in Table 1.

This traditional graduate medical education format, where the learner is evaluated throughout the course of the year, but competence is determined purely by subjective evaluations and case numbers at the end of the year, has come into question. Sixty-six percent of minimally invasive surgery fellowship program directors, when surveyed, do not think newly arriving fellows were able to operate for 30 minutes unsupervised, which implies that the current evaluation system is subjective and the arbitrary requisite case numbers do not adequately reflect competence [3]. Medical educators in the United States and Canada have been reconsidering the best methods to educate our graduate and postgraduate trainees using a competency-based medical education (CBME) format with objective in-training evaluation tools. There are multiple definitions of CBME in the literature, but the consensus definition is "an approach to preparing physicians for practice that is fundamentally oriented to graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs. It de-emphasizes time-based training and promises greater accountability, flexibility, and learner-centeredness" [4]. CMBE moves from assuming competence at the conclusion of the program to assessing competence throughout.

The American Board of Surgery (ABS) is evaluating the CBME concepts to possibly redesign general surgery residency training. The first curriculum that the ABS created with the support and contribution from SAGES, ASCRS, ASMBS, and SSAT was on flexible endoscopy. CBME breaks up training into modules and each module is broken down into milestones that the learner must achieve to advance to the next module. The flexible endoscopy curriculum has a total of 5 modules, and when successfully

Table 1
Minimum procedure numbers based on the current time-based bariatric surgery fellowship training curriculum

Current fellowship case number	
Procedure	Number
Stapling/anastomosis of gastrointestinal tract	51
Restrictive procedure	10
Revision procedure of previous bariatric surgery	5
Clinical skill	
Weight loss operations (primary surgeon in 51%)	100
Preoperative evaluation	50
Postoperative patient encounter (inpatient rounds)	100
Postoperative outpatient evaluations	100

[1]Minimally Invasive Surgery (SAGES); Bariatric Surgery (ASMBS); Hepatopancreatic & Biliary Surgery (AHPBA); Flexible Endoscopy (SAGES); Gastrointestinal Surgery (SSAT).