

**The Fellowship Council  
and  
The American Society for Metabolic and Bariatric Surgery**

**Advanced GI Surgery Curriculum for  
Bariatric Surgery Fellowship**

**10.04.07**

**1. Introduction**

- The purpose of Fellowship education in Bariatric Surgery is to provide a structured educational and training experience necessary to achieve expertise in Bariatric Surgery
- This curriculum provides:
  - Bariatric Surgery Program Directors with a basis for instruction and evaluation of Fellows
  - Fellows with a guide to the study of Bariatric Surgery and defines the essential areas of knowledge and technical skills that must be mastered.

**2. Curriculum Structure**

This Curriculum for Bariatric Surgery Fellowship should be considered within the broader context of the core curriculum for the Advanced GI Surgery Fellowship. This document, as produced and maintained by The Fellowship Council details the core requirements common to all Fellowships in Advanced GI Surgery, including those denoted as providing advanced training in:

- |                                       |         |
|---------------------------------------|---------|
| ○ Minimally Invasive Surgery (MIS)    | (SAGES) |
| ○ Bariatric Surgery                   | (ASMBS) |
| ○ Hepato-pancreatic & biliary surgery | (AHPBA) |
| ○ Flexible endoscopy                  | (SAGES) |
| ○ GI Surgery                          | (SSAT)  |

It is intended that each of the respective National Societies will be responsible for establishing and maintaining a Curriculum that describes the specific goals, and detailed objectives that are relevant to their sub-specialty fellowship, and that these curricula be included in the curriculum for Advanced GI Surgery Fellowship.

The curriculum for the Advanced GI Surgery Fellowship describes the following goals and objectives in the framework of the ACGME core competencies (which are common to, and required by, all Fellowships in Advanced GI Surgery) including:

1. Patient care, including minimum laparoscopic surgical skills
2. Medical Knowledge
3. Practice-based learning and improvement
4. Interpersonal and communication skills
5. Professionalism
6. Systems-based practice

These are also fundamental requirements of the curriculum for Bariatric Surgery Fellowship. The present document will describe the distinct medical knowledge and technical skills required by a fellow to become an expert of Bariatric Surgery.

This curriculum for a Bariatric Surgery Fellowship has been approved by the Executive Committee of The American Society for Metabolic and Bariatric Surgery.

### **3. Overview of the Curriculum for Bariatric Surgery Fellowship**

At the conclusion of the fellowship in Bariatric Surgery, the fellow will be able to provide comprehensive, state-of-the-art medical & surgical care to patients with morbid obesity and obesity related diseases. This will include the ability to investigate, diagnose, recommend therapeutic options, perform operative procedures, and provide all aspects of care, including pre-operative, peri-operative, and late postoperative care. To achieve this goal, this curriculum provides a guide to the topics for study, and the knowledge and skills required to become a Bariatric Surgeon.

This Curriculum consists of Major Units, some with Subunits:

- Unit 1 – Understanding Morbid Obesity
- Unit 2 – Nonoperative Management of Morbid Obesity
- Unit 3 – Primary Operative Management of Morbid Obesity
- Unit 4 – Revisional Operative Management of Morbid Obesity
- Unit 5 – Management of Complications

Each Unit or Sub-unit is organized into 3 Sections:

1. **Objectives:** description of the topics the Fellow must understand and the specific knowledge to be acquired
2. **Content:** description of the specific areas of study necessary to achieve the unit objectives
3. **Clinical Skills:** description of the clinical activities and technical skills that are to be mastered

### **Unit 1 - Understanding Morbid Obesity**

1. **Objectives:** Fellows will obtain an in-depth understanding of Obesity and its related diseases, including surgical and non-surgical treatment of these modalities.
2. **Content:** Minimum scope of understanding will include:
  - A. The epidemiology of obesity, including adolescent and geriatric obesity
  - B. The physiologic and interactive mechanisms of Morbid obesity
  - C. The psychological issues associated with Morbid Obesity
  - D. Identification and management of nutritional deficiencies related to surgery
  - E. Outcomes of bariatric surgery
  - F. Fellows are expected to participate in institutional multidisciplinary conferences held at least quarterly. The fellowship director should design this conference to include discussion of issues related to patient screening for bariatric surgery and co-morbidity management attended by nutrition staff, psychologists, and non-surgical specialists.
  - G. Fellows must attend at least one bariatric surgery patient support group meeting during the fellowship year.
  - H. Fellows are expected to contribute to the advancement of knowledge of obesity surgery and treatment of obesity and related diseases. Fellows are expected to submit an abstract and complete at least one clinical and/or research manuscript or research project (poster) during the fellowship year.
  - I.
3. **Clinical Skills:**
  - A. Fellows will apply such knowledge in evaluating obese patients for appropriate management.
  - B. Fellows will understand appropriate evaluation of the obese patient including end-organ by-products of the disease
    - a. Cardiac Disease
    - b. Pulmonary Disease
    - c. Musculoskeletal Disease
    - d. Psychological Disease
    - e. Metabolic Diseases

- C. Fellows will provide patients with the information needed to choose appropriate management options.

## **Unit 2 – Nonoperative Management of Obesity**

1. **Objectives:** Fellows will obtain and apply a comprehensive knowledge of management options for obesity without surgery.
2. **Content:**
  - A. Caloric Management
  - B. Exercise Physiology
  - C. Pharmacologic Management
3. **Clinical Skills:**
  - A. Fellows will develop understanding of various diet and caloric management systems including how they work and short- and long-term outcomes. They will have an understanding of potential complications of low calorie diets and ability to monitor for adverse outcomes.
  - B. Fellows will understand the purpose of different exercise programs and the benefits/risks of each for the obese patient
  - C. Fellows will be well versed on medications (prescription and non-prescription) for weight control including appropriate dosing and usage. This will include an understanding of outcomes, side effects, and risks.

## **Unit 3 - Primary Operative Management of Morbid Obesity**

1. **Objectives:** Fellows will develop surgical competence through experience with bariatric operations. Fellows will develop the skills and knowledge to evaluate and care for patients preoperatively and postoperatively.
2. **Content:**
  - A. Fellows must be exposed to more than one type of weight loss operation:
    - a. Laparoscopic and open surgical access
    - b. Restrictive operations
    - c. Gastric bypass
    - d. Malabsorptive procedures
  - B. While there is general consensus that skill improves with more experience, the minimum number of laparoscopic procedures to

attain competence in bariatric procedures remains unclear. For current recommendations, please see the Appendix.

- C. Fellows must also know how to perform these weight loss procedures by the open approach.
- D. Preoperative evaluation and postoperative management of the bariatric patient, including obesity related conditions

### **3. Clinical Skills:**

- A. Fellows will participate in weight loss operations.
- B. The fellow should have assumed the role of primary surgeon in the majority of cases (at least 51%), defined as having performed key components of the operation.
- C. Fellows will participate in preoperative evaluations:
  - a. Order and interpret appropriate testing
  - b. Consult with non-surgical specialists when needed
  - c. Evaluate most appropriate surgical options
  - d. Educate patient on benefits and risks of each option.
- D. Fellows will participate in postoperative patient encounters (eg, hospital rounds) and postoperative outpatient evaluations

## **Unit 4 - Revisional Operative Management of Morbid Obesity**

1. **Objectives:** Fellows will develop understanding of revision options, including the benefits and risks of each. Fellows will develop surgical competence through experience with revisional bariatric procedures. Fellows will develop the skills and knowledge to evaluate and care for patients preoperatively and postoperatively.

2. **Content:**

- A. Fellows will have experience with procedures for revision to treat complications or failure of previous bariatric surgery.

3. **Clinical Skills:**

- A. Fellows will participate in preoperative evaluations for surgical revision:
  - i. Order and interpret appropriate testing
  - ii. Consult with non-surgical specialists when needed
  - iii. Evaluate most appropriate surgical options
  - iv. Educate patient on benefits and risks of each option.
- B. Fellows will gain appropriate operative skill through primary and revisional procedures to perform these procedures in practice.

## **Unit 5 - Management of Complications of Bariatric Surgery**

1. **Objectives:** Fellows will gain comprehensive understanding of management of complications and obesity related conditions.
  
2. **Content:**
  - A. Early Complications
    - a. Identification
    - b. Management
  - B. Late Complications
    - a. Identification
    - b. Management
  
3. **Clinical Skills:**
  - A. Fellows will demonstrate ability to detect post operative complications through history and clinical examination.
  - B. Fellows will demonstrate an understanding of the physiologic impact of delaying diagnosis or treatment of postoperative complications.
  - C. Fellows will demonstrate appropriate use and interpretation of diagnostic tests to determine presence and magnitude of post operative complications.
  - D. Fellows will demonstrate a safe and logical plan of action, and show expediency in implementing management of postoperative complications.
  - E. Fellows will demonstrate the operative skill to manage such complications.

## Appendix

*While there is general consensus that skill improves with more experience, the minimum number of procedures to attain competence in bariatric procedures remains unclear. Currently the ASMBS recommends the following case numbers:*

Unit 3 - Primary Operative Management of Morbid Obesity in which the fellow is the primary surgeon:

<b><u>Procedure</u></b>	<b><u># Procedures</u></b>
Stapling/anastomoses of the gastrointestinal tract	51
Gastric restrictive procedures	10
<b><u>Clinical Skills</u></b>	
Weight loss operations (role as primary surgeon in 51%)	100
Preoperative evaluations	50
Postoperative patient encounters (e.g. hospital rounds)	100
Postoperative outpatient evaluations	100

Unit 4 - Revisional Operative Management of Morbid Obesity

<b><u>Procedure</u></b>	<b><u># Procedures</u></b>
Procedures for revision to treat complications or failure of previous bariatric surgery	5