

# Bariatric Surgery Fellowship Programs: general principles and the Saudi experience



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**No Conflict of Interest and No Disclosures**



# Objectives

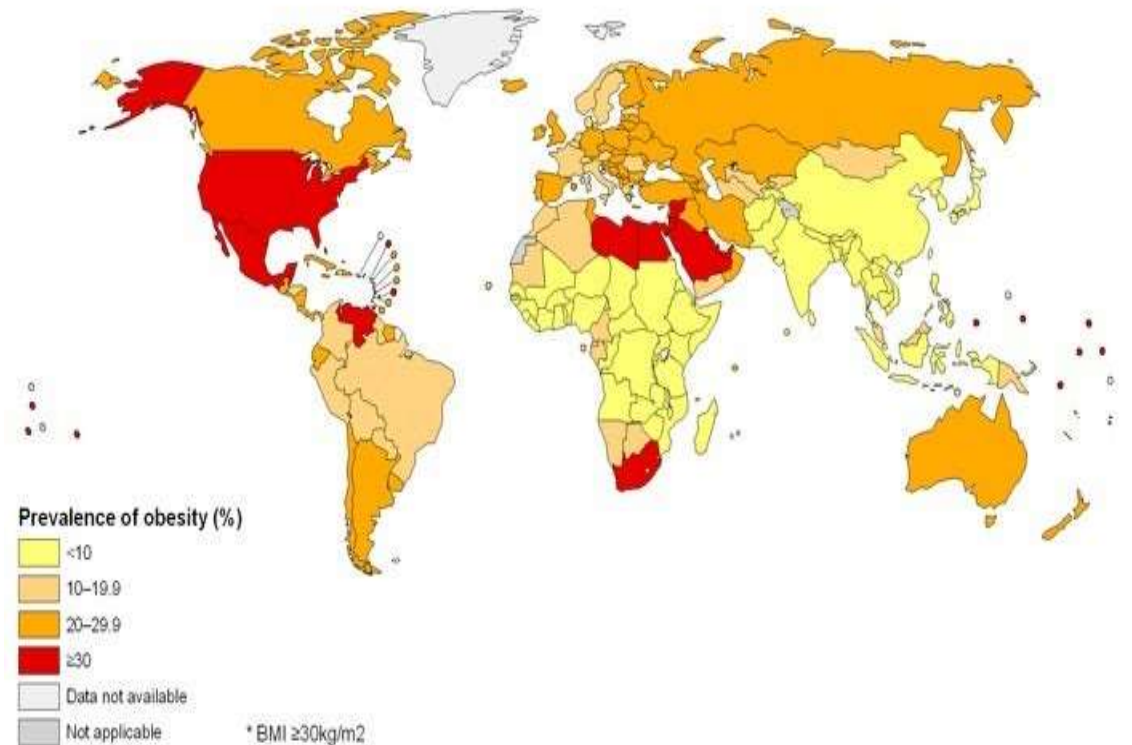
## **Respected Audience will be:**

- **Alerted about the increasing prevalence of obesity world-wide and in Saudi Arabia**
- **Acquainted with the importance and rationale behind establishing advanced laparoscopic and bariatric surgery fellowship programs**
- **Introduced to the Saudi Arabia's local experience of advanced laparoscopic and bariatric surgery training and fellowship programs**
- **Aware of basic principles and curriculum component of advanced laparoscopic and bariatric surgery fellowship training programs**



# Introduction

- Globally, more than one billion people are obese (~13.8%), 650 million (6.5%) are adults, 340 million (3.4%) are adolescents, and 39 million (3.9%) are children (WHO-2022). This number is still increasing!
- This of course is associated with increasing obesity related diseases, psychological and socioeconomic problems.
- WHO is urging countries to do more to reverse this preventable health crisis.
- Prevention is more cost effective than treatment of obesity. However, both prevention and treatment strategies for obesity control should go together hand-on-hand.



# Rationale behind establishing more bariatric surgery fellowship programs

- Increasing prevalence of obesity.
- Long waiting lists for bariatric surgery, especially in governmental hospitals.
- Shortage of bariatric surgeons' number against patients and societies' demand.
- Improvement of the quality of bariatric surgery services and outcomes.
- Helping some disadvantaged people who are living with obesity and cannot afford costs for bariatric surgery and its complications.



# The Saudi Local Experience

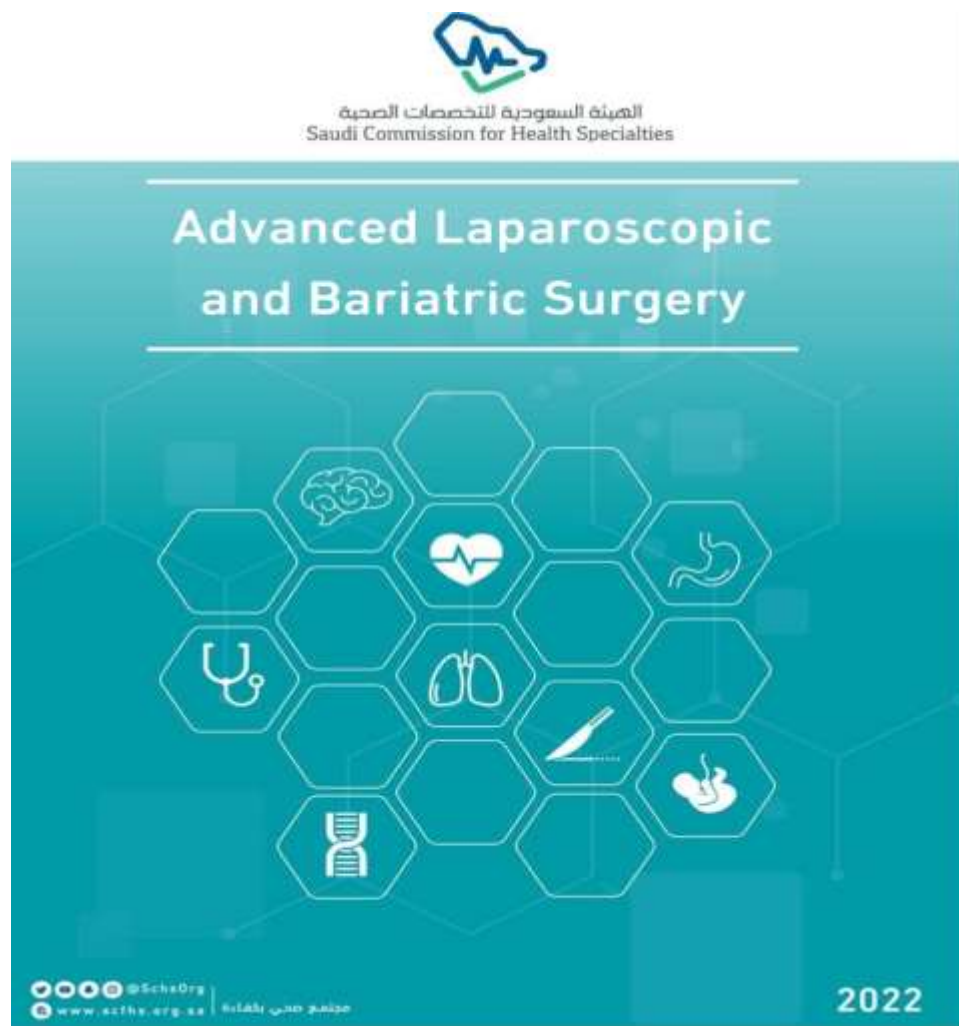
- First program for minimally invasive and bariatric surgery was established at King Saud University and affiliated hospitals in January 2015.
- Started with 4 trainers and now 6 trainers.
- Since 2015 we have admitted 2 fellows each year until 2022 they have increased to 3 fellows.
- Upto 2022, we have graduated 14 fellows, and currently 6 active fellows are under training.
- They are exposed to variety of cases including sleeve gastrectomy , bypass surgeries, SADI, re-dos, and emergency bariatric procedures.
- Also they rotate through multidisciplinary teams including GI and endoscopy, radiology, and research.



# The Saudi Local Experience - Continued

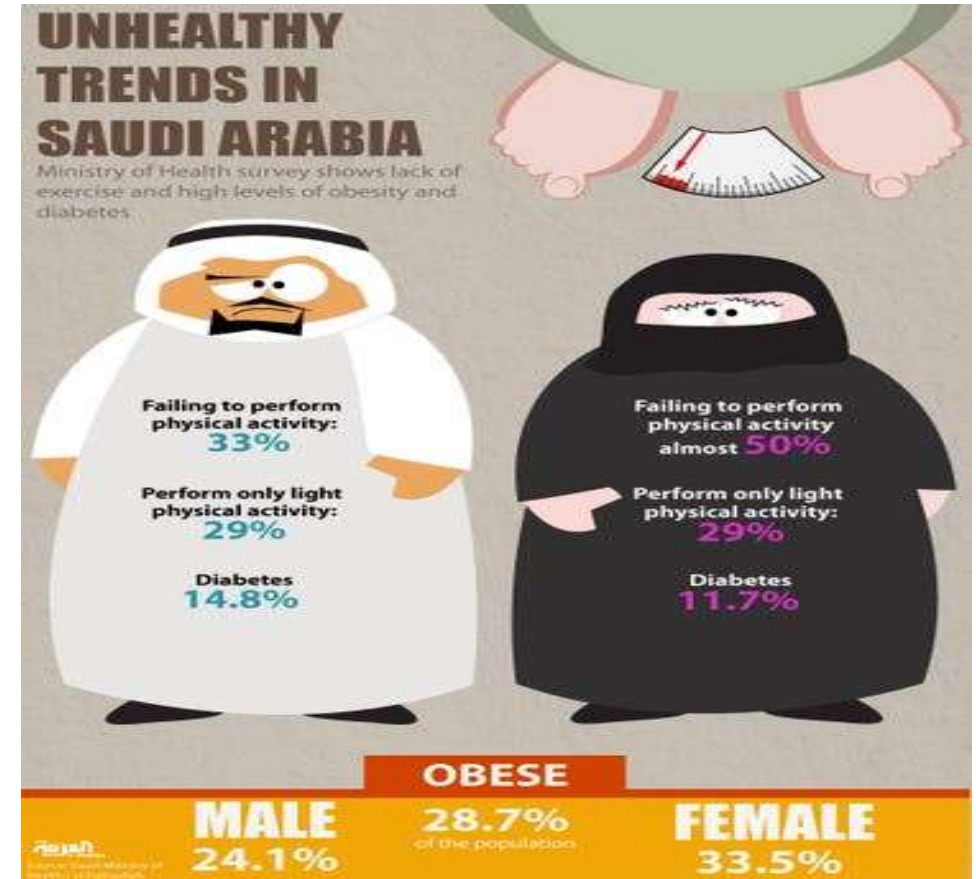
A similar program was established in December 2022 by the Saudi Commission For Health Specialties (SCFHS)

- Work on the curriculum was initiated by the Saudi Arabian Society for Metabolic and Bariatric Surgery (SASMBS) in 2020, then it was endorsed to the SCFHS for further development and implementation.
- The curriculum went through several steps of checking and refinement until approved and launched in December 2022.
- The next step is for the training centers is to check requirement and apply for accreditation of the center starting January 1st, 2023.
- In addition to KSU program, two centers were approved for training “Advanced Laparoscopic and Bariatric Surgery” so far, one in Riyadh and one in Mekkah regions. More centers are currently applying for the fellowship.
- Number of fellows should match the number of trainers and cases done (1 fellow/2 trainers/200cases/year).



# Context of Practice

- Prevalence of obesity: About 23% of adults and 10-20% of children and adolescents in Saudi Arabia are living with obesity (Front Public Health. 2023; 11: 1124051)
- Surgical management is offered to approximately 70% of the population in the Kingdom (~40% are private).
- The current system is still struggling to meet the demand of about 30% of the whole population needing bariatric surgery.
- Currently, insurance companies are obliged to cover BMI $\geq$ 40, or BMI $\geq$ 35 with justified comorbidity (CHI).





# Goal and Responsibility for Curriculum Implementation

- Guide fellows to become competent in the specialty
- Role of Academic Affairs: application, supervision, and implementation of the curriculum
- Role of the Program Director and Trainers: successful implementation of the curriculum
- Role of the Trainees: as an adult-learner, trainees have to demonstrate full engagement with a proactive role by carefully understanding learning objectives, engaging in self-directed learning, solving problems, and exhibiting openness and readiness to apply what they have learned through reflective practice based on feedback and formative assessment, while maintaining self-wellbeing and seeking support when needed.
- Also, trainees should be allowed to share responsibility in the curriculum implementation.
- The SCFHS will adopt the best models of training governance to provide the best quality training.



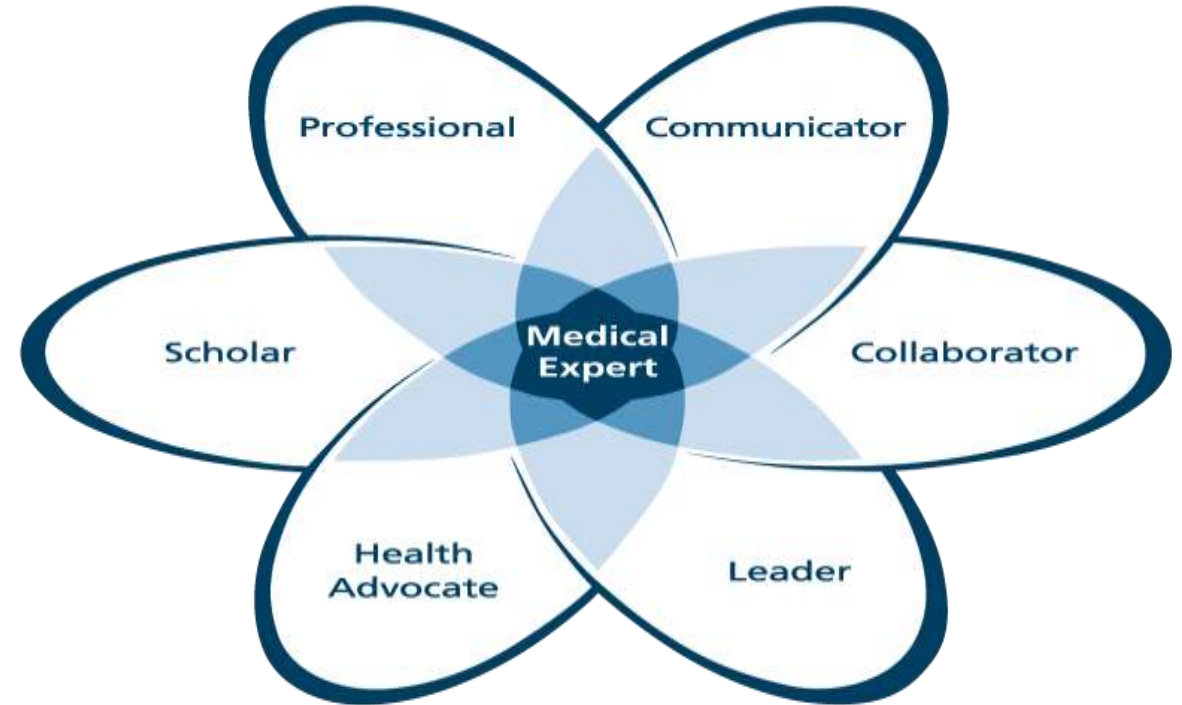
# Program Entry Requirements

- **The applicant must have completed residency training (board certified) in general surgery accredited by the SCFHS or equivalence.**
- **Candidates must pass the admission interview.**
- **Candidates must have a sponsorship for the entire period on a full-time basis.**
- **Other papers including the application form, curriculum vitae, copy of transcript of general surgery training records, copy of MBBS or equivalent degree approved by the SCFHS, copy of national ID/Iqama/passport, 3 recommendation letters, 3 passport size photos, and a valid SCFHS professional registration record.**



# LEARNING AND COMPETENCIES

- The program stresses learning defined as a lifelong acquisition of knowledge and clinical and operative skills.
- The CanMEDS framework is adopted as a copyright for the SCFHS, which include the following learning competencies:



CANMEDS

# PROGRAM DURATION AND ROTATIONS

Training year	Main Rotations			Selective Rotations			Leaves	
	Rotation name	Duration	Settings	Rotation name	Duration	Settings		
1st year: F1	Minimal invasive upper GI and bariatric surgery	10 blocks	<ul style="list-style-type: none"> <li>- ER</li> <li>- Inpatient</li> <li>- Outpatient</li> <li>- OR</li> <li>- Group therapy</li> </ul>	<ul style="list-style-type: none"> <li>- Endoscopy</li> <li>- Research proposal submission</li> </ul>	2 blocks	Endoscopy department	1 block*	Formative Assessment (Global Ratings/Direct Observation/Case)
End-of-Year Summative Assessment (MCQs/Structured Oral/Global Ratings)								
2nd year: F2	Minimal invasive, upper GI, and bariatric surgery	10 blocks	<ul style="list-style-type: none"> <li>- ER</li> <li>- Inpatient</li> <li>- Outpatient</li> <li>- OR</li> <li>- Group therapy</li> </ul>	<ul style="list-style-type: none"> <li>- Radiology</li> <li>- Complete research project submission</li> </ul>	2 blocks	Radiology department	1 block	
Final In-training Evaluation Report (FITER)								
↓ Surgery Logbook								
↓ Certificate of Training Completion								
↓ FINAL SPECIALTY EXAMINATIONS								



# CONTINUUM OF LEARNING

General Specialty	F1 (Minimal Invasive, Upper GI, and Bariatric Surgery)	F2 (Minimal Invasive, Upper GI, and Bariatric Surgery)
General surgery board	Dependent/supervised practice.	- Achieve competent and independent practice/supervised practice.
Obtain basic health science and foundational level to core discipline knowledge	<ul style="list-style-type: none"> <li>- Obtain fundamental knowledge related to the core clinical practice of minimal invasive upper GI and bariatric surgery specialty.</li> <li>- Acquire further knowledge in all aspects of this specialty to progress to higher competencies.</li> </ul>	- Acquire advanced and up-to-date knowledge related to core clinical problems of the specialty.
General clinical and surgical skills	<ul style="list-style-type: none"> <li>- Apply clinical and technical skills relevant to practice.</li> <li>- Acquire further competencies in clinical and procedural technical related to the core of the specialty.</li> </ul>	<ul style="list-style-type: none"> <li>- Achieve independent practice in certain well-practiced procedures, participation in more complex</li> <li>- demanding procedures.</li> </ul>

# RESEARCH GENERAL PLAN

## 1st half (F1), The Fellow will:

1. Choose a research project and submit a research proposal.
2. Choose a supervisor to help in accessing the essential resources that will allow an appropriate understanding of research skills and periodically discuss the progress.
3. Submit the research team members and progress plan.
4. Complete all research requirements to start the research project.
5. The attendance of dedicated courses or workshops that enhance research skills may be required by the program.

## 2nd half (F2)

1. The fellow will finish the research project and should be accepted by the research committee.
2. The research paper will be submitted.
3. It is highly desirable for the fellows to work on presenting the research results at national and/or international meetings and work hard to publish their work in indexed journals.

## Evaluation

1. Attendance at designated courses/lectures will be monitored and incorporated into the annual evaluation score.
2. Panel scoring of the research abstract presentation will be conducted at the end of the second year.
3. Research awards will be offered to fellows who publish in high-impact journals.



# TEACHING METHODS

## 1. Fellowship General Educational Activities

- Journal club every month
- Weekly grand rounds
- Involvement in quality improvement committees and meetings, as required
- Monthly morbidity and mortality (M&M).

## 2. Fellowship-Specific Educational Activities

- Fellowship academic half-day
- A weekly academic half-day covers all the theoretical components of the teaching methods and shall be presented and supervised by the fellows in collaboration with junior and senior colleagues. Two interactive lectures could be scheduled weekly.



# ASSESSMENT AND EVALUATION

## Formative Assessment

### 1. General principles

- Formative assessment implies a continuous monitoring and feedback processes of fellows throughout the program.
- Candidate fellows should be periodically made aware of their performance in knowledge acquisition, skills development, and other soft skills.

### 2. Formative assessment tools include:

- Knowledge: structured oral exam, annual written progress test, structured academic activities performance, and case-based discussion report.
- Skills: logbook, research activities, selective/elective activities or rotations will be evaluated by the in-training evaluation report (ITER).
- Attitude: ITER and 360 degree global ratings.

### 3. Progressive examinations from F1 to F2

Written (100 MCQs) testing knowledge, case-based, and problem solving





# SUMMATIVE ASSESSMENT

- 1. End of the program (F2) examinations (final graduation examinations)**
  - **Written (100 MCQs) testing knowledge, case-based, and problem-solving.**
  - **Structured oral examination (5 stations: 3 bariatric and 2 upper GI).**
  - **Global rating (ITER) by the trainers' committee.**
- 2. Final in-training evaluation report (FITER)**
- 3. Certification of training completion.**

# PROCEDURES LOGBOOK MINIMUM REQUIREMENTS

**By the end of the training period, each fellow is expected to perform a minimum of:**

- 20 laparoscopic hiatal hernia repair procedures as an assistant and 10 cases as the primary surgeon.
- 10 laparoscopic (Nissen/Troupet/Dor) fundoplication as an assistant and 5 cases as the primary surgeon.
- 20 upper GI endoscopy.
- 5 laparoscopic splenectomy as an assistant and 1 case as the primary surgeon.
- 75 laparoscopic sleeve gastrectomy as an assistant and 75 as the primary surgeon.
- 20 gastrointestinal bariatric procedures (e.g. laparoscopic one-anastomosis gastric bypass (OAGB), Laparoscopic Roux-en-Y gastric bypass (LRYGB)) as an assistant and 5 as the primary surgeon.
- 20 revisional bariatric procedures as the first assistant and 5 as the primary surgeon.
- 25 bariatric emergency surgeries as the first assistant.
- 5 gastric oncologic surgeries as a first assistant.

# PROGRAM AND COURSE EVALUATION

- The SCFHS applies variable measures to evaluate the implementation of this curriculum.
- The training outcomes of this fellowship will be evaluated by the quality assurance framework endorsed by the Central Training Committee at the SCFHS.
- Trainees' assessment (both formative and summative assessment) results will be analyzed and mapped to curriculum content.
- Goal-Based Evaluation.
- Other indicators such as:
  - Report of the annual trainees' satisfaction survey
  - Reports from trainees' evaluation of faculty members
  - Reports from trainees' evaluation of rotations
  - Reports from the annual survey of fellowship directors
  - Data available from fellowship accreditations
  - Reports from direct field communications with trainees and trainers
- The SCFHS will apply a robust method to ensure that this curriculum utilizes all the data available during the time of the revision of this curriculum in the future.



# POLICIES AND PROCEDURES

- The SCFHS has a full set of “General Bylaws” and “Executive Policies” (published on the official SCFHS website) that regulate all processes related to training.
- Trainees, trainers, and supervisors need to apply this curriculum in compliance with the most updated bylaws and policies that can be accessed online (via the official SCFHS website, [www.scfhs.org](http://www.scfhs.org)).



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# SUMMARY

- **Prevalence of obesity is increasing world wide and exponentially in some countries.**
- **Prevention is more cost effective than treatment of obesity, however, both need to go hand-on-hand.**
- **Increasing demand for bariatric surgery, especially in high prevalent countries.**
- **Bariatric Surgery Training Programs need guiding principles to assure good curriculum implementation and training outcomes.**
- **Training programs should be supervised and monitored by an accreditation body/institution.**

**Thank You**



# QUESTIONS

