Standards for Bariatric Surgery Services

Version 2

Issue date: 11/07/2023

Effective date: 11/09/2023

Health Policies and Standards Department

Health Regulation Sector (2023)

INTRODUCTION

Health Regulation Sector (HRS) forms an integral part of Dubai Health Authority (DHA) and is mandated by DHA Law No. (14) of the year (2021) amending some clauses of law No. (6) of 2018 pertaining to the Dubai Health Authority (DHA), to undertake several functions including but not limited to:

- Developing regulation, policy, standards, guidelines to improve quality and patient safety and promote the growth and development of the health sector;
- Licensure and inspection of health facilities as well as healthcare professionals and ensuring compliance to best practice;
- Managing patient complaints and assuring patient and physician rights are upheld;
- Governing the use of narcotics, controlled and semi-controlled medications;
- Strengthening health tourism and assuring ongoing growth; and
- Assuring management of health informatics, e-health and promoting innovation.

The Standards for Bariatric Surgery Services aims to fulfil the following overarching DHA Strategic Priorities (2022-2026):

- Pioneering Human-centered health system to promote trust, safety, quality and care for patients and their families.
- Make Dubai a lighthouse for healthcare governance, integration and regulation.
- Leading global efforts to combat epidemics and infectious diseases and prepare for disasters.
- Pioneering prevention efforts against non-communicable diseases.
- Become a global digital health hub.

- Foster healthcare education, research and innovation.
- Strengthening the economic contribution of the health sector, including health tourism to support Dubai economy.

ACKNOWLEDGMENT

The Health Policy and Standards Department (HPSD) developed this Standard in collaboration with Subject Matter Experts and would like to acknowledge and thank these health professionals for their dedication toward improving quality and safety of healthcare services in the Emirate of Dubai.

Health Regulation Sector

Dubai Health Authority

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Dubai Health Authority (DHA) is pleased to present version two of the DHA's Standards for Bariatric Surgery. This document has been revised in line with the evolving healthcare needs and international clinical best practice along with revised language.

Updates and amendments include the following:

1. Updated definitions
2. Minimum bariatric surgeries per Hospital. (Standard 2)
3. Hospitals shall maintain recognised accreditation within a period of 2 years, from the time they are licensed as per DHA Hospital Accreditation policy. (Standard 2)
4. Visiting surgeons shall be available forty-eight (48) hours with adequate handover. (Standard 3)
5. Recommended multidisciplinary (MDT) healthcare professional team with experience in bariatric patient management. (Standard 3)
6. Eligibility Criteria for Privileging Consultant General Surgeon (Standard 3)
7. Clinical Privileging may be granted as per DHA policy for Clinical Privileging. (Standard 3)
8. Recognized bariatric procedures. (Standard 4)
9. Updated Bariatric Surgery eligibility criteria in **appendix 1.**
10. Consider medical treatment for patients with BMI 30 – 34.9 (kg/m^2), such as weight loss injections. (Standard 4)
11. High-risk candidates for bariatric surgery (Standard 4)
12. Updated Postoperative assessment (Standard 4)

13. For transferring patients, the health facility shall adhere to DHA patient referral and inter-facility transfer policy. (Standard 5)
14. The health facility shall maintain diagnostic and interventional radiology services requirements as per the DHA Standards for Diagnostic Services (Standard 5)

DEFINITIONS

Bariatric surgery is a gastrointestinal surgery done to help obese patients achieve significant sustained weight loss. It is the most effective treatment for morbid obesity, producing durable weight loss, improvement or remission of comorbid conditions, and longer life. This may include, reducing the size of the stomach through removal of a portion of the stomach (sleeve gastrectomy or biliopancreatic diversion with duodenal switch) or by resecting and re-routing the small intestine to a small stomach pouch (gastric bypass surgery).

Biliopancreatic diversion with duodenal switch (BPD/DS) is a weight loss procedure that entails two major steps. The first step is sleeve gastrectomy in which about 80 percent of the stomach is removed, leaving a smaller tube-shaped stomach. The second step bypasses the majority of the intestine by connecting the end portion of the intestine to the duodenum near the stomach.

Gastric bypass is a surgical procedure involving stapling of the upper stomach into a 15 to 45 millilitres pouch and creating an outlet to the small intestine. Surgery is reversible and can be performed laparoscopically or with the open approach.

Intra-gastric balloon placement is a minimally invasive endoscopic weight-loss procedure that involves implanting a saline-filled silicone balloon in the stomach.

Laparoscopy is a type of surgery in which small incisions are made in the abdominal wall through which a laparoscope and other instruments can be placed to permit structures within the abdomen and pelvis to be seen. A variety of probes or other instruments can also be pushed

through these small incisions into the abdominal vacity. In this way, a number of surgical procedures can be performed without the need for a large surgical incision.

Laparoscopic One-Anastomosis Gastric Bypass (OAGB) is a weight loss procedure that combines the principles of restriction and malabsorption, which are achieved by creating a long and narrow gastric pouch and bypassing part of the small bowel (duodenum and part of the jejunum)

Laparoscopic Gastric Bypass (Roux-en-Y gastric bypass) surgery is a type of gastric bypass surgery, which involves cutting the stomach in two to create a pouch out of the smaller proximal (near) portion of the stomach, attaching it to the small intestine, bypassing a large part of the stomach and the entire duodenum. Gastric bypass offers combination of restriction, malabsorption and hormonal changes to optimize both weight loss and improve obesity-related medical problems. The newly created small stomach pouch makes patients feel full sooner and eat less food. Also, rerouting the food stream produces changes in gut hormones that produce satiety, suppress hunger, and improves blood sugar control.

Laparoscopic Sleeve Gastrectomy is a procedure, when we are surgically removing 70-80% of the stomach in vertical shape, creating a “sleeve” or tubular stomach. This will have a restrictive effect, which means the new stomach can accept only smaller portions, which will reduce the amount of food and calorie intake and giving early satiety.

Long-Standing Physician refers to physician who has been practicing/performing bariatric surgeries for a period of ten (10) years or more.

Obesity is a chronic, progressive disease, resulting from multiple complex environmental, genetic, metabolic, psychological, cultural and other factors. In morbid obesity the excess body fat has accumulated to the extent that it has adverse effect on health and it is associated with increased risk of co-morbidities and mortality. The obesity-related medical diseases affect all areas of the body including high blood pressure, pulmonary disease, sleep apnoea, cardiac disease, stroke, type 2 diabetes, asthma, depression, arthritis, back pain, joint pain, infertility, reflux, gout and some types of cancer.

Reduced Port Single Incision (SILS) is a method of using either one incision about 2 to 2.5 cm in size, or a few smaller 3 mm incisions to accomplish the bariatric surgery without leaving obvious scars.

Revisional Bariatric Surgery is performed to repair or change a previous weight loss surgery for patients that experienced post-operative complications or inadequate weight loss after the initial procedure.

Single anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S) is a weight loss procedure that combines both restrictive and malabsorptive surgery. It involves restricting food intake by reducing the stomach size and limiting food absorption by bypassing a portion of the small intestine.

ABBREVIATIONS

ACLS	:	Advanced Cardiovascular Life Support
BMI	:	Body Mass Index
BUN	:	Blood Urea Nitrogen
CAD	:	Coronary Artery Disease
CBC	:	Complete Blood Count
CME	:	Continuous Medical Education
CPD	:	Continuous Professional Development
DHA	:	Dubai Health Authority
ECG	:	Echocardiogram
GA	:	General Anaesthesia
GI	:	Gastrointestinal
HbA1c	:	Haemoglobin A1c
HFG	:	Health Facility Guidelines
HRS	:	Health Regulation Sector
ICU	:	Intensive Care Unit
LFT	:	Liver Function Test
LYRBG	:	Laparoscopic Roux-En-Y Gastric Bypass
MDT	:	Multidisciplinary Team
MI	:	Myocardial Infraction
MRP	:	Most Responsible Physician

PT	:	Prothrombin Time
PTT	:	Partial Thromboplastin Time
T2DM	:	Type 2 Diabetes Mellitus
TSH	:	Thyroid Stimulating Hormone
UAE	:	United Arab Emirates

1. BACKGROUND

Bariatric surgery is considered an effective approach for treating obesity and results in substantial changes to patients' weight, diet and behaviour in relation to eating. Weight loss has known to improve a number of associated diseases including but not limited to Type 2 diabetes, sleep apnoea and high blood cholesterol.

Bariatric surgery includes a variety of procedures and may include a reduction in the size of the stomach through removal of a portion of the stomach (sleeve gastrectomy or biliopancreatic diversion with duodenal switch) or by resecting and re-routing, the small intestine to a small stomach pouch (gastric bypass surgery). Bariatric surgery for adolescents (12-18 years) is generally not recommended and exceptional cases should be referred to health facilities with a Centre of Excellence status where they can be managed by multidisciplinary obesity management team. Bariatric surgery is not recommended for pregnant women and therefore excluded from this standard.

2. SCOPE

2.1. Bariatric Surgery services in DHA licensed health facilities.

3. PURPOSE

3.1. To assure provision of the highest levels of safety and quality Bariatric Surgery services in Dubai Health Authority (DHA) licensed health facilities.

4. APPLICABILITY

4.1. DHA licensed healthcare professionals and health facilities providing Bariatric Surgery services.

5. STANDARD ONE: REGISTRATION AND LICENSURE PROCEDURES

5.1. All health facilities providing Bariatric Surgery services shall adhere to the United Arab Emirates (UAE) Laws and Dubai regulations.

5.2. Health facilities aiming to provide Bariatric Surgery services shall comply with the DHA licensure and administrative procedures available on the DHA website https://www.dha.gov.ae.

5.3. Licensed health facilities opting to add Bariatric Surgery services shall inform Health Regulation Sector (HRS) and apply to HRS to obtain permission to provide the required service.

5.4. The health facility should develop the following policies and procedure; but not limited to:

5.4.1. Patient acceptance criteria

5.4.2. Patient assessment and admission

5.4.3. Patient education and Informed consent

5.4.4. Patient health record

5.4.5. Infection control measures and hazardous waste management

5.4.6. Incident reporting

5.4.7. Patient privacy

5.4.8. Medication management

5.4.9. Emergency action plan

5.4.10. Patient discharge/transfer.

5.5. The health facility shall provide documented evidence of the following:

5.5.1. Transfer of critical/complicated cases when required

5.5.2. Patient discharge

5.5.3. Clinical laboratory services

5.5.4. Equipment maintenance services

5.5.5. Laundry services

5.5.6. Medical waste management as per Dubai Municipality (DM) requirements

5.5.7. Housekeeping services.

5.6. The health facility shall maintain charter of patients' rights and responsibilities posted at the entrance of the premise in two languages (Arabic and English).

5.7. The health facility shall have in place a written plan for monitoring equipment for electrical and mechanical safety, with monthly visual inspections for apparent defects.

5.8. The health facility shall ensure it has in place adequate lighting and utilities, including temperature controls, water taps, medical gases, sinks and drains, lighting, electrical outlets and communications.

6. **STANDARD TWO:** HEALTH FACILITY REQUIREMENTS

6.1. Bariatric surgeries shall be performed only in a general hospital settings or specialized surgical hospitals where a fully equipped intensive care unit (ICU) is available and post-operative care requirements can be adequately met.

6.2. The bariatric surgery services can be performed in a stand-alone facility or as a designated area within an inpatient facility. In both instances bariatric surgery must be attached to a hospital where a fully equipped intensive care unit (ICU) is available and post-operative care requirements can be adequately met.

6.2.1. Hospitals shall maintain a minimum of 60 bariatric surgeries per annum of which 20 will include gastric bypass.

6.2.2. Hospitals performing bariatric surgery shall seek recognised accreditation within a period of 2 years, from the time they are licensed by DHA. Refer to DHA Hospital Accreditation policy.

6.3. All health facilities providing bariatric services shall adhere to DHA policy of Patient Referral and Interfacility Transfer.

6.4. The health facility should meet the health facility requirement as per the DHA Health Facility Guidelines (HFG) Health Facility Briefing & Design 180 – Inpatient Unit - Bariatric.

6.5. Bariatric surgeries shall be restricted according to weight limits of the existing equipment.

6.6. Lifting and transfer equipment should be suitable to facilitate and accommodate obese patients. Weight capacities of equipment and furniture used shall be documented by the manufacturer's specifications and this information shall be readily available to relevant staff. Essential equipment and furniture may include but not limited to:

6.6.1. Bariatric wheelchairs

6.6.2. Patients chairs and seats

6.6.3. Patients beds

6.6.4. Gowns

6.6.5. Weighing scales

6.6.6. Stretchers

6.6.7. Floor-mounted or floor-supported toilets

6.6.8. Shower rooms.

6.7. The health facility shall be designed and sized to accommodate the obese patients, and equipment needed.

7. **STANDARD THREE:** HEALTHCARE PROFESSIONALS REQUIREMENTS

7.1. All bariatric surgery services shall be led by consultant general surgeon.

7.1.1. Selected specialist general surgeons are permitted to perform bariatric surgeries in facilities with existing consultant coverage.

7.2. For each admitted patient, the health facility should designate a Most Responsible Physician (MRP), who should be the ultimate responsible for admitting, managing and discharging the bariatric patients.

7.3. For Bariatric surgery procedures performed by visiting surgeons, the health facility shall ensure the following:

7.3.1. Visiting surgeons shall be available up to 5 days after the procedure.

7.3.2. Visiting surgeons must always ensure their patients are handed over to a competent bariatric surgeon to oversee patient follow up and patient care during their absence.

7.4. Any health facility providing bariatric services should have a dedicated multidisciplinary (MDT) healthcare professional team with experience in bariatric patient management.

7.4.1. The team should consist of but not limited to the following:

a. Bariatric surgeon

b. Clinical/Health Psychologist

c. Clinical dietitian

d. Physician trained in obesity care, this includes either specialist or consultant:

i. Endocrinologist

ii. Internal medicine

iii. Family medicine

iv. Gastroenterologist

v. Pulmonologist

7.5. Physicians performing bariatric surgeries shall be:

7.5.1. Trained to use the equipment and be capable of moving obese patients without injury to the patient or themselves.

7.5.2. Suitably trained and assessed as competent and privileged by the Medical Director of the facility to perform bariatric surgeries and must be competent to recognize and treat related complications.

7.5.3. Responsible for demonstrating defined experience and exposure to the discipline's unique cognitive, technical and administrative challenges.

7.6. Health facilities providing bariatric surgery services shall have a clear and documented process to record patient details in their health records, which are as follows:

7.6.1. Patient selection criteria

7.6.2. Pre-operative assessment and counselling

7.6.3. Early/acute postoperative care (immediate care at 1-4 days) and upon discharge

7.6.4. Postoperative management follow up at 3 months, 6 months, 12 months and then as per the patient's condition. This includes, but not limited to:

a. Assessment of weight loss

b. Physical activity advice and support

c. Management of dietary and nutritional deficiencies

d. Bone density measurement at 1 year and 5 years

e. Assessment of lipid and glucose level and medication review

f. Management of post-operative complications.

7.7. Eligibility Criteria for Privileging

7.7.1. For consultant general Surgeons to perform bariatric surgeries, should meet the following requirements:

a. Valid DHA license

b. Evidence of successful completion of formal training in bariatric surgery, which includes completion of the following:

i. Bariatric surgery fellowship or equivalent

OR

ii. Updated logbook, showing evidence of 80 surgeries in the UAE in the previous 2 years with a minimum 15 gastric bypass surgeries.

7.7.2. For specialist general Surgeons to perform bariatric surgeries, should meet the following requirements:

a. Valid DHA license with minimum of 5 years' experience in bariatric surgery in UAE.

b. Evidence of successful completion of formal training in bariatric surgery which includes but not limited to:

i. Updated logbook, showing evidence of 100 surgeries in the UAE in the previous 3 years with a minimum 15 gastric bypass surgeries.

7.7.3. The health facility shall grant privileges as per the DHA policy for Clinical Privileging.

8. STANDARD FOUR: PRE-OPERATIVE EVALUATION AND POST-OPERATIVE PROCEDURES

8.1. Recognized bariatric procedures include:

8.1.1. Intra-gastric balloon

8.1.2. Roux-en-Y Gastric Bypass (RYGB)

8.1.3. Biliopancreatic diversion with duodenal switch (BPD/DS)

8.1.4. Laparoscopic One-Anastomosis Gastric Bypass (OAGB)

8.1.5. Single anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S)

8.1.6. Sleeve Gastrectomy (SG)

8.1.7. Revisional Bariatric Surgery

8.2. A detailed medical history with respect to any previous disease, drug intake and prior surgical procedures shall be taken of any patient indicated for bariatric surgery.

8.3. Bariatric surgery during pregnancy is not permitted. Patient who become pregnant following bariatric surgery should undergo nutritional screening every trimester.

8.4. Bariatric surgery shall be considered for individuals who meet the eligibility criteria in **Appendix 1.**

8.5. Consider medical treatment for patients with BMI 30 – 34.9 (kg/m^2), such as weight loss medications, along with recommended exercise, behaviour change, and diet

8.6. The health facility shall provide a clear protocol/clinical guideline for assessing patients preoperatively including, preoperative evaluation, preoperative management and other preoperative investigations.

8.6.1. Patients with medical concerns should have a thorough consultation with appropriate laboratory tests with the treating physician within the health facility or other facility, prior to the surgery.

8.7. Preoperative investigations shall be based on clinical judgement and shall focus on screening for the following but not limited to:

8.7.1. Cardiac arrhythmia

8.7.2. Prolonged QT syndrome

8.7.3. Cardiomyopathy

8.7.4. Uncontrolled endocrinology disease

8.7.5. Sleep apnoea

8.7.6. Impaired thyroid function, especially in risky patients.

8.8. The minimum preoperative assessment for bariatric surgery should include, but not limited to:

8.8.1. Upper GI Endoscopy

8.8.2. Blood studies including:

a. Complete blood count (CBC)

b. Blood urea nitrogen (BUN)

c. Serum creatinine

d. Electrolytes

e. Thyroid stimulating hormone (TSH)

f. Thyroid function test

g. Liver function test (LFT)

h. Haemoglobin A1c (HbA1c)

i. Serum insulin

j. Fasting blood glucose.

k. Coagulation profile such as prothrombin time (PT)/ partial thromboplastin time (PTT)

l. Vitamin assay for vitamin B12, folate and vitamin D

m. Ferritin

n. Calcium

o. Lipid profile

8.8.3. Echocardiogram (ECG)

8.8.4. Assess sleep patterns

8.9. The patient shall be physically and psychologically fit to proceed with the bariatric surgery/procedure.

8.10. Patients with comorbidities should be referred to consultant or specialist for evaluation and clearance for the relevant conditions before the bariatric surgery.

8.10.1. Consultants or specialists such as but not limited to the following healthcare professionals:

a. Psychiatrist

b. Psychologist

c. Psychotherapist

d. Cardiologist

e. Endocrinologist

f. Pulmonologist

8.11. As per the Decree of the Federal Law number (4) of 2016 concerning Medical Liability, informed consent shall be obtained by the treating physician from the patient or his designated representative (as applicable) after discussion of the following but not limited to:

8.11.1. Complication, risks, benefits, and alternatives of surgery/procedure.

8.11.2. The possibility of failure to lose weight

8.11.3. The patient's right to refuse treatment

8.12. The informed consent shall meet all DHA's criteria mentioned in **Appendix 2**.

8.13. The treating physician should decide the method of bariatric surgery incision. Reduced port single incision can be selected if the physician is competent to perform it.

8.14. Laparoscopy should be the primary choice for bariatric surgery/procedure.

8.15. When the laparoscopic approach proves to be difficult, the treating physician shall possess the necessary skills to convert to an open bariatric surgery/procedure.

8.16. Patients are considered high-risk candidates for bariatric surgery if he/she have one of the following risk factors:

8.16.1. Venous Thromboembolic Event (VTE)

8.16.2. BMI 60 or more

8.16.3. Severe Obstructive Sleep Apnoea: Apnoea Hypopnea Index > or equal to 30

8.16.4. Poor functional status (decided by the MDT team)

8.16.5. History of Myocardial Infraction (MI) or Percutaneous Coronary Intervention (PCI)

8.16.6. History of end-organ failure or transplant

8.16.7. Age 60 year or more

8.16.8. Revision/conversion

8.16.9. History of multiple open abdominal surgeries

8.17. High-risk surgeries may be performed under the following conditions:

8.17.1. Must be performed by a consultant surgeon with minimum 125 lifetime bariatric procedures including 50 LRYBG and have a minimum 50 bariatric procedures performed annually.

8.17.2. Bariatric surgery shall be performed in a unit with at least two surgeons, ICU, interventional radiology, and endoscopy management options to be handle any complications.

8.18. Patients' ability to comply with postoperative care should be determined.

8.18.1. To ensure the above a minimum of two (2) visits to the physician performing the bariatric surgery is required preoperatively, where the last visit should be after the completion of the preoperative investigation.

8.19. Postoperative assessment and follow up shall be conducted at 3 months, 6 months, 12 months and then as per patient's condition.

8.20. Postoperative assessment shall include the following:

8.20.1. Two (2) surgeons visits after date of surgery.

8.20.2. Two (2) dietician visits (2-3 weeks apart)

8.20.3. One (1) psychiatric visit

8.20.4. Blood work post-surgery include but not limited to:

a. FBC
b. Creatinine
c. U&E (urea and electrolyte panel)
d. HbA1c
e. TSH
f. LFT
g. Lipid profile
h. Ferritin
i. Iron
j. Calcium
k. Folate (every 3-6 months in the first 2 years)
l. Magnesium (every 6 months in the first 2 years)
m. Zinc (every 6 months in the first 2 years)
n. Vitamin B12 (every 3 months in the first 2 years)

o. Vitamin D3 (every 6 months in the first 2 years)

8.21. Follow-up blood tests should be conducted every 3 months in the first year postoperatively, then every 6 months for 1 year, and then when required.

8.22. Health facilities providing bariatric surgery services must have in place a continuity of care plan including but not limited to:

8.22.1. Regular follow up and review of outcome

8.22.2. Multi-disciplinary decision-making

8.22.3. Specialist support

8.22.4. Timely referral as per DHA patient referral and inter-facility transfer policy

8.22.5. Referral back to Primary Care setting

9. **STANDARD FIVE:** CRITICAL CARE SUPPORT

9.1. The health facility shall have a protocol for anaesthesia care that adheres to UAE laws and regulations.

9.2. All anaesthesiologist and anaesthesia team shall work with in their scope of practice and be competent in handling obese patients, this includes but not limited to:

9.2.1. Dosing anaesthetic drugs

9.2.2. Choice of anaesthetic type

9.2.3. Patient positioning

9.2.4. Special equipment needs to anesthetize severely obese patients safely as, special equipment for positioning, large beds and operating tables, mechanical

transfer mechanisms, additional personnel, extra-long needles, ultrasound and blood pressure cuffs.

9.3. An intensivist/anaesthesiologist trained and competent in handling obese patients and post-operative complications.

9.4. Trained critical care nursing staff available 24/7.

9.5. An Advanced Cardiovascular Life Support (ACLS) qualified physician shall be available on-site to provide ACLS when bariatric surgery/procedure patients are present, this include but not limited to; defibrillation, drug administration, advanced airway management, etc.

9.6. The health facility shall have in place ventilators and hemodynamic monitoring equipment as well as have the capacity to manage a difficult airway and intubation.

9.7. When necessary, the health facility shall have the ability to stabilize critically ill patients and transfer them to a higher level of care if the health facility is unable to manage the patient on-site.

9.8. If the health facility is unable to manage the full range of bariatric surgery/procedure complications, it shall have a written and signed transfer agreement with a hospital capable of managing bariatric related complications.

9.8.1. The transfer agreement shall detail the transfer plan of the bariatric patients.

9.8.2. For transferring patients, the health facility shall adhere to DHA patient referral and inter-facility transfer policy.

9.9. The health facility shall maintain diagnostic and interventional radiology services requirements as per the DHA Standards for Diagnostic Services

9.10. The health facility shall have, at all times, licensed consultants/specialists experienced in managing the full range of bariatric surgery/procedure complications:

9.10.1. Cardiology

9.10.2. Emergency and critical care

9.10.3. Gastroenterologist

9.10.4. Nephrology

9.10.5. Pulmonology

9.10.6. Psychiatry and rehabilitation.

9.11. A health facility that does not provide any of the consultation service listed above shall provide a copy of the signed written agreement for that service and a plan for provision of these services in the future.

REFERENCES

1. American College of Surgeons (2011). ACS BSCN Accreditation Program Manual Available at: https://www.cms.gov/Medicare/Coverage/DeterminationProcess/downloads/id160c.pdf [Accessed 01 June 2023]
2. American Society for Metabolic and Bariatric Surgery (ASMBS) and International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO): Indications for Metabolic and Bariatric Surgery (2022) Available at: https://pubmed.ncbi.nlm.nih.gov/36280539/ [Accessed 06 June 2023]
3. American Society for Metabolic and Bariatric Surgery (ASMS) position statement on preoperative patient optimization before metabolic and bariatric surgery (2022) Available at: https://asmbs.org/app/uploads/2021/10/PIIS1550728921004238.pdf [Accessed 06 June 2023]
4. American Society for Bariatric Surgery's Bariatric Training Committee (2006). American Society for Bariatric Surgery's guidelines for granting privileges in bariatric surgery. *Surgery for Obesity and Related* Diseases 2 (2006) 65–67. https://asmbs.org/wp/uploads/2005/10/GrantingPrivileges-Jan2006.pdf [Accessed 01 June 2023]
5. American Society for Metabolic and Bariatric Surgery (2017). Integrated Nutritional Guidelines for Surgical Weight Loss Patient 2016 Update. Available at:

https://asmbs.org/app/uploads/2017/06/ASMBS-Nutritional-Guidelines-2016-Update.pdf [Accessed 06 June 2023]

6. Auburn Memorial Hospital, Cornell University (2009). Universal Design: Meeting the needs of the Bariatric Population. Available at: http://iwsp.human.cornell.edu/files/2013/09/Universal-Design-Meeting-the-Needs-of-the-Bariatric-Population-18360rc.pdf [Accessed 01 June 2023]
7. British Obesity and Metabolic Surgery Society (BOMSS) Guidelines on preoperative and postoperative biochemical monitoring and micronutrient replacement for patients undergoing bariatric surgery (2014). Available at: https://bomss.org/wp-content/uploads/2021/06/BOMSS-guidelines-Final-version1Oct14.pdf [Accessed 14 June 2023]
8. Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (2019) Optimal Resources for Metabolic and Bariatric Surgery Standards. Available at: https://www.facs.org/media/fguhte1t/2022_cm_mbsaqip_standards_final_linked-toc.pdf [Accessed 01 June 2023]
9. Nguyen N.T., Brethaure S.A., Morton J.M. Ponce J., Rosenthal R.J. (2020). The ABSM textbook of Bariatric Surgery. Available at: https://www.academia.edu/38470266/The_ASMBS_Textbook_of_Bariatric_Surgery_Vol [Accessed 02 June 2023]
10. British Obesity and Metabolic Surgery Society (2014). BOMSS Guidelines on peri-operative and postoperative biochemical monitoring and micronutrient replacement for patients

undergoing bariatric surgery. Available at: https://bomss.org/wp-content/uploads/2021/06/BOMSS-guidelines-Final-version1Oct14.pdf [Accessed 02 June 2023].

11. British Obesity and Metabolic Surgery Society (2013). Professional Standards Document. British Obesity and Metabolic Surgery Society, 1, 1-10. Available at: https://bomss.org/wp-content/uploads/2022/01/BOMSS-Professional-Standards-March-2013.pdf [Accessed 02 June 2023]
12. Buchwald H (2005). ASBS Consensus Conference Consensus Conference Statement Bariatric surgery for morbid obesity. Health implications for patients, health professionals, and third-party payers. Available at: https://asmbs.org/wp/uploads/2014/05/2004_ASBS_Consensus_Conference_Statement.pdf [Accessed 01 June 2023]
13. DHA Health Facility Guidelines (2019). Part B – Health Facility Briefing & Design, 180 – Inpatient Unit – Bariatric. Available at: https://eservices.dha.gov.ae/CapacityPlan/HealthFacilityGuidelines/Guidelines/FileContent/Preview/DHAHFG/Part%20B%20-%20Complete [Accessed 01 June 2023]
14. Guidelines for Bariatric & Metabolic Surgery Saudi Arabia (2019). Available at: https://www.sasmbs.net/pdfs/sasmbs-2019-guidelines.pdf [Accessed 06 June 2023]
15. Melissas J. (2007). IFSO guidelines for safety, quality, and excellence in bariatric surgery. *Obes Surg*.18 (5). Available at:

https://www.eac-bs.com/site/images/ifso_guidelines_for_sqe_in_bariatric_surgery.pdf [Accessed 02 June 2023]

16. NHS Overview Weight loss Surgery (2020). Available at: https://www.nhs.uk/conditions/weight-loss-surgery/ [Accessed 06 June 2023]
17. National Institute for Health and Care Excellence (2014). Obesity: Identification, assessment, and management of overweight and obesity in children, young people and adults. NICE clinical guideline 189. Available at: https://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0071374/ [Accessed 02 June 2023].
18. Obesity: HPB-MOH Clinical Practice Guidelines 1/2016 (2016). Available from: https://www.moh.gov.sg/docs/librariesprovider4/guidelines/obesity-cpg_summary.pdf [Accessed 06 June 2023].
19. SAGES (2008) Guidelines for Clinical Application of Laparoscopic Bariatric Surgery. Available at: https://www.sages.org/publications/guidelines/guidelines-for-clinical-application-of-laparoscopic-bariatric-surgery/ [Accessed 14 June 2023]
20. Sjostrom et al. Effects of bariatric surgery on mortality in Swedish obese subjects. New England Journal of Medicine (2007). Available at: https://www.nejm.org/doi/full/10.1056/nejmoa066254 [Accessed 14 June 2023]

APPENDIX

APPENDIX 1: ELIGIBILITY CRITERIA AND CONTRAINDICATIONS FOR BARIATRIC SURGERY

BMI (kg/m^2)	Obesity related diseases
35 or above	No medical problems
30 – 34.9	Poorly controlled T2DM OR Two (2) obesity related diseases*

Obesity related diseases*

1. Type 2 Diabetes Mellitus (T2DM)
2. Hypertension
3. Dyslipidemia
4. Asthma
5. Gastroesophageal reflux disease GERD (Proven by endoscopy or manometry/PH study, BA study)
6. Nonalcoholic Fatty Liver Disease (NAFLD)
7. Disabling arthropathy (report from orthopedics)
8. Ischemic heart disease
9. Obstructive Sleep Apnea (OSA)/obesity hypoventilation syndrome
10. Severe urinary incontinence
11. Polycystic Ovary Syndrome (PCOS)
12. Benign intracranial Hypertension
13. Infertility
14. Gout

Contraindications for Bariatric Surgery

1. Severe uncontrolled eating disorder	3. Severe uncontrolled depression
2. Active Alcohol or drug abuse/dependence	4. Not Fit for GA
	5. Active malignancy

APPENDIX 2: CRITERIA FOR INFORMED CONSENT

1. If the patients lack the full capacity (e.g. less than 18 years old) informed consent shall be taken from their relatives up to the fourth degree, before the procedure/surgery is performed.
2. Patients shall be provided with comprehensive and accessible information concerning and procedure/surgery alternatives.
3. The health facility management shall clearly define investigations, treatment and surgical procedures that require patient consent.
4. The health facility management must develop an internal consent policy and procedures that are consistent with the federal legislation including procedures for individuals lacking the capacity of making informed decisions.
5. Informed consent form shall be maintained in the patient's health record. It should be bilingual and contain the following:
    - 5.1. Patient full name as per the passport/Emirates ID, age, gender, and patient identification number
    - 5.2. The diagnosis
    - 5.3. The name of proposed surgery
    - 5.4. The risks and benefits of proposed procedures or treatment e.g. re-operation, excess skin, gallbladder disease, vitamin deficiency and malabsorption
    - 5.5. Alternatives and the risks and benefits of alternatives
    - 5.6. Statement that surgery was explained to patient or guardian
    - 5.7. Date and time consent are obtained

5.8. Name and signature of the treating physician

5.9. Signature of a minimum one healthcare professional witnessing the consent (optional)

6. Informed consent shall be signed by the patient/guardian, witness, treating health professional, and translator if applicable.
7. All contents of the “Informed consent forms” should comply with the Decree of the Federal Law number (4) of 2016 concerning Medical Liability Law.
8. Healthcare professionals working in the health facility shall be informed and educated about the consent policy.
9. Where consent is obtained by the visiting community physician, the health facility management shall ensure that the signed consent is received and filed in the patient health record.