



الهيئة السعودية للتخصصات الصحية
Saudi Commission for Health Specialties

Saudi Board of Oral and Maxillofacial Surgery



سَبِّحْ لِلَّهِ عَمَّا يُشْرِكُونَ

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FOREWORD

OMS is a fully-developed major surgical specialty with a strong disciplinary foundation in dentistry.

The purpose of this curriculum is to guide the training of OMS in the core competencies required for a Saudi Health Specialist.

Throughout their five years of training, OMS residents will have a progressive educational experience with increasing patient care responsibility, with the junior residency level (3 years) including 12 months of rotations in medical and surgical specialties and the senior residency level (2 years) involving full-time clinical experience in OMS.

OMS integrates all of the physician roles, medical knowledge, procedural skills, and professional attitudes which are directed towards effective patient-centered care as outlined in the Royal College of Physicians and Surgeons of Canada (CanMEDS) framework.

The training program leading to the Saudi Specialty Certificate of Oral and Maxillofacial Surgery (SSC–OMS) is structured to achieve high-quality postgraduate education through the seven CanMEDS roles. More specifically, it aims to produce graduates that are able to:

1. **Medical Expert**

- a) Demonstrate the ability to conduct a consultation.
- b) Establish and maintain clinical knowledge, skills, and attitudes appropriate for OMS practice.
- c) Perform a complete and appropriate clinical assessment of an OMS patient.
- d) Use preventive and therapeutic interventions effectively.
- e) Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic.

2. **Communicator**

- a) Develop rapport, trust, and ethical therapeutic relationships with patients and their families.
- b) Accurately gather and synthesize relevant information and different perspectives from patients and their families, colleagues, and other professionals.
 - 1-Accurately and in a humane manner convey relevant information and explanations to patients, their families, colleagues, and other professionals.
 - 2-Develop a common understanding of clinical issues, problems, and management plans with patients, their families, and other professionals to develop a shared plan of care.
 - 3-Convey effective oral and written information about a physician-patient encounter.

3. **Collaborator**

- a) Participate effectively and appropriately in an interprofessional and interdisciplinary healthcare team to achieve optimal patient care.
- b) Effectively work with other health professionals to prevent, negotiate, and resolve interprofessional conflicts.

4. Manager

- a) Participate in activities that contribute to the effectiveness of their healthcare organizations and systems.
- b) Manage their practice and career effectively.
- c) Allocate finite healthcare resources appropriately.
- d) Serve in administration and leadership roles, as appropriate.

5. Health Advocate

- a) Respond to individual health needs and issues as part of patient care.
- b) Respond to the health needs of the communities that they serve.
- c) Identify the determinants of health for the broader populations that they serve.
- d) Promote the health of individuals, patients, communities, and populations.
- e) Promote and participate in patient health and safety.

6. Scholar

- a) Maintain and enhance professional activities through lifelong learning.
- b) Critically evaluate medical information including sources and guarantee appropriate application to practice decisions.
- c) Select effective teaching content and strategies to facilitate the learning of patients, their families, students, residents, health professionals, and the public.
- d) Contribute to the creation, dissemination, application, and translation of new knowledge in clinical practice.
- e) Demonstrate an understanding of the use of information technology to enhance OMS practice.

7. Professional

- a) Demonstrate a commitment to their patients, the OMS profession, and society at large through ethical practice.
- b) Demonstrate a commitment to their patients, the profession, and society through participation in defining profession-led regulations.
- c) Demonstrate a commitment to physician health and sustainable practice.

ABBREVIATIONS

SSCOMS	Saudi Specialty Certificate of Oral and Maxillofacial Surgery
OMS	Oral and maxillofacial surgery
SCFHS	Saudi Council for Health Specialties
CanMEDS	Royal College of Physicians and Surgeons of Canada
BLS	Basic life support
ATLS	Advanced trauma life support
ACLS	Advanced cardiac life support
BOOMS	Basic Operative Oral and Maxillofacial Skill course
ICU	Intensive care unit
ENT	Ear, nose, and throat
CEP	Core education program
PBL	Practice-based learning
PGY	Postgraduate year
E-Learning	Electronic learning
MF	Maxillofacial
MFT	Maxillofacial trauma
SIRS	Systemic inflammatory response syndrome
DIVC	Disseminated intravascular coagulopathy
HAI	Hospital-acquired infections
MRSA	Methicillin resistance <i>Staphylococcus aureus</i>
CLABSI	Central line-associated bloodstream infection
VRE	Vancomycin-resistant Enterococcus
HCW	Healthcare worker
GTR	Guided tissue regeneration
PRP	Plasma rich protein
CRQ	Constructed response questions
MCQ	Multiple-choice questionnaire
OSCEs	Objective structured clinical examination
SOEs	Structured oral examination
CER	Continuous evaluation report
DOPS	Direct observation of procedural skills
ITER	In-training evaluation report
CBD	Case-based discussion
Mini-CEX	Mini-clinical evaluation exercise
SEC	Saudi Examination Committee
MLP	Minimum performance level
ER	Emergency room
IMF	Inter-maxillary fixation
CPR	Cardiopulmonary resuscitation
IV	Intravenous
TLC	Triple lumen catheter
ECG	Electrocardiogram
CT	Computed tomography
MRI	Medical resonance imaging
TMJ	Temporomandibular joint

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I. INTRODUCTION

1. Context of Practice

The SSC–OMS residency program was launched in October 2000 with five residents admitted to the program. Professor Khalid Al Ruhaimi started designing and organizing the OMS program training structure and selection of **the first OMS Scientific Committee members**: Dr. Nasser Al Nooh, Dr. Abdullah Sehmi Al Gorashi, Professor Nowko Alagoba, and Dr. Medhat Al Husaini.

OMS is a dentistry-based surgery specialty with 5-year training programs. Through the SSC–OMS Program, trainees undertake written and oral examinations to validate their knowledge and competencies and qualify for clinical responsibilities.

The OMS specialty had a relatively limited scope in the past; however, over the last couple of years, the range of procedures has expanded considerably. The SSC–OMS training program is structured to achieve high-quality postgraduate education with added competency in the diagnosis and surgical and adjunctive treatment of diseases, injuries, and defects involving both functional and aesthetic aspects of the hard and soft tissues in the oral and maxillofacial regions.

2. Aims and Responsibilities in Curriculum Implementation

The ultimate goal of this curriculum is to allow trainees to become competent in their specialty. This goal will require a significant amount of efforts and coordination from all the stakeholders involved in postgraduate training. As adult learners, trainees must demonstrate full and proactive engagement through careful understanding of learning objectives, self-directed learning, openness to reflective feedback and formative assessment, self-care and wellbeing, and the ability of seeking support when needed. The Program Director has a key role and responsibility in making the implementation of this curriculum most successful. Training committee members, and in particular, the program administrator and chief resident, will have a significant impact on the program implementation. Trainees should be enabled to share the responsibility in curriculum implementation. The Saudi Commission for Health Specialties (SCFHS) will apply the best practice models in training governance to achieve the best quality of training. The Academic Affairs departments in the training centers and the regional supervisory training committees will have a major role in training supervision and implementation. The OMS Scientific Council will be responsible for making sure that the content of this curriculum is constantly updated to match the best available evidence in postgraduate education within their discipline.

3. Policies and Procedures

This curriculum outlines all the learning objectives that will guide the interactions between the trainers and trainees for the purpose of achieving the identified educational outcomes. Trainees, trainers, and supervisors must apply this curriculum in compliance with the last updated bylaws and policies, which can be accessed online through the official SCFHS website. Examples of rules and regulations to be followed include general bylaws on training and assessment and executive policies on admission, registration, continuous assessment and promotion, examination, trainees' representation and support, duty hours, and leaves.

II. PROGRAM STRUCTURE

1. Program Entry Requirements

1.1 General Requirements

Applicants should follow the admissions policies and procedures of the SCFHS.

1.2 Specific requirements

In addition, applicants should:

- Provide two recommendation letters from well-known oral and maxillofacial surgeons.
- Demonstrate at least 6 months of experience as a resident in a recognized OMS training center.
- Preferably have an Advanced Trauma Life Support (ATLS) and Advanced Cardiac Life Support (ACLS) certification.
- Sign an agreement that he/she will abide by all the relevant rules and regulations and will have no objection to receiving training in any training center in the Kingdom based on the local training committee rotation schedule.
- Attend and earn the certification delivered by the Basic Operative Oral and Maxillofacial Surgical Skill Course (BOOMS).

2. Program Duration

Residents who successfully completed the full 54-months of the OMS program are expected to have developed their clinical knowledge and skills to the competency level of a Specialist in Oral and Maxillofacial Surgery.

3. Program Rotations

The training program includes a series of clinical rotations to ensure the breadth and depth of training required for the satisfactory completion of the curriculum.

The Saudi Commission for Health Specialties requires five years of OMS rotation according to the following schedule:

Training level and Number of Weeks	Training Modules	Number of Blocks	Remarks
SSC–OMS R1 level 52 Weeks	Anatomy	18 Weeks	Total 4 Months
	Physiology	18 Weeks	
	General and Oral Pathology	18 Weeks	
	Pharmacology	18 Weeks	
	OMS Rotation (Tow rotation)	17 Weeks per rotation	Total 8 Months

PROGRAM STRUCTURE

SSC-OMS R2 level 4 Weeks	Statistics	2 Weeks	ICU lectures During the month of October
	Crash Course in Intensive Care Unit (ICU), Emergency Room (ER), and medicine	2 Weeks	
SSC-OMS R2 level 57 Weeks	Internal Medicine Rotation	8 Weeks	Starting in the first week of November
	Anesthesia Rotation	17 Weeks	
	Emergency Medicine Rotation	4 Weeks	
	General Surgery Rotation	8 Weeks	
	Otolaryngology Rotation	4 Weeks	
	Plastic Surgery Rotation	4 Weeks	
	Neurosurgery Rotation	4 Weeks	
	ICU Rotation	4 Weeks	
Elective Rotation	4 Weeks		
SSC-OMS R3 level 43 Weeks	OMS Rotation	21 Weeks	Two rotations per year
		22 Weeks	
SSC-OMS R4 level 52 Weeks	OMS Rotation	26 Weeks	Two rotations per year
		26 Weeks	
SSC-OMS R5 level 52 Weeks	OMS Rotation	26 Weeks 26 Weeks	Two rotations per year

III LEARNING AND COMPETENCIES

1. Introduction to Learning Outcomes and Competency-Based Education

The curriculum offers competency-based education that will provide OMS residents with the educational experiences they need to obtain all the necessary knowledge, skills, and attitudes to become a competent and well-rounded OMS professional. Among the main learning outcomes is the ability to develop and deliver appropriate care to the patient while maintaining a high degree of professionalism and ethical standards in developing patient-physician relationships.

2. Mapping of Milestones

2.1 Junior Level Competencies

2.1.1 First Year (52 Weeks Rotation) Goals and Objectives

- Receive education in the basic medical sciences (Appendix I), including Anatomy (General/Head and Neck), Physiology, Pharmacology, and Pathology (General/Oral).
- Have primary responsibility for the initial assessment and daily total care of the patient under the close supervision of a senior OMS resident and full-time consultant.
- Complete dentoalveolar surgery in all cases where it is required.
- Develop proficiency in OMS procedures under the direct supervision of a superior:
 - Suturing techniques of wounds in the head and neck region and removal of sutures
 - All local anesthesia techniques (infiltration versus block)
 - Incision and drainage of an abscess, extra- or intraoral
 - Surgical or nonsurgical teeth extraction
 - Removal of impacted teeth with full practice of different types of surgical approaches
 - Management of post-extraction complications, including dry sockets, sharp bony edges, and bleeding
 - Simple pre-prosthetic preparations for edentulous and partially edentulous patients
 - Oro-antral fistula closure
 - Intraoral cyst enucleation
 - Peri-apical surgery
 - Odontogenic infection management
 - Intraoral biopsy procedures, including needle aspiration, incisional biopsy, and excisional biopsy for non-suspicious lesions of less than 2 cm
 - Closed reduction of facial bone fractures
 - Applied arch bar and/or inter-maxillary fixation (IMF) wires
 - Removal of arch bar and/or IMF wires
 - Gingivectomy
 - Close reduction of condylar dislocation
- Become certified in:
 - Basic Life Support (BLS)
 - Advanced Trauma Life Support (ATLS)
 - Advanced Cardiac Life Support (ACLS)

2.1.2 Second Year (Off Service Rotation- 57 Weeks)

The OMS–off service resident has primary responsibility in the following medical and surgical fields: internal medicine; anesthesia and ICU; plastic surgery; and ear, nose, and throat (ENT), under appropriate supervision. Research and elective rotations are also included in this period.

Medicine Rotation (8 Weeks)***Goals and objectives:***

- a) Record an accurate medical history and perform a physical examination, issue a diagnosis, and select treatment in patients with a variety of medical conditions
- b) Gain experience in identifying and obtaining appropriate laboratory or other diagnostic tests, interpreting the results of these tests, and developing treatment strategies based on the interpreted results/diagnosis
- c) Gain experience in body fluid management
- d) Gain experience in diabetic and cardiac care
- e) Gain experience in anticoagulation management

Resident duties and training:

- a) Full-time commitment to the rotation
- b) First on-call duties
- c) Management of assigned patients in collaboration with a senior resident, fellow, or senior hospital staff
- d) Recording admission history and performing physical examination, participating in the diagnosis and comprehensive management of the patients assigned
- e) Participating in daily ward rounds and attending seminars and conferences as per the Medicine Department Schedule while rotating in the medicine service

Training evaluation and supervision are accomplished by the assigned program director of the Saudi Specialty Certificate of Medicine at the same hospital.

Anesthesia Rotation (17 Weeks):***Goals and objectives:***

- a) Function as an anesthesia resident with increasing levels of responsibilities, including receiving training in pre-anesthesia assessment, intubation and extubation techniques, pharmacology, drug administration and life parameters monitoring devices and equipment, resuscitative procedures, and postoperative assessment and management
- b) Evaluate and treat anesthesia emergencies through cardiopulmonary resuscitation (CPR), airway maintenance, and management of blood transfusion reactions
- c) Review basic pulmonary and cardiovascular physiology in dynamic situations
- d) Evaluate pharmacologic agents utilized in intravenous sedation management
- e) Develop competency in rapid sequence induction as well as standard induction and intubation techniques
- f) Develop practical skills in general and regional anesthetics including the use of ventilators for patient management
- g) Gain exposure to the management of both geriatric and pediatric patients in the normal course of anesthesia delivery at the training institution

Resident duties and training:

- a) After a suitable period of supervision determined by the anesthesia staff, takes on the responsibilities of an anesthesia resident
- b) Shares on-call duties on a regular basis with the other anesthesia residents
- c) Manages their own room and take on responsibility for preoperative patient evaluation and inter-operative management of patient general anesthetics
- d) Perform all routine work related to anesthesia, intravenous (IV) access, arterial line/triple lumen catheter (TLC), administering blood products, pain management, interpretation of chest x-ray, electrocardiogram (ECG) for anesthesia purposes.

Training evaluation and supervision is accomplished by the program director of the Saudi Specialty Certificate of Anesthesia at the rotating department of anesthesia.

Emergency Medicine (4 Weeks)***Goals and objectives:***

- a) Perform a focused emergency physical examination
- b) Diagnose and treat medical and surgical emergencies
- c) Exhibit skills in medical risk assessment
- d) Manage acutely ill patients in an emergency setting
- e) Manage a trauma patient
- f) Perform and interpret laboratory data and electrocardiograms

Resident duties and training:

- a) Full-time commitment to the rotation
- b) Taking shifts as assigned
- c) Management of medical complications, including acute asthma cases and diabetic ketoacidosis
- d) Perform and interpret chest x-ray and computed tomography (CT), medical resonance imaging (MRI) scan.

Training evaluation and supervision is accomplished by the program director of the Saudi Specialty Certificate of Emergency Medicine in the rotating hospital.

General Surgery (8 Weeks)***Goals and Objectives:***

- a) Function as a surgical resident with a commensurate level of responsibilities, including the diagnosis and treatment of surgical emergencies
- b) Gain experience in pre-operative evaluation of the surgery patient
- c) Gain experience in pre-operative, inter-operative, and post-operative patient care, including fluid and electrolyte status, pulmonary care, cardiovascular function, and wound care
- d) Gain experience in the application of surgical principles to wound care, wound healing, and wound infection
- e) Gain technical skills in the insertion of a central line, the insertion and utilization of chest tubes, and general surgical skills and techniques

Resident duties and training:

- a) Full-time commitment to the department of general surgery
- b) Functions as a member of the resident team and takes on the responsibilities of a general surgery resident
- c) Performs patient admission, records medical history, and carries out physical examination and assists in the management of critically-ill patients
- d) Plays a major role in the perioperative management of the team's patients, through participation in operating room activities, patient nutritional care, ventilator care, insertion and management of central lines and chest tubes, and pharmacology evaluation of administered agents
- e) Actively participate in the surgery department's activities, including the scheduled daily handover, conferences, lectures, and seminars

Training evaluation and supervision is accomplished by the general surgery program director of the Saudi Specialty Certificate of General Surgery at the rotation hospital.

Otolaryngology (4 Weeks)***Goals and Objectives:***

- a) Diagnosis and surgical treatment of benign and malignant lesions of the head and neck, paranasal sinuses, jaws, oral cavity, salivary glands, and neck dissections

- b) Perform fiber optic nasopharyngeal and hypopharyngeal examination
- c) Perform elective and emergency tracheostomies
- d) Manage epistaxis and airway emergency
- e) Perform head and neck examination
- f) Provide care to tracheostomy patients
- g) Interpret CT and MRI scans of the head and neck region

Resident duties and training:

- a) Full-time commitment to the rotation.
- b) Taking first on-call duties as an ENT resident, including patient admission and discharge.

Training evaluation and supervision is accomplished by the program director of the Saudi Specialty Certificate of ENT and Head and Neck at the same hospital.

Plastic Surgery (4 Weeks)

Goals and objectives:

- a) Management of soft tissue injuries of the oral and maxillofacial area
- b) Provide management of wound care and wound healing
- c) Provide management of head and neck trauma patients from a plastic surgeon's perspective
- d) Develop familiarity in the diagnosis and treatment of congenital lesions of the lips, palate, and nasal area
- e) Develop familiarity in re-anastomosis techniques
- f) Develop skills in management of extremity injury and microsurgical techniques
- g) Perform cosmetic and aesthetic surgery procedures in the maxillofacial region, including but not limited to rhinoplasty, blepharoplasty, rhytidectomy, genioplasty, lipectomy, otoplasty, and scar revisions
- h) Actively participate in outpatient clinic and inpatient procedures

Resident duties and training:

- a) Full-time commitment to the rotation.
- b) Take first on-call duties with the full responsibilities of a plastic surgery resident, directly report to the plastic surgery staff, and respond to needs in the emergency room and surgical intensive care units.
- c) Involved in patient workup and patient management during their hospital stay
- d) Participate in surgical procedures, including all types of skin grafts, free flap, and a variety of plastic surgery techniques

Training supervision and evaluation of end rotation is accomplished by the program director of the Saudi Specialty Certificate of Plastic Surgery at the rotating hospital.

Neurosurgery (4 Weeks)

Goals and objectives:

- a) Perform a neurological examination
- b) Perform early management of acute neurology injuries
- c) Evaluate conscious and unconscious patients and manage critically-ill patients within the neurosurgical ICU
- d) Read and interpret cervical spine fluid measurements, CT scan, MRI, and angiography and diagnose intra-cranial lesions
- e) Perform coronal flaps

Resident duties and training:

- a) Full-time commitment to the rotation
- b) Taking first on-call and functions as a junior neurosurgery resident
- c) Evaluate and treat intracranial hemorrhage (subarachnoid, epidural, subdural, and hypertensive)
- d) Provide care to intubated, comatose patients, and participate in nutrition under the supervision of the neurosurgery staff

Training supervision and evaluation of end rotation is accomplished by the program director of Saudi Specialty Certificate of Neurosurgery at the rotating hospital.

ICU Rotation (4 Weeks):**Goals and objectives:**

- a) Manage complex post-surgical care patients
- b) Develop skills in insertion of central venous access lines
- c) Participate in lung ventilator management
- d) Gain experience in management of the acutely-ill patient

Resident duties and training:

- a) Function as a junior surgery resident
- b) Assume a significant level of responsibility in the surgical ICU, including patient management under the supervision of the surgery staff

Training supervision and evaluation of end rotation is accomplished by the program director of Saudi Specialty Certificate of ICU at the rotating hospital.

2.1.3 Third Year (43 Weeks Rotation) Junior Level Goals and Objectives

- a) Evaluate and manage preoperative patients with a broad range of surgical problems
- b) Develop a basic understanding of the pathophysiology and natural history of surgical diseases and familiarity with basic operating room procedures
- c) Manage patients with various medical and surgical problems, especially as they pertain to OMS treatment and perform the following procedures, under direct supervision:
 - All R1 procedures
 - Pre-prosthetic surgery: Ridge reconstruction
 - Mandibular fracture open reduction and fixation with plate and screws
 - Maxillary fracture open reduction and fixation with plate and screws
 - Dental implant
 - Tracheostomy
 - Removal of salivary duct calculi
 - Genioplasty

2.2 Senior level competencies:**2.2.1 Fourth Year (Senior Resident 52 Weeks) Goals and Objectives**

- a) Evaluate and manage patients with a broad range of surgical problems from the preoperative to the postoperative phases of illness
- b) Manage surgical patients and perform procedures under direct or indirect supervision:
 - All R1 and R3 procedures
 - Extra-oral reduction and fixation of facial bone fractures
 - Excision of benign tumors in mandible and/or maxilla
 - Skin grafts

- Harvesting bone graft or cartilage
 - Noninvasive temporomandibular joint disorder (TMJ) cases excluding surgery
 - Orthognathic surgery (including the maxilla, mandible, and chin)
 - Cleft palate and alveolar bone graft
 - Distraction osteogenesis
- c) Teach the principles of patient management to junior residents.
 - d) Develop a comprehensive knowledge of surgical diseases and appropriately apply this knowledge to the clinical situation
 - e) Obtain informed consent from patients (this includes explaining the procedures to be performed as well as all the alternatives and potential risks and benefits)
 - f) Gain a working knowledge of other surgical subspecialties and the ability to supervise and directly manage the care of critically-ill or injured patients
 - g) Develop familiarity with the current surgical literature

2.2.2 Fifth Year (52 Weeks Rotation) Senior and Chief Resident in Rotating Hospital, Goals and Objectives

- a) Evaluate and manage patients with a broad range of surgical problems from the preoperative to postoperative phases of illness
- b) Manage surgical patients and perform procedures under indirect supervision as possible:
 - All R1, R3, and R4 procedures
 - Temporomandibular joint (TMJ) surgery: condylar excision, fixation, and reconstruction
 - Upper or lower jaw resection
 - Maxillofacial pathology, benign and malignant tumors
 - Excision of salivary glands
 - Assist in micro-vascular anastomosis for free flaps of head and neck
 - Cleft lip or palate repair and alveolar bone graft
 - Assist in rhinoplasty procedures
- c) Teach principles of patient management to junior residents
- d) Develop a comprehensive knowledge of surgical diseases and an appropriate application of this knowledge to the clinical situation
- e) Gain a working knowledge of other surgical subspecialties and the ability to supervise and directly manage the care of critically-ill or injured patients
- f) Demonstrate technical skills, clinical judgment, and a firm grasp of the surgical knowledge deemed appropriate for the independent practice of OMS
- g) Have the level of knowledge and technical skills necessary to successfully pass the OMS Examination.
- h) Develop familiarity with the current literature in the field of surgery

2.3 Continuum of Learning

Residents in training will see patients with a wide variety of conditions in the training centers. As OMS residents progress from the Junior to Senior level, they will have increasing responsibility in the management of patients within the organizational structure of the OMS Program, culminating in the role of administrative chief resident.

3. Academic Teaching

3.1 General Principles

Teaching in the OMS program follows a structured curriculum while fostering responsibility for self-directed learning.

Every week, residents from all accredited training centers will gather in a predetermined venue for 4 hours of planned formal training and teaching activities with an assigned tutor. Such formal teaching excludes direct patient care activities such as bedside teaching and clinical posting.

The Core Education Program (CEP) includes three formal teaching and learning activities:

- a) General topics: 20%
- b) Core OMS topics: 50%
- c) Trainee-selected topics: 30%

The CEP will be supplemented by practice-based learning (PBL) including:

- a) Morning reports and case presentations
- b) Morbidity and mortality reviews
- c) Journal clubs
- d) Systematic reviews
- e) Hospital grand rounds
- f) Hospitals CMEs

Residents will also meet with the Program Director every two weeks for a review of their clinical portfolio, mini-CEX, etc.

3.2-Common Subjects

These modules cover high-value, interdisciplinary subjects of outmost importance to the trainee. The reason for delivering such courses centrally is to ensure that every trainee will receive high-quality teaching and develop essential core knowledge. These topics are common to all specialties and meet one or more of the following criteria:

- 1-Impactful: subjects that are common occurrence or life-threatening
- 2-Interdisciplinary: subjects that are difficult to teach by a single discipline
- 3-Orphan: subjects that are poorly represented in the undergraduate curriculum
- 4-Practical: subjects that trainees will encounter in hospital practice

Development and Delivery:

Common subjects in the OMS Curriculum will be developed by the Commission and delivered centrally through an E-learning platform. A set of preliminary learning outcomes will be developed for each topic and may be subsequently modified by content experts, in collaboration with the central docent team.

These subjects will be didactic in nature with a focus on practical aspects of patient care. The modules will rely on more teaching content as compared to workshops and other face-to-face interactive sessions. The suggested duration for each module is 1.30 hours.

Assessment: The teaching subjects will be delivered in a modular fashion. An online formative assessment will be carried out at the end of each Learning Unit. After online completion of all modules, there will be a combined summative assessment in the form of a context-rich multiple-choice questionnaire (MCQ). All trainees must attain minimum competency in the summative assessment. Alternatively, these topics can be assessed in a summative manner along with specialty examination.

3.3 Core Specialty Subjects

Subjects
3.3.1 Dentoalveolar surgery
3.3.2 Maxillofacial space infections
3.3.3 Maxillofacial trauma
3.3.4 Oral and maxillofacial pathology
3.3.5 Dentofacial deformities
3.3.6 Craniofacial anomalies
3.3.7 Local and general anesthesia
3.3.8 Temporomandibular joint disorders/Facial pain
3.3.9 Principles of surgery and dental office emergencies
3.3.10 Pre-prosthetic surgery and implants
3.3.11 Facial cosmetic

3.3.1 Dentoalveolar Surgery

List of lectures:

- 1) Pediatric dentoalveolar surgery
- 2) Basic and complex exodontia and surgical management of impacted teeth
- 3) Complications of dentoalveolar surgery
- 4) Skeletal anchorage for orthodontics
- 5) Laser in OMS
- 6) Treatment of trigeminal nerve injury

Objectives:

- 1) Develop familiarity with basic and complex exodontia and surgical management of impacted teeth, intra-oral incisions and flaps, and principles of suturing techniques
- 2) Recognize and manage complications of dentoalveolar surgery
- 3) Develop an understanding of skeletal anchorage for orthodontics
- 4) Discuss the principles and techniques for pediatric dentoalveolar surgery
- 5) Diagnose and manage the trigeminal nerve injuries

3.3.2 Maxillofacial space infections

List of lectures:

- 1) Diagnosis of maxillofacial infections
- 2) Supportive care of maxillofacial infection patients
- 3) Microbiology of maxillofacial infections
- 4) Surgical anatomy and considerations for the OMS region
- 5) Pharmacology and antibiotic treatments for maxillofacial infection patients
- 6) Comprehensive care for maxillofacial infection patients
- 7) Disease complications and their management

Objectives:

- 1) Recognize and diagnose the different types of head and neck infection
- 2) Identify the anatomy of head and neck regions and their classification
- 3) Gain familiarity with pathophysiology and microbiology of infection
- 4) Gain familiarity with supportive care of patients with maxillofacial infections

- 5) Gain familiarity with treatment modalities for maxillofacial infections
- 6) Identify and manage complications of maxillofacial infections
- 7) Gain familiarity with empirical and therapeutic antibiotics dosage, indications, contraindications, and complications
- 8) Gain familiarity with diagnostic aids, including cell culture and antibiotics sensitivity tests, diagnostic images, and lab investigations as required.

3.3.3 Maxillofacial trauma (MFT)

List of lectures:

- 1) Perioperative assessment and management of trauma patients
- 2) Healing of trauma injuries
- 3) Airway emergencies and management of trauma patients
- 4) Use of diagnostic images
- 5) Cases that require immediate or delayed surgical intervention
- 6) Surgical approach and anatomy for MFT cases
- 7) Related ophthalmic, neurological, and endocrine injuries and required interventions
- 8) Principles of MFT management and surgeries
- 9) Early detection of MFT complications, diagnosis, and management
- 10) Secondary deformity of MFT correction
- 11) Rehabilitation of MFT patients
- 12) Maxillofacial gunshot and penetrating injuries

Objectives:

- 1) Become familiar with the common causes and epidemiology of MFT
- 2) Be competent in multidisciplinary team trauma care
- 3) Become familiar with the early management of MFT patients, in particular with the Advanced Trauma Life Support Protocol including supportive care, lifesaving, and airway management competencies
- 4) Become familiar with the physical examination of the MF skeleton
- 5) Master the requisition procedure and the reading of diagnostic imaging modalities including facial series, CT scans, and MRI images for MFT patients
- 6) Be proficient in anatomy and surgical approaches for MFT management
- 7) Become familiar with treatment modalities for the facial skeleton, its indications, contraindications, and the pros and cons of each approach
- 8) Become familiar with postoperative care for MFT patients, including their rehabilitation needs
- 9) Identify early and late complications with competency in their diagnosis and management

3.3.4 Oral and Maxillofacial Pathology:

List of lectures:

- 1) Principles of biopsy techniques
- 2) Cysts in the MF region
- 3) Benign odontogenic tumors
- 4) Malignant odontogenic tumors
- 5) Salivary gland diseases
- 6) Medication-related osteonecrosis of the jaw
- 7) Langerhans cell histiocytosis
- 8) Vascular lesions and anomalies of the head and neck
- 9) Benign non-odontogenic tumors
- 10) Malignant non-odontogenic tumors
- 11) Carcinoma of the MF region

- 12) Sarcoma of the MF region
- 13) Skin cancer and melanomas
- 14) Lymphoma
- 15) Principles of radiotherapy and chemotherapy in head and neck cancer

Objectives:

- 1) Become familiar with the proper diagnostic approach for MF pathology cases
- 2) Be able to give five differential diagnoses for each clinical and radiographic presentation of a disease.
- 3) Be able to properly utilize diagnostic images from biopsies and laboratory investigations
- 4) Establish a clear and correct treatment plan and effective communication with the patient
- 5) Be able to explain the possible outcomes and prognosis to the patient in an evidence-based medicine approach

3.3.5 Dentofacial Deformities:

List of Lectures:

- 1) Evaluation of the face
- 2) Model surgery and pre-surgical orthodontics
- 3) Revascularization and healing of orthognathic surgical procedures
- 4) Physiological consequences of orthognathic surgery
- 5) Psychological aspects of orthognathic surgery
- 6) Model surgery
- 7) Surgical osteotomies for MF orthognathic malocclusion correction
- 8) Facial asymmetry: diagnosis and treatment
- 9) Soft-tissue changes and prediction of orthognathic surgery
- 10) Perioperative patient management
- 11) Postsurgical management
- 12) Complications of orthognathic surgery
- 13) Distraction osteogenesis

Objectives:

- 1) Become familiar with the embryology of the head and neck
- 2) Become familiar with the different types of dentofacial deformities (malocclusion and asymmetry) and associated signs and symptoms
- 3) Be able to develop adequate planning and pre-operative collaboration with other specialties, e.g. orthodontics
- 4) Become familiar with laboratory, model surgery, and radiological workup
- 5) Be able to develop an appropriate surgical plan for different cases
- 6) Become familiar with operative techniques and their indications
- 7) Become familiar with postoperative patient care
- 8) Identify possible complications and their management
- 9) Become familiar with soft-tissue changes and prediction of orthognathic surgery

3.3.6 Craniofacial Anomalies:

List of lectures:

- 1) Embryology and development of the head and neck and oral cavity
- 2) Growth and development of the head, face, and jaws
- 3) Multidisciplinary care of the facial cleft patient and pre-surgical orthopedic interventions
- 4) Cleft lip and palate: classification, management, surgeries
- 5) Syndromic craniosynostosis
- 6) Non-syndromic craniosynostosis

- 7) Revision surgeries of the cleft patient
- 8) Craniofacial surgery for pathology in pediatric patients
- 9) Distraction osteogenesis of the craniomaxillofacial skeleton
- 10) Cleft orthognathic surgery

Objectives:

- 1) Become familiar with appropriate approaches for the diagnosis and interventions for craniofacial anomalies
- 2) Become familiar with the role of OMS in the craniofacial team and the procedure he/she can offer and their timing
- 3) Become familiar with effective communication with the other specialties involved in the case
- 4) Apply an educator role towards patients and their families
- 5) Be able to reach a diagnosis and identify the related signs and symptoms and how these may affect or modify treatment

3.3.7 Anesthesia:

List of lectures:

- 1) Local anesthesia: definition, concepts, classification, types, modes of action, techniques, and complications management
- 2) Intravenous sedation and inhalation sedation: definition, concepts, indications, modes of action, techniques, pharmacology, and complications management
- 3) General anesthesia: definition, concepts, indications, pre-anesthesia evaluation, medications and pharmacology, special OMS anesthesia considerations (e.g. hypotensive anesthesia, submental intubation, etc.), techniques, perioperative complications and their management

Objectives:

- 1) Be competent in the physiology and neurophysiology of pain
- 2) Have knowledge of the pharmacology and metabolism of anesthesia (topical, local, and general anesthesia and sedation)
- 3) Have knowledge of the adequate dosage, indications, and contraindications related to different anesthesia modalities
- 4) Be able to identify the possible complications of the different anesthesia modalities and their adequate management

3.3.8 Temporomandibular Joint Disorders/Facial Pain:

List of lectures:

- 1) Anatomy and function of the TMJ
- 2) Examination and imaging of the TMJ
- 3) TMJ disorders and pathology
- 4) Arthrocentesis and arthroscopy of the TMJ
- 5) Surgeries for internal derangement of the TMJ
- 6) TMJ reconstruction
- 7) Evaluation, differential diagnosis, and management of chronic facial pain
- 8) TMJ muscle disorders: diagnosis and management
- 9) Neuropathic orofacial pain

Objectives:

- 1) Have good knowledge of TMJ embryology, anatomy, and possible diseases

- 2) Be familiar with the adequate requisition of the diagnostic images and laboratory investigations related to the case
- 3) Be competent in the medical management phases of TMJ dysfunctions
- 4) Be a patient advocate regarding the best treatment modalities and their possible outcomes
- 5) Have good knowledge of the physiology, pathology, and pharmacology of pain in the orofacial region

3.3.9 Principles of Surgery and Dental Office Emergencies:

List of Lectures:

- 1) Wound healing and repair, chronic wounds, growth factors, causes and management of keloids and hypertrophy scars
- 2) Patient evaluation, history taking, physical examination, ECG interpretation, laboratory tests and diagnostic imaging for OMS
- 3) Postoperative care, fluids and electrolytes management, nutrition support, and postoperative complications management for OMS
- 4) Management of medical emergencies in the OMS clinic

Objectives:

- 1) Have adequate knowledge of the main systems of the human and how to conduct a physical examination
- 2) Be familiar with the requisition and interpretation of diagnostic tests such as chest X-rays and ECGs
- 3) Have adequate knowledge of the possible complications of surgery and dental procedures and their proper management

In addition, infection and trauma (with or without associated facial lacerations) are the most frequent oral and maxillofacial cases encountered in the emergency room.

Oral and maxillofacial infections

Oral and maxillofacial (OMF) infections can present with life-threatening complications, such as airway obstruction, mediastinal spread (mediastinitis), pulmonary aspiration of pus (through spontaneous or iatrogenic rupture during intubation attempts), and cavernous sinus thrombosis, all of which increase morbidity and mortality.

Hematogenous spread of infection can lead to thrombophlebitis, bacteremia, prosthetic valve or joint involvement, and systemic sepsis. The spread of infection is affected by compromised host defenses, which can be caused by other existing conditions, including diabetes mellitus, malignancy, or immunosuppression.

The resident should become competent in the following:

1. Recognizing and diagnosing the different types of head and neck space infection
2. Identification and classification of the anatomy of the head and neck spaces
3. Knowledge of the pathophysiology and microbiology of infection
4. Supportive care of patients with OMF infections
5. Knowledge of the treatment modalities for OMF infections
6. Identifying and managing complications of OMF infections
7. Empiric and therapeutic antibiotic therapy: dosage, indications, contraindications, and complications
8. Use of diagnostic aids: culture and sensitivity, diagnostic imaging, and lab investigations

The OMF regions are exposed externally and therefore carry a high risk of trauma. The types of OMF trauma are classified into the following categories:

- 1) Facial bone fractures
- 2) Dentoalveolar trauma
- 3) OMF soft tissue injuries

OMF trauma can cause not only esthetic and functional problems, but also psychological issues in patients. OMF injuries can be life-threatening if they compromise the airway and/or cause significant blood loss.

The resident should thus become competent in the following:

9. Perioperative assessment and management of OMF trauma patients (ATLS protocols).
10. Airway emergencies and management of OMF trauma patients
11. Utilization of the required diagnostic imaging
12. Identification of cases that require immediate surgical intervention vs. cases in which treatment can be delayed
13. The principles of OMF trauma management and surgeries
14. The surgical anatomy and approach for OMF access in trauma cases
15. Identification of ophthalmic, neurological, and endocrine system injuries related to OMF trauma and the required interventions
16. The healing process of OMF trauma injuries
17. Early detection of OMF trauma complications, diagnosis, and management
18. Secondary OMF trauma correction
19. Rehabilitation of OMF trauma patients
20. Gunshot and penetrating injuries in the OMF regions

3.3.10 Pre-Prosthetic Surgery and Dental Implantology:

List of lectures:

- 1) Pharmacology for implant dentistry
- 2) Autogenous bone grafting principles and techniques
- 3) Guided tissue regeneration (GTR) in implant dentistry and management of localized bone defect
- 4) Sinus-lift indications and surgery
- 5) Peri-implant soft-tissue surgery
- 6) Zygoma implant
- 7) Plasma rich protein (PRP), PMB, osseointegration, osseosynthesis, and osteogenesis
- 8) Socket implants (immediate implants) and immediate loading
- 9) Radiology for implants
- 10) Mini-implants and transitional implants
- 11) Pre-prosthetic surgery: types, indications, and techniques

Objectives:

- 1-Develop an understanding of the principles underlying dental implantology indications, contraindications, and surgery and complications management
- 2-Have adequate knowledge of the prosthetic basis and needs of the patient
- 3- Have adequate communication skills for collaboration with other specialties related to implant and prosthetic dentistry
- 4-Be competent in diagnosing the dental status and formulating the dental pre-prosthetic and implant plan for the patient
- 5-Be familiar with the requisition and interpretation of diagnostic images such as plain dental x-rays and cone beam CT scans

6-Be competent in different techniques for bone grafting and reconstruction of the dentoalveolar bone prior implants, with knowledge of possible complications and their management

3.3.11 Facial Cosmetics:

List of lectures:

- 1) Face lift (Rhytidectomy)
- 2) Laser skin resurfacing
- 3) Blepharoplasty
- 4) Liposuction and fat transfer
- 5) Hair transplantation
- 6) Facial chemical peels, Botox, and skin enhancement
- 7) Facial implants in cosmetic surgery
- 8) Injectable fillers in facial cosmetic surgery

Objectives:

- 1) Have appropriate knowledge for the diagnosis of the patient cosmetic needs and their adequate management
- 2) Have knowledge of the different cosmetic treatment modalities and their indications, contraindications, and possible complications
- 3) Be able to have the proper patient and recommended treatment selection
- 4) Be able to identify osseous versus soft-tissue cosmetic problems
- 5) Be able to adequately identify complications and their management
- 6) Be able to anticipate the needs and expectations of patients and manage them professionally

3.4 Trainee-Selected Topics

3.4.1 Module 1: Introduction, postgraduate year (PGY) 1

Hospital-Acquired Infections (HAIs): At the end of this Learning Unit, you should be able to:

- 1) Discuss the epidemiology of HAI with special reference to HAI in Saudi Arabia
- 2) Recognize HAI as one of the major emerging threats in healthcare
- 3) Identify the common sources and set-ups of HAI
- 4) Describe the risk factors of common HAIs such as ventilator associated pneumonia, Methicillin resistance *Staphylococcus aureus* (MRSA), central line-associated bloodstream infection (CLABSI), and Vancomycin resistant *Enterococcus* (VRE)
- 5) Identify the role of healthcare workers in the prevention of HAI
- 6) Determine appropriate pharmacological (e.g., selected antibiotic) and non-pharmacological (e.g., removal of indwelling catheter) measures in the treatment of HAI
- 7) Propose a plan to prevent HAI in the workplace

Antibiotic Stewardship: At the end of this Learning Unit, you should be able to:

- 1) Recognize antibiotic resistance as one of the most pressing public health threats globally
- 2) Describe the mechanism of antibiotic resistance
- 3) Determine the appropriate and inappropriate use of antibiotics
- 4) Develop a plan for safe and proper antibiotic usage plan including correct indications, duration, types of antibiotic, and discontinuation
- 5) Appraise the local guidelines in the prevention of antibiotic resistance

Safe drug prescribing: At the end of this Learning Unit, you should be able to:

- a) Recognize the importance of safe drug prescribing in the healthcare

- b) Describe adverse drug reactions and the common drugs that elicit them
- c) Apply the principles of drug-drug interactions, drug-disease interactions, and drug-food interactions in common clinical situations
- d) Apply the principles of prescribing drugs in special situations such as renal failure and liver failure
- e) Apply the principles of prescribing drugs in the elderly, diverse age-group patients, and pregnancy and lactation
- f) Promote cost-effective prescribing
- g) Discuss the ethical and legal framework governing safe-drug prescribing in Saudi Arabia

Blood Transfusion: At the end of this Learning Unit, you should be able to:

- a) Review the different components of blood products available for transfusion
- b) Recognize the indications and contraindications of blood product transfusion
- c) Discuss the benefits, risks, and alternatives to transfusion
- d) Obtain patient consent for a specific blood product transfusion
- e) Perform all the steps necessary for safe transfusion
- f) Develop an understanding of the special procedures and precautions necessary during massive transfusions
- g) Recognize transfusion-associated reactions and provide immediate clinical management

Sepsis, Systemic inflammatory response syndrome (SIRS), Disseminated intravascular coagulopathy (DIVC): At the end of the Learning Unit, you should be able to:

- a) Explain the pathogenesis of sepsis, SIRS, and DIVC
- b) Identify patient-related and non-patient related predisposing factors of sepsis, SIRS, and DIVC
- c) Recognize a patient at risk of developing sepsis, SIRS, and DIVC
- d) Describe the complications of sepsis, SIRS, and DIVC
- e) Apply the principles of management of patients with sepsis, SIRS, and DIVC
- f) Describe the prognosis of sepsis, SIRS, and DIVC

3.4.2 Module 2: Diabetes and Metabolic Disorders, PGY 2

Recognition and Management of Diabetic Emergencies: At the end of this Learning Unit, the resident should be able to:

- 1) Describe the pathogenesis of common diabetic emergencies including their complications
- 2) Identify risk factors and groups of patients vulnerable to such emergencies
- 3) Recognize a patient presenting with diabetic emergencies
- 4) Initiate immediate patient management
- 5) Refer the patient to the appropriate next level of care
- 6) Counsel patients and their families to prevent such emergencies

Management of Diabetic Complications: At the end of this Learning Unit, the resident should be able to:

- 1) Describe the pathogenesis of important complications of Type 2 diabetes mellitus
- 2) Screen patients for such complications
- 3) Provide preventive measures for such complications
- 4) Treat such complications
- 5) Counsel patients and their families with special emphasis on prevention

Comorbidities of Obesity: At the end of this Learning Unit, the resident should be able to:

- 1) Screen patients for presence of common and important comorbidities of obesity
- 2) Manage obesity-related comorbidities

- 3) Provide dietary and lifestyle advice for prevention and management of obesity

Abnormal ECG: At the end of this Learning Unit, the resident should be able to:

- 1) Recognize common and important ECG abnormalities
- 2) Initiate immediate patient management, if necessary

3.4.3 Module 3: Acute Care, PGY 3

Pre-Operative Assessment: At the end of this Learning Unit, the resident should be able to:

- 1) Describe the basic principles of preoperative assessment
- 2) Perform preoperative assessment in uncomplicated patients with special emphasis on
 - a) General health assessment
 - b) Cardiorespiratory assessment
 - c) Medications and medical device assessment
 - d) Drug allergy
 - e) Pain relief needs
- 3) Categorize patients according to risks

Postoperative Care: At the end of this Learning Unit, the resident should be able to:

- 1) Devise a postoperative care plan including monitoring of vitals, pain management, fluid management, medications, and laboratory investigations
- 2) Refer the patients to appropriate facilities
- 3) Describe the process of patient postoperative recovery
- 4) Identify common postoperative complications
- 5) Monitor patients for possible postoperative complications
- 6) Initiate immediate patient management for postoperative complications

Acute Pain Management: At the end of this Learning Unit, the resident should be able to:

- 1) Review the physiological basis of pain perception
- 2) Proactively identify patients who might be in acute pain
- 3) Assess a patient with acute pain
- 4) Apply various pharmacological and non-pharmacological modalities available for acute pain management
- 5) Provide adequate pain relief for uncomplicated patients with acute pain
- 6) Identify and refer patients with acute pain who can be benefited from specialized pain services

Chronic Pain Management: At the end of this Learning Unit, the resident should be able to:

- 1) Review bio-psychosocial and physiological basis of chronic pain perception
- 2) Discuss various pharmacological and non-pharmacological options available for chronic pain management
- 3) Provide adequate pain relief for uncomplicated patients with chronic pain
- 4) Identify and refer patients with chronic pain who can be benefited from specialized pain services

Management of Fluid in Hospitalized Patients: At the end of this Learning Unit, the resident should be able to:

- 1) Review physiological basis of water balance in the body
- 2) Assess a patient for his/her hydration status
- 3) Recognize a patient with over- and underhydration
- 4) Order fluid therapy (oral as well as intravenous) for a hospitalized patient

- 5) Monitor fluid status and response to therapy through history, physical examination, and selected laboratory investigations

Management of Electrolyte Imbalances: At the end of this Learning Unit, the resident should be able to:

- 1) Review physiological basis of electrolyte and acid-base balance in the body
- 2) Identify diseases and conditions that are likely to cause or be associated with acid/base and electrolyte imbalances
- 3) Correct electrolyte and acid-base imbalances
- 4) Perform careful calculations, checks, and other safety measures while correcting acid-base and electrolyte imbalances
- 5) Monitor response to therapy through history, physical examination and selected laboratory investigations

3.4.4 Module 4: Cancer, PGY 4

Principles of Cancer: At the end of this Learning Unit, you should be able to:

- 1) Discuss the basic principles of the staging and grading of cancers
- 2) Enumerate the basic principles (e.g., indications, mechanisms, and types) of cancer surgery
 - a) Chemotherapy
 - b) Radiotherapy
 - c) Immunotherapy
 - d) Hormone therapy

Side-Effects of Chemotherapy and Radiation Therapy: At the end of this Learning Unit, you should be able to:

- 1) Describe important side-effects of common chemotherapy drugs
- 2) Explain the principles of side-effect monitoring in a patient undergoing chemotherapy
- 3) Describe measures (pharmacological and non-pharmacological) available to ameliorate side-effects of chemotherapy drugs
- 4) Describe important (e.g., common and life-threatening) side-effects of radiation therapy
- 5) Describe measures (pharmacological and non-pharmacological) available to ameliorate side-effects of radiotherapy

Oncologic Emergencies: At the end of this Learning Unit, you should be able to:

- 1) Enumerate important oncologic emergencies encountered both in hospital and ambulatory settings
- 2) Discuss the pathogenesis of important oncologic emergencies
- 3) Recognize oncologic emergencies
- 4) Implement immediate measures when treating a patient with oncologic emergencies
- 5) Counsel patients in an anticipatory manner to recognize and prevent oncologic emergencies

Cancer Prevention: At the end of this Learning Unit, you should be able to:

- 1) Conclude that many major cancers are preventable
- 2) Identify smoking prevention and life-style modifications as major preventable measures
- 3) Recognize cancers that are preventable
- 4) Discuss the major cancer prevention strategies at the individual as well as national level
- 5) Counsel patients and their families in proactive cancer prevention including screening

Surveillance and Follow-Up of Cancer Patients: At the end of this Learning Unit, you should be able to:

- 1) Describe the principles of surveillance and follow-up of patients with cancer
- 2) Enumerate the surveillance and follow-up plans for common forms of cancer
- 3) Describe the role of primary care physicians, family physicians, and similar professionals in the surveillance and follow-up of cancer patients
- 4) Liaise with oncologists to provide surveillance and follow-up for patients with cancer

3.4.5 Module 5: Frail elderly patients, PGY 5

Assessment of Frail Elderly Patients: At this Learning Unit, the resident should be able to:

- 1) Enumerate the differences and similarities between the comprehensive assessment of the elderly and other patients
- 2) Perform a comprehensive assessment, in collaboration with other members in the healthcare team, of a frail elderly with special emphasis on social factors, functional status, quality of life, diet and nutrition, and medication history
- 3) Develop a problem list based on the assessment of the elderly

Mini-Mental State Examination (mini-MSE): At the end of this Learning Unit, the resident should be able to:

- 1) Review the appropriate usages, advantages, and potential pitfalls of mini-MSE
- 2) Identify patients suitable for mini-MSE
- 3) Screen patients for cognitive impairment through mini-MSE

Prescribing Drugs in the Elderly: At the end of this Learning Unit, the resident should be able to:

- 1) Discuss the principles of prescribing in the elderly
- 2) Recognize polypharmacy, prescribing cascade, inappropriate dosages, inappropriate drugs, and deliberate drug exclusion as major causes of morbidity in the elderly
- 3) Describe the physiological and functional declines in the elderly that contribute to increased drug-related adverse events
- 4) Discuss drug-drug interactions and drug-disease interactions among the elderly
- 5) Be familiar with Beers criteria
- 6) Develop rational prescribing habits for the elderly
- 7) Counsel elderly patients and their family on safe medication usage

Care of the Elderly: At the end of this Learning Unit, the resident should be able to:

- 1) Describe the factors that need to be considered while planning care for the elderly
- 2) Recognize the needs of caregivers and threats to their wellbeing
- 3) Identify the local and community resources available for the care of the elderly
- 4) Develop, with inputs from other healthcare professionals, individualized care plans for elderly patients

3.4.6 Module 6: Ethics and Healthcare, PGY 5

Occupation Hazards of Healthcare Workers (HCW): At the end of this Learning Unit, the resident should be able to:

- 1) Recognize common sources and risk factors of occupational hazards among HCW
- 2) Describe common occupational hazards in the workplace
- 3) Develop familiarity with legal and regulatory frameworks governing occupational hazards among HCW

- 4) Develop a proactive attitude to promote workplace safety
- 5) Protect him/herself and their colleagues against potential occupational hazards

Evidence Based Approach to Smoking Cessation: At the end of this Learning Unit, the resident should be able to:

- 1) Describe the epidemiology of smoking and tobacco usages in Saudi Arabia
- 2) Review the effects of smoking on the smoker and family members
- 3) Effectively use pharmacologic and non-pharmacologic measures to treat tobacco usage and dependence among patients
- 4) Effectively use pharmacologic and non-pharmacologic measures to treat tobacco usage and dependence among special population groups such as pregnant women, adolescents, and patients with psychiatric disorders

Patient Advocacy: At the end of this Learning Unit, the resident should be able to:

- 1) Define patient advocacy
- 2) Recognize patient advocacy as a core value governing medical practice
- 3) Describe the role of patient advocates in patient care
- 4) Develop a positive attitude towards patient advocacy
- 5) Be a patient advocate in conflicting situations
- 6) Be familiar with local and national patient advocacy groups

Ethical issues: Transplantation/organ harvesting and withdrawal of care: At the end of this Learning Unit, the resident should be able to:

- 1) Apply key ethical and religious principles governing organ transplantation and withdrawal of care
- 2) Be familiar with the legal and regulatory guidelines regarding organ transplantation and withdrawal of care
- 3) Counsel patients and families in the light of applicable ethical and religious principles
- 4) Guide patients and families to make informed decisions

Ethical issues: Treatment refusal and Patient Autonomy: At the end of this Learning Unit, the resident should be able to:

- 1) Predict situations where a patient or his/her family is likely to decline prescribed treatment
- 2) Describe the concept of 'rational adult' in the context of patient autonomy and treatment refusal
- 3) Analyze key ethical, moral, and regulatory dilemmas in treatment refusal
- 4) Recognize the importance of patient autonomy
- 5) Counsel the patients and families declining medical treatment in the light of the best interest of the patient

Role of Doctors in Death and Dying: At the end of this Learning Unit, the resident should be able to:

- 1) Recognize the important role a doctor can play during a dying process
- 2) Provide emotional as well as physical care to a dying patient and their family
- 3) Provide appropriate pain management to a dying patient
- 4) Identify suitable patients for referral to palliative care services

3.5 Learning Outcomes and Clinical Competencies for Junior and Senior residents

3.6.3.5.1 Goals

A resident is expected to become a competent OMS capable of assuming a consultant's role in his or her specialty.

The resident must acquire a working knowledge of the theoretical basis of the specialty, including its foundations in the basic medical sciences and underlying research.

An OMS resident must understand normal function, normal development and embryology, biochemistry and pharmacology, physiology, anatomy, gross and microscopic pathology and the pathological processes and diseases that affect the oral cavity, nose, para-nasal sinuses, the upper aerodigestive tract, and the neck and structures within it.

3.6.3.5.2 Competencies

Medical Expert	Communicator	Collaborator	Manager	Health Advocate	Scholar	Professional
Function effectively with increasing levels of responsibility according to their year of training. This must integrate all of the CanMEDS roles to provide optimal, ethical, and patient-centered medical care. Establish and maintain clinical knowledge, skills, and attitudes	Develop rapport, trust, and ethical therapeutic relationships with patients and their families. Accurately elicit and synthesize relevant information and perspectives of patients and their families, colleagues, and other professionals.	Participate effectively and appropriately in an inter-professional health care team. Work with other health professionals effectively to prevent, negotiate, and resolve inter-professional conflict.	Participate in activities that contribute to the healthcare organization and career systems. Allocate finite health care resources appropriately. Serve in administration and leadership roles.	Respond to individual patient health needs and issues as part of patient care. Identify the determinants of health for the populations and communities that they serve. Identify the determinants of	Maintain and enhance professional activities through ongoing learning. Critically evaluate medical information and apply this appropriately to practice decisions. Facilitate the learning of	Demonstrate a commitment to their patients, profession, and society through ethical practice. Demonstrate a commitment to their patients, other professionals, and society through participation in profession-led regulations.

<p>appropriate to OMS. ----- Perform a complete and appropriate assessment of a patient. ----- Use preventive and therapeutic interventions effectively. ----- ----- Appropriately use and interpret diagnostic tests relevant to OMS.</p>	<p>Convey relevant information and explanations accurately to patients and their families, colleagues, and other professionals. ----- Develop a common understanding on issues, problems, and plans with patients, their families, and other professionals to develop a shared plan of care. ----- Convey effective oral and written information about a medical encounter.</p>		<p>health for the populations that they serve ----- Promote the health of individual patients, communities, and populations.</p>	<p>patients, their families, students, residents, other health professionals, the public, and other stakeholders. ----- Contribute to the development, dissemination, and translation of new knowledge and practices. ----- Start at least one research project under the mentorship of an attending OMS to be presented at a national or international scientific event or submitted for publication.</p>	<p>Demonstrate a commitment to physician health and sustainable practice.</p>
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3.6 Weekly academic schedule

Topics	Comments

Example of a recommended weekly schedule of formal educational activities:

Day	8-9 am	1-2 pm	1-5 pm
Sun	Morning report/case presentation		
Mon		Meeting with mentor/ mini-CEX (bimonthly)	
Tue			
Wed			
Thu			CEP/ workshops

IV. LEARNING ASSESSMENTS

1. Purpose of Learning Assessments

The assessments during the training are meant to:

- Support learning
- Monitor progression
- Foster professional growth
- Evaluate and certify the competencies of new professionals
- Evaluate the quality of the training program

Continuous evaluation and assessment are performed throughout the program in accordance with the Commission's training and examination rules and regulations.

2. Formative Assessment

2.1 General Principles

- Evaluation should be based on the holistic profiling of a trainee rather than on individual traits or single measure instruments
- Trainee and faculty must hold regular meetings to review the performance of the resident
- Assessment should be based on the curriculum and its content

2.2 Annual Promotion Tools

Assessment for promotion is conducted towards the end of each training year. Trainees and trainers are required to follow the guidelines of the OMS scientific council for any adjustment on the assessment tools. The following table describes assessment tools in relation to the training level and learning focus (at the time of preparing this curriculum).

Learning focus	Assessment Formats R1, R3, and R4	Assessment Formats R2	Assessment Formats R5
Knowledge	Specific Academic Assignments	Structured Oral Exam (SOE)	Specific Academic Assignments
	End-of-Year Progress Test	End-of-Year Progress Test	Case-based discussions (CBD)
	Structured Oral Exam (SOE)		
Skills	Objective Structured Clinical Examination (OSCE)	Objective Structured Clinical Examination (OSCE)	Logbook
	Direct Observation of Procedural Skills (DOPS)		Direct Observation of Procedural Skills (DOPS)

Attitude	In-Training Evaluation Reports (ITERS)	In-Training Evaluation Reports (ITERS)	In-Training Evaluation Reports (ITERS)
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In-Training Evaluation Report (ITER):

ITER is a comprehensive assessment tool applied at the end of each rotation. The main aim of ITER is to evaluate trainee's performance in relation to CanMeds roles, with more emphasis on formative constructive feedback.

The CanMEDS-based competencies evaluation form must be completed within two weeks following the end of each rotation (preferably in an electronic format) and signed by at least two consultants. The program director will discuss the evaluation with the resident, as necessary. The evaluation form will be submitted to the Supervisory Committee of the SCFHS within four weeks following the end of the rotation.

End-of-Year Progress Test

End-of-year examinations will be limited to R1, R2, R3, and R4 residency years. The number of exam items, eligibility, and passing scores will be in accordance with the Commission's training and examination rules and regulations. Examination details and blueprints are published on the Commission's website www.scfhs.org.sa

Specific Academic Tasks

The academic and clinical assignments should be documented by an electronic tracking system (when applicable) on an annual basis. Trainees and trainers are required to refer to the OMS Scientific Council guidelines for further descriptions of academic assignment requirements.

Logbook and Direct Observation of Procedural Skills (DOPS)

Attainment of the minimum requirements for OMS clinical skills and procedures as determined by the program is an integral part of resident evaluations and annual promotion. Timely and specific feedback after each clinical procedure is mandatory to help the trainee improve on his/her diagnostic and therapeutic procedural skills.

A logbook will be used to keep track on procedure numbers, whereas DOPS will be used to provide constructive feedback to trainees on their performance. Trainees and trainers are required to follow the OMS Scientific Council guidelines for further descriptions of the Logbook and DOPS.

3. Summative Assessment

A summative assessment describes the composite performance of the development of a learner at a particular point in time and is used to inform judgment and make decisions about the level of learning achieved and resulting certification.

3.1 Certification of Training Completion

In order to be eligible to sit for final specialty examinations, each trainee is required to obtain a Certification of Training Completion. The Certification will be granted upon fulfillment of the following criteria:

- a. Successful completion of all training rotations and passing Part 1 exam.
- b. Completion of training requirements as outlined by the Scientific Council/Committee of the specialty, including logbook, research, etc.
- c. Clearance from SCFHS training affairs to ensure compliance with training tuitions and completion of common subject courses.

Certification of Training Completion will be issued and approved by the supervisory committee or equivalent according to SCFHS policies.

3.2 First-Part Examination

This exam is conducted in the form of a written examination with an MCQ format and held in the second year of training. The number of exam items, eligibility, and passing score will be in accordance with the Commission's training and examination rules and regulations. Examination details and blueprints are published on the Commission's website www.scfhs.org.sa.

3.3 Final Specialty Examination

In addition to the approved completion of clinical requirements (resident's logbook) by the local supervising committee, FITER is prepared by program directors for each resident at the end of his/her final year in residency (R5) and can also involve clinical, oral exams, and other academic assignment(s).

A logbook will be used to ensure that a reasonable number of surgical procedures have been performed by the trainee during his/her rotations as reviewed and signed by the program director at the end of each rotation.

OMS Examination Part II:

The final OMS Examination comprises two parts:

Final Written Examination

This examination assesses the theoretical knowledge base (including recent advances) and problem-solving capabilities of candidates in the specialty of OMS. The examination is delivered in an MCQ format and held at least once a year. The number of exam items, eligibility, and passing score will be in accordance with the Commission's training and examination rules and regulations. Examination details and blueprints are published on the Commission's website www.scfhs.org.sa

Final Clinical examination

This examination assesses a broad range of high-level clinical knowledge and skills, including data gathering, patient management, communication, and counseling skills. The examination is held at least once a year, preferably in an Objective Structured Clinical Examination (OSCE) format. The exam eligibility and passing score will be in accordance with the Commission's training and examination rules and regulations. Examination details and blueprints are published on the Commission's website www.scfhs.org.sa

Certification:

A certificate of training completion will only be issued upon the resident's successful completion of all program requirements. Candidates passing all components of the final specialty examination are awarded the Saudi Specialty Certificate of Oral and Maxillofacial Surgery.

APPENDICES

1. Mentorship for Residents

A mentor is an assigned faculty supervisor responsible for the professional development of residents under his/her responsibility. Mentoring is the process by which a mentor provides support to the resident. A mentee is the resident under the supervision of the mentor.

The needs: OMS is a formal academic program for residents to develop their full potential as future specialists. This is potentially the last substantial training program that residents will take before becoming an independent specialist. However, unlike undergraduate programs with a well-defined structure, residency training is inherently less organized. OMS residents are expected to work in the clinical setting to deliver patient care. They are rotated through multiple sites and sub-specialties.

The structure of this OMS program is designed to allow good clinical exposure, but it has the disadvantage of lacking opportunities for long-term professional relationships with a faculty member. Residents may feel lost without proper guidance. Moreover, outside of the context of a long-term longitudinal relationship, it is extremely difficult to identify a struggling resident. Residents may also struggle to develop professional identity with the home program especially when they are rotating away in other disciplines for a long duration.

Finally, the new OMS Curriculum has a more substantial work-based continuous assessment of clinical skills and professional attributes. OMS residents are expected to maintain a clinical logbook, complete mini-CEX and DOPS, and chart meticulously their clinical experience. This requires a robust and structured monitoring system in place with clear accountability and defined responsibilities.

Nature of the Mentoring Relationship: Mentorship is a *formal yet friendly* relationship. This is a *partnership* between the mentor and resident (i.e. the mentee). OMS residents are expected to take the mentoring opportunity seriously and help their mentor achieve the desired outcomes. The mentor should receive a copy of any adversarial report by other faculty members about the resident.

1.1 Goals:

- a) Guide OMS residents towards personal and professional development through continuous monitoring of progress
- b) Early identification of struggling OMS residents as well as high achievers
- c) Early detection of OMS residents who are at risk of emotional and psychological disturbances
- c) Provide career guidance

1.2 Roles of the Mentor

The primary role of the mentor is to nurture a long-term professional relationship with their assigned OMS residents. The mentor is expected to provide an 'academic home' for the residents so that they can feel comfortable in sharing their experiences, express their concerns, and clarify issues in a non-threatening environment. The mentor is expected to keep personal and sensitive information about the residents in confidence.

The mentor is also expected to make appropriate and early referral to the Program Director or Head of the Department if she/he identifies a problem that would require professional expertise or resources beyond his/her capacity. Examples of situations calling for such referral include:

- a) Serious academic problems
- b) Progressive deterioration of academic performance
- c) Potential mental or psychological issues
- d) Personal problems interfering with academic duties
- e) Professional misconduct and questionable practices

However, the following roles should NOT be expected from a mentor:

- f) Provide extra tutorials, lectures, or clinical sessions
- g) Provide counselling for serious mental and psychological problems
- h) Being involved in residents' personal matters
- i) Provide financial or other material supports

1.3 Roles of the OMS Resident

- a) Submit a resume at the start of the relationship
- b) Provide the mentor with medium (1-3 years) and longer term (3-7 years) goal
- c) Takes primarily responsibility in maintaining the relationship
- d) Schedule monthly meetings with their mentor in a timely manner and request ad-hoc meetings only in cases of emergency
- e) Recognize self-learning as an essential element of the OMS program
- f) Report any major events to the mentor in a timely manner

Who can be a mentor?

Any faculty member at the consultant grade and above within the OMS program can be a mentor. There is no special training required.

Number of OMS residents per mentor

As a guideline, each mentor should accept no more than 4-6 residents as trainees. As much as possible, the residents should come from all years of training. This will create an opportunity for the senior residents to guide their junior peers.

Frequency and duration of engagement

The recommended minimum meeting frequency is once every 4 weeks. Each meeting might take 30 minutes to 1 hour. Once assigned, mentors should continue to meeting the same residents preferably for the entire duration of the OMS training program or for at least two years.

Tasks during the meeting

Such meetings may serve to:

- a) Discuss the overall clinical experience of residents, with particular attention to be paid to any concerns raised
- b) Review their logbook or portfolio with the resident to determine whether he or she is on track towards meeting the training goals
- c) Revisit earlier concerns or unresolved issues, if any

- d) Explore any non-academic factors that may seriously interfere with training
- e) Document excerpts of the interaction in the logbook

Mandatory reporting to the Program Director or Head of the Department

- a) Consecutive absence from three scheduled meetings without any valid reasons
- b) Unprofessional behavior
- c) Consistent underperformance in spite of individual counselling
- d) Serious psychological, emotional, or health problems that may potentially cause unsafe patient care
- e) Any other serious concerns by the mentor

2. Formative Assessment Tools

2.1 Direct Observation of Procedural Report (DOPS) and In-training Evaluation Report (ITER)

Direct Observation of Procedural Skills (DOPS) Rating Form

Trainee's Name		SCFHS Registration #	
Procedure Observed			
Observed by		Date	
Signature of Observer			

Description	Satisfactory	Unsatisfactory	Comment
Understood the indications for the procedure and clinical alternatives			
Explained plans and potential risks to the patient clearly and in an understandable manner			
Good understanding of the theoretical background, including anatomy, physiology, and imaging, of the procedure			
Good advanced preparation for the procedure			
Communicated the procedural plan to relevant staff			
Explained procedure to the patient and obtained valid informed consent			
Aware of risks of cross infection and demonstrated an effective aseptic technique during the procedure			
Procedure success or failure was understood in the current setting			
Coped well with unexpected problems			
Demonstrated awareness through constant monitoring, maintained focus			
Demonstrated confidently correct procedural sequence, minimal hesitation			
Skilful and handled patient and tissues gently			
Maintained accurate and legible records including descriptions of problems or difficulties			
Issued clear post procedural instructions to the patient and/or staff			
Sought to work to the highest professional standards at all times			

ASSESSMENT	
Practice was satisfactory	
Practice was unsatisfactory	
Examples of good practice:	
Areas of practice requiring improvement:	
Further learning and experience should focus on the following:	

2.2 Case-Based Discussion (CBD)

Case-Based Discussion (CBD) Rating Form

Trainee name:

SCFHS Registration no.:

Residency level:

Date:

Brief summary of case:

--

 New Case Follow-up Case

Assessment setting:

 Inpatient Ambulatory ICU CCU Emergency department Other _____

Complexity:

 Low Moderate High

Focus:

 Data gathering Diagnosis Therapy Counseling Other _____**Assessment:**

SCORE FOR STAGE OF TRAINING									
Questions	Unsatisfactory			Satisfactory			Superior		
	1	2	3	4	5	6	7	8	9
Medical Record Documentation									
Clinical Assessment									
Investigation and Referrals									
Treatment									
Follow-up and Future Planning									
Professionalism									
Clinical Judgment									
Leadership/Managerial skills									
Overall performance									

Suggestions for Development:

1-

2-

3-

Evaluator Name:

Evaluator Signature:

2.3 Mini Clinical Evaluation Exercise (Mini-CEX)

Mini-Clinical Evaluation Exercise (Mini-CEX) Rating Form

Trainee name: _____ SCFHS Registration no.: _____ Residency level: _____
 Date: _____
 Mini-CEX time: min _____
 Observing: min _____
 Providing feedback: min _____

Brief summary of case:

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New Case Follow-up Case

Assessment setting:

Inpatient Ambulatory ICU CCU Emergency department Other _____

Complexity:

Low Moderate High

Focus:

Data gathering Diagnosis Therapy Counseling Other _____

Assessment:

SCORE FOR STAGE OF TRAINING									
Questions	Unsatisfactory			Satisfactory			Superior		
	1	2	3	4	5	6	7	8	9
History taking									
Physical examination skills									
Communication skills									
Critical judgment									
Humanistic quality/professionalism									
Organization and efficiency									
Overall clinical care									

Suggestions for Development:

- 1-
- 2-
- 3-

Evaluator Name:

Evaluator Signature:

Question	Description
History taking	Facilitates patient's narrative; uses appropriate questions to obtain accurate, adequate information effectively; responds to verbal and nonverbal cues appropriately
Physical examination skills	Follows an efficient, logical sequence; examinations are appropriate for clinical problems; provides patients with explanations; is sensitive to patients' comfort and modesty
Communication skills	Explores patients' perspectives; jargon free speech; open and honest; empathetic; agrees management plans and therapies with patients
Critical judgment	Forms appropriate diagnoses and suitable management plans; orders selectively and performs appropriate diagnostic studies; considers risks and benefits
Humanistic quality/professionalism	Shows respect, compassion, and empathy; establishes trust; attends to patient's comfort needs; respects confidentiality; behaves in an ethical manner; is aware of legal frameworks and his or her own limitations
Organization and efficiency	Prioritizes; is timely and succinct; summarizes
Overall clinical care	Demonstrates global judgment based on the above topics

2.4 Multi-Source Feedback (360 Degree Evaluation)

3. Blueprint of Examinations

Examination details and blueprints are published on the Commission's website www.scfhs.org.sa

4- Glossary

4.1 Basic Medical Science Courses for OMS

ANATOMY

Medical subjects (1st Semester)	
1-	Scapular and pectoral regions and arm Functional groups of muscles of forearm Classification of joints. Shoulder joints Osteology of upper limb. Scapular and pectoral muscles
2-	Brachial plexus. Dermatomes and innervations of the upper limb Nerve injuries of the upper limb Elbow and radioulnar joints Muscles of arm and forearm. Shoulder joint
3-	Quiz 1: MCQs on the upper limb Arterial supply and venous drainage of upper limb Femoral triangle, front of the thigh, and adductor group Nerves and vessels of upper limb. Hand muscles
4-	Dermatomes of lower limb and lumbosacral plexus Gluteal region, back of thigh, and popliteal fossa Functional and applied anatomy of the hip joint and gluteal region Hip bone and femur. Muscles of gluteal region and thigh
5-	Bone growth, ossification, and bone grafting Knee and ankle joints Arteries, veins, and lymphatics of the lower limb Tibia and fibula. Leg compartments Dorsum of the foot
6-	Quiz 2: MCQs on the lower limb. Thoracic wall, pleura, and typical intercostal nerves Blood supply and lymphatic drainage of thoracic wall Ribs, thoracic vertebrae, sternum, and diaphragm
7-	Trachea, bronchi, and bronchopulmonary segments Mediastinum: subdivisions and contents Diaphragm: mechanisms of respiration Trachea, bronchi, lungs, and mediastinum

8-	MCQs on the respiratory system Pericardium and heart Autonomic plexuses of thorax Pericardium and heart. Great vessels of the thorax
9-	Anterior abdominal wall and rectus sheath Inguinal region, hernia, testis, and spermatic cord Peritoneum: Topography of the viscera and mesenteries Anterior abdominal wall and external genitalia
10-	Stomach, duodenum, pancreas, and celiac trunk Small and large intestines and mesenteric vessels Liver, spleen and portal vein. Portal hypertension Abdominal viscera and blood supply of the gut
11-	Posterior abdominal wall. Sympathetic chain, kidney, and ureters Internal iliac vessels and lymphatic drainage of the pelvis Hip bone and anatomical basis for the bone grafting Posterior abdominal wall, Sympathetic chain, kidney and ureters
12-	Urinary bladder and male pelvic viscera Female pelvic viscera Practical revision Pelvic organs and blood supply
	Mid-year exam
Topics (2nd Sem)	
1-	Introduction and feedback Skull and mandible Clinical anatomy of skull and mandible
2-	Face and Scalp. Facial Nerve. Clinical anatomy of face and scalp. Bell's palsy, surgical incisions, trigeminal neuralgia Embryology: Development of face, nose, lips, and palate
3-	Cranial cavity: Meninges, blood supply of meninges, dural venous sinuses, diploic and emissary veins Cranial nerves: attachment to the brain and foramina of exit. Cavernous sinus thrombosis Overview of functions of cranial nerves. Clinical tests for cranial nerves Cranial cavity, meninges, cranial fossae
4-	Bony orbit and eyelid. Lacrimal apparatus. Extrinsic muscles of eyeball, nerves and vessels. Eyeball and intrinsic muscles. Anatomical basis of glaucoma. Anatomy of temporal bone and structure of the ear. Osteosclerosis and Gradenigo's syndrome. Orbit and eyeball; Fascia, muscles, vessels, and nerves of orbit.

5-	Quiz 4: MCQs (att topics from week 1 to week 4) Histology: Nervous tissue. Degeneration and regeneration of nerves Nervous system (I): Organization and functions Nervous system (II): Functional anatomy of the brain and brain protection
6-	Cerebral hemispheres: functional areas and blood supply. Cerebellum, blood supply, and functions. CSF: formation, absorption, and functions. Blood-brain barrier. Brain stem: morphology and blood supply. Cerebrum, cerebellum, and brain stem. Cross-sectional anatomy of the head
7-	Spinal cord: internal and external structure Parotid region: parotid bed and parotid gland Deep fascia of the neck. Anterior triangle of the neck Parotid region. Structures deep to parotid gland
8-	Carotid triangle: main arteries of the neck Mandibular nerve and related ganglia. Trigeminal neuralgia Embryology: branchial arches and pharyngeal pouches Temporal and infratemporal regions. Maxillary artery
9-	Posterior triangle of the neck Temporal and infratemporal fossa. Muscles of mastication Temporomandibular joint. Pterygoid plexus Anterior and posterior triangles of the neck
10-	Quiz 5: MCQ (all topics from week 5 to week 9) Last four cranial nerves: 9, 10, 11, and 12 Submandibular region and floor of the mouth Submandibular region
11-	Oral cavity, tongue, and palate Histology: oral cavity, tongue, and palate Overview of clinical anatomy of the head and neck
12-	Nasal cavity, tongue, and palate Histology: oral cavity, tongue, and palate Overview of clinical anatomy of the head and neck Oral cavity, tongue, and palate
13-	Pharynx and cervical part of esophagus. Larynx. Anatomical basis of intubation and tracheostomy. Pharynx, larynx, and thyroid gland.
14-	Carotid arterial system and subclavian artery. External and internal jugular veins. Landmarks for puncture of jug. Cervical sympathetic chains and distribution of its branches. Lymphatic drainage of head and neck.
15-	End year exam

PHARMACOLOGY

Subject areas	
1-	Introduction to Pharmacology I
2-	Introduction to Pharmacology II
3-	Immunomodulatory agents
4-	Cardiovascular concerns with oral surgery
5-	Antiviral and antifungal agents
6-	Antibiotics I
7-	Antibiotics II
8-	Pain pathway modulators and narcotic analgesics
9-	Non-narcotic analgesics
10-	Pre-anesthetic medications
11-	General anesthetics
12-	Exam

PATHOLOGY

Subject areas	
1-	Role of pathology in OMF Surgery. Review of investigative techniques in pathology. Histopathology process
2-	Homeostasis in health and disease I Homeostasis in health and disease II
3-	Selected disease of blood I Selected disease of blood II
4-	Immunopathology I Immunopathology II
5-	Clinical cases of immunosuppression Clinical cases of immunodeficiency

6-	Inflammation and inflammatory processes Wound healing and repair
7-	Lymphoma I Lymphoma II
Mid-year break	
8-	Update on odontogenic cysts Case study 1
9-	Update on odontogenic tumors Case study 2
10-	Oral white lesions and oral cancer Case study 3
11-	Diseases of the bones Case Study
12-	Salivary gland pathology Case study 4
13-	Tumors and tumor-like lesions in soft tissues of oral cavity Case study 5
14-	Fine-needle aspiration – General Fine-needle aspiration – Head and Neck
15-	Oral pigmented lesions Vesiculobullous diseases
16-	Exam

4.2 Surgical Procedure Requirement (Logbook)

Procedure	Required No. of Cases
1. MINOR SURGERY UNDER LOCAL ANESTHESIA	125
2. MINOR SURGERY UNDER GENERAL ANESTHESIA	125
3. TRAUMA	20-Assistant
	20-Surgery
4. ORTHOGNATIC SURGERY	15-Assistant
	10-Surgery

5. SURGICAL PATHOLOGY	25-Assistant
	20-Surgeon
6. RECONSTRUCTIVE SURGERY	20-Assistant
	15-Surgeon
7. PREPROSTHETIC SURGERY AND IMPLANT	20-Assistant
	10-Surgeon