

Fellowship Examination Blueprint: Oral and Maxillofacial Surgery

Blueprint

Competency Domain	Percentage
1. Patient Assessment, Diagnosis, and Treatment Planning	30 – 40%
2. Treatment Implementation	30 – 40%
3. Treatment Evaluation	15 – 25%
4. Communication	5 – 15%

Competencies

1. Patient Assessment, Diagnosis, and Treatment Planning

- 1.1 Perform a pre-operative airway assessment and identify patients with a difficult airway.
- 1.2 Determine the patient's chief complaint and obtain a comprehensive history of presenting illness.
- 1.3 Obtain a comprehensive review of systems.
- 1.4 Obtain a complete history of the patient, including medical, surgical, family, social, and dental.
- 1.5 Complete a thorough and relevant clinical examination of the patient with a focus on the head and neck.
- 1.6 Order appropriate investigations, including diagnostic imaging and laboratory tests.
- 1.7 Assess stomatognathic function and occlusion.
- 1.8 Perform a detailed assessment of patients requiring the replacement of teeth, nose, ears, and eyes.
- 1.9 Identify oral and maxillofacial manifestations of systemic diseases.
- 1.10 Perform appropriate tissue biopsy.
- 1.11 Conduct a trauma survey and provide initial management of a trauma patient according to the principles of Advanced Trauma Life Support (ATLS).
- 1.12 Accurately interpret investigations, including diagnostic imaging and laboratory tests.
- 1.13 Formulate a differential diagnosis based on findings from the history, clinical examinations, and investigations.

- 1.14 Effectively triage patient care through identification and prioritization of time-sensitive issues.
- 1.15 Diagnose benign and malignant pathologic conditions involving the cranial and maxillofacial region.
- 1.16 Provide basic histopathologic interpretation.
- 1.17 Prepare a patient-centred treatment plan that includes treatment alternatives, the consequences of no treatment, and explanation of the risks and benefits of each approach.
- 1.18 Determine the appropriate setting for the provision of patient care (e.g., hospital vs. ambulatory clinic).
- 1.19 Refer the patient to other healthcare professionals when appropriate based on other treatment options offered by other practitioners.
- 1.20 Create an anesthetic plan for adult and pediatric patients taking into consideration the procedural complexity and the patient's clinical examination, medical co-morbidities, and level of anxiety.
- 1.21 Perform a detailed assessment of patients with cranial and maxillofacial trauma.
- 1.22 Diagnose and triage patients with cranial and maxillofacial trauma.
- 1.23 Diagnose and manage post-traumatic cranial and maxillofacial deformities.
- 1.24 Develop a comprehensive treatment plan for the management of patients with cranial and maxillofacial trauma.
- 1.25 Perform a detailed assessment of patients with TMD and orofacial pain.
- 1.26 Develop a differential diagnosis for patients with TMD and orofacial pain.
- 1.27 Develop a comprehensive treatment plan for the management of patients with TMD and orofacial pain.
- 1.28 Perform a detailed assessment of patients with dentofacial deformities.
- 1.29 Diagnose patients with dentofacial deformities.
- 1.30 Determine treatment options for dentofacial deformities.
- 1.31 Perform a detailed assessment of patients with sleep-disordered breathing.
- 1.32 Develop a comprehensive treatment plan for the management of patients with sleep-disordered breathing.
- 1.33 Perform a detailed assessment of patients with cleft and craniofacial deformities.
- 1.34 Diagnose syndromic and non-syndromic cleft and craniofacial deformities.
- 1.35 Develop a comprehensive treatment plan for the management of patients with cleft and craniofacial deformities.
- 1.36 Perform a detailed assessment of patients requiring dentoalveolar surgery.
- 1.37 Diagnose conditions that require dentoalveolar surgical intervention.

- 1.38 Develop a comprehensive treatment plan for the management of patients requiring dentoalveolar surgery.
- 1.39 Perform a detailed assessment of patients requiring cranial and maxillofacial reconstruction.
- 1.40 Diagnose deformities and defects that require cranial and maxillofacial reconstruction.
- 1.41 Perform a detailed assessment of patients with maxillofacial nerve injuries.
- 1.42 Diagnose maxillofacial nerve injuries.
- 1.43 Develop a comprehensive treatment plan for the management of patients with maxillofacial nerve injuries.
- 1.44 Perform a detailed assessment of patients seeking aesthetic and maxillofacial gender affirmation surgery.
- 1.45 Establish an appropriate diagnosis for patients seeking aesthetic and maxillofacial gender affirmation procedures.
- 1.46 Develop a comprehensive treatment plan for the management of patients seeking aesthetic and maxillofacial gender affirmation procedures.

2. Treatment Implementation

- 2.1 Perform the management of benign pathologic conditions of the cranial and maxillofacial region.
- 2.2 Explain the management of malignant pathologic conditions of the cranial and maxillofacial region.
- 2.3 Provide collaborative care for patients with pathologic conditions in the cranial and maxillofacial region as part of a multidisciplinary team.
- 2.4 Manage or coordinate interdisciplinary care of urgent or emergent issues in cranial and maxillofacial trauma (e.g., acute airway compromise, bleeding, retrobulbar hematoma).
- 2.5 Provide collaborative care for polytrauma patients as part of a multidisciplinary team.
- 2.6 Coordinate care for patients with TMD and orofacial pain as part of a multidisciplinary team.
- 2.7 Coordinate care for patients with dentofacial deformities as part of a multidisciplinary team.
- 2.8 Discuss non-surgical management for patients with obstructive sleep apnea.
- 2.9 Coordinate care for patients with obstructive sleep apnea as part of a multidisciplinary team.

- 2.10 Provide collaborative care for patients with cleft and craniofacial deformities as part of a multidisciplinary team.
- 2.11 Manage patients with syndromic and non-syndromic cleft and craniofacial deformities from birth to adulthood.
- 2.12 Perform airway management using non-surgical and surgical techniques.
- 2.13 Provide collaborative care to patients who require implant rehabilitation as part of a multidisciplinary team.
- 2.14 Provide medical and supportive management of maxillofacial infections.
- 2.15 Provide surgical management of maxillofacial infections.
- 2.16 Provide collaborative care to patients with head and neck infections as part of a multidisciplinary team.
- 2.17 Provide appropriate treatment for maxillofacial nerve injuries.
- 2.18 Provide timely management of anesthetic emergencies.
- 2.19 Provide emergency management of patients according to the principles of Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS).
- 2.20 Utilize pharmacologic and non-pharmacologic strategies for analgesia and anxiolysis in the practice of oral and maxillofacial surgery.
- 2.21 Optimize patient's medical status prior to surgery with a focus on relevant medical conditions and collaborate with other healthcare professionals when indicated.
- 2.22 Determine a perioperative antibiotic regimen when necessary.
- 2.23 Explain surgical options and management of patients with obstructive sleep apnea.
- 2.24 Perform skeletal surgery for obstructive sleep apnea.
- 2.25 Explain the utilization of presurgical dentofacial orthopedics in the management of patients with cleft lip and/or palate deformities.
- 2.26 Utilize non-autogenous graft sources in cranial and maxillofacial reconstruction.
- 2.27 Harvest hard and soft tissues from local and distant sites and perform ridge augmentation/reconstruction for implant site preparation.
- 2.28 Utilize non-autogenous materials for ridge augmentation/reconstruction for implant site preparation.
- 2.29 Perform surgery to place dental implants.
- 2.30 Perform surgery to place craniofacial implants.
- 2.31 Provide post-operative patient care according to best practices.
- 2.32 Provide appropriate post-operative analgesic strategies for the patient.

- 2.33 Perform pre-prosthetic surgery to correct hard and soft tissues and/or augment them before prosthetic treatment, including but not limited to:
 - 2.33.1 Alveoloplasty
 - 2.33.2 Tori and exostosis removal
 - 2.33.3 Vestibuloplasty and lowering of the floor of mouth
 - 2.33.4 Grafting: soft tissue, bone, socket, sinus lifts, onlay alveolar ridge
 - 2.33.5 Tuberosity reduction
- 2.34 Provide surgical management of cranial and maxillofacial trauma, including but not limited to:
 - 2.34.1 Dentoalveolar trauma
 - 2.34.2 Soft tissue trauma
 - 2.34.3 Fractures of the mandible
 - 2.34.4 Fractures of the middle third of the face
 - 2.34.5 Fractures of the upper third of the face
- 2.35 Harvest non-vascularized bone for cranial and maxillofacial reconstruction from sites including but not limited to:
 - 2.35.1 Iliac crest (anterior and posterior)
 - 2.35.2 Calvarial
 - 2.35.3 Costochondral
 - 2.35.4 Tibial
- 2.36 Explain the utilization of regional flaps and free tissue transfer for cranial and maxillofacial reconstruction.
- 2.37 Utilize local flaps for cranial and maxillofacial reconstruction.
- 2.38 Harvest the following types of tissue for cranial and maxillofacial reconstruction:
 - 2.38.1 Skin
 - 2.38.2 Muscle
 - 2.38.3 Fascia
 - 2.38.4 Cartilage
 - 2.38.5 Nerve
 - 2.38.6 Fat
- 2.39 Explain the utilization of non-operative facial aesthetic procedures, including but not limited to:
 - 2.39.1 Dermabrasion
 - 2.39.2 Chemical peels
 - 2.39.3 Light-based therapy
 - 2.39.4 Retinoids
 - 2.39.5 Injectable fillers

- 2.39.6 Fat transfer
- 2.39.7 Neuromodulator
- 2.40 Explain the utilization of surgical facial aesthetic procedures, including but not limited to:
 - 2.40.1 Rhinoplasty
 - 2.40.2 Blepharoplasty
 - 2.40.3 Brow/forehead lift
 - 2.40.4 Facial recontouring
 - 2.40.5 Rhytidectomy
 - 2.40.6 Lipectomy
 - 2.40.7 Otoplasty
 - 2.40.8 Scar revision
 - 2.40.9 Alloplastic facial implants
- 2.41 Perform surgical procedures for the management of TMD and orofacial pain, utilizing but not limited to:
 - 2.41.1 Arthrocentesis
 - 2.41.2 Arthroscopy
 - 2.41.3 Arthrotomy
 - 2.41.4 Arthroplasty
 - 2.41.5 Neuroablative procedures
- 2.42 Provide non-surgical management of TMD and orofacial pain.
- 2.43 Perform orthognathic surgery to correct dentofacial deformities, utilizing but not limited to:
 - 2.43.1 Mandibular osteotomies
 - 2.43.2 Maxillary osteotomies
 - 2.43.3 Distraction osteogenesis
 - 2.43.4 Genioplasty
 - 2.43.5 Zygomatic osteotomies
- 2.44 Explain the following surgical procedures for the management of unilateral and bilateral cleft deformities:
 - 2.44.1 Primary functional cheilorhinoplasty
 - 2.44.2 Primary palatoplasty
 - 2.44.3 Revision surgeries
 - 2.44.4 Velopharyngeal dysfunction
- 2.45 Perform the following surgical procedures for the management of unilateral and bilateral cleft deformities:
 - 2.45.1 Alveolar bone grafting

- 2.45.2 Orthognathic surgery
- 2.45.3 Distraction osteogenesis
- 2.46 Explain the following surgical procedures for management of craniofacial deformities:
 - 2.46.1 Cranial vault surgeries
 - 2.46.2 LeFort II and III osteotomies
 - 2.46.3 Otoplasty
 - 2.46.4 Rhinoplasty
 - 2.46.5 Soft tissue augmentation
- 2.47 Administer the following methods of anesthesia for adult and pediatric patients with appropriate monitoring:
 - 2.47.1 Local anesthesia
 - 2.47.2 Oral sedation
 - 2.47.3 Nitrous oxide sedation
 - 2.47.4 Parenteral sedation
 - 2.47.5 General anesthesia
- 2.48 Perform the following dentoalveolar surgical procedures:
 - 2.48.1 Removal of impacted and non-impacted teeth and roots
 - 2.48.2 Coronectomy
 - 2.48.3 Exposure/bracketing of impacted teeth
 - 2.48.4 Surgical repositioning of teeth
 - 2.48.5 Surgical endodontics

3. Treatment Evaluation

- 3.1 Identify risk factors for perioperative complications.
- 3.2 Demonstrate best practices to prevent and manage the occurrence of common post-operative complications.
- 3.3 Recognize signs of abuse and neglect and report concerns to the appropriate authorities.
- 3.4 Anticipate, identify, and manage surgical and anesthetic complications.
- 3.5 Provide preventive measures to avoid complications.
- 3.6 Assess response to therapy and develop an alternative treatment plan as needed.
- 3.7 Determine the need for reoperation, adjunctive treatments and/or referral.
- 3.8 Critically assess treatment outcomes.
- 3.9 Develop a follow-up plan for the patient.

4. Communication

- 4.1 Communicate effectively with patients, their families, and other healthcare professionals.
- 4.2 Adapt communication based on the patient's age and stage of development.
- 4.3 Obtain informed consent from patients and/or their parents or guardians.
- 4.4 Collaborate with members of the interdisciplinary healthcare team.
- 4.5 Demonstrate collegiality when discussing differing opinions with other healthcare professionals.
- 4.6 Ensure the continuity and coordination of patient care through the appropriate transfer of information.
- 4.7 Consistently apply accurate, discipline-specific terminology when communicating clinical reasoning and decisions.
- 4.8 Communicate in a structured, clear, concise, and logical manner.
- 4.9 Clearly and transparently articulate clinical reasoning and decision-making processes.