

GUIDELINES FOR ACCREDITATION AND
TRAINING IN ORAL AND MAXILLOFACIAL SURGERY

9 DECEMBER 2024

INDEX

Introduction

1. Institutional Relationships and Commitment
2. Curriculum and Training Requirements
3. Academic Developments and Research
4. Programme supervision and Staffing
5. Physical Facilities and Resources of an Accredited Training Unit
6. Continuing Evaluation of Trainees
7. Rotations
8. Review

Appendixes I, II, III and IV

INTRODUCTION

The Clinical specialty of Oral and Maxillofacial Surgery has evolved since the Second World War as a specialty based on a university dental education. It was from the experiences of the management of facial skeletal injuries that the importance of detailed dental knowledge was shown to be a pre-eminent requirement for the management of such injuries.

This surgical specialty was known first as Oral Surgery but now, to more adequately describe it, the more appropriate title of Oral and Maxillofacial Surgery has come into wide usage. The specialty is defined by the International Association of Oral and Maxillofacial Surgeons as "that part of surgery which deals with the diagnosis, surgical and adjunctive treatment of diseases, injuries and defects of the human jaws and associated structures."

In Hong Kong, Oral and Maxillofacial Surgery remains to be a specialty within Dentistry. A dental degree (**BDS/DDS or equivalent**) is mandatory for entering a training programme which involves clinical experience appropriate to the specialty of Oral and Maxillofacial Surgery. The Specialty Board in Oral and Maxillofacial Surgery of the College of Dental Surgeons of Hong Kong aims to develop a training programme for the purpose of specialist training equivalent to the current international standard and appropriate for Hong Kong.

1. INSTITUTIONAL RELATIONSHIP AND COMMITMENT

Basic and higher specialist surgical training in Oral and Maxillofacial Surgery in Hong Kong should be a joint endeavour of the University, the Regional Hospitals and the other Colleges in the Academy of Medicine.

The university and regional hospitals should demonstrate a commitment to the programmes with appropriate documentary evidence. Respective responsibilities including the provision of teaching staff, the contribution of each institution, the period of assignment and the financial commitment should be identified.

The programme should be recognized within the administrative and clinical structure of the institution and should be consistent with that accorded to other surgical programmes.

Hospitals sponsoring basic and higher specialist surgical training in Oral and Maxillofacial must be accredited by the appropriate Education Committee.

2. CURRICULUM AND TRAINING REQUIREMENTS

2.1 Full time training programme in Oral and Maxillofacial Surgery should encompass a minimum duration of 6 years, with an intermediate examination after 3 years of basic training, followed by a higher 3-year specialist training and an exit examination.

It should comprise a comprehensive study of applied clinical sciences in a graduated sequence of clinical training appropriate to the scope of the specialty.

2.2 CURRICULUM

Curricula should be constructed on the basis of the existing BDS undergraduate course in Hong Kong and the additional requirements based upon the intermediate examination, as well as the documented requirements of the Exit Examination.

The above concepts are based on the following philosophy:

- The BDS degree is the basic qualification leading to Oral and Maxillofacial surgical training.
- That entrance to the higher specialist Oral and Maxillofacial Surgical training should be based on successful candidature at the intermediate examination.
- That an integrated educational process is essential, and which progresses from the undergraduate BDS level through to graduate level. It must be designed to provide adequate basic and then higher specialist level training.
- Curricula should be reviewed and revised if these current philosophies or requirements are changed.

2.2.1 **SEQUENCE OF TRAINING**

The current most appropriate sequence after BDS should be:

1. Full-time basic training in Oral and Maxillofacial Surgery should include a component of training in basic sciences and basic surgical sciences.
2. Selection to provisional candidature in the higher specialist training programme in Oral and Maxillofacial Surgery is based on success in the intermediate examination after three years. The intermediate examination consists of a written paper in oral and Maxillofacial surgery and a viva voce examination (Appendix I, II). Fellows of any of the reputable Colleges in the field of oral and maxillofacial surgery where appropriate, will be considered for partial or complete exemption the intermediate examination.
3. The subsequent three-year full-time higher specialist training should involve progressive surgical, medical and research training, including an option of a Master degree, within approved centres in clinical Oral and Maxillofacial Surgery.
4. Final exit examination (Appendix III, IV)

Completion of training must be demonstrated by successful candidature at the exit examination. A candidate with dual basic qualifications (both registrable dental and medical degrees) and with previous training in Oral and Maxillofacial Surgery will be individually assessed and advised by the Specialty Board in Oral and Maxillofacial Surgery about his/her stage of training in an approved training centre.

2.2.2 **BASIC TRAINING PROGRAMME IN ORAL AND MAXILLOFACIAL SURGERY**

The basic training must be acquired within an oral and maxillofacial surgery department approved for the purpose. Sound experience in minor oral surgery, oral diagnosis and sedation techniques must be demonstrated by successful candidature at the intermediate examination (Appendix I).

During the training period, trainers should arrange evaluations with trainees regularly, preferably bi-annually, or as appropriate. It is the responsibility of trainees to keep a valid training record throughout the training period. The record should be able to demonstrate his/ her exposure, which should include but not be limited to surgical cases, consultations, specialty-related conferences or courses.

Each basic surgical trainee is required to have participated in a minimum of 15 major surgical operations as an assistant to the chief surgeon.

2.2.3 **HIGHER SPECIALIST TRAINING PROGRAMME IN ORAL AND MAXILLOFACIAL SURGERY**

The programme must provide a complete, progressively graduated sequence of outpatient and inpatient experience.

In addition to providing the teaching and supervision of trainee activities, a sufficient number of patients with a sufficient variety of problems to give trainees exposure to and competence in the full scope of oral and maxillofacial surgery must be provided.

Candidates are required to demonstrate adequate exposure to and participation in a wide range of surgical procedures as chief surgeons under supervision before sitting the exit examination. Each candidate is required to have performed at least 50 dentoalveolar surgeries and 30 major cases. The major cases should cover each of the four categories of surgeries as listed below and as chief surgeon under supervision during the period of higher training.

1. Oral and maxillofacial trauma
2. Dentofacial deformities
3. Surgical pathology
4. Miscellaneous (includes but not limited to pre-prosthetic, reconstructive and implant surgery, TMJ surgery, cleft deformities and soft tissue surgeries)

Candidates shall submit log books and log diaries for vetting by the Chief Examiner for assessment of his/ her eligibility to exit examination.

3. **ACADEMIC DEVELOPMENTS AND RESEARCH**

It is considered desirable to maintain a University link within the training programme in Oral and Maxillofacial Surgery. This academic component may include the acquisition of a post-graduate Master degree in Oral and Maxillofacial Surgery as an additional option within the programme. This degree course should be structured to achieve the basic and applied clinical science components as well as research methods; as is currently available within the University.

4. **PROGRAMME SUPERVISION AND STAFFING**

The supervisor of training must be an Oral and Maxillofacial Surgeon accredited by the education committee of the college.

The supervisor must have sufficient authority and time to fulfil administrative and teaching responsibilities in order to achieve the educational goals of the programme. In addition, it is the supervisor's responsibility to ensure that trainees completing the programme have achieved the standards of performance established for the programme and for practice in the specialty.

The major components of specialty instruction and supervision should normally be conducted by Oral and Maxillofacial Surgeons. In addition, it is strongly recommended that individuals who provide instruction and supervision specific to any other specialty area should be fully qualified in that specialty.

- 4.1 The Supervisor must ensure that the following responsibilities are properly carried out:
- a. Selection of Trainees.
 - b. Development and implementation of the curriculum.
 - c. Ongoing evaluation of programme content, faculty teaching and trainees' performance.
 - d. Programme administration.
 - e. Planning and operation of facilities used in the educational programme.
 - f. Evaluation of trainee's supervision and activity in affiliated institutions.
 - g. Maintenance of records related to the educational programme.
 - h. Responsibility for overall continuity and quality of patient care.
- 4.2 The size and time commitment of the trainers should be sufficient to ensure:
- a. Continuity of instruction
 - b. Exposure of trainees to a broad range of diagnostic and treatment modalities.
 - c. Trainers' participation in all teaching activities, including conferences and seminars.
 - d. Trainers' review of patient evaluation, treatment planning, management, complications and outcomes of all cases with the trainees.
 - e. Adequate supervision of all clinical activity. The degree of supervision should be related to the aptitude and experience of the trainee. The trainer-to-trainee ratio should not exceed one to three, as stipulated by the Hong Kong Academy of Medicine, subject to periodic review.
- 4.3 Supervisors, as well as oral and maxillofacial surgeons appointed as trainers, should have a real and demonstrated interest in teaching; personally provide the necessary time and effort to the educational process, and set an example by engaging in scholarly pursuits such as (1) participation in their own continuing oral and maxillofacial surgical education; (2) participation in regional or national surgical scientific societies; (3) presentation and publications of scientific studies; and demonstration of an active interest in research as it pertains to their own special oral and maxillofacial surgical interests.

- 4.4 Instruction and supervision within the Specialty of Oral and Maxillofacial Surgery must be conducted by individuals who are fully qualified and accredited. Oral and Maxillofacial Surgeons who are appointed as trainers must have adequate experience and demonstrate competence in the chosen subspecialty for which the appointment is made. The teaching and supervisory staff should have specific and regularly scheduled sessions and be available for emergency services. There should be regular sessions for presentation of cases and participation in peer review. It is recommended that trainers should be evaluated annually to determine the quality of their performance. While the supervisor must be responsible for teaching staff evaluation, it is highly desirable that trainees also participate in this process.
- 4.5 The policy regarding privilege and responsibility for advanced surgical trainees parallels that enunciated by the other Colleges of the Academy of Medicine, namely:
- a. Advance surgical trainees should work under supervision but there should be gradual and increasing assumption of responsibility by the trainee throughout the training process. The levels of supervision will vary in degree depending on the level of the trainee's stage of training and the trainee's competence.
 - b. Supervision and increasing responsibility of trainees should extend to all areas of surgical experience, including Operation Theatre, Out-patient Service, Clinical Wards, Accident and Emergency Department and Research Laboratories.
 - c. Surgical trainees should be allowed limited privileges commensurate with their level of training and with their clinical skills.
 - d. Surgeons must at all times ensure that trainees are not undertaking, at any el of supervision, activities that are beyond their level or competence.

Responsibility for the activities of trainees should be recommended by the Supervisor of Training, based on the following criteria:

1. Performance in the preceding period of training.
2. Logbook evidence of training to date.
3. Competence in clinical judgement and operative technique.
4. Personal reliability and responsibility.

- 4.6 When a trainee is granted the privilege to operate alone.
1. The authorizing surgeon retains overall responsibility for the management of the patient.
 2. Specific permission should have been given by the responsible surgeon.
 3. The responsible surgeon shall remain readily available for attendance if necessary.
 4. When consultation is necessary with another surgeon, the matter is to be referred to the responsible surgeon.
 5. For the purpose of recording and monitoring, three levels of operative supervision are defined, namely:

The trainee is the surgeon with the trainer scrubbed in the operating room.

The trainee is the surgeon and the trainer is within the theatre suite.

The trainee is the surgeon and the trainer is available, but not within the suite.

5. **PHYSICAL FACILITIES AND RESOURCES OF AN ACCREDITED TRAINING UNIT**

Institutional facilities and resources must be adequate to provide the educational experience and opportunities required to fulfil the needs of the educational programme as specified in these standards. These include, but are not limited to, facilities and personnel resources for trainees to carry out their patient care and personal educational responsibilities, administrative offices, and an adequate library providing access to standard reference texts and current journals and sufficient space for instruction.

5.1 Clinical facilities for maxillofacial surgery procedures, including administration of general anaesthesia and sedation for outpatients in day surgery facilities.

5.2 In hospitals where beds are allocated to specific services, a proportionate number of beds must be assigned to the oral and maxillofacial surgery unit in relation to its needs. In hospitals where beds are unassigned, there must be adequate availability to provide for the required number of patient admissions and appropriate independent care by the oral and maxillofacial surgery unit.

5.3 Equipment and supplies for use in managing medical emergencies must be readily accessible and functional.

5.4 **Educational Resource Base**

It is a commitment of every accredited training unit to contribute fully to the development of an Educational Resource database.

This will include:

- I) Documentation and periodic review of all facilities and resources.
- II) Continued development and ready access to advanced educational material including clinical management and techniques.
- III) Availability of relevant material from special courses and conferences.
- IV) Periodic evaluation of the log of clinical experience and appropriate rotations.
- V) Development of the concept of limited rotation of trainees between units where appropriate.

6. CONTINUING EVALUATION OF TRAINEES

There must be documentation of progressive evaluation and advancement of trainees. The system should ensure that, through the Supervisor of Training, each programme,

- a. Progressively assess the accumulated log of activities maintained by all trainees in the approved log book.
 - b. Periodically, but at least bi-annually, evaluates the knowledge, skills and professional growth of its trainees, using appropriate criteria and procedures.
 - c. Provide trainees an assessment of their performance, at least biannually. More frequent evaluations and documentation of such evaluations should be made if it is determined a trainee may not be properly motivated or eligible for advancement or retention in the programme.
 - d. Advances trainees to positions of higher responsibility on the basis of an evaluation of their readiness for advancement.
 - e. Maintains a personal record of evaluation for each trainee which is accessible to the trainee and available for periodic review by the Specialty Board in Oral and Maxillofacial Surgery of the College of Dental Surgeons.
- 6.1 Trainees' performance must be formally evaluated and documented in each of the following categories: basic surgical sciences, clinical oral and maxillofacial surgery, physical evaluation and off-service rotations.

7. ROTATIONS

7.1 ROTATIONS

The concept of appropriate rotations is encouraged on the basis of (a) extending the clinical training and experience of trainees as defined by the minimum clinical requirements, especially where specific strengths or deficiencies are identified within respective programmes, (b) promoting and developing consistent standards and cooperation between programmes and (c) developing international relationship and recognitions.

Rotations between accredited programmes should normally not exceed six (6) months.

Any programme that rotates trainees to other accredited programmes or affiliated institutions must submit all supplementary documentation to the Advisory Committee on Training.

8. REVIEW

Each programme must regularly evaluate the degree to which its goals are being achieved through internal assessment.

It is also essential that each programme submits adequate documentation of Organizational and Training Commitments and Trainee status and experience, to the Specialty Board in Maxillofacial Surgery.

Appendix I
Scope of The Intermediate Examination
In Oral and Maxillofacial Surgery

Candidates should have competent knowledge in the principles of diagnosis and management of oral and maxillofacial diseases, including but not limited to the following topics:

1. Clinical Management of Patient

The candidates should be fully competent in good history taking and performing a thorough physical examination on patients presenting with oral and maxillofacial diseases. This includes the normal admission procedures, general physical examination and pre-operative investigations, as well as peri-operative and post-operative of patients in hospital settings.

2. Radiology and Imaging Techniques of the Maxillofacial Region

The candidates should have a good understanding of the principles of radiology, computerized tomography(CT), angiography nuclear medicine and magnetic resonance imaging. The candidates are expected to be competent in interpreting the oral, maxillofacial and other radiographs which are commonly employed in the diagnosis of maxillofacial injuries and diseases, including but not limited to sialograms, scintigrams of the temporomandibular joints and jaws, conventional CT, cone-beam CT, MRI and PET , of the maxillofacial and neck regions.

3. Anaesthesia and Sedation

The candidates should understand the principles, usage and monitoring involved in both local and general anaesthesia, as well as monitored anaesthetic control. The candidates should be proficient in the techniques of administering local anaesthesia and sedation to patients undergoing oral and maxillofacial surgical procedures.

4. Drugs and Therapeutics

The candidates should understand the pharmacology, therapeutic function, and side effects of the drugs commonly used for the prophylaxis and treatment of oral and maxillofacial diseases.

5. Sterilization and Aseptic Techniques

The candidates should have a good understanding of the sterilization procedures used for maxillofacial surgery practices in general hospitals. They should also be fully proficient in performing surgery under aseptic techniques.

6. Operating Theatre Procedures and Patient Safety

The candidates should be fully acquainted with the procedures for working in operating theatres and the means of maximizing the safety of patients undergoing operation and during the peri-operative periods.

7. Emergency and Resuscitation

The candidates should be having a good understanding of the clinical presentation and management of emergencies. This includes resuscitation techniques, drugs, and monitoring of patients.

8. Dentoalveolar Surgery

The candidates should be fully competent in the assessment for, and the surgical procedures of, exodontia, removal of impacted teeth and supernumeraries, cyst enucleation and marsupialization.

9. Endodontic Surgery

The candidates should be fully competent in apicectomy procedures involving both the anterior and posterior teeth.

10. Pre-prosthetic Surgery

The candidates should have a good understanding of the oral tissue changes due to age, and be competent in the common minor pre-prosthetic surgical techniques.

11. Oral Pathology and Salivary Gland Diseases

The candidates should have a good understanding of the pathological lesions involving the oral and maxillofacial regions, in particular cysts of the jaws, odontogenic tumours, and salivary gland diseases.

12. Maxillary Sinus Diseases

The candidates should have a good understanding of the common maxillary sinus diseases and the techniques of managing odontogenic complications or lesions involving the maxillary sinus.

13. Oral Medicine

The candidates should be proficient in the diagnosis and management of common diseases of the oral mucosa.

14. Orofacial Infection

The candidates should be proficient in diagnosing and managing infections involving the head and neck regions. This should also include a good understanding of the microbiology, antibiotics and anatomy relevant to orofacial infections.

15. Dental Implant

The candidates should have a good understanding of patient assessment, treatment planning and management of complications for dental implant procedures.

16. Dentofacial Deformity

The candidates should have proficient knowledge in diagnosis, treatment planning, surgical procedures, clinical aspects and management of dentofacial deformity.

17. Maxillofacial Injuries

The candidates should have a good understanding of clinical presentations and management of different types of maxillofacial trauma.

18. Patients with Special Care Needs

The candidates should have proficient knowledge in diagnosis, treatment planning, surgical procedures, clinical aspects and management of patients with special care needs.

Appendix II
Format of The Intermediate Examination
In Oral and Maxillofacial Surgery

1. The intermediate examination in Oral and Maxillofacial Surgery consists of two parts.
2. Candidates are expected to demonstrate competence in the management of medical problems relevant to the practice of Oral and Maxillofacial Surgery.
3. Part one of the examination consists of a 3-hour written paper requiring short answers to multiple questions.
4. Part two of the examination is a clinical viva consisting of multiple pre-set clinical case scenarios. Candidates are expected to demonstrate knowledge and competence in diagnosis, treatment planning, and application of current principles to the management of a range of clinical problems and pathologies.

Appendix III

Scope of The Exit Examination In Oral and Maxillofacial Surgery

The clinical training in oral and maxillofacial surgery should have equipped the trainees with a complete, progressively graduated sequence of outpatient, inpatient and casualty experience. The candidates admitted for the exit examination should demonstrate competence in the full scope of oral and maxillofacial surgery, including up-to-date knowledge and advances in the field. Candidates should be able to demonstrate evidence-based and critical thinking in the management of oral and maxillofacial diseases. The scope of the exit examination in oral and maxillofacial surgery includes, but is not limited to, the topics of the special section in the Intermediate Examination and the following areas as outlined.

1. **Maxillofacial Injuries**

The candidates should be competent in the management of patients suffering from injuries to the maxillofacial region. These include the diagnosis, perioperative care, and treatment of oral and maxillofacial lacerations and fractures.

2. **Temporomandibular Joint Diseases**

The candidates should have a good understanding of the normal physiology and anatomy of the temporomandibular joints in normal and disease states. The candidates should be competent in the diagnosis, and treatment of temporomandibular disorders and diseases. This should include both the surgical and non-surgical modalities.

3. **Orthognathic Surgery**

The candidates should be proficient in the diagnosis of dentofacial deformities and should demonstrate competence in osteotomies of the maxilla and mandible. The candidates should also have a basic understanding of orthodontics related to orthognathic surgery.

4. **Dental Implantology**

The candidates should have a good understanding of the principle of osseointegration, assessment of patients, and be fully competent in the management of atrophic jaws with dental implant surgery. The candidates should also have a basic understanding of the prosthodontic procedures for dental implant insertion.

5. **Pre- prosthetic Surgery**

The candidates should demonstrate competence in the surgical treatment of atrophic jaws with the various major pre-prosthetic surgery, techniques, including relative and absolute augmentation of the jaws and the procedures necessary for preparing patients to receive dental implants.

6. Oncological Diseases

The candidates should have a good understanding of the treatment modalities for tumours of the oral and maxillofacial region, including both benign and malignant diseases. The modalities should include radiotherapy, chemotherapy and surgical options for the different forms of tumours. The candidates should also demonstrate competence in the surgical treatment of at least the benign tumours.

7. Reconstructive Surgery

The candidates should have a good understanding of the common surgical options for reconstruction of the maxillofacial region. These should include bone, soft tissue and nerve reconstructive procedures for the maxilla and mandible. The candidates should also be competent in harvesting autogenous tissue grafts.

8. Syndromic Cases, Cleft Lip and Palate Management

The candidates should have a good understanding of the anatomy, pathogenesis, and treatment modalities for cleft lip and palate deformities as well as syndromic cases with maxillofacial presentations. The treatment modalities should include but not limited to cleft lip and palate repair, alveolar bone grafting, pharyngoplasty, secondary cleft lip nose revision, distraction osteogenesis and cleft osteotomies.

9. Obstructive Sleep apnea

The candidates should have a good understanding of clinical presentation, diagnosis as well as surgical and non-surgical management of obstructive sleep apnea Syndrome.

10. Salivary gland pathologies

Candidates should have a good understanding of aetiology, clinical presentation, diagnosis and management of pathologies involving the major and minor salivary glands. This includes a good understanding presentation and management of infections, obstructive salivary gland diseases, and salivary gland manifestations of systemic diseases.

Appendix IV
Format of The Exit Examination
In Oral and Maxillofacial Surgery

1. The exit examination consists of three parts.
2. Part 1 is a 3-hour written examination with essay-type questions.
3. Part 2 is a clinical examination involving the diagnosis and management of a mix of clinical patients.
4. Part 3 is a 50-minute clinical viva and a 30-minute general viva. This will involve images of clinical materials of one long case and two short cases, with set questions. Candidates are required to submit a set number of log cases which involve patients, to whom they have contributed substantially in their management. These logs are required to be submitted shortly before the examination. They may be required to answer questions raised by examiners on the management of these patients during the clinical viva.



Appendix IV -
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