

GUIDELINES FOR ACCREDITATION AND  
TRAINING IN ORTHODONTICS

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## INDEX

### Introduction

1. Institutional Relationships and Commitments
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

Basic Specialist Training                      Appendix I

Higher Specialist Training                      Appendix II

## **INTRODUCTION**

The clinical specialty of Orthodontics has evolved since beginning of this century as a specialty based on a university dental education.

Orthodontics is that branch of dentistry concerned with the study of growth of the craniofacial complex, the development of occlusion and the treatment of dentofacial deformities. There is also an interface between Orthodontics and Maxillofacial Surgery, Conservative Dentistry, Periodontology and Prosthetics in the adult patients, and Paediatric Dentistry in the younger patients.

At the present time in Hong Kong, a dental degree (BDS) is considered to be the most appropriate preparation for entering a training programme which involves clinical experience appropriate to the specialty in Orthodontics.

## **1. INSTITUTIONAL RELATIONSHIPS AND COMMITMENTS**

Basic and higher specialist orthodontic training in Orthodontics in Hong Kong should be a joint endeavour of the University and the Government Clinics.

The university and government clinics should demonstrate a commitment to the programme 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 recognised within the administrative and clinical structure of the institution and should be consistent with that accorded to other orthodontic programmes internationally.

Clinics sponsoring basic and higher specialist orthodontic training must be accredited by the appropriate Education Committee.

## **2. CURRICULUM AND TRAINING REQUIREMENTS**

The full time specialist training in Orthodontics should be for a minimum duration of 6 years, with an intermediate examination after 4 years followed by a 2-year higher training programme leading to the exit examination.

The programme should consist of a comprehensive study of applied clinical sciences in a graduated sequence of clinical training appropriate to Orthodontics. The full time specialist training in Orthodontics should be for a minimum duration of 6 years, with an intermediate examination after 4 years followed by a 2-year higher training programme leading to the exit examination.

The programme should consist of a comprehensive study of applied clinical sciences in a graduated sequence of clinical training appropriate to Orthodontics.

### **2.1 CURRICULUM**

The curriculum should be constructed on the basis of existing BDS undergraduate course, in Hong Kong, and the additional requirements based upon the intermediate and exit examinations.

The above are based on the following:

- The BDS degree is the basic qualification allowing entry into the basic training programme in Orthodontics.
- Admission to the Higher Specialist Training Programme in Orthodontics will be based on successful completion of the intermediate examination.
- The curriculum should be constantly reviewed and revised in line with changing philosophies or requirements.

### 2.2.1 SEQUENCE OF TRAINING

1. A basic dental degree from the University of Hong Kong or equivalent institution approved by the College will be the entry requirement for the full time basic training in Orthodontics. Candidature in the training programme will only be confirmed after successful completion of Section A, M.Orth.(R.C.S., Ed.), or equivalent.
2. In year 1 of the training programme, the candidate is expected to gain appropriate experience in general/hospital dentistry at the University of Hong Kong, Department of Health Dental Service, or other accredited private practices or institutions.
3. During year 1, the candidate is required to attend lectures, specific or continuing education courses and conferences of no less than 30 CME hours. The candidate must submit evidence of these hours to the Specialty Board in Orthodontics before admission to year 2 of the training programme.
4. Year 2 to year 4 should be a full time, structured, institute based training programme in Orthodontics in approved training institutions.
5. Before entry into the Higher Training Programme, the candidate must have successfully completed the Intermediate Examination in Orthodontics of the College of Dental Surgeons of Hong Kong, which is a conjoint examination with the Membership in Orthodontics of the Royal College of Surgeons of Edinburgh.
6. Year 5 and year 6 of the Programme should be a higher training period in an approved structured programme at a training institute or approved practice in conjunction with a training institute.
7. Before accreditation as a trained specialist, the candidate, having fulfilled all other requirements of specialty training in Orthodontics as determined by the Specialty Board, must successfully complete an exit Examination in Orthodontics conducted by the College of Dental Surgeons of Hong Kong
8. Final exit examination (Appendix II).

### 3. ACADEMIC DEVELOPMENTS AND RESEARCH

It is essential to maintain a University link within the training programme in Orthodontics. This may include the acquisition of a postgraduate master's degree in Orthodontics as an additional option within the programme. This degree course should be structured to include the basic and applied clinical science components, as well as research methods, as currently available within the University.

There should also be a significant commitment to research methods and activities, including experimental studies, investigative laboratory and clinical research and statistical analysis of clinical material.

#### 4. PROGRAMME SUPERVISION AND STAFFING

The supervisor of higher specialist training must be Orthodontics 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 the specialty instruction and supervision should normally be conducted by Orthodontists. 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.
  
- 4.3 Supervisors, as well as 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 education; (2) participation in regional or national orthodontic societies; (3) presentation and publication of scientific studies, and (4) demonstration of an active interest in research as it pertains to their own interests in Orthodontics.
  
- 4.4 Instruction and supervision within the Specialty of Orthodontics must be conducted by individuals who are fully qualified and accredited.  
Orthodontists who are appointed as trainers must have adequate experience and demonstrated competence in the chosen subspecialty for which the appointment is made.

The teaching and supervisory staff should have specific and regularly scheduled sessions. 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 trainees in the higher training programme of Orthodontics, parallels that enunciated by other colleges of the Hong Kong Academy of Medicine:
- a. Each trainee in the higher training programme will be supervised by a trainer in Orthodontics, nominated by the Specialty Board in Orthodontics, in an approved training centre or with the approval of the said Specialty Board, in association with a supervised practice.
  - b. In a supervised practice situation, the trainer and trainee need not work in the same practice. There will be regular contacts between the trainer and the trainee to provide training and advice on patient care, practice management and professional development. The trainee should be attached to a training institute for a minimum of 5 sessions per week.
  - c. The Supervisor will make regular, not less than once every six months, practice visits to the trainee's practice to assess and then give feedback on the practice profile, record keeping and management.
  - d. Supervision and increasing responsibility of trainees should extend to all areas of Orthodontics, including multidisciplinary treatment.
  - e. Trainers must at all times ensure that trainees are not undertaking, at any level of supervision, activities that are beyond their level of competence.

Responsibilities and activities of the trainees should be recommended by the Supervisor of training and based on the following criteria:

1. Performance in the preceding period of training.
2. Log book evidence of training to date.
3. Competence in clinical judgement and techniques.
4. Personal reliability and responsibility.

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

Institutional facilities and resources must be adequate to provide the educational experiences 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 must be properly equipped for performance of all procedures and relevant to Orthodontics.
- 5.2 There must be adequate supply of orthodontic patients of all trainers.
- 5.3 Independent practice approved for Higher Training should also comply with the above requirements.

## **6. CONTINUING EVALUATION OF TRAINEES**

There must be documentation of progressive evaluation and advancement of trainees. The system should assure 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 biannually, evaluates the knowledge, skills and professional growth of its trainees, using appropriate criteria and procedures.
  - c. Provides to trainees an assessment of their performance, at least biannually. More frequent evaluations and documentation of such evaluation 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 undertake more complex cases only on the basis of an evaluation of their readiness.
  - e. Maintains a personal record of evaluation for each trainee which is accessible to the trainee and available for periodic review by an Specialty Board in Orthodontics of the College of Dental Surgeons.
- 6.1 Trainees' performance must be formally evaluated and documented in all aspects of the programme.

## **7. ROTATIONS**

The concept of appropriate during the Higher Training Programme rotations is encouraged on the basis of:

- a. Extending the clinical training and experience of trainees as defined by the minimal clinical requirements, especially where specific strengths or deficiencies are identified with the respective programmes.
- b. Promoting and developing consistent standards and cooperation between programmes.
- c. Developing international relationships and recognition.

Rotations between accredited overseas programmes, with prior approval by the Education Committee of the College of Dental Surgeons of Hong Kong, should normally not exceed six months.

Any programme that rotates trainees to other accredited programmes or affiliated institutions must submit all supplementary documentation to the Specialty Board in Orthodontics.



**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 submit adequate documentation of Organizational and Training Commitments and Trainee status and experience, to the Specialty Board in Orthodontics.

## Appendix I

### Scope of the Intermediate Examination in Orthodontics (Conjoint MorthRCS Ed Examination)

#### Section A

1. Applied anatomy of the head and neck;
2. Growth of the skull and facial skeleton, and associated soft tissues;
3. The physiology and biochemistry of bone growth and remodeling;
4. Normal development of the teeth and jaws;
5. Principles of applied physiology with specific reference to growth and development, respiration, circulation, mastication, deglutition, and speech;
6. The tissue changes associated with tooth movement;
7. Material science relevant to orthodontics.

#### Section B

1. Normal growth and development with particular reference to the craniofacial complex, the dentition and soft tissue morphology;
2. Disorders of growth and development as they affect the above regions in relation to orthodontics; the aetiology of malocclusion and dentofacial deformity;
3. Psychological development and behaviour relevant to orthodontics;
4. Genetics relevant to orthodontics;
5. Variations in the development of occlusion; the recognition of abnormal variation and of the need to take interceptive measures;
6. The diagnosis and treatment of oral disease in children and the relationship between orthodontics and paediatric dentistry; the principles of medical and surgical practice related to the treatment of facial deformity; minor oral surgery in children;
7. The principles of radiography and radiology relevant to orthodontics;
8. Assessment of malocclusion and treatment planning in relation to general and dental health;
9. The construction, use and management of removable, functional and fixed appliances and their underlying mechanical principles;
10. Epidemiology, biometry and medical statistics applicable to orthodontics;
11. Materials used in orthodontics.

## **Appendix II**

### **Scope of the Exit Examination in Orthodontics**

The clinical training in Orthodontics should have equipped the trainees with a complete, progressively graduated sequence of experience. The candidates admitted for the exit examination should demonstrate competence in the full scope of Orthodontics. The scope of the exit examination in Orthodontics is outlined below,

1. The candidate should have comprehensive knowledge of the growth of the craniofacial complex and its variations, adolescent growth and its relationship to somatic growth.
2. The candidate should be fully competent in diagnosis and treatment planning for the child and adult patients in need of orthodontic treatment.
3. The candidate should be competent to:
  - Perform an analytical review of research papers.
  - Prepare a protocol for a research project.
  - Interpret research findings and present them in an oral and written form.
4. The candidate should be familiar with the classification of syndromes and genetic disorders in relation to aetiology, prognosis and implication to orthodontic treatment.
5. The candidate should have extensive knowledge of:
  - Multidisciplinary approaches and especially the role of the orthodontist in the treatment of acquired and hereditary dentofacial deformities including cleft lip and palate.
  - Indication, timing and application of multidisciplinary treatment of cleft lip and palate patients.
  - Methodology in the scientific evaluation of growth and treatment results.
6. The candidate should have thorough knowledge of the aetiology and diagnoses of malocclusion and dento-facial deformities. The candidate should be familiar with the indication, design and use of a wide range of removable, myofunctional, fixed orthodontic and dento-facial orthopaedic appliances. The candidate should be competent to carry out interceptive orthodontic treatment in the developing dentition.
7. The candidate should have a working knowledge of ethics, legislation and management of a practice specialising in Orthodontics.