

## THE COLLEGE OF DENTAL SURGEONS OF HONG KONG

# Guidelines for Accreditation and Training in Community Dentistry

(Approved by the Council of the H.K.A.M. on 21 September 2006)

#### **INDEX**

Fore	eword	. 2
1.	Introduction	. 4
2.	Definition	5
3.	Criteria for Recognition	6
4.	Institutional Relationships and Commitments	9
5.	Pathway Profile, Entry Level and Enrolment	10
6.	Curriculum and Training Requirements	14
7.	Academic Developments and Research	19
8.	Programme Supervision and Staffing	20
9.	Physical Facilities and Resources of an Accredited Training Centre	25
10.	Continuing Evaluation of Trainees	26
11.	Rotations	27
12.	Review	27
13.	Admission of First Fellows	28
Appendix I		29
	cope and Format of the Intermediate Examination in Community Dentistry	36
	cope and Format of the Exit Examination in Community Dentistry	41
Appendix IV		

#### **Foreword**

It is the ethical duty of the dental profession to offer the community the best possible health care that we can provide within the society settings, the societal norms and the constraints of resources.

Provision of the best possible dental care services to the public involves not only the quality of dental care provided by a dentist to a patient on an individual basis in a dental clinic setting, but also the quality of dental services to the community as a whole through organization of the service, appropriate deployment of resources and implementation of community oral health programmes.

Importance of the public health aspects in disease prevention and maintenance of health of the population in Hong Kong is highlighted by the recent outbreaks of new infectious diseases, the setting up of the Centre for Health Protection and the restructuring of the public medical health services.

Oral health is an integral part of general health. It is, therefore, essential that dental care services be integrated into the overall health care system as well. Dental professionals with specialized knowledge and skills in Community Dentistry are needed to address the demand of the dental health concerns in the community. In Hong Kong, the specialty of Community Medicine has long been recognized as an essential element of the medical profession. In fact, the Hong Kong College of Community Medicine is among one of the founding colleges of the Hong Kong Academy of Medicine. Most of those medical practitioners being heavily involved in epidemiology, community health care services and administration of medical services have undergone a prolonged structured specialist training in order to obtain special knowledge and skills which are essential for carrying out their tasks effectively.

The development of the specialty of Community Dentistry follows closely the steps of the medical counterpart. It is essential to nurture dental specialists who are able to carry out the public health aspects of dentistry and to serve the community as a whole. The College of Dental Surgeons of Hong Kong (herein referred to as the College) has designed a vocational training pathway for dentists in the specialty of Community Dentistry. Dentists in Hong Kong are now able to take the initiative to participate in a structured specialist training programme, and become a public health dentist to fulfill the demand of the community.

#### 1. Introduction

Community Dentistry is the branch of dentistry which specializes in the prevention and management of dental diseases in populations, and the promotion of oral health through organized community efforts. It is concerned primarily with the oral health and diseases in populations, serving the community as a whole rather than people on an individual basis. Its chief responsibilities are monitoring the oral health of a population, identifying its oral health needs, providing community dental services, fostering policies that promote oral health, and evaluating oral health services in the community. Thus, it is concerned with the oral health of the public, with applied dental research, with educational and other activities, and with the administration of dental care programmes.

In view of Hong Kong at present, a university dental degree is considered to be the most appropriate preparation for entering a training programme that involves relevant experiences being appropriate to the specialty of Community Dentistry.

#### 2. Definition

Community Dentistry is the specialty of dentistry concerning the promotion of oral health, the prevention of oral diseases, and the provision and administration of oral health and dental care services in defined populations and communities.

The specialty recognizes the role of behavioural and environmental factors as determinants of oral health. The goals of the specialty are to identify and measure the oral health problems and oral health care needs of the community; to identify means by which these needs can be best met within the constraints of resources; to provide and manage services to meet these needs; and to evaluate the extent to which these needs have been met.

In this specialty, epidemiological principles are applied to describe and define dental public health problems, as well as to formulate and evaluate oral health programmes and policies. This approach aims to achieve significant improvements in the oral health of communities as much as individuals. It also aims to advance the oral health of the population through the practice of evidence-based dentistry, and the effective and efficient management of oral health care services and resources.

#### **Chinese Version of Definition**

#### 社會牙醫學

此專科的服務對象以群體或社區爲重點,主要是透過有組織的社區活動去預防及控制口腔疾病,目標是促進個人及社區的口腔健康。社會牙醫學專科醫生了解到行爲及環境也是影響健康的主要因素,他們以流行病學原則去找出社區面對的牙科公共衞生問題,從而制訂和檢討口腔健康政策及計劃;工作內容包括促進公眾的口腔健康,進行實用的牙科科研,舉辦口腔健康教育活動,及管理牙科服務項目。

#### 3. Criteria for Recognition

A registered specialist in Community Dentistry should have the following characteristics:

- he/she has undergone training and assessment in Community Dentistry;
- the major part of his/her practice is in Community Dentistry; and
- he/she is currently of good standing in the specialty of Community Dentistry.

It is our view that Community Dentistry fulfills all nine criteria for recognition as a specialty as laid down by the Hong Kong Academy of Medicine:

#### a) that the specialty is needed in Hong Kong

Specialists in Community Dentistry practise dentistry with special emphasis on preventing and controlling dental diseases, and on promoting oral health through organized community efforts. This is to fulfill the community need and demand of the Hong Kong people.

#### b) that the specialty is new and different to existing specialties

The discipline of Community Dentistry primarily concerns with the oral health and care of populations; as such, its primary concerns are the promotion of oral health and the prevention of oral diseases at population level rather than for individuals. This is entirely different from the other existing specialties within the College of Dental Surgeons of Hong Kong.

c) that the knowledge base and practice involved are broad enough to constitute more than a subspecialty within another specialty

The knowledge base and practice of Community Dentistry is broad and has not been subsumed under any other dental specialties. In the University of Hong Kong, as well as universities in the UK and the USA, a special department or discipline in Community Dentistry or Dental Public Health is established to offer special training in both undergraduate and postgraduate degree courses.

d) that such specialty exists in another country

Community Dentistry exists as a distinct discipline in the dental specialty abroad in many countries. For example in the UK, Dental Public Health (the equivalence of Community Dentistry) is one of the recognized dental specialties and a dentist who obtained a recognized qualification and experience in Dental Public Health can be registered with the General Dental Council as a specialist in Dental Public Health.

e) that the specialty is recognized at the institutional level

At present, there are 1 professor, 1 associate professor and 1 assistant professor in the discipline of Dental Public Health in the Faculty of Dentistry of The University of Hong Kong. There are also senior positions, including consultant, in the Dental Service of the Department of Health of Hong Kong which require the incumbent to have special training in Community Dentistry.

f) that sufficient specialists in that specialty already exist in Hong Kong to make the specialty viable

Among the existing fellows of the College of Dental Surgeons of Hong Kong, there are around 10 fellows who have undergone full specialty training in Community Dentistry. They can join this specialty once it is established within the College. They can also act as trainers for dentists who want to follow the specialist training pathway to become a specialist in Community Dentistry in Hong Kong.

g) that the specialty is viable in private practice

Although the practice of Community Dentistry mainly takes place in the public sector, this may also be exercised by private dentists who manage the dental services in large dental practices and by those who are involved in dental clinical research and provision of community dental services.

h) that the specialty has the administrative support of one or more constituent Colleges of the Academy

The specialty of Community Dentistry will have the administrative support of The College of Dental Surgeons of Hong Kong.

i) that the major part of the postgraduate training and assessment required is unique and different to existing specialties

In parallel with other dental specialties (e.g. Paediatric Dentistry, Orthodontics and Oral and Maxillofacial Surgery), the specialty of Community Dentistry has a defined postgraduate training and assessment programme within The University of Hong Kong. The Royal Colleges of Surgeons in the UK and Ireland have an intercollegiate specialty fellowship board in Dental Public Health for assessing the knowledge and skill of dentists who want to join this specialty.

The objectives for which the specialty of Community Dentistry is established are:-

- to attain and maintain high standards of knowledge, skill and conduct in Community Dentistry;
- 2. to establish and maintain facilities for dental practitioners to further the objects of the specialty;
- 3. to encourage and assist research by its fellows and trainees into dental and other subjects related to Community Dentistry and the publication of literature upon such subjects;
- 4. to encourage and assist persons in undertaking and carrying out training courses and other activities in relation to the specialty; and
- 5. to grant qualifications in recognition of achievement in the field of Community Dentistry.

#### 4. Institutional Relationships and Commitments

Basic and higher training in Community Dentistry in Hong Kong should be a joint endeavor of the Faculty of Dentistry of the University of Hong Kong and the Dental Service of the Department of Health of the Government of the Hong Kong Special Administrative Region.

The University and the Dental Service should demonstrate a commitment to the programme. Respective responsibilities including the provision of teaching staff and trainers, 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 medical and dental programmes, as well as with that accorded to international dental public health programmes.

Institutions sponsoring basic and higher training in Community Dentistry must be accredited by the College.

#### 5. Pathway Profile, Entry Level and Enrolment

BDS(HK) or equivalent

Minimum no. of years of full time training (or equivalent)



#### **<u>Basic Training</u>** (Trainee of CDSHK)

Basic training course

Minimum 4 years training

One year experience in general or community dental practice

One year full-time or equivalent university-based academic training

An additional 2 years approved supervised practice in community dentistry or institution-based training

#### **Intermediate Examination**

Intermediate Examination provided by the Specialty Board in Community Dentistry of the College involving an invited fellow of one of the Royal Colleges of Surgeons in the UK or Ireland as an external examiner

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#### **Higher Training**

Higher training and assessment

Minimum 2 years training

Supervised higher training in community dentistry in accredited training centres

#### **Exit Examination**

FCDSHK (Community Dentistry) & FHKAM (Dental Surgery)

FCDSHK = Fellow of the College of Dental Surgeons of Hong Kong

FHKAM = Fellow of the Hong Kong Academy of Medicine

The specialist training programme in Community Dentistry shall encompass a minimum duration of 6 years, with a basic training leading to an intermediate examination 4 years after enrolment, followed by 2 years of supervised higher training leading to the exit examination. The programme should comprise a comprehensive study of applied clinical sciences, preventive and community dentistry, oral health care services, and management of community dental projects in a graduated sequence of training appropriate to Community Dentistry.

#### 5.1 Training Pathway in Brief

#### **5.1.1** Basic Training (Appendix I)

Four years full-time (or equivalent):

- 1) One year experience in general or community dental practice;
- 2) One year full-time (or equivalent) university-based training leading to a postgraduate diploma or master degree (or equivalent) in Community Dentistry or Dental Public Health, or a master degree in public health with specific dental modules; and
- 3) An additional two years of supervised practice in Community Dentistry in approved institutions or university-based training.

#### 5.1.2 Intermediate Examination (Appendix II)

- 1) A 3-hour written paper;
- 2) Submission of a community dental health project report; and
- 3) An oral examination.

#### **5.1.3** Higher Training

Two years full-time (or equivalent)

- 1) Supervised higher training practices; and
- 2) Guided professional development

#### **5.1.4** Exit Examination (Appendix III)

- 1) Submission of a logbook;
- 2) Submission of a set of reports/papers; and
- 3) An oral examination.

#### 5.2 Entry Level and Enrolment

The training begins with the dentist's enrolment as a trainee of the College.

#### 5.2.1 Entry requirements

- A. To be eligible for the Basic Training, an applicant must
  - have obtained a Bachelor in Dental Surgery degree granted by the University of Hong Kong or equivalent; and
  - be in good standing.
- B. To be eligible to sit for the intermediate examination, an applicant must
  - have obtained a Bachelor in Dental Surgery degree granted by the University of Hong Kong or equivalent; and
  - have completed 4 years of recognised basic training in Community Dentistry.
- C. To be eligible for Higher Training, an applicant must
  - have obtained a Bachelor in Dental Surgery degree granted by the University of Hong Kong or equivalent;
  - have completed 4 years of recognised basic training in Community Dentistry; and
  - have passed the intermediate examination of the Specialty of Community Dentistry or equivalent (Appendix IV).
- D. To be eligible to sit for the exit examination, an applicant must
  - have obtained a Bachelor in Dental Surgery degree granted by the University of Hong Kong or equivalent;
  - have completed 4 years of recognised basic training in Community Dentistry;
  - have passed the intermediate examination of the Specialty of Community Dentistry or equivalent; and
  - have completed 2 years of recognised higher training in Community Dentistry.

Having satisfied the above requirements, and after the approval of the Council of the College of the Dental Surgery and the payment of the necessary levies and dues, the dentist may be formally admitted as a trainee of the College. The trainee shall have the privilege to attend courses organized by the College, to utilize College resources, and to commence the training.

## 5.2.2 Requirement for admission as a Fellow of the College of Dental Surgeons of Hong Kong (Community Dentistry)

At the time of application by a trainee to become a Fellow of the College, the trainee must have passed the exit examination of the Specialty in Community Dentistry.

#### 5.2.3 Overseas qualifications, experience and/or training

Candidates who have obtained overseas qualifications and/or experience will have the qualifications and/or experience assessed on a case by case basis by the Specialty Board of Community Dentistry and to be endorsed by the Education Committee of the College.

#### 6. Curriculum and Training Requirements

#### 6.1 Training Requirements

The specialty full-time training programme in Community Dentistry should encompass a minimum duration of 6 years, with an intermediate examination after 4 years, followed by an 2-year higher training programme and an exit examination.

The training should comprise a comprehensive study of applied clinical and social sciences in a graduated sequence which combines both academic study and practical experience appropriate to the scope of the specialty.

#### 6.2 Curriculum

Curricula should be constructed on the basis of candidates who have completed an undergraduate dental degree course (in Hong Kong or elsewhere) and the additional requirements for the intermediate examination, as well as the documented requirements of the exit examination.

The above concepts are based on the following philosophy:

- that a dental bachelor degree is the basic qualification leading to training in Community Dentistry;
- that entrance to the higher training in Community Dentistry should be based on successful candidature at the intermediate examination; and
- that an integrated educational process is essential, which progresses from the undergraduate level through to postgraduate level. It is such designed to provide an adequate basic followed by higher level training.

Curricula should be reviewed and revised timely to meet contemporary philosophies or requirements.

#### **6.2.1.** Basic Training Programme in Community Dentistry

The basic training must be acquired within the institutions approved for the purpose. Sufficient theoretical and practical experience in Community Dentistry must be demonstrated by successful candidature at the intermediate examination.

A candidate will need to attain formal academic training in the following major areas of Community Dentistry through attendance at lectures and seminars, submission of assignments and supervised practices during the basic training. The specific topics under each broad area can be found in Appendix 1.

- 1. Critical reading and evidence-based dentistry
- 2. Preventive dentistry
- 3. Oral epidemiology and survey methods
- 4. Behavioural sciences in dentistry
- 5. Patient centered assessments and utility studies
- 6. Oral health education and promotion
- 7. Social aspects of oral health
- 8. Management and evaluation of oral health care service
- 9. Clinical trial research methodology
- 10. Use of statistics in dental research

Besides attending formal academic training courses, a candidate also needs to gain practical experiences through active participation in the following community dentistry activities:

- 1. Provision of oral health education to various population groups
- 2. Collection of oral health or dental public health related data and data analysis
- 3. Organization or provision of community dental care services

#### **6.2.2.** Higher Training Programme in Community Dentistry

The higher training programme should provide a complete, progressive sequence of training in the practice of Community Dentistry.

In addition to the provision of teaching and supervising activities of trainees, a sufficient variety of problems should be given to trainees so that they can obtain sufficient exposure to and competence in the full scope of Community Dentistry activities. Completion of training must be demonstrated by successful candidature in the exit examination.

#### 6.3 Fellowship Examinations

The objective of the intermediate examination is to ensure that a trainee in Community Dentistry has the necessary knowledge and supervised experience to proceed to higher training.

The objective of the exit examination is to ensure that a trainee in Community Dentistry has the necessary knowledge and experience to practise independently as a specialist in Community Dentistry.

Candidates will ordinarily be allowed no more than four attempts at either of the Fellowship examinations except at the discretion of the Education Committee of the College. Permission to exceed four attempts will be granted only if the candidate's record shows that he or she is likely to succeed at a subsequent attempt. The Education Committee of the College may endorse a recommendation from the Specialty Board of Community Dentistry to exempt a candidate from all or part of a Fellowship examination. Candidates must pass the exit examination or assessment conducted by the College.

A fee is payable for each attempt of a Fellowship examination. Fees must be paid in full by the published closing date for entry to that examination or a date specified for the candidate by the Education Committee of the College. A fee is required for consideration of any application for exemption from part of a Fellowship examination. The level of fees will be determined by the Education Committee of the College.

Any candidate who withdraws from a Fellowship examination must give notice in writing to the Education Committee of the College. A candidate who withdraws after starting part of a Fellowship examination is considered to have made an attempt at that examination. If the candidate is forced to withdraw from the examination for any reason beyond his or her control, the candidate may apply to the Education Committee of the College for special consideration of his or her case.

#### 6.4 Sequence of Training and Assessment

- 1. One year experience in general or community dental practice.
- 2. Three years full-time (or equivalent) progressive training in approved institutions. Within these three years, at least one year of full-time (or equivalent) university postgraduate training in Community Dentistry or Dental Public Health has to be taken. Before a candidate is allowed to sit for the intermediate examination, he/she has to produce evidence showing that he/she has fulfilled the training requirements.
- 3. An intermediate examination consisting of a written paper, submission of a community dental health project report, and an oral examination in Community Dentistry (Appendix II).
- 4. Two years full-time (or equivalent) higher training in approved institutions. Selection to candidature in the higher training programme is based on success in the intermediate examination. The higher training programme should provide a complete, progressive sequence of training in the practice of Community Dentistry. A candidate has to produce evidence showing that he/she has fulfilled the training requirements before being allowed to sit for the exit examination
- 5. A final exit examination consisting of submission of a community dentistry training logbook, a set of reports/papers, and an oral examination in Community Dentistry (Appendix III).

#### 6.5 Documentation of Training

- 1. The trainee has to keep a detailed training logbook which records all attendance at CME/CPD programmes, work experience, training activities with clinical supervisors and trainers, structured educational programmes attended, certified check-lists of knowledge and skills, learning portfolio and other educational activities.
- 2. The trainers or teachers of each course or programme shall sign the logbook upon the trainee's completion of the course or programme to the satisfaction of the trainer or teacher.
- 3. The trainers should review the trainee's training logbook every six months.
- 4. Formative assessment and feedback on the training between the trainee and his/her trainer should be recorded in the training logbook.
- 5. The training logbook has to be submitted to the Specialty Board of Community Dentistry for assessment annually, and at the end of the Basic Training and the Higher Training.

#### 7. Academic Developments and Research

It is considered essential to maintain a university link within the training programme in Community Dentistry. This academic component may include the acquisition of a postgraduate diploma or a master degree in Community Dentistry or Dental Public Health during the first four years of basic training within the programme. The diploma or degree course should be structured to achieve the basic and applied components as well as research methods in Community Dentistry. The programme currently available at The University of Hong Kong is such an example.

There should also be a significant commitment of the trainee to research methods and activities including experimental studies, clinical research and statistical analysis of appropriate data, whenever possible.

Apart from the taught courses, trainees are encouraged to further their professional and academic developments through other channels. These may include participation in literature review groups, research groups, and dental professional associations.

Trainees should develop and demonstrate ability in critical thinking by means of critical study of the literature and conducting or participating in scientific projects related to Community Dentistry leading to the publication of scientific articles in referred journals.

#### 8. Programme Supervision and Staffing

The supervisor who oversees the whole training process of the specialty pathway of a trainee at an accredited training centre must be a specialist in Community Dentistry nominated by the Specialty Board of Community Dentistry and approved by the Education and Examinations Committee of the College.

The major components of the specialty instruction and supervision should normally be conducted by accredited trainers. Trainers should be nominated by supervisors and must be approved and appointed by the Specialty Board of Community Dentistry.

Both supervisors and trainers must agree to abide by the principles and protocols of the training as defined by the College. They should have a real and demonstrated interest in the teaching and the practice of Community Dentistry. They should provide the necessary time and effort to educational process; and set an example by engaging in scholarly pursuits, for instances, participation in their own continuing professional education and development; participation in regional or national scientific societies; or demonstration of an interest in research, etc.

#### 8.1 Supervisors

A supervisor must be vested with the appropriate authority and time to fulfill administrative and teaching responsibilities in order to achieve the educational goals of the training. In addition, it is the supervisor's responsibility to ensure that trainees upon completing the training have achieved the standards of performance established for the training and for practising at a specialist level.

#### 8.1.1 Appointment Criteria for Supervisors

To be appointed by the Specialty Board of Community Dentistry as a supervisor, the appointee must be:

• a fellow of the Hong Kong Academy of Medicine or equivalent;

- in possession of one or more higher qualification(s) in the specialty of Community Dentistry that is/are approved by the Specialty Board of Community Dentistry;
- working in an accredited training centre;
- willing to devote the equivalence of no less than 3 hours a week to educational activities
  for trainees under his/her supervision, and fulfill the roles and responsibilities of a
  supervisor as required by the Specialty Board of Community Dentistry;
- having experience or professed interest in training and is prepared to participate in training activities; and
- prepared to provide formative assessments and feedback to trainees.

#### 8.1.2 Roles and Responsibilities of Supervisors

The supervisor must ensure that the following responsibilities are properly carried out:

- selection of trainees;
- nomination of trainers;
- acting as an "anchor" and personal advisor for trainees throughout the whole training including basic and higher training;
- development and implementation of curriculum for individual trainee;
- ongoing monitoring of programme content, training process, and trainees' performance;
- programme administration;
- planning and operation of facilities used in the educational programmes;
- evaluation of trainee's supervision and activities in affiliated institutions;
- maintenance of records related to educational programmes; and
- submitting a formative assessment report on the performance of trainees to the Specialty Board of Community Dentistry on a regular basis.

#### 8.2 Trainers

#### **8.2.1** Appointment Criteria for Trainers

To be appointed by the Specialty Board of Community Dentistry as a trainer, the appointee must be:

- a Fellow of the Hong Kong Academy of Medicine, or the College, or a college recognized by the College as equivalent;
- having adequate experience and demonstrated competence in the chosen training programme for which the appointment is made;
- prepared to fulfill the roles and responsibilities of a trainer as required by the Specialty
   Board of Community Dentistry;
- prepared to provide regular advice and support to trainees' learning during the course of training;
- prepared to attend teacher training activities; and
- prepared to report to the trainees' supervisors and the Specialty Board of Community Dentistry on the trainees' progress in training.

#### **8.2.2** Roles and Responsibilities of Trainers

A trainer should carry out the following roles and responsibilities under the specific training programme:

- being the expert who provides trainees with general and overall guidance in training and self-learning;
- help trainees to identify their own competence and deficiencies so as to formulate learning plans accordingly;
- monitor the progress of the trainees' training to ensure that they are meeting the requirements of the programme;
- give formative assessment and feedback to trainees periodically and at least once every six months;
- monitor the learning of trainees including the higher training modules and areas in professional development; and
- submit formal assessment reports on the performance of trainees to the trainee's supervisors who will then forward them to the Specialty Board of Community Dentistry.

#### 8.3 Staffing and Administrative Arrangements

The number and time commitment of the trainers should be sufficient to ensure:

- continuity of instruction;
- exposure of trainees to a broad range of theoretical and practical problems as well as solutions;
- trainer participation in all continuing education activities, including conferences and seminars; and
- adequate supervision and review of all activities. The degree of supervision should be related to the aptitude and experience of individual trainee. In the early years of higher training, a maximum of three trainees should be under the immediate supervision of one trainer.

The appointment period of supervisors and trainers may range from six months to six years subject to renewal and termination at the discretion of the Special Board of Community Dentistry.

The teaching and supervisory staff should have specific and regularly scheduled sessions. There should be regular sessions for presentation of projects and participation in peer review.

It is recommended that trainers should be evaluated annually to determine the quality of their performance. While supervisors must be responsible for teaching staff evaluation, it is highly desirable that trainees also participate in this process.

#### 8.4 Privileges and Responsibilities of Higher Trainees

The policy regarding privileges and responsibilities for higher trainees parallels that enunciated by the Colleges of the Academy of Medicine, namely:

- 1. Higher 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 personal competence;
- 2. Trainees should be allowed to work independently commensurate with their level of training and with their personal skills;
- 3. Supervisors must at all times ensure that trainees are not undertaking, at any level of supervision, activities that are beyond their level or competence; and

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

- performance in the preceding period of training;
- logbook evidence of training to date;
- competence in project management and research technique; and
- personal reliability and responsibility.

#### 9. Physical Facilities and Resources of an Accredited Training Centre

Institutional facilities and resources must be adequate to provide the educational experiences and opportunities required to fulfill the needs of the educational programmes. These include, but are not limited to, facilities and personnel resources for trainees to carry out their practice in Community Dentistry and personal educational responsibilities, administrative offices, and an adequate library providing access to standard reference texts and current journals and sufficient space for instruction.

There must be adequate resources available to provide for the required scope of activities in Community Dentistry.

#### 9.1 Educational Resource Base

It is a commitment of every accredited training institution to contribute fully to the development of an educational resource data base. This will include:

- documentation and periodic review of all facilities and resources;
- continued development and ready access to advanced educational materials and statistical advice;
- availability of relevant material from special courses and conferences; and
- periodic evaluation of the log of Community Dentistry activities.

#### An accredited Training Centre must:

- be one which provides a wide range of clinical or public health services;
- agree to comply with all the training requirements of the programme;
- have sufficient trainers recognized by the Specialty Board of Community Dentistry;
- be inspected and recognized by the Specialty Board of Community Dentistry for the purpose of training in Community Dentistry; and
- be inspected at least once every 5 years.

#### 10. Continuing Evaluation of Trainees

There must be documentation of progressive evaluation and advancement of trainees. The system should assure that, through supervisors of the training, each programme:

- progressively assesses the accumulated log of activities, which are maintained by all trainees in the approved logbook;
- periodically, at least biannually, evaluates the knowledge, skills and professional growth of its trainees, using appropriate criteria and procedures;
- provides to trainees an assessment of their performance, at least biannually. More
  frequent appraisals and documentation of such evaluation should, nevertheless, be made
  if it is determined that a trainee may not be properly motivated or eligible for
  advancement or retention in the programme;
- advances trainees to positions of higher responsibility only on the basis of an evaluation of their readiness for advancement; and
- maintains a personal record of periodic review by the Specialty Board of Community Dentistry.

Trainees' performance must be formally evaluated and documented in each of the following competency areas:

- 1. Dental health programme management and administration;
- 2. Research in Community Dentistry;
- 3. Oral health promotion and disease prevention; and
- 4. Oral health care services delivery.

#### 11. Rotations

The concept of appropriate rotations is encouraged on the basis of:

- extending the practical training and experience of trainees;
- promoting and developing consistent standards and co-operation between programmes;
   and
- developing international relationship and recognitions.

Rotations between accredited programmes should not be confined to Hong Kong. The duration of any single rotation should normally not exceed six months. More than one rotation within the 6-year period is allowed.

Any programme that rotates trainees to other accredited programmes or affiliated institutions must submit all supplementary documentation to the Specialty Board of Community Dentistry and prior approval from the Board should be obtained.

#### 12. Review

Each programme must be regularly evaluated regarding the extent to which its goals are being achieved through internal assessment.

It is also essential that each programme should be submitted with adequate documentation to the Specialty Board of Community Dentistry.

#### 13. Admission of First Fellows

To be eligible for admission as a First Fellow in the specialty of Community Dentistry, the applicant must satisfy all of the followings:

- a) be a Fellow of the Hong Kong Academy of Medicine;
- b) has satisfied the College that his training and/or clinical competence is comparable in quality and standard to be required for a Fellow in Community Dentistry;
- c) has satisfied the College that he has a minimum period of 12 years of good practice in the field of Community Dentistry. The standard of such practice or supervision must be assessed as satisfactory by the College for the purpose of accreditation; and
- d) has passed an assessment by the College. The assessment shall be based on criteria comparable to that required for Fellowship in Community Dentistry obtained via the approved formal training programme. The assessment should preferably be conducted by a panel consisting of at least one external independent member.

The Colleges shall cease to admit First Fellows in the specialty of Community Dentistry when the formal training programme in Community Dentistry has started which will be within 24 months after approval of the new specialty of Community Dentistry by the Council of the Hong Kong Academy of Medicine.

#### **Appendix I**

### Programme Content of the Academic Basic Training in Community Dentistry

#### Area 1: Critical reading and evidence-based dentistry

- Information retrieval: use of library, locating information in electronic databases including the internet, perform literature search on the common databases such as the Medline Database and Crochrane Library.
- Critical reading of dental literature: the basic structure of a scientific article, assessment of the quality of published articles or materials, presentation of essential information in epidemiological and clinical study report, CONSORT statement.
- Evidence-based dental practice: different types of epidemiological studies; descriptive studies, survey, cohort study, trend study; analytical studies, ecological study, casecontrol study, phases of clinical trial; level of clinical evidence, randomized controlled trial, systematic review.

#### Area 2: Preventive dentistry

- Principles of prevention: determinants of health and disease, individual and collective measures in disease prevention, primary prevention, secondary prevention, tertiary prevention, health screening.
- Cariology: structure of dental hard tissues, aetiology of dental caries, pathology of dental caries; detection and diagnosis of dental caries
- Prevention of dental caries: plaque control measures, self-care oral hygiene practices, professional prophylaxis, use of antiseptics; dietary measures, modification of dietary and feeding habits, use of sugar substitutes; tooth protection, use of fissure sealants; systemic use of fluorides, water fluoridation, salt fluoridation, milk fluoridation, fluoride tablet and drop; topical use of fluorides, fluoride toothpaste, fluoride gel, fluoride varnish, fluoride

mouthrinse; mechanisms of fluoride action, demineralization and remineralization of dental hard tissues, effect on plaque, pre-eruptive and post-eruptive effects; minimally invasive dentistry, caries arrest treatment, conservative treatment for caries, preventive resin restoration, atraumatic restorative treatment.

- Basic periodontology: structure of the healthy and diseased periodontium, aetiology of periodontal diseases, pathology of periodontal diseases, classification of periodontal diseases; detection and diagnosis of periodontal diseases.
- Prevention of periodontal diseases: mechanical plaque control measures, self-care oral hygiene practices, manual toothbrush, powered toothbrush, dental floss, professional prophylaxis; use of antiseptics, medicated toothpaste, antiseptic mouthrinse.
- Prevention of other oral diseases and problems: prevention of dental injury, use of mouthguard; prevention of oral cancer and mucosal lesions, tobacco use and oral health, betel nut chewing; systemic diseases and oral health.

#### Area 3: Oral epidemiology and survey methods

- Oral health survey: path-finder survey, regional survey, national survey; sampling and recruitment of study subjects, non-probability and probability samples, sampling frame, sampling methods, handling non-response; collection of qualitative and quantitative data.
- Measurement of dental caries: laboratory and clinical diagnosis of caries, concept of caries experience, the DMFT index, root caries index, other caries indices.
- Epidemiology of dental caries: prevalence and severity of dental caries in Hong Kong and globally, World Health Organization global oral health databank; trends in dental caries; distribution of caries in population groups; factors associated with dental caries, caries risk models.
- Measurement of oral hygiene and periodontal condition: oral hygiene indices, plaque indices, periodontal indices, the CPI index

- Epidemiology of periodontal diseases: prevalence and severity of periodontal diseases in Hong Kong and globally, World Health Organization global oral health databank; distribution of various types of periodontal diseases in population groups; factors associated with various types of periodontal diseases, periodontal disease risk models.
- Measurement and epidemiology of enamel defects: opacities, hypoplasia, discolouration; the DDE index, Dean's fluorosis index, other fluorosis indices; distribution of various types of enamel defects in population groups; factors associated with various types of enamel defects.
- Measurement and epidemiology of malocclusion: the dental aesthetics index, the index of orthodontic treatment need; distribution of various forms of malocclusion and orthodontic treatment need in population groups.
- Measurement and epidemiology of oral mucosal lesions: recording mucosal lesions in epidemiological studies; distribution of various types of mucosal lesions in population groups; factors associated with various types of mucosal lesions.
- Measurement and epidemiology of tooth wear: attrition, abrasion, erosion; tooth wear index; distribution of various types of tooth wear in population groups; factors associated with various types of tooth wear.
- Use of questionnaires in surveys: question designs; measuring knowledge and attitudes;
   translation and validation; construction of an index; handling non-response and
   incomplete questionnaires, analyzing data from questionnaires.

#### Area 4: Behavioural sciences in dentistry

- Basic psychology: different schools of psychology; developmental psychology; motivation and motivating people.
- Communications in dental practice: interviews and consultation, information giving, breaking bad news, communication with children and special groups; use of audio-visual aids.
- Teaching and learning: perception, different domains of learning, development of psycho-motor skill, supporting good habit development, individual and group learning.
- Psychology of pain and dental fear: pain perception and pain reaction; anxiety, fear, phobia, stress, coping strategies; behavioural management of dental pain and dental fear.

#### Area 5: Patient centered assessments and utility studies

- Patient-centered measures: concepts of health and illness, health beliefs and explanatory models, oral health care needs, satisfaction, quality of life, oral-health related quality of life measures.
- Utilization of dental services: use of dental services, pattern of use; dentist-patient interaction and relationship; satisfaction with dental care, barriers to dental care use.
- Oral health economics: cost-benefit analysis, cost-effectiveness analysis, cost-efficiency, health care utility analysis; implementing economic analysis in oral health.

#### Area 6: Oral health education and promotion

- Oral health education: methods to influence people's oral health knowledge and behaviours, factors affecting the outcome of oral health education activities, evaluation of oral health education materials and programmes.
- Oral health promotion: the primary health care approach, appropriateness of the primary health care approach for oral health, environmental hazards for oral diseases, responsibility of the government, the role of legislative and social policy measures.
- Planning and evaluating oral health promotion activities.

#### Area 7: Social aspects of oral health

- Medical sociology: concepts of health and oral health, the medical and social models of health, illness as a social role, evolution of dental public health.
- Social factors in oral health: social inequalities, ethnicity, gender and age differences in oral health, transcultural oral health.
- Equality, equity and policy: concepts of oral health care needs, social justice and priority, financial and human resources allocation, oral health care for special needs groups.

#### Area 8: Management and evaluation of oral health care services

- The dental profession: history and development, role of oral health care in the general health care services, regulation and monitoring, oral health care systems in different countries.
- Understanding oral health care system: structure and organization, manpower training and distribution, financing oral health care.
- The oral health care system in Hong Kong: private and public oral health care services, the government dental care services, the School Dental Care Service, health maintenance organizations, role of various non-governmental organizations, role of international health organizations.
- Managing oral health care services: manpower planning and management, job design and appraisal, project planning and management, medical audit, patient and consumer satisfaction, appropriateness and adequacy of services; health services informatics.

#### Area 9: Clinical trial research methodology

- Types of clinical trial: historical comparison, parallel group study, multi-factorial design, cross-over study, split-mouth design.
- Preparations for a clinical trial: protocol writing, sample size calculation, recruitment of trial subjects, selection of outcome measures, ethical considerations and approval, pilot testing.
- Good clinical practice for clinical trials: control of error and bias, calibration of
  measurement tools and examiners, masking of examiners and operators, random
  allocation of subjects and concealment of information, use of control, proper
  documentation and reporting.

#### Area 10: Use of statistics in dental research

- Principles: probability concepts and sampling distributions, estimation and confidence intervals, random samples and sampling methods, making inference from a sample to a population, performing statistical tests, hypothesis testing, sample size and statistical power.
- Descriptive statistics: measures for summarizing and displaying data, mean, median, standard deviation, percentiles, proportions, graphs, tables; data transformation, construction of summary scores and indices.
- Statistical methods in data analysis: measuring association and consistency, odds ratios, relative risks, linear regression; non-parametric statistical tests for comparing groups, chi-squared test for contingency table; parametric tests for comparing groups, t-test, analysis of variance; survival analysis; multivariable analysis, multiple linear regression, logistic regression; multi-level data structure and proper statistical analysis.
- Interpretation of study findings: drawing appropriate conclusions from quantitative research, explanation of findings in non-statistical language, drawing distinctions between clinical and statistical significance, critical evaluation of the validity of the use of statistical techniques in published papers; reading systematic reviews and results of meta-analysis.

#### **Appendix II**

## Scope and Format of the Intermediate Examination in Community Dentistry

The scope of this examination covers broadly the areas and topics learned in the basic training in Community Dentistry and the expected practical experience skill gained by trainees through the active participation in community dental health programmes.

To ensure the achievement of international standard by the candidates, a fellow in Community Dentistry of one of the Royal Colleges of Surgeons in the UK or Ireland will be invited to be an external examiner of the Intermediate Examination in Community Dentistry.

The intermediate examination consists of three parts, (1) a written examination, (2) submission of a community dental health project report; and (3) an oral examination. Candidates will be required to satisfy the examiners in all three parts of the examination which covers a range of topics in relation to the principles and practice of Community Dentistry. These are listed below to assist the candidate in preparing for this examination.

- 1. Oral health policy and programme management and administration
  - Oral health programme planning
  - Oral health programme implementation
  - Oral health programme evaluation
  - General skills and knowledge in programme management and administration
  - Quality assurance and risk management
  - Oral health policy

#### 2. Research methods in Community Dentistry

- Literature evaluation, scientific writing, and information management
- Planning, implementing, and conducting research
- Appropriate use of statistics
- Observational studies
- Experimental studies
- Health services research and health policy analysis

- Ethics in dental public health research
- 3. Oral epidemiology and disease prevention
  - Measurement of oral health status
  - Epidemiology of oral health status and diseases
  - General principles of health promotion and disease prevention
  - Prevention of oral diseases
  - Promoting oral health through implementation of oral health programmes
  - Critical review of oral health promotion and disease prevention measures
  - Occupational and environmental health and safety in relation to dentistry
- 4. Oral health services delivery system
  - Consumers, demand and utilization of oral health care services
  - Consumers, satisfaction with oral health care services
  - Oral health care services personnel
  - Financing and reimbursement of oral health services
  - Organizational structures of oral health services
  - Professionalism and ethics in the delivery of oral health services
- 5. Effective communication and oral health education
  - Oral health promotion and oral health education
  - Appropriate skills in written, oral and non-verbal communication
  - Appropriate skills in influencing and motivating people
  - Appropriate counseling and listening skills
  - Media skills (TV/ radio/ press)

The level of competency expected in the examination will be commensurate with the intermediate character of the examination, i.e. good knowledge and understanding will be expected in all areas, whereas practical skills will be expected in some, but not all areas.

#### Part 1 - written examination

Part 1 is a written examination designed to test the candidate's knowledge and understanding of the scientific basis of Community Dentistry as well as the knowledge pertinent to the practice of Community Dentistry in Hong Kong.

The written examination consists of a 3-hour paper. The candidate will be asked to answer no less than six short-essay type questions, each covering a different topic in Community Dentistry. Each question will be graded independently and an overall impression grade will be given. An overall pass will be awarded if a passing grade is obtained in over 70% of the questions and the overall impression grade is pass or above. Compensation across different questions is allowed.

#### Part 2 - community dental health project report

The candidate is required to submit a report of around 4,000 words on a project in community dental health which he/she has conducted. A basic trainee is allowed to choose the topic of his/her project but it has to be within the board field of Community Dentistry and agreed upon by the supervisor.

The submission must be presented in a form prescribed by the Specialty Board. If the work has involved other colleagues, the contribution of the candidate must be explicitly stated.

The followings are guidelines intended to assist the candidates in how best to present their work. These headings are not mandatory and they may not all be relevant to all types of project. Candidates are expected to show discretion in selecting the appropriate format for their reports.

#### (i) Abstract

The abstract should include a brief statement of the purposes of the study, the methods used, key findings or outcomes and the conclusions.

#### (ii) Background or problem identification

There should be a description of the general and specific background to the problem under study, including the local demographic, social and environmental characteristics. When appropriate, the epidemiology of particular oral health conditions, or the delivery of a specific dental health care service should be described. A concise critical review of relevant literature should also be included.

#### (iii) Project aims and objectives

Clear statements of the aims and objectives of the dental community health project should be given. If appropriate, specific hypothesis of the investigation should be stated.

#### (iv) Study methods and materials

A clear description of the study population, sampling and recruitment procedures should be given when appropriate. The methods of data collection, equipment used and data analysis should be included. In clinical intervention studies, the intervention procedures, the materials used, subject group assignment, and measures to reduce bias should be described.

#### (iv) Results of investigation

Results on the response rate, and drop-outs in case of a longitudinal study should be given. Summary of the data collected and the main findings should be clearly presented in form of text, tables and/or diagrams.

#### (vi) Discussion and interpretation

This section should include a critical account of reliability/validity of data, possible sources of bias, problems encountered in obtaining the data and how they were overcome comparison of the main findings with results of other studies. The rationale for choosing the study methods and their strengths and weaknesses should be discussed. Where appropriate, a comparison of the study findings with those obtained in other studies should be given. There should be interpretations and explanations of the main findings. The implication of the main findings on clinical practice, community dental health services, and oral health policy should be discussed.

#### (vii) Conclusions and recommendations

Conclusions in relation to the study objectives and supported by the study findings should be clearly stated. Justified recommendations to various people and authorities may be given.

The Chairman of the Board of Examiners may reject without assessment any submission which does not comply with the regulations. A rejected submission will normally be counted as a failed attempt at the examination.

#### Part 3 – oral examination

An oral examination on the topic of the candidate's submitted community dental health project report and related issues will be held. In the oral examination, the role played by the candidate in the project will be ascertained, as well as the skill and knowledge in Community Dentistry learned through conducting the project. The ability of the candidate to discuss issues in Community Dentistry, particularly in Hong Kong, will be assessed.

The Board of Examiners may decide to compensate for a borderline community dental health project report on a satisfactory performance in the oral examination. To pass the oral examination, the candidate must be able to express, present, and demonstrate the possession of the most up-to-date knowledge of the issues being raised by the examiners.

#### **Overall assessment**

In order to pass the intermediate examination, a candidate has to satisfy the examiners in all three parts of the examination, i.e. obtain at least a pass grade in each part of the examination.

Candidates whose written submission reaches the required standard but whose performance at the oral examination is inadequate will not be required to submit further written work in the next attempt of the intermediate examination. If they wish to re-enter the examination, they will be required to re-attend an oral examination within two years unless they have obtained consent of the Education Committee of the College to extend this period.

#### **Appendix III**

#### Scope and Format of the Exit Examination in Community Dentistry

The exit examination consists of three parts, (1) submission of a logbook, (2) submission of a set of reports/papers; and (3) an oral examination. A candidate is required to satisfy the examiners in all of the following competency areas. Essentially, the competency areas are identical to those examined at the intermediate examination. However, at the exit examination the candidate must demonstrate in-depth knowledge, understanding, experience and competency required at the specialist level of Community Dentistry. Outcome goals in the following areas are listed to assist candidate in seeking training, experience and preparation for the examination.

#### 1. Oral health policy and programme management and administration

- A specialist in Community Dentistry will have an understanding of and be able to apply concepts involved in the planning, implementation, operation and evaluation of dental public health programmes.
- To manage oral health programmes and assume a leadership role in public health, a specialist must possess technical skills in a number of areas, including planning, marketing, communications, human resources management, financial management, advocacy building, management of information and evaluation, quality assurance as well as risk management.
- A specialist will also have an understanding of the processes through which health policies are developed and regulated.

#### 2. Research in Community Dentistry

- A specialist in Community Dentistry will have an understanding of the basic concepts
  of planning, implementing and conducting observational studies, experimental studies,
  health services research and policy analysis.
- A specialist will have knowledge of and skills in research design, biostatistics as well as both general and oral-facial epidemiology.
- A specialist will be able to perform critical evaluations of the scientific literature,
   prepare scientific reports, and have an understanding of the content of research
   protocols for the conduct of scientific studies in Community Dentistry.

• Finally, a specialist will have an understanding of the ethical issues in the design and conduct of research in Community Dentistry.

#### 3. Oral health promotion, oral health education and disease prevention

- A specialist in Community Dentistry will have an understanding of the general concepts on which oral health promotion and disease prevention are based; be familiar with approaches to measure oral health and diseases, promote oral health promotion and prevent oral disease and related conditions; and be able to demonstrate knowledge of planning, implementation, and evaluation of oral health promotion and disease prevention programmes.
- A specialist will be able to implement and critically evaluate oral health education programmes and be familiar with the various means through which oral health education activities can be conducted, including the mass media.
- Finally, a specialist will be able to critically evaluate preventive technologies for adoption and use in oral health programmes and be familiar with current research activities in oral health promotion and disease prevention.

#### 4. Management of oral health services

- A specialist in Community Dentistry will be able to demonstrate knowledge about each of the elements of the oral health services delivery system, including consumers of oral health services, the practitioners who provide these services, the actual services resulting from the interaction of consumers and practitioners, both public and private, methods through which services are financed and reimbursed, purchasers of services, organizational configuration through which services are delivered, and the facilities in which they are delivered.
- A specialist will be able to integrate and organize knowledge of the oral health services delivery system for the solution of oral health problems in the community.
- Finally, a specialist will be able to identify consumer groups as well as dental and public health professional organizations being important in the delivery of oral health services; have an understanding of the history and tradition of dentistry; and have an understanding of and be able to apply professional and ethical standards in the planning, delivery and promotion of oral health services.

#### Part 1 - logbook

The candidate is required to submit a logbook which will comprise annotated accounts of the activities in relation to the training in Community Dentistry. These accounts should be presented in chronological order. The logbook should be certified by the candidate's supervisor to state that the candidate has sufficient participation in the activities listed in the logbook. Unsigned logbooks will not be accepted.

The logbook will be studied in advance by the panel of examiners and will form part of the oral examination.

The followings are items that may be included in the logbook. The information in the logbook should be compiled in a way that is appropriate to the trainee's work.

- curriculum vitae
- details of employment during traineeship
- details of relevant experience in Community Dentistry prior to traineeship
- details of further courses / training session / conferences attended during traineeship
- details of any other academic or professional qualifications obtained during traineeship
- details of any publications produced during traineeship
- examples of involvement in policies / procedures / guideline development for organisations with details of the trainee's specific input
- details of any teaching or involvement in course development for Community Dentistry
- summaries of presentations made at meetings or conferences
- other miscellaneous Community Dentistry activities not included in the above sections
- copies of records of CME/CPD points gained during the training programme

#### Part 2 – reports/papers

The candidate is required to submit a set of reports and/or papers (not less than two and not more than six) in the field of Community Dentistry. The overall maximum number of words for the set of reports and papers will be 20,000. The submitted reports and papers should be certified by the candidate's supervisor to state that the candidate has sufficient participation in the projects and is the author or one of the leading authors of the reports or papers.

The set of reports/papers will be studied in advance by the panel of examiners and will form part of the oral examination.

#### Part 3 – oral examination

An oral examination will be held to assess in greater depth the details of the submitted logbook and reports/papers. The oral examination will also test the candidate's ability to respond verbally to problems associated with the practice of Community Dentistry in Hong Kong. Different aspects of the practice of Community Dentistry may be covered in the examination, including the current developments in the specialty and the candidate's contribution to the specialty.

The duration of the oral examination will normally be no more than one and a half hours.

To pass the oral examination, the candidate must be able to express, present, and demonstrate the possession of the most up-to-date knowledge of the issues being raised by the examiners.

#### **Overall assessment**

In order to pass the exit examination, a candidate has to satisfy the examiners in all three parts of the examination, i.e. obtain at least a pass grade in each part of the examination. The candidate should not be examined/assessed by the designated supervisor/trainer at the Exit Examination.

Candidates whose written submission reaches the required standard but whose performance at the oral examination is inadequate will not be required to submit further written work in the next attempt of the examination. If they wish to re-enter the examination, they will be required to re-attend an oral examination within twelve months unless they have obtained consent of the Education Committee of the College to extend this period.

#### **Appendix IV**

#### List of Overseas Qualifications Regarded as Equivalent for Having Passed the Intermediate Examination in Community Dentistry

As there are many higher dental specialist qualifications in various countries in the world, it is not possible to draw up an exhaustive list of overseas qualifications that can be regarded as equivalent for having passed the Intermediate Examination in Community Dentistry for the purpose of fulfilling the requirements in the training pathway for the specialty of Community Dentistry. Applications will be assessed individually by the Council of the College of Dental Surgery. The following are examples of the more common qualifications.

#### Australia and New Zealand

- Fellow of the Royal Australasian College of Dental Surgeons, having Dental Public Health as the specialty paper in the exit examination

#### The United Kingdom and Ireland

- Diploma in Dental Public Health, Royal College of Surgeons (England)
- Fellow in Dental Surgery (Dental Public Health) in any one of the following four Colleges:

Royal College of Surgeons of England,

Royal College of Physicians and Surgeons of Glasgow,

Royal College of Surgeons of Edinburgh

Royal College of Surgeons in Ireland

#### The United States of America

- Diplomate, American Board of Public Health Dentistry