

# HONG KONG COLLEGE OF RADIOLOGISTS

## GUIDELINES ON HIGHER SPECIALIST TRAINING (RADIOLOGY)

[This document should be read in conjunction with the Training Regulations, Working Principles for Accreditation of Training Centres and Conduction of Training Programmes, and the Guidelines on General Radiology Training.]

### 1. General Aspects

1.1 In this document and all documents on “Higher Specialist Training (Radiology): Subspecialty Training of various subspecialties”, the following interpretation applies:

- “*Subspecialty Training*” = training for knowledge and skill in a subspecialty, and not attaining training for subspecialty accreditation
- “*Trainer*” = a Fellow of the Hong Kong College of Radiologists, or equivalent
- “*Co-trainer*” = a radiologist other than a Fellow of Hong Kong College of Radiologists, but approved by the Hong Kong College of Radiologists to provide training supervision to trainees under specified conditions. A Co-trainer has the role to supervise trainees on daily training activities but cannot replace the role of Trainers in the overall supervision for trainees throughout the training period. All Co-trainers of the training centre need to be vetted and approved by the College.
- “*Subspecialty Trainer*” = a Fellow of the Hong Kong College of Radiologists or equivalent, and recognized by the Hong Kong College of Radiologists to be eligible to supervise the Higher Training trainees for training in specific subspecialty (see 3.8)
- “*Subspecialty Co-trainer*” = a Fellow of the Hong Kong College of Radiologists or equivalent, or a radiologist recognized by the Hong Kong College of Radiologists to be eligible to supervise the Higher Training trainees for training in specific subspecialty under specified conditions (see 3.9)
- “*Trainee*” = a medical doctor registered as trainee with the Hong Kong College of Radiologists

1.2 Objectives of Higher Specialist Training:

- (a) To engage in subspecialty-based structured training with initiation towards subspecialty development
- (b) To establish the capability of independent practice in general radiology
- (c) To be well versed in various imaging modalities to be an effective member of a team in the multidisciplinary approach on patient care
- (d) To develop appropriate professional maturity and attitude
- (e) To be motivated towards continuous professional development
- (f) To engage in teaching activities to gather experience to develop as future trainer

- (g) To participate in management and planning activities with exposure to resource management and enhanced awareness in clinical management strategies
- (h) To engage in research projects and presentations (Also see point 1.8)
- (i) To acquire basic concept of quality improvement and clinical audit
- (j) To acquire knowledge of critical appraisal of literature

1.3 The following should be stressed in higher specialist training:

- (a) Practical experience
- (b) In-depth knowledge and skill
- (c) Increased responsibility
- (d) Independent thinking and problem solving
- (e) Familiarity with the appropriate problem-orientated clinical guidelines and procedural protocols

1.4 The 2 years of Higher Specialist Training should include the following components:

- (a) General Radiology Training
- (b) Higher Subspecialty Training
- (c) Training in relevant attributes: management, audit, quality assurance, research, medicolegal, communication, resource management, etc.

1.5 For a broad knowledge-based exposure, the 2 years of training should comply with the following criteria:

- (a) minimum of 9 months fulltime training in General Radiology, including 1 month of PET-CT training;
- (b) minimum of two Category A Subspecialty subjects;
- (c) remaining period: General Radiology or Subspecialty training in any categories;
- (d) minimum of 6 months training in one Category A Subspecialty subject;
- (e) minimum of 3 months training in each of the other Subspecialty subjects.
- (f) the training period for a Subspecialty can be split into separate periods during Higher Specialist Training, but each training period should be in blocks of 3 months or more in duration.

1.6 **Subspecialty Training** is categorized as follows:

1.6.1 **Category A:** well-recognized radiology subspecialties, in terms of body systems or population subgroups, or interventional procedures such as Paediatric Radiology, Oncologic Radiology, Musculoskeletal Radiology, Diagnostic Neuroradiology, Interventional Neuroradiology, Vascular & Interventional Radiology, Thoracic Radiology, Gastrointestinal & Hepatobiliary Radiology, Head & Neck Radiology, Breast Radiology, Cardiovascular Imaging, and Obstetrics & Gynaecology Radiology.

1.6.2 **Category B:** technique-based subspecialties -- Ultrasonography, CT, MRI,

## Radionuclide Imaging.

- 1.7 All training programmes (General Radiology Training or Subspecialty Training) must be accredited by the College.
- 1.8 Part of the training can be conducted in satellite facilities of the accredited training centre. The requirements are delineated in the Working Principles for Accreditation of Training Centres and Conduction of Training Programmes.
- 1.9 Trainees may apply for recognition of external training activities as part of accredited training. The requirements are delineated in the Working Principles for Accreditation of Training Centres and Conduction of Training Programmes. A list of pre-approved external training activities would be provided by the College to Training Centres on regular basis. It can also be obtained from the College upon written request.
- 1.10 During the entire period of Basic and Higher Specialist Training, trainees should participate actively in research activities. At least one project must be accepted at College scientific meetings, or regional / international scientific conferences with the trainee as the oral presenter or first author of a poster presentation; and at least one radiological / oncological / nuclear medicine article with the trainee as the first author, must be published / accepted for publication in the Journal of the College or other indexed medical journals.
- 1.11 Within an accredited Specialist Training Programme of the College, a trainee may attach to another Specialty of the College to broaden his/her training exposure and to fulfil the training requirements. When individual trainee undergoes the accredited Cross-Specialty training arrangement, he/she should be supervised by the accredited Trainer(s) or Co-trainer(s) of the attached accredited Training Centre under Hong Kong College of Radiologists. The Cross-Specialty training arrangement aims to broaden the exposure of trainees and is not equivalent to training for independent practice in the Cross-Specialty trained subject.

## **2. Higher Specialist Training: General Radiology**

- 2.1 The programme should differ from Basic General Radiology Training, with emphasis on independent performance and supervising responsibility.
- 2.2 The programme should be arranged with designated assignments and rotations.
- 2.3 Teaching activities: to clinicians, younger trainee radiologists, radiographers, nurses, medical students, etc., to attain in-depth knowledge of a subject and to improve on presentation skills

- 2.4 Management of and contribution to film museum and teaching files
- 2.5 Audit and quality assurance activities
  - 2.5.1 Before Exit Assessment, trainees should submit at least one **original** audit report in which they take up independent leading role in the submitted audit project. The pertinent audit project should be clinically oriented and is recommended to be related to their subspecialty training.
- 2.6 Academic radiology: research techniques, presentation skill, literature review
- 2.7 Nurture of professional attitude (ethical standards, legal responsibility, professional image, contribution towards professional organizations and activities, coordination with clinical colleagues for better healthcare)
- 2.8 Management responsibilities and management skills

### **3. Higher Specialist Training: Subspecialty Training**

- 3.1 Please note the interpretation of terminology in 1.1.
- 3.2 Standard format of application for accreditation should include: targets, structured programme, weekly duty sessions (modality, location), other activities, expected workload, qualification and achievement of trainers, etc.
- 3.3 Five or more duty sessions weekly specific for the subspecialty are advisable. On the average, each subspecialty session consists of 50% or more work related to that subspecialty.
- 3.4 For Category A Subspecialties, related application with multiple imaging modalities should be built into the programme. If certain modalities are not available at the specific training centre, rotation or attachment to another training centre is advisable. The training facilities involved under such arrangement should satisfy the basic requirements for training purpose. The training arrangement including period of rotation or attachment, level of training involved, any on-call or emergency duty arrangement, leave arrangement, etc. should be submitted in details for approval by College before the rotation commences. The training should at all-time be conducted under supervision by accredited Subspecialty Trainer(s) or Subspecialty Co-trainer(s). The principles of training supervision are delineated in the Working Principles For Accreditation of Training Centres and Training Programmes.
- 3.5 For broader and more comprehensive exposure to various aspects of a subspecialty, appropriate attachment or rotation to another training centre is acceptable. (See point 3.4 for requirements and necessity for pre-approval by College on the arrangement)

- 3.6 The minimum workload of subspecialty training (in terms of 6 months of training) will be defined by the College in the Training Guidelines of each Subspecialty. Workload required for 3 months of training is 50% of the requirement, except for specific conditions laid down in the pertinent Training Guidelines.
- 3.7 A minimum of two subspecialty trainers, or one subspecialty trainer plus one subspecialty co-trainer (who must be a radiologist), are required for each subspecialty to ensure that during the period of subspecialty training the trainee is being supervised all the time.
- 3.7.1 One subspecialty trainer should be designated to have primary responsibility for the educational content of the subspecialty area.
- 3.7.2 For a subspecialty training programme, if there is one subspecialty Trainer, only one subspecialty trainee can be taken in at one time.
- 3.7.3 A subspecialty trainer or subspecialty co-trainer should not take up training role of more than:
- (a) 1 trainer role of category A subspecialty plus two co-trainer roles of category A/B subspecialties; or
  - (b) 1 trainer role of category A subspecialty plus 1 trainer role of category B subspecialty
- 3.8 A **subspecialty trainer** of a programme for Category A Subspecialties should have
- (a) At least 3 months of previous training in the subspecialty, or, at least 2 years of experience as a co-trainer of the subspecialty
  - (b) At least 2 years of continuous experience in the subspecialty after award of the Fellowship of HKCR, or equivalent
  - (c) Major portion of clinical practice being in the subspecialty
  - (d) Related publications
  - (e) Related lectures / presentations
  - (f) Regular attendance of related subspecialty conferences in recent years.
- 3.9 In general, a **subspecialty co-trainer** of a programme for Category A Subspecialties fulfils some but not all of the requirements of a subspecialty trainer. He / She should have no less than 3 months of previous training in the subspecialty plus at least one year of post Fellowship experience in the subspecialty, or, previous training in the subspecialty plus 2 years of post Fellowship experience in the subspecialty. He or She must satisfy some of the other requirements outlined in 3.8 (c) to (f).
- 3.10 A subspecialty co-trainer may provide supervision on only a specific component of a subspecialty training programme, e.g. only the diagnostic component but not the interventional component. In such case, the pertinent

subspecialty co-trainer cannot replace the other two trainer / co-trainer of the subspecialty training programme. Details of the training arrangement should be submitted to College for approval.

3.11 All subspecialty trainers and subspecialty co-trainers of a programme need to be vetted and approved by the College at the accreditation of that programme. The training centre is responsible to report to the College any changes in the subspecialty trainers and subspecialty co-trainers of a programme for consideration of approval.

3.12 ***Subspecialty Clinical Radiological Conference (CRC) and other meetings***

3.12.1 Regular CRC related to Category A subspecialty, at least once every fortnight.

3.12.2 Presentation by the trainee of at least 2 cases per CRC.

3.12.3 Participation in other clinically oriented meetings is desirable, and this may be specified in the Training Guidelines of specific subspecialty.

3.13 ***Absence from Training***

3.13.1 ***Prolonged leave*** will reduce the time spent in training. Trainees absent from their training post for any period in excess of culmination of 60 calendar days during the period of Higher Specialist Training, apart from annual leave, study leave and prospectively approved full-time research programme, should notify the College for corresponding adjustment of the training period requirement in respect of examination or accreditation. In addition, trainees should notify the College for any continuous absence (inclusive of sick leave, maternity leave or study leave) other than annual leave of more than 14 calendar days during the training period. Trainee should also complete the Declaration of Absence from Training Form in the training logbook.

3.13.2 ***Leave*** of more than 4 weeks during 6 months of training (pro rata for other periods, e.g. 2 weeks (i.e. 14 days in continuity or an aggregate of 10 separate working days) during 3 months of training) requires compensatory training in the same subspecialty to ensure sufficient period of exposure.

3.14 Examination reports should be signed by the trainee if the cases are performed on his / her own independently. The report should be endorsed by the subspecialty trainer or subspecialty co-trainer if the case is performed by the trainee under direct supervision. Record of reporting without trainees' name would not be accepted and counted in his / her training profile. To facilitate the assessment of workload of a new training centre, the records of radiological examinations with coding should be provided. The Radiology Information System (RIS) in HA Hospitals provides convenient conversion of examination data into training records.

The RIS coding used in the Training Guidelines conforms to the prevailing

numbering system. The subspecialty trainers, subspecialty co-trainers and trainees should be aware of revision of the numbering system from time to time.

For situations in which reporting or performing of examinations could not be accurately reflected via the standard method (e.g. RIS system of HA), trainees should use separate manual log with counter-signage by subspecialty trainers or subspecialty co-trainers.

#### **4. Arrangement of Subspecialty Training for Trainees**

4.1 Specific subspecialty training for individual trainee needs to be approved by the Department Head and Training Head. The Department Head and Training Head are responsible to handle the overlapping demands for subspecialty training.

#### **5. Training Records**

5.1 The record of experience of the examinations and procedures during the training period should be kept in the prescribed logbook of the Hong Kong College of Radiologists. Additional information can be supplied as appended sheets to the logbook where appropriate.

5.2 The logbooks from all trainees would be reviewed at three fixed check points, namely after Basic Specialist Training (i.e. after passing Joint Final (Part B) Examination), after the first year of Higher Specialist Training and at the end of Higher Specialist Training (i.e. before Exit Assessment), by College to verify that appropriate training had been undertaken during the specified period under supervision of trainers.

#### **6. Training Assessment**

6.1 During the supervised training, it is essential for the trainer to help the trainees in understanding their limitation and identifying areas or complex problems where they need a second opinion or help.

6.2 The trainee should have a written assessment at 3-monthly intervals of the progress during the corresponding period, recorded in the logbook and signed by the supervising trainer and the trainee. The process should ensure that training objectives are met, remedial measures are proposed and any issues in the review period are discussed.

6.3 Particular attention should be paid to record the trainee's degree of proficiency in specific activities in order to attain independent practice.

6.4 Areas identified during the assessment process and requiring changes in the training infrastructure of the corresponding centre should be conveyed to the head of the department for consideration and implementation.

## **7. Workplace-based Assessment**

7.1 Workplace-based assessments would be conducted in various facets of training as specified by the College from time to time. The progress of trainees should be evaluated according to the requirements of the College. Please refer to the section of Workplace-Based Assessment in the Training Regulation (Radiology).

## **8. Remedial Training**

8.1 If the trainee is unable to comply with the minimum requirement of number of examinations during the designated training period, this can be made up any time during the Higher Specialist Training, as long as it is supervised, documented and recorded in the same manner.

8.2 Such remedial training would not be counted to extend the duration of subspecialty training.

8.3 The supervising trainer should be aware of the necessity for compensatory training if there is a significant period of leave despite the compliance with the minimum requirement of number of examinations. (Please refer to 3.14)

## **9. Accountability of Training Department**

9.1 It is advisable that the Training Supervisor is not the same person as the Administrative Head of the Department.

9.2 Accountability of the **Training Head:**

- (a) To initiate application for training accreditation by the College, with submission of the required data
- (b) To manage the training department and be responsible for the supervised training provided in the department in accordance with the training regulations and guidelines
- (c) To report immediately to the College any significant discrepancy from the status on accreditation, in respect of training manpower, facilities and workload that may have occurred or are expected to occur. All training centres are required to regularly notify the College on the updated number of trainers, co-trainers and trainees, and any change of their status. Suboptimal number of trainers and co-trainers, or failure to timely report to College for important change of status of trainers and co-trainers might prompt the College to actively review the accreditation status of a training centre
- (d) To initiate timely consultation and notification with the College on matters related to training, especially on major change of training provision which may risk on jeopardizing the quality of training
- (e) To advance the views of the College and to disseminate to the trainees relevant information from the College



- (f) To facilitate the trainees to attend training and educational activities
- (g) To provide annual return to the College on the status of trainers, co-trainers and trainees, and the assessment forms of the trainees in the department
- (h) To meet the trainees regularly, to be able to evaluate and provide advice to the trainees in Radiology
- (i) To answer trainees for questions relating to training, and channel the questions to College for consultation if necessary
- (j) To oversee the system of evaluation and monitoring on the level of supervision of trainees in different radiological examinations
- (k) To oversee and coordinate the conduction of workplace-based assessments within the training centre

### 9.3 Accountability of the **Trainee**:

- (a) To register as a trainee with the College on entry into the training system
- (b) To be aware of the scope, programme, facilities, workload and other aspects of training required in Radiology
- (c) To participate in the training courses organized by the College, and the training activities held at the training department.
- (d) To participate in and contribute to scientific and other activities organized by the College
- (e) To enter the training records in the logbooks regularly. The logbooks from all trainees would be reviewed at three fixed check points, namely after Basic Specialist Training (i.e. after passing Joint Final (Part B) Examination), after the first year of higher specialist training and at the end of higher specialist training (i.e. before Exit Assessment), by College to verify that appropriate training had been undertaken during the specified period under supervision of trainers
- (f) To interact with the trainers during the regular appraisal sessions
- (g) To participate in workplace-based assessments as specified by the College
- (h) To bring to the notice of the Training Supervisor, and if necessary the College, of any deficiency in the training programme for improvement at the specific training department
- (i) To prepare for the examinations and assessments of training at different levels
- (j) To be fully aware of the Guide on Good Medical Practice for Radiologists by the College

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