

# HONG KONG COLLEGE OF RADIOLOGISTS

## Higher Training (Radiology)

### Subspecialty Training in Paediatric Radiology

[This document should be read in conjunction with the *General Guidelines on Higher Training (Radiology)*]

#### 1. INTRODUCTION

1.1 Paediatric Radiology was one of the earliest subspecialties of radiology, and is recognized as a distinct subspecialty in advanced societies. It is dedicated to the imaging diagnosis and intervention in neonates, infants, children and adolescents.

1.2 Paediatric Radiology is characterised by:

- (a) The differences in physiology of the child.
- (b) Different spectrum of diseases and pathologies, many being congenital, developmental or related to growth.
- (c) The great emphasis on ionising radiation protection and safety because of the greater sensitivity of growing tissues to damage and induction of malignancy.
- (d) The need to develop skills that enable the radiologists to obtain diagnostic examinations from uncooperative subjects.
- (e) The need to understand the involvement of the parent and family in the child's disease.

1.3 Paediatric radiology is a category A subspecialty.

#### 2. OBJECTIVES

2.1 To gain a practical understanding of how a child's physiology affects image quality, and dictates differences in requirements for intravenous contrast and sedation.

2.2 To gain understanding of the effects of growth and development on image diagnosis.

2.3 To learn about paediatric pathologies.

2.4 To be able to select and plan the best imaging strategies for every diagnostic problem.

2.5 To be able to explain to, and involve the parents in, the diagnostic process and to answer their questions and anxieties.

2.6 To be able to interpret clinicians' request and communicate meaningfully results

to the clinicians.

- 2.7 To be able to communicate to larger groups of clinical and radiological colleagues.
- 2.8 To appreciate the problems involved in research in paediatric radiology in order to be able to apply the published literature to everyday practice.
- 2.9 [For those doing a full year] to attain the confidence and skill to manage 80% of everyday paediatric radiological problems independently.

### **3. TRAINING REQUIREMENTS**

#### **3.1 TRAINING CENTER REQUIREMENTS**

- 3.1.1 The training centre must have clinical units for Active Neonatal Special Care, Paediatrics and Paediatric Surgery or a Surgical Unit that manages/operates on paediatric surgical cases.
- 3.1.2 Radiological department equipment must include
  - (a) Ultrasonographic units with appropriate high frequency transducers
  - (b) Fluoroscopic unit with paediatric dose reduction options
  - (c) CT unit with proper paediatric protocols in use
  - (d) NM
  - (e) MRI
- 3.1.3 It is accepted that the trainee may have to spend some time outside their training department to be able to obtain training in all these areas. This must be done with the consent of the College.
- 3.1.4 Paediatric Angiography and Radiological Intervention (except intussusception reduction) are not to be included for practical experience in this training programme. These should be restricted to either the full time experienced interventionalists, or to post-accreditation subspecialty training. Observation of or assistance at such procedures is encouraged.
- 3.1.5 Medical physicist must be available to monitor radiation protection and to help in the introduction of new techniques.

#### **3.2 TRAINER REQUIREMENTS**

As specified in the General Guidelines on Higher Training.

#### **3.3 DURATION OF TRAINING**

- 3.3.1 Ideally a minimum of six months for a radiologist requiring a working knowledge in paediatric radiology to deal with related clinical problems in practice.

3.3.2 One year would suit those wishing to specialize in this subject after accreditation and should count towards the necessary two years of subspecialty training for full recognition as a paediatric radiologist.

3.3.3 A three-month duration is acceptable but not recommended.

3.4 DUTY SESSIONS

3.4.1 The recommended weekly pattern of training sessions would be one session each or equivalent of the following:  
*US, Fluoroscopy, CT, MRI, NM (alternate weeks)*

3.4.2 Sufficient time and workload should be *plain film reporting* of pediatric patients.

3.5 MINIMUM NUMBER OF EXAMINATIONS REQUIRED

3.5.1 The average total number of paediatric cases per session as calculated from the table is expected to assist the heads of training in assessing the possible viability of offering a Paediatric Radiology Training Programme.

3.5.2 As there are no specific RIS coding for Paediatric examinations; the statistics should be retrieved from RIS for patients 18 years of age or younger.

3.5.3 Plain film reporting and paediatric ultrasound are significantly under represented. This is deliberately designed to give the trainee the best exposure to achieve most of the objectives in the available time. If the workload were to be more representative of the usual daily distribution of paediatric radiology, the plain film reporting would be 10 times more and ultrasound 3 times more.

3.5.4 Exposure to neonatal imaging is necessary requirement and should be recorded in number in the training period of Paediatric Radiology.

3.5.5 The following table shows the minimum requirement for 6-month training:

<b>Examination</b>	<b>RIS Coding (please refer to 3.5.2)</b>	<b>Requirement</b>
<b>Plain Film Reporting</b>	1101-1799	200
<b>Ultrasound</b>		
Brain	3201 3101, 3103	60
Abdomen	3102, 3104-3599	100
Other	<i>(excluding 3201)</i>	40
<b>Fluoroscopy/Contrast studies</b>		
Ba/swallow/enema/meal/ FT	2102-2109 2199, 2202-2209, 2299	10
MCU or	2101-2499 <i>(excluding the above)</i>	30

<b>Examination</b>	<b>RIS Coding (please refer to 3.5.2)</b>	<b>Requirement</b>
MCU + VUS Other	2101-2499 (excluding the above) + 3322	(Minimum 5+25 with a total of 30) 10
<b>CT</b> Brain Other	4101, 4102 4103-4499	30 30
<b>MRI</b> Brain Other	8101, 8102 8103-8699	60 40
<b>NM</b> DTPA/MAG3/DMSA Other	9420-9481, 9499 9101-9999 (excluding the above)	30 20

*(Please give a separate list for patients under 1 month.)*

### 3.6 CLINICAL RADIOLOGICAL CONFERENCES AND OTHER MEETINGS

In hospitals where there are separate paediatric medical and paediatric surgical meetings, both should be attended.

A list of all cases presented with notes on discussions would be an ideal method to demonstrate the quality of experience to which the trainee has been exposed. This should be appended to the Logbook.

### 3.7 PRESENTATIONS AND PUBLICATIONS

Please refer to the General Guidelines in Higher Training.

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