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Foreword to second edition

We are living in challenging times with many changing agendas. We need to provide appropriate training programmes to prepare paediatricians to be able to provide care for children of the future, however the service is delivered.

Our model of training is still evolving and this document summarises our current plans which have been developed after much discussion in the Training Committee and in the annual Policy Conference. We are very grateful to all those involved and in particular I would like to thank Claire Smith and Patricia Hamilton who made many contributions to the editing of the document.

There is still further work to be done before we will be ready to implement specialty training programmes in August 2007. However, through close collaboration with other Colleges as a member of the Academy, and with the Postgraduate Medical Education and Training Board, the Conference of Postgraduate Medical Deans and the Modernising Medical Careers team we are confident that we will be able to complete the work to provide a new and improved training structure for the future.

For those who wish to access this document electronically it is available on http://www.rcpch.ac.uk/publications/education_and_training_documents/training_paediatricians05v6.pdf

Mary McGraw
Vice President (Training and Assessment) Elect
Modernising medical careers

In June 2004 we produced a document in response to the Modernising Medical Careers (MMC) initiative entitled ‘Training paediatricians of the future’. We have developed our plans further since then with the help of College members. Discussions with other Colleges and deaneries have been helpful also. The RCPCH Policy Conference 2005 entitled Transforming Training-Transforming Service was devoted to the anticipated training reforms and debated how services could adapt to meet the needs of patients and training.

This document is a summary of the work of the past year and an update on the developments in paediatric training and our current thinking. The MMC timeframe is that entry to specialty training programmes will begin in 2007.

Philosophies

The philosophies upon which our training programme is based are unchanged from our 2004 document. They are:

Becoming a consultant is dependent on competence, confidence and choice. Individuals will not be able to become consultants until they have achieved the required competences and feel confident to do the job. The consultant role the trainee selects will depend on their choice and the jobs which are available.

The length of time to train will depend on:
• an individual’s ability to acquire the necessary competence and confidence;
• the contexts in which they are training. For example, if a trainee is only exposed to a small number of high risk neonatal deliveries it will take longer to become competent to manage sick newborn babies.

The content, but not the length, of the training programme will be matched to suit the trainee’s choice of career path.

Proposed schema of paediatric specialist training

Our proposed schema for specialist training in paediatrics is unchanged. Our original diagram of training had many ladders demonstrating exit and re-entry to training. We recognised that flexibility was required to allow trainees to move from one specialty to another, to facilitate research and to accommodate trainees from overseas. These ladders have been omitted from the current diagram on the following page to keep it simple. Our philosophy remains that there needs to be flexibility for movement in and out of the programme at all stages.
Progress through the training programme will depend on satisfactory competence-based assessment which will take place regularly. Based on current working practices we estimate that the majority of trainees will take 8 years to complete the training programme, but a minority may progress more rapidly and could complete in a minimum time of 5 years.

Progress through training: our competency framework

Our training model is underpinned by a competency framework. The first set of competences was published in October 2004. These are the early or basic specialist training competences which are a broad range of clinical and non-clinical competences. Acquisition of these competences will be tested in the workplace and through the MRCPCH examination. This examination was updated in 2004 to ensure that it covered the full range of competences required. ‘Standards for assessment’ have been developed which map to the framework document and to the examination. They will facilitate assessment in the workplace as well.
We know that UK graduates pass Part 1 MRCPCH after an average time of 26 months from their first hospital appointment. It is likely with the introduction of Foundation Programmes that this may be extended as trainees may be exposed to paediatrics later in their career. We know that for those candidates who pass the clinical examination it takes an average of 23 months from the time they pass Part 1. This gap may be shortened because Foundation Programmes will have prepared them in terms of gaining generic competences. Therefore whilst some trainees may have completed all three parts of the examination within 2 years, we need to have flexibility to allow trainees to have up to 3 years in specialty training in order to acquire the necessary competences to complete the MRCPCH examination.

The second set of competences has been developed and will be published in October 2005. These concentrate on the competences developed in the early years as a specialist registrar when trainees have increased responsibility. The competences acquired during basic specialist training, both the generic and clinical skills, increase in depth and new skills are acquired as a result of taking on a different role within the team. This can be envisaged as developing a series of building block skills.

These higher competences will be assessed in the workplace. We have developed a range of tools to do this and are evaluating them across the UK. They include a peer ratings assessment tool, similar to that being piloted in Foundation Programmes, and a patient consultation assessment tool.
In the third stage trainees will choose whether to pursue sub-specialty training or whether to train as a general paediatrician. The competency framework for general paediatricians and the 13 tertiary specialist programmes will share all the same non-clinical competences, and all core clinical competences. These will be published in 2006. There will be additional specialty-specific competences which will be developed by the College Specialty Advisory Committees (CSACs).

We believe that general and sub-specialty paediatricians require the same number of competences. Both require broad-based paediatric knowledge and skills which will be acquired during early training. In later training, the general paediatrician will increase their depth of knowledge and abilities in a wide range of clinical competences, whereas the sub-specialist paediatrician will develop in depth competences in their specialty area.

Again we believe this is well conceptualised using the building block model.

For those who choose to become a sub-specialty paediatrician, there is a competitive selection process to ensure that appointment to the limited number of accredited sub-specialty training posts is equitable and meets workforce demands. The College has four years experience of recruiting nationally to sub-specialty programmes through a unique initiative between the RCPCH and the deaneries known as the NTN Grid. Selection to general paediatric training programmes is not necessary because there are far more posts.
available. We anticipate that this selection into the final phase of training will continue so that trainees have the opportunity to compete for the sub-specialty of paediatrics they wish to enter.

We believe that the common thread which underpins our competency framework throughout the training programme is a real strength because it ensures that specialty training within paediatrics remains flexible. This will allow us to respond rapidly to changing healthcare needs as well as to the needs of our trainees who may wish to change career path late in their paediatric training. It is mapped to assessment and informs and drives changes to the examination and other assessment tools. Critical to the success of implementation will be that consultants have time devoted in their programmes to supporting training.
Academic paediatrics

It is essential that our training programme has also sufficient flexibility to train the academic paediatricians of the future. Trainees may choose to move into research at a variety of different stages in their career. Those who are destined to become future academic leaders may require more than one period of research; an initial phase where they develop research skills and obtain a higher degree and a second phase through clinical lecturer or clinical scientist schemes where they begin to develop research programmes of their own. This is represented in our model with exit and re-entry from research at all stages of the specialty training programme. We are very pleased that MMC has indicated its support for the development of training pathways for academics with funding for clinical research fellows and clinical lecturers. We strongly encourage paediatric departments to bid for these posts. There is also the possibility to stimulate trainees’ interests in academic training at an early stage through offering paediatric academic ‘taster’ in Foundation Year 2.

Planned training programme

Comparing our training programme with those of other Colleges, we note that our schema differs in some respects. There are good reasons for this and these are outlined below.

A. Why are we recommending that the duration of training needs to be flexible with minimum and maximum times allowed?

- We believe that the rate of progress through the programme will depend on an individual’s ability and motivation, and on the contexts in which they train.
- We feel that it is contradictory to insist on a fixed duration of training when progress is dependent on the acquisition of competences.
- Our view is that the length of training should be flexible and that minimum and maximum time limits should be set for training programmes.

B. How do we believe that early training in paediatrics may differ from other specialties?

We believe there will be more early specialist training competences to develop in paediatrics than for most adult-based specialties because:

- Unlike adult-based specialties trainees enter paediatrics with little or no exposure to children or the specialty.
- Therefore the basic skills which are well developed in adult specialties at the same stage are absent, eg being able to undertake a clinical examination and interpret the
findings taking into consideration what would be appropriate for the child’s age and development.

- The ability to undertake even basic practical procedures in children will be extremely limited, even if trainees are competent to undertake technical procedures in adults.
- Trainees will need to learn how to undertake three-way consultations which are fundamental to paediatric practice.
- Trainees will have rudimentary or no knowledge of normal laboratory values and drug dosages for children. These are competences which are taken for granted in adult practice at this stage of training, but are areas which will need to be developed for paediatric practice.
- Although trainees will be competent at acute resuscitation in adults, they will need to acquire these skills for paediatric practice.
- Many conditions and problems seen in paediatrics are unique to the specialty which means that the learning curve is far steeper in early paediatric training than for adult-based specialties.

C. Why do general paediatricians require as much training as sub-specialist paediatricians?

- Paediatrics is a broad-based specialty that requires knowledge of a wide range of clinical presentations from birth to adolescence.
- Because of the diversity of clinical conditions encountered and the modification of the presentation of these at various stages of growth and development, it will take longer to acquire the pattern recognition which is required to be competent in diagnosis. Consultants need to be able to recognise rare presentations of common conditions and rare conditions which may be serious but difficult to diagnose.
- Serious and/or life-threatening diseases are relatively rare in children and for this reason sub-specialty practice has evolved within the 38 tertiary care Trusts across the UK.
- In adult medicine, equivalent sub-specialty practice is available in most district general hospitals (DGHs) because the prevalence of serious diseases is much higher in adults compared with children.
- In paediatric practice, the nearest specialist may be up to 250 miles away. This means that general paediatricians need to be trained to recognise, initiate treatment and participate in long-term care of all specialty-specific conditions within agreed pathways linked to the tertiary centre. This requires a greater breadth and depth of knowledge and skills than are needed by acute physicians in adult medicine where a range of specialists are available on site.
- We believe that general and sub-specialty paediatricians require the same number of competences as demonstrated by our building block model.
D. Why do we believe that generalist and sub-specialist training should take place within the same training programme, culminating in a common CCT?

- A significant proportion of paediatric sub-specialists continue to undertake some general paediatric practice within Tertiary Trusts. Arrangements vary between regions and within specialties. Therefore all trainees who exit sub-specialty training programmes need the competences which will enable them to work as a general paediatrician within their tertiary Trust. We recognise that the competences required would be somewhat different than for general paediatricians working in district general hospitals because other sub-specialty support would be available on site.

- Paediatric sub-specialties are relatively small and although 33% of consultant paediatricians are sub-specialists, the number of consultant posts which become available in each of the 13 sub-specialties are limited. Although we try hard to match the number of sub-specialty trainees with the number of consultant posts expected, some trainees may be disappointed when posts are not available. It is important that these senior trainees are able to change career path easily so that they can be appointed to posts in, for example, general paediatrics with an expertise in their specialty area and able to work within regional clinical networks.

- Community child health (CCH) is a sub-specialty of paediatrics which is often not based in tertiary centres. It is more often linked to general paediatric departments in DGHs. In future we anticipate that most consultants in CCH will have ongoing responsibilities to provide acute care out of hours, and some consultants may have combined hospital and community-based appointments. For these reasons it is important that sub-specialty trainees in CCH maintain and develop their skills in general paediatrics.

- For the reasons above, we believe that to adopt the adult medical model of separate CCT specialties with direct entry into those sub-specialties would be unwise. A common CCT suits the needs of paediatrics far better.

- If we did not have a common CCT, the alternative would be to train sub-specialists post-CCT as some other specialties are considering. This would lengthen training considerably for 33% of our trainee workforce and would go against one of the major objectives of MMC which is to produce specialists more quickly.
E. Why do we believe that paediatricians should train in a variety of settings?

- We believe that all trainees need exposure to paediatrics in a district general hospital setting. Such a setting is ideal for early training because it offers the breadth of experience which is needed to acquire many basic paediatric competences.
- All paediatricians need experience early in training in neonatology in units managing ventilated babies to allow them to acquire the competence and confidence to manage sick newborn babies safely before they progress to middle grade level.
- All paediatricians need experience and training in community child health to acquire a variety of competences and to learn how care is delivered between the hospital and the community and how hospital and community-based paediatricians can best work together.
- All trainees need training in tertiary centres and DGHs to gain an understanding of how the two work together in networks.
- Academic paediatrics tends to be focussed in these tertiary centres and thus both acquisition of academic competences and the development of academic paediatrics as a specialty requires trainees to receive some training in these centres.
- The general paediatrician in training needs experience in tertiary centres to help with pattern recognition of rare and serious conditions in childhood which present relatively infrequently to DGHs. When trainees work in tertiary centres, they not only benefit from concentrated exposure to clinical conditions in the specialty where they are based, but also to conditions in other specialties which they may see when they are working out of hours.
- Whilst the sub-specialist trainee may complete their training in the tertiary centre the general paediatrician in training needs experience in DGHs in the latter stage of training to consolidate their in-depth general paediatric competences.
- Paediatric programmes therefore need to provide a careful balance of DGH and tertiary centre training.

The staged implementation of the MMC proposals

A. Foundation Programmes

- Pilot Foundation Programmes (FPs) were introduced in August 2004.
- All medical graduates will enter FPs in August 2005.
- We have had positive feedback about FP training posts in paediatrics but unfortunately only a minority of FP rotations include paediatrics. There is wide
regional variation however and, for example, in parts of Scotland, 42% of SHO posts are being converted to Foundation Year 2 (F2).

- We have actively encouraged the conversion of Trust doctor posts to FP posts and also the conversion of stand alone SHO posts which may not be included in regional BST rotations.
- We have encouraged regions to develop working groups to discuss BST rotations so that they can liaise with deaneries and guide district paediatricians about FP conversion posts.
- When FP pilots were first introduced, we recommended that general paediatric posts in DGHs were most suitable for F2. Our views on this have changed following the successful introduction of F2 posts in critical care and anaesthetics. We now feel that well supervised sub-specialist SHO posts in tertiary centres are suitable for F2.
- The curriculum for the Foundation years was published recently. Unfortunately, despite a lot of effort by our College, the document remains very adult orientated and will need to be interpreted with great caution in a paediatric training environment.

B. Specialist Training Programmes

The conversion of the principles behind MMC into practical guidance for Colleges has been slow and the goal posts have been in a state of perpetual motion. Hence, the plans and developments outlined below may change, but we have done our best to summarise what we are working on at the moment and what we believe is the best way to train paediatricians equipped to provide the best service for children in the future.

The timetable for change is important. Specialist training programmes will be introduced in August 2007. Therefore we need to be ready to recruit to our specialist training programme well before this.

Although MMC is determining the timeframe and the processes for future medical training, it is important that all programmes developed meet the standards set by the Postgraduate Medical Education and Training Board (PMETB). The PMETB is currently drafting standards for entry into specialist training programmes which consider both the eligibility and selection criteria. We are trying to ensure that our suggestions comply with these standards.

For entry from F2 one of the key PMETB standards is that specialist knowledge or experience cannot be an entry criteria. Furthermore, results of FP assessments will not be made available to help us select candidates into specialist training programmes.
MMC have set us a number of tasks that are outlined below:

**Entry criteria and selection into paediatric programmes**

We were asked to devise minimum entry criteria for selection into our specialty. Knowing that these cannot be based on past experience, we have used criteria that we hope can assess potential. We have tried to incorporate specialty specific criteria into the key areas for selection that are as follows:

- Reasons for career choice
- Personal qualities
- Organisational skills
- Communication skills
- Thinking skills
- Practical skills
- Professional attitudes

We are working on how the criteria can be assessed from a structured application form for short-listing, and a structured interview.

Recent discussions with MMC suggest that the infrastructure for national recruitment to all specialties may be developed for us. This means that the main challenge for us is to finalise the specialty specific selection criteria needed, defining what different qualities and attributes are needed for paediatrics compared to other specialties. Any criteria that are developed need to be measurable so that they can be ranked to enable short-listing and selection at interview to take place.

We are attracted to the general practice model of national recruitment using a standardised recruitment process. We note however this has taken 5 years to develop, and unless we were able to benefit from much of the work undertaken by the GPs, it would be challenging to have this in place by 2007.

**Source and stage of entry to our specialist training programme**

MMC have suggested that the first year of specialist training (ST1) is broad-based which would allow undecided trainees to choose a variety of career options later. Colleges have been asked to consider which other specialties they may work with to develop shared aspects of training. There has been no enthusiasm for this approach from any Colleges including our own. At this stage it is unclear whether these broad-based programmes will
be developed, who will be responsible for their design, and who will be responsible for
developing the curriculum the training programmes will follow.

We believe it is very important that there should be the option of direct entry from F2 into
a paediatric specialty programme and anticipate that the majority of applicants will want
to enter paediatrics from this route. This is based on the advice from our own trainees that
the vast majority of trainees who have been successful in entering a career in paediatrics
knew they wanted to do so during their pre-registration house officer years. Knowing that
a broad-based F2 year has already been added to the training programme, the trainees feel
that the prospect of a further broad-based ST1 year will cause enormous frustration.

We do recognise that there will be trainees who are either undecided or discover that they
are not suited to their initial chosen career path. For those trainees, there will need to be
the flexibility to enter a training programme at a later stage. It may also be appropriate for
some overseas candidates to enter programmes at a later stage by virtue of their previous
paediatric training. We are therefore aware that we need to derive entry criteria that are
applicable to this group as well. We anticipate that these will be the same generic criteria
used for entry into ST1 combined with a knowledge assessment.

Methods of review in ST1

We have been asked to decide methods for review during the first year of paediatric
training. We anticipate that some of the validated tools for workplace assessment will be
used, eg multi-source feedback. We also have the option of using MRCPCH Part 1A.
This examination is a knowledge assessment appropriate for individuals who have
completed 4-6 months of paediatrics.

Other work being undertaken in preparation for 2007 entry to specialty
training programmes:

Promoting paediatrics

We have developed a brochure ‘Careers in Paediatrics’ as an initial step towards providing
information for medical students, Foundation trainees and other trainees who may be
considering a career in paediatrics.

We should consider developing short “taster” programmes for trainees in F2. These would
mean the trainee is supernumerary to the department for a week or so as part of their F2
study leave and a good experience may attract them to the specialty.
Estimated competition for paediatric training programmes

Currently there are 4500 exits from medical school per annum. This will increase to 6000 per annum with the increase in medical schools. Pre-registration career choices of UK graduates\(^2\) indicate that approximately 6% of UK graduates choose paediatrics. This would suggest that 270 UK graduates per annum rising to 360 graduates may choose paediatrics as a career option.

In addition to the above, we know that paediatrics has a high proportion of overseas graduates in its training programmes. The precise figure is not known but 24% of UK consultants appointed between 1992 and 2001 received their undergraduate training abroad.\(^3\) A high proportion of these are likely to have had some of their postgraduate training in the UK.

These data suggest that entry to paediatrics is likely to be very competitive which means that a robust selection process will need to be developed.

Workforce modelling to determine the number of programmes that will be required

Much of this work will need to be done regionally because there are marked differences across the UK in the distribution of our trainee workforce in terms of grade and balance between SHOs and SpRs, and their distribution between district general and tertiary hospitals. However, with 2007 in mind, the 2003 workforce census collected information about SHO posts for the first time. Full details have been published\(^4\) but in summary it showed there were:

- 2351 SHOs (2323WTE)
- 1540 SpRs (1460 WTE)
- 27% of SHOs were in GPVTS schemes and therefore 1716 were training to be paediatricians or moving into another specialty

If one assumes there were 1716 SHOs pursuing paediatrics, this amounts to 572 per annum over 3 years. In comparison, 1540 SpRs amounts to 308 per annum over 5 years. This gives an SHO to SpR ratio of 1.9:1

We are aware that these figures were inexact and that they were constantly changing as a result of SHO conversions to F2 and new Hutton NTNs. Furthermore, they did not take
account of career changes, part-time working and time out of programme (research, overseas training and maternity leave). However, the figures can be used as a guide and we will have an opportunity to update them through the next census.

Another useful figure to be aware of is that only 50% of all SHOs take MRCPCH (including VTS trainees). Therefore we assume that a significant proportion of SHOs are training in paediatrics in preparation for other specialty careers in the long term.

**Competency frameworks and standards for assessment**

Parallel to the development of our competency frameworks we are developing standards for assessment. These will enable competences to be assessed by the most appropriate methodology. The first one for BST is almost complete and it has been mapped to the framework document and to the MRCPCH examination. The assessment standards are being weighted according to their importance and they allow us to determine those standards that can be assessed by the examination and those that are better assessed through workplace assessments. Standards for assessment for the later stages of the competency framework have yet to be developed.

**Keeping everyone informed**

This document is being widely circulated and discussed so that all are informed and have opportunities to comment.

Please send any comments to:
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