

Modernising medical careers for paediatricians

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Abstract

Modernising medical careers (MMC) is a major reform of postgraduate medical education that offers many opportunities to improve the training delivered. New training programmes are being developed to support the delivery of a competency-based curriculum. Success of these reforms will depend on sufficient resources being available to support this more focused training. This article summarises the changes and the challenges that this reform in postgraduate medical education brings.

Keywords assessment; curriculum; education; educational; medical

Introduction

Healthcare systems around the world are changing in response to changing public and personal priorities. Although the context, processes and structures differ between countries, there are many similarities in the drivers for change. There is a need to meet public expectations and contemporary quality standards whilst accepting the inevitable financial constraints.

The spectrum of conditions that a paediatrician faces has changed. The success of many aspects of healthcare has led to the increasing survival of young people with diseases that were formerly lethal during childhood. There is also recognition of threats to health from psycho-social and environmental factors. These and other factors have led to a change in the type of healthcare that needs to be provided for children and demands a re-appraisal of how, where and by whom that healthcare is best provided.

Doctors themselves are also changing. They are less prepared to work long and irregular hours and this is being legally reinforced through the European Working Time Directive. There is feminisation of the workforce and a demand by doctors of both genders for a better life-work balance.

Hutchinson, in a review of healthcare reforms in England and their effects on the challenges to medical education, identified patient pressure for choice, diversity of healthcare providers and extended roles of other staff as the key issues.¹ It is in the context of these changing agendas that the biggest change in postgraduate medical education is being introduced. Modernising Medical Careers (MMC) is a UK initiative, the aim of which is 'to improve patient care by delivering a modernised and focused career structure for doctors through a major reform of postgraduate medical education'.²

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Foundation programmes

MMC has created 2-year foundation programmes that will, for the first time, require doctors to demonstrate their abilities and competence against set standards. Trainees will enter these programmes from medical school and rotate 4 monthly across a range of specialties. This will offer doctors the chance to gain insight into possible career options or to build a wider appreciation of medicine before embarking on specialist training. Many foundation programmes offer opportunities in paediatrics.

Specialty training

There will be competitive entry into specialty training, which will depend on successful completion of the foundation competences. Trainees will be required to make early career choices about the specialty they choose, because unlike in the past, there will be limited opportunities to change career paths at later stages. At present there are a potential 16 types of specialty programmes that trainees may choose to enter (Table 1), one of which is paediatrics. Four of the programmes involve a rotation through different specialties; core medicine (includes the 22 medical specialties), core surgery (includes seven surgical specialties), acute core (anaesthetics, acute medicine, accident and emergency) and neurosciences (neurosurgery, neurology, clinical neurophysiology). Trainees will be competitively allocated to one of the specialties within that core group after 2 years. All other programmes are single specialties and trainees will on successful completion of the training programme be awarded a Certificate of Completion of Training (CCT) in that specialty.

Some of the medical specialties have historically taken trainees after a period of early training in paediatrics, particularly paediatric cardiology and genetics. This will be able to continue with the competitive allocation into these specialties after 2–3 years in either core medicine or paediatrics.

It is intended that as many general practice programmes as possible will offer training in paediatrics. Close co-operation between the Royal College of Paediatrics and Child Health (RCPCH) and the Royal College of General Practitioners (RCGP) has resulted in guidance to ensure that general practice programmes are suitably developed so that those trainees in general practice can acquire the paediatric competences appropriate to their specialty.³ It is less clear how those training in other specialties, but who require some training in paediatrics (e.g. paediatric surgery, paediatric anaesthesia, paediatric haematology), will acquire that experience.

The paediatric curriculum

A new paediatric curriculum has been developed to support learning in this new structure. This curriculum, has received final approval by the Postgraduate Medical Education and Training Board (PMETB), is available through the RCPCH website (www.rcpch.ac.uk). This curriculum has been designed with the appropriate flexibility to prepare those in training, whether full- or part-time, for a wide range of career opportunities in paediatrics.

The purpose of the curriculum is to provide the basis for the training and assessment of paediatricians who are fit to practise and equipped to respond to the broad range of challenges of

MMC specialty training programmes

- Acute core* (anaesthetics, acute medicine, accident and emergency)
- Core surgery* (range of surgical specialties)
- Core medicine* (range of medical specialties)
- Neurosciences* (neurosurgery, neurology, clinical neurophysiology)
- Anaesthetics
- Chemical pathology
- General practice
- Histopathology
- Medical microbiology
- Obstetrics and gynaecology
- Ophthalmology
- Oral and maxillo-facial surgery
- Paediatrics
- Psychiatry
- Public health
- Radiology

*Trainees enter a 2-year core programme before being allocated to one of the individual specialties from within that programme.

Table 1

working with babies, children, young people and their families or carers in the complex social, economic, political and institutional contexts of the 21st century. The curriculum sets out what has to be taught, learned and assessed in postgraduate training in paediatrics and offers guidance to trainees and their supervisors about the areas they need to cover at each stage of their training and the competences they need to acquire. It defines learning outcomes, is competency-based and includes three stages of learning. The model of progression, which is central to this curriculum, defines each of these clear stages.

Level 1

Here the emphasis is on the acquisition of knowledge, skills and attitudes. The wording of the competences reflects this early stage, where trainees are expected to 'become familiar with' or to have had 'some experience of' areas of knowledge and skill.

Level 2

This brings new demands to trainees and consolidates those competences already acquired. The focus changes to the application of these newly acquired competences. Trainees are expected to go beyond the initial management of paediatric conditions to manage treatment and to take responsibility for chronic as well as acute cases. In addition, they are now expected to involve themselves in wider aspects of professional practice, such as clinical governance or taking a leadership role in multi-agency teamwork.

Level 3

At this stage trainees have the options of following different curricula. They may choose to become general paediatricians and this curriculum builds on the structure and content of the earlier documents. Those who choose sub-specialty training follow one of the other 14 curricula (Table 2).

Level 3 paediatric curricula

- General paediatrics
- Paediatric clinical pharmacology
- Community child health
- Paediatric diabetes and endocrinology
- Paediatric emergency medicine
- Paediatric gastroenterology, hepatology and nutrition
- Paediatric immunology, infectious disease and allergy
- Paediatric intensive care medicine
- Neonatal medicine
- Paediatric nephrology
- Paediatric neurodisability
- Paediatric neurology
- Paediatric oncology
- Paediatric respiratory medicine
- Paediatric rheumatology

Table 2

Regardless of the chosen career path, trainees at this stage are expected to maintain all general competences in paediatrics gained at previous stages of training and those more challenging ones introduced at this last stage; they are required to take full responsibility for their work; they are expected to ensure good practice, to evaluate and implement guidelines and policies, to monitor and assess the work of colleagues; in short, they are expected to have acquired the competence and confidence appropriate to the role of a consultant paediatrician.

Acquisition of competences is influenced by a variety of factors, some of which are trainee related, such as ability, motivation, choice, and confidence, and others that are influenced by the external environment such as the context in which the learning is offered and the opportunities made available. The time taken for individual trainees to gain these competences will therefore be necessarily variable. However, it is estimated that indicative times might be 2–3 years to gain Level 1 competences, 1–2 years to gain Level 2 competences and 2–3 years to gain Level 3 competences.

Training programmes

Standards need to be established for the training programmes so that the learning environment and the contexts for learning are able to support a trainee's journey from novice to expert. Trainees should initially be offered a broad experience in paediatrics. As they progress, they will acquire greater depth and continuing breadth of experience in wider areas of professional practice. Training programmes will need to be designed to support this progression. It is also very important that trainees have the opportunity to work in the wide variety of contexts in which paediatric care is practised (e.g. in acute and community settings) as this will be essential for their future delivery of service within networks of care.

Level 1 posts

Trainees need to encounter a wide range of acute and outpatient general paediatric work and a first year post should offer these

opportunities. Development of the competences relating to the presentation of acute paediatric conditions is likely to be provided most effectively by acute medical admissions units in busy District General Hospitals (DGHs) and Accident and Emergency departments (A&E) in children's hospitals. Development of the competences relating to outpatient presentations is likely to be provided by access to a broad range of secondary care outpatient clinics. This is most likely to be provided by a busy DGH.

During the second training year, trainees will need to ensure that they cover the full range of clinical conditions listed in the curriculum. A period of training in a neonatology unit offering both special and some intensive care will be required in order that competences relating to the care of the newborn can be acquired. There will also need to be a broad exposure to long-term clinical conditions across the full range of specialties. This is most likely to be acquired in a busy DGH. If trainees are placed in a children's hospital, exposure to several specialties rather than a single one is likely to be most beneficial.

Those trainees who require a third year of training at this stage are likely to need the opportunities to take on more responsibility or to focus on gaps in their learning. A programme which offers senior posts in DGHs or posts in tertiary units, which support trainees at this level will be required.

Level 2 posts

The most notable difference in the required breadth and depth of competences at Level 2 is in the area of behavioural, social and developmental paediatrics and child protection. A post in a community paediatric department is most likely to deliver the training to support this learning. At this stage, trainees are also expected to be able to apply the knowledge they have acquired, and will therefore need to be able to take on more responsibility in a senior role. This is likely to be best provided by experience in a busy DGH with exposure to a broad range of paediatrics and neonatology.

Level 3 posts

Trainees completing the general paediatric training programme will require opportunities to take on roles of increasing responsibility within a broad range of general paediatrics, neonatology and community child health. At Level 3, their acute skills will be well-developed and will need to be maintained. However, their ability to work with less supervision in managing long-term conditions within managed clinical networks is likely to require further development. Consequently, it would be helpful if posts at this stage of training included specialty clinics in DGHs and some exposure to tertiary specialty services. The principles for management of long-term conditions are similar across specialties and there are generic competences to cover this. Trainees do not need to experience all of the tertiary specialties to acquire these skills. The focus for training at this stage will be the preparation of trainees to work in the clinical environment they are likely to be working in as a consultant providing secondary care for children's services. Working in a senior role in a DGH is likely to be highly beneficial here.

Trainees entering sub-specialty programmes (with the exception of community child health) will be competitively appointed through the national sub-specialty scheme.⁴ The posts within

these programmes are in approved tertiary training centres. There are further opportunities to diversify at Level 3 for those trainees who choose sub-specialties with optional modules. For example, trainees in community child health neurodisability have the opportunity to pursue a course in paediatric audio-vestibular medicine. Trainees in paediatric immunology, infectious diseases and allergy, and in gastroenterology, hepatology and nutrition have the option to specialise in any one of the areas within that sub-specialty.

Academic training

MMC also includes an initiative to enhance academic training.⁵ New funding has been given to establish academic training programmes across all specialties. Trainees will enter these academic programmes from foundation into 3-year Academic Clinical Fellowships (ACF). During this time they will be supported to acquire not only the clinical competences relevant to their specialty but also have protected research time to develop sufficient research expertise to be in a position to apply for externally funded research grants. It is anticipated that trainees will then spend 3 years in funded research to gain a higher degree before returning to an Academic Clinical Lectureship (ACL) post to complete their training. In the first round of the development of these programmes six new ACF and seven ACL programmes have been established with a total of 50 ACF and 18 ACL new entrants anticipated over 5 years. This is good news for academic paediatrics and will hopefully reverse the decline in numbers of academic paediatricians which has been occurring in recent years.⁶

Transition

One of the biggest challenges is how we move from where we are now to where we want to be. The old training routes must close and yet those still within that system must not be disadvantaged by the changes. Those in higher specialist training will, subject to satisfactory progress, be able to complete their training within their current training programmes. Those currently in foundation programmes, and in a wide variety of senior house officer-level posts, need to be accommodated into the new training programmes to start in August 2007. The selection process will be competitive, but fair, and aimed to identify those candidates most likely to complete the programme successfully.

Trainees who are unsuccessful at first application will be able to apply for Fixed Term Specialty Training Appointments (FTSTAs). Appointment to these posts will be through the same application process, the Medical Training Application Service (MTAS). The training opportunities offered in these posts will follow the Level 1 curriculum. Individuals in these posts will have the opportunity to re-apply to specialty training at a later stage when vacancies in the programme become available. They will enter the specialty training programme appropriate to their level of competence (Figure 1). Alternatively, individuals may, after a period of training in these posts, apply for a career grade post.

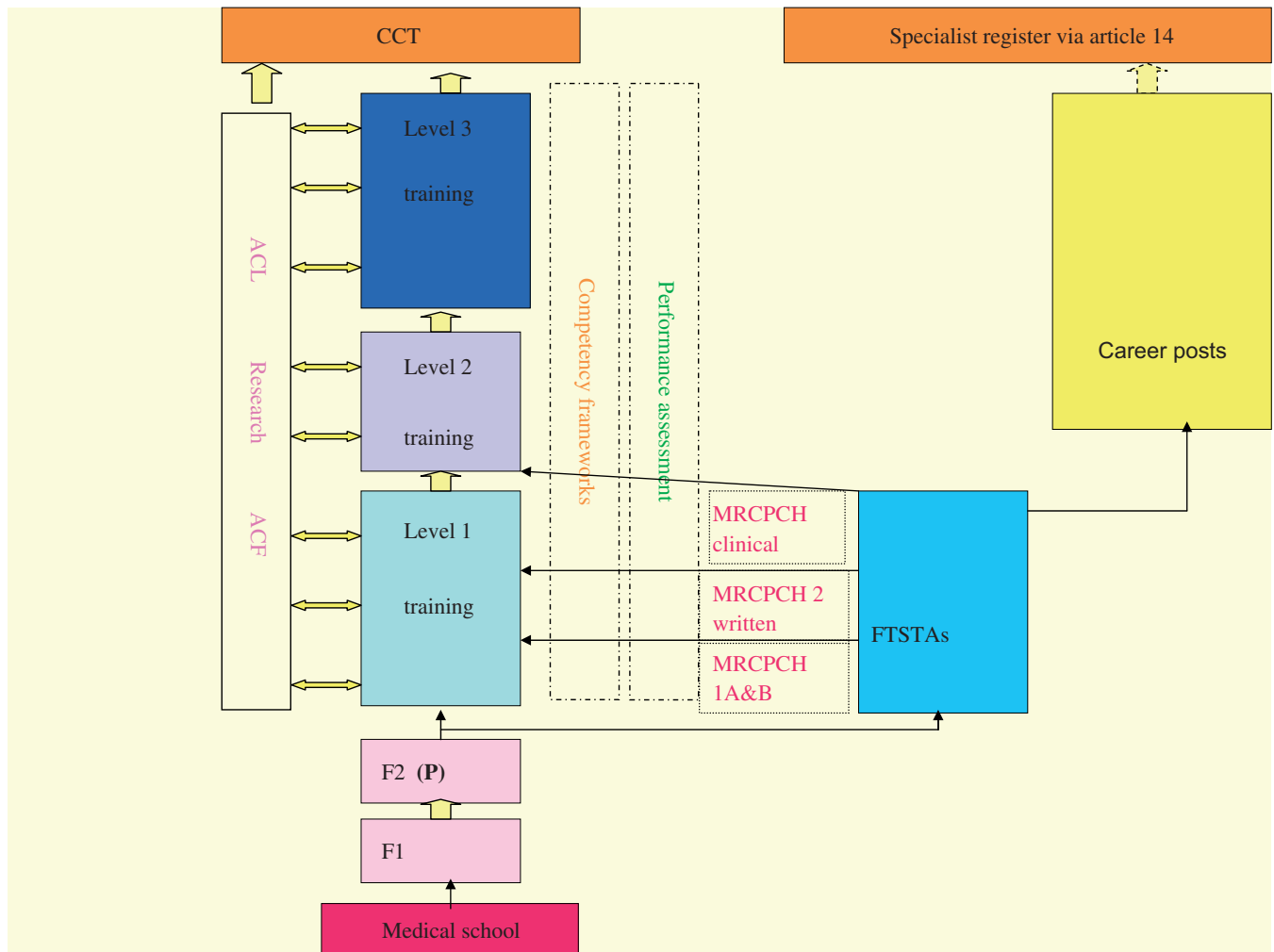


Figure 1 Overview of paediatric training.

Assessment

Training in the new programmes will be more structured. Trainees and trainers will know what the trainee needs to learn and they will be assessed to determine if they have achieved their learning objectives. It is important that a doctor's knowledge skills and attitudes are assessed across the whole curriculum. There is a spectrum of methodologies in assessment, from assessing what actually happens in the workplace, through simulation and Objective Structured Clinical Examinations (OSCEs), through to formal written examinations. These assessments test different levels of learning; a written examination may test knowledge and show that a doctor 'knows' or 'knows how'. A simulation or OSCE may test that a doctor is competent at a particular skill, 'can do'. Assessment in the workplace however shows what a doctor actually 'does' or tests his/her performance. An assessment strategy will combine a number of methods to ensure curriculum coverage.

In 2004 the RCPCH launched the new MRCPCH examination, which has been mapped to the new curriculum. This required the introduction of assessment of areas not previously tested in the examination, e.g. assessment of communications skills, neurodevelopmental examination and acute scenarios. The MRCPCH remains

very important, particularly for testing the knowledge and skills that need to be acquired early in training. This will be supplemented by assessments in the workplace, which focus on observable behaviour.

The RCPCH has also been evaluating the use of multi-source feedback in the assessment of paediatricians in training since 2004. The results have shown that this is a valid and reliable form of assessment, which is feasible to deliver on a national basis, and which is well received by trainees and trainers.⁷ A blue-printing exercise that considered which assessment tools are most suitable for assessment of the competences in the curriculum suggested that mini-clinical evaluation exercise and case-based discussion are likely to be useful additions to an overall assessment strategy. Therefore pilot work in adapting these tools for paediatric use is in progress.

The future

The crucial question is will this new curriculum, delivered through the more focussed training programmes, adequately prepare doctors for their role in the changing health service? The last major reform of postgraduate medical education in the UK was the introduction of the unified specialist registrar grade in 1995, following the

recommendation of the Calman report.⁸ Evaluation of that training suggested that although the majority of trainees were satisfied with their training, reporting increased supervision and support,⁹ a minority still experienced service work taking priority over learning needs.¹⁰ Studies in the US¹¹ and Canada^{12,13} have specifically examined whether recent graduates of paediatric residency programmes felt, in retrospect, that they had been well prepared for clinical practice. These studies identified areas of weakness in the training programmes. There has not been a similar study of UK paediatric specialist registrar training.

The curriculum that supports run through training has been designed to be flexible and thus be responsive to both the changing needs of the trainees and the service. However, the success of its delivery will be highly dependant on trainers being given adequate time to support trainees in this more focused training. This will be monitored through quality assurance mechanisms, including a national trainees' survey. However, in addition to this, it will also be important to review whether the doctors graduating from the scheme feel prepared for their new and changing roles in order to evaluate whether the programme is truly 'fit for purpose'. ♦

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