

# **Paediatric Curriculum Purpose Statement**

## **Proposal for August 2019**

The purpose statement addresses the requirements of the General Medical Council's Excellence by Design: standards for postgraduate curricula<sup>1</sup> (theme 1) and the Shape of Training Review. It sets out patient and service needs, scope of practice and the level of performance expected of doctors in training.

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## **1. Purpose statement for Paediatric Surgery**

### **1.1 The curriculum scope of practice, service, patient and population needs**

Paediatric surgery is unlike other specialties in that it is defined by patient age, not anatomical system. It exists to treat congenital abnormalities; physiology and surgical conditions of infants and children (including trauma). Many conditions of these conditions present out of hours. Therefore, the purpose of the curriculum for Paediatric Surgery is to produce, at certification, competent doctors, able to deliver excellent outcomes for patients as consultant surgeons in the UK. The curriculum will provide consultant surgeons with the generic professional and specialty-specific capabilities needed to manage patients presenting with the full range of acute and elective paediatric surgery conditions up to the point of operation and be capable of operating on all but the most complex conditions of children and neonates. Trainees will be entrusted to undertake the role of the general Paediatric Surgery Registrar during training and will be qualified at certification to apply for consultant posts in Paediatric Surgery in the United Kingdom or Republic of Ireland.

Patient safety and competent practice are both essential and the curriculum has been designed so that the learning experience itself should not affect patient safety. Patient safety is the first

priority of training demonstrated through safety-critical content, expected levels of performance, critical progression points, required breadth of experience and levels of trainer supervision needed for safe and professional practice. Upon satisfactory completion of training programmes, we expect trainees to be able to work safely and competently in the defined area of practice and to be able to manage or mitigate relevant risks effectively. A feature of the curriculum is that it promotes and encourages excellence through the setting of high-level outcomes, supervision levels for excellence, and tailored assessment and feedback, allowing trainees to progress at their own rate.

## **1.2 Shape of training review**

The Shape of Training (SoT) review<sup>2</sup> provides an opportunity to reform postgraduate training to produce a workforce fit for the needs of patients, producing a doctor who is more patient focused, more general and has more flexibility in career structure. The paediatric surgery curriculum meets the main recommendations of SoT as shown below.

### *1. Takes account of and describes how the proposal will better support the needs of patients and service providers:*

Paediatric Surgery addresses the need for management of infants and children with congenital and acquired disease. Paediatric Surgery can be grouped into neonatal surgery, general paediatric surgery, gastro-intestinal surgery, urology, thoracic surgery and oncology. Trainees require knowledge of all these areas to be emergency safe practitioners who will be able to manage unselected admissions in paediatric surgery up to the point of surgical intervention and be competent to perform the operations needed to cover all but the most complex of these admissions. Rare congenital conditions require tertiary level care, with an overlap with secondary level care for commoner acquired conditions. Recognizing and managing a sick infant and child requires special skills and familiarity with both neonatal and paediatric intensive care units.

There has been extensive consultation with stakeholders, including:

- The devolved 4 Nations
- NHS Employers
- Other SACs
- Specialty Association (Society for Cardiothoracic Surgery - SCTS)
- Education providers – Lead Dean, Training Programme Directors
- Trainees
- Core Surgery
- Intercollegiate Exam Board
- Patient/Lay representatives

ensuring the development of a curriculum that is fair, flexible, non-discriminatory, fit for purpose today with the capacity to evolve in future iterations in response to changing needs of patients.

*Ensures that the proposed curriculum to CCT equips doctors with the generic skills to participate in the acute unselected take and to provide continuity of care thereafter:*

An audit of 1000 days of emergency admissions at one of the largest children's hospitals in the UK has produced a skill-set for emergency safe paediatric surgeons. This includes conditions that surgeons will need to be able to recognise and manage, including operatively. Presenting conditions can be grouped into neonatal surgery, General Paediatric Surgery, gastro-intestinal surgery, urology, thoracic surgery and oncology. Training for this skill-set will include simulated training for rare emergency procedures such as trauma laparotomy and thoracotomy.

The knowledge base and experience will necessarily include experience of procedures which the trainees will not be expected to be competent to perform independently at CCT, but which they will need experience of in order to manage the complications (Trainee Experience Required Not Independent Practice (TERNIP)). Operative competence will be achieved in these specialized areas through post CCT training, which may be credentialed in future, responding to local service need as required.

*2. Where appropriate describes how the proposal would better support the delivery of care in the community:*

Paediatric surgery includes substantial areas of specialist practice such that it is largely performed in tertiary centres. However, out-patient clinics, daycase lists and multi-disciplinary teams are increasingly delivering general paediatric surgery care in district general hospitals (DGHs) in a hub and spoke model. Virtual telephone clinics are being trialled in paediatric surgery.

*3. Describes how the proposal will support a more flexible approach to training:*

The curriculum allows ease of transfer into other surgical specialties following completion of core training (CT1-2). There is generic paediatric surgery training until the end of Phase 1 – allowing flexibility in special interest choice until relatively late in training pathway.

The curriculum describes clinical Capabilities in Practice (CiPs) shared with other specialties in surgery supporting flexibility for trainees to move between the specialties in line with the recommendations set out in the GMC's report to the four UK governments<sup>3</sup>. The CiPs include the Generic Professional Capabilities (GPCs) common to all medical specialties, facilitating transferability of learning outcomes across other related specialties and disciplines. It will, therefore, be possible for trainees to transfer generic knowledge, clinical and surgical skills to another surgical specialty without restarting at CT1/ST1 level. As an example, prior learning of history-taking, physical examination, health promotion, medical record keeping and technical skills in one specialty may allow accelerated learning in the clinical areas of another specialty with identical requirements for communication skills, team-working and empathy, compassion and respect for patients. Consequently, trainees will acquire generic skills in the CiPs which can be transferred to other surgical specialties, or to other non-surgical specialties. Trainees who choose

a different career route may be able to have a shorter than usual training pathway in their new training programme, in recognition of learning already gained.

This flexible approach with acquisition of transferable capabilities will allow training in paediatric surgery to adapt to current and future patient and workforce needs as well as to changes in surgery with the advent of new treatments and technologies.

4. *Describes the role that credentialing will play in delivering the specialist and sub-specialist components of the curriculum:*

Post-certification credentialing will be considered for super-specialist areas of work to meet service and patient needs, these areas are detailed in 1.4.2. (*Please see Reference Section for GMC definition of 'Credentialing'*)

### **1.3 The high-level outcomes of Paediatric Surgery**

The curriculum is outcomes-based, specifying the high-level generic, shared and specialty-specific capabilities that must be demonstrated to complete training. There is a greater focus on the generic professional capabilities common to all doctors.

#### *1.3.1 Capabilities in Practice*

The high-level outcomes of the curriculum are expressed as Capabilities in Practice (CiPs). The 9 shared plus 1 specialty-specific CiPs describe the professional tasks or work within the scope of paediatric surgery. These are:

- 1) Manages an out-patient clinic
- 2) Manages the unselected emergency take
- 3) Manages ward rounds and the ongoing care of inpatients
- 4) Manages an operating list
- 5) Manages a multi-disciplinary meeting

In addition to these, there is one Paediatric Surgery specialty-specific capability described:

- 6) Able to manage premature infants, children and adolescents up to adult-hood within neonatal intensive care unit, paediatric intensive care unit and high dependency settings for congenital and acquired conditions and trauma presenting in infancy and childhood.

By the completion of training and certification, the trainee must demonstrate that they are capable of unsupervised practice in all CiPs.

#### *1.3.2 Generic Professional Capabilities*

Embedded within each CiP are the full range Generic Professional Capabilities (GPCs) which describe the professional responsibilities of all doctors in keeping with Good Medical Practice.

These attributes are common, minimum and generic standards expected of all medical practitioners achieving certification or its equivalent. The GPCs have equal weight in the training and assessment of clinical capabilities and responsibilities in the training programme. The nine domains of the GPC framework are:

1. Professional knowledge
2. Professional skills
3. Professional values and behaviours
4. Health promotion and illness prevention
5. Leadership and team-working
6. Patient safety and quality improvement
7. Safeguarding vulnerable groups
8. Education and training
9. Research and scholarship

### *1.3.3 Supervision levels*

The assessment of CiPs draws on the holistic judgement of Clinical Supervisors by ascribing the supervision level required by the trainee to undertake each CiP to the standard of certification. The level of supervision will change in line with the trainee's progression, consistent with safe and effective care for the patient. Typically, there should be a gradual reduction in the level of supervision required and an increase in the complexity of cases managed until the level of competence for independent practice is acquired. The supervision levels are shown in table 1:

|                  |                                                                                                                |
|------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Level I</b>   | Able to observe only                                                                                           |
| <b>Level II</b>  | Able to act with direct supervision:<br><br>a) supervisor present throughout<br>b) supervisor present for part |
| <b>Level III</b> | Able to act with indirect supervision                                                                          |
| <b>Level IV</b>  | Able to act at the level of a day 1 consultant                                                                 |
| <b>Level V</b>   | Demonstrates performance to a level well beyond that expected of a day one consultant                          |

Table 1: Supervision levels and descriptors

Phase 1 of training will be completed when the appropriate level of competency (as defined in 1.4 below) has been achieved in each CiP, and a trainee will be eligible for certification when level IV has been achieved. Level V indicates excellence.

#### *1.3.4 Descriptors*

Each CiP contains key descriptors associated with the clinical activity or task and all the GPC descriptors. The descriptors are intended to help trainees and trainers recognise the level of knowledge, skills and professional behaviours which must be demonstrated for independent practice. All descriptors will be taken in to account when carrying out assessment and they will be used by Clinical Supervisors to highlight where trainees achieve excellence at a faster rate and when targeted training is necessary in the manner of an exception report. They, therefore, provide the basis for specific, constructive feedback to the trainee. The CiPs will also provide trainees with a self-assessment, providing an opportunity to show insight and actively engage in the feedback discussion.

#### **1.4. Progression through training**

Trainees will enter Paediatric Surgery training via a national selection process at ST3 after successful completion of core surgical training or equivalent, and having passed the MRCS examination. Trainees will learn in a variety of settings using a range of methods, including workplace-based experiential learning in a variety of environments, formal postgraduate teaching, simulation-based education and through self-directed learning.

Paediatric Surgery training is outcome-based rather than time-based. However, it will normally be completed in an indicative time of 6 years.

There will be options for those trainees who demonstrate exceptionally rapid development and acquisition of capabilities to complete training more rapidly than the current indicative time of 6 years. There may also be a small number of trainees who develop more slowly and will require an extension of training in line the Reference Guide for Postgraduate Specialty Training in the UK (the Gold Guide<sup>4</sup>).

Trainees who choose less than full time training (LTFT) will have the indicative training time extended pro-rata in accordance with the Gold Guide. LTFT trainees will perform both elective and out of hours duties pro rata throughout the time of LTFT.

#### **Phases of Training**

Paediatric Surgical training is divided into 2 phases. Phase 1 will take an indicative time of 4 years to complete and Phase 2 will take an indicative time of 2 years to complete.

Phase 1: Trainees will acquire skills in routine surgery, simpler emergency cases and start to do more complex cases across all areas of paediatric surgery (neonatal surgery, general paediatric surgery, gastro-intestinal surgery, urology, thoracic surgery and oncology). They will develop the knowledge, clinical and professional skills of a day 1 consultant in Paediatric

Surgery. They will be eligible to apply to sit the intercollegiate Specialty Board Exam on successful completion of Phase 1.

Phase 2: Technical skills will continue to be developed across all areas of Paediatric Surgery to the level of a day 1 consultant, being able to provide a safe emergency paediatric surgery service by the end of this phase. There will be a particular focus on neonatal surgery in Phase 2, a area more complex than others in Paediatric Surgery requiring the previous acquisition of skills in the generality of Paediatric Surgery.

#### *Interdependencies across related specialties and disciplines*

Within paediatric surgery there is a growing service need for integrated care to best meet the needs of the patient. The curriculum specifically develops surgeons to be able to lead and work in multi-disciplinary teams (MDTs) and with colleagues from a wide range of professional groups in a variety of hospital settings. The composition of these teams will vary according to the needs of the patient but will include other surgical and medical specialties as well as diagnostic services.

Paediatric Surgery has interdependencies with other specialties including urology (paediatric urology), General Surgery (general Surgery of Childhood and colorectal surgery) and Thoracic Surgery. Throughout the development of the curriculum there has been extensive consultation, with colleagues in those specialties with the most interaction with Paediatric Surgery, with Deans and Heads of Schools, and also with patients.

#### *1.4.1 Critical Progression points*

Critical progression points have been set at the end of Phases 1 and 2

End of Phase 1: at this point trainees will have consolidated general paediatric surgery skills, pre and post-op management and be highly competent in recognising and managing sick children. They will have acquired the knowledge, clinical and professional skills to be assessed as a day 1 consultant in Paediatric Surgery and to apply to take the Intercollegiate Specialty Board Exam in Paediatric Surgery.

At this point trainees would be expected to have reached Supervision Level III in all 10 CiPs.

End of Phase 2: at this point the trainee would be expected to have acquired the complex surgery skills to be able to manage the 90% of emergency cases in an unselected on-call and be able to manage the generality of elective paediatric surgery.

Supervision levels are shown for both critical progression points in Table 2 . Once trainees have reached supervision level IV and satisfied all curriculum requirements then ARCP6 may be awarded and the trainee apply for entry onto the specialist register.

Excellence will be recognised by:

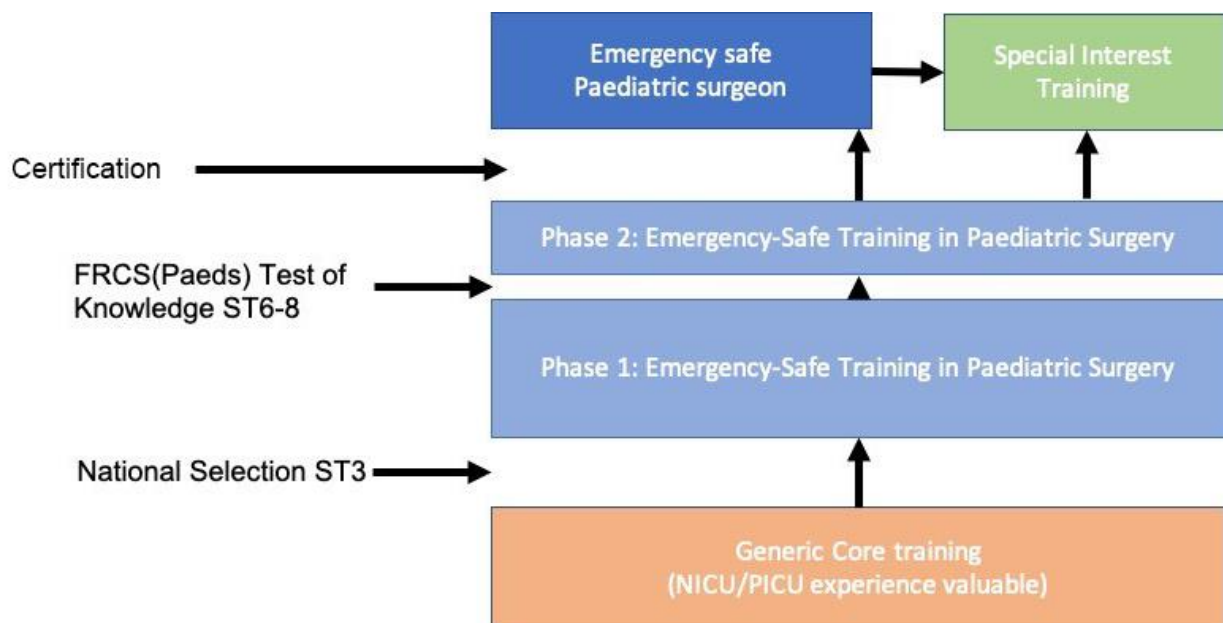
- a) achievement of Level V in any of the Capabilities in Practice
- b) exceeding the supervision level expected for the end of Phase 1
- c) achievement of a supervision level at an earlier stage than would normally be expected
- d) recognition of particularly good performance in any of the descriptors within a Capability in Practice

| Capability in practice (shared)                           | Phase 1   | Phase 2  |
|-----------------------------------------------------------|-----------|----------|
| 1. Manages an out-patient clinic                          | Level III | Level IV |
| 2. Manages the unselected emergency take                  | Level III | Level IV |
| 3. Manages ward rounds and the ongoing care of inpatients | Level III | Level IV |
| 4. Manages an operating list                              | Level III | Level IV |
| 5. Manages a multi-disciplinary meeting                   | Level II  | Level IV |

| Capability in practice (specialty-specific)                                                               | Phase 1   | Phase 2<br>(CCT) |
|-----------------------------------------------------------------------------------------------------------|-----------|------------------|
| 6. Able to manage patients within the neonatal and paediatric intensive care and high dependency settings | Level III | Level IV         |

Table 2: Supervision levels to be achieved by the critical progression points at the end of Phase 1 (indicative time of 4 years), and the end of Phase 2 (indicative time of 2 years).





#### *1.4.3 Proposed place of Credentialing in Training/Post-training*

Credentialing is defined as a process which provides formal accreditation of competencies (which include knowledge, skills and performance) in a defined area of practice, at a level that provides confidence that the individual is fit to practise in that area (GMC).<sup>5</sup>

Credentialing will be particularly relevant for surgeons who work in niche areas of medical practice that are not covered by existing standards for training and in new and emerging areas of medical practice.

The SAC is enthusiastic about working with the GMC to introduce a process of credentialing to enhance medical regulation and patient protection by:

- providing a framework of standards and accreditation in areas where regulation is limited or absent
- providing patients and employers with information about doctors' particular capabilities and current areas of competence
- providing better recognition of doctors' capabilities to support:
  - improvements in workforce flexibility and professional mobility
  - the new architecture for postgraduate medical education
- providing recognition of the capabilities of cardiac and thoracic surgeons to assure the public, service providers and employers that they have met and are maintaining UK standards in their field
- developing detailed frameworks, standards, assessment processes and proposals for quality assurance

Areas within the specialty which could be considered suitable for credentialing in Paediatric Surgery are:

- Paediatric Urology (e.g. Reconstruction lower urinary tract, gender surgery, Bladder exstrophy, minimally invasive upper tract surgery)
- Paediatric Oncology (Wilms tumour (especially minimally invasive Tumour Nephrectomy); Neuroblastoma surgery)
- Thoracic surgery (e.g. Minimally invasive management of congenital lung cysts; correction of congenital chest wall deformities (NUSS bar)).
- Colorectal surgery (e.g. management of Cloacal abnormalities, inflammatory bowel disease, surgical management of intestinal failure/short bowel syndrome).
- Hepatobiliary surgery (e.g. surgery for biliary atresia, choledochal cysts (3 centres in the UK)).
- Paediatric transplantation (e.g. renal, liver and small-bowel).

## References

1. Excellence by design: standards for postgraduate curricula. Published 22 May 2017 [https://www.gmc-uk.org/-/media/documents/excellence-by-design---standards-for-postgraduate-curricula-0517\\_pdf-70436125.pdf](https://www.gmc-uk.org/-/media/documents/excellence-by-design---standards-for-postgraduate-curricula-0517_pdf-70436125.pdf)
2. Shape of Training: Report from the UK Shape of Training Steering Group (UKSTSG). Dated: 29 March 2017 [https://www.shapeoftraining.co.uk/static/documents/content/Shape\\_of\\_Training\\_Final\\_SCT0417353814.pdf](https://www.shapeoftraining.co.uk/static/documents/content/Shape_of_Training_Final_SCT0417353814.pdf)
3. The state of medical education and practice in the UK. 2017. <https://www.gmc-uk.org/-/media/about/somep-2017-final-full.pdf?la=en&hash=3FC4B6C2B7EBD840017B908DBF0328CD840640A1>
4. A Reference Guide for Postgraduate Specialty Training in the UK. The Gold Guide. Sixth Edition. Feb 2016. <https://www.copmed.org.uk/images/docs/publications/Gold-Guide-6th-Edition-February-2016.pdf>
5. GMC website: Credentialing: <https://www.gmc-uk.org/education/standards-guidance-and-curricula/projects/credentialing>