ISCP INTERCOLLEGIATE SURGICAL CURRICULUM PROGRAMME

Paediatric Surgery Curriculum

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THE INTERCOLLEGIATE
SURGICAL CURRICULUM PROGRAMME

Educating the surgeons of the future

Acknowledgements

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You can also find the curriculum on the ISCP website at **www.iscp.ac.uk**

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1 Introduction

The curriculum provides the approved United Kingdom (UK) framework for the training of doctors to the level of independent consultant practice, addressing the requirements of patients, the population and the strategic health services. The curriculum will also be followed for training in the Republic of Ireland. General Medical Council (GMC) approval of the curriculum pertains to UK training programmes while those in the Republic of Ireland are governed by the Royal College of Surgeons in Ireland (RCSI) and the Medical Council of Ireland.

2 Purpose

2.1 Purpose of the curriculum

The purpose of the curriculum 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 conditions up to, including and beyond the point of operation and to manage the full range of acute and elective conditions in the generality of their chosen special interest. Trainees will be entrusted to undertake the role of the general Paediatric Surgery Specialty Registrar (StR) during training and will be qualified at certification to apply for consultant posts in Paediatric Surgery in the UK 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.

This purpose statement has been endorsed by the GMC's Curriculum Oversight Group and confirmed as meeting the needs of the health services of the countries of the UK.

2.2 Rationale and development of a new curriculum

The *Shape of Training* (SoT) review[1] and *Excellence by Design: standards for postgraduate curricula*[2] provided opportunities to reform postgraduate training. The curriculum will produce a workforce fit for the needs of patients, producing doctors who are more patient-focused, more general and who have more flexibility in their career structure. The GMC's introduction of updated standards for curricula and assessment processes laid out in *Excellence by Design* requires all medical curricula to be based on high-level outcomes. The high-level outcomes in this curriculum are called Capabilities in Practice (CiPs) and integrate parts of the syllabus to describe the professional tasks within the scope of specialty practice. At the centre of each of these groups of tasks are Generic Professional Capabilities[3] (GPCs), interdependent essential capabilities that underpin professional

[1] Shape of training: Securing the future of excellent patient care
[2] Excellence by design: standards for postgraduate curricula
[3] Generic professional capabilities framework

medical practice and are common to all who practise medicine. The GPCs are in keeping with Good Medical Practice (GMP)[4]. Equipping all trainees with these transferable capabilities should result in a more flexible, adaptable workforce.

All the shared CiPs are transferable to other surgical specialties and some may be transferable to non-surgical specialties. In addition, core knowledge and skills gained in any surgical specialty training programme are transferable for entry into Paediatric Surgery. Trainees who choose to move from a different speciality training programme having previously gained skills transferable to Paediatric Surgery may be able to have a shorter than usual training pathway in their new training programme. While most of the specialty syllabus is not transferable because the knowledge and detailed technical skills are specific to Paediatric Surgery, some limited areas of the syllabus may be transferable. This flexible approach, with acquisition of transferable capabilities, allows surgical training to adapt to current and future patient and workforce needs and change in the requirements of surgery with the advent of new treatments and technologies.

2.3 The training pathway and duration of training

Trainees will enter Paediatric Surgery training via a national selection process following foundation training for run-through or following core surgical training for uncoupled programmes. The curriculum is outcome-based rather than time-based. It will, however, normally be completed in an indicative time of eight years (two years in phase 1 – core surgical training, four years in phase 2, and two years in phase 3).

The programme will be divided into three phases (figure 1):

- Phase 1 will follow the Core Surgical Training curriculum.

- Phase 2 comprises the first four years of specialty training to gain knowledge and experience to manage all patients in paediatric surgery, to the point of being able to sit and pass the FRCS(Paeds) and surgical competence to include routine day-case surgery, beginning to learn complex cases, demonstrated through the CiPs.

- Phase 3 comprises the final two years to consolidate knowledge and experience with technical competence to be an emergency safe surgeon in paediatric surgery, to medically manage all cases presenting on an unselected on-call to be competent to manage surgically 90% of these.

[4] Good Medical Practice

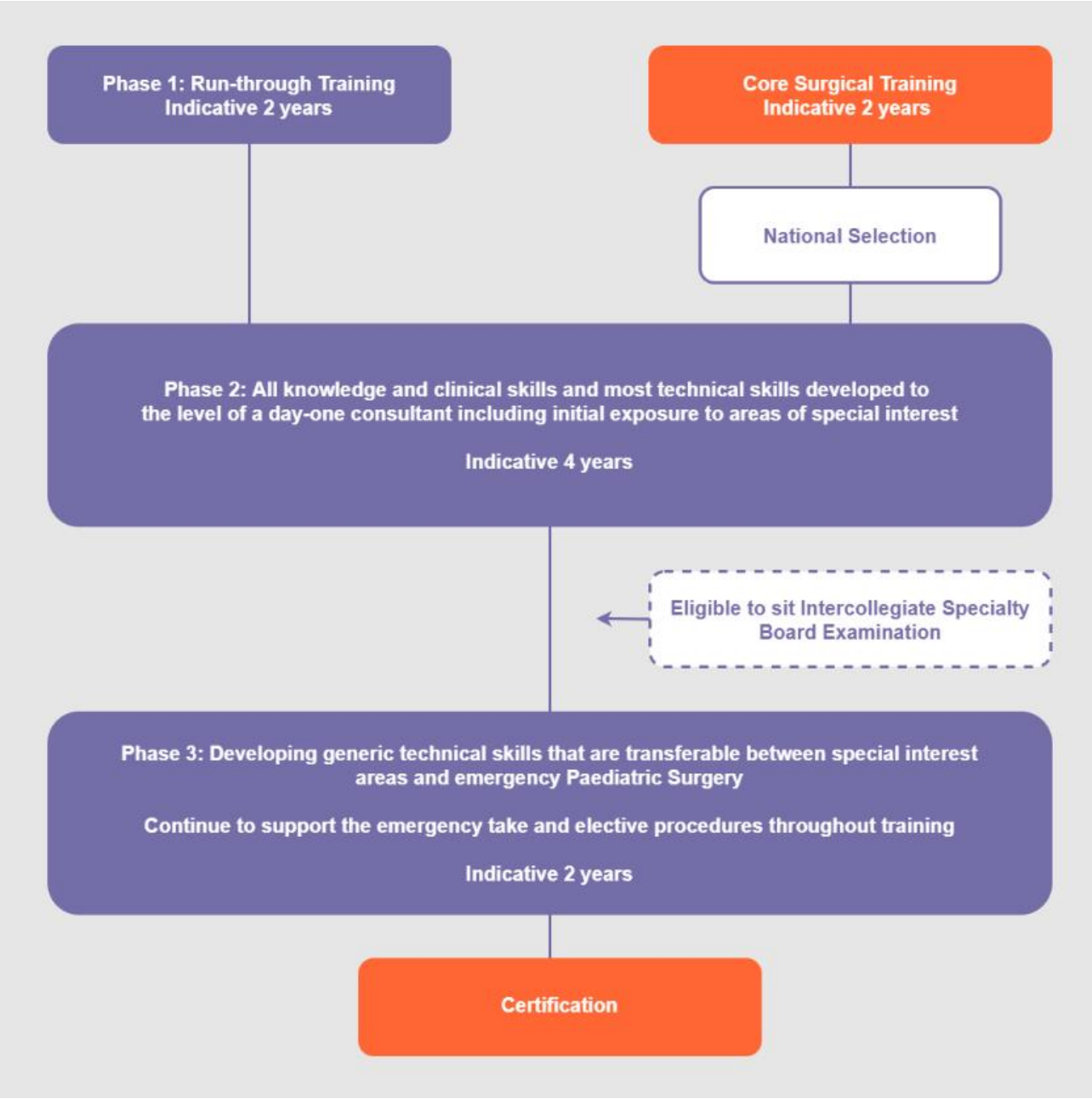

Figure 1. Paediatric Surgery Training Pathway

Training will be in at least two centres during phases 2 and 3 so that trainees can experience different approaches to management.

Trainees who demonstrate exceptionally rapid development in knowledge, technical skills and acquisition of capabilities can complete training more rapidly than this indicative time. There may also be a small number of trainees who develop more slowly and require an extension of training in line with *A Reference Guide for Postgraduate Foundation and Specialty Training in the UK* (The Gold Guide)[5]. Trainees who opt for training less than full time (LTFT) have their indicative training time extended on a pro-rata basis.

[5] Gold Guide 8th edition

3 Programme of Learning

This section covers the expected learning outcomes, learning methods, breadth of experience and levels of performance at critical progression points in the training programme and the levels of performance expected of those completing training.

3.1 What has to be learnt to complete the curriculum

The practice of Paediatric Surgery requires the generic and specialty knowledge, clinical and technical skills and behaviours to manage patients presenting with a wide range of congenital and acquired conditions in infants and children. It involves development of competence in diagnostic reasoning, managing uncertainty, dealing with co-morbidities, and recognising when another specialty opinion or care is required (as well as developing technical skills in the areas and to the level described in the syllabus as shown in appendix 2). The main areas for learning are described by the CiPs which are the high-level learning outcomes for training in Paediatric Surgery described below and shown in full in appendix 1.

3.2 Capabilities in Practice (the high-level outcomes of training)

Training is designed to produce a person capable of safely and effectively performing the role of a first day consultant surgeon. The role of a consultant surgeon can be thought of as a sum of all the various tasks which need to be performed through a working week. These tasks are the high-level outcomes of the curriculum and grouping these together describe the role of a consultant surgeon. To perform a high-level clinical task as a consultant surgeon requires trainees to be able to integrate areas of learning from all parts of the syllabus, including knowledge, clinical skills, professional skills and technical skills. In addition, a consultant surgeon will need to have acquired the generic skills, behaviours and values shared by all doctors in order to perform this task safely and well. A capability is a set of skills that can be developed through training from novice to expert and, therefore, these high-level clinical outcomes are known as Capabilities in Practice. They are common across all surgical specialties and are delivered within the context of the GPCs and the specialty syllabus.

There are five CiPs which are shared between all surgical specialties:

1. Manages an out-patient clinic
2. Manages the unselected emergency take
3. Manages ward rounds and the on-going care of in-patients
4. Manages an operating list
5. Manages multi-disciplinary working

In addition to these, the Paediatric Surgery specialty-specific CiP is:

6. Assesses and manages an infant or child in a NICU/PICU environment

The generic knowledge, skills, behaviours and values shared by all doctors are described in the GPC framework. The GPCs are essential components and have equal weight to the CiPs in the training and assessment of clinical capabilities and responsibilities in the training programme.

The GPC framework has nine domains:

Domain 1: Professional values and behaviours

Domain 2: Professional skills

Practical skills
Communication and interpersonal skills
Dealing with complexity and uncertainty
Clinical skills

Domain 3: Professional knowledge

Professional requirements
National legislative requirements
The health service and healthcare system in the four countries

Domain 4: Capabilities in health promotion and illness prevention

Domain 5: Capabilities in leadership and team working

Domain 6: Capabilities in patient safety and quality improvement

Patient safety
Quality improvement

Domain 7: Capabilities in safeguarding vulnerable groups

Domain 8: Capabilities in education and training

Domain 9: Capabilities in research and scholarship

Simply put, the CiPs and GPCs are the constituent parts of the role of a consultant surgeon. Each part is as important as the next and doctors are required to be capable in all parts of the role in order to be able to practice independently. In order to complete training and be recommended to the GMC for certification and entry to the specialist register, the doctor must demonstrate that they are capable of unsupervised practice in all the CiPs and GPCs. For example, managing the unselected emergency take (CiP 2), requires the integration of knowledge, clinical and diagnostic skills and technical skills described in the syllabus as well as communication and interpersonal skills, time management skills and many other generic skills described in the GPCs in order to be delivered safely, professionally and effectively. This will be assessed using the Multiple Consultant Report (MCR) as described below. The full content of the six CiPs can be found in appendix 1.

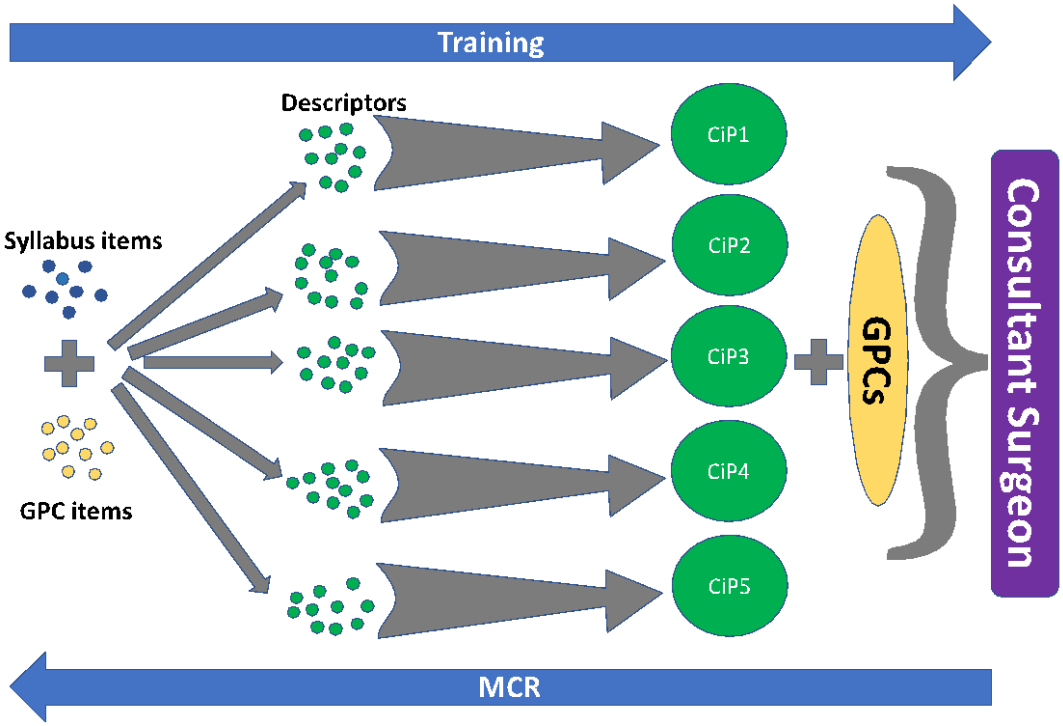

Figure 2 - The interrelationship of the GPCs, the syllabus, the CiPs and their descriptors to the role of a consultant surgeon. Items from the syllabus are combined with items taken from the GPC framework to form the small tasks which are the CiP descriptors. When the small tasks of the descriptors are integrated they comprise the constituent parts of the role of a consultant surgeon (the CiPs). When the CiPs are taken together, along with the GPCs, the role of a consultant surgeon (the overall outcome of the curriculum), is described. Each of these CiPs will be developed through training until the level required of a day-one consultant is reached. Assessment in an outcomes-based curriculum through the MCR examines the trainee from the perspective of the outcome (a consultant surgeon), and compares performance in each CiP and in the GPCs to that level. If the outcome level is not reached, then targeted feedback and development plans can be made with reference to the CiP descriptors and beyond to the syllabus items and GPC items that combine to form the descriptors.

3.3 Descriptors for CiPs

The six CiPs taken together describe the role of a consultant paediatric surgeon but more detail is needed to help trainees develop that capability through training via detailed feedback and focused development goals.

We can break the CiPs down into smaller tasks. Each of these smaller tasks is a CiP descriptor. For example, managing the unselected emergency take (CiP 2), includes the need to promptly assess acutely unwell and deteriorating patients and deliver resuscitative treatment and initial management and ensure sepsis is recognised and treated in compliance with protocol (see appendix 1). If a trainee has not yet reached the level required of a new consultant in a CiP then the descriptors can be used to describe in standard language what needs to be improved through learning and training to allow the trainee to get closer towards the outcome of training. By describing the component parts of a CiP, descriptors also aid decisions on assessment of the level of supervision required by a trainee at the time of that assessment, providing prompts for feedback of performance by allowing identification of areas of excellence or specific detail on areas for development, including in behavioural and professional domains. Descriptors can, therefore, help trainees identify where to focus their efforts to become competent and safe independent

practitioners. More detail about assessment and feedback is given in section 5, Programme of Assessment.

Each CiP is judged against a scale that describes the level of supervision required to perform the CiP to the standard of certification. The level of supervision changes 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. In the early years, therefore, it would be normal for trainees to achieve a lower supervision level and progress as experience is gained.

The supervision levels are:

Level I: Able to observe only
Level II: Able and trusted to act with direct supervision:
a) Supervisor present throughout
b) Supervisor present for part
Level III: Able and trusted to act with indirect supervision
Level IV: Able and trusted to act at the level expected of a day-one consultant
Level V: Able and trusted to act at a level beyond that expected of a day-one consultant

3.4 Critical progression points

Table 1 shows the indicative levels of supervision to be achieved to complete phase 2 and the supervision levels required by the end of phase 3. A trainee becomes eligible for certification when supervision level IV has been achieved in each of the shared and specialty-specific CiPs as well as acquiring all of the skills described in the GPC framework (in addition to the other certification requirements shown in section 5.4) as confirmed by an ARCP panel.

Excellence will be recognised by:
a) Achievement of level V in any of the CiPs
b) Exceeding the supervision level expected for the end of phase 2 or 3
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 CiP.

Capability in practice (shared)	Indicative Supervision Level (end of phase 2)	Supervision Level (end of phase 3 and certification)
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 on-going care of in-patients	Level III	Level IV

4. Manages an operating list	Level III	Level IV
5. Manages multi-disciplinary working	Level III	Level IV

Specialty-specific CiP:

Capability in practice (specialty-specific)	Indicative Supervision Level (end of phase 2)	Supervision Level (end of phase 3 and certification)
6. Assesses and manages an infant or child in a NICU/PICU environment	Level III	Level IV

Table 1: Supervision levels to be achieved by the end of each phase of training

3.5 Breadth of experience required during training

The curriculum requires trainees to accrue a rich experience that promotes deep learning of knowledge, clinical skills, technical skills, professional behaviour, leadership and all other generic professional skills that are considered necessary to ensure patient safety throughout the training process and specifically at the end of training. The scope of practice of a day-one consultant is described in the syllabus. In addition, there are certain skills and conditions within the syllabus that are of such central and fundamental importance to the safe practice of Paediatric Surgery that they are highlighted as critical conditions and index procedures.

3.5.1 The syllabus

The syllabus, shown in appendix 2, provides a detailed description of the specialty-specific knowledge, clinical and technical skills required for each phase of training and for certification. The syllabus is organised by topics which are the presenting conditions of patients in relation to the specialty. Trainees are expected to have exposure to all topics in phase 2 of training.

3.5.2 Critical conditions

From the syllabus, a list of critical conditions has been identified which are of significant importance for patient safety and demonstration of a safe breadth of practice. Across surgery, these are defined as any condition where a misdiagnosis could be associated with devastating consequences for life or limb. These critical conditions are assessed individually by means of the Case Based Discussion (CBD) and Clinical Evaluation Exercise (CEX), which both include an assessment of clinical judgement and decision-making. They provide formative feedback to the trainee and feed into the summative assessment of the Assigned Educational Supervisor (AES) via the AES report for the Annual Review of Competence Progression (ARCP). A list of critical conditions is given in appendix 3. These critical conditions were decided following wide consultation with clinicians and trainers in the specialty.

3.5.3 Index procedures

In addition to the critical conditions, a list of index procedures has been identified. Index procedures are common but important operations central to the specialty, competence in which is essential to the delivery of safe patient care. Taken together they form a representative sample of the breadth of operative procedures in the specialty. Learning in the index procedures is indicative of learning in the broad range of technical procedures in the syllabus and surgical logbook and is, therefore, of significant importance for patient safety and demonstration of a safe breadth of practice. Each of these index procedures is assessed individually by means of the Procedure Based Assessment (PBA) which provides formative feedback to the trainee and feeds into the summative AES report for the ARCP. A list of index procedures expected for Paediatric Surgery is given in appendix 4. These include indicative numbers of cases necessary before certification as trainees would not normally be expected to have achieved sufficient experience to be able to manage the range of pathology they encounter unless these numbers were met. It is recognised that competence could be achieved with fewer cases, if supported by evidence from other assessments. Meeting the numbers does not, in itself, imply competence. These index procedures and indicative numbers were decided following wide consultation with clinicians and trainers in the specialty.

The certification requirements, shown in section 5.4, summarise the experience trainees need to achieve by the end of the training programme.

4 Teaching and Learning

4.1 How the curriculum is delivered

The curriculum is used to help design training programmes locally that ensure all trainees can develop the necessary skills and knowledge in a variety of settings and situations. The curriculum is designed to ensure it can be applied in a flexible manner, meeting service needs as well as supporting each trainee's own tailored learning and development plan. The requirements for curriculum delivery have not changed as a result of this new curriculum. All training must comply with the GMC requirements presented in *Promoting excellence: standards for medical education and training*[6] *(2017).* This stipulates that all training must comply with the following ten standards:

Theme 1: learning environment and culture

S1.1 The learning environment is safe for patients and supportive for learners and educators. The culture is caring, compassionate and provides a good standard of care and experience for patients, carers and families.

S1.2 The learning environment and organisational culture value and support education and training, so that learners are able to demonstrate what is expected in Good Medical Practice and to achieve the learning outcomes required by their curriculum.

Theme 2: educational governance and leadership

S2.1 The educational governance system continuously improves the quality and outcomes of education and training by measuring performance against the standards, demonstrating accountability and responding when standards are not being met.

[6] Promoting excellence: standards for medical education and training

S2.2 The educational and clinical governance systems are integrated, allowing organisations to address concerns about patient safety, the standard of care, and the standard of education and training.

S2.3 The educational governance system makes sure that education and training is fair and is based on the principles of equality and diversity.

Theme 3: supporting learners

S3.1 Learners receive educational and pastoral support to be able to demonstrate what is expected in Good Medical Practice, and to achieve the learning outcomes required by their curriculum.

Theme 4: supporting educators

S4.1 Educators are selected, inducted, trained, and appraised to reflect their education and training responsibilities.

S4.2 Educators receive the support, resources and time to meet their education and training responsibilities.

Theme 5: developing and implementing curricula and assessments

S5.1 Medical school curricula and assessments are developed and implemented so that medical students are able to achieve the learning outcomes required for graduates.

S5.2 Postgraduate curricula and assessments are implemented so that doctors in training are able to demonstrate what is expected in Good Medical Practice, and to achieve the learning outcomes required by their curriculum.

It is the responsibility of Health Education England (HEE) and its Local Offices, NHS Education for Scotland (NES), Health Education and Improvement Wales (HEIW), the Northern Ireland Medical and Dental Training Agency (NIMDTA) and the Health Service Executive (HSE) in the Republic of Ireland to ensure compliance with these standards. Training delivery must also comply with the latest edition of the Gold Guide. Appendix 7 outlines the quality management arrangements for the curriculum.

4.2 Learning opportunities

A variety of educational approaches will be used by education providers to help trainees develop the knowledge, clinical and technical skills, professional judgement, values and behaviours required by the curriculum. Taken together, these educational approaches ensure that the CiPs and GPCs are taught appropriately in order that the purpose of the curriculum is met. These educational approaches divide into three areas:

- Self-directed learning
- Learning from practice
- Learning from formal situations

4.2.1 Self-directed learning

The curriculum is trainee-led and self-directed learning is encouraged. Trainees are expected to take a proactive approach to learning and development and towards working as members of a multi-professional team. Trainees are encouraged to establish study groups, journal clubs and conduct peer reviews. They should take the opportunity of learning with peers at a local level through postgraduate teaching and discussion sessions, and nationally with examination preparation

courses. Trainees are expected to undertake personal study in addition to attending formal and informal teaching. This includes using study materials and publications and reflective practice. Trainees are expected to use the developmental feedback they get from their trainers in learning agreement meetings and from assessments to focus further research and practice.

Reflective practice is an important part of self-directed learning and of continuing professional development. It is an educational exercise that enables trainees to explore, with rigour, the complexities and underpinning elements of their actions in order to refine and improve them. Reflection in the oral form is very much an activity that surgeons engage in and find useful and developmental. Writing reflectively adds more to the oral process by deepening the understanding of practice. Written reflection offers different benefits to oral reflection which include: a record for later review, a reference point to demonstrate development and a starting point for shared discussion. Whatever the modality of reflection, it is important that it takes place and that there is a record of it having taken place, whether or not the specific subject or content of the reflection is recorded[7]. Self-directed learning permits development in all six CiPs and the GPCs, especially when there is effective reflection on all aspects of learning at the centre of self-directed learning.

4.2.2 Learning from clinical practice

Surgical learning is largely experiential in nature with any interaction in the workplace having the potential to become a learning episode. The workplace provides learning opportunities on a daily basis for surgical trainees, based on what they see and what they do. Trainees are placed in clinical placements, determined locally by Training Programme Directors (TPDs), which provide teaching and learning opportunities. The placements must be in units that are able to provide sufficient clinical resource and have sufficient trainer capacity.

While in the workplace, trainees are involved in supervised clinical practice, primarily in a hospital environment in wards, clinics or theatre. There are strong links to practitioners working in primary care and training environments may include private settings and, where available for training, a variety of community settings where the necessary facilities and governance arrangements are in place. The trainee role in these contexts determines the nature of the learning experience.

Learning begins with observation of a trainer (not necessarily a doctor) and progresses to assisting a trainer; the trainer assisting/supervising the trainee and then the trainee managing a case independently but with access to their supervisor. The level of supervision changes in line with the trainee's progression through the phases of the curriculum. As training progresses, trainees should have the opportunity for increased autonomy, 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 CiPs are best taught, particularly in the early phases of training, by a specifically selected trainer directly watching and supervising while the trainee carries out the activity. This type of training is known as Professionalised Training and requires more time (and so, consequently, a reduced clinical workload) than conventional methods. It permits more thorough teaching, more rapid achievement of skill and earlier recognition of difficulties. Continuous systematic feedback and reflection are

[7] Improving feedback and reflection to improve learning. A practical guide for trainees and trainers http://www.aomrc.org.uk/reports-guidance/improving-feedback-reflection-improve-learning-practical-guide-trainees-trainers/

integral to learning from clinical practice. The CiP and GPC descriptors through the MCR assessment provide detailed feedback and identify specific, timely and relevant goals for development through training. Education providers should make every attempt to ensure that each trainee has exposure to Professionalised Training appropriate to their phase of progression through the curriculum. It is recommended that this be one session per week per trainee in the early years. Trainees are required to keep a surgical logbook to support their reflection and the assessment of their operative skills.

4.2.3 Learning from formal situations

Learning from clinical practice is supplemented by an educational programme of courses and teaching sessions arranged at local, regional and national levels. These should be mapped to the CiPs , GPCs and the Paediatric Surgery syllabus and may include a mixture of formal talks including attendance at national conferences relevant to the specialty, small group discussion, case review, morbidity and mortality meetings, literature review and skills teaching. Mandatory courses for trainees are shown in the certification requirements (section 5.4 below) and appendix 5.

4.2.4 Simulation

Teaching in formal situations often involves the use of simulation. In this context simulation can be any reproduction or approximation of a real event, process or set of conditions or problems e.g. taking a history in clinic, performing a procedure or managing post-operative care. Trainees have the opportunity of learning in the same way as they would in the real situation but in a patient-free environment. Simulation can be used for the development of both individuals and teams. The realism of the simulation may reflect the environment in which simulation takes place, the instruments used or the emotional and behavioural features of the real situation. Simulation training does not necessarily depend on the use of expensive equipment or complex environments e.g. it may only require a suturing aid or a role play with scenarios.

Simulation training has several purposes:

- supporting learning and keeping up to date
- addressing specific learning needs
- situational awareness of human factors which can influence people and their behaviour
- enabling the refining or exploration of practice in a patient-safe environment
- promoting the development of excellence
- improving patient care.

The use of simulation in surgical training is part of a blended approach to managing teaching and learning concurrent with supervised clinical practice. The use of simulation on its own cannot replace supervised clinical practice and experience or authorise a doctor to practice unsupervised. Provision of feedback and performance debriefing are integral and essential parts of simulation-based training. Simulation training broadly follows the same pattern of learning opportunities offering insight into the development of technical skills, team-working, leadership, judgement and professionalism. Education providers should use all teaching methods available, including simulation teaching, to ensure that the full breadth of the syllabus is covered. Where there is a need for specific intensive courses to meet specific learning outcomes, there may be a number of equivalent providers.

4.3 Supervision

Supervision is fundamental in the delivery of safe and effective training. It takes advantage of the experience, knowledge and skills of expert clinicians and ensures interaction between an experienced clinician and a trainee. The ultimate responsibility for the quality of patient care and the quality of training lies with the supervisor. Supervision is designed to ensure the safety of the patient by encouraging safe and effective practice and professional conduct. A number of people from a range of professional groups are involved in teaching and training with subject areas of the curriculum being taught by staff with relevant specialist expertise and knowledge. Those involved in the supervision of trainees must have the relevant qualifications, experience and training to undertake the role. Specialist skills and knowledge are usually taught by consultants and senior trainees whereas the more generic aspects of practice can also be taught by the wider multi-disciplinary team (MDT).

The key roles involved in teaching and learning are the Training Programme Director, Assigned Educational Supervisor, Clinical Supervisor, Assessor and Trainee. Their responsibilities are described in appendix 6 and further information is given in the Gold Guide.

In the UK, the GMC's process for the recognition and approval of trainers[8] enables Deaneries/HEE Local Offices to formally recognise AESs and Clinical Supervisors (CSs) and ensure they meet the specified criteria. Trainees must be placed in approved placements that meet the required training and educational standards of the curriculum. In each placement, trainees have a named AES and one or more CS, responsible for overseeing their education. Depending on local arrangements, these roles may be combined into a single role of AES.

All elements of work in training posts must be supervised. The level of supervision varies according to the experience of the trainee, the clinical exposure and the case mix undertaken. As training progresses trainees should have the opportunity for increased autonomy, consistent with safe and effective care for the patient. Achievement of supervision level IV in any of the six CiPs indicates that a trainee is able to work at an independent level, with advice from their trainer at this level being equivalent to a consultant receiving advice from senior colleagues within an MDT. However, within the context of a training system, trainees are always under the educational and clinical governance structures of the Health Service.

4.4 Supporting feedback and reflection

Effective feedback is known to enhance learning, and combining self-reflection[7] with feedback promotes deeper learning. Trainees are encouraged to seek feedback on all they do, either informally, through verbal feedback at the end of a learning event, or formally through workplace-based assessments (WBAs). The MCR and use of the CiP and GPC descriptors provide regular opportunities for detailed and specific feedback. Trainee self-assessment provides a regular opportunity for focused and structured reflection and development of self-directed goals for learning as well as developing these goals through dialogue with trainers. All the assessments in the curriculum are designed to include a feedback element as well as to identify concerns in multiple ways:

- *Learning agreement:* appraisal meetings with the AES at the beginning, middle and end of each placement
- *WBA:* immediate verbal dialogue after a learning episode

[8] GMC recognition and approval of trainers

- *CBD:* meeting with a consultant trainer to discuss the management of a patient case
- *MSF:* meeting with the AES to discuss the trainee's self-assessment and team views
- *MCR (mid-point formative):* meeting with the AES or CS to discuss the trainee's self-assessment and CSs' views on CiPs
- *MCR (final formative, contributing to the AES's summative Report):* meeting with the AES or CS to discuss the trainee's self-assessment and CSs' views on CiPs
- *Formal examinations:* summative feedback on key areas of knowledge and skills
- *ARCP:* a feedback meeting with the TPD or their representative following an ARCP.

Constructive feedback is expected to include three elements i) a reflection on performance ii) identification of the trainee's achievements, challenges and aspirations and iii) an action plan.

4.5 Academic training

All trainees are required to satisfy the learning outcomes in domain 9 of the GPC framework; *Capabilities in research and scholarship*. Trainees are encouraged to participate in clinical research and collaborative trials to achieve these outcomes, as well as in journal clubs, literature review and systematic review and to make a major contribution to the publication of novel findings in peer reviewed journals. An understanding of the principles of research, its interpretation and safe implementation of evidenced-based new methods, processes and techniques is essential for the modern, progressive practice of surgery and in the interests of patients and the service.

Some trainees choose to take time out of training for a formal period of research, as specified in the Gold Guide. For the majority, this leads to the award of a higher degree in an area related to their chosen specialty. Some also choose to focus a significant part of their training time on academic medicine, but need to complete all the essential elements of their specialty curriculum satisfactorily in order to achieve certification. The rate of progression through the clinical component of their training is determined by the ARCP process to ensure that all clinical requirements are met in keeping with the curriculum. Arrangements for academic training differ in detail across the nations of the UK and Republic of Ireland. Details of arrangements can be found on the webpages of the relevant National Health Education body.

5 Programme of Assessment

5.1 Purpose of assessment

Assessment of learning is an essential component of any curriculum. This section describes the assessment system and the purpose of its individual components which are blueprinted to the curriculum as shown in appendix 9. The focus is on good practice, based on fair and robust assessment principles and processes in order to ensure a positive educational impact on learners and to support assessors in making valid and reliable judgements. The programme of assessment comprises an integrated framework of examinations, assessments in the workplace and judgements made about a learner during their approved programme of training. Its purpose is to robustly evidence, ensure and clearly communicate the expected levels of performance at critical progression points in, and to demonstrate satisfactory completion of, training as required by the curriculum. The programme of assessment is shown in figure 3 below.

Assessments can be described as *helping* learning or *testing* learning - referred to as formative and summative respectively. There is a link between the two; some assessments are purely formative (shown in green in figure 3), others are explicitly summative with a feedback element (shown in

blue) while others provide formative feedback while contributing to summative assessment (shown in orange).

The purposes of formative assessment are to:

- assess trainees' actual performance in the workplace.
- enhance learning by enabling trainees to receive immediate feedback, understand their own performance and identify areas for development.
- drive learning and enhance the training process by making it clear what is required of trainees and motivating them to ensure they receive suitable training and experience.
- enable supervisors to reflect on trainee needs in order to tailor their approach accordingly.

The purposes of summative assessment are to:

- provide robust, summative evidence that trainees are meeting the curriculum requirements during the training programme.
- ensure that trainees possess the essential underlying knowledge required for their specialty, including the GPCs to meet the requirements of GMP.
- inform the ARCP, identifying any requirements for targeted or additional training where necessary and facilitating decisions regarding progression through the training programme.
- identify trainees who should be advised to consider changes of career direction.
- provide information for the quality assurance of the curriculum.

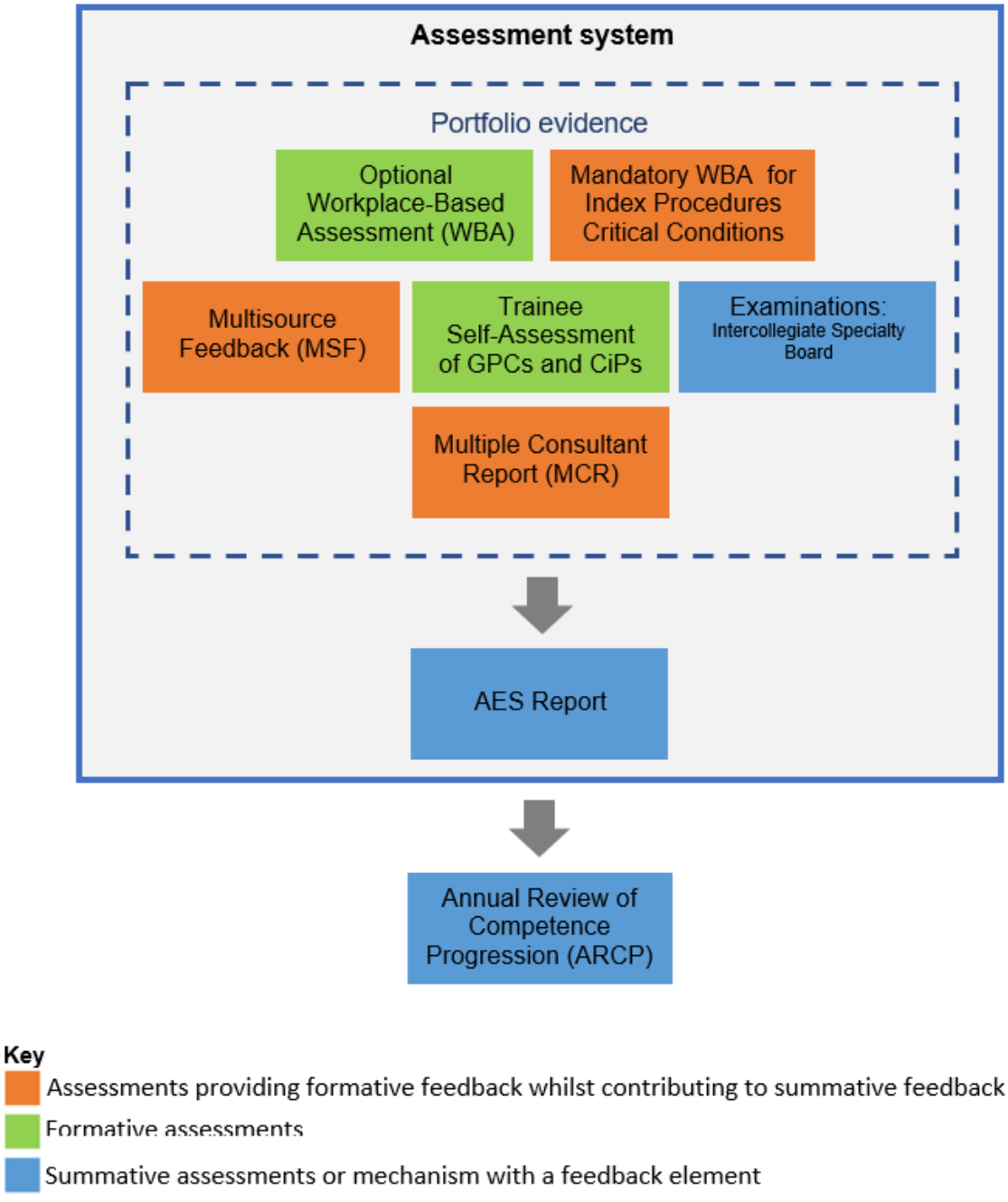

Figure 3: Assessment framework

5.2 Delivery of the programme of assessment

The programme of assessment is comprised of several different types of assessment needed to meet the requirements of the curriculum. These together generate the evidence required for global judgements to be made about satisfactory trainee performance, progression in, and completion of, training. These include the Intercollegiate Specialty Board (ISB) examination and WBA. The primary assessment in the workplace is the MCR, which, together with other portfolio evidence, contributes to the AES report for the ARCP. Central to the assessment framework is professional judgement. Assessors are responsible and accountable for these judgements and these judgements are supported by structured feedback to trainees. Assessment takes place throughout the training programme to allow trainees to continually gather evidence of learning and to provide formative feedback to the trainee to aid progression.

Reflection and feedback are also integral components of all WBAs. In order for trainees to maximise the benefit of WBA, reflection and feedback should take place as soon as possible after the event. Feedback should be of high quality that should include a verbal dialogue between trainee and assessor in reflection on the learning episode, attention to the trainee's specific questions, learning needs and achievements as well as an action plan for the trainee's future development. Both trainees and trainers should recognise and respect cultural differences when giving and receiving feedback[9]. The assessment framework is also designed to identify where trainees may be running into difficulties. Where possible, these are resolved through targeted training, practise and assessment with specific trainers and, if necessary, with the involvement of the AES and TPD to provide specific remedial placements, additional time and additional resources.

5.3 Assessment framework components

Each of the components of the assessment framework are described below.

5.3.1 The sequence of assessment

Training and assessment take place within placements of six to twelve months' duration throughout each phase of training (figure 4). Assessments are carried out by relevant qualified members of the trainee's multi-professional team whose roles and responsibilities are described in appendix 6. Trainee progress is monitored primarily by the trainee's AES through learning agreement meetings with the trainee. Throughout the placement trainees must undertake WBAs while specialty examinations are undertaken towards the higher end of the programme after satisfactory completion of phase 2. The trainee's CSs must assess the trainee on the six CiPs and nine GPC domains using the MCR. This must be undertaken towards the mid-point of each placement in a formative way and at the end of the placement when the formative assessment will contribute to the AES's summative assessment at the final review meeting of the learning agreement. The placement culminates with the AES report of the trainee's progress for the ARCP. The ARCP makes the final decision about whether a trainee can progress to the next level or phase of training. It bases its decision on the evidence that has been gathered in the trainee's learning portfolio during the period between ARCP reviews, particularly the AES report in each training placement.

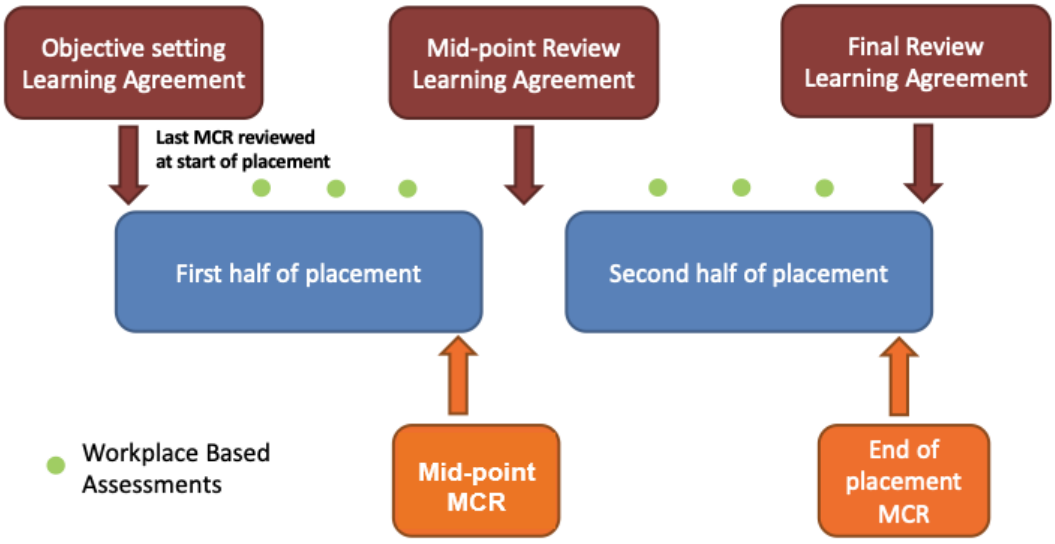

Figure 4: The sequence of assessment through a placement.

[9] ISCP Cultural Awareness elearning modules

5.3.2 The learning agreement

The learning agreement is a formal process of goal setting and review meetings that underpin training and is formulated through discussion. The process ensures adequate supervision during training, provides continuity between different placements and supervisors and is one of the main ways of providing feedback to trainees. There are three learning agreement meetings in each placement and these are recorded in the trainee's learning portfolio. Any significant concerns arising from the meetings should be fed back to the TPD at each point in the learning agreement.

Objective-setting meeting

At the start of each placement the AES and trainee must meet to review the trainee's progress so far, agree learning objectives for the placement ahead and identify the learning opportunities presented by the placement. The learning agreement is constructively aligned towards achievement of the high-level outcomes (the CiPs and GPCs) and, therefore, the CiPs and GPCs are the primary reference point for planning how trainees will be assessed and whether they have attained the learning required. The learning agreement is also tailored to the trainee's progress, phase of training and learning needs. The final MCR from the previous placement will be reviewed alongside the most recent trainee self-assessment and the action plan for training. Any specific targeted training objectives from the previous ARCP should also be considered and addressed though this meeting and form part of the learning agreement.

Mid-point review meeting

A meeting between the AES and trainee must take place at the mid-point of a placement (or each three months within a placement that is longer than six months). The learning agreement must be reviewed, along with other portfolio evidence of training such as WBAs, the logbook and the formative mid-point MCR, including the trainee's self-assessment. This meeting ensures training opportunities appropriate to the trainee's own needs are being presented in the placement, and are adjusted if necessary in response to the areas for development identified through the MCR. Particular attention must be paid to progress against targeted training objectives and a specific plan for the remaining part of the placement made if these are not yet achieved. There should be a dialogue between the AES and CSs if adequate opportunities have not been presented to the trainee, and the TPD informed if there has been no resolution. Discussion should also take place if the scope and nature of opportunities should change in the remaining portion of the placement in response to areas for development identified through the MCR.

Final review meeting

Shortly before the end of each placement trainees should meet with their AES to review portfolio evidence including the final MCR. The dialogue between the trainee and AES should cover the overall progress made in the placement and the AES's view of the placement outcome.

AES report

The AES must write an end of placement report which informs the ARCP. The report includes details of any significant concerns and provides the AES's view about whether the trainee is on track in the phase of training for completion within the indicative time. If necessary, the AES must also explain any gaps and resolve any differences in supervision levels which came to light through the MCR.

5.3.3 The Multiple Consultant Report

The assessment of the CiPs and GPCs (high-level outcomes of the curriculum) involves a global professional judgement of a range of different skills and behaviours to make decisions about a learner's suitability to take on particular responsibilities or tasks that are essential to consultant practice at the standard of certification. The MCR assessment must be carried out by the consultant CSs involved with a trainee, with the AES contributing as necessary to some domains (e.g. *Quality Improvement*, *Research and Scholarship*). The number of CSs taking part reflects the size of the specialty unit and is expected to be no fewer than two. The exercise reflects what many consultant trainers do regularly as part of a faculty group.

The MCR includes a global rating in order to indicate how the trainee is progressing in each of the six CiPs. This global rating is expressed as a supervision level recommendation described in table 2 below. Supervision levels are behaviourally anchored ordinal scales based on progression to competence and reflect a judgment that has clinical meaning for assessors. Using the scale, CSs must make an overall, holistic judgement of a trainee's performance on each CiP. Levels IV and V, shaded in grey, equate to the level required for certification and the level of practice expected of a day-one consultant in the Health Service (level IV) or beyond (level V). Figures 5 and 6 show how the MCR examines performance from the perspective of the outcome of the curriculum, the day-one consultant surgeon, in the GPCs and CiPs. If not at the level required for certification, the MCR can identify areas for improvement by using the CiP or GPC descriptors or, if further detail is required, through free text. The assessment of the GPCs can be performed by CSs, whilst GPC domains 6-9 might be more relevant to assessment by the AES in some placements.

CSs will be able to best recommend supervision levels because they observe the performance of the trainee in person on a day-to-day basis. The CS group, led by a Lead CS, should meet at the mid-point and towards the end of a placement to conduct a formative MCR. Through the MCR, they agree which supervision level best describes the performance of a trainee at that time in each of the six CiPs and also identify any areas of the nine GPC domains that require development. It is possible for those who cannot attend the group meeting, or who disagree with the report of the group as a whole, to add their own section (anonymously) to the MCR for consideration by the AES. The AES will provide an overview at the end of the process, adding comments and signing off the MCR.

The MCR uses the principle of highlight reporting, where CSs do not need to comment on every descriptor within each CiP but use them to highlight areas that are above or below the expected level of performance. The MCR can describe areas where the trainee might need to focus development or areas of particular excellence. Feedback must be given for any CiP that is not rated as level IV and in any GPC domain where development is required. Feedback must be given to the trainee in person after each MCR and, therefore, includes a specific feedback meeting with the trainee using the highlighted descriptors within the MCR and/or free text comments.

The mid-point MCR feeds into the mid-point learning agreement meeting. At the mid-point it allows goals to be agreed for the second half of the placement, with an opportunity to specifically address areas where development is required. Towards the end of the placement the MCR feeds into the final review learning agreement meeting, helping to inform the AES report (figure 4). It also feeds into the objective-setting meeting of the next placement to facilitate discussion between the trainee and the next AES.

The MCR, therefore, gives valuable insight into how well the trainee is performing, highlighting areas of excellence, areas of support required and concerns. It forms an important part of detailed, structured feedback to the trainee at the mid-point and before the end of the placement, and can trigger any appropriate modifications for the focus of training as required. The final formative MCR, together with other portfolio evidence, feeds into the AES report which in turn feeds into the ARCP. The ARCP uses all presented evidence to make the definitive decision on progression.

MCR Rating Scale (CiPs)	Anchor statements	Trainer input at each supervision level			
		Does the trainee perform part or all of the task?	Is guidance required?	Is it necessary for a trainer to be present for the task?	Is the trainee performing at a level beyond that expected of a day one consultant? [c]
Supervision Level I:	Able to observe only: no execution.	no	n/a	n/a	n/a
Supervision Level IIa:	Able and trusted to act with direct supervision: The supervisor needs to be physically present throughout the activity to provide direct supervision.	yes	all aspects	throughout	n/a
Supervision Level IIb:	Able and trusted to act with direct supervision: The supervisor needs to be physically present for part of the activity. The supervisor needs to guide all aspects of the activity. This guidance may partly be given from another setting.	yes	all aspects	will be necessary for part	n/a
Supervision Level III:	Able and trusted to act with indirect supervision: The supervisor may be required to be physically present on occasion. The supervisor does not need to guide all aspects of the activity. For those aspects which do need guidance, this may be given from another setting.	yes	some aspects	may be necessary for part	n/a
Supervision Level IV:	Able and trusted to act at the level of a day-one consultant.	yes	None [a,b]	None [a, b]	n/a
Supervision Level V:	Able and trusted to act at a level beyond that	yes	None[a]	None [a]	yes

	expected of a day-one consultant.				

Table 2: MCR anchor statements and guide to recommendation of appropriate supervision level in each CiP.

a. This equates to the level of practice expected of a day-one consultant in the Health Service. It is recognised that advice from senior colleagues within an MDT is an important part of consultant practice. Achievement of supervision level IV indicates that a trainee is able to work at this level, with advice from their trainer at this level being equivalent to a consultant receiving advice from senior colleagues within an MDT. It is recognised that within the context of a training system that trainees are always under the educational and clinical governance structures of the Health Service.
b. Where the PBA level required by the syllabus is less than level 4 for an operative procedure, it would be expected that mentorship is sought for such procedures and this would fall within the scope of being able to carry out this activity without supervision (level IV), i.e. be a level commensurate with that of a day-one consultant.
c. Achievement of this level across the entirety of an activity would be rare, although free text could describe aspects of an activity where this level has been reached.

In making a supervision level recommendation, CSs should take into account their experience of working with the trainee and the degree of autonomy they were prepared to give the trainee during the placement. They should also take into account all the descriptors of the activities, knowledge and skills listed in the detailed descriptions of the CiPs. If, after taking all this into account, the CSs feel the trainee is able to carry out the activity without supervision (level IV) then no further detail of this assessment is required, unless any points of excellence are noted. If the trainee requires a degree of supervision to carry out the activity then the CSs should indicate which of the descriptors of the activities, knowledge and skills require further development (to a limit of five items per CiP, so as to allow targets set at feedback to be timely, relevant and achievable). Similarly, if a trainee excels in one or more areas, the relevant descriptors should be indicated. Examples of how the online MCR will look are shown in figures 5 and 6. Figure 7 describes the MCR as an iterative process involving the trainee, CSs, the AES and the development of specific, relevant, timely and achievable action plans.

Multiple Consultant Report – assessment of the GPCs

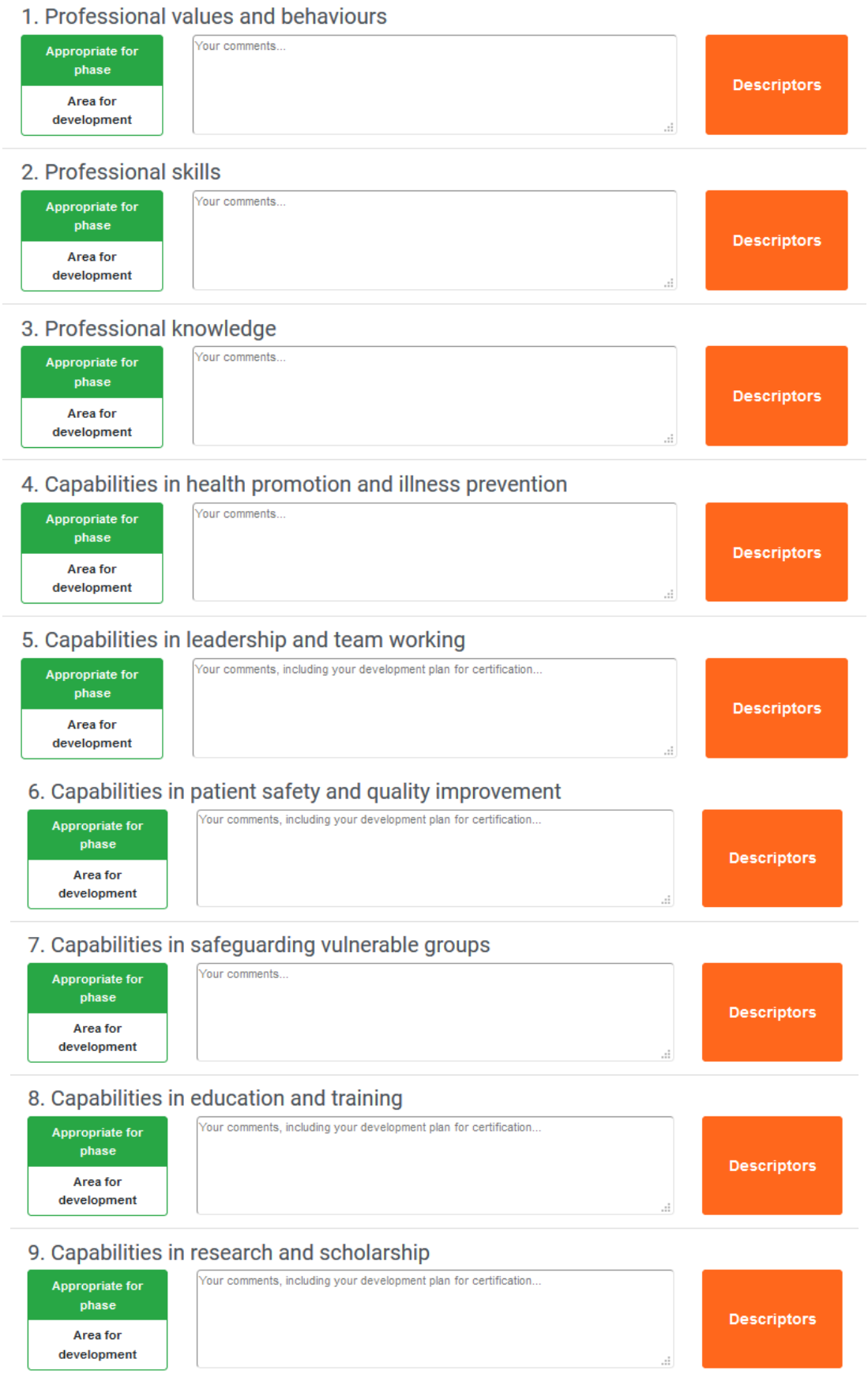

Figure 5: An example of how the GPCs are assessed through the MCR. CSs would consider whether there are areas for development in any of the nine GPC domains. If not, then nothing further need be recorded. If there are areas for development identified then CSs are obliged to provide feedback

through the MCR. This feedback can be recorded as free text in the comments box indicated. The Descriptors box expands to reveal descriptors taken from the GPC framework. These can be used as prompts for free text feedback or verbatim as standardised language used to describe professional capabilities.

Multiple Consultant Report – assessment of the CiPs

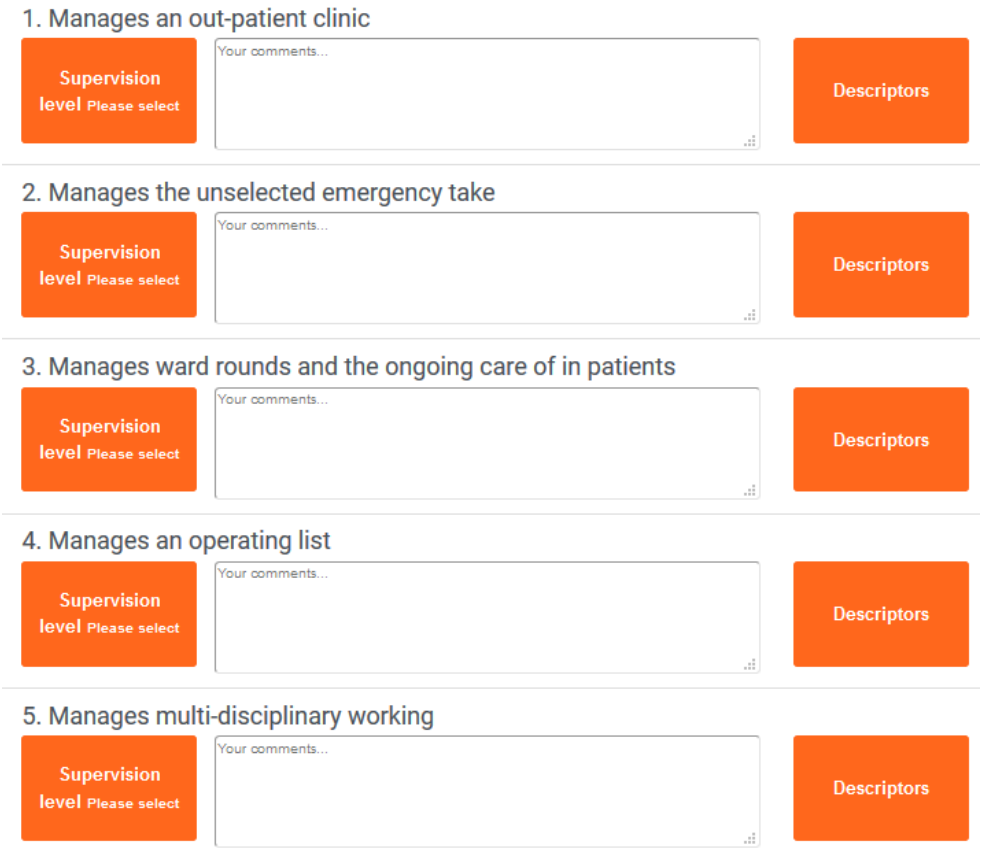

Figure 6: An example of how the CiPs are assessed through the MCR. The CSs would decide what supervision level to recommend for each of the CiPs and record this for each through the Supervision Level box. If the level recommended is IV or V then no further comment need be recorded, unless the CSs wished to capture areas of particular excellence for feedback. If levels I to III are recommended then the CSs are obliged to provide feedback through the MCR. This feedback can be recorded as free text in the comments box indicated. The Descriptors box expands to reveal CiP descriptors. These can be used as prompts for free text feedback or verbatim as standardised language to describe the clinical capabilities.

5.3.4 Trainee self-assessment

Trainees should complete the self-assessment in the same way as CSs complete the MCR, using the same form and describing self-identified areas for development with free text or using CiP or GPC descriptors. Reflection for insight on performance is an important development tool and self-recognition of the level of supervision needed at any point in training enhances patient safety. Self-assessments are part of the evidence reviewed when meeting the AES at the mid-point and end of a placement. Wide discrepancy between the self-assessment and the recommendation by CSs in the MCR allows identification of over or under confidence and for support to given accordingly.

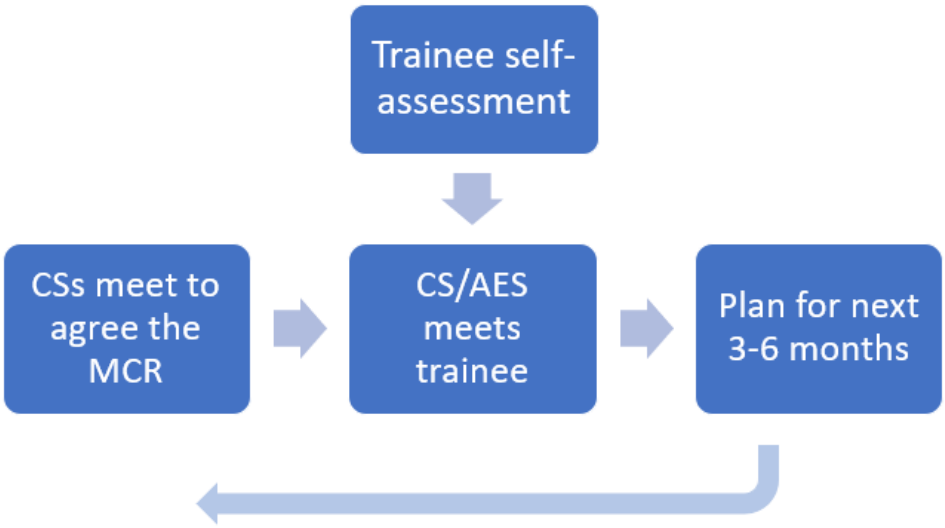

Figure 7: The iterative process of the MCR, showing the involvement of CSs, self-assessment by trainees, face to face meetings between trainees and supervisors and the development of an action plan focused on identified learning needs over the next three to six months of training. Progress against these action plans is reviewed by the AES and at the subsequent MCRs.

5.3.5 Workplace-based assessment (WBA)

Each individual WBA is designed to assess a range of important aspects of performance in different training situations. Taken together the WBAs can assess the breadth of knowledge, skills and performance described in the curriculum. They also constructively align with the clinical CiPs and GPCs (as shown in appendix 9) and will be used to underpin assessment in those areas of the syllabus central to the specialty i.e. the critical conditions and index procedures, as well as being available for other conditions and operations as determined by the trainee and supervisors and especially where needed in the assessment of a remediation package to evidence progress in areas of training targeted by a non-standard ARCP outcome. The WBAs described in this curriculum have been in use for over ten years and are now an established component of training.

The WBA methodology is designed to meet the following criteria:

- *Validity* – the assessment actually does test what is intended; that methods are relevant to actual clinical practice; that performance in increasingly complex tasks is reflected in the assessment outcome
- *Reliability* - multiple measures of performance using different assessors in different training situations produce a consistent picture of performance over time
- *Feasibility* – methods are designed to be practical by fitting into the training and working environment
- *Cost-effectiveness* – the only significant additional costs should be in the training of trainers and the time investment needed for feedback and regular appraisal, this should be factored into trainer job plans
- *Opportunities for feedback* – structured feedback is a fundamental component
- Impact on learning – the educational feedback from trainers should lead to trainees' reflections on practice in order to address learning needs.

WBAs use different trainers' direct observations of trainees to assess the actual performance of trainees as they manage different clinical situations in different clinical settings and provide more granular formative assessment in the crucial areas of the curriculum than does the more global

assessment of CiPs in the MCR. WBAs are primarily aimed at providing constructive feedback to trainees in important areas of the syllabus throughout each placement in all phases of training. Trainees undertake each task according to their training phase and ability level and the assessor must intervene if patient safety is at risk. It would be normal for trainees to have some assessments which identify areas for development because their performance is not yet at the standard for the completion of that training.

Each WBA is recorded on a structured form to help assessors distinguish between levels of performance and prompt areas for their verbal developmental feedback to trainees immediately after the observation. Each WBA includes the trainee's and assessor's individual comments, ratings of individual competencies (e.g. *Satisfactory*, *Needs Development* or *Outstanding*) and global rating (using anchor statements mapped to phases of training). Rating scales support the drive towards excellence in practice, enabling learners to be recognised for achievements above the level expected for a level or phase of training. They may also be used to target areas of under-performance. As they accumulate, the WBAs for the critical conditions and index procedures also contribute to the AES report for the ARCP.

WBAs are formative and may be used to assess and provide feedback on all clinical activity. Trainees can use any of the assessments described below to gather feedback or provide evidence of their progression in a particular area. WBAs are only mandatory for the assessment of the critical conditions and index procedures (see appendices 3 and 4). They may also be useful to evidence progress in targeted training where this is required e.g. for any areas of concern.

WBAs for index procedures and critical conditions will inform the AES report along with a range of other evidence to aid the decision about the trainee's progress. All trainees are required to use WBAs to evidence that they have achieved the learning in the index procedures or critical conditions by certification. However, it is recognised that trainees will develop at different rates, and failure to attain a specific level at a given point will not necessarily prevent progression if other evidence shows satisfactory progress.

The assessment blueprint (appendix 9) indicates how the assessment programme provides coverage of the CiPs, the GPC framework and the syllabus. It is not expected that the assessment methods will be used to evidence each competency and additional evidence may be used to help make a supervision level recommendation. The principle of assessment is holistic; individual GPC and CiP descriptors and syllabus items should not be assessed, other than the critical conditions and index procedures or if an area of concern is identified. The programme of assessment provides a variety of tools to feedback to and assess the trainee.

Case Based Discussion (CBD)

The CBD assesses the performance of a trainee in their management of a patient case to provide an indication of competence in areas such as clinical judgement, decision-making and application of medical knowledge in relation to patient care. The CBD process is a structured, in-depth discussion between the trainee and a consultant supervisor. The method is particularly designed to test higher order thinking and synthesis as it allows the assessor to explore deeper understanding of how trainees compile, prioritise and apply knowledge. By using clinical cases that offer a challenge to trainees, rather than routine cases, trainees are able to explain the complexities involved and the reasoning behind choices they made. It also enables the discussion of the ethical and legal framework of practice. It uses patient records as the basis for dialogue, for systematic assessment and structured feedback. As the actual record is the focus for the discussion, the assessor can also

evaluate the quality of record keeping and the presentation of cases. The CBD is important for assessing the critical conditions (appendix 3). Trainees are assessed against the standard for the completion of their phase of training.

Clinical Evaluation Exercise (CEX) / CEX for Consent (CEX(C))

The CEX or CEX(C) assesses a clinical encounter with a patient to provide an indication of competence in skills essential for good clinical care such as communication, history taking, examination and clinical reasoning. These can be used at any time and in any setting when there is a trainee and patient interaction and an assessor is available. The CEX or CEX(C) is important for assessing the critical conditions (appendix 3). Trainees are assessed against the standard for the completion of their phase of training.

Direct Observation of Procedural Skills (DOPS)

The DOPS assesses the trainee's technical, operative and professional skills in a range of basic diagnostic and interventional procedures during routine surgical practice in wards, out-patient clinics and operating theatres. The procedures reflect the common and important procedures. Trainees are assessed against the standard for the completion of core surgical training.

Multi-source Feedback (MSF)

The MSF assesses professional competence within a team working environment. It comprises a self-assessment and the assessments of the trainee's performance from a range colleagues covering different grades and environments (e.g. ward, theatre, out-patients) including the AES. The competencies map to the standards of GMP and enable serious concerns, such as those about a trainee's probity and health, to be highlighted in confidence to the AES, enabling appropriate action to be taken. Feedback is in the form of a peer assessment chart, enabling comparison of the self-assessment with the collated views received from the team and includes their anonymised but verbatim written comments. The AES should meet with the trainee to discuss the feedback on performance in the MSF. Trainees are assessed against the standard for the completion of their training level.

Procedure Based Assessment (PBA)

The PBA assesses advanced technical, operative and professional skills in a range of specialty procedures or parts of procedures during routine surgical practice in which trainees are usually scrubbed in theatre. The assessment covers pre-operative planning and preparation; exposure and closure; intra-operative elements specific to each procedure and post-operative management. The procedures reflect the routine or index procedures relevant to the specialty. The PBA is used particularly to assess the index procedures (appendix 4). Trainees are assessed against the standard for certification.

Surgical logbook

The logbook is tailored to each specialty and allows the trainee's competence as assessed by the DOPS and PBA to be placed in context. It is not a formal assessment in its own right, but trainees are required to keep a log of all operative procedures they have undertaken including the level of supervision required on each occasion using the key below. The logbook demonstrates breadth of experience which can be compared with procedural competence using the DOPS and the PBA and will be compared with the index procedures defined in the curriculum (appendix 4).

Observed (O)
Assisted (A)
Supervised - trainer scrubbed (S-TS)
Supervised - trainer unscrubbed (S-TU)
Performed (P)
Training more junior trainee (T)

The following WBAs may also be used to further collect evidence of achievement, particularly in the GPC domains of *Quality improvement*, *Education and training* and *Leadership and team working*:

Assessment of Audit (AoA)

The AoA reviews a trainee's competence in completing an audit or quality improvement project. It can be based on documentation or a presentation of a project. Trainees are assessed against the standard for the completion of their phase of training.

Observation of Teaching (OoT)

The OoT assesses the trainee's ability to provide formal teaching. It can be based on any instance of formalised teaching by the trainee which has been observed by the assessor. Trainees are assessed against the standard for the completion of their phase of training.

The forms and guidance for each WBA method can be found on the ISCP website (see section 7).

5.3.6 Intercollegiate Specialty Board Examination

The ISB examination is governed by the Joint Committee on Intercollegiate Examinations (JCIE, www.jcie.org.uk) on behalf of the four surgical Royal Colleges. The JCIE is served by an Intercollegiate Specialty Board in each specialty. The examination is a powerful driver for knowledge and clinical skill acquisition. It has been in existence for over twenty years and is accepted as an important, necessary and proportionate test of knowledge, clinical skill and the ability to demonstrate the behaviours required by the curriculum. The examination is taken after successful completion of phase 2 and the standard is set at the level of a day-one consultant in the generality of the specialty, and must be passed in order to complete the curriculum. The examination components have been chosen to test the application of knowledge, clinical skills, interpretation of findings, clinical judgement, decision-making, professionalism, and communication skills described within the curriculum. The examination also assesses components of the CiPs and GPCs (as shown in appendix 9) and feeds into the same process as WBA for review by the AES and ARCP.

There are two sections to the exam:

- Section 1 is a computer-based assessment comprising two papers taken on the same day. These are both Single Best Answer (SBA) papers designed to test the application of knowledge and clinical reasoning.
- Section 2 comprises the clinical component of the examination. It consists of a series of carefully designed and structured interviews on clinical topics – some scenario-based and others patient-based. The construct of section 2 allows assessment of the application of knowledge, clinical interpretation, decision-making, clinical judgement and professionalism.

Standard setting:

- Section 1 is standard set by the modified Angoff method with one set being added to the Angoff cut score to generate the eligibility to proceed mark. Section 1 is computer marked. Any questions identified as anomalous (possible wrong answers, negative discriminators etc.) are discussed at the standard setting meeting prior to the Angoff and, if necessary, removed.
- The Section 2 clinical and oral components are calibrated prior to the start of each diet. It is independently marked by examiners working in pairs but with reference to the marking descriptors and the standard agreed at the calibration meeting.

Feedback:

Following section 1, candidates will receive a formal letter from the Board Chair confirming the result and a Final Performance Report which shows:

Paper 1 (Single Best Answer) Score %
Paper 2 (Single Best Answer) Score %
Combined Score %

Following section 2, candidates will receive a formal letter from the Board Chair confirming the result. Unsuccessful candidates will also receive a Final Performance Report showing the name of each station and its pass mark, and the mark achieved by a candidate in each of the stations.

Attempts:

Trainees have a maximum of four attempts at each section of the examination with no re-entry. A pass in section 1 is required to proceed to section 2 and must be achieved within two years of the first attempt. The time limit for completion of the entire examination process is seven years. Pro-rata adjustments are permissible to these timescales for (LTFT) trainees. Trainees become eligible to sit section 1 following an ARCP outcome 1 at the end of phase 2 of specialty training. Further details can be found at https://www.jcie.org.uk/content/content.aspx?ID=12

5.3.7 Annual Review of Competence Progression (ARCP)

The ARCP is a formal Deanery/HEE Local Office process overseen and led by the TPD. It scrutinises the trainee's suitability to progress through the training programme. It bases its decisions on the evidence that has been gathered in the trainee's learning portfolio during the period between ARCP reviews, particularly the AES report in each training placement. The ARCP would normally be undertaken on an annual basis for all trainees in surgical training. A panel may be convened more frequently for an interim review or to deal with progression issues (either accelerated or delayed) outside the normal schedule. The ARCP panel makes the final summative decision that determines whether trainees are making appropriate progress to be able to move to the next level or phase of training or to achieve certification.

5.4 Completion of training in Paediatric Surgery

The following requirements are applied to all trainees completing the curriculum and applying for certification and entry to the specialist register.

All seeking certification must:

a) be fully registered with the GMC and have a licence to practise (UK trainees) or be registered with the Medical Council in Ireland (Republic of Ireland trainees)
b) have successfully passed the ISB examination

c) have achieved level IV or V in all the CiPs
d) have achieved the competencies described in the nine domains of the GPC framework
e) have been awarded an outcome 6 at a final ARCP (if applying for specialist registration through certification).

In order to be awarded an outcome 6 at the final ARCP, trainees must be able to satisfy the following specialty-specific certification requirements:

a) Generic requirements shared between surgical specialities

Research - Trainees must provide evidence of having met the relevant requirements for research and scholarship. For UK trainees, this can be found in the GMC's GPC framework. Broadly, this includes capabilities in 4 areas: 1. The demonstration of evidence-based practice 2. Understanding how to critically appraise literature and conduct literature searches and reviews 3. Understanding and applying basic research principles 4. Understanding the basic principles of research governance and how to apply relevant ethical guidelines to research activities.	
Quality Improvement - evidence of an understanding of, and participation in, audit or service improvement as defined in the curriculum	Trainees must complete or supervise an indicative number of three audit or quality improvement projects during specialty training. In one or more of these, the cycle should be completed.
Medical Education and Training - evidence of an understanding of, and participation in, medical education and training as defined in the curriculum	Trainees must provide evidence of being trained in the training of others and present written structured feedback on their teaching uploaded to the ISCP portfolio.
Management and Leadership - evidence of an understanding of management structures and challenges of the health service in the training jurisdiction	Trainees must provide evidence of training in health service management and leadership and having taken part in a management related activity e.g. rota administration, trainee representative, membership of working party etc. or of having shadowed a management role within the hospital.

b) Requirements specific to Paediatric Surgery

Additional courses / qualifications - evidence of having attended specific courses/gained specific qualifications as defined in the curriculum	Advanced Paediatric Life Support (APLS) or equivalent

Specialist conferences - evidence of having attended conferences and meetings as defined in the curriculum appropriate to the specialty	It is recommended that trainees attend national or international meetings during training (e.g. annual meetings of specialty associations or major international equivalents, BAPS; BAPES, BAPU.
Clinical experience - evidence of the breadth of clinical experience defined in the specialty syllabus, and experience in one specialty interest.	See appendix 2 below
Operative experience - consolidated logbook evidence of the breadth of operative experience defined in the specialty syllabus	Consolidated operative logbook
Index Procedures Index procedures are of significant importance for patient safety and to demonstrate a safe breadth of practice.	By certification there should be documented evidence of performance at the level of a day-one consultant by means of the PBA (to level 4 as shown in appendix 4).
Critical Conditions - To ensure that trainees have the necessary skills to manage the defined critical conditions.	By certification there should be documented evidence of performance at the level of a day-one consultant by means of the CEX or CBD as appropriate (to level 4 as shown in appendix 3).

Table 3: Requirements for completion of training: a) generic requirements shared between all surgical specialties and b) requirements specific to the specialty. Attainment of these requirements contribute to evidence that outcomes of training have been met.

Once these requirements have been met, the ARCP panel may consider the award of outcome 6 having reviewed the portfolio and AES report. Award of Outcome 6 allows the trainee to seek recommendation for certification and entry onto the specialist register.

6 Recording progress in the ISCP learning portfolio

This curriculum is available through the JCST's Intercollegiate Surgical Curriculum Programme (ISCP) training management system at www.iscp.ac.uk. Trainees and all involved with training must register with the ISCP and use the curriculum as the basis of their discussion and to record assessments and appraisals. Both trainers and trainees are expected to have a good knowledge of the curriculum and should use it as a guide for their training programme. Each trainee must maintain their learning portfolio by developing learning objectives, undergoing assessments, recording training experiences and reflecting on their learning and feedback.

The ISCP learning portfolio can be used to build a training record of trainee conduct and practice as follows:

- Trainees can initiate the learning agreement and WBAs directly with supervisors. They can record logbook procedures and other evidence using a variety of forms. They can also link WBAs with critical conditions and index procedures.
- TPDs can validate trainees in their placements, monitor training and manage the ARCP.
- Deanery/HEE Local Office administrators can support the TPD, JCST trainee enrolment and ARCP process.
- AESs can complete trainee appraisal through the learning agreement, monitor trainee portfolios and provide end of placement AES reports.
- CSs can complete the MCR at the mid-point and end of each placement.
- Assessors can record feedback and validate WBAs.
- Other people involved in training can access trainee portfolios according to their role and function.

Appendix 1: Capabilities in Practice

In each of the CiPs the word 'manage' is defined as clinical assessment, diagnosis, investigation and treatment (both operative and non-operative) and recognising when referral to more specialised or experienced surgeons is required for definitive treatment. Trainees are expected to apply syllabus defined knowledge and skills in straightforward and unusual cases across the breadth of the specialty across all CiPs.

Shared Capability in Practice 1:

Manages an out-patient clinic

Good Medical Practice Domains 1,2,3,4

Description

Manages all the administrative and clinical tasks required of a consultant surgeon in order that all patients presenting as out-patients in the specialty are cared for safely and appropriately.

Example descriptors:

- Assesses and prioritises GP and inter-departmental referrals and deals correctly with inappropriate referrals
- Assesses new and review patients using a structured history and a focused clinical examination to perform a full clinical assessment, and determines the appropriate plan of action, explains it to the patient and carries out the plan
- Carries out syllabus defined practical investigations or procedures within the out-patient setting
- Adapts approach to accommodate all channels of communication (e.g. interpreter, sign language), communicates using language understandable to the patient, and demonstrates communication skills with particular regard to breaking bad news. Appropriately involves relatives and friends
- Takes co-morbidities into account
- Requests appropriate investigations, does not investigate when not necessary, and interprets results of investigations in context
- Selects patients with urgent conditions who should be admitted from clinic
- Manages potentially difficult or challenging interpersonal situations, including breaking bad news and complaints
- Completes all required documentation
- Makes good use of time
- Uses consultation to emphasise health promotion

Specialty specific requirements:

See critical conditions (appendix 3 of the curriculum)

Supervision levels:

Level I: Able to observe only

Level II: Able and trusted to act with direct supervision:

a) Supervisor present throughout
b) Supervisor present for part

Level III:	Able and trusted to act with indirect supervision
Level IV:	Able and trusted to act at the level expected of a day-one consultant
Level V:	Able and trusted to act at a level beyond that expected of a day-one consultant

Shared Capability in Practice 2:

Manages the unselected emergency take

Good Medical Practice Domains 1,2,3,4

Description

Manages all patients with an emergency condition requiring management within the specialty. Able to perform all the administrative and clinical tasks required of a consultant surgeon in order that all patients presenting as emergencies in the specialty are cared for safely and appropriately.

Example descriptors:

- Promptly assesses acutely unwell and deteriorating patients, delivers resuscitative treatment and initial management, and ensures sepsis is recognised and treated in compliance with protocol
- Makes a full assessment of patients by taking a structured history and by performing a focused clinical examination, and requests, interprets and discusses appropriate investigations to synthesise findings into an appropriate overall impression, management plan and diagnosis
- Identifies, accounts for and manages co-morbidity in the context of the surgical presentation, referring for specialist advice when necessary
- Selects patients for conservative and operative treatment plans as appropriate, explaining these to the patient, and carrying them out
- Demonstrates effective communication with colleagues, patients and relatives
- Makes appropriate peri- and post-operative management plans in conjunction with anaesthetic colleagues
- Delivers ongoing post-operative surgical care in ward and critical care settings, recognising and appropriately managing medical and surgical complications, and referring for specialist care when necessary
- Makes appropriate discharge and follow up arrangements
- Carries out all operative procedures as described in the syllabus
- Manages potentially difficult or challenging interpersonal situations
- Gives and receives appropriate handover

Specialty specific requirements:

- See critical conditions (appendix 3 of the curriculum)
- APLS or equivalent

Supervision levels:

Level I:	Able to observe only
Level II:	Able and trusted to act with direct supervision:

	a) Supervisor present throughout b) Supervisor present for part
Level III:	Able and trusted to act with indirect supervision
Level IV:	Able and trusted to act at the level expected of a day-one consultant
Level V:	Able and trusted to act at a level beyond that expected of a day-one consultant

Shared Capability in Practice 3:

Manages ward rounds and the on-going care of in-patients

Good Medical Practice Domains 1,2,3,4

Description

Manages all hospital in-patients with conditions requiring management within the specialty. Able to perform all the administrative and clinical tasks required of a consultant surgeon in order that all in-patients requiring care within the specialty are cared for safely and appropriately.

Example descriptors:

- Identifies at the start of a ward round if there are acutely unwell patients who require immediate attention
- Ensures that all necessary members of the multi-disciplinary team are present, knows what is expected of them and what each other's roles and contributions will be, and contributes effectively to cross specialty working
- Ensures that all documentation (including results of investigations) will be available when required and interprets them appropriately
- Makes a full assessment of patients by taking a structured history and by performing a focused clinical examination, and requests, interprets and discusses appropriate investigations to synthesise findings into an appropriate overall impression, management plan and diagnosis
- Identifies when the clinical course is progressing as expected and when medical or surgical complications are developing, and recognises when operative intervention or re-intervention is required and ensures this is carried out
- Identifies and initially manages co-morbidity and medical complications, referring on to other specialties as appropriate
- Contributes effectively to level 2 and level 3 care
- Makes good use of time, ensuring all necessary assessments are made and discussions held, while continuing to make progress with the overall workload of the ward round
- Identifies when further therapeutic manoeuvres are not in the patient's best interests, initiates palliative care, refers for specialist advice as required, and discusses plans with the patient and their family
- Summarises important points at the end of the ward rounds and ensures all members of the multi-disciplinary team understand the management plans and their roles within them
- Gives appropriate advice for discharge documentation and follow-up

Specialty specific requirements:

See critical conditions (appendix 3 of the curriculum)

Supervision levels:

Level I: Able to observe only

Level II: Able and trusted to act with direct supervision:

a) Supervisor present throughout
b) Supervisor present for part

Level III: Able and trusted to act with indirect supervision

Level IV: Able and trusted to act at the level expected of a day-one consultant

Level V: Able and trusted to act at a level beyond that expected of a day-one consultant

Shared Capability in Practice 4:

Manages an operating list

Good Medical Practice Domains 1,2,3,4

Description

Manages all patients with conditions requiring operative treatment within the specialty. Able to perform all the administrative and clinical tasks required of a consultant surgeon in order that all patients requiring operative treatment receive it safely and appropriately.

Example descriptors:

- Selects patients appropriately for surgery, taking the surgical condition, co-morbidities, medication and investigations into account, and adds the patient to the waiting list with appropriate priority
- Negotiates reasonable treatment options and shares decision-making with patients
- Takes informed consent in line with national legislation or applies national legislation for patients who are not competent to give consent
- Arranges anaesthetic assessment as required
- Undertakes the appropriate process to list the patient for surgery
- Prepares the operating list, accounting for case mix, skill mix, operating time, clinical priorities, and patient co-morbidity
- Leads the brief and debrief and ensures all relevant points are covered for all patients on the operating list
- Ensures the WHO checklist (or equivalent) is completed for each patient at both the beginning and end of each procedure
- Understands when prophylactic antibiotics should be prescribed and follows local protocol
- Synthesises the patient's surgical condition, the technical details of the operation, co-morbidities and medication into an appropriate operative plan for the patient
- Carries out the operative procedures to the required level for the phase of training as described in the specialty syllabus

- Uses good judgement to adapt operative strategy to take account of pathological findings and any changes in clinical condition
- Undertakes the operation in a technically safe manner, using time efficiently
- Demonstrates good application of knowledge and non-technical skills in the operating theatre, including situation awareness, decision-making, communication, leadership, and teamwork
- Writes a full operation note for each patient, ensuring inclusion of all post-operative instructions
- Reviews all patients post-operatively
- Manages complications safely, requesting help from colleagues where required

Specialty specific requirements:

Trainees should have at least the breadth of operative experience described in the index procedures (appendix 4 of the curriculum).

Supervision levels:

Level I: Able to observe only

Level II: Able and trusted to act with direct supervision:

a) Supervisor present throughout
b) Supervisor present for part

Level III: Able and trusted to act with indirect supervision

Level IV: Able and trusted to act at the level expected of a day-one consultant

Level V: Able and trusted to act at a level beyond that expected of a day-one consultant

Shared Capability in Practice 5:

Manages multi-disciplinary working

Good Medical Practice Domains 1,2,3,4

Description

Manages all patients with conditions requiring inter-disciplinary management (or multi-consultant input as in trauma or fracture meetings in Trauma and Orthopaedic Surgery) including care within the specialty. Able to perform all the administrative and clinical tasks required of a consultant surgeon in order that safe and appropriate multi-disciplinary decisions are made on all patients with such conditions requiring care within the specialty.

Example Descriptors:

Appropriately selects patients who require discussion at the multi-disciplinary team

Follows the appropriate administrative process

Deals correctly with inappropriate referrals for discussion (e.g. postpones discussion if information is incomplete or out-of-date)

Presents relevant case history, recognising important clinical features, co-morbidities and investigations

Identifies patients with unusual, serious or urgent conditions

Engages constructively with all members of the multi-disciplinary team in reaching an agreed management decision, taking co-morbidities into account, recognising when uncertainty exists, and being able to manage this

Effectively manages potentially challenging situations such as conflicting opinions

Develops a clear management plan and communicates discussion outcomes and subsequent plans by appropriate means to the patient, GP and administrative staff as appropriate

Manages time to ensure the case list is discussed in the time available

Arranges follow up investigations when appropriate and knows indications for follow up

Specialty specific requirements: None

Supervision levels:

Level I: Able to observe only

Level II: Able and trusted to act with direct supervision:

a) Supervisor present throughout
b) Supervisor present for part

Level III: Able and trusted to act with indirect supervision

Level IV: Able and trusted to act at the level expected of a day-one consultant

Level V: Able and trusted to act at a level beyond that expected of a day-one consultant

Specialty Specific Capability in Practice 6:

Assesses and manages an infant or child in a NICU/PICU environment

Good Medical Practice Domains 1,2,3,4

Description

Able to assess infants and children on neonatal and intensive care units, recognise conditions that are best expectantly managed, and the indications and timing for surgical intervention. Discusses with neonatologists and intensivists to formulate appropriate plans, from medical management to surgical (including intervention on the unit itself), initiates/participates in discussions about palliative care if appropriate. Communicates the current situation, prognosis and plans to the parents and family in an accessible and understandable manner.

Example descriptors:

- Demonstrates knowledge of normal physiology in premature infant, term infant and child, and recognises ill infant and child and signs of recovery or deterioration
- Demonstrates knowledge and experience of index neonatal conditions, and recognises indications and urgency for surgical intervention
- Makes a full assessment of patients by taking a structured history and by performing a focused clinical examination, and requests, interprets and discusses appropriate investigations to synthesise findings into an appropriate overall impression, management plan and diagnosis
- Communicates with parents and families in a clear and understandable way, explaining the current situation and ongoing plans, including any surgical intervention
- Recognises co-morbidity and medical complications, discussing their management with neonatologists/intensivists, and referring on to other specialties as appropriate
- Identifies when further therapeutic manoeuvres are not in the patient's best interests, holds discussions about palliative care, refers for specialist advice as required, and discusses plans with their parents and neonatologists/intensivists
- Ensures all members of the multi-disciplinary team understand the management plans and their roles within them.
- Ensures the management plan is explicit and agreed with other members of the multi-disciplinary team, taking into account the sometimes conflicting needs of the child, which may happen at any time (for example out-of-hours)
- Gives appropriate advice for discharge from the neonatal or intensive care unit, with appropriate documentation and follow-up

Supervision levels:

Level I: Able to observe only

Level II: Able and trusted to act with direct supervision:

a) Supervisor present throughout
b) Supervisor present for part

Level III: Able and trusted to act with indirect supervision

Level IV: Able and trusted to act at the level expected of a day-one consultant

Level V: Able and trusted to act at a level beyond that expected of a day-one consultant

Appendix 2: Syllabus

The syllabus contains the specialty topics that must be covered in the training programme. Each of these topics includes one or more learning objectives.

Formative WBAs may be used to assess and provide feedback on any areas of clinical activity. However, other than for the critical conditions, index procedures or where they have been identified to address a concern, WBAs are optional and trainees, therefore, do not need to use WBAs to evidence their learning against each syllabus topic.

In the three phases of specialty training the following methodology is used to define the level of performance/competence to be achieved at completion of each phase in the domains of:

- specialty-based knowledge
- clinical skills and judgement
- technical and operative skills

Standards for knowledge

Each topic for a level or phase of training has a competence level ascribed to it for knowledge ranging from 1 to 4 which indicates the depth of knowledge required:

1. knows of
2. knows basic concepts
3. knows generally
4. knows specifically and broadly

Standards for clinical and technical skills

The practical application of knowledge is evidenced through clinical and technical skills. Each topic has a competence level ascribed to it in the areas of clinical and technical skills ranging from 1 to 4:

1. Has observed

Exit descriptor; at this level the trainee:

- has adequate knowledge of the steps through direct observation
- can handle instruments relevant to the procedure appropriately and safely
- can perform some parts of the procedure with reasonable fluency.

2. Can do with assistance

Exit descriptor; at this level the trainee:

- knows all the steps - and the reasons that lie behind the methodology
- can carry out a straightforward procedure fluently from start to finish
- knows and demonstrates when to call for assistance/advice from the supervisor (knows personal limitations).

3. Can do whole but may need assistance

Exit descriptor; at this level the trainee:

- can adapt to well-known variations in the procedure encountered, without direct input from the trainer
- recognises and makes a correct assessment of common problems that are encountered
- is able to deal with most of the common problems
- knows when help is needed
- requires advice rather than help that requires the trainer to scrub.

4. Competent to do without assistance, including complications

Exit descriptor, at this level the trainee:

- with regard to the common clinical situations in the specialty, can deal with straightforward and difficult cases to a satisfactory level and without the requirement for external input
- is at the level at which one would expect a UK consultant surgeon to function
- is capable of supervising trainees.

To ensure the appropriate procedural and clinical competence, there are nominated index procedures (appendix 4) that will require assessment through PBAs and critical conditions (appendix 3) that will require assessment through CBDs or CEXs as appropriate. Other than for the critical conditions, index procedures or where they have been identified to address a concern, WBAs are optional for formative feedback. Trainees, therefore, do not need to use WBAs to evidence their learning against each syllabus topic.

Syllabus

Topic	**Groin conditions**	*Areas in which simulation should be used to develop relevant skills*
Category	General Surgery of Childhood	
Sub-category:	None	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with 'groin pathology'* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention if required* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source*	
Knowledge	INGUINAL HERNIA: 4 Developmental anatomy	

	4 Natural history 4 Indications and outcomes of surgery HYDROCELE: 4 Developmental anatomy 4 Natural history 4 Place of conservative management 4 Indications and outcomes of surgery UNDESCENDED TESTIS: 4 Developmental anatomy 4 Natural history of undescended testis and retractile testis 4 Place of conservative management 4 Indications and outcomes of surgery PENILE CONDITIONS: 4 Developmental anatomy 4 Natural history 4 Place of conservative management 4 Indications and outcomes of surgery ACUTE SCROTUM: 4 Natural history 4 Place of conservative management 4 Indications and outcomes of surgery	
Clinical Skills	INGUINAL HERNIA: 4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups HYDROCELE: 4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups UNDESCENDED TESTIS: 4 Ability to assess child and reach appropriate diagnosis 4 Ability to differentiate true undescended testis from retractile variant 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups PENILE CONDITIONS:	

	4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups ACUTE SCROTUM: 4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	Hernia (ST5): 3 Inguinal herniotomy (non-neonatal) 3 Inguinal hernia (neonatal) Hydrocele (ST5): 3 Surgery for hydrocele Penile Conditions (ST5): 3 Prepucioplasty 4 Circumcision Undescended testis (ST5): 3 Surgery for undescended testis Acute scrotum (ST5): 4 Surgery for acute scrotum Hernia (ST6): 4 Inguinal herniotomy (non-neonatal) 3 Inguinal hernia (neonatal) Hydrocoele (ST6): 4 Surgery for hydrocele Penile Conditions (ST6): 4 Prepucioplasty 4 Circumcision Undescended testis (ST6): 4 Surgery for undescended testis Acute scrotum (ST6): 4 Surgery for acute scrotum	

Topic	**Abdominal wall pathologies**	*Areas in which simulation should be used to develop relevant skills*
Category	General Surgery of Childhood	
Sub-category:	None	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with abnormalities of the abdominal wall*	

	To be able to formulate a differential diagnosis and an investigation and management plan *To be able to treat the child appropriately up to and including operative intervention if required* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source*	
Knowledge	UMBILICAL HERNIA: 4 Developmental anatomy 4 Natural history 4 Place of conservative management 4 Indications and outcomes of surgery SUPRA-UMBILICAL HERNIA: 4 developmental anatomy 4 Natural history to include contrast with umbilical hernia 4 Indications and outcomes of surgery EPIGASTRIC HERNIA: 4 Developmental anatomy 4 Natural history 4 Indications and outcomes of surgery	
Clinical Skills	UMBILICAL HERNIA: 4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups SUPRA-UMBILICAL HERNIA: 4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups EPIGASTRIC HERNIA: 4 Ability to assess child and reach appropriate diagnosis 4 Ability to form a treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	Umbilical hernia (ST5): 4 Repair of umbilical hernia Epigastric hernia (ST5): 4 Repair of epigastric hernia Umbilical hernia (ST6): 4 Repair of umbilical hernia Epigastric hernia (ST6): 4 Repair of epigastric hernia	

Topic	**Head and neck swellings**	*Areas in which simulation should be used to develop relevant skills*
Category	General surgery of childhood	
Sub-category:	Management of benign surgical conditions	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with a head/neck swelling as the primary presenting symptom* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention if required* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source*	
Knowledge	4 Patterns of symptoms and relation to likely pathology, relevant anatomy and age of child 4 Relevance of embryonic development of head and neck structures 4 Differential diagnosis 4 Place and value of investigations	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	ST5 and 6: 4 Excision skin lesion 4 Excision/biopsy of lymph nodes 3 Surgery for thyroglossal cyst 3 Surgery for branchial cysts and branchial remnants ST7 and 8: 4 Excision skin lesion 4 Excision/biopsy of lymph nodes 4 Surgery for thyroglossal cyst 4 Surgery for branchial cysts and branchial remnants	

Topic	Access	*Areas in which simulation should be used to develop relevant skills*
Category	General Surgery of Childhood	
Sub-category:	None	
Objective	*None*	
Knowledge	None	
Clinical Skills	None	
Technical Skills and Procedures	Vascular access (ST5 and 6): 3 Central venous lines and ports (including percutaneous) Dialysis (ST5): 3 PD catheter insertion/removal Vascular access (ST7 and 8): 4 Central venous lines and ports (including percutaneous) Dialysis (ST6): 3 PD catheter insertion/removal	

Topic	Pyloric stenosis	*Areas in which simulation should be used to develop relevant skills*
Category	Gastrointestinal	
Sub-category:	None	
Objective	*To be able to assess an infant with vomiting* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to make a diagnosis of pyloric stenosis* *To be able to treat the child appropriately up to and including operative intervention if required* *To be able to communicate the above information at the required level to parents, other team members/referral source*	
Knowledge	4 Patterns of symptoms and relation to likely pathology 4 Significance of bile stained vomiting 4 Differential diagnosis 4 Place and value of investigations 4 Understanding of the biochemical changes associated with the condition	

Clinical Skills	4 Ability to assess ill child including an assessment of severity of dehydration 4 Ability to safely correct the dehydration and biochemical abnormalities 4 Ability to communicate with ill child (see section 1) 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	3 Pyloromyotomy - ST5 4 Pyloromyotomy - ST6, ST7, ST8	

Topic	**Gastro-oesophageal reflux**	*Areas in which simulation should be used to develop relevant skills*
Category	Gastrointestinal	
Sub-category:	None	
Objective	*To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Pathophysiology 4 Investigation and management 4 Indications for operative intervention	
Clinical Skills	4 Ability to synthesise history and investigations into appropriate management plan 4 Ability to communicate information to parents/child	
Technical Skills and Procedures	4 OGD - ST5, ST6, ST7, ST8 3 Oesophageal dilatation (ST5 & ST6) 4 Oesophageal dilatation (ST7 & ST8) 3 Gastrostomy -open (ST5 & ST6) 4 Gastrostomy -open (ST7 & ST8) 3 PEG (insertion/removal) - ST5 4 PEG (insertion /removal) - ST6, ST7, ST8	

	3 Open or laparoscopic fundoplication (ST5, ST6, ST7)4 Open and laparoscopic fundoplication (ST8) 1 Feeding jejunostomy (ST5) 2 Feeding jejunostomy (ST6) 3 Feeding jejunostomy (ST7) 4 Feeding jejunostomy (ST8) 1 Oesophago gastric disconnection (ST5 & ST6) 2 Oesophago gastric disconnection (ST7 & ST8)	

Topic	**Abdominal pain**	*Areas in which simulation should be used to develop relevant skills*
Category	Gastrointestinal	
Sub-category:	None	
Objective	*To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Patterns of symptoms and relation to likely pathology and age of child 4 Differential diagnosis 4 Place and value of investigations 4 Place of operative intervention, and associated outcomes	
Clinical Skills	4 Ability to assess ill child 4 Ability to communicate with ill child (see section 1) 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	3 Open and Laparoscopic appendicectomy (ST5) 4 Open and Laparoscopic appendicectomy (ST6, ST7, ST8) 3 Operative reduction of intussusception (ST5 & ST6) 4 Operative reduction of intussusception (ST7 & ST8)	

Topic	**Constipation**	*Areas in which simulation should be used to develop relevant skills*
Category	Gastrointestinal	
Sub-category:	None	
Objective	*To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Patterns of symptoms and relation to likely pathology and age of child 3 Differential diagnosis to include medical anomalies and socio-psychological aspects of symptom 4 Place and value of investigations	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups. 3 To include community aspects of further management	Desirable Communication
Technical Skills and Procedures	4 Rectal Biopsy 4 Manual evacuation 4 EUA rectum 4 Anal stretch 1 ACE procedure (ST5) 2 ACE procedure (ST6) 3 ACE procedure (ST7 & ST8)	Desirable

Topic	**Gastro-intestinal bleeding**	*Areas in which simulation should be used to develop relevant skills*
Category	Gastrointestinal	
Sub-category:	None	

Objective	*To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Patterns of symptoms and relation to likely pathology and age of child 3 Differential diagnosis 4 Place and value of investigations 3 Place of operative intervention, and associated outcomes	
Clinical Skills	4 Ability to assess ill child 4 Ability to communicate with ill child (see section 1) 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	4 OGD 2 Colonoscopy (ST5, ST6, ST7, ST8) 3 Sigmoidoscopy (ST5,) 4 Sigmoidoscopy (ST6, ST7, ST8) 3 Small bowel resection/anastomosis – open and laparoscopically assisted (Meckels) - ST5 & ST6 4 Small bowel resection/anastomosis – open and laparoscopically assisted (Meckels) - ST7 & ST8	

Topic	**Intestinal obstruction**	*Areas in which simulation should be used to develop relevant skills*
Category	Gastrointestinal	
Sub-category:	None	
Objective	*To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases*	

	To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Patterns of symptoms and relation to likely pathology and age of child 4 Differential diagnosis 4 Place and value of investigations 4 Place of operative intervention, and associated outcomes	
Clinical Skills	4 Ability to assess ill child 4 Ability to communicate with ill child (see Section 1) 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	3 Laparotomy (ST5 & ST6) 4 Laparotomy (ST7 & ST8) 3 Adhesiolysis (ST5 & ST6) 4 Adhesiolysis (ST7 & ST8) 3 Small bowel resection/anastomosis (ST5 & ST6) 4 Small bowel resection/anastomosis (ST7 & ST8)	

Topic	**Inflammatory bowel disease**	*Areas in which simulation should be used to develop relevant skills*
Category	Gastrointestinal	
Sub-category:	None	
Objective	*To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Patterns of symptoms and relation to likely pathology and age of child 3 Differential diagnosis 3 Place and value of investigations	

	3 Place of operative intervention, and associated outcomes	
Clinical Skills	4 Ability to assess ill child 4 Ability to communicate with ill child (see Section 1) 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	4 OGD 2 Colonoscopy (ST5, ST6, ST7, ST8) 3 Sigmoidoscopy (ST5 & ST6) 4 Sigmoidoscopy (ST7 & ST8) 3 Small bowel resection/anastomosis (ST5 & ST6) 4 Small bowel resection/anastomosis (ST7 & ST8) 2 Right hemicolectomy (ST5) 3 Right hemicolectomy (ST6, ST7) 4 Right hemicolectomy (ST8) 2 Left hemicolectomy (ST5) 3 Left hemicolectomy (ST6, ST7) 4 Left hemicolectomy (ST8) 2 Total colectomy (ST5) 3 Total colectomy (ST6, ST7) 4 Total colectomy (ST8) 1 Pouch formation (ST5 & ST6) 2 Pouch formation (ST7 & ST8)	

Topic	**Short bowel syndrome**	*Areas in which simulation should be used to develop relevant skills*
Category	Gastrointestinal	
Sub-category:	None	
Objective	*To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Patterns of symptoms and relation to likely pathology and age of child 3 Differential diagnosis	

	3 Place and value of investigations 3 Place of operative intervention, and associated outcomes	
Clinical Skills	4 Ability to assess ill child 4 Ability to communicate with ill child (see Section 1) 3 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	1 Bowel lengthening procedures (ST5 & 6 specialist centre) 2 Bowel lengthening procedures (ST7 & 8 specialist centre)	Desirable

Topic	**Liver/biliary disease**	*Areas in which simulation should be used to develop relevant skills*
Category	Gastrointestinal	
Sub-category:	None	
Objective	*To understand the presenting symptoms of common gastrointestinal conditions in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Patterns of symptoms and relation to likely pathology and age of child 3 Differential diagnosis 3 Place and value of investigations 3 Place of operative intervention, and associated outcomes	
Clinical Skills	4 Ability to assess ill child 4 Ability to communicate with ill child (see Section 1) 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Cholecystectomy 1 Choledochal cyst (ST5 & ST6) 2 Choledochal cyst (ST7)	

	3 Choledochal cyst (ST8) 1 Kasai procedure - ST5 & ST6 (specialist centre) 2 Kasai procedure - ST7 (specialist centre) 3 Kasai procedure - ST8 (specialist centre)	

Topic	**Urinary tract infection**	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Patterns of symptoms and relation to likely pathology and age of child 4 Relevance of different symptom patterns 4 Differential diagnosis 4 Place and value of investigations	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	None	

Topic	**Haematuria**	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract*	

	To be able to formulate a differential diagnosis and an investigation and management plan *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Patterns of symptoms and relation to likely pathology and age of child 4 Differential diagnosis 4 Place and value of investigations	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	3 Cysto-urethroscopy (ST5 & ST6) 4 Cysto-urethroscopy (ST7 & ST8)	

Topic	**Hypospadias**	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Likely modes of presentation 3 Different anatomical variants 4 Place and value of investigations/ operative intervention	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan	

	4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Repair distal hypospadias (ST5 & ST6) 3 Repair distal hypospadias (ST7) 4 Repair distal hypospadias (ST8) 1 Repair proximal hypospadias (ST5 & ST6) 2 Repair proximal hypospadias (ST7) 3 Repair proximal hypospadias (ST8) 1 Repair urethral fistula (ST5 & ST6) 2 Repair urethral fistula (ST7) 3 Repair urethral fistula (ST8)	

Topic	**Upper tract obstruction (to include Pelvi-ureteric junction obstruction and Vesico-ureteric junction obstruction)**	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Likely modes of presentation 4 Place and value of investigations/ operative intervention 4 Differential diagnosis	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	Strongly recommended
Technical Skills and Procedures	2 Pyeloplasty (ST5 & ST6) 3 Pyeloplasty (ST7) 4 Pyeloplasty (ST8) 2 Nephrectomy (ST5) 3 Nephrectomy (ST6 & ST7) 4 Nephrectomy (ST8) 2 Heminephrectomy (ST5) 3 Heminephrectomy (ST6 & ST7) 4 Heminephrectomy (ST8)	Desirable

	2 Insertion of percutaneous nephrostomy – with ultrasound guidance (ST5 – ST8) 2 Insertion of open nephrostomy (ST5 & ST6) 3 Insertion of open nephrostomy (ST7) 4 Insertion of open nephrostomy (ST8) 2 Insertion of JJ stent (ST5 & ST6) 3 Insertion of JJ stent (ST7) 4 Insertion of JJ stent (ST8) 1 Ureteric reimplantation (ST5 & ST6) 2 Ureteric reimplantation (ST7) 3 Ureteric reimplantation (ST8)	

Topic	**Posterior urethral valves**	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Likely modes of presentation 4 Place and value of investigations/ operative intervention 4 Differential diagnosis	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	Desirable Decision making
Technical Skills and Procedures	1 Destruction of PUV (ST5 & ST6) 2 Destruction of PUV (ST7) 3 Destruction of PUV (ST8) 2 Formation/closure of vesocistomy (ST5) 3 Formation/closure of vesicostomy (ST6 & ST7) 4 Formation/closure of vesicostomy (ST8)	

Topic	**Urinary tract calculus disease**	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Likely modes of presentation 3 Aetiological and biochemical factors 3 Place and value of investigations/ operative and non-operative intervention 3 Differential diagnosis	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Interventional management of urolithiasis (ST5 & ST6) 3 Interventional management of urolithiasis (ST7 & ST8)	

Topic	**Bladder dysfunction (incl. neuropathic bladder)**	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases*	

	To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Likely modes of presentation (ST5 & ST6) 3 Differential diagnosis (ST5 & ST6) 3 Place and value of investigations (ST5 & ST6) 3 Knowledge of appropriate referral pathways (ST5 & ST6) 4 Likely modes of presentation (ST7 & ST8) 4 Differential diagnosis (ST7 & ST8) 4 Place and value of investigations (ST7 & ST8) 4 Knowledge of appropriate referral pathways (ST7 & ST8)	
Clinical Skills	3 Ability to assess child (ST5 & ST6) 3 Ability to form a viable investigation and treatment plan (ST5 & ST6) 3 Ability to communicate with all relevant groups (ST5& ST6) 4 Ability to assess child (ST7 & ST8) 4 Ability to form a viable investigation and treatment plan (ST7 & ST8) 4 Ability to communicate with all relevant groups (ST7& ST8)	Strongly recommended
Technical Skills and Procedures	2 Cysto-urethroscopy (ST5) 3 Cysto-urethroscopy (ST6) 4 Cysto-urethroscopy (ST7 & ST8) 2 Vesicostomy (ST5 & ST6) 3 Vesicostomy (ST7) 4 Vesicostomy (ST8) 2 Closure of vesicostomy (ST5) 3 Closure of vesicostomy (ST6) 4 Closure of vesicostomy (ST7 & ST8) 3 Suprapubic catheter (ST5 & ST6) 4 Suprapubic catheter (ST7 & ST8) 1 Endoscopic cauterisation of lesion of bladder (ST5 & ST6) 2 Endoscopic cauterisation of lesion of bladder (ST7) 3 Endoscopic cauterisation of lesion of bladder (ST8) 2 Endoscopic management of clot from bladder (ST5 & ST6) 3 Endoscopic management of clot from bladder (ST7) 4 Endoscopic management of clot from bladder (ST8) 1 Ileal bladder reconstruction (ST5 & ST6) 2 Ileal bladder reconstruction (ST7) 3 Ileal bladder reconstruction (ST8) 1 Colonic bladder reconstruction (ST5 & ST6)	Desirable

	2 Colonic bladder reconstruction (ST7) 3 Colonic bladder reconstruction (ST8) 1 Ureteric diversion (ST5 & ST6) 2 Ureteric diversion (ST7) 3 Ureteric diversion (ST8) 2 Mitrofanoff procedure (ST5 & ST6) 3 Mitrofanoff procedure (ST7) 4 Mitrofanoff procedure (ST8)	

Topic	**Renal failure**	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of referral criteria to renal medical colleagues	
Clinical Skills	4 Ability to assess child 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	1 Ureteric un-diversion (ST5 & ST6) 2 Ureteric un-diversion (ST7) 3 Ureteric un-diversion (ST8) 2 Haemodialysis catheter insertion (ST5) 3 Haemodialysis catheter insertion (ST6) 4 Haemodialysis catheter insertion (ST7 & ST8) 3 PD catheter insertion/removal (ST5 & ST6) 4 PD catheter insertion/removal (ST7 & ST8)	

Topic	**Bladder exstrophy (to include outlet anomalies e.g. epispadias)**	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations	
Clinical Skills	4 Ability to assess child 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	1 Closure of bladder neck (ST5 & ST6) 2 Closure of bladder neck (ST7) 3 Closure of bladder neck (ST8) 1 Repair of bladder exstrophy (ST5 & ST6) 2 Repair of bladder exstrophy (ST7) (specialist centre) 3 Repair of bladder exstrophy (ST8) (specialist centre) 1 Repair of epispadias (ST5 & ST6) 2 Repair of epispadias (ST7) (specialist centre) 3 Repair of epispadias (ST8) (specialist centre)	

Topic	**Duplication of urinary tract**	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*To be able to assess a child presenting to the OP clinic or acutely with symptoms referable to the urinary tract* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to treat the child appropriately up to and including operative intervention in selected cases*	

	To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Likely modes of presentation 3 Embryological derivation and anatomical variants 3 Place and value of investigations/ operative intervention 3 Differential diagnosis	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	1 Open +/- laparoscopic hemi-nephrectomy (ST5) 2 Open +/- laparoscopic hemi-nephrectomy (ST6) 3 Open +/- laparoscopic hemi-nephrectomy (ST7) 4 Open +/- laparoscopic hemi-nephrectomy (ST8) 1 Excision of ureterocele - ST5, ST6 2 Excision of ureterocele - ST7 3 Excision of ureterocele - ST8 1 Endoscopic incision of ureterocele ST5 2 Endoscopic incision of ureterocele ST6, ST7 3 Endoscopic incision of ureterocele ST8	

Topic	**Urethral meatus**	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*None*	
Knowledge	None	
Clinical Skills	None	
Technical Skills and Procedures	2 Meatotomy - ST5 3 Meatotomy - ST6 4 Meatotomy - ST7, ST8 2 Meatoplasty -ST5 3 Meatoplasty -ST6 4 Meatoplasty -ST7, ST8 2 Urethral dilatation -ST5 3 Urethral dilatation -ST6 4 Urethral dilatation -ST7, ST8	

Topic	Epispadias	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*None*	
Knowledge	None	
Clinical Skills	None	
Technical Skills and Procedures	2 Repair of epispadias - ST7 (specialist centre) 3 Repair of epispadias - ST8 (specialist centre)	

Topic	Vesico-ureteric reflux	*Areas in which simulation should be used to develop relevant skills*
Category	Urology	
Sub-category:	None	
Objective	*None*	
Knowledge	None	
Clinical Skills	None	
Technical Skills and Procedures	3 Cysto-urethroscopy (ST5 & ST6) 4 Cysto-urethroscopy (ST7 & ST8) 2 STING/deflux (ST5 & ST6) 3 STING/deflux (ST7) 4 STING/deflux (ST8) 1 Ureteric reimplantation ST5, ST6 2 Ureteric reimplantation ST7 3 Ureteric reimplantation ST8	

Topic	Small bowel duplications	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	

Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period* *To be able to construct an appropriate management plan for these children* *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of presentation both pre- and post natal 4 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Intestinal resection/anastomosis - ST5, ST6 3 Intestinal resection/anastomosis - ST7 4 Intestinal resection/anastomosis - ST8	

Topic	**Sacro coccygeal teratoma**	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	
Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period* *To be able to construct an appropriate management plan for these children* *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of presentation both pre- and post natal 4 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies	

	4 Role of prenatal counselling	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	1 Excision of sacro coccygeal teratoma ST5, ST6 2 Excision of sacro coccygeal teratoma ST7 3 Excision of sacro coccygeal teratoma ST8	

Topic	**Congenital diaphragmatic hernia**	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	
Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period* *To be able to construct an appropriate management plan for these children* *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of presentation both pre- and post natal 4 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies 4 Role of pre-natal counselling	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Operation for diaphragmatic hernia (neonate) incl. eventration (ST5) 3 Operation for diaphragmatic hernia (neonate) incl. eventration (ST6 & ST7) 4 Operation for diaphragmatic hernia (neonate) incl. eventration (ST8)	

Topic	**Intestinal Atresias**	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	
Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period* *To be able to construct an appropriate management plan for these children* *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of presentation both pre- and post natal 4 Anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies 4 Role of pre-natal counselling	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	Strongly recommended:
Technical Skills and Procedures	2 Duodeno- duodenostomy (ST5) 3 Duodeno- duodenostomy (ST6 & ST7) 4 Duodeno- duodenostomy (ST8) 2 Intestinal resection/anastomosis (ST5) 3 Intestinal resection/anastomosis (ST6 & ST7) 4 Intestinal resection/anastomosis (ST8) 2 Stoma formation (ST5) 3 Stoma formation (ST6 & ST7) 4 Stoma formation (ST8)	Desirable

Topic	**Meconium Ileus**	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	
Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period*	

	To be able to construct an appropriate management plan for these children *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of presentation both pre- and post natal 4 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies 4 Role of pre-natal + genetic counselling	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Operation for meconium ileus (ST5) 3 Operation for meconium ileus (ST6, ST7, ST8)	

Topic	**Malrotation**	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	
Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period* *To be able to construct an appropriate management plan for these children* *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of presentation 4 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies	

Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Correction of malrotation (ST5) 3 Correction of malrotation (ST6, ST7) 4 Correction of malrotation (ST8)	

Topic	**Hirschsprungs disease**	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	
Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period* *To be able to construct an appropriate management plan for these children* *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of presentation both pre- and post natal 3 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies 4 Role of genetic counselling	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	3 Rectal biopsy (ST5) 4 Rectal biopsy (ST6, ST7, ST8) 4 Rectal washout 1 Trans-anal pull through – open or laparoscopically assisted (ST5 & ST6) 2 Trans-anal pull through – open or laparoscopically assisted (ST7) 3 Trans-anal pull through – open or laparoscopically assisted (ST8) 1 Pull through (Duhamel procedure, Soave, Swenson) - ST5	

	2 Pull through (Duhamel procedure, Soave, Swenson) - ST6, ST7 3 Pull through (Duhamel procedure, Soave, Swenson) - ST8	

Topic	**Oesophageal Atresia and Tracheo-oesophageal fistula**	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	
Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period* *To be able to construct an appropriate management plan for these children* *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of presentation both pre- and post natal 4 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies 4 Role of pre-natal counselling	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Operation for oesophageal atresia/TOF (ST5 & ST6) 3 Operation for oesophageal atresia/TOF (ST7) 4 Operation for oesophageal atresia/TOF (ST8) 1 Repair of H fistula (ST5 & ST6) 2 Repair of H fistula (ST7 & ST8) 1 Repair of recurrent fistula (ST5, ST6, ST7) 2 Repair of recurrent fistula (ST8) 1 Oesophageal dilatation (neonatal) - ST5 & ST6 2 Oesophageal dilatation (neonatal) - ST7 3 Oesophageal dilatation (neonatal) - ST8 1 Oesophageal replacement 1 Aortopexy	

Topic	**Anorectal Malformations**	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	
Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period* *To be able to construct an appropriate management plan for these children* *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of presentation both pre- and post natal 4 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies 4 Role of pre-natal counselling	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Anoplasty (ST5 & ST6) 3 Anoplasty (ST7) 4 Anoplasty (ST8) 3 Sigmoid colostomy (ST5) 4 Sigmoid colostomy (ST6, ST7, ST8) 1 PSARP (ST5 & ST6) 2 PSARP (ST7) 3 PSARP (ST8)	

Topic	**Necrotising Enterocolitis**	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	
Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period*	

	To be able to construct an appropriate management plan for these children *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of presentation 4 Patho-physiology of the condition 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Laparotomy and proceed (ST5 & ST6) 3 Laparotomy and proceed (ST7) 4 Laparotomy and proceed (ST8) 2 Intestinal resection/anastomosis (ST5 & ST6) 3 Intestinal resection/anastomosis (ST7) 4 Intestinal resection/anastomosis (ST8)	

Topic	**Neonatal Abdominal Wall Defects**	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	
Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period* *To be able to construct an appropriate management plan for these children* *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of presentation both pre- and post natal 4 Patho-physiology of the condition and anatomical variants 4 Associated anomalies 4 Outcome data on the condition 4 Differing management strategies 4 Role of pre-natal counselling	

Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	Desirable Human factors
Technical Skills and Procedures	2 Repair of gastroschisis (ST5) 3 Repair of gastroschisis (ST6 & ST7) 4 Repair of gastroschisis (ST8) 3 Application of preformed silo (ST5 & ST6) 4 Application of preformed silo (ST7 & ST8) 2 Repair of exomphalos (ST5) 3 Repair of exomphalos (ST6 & ST7) 4 Repair of exomphalos (ST8)	Desirable

Topic	**Disorders of sex development**	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	
Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period* *To be able to construct an appropriate management plan for these children* *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Mode of presentation both pre- and post natal 3 Patho-physiology of the condition and anatomical variants 3 Associated anomalies 3 Outcome data on the condition 3 Differing management strategies 3 Role of genetic counselling	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	None	

Topic	**Antenatal management**	*Areas in which simulation should be used to develop relevant skills*
Category	Neonatal Surgery	
Sub-category:	None	
Objective	*To understand the diagnosis and management of children presenting with congenital abnormalities in the neonatal period* *To be able to construct an appropriate management plan for these children* *To understand the place of operative management in the neonatal period and be able to carry this out in selected cases* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Likely modes of presentation of different conditions 4 Place and value of investigations Types of and indications for antenatal intervention 4 Role of ante-natal counselling	
Clinical Skills	4 Ability to counsel and inform parents 4 Ability to form a viable investigation and treatment plan Ability to communicate with all relevant groups	Strongly recommended
Technical Skills and Procedures	None	

Topic	**Wilms Tumour**	*Areas in which simulation should be used to develop relevant skills*
Category	Oncology	
Sub-category:	None	
Objective	*To understand the presentation and management of childhood tumours* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of clinical presentation 4 Differential diagnosis 3 Relevant basic science knowledge of oncogenesis 4 Outcome data of treatment modalities	

	4 Role of surgery	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Nephro-ureterectomy/nephrectomy for Wilms (ST5 & ST6) 3 Nephro-ureterectomy/nephrectomy for Wilms (ST7 & ST8)	

Topic	**Neuroblastoma**	*Areas in which simulation should be used to develop relevant skills*
Category	Oncology	
Sub-category:	None	
Objective	*To understand the presentation and management of childhood tumours* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of clinical presentation 4 Differential diagnosis #3 Relevant basic science knowledge of oncogenesis 4 Outcome data of treatment modalities 4 Role of surgery	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	1 Surgery for neuroblastoma (ST5 & ST6) 2 Surgery for neuroblastoma (ST7) 3 Surgery for neuroblastoma (ST8)	

Topic	**Hepatoblastoma**	*Areas in which simulation should be used to develop relevant skills*
Category	Oncology	
Sub-category:	None	
Objective	*To understand the presentation and management of childhood tumours* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of clinical presentation 4 Differential diagnosis 3 Relevant basic science knowledge of oncogenesis 4 Outcome data of treatment modalities 4 Role of surgery	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	1 Surgery for hepatoblastoma (ST5 & ST6) only at specialist centre 2 Surgery for hepatoblastoma (ST7) only at specialist centre 3 Surgery for hepatoblastoma (ST8) only at specialist centre	

Topic	**Soft tissue tumours**	*Areas in which simulation should be used to develop relevant skills*
Category	Oncology	
Sub-category:	None	
Objective	*To understand the presentation and management of childhood tumours* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of clinical presentation 4 Differential diagnosis 3 Relevant basic science knowledge of oncogenesis 4 Outcome data of treatment modalities	

	4 Role of surgery	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	1 Local excision soft tissue tumour (ST5, ST6) 2 Local excision soft tissue tumour (ST7) 3 Local excision soft tissue tumour (ST8)	

Topic	**Haematological malignancies**	*Areas in which simulation should be used to develop relevant skills*
Category	Oncology	
Sub-category:	None	
Objective	*To understand the presentation and management of childhood tumours* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Mode of clinical presentation 3 Differential diagnosis 3 Relevant basic science knowledge of oncogenesis 3 Management strategies and basic outcome data of treatment modalities	
Clinical Skills	4 Ability to assess child 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Cervical Lymph node biopsy (ST5) 3 Cervical Lymph node biopsy (ST6 & ST7) 4 Cervical Lymph node biopsy (ST8)	

Topic	**Benign tumours**	*Areas in which simulation should be used to develop relevant skills*
Category	Oncology	
Sub-category:	None	
Objective	*To understand the presentation and management of childhood tumours*	

	To be able to formulate a differential diagnosis and an investigation and management plan *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Mode of clinical presentation 4 Differential diagnosis 3 Relevant basic science knowledge of oncogenesis 4 Outcome data of treatment modalities 4 Role of surgery	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Oopherectomy (ST5) 3 Oopherectomy (ST6 & ST7) 4 Oopherectomy (ST8) 2 Oophero-salpingectomy (ST5) 3 Oophero-salpingectomy (ST6 & ST7) 4 Oophero-salpingectomy (ST8)	

Topic	**Generic procedures**	*Areas in which simulation should be used to develop relevant skills*
Category	Oncology	
Sub-category:	None	
Objective	*None ??*	
Knowledge	None	
Clinical Skills	None	
Technical Skills and Procedures	2 Tumour biopsy ST5 Tumour biopsy ST6, ST7 4 Tumour biopsy ST8	Desirable

Topic	**Adrenal gland**	**Areas in which simulation should be used to develop relevant skills**
Category	Endocrine conditions	
Sub-category:	None	
Objective	*None*	
Knowledge	None	

Clinical Skills	None	
Technical Skills and Procedures	1 Adrenalectomy (ST5 & ST6) 2 Adrenalectomy (ST7 & ST8)	

Topic	**Disease of the thyroid gland**	*Areas in which simulation should be used to develop relevant skills*
Category	Endocrine conditions	
Sub-category:	None	
Objective	*To understand the presenting symptoms of endocrine conditions in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to identify the need for surgery and influence of endocrine conditions on surgery* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of appropriate referral pathways	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	1 Thyroidectomy (ST5 & ST6) 2 Thyroidectomy (ST7 & ST8)	

Topic	**Parathyroid disease**	*Areas in which simulation should be used to develop relevant skills*
Category	Endocrine conditions	
Sub-category:	None	
Objective	*To understand the presenting symptoms of endocrine conditions in childhood and their management*	

	To be able to formulate a differential diagnosis and an investigation and management plan *To be able to identify the need for surgery and influence of endocrine conditions on surgery* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of appropriate referral pathways	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	None	

Topic	**Diabetes**	*Areas in which simulation should be used to develop relevant skills*
Category	Endocrine conditions	
Sub-category:	None	
Objective	*To understand the presenting symptoms of endocrine conditions in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to identify the need for surgery and influence of endocrine conditions on surgery* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of appropriate referral pathways	
Clinical Skills	4 Ability to assess child 3 Ability to form a viable investigation and treatment plan	

	4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	3 OGD (ST5) 4 OGD (ST6, ST7, ST8)	

Topic	**Disorders of Growth**	*Areas in which simulation should be used to develop relevant skills*
Category	Endocrine conditions	
Sub-category:	None	
Objective	*To understand the presenting symptoms of endocrine conditions in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To be able to identify the need for surgery and influence of endocrine conditions on surgery* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of appropriate referral pathways	
Clinical Skills	4 Ability to assess child 3 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	3 OGD (ST5) 4 OGD (ST6, ST7, ST8)	

Topic	**Disorders of secondary sexual development**	*Areas in which simulation should be used to develop relevant skills*
Category	Endocrine conditions	
Sub-category:	None	
Objective	*To understand the presenting symptoms of endocrine conditions in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan*	

	To be able to identify the need for surgery and influence of endocrine conditions on surgery *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Likely modes of presentation Differential diagnosis 3 Place and value of investigations 3 Knowledge of appropriate referral pathways	
Clinical Skills	4 Ability to assess child 3 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	1 Subcutaneous mastectomy (ST5 & ST6) 2 Subcutaneous mastectomy (ST7) 3 Subcutaneous mastectomy (ST8)	

Topic	**Chest wall anomalies**	*Areas in which simulation should be used to develop relevant skills*
Category	Thoracic Anomalies	
Sub-category:	None	
Objective	*To understand the presenting symptoms of thoracic anomalies in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To identify the place of surgery* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Likely modes of presentation 4 Differential diagnosis 4 Place and value of investigations 4 Knowledge of appropriate referral pathways 4 Outcomes of surgery	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	

Technical Skills and Procedures	1 Repair pectus excavatum (ST5 & ST6) 2 Repair pectus excavatum (ST7 & ST8) 1 Repair pectus carinatum (ST5 & ST6) 2 Repair pectus carinatum (ST7 & ST8)	

Topic	**Congenital and acquired lung abnormalities including management of empyema**	*Areas in which simulation should be used to develop relevant skills*
Category	Thoracic Anomalies	
Sub-category:	None	
Objective	*To understand the presenting symptoms of thoracic anomalies in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To identify the place of surgery* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Likely modes of presentation 4 Differential diagnosis 4 Place and value of investigations 3 Knowledge of developmental embryology and pertinent anatomy 4 Knowledge of appropriate referral pathways 4 Outcomes of surgery	
Clinical Skills	4 Ability to assess child 3 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	Strongly recommended
Technical Skills and Procedures	2 Thoracotomy (ST5 & ST6) 3 Thoracotomy (ST7) 4 Thoracotomy (ST8) 1 Open biopsy of lung (ST5 & ST6) 2 Open biopsy of lung (ST7) 3 Open biopsy of lung (ST8) 1 Pulmonary lobectomy (ST5 & ST6) 2 Pulmonary lobectomy (ST7) 3 Pulmonary lobectomy (ST8) 1 Excision of extra lobar sequestration (ST5 & ST6) 2 Excision of extra lobar sequestration (ST7) 3 Excision of extra lobar sequestration (ST8) 2 Aspiration of pleural cavity (ST5) 3 Aspiration of pleural cavity (ST6)	Desirable

	4 Aspiration of pleural cavity (ST7 & ST8) 2 Insertion of open chest drain (ST5) 3 Insertion of open chest drain (ST6) 4 Insertion of open chest drain (ST7 & ST8) 2 Insertion of percutaneous chest drain (ST5) 3 Insertion of percutaneous chest drain (ST6) Insertion of percutaneous chest drain (ST7 & ST8) 1 Open/thoracoscopic pleural debridement - ST5 Open/thoracoscopic pleural debridement - ST6 3 Open/thoracoscopic pleural debridement - ST7 4 Open/thoracoscopic pleural debridement - ST8 1 Rigid bronchoscopy -ST5, ST6 2 Rigid bronchoscopy -ST7, ST8 1 Fibreoptic bronchoscopy -ST5, ST6 2 Fibreoptic bronchoscopy -ST7, ST8	

Topic	**Tracheal anomalies**	*Areas in which simulation should be used to develop relevant skills*
Category	Thoracic Anomalies	
Sub-category:	None	
Objective	*To understand the presenting symptoms of thoracic anomalies in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To identify the place of surgery* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	3 Likely modes of presentation 3 Differential diagnosis 3 Place and value of investigations 3 Knowledge of developmental embryology and pertinent anatomy 3 Knowledge of appropriate referral pathways 3 Outcomes of surgery	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	1 Tracheostomy (ST5, ST6, ST7, ST8) 1 Rigid bronchoscopy (ST5 & ST6) 2 Rigid bronchoscopy (ST7 &ST8)	

	1 Fibreoptic bronchoscopy (ST5 & ST6) 2 Fibreoptic bronchoscopy (ST7 & ST8)	

Topic	**Inhaled /aspirated /ingested foreign body**	*Areas in which simulation should be used to develop relevant skills*
Category	Thoracic Anomalies	
Sub-category:	None	
Objective	*To understand the presenting symptoms of thoracic anomalies in childhood and their management* *To be able to formulate a differential diagnosis and an investigation and management plan* *To identify the place of surgery* *To be able to communicate the above information at the required level to patients/ parents/ other team members/ referral source* *To be able to practice with integrity, respect and compassion*	
Knowledge	4 Likely modes of presentation 4 Differential diagnosis 4 Place and value of investigations 4 Knowledge of developmental embryology and pertinent anatomy 4 Knowledge of appropriate referral pathways 4 Outcomes of surgery	
Clinical Skills	4 Ability to assess child 4 Ability to form a viable investigation and treatment plan 4 Ability to communicate with all relevant groups	
Technical Skills and Procedures	2 Rigid bronchoscopic removal of FB from bronchus (ST5, ST6, ST7, ST8)	

Topic	**Pre-operative care**	*Areas in which simulation should be used to develop relevant skills*
Category	Operative skills	
Sub-category:	None	
Objective	*To ensure the trainee has reached a level of competence in a range of basic operative procedures.*	
Knowledge	3 Indications for surgery	

	3 Required preparation for surgery to include necessary pre-operative investigations 3 Outcomes and complications of surgery 3 Knowledge of the admission process	
Clinical Skills	3 Synthesis of history and examination into operative management plan 3 Ability to explain procedure and outcomes to patient and parents at an appropriate level 3 To be able to take informed consent 3 To construct an appropriate theatre list 3 To follow the admission procedure	
Technical Skills and Procedures	No content	

Topic	**Intra-operative care**	*Areas in which simulation should be used to develop relevant skills*
Category	Operative skills	
Sub-category:	None	
Objective	*To ensure the trainee has reached a level of competence in a range of basic operative procedures.*	
Knowledge	3 Anatomy to be encountered during procedure (ST5 & ST6) 3 Steps involved in operative procedure (ST5 & ST6) 3 Knowledge of alternative procedures in case of encountering difficulties (ST5 & ST6) 3 Potential complications of procedure (ST5 & ST6) 4 Anatomy to be encountered during procedure (ST7 & ST8) 4 Steps involved in operative procedure (ST7 & ST8) 4 Knowledge of alternative procedures in case of encountering difficulties (ST7 & ST8) 4 Potential complications of procedure (ST7 & ST8)	
Clinical Skills	3 Necessary hand-eye dexterity to complete procedure (ST5 & ST6) 3 Appropriate use of assistance (ST5 & ST6) 3 Communication with other members of theatre team (ST5 & ST6) 4 Necessary hand-eye dexterity to complete procedure (ST7 & ST8) 4 Appropriate use of assistance (ST7 & ST8)	

	4 Communication with other members of theatre team (ST7 & ST8)	
Technical Skills and Procedures	4 Open and laparoscopic operative skills	Strongly recommended

Topic	**Post-operative care**	*Areas in which simulation should be used to develop relevant skills*
Category	Operative skills	
Sub-category:	None	
Objective	*To ensure the trainee has reached a level of competence in a range of basic operative procedures.*	
Knowledge	3 Outcomes of procedure 3 Likely post-operative progress from disease process and intervention 3 Physiological and pathological changes in condition as a result of intervention	
Clinical Skills	3 Assessment of patient and physiological parameters 3 Appropriate intervention to deal with changing parameters 3 Communication skills for dealing with team members, patients and parents 3 Ability to prioritise interventions	
Technical Skills and Procedures	No content	

Topic	**NHS Structure**	*Areas in which simulation should be used to develop relevant skills*
Category	Management	
Sub-category:	None	
Objective	*To understand the current structure and function of the NHS* *To develop an understanding of leadership qualities required of a consultant* *To develop the ability to support colleagues and peers in the delivery of care*	
Knowledge	3 Current structure of NHS in the different parts of the UK (relative to where the trainee is working)	

	3 Role of Department of Health (England) and its equivalent bodies in Northern Ireland, Scotland and Wales 3 Role of Strategic Health Authority (England) and its equivalent bodies in Northern Ireland, Scotland and Wales 3 Role of regulatory agencies	
Clinical Skills	3 Ability to identify impact of structures / changes on delivery of care	
Technical Skills and Procedures	No content	

Topic	**Trust/Hospital/Health Authority Managerial structures**	*Areas in which simulation should be used to develop relevant skills*
Category	Management	
Sub-category:	None	
Objective	*To understand the current structure and function of the NHS in the different parts of the UK* *To develop an understanding of leadership qualities required of a consultant* *To develop the ability to support colleagues and peers in the delivery of care*	
Knowledge	3 Local managerial structures 3 Alternative model(s) of management 3 Roles of Executive /Non -executive board members 3 Roles of different depts e.g. 3 Finance 3 Human resources 3 Risk management etc.	
Clinical Skills	3 Ability to interact appropriately with Trust structures to help in service delivery	
Technical Skills and Procedures	No content	

Topic	**Leadership**	*Areas in which simulation should be used to develop relevant skills*
Category	Management	
Sub-category:	None	
Objective	*To understand the current structure and function of the NHS* *To develop an understanding of leadership qualities required of a consultant* *To develop the ability to support colleagues and peers in the delivery of care*	Desirable
Knowledge	3 Differences between leadership and management 3 Different styles of leadership and their uses 3 Personal leadership styles 3 Roles of leaders in teams 3 NHS Leadership Qualities Framework	
Clinical Skills	3 Ability to identify own style of leadership 3 Ability to utilise appropriate style to management of managerial issues 3 Ability to lead a team of peers and colleagues in a project (research/audit/managerial)	Strongly recommended Leadership Management Desirable Team working
Technical Skills and Procedures	No content	

Topic	**Supporting training**	*Areas in which simulation should be used to develop relevant skills*
Category	Management	
Sub-category:	None	
Objective	*To develop the skills required to support training of peers and colleagues.*	
Knowledge	3 Principles of coaching, training and mentoring Principles and uses of assessment and appraisal 3 Differing styles of feedback and their appropriate use 3 Knowledge of career pathways 3 Indicators of 'poor performance' 3 Teaching styles and their uses (see section 1.6)	

Clinical Skills	3 Ability to train junior trainees 3 Ability to provide appropriate guidance to trainees through use of techniques of feedback, appraisal and assessment 3 Ability to support poor performers appropriately 3 Ability to give career advice 3 Ability to support colleagues through use of appraisal and revalidation mechanisms	
Technical Skills and Procedures	No content	

Topic	**Interview process**	*Areas in which simulation should be used to develop relevant skills*
Category	Management	
Sub-category:	None	
Objective	*To be able to participate appropriately in interview process.*	
Knowledge	3 Role of interview in selecting candidates for training 3 Use of different types of interview 3 Role of panel members 3 Legal requirements of panel members with respect to Employment and Equal Opportunities legislation	
Clinical Skills	3 Ability to ask appropriate questions depending on style of interview 3 Ability to provide feedback for both successful and unsuccessful candidates 3 Completion of paperwork for committee	
Technical Skills and Procedures	No content	

Appendix 3: Critical Conditions

To ensure that trainees have the necessary skills in the critical conditions below, by certification (the end of phase 3) there should be documented evidence in the portfolio of performance at the level of a day-one consultant by means of the CBD or CEX as appropriate (at level 4: *Appropriate for certification*. See CBD/CEX forms for the full list of levels).

Essential conditions Paediatric Surgery				
General Surgery	General Paediatric Surgery	INGUINAL HERNIA:		
		HYDROCELE:		
		UNDESCENDED TESTIS:		
		PENILE CONDITIONS:		
		ACUTE SCROTUM:		
	Abdominal wall pathologies	UMBILICAL HERNIA:		
		SUPRA-UMBILICAL HERNIA:		
		EPIGASTRIC HERNIA:		
	Head/neck	Skin lesions		
		Causes cervical lymphadenopathy		
		Thyroglossal cyst		
		Branchial cysts; Branchial remnants		
	Endocrine	Diabetes		
		Disease of thyroid gland		
		Disorders of Growth		
		Disorders of secondary sexual development (e.g. Gynaecomastia)		
		Parathyroid disease		
	Trauma	Head injury		
		Paediatric Abdominal and Pelvic Trauma		

		Principles of burn management in children:	Assessment, Resuscitation, early surgery (grafting), management of contractures	
	Emergency	Acute appendicitis, complications		
		Intussusception	Henoch-Schonlein Purpura (HSP)	
		Abscess (perianal; breast & misc)		
		Pilonidal abscess		
Neonatal surgery		Necrotising Enterocolitis (NEC)		
		Neonatal Abdominal Wall Defects (Gastroschisis and Exomphalos)		
		Hirschsprung's Disease		
		Oesophageal Atresia and Tracheo-oesophageal fistula		
		Malrotation, volvulus mid-gut		
		Ano-Rectal Malformation ; Cloaca		
		Congenital diaphragmatic hernia		
		Intestinal Atresias		
		Meconium Ileus		
		Small bowel duplications		
Gastro-intestinal surgery		Pyloric stenosis		
		Gastro-oesophageal reflux disease (GORD)		
		Oesophageal Stricture -	Reflux	TOF/OA
		Hiatus Hernia		
		Abdominal Pain		
		Constipation		

		Definitive Surgical management ARM, Hirschsprung's disease		
		GI Bleeding		
		Hepatobiliary abnormalities (e.g. Biliary atresia, Choledochal cysts)		
		Inflammatory Bowel Disease		
		Intestinal obstruction		
		Ingested Foreign Body -	Oesophagus	Stomach
		Intestinal Perforation		
		Oesophageal Stricture - Previous Oesophageal Atresia Repair		
		Cholelithiasis; choledochal abnormality e.g. Cysts)		
		Pancreatitis		
		Liver disease (e.g. hepatitis; cholangitis; Portal vein thrombosis; hepatic vein thrombosis; Portal Hypertension)		
		Splenic disease (hypersplenism; splenic cysts)		
		Meckel's Diverticulum		
		Volvulus - Localised		
		PR Bleeding		
		Fistula-in-ano; Peri-anal abscess		
		Short Bowel Syndrome		
		Leaking gastrostomy		
Urology		UTI (Cystitis; pyelonephritis; Pyonephrosis)		
		Haematuria		

		Hypospadias		
		Penile problems:	BXO causing phimosis	
			Metal Stenosis	
			Congenital Megaprepuce	
			Paraphimosis	
			Buried Penis	
			Balanoposthitis	
		PUJO		
		VUJO		
		PUV		
		Renal parenchymal abnormalities	MCDK; polycystic kidney disease; Glomerulonephritides	
		Urinary tract calculus		
		Bladder dysfunction (including neuropathic bladder)		
		Renal Failure		
		Bladder exstrophy/epispadias complex		
		Duplication of urinary tract	Complete Duplex	
			Incomplete duplex	
			PUJO LM duplex	
			VUR LM	
			Ectopic ureter	
			Ureterocele	
		Disorders of sex development		
		Acute scrotum	Torted Hydatid	
			Torsion testis	
			Idiopathic scrotal oedema	
			Epididymo-orchitius (HSP)	
		Ovarian cysts; tumours; torsion		

	Trauma	Urinary tract trauma	Renal	
			Ureter	
			Bladder	
			Urethra	
			External genitalia	
Thoracic		Chest wall anomalies	Pectus excavatum	
			Pectus carinatum	
		Congenital and acquired lung abnormalities including management of empyema	CCAM	
			Pulmonary sequestration	
			CLE	
			Foregut duplications	
		Inhaled /aspirated /ingested foreign body		
		Tracheal anomalies		
		Pneumothorax		
		Empyema		
	Trauma	Paediatric Thoracic Trauma		
Oncology	Wilms Tumour			
	Neuroblastoma			
	Hepatoblastoma			
	Sacro coccygeal teratoma			
	Soft tissue tumours			
	Haematological malignancies			
	Benign tumours			
	Adrenal gland	Congenital adrenal hyperplasia		
		Neuroblastoma		

		Phaeochromocytoma		
		Non-neoplastic conditions: Haemorrhage, cyst, abscess, TB		
		Benign: Ganglioneuroma		
		Malignant metastatic: Lymphoma		

Essential background Paediatric Knowledge: Recognise and manage appropriately the condition being treated and coexisting pathology	Basic science	Anatomy, physiology, embryology of the conditions being treated
	Pre, peri, post-op care	Including principles of anaesthesia and analgesia; post-op management (including fluid balance; analgesia; complications of surgery)
	Fetal Medicine	Understanding of fetal presentation (where relevant), and management
	Neonatal medicine	Including common conditions that coexist; ventilation; fluid balance; acid-base balance; thermoregulation; normal homeostasis; neonatal jaundice and management; feeding and GI function; common conditions such as respiratory distress syndrome (RDS); intra-ventricular haemorrhage (IVH); development of cerebral palsy; Chronic lung disease of prematurity
	Development	Neurological development; normal developmental milestones; common conditions that coexist in neonates (e.g. IVH; cerebral palsy)
	Respiratory function	Common conditions affecting this
	Gi Function	Assessment; monitoring; management
	Renal Function	Monitoring; assessment; treatment renal impairment (acute kidney injury (AKI); chronic renal impairment)
	Cardiovascular function	Monitoring, assessment; common abnormalities e.g. PDA, VSD, ASD Coarctation aorta, Tetralogy of Fallot etc.
	Endocrinology	Understanding normal physiology; recognition and management of common conditions e.g. hypoglycaemia; diabetes mellitus (and per-operative management) (DM); DI; Calcium/Phosphate homeostasis; puberty; thyroid function: assessment and management.
	Normal Growth	Recognition of failure to thrive; management
	Holistic care of the child	Holistic management of the child within the family unit; culture.
	Safe guarding	Safe-guarding: recognition; management

Appendix 4: Index Procedures

Index procedures are of significant importance for patient safety and demonstrate a safe breadth of practice. The following are the skillset for an emergency safe surgeon in Paediatric Surgery.

By certification (the end of phase 3) there should be documented evidence of performance at the level of a day-one consultant for the index procedures.

The levels shown in the table below refer to both:

the syllabus standards for technical skills (see appendix 2 for the full list of levels)

3. Can do whole but may need assistance
4. Competent to do without assistance, including complications

and

the PBA performance level (see PBA form for the full list of levels)

Level 2 a: Guidance required for most/all of the procedure (or part performed)
b: Guidance or intervention required for key steps only

Level 3 a: Procedure performed with minimal guidance or intervention (needed occasional help)
b: Procedure performed competently without guidance or intervention but lacked fluency

Level 4 a: Procedure performed fluently without guidance or intervention
b: As 4a and was able to anticipate, avoid and/or deal with common problems/complications

			Level	Experience	Performed, Performed under supervision, taught
General Surgery	General Paediatric Surgery (GPS)	Circumcision	4	85	70
		Inguinal herniotomy, Ligation PPV	4	150	75
		Orchidopexy	4	60	40
	Laparoscopy	Repair of epigastric hernia, repair of umbilical/supra-umbilical hernia	4	10	5
		Pyloromyotomy (open or laparoscopic)	4	20	10
		Appendicectomy (open or laparoscopic)	4	20	15
		Diagnostic laparoscopy for abdominal pathology, undescended testis	4	26	16
	Head and Neck	Thyroglossal Cysts/branchial remnant/fistula	3	8	5
		Central Venous access (open/percutaneous/portacath)	4	48	25
	Trauma	Trauma laparotomy; packing of abdomen simulated (cadaveric course)	4 or Simulated 4	1	1
		Trauma Thoracotomy; Clam-shell, simulated (cadaveric course)	3 or Simulated 4	1	1
Neonatal Surgery		Repair of oesophageal atresia/Tracheo-oesophageal Fistula	3	10	4
		Repair of diaphragmatic hernia/eventration	4	10	6
		Repair of abdominal wall defects (gastroschisis, exomphalos)	4	15	9
		Surgery to correct malrotation/duodenal atresia	4	10	6

		Surgery for small intestinal pathology (NNEC, creation and closure of ileostomy) intestinal atresia, meconium ileus,	4	20	14
		Neonatal colorectal surgery (NNEC, colonic atresia, colostomy)/anoplasty/Closure of stoma	4	20	14
		Repair of neonatal inguinal hernia	4	25	15
Urology		Exploration Acute Scrotum (Torted Hydatid; Torsion testis)	4	25	20
		Cystourethroscopy; SPC insertion; PUV resection	4	38	22
		Ureteric access STING/Stent; Nephrostomy (open/perc)	3	11	6
		Hypospadias repair	3	40	5
		Pyeloplasty (open or laparoscopic) or Nephrectomy (open or lap)	3	22	8
		Reconstructive urology: Bladder Augmentation, Mitrofanoff, ACE	3	13	4
		Surgery for impalpable UDT (open or laparoscopic)	4	10	7
		Peritoneal dialysis catheter insertion/removal	3	2	1
Gastro-intestinal		Upper GI endoscopy and biopsy; Insertion PEG/Gastrostomy	4	50	30
		Fundoplication etc	3	5	3
		Small bowel resection etc	4	10	6
		Small/large bowel stoma formation etc	4	10	6
		Laparotomy for adhesions; Intussusception etc	4	11	6
		PSARP etc	3	8	2
		Pull through for Hirschsprungs etc	3	6	2

Thoracic		Thoracic Surgery: Chest drain insertion; Pleural debridement Empyema; Lung biopsy/resection; Thoracotomy/VATS	4	10	5
Oncology		Tumour resection (Wilms, Resection Neuroblastoma; Saccrococcygeal teratoma)	3	14	2
		Tumour biopsy (open/laparoscopic/thoracoscopic)	4	8	4
		Lymphnode biopsy	4	7	5
Total				1990	1300

Experience means all cases trainee scrubbed for: In the elogbook this would include: Assisted (A), Supervised trainer scrubbed (STS) , Supervised trainer unscrubbed (STU), Performed in part by trainee (PPT), Performed (P), Taught (T), Performed with consultant colleague (PCC), Performed assisted by Trainee (PAT). It would not include observed cases. These numbers are indicative only, as trainees would not normally be expected to have achieved sufficient experience to be able to manage the range of pathology they encounter unless these numbers were met by the time of certification.

Performed these are cases the trainee was the main surgeon. In the elogbook this would include: Supervised trainer scrubbed (STS) , Supervised trainer unscrubbed (STU), Performed (P), Taught (T), Performed with consultant colleague (PCC) only. It excludes cases where the trainee only assisted, or assisted for part of the case. These numbers are indicative only, as trainees would not normally be expected to have achieved sufficient experience to be able to manage the range of pathology they encounter unless these numbers were met by the time of certification.

Over-all numbers		PBA Level 4 conditions	24
		3 x level	72

	Total	Performed
Experience neonatal surgery	110	68
PBA level 4		18

Total cases

Total assisted, performed, performed under assistance, taught	Lower Quartile	1990
Total performed, performed under assistance, taught	Lower Quartile	1300

Neonatal cases

Total assisted, performed, performed under assistance, taught	110
Total performed, performed under assistance, taught	68

The range of cases is very wide in paediatric surgery, but an over-all experience is important. The table at the top is for total experience (all cases) and the lower table specifically neonatal experience. The total numbers for neonates gives an idea of how extensive the experience has been for a trainee: if a trainee has managed to have 150 neonates in total and performed 110 then if there is one area where they do not quite meet the target, compensation will be possible. If they are short of an index PBA, but only have experience of 100 neonates in total and performed only 60, their global experience will be seen as inadequate.

Appendix 5: Courses and other learning opportunities away from the workplace

Learning outcomes relating to trauma which can be achieved by attendance at a formal trauma course, such as APLS or equivalent where the specialty treats children with traumatic injury, or a locally provided course meeting the outcomes described.

Trauma learning outcomes	**Rationale for learning by attendance at a course**	**Phase of training**	**GPC**	**CiP**	**Examples of ways to meet trauma learning outcomes**
Competency in the assessment, treatment and on-going management of the multiply injured child	Cannot be learned in the workplace to the level required for patient safety Allows a systematic process of teaching a safe and reliable method of immediate management of severely injured patients and comprises a range of comprehensive and adaptable trauma management skills relevant to all specialties Paediatric trauma is rare and technical skills can only be learned to a level required for patient safety through a paediatric cadaveric trauma course	Current throughout training	Domain 2: Professional skills Domain 3: Professional knowledge Domain 5: Capabilities in leadership and team working	2) Manages the unselected emergency take	APLS or locally provided course(s) meeting the outcomes described and paediatric cadaveric trauma course

Appendix 6: Roles and responsibilities for supervision

The role of the Training Programme Director (TPD)

TPDs are responsible for managing the specialty training programmes, ensuring they deliver the specialty curriculum.

TPDs are responsible for:

- Organising, managing and directing the training programmes, ensuring that the programmes meet curriculum requirements
- Identifying, appointing and supporting local faculty i.e. Assigned Educational Supervisors (AESs) and Clinical Supervisors (CSs), providing training as necessary, including training in equality and diversity and providing feedback to AESs and CSs on the quality of their performance
- Ensuring a policy for career management and advice covering the needs of trainees in their placements and programmes
- Overseeing progress of individual trainees through the levels of the curriculum, ensuring learning objectives are set, appropriate assessments are being undertaken and that appropriate levels of supervision and support are in place
- Helping the Postgraduate Dean and AES manage trainees who are running into difficulties by identifying remedial placements and resources where required
- Working with delegated Specialty Advisory Committee (SAC) representatives (SAC Liaison Members) and College representatives (e.g. college tutors) to ensure that programmes deliver the specialty curriculum
- Ensuring that Deanery/HEE Local Office administrative support are knowledgeable about curriculum delivery and are able to work with NHS Employers, SACs, trainees and trainers
- Providing induction for trainees entering specialty programmes
- Administering and chairing the Annual Review of Competence Progression (ARCP) meetings
- Monitoring the quality of the training programme and producing quality reports (including the quality of trainer assessments and feedback) for the Postgraduate Dean
- Ensuring access to trainee data is kept confidential.

The role of the Assigned Educational Supervisor (AES)

AESs are consultant surgeons responsible for the management and educational progress of one or more specified trainee(s) in a training placement or series of placements. AESs must be appropriately trained for the role, familiar with the curriculum and have demonstrated an interest and ability in teaching, training, assessing and appraising. They should have gained skills equivalent to courses such as Training the Trainer offered by an appropriate educational institution and must keep up-to-date with developments in training. They must have appropriate access to teaching resources and time for training allocated to their job plan (approx. 0.25 PA per trainee). They must have access to the support and advice of their senior colleagues regarding any issues related to teaching and training and to keep up-to-date with their own professional development.

AESs are responsible for:

- Providing induction to the unit (where appropriate)
- Ensuring that trainees are familiar with the curriculum and assessment system relevant to the level/phase of training and undertake it according to requirements

- Ensuring that trainees have appropriate day-to-day supervision appropriate to their phase of training
- Helping trainees with both professional and personal development
- Completing a learning agreement with trainees and undertaking appraisal meetings (typically one at the beginning, middle and end of a placement)
- Ensuring the MCR is completed by CSs, ensuring all the CiPs are addressed, any differences in supervision level are explained and final sign off of the MCR
- Ensuring a record is kept in the portfolio of any serious incidents or concerns and how they have been resolved
- Regularly inspecting trainee learning portfolios and ensuring trainees are making the necessary clinical and educational progress
- Informing trainees of their progress and encouraging trainees to discuss any deficiencies in the training programme, ensuring that records of such discussions are kept
- Ensuring access to trainee data is kept confidential
- Ensuring patient safety in relation to trainee performance by the early recognition and management of those doctors in distress or difficulty
- Keeping the TPD informed of any significant problems that may affect training
- Discussing trainees' progress with each trainer with whom trainees spend a period of training and involving them in the formal reporting process
- Providing an end of placement AES report for the ARCP.

The role of the Clinical Supervisor (CS)

CSs are consultant surgeons responsible for delivering teaching and training under the delegated authority of the AES. The training of CSs should be similar to that of the AES.

CSs are responsible for:

- Ensuring patient safety in relation to trainee performance
- Carrying out WBAs on trainees and providing verbal and written feedback
- Liaising closely with other colleagues, with whom the trainee is working, regarding the progress and performance of trainees
- Keeping the AES informed of any significant problems that may affect training
- Ensuring access to trainee data is kept confidential
- Contributing to the MCR as part of the faculty of CSs and providing constructive feedback to the trainee.

The roles of AES and CS come under the umbrella of the Professionalised Trainer outlined in section 3.2.2. The JSCT is supportive of the GMC's moves towards greater recognition and accreditation for clinicians undertaking the roles of AES and CS, and other responsibilities supporting education and training.

The role of the Assessor

Assessors carry out a range of WBAs and provide verbal and written feedback trainees. Assessments during training are usually be carried out by CSs, who will be responsible for the MCR, recommending the supervision level and providing detailed formative feedback to trainees with reference to the CiPs. Other members of the surgical team including senior trainees, senior nurses

and doctors from other medical disciplines may assess trainees in areas where they have particular expertise (e.g. with the use of the DOPS). Those who are not medically qualified may also act as assessors for the trainee's Multi-source Feedback (MSF). Assessors must be appropriately qualified in the relevant professional discipline and trained in the methodology of WBA. This does not apply to MSF raters.

Assessors are responsible for:

- Carrying out WBA, including the MCR, according to their area of expertise and training
- Providing constructive verbal feedback to trainees, including an action plan, immediately after the event
- Ensuring access to trainee data is kept confidential
- Providing written feedback and/or validating WBAs in a timely manner.

The role of the Trainee

Trainees are the learners who have been selected into a specialty training programme. Other surgeons who have registered to use the curriculum and learning portfolio as learners have the same responsibilities. All trainees/learners have a responsibility to recognise and work within the limits of their professional competence and to consult with colleagues as appropriate. Throughout the curriculum, great emphasis is laid on the development of good judgement and this includes the ability to judge when to seek assistance and advice. Trainees/learners must place the well-being and safety of patients above all other considerations. They are required to take responsibility for their own learning and to be proactive in initiating appointments to plan, undertake and receive feedback on learning opportunities.

Trainees/learners are responsible for:

- Engaging with opportunities for learning
- Creating a learning agreement and initiating meetings with the AES
- Raising concerns with the AES and/or TPD about any problems that might affect training
- Initiating regular WBAs with assessors in advance of observations
- Undertaking self and peer assessment
- Undertaking regular reflective practice
- Maintaining an up to date learning portfolio
- Working as part of the surgical and wider multi-professional team.

Appendix 7: Quality Management of the Curriculum

The Joint Committee on Surgical Training (JCST) works as an advisory body to the four surgical Royal Colleges of the UK and Ireland for all matters related to surgical training. It is the parent body of the Specialty Advisory Committees (SACs) and the Training Interface Groups (TIGs) and works closely with the Surgical Specialty Associations in Great Britain and Ireland. The JCST sets out a curriculum quality framework directed at evaluating and monitoring curriculum delivery against curriculum standards whereby a range of qualitative and quantitative measures inform continuous improvement. The JCST is also the umbrella organisation for the Intercollegiate Surgical Curriculum Programme (ISCP), the curriculum training management system. Through the variety of mechanisms outlined below, the JCST complies, and ensures compliance, with the requirements of equality and diversity legislation set out in the Equality Act 2010.

The quality system includes the following components:

- Quality assurance (QA): the development and maintenance of the curriculum links with the GMC's role in providing standards for training and for curricula.
- Quality management (QM): the implementation of training and curriculum standards by Deaneries/HEE Local Offices through training programmes and post locations approved by the GMC. The system includes processes for recruitment and selection and mechanisms to address concerns. SAC Liaison Members provide externality and support for local quality management.
- Quality control (QC): the implementation of training standards by local education providers (LEPs). The local delivery of curriculum is through the trainers recognised by the GMC.

Internal Quality Review

The following mechanisms provide sources of information that, together, provide complementary information which informs quality management and quality improvement.

Specialty Advisory Committees (SACs)

There is one SAC for each GMC recognised surgical specialty and a Core Surgical Training Advisory Committee (CSTAC) which oversees core surgical training. Each SAC will comprise appointed Liaison Members to cover all training regions in the UK, the Lead Dean for the specialty, a trainee representative, the Chair of the Intercollegiate Specialty Board (ex officio), the President of the Specialty Association or deputy, a representative of Royal College of Surgeons in Ireland and additional members may be co-opted for a time-limited period to provide specific expertise as necessary. The skill set and experience of SAC members will reflect the breadth of the specialty. The Liaison Members act on behalf of the SAC by overseeing training in a particular region(s) other than their own. Duties include contributing to the local quality management systems, the ARCP and to the regular reporting through first-hand independent knowledge of training programmes.

Curriculum development

The SACs, working with their Specialty Associations, are responsible for curriculum development and maintenance. They monitor innovations in clinical practice and, when these become established components of service delivery, they can be incorporated into an approximately three yearly review of the specialty curriculum. Similarly, the JCST, ISCP Management Committee, JCST Quality Assurance Group and the SACs monitor developments in training delivery and incorporate these into formal curriculum reviews. Curriculum updates are made in consultation with all stakeholders, including

trainees, trainers, speciality organisations, deans, employers, patient and lay representatives and the GMC including specific trials and pilots when required.

Equality and diversity implications are considered throughout the development of curricula in association with trainees and trainers through specific development events, which feed into impact assessments, noting any potential adverse effects on learners with protected characteristics as defined by the Equality Act 2010. Curricula are also developed through regular meetings with the GMC, helping to refine the curriculum approach and ensuring that the standards for curricula are met and identify future developments.

GMC Survey

The GMC undertakes a national training survey of trainee views on their training. The findings of the survey are available by country, postgraduate body, LEP, training level and graduating medical school. The GMC also conducts a survey of educational and clinical supervisors in the UK, which aims to collect evidence on whether trainers are able to undertake their duties as trainers effectively; have support for training including trainer development and the formal recognition of their duties in job plans; are implementing curricula and assessments appropriately.

The JCST analyses the GMC's published reports on these surveys, drawing out the key messages for surgery to feed into each SAC and QA Group meeting. SAC Liaison Members are responsible for consulting on the outcomes of these discussions with those responsible for curriculum delivery in their regions including TPDs and Specialty Training Committees (STCs). They also report key learning points through their Liaison Member Reports. The JCST uses the initial analysis and feedback from these processes to help address ad hoc queries and inform projects, pilots, monitoring and evaluation work. The outcomes of these processes are to report the specialty and national view of postgraduate surgical training through a continuous model of reporting to the GMC at regional and national level.

The GMC also provides a progression data portal, which colleges and faculties can use to consider data on the progression of trainees by specialties and regions. The JCST uses these data to help identify system or policy changes that might need review in order to ensure equality, diversity and fairness. See also below – External Quality Review (the GMC and postgraduate bodies use the GMC survey findings in external quality review).

Quality Indicators

The JCST Quality Indicators are the JCST and SACs' guidance on the attributes of good quality training posts. They are not an assessment for measuring the achievements of individual trainee. They are a tool to monitor the quality of training posts and drive quality improvement.

JCST Survey

The JCST trainee survey measures training post compliance with the JCST Quality Indicators across all UK training programmes. The anonymised survey responses are pivotal to the JCST's quality processes. Trainees complete one survey for each training placement prior to their ARCP. As part of its five-year strategy, the JCST shares this information in the form of annual reports. The JCST also conducts a biennial survey of surgical Assigned Educational Supervisors to gather information on issues particularly relevant to surgical trainers, such as use of the web-based ISCP, time and support available to undertake training and other related activities. Analysis of the findings from these

surveys are key to the work of the SACs and QA Group. This informs their meetings and the consultations SAC Liaison Members have with those responsible for curriculum delivery within their regions including TPDs and STCs. The learning points drawn from the analysis and feedback inform all JCST work including projects, pilots and evaluation and help report the specialty and national view of postgraduate surgical training.

JCST and ISCP data

Training data collected through the JCST and ISCP are used to review quality. These include curriculum delivery, adherence to quality indicators and equality and diversity issues. The ISCP is used to monitor curriculum delivery, trainee progression and WBA performance. The ISCP Management Committee undertakes and supports qualitative and quantitative research and recruits external Research Fellows to conduct specific studies to support curriculum and assessment change.

Trainee views

Representatives of trainee associations are members of the JCST committees and have specific sections of meetings to report on training issues and raise concerns. Trainee representatives are involved in working groups, curriculum review and the development of the ISCP training management system, including, where necessary, cascading training, testing and piloting.

External Quality Review

Postgraduate Deans

The responsibility for the quality management of specialty training programmes rests with the Deans. They ensure posts and programmes are approved by the GMC, oversee the appointment of trainees and of TPDs. They ensure that training in the regions is implemented in accordance with GMC-approved curricula. Deans work through STCs and Boards, seeking advice from the JCST, the surgical Royal Colleges and SACs on curriculum delivery, the local content of programmes, assessment of trainees, remedial training and the recognition and training of trainers. The Deans contract LEPs through Service Level Agreements to deliver training to agreed standards. Working alongside Postgraduate Deans, education providers must take responsibility for ensuring that clinical governance and health and safety standards are met. This includes the provision of a system of training including in equality and diversity, a process of revalidation and annual appraisals of trainers by employers set against the professional standards for Good Medical Practice.

Schools of Surgery

The co-ordination of surgical training is through Schools and their devolved nation equivalents, which are accountable to the Deaneries/HEE Local Offices. They bring together networks of lead providers of postgraduate medical education in a particular specialty or group of specialties to decide how educational initiatives are best delivered and ensure consistency of approach. Each School is led by the Head of School who acts as a workforce adviser to the education commissioners, leads on quality management of surgery, supports and develops lead providers, provides regional representation in national fora and an interface with other disciplines. The Head of School or their devolved nation equivalent also oversees the quality of training posts provided locally. The national Heads of School and their devolved nation equivalents meet through their Confederation of Postgraduate Schools of Surgery (CoPSS), which is also attended by the Chair of the JCST and ISCP Surgical Director.

Training Programme Directors

Training programmes are led by TPDs or their designated equivalent. TPDs have responsibility for managing individual specialty training programmes. Their responsibilities include allocating trainees to training placements and rotations, providing systems for career management, flexible training, academic training and remedial training as well as organising the recognition and training of trainers and co-ordinating the ARCP. TPDs, working alongside Heads of School, are also introducing a standardised form for the evaluation of AES reports in order to offer feedback to AESs about the quality of their feedback to trainees, along with mechanisms for development.

Statutory Education Bodies

Co-ordination and alignment of policy on medical education is devolved from health ministers to bodies governing the health services in the four nations of the UK (Health Education England (HEE), NHS Education for Scotland (NES), the Northern Ireland Medical and Dental Training Agency (NIMDTA) and Health Education and Improvement Wales (HEIW)) and Ireland (the Health Service Executive (HSE)). These organisations are responsible for healthcare, education, training and workforce development. They take advice from the JCST and the surgical Royal Colleges in order to ensure consistent regional delivery. These organisations can undertake visits to LEPs and visits can be triggered by specific concerns. They highlight any areas for improvement, agree the timetable for any appropriate action and identify areas of notable practice. SAC Liaison Members may be involved in the visits to provide both specialty-specific input and externality.

UK Medical Education Reference Group (UKMERG)

The UKMERG is a forum for discussion, co-ordination and alignment of matters relating to medical education across the UK. It includes representation from the four UK health departments and the four statutory postgraduate medical education bodies.

General Medical Council

The GMC is responsible for setting the standards for curricula and approving curricula as well as approval of training programmes and training post locations. The Deanery/HEE Local Office submits an application for programme and post location approval. Support for an application is available from the relevant surgical SAC. There is regular reporting to the GMC as part of their quality framework. The GMC activities may include document requests, meetings, shadowing, observations, visits and document reviews. The GMC uses the GMC survey results in quality assurance by monitoring that training meets the required standards. It will escalate issues through other QA activity such as an enhanced monitoring process. Triggered visits investigate possible serious educational failures or risks to patient safety as part of the GMC's enhanced monitoring process. The GMC’s QA process includes the ability to impose a sanction in response to a failure to meet its standards including imposing conditions which limit the time or scope of approval, refusing approval, and withdrawing recognition for training.

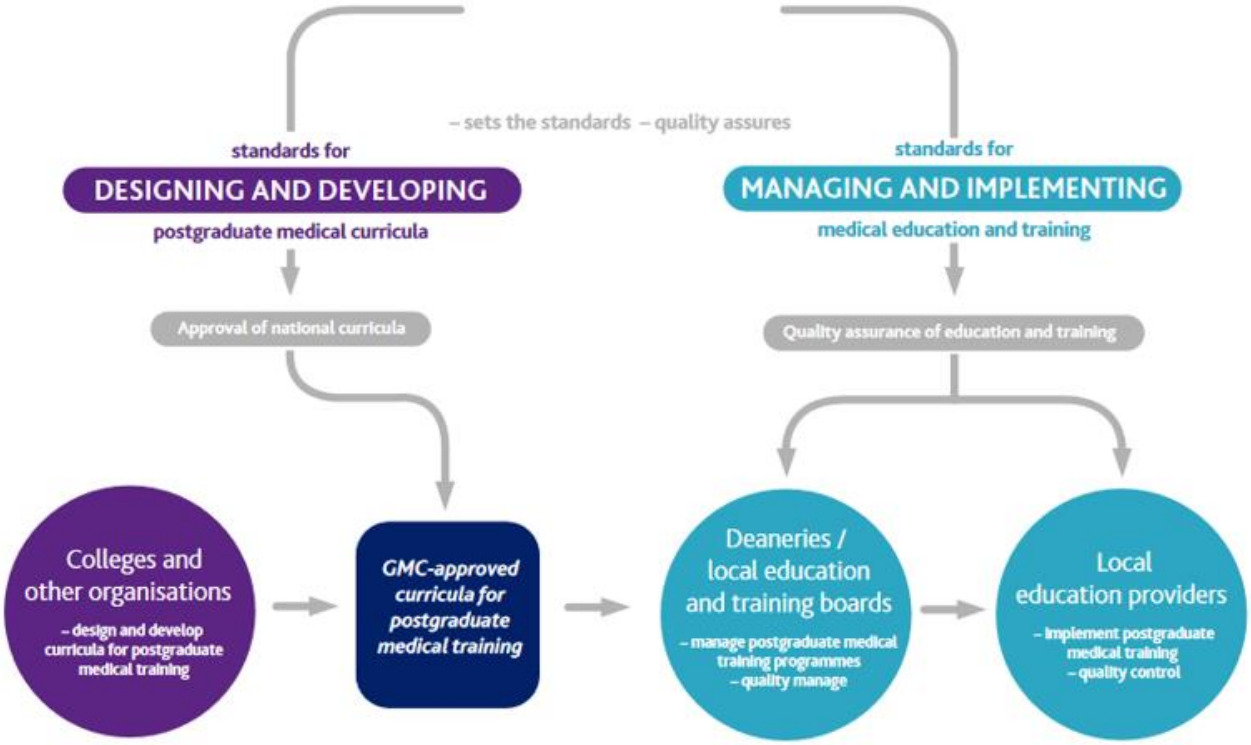

Figure 8: The quality assurance structure of the curriculum (adapted from Excellence by Design, GMC, 2017)

Appendix 8: Glossary

Term	Definition
AES Report	An end of placement report by the trainee's Assigned Educational Supervisor, providing key evidence for the trainee's ARCP.
ARCP / ARCP 6	The Annual Review of Competence Progression (ARCP) panel will recommend one of 8 outcomes to trainees. Outcome 6 sets out that a trainee has gained all required competencies and will be recommended as having completed the training programme. (For further information, please see the Gold Guide[7]).
Capability	The ability to be able to perform an activity in a competent way.
Capabilities in Practice (CiP)	The high-level learning outcomes of the curriculum. Learning outcomes operationalise groups of competencies by describing them in terms of holistic professional activities. In surgery they are aligned to what a day-one consultant will need to be able to know and do. Rather than learning 'inputs' ('what is learned', they set out what the learner must be able to do as a result of the learning at the end of the training programme – a practical skill) and clarify the extent to which trainees should successfully perform to reach certification.
Critical Condition	Any condition where a misdiagnosis can be associated with devastating consequences for life or limb.
Critical Progression Points	Key points during the curriculum where trainees will transition to a higher level of responsibility or enter a new area of practice. These points are frequently associated with increased risk, and so robust assessment is required. These points are at the end of phase 2 (transition to phase 3), and the end of phase 3 to achieve certification.
Core Surgical Training	The early years of surgical training for all ten surgical specialties.
Generic	Applicable to *all* trainees regardless of specialty, discipline and level of training, e.g. Generic Professional Capabilities.
Generic Professional Capabilities (GPCs)	A framework of educational outcomes that underpin medical professional practice for all doctors in the United Kingdom.
Good Medical Practice (GMP)	The core ethical guidance that the General Medical Council (GMC) provides for doctors.
High-Level Outcome	See Capability in Practice.
Index Procedure	Operative procedures that refer to some of the more commonly performed clinical interventions and operations in the specialty. They represent evidence of technical competence across the whole range of specialty procedures in supervised settings, ensuring that the required elements of specialty practice are acquired and adequately assessed. Direct Observations of Procedural Skills (DOPS) and Procedure-based Assessments (PBAs) assess trainees carrying out index procedures (whole procedures or specific sections) to evidence learning.

Manage	Throughout the curriculum the term 'manage' indicates competence in clinical assessment, diagnosis, investigation and treatment (both operative and non-operative), recognising when referral to more specialised or experienced surgeons is required for definitive treatment.
Multiple Consultant Report (MCR)	An assessment by Clinical Supervisors that assesses trainees on the high-level outcomes of the curriculum. The MCR provides a supervision level for each of the five Capabilities in Practice (CiPs) as well as giving outcomes for the nine domains of the Generic Professional Capabilities. The assessment will be at the mid-point and end of a placement. The MCR is a formative assessment, providing trainees with formative feedback. However, the final MCR also contributes to the summative AES report.
Phase	An indicative period of training encompassing a number of indicative training levels. Phases are divided by critical progression points to ensure safe transitioning where patient or training risk may increase. Phases have replaced 'stages' of training in previous versions of the curriculum.
Placement	A surgical unit in which trainees work in order to gain experiential training and assessment under named supervisors.
Run-through training	The route which allows trainees, after a single competitive selection process at ST1 and satisfactory progress, to progress through to specialty training at ST3 onwards (unlike uncoupled training).
Specialty Advisory Committee (SAC)	The committee which oversees training in a particular specialty, reporting to the JCST. SAC responsibilities include trainee enrolment and support, certification, out of programme and LTFT training, curriculum development, logbook development, simulation training, quality assurance (including processes for externality via the provision of regional liaison members), national recruitment also credentialing (if appropriate).
Shared	Applicable to all specialties i.e. the five shared CiPs are identical to all ten surgical specialties. In some specialties some additional CiPs may be specialty-specific.
Special Interest	Advanced areas of training in the specialty.
Supervision level	The level of supervision required by a trainee to undertake an activity, task or group of tasks, ranging from the ability to observe only through direct and indirect supervision to the ability to perform unsupervised.
Trainees	Doctors in training programmes.
Training programme	A rotation of placements in which training is provided under a Training Programme Director and named supervisors.
Uncoupled programme	The route where core surgical training (CT1 and CT2) and specialty training (ST3 onwards) are separated by a national recruitment process (unlike run-through training).

Appendix 9: Assessment Blueprint

All aspects of the curriculum are assessed using one or more of the described components of the assessment system. Some curriculum content can be assessed in more than one component but the emphasis will differ between assessments so that testing is not excessive in any one area. The key assessment is the MCR through which trainees are assessed on the high-level outcomes of the curriculum; the CiPs and GPCs.

High-level outcomes	Assessment Framework										
		CiP/GPC self-assessment	MCR	MSF	CEX	CBD	PBA	DOPS	AoA	OoT	ISB Exam Section 1	ISB Exam Section 2
	Capabilities in Practice											
	1. Manages an out-patient clinic	*	*	*	*	*						*
	2. Manages the unselected emergency take	*	*	*	*	*	*	*				*
	3. Manages ward rounds and the on-going care of in-patients	*	*	*	*	*						*
	4. Managing an operating list	*	*	*			*	*				
	5. Managing multi-disciplinary working	*	*	*		*						
	6. Assesses and manages an infant or child in a NICU/PICU environment.	*	*	*	*	*	*	*				*

High-level outcomes	Generic Professional Capabilities											
		CiP/GPC self-assessment	MCR	MSF	CEX	CBD	PBA	DOPS	AoA	OoT	ISB Exam Section 1	ISB Exam Section 2
	Domain 1: Professional values and behaviours	*	*	*	*	*	*	*	*	*		*
	Domain 2: Professional skills	*	*	*	*	*	*	*		*		*
	Domain 3: Professional knowledge	*	*	*	*	*	*	*	*	*	*	*
	Domain 4: Capabilities in health promotion and illness prevention	*	*		*	*					*	
	Domain 5: Capabilities in leadership and team working	*	*	*		*	*	*	*	*	*	
	Domain 6: Capabilities in patient safety and quality improvement	*	*			*			*		*	
	Domain 7: Capabilities in safeguarding vulnerable groups	*	*		*	*	*	*			*	
	Domain 8: Capabilities in education and training	*	*							*		
	Domain 9: Capabilities in research and scholarship	*	*									

Syllabus			CiP/GPC self-assessment	MCR	MSF	CEX	CBD	PBA	DOPS	AoA	OoT	ISB Exam Section 1	ISB Exam Section 2
	Knowledge		*	*	*	*	*	*	*	*	*	*	*
	Clinical skills	Clinical skills (general)	*	*	*	*	*						*
		Critical conditions (mandated CEX/CBD)	*	*	*	*	*						*
	Technical skills	Technical skills (general)	*	*				*	*				
		Index procedures (mandated PBA/DOPS)	*	*				*	*				