ISCP INTERCOLLEGIATE
SURGICAL
CURRICULUM
PROGRAMME

General Surgery Curriculum

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THE INTERCOLLEGIATE
SURGICAL CURRICULUM PROGRAMME

Educating the surgeons of the future

Acknowledgements

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

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1 Introduction

The General Surgery curriculum provides the approved United Kingdom (UK) framework for the training of doctors to the level of independent consultant practice in General Surgery, addressing the requirements of patients, the population and the strategic health services. The curriculum will also be followed for training in General Surgery 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 of Ireland (RCSI) and the Medical Council of Ireland.

2 Purpose

2.1 Purpose of the curriculum

The purpose of the General Surgery curriculum is to produce, at certification, consultant-level general surgeons able to manage patients presenting with the full range of emergency general surgery conditions and elective conditions in the generality of General Surgery. Trainees will also be expected to develop a special interest within General Surgery in keeping with service requirements. They will be entrusted to undertake the role of the General Surgery Specialty Registrar (StR) during training and will be qualified to apply for consultant posts in General Surgery in the UK after successful completion of training.

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, we expect trainees to be able to work safely and competently in the defined areas 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

In the past ten years there has been increased emphasis on emergency general surgery care, the development of an oncoplastic philosophy of care in breast surgery, the establishment of major trauma centres, increased specialisation in the management of upper gastrointestinal conditions and rationalisation of transplant services. Nevertheless, Employers have identified a need to train some individuals in a broader range of skills. General Surgery of Childhood (GSoC) is recognised as an area requiring training and expansion to allow children to be treated in hospitals close to home. In addition to service changes, there has been scrutiny of individual surgeon outcome data and associated increased patient expectations. These workforce and service demands together with patient expectations have been some of the drivers for change to the General Surgery curriculum.

The *Shape of Training* (SoT) review[1] and *Excellence by design: standards for postgraduate curricula*[2] provided opportunities to reform postgraduate training. The General Surgery 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 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 General Surgery. Trainees who choose to move from a different speciality training programme having previously gained skills transferable to General Surgery, therefore, 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 General Surgery, some limited areas of the syllabus may be transferable e.g. critical care skills. 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

General Surgery training is divided into two phases and will take an indicative time of six years (four years in phase 2 and two years in phase 3).

Uncoupled trainees will enter phase 2 after completion of core surgical training (phase 1) and successfully gaining a National Training Number (NTN) through the national selection process.

There will be options for those trainees who demonstrate exceptionally rapid development and acquisition of capabilities to complete training more rapidly than the indicative time. There may also be a small number of trainees who develop more slowly and will 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 choose less than full time training (LTFT) will have the indicative training time extended pro-rata in accordance with the Gold Guide. LTFT trainees will perform both elective and out of hours duties pro rata throughout the time of LTFT.

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[1] Shape of training: Securing the future of excellent patient care
[2] Excellence by design: standards for postgraduate curricula
[3] Generic professional capabilities framework
[4] Good Medical Practice
[5] Gold Guide 8th edition

Phase 2

This will take an indicative time of four years to complete, during which trainees will acquire knowledge and skills in elective general and gastrointestinal surgery together with emergency general surgery. These skills are central to the practice of General Surgery and a foundation to any of the later chosen special interests. In addition, in consultation with the Training Programme Director (TPD), trainees will spend up to one of the indicative four years of phase 2 gaining early exposure to one or more special interest areas in General Surgery through an option module, as shown in figures 1 and 2, which can be developed further in phase 3.

In addition to special interest areas, an option module will be available in Rural and Remote Surgery. This will allow trainees to gain exposure in areas which may be pursued further with some post-certification training. Such training will develop competencies in the interdisciplinary Rural and Remote Surgery, where General Surgery contributes only 30% of the scope of the role. Another option module will be available in GSoC which trainees may pursue further either as an integral part of the gastrointestinal module or alongside other modules in phase 3. This will enable them to deliver general paediatric surgery as consultants in District General Hospitals (DGHs), participating in treatment networks. At the end of phase 2 there is a critical progression point where trainees will demonstrate competencies in knowledge, clinical skills and professional behaviours and become eligible to sit the Intercollegiate Specialty Board (ISB) examination in General Surgery.

Phase 3

This will take an indicative time of two years to complete. Trainees will further develop their knowledge, clinical and technical skills in elective general surgery. In addition, to meet current service demands, trainees will complete two special interest modules (figure 1). Emergency general surgery is considered to be one of the special interest modules in phase 3. The majority of trainees will follow this module together with one other module allowing the development of technical skills in emergency aspects of the specialty and development of a second special interest area as defined by the syllabus.

The trainee will complete permitted combinations of modules from the training pathway shown in figure 1. In addition to the main modules shown, trainees will be able to complete training in GSoC or a component of another module, for example parathyroid surgery, to complement renal transplantation. This flexibility and the combination of modules allow development of a surgeon with the skills appropriate and relevant to the needs of patients and the modern service. Options allow for differences in scope of practice between nations and for special interests to be appropriate for smaller and larger hospitals. The knowledge, clinical and technical skills required for each module are defined in the syllabus. At the end of Phase 3 trainees will be eligible for certification and for recommendation to enter the specialist register.

Selection of option and special interest modules

The selection of option and special interest modules will be determined in discussion between the trainee and TPD and will be based on trainee aptitude, service and workforce requirements. It is anticipated that this might be informed by an exploration of workforce requirements with statutory education authorities across the four nations via the Lead Dean for General Surgery.

At the end of training: ***All trainees*** will have completed modules in elective general surgery, emergency general surgery (EGS), upper and lower gastrointestinal surgery and at least one additional option module in phase 2.

By completion of training, **all surgeons** with certification in General Surgery will have:

- acquired the knowledge, clinical and technical skills in **elective general surgery** as defined by the syllabus
- acquired the knowledge and clinical skills to independently manage an **unselected emergency general surgical take**
- completed **two special interest modules** at phase 3 and will have acquired the knowledge, clinical and technical skills as defined by the syllabus relevant to these special interests.
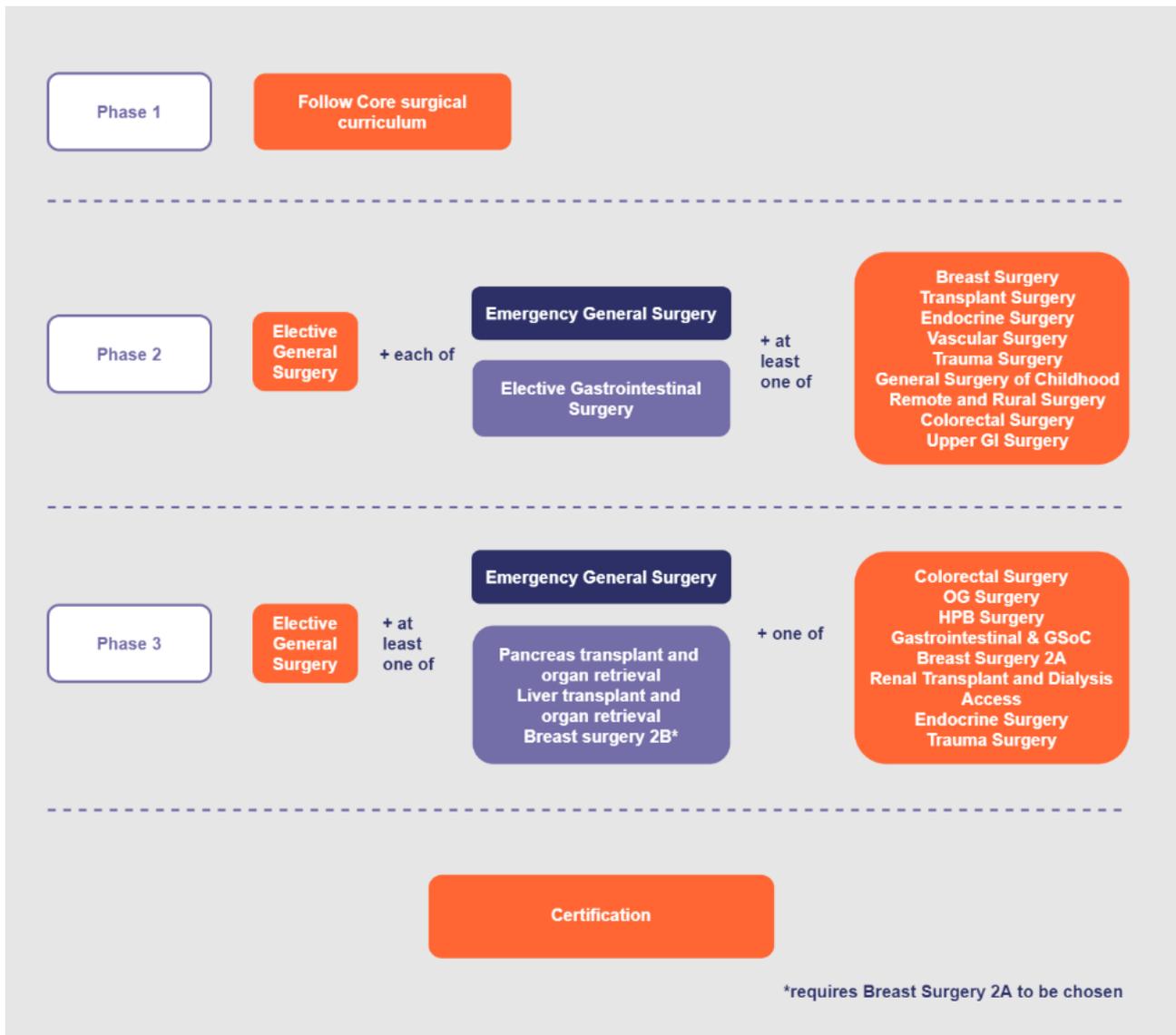
Figure 1: Overview of the training pathway in General Surgery. Trainees can enter General Surgery training at Phase 1, following the curriculum for core surgical training and running through without further selection into Phase 2 of the General Surgery curriculum, or trainees can enter at phase 2, having successfully completed the curriculum for core surgical training and been successful at a national selection process into General Surgery training. Core surgical training is uncoupled from specialty training for the majority of trainees. The availability of posts is at the discretion of the statutory postgraduate medical education bodies.

Output from the curriculum

The modular structure of the curriculum will permit flexibility to respond to changing service demands. Underpinning this is a commonality of training in phase 2 and elective general surgery for all trainees in phase 3. On completion of training all trainees will have elective general surgical competencies and EGS knowledge and clinical skills. In addition, the curriculum will offer development of the following skill sets within General Surgery, summarised in figure 2.

Emergency General Surgery and Colorectal
Emergency General Surgery and Oesophagogastric (OG)
Emergency General Surgery and Hepatopancreaticobiliary (HPB)
Emergency General Surgery and Breast Surgery
Emergency General Surgery and Gastrointestinal (GI) with General Surgery of Childhood (GSoC)
Emergency General Surgery and Endocrine Surgery
Emergency General Surgery and Renal Transplant with Dialysis Access
Emergency General Surgery and Trauma Surgery
Breast Surgery with Oncoplastic Reconstruction
Multiorgan Transplantation and Retrieval
Hepatopancreaticobiliary and liver / pancreas transplant

Trainees following any of the first eight of these module combinations will have completed the EGS module during phase 3. As such, approximately 80-85% will undertake a phase 3 module in EGS. These trainees will be able to perform common emergency general surgical operations fluently without guidance or intervention and be able to anticipate, avoid and/or deal with common problems/complications by completion of training.

Those trainees following the three special interest module combinations that do not include EGS in phase 3 will have acquired some technical skills in EGS during phase 2 but all will be able to manage the unselected take up to the point of operation and all will be able to manage post-operative care.
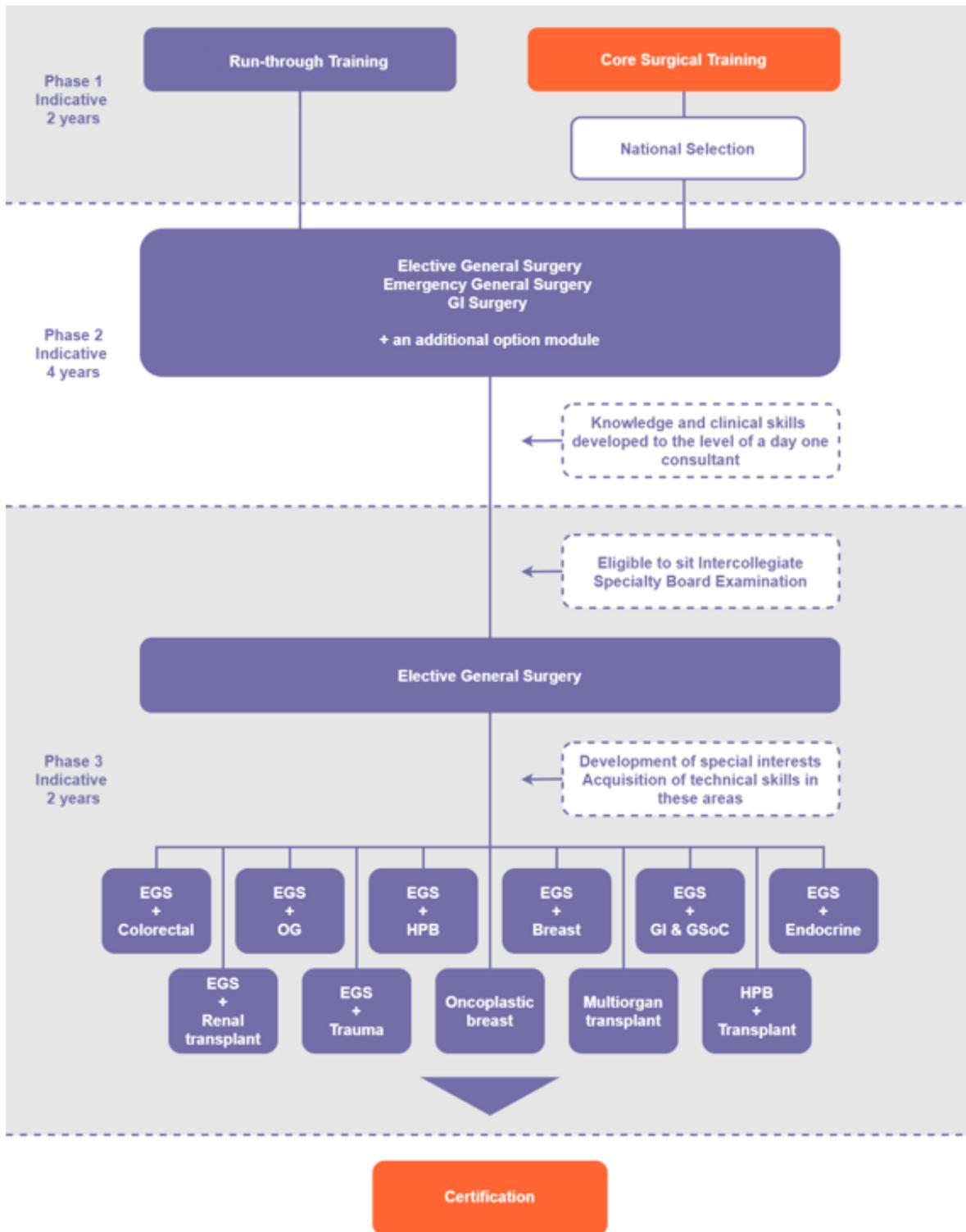
Figure 2: Outputs of the General Surgery curriculum, demonstrating commonality in phase 2 and that elective and emergency general surgery are at the core of the curriculum.

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 General Surgery curriculum

The practice of General Surgery requires the generic and specialty knowledge, clinical and technical skills and behaviours to manage patients presenting with a wide range of emergency general surgery conditions and elective conditions in the generality of General Surgery. It involves the 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 General 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

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 general 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 on 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 five CiPs can be found in appendix 1.
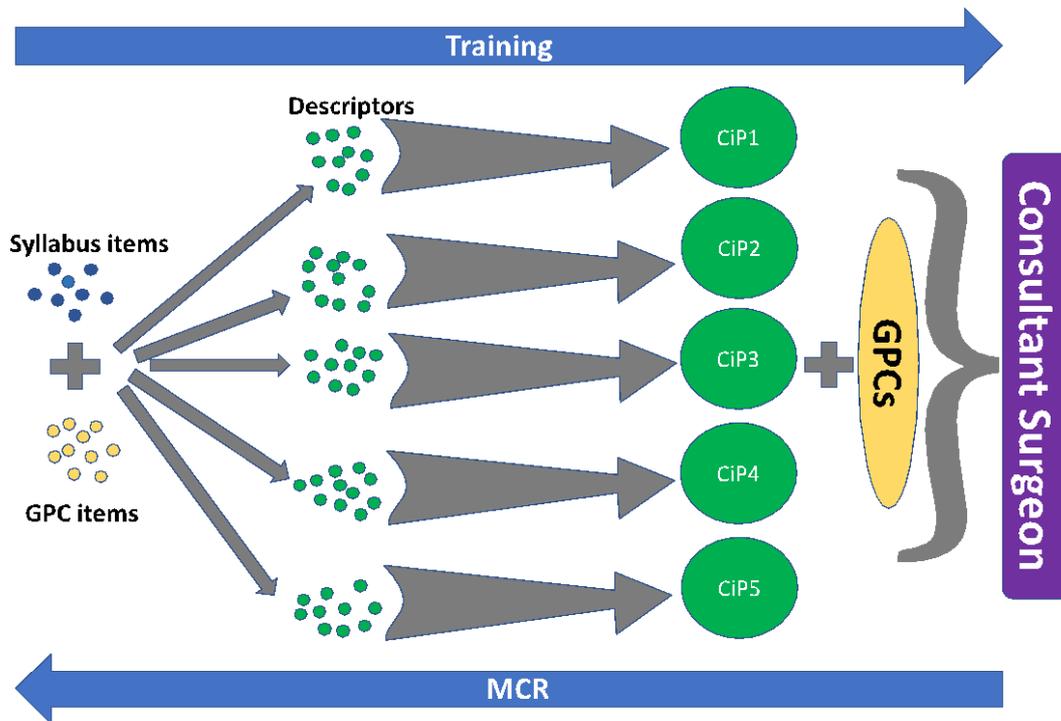
Figure 3 - The interrelationship of the GPCs, the syllabus, the CiPs and their descriptors to the role of a consultant surgeon. Items from the syllabus are combined with items taken from the GPC framework to form the small tasks which are the CiP descriptors. When the small tasks of the descriptors are 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 five CiPs taken together describe the role of a consultant general 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

At the end of phase 2 there is a critical progression point for phase 3 entry, assessed at the ARCP, where trainees will demonstrate competencies in knowledge, clinical skills and professional behaviours commensurate with the CiPs and defined syllabus. To move from phase 2 to phase 3 trainees must demonstrate knowledge, clinical skills and professional behaviours commensurate with certification and, therefore, become eligible to sit the ISB examination in General Surgery. Table 1 shows the supervision levels required by the end of each phase. A trainee becomes eligible for certification when supervision level IV has been reached in all the 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)	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 IIb	Level IV
5. Manages multi-disciplinary working	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 in General Surgery

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 in General Surgery 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 a general surgeon that they are highlighted as critical conditions and index procedures.

3.5.1 The syllabus

The syllabus, shown in appendix 2, provides a description of the high-level specialty-specific topics for which knowledge and clinical skills are required and details of the technical skills required for each phase of training and for certification in General Surgery. The syllabus is organised into modules with topics covering the presenting conditions of patients in relation to the specialty. All trainees will be expected to complete modules in elective and emergency general surgery and upper and lower gastrointestinal surgery. These provide the bedrock for managing general surgery patients both before and after surgery. In addition, trainees will complete modules in special interest areas to meet service demand in all parts of the UK.

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 ARCP. A list of critical conditions for General Surgery 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 is given in appendix 4. These include indicative numbers of index cases necessary at the phase 2 and 3 critical progression points 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 were decided following wide consultation with clinicians and trainers in the specialty.

To support the demonstration of a sufficient breadth of experience and achievement of competence in the generality of General Surgery and special interest areas, 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.

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.

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

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 five 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 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 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

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[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/

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 General Surgery syllabus and may include a mixture of formal talks including attendance at national conferences relevant to the specialty, small group discussion, case review and morbidity and mortality meetings, literature review and skills teaching. Some knowledge and capabilities are best gained in the formal setting of a taught course. A list of mandated courses for trainees and their learning outcomes is given the certification requirements and in 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 five 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 of CiPs 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
- *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

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[8] [GMC recognition and approval of trainers](#)

- *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 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[5]. 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 4 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 4), 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 4: 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 ISB examination and WBAs. 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 WBAs, 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, practice 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 is described below.

5.3.1 The sequence of assessment

Training and assessment take places within placements of six to twelve months' duration throughout each phase of training (figure 5). 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 at the higher end of the programme after satisfactory completion of phase 2. The trainee's CS must assess the trainee on the 5 CiPs and 9 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 which 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.

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[9] https://www.iscp.ac.uk/courses/culturalawarenesscourse.aspx
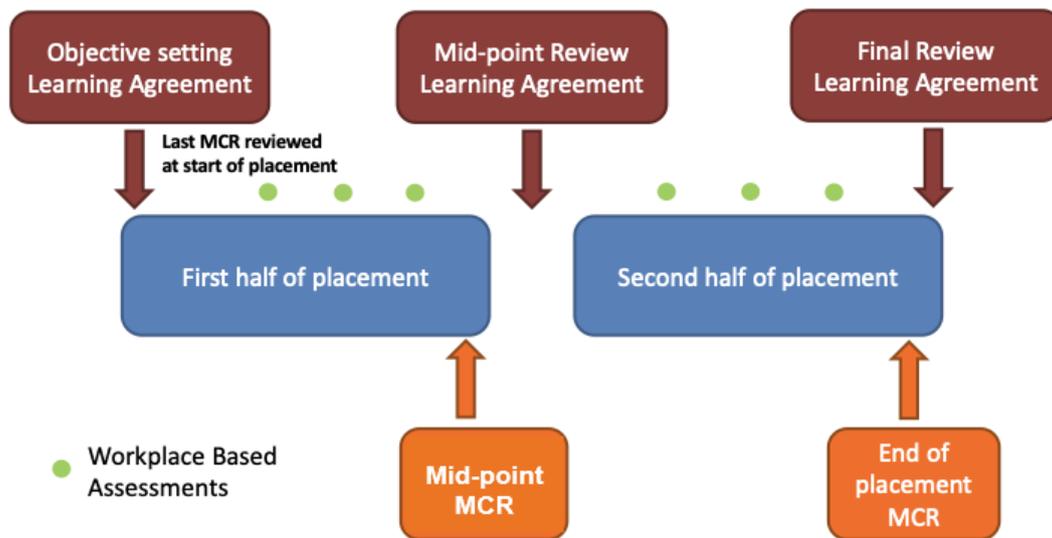
Figure 5: The sequence of assessment through a placement.

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 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 summative 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 the 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

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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 five 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 6 and 7 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 five CiP areas 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 5). 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 will need 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 expected of a day-one consultant.	yes	None [a]	None [a]	yes

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 6 and 7. Figure 8 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

6. Capabilities in patient safety and quality improvement

Appropriate for phase	Your comments, including your development plan for certification...	Descriptors
Area for development		

7. Capabilities in safeguarding vulnerable groups

Appropriate for phase	Your comments...	Descriptors
Area for development		

8. Capabilities in education and training

Appropriate for phase	Your comments, including your development plan for certification...	Descriptors
Area for development		

9. Capabilities in research and scholarship

Appropriate for phase	Your comments, including your development plan for certification...	Descriptors
Area for development		

Figure 6: 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.

Figure 7 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 of CiPs 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 of supervision level and the recommendation by CSs in the MCR allows identification of over or under confidence and for support to given accordingly.
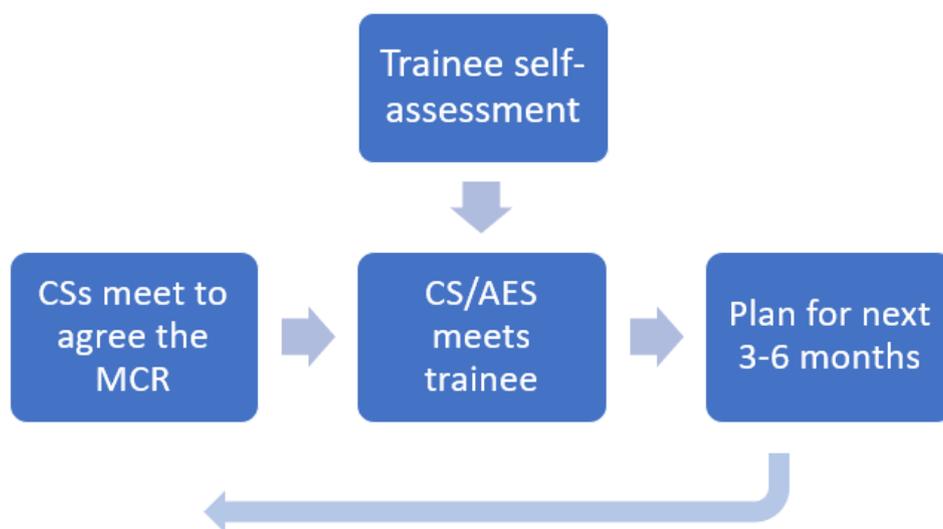
Figure 8: The iterative process of the MCR, showing the involvement of CSs, self-assessment by trainees, face to face meetings between trainees and supervisors and the development of an action plan focused on identified learning needs over the next three to six months of training. Progress against these action plans is reviewed by 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 Annual Review of Competence Progression (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 for 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 in the critical conditions and index procedures or if an area of concern is identified. The programme of assessment provides a variety of tools for feedback to and assess of 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 indicative numbers of 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*:

Endoscopy

Trainees who develop endoscopy skills will record their experience through the Joint Advisory Group (JAG) Endoscopy Training System (JETS)[10]. This is a system common across all medical and surgical specialties. Trainees are required to keep a log of all endoscopic procedures they have undertaken including the level of supervision required on each occasion. The JETS logbook demonstrates breadth of experience in endoscopy and trainees will perform DOPs within this framework which will be available for review and will feed in to the ARCP process.

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 In General Surgery 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 having the knowledge, clinical and professional skills 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:

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[10] www.jets.nhs.uk

- 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 less than full time (LTFT) trainees. Trainees in General Surgery 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 to be able to move to the next level or phase of training or to achieve certification.

5.4 Completion of training in General 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 in General Surgery 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 General Surgery

Additional courses / qualifications - evidence of having attended specific courses/gained specific qualifications as defined in the curriculum	The Advanced Trauma Life Support® (ATLS®), European Trauma Course, Definitive Surgical Trauma Skills course or equivalent locally provided course(s) meeting the outcomes described.
Educational conferences - evidence of having attended appropriate educational conferences and meetings as defined in the curriculum	It is recommended that trainees attend national or international meetings during training (e.g. annual meetings of specialty associations or major international equivalents).
Clinical experience - sufficient clinical experience in the different components of general surgery as defined in the curriculum	Completion of elective and EGS modules and upper and lower gastrointestinal modules in phase 2 together with completion of a further option module at that stage. Completion of the elective general surgery module and two special interest modules at phase 3 as defined by the syllabus.
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 in all the critical conditions shown in appendix 3. In addition, trainees should complete an indicative number of 10 CBDs or CEXs in their special interest area showing satisfactory performance by certification.
Operative experience - consolidated logbook evidence of the breadth of operative experience as defined in the curriculum	A list of index procedures is given in appendix 4. These include indicative numbers of index 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.
Operative competence - evidence of competence in indicative operative procedures	By certification there should be documented evidence of performance in the index procedures at the level of a day-one consultant by means of an indicative three or more PBAs in each index procedure to the level shown in appendix 4.

Table 3: Requirements for completion of training in General Surgery: a) generic requirements shared between all surgical specialties and b) requirements specific to General Surgery. 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: 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

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:

- Trauma course (ATLS 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

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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: 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

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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: 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

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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

Appendix 2: General Surgery Syllabus

The syllabus provides a description of the knowledge and clinical skills required for the high-level specialty-specific topics in each module and details of the technical skills required for each phase of training. 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 of training:

Standards for knowledge

Specific competency levels in knowledge have been removed except for the critical conditions where the topic for a phase of training has a competence level 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. Competency levels for clinical and technical skills range from 1-4 as detailed below.

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.

Specific competency levels for knowledge and clinical skills have been removed except for the critical conditions which are defined in appendix 3.
Competency levels for the technical skills required for each phase of training are detailed in the tables below.

In the following tables, shaded columns indicate modules that will be completed by all trainees. * indicates that knowledge and clinical skills are required to the level appropriate with the phase of training in any given module. Procedures highlighted in bold represent index cases.

ELECTIVE GENERAL SURGERY		
	Phase 2	Phase 3
SKIN AND SUBCUTANEOUS TISSUES		
OBJECTIVE		
Recognise and appropriately refer malignant skin lesions including BCC, SCC and malignant melanoma, skin metastases, angiosarcoma	*	*
Management of benign subcutaneous lesions including lipomata, sebaceous cysts	*	*
ABDOMINAL WALL		
OBJECTIVE		
Management of abnormalities of the abdominal wall, excluding hernia.	*	*
RETICULO-ENDOTHELIAL SYSTEM		
OBJECTIVE		
Knowledge of surgical support needed in the management of conditions affecting the reticulo-endothelial and haemopoetic systems.	*	*
VENOUS THROMBOSIS AND EMBOLISM		
OBJECTIVE		
Understanding of the pathophysiology of venous thrombosis and embolism, its prevention, diagnosis and management	*	*
GENETIC ASPECTS OF SURGICAL DISEASE		
OBJECTIVES		
Understanding of genetically determined diseases related to breast, endocrine, and gastrointestinal disease	*	*
Clinical and molecular genetics: Basic understanding of the principles of genetics	*	*
Understanding of modes of inheritance, genetic testing, screening and prophylactic/therapeutic interventions	*	*

GENERIC ONCOLOGY FOR SURGEONS		
OBJECTIVE		
Understanding of the basic principles of Surgical Oncology and knowledge of risk factors, basics of management and ways of evaluating cancer treatments	*	*
ELECTIVE HERNIA		
OBJECTIVE		
Competency in the diagnosis and management, including operative management of primary and recurrent abdominal wall hernia	*	*
SURGICAL NUTRITION		
OBJECTIVES		
Recognise and assess nutritional requirements of the patient and appropriate routes of administration of nutrition	*	*
NECK SWELLINGS		
OBJECTIVE		
Competency in the assessment and management of Neck Swellings	*	*
BREAST CONDITIONS		
OBJECTIVES		
Competency in the assessment and initial management of patients with breast disease	*	*
MULTIDISCIPLINARY TEAM WORKING		
OBJECTIVE		
Understand the principals of multidisciplinary meetings and competency in the organisation and running of meetings	*	*
TECHNICAL SKILLS		
Punch biopsy	4	4
Excision of skin and subcutaneous lesions	4	4
Evacuation of haematoma	4	4
Biopsy - FNA Breast, neck, subcutaneous	4	4
Lymph node biopsy-groin, axilla and abdomen	4	4
Cervical lymph node biopsy	3	4
Insertion of nasogastric tube and confirmation of position	4	4
Repair primary abdominal wall hernias	**4**	**4**
Repair of incisional or recurrent hernias	3	4

EMERGENCY GENERAL SURGERY		
	Phase 2	Phase 3
SUPERFICIAL SEPSIS INCLUDING NECROTISING INFECTIONS		
OBJECTIVE		
Competency in the diagnosis and management of superficial sepsis, gas gangrene and other necrotising infections.	*	*

BREAST INFECTIONS		
OBJECTIVES		
Competency in the diagnosis and initial management of breast sepsis including sepsis associated with implant surgery	*	*
ACUTE ABDOMEN		
OBJECTIVE		
Competency in the recognition and management of the acute abdomen, including peritonitis and acute intestinal obstruction	*	*
EMERGENCY SURGICAL AMBULATORY CARE (ESAC)		
OBJECTIVES		
Competency in the selection and management of acutely presenting surgical patients in an ambulatory setting.	*	*
ACUTE APPENDICITIS		
OBJECTIVE		
Competency in the assessment and management of acute appendicitis	*	*
OBSTRUCTED AND STRANGULATED HERNIA		
OBJECTIVES		
Competency in the diagnosis and management of any strangulated abdominal hernia	*	*
GASTROINTESTINAL BLEEDING		
OBJECTIVE		
Competency in the diagnosis and management of upper and lower GI bleeding	*	*
SHOCK		
OBJECTIVE		
Knowledge and clinical skills in the diagnosis and management of different types of shock	*	*
COMPLICATIONS OF ABDOMINAL SURGERY		
OBJECTIVE		
Competency in the assessment and management of septic, obstructive or bleeding complications of GI surgery	*	*
ABDOMINAL PAIN IN CHILDHOOD		
OBJECTIVES		
Competency in the assessment and management of a child with abdominal pain	*	*
INTUSSUSCEPTION		
OBJECTIVE		
Competency in the assessment and management of a child with intussusception including referral for radiological or surgical reduction	*	*

ACUTE GROIN AND SCROTAL CONDITIONS IN CHILDHOOD		
OBJECTIVE		
Competency in the assessment and management of a child with incarcerated inguinal hernia or acute scrotal condition	*	*
TECHNICAL SKILLS		
ACUTE DYSPHAGIA		
OBJECTIVES		
Competency in the assessment and initial management of patients presenting with acute dysphagia	*	*
OESOPHAGEAL VARICES		
OBJECTIVES		
Competency in the assessment and initial emergency management of patients presenting with oesophageal varices	*	*
OESOPHAGEAL PERFORATION including BOERHAAVE'S		
OBJECTIVES		
Competency in the assessment and initial management of patients with oesophageal perforation	*	*
ACUTE GASTRIC DILATION		
OBJECTIVES		
Competency in the assessment, initial and emergency management of patients presenting with acute gastric dilatation	*	*
ACUTE PERFORATION		
OBJECTIVES		
Competency in the assessment, investigation and management of a perforated viscus	*	*
ACUTE GASTRIC VOLVULUS		
OBJECTIVES		
Competency in the assessment and initial management of patients presenting with acute gastric volvulus	*	*
GALLSTONE DISEASE		
OBJECTIVES		
Competency in the assessment and management of acute complications of gallstones	*	*
ACUTE PANCREATITIS		
OBJECTIVES		
Competency in the diagnosis and initial management of patients with acute pancreatitis	*	*
CHRONIC PANCREATITIS		

OBJECTIVES		
Competency in the assessment and initial management of patients with chronic pancreatitis	*	*
PERI-ANAL SEPSIS		
OBJECTIVE		
Competency in the assessment and management acute peri-anal and pilonidal sepsis	*	*
ACUTE PAINFUL PERI-ANAL CONDITIONS		
OBJECTIVE		
Competency in the assessment and initial management of anal fissure, thrombosed haemorrhoids and perianal haematoma	*	*
ACUTE COLONIC DIVERTICULITIS		
OBJECTIVES		
Competency in the assessment and management of acute presentations of diverticular disease	*	*
COLONIC VOLVULUS		
OBJECTIVE		
Competency in the diagnosis and initial treatment of colonic volvulus	*	*
ACUTE COLITIS		
OBJECTIVES		
Competency in the diagnosis and management of acute colitis including ischaemic, inflammatory and infective	*	*
EMERGENCY ANEURYSM DISEASE		
OBJECTIVES		
Competency in the assessment and management of emergency aneurysm disease	*	*
MESENTERIC VASCULAR DISEASE		
OBJECTIVES		
Competency in the assessment and management of patients with acute and chronic mesenteric ischaemia	*	*
ACUTE LIMB ISCHAEMIA		
OBJECTIVE		
Competency to assess and initiate treatment of acute and chronic limb ischaemia and understand emergency management	*	*
TRAUMA PRINCIPLES		
OBJECTIVE		
Identification and management of the majority of abdominal injuries	*	*

ABDOMEN AND THORAX TRAUMA		
OBJECTIVES		
Competency to assess and initially manage blunt and penetrating thoracic and abdominal trauma	*	*
HEAD AND NECK TRAUMA		
OBJECTIVE		
Competency in the assessment and initial management of trauma to the Head and Neck	*	*
EXTREMITY AND SOFT TISSUE TRAUMA		
OBJECTIVE		
Competency in the assessment and management of blunt and penetrating injury of the soft tissues and skeleton.	*	*
VASCULAR TRAUMA		
OBJECTIVE		
Competency in the assessment and immediate management of injuries to blood vessels	*	*
COLON TRAUMA		
OBJECTIVE		
Competency in the appropriate diagnosis and treatment of colon trauma	*	*
ANORECTAL TRAUMA		
OBJECTIVE		
Competency in the diagnosis and treatment of rectal and anal trauma	*	*
PANCREATIC TRAUMA		
OBJECTIVES		
Competency in the assessment and management of patients with pancreatic trauma	*	*
LIVER TRAUMA		
OBJECTIVES		
Competency in the diagnosis and early management of liver trauma	*	*
TECHNICAL SKILLS		
Drainage of superficial sepsis	4	4
Radical excisional surgery of gas gangrene and necrotising infections	3	4
Aspiration of breast abscess	4	4
Open drainage of breast abscess and/or debridement of soft tissue necrosis	4	4
Removal of infected breast implant	4	4
Appendicectomy - open and laparoscopic, adult and paediatric	**4**	**4**
Repair any obstructed or strangulated abdominal hernia, including bowel resection	3	4
Operation for testicular torsion, adult and paediatric	4	4

Laparotomy / laparoscopy and damage limitation surgery	3	4
Salvage surgery e.g. packing	3	4
Wash out by laparoscopy/laparotomy	3	4
Laparotomy and division of adhesions	3	4
Small bowel resection	3	4
Gastrotomy + non-resectional treatment - histology	3	4
Partial gastrectomy	2	3
Operative management of perforated viscus including primary closure, resection and stoma formation	4	4
Segmental colectomy	**3**	**4**
Formation of stoma	3	4
Hartmann's procedure	**3**	**4**
Re-laparotomy for post-operative complication including damage control, bleeding and anastomotic leak	2	4
Indications for and techniques for laparostomy / open abdomen	2	4
Formation of feeding enterostomy (open / lap)	2	3
Colon-primary repair	3	4
Cholecystectomy – lap / open	**3**	**4**
Cholecystostomy	3	4
EUA, rigid sigmoidoscopy, drain perianal haematoma	4	4
Insertion of flatus tube	4	4
Chest drain insertion	4	4
Operative management of visceral injury including splenic conservation, bowel resection, debridement and formation of stoma where indicated	3	4
Splenectomy	3	4
Crycothyroidotomy	3	3
Wound debridement and lavage	3	4
Fasciotomy – Lower leg	2	2
Application of dressings including Topical Negative Pressure Dressings	3	4
Vascular control with compression	4	4

UPPER GI				
	Phase 2 Gen and GI	Phase 2 Specialty	Phase 3 OG	Phase 3 HPB
GASTRO-OESOPHAGEAL REFLUX DISEASE				
OBJECTIVES				
Competency in the assessment and management of patients with GORD	*	*	*	
HIATUS HERNIA				
OBJECTIVES				

Competency in the assessment and management of patients with hiatus hernia	*	*	*	
ACHALASIA AND OESOPHAGEAL MOTILITY DISORDERS				
OBJECTIVES				
Competency in the assessment and management of patients with achalasia and motility disorders	*	*	*	
OESOPHAGEAL PERFORATION INCLUDING BOERHAAVE'S (specialist)				
OBJECTIVES				
Competency in the assessment and management of patients presenting with oesophageal perforation	*	*	*	
OESOPHAGEAL CANCER				
OBJECTIVES				
Competency on the assessment and management of patients presenting with oesophageal carcinoma	*	*	*	
PEPTIC ULCER (specialist)				
OBJECTIVES				
Competency on the assessment and management of patients presenting with gastric or duodenal ulcer	*	*	*	
GASTRIC AND DUODENAL POLYPS				
OBJECTIVES				
Competency in the assessment and management of patients presenting with gastric and duodenal polyps	*	*	*	
ACUTE UPPER GI HAEMORRHAGE (specialist)				
OBJECTIVES				
Endoscopic diagnosis of upper GI haemorrhage, endoscopic management of most cases, operative management of cases where endostasis has failed, including management of complications.	*	*	*	
ACUTE GASTRIC DILATION AND GASTRIC VOLVULUS (specialist)				
OBJECTIVES				
Competency in the assessment and definitive management of patients with gastric dilatation of volvulus	*	*	*	
GASTRIC CARCINOMA				
OBJECTIVES				
Competency in the assessment and management of patients presenting with gastric cancer	*	*	*	
GIST AND LYMPHOMA				

OBJECTIVES				
Competency in the assessment and management of patients presenting with gastrointestinal stromal tumours or lymphoma	*	*	*	
BARIATRICS				
OBJECTIVES				
Competency in the assessment and management of patients with morbid obesity	*	*	*	
GALLSTONE DISEASE				
OBJECTIVES				
Competency in the assessment and management of gallstone disease	*	*	*	*
ACUTE PANCREATITIS (specialist)				
OBJECTIVES				
Competency in the assessment and management of patients with severe acute pancreatitis	*	*		*
CHRONIC PANCREATITIS (specialist)				
OBJECTIVES				
Competency in the assessment and management of patients with chronic pancreatitis	*	*		*
PANCREATIC CANCER / PERIAMPULLARY CANCER				
OBJECTIVES				
Competency In the assessment and management of patients with pancreatic and ampullary cancer	*	*		*
OTHER PANCREATIC TUMOURS				
OBJECTIVES				
Competency in the assessment and management of patients with tumours of the pancreas other than carcinoma	*	*		*
PANCREATIC TRAUMA (specialist)				
OBJECTIVES				
Competency in the assessment and management of patients with pancreatic trauma following initial resuscitation	*	*		*
LIVER METASTASES				
OBJECTIVES				
Competency in the assessment and management of liver metastases.	*	*		*
PRIMARY LIVER CANCER	*			

OBJECTIVES				
Competency in the assessment and management of primary liver cancer	*	*		*
CHOLANGIOCARCINOMA AND GALLBLADDER CANCER				
OBJECTIVES				
Assessment and management of cholangiocarcinoma and gallbladder cancer	*	*		*
BENIGN AND CYSTIC TUMOURS				
OBJECTIVES				
Assessment and management of benign and cystic tumours of the liver	*	*		*
LIVER TRAUMA (specialist)				
OBJECTIVES				
Diagnosis and ongoing management of liver trauma following initial resuscitation	*	*		*
ENDOSCOPY				
OBJECTIVE				
Competency in upper GI endoscopy	*	*	*	
TECHNICAL SKILLS				
Endoscopic treatment of achalasia	-	2	4	
Endoscopic excision including EMR	-	-	3	
Endoscopic palliation including stenting	-	-	4	
Oesophageal dilatation	-	-	3	
Thoracotomy/thoracosopy and lavage	-	-	2	
Laparoscopy	3	4	4	
Oesophagectomy	**-**	**-**	**3**	
Oesophagogastrectomy	**-**	**-**	**3**	
Partial gastrectomy	**-**	**1**	**3**	
Total gastrectomy	**-**	**-**	**3**	
Antireflux surgery	**-**	**1**	**4**	
Revisional antireflux surgery	-	-	3	
Open or laparoscopic repair hiatus hernia repair	-	-	3	
Cardiomyotomy	-	1	3	
Laparoscopic access in the morbidly obese	1	2	4	
Aspiration of lap band port	2	2	4	
Emergency release of lap band for slippage	-	2	4	
Revisional gastric surgery for obesity	-	-	2	
Insertion of lap band	**-**	**-**	**4**	
Repair of internal hernia after gastric bypass	-	-	4	

Bariatric surgery - all options	-	-	**4**	
General Surgery for the super morbidly obese patient	2	3	4	
Gastrotomy + non-resectional treatment - histology	3	3	4	
Surgery for peptic ulcer including resection	-	2	3	
Open excision of GIST	-	-	4	
Surgery for polyps including resection, procedure depending on site	-	2	4	
Small bowel resection	4	4	4	
Gastroenterostomy	3	3	4	4
Cholecystectomy - lap / open	**3**	**3**	**4**	**4**
Cholecystostomy	3	3	4	4
Exploration CBD	1	2		4
Biliary bypass	-	-		4
Pancreatic debridement & drainage	-	-		2
Distal pancreatectomy	**-**	**-**		**3**
Pancreatic enucleation	**-**	**-**		**3**
Necrosectomy	-	-		2
Pancreaticoduodenectomy	**-**	**-**		**3**
Pancreaticojejunostomy	-	-		3
Pseudocyst drainage	-	-		2
Liver Debridement & hepatectomy	-	-		1
Central liver resection	**-**	**-**		**2**
Extended hepatectomy	**-**	**-**		**2**
Liver resection	**-**	**-**		**2**
Peripheral wedge or segmental liver resection	**-**	**-**		**3**
Fenestration of liver cyst	-	-		3
Hepatic artery lymphadenectomy	-	-		2
Hepaticodochojejunostomy	-	-		3
Salvage liver surgery e.g. packing	3	3		4

COLORECTAL			
	Phase 2 Gen and GI	Phase 2 Specialty	Phase 3
PILONIDAL DISEASE			
OBJECTIVE			
Competency in the management of pilonidal disease.	*	*	*
BENIGN ANAL CONDITIONS			
OBJECTIVES			
Competency in the diagnosis and medical and surgical management of benign anal conditions	*	*	*

BENIGN COLORECTAL CONDITIONS			
OBJECTIVES			
Competency in the diagnosis and medical and surgical management of benign colorectal conditions	*	*	*
RECTAL BLEEDING			
OBJECTIVES			
Management of patients with rectal bleeding and vascular malformations of the lower GI tract	*	*	*
ANORECTAL TRAUMA (specialist)			
OBJECTIVE			
Competency in the ongoing assessment and management of rectal and anal trauma	*	*	*
COLORECTAL NEOPLASIA			
OBJECTIVE			
Competency in the assessment and management of patients presenting with colonic neoplasia	*	*	*
RECTAL NEOPLASIA			
OBJECTIVES			
Competency in the assessment and management of patients presenting with rectal neoplasia	*	*	*
MISCELLANEOUS COLORECTAL MALIGNANT LESIONS			
OBJECTIVES			
Competency in the diagnosis and management of rarer tumours of the colon and rectum	*	*	*
ANAL NEOPLASIA			
OBJECTIVES			
Competence in the diagnosis and management of patients with anal canal and anal margin cancer	*	*	*
PRESACRAL LESIONS			
OBJECTIVES			
Competency in the management of presacral lesions	*	*	*
FAECAL INCONTINENCE			
OBJECTIVES			
Competency in the management of patients with faecal incontinence	*	*	*
RECTAL PROLAPSE			
OBJECTIVES			
Competency in the management of patients with rectal prolapse including internal intussusception and solitary rectal ulcer syndrome	*	*	*

CONSTIPATION			
OBJECTIVE			
Competency in the management of outlet obstruction constipation	*	*	*
Competency in the management of colonic inertia and colonic pseudo-obstruction.	*	*	*
IRRITABLE BOWEL SYNDROME			
OBJECTIVE			
Competency in the management of irritable bowel syndrome	*	*	*
INFLAMMATORY BOWEL DISEASE			
OBJECTIVES			
Competency in the diagnosis and medical and surgical management of IBD	*	*	*
OTHER COLITIDES			
OBJECTIVES			
Competency in the diagnosis and management of other colitides including ischaemic colitis, radiation colitis, infectious colitis, microscopic, diversion or neutropaenic colitis	*	*	*
STOMAS			
OBJECTIVES			
Competency in the management of patients with stomas	*	*	*
ENDOSCOPY			
OBJECTIVE			
Competency in lower GI endoscopy	*	*	*
TECHNICAL SKILLS			
Pilonidal sinus-lay open	4	4	4
Pilonidal sinus-excision + suture	4	4	4
Pilonidal sinus-graft or flap	2	2	3
Haemorrhoids - Outpatient treatment	4	4	4
Haemorrhoidectomy - operative treatments	**3**	**3**	**4**
Lateral sphincterotomy	3	4	4
Anal advancement flap	-	1	3
Operations for Fistula-in-ano including lay open, placement and choice of seton	**3**	**3**	**4**
Fistula - operation for rectovaginal fistula	-	2	3
Anal skin tags/warts-excision	4	4	4
Sigmoidoscopy-rigid	4	4	4
Rectum-operation for trauma	-	-	3
Segmental colectomy	**3**	**3**	**4**
Hartmann's procedure	3	3	4

Hartmann's reversal	2	3	4
Colectomy-total+ileostomy	3	3	4
Colectomy-total+ileorectal anastomosis	3	3	4
Rectum-panproctocolectomy+ileostomy	2	2	4
Ileoanal anastomosis+creation of pouch	2	2	3
Crohn's-ileocaecectomy	2	3	4
Strictureplasty-Crohn's	1	3	4
En-bloc resections of adjacent organs	3	3	4
Extended resections to include total abdominal colectomy	3	3	4
Transanal microsurgery	-	1	3
Per anal excision of rectal lesion	1	3	4
Rectum - posterior approach	-	1	2
Rectum - high anterior resection	**2**	**3**	**4**
Rectum - low anterior resection +/- coloanal anastomosis	1	2	3
Rectum - AP excision (including ELAPE)	1	2	3
Posterior pelvic clearance	-	3	3
Pelvic exenteration	-	2	3
Reoperation-pelvic malignancy	-	2	3
Anal tumour- local excision	1	2	4
Anal tumour - AP excision	1	2	3
Inguinal lymph node dissection	-	-	2
Anal sphincter repair including postanal repair, anterior sphincter repair	-	-	3
Anal sphincter - artificial sphincter/sacral nerve stimulation	-	-	2
Prolapse - abdominal rectopexy	-	2	3
Prolapse - rectopexy + sigmoid resection	-	2	3
Prolapse-perineal repair	1	2	4
STARR Procedure	-	2	3
Ventral mesh rectopexy	-	2	3
Rectocele repair	-	-	3
Gastroenterostomy	3	3	4
Intestinal fistula operation	1	2	4
Ileostomy-construction	3	4	4
Colostomy-construction	3	4	4
Ileostomy-closure	3	3	4
Colostomy-closure	3	3	4
Colostomy-revision	2	3	4
Ileostomy-revision	2	3	4

GASTROINTESTINAL AND GENERAL SURGERY OF CHILDHOOD	
	Phase 3
GASTROINTESTINAL SURGERY	
GASTRO-OESOPHAGEAL REFLUX DISEASE	

OBJECTIVES	
Competency in the assessment and management of patients with GORD	*
HIATUS HERNIA	
OBJECTIVES	
Competency in the assessment and management of patients with hiatus hernia	*
ACHALASIA AND OESOPHAGEAL MOTILITY DISORDERS	
OBJECTIVES	
Competency in the assessment and management of patients with achalasia and motility disorders	*
OESOPHAGEAL CANCER	
OBJECTIVES	
Knowledge and clinical skills of patients presenting with oesophageal carcinoma	*
PEPTIC ULCER (specialist)	
OBJECTIVES	
Competency on the assessment and management of patients presenting with gastric or duodenal ulcer	*
GASTRIC AND DUODENAL POLYPS	
OBJECTIVES	
Competency in the assessment and management of patients presenting with gastric and duodenal polyps	*
ACUTE UPPER GI HAEMORRHAGE (specialist)	
OBJECTIVES	
Endoscopic diagnosis of upper GI haemorrhage, endoscopic management of most cases, operative management of cases where endostasis has failed, including management of complications.	*
ACUTE GASTRIC DILATION AND GASTRIC VOLVULUS (specialist)	
OBJECTIVES	
Competency in the assessment and management of patients with gastric dilatation of volvulus	*
GASTRIC CARCINOMA	
OBJECTIVES	
Knowledge and clinical skills of patients presenting with gastric cancer	*
GIST AND LYMPHOMA	
OBJECTIVES	
Competency in the assessment and clinical management of patients presenting with gastrointestinal stromal tumours or lymphoma	*

BARIATRICS	
OBJECTIVES	
Competency in the assessment and clinical management of patients with morbid obesity	*
GALLSTONE DISEASE	
OBJECTIVES	
Competency in the assessment and management of gallstone disease	*
ACUTE PANCREATITIS (specialist)	
OBJECTIVES	
Competency in the assessment and management of patients with severe acute pancreatitis	*
CHRONIC PANCREATITIS (specialist)	
OBJECTIVES	
Competency in the assessment and non-operative management of patients with chronic pancreatitis	*
PILONIDAL DISEASE	
OBJECTIVE	
Competency in the management of pilonidal disease.	*
BENIGN ANAL CONDITIONS	
OBJECTIVES	
Competency in the diagnosis and medical and surgical management of benign anal conditions	*
BENIGN COLORECTAL CONDITIONS	
OBJECTIVES	
Competency in the diagnosis and medical and surgical management of benign colorectal conditions	*
RECTAL BLEEDING	
OBJECTIVES	
Management of patients with rectal bleeding and vascular malformations of the lower GI tract	*
ANORECTAL TRAUMA (specialist)	
OBJECTIVE	
Competency in the assessment and initial management of rectal and anal trauma	*
COLORECTAL NEOPLASIA	
OBJECTIVE	
Competency in the assessment and management of patients presenting with colonic neoplasia	*
RECTAL NEOPLASIA	
OBJECTIVES	
Knowledge and clinical skills of patients presenting with rectal neoplasia	*

ANAL NEOPLASIA	
OBJECTIVES	
Knowledge and clinical skills of patients with anal canal and anal margin cancer	*
IRRITABLE BOWEL SYNDROME	
OBJECTIVE	
Competency in the management of irritable bowel syndrome	*
INFLAMMATORY BOWEL DISEASE	
OBJECTIVES	
Competency in the diagnosis and medical and surgical management of IBD	*
OTHER COLITIDES	
OBJECTIVES	
Competency in the diagnosis and management of other colitides including ischaemic colitis, radiation colitis, infectious colitis, microscopic, diversion or neutropaenic colitis	*
STOMAS	
OBJECTIVES	
Competency in the management of patients with stomas	*
ENDOSCOPY	
OBJECTIVE	
Competency in upper and lower GI endoscopy	*
GENERAL SURGERY OF CHILDHOOD	
CHILD WITH VOMITING	
OBJECTIVE	
The ability to assess a child with vomiting.	*
CONSTIPATION	
OBJECTIVE	
The ability to assess and manage a child with constipation	*
ABDOMINAL WALL CONDITIONS	
OBJECTIVE	
The ability to assess and manage a child with abdominal wall hernia	*
CHILD WITH GROIN CONDITION	
OBJECTIVES	
The ability to assess and manage a child with a common groin condition including undescended testes, inguinal hernia and hydrocele	*

UROLOGICAL CONDITIONS	
OBJECTIVE	
The ability to assess and manage a child with a common conditions of the foreskin, urinary tract infection and haematuria	*
The ability to assess whether circumcision is indicated and carry it out.	*
HEAD AND NECK SWELLINGS	
OBJECTIVE	
The ability to assess and manage a child with a head and neck swelling	*
MISCELLANEOUS SKIN CONDITIONS	
OBJECTIVE	
The ability to assess and manage a child with superficial abscess or with ingrowing toenail.	*
GASTROINTESTINAL SURGERY	
TECHNICAL SKILLS	
Endoscopic treatment of achalasia	4
Laparoscopy	4
Partial gastrectomy	3
Antireflux surgery	3
Revisional antireflux surgery	2
Open or laparoscopic repair hiatus hernia repair	3
Cardiomyotomy	3
Laparoscopic access in the morbidly obese	4
Aspiration of lap band port	4
General Surgery for the super morbidly obese patient	4
Gastrotomy + non-resectional treatment - histology	4
Surgery for peptic ulcer including resection	3
Open excision of GIST	4
Surgery for polyps including resection, procedure depending on site	4
Small bowel resection	4
Gastroenterostomy	4
Cholecystectomy - lap / open	**4**
Cholecystostomy	4
Pilonidal sinus-lay open	4
Pilonidal sinus-excision + suture	4
Pilonidal sinus-graft or flap	3
Haemorrhoids-Out patient treatment	4
Haemorrhoidectomy-operative treatments	4
Lateral sphincterotomy	4

Laying open of fistula in ano	4
Insertion of seton	4
Anal skin tags/warts-excision	4
Sigmoidoscopy-rigid	4
Segmental colectomy	**4**
Hartmann's procedure	4
Hartmann's reversal	4
Colectomy-total+ileostomy	4
Colectomy-total+ileorectal anastomosis	4
Crohn's-ileocaecectomy	4
Strictureplasty-Crohn's	4
En-bloc resections of adjacent organs	4
Extended resections to include total abdominal colectomy	4
Gastroenterostomy	4
Intestinal fistula operation	4
Ileostomy-construction	4
Colostomy-construction	4
Ileostomy-closure	4
Colostomy-closure	4
Colostomy-revision	4
Ileostomy-revision	4
GENERAL SURGERY OF CHILDHOOD	
TECHNICAL SKILLS	
Pyloromyotomy	2
Manual evacuation	4
Repair of epigastric, supra-umblical and abdominal wall hernia	**4**
Orchidopexy	3
Circumcision	4
Inguinal hernia (not neonatal) operation	**4**
Hydrocele operation	4
Suprapubic catheter insertion	4
Lymph node biopsy	3
Abscess drainage	4
Ingrowing toenail operation	4

BREAST			
	Phase 2	Phase 3	Phase 3
	Module 1	Module 2A	Module 2B
BREAST AND AXILLARY ASSESSMENT			
OBJECTIVES			

Competency in the assessment and management of men and women with breast symptoms	*	*	
BREAST INFECTIONS			
OBJECTIVES			
Competency in the management of sepsis and soft tissue necrosis	*		*
Competency in the management of acute and chronic complex wounds in oncoplastic and breast reconstruction procedures	*		*
Competency in the management of implant salvage management in chronic sepsis	*		*
BREAST CANCER			
OBJECTIVES			
Competency in the assessment & management of all breast cancer presentations and treatment including screening	*	*	
Competency in the assessment and management of those at increased risk of breast cancer	*	*	
PRINCIPLES OF ONCOPLASTIC BREAST SURGERY			
OBJECTIVES			
Competency in the knowledge, assessment, limitations and risks of patients undergoing oncoplastic and reconstructive surgical procedures.	*	*	
IMPLANT BASED/ASSISTED RECONSTRUCTION			
OBJECTIVES			
Competency in the knowledge, assessment, limitations and risks of patients undergoing implant based/assisted breast reconstruction.	*		*
AUTOLOGOUS RECONSTRUCTION			
OBJECTIVES			
Knowledge and awareness of microvascular-based autologous breast reconstruction and pedicle flap reconstruction	*		*
BENIGN SURGERY OF THE BREAST			
OBJECTIVES			
Competency in the assessment and safe management of congenital asymmetry breast procedures	*		*
Competency in assessment and surgical management of gynaecomastia	*		*
TECHNICAL SKILLS			
Nipple smear	4	4	
Punch biopsy of skin / nipple	4	4	
Nipple surgery	**4**	**4**	
Palpable core biopsy of the breast	2	4	

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Laying open breast fistula	4		4
Removal of infected breast implant and skin envelope revision	2		4
Surgical debridement of soft tissue necrosis - complex wound management	1		3
Salvage implant revision	1		4
Exploration of donor site complication	1		4
Partial and full thickness skin graft	1		3
BREAST CONSERVATION:			
Palpable	**3**	**4**	
Impalpable & image guided	**2**	**4**	
Oncoplastic wide local excision	**1**	**4**	
Mammoplasty WLE: using either reduction, displacement or replacement techniques	**1**	**4**	
MASTECTOMY:			
Mastectomy - Simple	**2**	**4**	
Mastectomy - Skin sparing +/- nipple preserving	**1**	**3**	
Mastectomy - Skin reducing	**1**	**3**	
AXILLARY SURGERY:			
Lymph node biopsy	3	4	
Axillary clearance -Primary . Level 1-3	**1**	**4**	
Axillary clearance -completion (delayed)	**1**	**4**	
Axillary surgery - repeat (recurrence)	**1**	**3**	
SLNB (any technique)	**3**	**4**	
Preoperative marking of patient for oncoplastic procedures and breast reconstruction	-	4	
Minimising infection: antibiotics, drains, changing gloves, laminar theatres etc	2	4	
Lipomodelling techniques in oncoplastic & reconstructive breast surgery	-	4	
Planning, execution and closing incisions on the breast with reference to aesthetic principles and sub units	2	4	
Nipple reconstruction techniques	**-**	**4**	
Nipple free graft	**-**	**4**	
Creation and closure of sub-pectoral pocket	**1**		**4**
Orient devices and prepare appropriately	**-**		**4**
Two stage reconstruction using TEX and subsequent exchange for FVI	**-**		**4**
Single stage reconstruction using FVI/TEX and biological & non biological mesh	**1**		**4**
Inferior dermal sling to achieve implant cover	**-**		**4**
Pre pectoral pocket	1		3
Techniques in capsulotomy, capsulectomy and revision implant surgery	-		3

Raising and insetting pedicled autologous TRAM flap	-		1
Raising and insetting pedicled autologous LD flap (including implant assisted LD)	**-**		**2**
Raising and insetting a local perforator flap	**-**		**3**
Free-flap Techniques	-		2
Scar revision in aesthetic breast surgery	1		3
Correction of the inverted nipple (various techniques)	-		1
Bilateral breast reduction by various patterns and techniques	**1**		**3**
Bilateral breast augmentation by various routes, in various planes	**1**		**3**
Bilateral mastopexy by various patterns and techniques	1		3
Excision of gynaecomastia, incorporating various forms of liposuction as appropriate	-		3
Unilateral or differential breast augmentation to attain symmetry	-		2
Unilateral or asymmetric breast reduction in pattern or volume to attain symmetry	-		3
Synchronous mastopexy and breast augmentation in several patterns	-		2
Correction of tuberous breast by combinations of mastopexy, augmentation or tissue expansion	-		2
Revision procedures following previous aesthetic surgery of the breast	-		2
Aesthetic surgery of the breast in patients with previous breast cancer or irradiation.	-		1

ENDOCRINE		
	Phase 2	Phase 3
THYROID		
OBJECTIVE		
Competency in the assessment and management of patients with thyroid swellings and thyrotoxicosis	*	*
PARATHYROID		
OBJECTIVE		
Competency in the assessment and management of parathyroid disease	*	*
ADRENAL		
OBJECTIVE		
Competency in the assessment and management of adrenal swellings	*	*
PANCREATIC ENDOCRINE		
OBJECTIVE		
Competency in the diagnosis and non-operative management of pancreatic endocrine tumours	*	*
GENETIC SYNDROMES		
OBJECTIVE		

Competency in the diagnoses and management of patients with MEN and other genetic disorders	*	*
TECHNICAL SKILLS		
Thyroid lobectomy	**2**	**4**
Subtotal thyroidectomy	**2**	**4**
Total Thyroidectomy	**2**	**4**
Thyroidectomy - toxic goitre	**1**	**4**
Thyroidectomy - total + cervical node dissection - central and lateral compartments	**-**	**4**
Thyroid surgery - reoperation	1	4
Cervical approach to retrosternal goitre	1	4
Sternotomy for retrosternal goitre	-	4
Thymectomy - transcervical approach	1	4
Direct laryngoscopy	1	4
Parathyroidectomy	**1**	**4**
Parathyroid surgery - reoperation	-	4
Laparoscopic/retroperitoneal Adrenalectomy	**-**	**3**
Open adrenalectomy	**-**	**3**

TRANSPLANT				
	Phase 2	Phase 3 Renal	Phase 3 liver + retrieval	Phase 3 pancreas + retrieval
ACCESS FOR DIALYSIS				
OBJECTIVE				
Competency in the management of patients requiring access for renal dialysis	*	*		
KIDNEY TRANSPLANT				
OBJECTIVE				
Competency in the assessment and management of patients requiring renal transplantation	*	*		
PAEDIATRIC KIDNEY TRANSPLANTATION				
OBJECTIVE				
Ability to assess paediatric patients for kidney transplantation and manage their care	*	*		
PRINCIPLES OF TRANPLANTATION				
OBJECTIVE				
Knowledge of pathophysiology, indications and contraindications for kidney, pancreas and liver transplantation	*	*	*	*
PANCREATIC TRANSPLANTATION				

OBJECTIVE				
Assessment of patients for pancreatic transplantation in consultation with physicians; operative management and post operative care	*			*
LIVER TRANSPLANTATION				
OBJECTIVE				
Competency in the assessment and management of patients requiring liver transplantation	*		*	
ORGAN RETRIEVAL				
OBJECTIVE				
The ability to retrieve abdominal organs for transplantation	*	*	*	*
TECHNICAL SKILLS				
Insert central venous dialysis catheter (tunnelled)	2	3		
Insert and remove peritoneal catheters	**2**	**4**		
A-V fistula ligation	2	4		
Construct a-v fistula - Radio-cephalic, brachio-cephalic, brachio-basilic, basilic vein transposition	**2**	**4**		
Access secondary vascular	1	4		
Upper & lower limb PTFE graft	1	3		
On-table fistulogram/plasty	1	2		
Graft thrombectomy and revision	1	4		
Ligation and excision of fistula / graft	1	4		
Management of Steal syndrome	1	4		
Complex revision procedures	1	3		
Kidney transplant -benchwork preparation	1	4		
Kidney transplant - donor operation - deceased	1	2		
Kidney transplant - donor operation - live donor	1	2		
Kidney transplant - complete operation - deceased donor	**1**	**4**		
Kidney transplant - complete operation - live donor	1	3		
Kidney transplant - complete operation - regraft on side of previous transplant	1	2		
Paediatric kidney transplant (live donor and deceased donor)	-	2		
Pancreas transplant -benchwork preparation of pancreas for implantation	**-**	**-**	**-**	**3**
Pancreatic transplant - donor pancreatectomy	-	-	-	3
Pancreatic transplant implant graft	**-**	**-**	**-**	**2**
Bench preparation of Liver allograft for implantation	**-**	**-**	**3**	**-**
Recipient Hepatectomy	-	-	2	-
Deceased donor Liver transplant (implantation)	-	-	2	-

Living donor Liver transplant (implantation)	-	-	1	-
Re-do deceased Liver transplant	-	-	1	-
Liver resection	-	-	3	-
Kidney retrieval - donor: deceased	-	2	4	4
Kidney retrieval - donor: live	-	2	2	2
Liver retrieval - Donation after brain death (DBD)	-	-	4	4
Liver retrieval - Donation after circulatory death (DCD)	-	-	2	2
Pancreas retrieval - Donation after brain death (DBD)	-	-	4	4
Pancreas retrieval - Donation after cardiac death (DCD)	-	-	2	2
Mutiorgan retrieval after brain death (DBD)	-	**2**	**4**	**4**

GENERAL SURGERY OF CHILDHOOD	
	Phase 2
ABDOMINAL WALL CONDITIONS	
OBJECTIVE	
The ability to assess and manage a child with abdominal wall hernia	*
CHILD WITH GROIN CONDITION	
OBJECTIVES	
The ability to assess and manage a child with a common groin condition including undescended testes, inguinal hernia and hydrocele	*
UROLOGICAL CONDITIONS	
OBJECTIVE	
The ability to assess and manage a child with a common conditions of the foreskin, urinary tract infection and haematuria	*
The ability to assess whether circumcision is indicated and carry it out.	*
HEAD AND NECK SWELLINGS	
OBJECTIVE	
The ability to assess and manage a child with a head and neck swelling	*
MISCELLANEOUS SKIN CONDITIONS	
OBJECTIVE	
The ability to assess and manage a child with superficial abscess or with ingrowing toenail.	*
TECHNICAL SKILLS	
Pyloromyotomy	2
Manual evacuation	4
Repair of epigastric, supra-umbilical and abdominal wall hernia	4
Orchidopexy	3
Circumcision	4
Inguinal hernia (not neonatal) operation	4
Hydrocele operation	4
Suprapubic catheter insertion	4

Lymph node biopsy	3
Abscess drainage	4
Ingrowing toenail operation	4

VASCULAR	
	Phase 2
EXPOSURE AND CONTROL OF MAJOR PERIPHERAL ARTERIES	
OBJECTIVES	
To be able to expose and control major vessels including femoral, popliteal, brachial and carotid arteries	*
TECHNICAL SKILLS	
Exposure and control of major peripheral arteries	4
Basic techniques for repair of major peripheral arteries	3
Shunting	3

REMOTE AND RURAL	
	Phase 2
CRANIAL TRAUMA	
MANAGEMENT OF HEAD INJURED PATIENTS	
OBJECTIVE	
Competency in the management of head-injured patients	*
CRANIO MAXILLOFACIAL TRAUMA	
FACIAL FRACTURES	
OBJECTIVE	
Competency in the assessment of a patient with suspected facial fracture and appropriate referral	*
OBSTETRICS AND GYNAECOLOGY	
OBSTETRICS	
OBJECTIVE	
Competency in the organisation and management of delivery including Caesarean section and its complications	*
GYNAECOLOGY	
OBJECTIVE	
Competency in the management of common gynaecological emergencies and in the management of early pregnancy complications	*
OPTHALMOLOGY	
OBJECTIVE	
Ability to deal with common minor eye emergencies and refer serious problems appropriately	*
OTOLARYNGOLOGY	
PAEDIATRIC OTOLARYGOLOGY	
OBJECTVE	

Competency in the initial management of children with ENT problems	*
ADULTS	
HEAD AND NECK	
OBJECTIVE	
Competency in the initial management of patients with neck pathology	*
OTOLOGY	
OBJECTIVE	
Competency in the assessment and initial management of patients with ear problems	*
RHINOLOGY	
OBJECTIVE	
Competency in the assessment and initial management of patients with nasal trauma and epistaxis	*
PLASTIC SURGERY	
OBJECTIVE	
Competency in the assessment and initial management of patients with burns	*
TRAUMA AND ORTHOPAEDICS	
TRAUMA	
OBJECTIVE	
Competency in the assessment and initial management of patients with soft tissue and bony injuries of the limbs	*
ORTHOPAEDICS	
OBJECTIVE	
Competency in the assessment and initial management of patients with an acute presentation of orthopaedic pathology	*
UROLOGY	
STONE DISEASE	
OBJECTIVE	
Competency in the assessment and initial management of patients presenting with renal tract calculi	*
URINARY TRACT OBSTRUCTION	
OBJECTIVE	
Competency in the assessment and initial management of patient presenting with lower urinary tract symptoms or retention	*
URINARY TRACT INFECTIONS	
OBJECTIVE	

Competency in the assessment and management of patients with urinary tract infection and genital tract infections	*
UROLOGICAL ONCOLOGY	
OBJECTIVE	
Competency in the initial assessment and management of patients presenting with urological cancer	*
ANDROLOGY	
OBJECTIVE	
Competency in the assessment and counselling of a man requesting a vasectomy	*
EMERGENCY UROLOGY	
OBJECTIVE	
Competency in the assessment and initial management of patients presenting acutely with urological disease	*
TRAUMA TO THE URINARY TRACT	
OBJECTIVE	
Competency in the assessment and initial management of patients presenting with genitourinary trauma	*
TECHNICAL SKILLS	
Craniotomy for supratentorial extradural haematoma	1
Closed manipulation of nasal bones and septum	1
Emergency LSCS	1
Manual removal of retained placenta	1
Exploration of genital tract, cervical laceration repair	1
EUA, repair perineal trauma	1
Evacuation of retained products of conception	1
Laparoscopic and open salpingectomy for ectopic pregnancy	1
Diagnostic laparoscopy	2
Laparoscopy and open oophorectomy for torsion	1
Nasal cautery	2
EUA nose	2
Appropriate nasal packing in a child	2
Endotracheal intubation	3
Suturing of pinna	2
Split skin graft	1

Manipulation under anaesthetic of appropriate fracture	2
Reduction of dislocations dependent on site	2
Trigger finger release	2
Aspiration / injection knee joint	2
Ingrowing toenail operation	3
Endoscopic fragmentation of bladder calculi	1
Open removal bladder calculi	1
Rigid cystoscopy, retrograde ureterogram, insertion of JJ stent	2
Bladder neck incision	1
Percutaneous insertion of suprapubic catheter	2
Optical urethrotomy	1
TURP	1
Flexible Cystoscopy	3
TRUS & Biopsy	1
Cystoscopy and biopsy	2
Cystoscopy and diathermy bladder lesion	1
Vasectomy	2
Surgical exploration for torsions of testis, with fixation	2
Circumcision	3

TRAUMA		
	Phase 2	Phase 3
GENERAL PRINCIPLES		
OBJECTIVE		
Competency in the assessment, treatment and ongoing management of the multiply injured patient	*	*
ABDOMEN AND THORAX		
OBJECTIVES		
Assessment and management of blunt and penetrating abdominal and thoracic injury	*	*
HEAD AND NECK		
OBJECTIVE		
Identification, assessment and initial management of trauma to the Head and Neck	*	*
EXTREMITY AND SOFT TISSUE TRAUMA		
OBJECTIVE		
Assessment and management of blunt and penetrating injury of the soft tissues and skeleton.	*	*
VASCULAR TRAUMA		
OBJECTIVE		
Identification, assessment and management of injuries to blood vessels	*	*

SYSTEM SPECIFIC TRAUMA		
OBJECTIVE		
Competency in the assessment and management of patients with system specific trauma	*	*
ON GOING CARE OF INJURED PATIENTS		
OBJECTIVE		
Competency in the ongoing management of trauma patients	*	*
TRAUMA SYSTEM MANAGEMENT		
OBJECTIVE		
Knowledge of trauma system methodology and improvement processes	*	*
TECHNICAL SKILLS		
Arrest haemorrhage by suture/ligation/packing	4	4
Closed and Penetrating thoracic injury		
Chest drain insertion	4	4
Lateral thoracotomy	1	4
Median sternotomy	1	4
Clamshell thoracotomy	-	4
Hilar control of massive pulmonary haemorrhage	-	4
Non-segmental lung resection	-	4
Pulmonary tractotomy using staplers	-	4
Pericardotomy	-	4
Control and suture of myocardial laceration	-	4
Closed and penetrating abdominal injury		
Laparotomy - trauma	3	4
Packing / debridement of liver trauma	3	4
Splenectomy	3	4
Splenic repair	2	4
Small bowel resection	3	4
Distal pancreatectomy	-	2
Pancreatic debridement and drainage	-	4
Mobilisation and repair of the duodenum	2	4
Medial rotation of left hemicolon and colectomy when appropriate	2	4
Medial rotation of right hemicolon and colectomy when appropriate	2	4
Hartmann's Procedure	3	4
Nephrectomy	-	2
Bladder repair	3	4
Stoma formation	3	4
Temporary abdominal closure Bogota Bag or Topical Negative Pressure Dressing	3	4
Exposure, control and repair of vascular, airway or GI tract structures in the neck	1	3
Crycothyroidotomy	3	4
Formal tracheostomy	1	4

Burr holes	-	1
Craniotomy/Craniectomy	-	1
Evacuation of Extradural/Subdural haematoma	-	1
Debridement of injured brain	-	1
Lateral canthotomy for orbital decompression	-	1
Proximal arterial control		
Femoral	3	4
Brachial	3	4
Subclavian	2	4
Soft Tissue Management		
Wound debridement and lavage	4	4
Fasciotomy -Lower leg	2	4
Fasciotomy -Thigh	2	4
Fasciotomy -Upper limb	2	4
Application of dressings	4	4
Application of Topical Negative Pressure Dressings	4	4
Split skin grafting	1	1
Control with compression	4	4
Surgical options		
Exposure and control of major vessels		
Thoracic aorta	1	4
Abdominal aorta (infra and supra renal)	1	4
Subclavian and axillary arteries	-	4
Femoral and popliteal arteries	2	4
Use of shunts	-	4
Ligation	3	4
Direct suture repair	2	4
End to end anastomosis	2	2
Interposition vein / prosthetic graft	2	2
Panel / spiral grafts	-	2
Fasciotomy	2	4
Radiological		
Intra-operative imaging techniques	-	1
options for control of bleeding	-	1

Appendix 3: General Surgery Critical Conditions

The list of critical conditions covers a range of conditions where misdiagnosis or mismanagement can result in devastating consequences for life or limb.

These critical conditions can be assessed individually by means of the CBD and CEX which both include an assessment of clinical judgement and decision-making. To ensure that trainees have demonstrated 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 to level 4: *Appropriate for certification* in each of the critical conditions (see CBD/CEX forms for the full list of levels) . In addition, trainees should complete an indicative number of 10 CBDs or CEXs in their special interest area showing satisfactory performance by certification. However, it should be noted that meeting the numbers does not, in itself, imply competence.

General
- Assessment of the acute abdomen
  Include differential diagnosis, operative and conservative treatment in the discussion
- Strangulated / obstructed hernia
- Intestinal ischaemia
- Intestinal obstruction
  Include small and large bowel obstruction in the discussion
- Post-operative haemorrhage
  Include different operative sites (e.g. neck surgery) in the discussion
- Acute gastrointestinal haemorrhage
  Include both upper and lower GI bleeding in the discussion
- Blunt / penetrating abdominal injury
  Include physiological response and management of blunt and penetrating injury in the discussion
- Necrotising fasciitis
  Include other severe soft tissue infections in the discussion (e.g. diabetic foot infection)
- Sepsis
  Include recognition and management in the discussion
- Anastomotic leak
  Include large bowel and small bowel anastomotic leak

Colorectal
- Acute colitis / toxic megacolon
- Faecal peritonitis

UGI
- Biliary sepsis
  Include all causes and their management in the discussion
- Acute pancreatitis
- Oesophageal perforation
- Upper GI anastomotic leak

Vascular
- Ruptured AAA
- Acute limb ischaemia
- Compartment syndrome

Appendix 4: Index Procedures / Indicative Numbers

Index procedures are of significant importance for patient safety and demonstrate a safe breadth of practice.

By certification there should be documented evidence of performance at the level of a day-one consultant in the portfolio by means of the PBA. The table below sets out the required PBA levels ranging between 2 to 4:

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

In addition, the indicative numbers of index cases help to demonstrate sufficient experience to be able to manage the range of pathology trainees encounter. 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.

Critical Progression Point
End of phase 2
All trainees

Indicative Numbers
Summarise the number of cases (S-TS + S-TU + P + T) you have performed for each of the procedures below:

Elective General and GI Surgery+ Emergency General Surgery (Phase 2)		Number
Inguinal hernia	50	. . . .
Cholecystectomy	40	. . . .
Segmental colectomy	15	. . . .
Emergency laparotomy	45	. . . .
Appendicectomy	60	. . . .

Index procedures operative competency
Indicate the number of PBAs (to the level shown) you have for each of the procedures listed.
An indicative three or more PBAs by different assessors for each of the procedures.

Elective General and GI Surgery+ Emergency General Surgery (Phase 2)		Number
Hernia repair – all types	Level 4	. . . .
Cholecystectomy (both laparoscopic and/or open)	Level 3	. . . .
Segmental colectomy	Level 3	. . . .

Critical Progression Point
End of phase 3
Certification

Indicative Numbers

Summarise the number of cases (S-TS + S-TU + P + T) you have performed in your two phase 3 special interest modules (the indicative numbers for certification are shown).

Emergency General Surgery	Phase 3 ☐	Number
Emergency laparotomy	100	. . . .
Appendicectomy	80	. . . .
Cholecystectomy*	50	. . . .
Segmental colectomy*	20	. . . .

*May include elective case numbers

Breast	Phase 3 ☐	
Module 2A		
Breast cancer conservation	100	. . . .
Mastectomy	70	. . . .
inc skin sparing	40	. . . .
Axillary surgery inc ANC, SNB	100	. . . .
Reduction mammoplasty techniques	40	. . . .
Module 2B		
Implant reconstruction	40	. . . .
Local flaps	25	. . . .

Colorectal	Phase 3 ☐	
Anterior resection	30	. . . .
Fistula surgery	20	. . . .
Segmental colectomy	50	. . . .
(some colonic resections should be laparoscopic)		
Haemorrhoidectomy	15	. . . .
Colonoscopy	200	. . . .

Oesophagogastric	Phase 3 ☐	
Major OG procedures	35	. . . .
(includes anti-reflux, obesity and OG resection)		
(some trainees will focus primarily on benign and others on resectional)		
Cholecystectomy	110	. . . .
Gastroscopy	200	. . . .

Hepatopancreaticobiliary	Phase 3 ☐		Number
Major HPB procedures	35		. . . .
Cholecystectomy	110		. . . .

Gastrointestinal and GSoC	Phase 3 ☐		
Segmental Colectomy	50		. . . .
Cholecystectomy	110		. . . .
Paediatric herniotomy	20		. . . .
Gastroscopy	200		. . . .
Colonoscopy	200		. . . .

Transplant	Phase 3 ☐		
Kidney Transplant and Dialysis Module			
Kidney transplant	40		. . . .
Benchwork preparation for kidney transplant	40		. . . .
Insertion of PD catheter	20		. . . .
Creation of AV fistula	50		. . . .
Pancreas Transplant and Organ Retrieval Module			
Pancreas transplant	10		. . . .
Benchwork preparation for pancreas transplant	10		. . . .
Kidney implant part of SPK	10		. . . .
Multi-organ retrieval	30		. . . .
Emergency laparotomy (excl retrievals)	80		. . . .
Liver Transplant and Organ Retrieval Module			
Liver transplant	30		. . . .
Benchwork preparation for liver transplant	30		. . . .
Multi-organ retrieval	30		. . . .
Emergency laparotomy (excl retrievals)	80		. . . .

Endocrine	Phase 3 ☐		
Thyroidectomy	50		. . . .
Re-operative thyroid surgery	10		. . . .
Parathyroidectomy	30		. . . .

Adrenalectomy	**	. . . .

Trauma	Phase 3 ☐	Number
Trauma laparotomy	**	. . . .
Paediatric trauma laparotomy	**	. . . .
Trauma thoracotomy	**	. . . .
Surgical airway management	**	. . . .

There are, at present (June 2020), insufficient data to give indicative numbers for the procedures marked as **. Future versions of this form will include this.

Index procedures operative competency

Indicate the number of PBAs (to the level shown) you have for each of the procedures listed in each of your phase 3 special interest modules

An indicative three or more PBAs to be performed by different assessors for each of the procedures in the phase 3 modules that you have undertaken.

Emergency General Surgery (Phase 3 module)

Emergency laparotomy	Level 4	. . . .
Cholecystectomy (laparoscopic and/or open)	Level 4	. . . .
Hartmann's procedure	Level 4	. . . .
Segmental colectomy	Level 4	. . . .
Appendicectomy	Level 4	. . . .

Breast	Phase 3 ☐	
Module 2A		
Image guided breast excision	Level 4	. . . .
Mastectomy	Level 4	. . . .
Sentinel lymph node biopsy	Level 4	. . . .
Axillary clearance	Level 4	. . . .
Duct and nipple surgery	Level 4	. . . .
Module 2B		
Implant reconstruction	Level 4	. . . .
Autologous flaps	Level 2	. . . .
Mammoplasty: augmentation and reduction	Level 3	. . . .

Colorectal	Phase 3 ☐	
Anterior resection (high)	Level 4	. . . .
Segmental colectomy	Level 4	. . . .

Fistula surgery	Level 4	. . . .
Surgical treatment of haemorrhoids	Level 4	. . . .

Oesophagogastric   **Phase 3** ☐

Cholecystectomy	Level 4	. . . .
Anti-reflux surgery (laparoscopic and/or open) and/or	Level 4	. . . .
Oesophagectomy	Level 3	. . . .
Gastrectomy and/or	Level 3	. . . .
Bariatric surgery – gastric bypass	Level 4	. . . .
Bariatric surgery – sleeve gastrectomy	Level 4	. . . .

Hepatopancreaticobiliary   **Phase 3** ☐

Liver resection	Level 3	. . . .
Pancreatic resection	Level 3	. . . .
Cholecystectomy	Level 4	. . . .

Gastrointestinal and GSoC   **Phase 3** ☐

Segmental colectomy	Level 4	. . . .
Cholecystectomy	Level 4	. . . .
Paediatric herniotomy	Level 4	. . . .

Transplant   **Phase 3** ☐

Kidney Transplant and Dialysis Module

Kidney transplant	Level 4	. . . .
Insertion of PD catheter	Level 4	. . . .
Creation of AV fistula	Level 4	. . . .
Live donor nephrectomy	Level 2	. . . .
DBD multi-organ retrieval	Level 2	. . . .

Pancreas Transplant and Organ Retrieval Module

DBD multi-organ retrieval	Level 4	. . . .
Pancreatic transplant bench preparation	Level 3	. . . .
Pancreas transplant recipient operation	Level 2	. . . .
Kidney transplant (part of SPK)	Level 4	. . . .

Liver Transplant and Organ Retrieval Module

DBD multi-organ retrieval	Level 4	. . . .

| Liver transplant bench preparation | Level 3 | . . . . |
| Liver transplant recipient operation | Level 2 | . . . . |

Endocrine	**Phase 3** ☐		
Adrenal surgery		Level 3	. . . .
Thyroidectomy		Level 4	. . . .
Parathyroidectomy		Level 4	. . . .

Trauma	**Phase 3** ☐		
Trauma laparotomy		Level 4	. . . .
Paediatric trauma laparotomy		Level 4	. . . .
Trauma thoracotomy		Level 4	. . . .
Surgical airway management		Level 4	. . . .

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

Some knowledge and capabilities are best gained in the formal setting of a taught course. In General Surgery there is one mandated course.

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 ongoing management of the multiply injured patient	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	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	The Advanced Trauma Life Support® (ATLS®), European Trauma Course, Definitive Surgical Trauma Skills course or equivalent locally provided course(s) meeting the outcomes described

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 for 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 WBAs, 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 in 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.
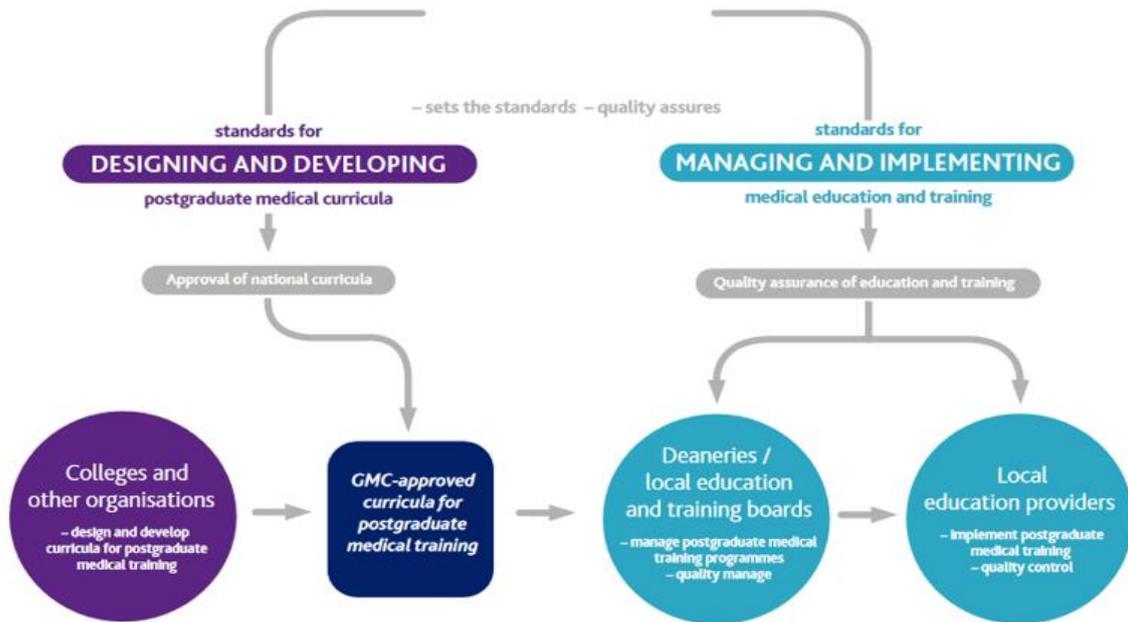
Figure 9: The quality assurance structure of the curriculum (adapted from Excellence by Design, GMC, 2017)

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	*	*	*		*						

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)	*	*				*	*				