

2021 Curriculum for a CCT in Anaesthetics

Version 1.4
August 2021

Change log

This document outlines the curriculum to be used by doctors completing postgraduate training in anaesthetics in the UK. It is accompanied by the *Assessment strategy for Anaesthetics*.

This is Version 1.0, published in August 2021. As the document is updated, version numbers will be changed, and content changes noted in the table below.

Version number	Date issued	Summary of changes
Version 1.1	17 February 2023	<ul style="list-style-type: none"> • Addition of guidance around 'acting-up' (section 4.6) • 'structured' learning event updated to 'supervised' learning event throughout, for consistency with other College resources • Stage 3, Special Interest Area - Anaesthesia for Cardiac Surgery: supervision level adjusted from level 4 to level 3 • Stage 3, Special Interest Area - Anaesthesia for Hepato-Pancreato-Biliary Surgery: supervision level adjusted from level 4 to level 3 • Stage 3, Special Interest Area - Anaesthesia for Vascular Surgery (key capability C) : Slight amendment to reflect service delivery across the UK • Stage 3 - General Anaesthesia (paediatrics key capability N): supervision level adjusted from level 3 to level 2 for children aged 1-3
Version 1.2	01 November 2023	<ul style="list-style-type: none"> • Addition of non-clinical SIAs in <i>Safety and Quality Improvement</i> and <i>Research and Managing Data</i>
Version 1.3	15 April 2024	<ul style="list-style-type: none"> • Addition of non-clinical SIAs in <i>Management and Professional and Regulatory Requirements</i> and <i>Education and Training</i>
Version 1.4	15 August 2024	<ul style="list-style-type: none"> • Addition of flexibility for Stage 2 and Stage 3

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1 Introduction to the anaesthetics curriculum

This document identifies the purpose, content of learning, process of training, and the programme of assessment for postgraduate specialist training leading to a Certificate of Completion of Training [CCT] in Anaesthetics.

2 Purpose

2.1 Purpose of the anaesthetics curriculum

This purpose statement addresses the requirements of the 'GMC *Excellence by design: standards for postgraduate curricula*' to include a clear statement, addressing patient and service needs, and the scope of practice and level expected of those completing training.

The curriculum has a stated and clear purpose based on scope of practice, service, and patient and population needs.

The purpose of the anaesthetic curriculum is to enable doctors to become consultant anaesthetists with the generic professional and specialty specific capabilities to lead, develop and deliver high quality anaesthesia, and perioperative, critical care, and pain medicine. The curriculum provides a framework for training, articulating the standard required to work at consultant level and at critical progression points within the programme, as well as encouraging the pursuit of excellence in all aspects of clinical and wider practice.

The need for doctors to follow this training programme is clear; a nationwide survey of all UK hospitals in 2013 demonstrated that anaesthetists are responsible for the care of more than 3.5 million patients per year. This means that in a given year 1 in 20 of the population will require an anaesthetic.¹ The Centre for Workforce Intelligence (CfWI) in-depth review of anaesthesia and Intensive Care Medicine (ICM), published in 2015², reported that the demand for anaesthesia and ICM services is expected to exceed supply over the next 20 years. The report also identified an existing unmet need of 15% in anaesthesia. 16% of all hospital consultants are anaesthetists, making anaesthetics the single largest hospital specialty in the UK, and they play a critical role in the care of two-thirds of all hospital patients. Unlike many other specialties there is no potential for cross-cover from doctors in other specialties to meet the staffing gap for anaesthesia, as the ability to deliver a safe anaesthetic for even the most straightforward of cases is simply not part of the wider skill set of doctors outside of our specialty.

This curriculum seeks to provide a flexible, attractive programme for doctors training in anaesthetics; ensuring they have the opportunity to develop the full range of knowledge, skills, behaviours, and attributes needed to practice as a consultant anaesthetist in the NHS. The content of the curriculum reflects the wide range of clinical and professional skills required to meet the needs of clinical services across the whole of the UK.

Both clinical and non-clinical practice will be developed and evidenced through achievement of High-level Learning Outcomes (HLOs) across 14 domains, which advance in complexity and sophistication as anaesthetists progress through the 3 stages of the training programme. The HLOs to be achieved by the end of each stage of specialty training capture the skills, knowledge, and behaviours required, incorporating the General Medical Council's (GMC) Generic Professional Capabilities (GPCs)³ for all doctors-in-training and specialty-specific clinical learning outcomes.

¹ <https://www.rcog.ac.uk/news-and-bulletin/rcog-news-and-statements/nationwide-survey-of-all-uk-hospitals-shows-anaesthetic>

² In-depth review of the anaesthetics and intensive care medicine workforce. Centre for Workforce Intelligence, London, February 2015 (<http://bit.ly/2HdkP58>).

³ GMC GPC Framework, <https://www.gmc-uk.org/education/standards-guidance-and-curricula/standards-and-outcomes/generic-professional-capabilities-framework>

Figure 1 - the domains of learning

Domain	High-level Learning Outcome
Professional Behaviours and Communication	Demonstrates the professional values and behaviours that patients expect from their doctors
Management and Professional and Regulatory requirements	Undertakes managerial, administrative and organisational roles
Team Working	Contributes to teams to enhance patient care
Safety & Quality Improvement	Improves the quality and safety of patient care
Safeguarding	Identifies vulnerable people and takes appropriate action
Education and Training	Helps others to develop their professional practice
Research and Managing Data	Expands the understanding of anaesthetic practice
Perioperative Medicine and Healthcare Promotion	Facilitates safe multi-disciplinary peri-operative care and promotes the principles of public health interventions and efficient use of healthcare resources
General Anaesthesia	Provides safe and effective general anaesthesia
Regional Anaesthesia	Provides safe and effective regional anaesthesia
Resuscitation and Transfer	Resuscitates, stabilises and transfers critically ill patients safely
Procedural Sedation	Provides safe & effective sedation
Pain	Manages pain
Intensive Care	Manages critical illness

Training in anaesthetics will be divided into three distinct stages each of which has a specific critical progression point to move to the next stage or be recommended for the CCT.

Stage 1 (indicative three years): anaesthetists in training will be exposed to a comprehensive introduction to elective and emergency anaesthetic practice and perioperative care in areas that reflect 'generalist' anaesthetic practice. Time is spent gaining clinical experience primarily in a low to moderate risk patient population although there will be some supervised exposure to more complex cases. Time will also be spent developing relevant skills in ICM. Anaesthetists in training will complete the Primary FRCA examination during this stage of training.

Stage 2 (indicative two years): having gained knowledge of the principles underlying clinical anaesthetic practice at Stage 1, anaesthetists in training are introduced to wider areas of practice during Stage 2. The focus of this part of the training programme is twofold: an introduction to specialist areas of anaesthetic practice and consolidation of the skills gained in Stage 1 in 'generalist' practice with greater autonomy whilst developing skills in managing a higher risk patient population. Anaesthetists in training will complete the Final FRCA examination during this stage.

Stage 3 (indicative 2 years): the final stage of training will prepare anaesthetists for the transition to consultant practice. This final level of training allows them to mature for safe independent practice. The final stage of training also allows further development of the generic professional capabilities to a level appropriate for the award of a CCT in areas that include medical leadership, management responsibilities, and the ability to teach, train, and supervise others. This final stage equips anaesthetists with the expertise to manage complex clinical and organisational issues. The generic nature (to anaesthetic practice) of the clinical learning outcomes will allow opportunities for service providers to provide training in clinical areas in a manner that is flexible to meet service requirements and developments. Completion of stage 3 training will ensure that anaesthetists in training are fully prepared for consultant roles in generalist and/or specialist practice and will lead to the award of CCT.

During Stage 3 trainees will develop advanced skills that are transferable between generic and specialist areas of practice; all day-1 Anaesthetics CCT holders will be appointable to any Anaesthetics post advertised.

Training and assessment in each of the areas outlined in the domains will take place throughout each of the 3 stages of training.

This curriculum will train doctors to undertake the wide range of diverse roles that are associated with consultant anaesthetic practice throughout the UK. All anaesthetists will have the clinical and professional skills to manage and supervise elective and acute unselected perioperative care in an environment that includes a wide range of surgical specialties, maternity services, pain management and also to provide support for ICM and paediatric services in non-specialist centres. They will also have the capabilities to manage patients requiring specialist treatment until transfer to a definitive area of care. All anaesthetists at the completion of training are trained for "Generalist Practice".

Additionally, all anaesthetists will undertake specialist training in selected areas of practice such as major general surgery, obstetrics, complex trauma, cardiothoracic anaesthesia, neuroanaesthesia, paediatric anaesthesia, or chronic pain medicine, as well as have the potential to be specialty leads in DGHs in appropriate areas.

The GPCs and the specialty specific learning outcomes required will be identical throughout the duration of the training programme.

On completion of the training programme, an anaesthetist will be equipped with the competence and confidence to treat the full range of emergency and elective patients encountered in a typical general hospital, recognise and stabilise those who require tertiary care, before transferring them onward for definitive treatment.

The curriculum will not equip any doctor with the expertise to become a consultant in highly specialised areas of anaesthetic practice such as anaesthesia for children with significant cardiac abnormalities. However, it will provide the foundation stones for further development of such areas of practice, as per the UK Shape of Training Review⁴, once a legal and regulatory framework for credentialing is developed.

The curriculum considers interdependencies across related specialties and disciplines. It demonstrates that it has addressed the expectations of the service and healthcare system.

Anaesthetists underpin the safe provision of a wide range of essential NHS services and work, and interface with all other medical specialties and hospital teams, facilitating complex and routine surgery of all types by safe anaesthesia and perioperative care. As well as anaesthesia and perioperative care for elective and emergency surgical patients, anaesthetists are also essential to

⁴ UK Shape of Training Final Report

https://www.shapeoftraining.co.uk/static/documents/content/Shape_of_training_FINAL_Report.pdf_53977887.pdf

the provision of other services including maternity, critical care, acute and chronic pain management, management of trauma, resuscitation, stabilisation, and transfer of patients.

During its development, the curriculum has undergone extensive consultation with stakeholders including anaesthetists in training, trainers, Heads of Schools, and lay representatives. Input from appropriate external stakeholders from other related specialties (notably the Faculty of ICM and the Faculty of Pain Medicine) has been essential. Anaesthetic specialist societies and lay and patient groups have been consulted, to gain their insight into what they require and would want from a high-quality anaesthetic consultant. In addition, there has been formal consultation with the anaesthetic Clinical Directors network and NHS Employers and their equivalent in the devolved nations, and Conference Of Postgraduate Medical Deans (COPMeD) through the lead Postgraduate Dean.

The curriculum supports the flexibility and transferability of learning.

In the early stages of training, Anaesthesia will share transferability with the other specialties that make up the Acute Care Common Stem (ACCS) pathway (Emergency Medicine, Internal Medicine and ICM). On successful completion of these common areas, anaesthetists in training will be able to transfer the skills they have learnt between the anaesthetic and ACCS training programmes. Successful completion of appropriate elements of the anaesthetic curriculum will also be recognised towards the ICM CCT programme (as is currently the case).

By making the GPCs explicit within the curriculum design, ease of transfer between specialties as other curricula are reviewed to incorporate the GPCs is assured. HLOs can be evidenced by experience in a wide range of posts and environments, allowing flexibility to meet the needs of both the service and individual anaesthetists in training.

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 for the anaesthetics curriculum

The Shape of Training Review⁵ and the GMC's *Excellence by design: standards for postgraduate curricula*⁶ provide an opportunity to reform postgraduate training to produce a workforce fit for the needs of patients, producing a doctor who is more patient focused, more general and has more flexibility in career structure. The 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 and also to incorporate the GPCs framework⁷. The curriculum is constituted of seven generic professional domains and seven specialty-specific domains of learning outcomes to be achieved by all anaesthetists as they progress through each stage of training, and ultimately attain a CCT.

The curriculum for anaesthetics incorporates and emphasises the importance of the GPCs, which provide the educational articulation of Good Medical Practice⁸. Such common capabilities will promote flexibility in postgraduate training in line with the recommendations set out in the GMC's report to the four UK governments⁹, ensuring a sustainable model for anaesthetic training agile

⁵ https://www.shapeoftraining.co.uk/static/documents/content/Shape_of_training_FINAL_Report.pdf_53977887.pdf

⁶ <https://www.gmc-uk.org/education/standards-guidance-and-curricula/standards-and-outcomes/excellence-by-design>

⁷ <https://www.gmc-uk.org/education/standards-guidance-and-curricula/standards-and-outcomes/generic-professional-capabilities-framework>

⁸ <https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/good-medical-practice>

⁹ https://www.gmc-uk.org/-/media/documents/adapting-for-the-future-a-plan-to-improve-postgrad-med-training-flexibility_pdf-69842348.pdf

enough to respond to evolving patient need and service opportunities, as well as resulting in a more flexible, adaptable workforce.

The curriculum provides further detail and guidance as to how the HLOs can be achieved and demonstrated in section 5.

2.3 Development of the anaesthetics curriculum

Responsibility for the anaesthetics curriculum rests with the RCoA Training, Curriculum, and Assessment Committee. The committee established the Anaesthetic Curriculum Review Group (ACRG) with delegated responsibility for setting the direction of the curriculum revisions and overseeing and approving the review work. The group's membership represents a wide range of stakeholders including the President's Office, Council and Faculties, the Lead Dean for Anaesthetics, Regional Advisors Anaesthesia (RAAs), College Tutors, Clinical Directors, Anaesthetists in training, and lay/patient groups.

The curriculum for anaesthetics has been developed with the support and input of anaesthetists in training, consultants actively involved in delivering teaching and training across the UK, specialist societies, service representatives and lay persons. This has been through the work of the ACRG and its subgroups and at regular stakeholder engagement events.

2.3.1 Ongoing curriculum review

The curriculum will be reviewed regularly with an implementation date for any changes being not less than six months after their publication date. All changes to the curriculum are prospectively approved by the GMC before publication. When published, the curriculum document will be annotated with the same version number and will be available on the College website. A summary of changes will be published with the new version of the curriculum and available on the RCoA website.

Occasionally the RCoA Training, Curriculum, and Assessment Committee may have to take decisions that may affect the immediate interpretation or application of specific items in this curriculum document of supporting guidance manuals. These will be published as a 'Training Programme Update' circular to all RAAs and Deputy Regional Advisers (DRAAs), College Tutors, Training Programme Directors (TPDs) and Heads of Schools [or deanery/Local Education Training Board (LETB) equivalent], as well as being cascaded to anaesthetist in training groups and published on the College website.

2.4 The anaesthetics training pathway and duration of training

Doctors will enter anaesthetics training via a national recruitment process at either CT1 or ST4 level.

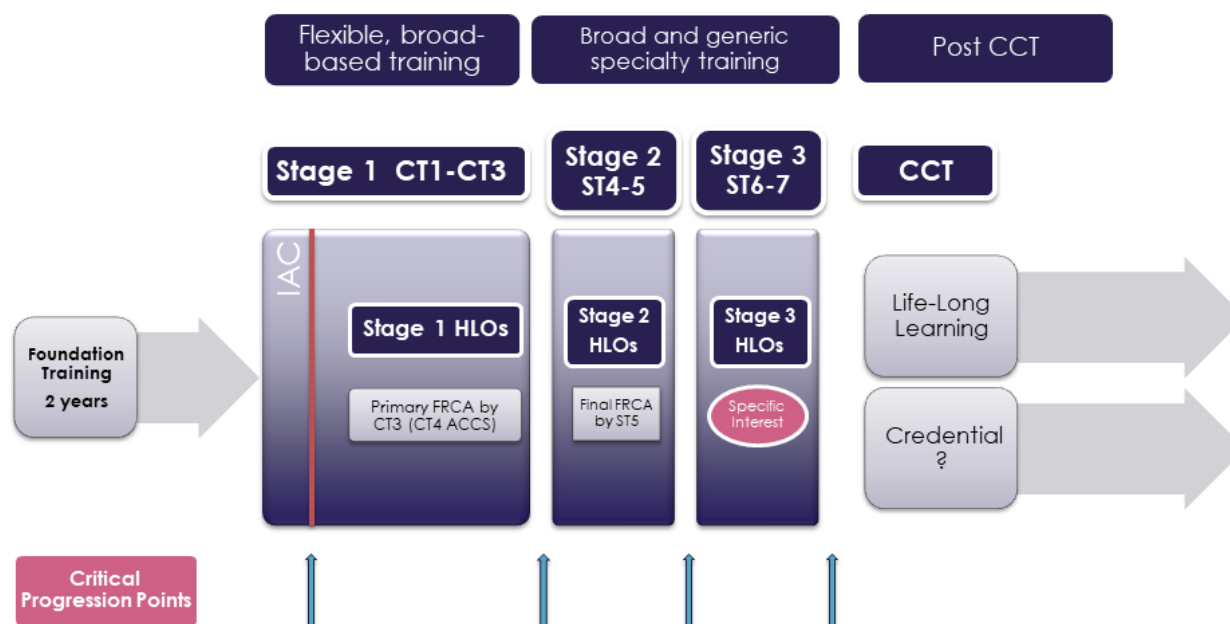
An alternative route into anaesthetic training at ST4 level is through completion of the ACCS curriculum. The ACCS curriculum sets out the learning requirements of a four-year programme of training in anaesthesia, internal medicine, emergency medicine and ICM. As such it covers some areas of the specialty curricula for the four specialty CCT programmes. Entry to ACCS training will be by competitive application under nationally agreed arrangements.

Anaesthetics is a craft specialty and much of the education and learning is acquired through experiential means and reflective practice with trainers. Learning is undertaken through a variety of formats including lectures, tutorials, seminars, simulation, e-learning and personal study.

Anaesthetic training is outcome-based rather than time-based. However, the indicative length of training is seven years from appointment to completion. There will be options for those anaesthetists in training who demonstrate exceptionally rapid development and acquisition of capabilities to complete training more rapidly than the current indicative time, although it is recognised that clinical experience is a fundamental aspect of development. There may also be a small number of

anaesthetists in training who develop more slowly and will require an extension of training in line with the Reference Guide for Postgraduate Specialty Training in the UK (the *Gold Guide*¹⁰). Those who choose less than full-time training (LTFT) will have their indicative training time extended pro-rata in accordance with the Gold Guide. LTFT anaesthetists in training should, pro-rata, undertake the same out-of-hours duties, including weekend duties, as full-time colleagues in the same programme and at the equivalent stage.

Figure 2 - the anaesthetics curriculum, and thus training programme, is divided into three stages



Stage 1 (indicative three years – CT1-CT3): anaesthetists in training will be exposed to a comprehensive introduction to elective and emergency anaesthetic practice and perioperative care in areas that reflect 'generalist' anaesthetic practice. The initial novice period will be directly supervised until the Initial Assessment of Competence progression point has been attained. Time is spent gaining clinical experience primarily in a low to moderate risk patient population although there will be some supervised exposure to more complex cases. Time will also be spent developing relevant skills in ICM. Anaesthetists in training will complete the Primary FRCA examination during this stage of training.

Stage 2 (indicative two years – ST4-ST5): Having gained knowledge of the principles underlying clinical anaesthetic practice at Stage 1, anaesthetists are introduced to wider areas of practice during Stage 2. The focus of this part of the training programme is twofold: an introduction to specialist areas of anaesthetic practice and consolidation of the skills gained in Stage 1 in 'generalist' practice with greater autonomy whilst developing skills in managing a higher risk patient population. Anaesthetists in training will complete the Final FRCA examination during this stage of training.

Stage 3 (indicative two years – ST6-ST7): the final stage of training will prepare anaesthetists in training for the transition to consultant practice. This final level of training allows them to mature the clinical skills required for safe independent practice. The final stage of training also allows development of the generic professional capabilities to a level appropriate for the award of a CCT in areas which include medical leadership, management responsibilities, and the ability to teach, train and supervise others. This final stage equips anaesthetists with the expertise to treat patients with complex clinical needs and manage organisational issues. The generic nature (to anaesthetic practice) of the clinical learning outcomes will allow opportunities for service providers to provide

¹⁰ <https://www.copmed.org.uk/gold-guide-7th-edition/the-gold-guide-7th-edition>

training in clinical areas in a manner that is flexible to meet service requirements and developments. Completion of stage 3 training will ensure that anaesthetists in training are fully prepared for consultant roles in generalist and specialist practice and will lead to the award of the CCT. During Stage 3 trainees will develop advanced skills that are transferable between generic and specialist areas of practice; all day-1 Anaesthetics CCT holders will be appointable to any Anaesthetics post advertised.

There are a number of specialties that may continue to accept two years of anaesthetics training as an entry route to higher speciality training in that specialty. To facilitate this, those anaesthetists in training who may wish to move to train in one of these alternative specialties once they have completed CT2, are advised that if they subsequently wish to return to anaesthetics higher training at a later date, they will be required to meet all of the domains of learning required for completion of Stage 1 in this curriculum.

3 Organisation and content of the curriculum – content of learning

3.1 Generic Professional Capabilities and Good Medical Practice



Figure 3 – the GMC's Generic Professional Capability Framework

The GMC has developed the GPC framework¹¹ with the Academy of Medical Royal Colleges (AoMRC) to describe the fundamental, career-long, generic capabilities required of every doctor. The framework describes the requirement to develop and maintain key professional values and behaviours, knowledge, and skills, using a common language. GPCs also represent a system-wide, regulatory response to the most common contemporary concerns about patient safety and fitness to practise within the medical profession. The framework will be relevant at all stages of medical education, training and practice.

Good Medical Practice (GMP)¹² is embedded at the heart of the GPC framework. In describing the principles, duties and responsibilities of doctors the GPC framework articulates GMP as a series of achievable educational outcomes to enable curriculum design and assessment. The GPC framework describes nine domains with associated descriptors outlining the 'minimum common regulatory requirement' of performance and professional behaviour for those completing a CCT or its equivalent. These attributes are common, minimum and generic standards expected of all medical practitioners achieving a CCT or its equivalent.

The 9 domains of the GPC framework are directly identifiable in the anaesthetics curriculum. They are mapped to each of the generic and specialty specific domains, which are in turn mapped to the assessment blueprints. This is to emphasise those core professional capabilities that are essential to safe clinical practice and that they must be demonstrated at every stage of training as part of

¹¹ GMC GPC Framework, <https://www.gmc-uk.org/education/standards-guidance-and-curricula/standards-and-outcomes/generic-professional-capabilities-framework>

¹² GMC Good Medical Practice, <https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/good-medical-practice>

the holistic development of responsible professionals. This approach will allow early detection of issues most likely to be associated with fitness to practise and to minimise the possibility that any deficit is identified during the final phases of training.

3.2 Domains of learning

The anaesthetics curriculum contains 14 domains that describe the standard that anaesthetists must demonstrate as they progress through training and ultimately attain a CCT. Anaesthetists in training are required to demonstrate achievement of both the generic professional and specialty-specific domains throughout their training period.

Each domain has a **High-level Learning Outcome (HLO)** that sets the scene for what constitutes an anaesthetist.

Below that is a **stage learning outcome** that provides a description of attainment to be achieved at the end of that stage in order to progress to the next.

Next follows a set of **key capabilities** that are mandatory capabilities that must be evidenced by anaesthetists in training to meet the stage learning outcome. These are also therefore mapped to the GPC framework.

Every HLO at each stage of training includes a selection of **examples of evidence** that give the range of clinical contexts that anaesthetists in training may use to support their achievement of the key capabilities, as well as suggested assessment methods. These are intended to provide a prompt to the anaesthetist in training and their trainers as to how the overall outcomes may be achieved. They are not intended to be exhaustive and there are many more examples that would provide equally valid evidence of performance. In addition, excellent anaesthetists in training may produce a broader portfolio of evidence that demonstrates deeper learning. It is not expected that anaesthetists in training provide a set quota of evidence; the aim of assessment is to provide adequate, robust evidence against every key capability to demonstrate acquisition of the HLOs at each stage.

Satisfactory achievement for each stage of training requires demonstration that, for each of the HLOs, the anaesthetist in training's performance meets or exceeds the minimum requirements as described. This will require educational supervisors to make a global judgement indicating whether satisfactory progress for the defined stage of training has been made. More detail is provided in the programme of assessment section of the curriculum.

3.3 Practical procedures

There are a number of procedural skills in which an anaesthetist in training must become proficient to the level expected by the end of training. They must be able to outline the indications for these procedures and recognise the importance of valid informed consent, and of requesting help when appropriate. For all practical procedures the anaesthetist in training must be able to recognise complications and respond appropriately if they arise, including calling for help from colleagues in other specialties when necessary.

Anaesthetists in training should *ideally* receive training in all procedural skills in a simulated setting before performing these procedures clinically. When the anaesthetist in training has been signed off as being able to perform a procedure independently, they are not required to have any further assessment (eg DOPS) of that procedure, unless they or their educational supervisor thinks that this is required (in line with standard professional conduct).

The procedural skills are an essential component to meet some key capabilities in the respective stage of the relevant domains. A list of practical procedures to be covered by stage 1 to 3 (in brackets) by all anaesthetists-in-training, but not including any related to the special interest areas, is included in Annex F.

4 Programme of learning

4.1 The training programme

The organisation and delivery of postgraduate training is currently the responsibility of the Health Education England (HEE) and Deaneries, NHS Education for Scotland (NES), Health Education and Improvement Wales (HEIW) and the Northern Ireland Medical and Dental Training Agency (NIMDTA). A TPD will be responsible for coordinating the anaesthetic training programme in each School of Anaesthesia with a College Tutor in each trust or hospital.

Progression through the programme will be determined by the annual review of curriculum progression (ARCP) process (section 5.8) and the training requirements for each indicative stage of training are summarised in the Anaesthetic ARCP decision aid. The successful completion of each stage of training will be dependent on achieving the expected level of attainment in all domains. The programme of assessment will be used to monitor and determine progress through the programme. Training will normally take place in a range of settings, e.g. in the community, district general hospitals, large teaching hospitals.

The sequence of training **should ensure appropriate progression in experience and responsibility**. The training to be provided at each training site will be designed to ensure that, during the programme, the entire curriculum is covered and also that unnecessary duplication and educationally unrewarding experiences are avoided. The sequence of training should be flexible enough to allow the anaesthetist in training to develop a special interest.

The College recognises that due to geographical considerations, regional service configuration and the availability of some specialties within some Schools of Anaesthesia, the delivery of Stage 2 and Stage 3 curriculum may benefit from flexibility which would also help support Schools to reduce the frequency of rotations, as well as facilitate progression through the training programme.

This flexibility should only be needed in exceptional circumstances but will be available to Schools to implement locally to reflect educational and service capacity and capability and **enable the attainment of specific curricular outcomes**. Where flexibility between Stage 2 and Stage 3 has been **prospectively approved** by the Training Programme Director, any deferred capabilities must be documented at the next ARCP on the LLP ARCP outcome form [see section 5.5.1]. The indicative training time for ST training remains 48 months full time equivalent.

Schools of Anaesthesia will need to consider the appropriate breadth of experience and expected level of performance that must be considered during this phase of the training programme, before such flexibility may be applied.

In particular, there will need to be a focus on the scope of practice and breadth of experience at the point of flexibility and the specific local training arrangements and supervision requirements to enable transitions and maintain patient safety. This may include the potential impact of a change in training site and arrangements for educational supervision.

4.2 The training environment

This curriculum should be used to help design training programmes locally that ensure all anaesthetists can develop their anaesthetic practice in a variety of settings and situations. It is designed to ensure that it can be applied in a flexible manner, meeting service needs as well as supporting each anaesthetist in training's learning and development plan. The requirements for the provision of training 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* (2017)¹³. This stipulates that all training must comply with the following ten standards:

4.2.1 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.

4.2.2 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.

4.2.3 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.

4.2.4 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.

4.2.5 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 developed and 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 HEE and its local offices, NES, HEIW, and NIMDTA to ensure compliance with these standards for anaesthetic training, and to notify the RCoA if further support is required in achieving this. Training delivery must also comply with the requirements of the latest edition of the COPMeD's 'Gold Guide'.

¹³ GMC Promoting excellence: standards for medical education and training (2017) https://www.gmc-uk.org/-/media/documents/Promoting_excellence_standards_for_medical_education_and_training_0715.pdf_61939165.pdf

4.3 Learning methods

Anaesthetics is a craft specialty and much of the education and training is acquired through experiential learning and reflective practice with trainers. A variety of learning experiences enable the achievement of the capabilities described in the domains. There will be a balance of different learning methods from formal teaching programmes to experiential learning 'on the job'. The proportion of time allocated to each method may vary depending on the nature of the attachment within a rotation, which should be constructed to enable the anaesthetist in training to experience the full range of educational and training opportunities.

4.3.1 Practice-based experiential learning

Anaesthetic training 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 anaesthetists in training and the programme of placements is decided by the local faculty for education within a location.

A minimum of three supervised sessions per week (averaged over three to six months) is required to ensure sufficient workplace based learning to allow most anaesthetists in training to progress to CCT within the seven-year indicative length of the programme; this figure is based on many years of experience. It is accepted that there may be variation from week to week depending on local work patterns and the structure of individual school programmes of training, and that the number of sessions required, in the various settings, to meet curriculum requirements will vary according to the stage of training and the individual interests of the anaesthetist in training as they progress.

To ensure patient safety, anaesthetists in training new to the specialty must, at all times, be directly supervised until they have passed the Initial Assessment of Competence (IAC). This is also the case for those new to special interest areas of practice. These concentrated periods of supervision are essential to ensure that anaesthetists in training complete all the required learning outcomes in a very full programme. Following this, the appropriate level of supervision for the anaesthetist's level of competence should be provided.

It is important to ensure that supervised sessions have relevance to the curriculum and stage that individual anaesthetists in training are undertaking at the time; the concept of a balanced programme of training is essential.

4.3.2 Independent self-directed learning

Anaesthetists in training will use this time in a variety of ways depending upon their stage of learning. Suggested activities include:

- reading, including web-based material such as e-Learning for Healthcare (e-LfH)
- maintenance of personal portfolio (self-assessment, reflective learning, personal development plan)
- audit, quality improvement and research projects
- reading journals
- achieving personal learning goals beyond the essential, core curriculum.

4.3.3 Learning with peers and colleagues

There are many opportunities for anaesthetists in training to learn with their peers and colleagues. Local postgraduate teaching opportunities allow anaesthetists of varied levels of experience to come together for small group sessions. Examination preparation encourages the formation of self-help groups and learning sets.

4.3.4 Formal postgraduate education sessions

The content of formal postgraduate education sessions and access to other more formal learning opportunities are determined by the local faculty of anaesthetic education and will be based on the curriculum. There are many opportunities throughout the year for formal teaching locally and at regional, national and international meetings. Many of these are organised by the RCoA.

Where appropriate formal teaching/meetings should include the multi-professional team. Access should also be provided to key meetings within the service. Suggested activities include:

- a programme of formal 'bleep-free' regular teaching sessions to cohorts of anaesthetists in training
- attendance and presentation at mortality and morbidity meetings
- case presentations
- research, audit and quality improvement projects
- attendance and presentation at governance and risk meetings
- lectures and small group teaching
- clinical skills demonstrations and teaching
- critical appraisal and evidence-based medicine and journal clubs
- joint specialty and multi-professional meetings
- attendance at training programmes organised on a deanery or regional basis, which are designed to cover aspects of the training programme outlined in this curriculum.

4.3.5 Simulation training

Procedural competency training, using simulation aimed at achieving technical competence for certain anaesthetic procedures should be provided as early as possible in CT1. Scenario-based immersive simulation training is expected to be undertaken in Stage 1 in all relevant specialty specific learning outcomes, with human factors incorporated into the scenarios where appropriate.

Simulation training within anaesthetic practice is a developing field and will also be expected to be incorporated into Stage 2 and 3 learning to enable anaesthetists in training to meet the required Stage key capabilities and learning outcomes in line with the RCoA Simulation Strategy developments.

In addition anaesthetists in training will need to learn to be simulation training faculty members and this should be facilitated.

Examples of simulation-based learning activities that should be used to deliver aspects of Stage 1 of the curriculum include, but are not limited to:

- Novice Anaesthesia Skills and Drills
- Assessment of failed intubation drill
- Critical incident training
- Anaesthetic care in the labour suite and obstetric theatre
- Assessment of general anaesthesia for Caesarean section
- Vascular access
- Transfer training course.

Critical incident training should be undertaken more specifically in year 1 of Stage 1 rather than at any time in Stage 1 and should be revisited again in Stages 2 and 3 in order to address the development of more advanced skills and capabilities pertinent to the more experienced anaesthetist in training and their level of responsibility in practice.

4.3.6 Formal study courses

Time to be made available for formal courses is encouraged, subject to local conditions of service. Examples include life support, management and communication courses.

4.3.7 Educational development time

In order to facilitate the acquisition of the essential generic capabilities required for safe, effective and high quality medical care as prescribed by the GMC GPC framework, and to recognise the contribution anaesthetists in training make outside of the clinical setting, the RCoA recommends that local Schools of Anaesthesia consider mechanisms to enable and encourage trainee involvement in research, audit and quality improvement, as well as allowing time for them to work on publications and presentations and participate in teaching and aspects of hospital management. One way to do so is to allow educational development time to help the development of these important skills and the RCoA recommends that this approach, or something similar, is taken by schools for all anaesthetists in training, although the amount of time required may vary throughout the training programme.

4.4 Academic training

All anaesthetists in training are complete the requirements of the domain in '*Research and managing data*'. Anaesthetists are encouraged to participate in clinical research and collaborative trials to achieve the required outcomes, as well as in journal clubs, literature and systematic review, and to make contributions to the publication of novel findings in peer reviewed journals. Understanding of the principles of research, its interpretation and the safe implementation of evidenced based new methods, processes and techniques is essential for the modern, progressive practice of anaesthesia and in the interests of patients and the service.

Anaesthetists in training may train in academic anaesthesia as an academic clinical fellow (ACF) or equivalent. Academic posts are usually recruited to in the first three years of training, although it may be necessary to have completed the Primary FRCA prior to entry¹⁴. Some anaesthetists in training may opt to do research leading to a higher degree without being appointed to a formal academic programme. This new curriculum should not impact in any way on the facility to take time out of programme for research (OOPR) but as now, such time requires discussion between the anaesthetist, the TPD, and the Deanery as to what is appropriate, together with guidance from the RCoA that the proposed period and scope of study is sensible. Anaesthetists in training following this route need to complete all the essential elements of the anaesthetic 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.

The four nations have different arrangements for academic training and anaesthetists in training should consult their Deanery for further guidance.

4.5 Dual training in anaesthetics and Intensive Care Medicine (ICM)

Training in ICM is an integral part of anaesthesia training. The skills learned in managing critically ill patients in the intensive care environment are transferable and contribute to the skills required in managing patients across the perioperative period. The development of these skills and knowledge directly contribute to patient safety and patient care outcomes.

Anaesthetists in training may apply competitively for a dual CCT post in Anaesthetics and ICM. Anaesthetics anaesthetists in training wishing to follow a dual CCT programme should contact their local Regional Adviser in ICM or see the Faculty of Intensive Care Medicine website (www.ficm.co.uk) for more information on the ICM CCT.

¹⁴ Guidance on academic training in anaesthesia and perioperative medicine (2018) <https://www.niaa.org.uk/Academic-Training-Guidance-2018#pt>

Anaesthetists in training who follow the dual CCTs route will obtain a proportion of their anaesthesia outcomes during their ICM training and vice versa. These transferable outcomes are documented in the revised Dual CCTs guidance produced by the RCoA and the FICM, which is available on both the RCoA and FICM websites.

4.6 Requests to complete training as a locum consultant

Time spent in a Locum Consultant appointment does not count toward the CCT/CESR[CP]: only time spent in a GMC approved training programme counts toward the CCT/CESR[CP]. It is recognised, however, that some anaesthetists in training towards the end of their training benefit from being allowed to 'act up' in a consultant capacity.

If the period of acting up as a consultant is deemed by the Deanery/College to be a normal part of the anaesthetic CCT training programme and is intended to count towards the anaesthetist in training's CCT/CESR[CP] then GMC approval is not needed because this is already an approved element of the training programme. Acting up should usually only be allowed within the anaesthetist in training's own programme with the agreement of the local Training Committee, the Training Programme Director and the Clinical Director of the hospital concerned. The anaesthetist in training will retain their NTN and continue to be supervised by and be responsible to the local Training Committee. It is essential that at all times the anaesthetist in training has immediate access to consultant advice and understands that he or she is still in training until completion of the CCT/CESR[CP].

Such a post can only occur within the last three months of training with the proviso that the anaesthetist in training must have satisfactorily completed all other aspects of the training programme. Anaesthetists in training wishing to take up this option should apply directly to the Training Department at the College with the support of their Training Programme Director.

If, however, the period of acting up as a consultant is not deemed to be a normal part of the anaesthetic CCT training programme and the anaesthetist in training still wishes this to count towards their CCT/CESR[CP], then prospective approval must be sought from the GMC in the same way as other out of programme training.

5 Programme of Assessment

5.1 Purpose of assessment

The purpose of the programme of assessment is to:

- assess anaesthetists in training's actual performance in the workplace
- encourage the development of the anaesthetist in training as an adult responsible for their own learning
- enhance learning by providing formative assessment, enabling the anaesthetists in training 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 anaesthetists and motivating them to ensure they receive suitable training and experience
- demonstrate anaesthetists in training have acquired the GPCs and meet the requirements of good medical practice
- ensure that anaesthetists in training possess the essential underlying knowledge required for their specialty
- provide robust, summative evidence that anaesthetists in training are meeting the curriculum standards during the training programme
- inform the ARCP process, identifying any requirements for targeted or additional training where necessary and facilitating decisions regarding progression through the training programme
- identify anaesthetists in training who should be advised to consider a change of career direction.

5.2 Programme of assessment

Our programme of assessment refers to the integrated framework of examinations, assessments in the workplace and judgements made about an anaesthetist in training during their approved programme of training. The purpose of the programme of assessment is to robustly evidence, and clearly communicate the expected levels of performance and ensure these are met on an annual basis and at other critical progression points in, and to demonstrate satisfactory completion of, training as required by the curriculum. Detailed guidance has been drafted to assist trainers and anaesthetists in training.

The programme of assessment comprises the use of a number of individual assessment tools. These include the FRCA examinations, which encompass the 'knowledge requirements' that underpin the curriculum and have been mapped to the FRCA and will form the syllabus for each component of the examinations, as well as summative and formative supervised learning events. A range of assessments is needed to generate the necessary evidence required for global judgements to be made about satisfactory performance, progression in, and completion of, training. All assessments, including those conducted in the workplace, are linked to the relevant learning outcomes (eg through the blueprinting of assessment system to the stated curriculum outcomes).

The programme of assessment emphasises the importance and centrality of professional judgement in making sure anaesthetists in training have met the expected level of attainment in the domains at each stage of training, as set out in the approved curriculum. It also focuses on the anaesthetist as a reflective practitioner. Assessors will make accountable, professional judgements on whether progress has been made. The programme of assessment explains how professional judgements are used and collated to support decisions on progression and satisfactory completion of training.

Assessments will be supported by structured feedback for anaesthetists in training. Assessment tools, which are well established in anaesthetic training, will be both formative and summative and have been selected on the basis of their fitness for purpose and their familiarity to anaesthetists in training and trainers.

Anaesthetists in training will be assessed throughout the training programme, allowing them to continually gather evidence of learning and to provide formative feedback. Those assessment tools which are not identified individually as summative will contribute to summative judgements about an anaesthetist in training's progress as part of the programme of assessment. The number and range of these will ensure a reliable assessment of the training relevant to their stage of training and achieve coverage of the curriculum.

Reflection and feedback should be an integral component to all supervised learning events. Every clinical encounter can provide a unique opportunity for reflection and feedback and this process should occur frequently – and as soon as possible after any event to maximise benefit for the anaesthetist in training. Feedback should be of high quality and should include an action plan for future development for the anaesthetist in training. Both anaesthetists in training and trainers should recognise and respect cultural differences when giving and receiving feedback.

5.3 The Fellowship of the Royal College of Anaesthetists (FRCA)

The FRCA examinations will continue to be overseen by the Examinations Committee and Examinations Department. No major planned changes to the content of the examinations are expected as a result of this new curriculum; the existing question banks have been reviewed by examiners with the contents being mapped to the new structure and appropriate blueprints developed as part of the Assessment Strategy. Other planned changes to examinations will continue to be implemented as expected and future changes will be highlighted in the planned assessment strategy document.

The Primary FRCA is to be completed by the end of CT3 and the final FRCA by the end of ST5, notwithstanding any remedial time allocated.

5.4 Assessment of High-level Learning Outcomes

The assessment process contains both formative and summative elements, which are detailed in section 5.7. All assessments are reviewed at the ARCP.

5.4.1 Formative assessment

Formative assessment is *assessment for learning*. The goal of formative assessment is to monitor progress in order to offer ongoing constructive feedback with the aim of improving performance. In formative assessment there is no grade or mark, no pass or fail. Formative assessment must provide good quality feedback; without this the process loses its purpose. The main formative assessments used in the curriculum are the Supervised Learning Events (SLEs).

SLEs are *only one* source of evidence towards the attainment of a learning outcome. Their purpose is to demonstrate engagement of trainers and anaesthetists in training in professional educational conversations alongside the logbook and consultant feedback. Further examples of how anaesthetists in training might provide evidence of achievement of key capabilities and higher learning outcomes will be included in the examples of evidence section that accompanies each learning outcome. These will include activities such as teaching, course attendance and quality improvement projects.

The anaesthetic curriculum is outcomes-based. Key capabilities (knowledge or skills) relating to each learning outcome in the curriculum are listed in annexes at the end of this document. The key capabilities may be assessed by SLEs and these, along with other evidence, may be used to demonstrate their attainment and therefore achievement of the learning outcomes at each stage of training.

5.4.2 Summative assessment

Summative assessment is *assessment of learning* and results in a mark or grade, pass or fail. The goal of summative assessment is to test knowledge or performance against set criteria to meet the key capabilities.

5.5 Critical Progression Points

There are four critical progression points during anaesthetic training:

5.5.1 Critical progression point 1: Initial Assessment of Competence (IAC)

This is the first component of training and in practice normally takes between three and six (indicative) months for most doctors to achieve. It is a summative assessment and anaesthetists in training must complete it in its entirety before trainers consider whether it is acceptable for them to progress to undertake aspects of clinical anaesthetic practice without direct supervision. It is important that anaesthetists and their trainers recognise that possession of the IAC does not imply that an anaesthetist in training may deliver direct anaesthetic care to patients without continuing appropriate supervision, but is the first milestone in the training programme.

5.5.2 Critical progression point 2: End of Stage 1 (CT3)

To complete Stage 1 training successfully, the anaesthetist in training must pass the Primary FRCA in its entirety, as well as attaining all of the generic and specialty learning outcomes required for that stage of training. In signing the *Stage One Training Certificate*, trainers must be satisfied that the anaesthetist in training has obtained the required level of achievement in all of the learning outcomes for stage 1. If this is not the case, then the anaesthetist in training requires additional training time, as detailed in the Gold Guide. Satisfactory completion of Stage 1 is a prerequisite for eligibility for recruitment, and entry, to stage 2 of the anaesthetic training programme.

Additionally, The *Initial Assessment of Competence in Obstetric Anaesthesia (IACOA)* must be obtained by all anaesthetists in training during stage 1, before being considered safe to work in an obstetric unit without direct supervision. It is recommended that this is attained after a block of obstetric anaesthetic training, usually commenced after one year in programme. Achieving the IACOA does not signal meeting the obstetric anaesthetic capabilities of Stage 1 training.

5.5.3 Critical progression point 3: End of Stage 2 (ST5)

To complete Stage 2 training successfully, the anaesthetist in training must pass the Final FRCA in its entirety, as well as attaining all of the generic and specialty learning outcomes required for that stage of training. In signing the *Stage Two Training Certificate*, trainers must be satisfied that the anaesthetist in training has obtained the required level of achievement in all of the learning outcomes for stage 2. If this is not the case, then the anaesthetist in training requires additional training time, as detailed in the Gold Guide. A satisfactory ARCP outcome will be required for entry to Stage 3 training (ST6-7).

5.5.4 Critical progression point 4: End of training (ST7)

The final progression point is at the end of training when anaesthetists in training will be required to demonstrate that they have met the specified standard in all of the HLOs for the end of this final stage of training. Trainers must be satisfied that this is the case and a satisfactory outcome will be required before signing a *Stage 3 Training Certificate* in order that an anaesthetist in training can apply for the award of a CCT.

5.5.5 Flexibility for Stage 2 and Stage 3

The College recognises that due to geographical considerations, regional service configuration and the availability of some specialties within some Schools of Anaesthesia, the delivery of Stage 2 and Stage 3 curriculum may benefit from flexibility which would also help support Schools to reduce

the frequency of rotations, as well as facilitate progression through the training programme. This flexibility should only be needed in exceptional circumstances but will be available to Schools to implement locally to reflect educational and service capacity and capability and **enable the attainment of specific curricular outcomes**.

It is expected that, where possible, Stage 2 training will be delivered entirely within the indicative two-year period (ST4 and ST5) and the indicative time for completion of stage 2 and 3 would be 48 months full time equivalent (FTE).

In exceptional circumstances, if flexibility is required, **prospective approval** should be sought from the Training Programme Director. If approved, the following rules would apply:

- The option to defer Stage 2 capabilities or advance Stage 3 capabilities is within the boundaries of the last 6 months of ST5 and the first 6 months of ST6
- Anaesthetists in training must achieve the Final FRCA examination in its entirety by the end of ST5, before they can officially start ST6. Failure to do so would prevent progression to ST6 and the likely need for an extension to training through an ARCP Outcome 3
- Some areas of the curriculum such as neuroanaesthesia, cardiothoracic and paediatrics may have geographical constraints that affect training programmes. Schools may be able to defer some of those into the first 6 months of ST6 allowing some Stage 3 general capabilities to be acquired instead in the last 6 months of ST5 if that facilitates local delivery of training and supports progression through the training programme
- Special Interest Area (SIA) training cannot be undertaken until the Final FRCA is completed
- The Stage 2 Training Certificate can be issued when all Stage 2 domains of learning are completed and the Final FRCA is passed in its entirety
- Where flexibility between Stage 2 and Stage 3 has been approved, deferred capabilities must be documented at the next ARCP on LLP ARCP form. The indicative training time for ST training remains 48 months FTE.

Schools of Anaesthesia will need to consider the appropriate breadth of experience and expected level of performance that must be considered during this phase of the training programme, before such flexibility may be applied.

In particular, there will need to be a focus on the scope of practice and breadth of experience at the point of flexibility and the specific local training arrangements and supervision requirements to enable transitions and maintain patient safety. This may include the potential impact of a change in training site and arrangements for educational supervision.

Where flexibility is approved, the specific learning outcomes that learners must demonstrate to complete training and to move through critical progression points will be clearly identified and monitored by the local training organisation and trainers.

The principles of the existing Programme of Assessment will continue to be sequenced and applied across the curriculum, including where flexibility between Stage 2 and 3 has been undertaken, to ensure patient and training safety around critical progression points.

Review of monitoring of such episodes of flexibility will be carefully managed and decisions to progress will be based on robust evidence of satisfactory performance.

5.6 Domains and High-level Learning Outcomes

The tables below provide a high-level description of attainment to be achieved, in each of the domains, at the end of each stage of training in order to progress to the next. A copy of this grid including mapping to the Generic Professional Capabilities and domains of Good Medical Practice can be found in Annex A.

Figure 4 - Generic professional domains of learning

Domain	Professional Behaviours and Communication	Management and Professional and Regulatory Requirements	Team Working	Safety & Quality Improvement	Safeguarding	Education and Training	Research and Managing Data
High-level Learning Outcome	Demonstrates the professional values and behaviours that patients expect from their doctors	Undertakes managerial, administrative and organisational roles	Contributes to teams to enhance patient care	Improves the quality and safety of patient care	Identifies vulnerable people and takes appropriate action	Helps others to develop their professional practice	Expands the understanding of anaesthetic practice
Stage 1 Learning Outcome	Demonstrates the professional values and behaviours required of doctors in training	Understands and undertakes managerial, administrative and organisational roles expected of all doctors	Works effectively as a member of a clinical team	Understands and applies quality improvement methodology Applies the principles of patient safety to their own clinical practice	Describes the importance of safeguarding vulnerable people	Takes responsibility for their own education and training needs and contributes to departmental education	Is research aware: Demonstrates an understanding of the evidence-based approach to anaesthetic and perioperative care
Stage 2 Learning Outcome	Demonstrates the professional values and behaviours required of senior anaesthetists in training	Understands and undertakes managerial, administrative and organisational roles expected of senior anaesthetists in training	Demonstrates safe and effective followership and leadership in clinical teams	Leads a local quality improvement project Applies the principles of patient safety in the hospital context	Recognises safeguarding concerns in patients and healthcare professionals	Plans, delivers and reflects on educational activities provided to other learners	Is research ready: Develops critical appraisal skills; gains a broader understanding of data management and research methodology; communicates research evidence to patients and colleagues in a meaningful way
Stage 3 Learning Outcome	Demonstrates the professional values and behaviours required to be a consultant	Understands and undertakes managerial, administrative and organisational roles expected of consultants	Leads and participates in complex and diverse teams in all situations	Supervises a local quality improvement project and participates in regional or national quality improvement projects Uses a systems approach to creating, maintaining and improving safety	Evaluates and instigates initial management of safeguarding concerns	Meets the requirements of a clinical supervisor (as defined by the GMC)	Is research experienced: Has engaged with research; applies the governance involved in research; evaluates and communicates research findings clearly

Figure 5 - Specialty specific domains of learning

Domain	Perioperative Medicine and Health Promotion	General Anaesthesia	Regional Anaesthesia	Resuscitation and Transfer	Procedural Sedation	Pain	Intensive Care
High-level Learning Outcome	Facilitates safe multi-disciplinary peri-operative care and promotes the principles of public health interventions and efficient use of healthcare resources	Provides safe and effective general anaesthesia	Provides safe and effective regional anaesthesia.	Resuscitates, stabilises and transfers critically ill patients safely.	Provides safe & effective sedation	Manages pain	Manages critical illness
Stage 1 Learning Outcome	Identifies clinical and social challenges that increase risk for patients undergoing surgery Appreciates the principles of sustainability in clinical practice	Provides safe and effective general anaesthesia with distant supervision for ASA 1-3 patients undergoing non-complex elective and emergency surgery within a general theatre setting	Performs simple peripheral nerve blocks and performs spinal and lumbar epidural anaesthesia/analgesia independently	Able to recognise and initiates resuscitation of the deteriorating patient Works as an effective member of the medical emergency team Cares for stable critically ill adult patients independently during inter-hospital transfers by road	Provides safe procedural sedation to ASA 1-3 patients within the theatre complex	Recognises, assesses and treats acute pain independently Differentiates between acute and chronic pain	Provides safe and effective care for critically ill patients under close supervision
Stage 2 Learning Outcome	Works with patients to reduce the risks associated with surgery	Provides safe and effective general anaesthesia with distant supervision for ASA 1-3 patients undergoing non-complex elective and emergency surgery within all settings	Performs a wider range of regional anaesthetic techniques	Able to manage the ongoing care of post-resuscitation patients Independently cares for critically ill adult patients during inter-hospital transfers by road	Provides safe sedation to ASA 1-3 patients and children in any location within the hospital	Understands the aetiology and management of acute, acute on chronic and chronic pain	Provides safe and effective care for critically ill patients with specialist help and guidance
Stage 3 Learning Outcome	Manages peri-operative care at an individual and service-wide level Applies the principles of sustainability to clinical practice	Provides safe and effective general anaesthesia independently for all patients undergoing non-specialist procedures and for patients within defined areas of a special interest	Delivers a range of safe and effective regional anaesthetic techniques to cover the upper and lower limb, chest wall and abdominal wall independently	Is able to lead the multidisciplinary team for all patients requiring resuscitation from any cause, subsequent stabilisation and post-resuscitation care Able to supervise inter-hospital transfers and evaluate the necessary resources for patient transfers	Delivers safe and effective procedural sedation independently	Able to initiate complex pain management for in-patients and to sign-post to appropriate pain management services	Provides safe and effective care for critically ill patients with specialist help and guidance

5.7 Evidence of progress

The following methods will provide evidence of progress in the integrated programme of assessment. The requirements for each training year/level are stipulated in the ARCP decision guidance; checklists for anaesthetists in training and for educational supervisors can be found on the College website. Evidence is a crucial concept in this curriculum, and as well as the methods

listed below, can include other sources, such as the Personal Development Plan, quality improvement project or logbook summaries. The anaesthetist in training will collect evidence to support their acquisition of the requirements for each of the domains, and the Educational Supervisor will use it to make a global judgement indicating whether the anaesthetist in training has made satisfactory progress for the defined stage of training. These methods are described briefly below. More information and guidance for anaesthetists in training and trainers will be available in the 'Guide to Anaesthetics Training'.

5.7.1 Summative assessment

Summative assessment is *assessment of learning* and results in a mark or grade, pass or fail. The goal of summative assessment is to test knowledge or performance against set criteria. The summative assessment in the anaesthetic training programme takes the following forms:

- Fellowship of the Royal College of Anaesthetists (FRCA) examinations: Primary and Final
- Initial Assessment of Competence (IAC)
- Initial Assessment of Competence in Obstetric Anaesthesia (IACOA)
- Holistic Assessment of Learning (HALO) form
- Multiple Trainer Reports (MTR)
- Educational supervisors structured report (ESSR)
- Entrustable Professional Activities (EPAs).

5.7.2 Formative assessment

Formative assessment is *assessment for learning*. The goal of formative assessment is to monitor progress in order to offer ongoing constructive feedback with the aim of improving performance. In formative assessment there is no grade or mark, no pass or fail. Formative assessment must provide good quality feedback; without this the process loses its purpose.

SLEs have been in use for over ten years and in that time have been revised so that they emphasise their formative function¹⁵. Integral to the SLEs are reflection on the learning event by the anaesthetist in training and feedback from the assessor. The purpose of feedback is to inform the learner about their work in relation to what is expected and direct them on how to improve. As part of this feedback the assessor can indicate what level of supervision the anaesthetist in training requires for that task or case and how they can improve in order to reach the level of supervision required. To facilitate this, levels of supervision have been developed and a supervision/entrustment scale is included on some of the SLEs.

A supervision scale will be used in a formative way to demonstrate progress by the trainee. It will be used to inform summative assessments such as the IAC and IACOA.

Figure 6 – The levels of supervision

1	Direct supervisor involvement, physically present in theatre throughout
2A	Supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals
2B	Supervisor within hospital for queries, able to provide prompt direction/assistance
3	Supervisor on call from home for queries able to provide directions via phone or non-immediate attendance
4	Should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols)

¹⁵ Norcini, J. and Burch, V. (2007), 'Workplace Based Assessments as an Educational Tool: AMEE Guide 31'. *Medical Teacher*, vol. 29, pp 855-871.

The educational supervisor should review the SLE with the anaesthetist in training to see how they are progressing and to ensure that they are acting on feedback received.

The main formative assessments used in the curriculum are the SLEs:

- Anaesthetic Clinical Evaluation Exercise [A-CEX]
- Anaesthetic List/Clinic/Ward Management Assessment Tool [ALMAT]
- Direct Observation of Procedural Skills [DOPS]
- Case Based Discussion [CBD]
- Logbook
- Multi-Source Feedback [MSF]
- Anaesthetic Quality Improvement Project Assessment Tool [A-QIPAT]
- Multiple Trainer Report (MTR)

5.7.3 [SLEs](#)

Each individual SLE is designed to assess a range of important aspects of performance in different training situations. Taken together they can assess the breadth of knowledge, skills and performance described in the curriculum. The SLEs described in this curriculum have been in use for over ten years and are now an established component of training.

The SLE methodology is designed to meet the following criteria:

- **Validity** – the assessment actually does test what is intended; that methods are relevant to the 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 additional significant costs should be in the training of trainers and the time invested needed for feedback and regular appraisal, which 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 anaesthetists in training' reflections on practice in order to address learning needs.

SLEs use different trainers' direct observations of anaesthetists in training to assess the actual performance of anaesthetists as they manage different clinical situations in different clinical settings and provide more granular formative assessment in crucial areas of the curriculum than does the more global assessment provided by supervisors' reports. SLEs are primarily aimed at providing constructive feedback to anaesthetists in training in important areas of the curriculum throughout each placement in all phases of training. It is normal for anaesthetists in training to have some assessments that identify areas for development because their performance is not yet at the standard for the completion of that training.

5.7.4 [How many SLEs?](#)

In order to complete a learning outcome, anaesthetists in training should undertake SLEs that contribute to evidence showing key capabilities at each of the three stages of training. There are several key capabilities within each domain and stage of training and a single assessment may provide evidence to satisfy multiple key capabilities across a range of domains.

The SLE blueprints are found in section 5.10. These show how the SLEs could be used to provide evidence towards demonstration of attainment of each learning outcome.

There are no requirements for minimum numbers of SLEs. The SLEs should be used in a formative way to demonstrate reflection on learning and progress by the trainee. The SLEs allow the trainer to

indicate what level of supervision is required for the trainee. For the IAC and IACOA trainers need to be satisfied that the anaesthetist is able to perform with the required a certain level of supervision in order to complete these training requirements.

The Faculty of ICM has set the number of assessments for ICM, which are listed in the ICM Curriculum, and some assessments achieved in the anaesthesia curriculum may be cross counted to satisfy ICM competences and vice-versa.

5.7.5 [Who can assess?](#)

Consultants, specialty anaesthetists, and senior anaesthetists in training can assess SLEs. In accordance with GMC standards, assessors must possess expertise in the area to be assessed and be familiar with the assessment process. Senior anaesthetists in training and non-medical staff may assess SLEs if they have completed appropriate training, and if the educational supervisor (ES) considers it appropriate. The ES may need to enter the assessment in the Lifelong Learning platform (LLp). Anaesthetists in training must not perform assessments for the IAC and the IACOA.

5.7.6 [The supervised learning event process:](#)

- feedback is the most important element of a SLE
- anaesthetists in training should undertake SLEs relevant to their current practice
- areas for learning should be identified prior to starting a list, clinic, ward-round, etc., and the anaesthetist in training should ask the trainer in advance to perform a SLE
- requesting SLEs retrospectively is considered poor practice and is not acceptable, except in Case-Based Discussions
- the anaesthetist in training should reflect on the learning event in the SLE
- the trainer should observe the performance of the anaesthetist in training, and give immediate verbal feedback as well as suggestions for future development, further reading etc.; they will indicate what level of supervision the anaesthetist requires for that activity
- trainers should comment on clinical and non-clinical aspects of performance, such as professionalism and team-working
- if facilities exist and it is safe to do so, the assessment can be documented on the LLp at this time
- if the online form cannot be completed at this time, the anaesthetist in training will send a request for a SLE to the trainer electronically
- verbal feedback should always take place at the time of the SLE
- the trainer should complete the online form as soon as possible
- the anaesthetist in training should link the form to the relevant learning outcome so that the SLE can be used as evidence for the HALO
- linking a SLE to more than one unit of training may be appropriate, if it demonstrates relevant progress.

Local education providers/hospitals and Deaneries often provide training in supervised learning events. The College provides training in the '*Anaesthetists as Educators*' courses, and online materials are available on the RCoA website.

5.7.7 [Supervisor reports](#)

Consultant feedback, and feedback from other approved anaesthetist trainers, is a fundamental source of evidence when assessing anaesthetists in training' performance. This means of assessment is valuable in identifying anaesthetists in training who are performing above and below the standard expected for their level.

All of these methods are described briefly below and include feedback opportunities as an integral part of the programme of assessment. A record of the assessment, including feedback, should be recorded in the anaesthetist in training's LLp. More information and guidance for anaesthetists in training and trainers is available in the '2021 Curriculum Assessment Guidance'.

5.7.8 [FRCA](#)

The FRCA examination is a two-part 'high-stakes' national assessment. Its major focus is on the knowledge required for practice but the structured oral examination [SOE] and objectively structured clinical examination [OSCE] test decision-making, understanding of procedure and practical elements (including the use of simulation).

The Primary examination is divided into two parts: the MCQ and the OSCE/SOE. Possession of the Primary FRCA is a mandatory requirement for entry into Stage 2 (ST4).

The Final FRCA also consists of two parts: the written and the SOE. The Final examination must be successfully completed in order to progress to Stage 3 (ST6).

Further details on the examinations are available on the *Examinations* pages on the RCoA website.

5.7.9 [IAC](#)

The IAC is the first critical progression point in the anaesthetic curriculum, and the anaesthetic element of the ACCS curriculum. The purpose of the IAC is to signify that the anaesthetist in training has achieved a basic understanding of anaesthesia and is able to give anaesthetics at a level of supervision commensurate with the individual anaesthetist in training's skills and the clinical case; and the anaesthetist in training can be added to the on-call rota for anaesthesia. The IAC is not a licence for independent anaesthetic practice.

5.7.10 [IACOA](#)

The IACOA must be obtained by all anaesthetists in training before being considered safe to work in an obstetric unit without direct supervision. Achieving the IACOA does not signal the completion of training in obstetric anaesthesia during Stage 1. Further training will be required in order to attain the required key capabilities.

5.7.11 [Holistic Assessment of Learning Outcomes \(HALOs\)](#)

A satisfactorily completed HALO form provides evidence that an anaesthetist in training has achieved the key capabilities required to demonstrate attainment of a stage learning outcome, in order to progress to the next. Supervisors should draw upon a range of evidence including the logbook of cases completed, SLEs, illustrations set out in the curriculum document, and consultant feedback to inform their decision as to whether the stage learning outcome has been achieved. The logbook review should consider the mix of cases, level of supervision and balance of elective and emergency cases, if relevant, for the stage learning outcome. Evidence for achievement of key capabilities and learning outcomes will be uploaded to the LLp and will be linked by the anaesthetist in training to the relevant stage learning outcome. The supervisor will be able to review this evidence at the end of a stage of training to complete the HALO but it is expected that the evidence will be collected and linked throughout the stage of training period so that educational supervisors and ARCP panels are able to review progress.

All hospitals must identify appropriate designated trainers to sign the HALO form for each stage learning outcome. Each trainer should be familiar with the requirements for the stage learning outcome and be able to provide guidance for anaesthetists in training who have not yet achieved the learning outcomes. It is anticipated that the HALOs for the generic professional capability based stage learning outcomes will be signed by the anaesthetist's educational supervisor. **The professional judgement of the supervisor will ultimately determine whether it is appropriate to sign the HALO form for an anaesthetist in training.**

5.7.12 Stage 1 Training Certificate

The Stage 1 Training Certificate signifies that an anaesthetist in training has achieved the required HALOs in all learning outcomes for that stage of training, has passed the Primary FRCA, and is eligible to progress to Stage 2.

5.7.13 Stage 2 Training Certificate

The Stage 2 Training Certificate signifies that an anaesthetist in training has achieved the required HALOs in all learning outcomes for that stage of training, has passed the Final FRCA.

5.7.14 Stage 3 Training Certificate

The Stage 3 Training Certificate signifies that an anaesthetist in training has achieved the required HALOs in all learning outcomes for that stage of training and is eligible for the award of a CCT or CESR[CP].

5.7.15 Anaesthesia Clinical Evaluation Exercise (A-CEX)

The A-CEX is used during clinical sessions, and the assessments are based on the observed performance of the anaesthetist in training's skills, attitudes and behaviours, and knowledge. It looks at the anaesthetist in training's performance in a case rather than focusing on a specific procedure, for example the anaesthetic management of a patient with renal failure.

5.7.16 Anaesthesia List Management Tool (ALMAT)

Similar to the A-CEX, the ALMAT is designed to assess and facilitate feedback on an anaesthetist in training's performance during their practice. When undertaking an ALMAT, an anaesthetist in training is given responsibility for the running of a surgical list according to their level of competence. This tool is particularly appropriate for more senior anaesthetists in training and allows assessment of both clinical and non-clinical skills. Anaesthetists in training should request this assessment before the start of the list, and they may be assessed either by the trainer with direct responsibility for that list, or it may be possible for an anaesthetist in training working with indirect supervision to be assessed by the nominated supervising consultant for that area.

5.7.17 Directly Observed Procedural Skills (DOPS)

The DOPS tool is used for assessing performance in procedures, such as arterial cannulation or epidural insertion. This tool is therefore more suited to Stage 1 training rather than Stage 2 or 3, except for new areas of anaesthetic practice, which should focus on higher level skills. They are useful for assessing anaesthetists in training who are learning a new skill e.g. nerve block.

5.7.18 Case-Based Discussion (CBD)

The CBD is usually used away from the clinical environment – it allows the assessor to question the anaesthetist in training about a clinical episode in order to assess their knowledge and rationale for their actions, or what they would do if presented with the clinical scenario. When undertaking a CBD, the anaesthetist in training should bring the case notes and/or anaesthetic chart of a case that they wish to discuss in retrospect. The conduct and management of the case as well as the standards of documentation and follow up should be discussed. CBDs offer an opportunity to discuss a case in depth and to explore thinking, judgement and knowledge. They also provide a useful forum for reflecting on practice, especially in cases of critical incidents.

5.7.19 Logbook

The LLP integrated logbook allows the anaesthetist in training's development as assessed by certain SLEs to be placed in context. It is not a formal assessment in its own right, but anaesthetists in training are required to keep a log of all anaesthetic, pain and ICM procedures they have

undertaken including the level of supervision required on each occasion. The logbook demonstrates breadth of experience and a logbook review should consider the mix of cases, level of supervision and balance of elective and emergency cases, if relevant, for the learning outcome.

5.7.20 [Multi-Source Feedback \(MSF\)](#)

The MSF, unlike the other SLEs, provides specific feedback on generic skills such as communication, leadership, team working, reliability, etc., across the domains of Good Medical Practice from a wide range of individuals who have worked with the anaesthetist in training in the current training year. Other SLEs are a snapshot in time covering a clinical episode, where the MSF is used to measure an anaesthetist in training's performance across a broader period of time and informs the assessment of achievement of learning outcomes.

Anaesthetists in training are required to have at least one MSF completed for each training year and MSFs can be conducted in anaesthesia, pain medicine or ICM. The anaesthetist in training identifies a minimum of 12 people (who should be from a mixture of disciplines) with whom they have worked, for example, consultants, theatre staff, recovery staff, ODPs, midwives and administrative staff, and sends a request through the LLp.

5.7.21 [Anaesthetic Quality Improvement Project Assessment Tool \(A-QIPAT\)](#)

Quality improvement is a key element of professional practice. The A-QIPAT form is introduced in this curriculum to enhance assessment of this learning outcome. This assessment allows individuals who have worked with the anaesthetist in training to comment on their performance as part of a quality improvement project. This is a very useful way to provide the anaesthetist with feedback that is specific to their performance in quality improvement projects.¹⁶

5.7.22 [Multiple Trainer Reports \(MTRs\)](#)

Consultant feedback is a mandatory part of completing a learning outcome and should assure whoever signs the HALO form that the trainee is considered competent to provide anaesthesia and peri-operative care to the required level in this learning outcome.

The MTRs differs from the MSF as it concerns an anaesthetist's training progress with key capabilities and learning outcomes. MSFs seek feedback from the multidisciplinary team, including consultants, on overall professional behaviour and attitude.

The current RCoA consultant feedback form has been developed to provide reports that give feedback across *all* the learning outcomes. Consultant feedback will be collated through the LLp and will form part of the Educational Supervisor's Structured Report (ESSR). At least one MTR will be required per year of training, and for certain areas of training specific MTRs will be required. This includes paediatric, cardiac, neuro and obstetric anaesthesia.

Consultant feedback will be collated, linked to the learning outcome and presented in the ESSR at ARCP. It should be discussed with the trainee during or at the end of a learning outcome prior to sign-off.

5.7.23 [Educational supervisors structured report \(ESSR\)](#)

The LLp system allows for multiple ESSRs per year that can be completed at intervals reflective of individual training programmes, as agreed between an anaesthetist in training and an educational supervisor. These will all subsequently feed into an ARCP.

The ESSR will periodically (at least annually) record a longitudinal, global report of an anaesthetist in training's progress based on a range of assessment, potentially including exams and observations in practice or reflection on behaviour by those who have appropriate expertise and experience. The

¹⁶ AoMRC Final QI Curriculum January 2019

ESSR can incorporate commentary or reports from longitudinal observations, such as from supervisors or formative assessments demonstrating progress over time.

5.7.24 Entrustable Professional Activities (EPAs)

The RCoA utilises supervision/entrustment scales for SLEs (DOPS, A-CEX, ALMAT, and CBDs) within the curriculum to provide formative assessment and meaningful feedback on the level of supervision that was required for anaesthetists in training undertaking clinical activities. Entrustable professional activities (EPAs) involve looking across a range of different skills and behaviours to make global decisions about an anaesthetist in training's suitability to take on particular responsibilities or tasks and help to establish an increase in autonomy and responsibility for the unsupervised practice of key activities. (ten Cate, 2013) Unlike conventional SLEs that assess previous activity, EPAs focus on an anaesthetist in training's ability to cope with future situations and challenges. (Peters, 2017¹⁷)

This curriculum embeds EPAs at two critical progression points to make summative decisions on defined areas of practice confirming that the trainee is able to undertake specific responsibilities safely and independently. These summative assessments will be undertaken by 'training faculty members' who have observed an anaesthetist in training's performance on multiple occasions and who utilise all available sources of relevant information including; SLEs, clinical logbook, supervisor reports, MSF, and MTRs. Utilising all the relevant information available at each progression point for individual anaesthetists in training will ensure that the curriculum is underpinned by a programmatic approach to assessment¹⁸.

The EPAs are centred on an anaesthetist in training's ability to join the on-call rotas for general and obstetric anaesthesia and are widely recognised as priority areas in which entrustment decisions are required to ensure patient safety.

5.7.24.1 *Initial Assessment of Competence*

This comprises three arenas of professional activity:

- safe general anaesthesia with spontaneous respiration to ASA 1-2 patients for uncomplicated surgery in the supine position
- safe rapid sequence induction for ASA 1-2 patients aged 16 or older and failed intubation routine
- safe perioperative care to ASA 1E – 2E patients requiring uncomplicated emergency surgery.

5.7.24.2 *Initial Assessment of Obstetric Competence*

This comprises four arenas of professional activity:

- safe administration of epidural/CSE for pain relief in labour
- safe administration of epidural top-up for an emergency caesarean section
- safe administration of spinal/CSE for elective or emergency caesarean section
- safe administration of general anaesthesia for elective or emergency caesarean section.

5.8 **Decisions on progress**

The ARCP is the formal process where the anaesthetist in training's progress is reviewed, usually on an annual basis. This process should be used to collate and systematically review evidence about an anaesthetist in training's performance and progress in a holistic way and make decisions about their achievement of expected outcomes and subsequent progression in training.

¹⁷ Harm Peters, Ylva Holzhausen, Christy Boscardin, Olle ten Cate & H. Carrie Chen (2017) Twelve tips for the implementation of EPAs for assessment and entrustment decisions, Medical Teacher, 39:8, 802-807, DOI: [10.1080/0142159X.2017.1331031](https://doi.org/10.1080/0142159X.2017.1331031)

¹⁸ Lambert W. T. Schuwirth & Cees P. M. Van der Vleuten (2011) Programmatic assessment: From assessment of learning to assessment for learning, Medical Teacher, 33:6, 478-485, DOI: [10.3109/0142159X.2011.565828](https://doi.org/10.3109/0142159X.2011.565828)

ESSRs form the basis of the evidence that is reviewed at the ARCP and other evidence such as the logbook, audit, research, teaching, management and examination results are considered when awarding an ARCP outcome. A satisfactory outcome at the ARCP is required in order to progress through the training programme. The ARCP process is described in the Gold Guide and the Deaneries are responsible for organising and conducting ARCPs. The evidence to be reviewed by ARCP panels should be collected in the anaesthetist in training's LLP.

The decisions made at critical progression points and upon completion of training should be clear and defensible. They must be fair and robust and make use of evidence from a range of assessments, potentially including examinations and observations in practice or reflection on behaviour by those who have appropriate expertise or experience. They can also incorporate commentary or reports from longitudinal observations, such as from supervisors or formative assessments demonstrating progress over time.

Assessment of attainment of the learning outcomes involves looking across a range of different skills and behaviours to make global decisions about an anaesthetist in training's suitability to progress. The domains grids in section 5.10 set out the high-level description of attainment to be achieved for each learning outcome at the end of each stage of training in order to progress to the next.

As a precursor to ARCPs, the RCoA strongly recommend that anaesthetists in training have an informal LLP review either with their educational supervisor or arranged by the local School of Anaesthesia. These provide opportunities for early detection of anaesthetists in training who are failing to gather the required evidence for ARCP.

In order to guide anaesthetists in training, supervisors and the ARCP panel, the RCoA has produced ARCP guidance which sets out the requirements for a satisfactory ARCP outcome at the end of each stage of training and critical progression point. The ARCP decision aid is available on the RCoA website.

5.9 Anaesthetists in training requiring additional support

For most anaesthetists in training the ARCP will confirm that they are on course to complete training without difficulty. For those not progressing as expected, additional help and support must be given to enable them to fulfil the requirements of the programme. The College strongly encourages all supervised training sessions to be assessed formatively so that anaesthetists in training who are experiencing difficulties come to the attention of trainers early. This should give the anaesthetist in training time to try and overcome the deficiencies identified and allow trainers to target training and support. If the problems identified are related to attitudes and behaviours, the use of non-technical skills assessment and targeted training may be required.

Any difficulties should feed into the appraisal process, via the ESSR and MSF and consultant feedback. If local trainers are unable to remedy the situation, the ARCP panel must be made aware via the ESSR so that directed learning objectives can then be set. Help might involve a combination of extra supervision, counselling, or focused training. Those involved in the review should take account of any relevant external factors which may have affected progress in training. Anaesthetists in training should be aware that the outcome of meetings with their clinical and educational supervisors will, with their knowledge, help inform the assessment process and therefore the ARCP panel; such discussions should be recorded.

Where progress is not judged satisfactory at the ARCP there are courses of action that may follow; more information can be found in the 'Gold Guide'.

Guidance for anaesthetists in training who have not passed the FRCA examinations is available on the Examinations pages of the RCoA website.

5.10 Overarching assessment blueprint

The overarching assessment blueprint shows how each of the assessments relates to the domains of learning. It is not necessary that every method will be used for each key capability and additional evidence may be used to make a global judgement on attainment.

Figure 7 - the assessment blueprint

	Generic professional domains							Specialty specific domains						
	Professional Behaviours & Communication	Management & Professional Regulatory Requirements	Team Working	Safety & Quality Improvement	Safeguarding	Education & Training	Research & Managing Data	Perioperative Medicine & Health Promotion	General Anaesthesia	Regional Anaesthesia	Resuscitation and transfer	Procedural Sedation	Pain	Intensive Care Medicine
A-CEX	O	O	O		O	A*		A*	A*	A*	A*	A*	A*	A*
DOPS	O		O	O		A*		O	A*	A*	O	O	A*	A*
CBD	O	A*	O	O	A*	A*	O	A*	A*	A*	A*	A*	A*	A*
ALMAT	A*	A*	A*		O			A*	A*	A*	O	A*	A*	
A-QIPAT	O	O	O	A*			O							
MSF	A*	O	O	O	O	O	O	A*	A*	A*	O	A*	O	A*
MTR	A*	O	A*	O	O	A*	A*	A*	A*	A*	A*	A*	A*	A*
HALO	A*	A*	A*	A*	A*	A*	A*	A*	A*	A*	A*	A*	A*	A*
IAC/IACOA	O		O	O	O			A*	A*	A*	A*	A*	A*	
Primary FRCA	A*	O	O	A*	O		A*	A*	A*	A*	A*	A*	A*	A*
Final FRCA	A*	O		A*	O		A*	A*	A*	A*	A*	A*	A*	A*

A* should be used to assess this domain

O may be used to assess this domain

Figure 8 - the programme of assessment (critical progression point)**

	Stage 1			Stage 2		Stage 3	
	CT1	CT2	CT3 **	ST4	ST5 **	ST6	ST7 **
Formative Supervised Learning Events (SLEs)							
A-CEX	There is no requirement for a minimum number of SLEs each year. The anaesthetist in training should use SLEs in a formative way to demonstrate reflection on learning and progress. Feedback on the learning event should help the learner improve their practice. The SLEs allow the trainer to indicate what level of supervision is required for the trainee for that case or procedure. Feedback should include guidance on how the learner develops their practice to reach the desired supervision level.						
ALMAT							
CBD							
DOPS							
A-QIPAT	Practical procedures should be assessed with a DOPS tool.						
Summative Assessments							
Initial Assessment of Competence (IAC) **	<ul style="list-style-type: none">Completed in CT1Supervision level 2bEPAs 1 and 2						
Initial Assessment of Competence in Obstetric Anaesthesia (IACOA)	<ul style="list-style-type: none">Completed by end of CT2Supervision level 3EPAs 3 and 4						
MSF (one per year)	✓	✓	✓	✓	✓	✓	✓
Multiple Trainer Report	✓	✓	✓	✓	✓	✓	✓
HALO	Stage 1 domains of learning 1-14			Stage 2 domains of learning 1-14		Stage 3 domains of learning 1-14	
FRCA Examinations							
Primary FRCA	Essential						
Final FRCA							
Educational Supervisors Structured Report (ESSR)							
ESSR	✓	✓	✓	✓	✓	✓	✓

6 Supervision and feedback

This section of the curriculum describes how anaesthetists in training will be supervised, and how they will receive feedback on performance. For further information please refer to the Academy of Medical Royal Colleges (AoMRC) guidance on Improving feedback and reflection to improve learning¹⁹.

Access to high quality, supportive and constructive feedback is essential for the professional development of the anaesthetist in training. Anaesthetist in training reflection is an important part of the feedback process and exploration of that reflection with the trainer should ideally be a two-way dialogue. Effective feedback is known to enhance learning and combining self-reflection to feedback promotes deeper learning.

Trainers should be supported to deliver valuable and high-quality feedback. This can be by providing face to face training to trainers. Anaesthetists in training would also benefit from such training as they frequently act as assessors to junior doctors, and all involved could also be shown how best to carry out and record reflection.

6.1 Supervision

All elements of work in training posts must be supervised with the level of clinical supervision varying depending on the experience of the anaesthetist in training and the clinical exposure and case mix undertaken. As training progresses the anaesthetist should have the opportunity for increasing autonomy, consistent with safe and effective care for the patient.

Organisations must make sure that each anaesthetist in training has access to a named clinical supervisor and a named educational supervisor. The role and responsibilities of supervisors have been defined by the GMC in their standards for medical education and training²⁰.

6.1.1 Educational supervisor

The educational supervisor is responsible for the overall supervision and management of a doctor's educational progress during a placement or a series of placements. They regularly meet with the doctor in training to help plan their training, review progress and achieve agreed learning outcomes. They are also responsible for the educational agreement, and for bringing together all relevant evidence to form a summative judgement about progression at the end of the placement or a series of placements.

6.1.2 Clinical supervisor

The clinical supervisor oversees the anaesthetist's clinical work throughout a placement and should be a member of the anaesthetist in training's clinical specialty team. The clinical supervisor leads on reviewing the anaesthetist in training's clinical or medical practice throughout a placement, and contributes to the educational supervisor's report on whether the doctor should progress to the next stage of their training.

The clinical and educational supervisors, when meeting with the anaesthetist in training, should discuss issues of clinical governance, risk management and any report of any untoward clinical incidents involving the anaesthetist. If the clinical directorate (clinical director) has any concerns about the performance of the anaesthetist in training, or there were issues of doctor or patient safety, these would be discussed with the relevant clinical and educational supervisors. These

¹⁹ AoMRC Improving feedback and reflection to improve learning <https://www.aomrc.org.uk/reports-guidance/improving-feedback-reflection-improve-learning-practical-guide-anaesthetist-in-traininganaesthetists-in-training-trainers/>

²⁰ GMC Promoting excellence: standards for medical education and training (2017) https://www.gmc-uk.org/-/media/documents/Promoting_excellence_standards_for_medical_education_and_training_0715.pdf_61939165.pdf

processes, which are integral to an anaesthetist's development, must not detract from the statutory duty of the trust to deliver effective clinical governance through its management systems.

Educational and clinical supervisors need to be formally recognised by the GMC to carry out their roles. It is essential that training in assessment is provided for trainers and anaesthetists in training in order to ensure that there is complete understanding of the assessment system, assessment methods, their purposes and use. Training will ensure a shared understanding and a consistency in the use of the SLEs and the application of standards.

Opportunities for feedback to anaesthetists in training about their performance will arise through the use of the SLEs, regular appraisal meetings with supervisors, other meetings and discussions with supervisors and colleagues and feedback from ARCP.

6.1.3 Sessional supervisor

All consultant anaesthetists who have anaesthetists in training attached to them in any clinical area are Sessional Supervisors. They have direct responsibility for what that trainee does in the workplace while they are supervising them.

6.1.4 Anaesthetists in training

Anaesthetists in training should make the safety of patients their first priority. Furthermore, anaesthetists in training should not be practising in clinical scenarios which are beyond their experiences and competences without supervision.

Anaesthetists in training should actively devise individual learning goals in discussion with their trainers and should subsequently identify the appropriate opportunities to achieve said learning goals. Anaesthetists in training need to plan their SLEs accordingly to enable their SLEs to collectively provide a picture of their development during a training period. Anaesthetists in training should actively seek guidance from their trainers in order to identify the appropriate learning opportunities and plan the appropriate frequencies and types of SLEs according to their individual learning needs. It is the responsibility of anaesthetists in training to seek feedback following learning opportunities and SLEs. Anaesthetists in training should self-reflect and self-evaluate regularly with the aid of feedback. Furthermore, anaesthetists in training should formulate action plans with further learning goals in discussion with their trainers.

6.2 Appraisal

A formal process of appraisals and reviews underpins training. This process ensures adequate supervision during training, provides continuity between posts and different supervisors and is one of the main ways of providing feedback to anaesthetists in training. All appraisals should be recorded in the LLP.

6.2.1 Induction appraisal

The anaesthetist in training and Educational Supervisor should have an appraisal meeting at the beginning of each post to review the anaesthetist in training's progress so far (including the previous ESSR), agree learning objectives for the post ahead and identify the learning opportunities presented by the post. Reviewing progress through the curriculum will help anaesthetists in training to compile an effective Personal Development Plan (PDP) of objectives for the upcoming post. This PDP should be agreed during the Induction Appraisal. The anaesthetist in training and supervisor should also both sign the educational agreement in the LLP at this time, recording their commitment to the training process.

6.2.2 Monthly meetings

Monthly meetings between anaesthetist in training and Educational Supervisor are not mandatory but are strongly encouraged. These are particularly important if either the anaesthetist in training or educational or clinical supervisor has training concerns, or the anaesthetist in training has been set specific targeted training objectives at their ARCP. At these meeting anaesthetists in training should review their PDP with their supervisor using evidence from the LLp. SLEs and progress through the curriculum can be reviewed to ensure anaesthetists in training are progressing satisfactorily, and attendance at educational events should also be reviewed.

6.2.3 End of attachment appraisal

Anaesthetists in training should review the PDP and curriculum progress with their Educational Supervisor using evidence from the LLp. Specific concerns may be highlighted from this appraisal. The end of attachment appraisal should record the areas where further work is required to overcome any shortcomings. Further evidence of competence in certain areas may be needed, such as planned workplace-based assessments, and this should be recorded. If there are significant concerns following the end of attachment appraisal, then the TPD should be informed. Information gathered from this meeting should be incorporated into the Educational Supervisor's Structured Report.

7 Quality management

The organisation of training programmes for Anaesthetics is the responsibility of HEE local offices and the devolved nations' deaneries. The HEE local offices/deaneries will oversee programmes for postgraduate medical training in their regions. A TPD will be responsible for coordinating the anaesthetic training programme in each trust. The Schools of Anaesthesia in England, Wales and Northern Ireland and NHS Education Scotland will undertake the following roles:

- oversee recruitment and induction of anaesthetists in training from foundation training to core anaesthetics and ACCS
- allocate anaesthetists in training into particular rotations for core anaesthetics appropriate to their curriculum training needs
- oversee the quality of training posts provided locally
- interface with other specialty training faculties (Emergency Medicine, Intensive Care Medicine, etc.) and other healthcare professionals
- ensure adequate provision of appropriate educational events
- ensure curricula implementation across training programmes
- oversee the supervised learning event process within programmes
- coordinate the ARCP process for anaesthetists in training
- provide adequate and appropriate career advice
- provide systems to identify and assist doctors with training difficulties
- provide flexible training
- recognise the potential of specific anaesthetists in training to progress into an academic career.

Educational programmes to train Educational Supervisors and assessors in supervised learning events may be delivered by HEE local offices/deaneries or by the RCoA or both.

Development, implementation, monitoring and review of the curriculum are the responsibility of the RCoA via the Training, Assessment, and Curriculum Committee. The Committee is formally constituted with representatives from England, the devolved nations and with anaesthetist in training and lay representation. It is the responsibility of the RCoA to ensure that curriculum developments are communicated to Heads of Schools, regional specialty training committees and TPDs.

The RCoA serves its role in quality management by monitoring and driving improvement in the standard of all anaesthetic training. The Training, Assessment, and Curriculum Committee is actively involved in assisting and supporting deaneries to manage and improve the quality of education within each of their approved training locations. It is tasked with activities central to assuring the quality of medical education such as writing the curriculum and assessment systems, reviewing applications for new posts and programmes, provision of external advisors to deaneries and recommending anaesthetists in training eligible for CCT or Certificate of Eligibility for Specialist Registration (CESR).

The RCoA uses data from four quality datasets across the specialty to provide meaningful quality management. The datasets include the GMC National Training Survey (NTS) data, ARCP outcomes, FRCA examination outcomes and External Advisor reports. These datasets are monitored and reviewed to improve the provision of training and ensure enhanced educational experiences and form the basis of the annual report to the GMC on the quality of anaesthetic training nationally. These principles have been transferred to the new curriculum to ensure this continues.

8 Intended use of curriculum by trainers and anaesthetists in training

The curriculum is a crucial document for ensuring the quality and consistency of training and assessment. It must be referred to throughout training, as the anaesthetists in training record evidence demonstrating their developing skills and knowledge, which progressing towards achievement of the HLOs.

The curriculum should be used to help design training programmes locally that ensure all anaesthetists in training 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 anaesthetist in training's own tailored learning and development plan.

This curriculum, Matrix of Progression, and ARCP guidance documents are available via the RCoA website.

Clinical and educational supervisors should use the curriculum, Matrix of Progression and ARCP guidance documents as the basis of their discussion with anaesthetists in training, particularly during the appraisal process. Both trainers and anaesthetists in training are expected to have a good knowledge of the curriculum and should use it as a guide for their training programme.

Each anaesthetist in training will engage with the curriculum by maintaining a record of their progress on the LLp. The anaesthetist in training will use the curriculum to develop learning objectives and reflect on learning experiences. Anaesthetists in training will have different strengths and areas of interest, and so may be able to demonstrate achievement of some learning outcomes at different rates. Where an anaesthetist in training has already achieved the required level of attainment in a learning outcome at a particular stage of training, they may record evidence against a higher stage learning outcome if it is agreed to be relevant and appropriate.

8.1 Recording progress on the Lifelong Learning platform (LLp)

On enrolling with the RCoA anaesthetists in training will be given access to the LLp. The platform allows evidence to be built up to inform decisions on an anaesthetist in training's progress and provides tools to support their education and development.

The anaesthetist in training's main responsibilities are to ensure their LLp record is kept up to date, arrange SLEs and ensure they are recorded, prepare drafts of appraisal forms, maintain their PDP, record their reflections on learning and record their progress through the curriculum.

The supervisor's main responsibilities are to use the LLp evidence such as outcomes of SLEs, reflections and PDPs to inform appraisal meetings. They are also expected to update the anaesthetist in training's record of progress through the curriculum, write end-of-attachment appraisals and supervisor's reports.

Deaneries, TPDs, College Tutors and ARCP panels will use the LLp to monitor the progress of anaesthetists in training for whom they are responsible. The RCoA will use summarised, anonymous LLp data to support its work in quality assurance.

All appraisal meetings, personal development plans and SLEs (including MSF) should be recorded in the LLp. Anaesthetists in training are encouraged to reflect on their learning experiences and to record these in the LLp. Reflections can be kept private or shared with supervisors.

Reflections, SLEs and other LLp content should be used to provide evidence towards acquisition of curriculum requirements.

8.2 Ongoing management of the curriculum by the RCoA

The RCoA Training, Assessment and Curriculum Committee has developed a process to allow for regular review of the curriculum to ensure it remains fit for purpose, reflecting current training and service needs.

A dedicated email address for the 2021 Anaesthetics Curriculum is the conduit through which stakeholders will be able to submit proposed revisions to the examples of evidence and range of clinical contexts that anaesthetists in training may use to support their achievement of the key capabilities, as well as suggested assessment methods, at each stage of training.

A sub-group of the Training, Assessment and Curriculum Committee has been established to review and either approve or reject the proposed revisions on an annual basis. Should any revisions be proposed to the High-Level Learning Outcomes (HLOs) or the Key Capabilities (mandatory), amendments will only be made where a clear rationale exists for doing so, such as where it is necessary to address patient safety concerns or reflect a significant change in contemporary anaesthetic practice, and every effort will be made to minimise any negative impact on anaesthetists in training.

Following submission to and approval from the GMC as the regulatory body, updated curriculum annexes will be issued prior to the start of the training year, making clear, using the version tracking table at the front of each document, what amendments have been made on each occasion.

9 Equality and diversity

The RCoA will comply, and ensure compliance, with the requirements of equality and diversity legislation set out in the Equality Act 2010.

The RCoA believes that equality of opportunity is fundamental to the many and varied ways in which individuals become involved with the Colleges, either as members of staff and Officers; as advisers from the medical profession; as members of the Colleges' professional bodies or as doctors in training and examination candidates.

Deaneries will quality assure each training programme so that it complies with the equality and diversity standards in postgraduate medical training as set by GMC. They should provide access to a professional support unit or equivalent for anaesthetists in training requiring additional support.

Compliance with anti-discriminatory practice will be assured through:

- monitoring of recruitment processes
- ensuring all College representatives and Programme Directors have attended appropriate training sessions prior to appointment or within 12 months of taking up post
- Deaneries ensuring that educational supervisors have had equality and diversity training (for example, an e-learning module) every 3 years
- Deaneries ensuring that any specialist participating in anaesthetist in training interview/appointments committees or processes has had equality and diversity training (at least as an e-module) every 3 years
- ensuring anaesthetists in training have an appropriate, confidential and supportive route to report examples of inappropriate behaviour of a discriminatory nature. Deaneries and Programme Directors must ensure that on appointment anaesthetists in training are made aware of the route in which inappropriate or discriminatory behaviour can be reported and supplied with contact names and numbers. Deaneries must also ensure contingency mechanisms are in place if anaesthetists in training feel unhappy with the response or uncomfortable with the contact individual
- providing resources to anaesthetists in training needing support (for example, through the provision of a professional support unit or equivalent)
- monitoring of College Examinations
- ensuring all assessments discriminate on objective and appropriate criteria and do not unfairly advantage or disadvantage an anaesthetist in training with any of the Equality Act 2010 protected characteristics. All efforts shall be made to ensure the participation of people with a disability in training through reasonable adjustments and recognising that not all disabilities are visible.

10 Implementation and transition

The 2021 CCT Anaesthetics Curriculum provides a programme of learning which can be flexed to deliver the necessary skill mix to suit the demands and aspirations of the NHS and develop all trainees without compromising patient safety. The new curriculum has the same content and scope as the existing anaesthetic 2010 Curriculum, thereby ensuring a consistent output to meet the current and future demands of patients.

The College would like to transfer the majority of trainees from the 2010 Curriculum to the 2021 Curriculum at this time to allow them to enjoy the benefits the new curriculum provides, but also recognises the need to allow flexibility for schools of anaesthesia to transition trainees in a way that supports and manages the delivery of programmes locally. The following implementation plan has been agreed;

- the 2010 curriculum will remain in use until 31 January 2024
- all August 2021 new CT1 Anaesthesia or ACCS (Anaesthesia) trainees commence on the new Anaesthetics (or ACCS) 2021 curriculum
- CT1 Anaesthesia or ACCS (Anaesthesia) trainees who commenced in February 2021 are transferred to the new Anaesthetics (or ACCS) 2021 curriculum in either August 2021 or February 2022
- CT2 trainees or ACCS (Anaesthesia) CT3 trainees who expect to have completed 18 months anaesthesia by August 2021 and intend to apply for ST3 Anaesthesia starting in February 2022 should complete competences for core level training on the 2010 curriculum to allow application for ST3
- CT2 to ST5 trainees are transferred to the new curriculum in either August 2021 or February 2022, however;

Any trainee who is expected to achieve their CCT by 31 January 2024 may remain on the 2010 curriculum. This should be discussed with the local TPD. Those who anticipate a CCT date beyond this date, for any reason, should transition to the new Anaesthetics 2021 curriculum at the earliest opportunity

The year of transfer will be a School of Anaesthesia decision based on local circumstances.

More information is available on the RCoA website.

11 Annex A - Domains and High-level Learning Outcomes grid

Domain	Professional Behaviours and Communication	Management and Professional and Regulatory Requirements
High-level Learning Outcome	Demonstrates the professional values and behaviours that patients expect from their doctors.	Undertakes managerial, administrative and organisational roles.
Stage 1 Learning Outcome(s)	Demonstrates the professional values and behaviours required of doctors in training.	Understands and undertakes managerial, administrative and organisational roles expected of doctors in training.
Stage 2 Learning Outcome(s)	Demonstrates the professional values and behaviours required of senior anaesthetists in training.	Understands and undertakes managerial, administrative and organisational roles expected of senior anaesthetists in training.
Stage 3 Learning Outcome(s)	Demonstrates the professional values and behaviours required to be a consultant.	Understands and undertakes managerial, administrative and organisational roles expected of consultants.
Mapping to GPC domains	<p>Domain 1: Professional values and behaviours</p> <p>Domain 2: Professional skills</p> <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills <p>Domain 3: Professional knowledge</p> <ul style="list-style-type: none"> • Professional requirements • National legislative requirements <p>Domain 4: Capabilities in health promotion and illness prevention</p> <p>Domain 5: Capabilities in leadership and team working</p> <p>Domain 6: Capabilities in patient safety and quality improvement</p> <ul style="list-style-type: none"> • Patient safety <p>Domain 8: Capabilities in education and training</p> <p>Domain 9: Capabilities in research and scholarship.</p>	<p>Domain 1: Professional values and behaviours</p> <p>Domain 2: Professional skills</p> <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills <p>Domain 3: Professional knowledge</p> <ul style="list-style-type: none"> • Professional requirements • National legislative requirements • The health service and healthcare systems in the four nations <p>Domain 5: Capabilities in leadership and team working</p> <p>Domain 6: Capabilities in patient safety and quality improvement</p> <ul style="list-style-type: none"> • Patient safety.
Mapping to GMC Good Medical Practice Domains	<p>Domain 1: Knowledge, Skills & performance</p> <p>Domain 2: Safety & Quality</p> <p>Domain 3: Communication, Partnership & Teamwork</p> <p>Domain 4: Maintaining Trust</p>	<p>Domain 2: Safety & Quality</p> <ul style="list-style-type: none"> • Contribute to/comply with systems to protect patients • Respond to risks to safety <p>Domain 3: Communication, Partnership & Teamwork</p> <ul style="list-style-type: none"> • Communicate effectively • Work collaboratively with colleagues <p>Domain 4: Maintaining Trust</p> <ul style="list-style-type: none"> • Treat patients and colleagues fairly and without discrimination • Act with honesty & integrity

Domain	Team Working	Safety & Quality Improvement
High-level Learning Outcome	Contributes to teams to enhance patient care.	Improves the quality and safety of patient care.
Stage 1 Learning Outcome(s)	Works effectively as a member of a clinical team.	Understands and applies quality improvement methodology. Applies the principles of patient safety to their own clinical practice.
Stage 2 Learning Outcome(s)	Demonstrates safe and effective followership and leadership in clinical teams.	Leads a local quality improvement project. Applies the principles of patient safety in the hospital context.
Stage 3 Learning Outcome(s)	Leads and participates in complex and diverse teams in all situations.	Supervises a local quality improvement project and participates in regional or national quality improvement projects. Uses a systems approach to creating, maintaining and improving safety.
Mapping to GPC domains	<p>Domain 1: Professional values and behaviours</p> <p>Domain 2: Professional skills</p> <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills <p>Domain 3: Professional knowledge</p> <ul style="list-style-type: none"> • Professional requirements <p>Domain 5: Capabilities in leadership and team working</p> <p>Domain 6: Capabilities in patient safety and quality improvement</p> <ul style="list-style-type: none"> • Patient safety <p>Domain 8: Capabilities in education and training.</p>	<p>Domain 1: Professional values and behaviours</p> <p>Domain 2: Professional skills</p> <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills <p>Domain 3: Professional knowledge</p> <ul style="list-style-type: none"> • Professional requirements <p>Domain 5: Capabilities in leadership and team working</p> <p>Domain 6: Capabilities in patient safety and quality improvement</p> <ul style="list-style-type: none"> • Patient safety • Quality improvement <p>Domain 7: Capabilities in safeguarding vulnerable groups</p> <p>Domain 9: Capabilities in research and scholarship.</p>
Mapping to GMC Good Medical Practice Domains	<p>Domain 3: Communication, Partnership & Teamwork</p> <ul style="list-style-type: none"> • Communicate effectively • Work collaboratively with colleagues • Teaching, training, supporting and assessing 	<p>Domain 1: Knowledge, Skills & Performance</p> <ul style="list-style-type: none"> • Apply knowledge and experience to practice <p>Domain 2: Safety & Quality</p> <ul style="list-style-type: none"> • Contribute to/comply with systems to protect patients • Respond to risks to safety <p>Domain 3: Communication, Partnership & Teamwork</p> <ul style="list-style-type: none"> • Communicate effectively • Work collaboratively with colleagues

Domain	Safeguarding	Education and Training
High-level Learning Outcome	Identifies vulnerable people and takes appropriate action.	Helps others to develop their professional practice.
Stage 1 Learning Outcome(s)	Describes the importance of safeguarding vulnerable people.	Takes responsibility for their own education and training needs and contributes to departmental education.
Stage 2 Learning Outcome(s)	Recognises safeguarding concerns in patients and healthcare professionals.	Plans, delivers and reflects on educational activities provided to other learners.
Stage 3 Learning Outcome(s)	Evaluates and instigates initial management of safeguarding concerns.	Meets the requirements of a clinical supervisor as defined by the GMC.
Mapping to GPC domains	<p><i>Domain 1: Professional values and behaviours</i></p> <p><i>Domain 2: Professional skills</i></p> <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills <p><i>Domain 3: Professional knowledge</i></p> <ul style="list-style-type: none"> • Professional requirements • National legislative requirements <p><i>Domain 5: Capabilities in leadership and team working</i></p> <p><i>Domain 6: Capabilities in patient safety and quality improvement</i></p> <ul style="list-style-type: none"> • Patient safety <p><i>Domain 7: Capabilities in safeguarding vulnerable groups</i></p> <p><i>Domain 8: Capabilities in education and training.</i></p>	<p><i>Domain 1: Professional values and behaviours</i></p> <p><i>Domain 2: Professional skills</i></p> <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills <p><i>Domain 5: Capabilities in leadership and team working</i></p> <p><i>Domain 6: Capabilities in patient safety and quality improvement</i></p> <ul style="list-style-type: none"> • Quality improvement <p><i>Domain 8: Capabilities in education and training</i></p> <p><i>Domain 9: Capabilities in research and scholarship.</i></p>
Mapping to GMP Domains	<p><i>Domain 2: Safety & Quality</i></p> <ul style="list-style-type: none"> • Contribute to/comply with systems to protect patients • Respond to risks to safety <p><i>Domain 4: Maintaining Trust</i></p> <ul style="list-style-type: none"> • Treat patients and colleagues fairly and without discrimination • Act with honesty & integrity 	<p><i>Domain 1: Knowledge, Skills & performance</i></p> <ul style="list-style-type: none"> • Develop & maintain professional practice <p><i>Domain 3: Communication, Partnership & Teamwork</i></p> <ul style="list-style-type: none"> • Work collaboratively with colleagues • Teaching, training and supporting colleagues

Domain	Research and Managing Data	Perioperative Medicine and Health Promotion
High-level Learning Outcome	Expands the understanding of anaesthetic practice.	Facilitates safe multi-disciplinary peri-operative care and promotes the principles of public health interventions and efficient use of healthcare resources.
Stage 1 Learning Outcome(s)	Is research aware: Demonstrates an understanding of the evidence-based approach to anaesthetic and perioperative care.	Identifies clinical and social challenges that increase risk for patients undergoing surgery. Appreciates the principles of sustainability in clinical practice.
Stage 2 Learning Outcome(s)	Is research ready: Develops critical appraisal skills; gains a broader understanding of data management and research methodology; communicates research evidence to patients and colleagues in a meaningful way.	Works with patients to reduce the risks associated with surgery.
Stage 3 Learning Outcome(s)	Is research experienced: Has engaged with research; applies the governance involved in research; evaluates and communicates research findings clearly.	Manages peri-operative care at an individual and service-wide level. Applies the principles of sustainability to clinical practice.
Mapping to GPC domains	<p>Domain 1: Professional values and behaviours</p> <p>Domain 3: Professional knowledge</p> <ul style="list-style-type: none"> Professional requirements National legislative requirements <p>Domain 5: Capabilities in leadership and team working</p> <p>Domain 6: Capabilities in patient safety and quality improvement</p> <ul style="list-style-type: none"> Patient safety <p>Domain 8: Capabilities in education and training</p> <p>Domain 9: Capabilities in research and scholarship.</p>	<p>Domain 1: Professional values and behaviours</p> <p>Domain 2: Professional skills</p> <ul style="list-style-type: none"> Practical skills Communication and interpersonal skills Dealing with complexity and uncertainty Clinical skills <p>Domain 3: Professional knowledge</p> <ul style="list-style-type: none"> Professional requirements National legislative requirements <p>Domain 4: Capabilities in health promotion and illness prevention</p> <p>Domain 5: Capabilities in leadership and team working</p> <p>Domain 6: Capabilities in patient safety and quality improvement</p> <ul style="list-style-type: none"> Patient safety <p>Domain 7: Capabilities in safeguarding vulnerable groups.</p>
Mapping to GMP Domains	<p>Domain 1: Knowledge, Skills & performance</p> <ul style="list-style-type: none"> Develop & maintain professional practice Record work clearly, accurately & legibly <p>Domain 2: Safety & Quality</p> <ul style="list-style-type: none"> Contribute to/comply with systems to protect patients <p>Domain 3: Communication, Partnership & Teamwork</p> <ul style="list-style-type: none"> Work collaboratively with colleagues Teaching, training and supporting colleagues <p>Domain 4: Maintaining Trust</p> <ul style="list-style-type: none"> Show respect for patients Act with honesty and integrity 	<p>Domain 1: Knowledge, Skills & performance</p> <ul style="list-style-type: none"> Apply knowledge and experience to practice <p>Domain 2: Safety & Quality</p> <ul style="list-style-type: none"> Contribute to/comply with systems to protect patients Responds to risks to safety <p>Domain 3: Communication, Partnership & Teamwork</p> <ul style="list-style-type: none"> Work collaboratively with colleagues Teaching, training and supporting colleagues <p>Domain 4: Maintaining Trust</p> <ul style="list-style-type: none"> Show respect for patients Treat patients and colleagues fairly and without discrimination Act with honesty and integrity

Domain	General Anaesthesia	Regional Anaesthesia
High-level Learning Outcome	Provides safe and effective general anaesthesia.	Provides safe and effective regional anaesthesia.
Stage 1 Learning Outcome(s)	Provides safe and effective general anaesthesia with distant supervision for ASA 1-3 patients undergoing non-complex elective and emergency surgery within a general theatre setting.	Performs simple nerve blocks and performs spinal anaesthesia and lumbar epidural anaesthesia/analgesia independently.
Stage 2 Learning Outcome(s)	Provides safe and effective general anaesthesia with distant supervision for ASA 1-3 patients undergoing non-complex elective and emergency surgery within all settings.	Performs a wider range of regional anaesthetic techniques.
Stage 3 Learning Outcome(s)	Provides safe and effective general anaesthesia independently for patients undergoing non-specialist procedures and for patients within defined areas of a special interest.	Delivers a range of safe and effective regional anaesthetic techniques to cover the upper and lower limb, chest wall and abdominal wall independently.
Mapping to GPC domains	<p>Domain 1: Professional values and behaviours</p> <p>Domain 2: Professional skills</p> <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills <p>Domain 3: Professional knowledge</p> <ul style="list-style-type: none"> • Professional requirements • National legislative requirements <p>Domain 5: Capabilities in leadership and team working</p> <p>Domain 6: Capabilities in patient safety and quality improvement</p> <ul style="list-style-type: none"> • Patient safety <p>Domain 7: Capabilities in safeguarding vulnerable groups.</p>	<p>Domain 1: Professional values and behaviours</p> <p>Domain 2: Professional skills</p> <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills <p>Domain 3: Professional knowledge</p> <ul style="list-style-type: none"> • Professional requirements • National legislative requirements <p>Domain 5: Capabilities in leadership and team working</p> <p>Domain 6: Capabilities in patient safety and quality improvement</p> <ul style="list-style-type: none"> • Patient safety <p>Domain 7: Capabilities in safeguarding vulnerable groups.</p>
Mapping to GMP Domains	<p>Domain 1: Knowledge, Skills & performance</p> <ul style="list-style-type: none"> • Develop & maintain professional practice • Apply knowledge and experience to practice • Record work clearly, accurately & legibly <p>Domain 2: Safety & Quality</p> <ul style="list-style-type: none"> • Contribute to/comply with systems to protect patients • Respond to risks to safety • Respond to risks posed by your health <p>Domain 3: Communication, Partnership & Teamwork</p> <ul style="list-style-type: none"> • Communicate effectively • Work collaboratively with colleagues • Teaching, training and supporting colleagues <p>Domain 4: Maintaining Trust</p> <ul style="list-style-type: none"> • Show respect for patients • Treat patients and colleagues fairly and without discrimination • Act with honesty and integrity 	<p>Domain 1: Knowledge, Skills & performance</p> <ul style="list-style-type: none"> • Develop & maintain professional practice • Apply knowledge and experience to practice • Record work clearly, accurately & legibly <p>Domain 2: Safety & Quality</p> <ul style="list-style-type: none"> • Contribute to/comply with systems to protect patients • Respond to risks to safety • Respond to risks posed by your health <p>Domain 3: Communication, Partnership & Teamwork</p> <ul style="list-style-type: none"> • Communicate effectively • Work collaboratively with colleagues • Teaching, training and supporting colleagues <p>Domain 4: Maintaining Trust</p> <ul style="list-style-type: none"> • Show respect for patients • Treat patients and colleagues fairly and without discrimination • Act with honesty and integrity

Domain	Resuscitation and Transfer	Procedural Sedation
High-level Learning Outcome	Resuscitates, stabilises and transfers critically ill patients safely.	Provides safe & effective sedation.
Stage 1 Learning Outcome(s)	<p>Able to recognise and initiates resuscitation of the deteriorating patient.</p> <p>Works as an effective member of the medical emergency team.</p> <p>Cares for stable critically ill adult patients independently during inter-hospital transfers by road.</p>	Provides safe procedural sedation to ASA 1-3 patients within the theatre complex.
Stage 2 Learning Outcome(s)	<p>Able to manage the on-going care of post-resuscitation patients.</p> <p>Independently cares for critically ill adult patients during inter-hospital transfers by road.</p>	Provides safe sedation to ASA 1-3 adults and children, in any location within the hospital.
Stage 3 Learning Outcome(s)	<p>Is able to lead the multidisciplinary team for all patients requiring resuscitation from any cause, subsequent stabilisation and post-resuscitation care.</p> <p>Able to supervise inter-hospital transfers and evaluate the necessary resources for patient transfers.</p>	Delivers safe and effective procedural sedation independently.
Mapping to GPC domains	<p><i>Domain 1: Professional values and behaviours</i></p> <p><i>Domain 2: Professional skills</i></p> <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills <p><i>Domain 3: Professional knowledge</i></p> <ul style="list-style-type: none"> • Professional requirements • National legislative requirements <p><i>Domain 5: Capabilities in leadership and team working</i></p> <p><i>Domain 6: Capabilities in patient safety and quality improvement</i></p> <ul style="list-style-type: none"> • Patient safety. 	<p><i>Domain 1: Professional values and behaviours</i></p> <p><i>Domain 2: Professional skills</i></p> <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills <p><i>Domain 3: Professional knowledge</i></p> <ul style="list-style-type: none"> • Professional requirements • National legislative requirements <p><i>Domain 5: Capabilities in leadership and team working</i></p> <p><i>Domain 6: Capabilities in patient safety and quality improvement</i></p> <ul style="list-style-type: none"> • Patient safety <p><i>Domain 7: Capabilities in safeguarding vulnerable groups.</i></p>
Mapping to GMP Domains	<p><i>Domain 1: Knowledge, Skills & performance</i></p> <ul style="list-style-type: none"> • Develop & maintain professional practice • Apply knowledge and experience to practice • Record work clearly, accurately & legibly <p><i>Domain 2: Safety & Quality</i></p> <ul style="list-style-type: none"> • Contribute to/comply with systems to protect patients • Respond to risks to safety • Respond to risks posed by your health <p><i>Domain 3: Communication, Partnership & Teamwork</i></p> <ul style="list-style-type: none"> • Communicate effectively • Work collaboratively with colleagues • Teaching, training and supporting colleagues <p><i>Domain 4: Maintaining Trust</i></p> <ul style="list-style-type: none"> • Show respect for patients • Treat patients and colleagues fairly and without discrimination • Act with honesty and integrity 	<p><i>Domain 1: Knowledge, Skills & performance</i></p> <ul style="list-style-type: none"> • Develop & maintain professional practice • Apply knowledge and experience to practice • Record work clearly, accurately & legibly <p><i>Domain 2: Safety & Quality</i></p> <ul style="list-style-type: none"> • Contribute to/comply with systems to protect patients • Respond to risks to safety • Respond to risks posed by your health <p><i>Domain 3: Communication, Partnership & Teamwork</i></p> <ul style="list-style-type: none"> • Communicate effectively • Work collaboratively with colleagues • Teaching, training and supporting colleagues <p><i>Domain 4: Maintaining Trust</i></p> <ul style="list-style-type: none"> • Show respect for patients • Treat patients and colleagues fairly and without discrimination • Act with honesty and integrity

Domain	Pain	Intensive Care
High-level Learning Outcome	Manages pain.	Manages critical illness.
Stage 1 Learning Outcome(s)	Recognises, assesses and treats acute pain independently. Differentiates between acute and chronic pain.	Provides safe and effective care for critically ill patients under close supervision.
Stage 2 Learning Outcome(s)	Understands the aetiology and management of acute, acute on chronic and chronic pain.	Provides safe and effective care for critically ill patients with specialist help and guidance.
Stage 3 Learning Outcome(s)	Able to initiate complex pain management for in-patients and to signpost to appropriate pain management services.	Provides safe and effective care for critically ill patients with specialist help and guidance.
Mapping to GPC domains	<p>Domain 1: Professional values and behaviours</p> <p>Domain 2: Professional skills</p> <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills <p>Domain 3: Professional knowledge</p> <ul style="list-style-type: none"> • Professional requirements • National legislative requirements <p>Domain 5: Capabilities in leadership and team working</p> <p>Domain 6: Capabilities in patient safety and quality improvement</p> <ul style="list-style-type: none"> • Patient safety <p>Domain 7: Capabilities in safeguarding vulnerable groups.</p>	<p>Domain 1: Professional values and behaviours</p> <p>Domain 2: Professional skills</p> <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills <p>Domain 3: Professional knowledge</p> <ul style="list-style-type: none"> • Professional requirements • National legislative requirements <p>Domain 5: Capabilities in leadership and team working</p> <p>Domain 6: Capabilities in patient safety and quality improvement</p> <ul style="list-style-type: none"> • Patient safety <p>Domain 7: Capabilities in safeguarding vulnerable groups.</p>
Mapping to GMP Domains	<p>Domain 1: Knowledge, Skills & performance</p> <ul style="list-style-type: none"> • Develop & maintain professional practice • Apply knowledge and experience to practice • Record work clearly, accurately & legibly <p>Domain 2: Safety & Quality</p> <ul style="list-style-type: none"> • Contribute to/comply with systems to protect patients • Respond to risks to safety • Respond to risks posed by your health <p>Domain 3: Communication, Partnership & Teamwork</p> <ul style="list-style-type: none"> • Communicate effectively • Work collaboratively with colleagues • Teaching, training and supporting colleagues <p>Domain 4: Maintaining Trust</p> <ul style="list-style-type: none"> • Show respect for patients • Treat patients and colleagues fairly and without discrimination • Act with honesty and integrity 	<p>Domain 1: Knowledge, Skills & performance</p> <ul style="list-style-type: none"> • Develop & maintain professional practice • Apply knowledge and experience to practice • Record work clearly, accurately & legibly <p>Domain 2: Safety & Quality</p> <ul style="list-style-type: none"> • Contribute to/comply with systems to protect patients • Respond to risks to safety • Respond to risks posed by your health <p>Domain 3: Communication, Partnership & Teamwork</p> <ul style="list-style-type: none"> • Communicate effectively • Work collaboratively with colleagues • Teaching, training and supporting colleagues <p>Domain 4: Maintaining Trust</p> <ul style="list-style-type: none"> • Show respect for patients • Treat patients and colleagues fairly and without discrimination • Act with honesty and integrity

12 Annex B - Stage 1 Domains of Learning

12.1 Professional Behaviours and Communication

12.1.1 Stage 1 learning outcome

- *Demonstrates the professional values and behaviours required of doctors in training*

12.1.2 Key capabilities

A	Demonstrates the personal and professional values and behaviours set out in Good Medical Practice
B	Communicates effectively with patients, their relatives and members of the multidisciplinary team with whom they work including being open and honest when things go wrong
C	Practices effective interpersonal skills, emphasising empathy, compassion, courtesy and respect
D	Appreciates how their own behaviour affects patients and members of the multidisciplinary team and acts accordingly
E	Reflects on their own clinical practice in order to achieve insight and gain meaningful learning from experiences
F	Obtains valid consent following the associated legal and professional principles
G	Participates in GMC National Training Survey and other quality control, management and assurance processes as required by the regulator
H	Produces accurate, legible, contemporaneous notes relating to all clinical practice
I	Appreciates the importance of physical and mental health in self and others

12.1.3 Examples of evidence

12.1.3.1 *Experience & logbook:*

- range of surgical specialties and patient groups in theatre setting, obstetrics, pre-operative assessment clinics and Intensive Care Unit.

12.1.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- effective communication skills with patients during pre-operative assessment
- accurate recording of details of pre-operative assessment on anaesthetic chart
- discussion of event where demonstration of duty of candour is appropriate
- safe and effective handover to another member of the health care team
- high standards in prescribing medication
- active involvement with safety checks in theatre eg WHO checklist.

12.1.3.3 *Personal Activities and Personal Reflections may include:*

- maintenance of professional portfolio on LLP including evidence of regular meetings with educational supervisor
- completion of GMC trainee survey
- reflection on examples of good and poor behaviour by members of the multidisciplinary team
- demonstration of confidentiality within all means of communication including social media
- simulation training: critical incidents, transfers
- attendance at quality improvement/clinical governance meetings.

12.1.3.4 *Other evidence:*

- multi-source feedback
- thank you cards/letters/emails from patients and colleagues.

12.1.4 Cross links with other domains and capabilities

- Education and Training
- Safety and Quality Improvement
- all specialty-specific domains.

12.2 Management and Professional and Regulatory Requirements

12.2.1 Stage 1 learning outcome

- *Understands and undertakes managerial, administrative and organisational roles expected of all doctors*

12.2.2 Key capabilities

A	Describes the management structure and processes of the anaesthetic department within the wider hospital environment
B	Explains employment law and the relevance of the working time regulations
C	Works within local and national systems for clinical governance and data protection
D	Stays up to date, and complies, with relevant guidance from the GMC and other professional bodies
E	Commits to the objectives of the hospital as an organisation
F	Understands equality and diversity legislation
G	Complies with health and safety legislation in the context of patient care

12.2.3 Examples of evidence

12.2.3.1 *Experience & logbook:*

- engagement with anaesthetic departmental activities.

12.2.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- application of principles of information governance
- knowledge of guidance from GMC and other professional bodies.

12.2.3.3 *Personal Activities and Personal Reflections may include:*

- equality and diversity training
- attendance at hospital induction and completion of mandatory training requirements
- attendance at departmental clinical governance meetings
- e-learning or reading literature on employment law
- presentation at clinical governance meeting
- attendance at junior doctors' forum meetings.

12.2.4 Cross links with other domains and capabilities

- Safety and Quality Improvement
- Education and Training.

12.3 Team Working

12.3.1 Stage 1 learning outcome

- Works effectively as a member of a clinical team

12.3.2 Key capabilities

A	Actively participates and contributes to the work and success of a team
B	Demonstrates appropriate clinical leadership behaviour in the workplace
C	Demonstrates the importance of non-technical behaviour in the functioning of a successful team
D	Describes leadership responsibilities
E	Explains why effective leadership is central to safe and effective care
F	Provides, accepts and acts on constructive and appropriately framed feedback

12.3.3 Examples of evidence

12.3.3.1 *Experience & logbook:*

- range of surgical specialties and patient groups in theatre setting, obstetrics, pre-operative assessment clinics and Intensive Care Unit.

12.3.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- evidence of good team working through reflection
- participation with teams in theatre (eg ALMAT)
- acting as a member of Medical Emergency Team
- management of the critically ill patient as part of the ICU team.

12.3.3.3 *Personal Activities and Personal Reflections may include:*

- completion of resuscitation courses
- simulation training
- multi-source feedback.

12.3.4 Cross links with other domains and capabilities

12.4 Safety and Quality Improvement

12.4.1 Stage 1 learning outcomes

- *Understands and applies quality improvement methodology*
- *Applies the principles of patient safety to their own clinical practice.*

12.4.2 Key capabilities

A	Describes quality improvement theories and methodologies
B	Contrasts quantitative and qualitative analysis and the diagnostic tools used to understand the system
C	Compares audit, research and quality improvement
D	Commits to the principles of continuous quality improvement
E	Describes the common threats to patient safety in theatre and the perioperative period, and describes how these are minimised by day-to-day work routines
F	Describes the benefits of learning by sharing patient safety problems and solutions by means of critical incident reporting and improving care through morbidity or mortality reviews
G	Understands the importance of recognising and rewarding excellence in quality and safety, not simply mistakes and errors
H	Demonstrates the importance of the non-technical aspects of care such as situation awareness, task management, decision making and team working in anaesthetic practice.
I	Understands the importance of interpersonal skills, structured communication and the use of cognitive aids in managing critical emergencies, and recognises the role of simulation in rehearsal
J	Describes the benefits and limitations of technology and equipment in maintaining patient safety
K	Describes the requirements and processes for raising concerns
L	Explains and demonstrates duty of candour
M	Prescribes and administers drugs safely

12.4.3 Examples of evidence

12.4.3.1 *Experience & logbook*

- involvement in QI activities within Anaesthetics Department as a minimum requirement.

12.4.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- understanding of quality improvement methodology (A-QIPAT for relevant projects)
- engagement with surgical safety initiatives and departmental guidelines relating to patient safety
- learning from critical incidents
- learning from pre-briefs and de-briefs on own and team's performance
- evidence of applying good non-technical skills and effective multi-disciplinary team working (eg ALMAT)
- safe prescription and administration of drugs.

12.4.3.3 *Personal Activities and Personal Reflections may include:*

- attendance at quality improvement training
- involvement with local, regional or national quality improvement projects
- submission of excellence and incident reports
- simulation training eg crisis resource management, critical incident, resuscitation
- attendance at local clinical governance/quality improvement meetings
- self-directed learning regarding duty of candour
- multi-source feedback.

12.4.4 Cross links with other domains and capabilities

- Professional Behaviours and Communication
- Team working
- all specialty specific domains.

12.5 Safeguarding

12.5.1 Stage 1 learning outcome

- Describes the importance of safeguarding vulnerable people

12.5.2 Key capabilities

A	Explains local procedures for safeguarding vulnerable children and adults
B	Discusses the principles of adult safeguarding; empowerment, prevention, proportionality, protection, partnership, accountability
C	Communicates effectively with vulnerable patients
D	Recognises potential forms of abuse of vulnerable adult and children and the various contexts in which they may occur
E	Classifies the different forms of maltreatment that can occur
F	Complies with professional requirements and legal processes when obtaining consent from vulnerable patients
G	Describes escalation triggers and processes

12.5.3 Examples of evidence

12.5.3.1 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- management of consent in an adult who does not have capacity
- knowledge of the local procedure for referral of an adult for safeguarding concerns
- involvement with cases where there are safeguarding issues with children or adults.

12.5.3.2 *Personal Activities and Personal Reflections may include:*

- attendance at local mandatory training including safeguarding
- e-Learning: child and adult safeguarding
- e-Learning: mental capacity act.

12.5.4 Cross links with other domains and capabilities

- Professional Behaviours and Communication
- Education and Training

12.6 Education and Training

12.6.1 Stage 1 learning outcome

- *Takes responsibility for their own education and training needs and contributes to departmental education*

12.6.2 Key capabilities

A	Demonstrates that providing high quality patient care is always the priority in the context of education
B	Manages their own programme of learning
C	Describes the importance of and participates in induction and orientation of new staff
D	Explains the role of different learning opportunities, within the workplace and beyond, making use of a range of techniques including e-learning and simulation
E	Explains the need for, reflects and acts on feedback on their education and training, including at local, regional and national level
F	Describes the importance of patient education
G	Records educational activities appropriately, including reflection on learning
H	Promotes and participates in inter-professional learning
I	Contributes to departmental educational programmes

12.6.3 Examples of evidence

12.6.3.1 *Experience & logbook:*

- use of SLEs throughout stage of training to facilitate learning and guide progress.

12.6.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- reflection on learning in the workplace and response to feedback.

12.6.3.3 *Personal Activities and Personal Reflections may include:*

- maintenance of professional portfolio on LLp
- setting out and review of personal development plans
- record of attendance at local and regional/school teaching sessions
- completion of GMC trainee survey
- teaching session delivered (presentation slides)
- attendance at pre-assessment (POA) or perioperative medicine (POM) clinic and reflection on learning
- production of patient educational materials
- attendance at hospital induction session(s)
- mandatory training

- simulation training
- use of e-Learning Anaesthesia
- engagement with feedback on education and training
- personal learning activities such as journal articles read and reflections on them.

12.6.4 Cross links with other domains and capabilities

- all specialty specific and generic professional domains

12.7 Research and Managing Data

12.7.1 Stage 1 learning outcome

- *Is research aware: demonstrates an understanding of the evidence-based approach to anaesthetic and perioperative care*

12.7.2 Key capabilities

A	Demonstrates knowledge of different research approaches in scientific enquiry
B	Develops the skills required to be current with national guidelines, best practice and relevant publications, appreciating the principles of an unbiased literature search
C	Explains the principles of Good Clinical Practice (GCP)
D	Explains the role of research evidence in clinical practice
E	Describes essential statistical techniques used in research

12.7.3 Examples of evidence

12.7.3.1 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- use of evidence-based national or local guidelines
- accessing and interpreting evidence from the literature to aid shared-decision making.

12.7.3.2 *Personal Activities and Personal Reflections may include:*

- presentation at journal club: academic paper, review article, national reports or guidelines such as CEMACH, NCEPOD, NICE
- undertaking or completed GCP certificate
- assisting with data collection for research project
- involvement in review article / literature review
- awareness of local Trainee Research Network activity (TRN).

12.7.4 Cross links with other domains and capabilities

- Safety and Quality Improvement

12.8 Perioperative Medicine and Health Promotion

12.8.1 Stage 1 learning outcomes

- Identifies clinical and social challenges that increase risk for patients undergoing surgery
- Appreciates the principles of sustainability in clinical practice

12.8.2 Key Capabilities A to F

A	Explains the patient, anaesthetic and surgical factors influencing patient outcomes
B	Applies a structured approach to preoperative anaesthetic assessment of ASA 1-3 patients prior to surgery and recognises when further assessment and optimisation is required
C	Explains the effect that co-existing disease, subsequent treatment and surgical procedure may have on the conduct of anaesthesia and plans perioperative management accordingly
D	Explains individualised options and risks of anaesthesia and pain management to patients
E	Describes the importance of perioperative nutrition and fasting
F	Recognises and acts on the specific perioperative care requirements in frail and elderly patients and those with cognitive impairment

12.8.2.1 *Examples of evidence*

- EPA 1, 2 and 4
- SLEs throughout stage of training across range of surgical specialties and experience in pre-operative assessment clinics.

12.8.2.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance

12.8.2.3 *Cross links with other domains and capabilities*

- General Anaesthesia

12.8.3 Key capability G

G	Considers patient informed preference when obtaining consent for anaesthetic procedures
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12.8.3.1 *Examples of evidence*

- EPA 1
- SLEs throughout stage of training across range of surgical specialties and experience in pre-operative assessment clinics.

12.8.3.2 *Suggested supervision level*

- Not applicable.

12.8.3.3 *Cross links with other domains and capabilities*

- General Anaesthesia
- Regional Anaesthesia

12.8.4 Key capabilities H & I

H	Describes and recognises the role of socio-economic, environmental and lifestyle factors in health and illness
I	Identifies appropriate opportunities to educate patients in health matters

12.8.4.1 *Examples of evidence*

- EPA 1
- SLEs throughout stage of training across range of surgical specialties and experience in pre-operative assessment clinics.

12.8.4.2 *Suggested supervision level*

- Not applicable.

12.8.4.3 *Cross links with other domains and capabilities*

- General Anaesthesia

12.8.5 Key Capability J

J	Describes and utilises appropriate antibiotic prophylaxis and prevention and treatment of infections
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12.8.5.1 *Examples of evidence*

- EPA 2 and 4
- SLEs throughout stage of training across range of surgical specialties.

12.8.5.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

12.8.5.3 *Cross links with other domains and capabilities*

- General Anaesthesia
- Intensive Care

12.8.6 Key capability K

K	Explains the environmental impact of healthcare and the principles of sustainable clinical practice
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12.8.6.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties
- Demonstration of learning through reflection of journal articles, texts, eLearning, webinars, courses etc.

12.8.6.2 *Suggested supervision level*

- Not applicable.

12.8.6.3 *Cross links with other domains and capabilities*

- Intensive Care

12.8.7 Key capability L

L	Applies local policies to prevent venous thromboembolism and understands the implications for anaesthetic practice on an individualised basis
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12.8.7.1 *Examples of evidence*

- EPAs 1,2,3 and 4
- SLEs throughout stage of training across range of surgical specialties.

12.8.7.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

12.8.7.3 *Cross links with other domains and capabilities*

- General Anaesthesia
- Regional Anaesthesia

12.8.8 Paediatric anaesthesia: key capability M

M	Explains the specific perioperative care requirements of children including anxiety management
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12.8.8.1 *Examples of evidence*

- SLEs throughout stage of training across range of paediatric surgical specialties.

12.8.8.2 *Suggested supervision level*

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals.

12.8.8.3 *Cross links with other domains and capabilities*

- General Anaesthesia

12.8.9 Obstetric anaesthesia: key capability N

N	Explains the perioperative implications of pregnancy, and initiates management of common serious diseases relating to pregnancy
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12.8.9.1 *Examples of evidence*

- EPA 4
- SLEs throughout stage of training in obstetrics.

12.8.9.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

12.8.9.3 *Cross links with other domains and capabilities*

- General Anaesthesia
- Regional Anaesthesia

12.8.10 Key capability O

O	Liaises with critical care when appropriate for post-operative care
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12.8.10.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties.

12.8.10.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

12.8.10.3 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication

- General Anaesthesia

12.8.11 Key capability P

P	Describes the perioperative requirements for day case surgery
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12.8.11.1 *Examples of evidence*

- EPAs 1 and 2
- SLEs throughout stage of training across range of surgical specialties.

12.8.11.2 *Suggested supervision level*

- not applicable.

12.8.11.3 *Cross links with other domains and capabilities*

- General Anaesthesia

12.8.12 Key capability Q

Q	Safely prescribes and administers blood products
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12.8.12.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties
- Blood transfusion training
- EPA 4.

12.8.12.2 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

12.8.12.3 *Cross links with other domains and capabilities*

- General Anaesthesia

12.9 General Anaesthesia

12.9.1 Stage 1 learning outcome

- Provides safe and effective general anaesthesia with distant supervision for ASA 1-3 patients undergoing non-complex elective and emergency surgery within a general theatre setting

12.9.2 Key capabilities A to D

A	Conducts comprehensive pre-anaesthetic and pre-operative checks
B	Safely manages induction and maintenance of anaesthesia by inhalational and intravenous techniques, extubation and emergence from anaesthesia
C	Plans recovery care, and manages recovery from anaesthesia utilising safe discharge criteria
D	Diagnoses and manages common peri-operative complications

12.9.2.1 *Examples of evidence*

- EPA 1 and 2
- SLEs throughout stage of training across range of surgical specialties
- Simulation training: critical incidents.

12.9.2.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

12.9.2.3 *Cross links with other domains and capabilities*

- Team Working
- Perioperative Medicine and Health Promotion

12.9.3 Key capability E

E	Recognises anaesthetic critical incidents and explains their causes and management
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12.9.3.1 *Examples of evidence*

- EPA 2
- SLEs throughout stage of training across range of surgical specialties
- simulation training: critical incidents.

12.9.3.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

12.9.3.3 *Cross links with other domains and capabilities*

- Team Working
- Safety and Quality Improvement

12.9.4 Key capabilities F & G

F	Demonstrates knowledge of standard equipment used in anaesthetic practice with an understanding of relevant underpinning physics and clinical measurement involved.
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G	Demonstrates knowledge of anatomy, physiology, biochemistry and pharmacology relevant to anaesthetic practice
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12.9.4.1 *Examples of evidence*

- EPAs 1, 2, 3 and 4
- SLEs throughout stage of training across range of surgical specialties
- Primary FRCA.

12.9.4.2 *Suggested supervision level*

- Not applicable.

12.9.4.3 *Cross links with other domains and capabilities*

- Education and Training

12.9.5 Key capabilities H to J

H	Provides safe general anaesthesia with distant supervision for ASA 1- 3 adults undergoing non-complex elective and emergency surgery within the general theatre setting.
I	Describes the specific needs of the obese, frail and elderly patient undergoing general anaesthesia
J	Manages intra-operative fluid balance appropriately

12.9.5.1 *Examples of evidence*

- EPAs 1, 2, and 4
- SLEs throughout stage of training across range of surgical specialties.

12.9.5.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

12.9.5.3 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion

12.9.6 Key capabilities K & L

K	Can identify patients with difficult airways, demonstrates management of the 'cannot intubate cannot oxygenate' scenario in simulation, and describes difficult airway guidelines
L	Recognises the challenges associated with shared airway surgery

12.9.6.1 *Examples of evidence*

- EPAs 1, 2, 3 and 4
- SLEs throughout stage of training across range of surgical specialties including ENT, Head & Neck
- simulation training: airway management.

12.9.6.2 *Suggested supervision level*

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals.

12.9.6.3 Cross links with other domains and capabilities

- Perioperative Medicine and Health Promotion

12.9.7 Key capability M

M	Provides safe anaesthesia for diagnostic or therapeutic procedures in the non-theatre environment for ASA 1- 2 adults with local supervision
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12.9.7.1 Examples of evidence

- SLEs throughout stage of training across range of surgical specialties.
- experience in different settings such as radiology, CT, MRI, ECT, Emergency Department.

12.9.7.2 Suggested supervision level

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals.

12.9.7.3 Cross links with other domains and capabilities

- Resuscitation and Transfer
- Intensive Care

12.9.8 Key capability N

N	Explains the principles of anaesthetic care for patients presenting with major trauma
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12.9.8.1 Examples of evidence

- SLEs throughout stage of training across relevant surgical specialties.
- emergency resuscitation in the Emergency Department setting
- simulation training: trauma resuscitation.

12.9.8.2 Suggested supervision level

- 1 - direct supervisor involvement, physically present in theatre throughout.

12.9.8.3 Cross links with other domains and capabilities

- Intensive Care

12.9.9 Paediatric anaesthesia: key capabilities O & P

O	Explains the principles of paediatric anaesthesia taking into account the anatomical, physiological, psychological and pharmacological differences from adults and their implications for safe anaesthetic practice
P	Provides safe general anaesthesia for ASA 1- 2 children 5 years and over with local supervision and 10 years with distant supervision undergoing non-complex elective and emergency surgery.

12.9.9.1 Examples of evidence

- SLEs throughout stage of training across relevant paediatric cases.

12.9.9.2 Suggested supervision levels

ASA 1-2 children aged 5-10:

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals

ASA 1-2 children aged over 10:

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

12.9.9.3 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion

12.9.10 Obstetric anaesthesia: key capabilities Q & R

Q	Explains the anaesthetic implications of pregnancy, and undertakes safe general anaesthesia for ASA 1- 3 obstetric patients
R	Performs immediate resuscitation and care for patients with acute obstetric emergencies under distant supervision, recognising when additional help is required

12.9.10.1 *Examples of evidence*

- EPAs 3 and 4
- SLEs throughout stage of training across relevant obstetric cases.

12.9.10.2 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance

12.9.10.3 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion

12.9.11 Key capability S

S	Describes the principles of total intravenous anaesthesia and uses it safely in clinical practice for non-complex cases
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12.9.11.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties.

12.9.11.2 *Suggested supervision level*

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals.

12.9.11.3 *Cross links with other domains and capabilities*

- Procedural Sedation

12.10 Regional Anaesthesia

12.10.1 Stage 1 learning outcome

- Performs simple peripheral nerve blocks and performs spinal anaesthesia and lumbar epidural anaesthesia/analgesia independently

12.10.2 Key capabilities A to C

A	Explains clearly to patients the risks and benefits of regional anaesthesia
B	Describes the indications and contraindications to regional anaesthetic techniques
C	Practices measures to avoid wrong-site blocks

12.10.2.1 *Examples of evidence*

- EPAs 3 and 4
- SLEs throughout stage of training across range of surgical specialties including obstetrics
- these should include demonstration of Stop Before You Block measures.

12.10.2.2 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance

12.10.2.3 *Cross links with other domains and capabilities*

- Safety and Quality Improvement
- Perioperative Medicine and Health Promotion

12.10.3 Key capability D

D	Performs spinal anaesthesia for ASA 1-3 surgical patients independently
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12.10.3.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties.
- EPA 4.

12.10.3.2 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

12.10.3.3 *Cross links with other domains and capabilities*

- Regional Anaesthesia

12.10.4 Key capability E

E	Performs simple peripheral nerve blocks with ultrasound
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12.10.4.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties.

12.10.4.2 *Suggested supervision levels*

simple peripheral nerve block such as wrist block:

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance

for ultrasound guided upper limb plexus block:

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals.

12.10.4.3 *Cross links with other domains and capabilities*

- Regional Anaesthesia

12.10.5 Key capability F

F	Performs ultrasound-guided femoral or fascia iliaca blocks independently
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12.10.5.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties.

12.10.5.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

12.10.5.3 *Cross links with other domains and capabilities*

- Regional Anaesthesia

12.10.6 Obstetric anaesthesia: key capabilities G to I

G	Identifies and initiates initial management of complications of regional anaesthesia including systemic local anaesthetic toxicity, high spinal and dural puncture headache
H	Provides epidural or combined spinal-epidural analgesia for labour in the ASA 1-3 obstetric patient, and offers other forms of pain relief when neuraxial analgesia is contraindicated
I	Provides neuraxial anaesthesia for operative delivery and other obstetric procedures in ASA 1-3 patients and manages the inadequate neuraxial block

12.10.6.1 *Examples of evidence*

- EPAs 3 and 4
- SLEs throughout stage of training across range of surgical specialties including obstetrics.

12.10.6.2 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

12.10.6.3 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion
- Regional Anaesthesia

12.10.7 Key capability J

J	Discusses the scientific basis of ultrasound and the generation of ultrasound images
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12.10.7.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties.
- Primary FRCA.

12.10.7.2 *Suggested supervision level*

- Not applicable.

12.10.7.3 *Cross links with other domains and capabilities*

- Regional Anaesthesia

12.10.8 Key capability K

K	Discusses drugs and equipment used in regional anaesthesia
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12.10.8.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties.

12.10.8.2 *Suggested supervision level*

- Not applicable.

12.10.8.3 *Cross links with other domains and capabilities*

- Regional Anaesthesia

12.11 Resuscitation and Transfer

12.11.1 Stage 1 learning outcomes

- Able to recognise and initiates resuscitation of the deteriorating patient
- Works as an effective member of the medical emergency team.
- Cares for stable critically ill adult patients independently during inter-hospital transfers by road

12.11.2 Key capabilities A to D

A	Explains of the pathophysiology of respiratory and cardiac arrest
B	Initiates resuscitation appropriately in all patient groups in accordance with the latest guidance
C	Describes ethical and legal issues associated with resuscitation including advance directives
D	Participates in debrief sessions for staff and relatives in a sensitive, compassionate and constructive manner

12.11.2.1 *Examples of evidence*

- SLEs throughout stage of training across relevant cases including cases managed as part of the medical emergency team
- successful completion of adult and paediatric life support courses
- simulation training
- personal activity or reflection on attendance at debrief session.

12.11.2.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

12.11.2.3 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication
- Team Working
- Intensive Care

12.11.3 Key capabilities E to G

E	Demonstrates the safe management of the inter-hospital transfer of the critically ill but stable adult patient by road
F	Assesses the clinical risks associated with transfer for individual patients
G	Safely performs intra-hospital transfer of patients, including retrieval of patients newly referred to critical care.

12.11.3.1 *Examples of evidence*

- SLEs throughout stage of training across relevant cases
- simulation training
- successful completion of a transfer course.

12.11.3.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

12.11.3.3 *Cross links with other domains and capabilities*

- Team Working
- Safety and Quality Improvement
- Intensive Care

12.11.4 Key capability H

H	Explains scoring systems in the management of deteriorating patients, and responds appropriately
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12.11.4.1 *Examples of evidence*

- SLEs throughout stage of training across relevant cases.
- Simulation.

12.11.4.2 *Suggested supervision level*

- Not applicable.

12.11.4.3 *Cross links with other domains and capabilities*

- Intensive Care

12.12 Procedural sedation

12.12.1 Stage 1 learning outcome

- Provides safe procedural sedation to ASA 1 to 3 adult patients within the theatre complex

12.12.2 Key capabilities A to G

A	Conducts appropriate pre-assessment of patients with respect to sedation, understands patient related risk factors, and plans accordingly
B	Chooses safe, appropriate sedative drugs to deliver conscious sedation
C	Describes the particular dangers associated with the use of single or combinations of sedative drugs, particularly in the frail, elderly or critically ill patient and those requiring transfer
D	Monitors a sedated patient's physiology appropriately
F	Ensures the provision of safe post-procedural care
E	Explains the different levels of sedation and appreciates the risks associated with these
G	Recognises and manages the complications of sedation

12.12.2.1 Examples of evidence

- SLEs throughout stage of training across range of surgical specialties.

12.12.2.2 Suggested supervision level

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals.

12.12.2.3 Cross links with other domains and capabilities

- Regional Anaesthesia
- Resuscitation and Transfer
- Intensive Care

12.13 Pain

12.13.1 Stage 1 learning outcomes

- Recognises, assesses and treats acute pain independently
- Differentiates between acute and chronic pain

12.13.2 Key capabilities A to C

A	Can recognise, examine, assess and manage acute pain in the surgical and non-surgical patient
B	Is able to safely and appropriately prescribe medication for pain management
C	Demonstrates effective communication skills regarding pain management with patients, relatives and carers

12.13.2.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties including acute pain rounds
- safe and appropriate prescribing of medication for pain management in the perioperative period.

12.13.2.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

12.13.2.3 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication

12.13.3 Key capabilities D & E

D	Demonstrates the basic assessment and management of acute on chronic and chronic pain in adults
E	Describes the concept of biopsychosocial multi-disciplinary pain management

12.13.3.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties including acute pain rounds
- personal activities such as teaching sessions, e-learning, attending pain clinic.

12.13.3.2 *Suggested supervision level*

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals.

12.13.3.3 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication

12.13.4 Key capability F

F	Describes the special circumstances in assessing and managing perioperative pain in specific patient groups including children, pregnancy and breast feeding, the elderly and frail, those with learning and communication difficulties, autism, dementia, renal and hepatic impairment and substance abuse
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12.13.4.1 Examples of evidence

- SLEs throughout stage of training across range of surgical specialties including those from obstetrics and paediatrics
- EPAs 3 and 4.

12.13.4.2 Suggested supervision level

- Not applicable.

12.13.4.3 Cross links with other domains and capabilities

- General Anaesthesia
- Intensive Care

12.13.5 Key capability G

G	Demonstrates the safe use of equipment used in pain management
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12.13.5.1 Examples of evidence

- SLEs throughout stage of training across range of surgical specialties eg setting up PCA pump
- EPA 3.

12.13.5.2 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

12.13.5.3 Cross links with other domains and capabilities

- Safety and Quality Improvement
- General Anaesthesia

12.14 Intensive Care

12.14.1 Stage 1 learning outcome

- Provides safe and effective care for critically ill patients under close supervision

12.14.2 Key capability A

A	Recognises the limitations of intensive care; employs appropriate admission criteria
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12.14.2.1 *Examples of evidence*

- SLEs throughout period of training for relevant cases.

12.14.2.2 *Suggested supervision level*

- FICM capability level 2 (see below for details).

12.14.2.3 *Cross links with other domains and capabilities*

- Resuscitation and Transfer

12.14.3 Key capability B

B	Performs safely and effectively the clinical invasive procedures required to maintain respiratory, cardiovascular and renal, support
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12.14.3.1 *Examples of evidence*

- SLEs throughout period of training for relevant cases.

12.14.3.2 *Suggested supervision level*

- FICM capability level 2 (see below for details).

12.14.3.3 *Cross links with other domains and capabilities.*

- Resuscitation and Transfer

12.14.4 Key capability C

C	Recognises, assesses and initiates management for acutely ill adults across the spectrum of single or multiple organ failure
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12.14.4.1 *Examples of evidence*

- SLEs throughout period of training for relevant cases
- simulation training including adult resuscitation courses.

12.14.4.2 *Suggested supervision level*

- FICM capability level 2 (see below for details).

12.14.4.3 *Cross links with other domains and capabilities.*

- Resuscitation and Transfer

12.14.5 Key capability D

D	Recognises the acutely ill child and initiates management of paediatric emergencies
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12.14.5.1 *Examples of evidence*

- SLEs throughout stage of training for relevant cases
- simulation training including paediatric resuscitation courses.

12.14.5.2 Suggested supervision level

- FICM capability level 1 (see below for details).

12.14.5.3 Cross links with other domains and capabilities.

- Resuscitation and Transfer

12.14.6 Key capability E

E	Recognises and manages the patient with sepsis and employs local infection control policies
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12.14.6.1 Examples of evidence

- SLEs throughout stage of training for relevant cases.

12.14.6.2 Suggested supervision level

- FICM capability level 2 (see below for details).

12.14.6.3 Cross links with other domains and capabilities

- Perioperative Medicine and Health Promotion

12.14.7 Key capability F

F	Undertakes and evaluates laboratory and clinical imaging investigations to manage patients while critically ill during their intensive care stay
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12.14.7.1 Examples of evidence

- SLEs throughout period of training for relevant cases.

12.14.7.2 Suggested supervision level

- FICM capability level 2 (see below for details).

12.14.7.3 Cross links with other domains and capabilities

- Resuscitation and Transfer

12.14.8 Key capability G

G	Manages the medical / surgical needs and organ support of patients during their critical illness, including the holistic care of patients and relatives
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12.14.8.1 Examples of evidence

- SLEs throughout period of training for relevant cases.

12.14.8.2 Suggested supervision level

- FICM capability level 2 (see below for details).

12.14.8.3 Cross links with other domains and capabilities

- Resuscitation and Transfer

12.14.9 Key capability H

H	Plans and communicates the appropriate discharge of patients from intensive care to health care professionals, patients and relatives
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12.14.9.1 Examples of evidence

- SLEs throughout period of training for relevant cases.

12.14.9.2 Suggested supervision level

- FICM capability level 2 (see below for details).

12.14.9.3 Cross links with other domains and capabilities

- Professional Behaviours and Communication

12.14.10 Key capability I

I	Manages end of life care within the intensive care environment with patients, relatives and the multi-professional team
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12.14.10.1 Examples of evidence

- SLEs throughout period of training for relevant cases.

12.14.10.2 Suggested supervision level

- FICM capability level 1 (see below for details).

12.14.10.3 Cross links with other domains and capabilities

- Professional Behaviours and Communication
- Resuscitation and Transfer

12.14.11 Key capability J

J	Liaises with transplant services when appropriate, can perform brain stem death testing and provides the physiological support of the donor
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12.14.11.1 Examples of evidence

- SLEs throughout period of training for relevant cases
- simulation training
- personal activity and reflection: journal article, e-Learning.

12.14.11.2 Suggested supervision level

- FICM capability level 0 (see below for details).

12.14.11.3 Cross links with other domains and capabilities

12.14.12 Key capability K

K	Supports clinical staff outside the ICU to enable the early detection of the deteriorating patient
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12.14.12.1 Examples of evidence

- SLEs throughout period of training for relevant cases.

12.14.12.2 Suggested supervision level

- FICM capability level 1 (see below for details).

12.14.12.3 Cross links with other domains and capabilities

- Resuscitation and Transfer

Level	Task orientated capability	Knowledge orientated capability	Patient management capability
1	Performs task under direct supervision.	Very limited knowledge; requires considerable guidance to solve a problem within the area.	Can take history, examine and arrange investigations for straight forward case (limited differential diagnosis). Can initiate emergency management and continue a management plan, recognising acute divergences from the plan. Will need help to deal with these.
2	Performs task in straightforward circumstances, requires help for more difficult situations. Understands indications and complications of task.	Sound basic knowledge; requires some guidance to solve a problem within the area. Will have knowledge of appropriate guidelines and protocols.	Can take history, examine and arrange investigations in a more complicated case. Can initiate emergency management. In a straightforward case, can plan management and manage any divergences in short term. Will need help with more complicated cases.
3	Performs task in most circumstances, will need some guidance in complex situations. Can manage most complications, has a good understanding of contraindications and alternatives.	Advanced knowledge and understanding; only requires occasional advice and assistance to solve a problem. Will be able to assess evidence critically.	Can take history, examine and arrange investigations in a more complex case in a focused manner. Can initiate emergency management. In a most cases, can plan management and manage any divergences. May need specialist help for some cases.

13 Annex C - Stage 2 Domains of Learning

13.1 Professional Behaviours and Communication

13.1.1 Stage 2 learning outcome

- *Demonstrates the professional values and behaviours required of senior anaesthetists in training*

13.1.2 Key capabilities

A	Guides and advises colleagues who are less experienced than themselves on professional matters
B	Formulates management plans for patients with complex needs, recognising the limits of their own experience and competence and seeks assistance where appropriate
C	Recognises and reflects on how the behaviour of themselves and others can affect the effective delivery of health care and patient safety
D	Acts as a good role model for more junior colleagues and other members of the multidisciplinary team
E	Acts and responds appropriately in difficult situations such as medical emergencies, whilst demonstrating professional behaviour and good judgement and maintains situational awareness
F	Communicates effectively and sensitively when breaking bad news to patients and their relatives, demonstrating awareness of cultural and social differences
G	Describes the effects of working patterns or lifestyle choices on physical and mental health and takes steps to minimise the impact

13.1.3 Examples of evidence

13.1.3.1 *Experience & logbook:*

- range of surgical specialties and patient groups in theatre setting, obstetrics, pre-operative assessment clinics and Intensive Care Unit.

13.1.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- discussion with patients' relative on ICU
- formulation of treatment plan for a patient with complex needs in the pre-operative assessment clinic or ICU setting and discussion of this plan with the wider team
- professional behaviours during an emergency situation in theatre, ICU, A&E, etc
- leadership in theatre lists (ALMAT)
- high standards in prescribing medication.

13.1.3.3 *Personal Activities and Personal Reflections may include:*

- simulation and other courses such as resuscitation, communication skills, inter-hospital transfer
- awareness and application of Caldicott principles
- participation in junior doctors forum meetings
- delivery of teaching sessions and feedback.

13.1.3.4 *Other evidence:*

- satisfactory MSF.

13.1.4 Cross links with other domains and capabilities

- Safety and Quality Improvement
- Education and Training
- all specialty specific domains.

13.2 Management and Professional and Regulatory Requirements

13.2.1 Stage 2 learning outcome

- *Understands and undertakes managerial, administrative and organisational roles expected of senior anaesthetists in training*

13.2.2 Key capabilities

A	Appreciates and participates in the organisation of anaesthetic services within the structure of local hospital management and links to regional tertiary level services
B	Applies legal and ethical guidelines to their medical practice, including the legal requirements of consent and shared decision making
C	Engages with the departmental management structure and processes required for the delivery of perioperative and anaesthetic services.
D	Works effectively in the digital environment relating to patient care

13.2.3 Examples of evidence

13.2.3.1 *Experience & logbook:*

- involvement with Anaesthetic Departmental activities.

13.2.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- ability to use hospital investigation IT systems, electronic prescribing, electronic medical records
- participation in patient advice and decision-making pathway in pre-operative assessment
- obtaining consent for procedures.

13.2.3.3 *Personal Activities and Personal Reflections may include:*

- management of a project in the anaesthetic department such as a teaching programme, QI project, rota administration for anaesthetists in training
- attendance at departmental business meetings
- courses or e-Learning: NHS structure and management, NICE guidance on shared decision making.

13.2.4 Cross links with other domains and capabilities

- Safety and Quality Improvement
- Education and Training
- Perioperative Medicine and Health Promotion

13.3 Team working

13.3.1 Stage 2 learning outcome

- *Demonstrates safe and effective followership and leadership in clinical teams*

13.3.2 Key capabilities

A	Provides assistance and leadership to less experienced colleagues
B	Recognises their own leadership style and how it may impact on others
C	Analyses and reflects on decision making, and explains this to others
D	Promotes and effectively participates in multidisciplinary and inter-professional team working
E	Applies teamworking skills to effectively manage complex dynamic situations

13.3.3 Examples of evidence

13.3.3.1 *Experience & logbook:*

- range of surgical specialties and patient groups in theatre setting, obstetrics, pre-operative assessment clinics and Intensive Care Unit.

13.3.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- supervision of more junior anaesthetists in training out of hours
- ability to lead resuscitation teams in the clinical setting
- leadership and management of theatre teams (ALMAT)
- decision making in clinical management of cases in theatre, etc.

13.3.3.3 *Personal Activities and Personal Reflections may include:*

- completion of resuscitation courses
- simulation training
- being part of simulation course faculty
- reflection on constructive feedback given to colleague
- portfolio evidence of personal development plans and regular meetings with educational supervisors.

13.3.3.4 *Other evidence*

- satisfactory MSF.

13.3.4 Cross links with other domains and capabilities

- Safety and Quality Improvement
- Resuscitation and Transfer
- all specialty specific domains.

13.4 Safety and Quality Improvement

13.4.1 Stage 2 learning outcomes

- Able to lead a local quality improvement project.
- Applies the principles of patient safety in the hospital context

13.4.2 Key capabilities

A	Knows when and how to apply quality improvement science with the aim of improving services while maintaining patient safety
B	Recognises the factors influencing reliable care
C	Demonstrates knowledge of variation with respect to interpreting measurement, understanding types of variation, and differentiating between expected and unwarranted variation
D	Utilises appropriate measurement techniques for improvement, and demonstrates whether a change has occurred and its impact
E	Contrasts 'data for assurance' and 'data for improvement' and uses both data appropriately
F	Uses simple proactive safety techniques to prevent harm to patients, including the assessment of likelihood and severity of risks
G	Matches expertise and resources to the level of clinical risk posed to patients
H	Describes the impact of anaesthetists' actions on patient safety more broadly in the hospital and wider healthcare system
I	Describes the principles of medication safety
J	Explains the process of critical incident follow-up

13.4.3 Examples of evidence

13.4.3.1 *Experience & logbook:*

- involvement in QI activities within Anaesthetics department and experience of hospital wide QI and risk assessment.

13.4.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- leadership of local QI project
- presentation of QI project results
- implementation of QI project outcomes recognizing challenges eg sustainability, up-scaling, spreading
- A-QIPAT
- case(s) resulting in completion of incident form
- observance of theatre safety practices such as Stop Before You Block, WHO checklist.

13.4.3.3 *Personal Activities and Personal Reflections may include:*

- courses or eLearning: quality improvement methodology, medicines management, human factors
- reflection on critical incident

- involvement with critical incident investigations
- attendance at quality improvement meetings.

13.4.4 Cross links with other domains and capabilities

- Professional Behaviours and Communication
- Team working
- Perioperative Medicine and Health Promotion
- Resuscitation and Transfer
- other specialty specific domains.

13.5 Safeguarding

13.5.1 Stage 2 learning outcome

- Recognises safeguarding concerns in patients and healthcare professionals

13.5.2 Key capabilities

A	Identifies, documents and acts on child protection and vulnerable patient concerns
B	Communicates effectively with appropriate teams, appreciating the issues of confidentiality, consent, information sharing and data protection
C	Applies the principles of adult safeguarding: empowerment, prevention, proportionality, protection, accountability, partnership
D	Applies the mental capacity legislation in clinical practice to protect the safety of individuals and society, and to address appropriate consent to treatment
E	Describes the needs and support required for people with learning disabilities, autism, acute confusion, dementia and mental illness

13.5.3 Examples of evidence

13.5.3.1 *Experience & logbook:*

- range of surgical specialties and patient groups in theatre setting, obstetrics, pre-operative assessment clinics and Intensive Care Unit.

13.5.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- management of consent with a child or adolescent involving parents
- knowledge of the local procedure for referral of a child for safeguarding concerns
- involvement with cases where there are safeguarding issues with children or adults
- adjustment to pre-operative assessment and consent when dealing with vulnerable adults or children
- involvement with cases dealing with vulnerable adults and children as listed in key capability E.

13.5.3.3 *Personal Activities and Personal Reflections may include:*

- attendance at local mandatory training including safeguarding, information governance and mental capacity act
- experience of the involvement of an Independent Mental Capacity Advocate.

13.5.4 Cross links with other domains and capabilities

- Professional Behaviours and Communication
- Education and Training
- all specialty specific domains.

13.6 Education and Training

13.6.1 Stage 2 learning outcome

- *Plans, delivers and reflects on educational activities provided to other learners*

13.6.2 Key capabilities

A	Describes the processes involved in planning and delivering educational programmes
B	Provides safe clinical supervision of learners in the workplace
C	Seeks, reflects on and acts upon feedback on their delivered educational activity
D	Explains the role of the patient in teaching and learning and respects their wishes
E	Describes the advantages and limitations of simulation and technology enhanced learning
F	Actively participates in patient education
G	Provides timely and supportive developmental feedback for all colleagues
H	Leads departmental educational sessions

13.6.3 Examples of evidence

13.6.3.1 *Experience & logbook:*

- range of clinical experience taking advantage of all opportunities for teaching and learning.

13.6.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- use of SLEs throughout stage of training to facilitate learning and guide progress
- supervision of more junior colleague.

13.6.3.3 *Personal Activities and Personal Reflections may include:*

- courses: Teaching and training courses such as Generic Instructor (GIC), Anaesthetists as Educators
- acting as part of teaching faculty in simulation courses
- planning and delivery of teaching sessions with feedback
- development of patient information material
- involvement with development and/or delivery of department teaching programmes.

13.6.4 Cross links with other domains and capabilities

- all specialty specific and generic professional domains.

13.7 Research and Managing Data

13.7.1 Stage 2 learning outcome

- *Is research ready: develops critical appraisal skills; gains a broader understanding of data management and research methodology; communicates research evidence to patients and colleagues in a meaningful way*

13.7.2 Key capabilities

A	Assesses the quality of research and its place in the literature when considering changes to practice
B	Can communicate to patients, the public and colleagues the strengths and limitations of evidence underlying anaesthetic and perioperative practice
C	Develops the ability to critically appraise published literature
D	Describes key approaches to improving patient outcomes through research including: clinical trials, stratified medicine, genomics, informatics, qualitative techniques, systematic review and meta-analysis, health services research
E	Explains the details of data protection in research
F	Describes the key components of research and its governance with emphasis on ethical considerations and ethics committees, translation into practice and the roles of Trust and University research and development departments
G	Applies a variety of statistical techniques used in research and understands their strengths and limitations

13.7.3 Examples of evidence

13.7.3.1 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- use of evidence-based national or local guidelines
- accessing and interpreting evidence from the literature (CBD).

13.7.3.2 *Personal Activities and Personal Reflections may include:*

- involvement in data collection as part of a local, regional or national study
- critical appraisal of journal article for example at a journal club meeting
- presentation of poster or paper at a regional or national meeting
- involvement in developing local guidelines
- appropriate use of statistics when contemplating research projects
- participation in trainee research network activities
- GCP certificate completion
- courses: research methodology, information governance.

13.7.4 Cross links with other domains and capabilities

- Safety and Quality Improvement

13.8 Perioperative medicine and health promotion

13.8.1 Stage 2 learning outcome

- Works with patients to reduce the risks associated with surgery

13.8.2 Key capabilities A to H

A	Delivers high quality, individualised perioperative care to ASA 1-4 patients for elective surgery and ASA 1-3 emergency patients, focusing on optimising patient experience and outcome
B	Liaises appropriately with other healthcare professionals to optimise patient care
C	Explains the principles of shared decision making
D	Makes appropriate plans to mitigate co-morbidities and their treatment in the perioperative period, with particular reference to less common cardiovascular, neurological, respiratory, endocrine, haematological and rheumatological diseases
E	Appreciates how integrated care pathways influence patient outcomes
F	Describes the use and limitations of common risk-scoring systems
G	Recognises when advanced physiological testing is indicated, interpreting the data to help stratify risk
H	Applies basic sciences to perioperative care

13.8.2.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties including emergency surgery, obstetrics, paediatrics, neuro, cardiac and experience in pre-operative assessment clinics.

13.8.2.2 *Personal Activities and Personal Reflections may include:*

- attendance at pre-operative assessment clinics
- knowledge of NICE guidance on shared decision making
- awareness of integrated care pathways in the devolved nations
- e-Learning or teaching sessions on risk scoring, cardiopulmonary exercise testing
- Final FRCA.

13.8.2.3 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.8.2.4 *Cross links with other domains and capabilities*

- Management and Professional and Regulatory Requirements
- General Anaesthesia

13.8.3 Key capabilities I to K

I	Applies the principles of public health interventions such as smoking cessation, reducing obesity and alcohol intake
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J	Recognises the potential harms of health care interventions
K	Explains how religious, cultural, and lifestyle factors may influence healthcare choices, such as blood transfusions, implants and use of animal derived products

13.8.3.1 *Examples of evidence*

- SLEs throughout stage of training across range of surgical specialties and experience in pre-operative assessment clinics.

13.8.3.2 *Personal Activities and Personal Reflections may include:*

- involvement with health promotion interventions with patients in pre-operative assessment clinics such as smoking cessation, prehabilitation
- knowledge of guidance of use of blood and blood products in Jehovah's Witnesses.

13.8.3.3 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance

13.8.3.4 *Cross links with other domains and capabilities*

- General Anaesthesia

13.8.4 *Key capability L*

L	Describes the needs and roles of carers and those providing support in the perioperative period and applies this to practice
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13.8.4.1 *Examples of Evidence*

- SLEs throughout stage of training across range of surgical specialties and experience in pre-operative assessment clinics.

13.8.4.2 *Suggested supervision level*

- Not applicable.

13.8.4.3 *Cross links with other domains and capabilities*

- Safeguarding
- General Anaesthesia

13.8.5 *Key capabilities M & N*

M	Describes the requirement for postoperative organ support and its limitations
N	Applies end of life care as part of a multidisciplinary team

13.8.5.1 *Examples of Evidence*

- SLEs throughout stage of training across range of surgical specialties including emergency surgery, neuro, cardiac and experience in intensive care and pre-operative assessment clinics.

13.8.5.2 *Personal Activities and Personal Reflections may include:*

- discussion with relatives of patients on Intensive Care.

13.8.5.3 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance

13.8.5.4 Cross links with other domains and capabilities

- Team Working
- Intensive Care

13.8.6 Key capabilities O to Q

O	Explains and acts on the importance of perioperative management of haematological conditions including anaemia and coagulopathy
P	Recognises the factors associated with abnormal perioperative nutritional status and applies strategies to mitigate risks where appropriate
Q	Applies adjustments required that co-existing disease and surgical complexity have on the conduct of anaesthesia and perioperative care, including frailty, cognitive impairment and the impact of substance abuse or obesity

13.8.6.1 Examples of evidence

- SLEs throughout stage of training across range of surgical specialties including emergency surgery, obstetrics, paediatrics, neuro, cardiac and experience in pre-operative assessment clinics
- demonstration of application of adjustments for patient groups described above.

13.8.6.2 Personal Activities and Personal Reflections may include:

- knowledge of local and national guidance on management of anaemia peri-operatively.

13.8.6.3 Suggested supervision level

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

13.8.6.4 Cross links with other domains and capabilities

- General Anaesthesia

13.8.7 Paediatric anaesthesia: key capability R

R	Demonstrates adjustments in perioperative care for children with co-morbidity
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13.8.7.1 Examples of Evidence

- SLEs throughout stage of training across range of surgical specialties including emergency surgery.

13.8.7.2 Suggested supervision level

ASA 1-3 children aged 1-5:

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals

ASA 1-3 children aged 5 and over:

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

13.8.7.3 Cross links with other domains and capabilities

- General Anaesthesia

13.8.8 Obstetric anaesthesia: key capabilities S & T

S	Plans appropriate obstetric anaesthetic care for all parturients collaboratively with the wider multi-disciplinary team
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T	Recognises and manages critical illness in parturients, including immediate resuscitation, and leads the care of acute obstetric emergencies
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13.8.8.1 *Examples of evidence*

- SLEs throughout stage of training in obstetrics including out of hours work and experience in pre-operative assessment clinics.

13.8.8.2 *Personal Activities and Personal Reflections may include:*

- attendance at obstetric anaesthesia clinics.

13.8.8.3 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance

13.8.8.4 *Cross links with other domains and capabilities.*

- General Anaesthesia
- Regional Anaesthesia
- Resuscitation and Transfer
- Intensive Care

13.9 General Anaesthesia

13.9.1 Stage 2 learning outcome

- Provides safe and effective general anaesthesia with distant supervision for ASA 1 - 3 patients undergoing non-complex elective and emergency surgery within all settings

13.9.2 Key Capability A

A	Explains the specific factors in providing safe anaesthetic care for patients at extremes of age, including neonates, children and older people with frailty, and implements these in practice
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13.9.2.1 *Examples of Evidence*

- SLEs throughout stage of training in a range of surgical specialties including paediatrics.

13.9.2.2 *Personal Activities and Personal Reflections may include:*

- Final FRCA.

13.9.2.3 *Suggested supervision level*

- Not applicable.

13.9.2.4 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion
- General Anaesthesia

13.9.3 Key capability B

B	Provides appropriate anaesthesia care for patients undergoing day case surgery in all settings
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13.9.3.1 *Examples of Evidence*

- SLEs throughout stage of training in a range of surgical specialties

13.9.3.2 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.9.3.3 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion
- Regional anaesthesia
- Pain

13.9.4 Key capability C

C	Describes the principles of intra-operative haemostasis and manages major haemorrhage
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13.9.4.1 *Examples of Evidence*

- SLEs throughout stage of training in a range of surgical specialties including out of hours work, trauma.

13.9.4.2 *Personal Activities and Personal Reflections may include:*

- mandatory training: blood transfusion.

13.9.4.3 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

13.9.4.4 *Cross links with other domains and capabilities.*

- Perioperative Medicine and Health Promotion
- Resuscitation and Transfer

13.9.5 Key capabilities D to F

D	Provides safe care for ASA 1-3 adult patients with multiple injuries from arrival in hospital to post-operative care and seeks help appropriately
E	Describes the anaesthetic-related problems associated with trauma including burns, poisoning, electrical injuries, and drowning
F	Applies physiological & pharmacological principles to reduce the risk of secondary brain injury in patients presenting with a severe head injury

13.9.6 Examples of Evidence

- SLEs throughout stage of training including out of hours work and experience in major trauma centre and neurosurgery.

13.9.6.1 *Personal Activities and Personal Reflections may include:*

- simulation training: trauma resuscitation.

13.9.7 Suggested supervision level

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

13.9.8 Cross links with other domains and capabilities

- Resuscitation and Transfer

13.9.9 Key capability G

G	Recognises, mitigates against risks and manages complications relating to patient positioning during surgery, including reference to the obese patient
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13.9.9.1 *Examples of Evidence*

- SLEs throughout stage of training in a range of surgical specialties including obstetrics, neuro and bariatric surgery.

13.9.9.2 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: anaesthesia for the obese patient.

13.9.9.3 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance

13.9.9.4 *Cross links with other domains and capabilities.*

- Safety and Quality Improvement

13.9.10 Key capability H

H	Applies a sound understanding of anatomy, physiology, biochemistry, pharmacology, physics and clinical measurement to anaesthetic practice
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13.9.10.1 Examples of Evidence

- SLEs throughout stage of training in a range of surgical specialties.

13.9.10.2 Personal Activities and Personal Reflections may include:

- Final FRCA.

13.9.10.3 Suggested supervision level

- Not applicable.

13.9.10.4 Cross links with other domains and capabilities

- Perioperative Medicine and Health Promotion
- Regional Anaesthesia

13.9.11 Key capabilities I & J

I	Safely manages patients with complex airways including the ability to perform videolaryngoscopy with local supervision
J	Manages non-complex shared airway surgery with distant supervision

13.9.11.1 Examples of Evidence

- SLEs throughout stage of training in a range of surgical specialties including ENT and Maxillo-facial surgery.

13.9.11.2 Personal Activities and Personal Reflections may include:

- simulation courses: airway management.

13.9.11.3 Suggested supervision level

- refer to practical procedures grid for details of airway management.

13.9.11.4 Cross links with other domains and capabilities

- General Anaesthesia

13.9.12 Key capability K

K	Explains the problems associated with laparoscopic, endoscopic and open procedures, including those with major blood loss, and provides safe general anaesthesia for these procedures with distant supervision for ASA 1 to 3 adult patients
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13.9.12.1 Examples of Evidence

- SLEs throughout stage of training in a range of surgical specialties.

13.9.12.2 Personal Activities and Personal Reflections may include:

- Final FRCA.

13.9.12.3 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.9.12.4 Cross links with other domains and capabilities

- Perioperative Medicine and Health Promotion
- General Anaesthesia

13.9.13 Key capability L

L	Provides safe general anaesthesia for diagnostic and therapeutic procedures in the non-theatre environment but within the hospital setting for ASA 1-3 adult patients independently, recognising when this is inappropriate
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13.9.13.1 *Examples of Evidence*

- SLEs throughout stage of training. Case examples could come from radiology, ECT, cardioversion, Emergency Department.

13.9.13.2 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.9.13.3 *Cross links with other domains and capabilities*

- General Anaesthesia
- Resuscitation and Transfer

13.9.14 Neuro anaesthesia: key capabilities M & N

M	Applies relevant anatomical, physiological and pharmacological principles to neurosurgical patients
N	Provides safe anaesthetic care to ASA 1-3 adults for simple elective and emergency intracranial, spinal and neuroradiology procedures under local supervision

13.9.14.1 *Examples of Evidence*

- SLEs from experience in neurosurgery.

13.9.14.2 *Personal Activities and Personal Reflections may include:*

- Final FRCA.

13.9.14.3 *Suggested supervision level*

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals.

13.9.14.4 *Cross links with other domains and capabilities*

- General Anaesthesia

13.9.15 Cardiothoracic anaesthesia: key capabilities O to R

O	Applies basic science and clinical anaesthetic principles to patients undergoing cardiac and thoracic surgery
P	Describes the principles of anaesthesia for on and off bypass cardiac and thoracic surgery
Q	Provides safe anaesthetic care to ASA 1-3 adults undergoing elective cardiac revascularization, valvular surgery and cardiology procedures under direct supervision
R	Demonstrates safe anaesthetic care for adults requiring non-complex thoracic procedures under direct supervision, including one lung ventilation

13.9.15.1 *Examples of Evidence*

- SLEs from experience in cardiac and thoracic surgery.

13.9.15.2 *Personal Activities and Personal Reflections may include:*

- Final FRCA.

13.9.15.3 *Suggested supervision level*

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals.

13.9.15.4 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion

13.9.16 Key capability S

S	Explains the anaesthetic implications of ophthalmic surgery, in particular the penetrating eye injury and the presence of intraocular gas
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13.9.16.1 *Examples of Evidence*

- SLEs from experience in ophthalmic surgery and trauma.

13.9.16.2 *Personal Activities and Personal Reflections may include:*

- E-Learning: ophthalmic anaesthesia.

13.9.16.3 *Suggested supervision level*

- Not applicable.

13.9.16.4 *Cross links with other domains and capabilities*

- General Anaesthesia
- Regional Anaesthesia

13.9.17 Obstetric anaesthesia: key capability T

T	Provides safe anaesthetic care for elective and emergency obstetric patients including those with co-morbidities and obstetric complications with distant supervision
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13.9.17.1 *Examples of Evidence*

- SLEs throughout stage of training in obstetrics including out of hours work and experience in pre-operative assessment clinics.

13.9.17.2 *Personal Activities and Personal Reflections may include:*

- attendance at obstetric anaesthesia clinics
- simulation training: obstetric emergencies.

13.9.17.3 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.9.17.4 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Regional Anaesthesia
- Resuscitation and Transfer

13.9.18 Paediatric anaesthesia: key capabilities U to W

U	Provides safe general anaesthesia for ASA 1-3 children undergoing non-complex elective and emergency surgery aged 1- 5 years with direct supervision, and 5 years and above with distant supervision
V	Explains the principles of anaesthetic care for children of all ages with complex medical problems and/or requiring complex surgical procedures
W	Explains the principles of the general anaesthetic care of neonates

13.9.18.1 *Examples of Evidence*

- SLEs throughout stage of training in paediatric anaesthesia including out of hours work and experience in pre-operative assessment clinics.

13.9.18.2 *Personal Activities and Personal Reflections may include:*

- simulation or other courses: paediatric anaesthesia.

13.9.18.3 *Suggested supervision level*

for ASA 1-3 children aged 1-5:

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals for children 5 years and above

:

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

13.9.18.4 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion

13.9.19 Key capability X

X	Uses total intravenous anaesthesia safely in all areas of clinical anaesthetic practice
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13.9.19.1 *Examples of Evidence*

- SLEs from appropriate surgical specialties.

13.9.19.2 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

13.9.19.3 *Cross links with other domains and capabilities*

- General Anaesthesia

13.10 Regional anaesthesia

13.10.1 Stage 2 learning outcome

- Performs a wider range of regional anaesthetic techniques

13.10.2 Key capability A

A	Performs ultrasound-guided brachial plexus blocks
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13.10.2.1 Examples of Evidence

- SLEs for appropriate cases (DOPS).

13.10.2.2 Personal Activities and Personal Reflections may include:

- use of part-task simulator
- simulation or other courses: Use of ultrasound, regional anaesthesia.

13.10.2.3 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.10.2.4 Cross links with other domains and capabilities

- Safety and Quality Improvement

13.10.3 Key capabilities B & C

B	Performs ultrasound-guided fascial plane blocks for the chest or abdominal wall
C	Demonstrates how to achieve an optimal ultrasound image and recognises common ultrasound artefacts

13.10.3.1 Examples of Evidence

- SLEs for appropriate cases (DOPS).

13.10.3.2 Personal Activities and Personal Reflections may include:

- use of part-task simulator
- simulation or other courses: use of ultrasound, regional anaesthesia.

13.10.3.3 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.10.3.4 Cross links with other domains and capabilities

- Safety and Quality Improvement

13.10.4 Key capability D

D	Describes ophthalmic blocks for patients undergoing awake ophthalmic surgery
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13.10.4.1 Examples of Evidence

- SLEs for appropriate cases.

13.10.4.2 Personal Activities and Personal Reflections may include:

- E-Learning: ophthalmic regional anaesthesia.

13.10.4.3 Suggested supervision level

- Not applicable.

13.10.4.4 Cross links with other domains and capabilities

- General Anaesthesia

13.10.5 Key capabilities E & F

E	Involves the patient in planning and understanding potential complications of regional anaesthesia
F	Assesses when a regional technique is not appropriate

13.10.5.1 Examples of Evidence

- SLEs throughout stage of training in a range of surgical specialties including obstetrics and experience in pre-operative assessment clinics.

13.10.5.2 Personal Activities and Personal Reflections may include:

- Attendance at pre-operative and obstetric anaesthesia clinics.

13.10.5.3 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.10.5.4 Cross links with other domains and capabilities

- Perioperative Medicine and Health Promotion

13.10.6 Key capability G

G	Manages inadequate block in the awake patient and in recovery if used as an adjunct to general anaesthesia
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13.10.6.1 Examples of Evidence

- SLEs throughout stage of training in a range of surgical specialties including obstetrics.

13.10.6.2 Personal Activities and Personal Reflections may include:

- Pain rounds, post-natal follow up.

13.10.6.3 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.10.6.4 Cross links with other domains and capabilities

- General Anaesthesia
- Pain

13.10.7 Key capability H

H	Describes the longer term management of complications of regional anaesthesia
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13.10.7.1 Examples of Evidence

- SLEs throughout stage of training in a range of surgical specialties including obstetrics.

13.10.7.2 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: complications of regional anaesthesia, scientific meetings on regional anaesthesia.

13.10.7.3 *Suggested supervision level*

- Not applicable.

13.10.7.4 *Cross links with other domains and capabilities*

13.10.8 Key capability I

I	Discusses the use of regional anaesthesia in the presence of abnormalities of coagulation
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13.10.8.1 *Examples of Evidence*

- SLEs throughout stage of training in a range of surgical specialties including obstetrics.

13.10.8.2 *Personal Activities and Personal Reflections may include:*

- review of local and national guidelines for regional anaesthesia in patients on anticoagulant drugs.

13.10.8.3 *Suggested supervision level*

- Not applicable.

13.10.8.4 *Cross links with other domains and capabilities*

- Safety and Quality Improvement
- Perioperative Medicine and Health Promotion

13.11 Resuscitation and Transfer

13.11.1 Stage 2 learning outcomes

- Able to manage the on-going care of post-resuscitation patients.
- Independently cares for critically ill adult patients during inter-hospital transfers by road

13.11.2 Key capabilities A & B

A	Leads a multidisciplinary resuscitation team from the initial assessment and management of a critically ill patient, through to handover to Critical Care or another specialist team
B	Maintains contemporary knowledge and skills required for the delivery of successful resuscitation

13.11.2.1 *Examples of Evidence*

- SLEs throughout stage of training including out of hours experience.

13.11.2.2 *Personal Activities and Personal Reflections may include:*

- simulation courses: adult life support, trauma resuscitation, and transfer.

13.11.2.3 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.11.2.4 *Cross links with other domains and capabilities*

- Team Working
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Intensive Care

13.11.3 Key capability C

C	Demonstrates resuscitation skills in neonates and children
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13.11.3.1 *Examples of Evidence*

- SLEs throughout stage of training including out of hours experience.

13.11.3.2 *Personal Activities and Personal Reflections may include:*

- simulation courses: neonatal resuscitation, paediatric life support.

13.11.3.3 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

13.11.3.4 *Cross links with other domains and capabilities*

- Intensive Care

13.11.4 Key capability D

D	Undertakes discussions with patients, families and colleagues to aid decision making on resuscitation, including DNACPR 'do not attempt cardiopulmonary resuscitation' orders
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13.11.4.1 *Examples of Evidence*

- SLEs throughout stage of training including out of hours experience.

13.11.4.2 *Personal Activities and Personal Reflections may include:*

- medical ethics.

13.11.4.3 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.11.4.4 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication
- Safeguarding
- Intensive Care

13.11.5 Key capability E

E	Demonstrates knowledge and skills in resuscitation of the patient with major trauma
---	---

13.11.5.1 *Examples of Evidence*

- SLEs throughout stage of training including out of hours experience.

13.11.5.2 *Personal Activities and Personal Reflections may include:*

- simulation courses: trauma resuscitation.

13.11.5.3 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

13.11.5.4 *Cross links with other domains and capabilities*

- General Anaesthesia
- Intensive Care

13.11.6 Key capability F

F	Manages inter-hospital transfers of adults and children by land, including time-critical transfers, in line with local and regional policy
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13.11.6.1 *Examples of Evidence*

- SLEs throughout stage of training including out of hours experience.

13.11.6.2 *Personal Activities and Personal Reflections may include:*

- simulation courses: transfer.

13.11.6.3 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.11.6.4 *Cross links with other domains and capabilities*

- Intensive Care

13.11.7 Key capability G

G	Manages the resuscitation, stabilisation and transfer of patients with acute neurological deterioration
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13.11.7.1 *Examples of Evidence*

- SLEs throughout stage of training including out of hours experience.

13.11.7.2 *Personal Activities and Personal Reflections may include:*

- simulation courses: trauma resuscitation, transfer.

13.11.7.3 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.11.7.4 *Cross links with other domains and capabilities*

- General Anaesthesia
- Intensive Care

13.12 Procedural sedation

13.12.1 Stage 2 learning outcome

- Provides safe sedation to ASA 1 to 3 adults and children in any location within the hospital

13.12.2 Key Capabilities

A	Utilises appropriate sedation techniques by a variety of routes of administration and multiple drug combinations, including target-controlled infusions.
B	Utilises sedation protocols and scoring systems
C	Explains the risks of delivering sedation outside the operating theatre and acts to mitigate these risks
D	Recognises when the use of sedation is inappropriate and formulates an alternative safe plan

13.12.2.1 Examples of Evidence

- SLEs throughout stage of training in appropriate cases eg ophthalmic surgery, trauma, dentistry, endoscopy, Intensive Care, cardioversion.

13.12.2.2 Personal Activities and Personal Reflections may include:

- courses and e-Learning: sedation scoring
- knowledge of local sedation guidelines and protocols.

13.12.2.3 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.12.2.4 Cross links with other domains and capabilities

- General Anaesthesia
- Resuscitation and Transfer
- Intensive Care

13.13 Pain

13.13.1 Stage learning outcome

- Understands the aetiology and management of acute, acute on chronic and chronic pain

13.13.2 Key capabilities A & B

A	Utilises a multi-disciplinary approach to the management of complex pain within a biopsychosocial model of care
B	Can confidently manage acute pain in the whole perioperative pathway in a timely manner

13.13.2.1 *Examples of Evidence*

- SLEs throughout stage of training across range of surgical specialties, acute pain ward rounds, and from specialist pain clinics
- examples: regional anaesthesia techniques for post-operative pain
- management plans for the transition to oral analgesia from PCA, neuraxial or regional anaesthesia techniques.

13.13.2.2 *Personal Activities and Personal Reflections may include:*

- leading pain round
- attendance at specialist pain clinic
- biopsychosocial approach in pain management programmes and multidisciplinary reviews.

13.13.2.3 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

13.13.2.4 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication
- Team Working
- General Anaesthesia
- Regional Anaesthesia

13.13.3 Key capabilities C to E

C	Is able to assess patients, interpret investigations and initiate management of chronic malignant and non-malignant pain in a timely manner under distant supervision
D	Can assess and manage acute on chronic and chronic in-patient pain in adults and recognise when referral to specialist pain services is appropriate
E	Identify barriers to effective pain management including those related to patient beliefs, society, culture, and healthcare provision

13.13.3.1 *Examples of Evidence*

- SLEs throughout stage of training across range of surgical specialties and from specialist pain clinics.

13.13.3.2 *Personal Activities and Personal Reflections may include:*

- attendance at specialist pain clinic, pain intervention lists.

13.13.3.3 *Suggested supervision level*

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

13.13.3.4 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion

13.13.4 Key capability F

F	Explains the risk factors for persistent post-surgical pain including measures to minimise its occurrence
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13.13.4.1 *Examples of Evidence*

- SLEs throughout stage of training across range of surgical specialties and from specialist pain clinics.

13.13.4.2 *Suggested supervision Level*

- Not applicable.

13.13.4.3 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication
- Perioperative Medicine and Health Promotion
- General Anaesthesia

13.14 Intensive Care

13.14.1 Stage 2 learning outcome

- Provides safe and effective care for critically ill patients with specialist help and guidance

13.14.2 Key capability A

A	Recognises the limitations of intensive care; employs appropriate admission criteria
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13.14.2.1 *Examples of Evidence*

- SLEs throughout stage of training for relevant cases.

13.14.2.2 *Suggested supervision level*

- FICM capability level 3 (see below for details)
- supervision levels given for individual procedures in the Practical Procedures Grid.

13.14.2.3 *Cross links with other domains and capabilities*

- Resuscitation and Transfer

13.14.3 Key capability B

B	Performs safely and effectively the clinical invasive procedures required to maintain respiratory, cardiovascular and renal, support
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13.14.3.1 *Examples of Evidence*

- SLEs throughout stage of training for relevant cases.

13.14.3.2 *Suggested supervision level*

- FICM capability level 3 (see below for details)
- supervision levels given for individual procedures in the Practical Procedures Grid.

13.14.3.3 *Cross links with other domains and capabilities*

- Resuscitation and Transfer

13.14.4 Key capability C

C	Recognises, assesses and initiates management for acutely ill adults across the spectrum of single or multiple organ failure
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13.14.4.1 *Examples of Evidence*

- SLEs throughout stage of training for relevant cases
- simulation training including adult resuscitation courses.

13.14.4.2 *Suggested supervision Level*

- FICM capability level 3 (see below for details).

13.14.4.3 *Cross links with other domains and capabilities*

- Resuscitation and Transfer

13.14.5 Key capability D

D	Recognises the acutely ill child and initiates management of paediatric emergencies
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13.14.5.1 Examples of Evidence

- SLEs throughout stage of training for relevant cases
- simulation training including paediatric resuscitation courses.

13.14.5.2 Suggested supervision Level

- FICM capability level 3 (see below for details).

13.14.5.3 Cross links with other domains and capabilities

- Resuscitation and Transfer

13.14.6 Key capability E

E	Recognises and manages the patient with sepsis and employs local infection control policies
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13.14.6.1 Examples of Evidence

- SLEs throughout stage of training for relevant cases.

13.14.6.2 Suggested supervision Level

- FICM capability level 3 (see below for details).

13.14.6.3 Cross links with other domains and capabilities

- Resuscitation and Transfer

13.14.7 Key capability F

F	Undertakes and evaluates laboratory and clinical imaging investigations to manage patients while critically ill during their intensive care stay
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13.14.7.1 Examples of Evidence

- SLEs throughout stage of training for relevant cases.

13.14.7.2 Suggested supervision Level

- FICM capability level 3 (see below for details).

13.14.7.3 Cross links with other domains and capabilities

- Resuscitation and Transfer

13.14.8 Key capability G

G	Manages the medical / surgical needs and organ support of patients during their critical illness, including the holistic care of patients and relatives
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13.14.8.1 Examples of Evidence

- SLEs throughout stage of training for relevant cases.

13.14.8.2 Suggested supervision Level

- FICM capability level 3 (see below for details).

13.14.8.3 Cross links with other domains and capabilities

- Resuscitation and Transfer

13.14.9 Key capability H

H	Plans and communicates the appropriate discharge of patients from intensive care to health care professionals, patients and relatives
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13.14.9.1 *Examples of Evidence*

- SLEs throughout stage of training for relevant cases.

13.14.9.2 *Suggested supervision Level*

- FICM capability level 3 (see below for details).

13.14.9.3 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication

13.14.10 Key capability I

I	Manages end of life care within the intensive care environment with patients, relatives and the multi-professional team
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13.14.10.1 *Examples of Evidence*

- SLEs throughout stage of training for relevant cases.

13.14.10.2 *Suggested supervision Level*

- FICM capability level 2 (see below for details).

13.14.10.3 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion

13.14.11 Key capability J

J	Liaises with transplant services when appropriate, can perform brain stem death testing and provides the physiological support of the donor
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13.14.11.1 *Examples of Evidence*

- SLEs throughout stage of training for relevant cases
- simulation training
- personal activity and reflection: journal article, e-Learning.

13.14.11.2 *Suggested supervision Level*

- FICM capability level 1 (see below for details).

13.14.11.3 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication

13.14.12 Key capability K

K	Supports clinical staff outside the ICU to enable the early detection of the deteriorating patient
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13.14.12.1 *Examples of Evidence*

- SLEs throughout stage of training for relevant cases.

13.14.12.2 *Suggested supervision Level*

- FICM capability level 2 (see below for details).

13.14.12.3 *Cross links with other domains and capabilities*

■ Resuscitation and Transfer

13.14.13 FICM Capability Levels

Level	Task orientated capability	Knowledge orientated capability	Patient management capability
1	Performs task under direct supervision.	Very limited knowledge; requires considerable guidance to solve a problem within the area.	Can take history, examine and arrange investigations for straight forward case (limited differential diagnosis). Can initiate emergency management and continue a management plan, recognising acute divergences from the plan. Will need help to deal with these.
2	Performs task in straightforward circumstances, requires help for more difficult situations. Understands indications and complications of task.	Sound basic knowledge; requires some guidance to solve a problem within the area. Will have knowledge of appropriate guidelines and protocols.	Can take history, examine and arrange investigations in a more complicated case. Can initiate emergency management. In a straightforward case, can plan management and manage any divergences in short term. Will need help with more complicated cases.
3	Performs task in most circumstances, will need some guidance in complex situations. Can manage most complications, has a good understanding of contraindications and alternatives.	Advanced knowledge and understanding; only requires occasional advice and assistance to solve a problem. Will be able to assess evidence critically.	Can take history, examine and arrange investigations in a more complex case in a focused manner. Can initiate emergency management. In a most cases, can plan management and manage any divergences. May need specialist help for some cases.

14 Annex D - Stage 3 Domains of Learning

14.1 Professional Behaviours and Communication

14.1.1 Stage 3 learning outcome

- *Demonstrates the professional values and behaviours required to be a consultant*

14.1.2 Key capabilities

A	Leads the management of complications that have arisen in the course of delivery of health care
B	Formulates management plans for patients with complex needs including those beyond guidelines, remaining aware of their own limitations and seeks help where appropriate
C	Takes part in annual appraisal and explains job planning, performance management and the requirement for revalidation
D	Complies with governance frameworks and seeks to ensure that all members of the multidisciplinary team do likewise
E	Acts to optimise health and wellbeing appropriately and supports others to do so, being able to identify colleagues in difficulty and provide appropriate support and escalation when required
F	Works within appropriate equality and diversity legislation

14.1.3 Examples of evidence

14.1.3.1 *Experience & logbook:*

- range of surgical specialties including special interest areas

14.1.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- ability to manage lists as a sole anaesthetist including areas of special interest (ALMAT)
- leadership when discussing the care of a complex patient with the multi-disciplinary team
- evidence of effective shared decision making with patients and colleagues.

14.1.3.3 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: leadership and management, equality and diversity
- professional portfolio and CV ready for consultant interview
- management of a difficult conversation with a colleague, patient or relative
- reflections on active listening in a range of environments and situations
- leadership of a quality improvement project
- training with members of senior hospital management such as clinical governance lead, clinical directors, medical directors
- experience of the process whereby complaints are dealt with.

14.1.3.4 *Other evidence*

- satisfactory MSF.

14.1.4 Cross links with other domains and capabilities

- Management and Professional and Regulatory Requirements
- Education and Training
- Safety and Quality Improvement
- all specialty specific domains

14.2 Management and Professional and Regulatory Requirements

14.2.1 Stage 3 learning outcome

- *Understands and undertakes managerial, administrative and organisational roles expected of consultants*

14.2.2 Key capabilities

A	Explains how the management system and organisational structures at Trust/Health Board level communicate and co-operate
B	Describes the structure and organisation of the NHS including primary care, the community and independent sectors and the wider health and social care landscape
C	Explains the national processes by which health policy are developed, promoted, disseminated, introduced, monitored and modified, and how services are held accountable to the public.
D	Appreciates the roles and practice of different professionals in the organisation and delivery of the health service by promoting inter-professional understanding and working
E	Describes mechanisms for workforce planning and their limitations
F	Applies management and team skills to complex and dynamic situations
G	Describes how healthcare systems are commissioned and funded
H	Knows how to prepare medico-legal statements and co-operate with agencies involved in legal requirements.
I	Works within regulations relating to information governance, data protection and storage
J	Undertakes departmental administrative and managerial roles
K	Engages with their own contractual obligations, appraisal and quality review processes

14.2.3 Examples of evidence

14.2.3.1 *Experience & logbook:*

- leadership of Anaesthetic Departmental activities.

14.2.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- management and team leadership skills with complex cases such as in theatres, pre-operative assessment clinics, obstetrics and intensive care.

14.2.3.3 *Personal Activities and Personal Reflections may include:*

- management responsibility in the anaesthetic department
- roles in regional training programme such as trainee representative
- rota management for anaesthetists in training
- attendance at hospital/Trust Board level meetings
- training sessions with members of senior management such as clinical directors, medical directors, Trust Chief Executive
- courses and e-Learning: NHS structure and management, information governance, skills to manage difficult interactions, mastering risk
- training and involvement in investigation of serious incidents

- involvement in writing a report for the Coroner or other medico-legal indication
- experience of healthcare systems outside of the UK
- awareness of relevant government health policies.

14.2.4 Cross links with other domains and capabilities

- Professional Behaviours and Communication
- Team Working
- Safety and Quality Improvement
- Education and Training
- all specialty specific domains.

14.3 Team Working

14.3.1 Stage 3 learning outcome

- *Leads and participates in complex and diverse teams in all situations*

14.3.2 Key capabilities

A	Demonstrates the skills to provide clinical leadership in a special interest area of anaesthetic practice
B	Leads the multidisciplinary team in the organisation of complex patient care
C	Engages with all members of the perioperative and theatre teams to work efficiently and effectively
D	Maintains high levels of individual and team situational awareness at all times
E	Seeks and shares information and anticipates future problems to maximise safe practice
F	Critically appraises performance of colleagues, peers and systems to promote best practice
G	Demonstrates appropriate leadership behaviour to nurture teams and promote engagement.
H	Promotes an open and transparent culture, acting as a role model in supporting colleagues and respecting differences of opinion
I	Adapts leadership behaviour to improve engagement and outcomes.
J	Delegates appropriately and effectively
K	Manages and reflects on challenging behaviours within the team and escalate concerns as appropriate
L	Describes contributions to a major incident response

14.3.3 Examples of evidence

14.3.3.1 *Experience & logbook:*

- range of experience in theatres, obstetrics, pre-operative assessment and including special interest areas.

14.3.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- leadership of the theatre team in the management of challenging cases
- leadership of complex resuscitation cases including team debrief discussion.

14.3.3.3 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: leadership and management, human factors, appraisal skills, major incident training, risk management
- faculty member of simulation courses
- completion of a project demonstrating leadership and team building.

14.3.3.4 *Other evidence:*

- satisfactory MSF.

14.3.4 Cross links with other domains and capabilities

- Professional Behaviours and Communication
- Management and Professional and Regulatory Requirements
- Safety and Quality Improvement
- Resuscitation and Transfer
- all specialty specific domains.

14.4 Safety and Quality Improvement

14.4.1 Stage 3 learning outcomes

- *Supervises a local quality improvement project and participates in regional or national quality improvement projects.*
- *Uses a systems approach to creating, maintaining and improving safety*

14.4.2 Key capabilities

A	Identifies and supervises a quality improvement project, prioritising and evaluating measures and outcomes important to patients in a special interest area of anaesthetic practice
B	Explains how complexity theory applies to healthcare
C	Identifies levers and drivers and the principles of psychology underpinning change management that can be used to develop a shared purpose
D	Identifies and engages with stakeholders affected by potential change
E	Interprets the interplay between psychology, system, process and technical knowledge needed to implement change
F	Promotes a collaborative approach to delivering quality improvement utilising the principles of patient co-design when possible
G	Describes how to sustain improvement
H	Effectively evaluates the impact of a quality improvement intervention
I	Applies safety science principles and practice at individual, team, organisational and system levels
J	Uses measures of process reliability to monitor and improve safety
K	Predicts how system failures will create risks to patients
L	Uses a systems-based approach to proactively assess risk and in the investigation of safety incidents
M	Acts on national regulation and findings of national case studies in patient safety
N	Explains how organisational culture can influence failure or improvement in clinical practice
O	Analyses the strengths and weaknesses of safety interventions
P	Quantifies the effect of contextual factors on safety
Q	Addresses the limitations of the concept of 'human error' in incident investigations and responses
R	Mitigates against fixation error, unconscious and cognitive biases

14.4.3 Examples of Evidence

14.4.3.1 *Experience & logbook:*

- leadership of QI activities within Anaesthetics department and experience of regional or national QI and risk assessment.

14.4.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- leadership of local QI project and participation in regional or national QI projects (A-QIPAT)
- presentation of QI project results
- implementation of QI project outcomes
- promotion of safety in theatre lists.

14.4.3.3 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: quality improvement methodology, understanding risk, understanding professional interactions, change management, national patient safety legislation, human factors training, complexity theory, safety science
- involvement with patient safety investigation such as root cause analysis.
- undertake mortality reviews
- attendance and presentation at clinical governance meetings.

14.4.4 Cross links with other domains and capabilities

- Professional Behaviours and Communication
- Management and Professional and Regulatory Requirements
- Team Working
- all specialty specific domains.

14.5 Safeguarding

14.5.1 Stage 3 learning outcome

- *Evaluates and instigates initial management of safeguarding concerns*

14.5.2 Key capabilities

A	Identifies safeguarding concerns and acts to refer to relevant professionals when dealing with vulnerable patient groups.
B	Describes how beliefs, experience and attitudes might influence professional practice, and ensures that these do not exploit patient vulnerability
C	Explains the effect of parental behaviour on children and young people and interagency response
D	Manages the particular needs of vulnerable patients of all types in complex clinical situations
E	Engages in national safeguarding initiatives and Trust mandatory training
F	Determines when and how to safely restrain and safeguard vulnerable patients in distress
G	Applies equality and diversity legislation in the context of vulnerable patient care

14.5.3 Examples of evidence

14.5.3.1 *Experience & logbook:*

- range of surgical specialties and patient groups in theatre setting, obstetrics, pre-operative assessment clinics and Intensive Care Unit.

14.5.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- management of a vulnerable patient for surgical procedure
- management of vulnerable patient in distress with potential to require restraint
- management of a case where cultural or religious differences affect consent and treatment.

14.5.3.3 *Personal Activities and Personal Reflections may include:*

- courses and eLearning: equality and diversity, Prevent/counter terrorism, child and adult safeguarding, mental capacity act.
- participation in best interests decision.

14.5.4 Cross links with other domains and capabilities

- Professional Behaviours and Communication
- Education and Training

14.6 Education and Training

14.6.1 Stage 3 learning outcome

- Meets the requirements of a Clinical Supervisor as defined by the GMC

14.6.2 Key capabilities

A	Actively promotes a culture of learning
B	Creates effective learning opportunities
C	Demonstrates leadership in terms of patient safety in the context of clinical supervision
D	Develops a plan for personal life-long learning
E	Participates in planning and delivery of educational programmes using a range of educational methods to deliver teaching
F	Explains how to raise concerns about the performance or behaviour of learners who are under their clinical supervision
G	Assesses the performance of learners fairly and objectively
H	Evaluates, reflects and acts on the effectiveness of their educational activities and learning
I	Applies an understanding of the basis of educational theory that underpins successful adult learning

14.6.3 Examples of evidence

14.6.3.1 *Experience & logbook:*

- range of clinical experience taking advantage of all opportunities for teaching and learning.

14.6.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- use of SLEs throughout stage of training to facilitate learning and guide progress
- completion of SLEs for more junior colleagues with demonstration of constructive feedback.

14.6.3.3 *Personal Activities and Personal Reflections may include:*

- courses: teaching and training courses such as Generic Instructor (GIC), *Anaesthetists as Educators*, train the trainers
- acting as part of teaching faculty in simulation courses, exam preparation courses
- delivery of teaching sessions with feedback
- organisation of teaching programmes for anaesthetists in training
- critical appraisal of local teaching programme with suggestions for feedback
- completion of higher qualification in medical education such as PGCert
- presentation at regional or national meeting
- development of e-Learning module
- training sessions with educators such as educational supervisors, College Tutor, post-graduate clinical tutor.

14.6.4 Cross links with other domains and capabilities

- all specialty-specific and generic professional domains.

14.7 Research and Managing Data

14.7.1 Stage learning outcome

- *Is research experienced; has engaged with research, applies the governance involved in research, evaluates and communicates research findings clearly*

14.7.2 Key capabilities

A	Practises evidence-based medicine based on critical analysis and awareness of current literature and national and local guidelines, with a detailed knowledge in an area of special interest in anaesthetic or perioperative practice
B	Recognises where research can ask relevant questions, appreciates how to study these, where findings can be applied to patient care, and can communicate these to patients in a meaningful way
C	Promotes a culture of professional critical enquiry with the ability to understand and apply new and future areas of research and related practice eg. informatics, genomics, stratified medicine, population and global health
D	Demonstrates practical knowledge of research principles and governance and how to translate findings into practice
E	Formulates relevant research questions and designs a studies to answer them
F	Demonstrates the processes for effective clinical decision making where research is absent or contradictory

14.7.3 Examples of evidence

14.7.3.1 *Experience & logbook:*

- inclusion of cases from special interest area(s).

14.7.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- use of evidence-based medicine
- management of cases where research data is lacking.

14.7.3.3 *Personal Activities and Personal Reflections may include:*

- attendance at scientific meeting
- abstract accepted at national or international meeting
- publication in peer reviewed journal
- involvement in research project including ethical approval, gaining consent of participants, data analysis
- leads in development or revision of local guidelines
- participation in systematic literature review
- active involvement with local trainee research network (TRN) such as local lead for a TRN study.

14.7.4 Cross links with other domains and capabilities

- Safety and Quality Improvement
- Education and Training

14.8 Perioperative Medicine and Health Promotion

14.8.1 Stage learning outcomes

- *Manages perioperative care at an individual and service-wide level.*
- *Applies the principles of sustainability to clinical practice*

14.8.2 Key capabilities A to E

A	Delivers high quality perioperative care of all patients for elective and emergency surgery, developing expertise in an area of anaesthetic special interest
B	Describes the impact of patient mental health and well-being on perioperative care and applies this to practice
C	Describes the principles of person-centred care, including effective self-management, self-care and expert patient support
D	Describes the reasonable limitations of perioperative interventions
E	Can make reasoned clinical decisions in the face of uncertainty

14.8.2.1 *Examples of evidence*

- SLEs throughout stage of training including special interest area and experience in pre-operative assessment clinics demonstrating, for example:
 - ability to work independently in special interest area (ALMAT)
 - leading a pre-operative assessment clinic
 - discussion and advice on likely outcomes and recovery following anaesthesia and surgery for complex patients
 - discussion of alternative treatment pathways and their relative risks and benefits.

14.8.2.2 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: scientific meetings on perioperative medicine.

14.8.2.3 *Suggested supervision level*

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.8.2.4 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication
- General Anaesthesia
- areas of special interest

14.8.3 Key capabilities F & G

F	Applies the principles of shared decision making about the suitability of surgery and anaesthesia with high-risk patients and colleagues
G	Evaluates information gained through preoperative assessment and applies the principles of shared decision making with the patient and multi-disciplinary team

14.8.3.1 *Examples of evidence*

- SLEs throughout stage of training including special interest area and experience in pre-operative assessment clinics demonstrating, for example:
 - leadership in discussion of patient care with surgical team.

14.8.3.2 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: NICE guidance – shared decision making.

14.8.3.3 *Suggested supervision level*

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.8.3.4 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication
- General Anaesthesia

14.8.4 Key capabilities H & I

H	Acts as an advocate for health promotion and illness prevention in the perioperative period
I	Supports members of the preoperative team to deliver perioperative health promotion strategies

14.8.5 Examples of evidence

- SLEs throughout stage of training including special interest areas and experience in pre-operative assessment clinics.

14.8.5.1 *Personal Activities and Personal Reflections may include:*

- activities related to enhanced recovery programmes
- development of preparation for surgery strategies eg RCoA Fitter Better Sooner.

14.8.6 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.8.7 Cross links with other domains and capabilities

- General Anaesthesia

14.8.8 Key capability J

J	Promotes strategies to support sustainable healthcare in clinical practice
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14.8.8.1 *Examples of evidence*

- SLEs throughout stage of training including special interest areas.

14.8.8.2 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: environmental impact of anaesthesia
- quality improvement project looking at sustainability in operating departments.

14.8.8.3 *Suggested supervision level*

- Not applicable.

14.8.8.4 *Cross links with other domains and capabilities*

- Safety and Quality Improvement
- General Anaesthesia

14.8.9 Key capability K

K	Develops an understanding of the basic principles of global health including governance, health systems and global health risks
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14.8.9.1 *Examples of evidence*

14.8.9.2 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: anaesthesia in developing countries.

14.8.9.3 *Suggested supervision level*

- not applicable.

14.8.9.4 *Cross links with other domains and capabilities*

- Safety and Quality Improvement
- General Anaesthesia

14.9 General Anaesthesia

14.9.1 Stage 3 learning outcome

- Provides safe and effective general anaesthesia independently for all patients undergoing non-specialist procedures and for patients within defined areas of a special interest

14.9.2 Key capabilities A to C

A	Provides general anaesthesia for all patients undergoing elective and emergency surgery in general settings including maternity units for common complex surgical procedures
B	Demonstrates the decision making and organisational skills required to manage operating sessions independently ensuring that the care delivered to patients is safe, effective and efficient
C	Applies understanding of co-morbidities in patients requiring general anaesthesia and delivers management strategies to offer individualised care

14.9.2.1 *Examples of evidence*

- SLEs throughout stage of training including special interest areas and out of hours experience:
 - CBDs and ALMATs from a range of surgical specialties.

14.9.2.2 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: scientific meetings related to special interest area.

14.9.2.3 *Suggested supervision level*

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.9.2.4 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication
- Team Working
- Perioperative Medicine and Health Promotion
- areas of special interest.

14.9.3 Key capability D

D	Provides safe anaesthetic care for multiply injured patients, from arrival in hospital through definitive treatment, and understands and applies the principles of management for complex situations such as severe burns or poisoning.
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14.9.3.1 *Examples of evidence*

- SLEs: experience may be gained at major trauma centres, burns units.

14.9.3.2 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: trauma management

14.9.3.3 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

14.9.3.4 *Cross links with other domains and capabilities*

- Resuscitation and Transfer
- Intensive Care

14.9.4 Key capability E

E	Contributes to departmental expertise in one or more defined areas of special interest
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14.9.4.1 *Examples of evidence*

- SLEs from experience in special interest areas
- this may include A-QIPAT for relevant projects.

14.9.4.2 *Personal Activities and Personal Reflections may include:*

- teaching delivered
- quality Improvement project in area of special interest
- development of local guidelines
- departmental presentations.

14.9.4.3 *Suggested supervision level*

- Not applicable.

14.9.4.4 *Cross links with other domains and capabilities*

- Safety and Quality Improvement
- Education and Training
- Research and Managing Data
- areas of special interest

14.9.5 Key capabilities F & G

F	Manages patients with complex airway disorders in most situations including independent fibre-optic intubation and can recognise when additional assistance is necessary
G	Can manage the anaesthetic challenges of patients needing complex shared airway surgery

14.9.5.1 *Examples of evidence*

- SLEs including experience in ENT and maxillo-facial surgery.

14.9.5.2 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: airway management, scientific meeting on difficult airway management.

14.9.5.3 *Suggested supervision level*

- refer to practical procedures grid for airway management supervision levels.

14.9.5.4 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion

14.9.6 Key capability H

H	Provides safe anaesthesia for diagnostic or therapeutic procedures outside of the theatre environment including remote sites
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14.9.6.1 *Examples of evidence*

- SLEs from experience such as ECT, radiology, interventional cardiology, interventional neuroradiology.

14.9.6.2 *Suggested supervision level*

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.9.6.3 Cross links with other domains and capabilities

- Perioperative Medicine and Health Promotion

14.9.7 Key capability I

I	Provides safe anaesthetic care for the critically ill patient who needs to return to theatre from the intensive care unit
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14.9.7.1 Examples of evidence

- SLEs from experience such as neurosurgery, cardiac surgery, trauma, general surgery.

14.9.7.2 Personal Activities and Personal Reflections may include:

- courses and e-Learning; relevant scientific meetings.

14.9.7.3 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

14.9.7.4 Cross links with other domains and capabilities

- Intensive Care

14.9.8 Key capability J

J	Provides safe and effective perioperative anaesthetic care to all high risk surgical patients with significant co-morbidities and the potential for massive haemorrhage
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14.9.8.1 Examples of evidence

SLEs from experience such as neurosurgery, cardiac surgery, trauma, general surgery and obstetrics.

14.9.8.2 Personal Activities and Personal Reflections may include:

- courses and e-Learning; blood transfusion, trauma management.

14.9.8.3 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.9.8.4 Cross links with other domains and capabilities

- General Anaesthesia
- Intensive Care

14.9.9 Key capability K

K	Manages the anaesthetic implications of previous neurosurgery and/or intracranial pathology in patients presenting for co-incidental surgery
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14.9.9.1 Examples of evidence

- SLEs from experience such as neurosurgery.

14.9.9.2 Personal Activities and Personal Reflections may include:

- neuro anaesthesia scientific meeting.

14.9.9.3 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

14.9.9.4 Cross links with other domains and capabilities

- General Anaesthesia
- Intensive Care

14.9.10 Key capability L

L	Manages the anaesthetic implications of congenital or acquired heart disease in patients presenting for co-incidental surgery including referral to a specialist centre when appropriate
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14.9.10.1 Examples of evidence

- SLEs from experience such as cardiac surgery.

14.9.10.2 Personal Activities and Personal Reflections may include:

- courses and e-Learning: adult congenital heart disease.

14.9.10.3 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

14.9.10.4 Cross links with other domains and capabilities

- General Anaesthesia
- Intensive Care

14.9.11 Obstetric anaesthesia: key capability M

M	Provides safe anaesthetic care for any patient who requires elective or emergency obstetric anaesthesia in a general maternity unit
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14.9.11.1 Examples of evidence

- SLEs from experience in obstetrics.

14.9.11.2 Personal Activities and Personal Reflections may include:

- attendance at obstetric anaesthesia clinic.

14.9.11.3 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.9.11.4 Cross links with other domains and capabilities

- Perioperative Medicine and Health Promotion

14.9.12 Paediatric anaesthesia: key capability N

N	Provides safe anaesthetic care for common non-complex elective and emergency surgical procedures in children aged one year and over
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14.9.12.1 Examples of evidence

- SLEs from experience in paediatric surgery.

14.9.12.2 Personal Activities and Personal Reflections may include:

- courses and e-Learning: scientific meeting paediatric anaesthesia.

14.9.12.3 Suggested supervision level

- **Children aged 1-3:** supervision level 2b - Supervisor within hospital for queries, able to provide prompt direction/assistance.
- **Children aged 3 and over:** supervision level minimum 3 - Supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

14.9.12.4 Cross links with other domains and capabilities

- Perioperative Medicine and Health Promotion

14.9.13 Paediatric anaesthesia: key capability O

O	Provides emergency anaesthetic care for paediatric patients pending inter-hospital transfer to a tertiary unit
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14.9.13.1 Examples of evidence

- SLEs.

14.9.13.2 Personal Activities and Personal Reflections may include:

- courses and e-Learning: paediatric resuscitation.

14.9.13.3 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

14.9.13.4 Cross links with other domains and capabilities

- Team Working
- Resuscitation and Transfer
- Intensive Care

14.10 Regional Anaesthesia

14.10.1 Stage 3 learning outcome

- Delivers a range of safe and effective regional anaesthetic techniques to cover the upper and lower limb, chest and abdominal wall independently

14.10.2 Key capability A

A	Tailors regional anaesthesia techniques to patients undergoing day surgery
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14.10.2.1 Examples of evidence

- SLEs throughout stage of training in a range of surgical specialties.

14.10.2.2 Personal Activities and Personal Reflections may include:

- courses and e-Learning: regional anaesthesia.

14.10.2.3 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.10.2.4 Cross links with other domains and capabilities

- Pain

14.10.3 Key capability B

B	Manages regional anaesthesia and analgesia safely in the perioperative period in all settings
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14.10.3.1 Examples of evidence

- SLEs throughout stage of training.

14.10.3.2 Personal Activities and Personal Reflections may include:

- courses and e-Learning: regional anaesthesia.

14.10.3.3 Suggested supervision level

- refer to practical procedures grid for details

For procedures not listed:

- lumbar epidural: 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols)
- low thoracic epidural: 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance
- spinal: 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols)
- combined spinal/epidural: 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.10.3.4 Cross links with other domains and capabilities

- Safety and Quality Improvement
- Regional Anaesthesia
- Pain

14.10.4 Key capability C

C	Performs ultrasound-guided regional anaesthesia for the chest wall independently
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14.10.4.1 Examples of evidence

- SLEs throughout stage of training.

14.10.4.2 Personal Activities and Personal Reflections may include:

- courses and eLearning: ultrasound, regional anaesthesia, management of chest wall trauma.

14.10.4.3 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.10.4.4 Cross links with other domains and capabilities

- Regional Anaesthesia

14.10.5 Key capability D

D	Performs ultrasound-guided regional anaesthesia for the abdominal wall independently
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14.10.5.1 Examples of evidence

- SLEs throughout stage of training.

14.10.5.2 Personal Activities and Personal Reflections may include:

- courses and e-Learning: ultrasound, regional anaesthesia.

14.10.5.3 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.10.5.4 Cross links with other domains and capabilities

- Regional Anaesthesia

14.10.6 Key capability E

E	Performs ultrasound-guided nerve blocks for lower limb surgery independently
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14.10.6.1 Examples of Evidence

- SLEs throughout stage of training
- experience should include femoral nerve and fascia iliaca blocks.

14.10.6.2 Personal Activities and Personal Reflections may include:

- courses and e-Learning: ultrasound, regional anaesthesia.

14.10.6.3 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.10.6.4 Cross links with other domains and capabilities

- Regional Anaesthesia

14.10.7 Key capability F

F	Performs ultrasound-guided brachial plexus block independently
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14.10.7.1 Examples of evidence

- SLEs throughout stage of training.

14.10.7.2 *Personal Activities and Personal Reflections may include:*

- courses and eLearning: ultrasound, regional anaesthesia.

14.10.7.3 *Suggested supervision level*

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.10.7.4 *Cross links with other domains and capabilities*

- Regional Anaesthesia

14.11 Resuscitation and Transfer

14.11.1 Stage learning outcomes

- Is able to lead the multidisciplinary team for all patients requiring resuscitation from any cause, subsequent stabilisation and post-resuscitation care
- Able to supervise inter-hospital transfers and evaluate the necessary resources for patient transfers

14.11.2 Key capabilities A to D

A	Maintains resuscitation capabilities achieved in earlier stages
B	Identifies situations where specialist retrieval teams are required
C	Leads the clinical care of patients requiring retrieval/transfer
D	Evaluates the suitability of resuscitation, stabilisation, retrieval or transfer

14.11.2.1 *Examples of evidence*

- SLEs throughout stage of training including out of hours experience.

14.11.2.2 *Personal Activities and Personal Reflections may include:*

- courses and eLearning: trauma resuscitation, transfer, adult and paediatric resuscitation.

14.11.2.3 *Suggested supervision level*

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.11.2.4 *Cross links with other domains and capabilities*

- Intensive Care

14.11.3 Key capability E

E	Leads debrief sessions for both staff and relatives in a sensitive, compassionate and constructive manner
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14.11.3.1 *Examples of evidence*

- SLEs throughout stage of training including out of hours experience.

14.11.3.2 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: resuscitation, human factors, breaking bad news.

14.11.3.3 *Suggested supervision level*

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.11.3.4 *Cross links with other domains and capabilities*

- Professional Behaviours and Communication
- Team Working
- Intensive Care

14.11.4 Key capabilities F & G

F	Evaluates the wider implications of inter-hospital transfer for on-going safe hospital service delivery
G	Explains the requirements for safe patient transfer by air retrieval

14.11.4.1 *Examples of evidence*

- SLEs throughout stage of training including out of hours experience.

14.11.4.2 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: transfer.

14.11.4.3 *Suggested supervision level*

- Not applicable.

14.11.4.4 *Cross links with other domains and capabilities*

- Resuscitation and Transfer
- Intensive Care

14.11.5 Key capability H

H	Acts as a member of the multidisciplinary trauma team in the initial assessment and stabilisation of the multiple trauma patient and prioritise further management
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14.11.5.1 *Examples of evidence*

- SLEs throughout stage of training including out of hours experience.

14.11.5.2 *Personal Activities and Personal Reflections may include:*

- courses and e-Learning: trauma resuscitation, transfer.

14.11.5.3 *Suggested supervision level*

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.11.5.4 *Cross links with other domains and capabilities*

- Resuscitation and Transfer
- General Anaesthesia
- Intensive Care

14.12 Procedural Sedation

14.12.1 Stage 3 learning outcome

- *Delivers safe and effective procedural sedation independently*

14.12.2 Key capabilities A to D

A	Delivers procedural sedation for all patients in all settings
B	Evaluates the suitability of sedation for a procedure for a given patient, and formulates an alternative strategy when necessary
C	Evaluates and manages the issues posed by provision of sedation in remote sites outside the hospital
D	Describes local and national guidelines regarding sedation practice outside the operating theatre.

14.12.2.1 *Examples of evidence*

- SLEs throughout stage of training in appropriate cases eg ophthalmic surgery, trauma, dentistry, endoscopy, intensive care, cardioversion.

14.12.2.2 *Personal Activities and Personal Reflections may include:*

- contribution to safe sedation training across hospital
- involvement with writing local guidelines relating to sedation.

14.12.2.3 *Suggested supervision level*

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.12.2.4 *Cross links with other domains and capabilities*

- Safety and Quality Improvement
- Perioperative Medicine and Health Promotion
- Intensive Care

14.13 Pain

14.13.1 Stage learning outcome

- Able to initiate complex pain management for in-patients and to sign-post to appropriate pain management services

14.13.2 Key capabilities A to C

A	Applies knowledge and understanding of assessment and management of pain in a multi-professional context
B	Demonstrates safe effective pharmacological management of acute and procedure pain in all age groups
C	Acts as an effective member of the inpatient pain team

14.13.2.1 Examples of evidence

- SLEs throughout stage of training across range of surgical specialties, acute pain ward rounds and from specialist pain clinics; for example:
 - managing and planning analgesia for patients with chronic pain who present for surgery
 - leading an inpatient acute pain round
 - recognition of comorbidities and adjustment of pain medications accordingly

14.13.2.2 Personal Activities and Personal Reflections may include:

- attendance at pain clinic, multidisciplinary pain meetings
- development of an individual pain management care plan in pre-operative assessment clinic.

14.13.2.3 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.13.2.4 Cross links with other domains and capabilities

- Team Working
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Regional Anaesthesia
- Intensive Care

14.13.3 Key capabilities D & E

D	Effectively engages with multi-disciplinary primary and secondary pain services and palliative care when necessary
E	Recognises the need for and complications of interventional pain procedures

14.13.3.1 Examples of Evidence

- SLEs throughout stage of training across range of surgical specialties, acute pain ward rounds and from specialist pain clinics; for example:
 - recognition of end-of-life care and adjustments to pain medication accordingly
 - managing and planning analgesia for patients with acute on chronic pain
 - assessing patients with chronic pain.

14.13.3.2 Personal Activities and Personal Reflections may include:

- experience of management of pain in the terminal care setting

- attendance at pain intervention lists.

14.13.3.3 *Suggested supervision level*

- Not applicable.

14.13.3.4 *Cross links with other domains and capabilities*

- Team Working
- Perioperative Medicine and Health Promotion
- General Anaesthesia

14.13.4 Key capability F

F	Prescribes appropriately in the perioperative period and recognises the long-term implications of not reviewing patient analgesia in the post-operative period following discharge
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14.13.4.1 *Examples of Evidence*

- SLEs throughout stage of training across range of surgical specialties, acute pain ward rounds, and from specialist pain clinics; for example:
 - managing and planning analgesia for discharge.

14.13.4.2 *Personal Activities and Personal Reflections may include:*

- identification and management of complications from patient-controlled analgesia, neuraxial techniques, and continuous regional techniques.

14.13.4.3 *Suggested supervision level*

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.13.4.4 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion
- General anaesthesia
- Regional anaesthesia

14.13.5 Key capability G

G	Plans the perioperative management of patients for surgery who are taking high dose opioids and other drugs of potential addiction
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14.13.5.1 *Examples of Evidence*

- SLEs throughout stage of training across range of surgical specialties, acute pain ward rounds, and from specialist pain clinics; for example:
 - management of the intra-venous drug user who presents for surgery
 - managing and planning analgesia for patients with chronic pain who present for surgery.

14.13.5.2 *Suggested supervision level*

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

14.13.5.3 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Regional Anaesthesia

14.14 Intensive Care Medicine

14.14.1 Stage 3 learning outcomes

- Maintains the capabilities achieved at stage 2
- Provides safe and effective care for critically ill patients with specialist help and guidance

14.14.2 Key capabilities

A	Recognises the limitations of intensive care; employs appropriate admission criteria
B	Can safely plan and conduct the transfer from, and return to, the intensive care unit for patients requiring multi-organ support
C	Recognises and manages the surgical patient who would benefit from pre and/or post-operative critical care
D	Provides safe anaesthetic care for the critically ill patient who requires a procedure or investigation outside of the intensive care environment
E	Recognises and manages the patient with sepsis and employs local infection control policies
J	Explains the physiological and pharmacological requirements for the clinical management of the patient for organ donation
K	Supports clinical staff outside the ICU to enable the early detection of the deteriorating patient

14.14.3 Examples of evidence

14.14.3.1 Experience & logbook:

- experience from theatre and on call work in intensive care.

14.14.3.2 Supervised Learning Events (SLEs) can be used to demonstrate:

- initial assessment, stabilisation, and management of the critically ill patient including examples from obstetrics, multiple trauma, major surgical haemorrhage
- anaesthesia for ICU patients requiring surgical intervention such as surgical tracheostomy, laparotomy, trauma surgery
- emergency surgery in a critically ill patient requiring organ support
- management of patient for organ donation
- paediatric resuscitation and stabilisation
- transfer of critically ill patient to remote sites such as MRI scanner, catheter laboratory
- discussion with relatives following resuscitation.

14.14.3.3 Personal Activities and Personal Reflections may include:

- completion of resuscitation courses
- simulation training
- attendance at scientific meetings with focus on intensive care medicine
- attendance at ICU follow up clinic.

14.14.3.4 Cross links with other domains and capabilities

- Professional Behaviours and Communication
- General Anaesthesia
- Resuscitation and Transfer

15 Annex E - Stage 3 Special Interest Areas

During stage 3 of the Anaesthetics Curriculum, 12 months (whole time equivalent) of training must be undertaken in one or more areas of special interest. This allows the anaesthetist in training to develop knowledge and skills to enable them to gain the capabilities required to be an independent practitioner. It also prepares them for specialised areas of anaesthetic practice that they may want to pursue as a consultant or in preparation for additional training opportunities that might be undertaken in a more specialised area of anaesthetics practice after gaining CCT.

Special Interest Area (SIA) training is not separate from that of stage 3. In fact the capabilities acquired during this training inform the capabilities of stage 3. This is particularly relevant for the generic professional domains of learning. Stage 3 domains and the special interest areas together lead to achievement of independent practice.

The SIAs are undertaken over a period of one year during stage 3 of training. The time taken in each SIA depends on the type of SIA. The year may be a single SIA or combination of SIAs.

15.1 Acute Patient Pain

15.1.1 Stage 3 SIA learning outcome

- *Managing pain in inpatients (acute pain, acute on chronic pain, chronic pain and cancer pain)*

15.1.2 Key capabilities

A	Can lead an acute inpatient pain team and use a biopsychosocial model of care
B	Delivers complex patient centred care emphasising shared decision making with the patient and other health professionals
C	Delivers evidence-based pain medicine
D	Provides safe and effective pharmacological management of acute and procedural pain in all age groups
E	Demonstrates an ability to perform necessary practical pain relieving procedures for safe, effective evidence-based practice
F	Demonstrates effective consultation skills in challenging areas (e.g. ventilated in ICM, non-verbal patient and those with learning difficulties)
G	Facilitates referrals to specialist palliative care and end of life care when needed
H	Recognises need to liaise with specialty services such as liaison psychiatry and addiction medicine services and refers where appropriate

15.1.3 Examples of evidence

15.1.3.1 *Experience & Logbook:*

- experience of managing acute and acute on chronic pain in the acute hospital setting and in pain management clinics, pain intervention lists, pain interventions as part of end of life care which may include terminal care setting.

15.1.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- safe and effective pharmacological management of acute, acute on chronic and procedural pain in all groups
- explanation of clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues
- appropriate pharmacological knowledge for safe short and long term prescribing of opioids
- ability to manage complications from interventional procedures and pharmacological management for pain
- appropriate clinical reasoning by analysing physical and psychological findings
- appropriate and timely liaison with other medical specialty services when required
- application of effective team working strategies to ensure that effective prioritisation, communication and shared decision making occurs
- development of an individualised care plan, including anticipatory prescribing at end of life
- appropriate application of evidence-based treatments for pain management
- practical procedural skills for management of acute inpatient pain
- lead inpatient pain review round in collaboration with MDT.

15.1.3.3 *Personal Activities and Personal Reflections may include:*

- national and international courses or conferences related to Acute Inpatient Pain
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies related to Acute Inpatient Pain
- leadership training and demonstration of ability to lead an inpatient acute pain service
- attendance at multi-disciplinary pain meetings.

15.1.3.4 *Other evidence:*

- satisfactory MSF.

15.1.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.1.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- General Anaesthesia
- Pain

15.2 Additional Intensive Care

15.2.1 Stage 3 SIA learning outcome

- Provides safe and effective care for critically ill patients with occasional specialist help and guidance

15.2.2 Key capabilities

A	Recognises the limitations of intensive care; employs appropriate admission criteria. FICM Capability level: 3
B	Performs safely and effectively the clinical invasive procedures required to maintain cardiovascular, renal, and respiratory support. FICM Capability level: 3
C	Recognises, assesses and initiates management for acutely ill adults across the spectrum of single or multiple organ failure. FICM Capability level: 4
D	Recognises the acutely ill child and initiates management of paediatric emergencies. FICM Capability level: 3
E	Recognises and manages the patient with sepsis and employs local infection control policies. FICM Capability level: 4
F	Undertakes and evaluates laboratory and clinical imaging investigations to manage patients while critically ill during their intensive care stay. FICM Capability level: 3
G	Manages the medical / surgical needs and organ support of patients during their critical illness, including the holistic care of patients and relatives. FICM Capability level: 3
H	Plans and communicates the appropriate discharge of patients from intensive care to health care professionals, patients and relatives. FICM Capability level: 3
I	Manages end of life care within the intensive care environment with patients, relatives and the multi-professional team. FICM Capability level: 3
J	Liaises with transplant services when appropriate, can perform brain stem death testing and provides the physiological support of the donor. FICM Capability level: 2
K	Supports clinical staff outside the ICU to enable the early detection of the deteriorating patient. FICM Capability level: 3

15.2.3 Examples of Evidence

15.2.3.1 *Experience & Logbook:*

- experience in ICU recognised for Stage 3 ICM training including on call commitments
- ICU follow up clinics.

15.2.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- assessment and management of cases in accordance with capability levels set out above
- examples may include management of severe sepsis, multi-trauma, post-operative management following complex major surgery, severe burns, diagnosis of brain stem death and management of the potential organ donor
- assessment of acutely ill child including initial resuscitation of paediatric emergencies
- practical procedures as listed in Key Capability B
- other practical procedures may include percutaneous tracheostomy, bronchoscopy, use of ultrasound in intensive care including use of echocardiography
- ICU Ward round management and discharge planning
- Critical Care Outreach review
- Communication with relatives including discussion of withdrawal of support.

15.2.3.3 *Personal Activities and Personal Reflections may include:*

- national or international meetings related to Intensive Care Medicine
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies related to Intensive Care Medicine
- leadership of QI projects related to ICM
- review of mortality
- teaching and training of other medical and nursing staff and allied health professionals
- simulation training related to management of critical care scenarios
- attendance at debriefing sessions following stressful episodes
- leadership training and demonstration of ability to lead ICU ward rounds
- attendance at ICU follow up clinics and appreciation of post intensive care syndrome
- attendance at ICU business or multidisciplinary meetings
- attendance at Trust or Health Board senior management meetings.

15.2.3.4 *Other evidence:*

- satisfactory MSF.

15.2.4 Supervision level

As per capability level detailed above.

15.2.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- General Anaesthesia
- Resuscitation and Transfer
- Intensive Care

15.3 FICM Capability Levels

Level	Task orientated capability	Knowledge orientated capability	Patient management capability
1	Performs task under direct supervision.	Very limited knowledge; requires considerable guidance to solve a problem within the area.	Can take history, examine and arrange investigations for straight forward case (limited differential diagnosis). Can initiate emergency management and continue a management plan, recognising acute divergences from the plan. Will need help to deal with these.
2	Performs task in straightforward circumstances, requires help for more difficult situations. Understands indications and complications of task.	Sound basic knowledge; requires some guidance to solve a problem within the area. Will have knowledge of appropriate guidelines and protocols.	Can take history, examine and arrange investigations in a more complicated case. Can initiate emergency management. In a straightforward case, can plan management and manage any divergences in short term. Will need help with more complicated cases.
3	Performs task in most circumstances, will need some guidance in complex situations. Can manage most complications, has a good understanding of contraindications and alternatives.	Advanced knowledge and understanding; only requires occasional advice and assistance to solve a problem. Will be able to assess evidence critically.	Can take history, examine and arrange investigations in a more complex case in a focused manner. Can initiate emergency management. In a most cases, can plan management and manage any divergences. May need specialist help for some cases.

15.4 Anaesthesia for Bariatric Surgery

15.4.1 Stage 3 SIA learning outcomes

- Provides safe perioperative airway and anaesthetic care independently for patients undergoing bariatric surgery
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.4.2 Key capabilities

A	Provides risk stratification to patients with obesity related co-morbidity on their peri operative risk profile
B	Describes the pathophysiology and anaesthetic implications of different sleep disordered breathing conditions
C	Describe methods of testing and be able to interpret and act on the results of sleep studies
D	Demonstrate techniques to prolong safe apnoea time, and techniques for managing the difficult airway in the patient requiring bariatric surgery
E	Provides safe anaesthesia and ventilation strategies for all main weight loss surgical procedures

15.4.3 Examples of Evidence

15.4.3.1 *Experience & Logbook*

- experience of a range of bariatric surgical procedures
- pre-operative assessment of patients planned for bariatric surgery including use of different risk scoring systems and indications for further investigation.

15.4.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- assessment and management of cases with high BMI including those undergoing obesity surgery
- understanding of the different factors relevant to airway management in these patients
- evaluation of sleep studies and their impact on the perioperative management including indications for referral
- assessment and management of complications associated with high Body Mass Index (BMI) such as OSA and VTE management
- use of TIVA in management of bariatric patients including discussion of the different models involved.

15.4.3.3 *Personal Activities and Personal Reflections may include:*

- national and international meetings related to anaesthesia for bariatric surgery and specialist societies
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies related to management of patients with high BMI
- leadership of QI projects related to patients with high BMI undergoing surgical procedures
- leadership training.

15.4.3.4 *Other evidence:*

- satisfactory MSF.

15.4.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.4.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia

15.5 Anaesthesia for Cardiac Surgery

15.5.1 Stage 3 SIA learning outcomes

- *Is able to deliver safe perioperative care for the cardiac surgical patient or for an interventional procedure.*
- *Can contribute to a multidisciplinary ward round within the cardiac intensive care unit*

15.5.2 Key capabilities

A	Provides anaesthesia for a cardiac surgical list of uncomplicated CABG, AVR or combined procedures independently
B	Manages the anaesthetic care of a complex valve case and a major aortic case with local supervision
C	Can assess and provide perioperative care for off pump cardiac surgical procedures independently
D	Manages cardiac surgical cases with poor biventricular function and plans on-going care
E	Provides anaesthesia for interventional cardiology procedures e.g complex coronary intervention, transcatheter aortic valve
F	Evaluates point of care tests and utilises appropriate bleeding algorithms to manage peri and post bypass operative bleeding
G	Can manage emergency anaesthesia for post cardiac surgical complications
H	Undertakes learning and delivery of transoesophageal echocardiography
I	Provides intensive care to the post operative cardiac surgical patient
J	Explains the principles of cardiac transplantation
K	Manages patients requiring mechanical circulatory support during the perioperative period

15.5.3 Examples of evidence

15.5.3.1 *Experience and Logbook*

- appropriate preoperative assessment whether in a preoperative clinic or ward based assessment with interpretation of the relevant preoperative investigations to plan appropriate care for the patient
- logbook should demonstrate a range of cardiac cases - elective, urgent and emergency including coronary artery bypass surgery, valve surgery, and surgery on the thoracic aorta. Some

time should be spent in the cardiac catheter suite to support minimally invasive and structural work

- centres that do not have access to transplant or ECMO services should encourage their trainees to seek supernumerary visits to other departments
- intraoperative care should include appropriate use of inotropes and vasopressors and management of cardiac surgical bleeding supported by Point of Care analysis
- anaesthetists in training should start to develop trans-oesophageal echocardiography hands on skills and interpretation of basic images.
- participate and go on to lead a cardiac intensive care ward round with the relevant communications to surgeons, senior nurses, and other members of the MDT and escalation or de-escalation of care to patients which may include haemofiltration, percutaneous tracheostomy and referral to a specialist unit.

15.5.3.2 Supervised Learning Events (SLEs) can be used to demonstrate:

- understanding and discussion of the principles of safe cardiopulmonary bypass
- effective communication triad between lead surgeon, lead anaesthetist and clinical perfusionist
- advanced vascular access - pulmonary artery catheter
- basic TOE logbook with attendance at appropriate course
- delivery of anaesthesia with distant supervision for an elective aortic valve replacement, CABG or combination of both
- returning a patient to theatre for bleeding independently and escalate the appropriate haemorrhage management
- participation in patient MDT in preparation for theatre and/or Cardiac ICU

15.5.3.3 Personal Activities and Personal Reflections may include:

- national and international meetings related to anaesthesia for cardiac surgery
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies related to management of patients for cardiac surgery
- leadership of QI projects related to anaesthesia for cardiac surgery
- leadership training.

15.5.3.4 Other evidence:

- satisfactory MSF.

15.5.4 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

15.5.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Intensive Care

15.6 Anaesthesia for Complex Orthopaedic Surgery

15.6.1 Stage 3 SIA learning outcomes

- Provides safe perioperative anaesthetic care for a wide variety of complex orthopaedic procedures independently
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.6.2 Key capabilities

A	Independently manages the perioperative care of patients for major complex orthopaedic surgery including scoliosis surgery, pelvic surgery and major orthopaedic cancer surgery.
B	Engages in local policy making for orthopaedic anaesthetic and analgesic techniques
C	Ability to perform a variety of regional anaesthesia techniques for peri-operative analgesia and to facilitate rehabilitation.
D	Can independently practice safely a wide range of regional techniques for all upper limb and shoulder surgery under block alone, including the management of continuous nerve catheters for post-operative analgesia
E	Can independently practice safely a wide range of regional techniques for lower limb surgery, including the management of continuous nerve catheters for post-operative analgesia

15.6.3 Examples of Evidence

15.6.3.1 *Experience and Logbook*

- preoperative clinic based assessment and preparation for surgery of patients
- a wide range of cases including patients for revision arthroplasty, major complex oncological resections and scoliosis/oncological spinal surgery.

15.6.3.2 *Personal Activities and Personal Reflections may include:*

- national and international meetings related to anaesthesia for complex orthopaedic surgery
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies
- leadership of QI projects related to anaesthesia for complex orthopaedic surgery
- leadership training.

15.6.3.3 *Other evidence:*

- satisfactory MSF.

15.6.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.6.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Regional Anaesthesia

15.7 Anaesthesia for Hepato-Pancreato-Biliary Surgery

15.7.1 Stage 3 SIA learning outcomes

- Provides safe perioperative anaesthetic care for a wide variety of complex hepato-pancreato-biliary procedures
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.7.2 Key capabilities

A	Provides comprehensive safe anaesthetic perioperative care for major hepatobiliary surgery
B	Manages the perioperative care of patients undergoing major pancreatic surgery recognising and planning for the metabolic consequences of the procedure
C	Manages the perioperative care for patients undergoing intra-abdominal organ transplantation
D	Management of portal hypertension with an emphasis on provision of anaesthesia or monitored anaesthesia care for transjugular intrahepatic portosystemic shunt (TIPS) procedure

15.7.3 Examples of Evidence

15.7.3.1 *Experience and Logbook*

- attendance at hepatobiliary pre-assessment clinic, assessing patients for major cancer work affecting the liver and pancreas
- attend theatre - deliver anaesthesia for a wide range of cases including lap and open liver resections, pancreatic surgery – PPPD, Whipples, distal pancreatectomy and splenectomy; understand the differences in techniques and the risks associated for the patient
- gain an understanding of neuroendocrine and adrenal tumours, such as phaeochromocytomas where experience is available
- liver transplantation – risks/ benefits/assessment – attendance at inpatient and outpatient assessment clinics and MDT
- attendance at monthly hepatobiliary and liver MDT
- assess patients for surgery secondary to liver transplants – hernias/ biliary reconstruction
- understand thrombo-elastography (TEG) and the management of major haemorrhage
- vascular access / Lidco / TOE / Pulmonary artery floatation catheters.

15.7.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- pre-operative assessment for hepatobiliary patients including high risk cases
- understanding and discuss of the techniques used for different operations and understand why they are used
- delivery of anaesthesia for simple liver resections and pancreatic surgery independently
- discussion of the management of neuro-endocrine tumours and adrenal patients where experience is available
- management of parts of a liver transplant operation based on skillset and abilities
- planning post-operative analgesia based on the operation
- observed practice of practical skills – TEG interpretation/ venous access/ thoracic epidurals.

15.7.3.3 *Personal Activities and Personal Reflections may include:*

- national and international meetings related to anaesthesia for HPB surgery
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies related to management of patients for HPB surgery
- leadership of QI projects related to anaesthesia for HPB surgery

- leadership training
- participation in audit and/or research in the liver unit.

15.7.3.4 *Other evidence:*

- satisfactory MSF.

15.7.4 Suggested supervision level

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

15.7.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Intensive Care

15.8 Anaesthesia for Major General Surgery

15.8.1 Stage 3 SIA learning outcomes

- Provides safe perioperative anaesthetic care for a wide variety of complex general surgical, urological and gynaecological patients
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.8.2 Key capabilities

A	Provides and evaluates safe perioperative care for patients with significant co-morbidities for complex intra-abdominal surgery across all surgical disciplines
B	Knows and can evaluate developments in the anaesthetic care for complex procedures for cancer surgery across the general surgical, gynaecological and urological disciplines
C	Can assist colleagues in the perioperative planning and management of major cases
D	Provides expert perioperative care for patients with complex endocrine surgery

15.8.3 Examples of Evidence

15.8.3.1 *Experience and Logbook*

- pre-operative assessment clinics including risk assessment for patients undergoing major abdominal surgery and planning for high risk patients
- involvement with pre-operative surgical preparation pathways such as enhanced recovery
- experience of broad range of elective and emergency major procedures in general, gynaecological and urological surgery including major cancer and intra-abdominal endocrine surgery such as adrenal gland and carcinoid tumours.

15.8.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- involvement of multi-disciplinary team in shared decision making for high risk patients undergoing major procedures
- pre-operative preparation of patients with endocrine abnormalities for example thyroid and parathyroid disease
- assessment and peri-operative management of patient undergoing elective major intra-abdominal cancer surgery
- analgesic strategies and techniques for patients undergoing intra-abdominal procedures
- management of patients for minimally invasive abdominal and pelvic surgery including effects of positioning for prolonged laparoscopic procedures.

15.8.3.3 *Personal Activities and Personal Reflections may include:*

- national and international meetings related to anaesthesia for major general surgery
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies related to management of patients for major general surgery including pre-operative preparation and enhanced recovery programmes
- leadership of QI projects related to anaesthesia for major general surgery
- leadership training.

15.8.3.4 *Other evidence:*

- satisfactory MSF.

15.8.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.8.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Intensive Care

15.9 Anaesthesia for Neurosurgery

15.9.1 Stage 3 SIA learning outcomes

- Provides safe perioperative anaesthetic care for a wide variety of complex neurosurgical and neuroradiological procedures independently
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.9.2 Key capabilities

A	Deliver safe perioperative care to adults requiring elective intracranial surgery both supratentorial and infratentorial including craniotomies for vascular lesions, pituitary surgery
B	Delivers safe peri-operative anaesthetic care to adults for emergency intracranial surgery, CSF diversions, spinal surgery and endovascular thrombectomy
C	Deliver safe perioperative care to adults requiring complex spinal surgery
D	Describes and implements an anaesthetic plan for the complex endocrine and electrolyte disorders that accompany intracranial pathology
E	Analyses the risks and benefits of available anaesthetic techniques for differing neuroscience procedures including TIVA, processed EEG, neurophysiological monitoring, awake testing, and the implications of patient positioning
F	Delivers safe anaesthetic care for neuro-radiological investigations and interventions such as coiling, embolisation and endovascular thrombectomy

15.9.3 Examples of Evidence

15.9.3.1 *Experience and Logbook*

- preoperative clinic experience and the assessment and optimisation of patients presenting for elective neurosurgical procedures
- a wide range of elective cases, which may include simple and complex spinal procedures, neurovascular procedures (surgical and interventional neuro-radiological), other neuroimaging eg MRI, trans-sphenoidal cases, neuro-oncology, functional neurosurgery, paediatric neurosurgery and may include awake craniotomies
- Perioperative management of emergency neurosurgical presentations which may include decompressive craniectomy, emergency craniotomies, CSF diversion procedures, emergency spinal surgery, urgent neuro-radiological procedures such as aneurysm coiling or mechanical thrombectomy, and management of the patient with traumatic brain or spinal injury
- experience may also include neuro-critical care, and the resuscitation and transfer of patients with neurological injury or pathology.

15.9.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- management of any of the above cases
- effective list management of an elective or emergency neurosurgical or neuroradiology session
- pre-operative assessment and optimisation of patients with complex neurological needs, for example patients with movement disorders, complex epilepsy, endocrine sequelae of pituitary disease, or with medical comorbidities, which may complicate neurosurgery eg conditions requiring anticoagulation

- appreciation of the balance between risks and benefits of neurosurgery and anaesthesia in complex or frail patients and ability to work with patients, their families and multidisciplinary colleagues to plan best care
- ability to safely position patients in a variety of positions for surgery and with different equipment, eg prone or park bench positioning, use of Allan table or stereotactic or robotic head-frames
- advanced airway management skills relevant to neuro-anaesthesia eg awake intubation techniques, video-laryngoscopy
- ability to adapt anaesthetic technique to facilitate neurophysiological monitoring, eg TIVA anaesthesia and intraoperative neuro-monitoring, awake cranial procedures, intra-operative EEG monitoring.

15.9.3.3 *Personal Activities and Personal Reflections may include:*

- national and international meetings related to neuro-anaesthesia
- presentation at relevant meeting eg abstract or free paper
- development of neuro-anaesthetic or neuro-critical care guidelines and policies
- leadership of QI projects related to neuro-anaesthesia
- attendance at neurosurgical or neuro-radiological MDT meetings
- eLearning relevant to neuro-anaesthesia and neurological conditions
- sessions with radiology learning interpretation of neuroimaging
- participation and leadership in local/regional/national neuro-anaesthesia teaching
- simulation in neuro-anaesthesia and related emergencies.
- leadership training.

15.9.3.4 *Other evidence:*

- satisfactory MSF.

15.9.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.9.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Intensive Care

15.10 Anaesthesia for Ophthalmic Surgery

15.10.1 Stage 3 SIA learning outcomes

- Provides safe perioperative anaesthetic care for a wide variety of complex ophthalmic procedures independently
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.10.2 Key capabilities

A	Provides safe and effective regional anaesthesia in appropriate patients for ophthalmic surgery, understanding implications of biometry measurements and B scan results.
B	Delivers perioperative anaesthetic management of patients having orbital surgery or vitreo-retinal surgery including specific considerations in laser treatment
C	Delivers safe anaesthetic management of patients for glaucoma surgery appreciating the different types of procedures undertaken and any specific anaesthetic requirements.
D	Manages the perioperative care of patients having complex cornea surgery including the issues relating to tissue transplant.
E	Provides safe perioperative management of children for ophthalmic surgery including those with complex congenital syndromes.

15.10.3 Examples of Evidence

15.10.3.1 Experience & Logbook

- experience of a wide range of elective and emergency ophthalmic procedures including those in children.

15.10.3.2 Supervised Learning Events (SLEs) can be used to demonstrate:

- assessment and management of cases as detailed in key capabilities
- management of intra-ocular pressure
- implications of use of laser in ophthalmic theatres
- ability to provide ophthalmic regional anaesthesia
- liaison with surgical team in the management of complex patients
- safe sedation for ophthalmic surgery under local anaesthesia
- management of ophthalmic trauma including open globe injuries.

15.10.3.3 Personal Activities and Personal Reflections may include:

- national and international meetings related to ophthalmic anaesthesia
- presentation at relevant meeting eg abstract or free paper
- teaching and training junior staff; this can include the use of part simulators for ophthalmic regional anaesthesia
- development of guidelines and policies related to ophthalmic anaesthesia
- leadership of QI projects related to ophthalmic anaesthesia
- leadership training.

15.10.3.4 Other evidence:

- satisfactory MSF.

15.10.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.10.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Regional Anaesthesia

15.11 Anaesthesia for Patients with Complex Airway

15.11.1 Stage 3 SIA learning outcomes

- Provides safe perioperative airway and anaesthetic care for a wide variety of patients with complex airway problems independently
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.11.2 Key capabilities

A	Is a senior decision maker within the multi-disciplinary team in planning the appropriate airway management in patients with advanced airway pathology
B	Can proficiently manage the difficult paediatric airways that may present in any non-specialist hospital
C	Performs awake and asleep intubation in all patients with advanced airway pathology
D	Can plan and manage at-risk extubation
E	Utilises techniques for apnoeic oxygenation and ventilation
F	Proficient in front of neck access to the airway
G	Is proficient in independently managing anaesthesia for patients needing a wide range of major head and neck surgeries

15.11.3 Examples of Evidence

15.11.3.1 Experience & Logbook:

- pre-operative clinic based assessment and multi-disciplinary planning for the suitability of surgery of patients with complex head and neck pathology like cancer, infection and congenital or acquired anatomical deformities
- range of experience in theatres including ENT and head and neck surgery and specialist paediatric lists.

15.11.3.2 Supervised Learning Events (SLEs) can be used to demonstrate:

- pre-operative assessment and management of complex head and neck surgery patient
- leadership of multi-disciplinary planning for patients with complex airways
- practical procedures such as:
 - video-laryngoscope assisted intubations using both MAC and hyper angulated blades
 - pre-operative nasendoscopy
 - awake and asleep fibre-optic intubation
 - awake bronchoscopies
 - front of neck access techniques: ultrasound guided, mannequin, cadaver
 - jet ventilation (tube-less surgeries)
 - apnoeic oxygenation techniques
- ability to interpret investigations like CT head & neck and CT chest to aid the planning of complex airway management
- use of innovative techniques for complex airway management
- management of potentially difficult paediatric airway in conditions such as croup, epiglottitis, bleeding tonsil.
- .

15.11.3.3 *Personal Activities and Personal Reflections may include:*

- national and international meetings related to management of complex airways, for example Difficult Airway Society meetings
- difficult airway training courses
- presentation at relevant meeting ie abstract or free paper
- development of guidelines and policies related to airway management
- leadership of QI projects related to airway management
- involvement with local/regional educational programs for teaching airway skills
- leadership training
- attendance at MDT ENT - radiology teaching sessions.
- attendance at ENT clinics (nasendoscopy experience)
- attendance at respiratory bronchoscopy sessions.
-

15.11.3.4 *Other evidence:*

- satisfactory MSF.

15.11.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.11.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- General Anaesthesia

15.12 Anaesthesia for Plastic Surgery and Burns Management

15.12.1 Stage 3 SIA learning outcomes

- Provides safe perioperative anaesthetic care for a wide variety of complex plastics and burns cases independently
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.12.2 Key capabilities

A	Provides the perioperative care of a patient independently undergoing complex plastic surgical procedures or major burns excision and grafting
B	Manages the initial assessment, plans, manages and evaluates the ongoing care of a severely burned patient from any cause
C	Management of inhalational injuries including use of bronchoscopy and management of carbon monoxide and cyanide poisoning
D	Provides effective analgesia and sedation for change of dressing in a severely burn injured patient
E	Acts as a senior decision maker in the burns multidisciplinary ward round
F	Is proficient in the performance of regional anaesthetic techniques for the upper and lower limb

15.12.3 Examples of Evidence

15.12.3.1 Experience and Logbook

- experience of a wide range of elective and emergency plastic surgery and burns procedures including those in children
- experience in the emergency management of major burns injuries.

15.12.3.2 Supervised Learning Events (SLEs) can be used to demonstrate:

- ▶ emergency assessment, resuscitation, and ongoing management of patients with major burn injury including airway management and organ support
- ▶ management of fluid resuscitation following major burn injury
- ▶ bronchoscopy assessment of inhalational lung injury
- ▶ perioperative management of patients undergoing major burns excision and grafting
- ▶ management of dressing changes including different analgesia and sedation techniques
- ▶ ICU management of patients with major burn injury requiring multi organ support
- ▶ perioperative management of patients undergoing free flap surgery
- ▶ perioperative management of patients undergoing reconstructive surgery
- ▶ management of major haemorrhage during major burns/plastics surgery including blood conservation techniques
- ▶ perioperative management of emergency plastic surgery cases including the use of regional techniques.

15.12.3.3 Personal Activities and Personal Reflections may include:

- national and international meetings related to plastic surgery and burns management
- attendance at regional education meetings
- presentation and discussion of cases at local, regional, and national network meetings
- burns specific resuscitation courses

- development of guidelines and policies for management of Burns
- leadership of QI projects related to plastic surgery and burns management
- leadership training
- simulation training.
-

15.12.3.4 Other evidence:

- satisfactory MSF.

15.12.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.12.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Resuscitation and Transfer
- Pain
- Intensive Care

15.13 Anaesthesia for Thoracic Surgery

15.13.1 Stage 3 SIA learning outcomes

- *Provides safe perioperative anaesthetic care for a thoracic surgical patient*
- *Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation*

15.13.2 Key capabilities

A	Can assess and management the perioperative care thoracoscopic video assisted lung or pleural biopsy independently
B	Manages independently the perioperative care of patients for a wide range of major thoracic surgical procedures
C	Provides a range of appropriate perioperative multimodal pain management for thoracic procedures
D	Preoperative assessment and anaesthetic management of patients with recurrent pneumothoraces, pleurectomy or bullectomy
E	Manages airway interventions for benign and malignant disease including tracheal stents and tumour debulking
F	Manages independently the patient with pleuro-pulmonary sepsis

15.13.3 Examples of Evidence

15.13.3.1 Experience and Logbook

- preoperative clinic based assessment of suitability and preparation for surgery of patients with diseases of the lungs, pleura, mediastinum and chest wall

- a wide range of cases including patients undergoing lung resection, mediastinal surgery, and pleural surgery
- management of thoracic trauma including haemothorax and pneumothorax
- management of patients undergoing tracheal surgery.

15.13.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- pre-operative assessment for thoracic surgical patients including high risk cases
- understanding of techniques for airway management during tracheal surgery
- ability to manage patients undergoing lung resection, pleural surgery, mediastinal surgery and diagnostic procedures
- management of single lung ventilation and its consequences
- ability to achieve lung isolation with double lumen tubes and bronchial blockers
- ability to provide safe and effective postoperative analgesia
- effective list management.

15.13.3.3 *Personal Activities and Personal Reflections may include:*

- national and international meetings related to thoracic anaesthesia
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies
- leadership of QI projects related to thoracic anaesthesia
- leadership training.

15.13.3.4 *Other evidence:*

- satisfactory MSF.

15.13.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.13.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Regional Anaesthesia
- Pain

15.14 Anaesthesia for Vascular Surgery

15.14.1 Stage 3 SIA learning outcomes

- *Provides safe perioperative anaesthetic care for a wide variety of complex vascular cases independently*
- *Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation*

15.14.2 Key capabilities

A	Capable of providing advanced cardiovascular risk assessment relating to vascular surgery
B	Manages the perioperative care of elective and emergency open AAA repair
C	Manages the perioperative care of complex endovascular repair of aortic aneurysms including thoracic aneurysms where experience is available

D	Manages the perioperative care for patients requiring carotid endarterectomy under general and regional anaesthesia
E	Provides perioperative care for patients requiring vascular access procedures for renal dialysis
F	Appreciates the complexities in organising regional vascular services

15.14.3 Examples of Evidence

15.14.3.1 *Experience and Logbook*

- pre-operative assessment clinics including evaluation of cardiovascular risk
- broad experience of elective and emergency vascular surgery including carotid arterial procedures, aortic surgery, aorto-iliac occlusive disease procedures.

15.14.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- perioperative care of high-risk patient undergoing vascular surgery
- involvement of multi-disciplinary team in shared decision making for high-risk surgery
- regional anaesthesia for vascular procedures including techniques for carotid endarterectomy
- management of major haemorrhage during emergency vascular surgery including blood conservation techniques
- ability to use specific techniques during anaesthesia to minimise effect of surgery such as spinal cord protection and maintenance of renal function
- intra-operative monitoring techniques for vascular procedures including cardiovascular and neurophysiological monitoring
- management of complications relating to carotid surgery
- assessment and management of patients with ruptured abdominal aortic aneurysm.

15.14.3.3 *Personal Activities and Personal Reflections may include:*

- national and international meetings related to vascular anaesthesia
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies
- leadership of QI projects related to vascular anaesthesia
- leadership training.

15.14.3.4 *Other evidence:*

- satisfactory MSF.

15.14.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.14.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Resuscitation and Transfer
- Pain
- Intensive Care

15.15 Anaesthesia in Resource Poor Environments

15.15.1 Stage 3 SIA learning outcome

- Provide safe perioperative anaesthetic care in a resource poor environment

15.15.2 Key capabilities

A	Describes the culture, customs and political influence (if appropriate) to healthcare in the particular resource poor environment
B	Explains the impact of local epidemiology that may influence delivery of anaesthesia and peri-operative care
C	Works with the local hospital governance and management structure
D	Provides perioperative management of patients undergoing a wide range of surgical procedures and acutely sick patients requiring post-operative care within the local environment adapting to the available resources
E	Teaches and trains the multidisciplinary team including anaesthetic clinical officers, doctors, theatre staff and medical students within limited educational resources
F	Describes the challenges to deliver sustainable healthcare within the particular environment

15.15.3 Examples of Evidence

15.15.3.1 Experience and Logbook

- logbook demonstrating use of appropriate regional or general techniques, for resource limited environment, of a wide range of patients undergoing elective or emergency surgery
- logbook evidence of experience managing anaesthesia particularly in obstetric, trauma and paediatric patients
- experience in delivering multidisciplinary team teaching and clinical anaesthesia in resource poor environment.
- 15.15.3.2 Supervised Learning Events (SLEs) can be used to demonstrate: ability to manage patients using draw-over or hybrid anaesthesia machine, ketamine anaesthesia, and resource appropriate regional or local techniques
- safe pre-operative management of patients presenting with undiagnosed or poorly treated chronic conditions
- ability to manage the perioperative care of emergency cases including the post-operative level 2 or 3 care with available local resources, including referral
- inclusive approach to list management, leading a multidisciplinary team of mixed abilities and language
- understanding of the cultural and political influences on low resource health systems
- a systematic approach to theories of change and principles of sustainable development.

15.15.3.2 15.15.3.3 Personal Activities and Personal Reflections may include:

- attendance at national and international meetings or courses related to world anaesthesia, including presenting/speaking
- development of guidelines and policies alongside local counterparts
- involvement in teaching opportunities for the multidisciplinary team
- training focused on delivery of education in low resource settings (eg SAFE)
- development of skills in a foreign language

- understanding of the impact conscious and unconscious biases on delivery of healthcare and education to low resource settings
- involvement in organisations promoting safe global anaesthesia (e.g. World Anaesthesia Society, RCoA Global Partnerships, GASOC, MSF)
- Diploma in Tropical Medicine and Hygiene
- Global Health Medicine certification (PGCert, Dip or MSc)
- Diploma in the Medical Care of Catastrophes.

15.15.3.3 *Other evidence*

- satisfactory MSF.

15.15.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.15.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Regional Anaesthesia
- Pain

15.16 Military Anaesthesia

15.16.1 Stage 3 SIA learning outcome

- *Considers the knowledge, skills and behaviours necessary to provide resuscitation, anaesthesia and ongoing care for patients in the deployed military environment.*

15.16.2 Key capabilities

A	Plans the management of military trauma including major bleeding
B	Operates and safely uses relevant military clinical equipment
C	Contrasts interoperability and cultural issues between UK Defence Medical Services and multinational partners and intergovernmental agencies
D	Evaluates different medical treatment facilities and their capabilities, considering the knowledge and skills necessary to operate and sustain them
E	Considers the challenges of delivering clinical care, with potential prolonged holding, in a resource limited environment
F	Considers Chemical, Biological, Radiological and Nuclear issues in the context of anaesthesia
G	Compares the structures and responsibilities within the Defence Medical Services, as well as Land, Fleet and Air Commands.
H	Considers ethical decisions and clinical governance on military operations
I	Evaluates the roles of anaesthesia within the operational patient care pathway
J	Considers the role of anaesthesia in rehabilitation and anaesthetic considerations specific to the care of veterans
K	Evaluates the impact of Human Factors, Ergonomics and Crew Resource Management on performance during management of military patients in a deployed environment.

15.16.3 Examples of Evidence

15.16.3.1 Experience and Logbook

- a wide range of cases including major trauma, management of haemorrhage and massive blood transfusion, regional anaesthesia (particularly in trauma) and inter-hospital critical care transfers.

15.16.3.2 Supervised Learning Events (SLEs) can be used to demonstrate:

- ability to manage the resuscitation and anaesthesia requirements of patients suffering major trauma
- the management of resuscitation in major haemorrhage including massive blood transfusion
- ability to use deployed anaesthetic equipment
- understanding of the operational patient care pathway.

15.16.3.3 Personal Activities and Personal Reflections may include:

- national and international meetings related to military anaesthesia
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies

- leadership of QI projects related to military anaesthesia
- leadership training
- simulation training
- attending the Military Operational Surgical Team Training (MOSTT) Course, the Defence Anaesthesia Simulation Course (DASC), the Medical Emergency Response Team (MERT) Course and the CBRN Clinical Course
- deployment on operations and exercises in Land, Air and Maritime Medical Treatment Facilities (MTFs).

15.16.3.4 *Other evidence:*

- satisfactory MSF.

15.16.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.16.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Intensive Care

15.17 Obstetric Anaesthesia

15.17.1 Stage 3 SIA learning outcomes

- Provides safe perioperative anaesthetic care for a wide variety of complex obstetric cases independently.
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation.

15.17.2 Key capabilities

A	Evaluates and triages the daily obstetric anaesthesia workload for labour ward and obstetric theatre to maximize patient and service benefit
B	Provides safe anaesthetic care for complex deliveries in all patients
C	Collaboratively manages the critically ill parturient requiring single-organ support on labour ward, recognising when to escalate care, including safe transfer if required.
D	Is up to date with evidence-based guidance and publications to be equipped to represent obstetric anaesthetic services at a range of Trust maternity management meetings
E	Explains the essential principles of obstetric practice including basic CTG interpretation.
F	Develops, organises and evaluates multidisciplinary drills training and teaching in obstetrics.
G	Evaluates and introduces evidence-based obstetric anaesthetic practice

15.17.3 Examples of Evidence

15.17.3.1 Experience and Logbook

- experience in obstetric unit with wide range of cases including mothers with complex medical needs and high dependency unit caring for obstetric patients
- exposure to multi-disciplinary team (MDT) meetings and obstetric management meetings.

15.17.3.2 Supervised Learning Events (SLEs) can be used to demonstrate:

- pre-operative assessment for high-risk cases
- understanding and knowledge of difficult airway management in obstetric cases
- management of obstetric emergencies
- management of critically ill parturients
- ability to manage and provide safe and effective anaesthesia and analgesia for obstetric patients in the elective and emergency setting
- elective Caesarean section list management
- labour ward management of workload
- effective management of high-risk patients
- management of non-obstetric surgery in pregnancy
- leading ward round of high dependency unit obstetric patients
- leadership and delegation by leading anaesthetic handover, managing elective list and delivery suite workload
- involvement with obstetric patients with complex medical needs eg congenital cardiac diagnoses
- safeguarding issues in obstetric patients with learning difficulties, mental health issue or under age pregnancy

- ethical dilemmas eg consent for delivery and anaesthetic in pregnant patients with severe mental health issue
- perioperative assessment and MDT discussion for pregnant women with complex medical background

15.17.3.3 *Personal Activities and Personal Reflections may include:*

- attending and leading high risk obstetric anaesthetic clinics to formulate management plans
- attending MDT meetings to plan patient care
- attending Obstetric management meetings
- shadowing members of the MDT to appreciate their roles eg Lead Labour Ward Midwife, Consultant Obstetrician
- teaching on PROMPT, BOAST, simulation courses
- attending CTG teaching
- attendance at joint obstetric specialist clinics eg cardiac/haematology
- supervision/mentorship of junior anaesthetists doing IACOA/stage 1 obstetric anaesthesia
- national and international meetings related to obstetric anaesthesia
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies
- leadership of QI projects related to obstetric anaesthesia
- leadership training.

15.17.3.4 *Other evidence:*

- satisfactory MSF.

15.17.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.17.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Regional Anaesthesia

15.18 Paediatric Anaesthesia

15.18.1 [Stage 3 SIA learning outcomes](#)

For a DGH anaesthetist with a regular commitment to children's anaesthesia:

- Provides safe perioperative anaesthetic care for a wide variety of paediatric procedures performed in the DGH environment independently

For the paediatric specialist in a tertiary centre, additionally:

- Provides safe perioperative anaesthetic care for a wide variety of complex paediatric (including neonates) surgery and other procedures independently
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.18.2 [Key capabilities](#)

For those intending to practice and potentially lead paediatric anaesthesia in a non-tertiary setting:

A	Provides safe anaesthesia in both the emergency and elective setting utilising techniques to reduce anxiety in all ages including premature babies
B	Delivers safe perioperative care to all paediatric patients requiring surgery in a district general setting, including those with complex co-existing disease
C	Can gain arterial, intraosseous, peripheral and central vascular access in children and babies
D	Uses a wide range of analgesic strategies perioperatively including simple regional techniques for surgeries routinely performed in a district general hospital setting
E	Manages massive transfusion in children.
F	Explains NHS policy for the provision of paediatric services

For those intending to practice in a tertiary paediatric setting (in addition to above):

G	Delivers safe perioperative care to all paediatric patients requiring surgery in tertiary paediatric setting including those with complex co-existing disease
H	Uses a wide range of analgesic strategies perioperatively for complex paediatric patients requiring major surgery

15.18.3 [Examples of Evidence](#)

15.18.3.1 *Experience and Logbook*

- experience of a wide range of paediatric cases in an elective and emergency setting including paediatric trauma, emergency surgery and procedures such as laryngotracheobronchoscopy
- experience of neonatal anaesthesia
- resuscitation and stabilisation of the critically ill child

15.18.3.2 *Supervised Learning Events (SLEs) can be used to demonstrate:*

- preoperative assessment including planning for induction of anaesthesia
- premedication and management of the anxious child
- neonatal anaesthesia including neonatal laparotomy
- management of post-operative analgesia in different age groups of child

- transfer and handover of the postoperative child to PICU
- indications and the practice of venous access in children
- regional anaesthesia in children

15.18.3.3 *Personal Activities and Personal Reflections may include:*

- national and international meetings related to paediatric anaesthesia such as APAGBI annual meeting
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies
- leadership of QI projects related to paediatric anaesthesia
- leadership training
- simulation training such as: Positive Outcome and Experience Management Strategies (POEMS), Managing Emergencies in Paediatric Anaesthesia (MEPA), Advanced Paediatric Life Support (APLS).
-

15.18.3.4 *Other evidence:*

- satisfactory MSF.

15.18.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.18.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Pain

15.19 Pain Medicine

15.19.1 Stage 3 SIA learning outcome

- Provides comprehensive management of patients with acute, acute on chronic, chronic and cancer related pain using physical, pharmacological, interventional and psychological techniques in a multidisciplinary setting

15.19.2 Key capabilities

A	Manages referrals/triages within pain service
B	Manages an outpatient pain medicine clinic
C	Manages pain procedural cases
D	Participates effectively within a pain MDT
E	Manages inpatient pain and acute pain rounds
F	Manages patients who are taking drugs of potential addiction
G	Has an understanding of the socioeconomic, occupational health and medicolegal aspects of pain medicine
H	Describes the healthcare infrastructure and the pain service
I	Manages pain in paediatric patients (chronic pain)
J	Manages pain in paediatric inpatients (acute pain)
K	Manages pain in cancer patients

15.19.3 Examples of Evidence

15.19.3.1 15.19.3.1 Experience and Logbook

- experience of multidisciplinary approaches to managing inpatient and outpatient pain in a variety of setting including inpatient ward rounds, outpatient clinics, advanced interventional techniques, pharmacological therapies and pain management programmes
- a wide range of clinical assessments and formulation of management plans for adults and children with acute, acute on chronic, chronic and cancer pain seen in both inpatient and outpatient clinic settings
- a wide range of pain management interventional procedures for acute, chronic and cancer pain using landmark, ultrasound and X-ray guided techniques.

15.19.3.2 Supervised Learning Events (SLEs) can be used to demonstrate:

- ability to work within a multidisciplinary pain team, collaborating with other specialties in primary and secondary care and allied health professions such as physiotherapy, occupational therapy, nursing and clinical psychology
- leading inpatient ward rounds and pain MDT
- comprehensive assessment of adults and children presenting with acute, acute on chronic and cancer pain, applying a biopsychosocial model of care.
- assessment of pain in complex scenarios, including those with cognitive impairment, limited verbal interaction and settings such as intensive care

- formulation and review of management plans for adults and children presenting with acute, acute on chronic and cancer pain
- recognition of patients with pain who have psychological problems and who require psychological evaluation, and the ability to apply established treatments for the management of psychological distress in those with pain
- management of complex patients with painful conditions, including those requiring coordinated care with other specialties and agencies, such as transition from paediatric to adult health and social services or those with drug dependences or mental health conditions
- pharmacological management of acute, acute on chronic, cancer and procedural pain in all age groups with different co-morbidities
- management of inpatient acute pain including postoperative pain; infusion pumps including PCAs, wound catheters, epidurals
- ability to plan, undertake and follow up interventional procedures for acute, chronic and cancer pain, including management of complications
- advanced interventional techniques for the management of cancer pain including but not exclusively, percutaneous cordotomy
- management of external and internal implantable drug delivery systems, both peripheral and central, for the management of cancer pain
- impact of pain on occupation and aspects of daily living; support structures for these patients
- assessment of pain in the context of neuromodulation
- referral criteria and process for patients requiring assessment and treatment by specialised pain services, eg neuromodulation, paediatric chronic pain
- management of outpatient clinics and pain intervention lists, including appropriate prioritisation of referrals.

15.19.3.3 *Personal Activities and Personal Reflections may include:*

- national and international courses or conferences related to Pain Medicine
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies related to inpatient and outpatient pain
- leadership training and demonstration of ability to lead an inpatient acute pain service including supervision of nurse led services
- ability to lead multi-disciplinary pain meetings
- attend service development meetings
- deliver pain training to other professionals
- quality improvement and research projects in Pain Medicine.
- **Courses/e-learning/personal reading:** Role of pain management programmes, basic concepts of welfare benefits, Equality Act 2010, Mental Capacity Act, legal aspects of reasonable adjustments in context of occupation, role of social services in supporting patients with disability, Misuse of Drugs Act 1971 and Misuse of Drugs Regulations 2001, the Controlled Drugs (Supervision of Management and Use) Regulations 2013, guidance for healthcare professionals on drug driving.

15.19.3.4 *Other evidence*

- satisfactory MSF
- option to take FPMRCA exam.

15.19.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.19.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning

- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Pain

15.20 Perioperative Medicine

15.20.1 Stage 3 SIA learning outcomes

- Provides clinical management of patients in the preoperative, intraoperative and both immediate and longer term postoperative periods independently
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.20.2 Key capabilities

A	Provides expert opinion in the clinical management of patients in the whole perioperative process
B	Leads in decision making about the suitability of high risk patients for surgery
C	Manages the perioperative services, ensuring that the care delivered is safe and timely, benefiting both patients and the organisation
D	Develops and evaluates local services and practice
E	Seeks to ensure that perioperative services are fully integrated, consistent, and reliable and sustainable
F	Develops, maintains and evaluates partnerships with colleagues in other disciplines, in particular primary care.

15.20.3 Examples of Evidence

15.20.3.1 Experience and Logbook

- pre-operative assessment clinics, cardio-pulmonary exercise clinics, acute pain rounds, surgical multi-disciplinary team (MDT) meetings.

15.20.3.2 Supervised Learning Events (SLEs) can be used to demonstrate:

- assessment of risk and management of high-risk patients
- involvement of MDT and patient in shared decision making about high risk surgery
- pre-operative assessment and management of, for example: anaemia, anticoagulant medication, diabetes, obstructive sleep apnoea, pacemakers, hypertension
- assessment of frailty
- use of risk scoring tools and models of functional capacity
- perioperative analgesia management including regional techniques
- assessment of post-operative pain
- assessment and management of post-operative delirium

15.20.3.3 Personal Activities and Personal Reflections may include:

- national and international meetings related to perioperative medicine
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies
- leadership of QI projects related to perioperative anaesthesia
- leadership training
- experience of inpatient rounds such as orthogeriatrics
- attendance at medical clinics such as cardiology and respiratory.
- courses and eLearning: shared decision making.

15.20.3.4 *Other evidence:*

- satisfactory MSF.

15.20.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.20.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Regional Anaesthesia
- Pain

15.21 Regional Anaesthesia

15.21.1 Stage 3 SIA learning outcomes

- Provides a wide variety of regional anaesthetic techniques independently
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.21.2 Key capabilities

A	Can independently practice safely a wide range of regional techniques for all upper limb and shoulder surgery under block alone, including the management of continuous nerve catheters for post-operative analgesia
B	Can independently practice safely a wide range of regional techniques for lower limb surgery, including the management of continuous nerve catheters for post-operative analgesia
C	Can independently practice safely a wide range of regional techniques for chest and abdominal wall surgery
D	Ability to independently organise, lead and evaluate the effectiveness and efficiency of an operating list planned under regional anaesthesia alone
E	Supervises and advises colleagues on the suitability and delivery of regional anaesthesia in complex cases
F	Can evaluate the place of regional anaesthesia, and any developments, within the patient perioperative pathway and advise on potential changes in practice

15.21.3 Examples of Evidence

15.21.3.1 Experience and Logbook

- preoperative clinic based assessment of suitability and preparation for surgery of patients utilising regional anaesthesia
- a wide range of cases and techniques for awake and asleep surgical procedures.

15.21.3.2 Supervised Learning Events (SLEs) can be used to demonstrate:

- understanding and implementing comprehensive consent for regional techniques
- meticulous attention to wrong site block prevention based on national guidance
- ability to manage awake, sedated and general anaesthetic patients with a regional anaesthetic component
- ability to use ultrasound and needle techniques safely for a variety of procedures including nerve catheters
- ability to provide safe and effective postoperative analgesia through a variety of regional techniques
- management of regional anaesthesia lists.

15.21.3.3 Personal Activities and Personal Reflections may include:

- national and international meetings related to regional anaesthesia
- presentation at relevant meeting eg abstract or free paper
- development of guidelines and policies
- leadership of QI projects related to regional anaesthesia
- leadership training.

15.21.3.4 *Other evidence:*

- satisfactory MSF.

15.21.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.21.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Perioperative Medicine and Health Promotion
- General Anaesthesia
- Regional Anaesthesia
- Pain

15.22 Transfer Medicine

15.22.1 Stage 3 SIA learning outcomes

- Provides safe and effective multi-disciplinary care to all patients requiring retrieval and/or transfer, however complex, independently
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.22.2 Key capabilities

A	Leads the clinical care of complex patients requiring transfer or retrieval by road or air
B	Works safely in the prehospital environment to resuscitate and stabilise patients
C	Communicates and works effectively with multiagency partners
D	Can triage casualties appropriately for evacuation by road or air
E	Can prepare, package and transfer patients appropriately by air safely
F	Is familiar with aircraft operating and safety procedures, crew communications systems, and emergency procedures
G	Describes relevant law and procedures in relation to international medical transfers and repatriations
H	Is able to co-ordinate transfer and retrieval services across an area or network including ability to liaise with road or air transport providers, transfer teams, and referring and receiving hospitals

15.22.3 Examples of Evidence

15.22.3.1 15.22.3.1 Experience and Logbook

- logbook demonstrating experience managing transfer of patients of all ages across a range of transport modalities.

15.22.3.2 15.22.3.2 Supervised Learning Events (SLEs) can be used to demonstrate:

- strategies for optimising a patient's physiology prior to transfer
- ability to coordinate and plan patient transfer demonstrating concurrent activity in managing clinical and non-clinical aspects of the transfer
- consideration for ethical challenges posed by inter-facility transfer
- understanding of the regulations related to land Ambulance, HEMS and Air Ambulance deployment
- ability to differentiate the risks and benefits of road, helicopter and fixed wing transport modalities
- knowledge of the physiological effects of transfer and how these can be effectively minimised
- ability to undertake safe transfer of all age groups of ventilated patients
- knowledge of the potential patient and operational complications with transfer, and how to prepare/mitigate these
- understanding of minimum standards of monitoring during transfer
- clear understanding of the law and principles related to safety; actions taken to ensure safety of both patient and crew
- acknowledgment of futility and avoidance of inappropriate inter-facility transfer.

15.22.3.3 15.22.3.3 *Personal Activities and Personal Reflections may include:*

- attendance at local or national courses related to transfer
- leadership of QI projects related to transfer
- involvement in teaching opportunities relating to transfer
- attendance at pre-hospital/transfer conferences, study days or lectures.

15.22.3.4 15.22.3.4 *Other evidence*

- satisfactory MSF
- Suggested (optional) further qualifications:
 - Diploma in Immediate Retrieval and Transfer from the Royal College of Surgeons of Edinburgh
 - Diploma in Immediate Medical Care from the Royal College of Surgeons of Edinburgh
 - Fellowship in Immediate Medical Care from the Royal College of Surgeons of Edinburgh.

15.22.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.22.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- General Anaesthesia
- Resuscitation and Transfer
- Pain

15.23 Trauma and Stabilisation

15.23.1 Stage 3 SIA learning outcomes

- Provides safe and effective multi-disciplinary care to multiply-injured patients as Trauma Team Leader
- Is capable of leading the delivery of care in this area of anaesthetic practice, to the benefit of both patients and the organisation

15.23.2 Key capabilities

A	Explains and acts within the multidisciplinary nature of trauma care from pre-hospital to rehabilitation
B	Can lead the trauma team from arrival in hospital to definitive investigation and management for all critically ill trauma patients
C	Can lead triaging of trauma patients
D	Explains the structure and setup of trauma services and trauma databases
E	Delivers a detailed explanation of and has the ability to contribute to major incident planning

15.23.3 Examples of Evidence

15.23.3.1 Experience and Logbook

- logbook demonstrating experience managing a wide range of trauma patients in both the pre-hospital and in-hospital settings
- logbook evidence for major interventions related to trauma (some of which can be achieved through simulation).

15.23.3.2 Supervised Learning Events (SLEs) can be used to demonstrate:

- understanding of trauma triage tools and appropriate triage of patients in the pre-hospital environment
- leadership qualities when managing multi-casualty scenarios
- clinical management of the trapped patient and interagency team working to support extrication
- ability to provide safe sedation and pre-hospital emergency anaesthesia to major trauma patients
- ability to recognise and treat the hypovolemic patient including initiation of massive transfusion protocols
- systematic approach to the management of polytrauma patients ensuring effective prioritisation, communication and shared decision making occurs
- safe and effective pharmacological and non-pharmacological management of pain in trauma patients of all age groups
- understanding of the key principles relating to emergency preparedness and initial decontamination and management relating to chemical, biological and radiological (CBR) emergencies. This may be achieved through the use of table top or major incident exercises.
- ability to provide safe clinical assessment, stabilisation and resuscitation of paediatric, obstetric and elderly major trauma patients.

15.23.3.3 Personal Activities and Personal Reflections may include:

- national and international courses or conferences related to trauma
- leadership of QI projects related to trauma

- attendance at pre-hospital governance days / major trauma meetings
- attendance at pre-hospital conferences, study days or lectures
- presentations at relevant meetings eg abstract or free paper
- involvement in teaching opportunities relating to trauma
- attendance at local Emergency Preparedness / Major Incident exercises
- development of guidelines and policies
- leadership training.

15.23.3.4 *Other evidence:*

- satisfactory MSF
 - ▶ suggested (optional) further qualifications:
 - Diploma in Immediate Medical Care from the Royal College of Surgeons of Edinburgh
 - Fellowship in Immediate Medical Care from the Royal College of Surgeons of Edinburgh.

15.23.4 Suggested supervision level

- 4 - should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

15.23.5 Cross links with stage 3 domains and capabilities

- All generic professional domains of learning
- Resuscitation and Transfer
- Pain
- Intensive Care

15.24 Non clinical SIA: Safety and Quality Improvement

15.24.1 Stage 3 SIA learning outcomes

- Supervises and mentors others with quality improvement projects at different stages of training and able to lead a team to introduce a quality improvement project
- Can contribute to multidisciplinary training in Quality Improvement principles & methodology

15.24.2 Key capabilities

A	Supervises quality improvement projects at different stages of development and testing
B	Demonstrates knowledge in the use of different types of control charts to present data for improvement appropriately
C	Uses control charts to interpret the impact of changes and differentiate between unexpected and unwarranted variation
D	Effectively able to plan and deliver multidisciplinary quality improvement training sessions on a comprehensive range of QI principles (including different methodologies and measurement)
E	Evaluates the impact of quality improvement training and develops a strategy for further learning
F	Demonstrates the ability to communicate the different outcomes of a quality improvement project to a multidisciplinary audience to effect change

15.24.3 Examples of Evidence

15.24.3.1 Experience and Logbook

- Supervises and mentors others with QI projects
- Leads a QI project team with a focus on patient safety
- Experience in delivery of QI training sessions on a range of topics to different audiences
- If clinical work is done during this time then cases should be documented in the log book

15.24.3.2 Supervised Learning Events (SLEs) should be completed as part of any clinical work undertaken and linked to relevant Key Capabilities in Stage 3 and can be used to demonstrate:

- A-QIPAT can be used to illustrate own project progression; may also be used to provide feedback on QI projects undertaken by others at different stages of development

15.24.3.3 Personal Activities and Personal Reflections may include:

- Experience in application of QI as it relates to patient safety in healthcare
- Experience with the collection, organisation and analysis of data for improvement
- Experience in mapping and design of safety critical processes against clinical goals
- Selection and development of appropriate charts to present data
- Presentation of project findings in the form of posters, abstracts and presentations
- The skills necessary to communicate the findings to a wider audience
- Engagement with the improvement community through attendance of relevant scientific meetings and conferences
- Experience of supervising others undertaking QI projects and able to provide appropriate feedback and guidance
- Development of QI educational resources to support learning

15.24.3.4 *Other evidence:*

- satisfactory MSF

15.24.4 Suggested supervision level

- N/A

15.24.5 Cross links with stage 3 domains and capabilities

- Stage 3 GPC domains
- Stage 3 Clinical Key Capabilities where appropriate

15.25 Non clinical SIA: Research and Managing Data

15.25.1 Stage 3 SIA learning outcomes

- *Demonstrates the experience and skill required to coordinate and lead a research project*

15.25.2 Key capabilities

A	Demonstrates understanding of the steps necessary to conduct research, including funding, patient and public involvement, ethics approval, delivery of a project, data analysis, publication
B	Demonstrates understanding of the processes involved in delivering research and governance required to ensure its proper conduct
C	Develops detailed knowledge and experience within a chosen field of research along with a broad understanding of how this integrates with other areas of research to continuously improve patient outcomes
D	Develops the critical thinking skills required to enable robust evaluation of published data and the formulation of new research questions
E	Develops the skills necessary to support others to succeed in research
F	Demonstrates understanding of research governance
G	Communicates the findings of research to colleagues, patients and the public

15.25.3 Examples of Evidence

15.25.3.1 *Experience and Logbook*

- Supervised research project that may be stand alone or form part of a larger project such as that for a higher degree (PhD, MD)
- If clinical work is done during the research time then cases should be documented in the log book

15.25.3.2 *Supervised Learning Events (SLEs) should be completed as part of any clinical work undertaken and linked to relevant Key Capabilities in Stage 3*

15.25.3.3 *Personal Activities and Personal Reflections may include:*

- Understanding and experience of applying for research funding
- Understanding and experience of applying for ethical approval for research
- Involvement in the day to day running of a research project
- For clinical trials, a thorough understanding of the governance structures required (e.g. trial steering groups and data monitoring committees)
- For clinical research, experience of recruiting patients into studies
- Experience with the collection, organisation and analysis of data
- Development of relevant statistical knowledge
- The ability to write up results in the form of posters, abstracts, manuscripts and presentations
- The skills necessary to communicate the findings of research to patients and the public
- Engagement with the research community through attendance of relevant scientific meetings and conferences
- Experience of supervising others wishing to participate in research

15.25.3.4 *Other evidence:*

satisfactory MSF

15.25.4 Suggested supervision level

- N/A

15.25.5 Cross links with stage 3 domains and capabilities

- Stage 3 GPC domains
- Stage 3 Clinical Key Capabilities where appropriate

15.26 Non clinical SIA: Management and Professional and Regulatory Requirements

15.26.1 Stage 3 SIA learning outcomes

- Understands and undertakes managerial & organisational roles at Trust/Health Board, Regional and National levels
- Demonstrates leadership in the planning and development of a project involving change or transformation

15.26.2 Key capabilities

A	Demonstrates understanding of the role and practice of different professionals in the organisation and delivery of the health service and promotes inter-professional understanding and working
B	Demonstrates project management skills including agenda setting, stakeholder engagement and monitoring progress across a system
C	Contributes to management meetings and is able to prepare & deliver presentations to key stakeholders
D	Undertakes review of relevant quantitative and qualitative data, in order to prepare option appraisal documents and papers for presentation and discussion
E	Supervises other members of the team in the delivery of project work
F	Understands the role of different organisations in health policy and management

15.26.3 Examples of Evidence

15.26.3.1 Experience and Logbook

- Experience beyond the Learning Outcomes of Stage 3
- Experience of managing service changes and/or transformation projects
- If clinical work is done during this time, then cases should be documented in the logbook

15.26.3.2 Supervised Learning Events (SLEs) should be completed as part of any clinical work undertaken and linked to relevant Key Capabilities in Stage 3

- Utilise SLEs where appropriate to gain feedback on activities as part of management portfolio

15.26.3.3 Personal Activities and Personal Reflections may include:

- Portfolio of presentations of work undertaken with stakeholders
- Experience of managing project performance including governance frameworks and Quality Assurance processes
- Experience of different frameworks to assess performance and reporting mechanisms within organisations
- Engagement with different roles within Trust/Health Board, national and regional structures through attendance at meetings
- Experience of exploring the different ways patients/carers and the wider public are involved in informing service development and planning or policy
- Attendance at leadership and management training sessions including up-to-date approaches and different methodologies as part of change management
- Experience of chairing and leading meetings where appropriate

- Attendance and reflection on local, regional, national, and international (where appropriate) meetings related to management in healthcare
- Written report of project including executive summary and recommendations
- Presentation of project work and summary of findings and recommendations
- Development of implementation plan
- Presentation of project findings in the form of posters, abstracts, and presentations at an appropriate meeting

15.26.3.4 *Other evidence:*

satisfactory MSF

15.26.4 Suggested supervision level

- N/A

15.26.5 Cross links with stage 3 domains and capabilities

- Stage 3 GPC domains
- Stage 3 Clinical Key Capabilities where appropriate

15.27 Non clinical SIA: Education and Training

15.27.1 Stage 3 SIA learning outcomes

- Leads and manages educational programmes of learning
- Can establish and maintain an environment for learning to guide professional development of others

15.27.2 Key capabilities

A	Leads and develops a defined programme of learning, including content development, assessment and organisational considerations
B	Applies knowledge of appropriate educational approaches and adult learning theories in supporting learning in the workplace
C	Demonstrates leadership in the planning and delivery of a range of educational and training situations, such as formal presentations, interactive workshops, virtual classrooms and clinical training
D	Effectively able to lead and deliver multi-professional training sessions on a range of topics
E	Evaluates the impact of educational programmes and develops a strategy for further learning
F	Demonstrates knowledge of the wider application of learning including pastoral and developmental aspects of the role of the trainer, in guiding future programmes of learning

15.27.3 Examples of Evidence

15.27.3.1 *Experience and Logbook*

- If clinical work is done during this time, then cases should be documented in the logbook

15.27.3.2 *Supervised Learning Events (SLEs) should be completed as part of any clinical work undertaken and linked to relevant Key Capabilities in Stage 3*

- Evidence of SLEs completed as *the trainer*, notably the feedback comments
- Evidence of the use of different feedback methods and tools, adapted to different learning environments and clinical training
- Evidence of engagement in mentoring and pastoral development as a trainer in the workplace, throughout the programme of learning

15.27.3.3 *Personal Activities and Personal Reflections may include:*

- Reflective portfolio of education and training opportunities
- Leadership in the planning of educational meeting or regional training programme, including appropriate evaluation
- Evidence of the expert application of different teaching materials in a variety of settings in the workplace
- Experience of undertaking a Learning Needs Assessment for an individual or group
- Experience of recognising and appropriately supporting individuals who may not be making adequate progress in the workplace
- Experience of the use of different feedback mechanisms
- Use of Simulations Based Educational approaches and the role of psychological safety and debriefing strategies
- Contribution to educational policy at local or national levels

- Presentation of work at educational meeting or conferences, including poster presentation, workshops or oral presentation
- Additional educational qualifications (such as GIC, PG cert, Fellow of HEA or diploma) – it is important to note that the SIA must include practical application of the learning
- Evidence of involvement in educational research
- Critical analysis of Educational literature and application of up-to-date educational knowledge

15.27.3.4 *Other evidence:*

satisfactory MSF

15.27.4 Suggested supervision level

- N/A

15.27.5 Cross links with stage 3 domains and capabilities

- Stage 3 GPC domains
- Stage 3 Clinical Key Capabilities where appropriate

16 Annex F - Practical Procedures grid

Practical procedures with supervision/entrustment level

		Stage 1	Stage 2	Stage 3
Airway management	Insertion of supraglottic airway	3	3	4
	Intubation using standard laryngoscope	3	3	4
	Intubation using video laryngoscope	2a	3	4
	Fibreoptic intubation	1	2a	3
	Intubation in the awake patient	1	2a	3
	Emergency front of neck access (simulation)	2a	3	4
	Insertion of double lumen tube	1	2a	3
CVS	Central venous line insertion	2b	3	4
	Venous access line for renal replacement therapy	2b	3	4
	Arterial line	2b	3	4
	Ultrasound guided peripheral venous cannulation	2b	3	4
Respiratory	Needle thoracocentesis	2b	3	4
	Chest drain insertion	2a	3	4
Regional Techniques	Lumbar epidural	3	3	4
	Low thoracic epidural	1	2b	3
	Spinal anaesthesia	3	3	4
	Combined spinal/epidural	2b	3	4
	Simple peripheral nerve block	2b	3	4
	Ultrasound guided chest wall plane block	2a	3	4
	Ultrasound guided abdominal wall plane block	2a	3	4
	Ultrasound guided lower limb block including femoral nerve block and fascia iliaca block	2a	3	4
	Ultrasound guided upper limb block including brachial plexus block	2a	3	4


Supervision/entrustment levels:


- 1) direct supervisor involvement, physically present in theatre throughout
- 2a) supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals
- 2b) supervisor within hospital for queries, able to provide prompt direction/assistance
- 3) supervisor on call from home for queries able to provide directions via phone or non-immediate attendance
- 4) should be able to manage independently with no supervisor involvement (although should inform consultant supervisor as appropriate to local protocols).

Royal College of Anaesthetists

Churchill House, 35 Red Lion Square, London WC1R 4SG

020 7092 1500 | training@rcoa.ac.uk | rcoa.ac.uk/training-careers

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