The Faculty of Intensive Care Medicine

ICM CURRICULUM: SUPPORTING EXCELLENCE for a CCT in Intensive Care Medicine

VERSION 1.2
August 2021

Change log

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

This is Version 1.2.

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
1.0	August 2021	Original publication – the date of August 2021 is kept on the publication at GMC request for all subsequent versions, to make clear the date of curriculum implementation.
1.1	October 2021	Updated references to dual CCTs programmes to include the approved triple CCTs of ICM with Internal Medicine and one of Acute Internal Medicine, Respiratory Medicine or Renal Medicine.
1.2	December 2021	Included section 5.7 on Acting up as a Consultant

Contents

1. Introduction to the Intensive Care Medicine 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 Intensive Care Medicine (ICM).

2. Purpose

2.1. Purpose of the ICM Curriculum

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

Intensive Care Medicine [ICM], is the body of specialist knowledge and practice concerned with the treatment of patients with, at risk of, or recovering from potentially life-threatening failure of one or more of the body's organ systems. It includes the provision of organ system support, the investigation, diagnosis, and treatment of acute illness, systems management and patient safety, ethics, end-of-life care, and the support of families.

Intensive Care Medicine specialists are therefore medical experts in:

- Resuscitation
- Advanced physiological monitoring
- Provision of advanced organ support (often multiple)
- Diagnosis and disease management in the context of the most gravely ill patients in the hospital
- Provision of symptom control
- Management and support of the family of the critically ill patient
- End of life care
- Collaboratively leading the intensive care team
- Coordination of specialist and multi-specialty input to complicated clinical cases in the unique context of intensive care.

The management of intensive care patients by doctors who are specialists in Intensive Care Medicine and whose primary function is the work of Intensive Care Medicine has been demonstrated to have a significant beneficial influence on outcomes for patients, with a decrease in mortality and a reduction of complications.[1]

A doctor completing the training programme in ICM will be able to fulfil the above requirements and their progress will be assessed at key progression points during their training.

The development of the syllabus for the CCT in ICM has drawn extensively on the Competency Based Training in Intensive Care Medicine in Europe (CoBaTrICE) syllabus. The latter is an international partnership of professional organisations and critical care clinicians working together to harmonise training in Intensive Care Medicine worldwide. The CoBaTrICE Collaboration was formed in 2003 to define outcomes of specialist ICM training and to develop an international training programme in ICM for Europe and other world regions. The project was part-funded by the European Commission and the European Society of Intensive Care Medicine. Consensus techniques were used to enable interested stakeholders (health care professionals, educators, patients and their relatives) to identify and prioritise core competencies required of a specialist in ICM.

[1] *Evaluation of modernisation of adult critical care services in England: time series and cost effectiveness analysis.* Hutchings A, Durand MA, Grieve R, Harrison D, Rowan K, Green J, Cairns J, Black N. BMJ. 2009 Nov 11;339:b4353. doi: 10.1136/bmj.b4353.

Individuals and groups from 29 countries contributed to the process whereby 102 competence statements divided into 12 domains were agreed as the desired final syllabus for doctors in training in ICM.

The training programme is based on the concept that ensures that the basic principles learnt and understood are repeated, expanded and further elucidated as time in training progresses; this also applies to the acquisition of skills, attitudes and behaviours. The outcome is such that mastery of the specialty to the level required to commence independent practice in a specific post is achieved by the end of training as knowledge, skills, attitudes and behaviours metaphorically spiral upwards.

The Intensive Care Curriculum has 14 High Level Learning Outcomes (HiLLOs) of which 4 are generic and 10 are specialty specific (as outlined at a high level in the table below) with their associated Generic Professional Capabilities (GPC) domains.

	Intensive Care Medicine Curriculum High-Level Learning Outcomes	GPC Domains
1	The doctor will be able to function successfully within NHS organisational and management systems whilst adhering to the appropriate legal and ethical framework.	**1,2,3,6,7**
2	The doctor will be focused on patient safety and will deliver effective quality improvement, whilst practising within established legal and ethical frameworks.	**1,2,4,6,7,9**
3	An Intensive Care Medicine specialist will know how to undertake medical research including the ethical considerations, methodology and how to manage and interpret data appropriately.	**1,9**
4	To ensure development of the future medical workforce, a doctor working as a specialist in Intensive Care Medicine will be an effective clinical teacher and will be able to provide educational and clinical supervision.	**1,8**
5	Doctors specialising in Intensive Care Medicine can identify, resuscitate and stabilise a critically ill patient, as well as undertake their safe intra-hospital or inter-hospital transfer to an appropriately staffed and equipped facility.	**2,5,6**
6	Intensive Care Medicine specialists will have the knowledge and skills to initiate, request and interpret appropriate investigations and advanced monitoring techniques, to aid the diagnosis and management of patients with organ systems failure. They will be able to provide and manage the subsequent advanced organ system support therapies. This will include both pharmacological and mechanical interventions.	**2,3**
7	Specialists in Intensive Care Medicine can provide pre-operative resuscitation and optimisation of patients, deliver post-operative clinical care including optimising their physiological status, provide advanced organ system support and manage their pain relief.	**1,2,5**
8	Doctors specialising in Intensive Care Medicine will understand and manage the physical and psychosocial consequences of critical illness for patients and their families, including providing pain relief, treating delirium and arranging ongoing care and rehabilitation. They will also manage the withholding or withdrawal of life-sustaining treatment, discussing end of life care with patients and their families and facilitating organ donation where appropriate.	**2,3,5**
9	Intensive Care Medicine specialists will have the skillset and competence to lead and manage a critical care service, including the multidisciplinary clinical team and providing contemporaneous care to a number of critically ill patients.	**2,3,5,7**
10	Intensive Care Medicine specialists will have developed the necessary skills of induction of anaesthesia, airway control, care of the unconscious patient and understanding of surgery and its physiological impact on the patient.	**2,5**
11	In order to manage acutely ill patients outside the Intensive Care Unit, an Intensive Care Medicine specialist will have the diagnostic, investigational and patient management skills required to care for ward-based patients whose condition commonly requires admission to the intensive care unit.	**1,2,5**
12	Doctors specialising in Intensive Care Medicine understand the special needs of, and are competent to manage patients with neurological diseases, both medical and those requiring surgery, which will include the management of raised intracranial pressure, central nervous system infections and neuromuscular disorders.	**2,5**
13	A specialist in adult Intensive Care Medicine is competent to recognise, provide initial stabilisation and manage common paediatric emergencies until expert advice or specialist assistance is available. They are familiar with legislation regarding safeguarding children in the context of Intensive Care Medicine practice.	**2,5,7**
14	Intensive Care Medicine specialists recognise the special needs of, and are competent to provide the perioperative care to, patients who have undergone cardiothoracic surgery including providing pain relief and advanced organ system support utilising specialised techniques available to support the cardiovascular system.	**2,5**

Intensive Care Medicine training is divided into 3 distinct stages with associated progression points where specific criteria must be met to proceed to the next stage of training. It is recognised that these progression points are based on a trainee's ability and that this will tend to vary from trainee to trainee. Therefore, where a period of time in a specific module or stage of training is suggested below, these times are to be interpreted as typical times that the Faculty would expect a trainee to spend in a particular module or stage of training in order to achieve the necessary criteria for progression. The final arbiter on whether a trainee has successfully achieved the requirements to progress beyond a progression point will be the Annual Review of Competence Progression (ARCP) panel with the Faculty providing oversight and advice as required.

Stage 1 ICM (CT1-ST4) training consists of an initial indicative four-year block of training. Years 1 and 2 will be spent in Stage 1 Anaesthetics, Internal Medicine or Acute Care Common Stem (ACCS) training programmes. Competitive entry to ST3 will occur following acquisition of the capabilities required of the relevant core training programme and its associated examination, namely, Primary FRCA, MRCP(UK) or MRCEM obtained prior to August 2018 or FRCEM Primary (or MRCEM Part A after August 2012) AND FRCEM Intermediate SAQ (or MRCEM Part B after August 2012) AND FRCEM Intermediate SJP. The ST3 and ST4 years are intended to consolidate the trainee's knowledge and skills in general diagnosis and patient management and enable trainees who enter from a variety of core programmes to achieve the designated capability levels in ICM by the end of ST4.

Successful completion of Stage 1 (and therefore progression) involves an indicative training time of 12 months each in Anaesthetics, Internal Medicine and ICM across the recommended four years of the training Stage as well as the corresponding core training programme examination. All training times are indicative and can be altered at the discretion of the Annual Review of Competence Progression Panel in line with the General Medical Council's standards for postgraduate curricula.

Stage 2 ICM (ST5-6) covers an indicative 12 months ICM training in 3 specialist areas of practice, namely, paediatric ICM, neurosurgical and neurological ICM and cardiothoracic ICM. It also allows trainees an indicative 12 months to develop a special skill or area of expertise that will benefit patients and the service in general and to consolidate their general ICM training.

In many hospitals, patients presenting acutely, with for example, head trauma or paediatric sepsis will need the skills and expertise of Intensive Care Medicine doctors to institute resuscitation and stabilisation prior to transfer or retrieval. Therefore, during the programme, time must be spent in developing skills and competencies associated with the specialist areas of cardiothoracic, neurosciences and paediatric ICM practice. The Faculty would expect this to typically involve a 3-month placement in each of these areas with the opportunity to either consolidate one or all of the trainee's specialist ICM skills or their general intensive care medicine experience contributing to an indicative 12 months of training.

In the other indicative 12 months of Stage 2, trainees in ICM must develop an area of special expertise which will be of direct benefit to the service and patient care, acquired during a Special Skills year. Intensive Care Medicine has a history of practitioners from many different backgrounds bringing skills and competencies into the Intensive Care Unit. Expertise can be gained in one of 11 prior approved specialist areas including research in ICM, quality improvement and education as well as specific skills such as echocardiography and catering for the special needs of patients who require extra-corporeal membrane oxygenation (ECMO).

Progression from Stage 2 will require the trainee to have completed the above training, gained the required competencies and successfully completed the Fellowship of the Faculty of Intensive Care Medicine (FFICM) examination.

Stage 3 ICM consists of the final stage of ICM training (ST7) and comprises a recommended 12 month period, which must be spent in Intensive Care Units consolidating the trainee's competencies and acquiring high-level management and administrative skills, progressively achieving autonomy so that they are competent to take up a consultant post in ICM.

Upon completion of Stage 3, the trainee will be recommended for their CCT in Intensive Care Medicine having successfully achieved all the curriculum outcomes to the standard expected of a specialist in Intensive Care Medicine capable of independent practice.

The curriculum will equip doctors to undertake independent practice in all aspects of Intensive Care Medicine likely to be encountered in non-specialist practice, as well as the ability to recognise and stabilise patients who present in a general setting but require specialist ICM care in a specialist centre. It will also provide them with sound basis for developing specialist practice in areas such as paediatric, neurological/neurosurgical and cardiothoracic ICM, where there is the workforce need.

The curriculum will provide the foundation on which specialist ICM practice can be further developed but will not equip doctors to undertake such specialist practice unless they have undertaken a special skills module in that area of practice. In addition to the special skills module, these extra competencies and experience are gained either as part of an out of programme period of additional training whilst undertaking the CCT programme or as post CCT training undertaken after entry onto the specialist register.

Intensive Care Medicine (ICM) specialists underpin the clinical care delivered in all areas of an acute hospital including theatres, maternity units, acute medical and surgical wards, imaging and the emergency departments. From a clinical governance perspective, a suitable on-site intensive care facility is mandatory if a hospital is to provide the above services. Intensive Care Medicine delivers a 24 hours a day, seven days a week, consultant-led and delivered service providing equity of access to intensive care and consultant ward rounds.

The ICM specialist is responsible for leading a multi-disciplinary team and co-ordinating other teams of clinicians both medical and non-medical and the curriculum provides for the acquisition of these skills.

During its development the curriculum has undergone extensive consultation with stakeholders including:

- ICM trainees, trainers, Faculty Tutors, Regional Advisors, Training Programme Directors and Heads of Schools.
- Partner specialties, namely the Royal College of Anaesthetists, Royal Colleges of Physicians and Royal College of Emergency Medicine
- Lay and patient groups
- The Clinical Director networks of our own and partner specialties
- NHS Employers and their equivalent in the devolved nations
- COPMeD through the lead Postgraduate Dean

- Representative groups within FICM, including our Smaller & Specialist Units Advisory Group (with responsibility for remote, rural and specialist units) and the Women in Intensive Care Medicine Committee
- Specialist organisations covering neurological/neurosurgical, cardiothoracic and paediatric ICM.

As the NHS moves to more integrated models of care, the boundaries between medical disciplines by necessity become blurred and ICM is ideally placed to facilitate these changes since we accept entry into our training programme from a wide range of acute care specialty programmes, namely Internal Medicine Training, ACCS (Emergency Medicine), ACCS (Acute Internal Medicine), ACCS (Anaesthesia) and Core Anaesthesia Training. In addition, a doctor can specialise in another specialty in conjunction with ICM meaning that doctors can dual or triple qualify in ICM with one of our partner specialties: Acute Internal Medicine and Internal Medicine, Emergency Medicine, Renal Medicine and Internal Medicine, Respiratory Medicine and Internal Medicine, and Anaesthesia, allowing them to practice in two or three specialties within a single provider thus increasing flexibility for employers and patients alike.

The curriculum also requires that all doctors undertake a recommended 12-month period of training in our partner specialties of Internal Medicine and Anaesthesia at core level, to acquire the necessary broad-based experience and competencies to practice as an ICM specialist. This also allows the ICM specialist to better understand the wider needs of other parts of the hospital, improving patient experience and flow.

Intensive Care Medicine fulfils the requirement to provide flexibility in training pathways for doctors in training. It formally recognises capabilities already acquired from Anaesthesia, Emergency Medicine and Internal Medicine Training programmes by virtue of its Stage 1 training requirements. It also formally recognises capabilities obtained in those specialties with which it shares dual training programmes. Capabilities will therefore also be recognised for ICM training if acquired during training in Internal Medicine, Acute Internal Medicine, Respiratory Medicine, Renal Medicine, Anaesthesia and Emergency Medicine irrespective of whether they were gained as part of a dual or triple training programme with ICM or in one of those partner specialty's CCT programmes. Capabilities acquired within ICM training will be similarly recognised and transferrable to these specialties. It will also be possible to transfer some capabilities from and to all acute specialties due to the broad scope of ICM training but the specific capabilities will be significantly less than those listed above.

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

2.2. Rationale for the ICM curriculum

The Shape of Training Review[2] and the GMC's *Excellence by design: standards for postgraduate curricula*[3] 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 GPC framework[4]. The HiLLOs in this curriculum constitute 4 generic and 10 specialty-specific learning outcomes to be achieved by all ICM trainees as they progress through each stage of training, and ultimately attain a CCT.

[2] https://www.shapeoftraining.co.uk/static/documents/content/Shape_of_training_FINAL_Report.pdf_53977887.pdf
[3] https://www.gmc-uk.org/education/standards-guidance-and-curricula/standards-and-outcomes/excellence-by-design
[4] https://www.gmc-uk.org/education/standards-guidance-and-curricula/standards-and-outcomes/generic-professional-capabilities-framework

The curriculum for Intensive Care Medicine incorporates and emphasises the importance of the GPCs, which provide the educational articulation of Good Medical Practice[5]. 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 governments[6], ensuring a sustainable model for ICM training agile 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 HiLLOs can be achieved and demonstrated in Section 6: Programme of Assessment and Annex A.

2.3. Development of the ICM curriculum

Responsibility for the ICM curriculum rests with the FICM's Training, Assessment and Quality (TAQ) Committee. The committee established the Curriculum Working Group (CWG) with delegated responsibility for setting the direction of the curriculum revisions and overseeing and approving the review work, working in tandem with the TAQ Committee. The committee's membership represents a wide range of stakeholders including representatives from the FICM Board, the Lead Dean for ICM, the Lead Regional Advisor for ICM, Faculty Tutors, Intercollegiate Board for Training in Pre-Hospital Emergency Medicine (IBTPHEM), Acute Care Common Stem (ACCS), Training Programme Directors, and ICM trainees.

The curriculum for Intensive Care Medicine has been developed with the support and input of ICM trainees, 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 TAQ Committee 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 a different version number, including a summary of the changes and will be available on the Faculty website.

Occasionally the FICM's TAQ Committee may have to take decisions that will affect the immediate interpretation or application of specific items in this curriculum document or its supporting guidance manuals. These will be published as a 'Training Programme Update' circular to all ICM Regional Advisors, Faculty Tutors, Training Programme Directors (TPDs) and Heads of Schools, as well as being cascaded to ICM trainees and published on the Faculty website.

[5] https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/good-medical-practice
[6] https://www.gmc-uk.org/-/media/documents/adapting-for-the-future-a-plan-to-improve-postgrad-med-training-flexibility_pdf-69842348.pdf

3. The ICM training pathway and entry requirements

3.1. The training pathway

We accept entry into our programme following the completion of at least the first two years of a number of acute care specialty programmes and successful completion of the respective primary exam (or equivalent) for that specialty by the time of appointment, namely:

- Internal Medicine Training (IMT)
- Acute Care Common Stem (ACCS) (Emergency Medicine, Anaesthesia and Acute Internal Medicine)
- Core Anaesthesia Training (CAT)

No single, dedicated ICM core training scheme has been developed. This is a deliberate choice of the FICM based on our philosophy, backed by evidence, that the delivery of ICM in the UK has been greatly strengthened by the entry into ICM training of trainees with diverse medical backgrounds.

ACCS is a core training programme providing wide experience in management of patients presenting with acute illness. It comprises an initial two years consisting of four 6 month posts in Acute Internal Medicine, Anaesthesia, Emergency Medicine and Intensive Care Medicine.

CAT is currently a two-year core training programme for those planning a career in Anaesthesia but we understand it will be moving to a 3 year core training programme when their new curriculum is introduced. However, we refer you to the first paragraph in this section. It consists of rotations to allow trainees to gain experience in core anaesthesia, the assessment of patients including the acutely ill, resuscitation skills and some exposure to ICM.

IMT replaced Core Medical Training as the core training programme for those planning a career in Medicine or one of its specialties in 2019. It consists of a nominal two years of rotations between both acute general medicine and some exposure to specialties, which include ICM. A significant proportion of time is spent caring for acutely ill patients reviewed as part of the acute medical take or in the Emergency Department.

Trainees who complete ST1-3 of the Emergency Medicine run-through programme are also eligible to enter ICM training. This is on the basis that the competencies acquired in EM ST1-3 are the same as those acquired by Emergency Medicine trainees who have completed the ACCS (Emergency Medicine) core programme.

The use of multiple core schemes in this ICM CCT allows that link to be maintained and strengthened by facilitating the acquisition of dual or triple CCTs in ICM and a partner specialty. Trainees wishing to train in ICM can enter higher specialist ICM training by any of the above core schemes.

Entry for higher specialist ICM training will generally occur at ST3 level by a competitive process.

The training programme acknowledges the fact that on entry to higher ICM training not all trainees will have had an identical training experience. The first two years of higher ICM training (ST3-4) are designed to enable all trainees to achieve the same learning outcomes and level of competency by the end of ST4. Stage 1 ICM Training needs four indicative years to be completed, including 1 each of Internal Medicine, Anaesthesia and ICM. The other years completed in core training programmes will count towards partner specialty progression

ICM training is outcome-based rather than time-based however, the indicative length of training is seven years from appointment to completion (this includes the training acquired in one of the approved core programmes). There will be options for those trainees who demonstrate exceptionally rapid development and acquisition of capabilities to complete training earlier 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 ICM trainees 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*[7]). Those who choose less than full-time training (LTFT) will have their indicative training time extended pro-rata in accordance with the Gold Guide. ICM LTFT trainees 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. For more information on LTFT training in ICM please consult the ICM Curriculum Handbook.

The ICM curriculum, and thus training programme, is divided into three Stages:

Stage 1 ICM (indicative 4 years - CT1-ST4): Years 1 and 2 will be spent in the Core Anaesthetic, Internal Medicine or ACCS training programmes. Competitive entry to ST3 will occur following acquisition of the competencies required of the relevant core training programme and its associated examination, namely, Primary FRCA, MRCP(UK) or MRCEM obtained prior to August 2018 or FRCEM Primary (or MRCEM Part A after August 2012) AND FRCEM Intermediate SAQ (or MRCEM Part B after August 2012) AND FRCEM Intermediate SJP. The ST3 and ST4 years are intended to consolidate the trainee's knowledge and skills in general diagnosis and patient management and enable trainees who enter from a variety of core programmes to achieve the designated competency levels in ICM by the end of ST4.

Successful completion of Stage 1 (and therefore progression) involves an indicative training time of 12 months each in Anaesthesia, Internal Medicine and ICM across the recommended four years of the training Stage as well as the corresponding core training programme examination. All training times are indicative and can be altered at the discretion of the Annual Review of Competence Progression Panel in line with the General Medical Council's standards for postgraduate curricula.

Stage 2 ICM (ST5-6) covers an indicative 12 months ICM training in 3 specialist areas of practice, namely, paediatric ICM, neurosurgical and neurological ICM and cardiothoracic ICM. It also allows trainees an indicative 12 months to develop a special skill or area of expertise that will benefit patients and the service in general and to consolidate their general ICM training.

In many hospitals, patients presenting acutely, with for example, head trauma or paediatric sepsis will need the skills and expertise of Intensive Care Medicine doctors to institute resuscitation and stabilisation prior to transfer or retrieval. Therefore, during the programme, time must be spent in developing skills and competencies associated with the specialist areas of cardiothoracic, neurosciences and paediatric ICM practice. The Faculty would expect this to typically involve a 3- month placement in each of these areas with the opportunity to either consolidate one or all of the trainee's specialist ICM skills or their general intensive care medicine experience contributing to an indicative 12 months of training.

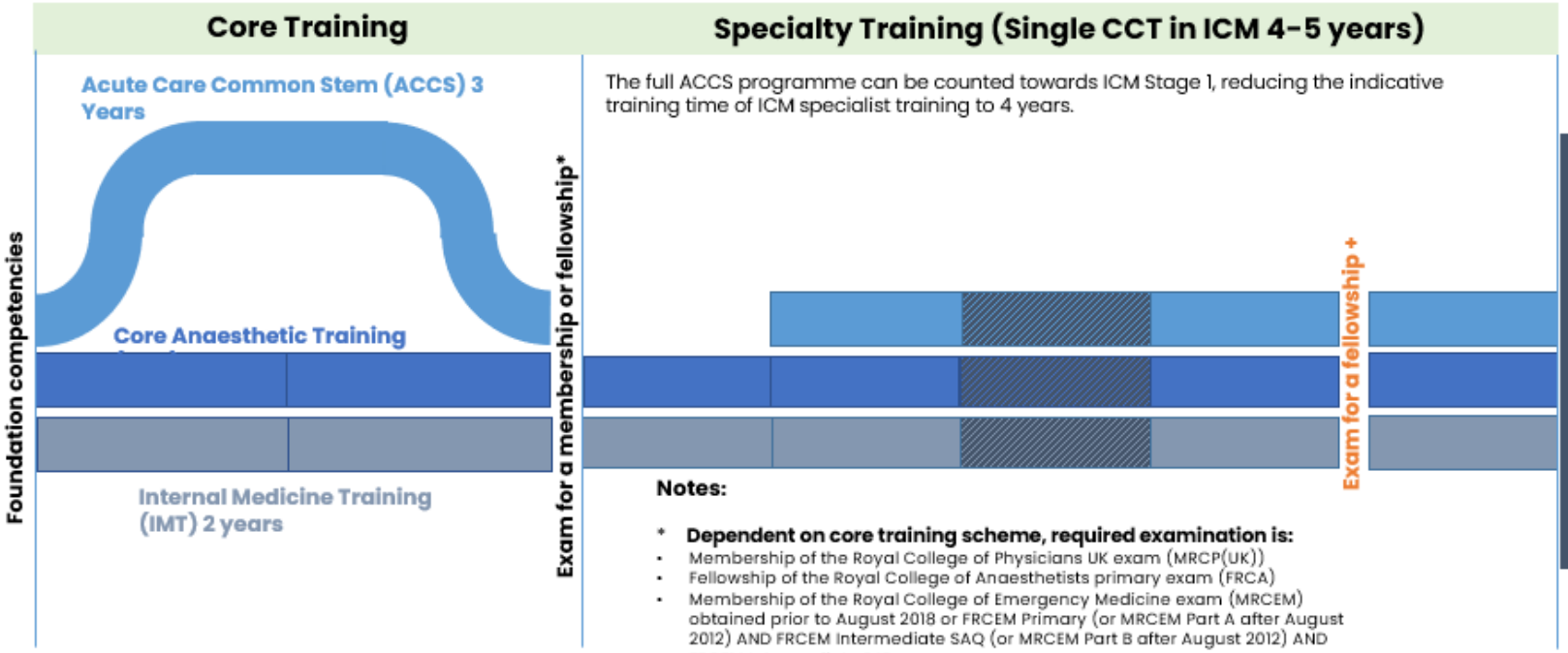
In the other indicative 12 months of Stage 2, trainees in ICM must develop an area of special expertise which will be of direct benefit to the service and patient care, acquired during a Special Skills year. Intensive Care Medicine has a history of practitioners from many different backgrounds bringing skills and competencies into

[7] https://www.copmed.org.uk/gold-guide-8th-edition/

the Intensive Care Unit. Expertise can be gained in one of 11 prior approved specialist areas including research in ICM, quality improvement and education as well as specific skills such as echocardiography and catering for the special needs of patients who require extra-corporeal membrane oxygenation (ECMO).

Progression from Stage 2 will require the trainee to have completed the above training, gained the required competencies and successfully completed the Fellowship of the Faculty of Intensive Care Medicine (FFICM) examination.

Stage 3 ICM (indicative 12 months – ST7) consists of the final stage of ICM training (ST7) and comprises a recommended 12 month period, which must be spent in Intensive Care Units consolidating the trainee's competencies and acquiring high-level management and administrative skills, progressively achieving autonomy so that they are competent to take up a consultant post in ICM. Upon completion of Stage 3 the trainee will be recommended for their CCT in Intensive Care Medicine having successfully achieved all the curriculum outcomes to the standard expected of a specialist in Intensive Care Medicine capable of independent practice.



Dual/Triple Training

ICM has competency-mapped programmes with specific partner specialties that deliver dual or triple specialty trained doctors with a shortened amount of additional training time required across the 3 stages. This is made possible by pre-planning these programmes at appointment to ensure rotations that allow experience from each programme to be gained simultaneously.

Dual CCTs: Anaesthesia, Emergency Medicine. Indicative training time **8.5 years.**

Triple CCTs: Acute Internal Medicine, Respiratory Medicine, Renal Medicine (triple accreditation is due to physician specialties already including Internal Medicine as a built-in dual CCT). Indicative training time **8.5 – 9.5 years.**

ICM Stage 1	ICM Stage 2	ICM Stage 3

Please note: All recommended periods of training are indicative and ARCP panels may accelerate a trainee's progression where appropriate evidence exists to support this decision

3.2. Dual CCTs

In the UK, ICM training was traditionally delivered alongside other higher specialist training in the form of a Joint CCT programme incorporating two CCTs. The majority of practicing Intensive Care Medicine specialists are therefore also qualified in Anaesthesia, Emergency Medicine or one of the partner Medical specialties.

Members of the intensive care community believe that this multi-disciplinary training has been of great benefit to critically ill patients in the UK. We therefore created dual training schemes to promote training in ICM and other disciplines. In all of these, the trainees will need to acquire the full competencies of both disciplines but by a suitable choice of training attachments and educational interventions this can be achieved without undue prolongation of training.

The 'Gold Guide' gives specific advice on dual CCT training and the following sections are particularly relevant:

> 3.35 Where trainees are competitively appointed to a training programme leading to dual certification (e.g. neurology and clinical neurophysiology), trainees are expected to complete the programmes in full and obtain the competences set out in both curricula. Application to the GMC for a CCT/CESR/CEGPR(CP) should only take place when both programmes are complete. The two CCTs should be applied for and awarded on the same date and the expected end of training date for both CCTs therefore becomes the same date.[8]

The GMC guidance on dual CCTs states that:

> "Dual CCTs are available if the trainee can demonstrate achievement of the competences and outcomes of both the approved curricula. Both potential trainees and selection panels must be clear whether the appointment is for a dual or single CCT(s). Appointment to dual CCT programmes is through competition."[9]

3.2.1. Mapping for dual CCTs

There are specific acute medical specialties where areas of competence overlap with those of Intensive Care Medicine. To facilitate the creation of dual training programmes, the FICM and its trustee Colleges have undertaken cross-mapping exercises of the relevant curricula to identify areas of commonality that will allow trainees to acquire the full High-Level Learning Outcomes of both disciplines via a suitable choice of training attachments and educational interventions whilst avoiding undue prolongation of training. The specialties encompassed in this mapping are:

- Anaesthesia
- Emergency Medicine

The indicative timeframe for each of these dual programmes is 8.5 years.

Trainees wishing to obtain dual certification in one of the above CCT specialties and in the single ICM specialty will be able to obtain a proportion of the other specialty High-Level Learning Outcomes and assessments during ICM training, and vice-versa. The shared High-Level Learning Outcomes and forms of assessment have been identified by a joint working group between the relevant College (ie the Joint Royal Colleges of Physicians' Training Board (JRCPTB), the Royal College of Anaesthetists and the Royal College of Emergency

[8] A Reference Guide for Postgraduate Specialty Training in the UK, Modernising Medical Careers, Seventh Edition, 2017, p24.
[9] GMC. Improving the national consistency and approval of dual CCT training programmes. 2015.

Medicine) and the FICM, and are documented in the dual CCT guidance produced by the relevant College and the Faculty of Intensive Care Medicine.

Detailed guidance documents on duals CCTs for ICM and its partner specialties can be found online.

3.3. Triple CCTs

Prior to the introduction of the new 2021 curriculum, trainees in Respiratory, Renal and Acute Internal Medicine could also apply to train in ICM and achieve a dual CCT. These groups of consultants provide an essential part of a modern Critical Care Service. The new curriculum for these medical specialties now compulsorily incorporates training in Internal Medicine (IM), resulting in dual CCTs in, for example, Respiratory Medicine and Internal Medicine. Addition of ICM therefore results in a triple CCT. This new development adds extra content to the programme for physicians wishing to train in ICM, but also produces consultants with broad skills ideally suited to the changing demands of an evolving, modern Critical Care Service.

The principles of training for a triple CCT are identical to those outlined above for dual CCTs. Delivery of training however needs to take into account managing three curricula rather than two. The addition of the CCT in Internal Medicine demands careful communication between the Training Programme Directors to plan for a rotation that is effective, and outcome focused. Cross-mapping exercises have shown a considerable overlap between the specialties, which allows the Learning Outcomes for the respective curricula to be achieved as efficiently as possible. However, there are capabilities which can only be achieved within a specific attachment. Consideration should be given to combining assessments and reviews wherever possible.

The specialties encompassed in this mapping are:

- Internal Medicine and Acute Internal Medicine
- Internal Medicine and Renal Medicine
- Internal Medicine and Respiratory Medicine

The indicative timeframe for each of the triple CCT programmes is 8.5-9.5 years.

Detailed information is provided in the accompanying guidance on triple CCTs that can be found online.

3.4. Pre-Hospital Emergency Medicine (PHEM)

Trainees have the option of completing their CCT in Intensive Care Medicine with sub-specialty accreditation in Pre-Hospital Emergency Medicine (PHEM). Entry into the PHEM sub-specialty programme is via a competitive national application process during Stage 1 training (ST4 at the earliest for single ICM trainees) for a programme commencement in Stage 2 training (ST5 or 6). Trainees would then undertake PHEM as their Special Skills Year within ICM training.

Undertaking PHEM sub-specialty training is separate to undertaking an ICM Special Skills module in Transfer Medicine; whilst PHEM and the Transfer Medicine Special Skills module contain some shared High-Level Learning Outcomes, they are by no means identical and do not have the same learning outcomes. In addition, the PHEM programme must be entered via competitive national application and interview.

The full syllabus for PHEM training is not reproduced within this manual; trainees should refer to the full PHEM curriculum available via the Intercollegiate Board for Training in Pre-Hospital Emergency Medicine (IBTPHEM).[10]

3.5. Paediatric Intensive Care Medicine (PICM)

Trainees have the opportunity of completing their CCT in Intensive Care Medicine with subspecialty accreditation in Paediatric Intensive Care Medicine (PICM). Entry into the PICM subspecialty programme is via an open and competitive national application process during Stage 1 training (single ICM CCT trainees must have examinations deemed equivalent to a primary FFICM and have completed ST4 by the time of entry) to commence the programme in ICM Stage 2 training.

The training requirements for PICM are set by the Paediatric Intensive Care Medicine Intercollegiate Specialty Advisory Committee [PICMISAC], with representation from the Royal College of Paediatrics and Child Health (RCPCH), FICM, RCoA and Paediatric Intensive Care Society. The RCPCH are the GMC-designated Lead College for the subspecialty of PICM. The application process for entry to PICM CCT subspecialty training is overseen entirely by the RCPCH and runs as part of their NTN Grid training programme.[11]

Please note that the full syllabus for PICM training is not reproduced within this manual; trainees should refer to the full PICM curriculum available via the RCPCH website.[12]

4. Content of Learning

4.1. 'Spiral' Learning

The training programme is based on this concept, which ensures that the basic principles learnt and understood are repeated, expanded and further elucidated as time in training progresses; this also applies to the acquisition of skills, attitudes and behaviours. The outcome is such that mastery of the specialty to the level required to commence independent practice in a specific post is achieved by the end of training as knowledge, skills, attitudes and behaviours metaphorically spiral upwards.

[10] www.ibtphem.org.uk
[11] https://www.rcpch.ac.uk/resources/apply-sub-specialty-training-ntn-grid-guidance
[12] https://www.rcpch.ac.uk/sites/default/files/2018-03/paediatric_intensive_care_medicine_syllabus_final.pdf.

4.2. Generic Professional Capabilities and Good Medical Practice

The GMC has developed the Generic Professional Capabilities (GPCs) framework[13] 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)[14] 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 ICM curriculum. They are mapped to each of the generic and specialty specific HiLLOs, which are in turn mapped to the assessment blueprints. This is to emphasise the core professional capabilities that are essential to safe clinical practice and that they must be demonstrated at every stage of training as part of the holistic development of responsible professionals. This approach will allow early detection of issues most likely to be associated with concerns regarding fitness to practise and to minimise the possibility that any deficit is identified during the final phases of training.

[13] GMC GPC Framework
[14] GMC Good Medical Practice

4.3. High-Level Learning Outcomes (HiLLOs)

The ICM curriculum contains 14 HiLLOs that specify the standard that ICM specialists must demonstrate as they progress through training and ultimately attain a CCT. ICM trainees are required to demonstrate achievement of both the generic and specialty specific HiLLOs throughout their training period.

Each HiLLO has an **overarching description that** describes what a specialist in Intensive Care Medicine will be able to do by the end of the training programme. Underneath this are a set of **key capabilities** that are examples of how an ICM trainee could evidence (in the ICM ePortfolio) attaining the required level of the HiLLO at the different stages of training. All HiLLOs are mapped to the GPC framework. Every HiLLO also includes **examples of evidence** that ICM trainees may use to support their achievement of the HiLLO, as well as suggested assessment methods.

The key capabilities and examples of evidence are intended to provide a prompt to trainees 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 ICM trainees may produce a broader portfolio of evidence that demonstrates deeper learning. It is not expected that ICM trainees will provide a set quota of evidence; the aim of assessment is to provide adequate, robust evidence to demonstrate acquisition of the expected Level of each HiLLOs at each stage of training.

Satisfactory sign off for each stage of training requires demonstration that, for each of the HiLLOs, the ICM trainee'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 Section 6: Programme of Assessment.

4.4. Special Skills

Intensive Care Medicine has a history of practitioners from many different backgrounds bringing skills into the Intensive Care Unit – these skills are of direct patient benefit and contribute to the construction of a comprehensive team.

The GMC's 'Good Medical Practice' requires doctors to commit to life-long learning in order to maintain and improve performance; the foundations for this set of attitudes and behaviours must be established during training through aspiration to excellence, manifest by the acquisition of special skills and interests.

During Stage 2, trainees will be expected to develop and consolidate expertise in a special skill directly relevant to ICM practice. Areas of particular benefit to the future development of critical care and its work force are recommended including ultrasound expertise, education or research.
The choice of special skill should be guided by discussion with the ICM Training Programme Director to reflect the career intentions of the trainee. For example, a trainee intending to practice in a more remote area may wish to develop greater ultrasound expertise as these skills may be required more regularly in such an environment than in a large central hospital. Acquisition of this expertise must be as part of an FICM-approved[15] training programme. Options include:

- Additional Medicine, Anaesthesia or Emergency Medicine
- Academic Research (may be standalone or as part of an academic training programme)

[15] Full guidance documents for approved dual and triple CCTs specialties will be available on the FICM website

- Augmented learning outcomes in specialist Intensive Care including Paediatric (via the subspecialty of Paediatric Intensive Care Medicine), Cardiothoracic or Neurosurgical Intensive Care Medicine
- Echocardiography
- ECMO
- Home Ventilation
- Quality Improvement
- Transfer Medicine
- Education
- Subspecialty of Pre-Hospital Emergency Medicine

During these blocks, trainees must continue to develop their patient-orientated intensive care skills. Trainees should continue with a substantial clinical workload (typically 75% of their time) to maintain and develop clinical skills. This should include regular supervised daytime and out of hours work.

To view the learning outcomes for the Special Skills modules, see Annex B.

4.5. Local decisions about the training programme

The exact nature of each training programme will be decided at a regional level following discussion with the Regional Advisor and local training leads. However, the overall programme must conform to the specifications outlined in this document and deliver the training outcomes as defined in the Assessment Blueprint.

5. Programme of Learning

5.1. The training programme

The organisation and delivery of postgraduate training is the responsibility of Health Education England (HEE), NHS Education for Scotland (NES), Health Education and Improvement Wales (HEIW) and the Northern Ireland Medical and Dental Training Agency (NIMDTA). A Training Programme Director will be responsible for coordinating the ICM training programme in each Trust/Health Board. The local organisation and delivery of training is overseen by a School – this is either a School of ICM or a joint School of Anaesthesia and ICM.

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 stage of training are summarised in the ICM ARCP decision aid. The successful completion of each stage of training will be dependent on achieving the expected level of attainment in all HiLLOs. 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, including in district general hospitals and large teaching hospitals.

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

5.2. The training environment

This curriculum should be used to help design training programmes locally that ensure all Intensive Care Medicine trainees can develop the necessary skills and knowledge 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 doctor-in-training's learning and development plan. The requirements for curriculum delivery have not changed as a result of this new curriculum. All training must comply with the GMC requirements presented in Promoting excellence: standards for medical education and training (2017)[16]. This stipulates that all training must comply with the following ten standards:

Theme 1: Learning environment and culture

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

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

Theme 2: Educational governance and leadership

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

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

[16] GMC Promoting excellence: standards for medical education and training (2017)

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

Theme 3: Supporting learners

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

Theme 4: Supporting educators

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

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

Theme 5: Developing and implementing curricula and assessments

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

S5.2 Postgraduate curricula and assessments are 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 ICM training, and to notify the FICM if further support is required in achieving this. Training delivery must also comply with the requirements of the latest edition of the COPMeD's, *'A Reference Guide for Postgraduate Specialty Training in the UK: 'The Gold Guide"*.[17]

5.3. Educational strategies

The curriculum describes educational strategies that are suited to work-based experiential learning and to appropriate off-the-job education. The manner in which the training programme is organised to deliver such training will vary between regions, depending on local facilities, and will need to be flexible enough to be tailored to the individual trainee. However, the most important element of training is appropriately supervised direct participation in the care of patients with a wide range of conditions, and there can be no substitute for this approach. Training should therefore be structured to allow the trainee to be involved in the care of patients with the full range of critical illness and related problems.

During the training programme the trainee must demonstrate increasing responsibility and capability across the full range of practice expected of an independent ICM consultant specialist.

5.4. Teaching and learning methods

The curriculum will be delivered through a variety of learning experiences. Trainees will learn from practising clinical skills appropriate to their level of training and to their attachment within the department. An appropriate balance needs to be struck between work-based experiential learning, appropriate formal education sessions away from the clinical area and independent self-directed learning. ICM is a specialty that encompasses a huge range of clinical conditions and a significant number of practical skills, such that the greater proportion of learning should be work-based experience.

[17] COPMeD (2018) A Reference Guide for Postgraduate Specialty Training in the UK: "The Gold Guide" 8th Edition

The curriculum indicates where particular learning methods or experiences are especially recommended. However, it is for the trainee, Educational Supervisor and Training Programme Director to tailor the exact balance of methods to the particular regional environment and trainee in the most suitable blended manner. Trainees should have supervised responsibility for the care of patients. A guiding principle should be that the degree of responsibility taken by the trainee will increase as capability increases. This means that the degree of clinical supervision will vary as training progresses, with increasing clinical independence and responsibility as the High-Level Learning Outcomes are achieved.

All trainees are adult learners and take responsibility for their own education. It is the responsibility of the trainers to ensure adequate and appropriate educational opportunities are made available to the trainee. In turn the trainee should be enthusiastic and pro-active in identifying their own gaps in knowledge, skills, attitudes and behaviour. Trainees are expected to take advantage of all the formal and informal learning opportunities provided by their training placements.

The following describes different learning opportunities that trainees are able to utilise and draws from the AoMRC's Medical Leadership Curriculum.

5.4.1. Practice-based experiential learning

Trainees spend a large proportion of time on workplace-based experiential learning during supervised clinical practice in hospital settings. Learning involves closely supervised clinical practice until competence is achieved. The learning environment includes wards, clinics, laboratories, simulated activities and meetings. These more informal settings are valuable situations in which to develop leadership abilities, alongside colleagues from other professions and fields of work. With increasing responsibilities and independence, the trainee will take the lead for an area of work, ultimately integrating a range of abilities to finally deliver consultant level practice.

5.4.2. Learning from feedback

Trainees learn from experience and this can be enhanced by reflecting on feedback from patients, carers, and the public, as well as colleagues and other staff.

5.4.3. Learning with peers

There are many opportunities for trainees to learn with their peers. Local and regional postgraduate teaching opportunities allow trainees at different phases of training to come together for group learning. Examination preparation encourages the formation of self-help groups and learning sets.

5.4.4. 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 ICM 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.

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 ICM trainees
- 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 that are designed to cover aspects of the training programme outlined in this curriculum.

5.4.5. Formal study courses

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

5.4.6. Simulation training

Simulation can provide a safe environment where a trainee can learn and practice procedural skills. Scenario-based immersive simulation training can be used to develop teamworking and communication skills as well as gaining experience in rare but potentially life-threatening clinical scenarios such as anaphylaxis and cardiac arrest. It will also afford trainees the opportunity to practice multi-disciplinary teamworking.

5.4.7. Independent self-directed learning

ICM Trainees 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, e-ICM)
- 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.

5.4.8. Specific trainer input

It is important to recognise and capitalise on the experience and expertise within each placement, including non-clinical staff. Different members of the team can act as role models at different stages, including those from other professions or spheres of work.

5.4.9. Supporting professional activities time for trainees

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's GPC framework, and to recognise the contribution ICM trainees make outside of the clinical setting, the FICM recommends that local Schools 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.

5.5. Academic training

All ICM trainees are required to complete the requirements of HiLLO3; they should know how to 'undertake medical research including the ethical considerations, methodology and how to manage and interpret data appropriately.' ICM specialists are encouraged to participate in clinical research and collaborative trials to

achieve the required outcomes, as well as in journal clubs, literature and systematic reviews, 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 Intensive Care Medicine and in the interests of patients and the service. An Academic Research SSY is additional to HiLLO 3, and has its own capabilities and levels.

ICM trainees may also train in academic ICM as an academic clinical fellow (ACF) or equivalent. Some ICM trainees 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 ICM trainee, and/or academic/research specialist, the TPD, and the Deanery as to what is appropriate, together with guidance from the FICM that the proposed period and scope of study is sensible. ICM trainees following this route need to complete all of the essential elements of the ICM 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 ICM trainees should consult their local HEE office or Deanery for further guidance.

5.6. Out of hours commitments

Most ICM work is unscheduled and at least 50% of admissions to ICUs occur 'out of hours'. In view of this, it is essential for trainees to gain experience outside routine working hours.

The pattern of work undertaken during all stages of training must be compliant with relevant legislation and contractual requirements and provide exposure to all aspects of clinical care. This specifically includes working at night and weekends and reflects the different case mix admitted at different times of day. This requirement provides:

- An opportunity to experience and develop clinical decision making, with the inevitable reduction in out-of-hours facilities, under distant supervision.
- An opportunity to learn when to seek advice and appreciating that, when learning new aspects of emergency work as trainees, they require close clinical supervision.
- A reflection of the expected working practices of an Intensive Care Medicine specialist who will regularly admit emergency patients out of hours.

When working at night and weekends the trainee should principally be covering the area of clinical practice consistent with their current stage of training. For example, during Stage 1, a trainee undertaking Anaesthesia training is expected to provide cover for this area. Likewise, when working in ICM they should be providing cover here. It is acceptable for the trainee to be involved in the management of patients outwith the specialty as long as it is appropriate to the level of training and the care of other patients is not compromised e.g. a trainee covering the ICU could be called to the ED as part of a trauma call but they must be able to return to the unit if required.

Occasionally, there may be a unit of training, where out of hours work is not required; this will be the exception and would only be suitable as a short-term placement.

The Faculty does recognise that there are occasions when additional out of hours work is required due to local circumstances; when this occurs, it should be for short periods only, otherwise there will be an adverse impact on the trainee's progression through the programme, making it is almost certain that training time will have to be extended to ensure the learning outcomes are met.

Local trainers, in conjunction with their Clinical Directors, must recognise this consequence if excessive out of hours commitments are placed above training requirements. Finally, it is important to ensure that any new aspects of emergency work are undertaken initially with close clinical supervision.

For trainees unable to undertake out of hours work due to illness or other debilitating circumstances, the Faculty Tutor, RA, TPD and FICM Training, Assessment and Quality Committee will determine whether it is possible to obtain all the essential learning outcomes and if so, what, if any, additional training arrangements will be required. This may involve extending the period of training for specific placements or indeed the whole programme depending on the trainees' opportunities to access the necessary training and their progress in achieving the relevant outcomes. Trainees are advised to discuss the potential consequences of an inability to perform out of hours work as soon as practicable, as it may have a major impact on the training programme leading to the award of a CCT, including failure to complete a CCT programme.

5.7. 'Acting Up' as a 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 StRs towards the end of their training would benefit from being enabled to 'act up' in a consultant capacity and undertake duties similar to those encountered in consultant practice. It is appropriate for a doctor in training to act up in a consultant capacity providing that there are adequate arrangements for supervision, albeit at a distance, to ensure that the quality of training is maintained. Stage 3 of the ICM Curriculum is ideally placed to encourage this type of working, particularly towards the latter part of the training year.

The doctor 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 StR has immediate access to consultant advice and understands that they are still in training until completion of the CCT/CESR[CP].

Such a post can only occur when it is felt the doctor is suitably ready by the local trainers and on the proviso that they have satisfactorily completed all other aspects of the ICM training programme.

If, however, the period of acting up as a consultant is not deemed to be a normal part of the ICM CCT training programme and the StR 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, or it must be taken as Out of Programme Experience. Please refer to COPMeD's Gold Guide[18] for details.

[18] COPMeD (2018) A Reference Guide for Postgraduate Specialty Training in the UK: "The Gold Guide" 8th Edition

6. Programme of Assessment

6.1. Aims

- The FICM Programme of Assessment should allow learners to demonstrate they have met the outcomes from the curriculum in a way that is fair and reproducible, using methods that both trainees and trainers find useful and practical and that considers the available educational evidence base.
- It should prioritise patient safety whilst at the same time encourage excellence in training and professional performance; assessment is a useful tool *for* learning not just for proof of learning.
    - Formative assessments will be used as a tool to promote learning and encourage excellence.
    - Summative assessments and judgements will make clear the scope of performance and capabilities trainees have. This will ensure their skills reflect their level of clinical responsibility and maintain patient safety.
- Whilst it must be clear how each HiLLO has been assessed, there should be no unnecessary repetition of assessments with the overall burden of assessment being reduced whilst maintaining proportionality.
- Where there are key progression points in training, for example between stages of training, judgements based on triangulation of evidence from a number of sources should be used to show trainees have demonstrated suitable capability for their level of training. This protects patients and ensures trainees are assessed fairly. Trainees should know what is expected of them at these key progression points.

6.2. Programme of assessment

The programme of assessment refers to the integrated framework of exams, assessments in the workplace and judgements made about an ICM trainee 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 will be provided to assist trainers and trainees.

The programme of assessment comprises the use of a number of individual assessment tools. They are already well established in ICM training, including both formative and summative assessments, and have been selected on the basis of their fitness for purpose and their familiarity to trainees and trainers. These include the summative FFICM examinations that encompass the 'knowledge requirements' that underpin the entire curriculum. The syllabus for each component of the examinations is mapped to the curriculum capabilities and HiLLOs. Other assessment tools are the formative Supervised Learning Events (SLEs), while the MSF has both formative and summative roles.

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 HiLLOs (eg through blueprinting of the assessment system to the stated curriculum outcomes).

The programme of assessment emphasises the importance and centrality of professional judgement in making sure ICM trainees have met the expected level of attainment in the HiLLOs at each stage of training, as set out in the approved curriculum. It also focuses on the Intensive Care Medicine doctor 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 the satisfactory completion of training.

ICM trainees 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 a trainee'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 this. It should occur frequently and as soon as possible after any event to maximise benefit for the trainee. Feedback should be of high quality and should include an action plan for future development for the trainee. Both ICM trainees and trainers should recognise and respect cultural differences when giving and receiving feedback.

6.3. The Fellowship of the Faculty of Intensive Care Medicine

The Fellowship of the Faculty of Intensive Care Medicine (FFICM) 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 as the syllabus remains unchanged.

The FFICM Final examination is taken during Stage 2 of the training programme. A successful pass is required before progression to Stage 3 ICM training. Eligibility to sit the FFICM Final examination requires a pass in the Primary examination of one of the defined core training programmes and completion of Stage 1 training.

The examination consists of three sections: the Multiple Choice Question (MCQ) examination, the Objective Structured Clinical Examination (OSCE) and the Structured Oral Examination (SOE).

Full details of the examination and its component parts are contained in the FFICM Examination Regulations.

6.4. Assessment of High-Level Learning Outcomes

The assessment process contains both formative and summative elements that are detailed in section 6.7. All assessments are reviewed by the panel at the Annual Review of Competence Progression (ARCP).

Formative assessment

Formative assessment is an *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 Supervised Learning Events (SLEs).

SLEs provide *only one* source of evidence that a trainee has achieved the outcomes of a HiLLO. Their purpose is to demonstrate engagement of trainers and trainees in professional educational conversations alongside their logbook of procedures and consultant feedback. Further examples of how trainees might evidence achievement of the High-Level Learning Outcomes are included in the 'Evidence to Inform decision' section that accompanies each HiLLO. These will include activities such as teaching, course attendance and quality improvement projects.

The ICM curriculum uses an outcomes-based curriculum. The key capabilities, listed underneath each HiLLO, illustrate ways in which achievement of the HiLLO could be achieved.

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. Full details of the above can be found in the Assessment Strategy on the FICM website.

6.5. Critical Progression Points

There are three critical progression points during ICM training:

Critical progression point 1: End of Stage 1 (ST4)

To complete Stage 1 training successfully, the ICM trainee must have achieved all of the generic and specialty HiLLOs for that stage of training. In signing the *Stage One Training Certificate* trainers must be satisfied that the trainee has obtained the required level of achievement in all of the HiLLOs. If this is not the case the trainee must spend more time in Stage 1 training. Satisfactory completion of Stage 1 is a prerequisite for eligibility for entry to Stage 2 of the ICM training programme. A satisfactory ARCP outcome will be required for entry to Stage 2 training (ST5-6).

Critical progression point 2: End of Stage 2 (ST6)

To complete Stage 2 training successfully, the ICM trainee must pass the FFICM Examination in its entirety, as well as achieve all of the generic and specialty HiLLOs required for that stage of training. In signing the *Stage Two Training Certificate,* trainers must be satisfied that the trainee has obtained the required level of achievement in all of the HiLLOs. If this is not the case the ICM trainee must spend more time in training in Stage 2. A satisfactory ARCP outcome will be required for entry to Stage 3 training (ST7).

Critical progression point 3: End of training (ST7)

The final progression point is at the end of training when ICM trainees will be required to demonstrate that they have met the specified standard in all of the HiLLOs for the end of this final stage of training. Trainers must be satisfied that this is the case and an ARCP outcome 6 will be required in line with issuing a *Stage Three Training Certificate* so that an ICM trainee can apply for the award of a Certificate of Completion of Training (CCT).

At all stages of training, the Educational Supervisor's Structured Report (ESSR) will make a recommendation to the ARCP panel as to whether the ICM trainee has met the required level of achievement in each of the HiLLOs for each stage of training and, where relevant, the critical progression points. The ARCP panel will make the final decision on whether the trainee has satisfactorily achieved the required standard and can therefore progress to the next year or stage of training [see section 7.1].

6.6. High-Level Learning Outcomes Grid

The table below provides a high-level description of attainment to be achieved, in each of the HiLLOs, at the end of each stage of training in order to progress to the next.

HiLLO Number	High-Level Learning Outcomes (HiLLOs) – Intensive Care Medicine	Expected capability level by end of:		
		Stage 1	Stage 2	Stage 3
1	The doctor will be able to function successfully within NHS organisational and management systems whilst adhering to the appropriate legal and ethical framework.	2	3	4
2	The doctor will be focused on patient safety and will deliver effective quality improvement, whilst practising within established legal and ethical frameworks.	2	4	4
3	An Intensive Care Medicine specialist will know how to undertake medical research including the ethical considerations, methodology and how to manage and interpret data appropriately.	2	3	4
4	To ensure development of the future medical workforce, a doctor working as a specialist in Intensive Care Medicine will be an effective clinical teacher and will be able to provide educational and clinical supervision.	2	3	4
5	Doctors specialising in Intensive Care Medicine can identify, resuscitate and stabilise a critically ill patient, as well as undertake their safe intra-hospital or inter-hospital transfer to an appropriately staffed and equipped facility.	2	3	4
6	Intensive Care Medicine specialists will have the knowledge and skills to initiate, request and interpret appropriate investigations and advanced monitoring techniques, to aid the diagnosis and management of patients with organ systems failure. They will be able to provide and manage the subsequent advanced organ system support therapies. This will include both pharmacological and mechanical interventions.	2	3	4
7	Specialists in Intensive Care Medicine can provide pre-operative resuscitation and optimisation of patients, deliver post-operative clinical care including optimising their physiological status, provide advanced organ system support and manage their pain relief.	2	3	4
8	Doctors specialising in Intensive Care Medicine will understand and manage the physical and psychosocial consequences of critical illness for patients and their families, including providing pain relief, treating delirium and arranging ongoing care and rehabilitation. They will also manage the withholding or withdrawal of life-sustaining treatment, discussing end of life care with patients and their families and facilitating organ donation where appropriate.	2	3	4
9	Intensive Care Medicine specialists will have the skillset and competence to lead and manage a critical care service, including the multidisciplinary clinical team and providing contemporaneous care to a number of critically ill patients.	2	3	4
10	Intensive Care Medicine specialists will have developed the necessary skills of induction of anaesthesia, airway control, care of the unconscious patient and understanding of surgery and its physiological impact on the patient.	2	3	3

HiLLO Number	High-Level Learning Outcomes (HiLLOs) – Intensive Care Medicine	Expected capability level by end of:		
		Stage 1	Stage 2	Stage 3
11	In order to manage acutely ill patients outside the Intensive Care Unit, an Intensive Care Medicine specialist will have the diagnostic, investigational and patient management skills required to care for ward-based patients whose condition commonly requires admission to the intensive care unit.	3	3	3
12	Doctors specialising in Intensive Care Medicine understand the special needs of, and are competent to manage patients with neurological diseases, both medical and those requiring surgery, which will include the management of raised intracranial pressure, central nervous system infections and neuromuscular disorders.	1	3	3
13	A specialist in adult Intensive Care Medicine is competent to recognise, provide initial stabilisation and manage common paediatric emergencies until expert advice or specialist assistance is available. They are familiar with legislation regarding safeguarding children in the context of Intensive Care Medicine practice.	1	3	3
14	Intensive Care Medicine specialists recognise the special needs of, and are competent to provide the perioperative care to patients who have undergone cardiothoracic surgery, including providing pain relief and advanced organ system support utilising specialised techniques available to support the cardiovascular system.	1	3	3

6.7. Evidence of progress

The following methods will provide evidence of progress in the integrated programme of assessment. The requirements for each training year and Stage of training are stipulated in the Assessment Blueprint. 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 ICM trainee will collect evidence to support their acquisition of the requirements for each of the HiLLOs, and the Educational Supervisor will use it to make a global judgement indicating whether the trainee has made satisfactory progress for the defined Stage of training. These methods are described briefly below. More information and guidance for ICM trainees and trainers will be available in the 'Assessment Guidance'.

Where possible, supervised learning events (SLEs) as formative assessments are favoured over assessments of performance (summative assessments) to encourage depth of learning from experienced clinicians in the clinical environment. The Multi-Source Feedback (MSF) tool is primarily formative yet has an important summative role that contributes to the assessment of performance, the Educational Supervisor's Structured Report and the ARCP, and the Faculty has made clear the justification for this.

Use of formative assessments (supervised learning events) in the workplace, with a focus on trainee-trainer discussion and reflection to guide learning in clinical scenarios, is encouraged to improve the validity and acceptability of these tools for trainers and trainees. It is hoped these changes will drive excellence in assessment and emphasise the value of input and guidance from senior clinicians.

Where summative assessments or judgements are required for progression (for example written examinations, an Educational Supervisor's Structured Report (informed by a multisource feedback assessment), or at the Annual Review of Competency Progression (ARCP)), this has been highlighted within the programme of assessment (See Section 7: Progression and the Programme of Assessment). It is clear how each assessment contributes to progression at these key points, and the recommended course of action if these criteria are not met.

6.7.1. 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 assessments in the Intensive Care Medicine training programme take the following forms:

- Fellowship of the Faculty of Intensive Care Medicine (FFICM) examination
- Stage 1 Training Certificate
- Stage 2 Training Certificate
- Stage 3 Training Certificate

6.7.2. 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.

The educational supervisor should review the SLE with the ICM trainee 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 listed below:

- Mini-Clinical Evaluation Exercise [Mini-CEX]
- Acute Care Assessment Tool for Intensive Care Medicine [ACAT]
- Direct Observation of Procedural Skills [DOPS]
- Case based Discussion [CBD]
- Annual Multi-Source Feedback [MSF]
- Procedures log

6.7.3. Supervised Learning Events (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 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 ICM trainees' reflections on practice in order to address learning needs.

SLEs use different trainers' direct observations of ICM trainees to assess the actual performance of Intensive Care Medicine doctors 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 trainees in important areas of the curriculum throughout each placement in all phases of training. It is normal for ICM trainees to have some assessments that identify areas for development because their performance is not yet at the standard for the completion of that training.

6.7.4. Number of assessments required and further guidance

It is recognised that trainers and trainees value guidance in terms of numbers of assessments required. However, the total number of assessments completed is less important than the quality of the assessments and breadth of cases covered. This allows Educational Supervisors to form reliable judgements of performance. Therefore, there is no 'target' number, instead the Faculty have suggested the following guidance:

- Each HiLLO must have appropriate evidence for the ES or CS to sign off at the appropriate level for training. The ICM Assessment Blueprint highlights which forms of assessment are most appropriate for each HiLLO. This may be supplemented by other evidence such as, amongst others, development courses, teaching sessions, simulation and self-directed learning. However, where demonstration of performance in practice is required, SLEs and the MSF are likely to form the highest quality of evidence upon which an ES or CS can base their judgement.
- One assessment may be used to evidence multiple capabilities. However, it must be clear to anyone reviewing such evidence that all capabilities linked were assessed and commented upon during the assessment, and that the assessment tool used was appropriate to assess the capabilities linked.
- The ES/CS will provide guidance to individual trainees at supervisor meetings regarding the quality and breadth of assessments completed. Trainees performing well will use assessments in a creative way to demonstrate and improve their practice.
- The numbers of different types of SLE used may change as trainees progress through training. For example, stage 3 trainees may choose to use the ACAT or CBD more than the DOPS or mini-CEX reflecting that evidence of complex decision making and leadership skills may be more useful for learning than observed clinical procedures by this stage of training.
- It will be necessary to complete multiple SLEs within the same capabilities over a period of time. For example, multiple DOPS for complex procedures e.g. tracheostomy or emergency airway management would be expected to be completed by different assessors over a period of time and followed by a procedures log to demonstrate maintenance of skill. For more simple procedures this may not be required.
- The procedures log is required to evidence maintenance of complex practical skills as described above. However, there is insufficient evidence to support a required number of procedures. Instead, numbers required will depend on the training level and the circumstances of the individual trainee. For example, the ES/CS is more likely to require evidence of maintenance of advanced airway skills from trainees that are undertaking part of their training in areas where these skills are not used regularly.

6.7.5. Who can assess?

Consultants, specialty Intensive Care Medicine doctors, senior ICM trainees, Advanced Critical Care Practitioners and senior nursing staff can facilitate SLEs providing they are competent to do so and understand their role in facilitating the SLE in particular, the need for timely and constructive feedback. In accordance with GMC standards assessors must possess expertise in the area to be assessed and be familiar with the assessment process. Senior ICM trainees and non-medical staff may assess SLEs if they have completed appropriate training and if the educational supervisor (ES) considers it appropriate for the level of trainee being assessed. The ES may need to enter the assessment in the ePortfolio.

6.7.6. The Supervised Learning Event (SLE) process

Listed below are a few key points regarding SLEs:

- feedback is the most important element of an SLE
- ICM trainees should aim to undertake SLEs relevant to their current unit of training
- areas for assessment should be identified by the ICM trainee in discussion with their Educational Supervisor
- requesting assessments retrospectively is considered bad practice and is not acceptable, except in Case-Based Discussions
- the trainee should reflect on the learning event in the SLE
- the trainer should observe the performance of the ICM trainee, and give immediate verbal feedback, as well as suggestions for future development, further reading etc.; they will indicate what level of supervision the trainee 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 ICM ePortfolio at this time; this is the ideal situation
- if the online form cannot be completed at this time, the ICM trainee will send a request for assessment to the trainer electronically
- verbal feedback should always take place at the time of the assessment
- the trainer should complete the online form as soon as possible
- linking the assessment to more than one unit of training may be appropriate

6.7.7. Supervisor reports

Consultant feedback, and feedback from other approved trainers, is an important source of evidence when assessing trainees' performance. This means of assessment is valuable in identifying ICM trainees who are performing above or below the standard expected for their Stage of training.

All of these methods are described briefly below and include feedback opportunities as an integral part of the programme of assessment. Assessment should be recorded in the ICM trainee's ePortfolio. More information and guidance for ICM trainees and trainers will be available in the 'Guide to Intensive Care Medicine Training'.

6.7.8. FFICM

The FFICM examination is a three-part national assessment and comprises three sections: A Multiple-Choice Question (MCQ) examination, an Objective Structured Clinical Examination (OSCE) and the Structured Oral Examination (SOE). Each section is marked separately and does not influence the marks in any of the other sections. Its major focus is on the knowledge required for practice but the structured oral examination and

objective structured clinical examination test decision-making, understanding of procedure and practical elements (including the use of simulation).

The FFICM examination must be successfully completed in order to progress to Stage 3 (ST7).

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

6.7.9. Stage 1 Training Certificate

The Stage 1 Training Certificate signifies that an ICM trainee has achieved the required level of attainment in all HiLLOs for that Stage of training and is eligible to progress to Stage 2.

6.7.10. Stage 2 Training Certificate

The Stage 2 Training Certificate signifies that an ICM trainee has achieved the required level of attainment in all HiLLOs for that Stage of training, has passed the FFICM Examination, and is eligible to progress to Stage 3.

6.7.11. Stage 3 Training Certificate

The Stage 3 Training Certificate signifies that an ICM trainee has achieved the required level of attainment in all HiLLOs for that stage of training and is eligible to be awarded a Certificate of Completion of Training (CCT).

6.7.12. Case-based Discussion (CBD)

The CBD is intended to highlight learning within areas of clinical decision making and reasoning. Trainees should pick cases that presented challenges, doubt or difficulty to maximise the usefulness of the assessment. A review of the trainee's documentation should be carried out. **Feedback should be given at the time of the case and documented contemporaneously.** The CBD may also be useful for assessing more generic knowledge and skills required for practice by focussing on different aspects of a case e.g. teamwork, safety, evidence-based practice etc.

6.7.13. Direct Observation of Procedural Skills (DOPS)

The DOPS tool is an assessment of practical skills and ability. The assessor **directly observes** the trainee undertaking a practical procedure and assesses their performance and **gives feedback directly after the event.** Documentation of the encounter should include suitable context and detail for the ES or CS to establish the complexity of the case and level of supervision deemed to be required using the capability level descriptors.

6.7.14. Mini-Clinical Evaluation Exercise (Mini-CEX)

The Mini-CEX is used to assess a trainee's performance in clinical encounters with patients. It involves the assessor **directly observing a trainee** in a clinical situation e.g. admission clerking or resuscitation. It is designed to assess a variety of skills such as history taking, examination, communication skills and clinical judgement.

6.7.15. Acute Care Assessment Tool (ACAT)

The ACAT assesses the trainee's ability to manage a body of work over a more extended period of time, better reflecting their performance in practice. In the ICM environment, this will usually be during a rostered clinical duty period and the assessment may focus on a variety of areas including leadership, time management and prioritisation, team working and handover.

6.7.16. Multi-Source Feedback (MSF)

The MSF allows trainees to collect feedback on performance from a variety of members of the healthcare team. It collates the judgement of assessors from different groups: peers, senior clinicians, nursing staff, allied healthcare professionals and clerical staff. These judgements are important; team-working, communication, accessibility and trustworthiness are key aspects of the practice of the Intensive Care Medicine clinician and are not assessed objectively via other assessment modalities in the same way.

12-15 or more assessors are required from a representative selection and a range of seniorities of the above team members to complete the MSF. This number of assessors provides a reliable assessment of communication, teamworking and trustworthiness. The Educational Supervisor will ensure that an adequate number and breadth of assessor background and seniority is chosen and will review the evidence of performance. A minimum of 4 senior permanent medical staff is expected. The MSF results are anonymously presented after review by the ES, ensuring that feedback is presented in a constructive manner.

The MSF tool is predominantly formative, but does significantly inform the summative decisions that the Educational Supervisor and ARCP panels will be required to make each year regarding progression. The summative aspect relates to how the overall performance of the trainee (satisfactory or unsatisfactory) is viewed by the whole of the MSF process, and whether it has been conducted in accordance with guidance on numbers and suitable respondents. Each assessor will be asked to mark the components of the MSF as being satisfactorily met or otherwise. The tool reflects the importance of adequate communication and team-working skills within the clinical environment for patient safety. If performance is unsatisfactory, the trainee is able to discuss areas for improvement and repeat the assessment but progression to the next stage of training is unlikely to be judged permissible by the Educational Supervisor and ARCP panel until adequate performance has been demonstrated utilising the MSF assessment.

The MSF adds value compared to judgements in these areas by clinicians only; different team members provide a different perspective on professional practice. Furthermore, the MSF is the only assessment in the workplace that is predictive of doctors in difficulty and so a trainee encountering difficulty with this assessment should highlight to the ES that further attention is required in training and a shared action plan can then be agreed.

6.7.17. Educational Supervisor's Structured Report (ESSR)

The ESSR will annually record a longitudinal, global report of an ICM trainee's progress based on a range of assessments, potentially including exams and observations in practice or reflection on behaviour, by those who have the appropriate expertise and experience. The ESSR can incorporate commentary or reports from longitudinal observations, such as from supervisors or formative assessments, demonstrating progress over time.

Its content must reflect the learning agreement and objectives established at the initial appraisal meeting. There must be appropriate supporting evidence available to the Educational Supervisor (ES) and this must be clearly documented in the report. If there has been any modification to the initial learning agreement during the relevant period of training, the reasons for this must be included.

The Gold Guide stipulates the minimum standard required but it is important to include other evidence to encourage and promote excellence. Logbooks, Quality Improvement progress reports, research and publications are assessments of experience and are valid records of progress. The ES should be able to suggest an appropriate outcome having reviewed and checked the documentation. The report must be

discussed with the trainee prior to submission so that they are aware of any concerns regarding their training progress, and trainees will receive feedback as part of the ARCP process.

6.7.18. Capability level descriptors

Whilst the Faculty recognise the value of Entrustable Professional Activities (EPAs), rather than introducing a new assessment, we have further developed the existing use of capability levels (formerly competence levels) to define the level of capability required for progression within each area of practice at the three stages of the ICM training programme. It is felt that this similarly defines when entrustment decisions are made.

Clarification of the expected capability levels for each stage of training allows trainees to know what level of performance is expected of them and what level of supervision is required within specific areas of practice as trainees progress through training. It is a core component of the assessment strategy and the target capability levels for each stage of training that are detailed in the HiLLOs Grid in this document.

Each capability level has construct-aligned descriptors; narrative scales guide trainees and trainers as to the level of capability expected. These are anchored to real world practice and suggest the degree of entrustability associated with each level (e.g. requiring direct supervision through to independent practice) – see the table below.

Capability level descriptors with construct-aligned anchors

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 straightforward 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.
4	Independent (consultant) practice.	Expert level of knowledge.	Specialist.

Educational Supervisors (ESs) will collate evidence from multiple sources to make overall judgements as to a trainee's level of capability and therefore their devolved responsibilities and required level of supervision. This judgement is recorded via a capability level scored for each HiLLO via the ePortfolio. This helps to ensure trainees have the appropriate skills and level of supervision at each Stage of training and thereby embeds prioritisation of public safety within the programme of assessment.

7. Training progression and the ARCP process

7.1. Progression and the Programme of Assessment

The FICM programme of assessment (see the table below) summarises the assessments that are required for trainees to transition through the three main progression points (from Stage 1 to Stage 2, from Stage 2 to Stage 3, and from Stage 3 to completion of training).

The target capability levels for each stage of training (see HiLLOs Grid) should be used alongside this to ensure the level of capability and entrustment within each area (as judged by the Educational Supervisor and ARCP panel) is sufficient to allow progression to the next stage of training.

The FICM Programme of Assessment

<table>
<tr><th></th><th>Stage 1 (ST3/4)</th><th>Stage 2 (ST5/6)</th><th>Stage 3 (ST7)</th></tr>
<tr><td></td><td colspan="3">Supervised Learning Events (formative assessments)</td></tr>
<tr><td>CBD
MiniCEX
DOPS
ACAT</td><td colspan="3">Adequate breadth and quality of assessments must be conducted to allow trainers to make valid judgements of the doctor's performance across all areas of the curriculum (see the ICM Assessment Blueprint).
The focus should be on the quality of feedback and evidence of learning from the assessment. The emphasis is on the quality of assessment rather than numbers, and incorporating feedback from multiple assessors. Not pass/fail.</td></tr>
<tr><td>MSF</td><td>1 per year</td><td>1 per year</td><td>1 per year</td></tr>
<tr><td></td><td colspan="3">Assessments of Performance (summative assessments)</td></tr>
<tr><td></td><td colspan="3">Satisfactory completion of these assessments as judged by Educational Supervisor is compulsory to allow progression</td></tr>
<tr><td></td><td colspan="3">End of Stage Training Certificates</td></tr>
<tr><td>Training Certificates</td><td>Stage 1 Training Certificate</td><td>Stage 2 Training Certificate</td><td>Stage 3 Training Certificate</td></tr>
<tr><td></td><td colspan="3">Examinations</td></tr>
<tr><td>FFICM MCQ</td><td></td><td>Required for progression</td><td rowspan="2"></td></tr>
<tr><td>FFICM OSCE/SOE</td><td></td><td>Required for progression</td></tr>
<tr><td></td><td colspan="3">Capability levels</td></tr>
<tr><td></td><td colspan="3">Doctors must have met the required capability levels for each HiLLO for stage of training as indicated by the capability blueprint (see the HiLLOs Grid) and evaluated by ES to progress to the next stage of training or to the award of CCT. Educational Supervisors will not be able to complete these without sufficient evidence (e.g. adequate numbers, variety and quality of SLEs, a diverse educational portfolio and logbook of procedures). For doctors who are mid-stage, then the requirement is to demonstrate engagement with spiral learning and progression in all the HiLLOs, without necessarily reaching the required capability level for the end of stage.</td></tr>
<tr><td>Capabilities (see blueprint)</td><td>Meets requirements for stage of training</td><td>Meets requirements for stage of training</td><td>Meets requirements for stage of training</td></tr>
<tr><td></td><td colspan="3">Other Requirements for progression / ARCP</td></tr>
<tr><td>Procedures log</td><td colspan="3">A logbook of procedures performed relevant to stage of training and experience is required for each year of training</td></tr>
<tr><td>ES Structured Report</td><td colspan="3">Satisfactory report for each year of training required for progression</td></tr>
</table>

ES/CS End of Placement Reports	Satisfactory End of Placement Report for each ICM Programme Placement during the year

NB: Specific Statutory Education Bodies (SEBs) may require additional evidence, such as Form R

7.2. Assessments within complementary specialties or special skills years

Guidance from the programme of assessment relates to years during ICM training within an ICM placement. Assessment guidance for Special Skills Years forms an integral part of each Special Skills requirements as approved by the General Medical Council and is detailed in Annex B.

Assessment of trainees undertaking placements in the complementary specialties of Internal Medicine and Anaesthesia will align to that of trainees undertaking Year 1 of training in that specialty. The programme of assessment and the ARCP requirements for an ICM trainee will be matched to that of a Year 1 trainee in that specialty.

7.3. The ARCP

The purpose and conduct of the ARCP is described in the Gold Guide.

> '4.38 The ARCP provides a formal process that reviews the evidence presented by the trainee and their educational supervisor relating to the trainee's progress in the training programme. It enables the trainee, the Postgraduate Dean and employers to document that the capabilities/competences required are being gained at an appropriate rate and through appropriate experience.'

Hence, the ARCP is an assessment of the *documentary evidence* submitted by the trainee. This should include, as a minimum, a review of the trainees' portfolio in the form of a structured report from the Educational Supervisor (an ESSR). Assessment of the trainee usually occurs in the workplace and nationally in the form of college/faculty examinations. The outcome of these assessments should be contained in the portfolio.

Appraisal and annual planning are separate processes but can be combined with the ARCP as long as the outcome of the panel is decided prior to seeing the trainee. We would encourage the ES to make a recommendation to the panel in their structured report.

7.4. Trainees requiring additional support

Doctors in training can encounter either personal or professional problems that may affect their performance. With the introduction of personal development plans, appraisal, annual assessment, learning agreements and clinical governance, trainees who struggle to achieve their goals within the expected timescale can be more easily identified and may require support during their career. Whatever the reason for difficulty it should be identified as early as possible. If the problems identified are related to attitudes and behaviours, the use of non-technical skills assessment and targeted training may be required. Guidance for ICM trainees who have not passed the FFICM examinations is available on the Examinations pages of the FICM website.

Any difficulties should feed into the appraisal process, via the Educational Supervisor's Structured Report and the MSF. Intensive Care Medicine doctors-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. If local trainers are unable to remedy the situation, the ARCP panel must be made aware, via the Educational Supervisor's Structured Report, 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.

For those not progressing as expected, additional help and support must be given to enable them to fulfil the requirements of the programme. Deaneries/NIMDTA will have a clear strategy for dealing with such situations encompassing the spectrum of performance difficulties. Depending on the level of risk, the Educational Supervisor will require a variable degree of support. It is highly recommended that all those involved in the education and clinical supervision of trainees are aware of their local strategy to ensure appropriate support can be provided to the trainee and that patient safety is maintained. In situations where trainees appeal against assessment or other decisions, and informal resolution is not possible, then the process described in the Gold Guide will be followed.[19]

[19] https://www.copmed.org.uk/gold-guide-8th-edition/

7.5. ICM Assessment Blueprint

HiLLO Number	High-Level Learning Outcomes (HiLLOs)	SLEs and MSF					ES Report	FFICM Examinations		
		ACAT	CBD	Mini-CEX	DOPS	MSF		MCQ	OSCE	SOE
1	The doctor will be able to function successfully within NHS organisational and management systems whilst adhering to the appropriate legal and ethical framework.	✓	✓			✓	✓	✓		✓
2	The doctor will be focused on patient safety and will deliver effective quality improvement, whilst practising within established legal and ethical frameworks.	✓	✓	✓	✓	✓	✓	✓		✓
3	An Intensive Care Medicine specialist will know how to undertake medical research including the ethical considerations, methodology and how to manage and interpret data appropriately.	✓	✓				✓	✓	✓	✓
4	To ensure development of the future medical workforce, a doctor working as a specialist in Intensive Care Medicine will be an effective clinical teacher and will be able to provide educational and clinical supervision.	✓				✓	✓		✓	✓
5	Doctors specialising in Intensive Care Medicine can identify, resuscitate and stabilise a critically ill patient, as well as undertake their safe intra-hospital or inter-hospital transfer to an appropriately staffed and equipped facility.	✓	✓	✓	✓		✓	✓	✓	✓

HiLLO Number	High-Level Learning Outcomes (HiLLOs)	SLEs and MSF					ES Report	FFICM Examinations		
		ACAT	CBD	Mini-CEX	DOPS	MSF		MCQ	OSCE	SOE
6	Intensive Care Medicine specialists will have the knowledge and skills to initiate, request and interpret appropriate investigations and advanced monitoring techniques, to aid the diagnosis and management of patients with organ systems failure. They will be able to provide and manage the subsequent advanced organ system support therapies. This will include both pharmacological and mechanical interventions.	✓	✓	✓	✓		✓	✓	✓	✓
7	Specialists in Intensive Care Medicine can provide pre-operative resuscitation and optimisation of patients, deliver post-operative clinical care including optimising their physiological status, provide advanced organ system support and manage their pain relief.	✓	✓	✓	✓		✓	✓	✓	✓
8	Doctors specialising in Intensive Care Medicine will understand and manage the physical and psychosocial consequences of critical illness for patients and their families, including providing pain relief, treating delirium and arranging ongoing care and rehabilitation. They will also manage the withholding or withdrawal of life-sustaining treatment, discussing end of life care with patients and their families and facilitating organ donation where appropriate.	✓	✓	✓	✓		✓	✓	✓	✓
9	Intensive Care Medicine specialists will have the skillset and competence to lead and manage a critical care service, including the multidisciplinary clinical team and providing contemporaneous care to a number of critically ill patients.	✓	✓			✓	✓	✓	✓	✓

HiLLO Number	High-Level Learning Outcomes (HiLLOs)	SLEs and MSF					ES Report	FFICM Examinations		
		ACAT	CBD	Mini-CEX	DOPS	MSF		MCQ	OSCE	SOE
10	Intensive Care Medicine specialists will have developed the necessary skills of induction of anaesthesia, airway control, care of the unconscious patient and understanding of surgery and its physiological impact on the patient.		✓	✓	✓	✓	✓	✓	✓	
11	In order to manage acutely ill patients outside the Intensive Care Unit, an Intensive Care Medicine specialist will have the diagnostic, investigational and patient management skills required to care for ward-based patients whose condition commonly requires admission to the intensive care unit.	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	Doctors specialising in Intensive Care Medicine understand the special needs of, and are competent to manage patients with neurological diseases, both medical and those requiring surgery, which will include the management of raised intracranial pressure, central nervous system infections and neuromuscular disorders.	✓	✓	✓	✓		✓	✓	✓	✓
13	A specialist in adult Intensive Care Medicine is competent to recognise, provide initial stabilisation and manage common paediatric emergencies until expert advice or specialist assistance is available. They are familiar with legislation regarding safeguarding children in the context of Intensive Care Medicine practice.	✓	✓	✓	✓		✓	✓	✓	✓

HiLLO Number	High-Level Learning Outcomes (HiLLOs)	SLEs and MSF					ES Report	FFICM Examinations		
		ACAT	CBD	Mini-CEX	DOPS	MSF		MCQ	OSCE	SOE
14	Intensive Care Medicine specialists recognise the special needs of, and are competent to provide the perioperative care to patients who have undergone cardiothoracic surgery, including providing pain relief and advanced organ system support utilising specialised techniques available to support the cardiovascular system.	✓	✓	✓	✓		✓	✓	✓	✓

FFICM Examination question banks will be reviewed and mapped to the new ICM HiLLOs.

7.6. Special Skills Modules Assessment Blueprint

SSY Modules	Aims	SLEs and MSF					ES Report	SSY Specific Tools		
		ACAT	CBD	Mini-CEX	DOPS	MSF		SSY Unique Assessments	Notes	Logbook requirement*
Academic Research	*Equip individuals with the competencies to deliver multicentre clinical research within their critical care units following appointment as NHS consultants, and also initiate local research, if individual aspirations and local resources support this*			✓		✓	✓	PbD Viva Voce	Requires proof of completion of application for funding, GCP certificate, presentation at national research meeting	✓
Cardiothoracic Intensive Care Medicine	*Equip individuals with the competencies required to work as a consultant in a specialist cardiothoracic intensive care unit*	✓	✓	✓	✓	✓	✓	Simulation (where available)	Additional training in echocardiography is encouraged but not assessed as part of this SSY	
Echocardiography	*To train an individual to echocardiography competence at either. BSE Level II ACCE (critical care echocardiography) or BSE Level I accreditation and to equip an individual with the knowledge, skills and attitudes to be clinical lead for echocardiography on a critical care unit*	✓	✓	✓	✓	✓	✓	Completion of BSE level 1 or 2 requires a formal practical assessment held by the BSE - see notes	Completion of the MCQ examination (for level 2) or practical assessment (level 1/2) is not required for progression providing the learning outcomes have been met	✓* *requirements vary between Level I and Level II BSE accreditation

SSY Modules	Aims	SLEs and MSF					ES Report	SSY Specific Tools		
		ACAT	CBD	Mini-CEX	DOPS	MSF		SSY Unique Assessments	Notes	Logbook requirement*
ECMO (Extra-Corporeal Membrane Oxygenation)	*To equip an individual with the knowledge and skills to provide ECMO as part of a team in a specialist Critical Care Unit*	✓	✓	✓	✓	✓	✓	Simulation (where available)		✓ Logbook of procedures (mandated number for completion of SSY)
Home Ventilation	*To train an individual in the management of patients with respiratory failure who require domiciliary ventilatory support.*	✓	✓	✓	✓	✓	✓	Patient satisfaction survey* *(either GMC or BTS approved tool)		
Neuro Intensive Care Medicine	*Consultant Intensive Care Medicine doctors with subspecialty training in NICM have a central role in neuro intensive care units. They share the ultimate responsibility of care with the admitting clinical teams and they collaboratively lead the provision of neuro intensive care, coordinating a multi-specialty team of physicians, surgeons and allied health professionals including specialised nurses, physiotherapists, neurophysiologists and clinical scientists.*	✓	✓	✓	✓	✓	✓	Simulation (where available)		

SSY Modules	Aims	SLEs and MSF					ES Report	SSY Specific Tools		
		ACAT	CBD	Mini-CEX	DOPS	MSF		SSY Unique Assessments	Notes	Logbook requirement*
Paediatric Intensive Care Medicine	*To allow a doctor who is unsuccessful in securing appointment to the PICM sub-specialty or who does not wish to specialise in PICM, the opportunity to further develop the depth and breadth of their paediatric ICM skills. This would facilitate a level of capability commensurate with being the paediatric ICM Lead in a non-specialist hospital but would not equip the doctor as a PICM specialist recognized by the GMC*	✓	✓	✓	✓	✓	✓		This would facilitate a level of capability commensurate with being the paediatric ICM Lead in a non-specialist hospital but would not equip the doctor as a PICM specialist recognised by the GMC	
Pre-Hospital Emergency Medicine	*Intensivists with appropriate prior expertise may apply via competitive national application for PHEM sub-specialty training (via IBTPHEM)*	See IBTPHEM curriculum								

SSY Modules	Aims	SLEs and MSF					ES Report	SSY Specific Tools		
		ACAT	CBD	Mini-CEX	DOPS	MSF		SSY Unique Assessments	Notes	Logbook requirement*
Quality Improvement in Healthcare	*This module covers the competences required to adopt a logical, scientific and analytical approach to quality improvement. It encourages the development of leadership skills to allow trainees a platform to influence change in future practice. It aims to develop expertise to share with other members of the healthcare team.*	✓	✓	✓	✓	✓	✓		Although further professional accreditation (e.g. FMLM fellowship) is encouraged, it is not a requirement for completion of the year	✓
Transfer Intensive Care Medicine	*This module covers the competences required to make transfer decisions, select the most appropriate transport platform, provide safe, effective and focused in-transit critical care and ensure that the patients' condition and immediate needs are communicated to receiving hospital clinical staff.*	✓	✓	✓	✓	✓	✓		An audit of transfer standards locally or at a regional or network level is required. A number of relevant courses / accreditations may be beneficial but not required e.g. CCAT, DipIMC	

SSY Modules	Aims	SLEs and MSF					ES Report	SSY Specific Tools		
		ACAT	CBD	Mini-CEX	DOPS	MSF		SSY Unique Assessments	Notes	Logbook requirement*
Education	*This special skills module is intended for trainees who are considering developing a special interest in medical education in their consultant career. It intends to further a trainee's professional development as an educator through taking part in a wide variety of educational activities, self-evaluation and utilising frameworks in which to describe their own development as a trainer.*	✓	✓	✓	✓	✓	✓	Peer-observed teaching practice		

*** SSY specific logbook requirement –** The SSY modules that require a specific logbook are identified above but please note that as these modules fall within stage 2 of ICM training, the standard curriculum requirements still apply and that includes maintaining a logbook of clinical procedures as a minimum.

Abbreviations:

ACCE: Adult Critical Care Echocardiography
BSE: British Society of Echocardiography
BTS: British Thoracic Society
CCAT: Clinical Considerations in Aero Medical Transport
DipIMC: Diploma in Immediate Medical Care
ECMO: Extra-Corporeal Membrane Oxygenation
FMLM: Faculty of Medical Leadership and Management
GMC: General Medical Council
IBTPHEM: Intercollegiate Board for Training in Pre-Hospital Emergency Medicine
NICM: Neuro Intensive Care Medicine
PbD: Project based Discussion

8. Supervision and feedback

This section of the curriculum describes how ICM trainees 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, 'Improving feedback and reflection to improve learning.'[20]

Access to high-quality, supportive and constructive feedback is essential for the professional development of the ICM trainee. Trainee 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. Senior ICM trainees would also benefit from such training as they frequently act as assessors to more junior colleagues, and all involved could also be shown how best to carry out and record reflection.

8.1. Supervision

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

Organisations must make sure that each ICM trainee 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 training[21].

8.1.1. Educational Supervisor (ES)

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.

8.1.2. Clinical Supervisor (CS)

Day to day clinical supervision is provided by the duty consultant to whom the trainee is clinically responsible; this is different to the concept of a Clinical Supervisor (as the GMC defines the role).

In specific units of training (eg Medicine, Anaesthesia, specialty ICUs), a named clinical supervisor oversees the trainee's clinical work throughout the specific placement. The clinical supervisor leads on reviewing the trainee's clinical or medical practice throughout the placement and contributes to the Educational Supervisor's Structured Report on whether the doctor should progress to the next stage of their training.

The clinical and educational supervisors, when meeting with the ICM trainee, should discuss issues of clinical governance, risk management and any untoward clinical incidents involving the trainee. If there are any concerns about the performance of an ICM trainee, or there are issues of doctor or patient safety, these will be discussed with the relevant clinical and educational supervisors.

[20] AoMRC Improving feedback and reflection to improve learning
[21] GMC Promoting excellence: standards for medical education and training (2017)

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 ICM trainees 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 ICM trainees about their performance will arise through the use of the SLEs, regular appraisal meetings with supervisors, other meetings and discussions with supervisors and colleagues as well as feedback from ARCP.

8.1.3. ICM Trainees

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

ICM trainees should actively devise individual learning goals in discussion with their trainers and should subsequently identify the appropriate opportunities to achieve these learning goals. ICM trainees need to plan their SLEs accordingly to enable them to collectively provide a picture of their development during a training period. ICM trainees 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 ICM trainees to seek feedback following learning opportunities and SLEs. ICM trainees should self-reflect and self-evaluate regularly with the aid of feedback. Furthermore, they should formulate action plans with further learning goals in discussion with their trainers.

8.2. 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 trainees. All appraisals should be recorded in the ICM ePortfolio.

8.2.1. Induction appraisal

The ICM trainee and Educational Supervisor should have an appraisal meeting at the beginning of each placement to review the trainee'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 ICM trainees to compile an effective Personal Development Plan (PDP) of objectives for the upcoming post. This PDP should be agreed during the Induction Appraisal. The trainee and supervisor should also both sign the educational agreement in the ICM ePortfolio at this time, recording their commitment to the training process.

8.2.2. Mid-term appraisal and regular meetings

Regular meetings between trainees and Educational Supervisors are strongly encouraged but a mid-placement appraisal is expected unless the placement is so short as to make this impractical. These are particularly important if either the ICM trainee or educational or clinical supervisor has training concerns, or the trainee has been set specific targeted training objectives at their ARCP. At these meetings, ICM trainees should review their PDP with their supervisor using evidence from the ICM ePortfolio. Supervised Learning Events and progress through the curriculum can be reviewed to ensure trainees are progressing satisfactorily, and attendance at educational events should also be reviewed.

8.2.3. End of placement appraisal

ICM trainees should review the PDP and curriculum progress with their Educational Supervisor using evidence from the ICM ePortfolio. Specific concerns may be highlighted at 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 SLEs, and this should be recorded. If there are significant concerns following the end of placement appraisal, then the Training Programme Director should be informed. Information gathered from this meeting should be incorporated into the Educational Supervisor's Structured Report (ESSR).

9. Quality management

Quality Management for the FICM sits within the Training, Assessment and Quality Committee and oversees the collection of data that allows the FICM to quality manage its training programme. The organisation of training programmes for Intensive Care Medicine is the responsibility of HEE/local teams and the devolved nations' Deaneries. The HEE Offices/Deaneries will oversee programmes for postgraduate medical training in their regions. A Training Programme Director will be responsible for coordinating the ICM training programme in each region. The Schools and Training Programme Director, accompanied by the Specialty Training Committees in England, Wales and Northern Ireland and NHS Education Scotland will undertake the following roles:

- engagement with the national recruitment process
- allocate Intensive Care Medicine trainees' placements and rotations appropriate to their training needs
- oversee the quality of training posts provided locally
- interface with other specialty training faculties (Emergency Medicine, Anaesthesia, etc.) and other healthcare professionals
- ensure adequate provision of appropriate educational events
- ensure curricula implementation across training programmes
- oversee the workplace-based assessment process within programmes
- coordinate the ARCP process for Intensive Care Medicine trainees
- provide adequate and appropriate career advice
- provide systems to identify and assist doctors with training difficulties
- provide flexible training
- recognise the potential of specific doctors-in-training to progress into an academic career.

Educational programmes to train Educational and Clinical Supervisors and assessors in Supervised Learning Events may be delivered by HEE Offices/Deaneries or by the FICM or both.

Development, implementation, monitoring and review of the curriculum are the responsibility of the FICM via the Training, Assessment and Quality Committee. The committee is formally constituted with a lead Dean and the ICM Trainee Representative. It is the responsibility of the FICM to ensure that curriculum developments are communicated to Heads of Schools, regional specialty training committees and TPDs.

The FICM serves its role in quality management by monitoring and driving improvement in the standard of all ICM training. The Training, Assessment, and Quality Committee is actively involved in assisting and supporting HEE/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 ICM trainees eligible for Certificate of Completion of Training (CCT) or Certificate of Eligibility for Specialist Registration (CESR).

The FICM uses data from seven quality datasets across the specialty to provide meaningful quality management. The datasets include the GMC National Training Survey (NTS) data, the FICM trainee survey, ARCP outcomes, FICM exam outcomes, External Advisor reports, Regional Advisor annual reports and annual Recruitment Quality Assurance 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 ICM training nationally. These principles will be transferred to the new curriculum to ensure this continues.

An annual publication, the Quality Management of Training Report, is available publicly on the FICM website.

10. Intended use of the curriculum by ICM trainers and trainees

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

The curriculum should be used to help design training programmes locally that ensure all ICM trainees can develop the necessary skills and knowledge in a variety of settings and situations. The curriculum is designed to ensure it can be applied in a flexible manner, meeting service needs as well as supporting each trainee's own tailored learning and development plan. This curriculum, and further guidance documents will be available in due course via the FICM website.

Clinical and educational supervisors should use the curriculum and guidance documents as the basis of their discussion with ICM trainees. The ICM trainees are themselves expected to have a good knowledge of the curriculum and should use it as a guide for their training programme. Each ICM trainee will engage with the curriculum by maintaining a record of their progress on the ICM ePortfolio. The trainee will use the curriculum to develop learning objectives and reflect on learning experiences. ICM trainees will have different strengths and areas of interest, and so may be able to demonstrate achievement of some learning outcomes at different rates.

Recording progress on the ICM ePortfolio

On enrolling with the FICM, trainees will be given access to the ICM ePortfolio. This platform allows evidence to be built up to inform decisions on a trainee's progress and provides tools to support their education and development.

The ICM trainee's main responsibilities are to ensure their ePortfolio record is kept up to date, arrange assessments 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 ePortfolio evidence such as outcomes of assessments, reflections and PDPs to inform appraisal meetings. They are also expected to update the ICM trainee's record of progress through the curriculum, produce end of placement appraisals and supervisor's reports.

HEE/Deaneries, TPDs, Faculty Tutors and ARCP panels will use the ICM ePortfolio to monitor the progress of ICM trainees for whom they are responsible. The FICM will use summarised, anonymised data from the ePortfolio to support its work in quality assurance.

All appraisal meetings, personal development plans, supervised learning events and MSFs, should be recorded in the ICM ePortfolio. ICM trainees are encouraged to reflect on their learning experiences and to record these in the ePortfolio. Reflections can be kept private or shared with supervisors.

Reflections, assessments and other ICM ePortfolio content should be used to provide evidence towards acquisition of curriculum requirements.

10.1. Ongoing management of the curriculum by the Faculty

The FICM's Training, Assessment and Quality Committee will regularly review the curriculum to ensure it remains fit for purpose, reflecting current training and service needs.

Our contact email address (contact@ficm.ac.uk) for all enquiries will be the conduit through which stakeholders will be able to submit feedback on any element of the curriculum.

The Training, Assessment and Quality Committee will review the feedback and either approve or reject the proposed revisions on an annual basis. Should any revisions be proposed to the High-Level Learning Outcomes (HiLLOs) or the Key Capabilities, 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 practice in Intensive Care Medicine, and every effort will be made to minimise any negative impact on ICM trainees.

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 the document) what amendments have been made on each occasion.

11. Equality and diversity

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

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

HEE/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 ICM trainees requiring additional support.

Compliance with anti-discriminatory practice will be assured through:

- monitoring of recruitment processes
- ensuring all Faculty representatives and Programme Directors have attended appropriate training sessions prior to appointment or within 12 months of taking up post
- HEE/Deaneries ensuring that educational supervisors have had equality and diversity training (for example, an e-learning module) every 3 years
- HEE/Deaneries ensuring that any specialist participating in ICM trainee interview or appointments committees, or processes has had equality and diversity training (at least as an e-module) in the preceding 3 years
- ensuring ICM trainees have an appropriate, confidential, and supportive route to report examples of inappropriate behaviour of a discriminatory nature. HEE/Deaneries and Programme Directors must ensure that on appointment, ICM trainees are made aware of the route in which inappropriate or discriminatory behaviour can be reported and supplied with relevant contact details. HEE/Deaneries must also ensure contingency mechanisms are in place if ICM trainees not satisfied with the response or feel unable to use the process as described, such as being unable to approach the nominated contact individual as a result of conflicted interest
- providing resources to ICM trainees needing support (for example, through the provision of a professional support unit or equivalent)
- monitoring of FICM Examinations
- ensuring all assessments discriminate on objective and appropriate criteria and do not unfairly advantage or disadvantage an ICM trainee 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; recognising that not all disabilities are visible.

12. Annexes

Annex A – ICM High-Level Learning Outcomes

1. The doctor will be able to function successfully within NHS organisational and management systems whilst adhering to the appropriate legal and ethical framework.	
KEY CAPABILITIES	They: • Understand, incorporate and implement national legislation (eg Health and Social Care Act 2012 and the Equality Act 2010 (Disability Discrimination Act 1995 in Northern Ireland)) into everyday practice. • Successfully and ethically incorporate information technology and governance, according to national legislation, into patient care • Can communicate & document effectively, according to ethical and legal frameworks to promote the highest standards of healthcare • Know how to interpret, construct and apply ethical and legal frameworks into all areas of clinical governance • Demonstrate the highest professional behaviours, individually and corporately • Continually strive to enhance and integrate knowledge into clinical practice and the NHS organisation as a whole, whilst observing legal and ethical obligations.
GPC Domains	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 6: Capabilities in patient safety and quality improvement Domain 7: Capabilities in safeguarding vulnerable groups
Evidence to inform decision	➢ ACAT ➢ CBD ➢ MSF ➢ Involvement in developing clinical or organisational policies and procedures ➢ Attendance at management meetings ➢ Postgraduate qualifications or evidence of further study in management/leadership ➢ Portfolio evidence of self-study eg eLfH ➢ ES Report

2. The doctor will be focused on patient safety and will deliver effective quality improvement, whilst practising within established legal and ethical frameworks.	
KEY CAPABILITIES	They will: • Adhere to national legislation and guidelines relating to safeguarding children and other vulnerable groups of patients, such as those with protected characteristics • Contribute towards quality improvement, communicate effectively and share good practice • Optimise care of critically unwell patients by the critical appraisal of recent medical literature and the application of evidence-based guidelines • Demonstrate a commitment to learn from critical incidents and adverse events as well as sharing the learning points from these experiences • Communicate effectively with patients, their families and professional colleagues whilst recognising and effectively managing any barriers to effective communication • Ensure patient safety is the key priority at all times in their clinical practice both within the intensive care unit and in the wider clinical environment of the hospital.
GPC Domains	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 4: Capabilities in health promotion and illness prevention Domain 6: Capabilities in patient safety and quality improvement Domain 7: Capabilities in safeguarding vulnerable groups Domain 9: Capabilities in research and scholarship
Evidence to inform decision	➢ ACAT ➢ CBD ➢ Mini-CEX ➢ DOPS ➢ MSF ➢ Involvement in quality improvement ➢ Portfolio evidence of self-study ➢ ES Report

3. An Intensive Care Medicine specialist will know how to undertake medical research including the ethical considerations, methodology and how to manage and interpret data appropriately.	
KEY CAPABILITIES	To ensure this is the case they will: • Remain up to date in their reading of current research literature and best practice guidelines • Have an understanding of the processes and governance of clinical research, and will be able to communicate this to patients and their relatives where appropriate • Be able to critically appraise clinical literature, and to apply this, when appropriate, to their clinical practice • Use their knowledge of the ethical principles of practising medicine, and the legal framework associated with this in modern healthcare to benefit their patients • Have the ability to organise the collection and interpretation of data collected from their own intensive care unit and use this as a method of improving clinical services locally • Apply information derived from population data to help inform individual treatment plans for their patients.
GPC Domains	Domain 1: Professional values and behaviours Domain 9: Capabilities in research and scholarship
Evidence to inform decision	➢ ACAT ➢ CBD ➢ Qualifications or evidence of further study involving undertaking research eg Good Clinical Practice ➢ Involvement in research studies within the department or further study eg MSc/MD/PhD ➢ Involvement in journal clubs or similar ➢ Portfolio evidence of self-study ➢ ES Report

4. To ensure development of the future medical workforce, a doctor working as a specialist in Intensive Care Medicine will be an effective clinical teacher and will be able to provide educational and clinical supervision.	
KEY CAPABILITIES	They will: • Deliver effective teaching and training to medical students, doctors in training, colleagues and members of the wider multidisciplinary team. This will include understanding the teaching, assessment and feedback needs of learners from all groups with protected characteristics and being able to adapt teaching and provide supportive techniques to ensure successful and equitable learning outcomes. • Competently assess the performance of learners objectively and deliver timely and constructive feedback on learning activities in accordance with current educational standards and best practice • Meet any regulatory requirements of a trainer and will keep these current as well as participating in quality assurance processes to ensure excellent undergraduate and postgraduate training • Endeavour to ensure patient involvement and feedback is integral to the delivery of education to doctors in their individual roles as well as their role as a member of the multidisciplinary team.
GPC Domains	Domain 1: Professional values and behaviours Domain 8: Capabilities in education and training
Evidence to inform decision	➢ ACAT ➢ MSF ➢ Portfolio evidence of feedback and learning from teaching delivered ➢ Postgraduate qualifications or evidence of further study in medical education (eg PGCert) ➢ ES Report

5. Doctors specialising in Intensive Care Medicine can identify, resuscitate and stabilise a critically ill patient, as well as undertake their safe intra-hospital or inter-hospital transfer to an appropriately staffed and equipped facility.	
KEY CAPABILITIES	They will: • Identify an acutely ill patient or one at risk of significant deterioration by taking account of their medical history, clinical examination, vital signs and available investigations • Integrate clinical findings with timely and appropriate investigations to form a differential diagnosis and an initial treatment plan • Administer intravenous fluids and inotropic drugs as clinically indicated utilising central venous access where required and monitoring the effectiveness of these treatments with invasive monitoring techniques • Stabilise and initiate an initial treatment plan for a critically ill acute surgical, acute medical or peripartum patient including those with sepsis or post-trauma and institute timely antimicrobial therapy • Provide definitive airway management and initiate and maintain advanced respiratory support • Undertake the transport of mechanically ventilated critically ill patients outside the Intensive Care Unit when required • Communicate effectively and in a timely manner, with fellow members of the multi-disciplinary team including those from other specialties and make an accurate, legible and contemporaneous entry in the patient's medical record • Where escalation of care is required, be able to arrange this and provide a succinct structured handover to clinical colleagues • Recognise when a patient has the potential to deteriorate or requires future treatment escalation and be able to provide explicit instructions regarding an ongoing treatment plan and contact details should a further review be required • Have the ability to communicate with a patient's family, in terms they can understand, the patient's clinical condition, current and likely future treatment options and where possible, an indicative prognosis in an empathetic and understanding manner • Be mindful at all times that whilst assessing and treating patients they must maintain optimum safety for their patients by recognising any limitations of their current clinical environment, the available equipment and personnel and employing best practice guidelines where these exist.
GPC Domains	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement
Evidence to inform decision	➢ ACAT ➢ CBD ➢ Mini-CEX ➢ DOPS ➢ Portfolio evidence of logbook of procedures ➢ Attendance at transfer courses ➢ FFICM examinations ➢ ES Report ➢ Simulation

6. Intensive Care Medicine specialists will have the knowledge and skills to initiate, request and interpret appropriate investigations and advanced monitoring techniques, to aid the diagnosis and management of patients with organ systems failure. They will be able to provide and manage the subsequent advanced organ system support therapies. This will include both pharmacological and mechanical interventions.	
KEY CAPABILITIES	This means they can: • Initiate, perform, interpret and integrate point-of-care testing, radiological and laboratory investigations with their patient's clinical findings • Integrate knowledge, skills and investigations to treat a patient who is deteriorating and institute or escalate organ support therapies • Perform invasive procedures to aid the diagnosis and management of a critically ill patient, and provide advanced organ-support therapies as well as monitor the effectiveness of these therapies in improving the patient's overall condition • Use their knowledge, apply their skills, and interpret investigations and advanced therapeutic monitoring data to manage critically ill patients, including safe prescribing practices and advanced organ system support modalities, throughout the course of their critical illness.
GPC Domains	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries
Evidence to inform decision	➢ ACAT ➢ CBD ➢ Mini-CEX ➢ DOPS ➢ Formal intensive care ultrasound accreditation with demonstration of appropriate maintenance of skill ➢ Portfolio evidence of self-study eg eLfH ➢ FFICM examinations ➢ ES Report ➢ Simulation

7. Specialists in Intensive Care Medicine can provide pre-operative resuscitation and optimisation of patients, deliver post-operative clinical care including optimising their physiological status, provide advanced organ system support and manage their pain relief.	
KEY CAPABILITIES	To achieve this, they will therefore: • Have the knowledge and understanding of the care of patients undergoing a wide range of operative procedures • Be expert in resuscitating and stabilising patients before and after a wide range of operative procedures including sold organ transplantation • Have an awareness of and be able to treat the common complications of a broad range of operative procedures including solid organ transplantation • Lead and contribute to the skill mix of a multidisciplinary team that will deliver the perioperative management of patients undergoing surgical procedures.
GPC Domains	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 5: Capabilities in leadership and teamworking
Evidence to inform decision	➢ ACAT ➢ CBD ➢ Mini-CEX ➢ DOPS ➢ Portfolio evidence of self-study eg e-LfH ➢ FFICM examinations ➢ ES Report ➢ Simulation

8. Doctors specialising in Intensive Care Medicine will understand and manage the physical and psychosocial consequences of critical illness for patients and their families, including providing pain relief, treating delirium and arranging ongoing care and rehabilitation. They will also manage the withholding or withdrawal of life-sustaining treatment, discussing end of life care with patients and their families and facilitating organ donation where appropriate.	
KEY CAPABILITIES	In order to do this, they will be expert in: • Identifying and limiting the physical and psychosocial consequences of critical illness for patients and families paying particular attention to the assessment, prevention and treatment of pain and delirium • Communicating the continuing care requirements of patients at discharge from both ICU and hospital to healthcare professionals, patients and relatives. This will include the patient's plan for ongoing care, medical follow up and rehabilitation • Facilitating discussions focused on how to manage end of life care with patients and their families. The process of withholding or withdrawing life-sustaining treatments and providing palliative care whilst maintaining respect for cultural and religious beliefs will form an important element of this • Diagnosing death using neurological criteria and diagnosing death using circulatory criteria in time sensitive scenarios (eg donation after circulatory death). • Identifying likely organ donors, working collaboratively with specialist nurses for organ donation and facilitating the process of organ donation, including providing appropriate physiological support to the organ donor.
GPC Domains	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and teamworking
Evidence to inform decision	➢ ACAT ➢ CBD ➢ DOPS ➢ Mini-CEX ➢ Portfolio evidence of self-study eg e-LfH ➢ FFICM examinations ➢ ES Report ➢ Simulation

9. Intensive Care Medicine specialists will have the skillset and competence to lead and manage a critical care service, including the multidisciplinary clinical team and providing contemporaneous care to a number of critically ill patients.	
KEY CAPABILITIES	They will do this by: • Providing support to colleagues and contributing to the management of acutely unwell patients outside of the critical care unit when requested to do so • Having the leadership and communication skills to head a culturally diverse multidisciplinary team providing care to an equally diverse range of patients on the critical care unit • Involving patients and their relatives in as many treatment decisions as circumstances will allow whilst ensuring patients and relatives are kept abreast of the current treatment plan and options • Actively participating in the development and application of systems and processes designed to improve the delivery of safe care for critically ill patients. • Understanding and being able to describe the special requirements of a mass casualty incident.
GPC Domains	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and teamworking Domain 7: Capabilities in safeguarding vulnerable groups
Evidence to inform decision	➢ ACAT ➢ CBD ➢ MSF ➢ FFICM examinations ➢ Postgraduate qualifications or evidence of further study involving leadership/management ➢ ES Report ➢ Simulation

10. Intensive Care Medicine specialists will have developed the necessary skills of induction of anaesthesia, airway control, care of the unconscious patient and understanding of surgery and its physiological impact on the patient.	
KEY CAPABILITIES	They will be able to: • Conduct comprehensive pre-anaesthetic and pre-operative checks • Demonstrate knowledge of anatomy, physiology, biochemistry and pharmacology relevant to anaesthetic practice • Describe the functioning principles of standard equipment used within anaesthetic practice and understand the physical principles governing the operation of such equipment and the clinical measurements derived from them • Pre-operatively assess ASA 1-3 patients' suitability for anaesthesia, prescribe suitable pre-medication and recognise when further investigation or optimisation is required prior to commencing surgery and adequately communicate this to the patient and their family • Safely induce anaesthesia in ASA 1-3 patients and recognise and deal with complications associated with the induction of anaesthesia • As a member of the multi-disciplinary theatre team, maintain anaesthesia for the relevant procedure, utilise appropriate monitoring and effectively interpret the information it provides to ensure the safety of the anaesthetised patient • Recognise anaesthetic critical incidents, understand their causes and how to manage them • Safely care for a patient recovering from anaesthesia and recognise and treat the common associated complications whilst providing appropriate post-operative analgesia (including that via regional and neuraxial blockade), anti-emesis and fluid therapies • Provide urgent or emergency anaesthesia to ASA 1E and 2E patients requiring non-complex emergency surgery • Identify patients with difficult airways, demonstrate management of the 'cannot intubate cannot oxygenate' scenario in simulation, and be familiar with difficult airway guidelines.
GPC Domains	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 5: Capabilities in leadership and teamworking
Evidence to inform decision	➢ CBD ➢ Mini-CEX ➢ DOPS ➢ FFICM examinations ➢ ES Report ➢ Simulation ➢ MSF

11. In order to manage acutely ill patients outside the Intensive Care Unit, an Intensive Care Medicine specialist will have the diagnostic, investigational and patient management skills required to care for ward-based patients whose condition commonly requires admission to the intensive care unit.	
KEY CAPABILITIES	They will: • Be able to manage an acute unselected take • Manage an acute specialty-related take • Be capable of providing continuity of care to medical in-patients, including management of comorbidities and cognitive impairment • Know how to manage patients in an outpatient clinic, ambulatory or community setting (including management of long-term conditions) • Have the ability to assess and treat medical problems in patients in other specialties and special cases • Make an active contribution to the functioning of a multi-disciplinary clinical team including effective discharge planning • Deliver effective resuscitation and manage an acutely deteriorating patient • Care for patients who require end of life care as well as those who require palliative care.
GPC Domains	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 5: Capabilities in leadership and teamworking
Evidence to inform decision	➢ ACAT ➢ CBD ➢ Mini-CEX ➢ DOPS ➢ Portfolio evidence of self-study eg e-LfH ➢ FFICM examinations ➢ ES Report ➢ MSF ➢ Simulation

12. Doctors specialising in Intensive Care Medicine understand the special needs of, and are competent to manage patients with neurological diseases, both medical and those requiring surgery, which will include the management of raised intracranial pressure, central nervous system infections and neuromuscular disorders.	
KEY CAPABILITIES	They will care for these patients by: • Understanding and assessing the perioperative risks associated with patient comorbidities, emergency anaesthesia and surgery and the implications of concomitant drug therapies in these patients • Being competent in the postoperative care of common acute and chronic medical conditions commonly found in these patients • Being aware of the effects of major neurological surgery on these patients and the associated immediate postoperative management of these patients including the common complications and providing optimal analgesia • Knowing the factors which influence the intensity, levels of care and the clinical environments where the necessary care can be safely delivered to patients with neurological disease • Recognising and treating respiratory and cardiovascular dysfunction with their associated complications commonly encountered in these patients • Effectively assessing and managing other perioperative conditions and complications encountered by pre- and post-operative neurosurgical and neurological patients • Being able to competently assess a patient's neurological status and provide appropriate support where necessary • Having a thorough understanding of the pathophysiology of raised intracranial pressure including the options for its operative and non-operative management • Providing immediate treatment of perioperative emergencies in neurosurgical and neurological patients and knowing when to seek senior help and support.
GPC Domains	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 5: Capabilities in leadership and teamworking
Evidence to inform decision	➢ ACAT ➢ CBD ➢ Mini-CEX ➢ DOPS ➢ Portfolio evidence of self-study eg eLfH ➢ FFICM examinations ➢ ES Report ➢ Simulation

13. A specialist in adult Intensive Care Medicine is competent to recognise, provide initial stabilisation and manage common paediatric emergencies until expert advice or specialist assistance is available. They are familiar with legislation regarding safeguarding children in the context of Intensive Care Medicine practice.	
KEY CAPABILITIES	They: • Know and can effectively manage the major anatomical, physiological and psychological differences between adult and paediatric patients • Appreciate the pathophysiology of common paediatric emergencies, recognise their presentation and can provide initial management until expert help or specialist assistance is available • Are able to provide emergency and continuing cardiovascular support to a child until expert help or specialist assistance is available • Are capable of resuscitating a child, know when to seek specialist help and support via their local paediatric retrieval team whose processes they are familiar with • Are competent to provide elective and emergency airway management and mechanical ventilation to a child including induction of anaesthesia for intubation • Practise in accordance with national legislation and guidelines relating to safeguarding children in the context of critical care.
GPC Domains	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 5: Capabilities in leadership and teamworking Domain 7: Capabilities in safeguarding vulnerable groups
Evidence to inform decision	➢ ACAT ➢ CBD ➢ Mini-CEX ➢ DOPS ➢ Portfolio evidence of self-study eg eLfH ➢ Attendance at relevant courses eg APLS ➢ Attendance at relevant child safeguarding courses ➢ FFICM examinations ➢ ES Report ➢ Simulation

14. Intensive Care Medicine specialists recognise the special needs of, and are competent to provide the perioperative care to patients who have undergone cardiothoracic surgery, including providing pain relief and advanced organ system support utilising specialised techniques available to support the cardiovascular system.	
KEY CAPABILITIES	They are competent in: • Assessing the perioperative risks associated with these patients' co-morbidities, emergency anaesthesia and surgery and the implications of their concomitant drug therapies • The postoperative care of common acute and chronic medical conditions commonly found in these patients • Assessing the implications of the type and site of surgery for these patients' immediate postoperative management and the potential complications, which they can manage effectively whilst providing optimal analgesia • Considering the factors which influence the intensity, levels of care and the clinical environments where the necessary care can be safely delivered to these patients • Treating respiratory dysfunction and complications in these patients • Treat cardiovascular dysfunction and complications in these patients including understanding advanced monitoring techniques and provision of mechanical circulatory support • Assessing and managing other perioperative conditions and complications encountered by pre- and post-operative cardiothoracic surgery patients • Recognising and providing immediate treatment of perioperative emergencies and know when to seek senior help and support.
GPC Domains	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills (history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease) Domain 5: Capabilities in leadership and teamworking
Evidence to inform decision	➢ ACAT ➢ CBD ➢ Mini-CEX ➢ DOPS ➢ Portfolio evidence of self-study eg eLfH ➢ FFICM examinations ➢ ES Report ➢ Simulation

Annex B – Special Skills Modules: Learning Objectives

Academic Research - Special Skills Module	
Learning Objectives	***SSY Target capability level***
Appreciate the difference between audit and research, have a clear oversight of the ethical principles involved in conducting research and have a good understanding of the difference types of study design	4
Complete Good Clinical Practice (GCP) for clinical trials and have an oversight of the complex regulatory framework behind research including the Integrated Research Application System (IRAS)	4
Formulate a focused research question, undertake a systematic comprehensive literature search and be able to critically appraise the literature in addition to having a solid grounding in medical statistics	4
Have a comprehensive grasp of the management of clinical trials including the role of the National Institute Health Research (NIHR) as both a funder and the body that delivers high quality research and actively engage in recruitment to NIHR research studies	4
Engage directly in a research project related to ICM and present the results at a national meeting resulting ultimately in a peer-reviewed publication	4
GPC Domains	Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement Domain 9: Capabilities in research and scholarship
Evidence to inform decision	➢ Portfolio evidence of self-study eg e-LfH ➢ Academic Supervisors Report ➢ Appropriate statistics course attendance ➢ Evidence of academic activity eg courses, presentations, funding applications, awards, abstracts

Cardiothoracic Intensive Care Medicine - Special Skills Module	
Learning Objectives	***SSY Target capability level***
Understands the causes and can manage a peri-arrest cardiac surgery patient in the perioperative period as well as being able to manage cardiopulmonary resuscitation and post-resuscitation care in these patients	4
Can initiate and interpret the results of advanced cardiovascular monitoring techniques	3
Is able to provide multi-organ system support and in the context of underlying cardiopulmonary disease	4
Is able to manage the clinical care of non-surgical patients commonly seen in a cardiothoracic intensive care unit including pregnancy associated pathologies, heart and lung transplantation, structural and vascular heart disease and congenital heart disease	3
Manages the care of patients with cardiac disease who have critical illness due to non-cardiac causes	3
Manages the care of the patient following cardiothoracic trauma	3
Understands the principles behind and the functioning of mechanical support devices for the cardiovascular system	3
Is able to treat cardiac dysrhythmias by the use of external and internal pacing devices	4
Is able to provide perioperative care for patients who have undergone cardiac surgical procedures care and can provide perioperative care for patients with cardiothoracic disease undergoing non-cardiac surgical procedures	4
Manages the palliative care of the patient with end stage heart or lung disease	4
Describes the care of the patient prior to and following thoracic solid organ transplantation (heart, lung, heart-lung)	3
Describes the management of common congenital heart conditions in the adult patient	3
Understands ICU risk scoring systems in the context of cardiothoracic ICU practice	4
Is able to contribute to functioning of the multi-disciplinary team to provide optimal clinical and to participate in perioperative planning and clinical governance meetings	4
GPC Domains	Domain 2: Professional skills Domain 5: Capabilities in leadership and team working Domain 6: Capabilities in patient safety and quality improvement
Evidence to inform decision	➢ ACAT ➢ CBD ➢ DOPS ➢ Mini-CEX ➢ MSF ➢ Simulation ➢ Attendance Records

Echocardiography - Special Skills Module	
Learning Objectives	***SSY Target capability level***
Will understand the technology, uses and care of echocardiography equipment, applying the skills and knowledge to perform and interpret studies and views in critically unwell patients. They will also be capable of supervising others to do so.	3
Will be able to accurately and clearly record echocardiography findings, and safely store images and studies for recall.	3
Will apply high personal standards of clinical governance, and understand the governance structure of an echocardiography service, while engaging and collaborating with the local echocardiography community.	4
GPC Domains	Domain 2: Professional skills Domain 5: Capabilities in leadership and team working Domain 6: Capabilities in patient safety and quality improvement Domain 9: Capabilities in research and scholarship
Evidence to inform decision	➢ ACAT ➢ CBD ➢ DOPS ➢ Mini-CEX ➢ MSF ➢ Examination (Level 1 BSE) optional ➢ Logbook ➢ Peer review

Extracorporeal Membrane Oxygenation (ECMO) - Special Skills Module	
Learning Objectives	***SSY Target capability level***
Can assess a patient's suitability for ECMO therapy	3
Initiates ECMO therapy including cannulation, and management of complications	3
Leads the daily multidisciplinary ward round of patients on ECMO	3
Transfers patients between hospitals on ECMO	2
Transfers patients within the hospital on ECMO	3
Understands the multi-disciplinary team required to provide ECMO within the NHS	4
Takes part in clinical governance activities relating to ECMO	4
GPC Domains	Domain 1: Professional values and behaviours Domain 5: Capabilities in leadership and team working Domain 6: Capabilities in patient safety and quality improvement Domain 8: Capabilities in education and training
Evidence to inform decision	➢ ACAT ➢ CBD ➢ DOPS ➢ Mini-CEX ➢ Simulation ➢ MSF

Home Ventilation - Special Skills Module	
Learning Objectives	***SSY Target capability level***
Understands the pathophysiology of CRF and will recognise the various ways that patients present to domiciliary ventilation services	4
Is able to make an initial assessment of patients with CRF including arranging and interpreting appropriate investigations	4
Understands the different organisational models of home ventilation within the NHS	4
Is able to manage the end of life care of patients with CRF	3
Understands the role of multi-disciplinary teams in the long-term management of patients with CRF	4
Is able to assess and develop a weaning strategy for difficult to wean patients including their rehabilitation needs	3
Is able to use a range of ventilators and adjunct devices in the treatment of CRF including tracheostomy	4
GPC Domains	Domain 2: Professional skills Domain 4: Capabilities in health promotion and illness prevention Domain 7: Capabilities in safeguarding vulnerable groups Domain 9: Capabilities in research and scholarship
Evidence to inform decision	➢ ACAT ➢ CBD ➢ DOPS ➢ Mini-CEX ➢ MSF

Neuro Intensive Care Medicine - Special Skills Module	
Learning Objectives	***SSY Target capability level***
Can recognise, resuscitate and initiate treatment of the patient with acute neurological injury, having an enhanced understanding of the specific neuropathophysiologies. They will be able to institute advanced pharmacological and physical therapeutic interventions, and continue ongoing diagnostic and disease management strategies, including multi-organ support.	4
Can initiate and interpret the results of advanced neuro imaging techniques and monitoring technologies, understanding their fundamental principles, indications and safety profiles.	3
Will be capable of diagnostic and treatment strategies for the specific presentations and provide ongoing management and care.	3
Is able to provide comprehensive perioperative care for patients who are to undergo neurosurgical procedures.	4
Will provide high quality comfort, care and dignity to optimise a neurocritical care patient's recovery and outcome.	4
Understands the principles, practicalities and consequences of neurological injury and rehabilitation	3
GPC Domains	Domain 1: Professional values and behaviours Domain 2: Professional skills Domain 5: Capabilities in leadership and team working
Evidence to inform decision	➢ ACAT ➢ CBD ➢ DOPS ➢ Mini-CEX ➢ MSF ➢ Simulation

Paediatric Intensive Care Medicine - Special Skills Module	
Learning Objectives	***SSY Target capability level***
Recognise, assess and manage the full range of both medical and surgical paediatric conditions requiring intensive care support, including the management of safeguarding issues within this environment.	3
Assume the role of Paediatric Intensive Care Team Lead for a non-specialist hospital and liaise with hospital and community specialist teams, effectively manage and coordinate patient flow, staffing, safety and quality in the context of emergency paediatric care in a non-specialist hospital	3
Effectively lead the team in resuscitating, stabilising and transferring a critically ill child, perform the and supervise others in performing high-level clinical and technical skills and procedures necessary to carry this out in paediatric patients in a non-specialist hospital's intensive care, emergency and transport environments.	3
Perform and supervise others performing high-level technical skills and procedures utilising the appropriate medications necessary for managing critically ill children in a non-specialist hospital	3
Supports and communicates with families when their child is extremely unwell, dying or has died.	4
GPC Domains	Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement Domain 7: Capabilities in safeguarding vulnerable groups Domain 9: Capabilities in research and scholarship
Evidence to inform decision	➢ ACAT ➢ CBD ➢ DOPS ➢ Simulation ➢ MSF ➢ ES Report ➢ Portfolio evidence of self-study e.g. e-LfH

Quality Improvement - Special Skills Module	
Learning Objectives	***SSY Target capability level***
Understands the principles and purpose of quality improvement including evidence-based practice, best practice guidelines and benchmarking, as well as being able to appreciate different sampling methodology.	4
Can propose, initiate, implement, develop and evaluate protocols, guidelines and quality improvement	4
Can collate, manage and interpret information gathered from different resources	4
Can understand and apply statistical modelling, including variance and graphical models, to analyse, organise and present information	4
Can describe the general change, reliability and lean concepts	4
Understands the principles and structure of local and national healthcare provision and management, including health economics, departmental budgeting, development and preparation of business plans.	4
Understands the role of the ICU specialist outwith the intensive care unit in raising the profile of the Specialty within the hospital and to the general population	4
Recognises and promotes change within ICU to improve healthcare provision and adopts strategies to minimise and counter resistance to such change.	4
Work effectively within the MDT by respecting, acknowledging and collaborating with others to achieve a common goal	4
Understands the principles of group dynamics	4
Demonstrates proficiency in leadership and communication through providing supervision to members of MDT, conducts and chairs meetings and by managing conflict between different professional and patient groups	4
Delivers effective teaching and training to medical and non-medical members of the healthcare team	4
GPC Domains	Domain 4: Capabilities in health promotion and illness prevention Domain 6: Capabilities in patient safety and quality improvement Domain 8: Capabilities in education and training Domain 9: Capabilities in research and scholarship
Evidence to inform decision	➢ ACAT ➢ CBD ➢ DOPS ➢ Mini-CEX ➢ MSF ➢ Simulation

Transfer Intensive Care Medicine - Special Skills Module	
Learning Objectives	***SSY Target capability level***
Contrast the risks and benefits associated with emergent inter-facility transfer	4
Describe the physiological and physical effects of movement of patients	4
Describe the principles of planning and co-ordinating patient transfer	4
Demonstrate a professional approach to the planning and co-ordination of patient transfer	4
Demonstrate correct preparation of patients for safe inter-facility transfer	4
Demonstrate a professional approach to preparation of patients for transfer	4
Differentiate the risks and benefits of road, helicopter, fixed wing and other transport modalities	4
Demonstrate the ability to transfer patients using a range of modalities	4
Describe the common problems experienced during patient transfer	4
Demonstrate the safe inter-facility transfer of all age groups of ventilated patients	4
Demonstrate a professional approach to the clinical management of patients undergoing emergent inter-facility transfer	4
GPC Domains	Domain 1: Professional values and behaviours Domain 2: Professional skills Domain 6: Capabilities in patient safety and quality improvement Domain 8: Capabilities in education and training
Evidence to inform decision	➢ ACAT ➢ CBD ➢ DOPS ➢ Mini-CEX ➢ Simulation

Education - Special Skills Module	
Learning Objectives	***SSY Target capability level***
Can deliver educational sessions pertinent to learners from varying backgrounds and levels of prior knowledge using a variety of teaching formats (e.g. small group, lecture, e-learning) demonstrating appropriate planning and design, considering awareness of the curriculum and learner needs, use of teaching methods and technology and showing evaluation and plans for improvement of future sessions	4
Can deliver simulation teaching with assistance from faculty, considering the evidence base and teaching theory related to simulation teaching, awareness of levels of fidelity and relevant advantages/disadvantages of this teaching format. Aware of use in relation to critical incidents and non-technical and communication skills teaching	3
Uses assessment tools in the workplace appropriately, demonstrating theoretical knowledge including awareness of validity, reliability and feasibility of the assessment tools chosen and how this influences the choice of assessments used to maximise learning	4
Provides structured feedback appropriately after learning encounters demonstrating awareness of various models of feedback. Demonstrates professionalism and empathy during this process and shares enthusiasm for teaching and learning in the clinical environment	4
Produces an educational portfolio demonstrating involvement in educational activities aligned with GMC guidance on recognition and approval of trainers, including involvement in teaching and learning, appropriate use of assessment, supporting and monitoring learners, guiding personal and professional development and developing own skills as an educator	3
Can organise an educational event, considering choice of topic, speakers and environment and manages a system for collecting feedback and using this to improve future events	3
Demonstrate skills in leadership and management relating to education and what role clinicians specialising in medical education may have at a local or regional level to influence change and improve teaching and learning in the workplace	3
Can critically evaluate research within medical education, showing up-to-date knowledge of developments within this field and applies new knowledge learnt to improve their own practice. Shows willingness to share knowledge with others.	4
GPC Domains	Domain 1: Professional values and behaviours Domain 4: Capabilities in health promotion and illness prevention Domain 8: Capabilities in education and training
Evidence to inform decision	➢ Peer observed teaching session feedback ➢ ES Report ➢ Presentation session feedback ➢ MSF ➢ Portfolio evidence of self-study e.g. e-LfH, continuing professional development record ➢ Assessment design and delivery tool - feedback from ES ➢ Formal qualification in medical education ➢ Evidence of lead organiser for a non-departmental educational meeting

Annex C – Abbreviations

Abbreviation	Term
ACAT	Acute Care Assessment Tool for Intensive Care Medicine
ACCP	Advanced Critical Care Practitioner
ACCS	Acute Care Common Stem
AIM	Acute Internal Medicine
APLS	Advanced Paediatric Life Support
ARCP	Annual Review of Competency Progression
CAT	Core Anaesthetic Training
CCT	Certificate of Completion of Training
CBD	Case-based Discussion
CESR	Certificate of Eligibility for Specialist Registration
CoBaTrICE	Competency Based Training programme in Intensive Care Medicine for Europe
CS	Clinical Supervisor
CT	Core Training
DOPS	Direct Observation of Procedural Skills
e-LfH	e-Learning for Health
e-ICM	e-Learning module for ICM on the e-LfH platform
EM	Emergency Medicine
ES	Educational Supervisor
ESSR	Educational Supervisor's Structured Report
ESICM	European Society of Intensive Care Medicine
FFICM	Fellowship of the Faculty of Intensive Care Medicine
FICM	Faculty of Intensive Care Medicine
FT	ICM Faculty Tutor
GMC	General Medical Council
GPCs	Generic Professional Capabilities
HDU	High Dependency Unit
HEE	Health Education England
HEIW	Health Education and Improvement Wales
HiLLO	High-Level Learning Outcome
HST	Higher Specialist Training
IBTPHEM	Intercollegiate Board for Training in Pre-Hospital Emergency Medicine
ICM	Intensive Care Medicine
ICU	Intensive Care Unit
IM	Internal Medicine
IMT	Internal Medicine Training
JRCPTB	Joint Royal Colleges of Physicians' Training Board
MCQ	Multiple Choice Question
Mini-CEX	Mini-Clinical Evaluation Exercise
NES	NHS Education for Scotland
NIMDTA	Northern Ireland Medical & Dental Training Agency
OSCE	Objective Structured Clinical Examination
PICM	Paediatric intensive Care Medicine
RA	ICM Regional Advisor
RCoA	Royal College of Anaesthetists
RCEM	Royal College of Emergency Medicine
RCPCH	Royal College of Paediatrics and Child Health
SBA	Single Best Answer
SLE	Supervised Learning Event
SOE	Structured Oral Examination
SSY	Special Skills Year
TAQ	FICM Training, Assessment & Quality Committee
TPD	Training Programme Director

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