General Medical Council

Intensive Care Medicine

Specialty Specific Guidance

This guidance is to help doctors who are applying for entry onto the Specialist Register with a CESR in Intensive Care Medicine. You will also need to read the Intensive Care Medicine CCT Curriculum.

Introduction

You can contact us and ask to speak to the GMC Specialist Applications team for advice before you apply. You are strongly advised to review the Faculty of Intensive Care Medicine (FICM) equivalence guidance pages. FICM can be contacted at contact@ficm.ac.uk.

What is the indicative period of training for a Certificate of Completion of Training (CCT) in Intensive Care Medicine?

The minimum indicative period of training for a CCT in Intensive Care Medicine is seven years. It is unlikely that you would achieve all the learning outcomes required for a CCT in a shorter period of time.

Curriculum Framework

The Intensive Care Medicine (ICM) CCT Curriculum is structured as an outcome-based curriculum. It's divided into 14 High Level Learning Outcomes (HiLLOs) – the first four HiLLOs are generic and the remainder are specialty specific (Table 1).

Within each HiLLO are a series of key capabilities which describe the knowledge, skills, attitudes and behaviours expected of a practicing ICM specialist. Therefore, CESR applicants must be able to demonstrate that they have evidence of the key capabilities at the necessary level of ability (Table 2) as described for each HiLLO. The individual key capabilities are listed for the specific HiLLOs later in this guidance.

The curriculum also requires trainees to have acquired skills in an area related to ICM, which are covered by specialist modules known as *Special Skills Year* (SSY) modules. CESR applicants must make a clear declaration of their area of special experience, demonstrating the attainment of the key capabilities for their chosen SSY module HiLLO syllabus. Further information on SSYs, HiLLOs, key capabilities and descriptors can be found in the ICM Curriculum.

Table 1: High Level Learning Outcomes for ICM and Capability Levels

HiLLO for Intensive Care Medicine	Capability Level
1) The doctor will be able to function within NHS organisational and management systems whilst adhering to the appropriate legal and ethical framework	4
2) The doctor will be focused on patient safety and will deliver effective quality improvement, whilst practising within established legal and ethical frameworks	4
3) An Intensive Care Medicine specialist will know how to undertake medical research including ethical considerations, methodology and how to manage and interpret data appropriately	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	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.	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	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.	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.	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.	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.	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
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.	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.	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.	3

Table 2: Capability Level Descriptors

Capability Level	Task Orientated Capability	Knowledge Orientated Capability	Patient Management Capability
1	Performs tasks under direct supervision	Very limited knowledge; requires considerable guidance to solve a problem within the area	Can take a history, examine and arrange investigations for a straight forward case (limited differential diagnosis). Can initiate emergency management and continue a management plan, recognising acute divergences from the plan. Will need help to deal with these.
2	Performs task in straightforward circumstances, requires help for more difficult situations. Understands indications and complications of task	Sound basic knowledge; requires some guidance to solve a problem within the area. Will have knowledge of appropriate guidelines and protocols	Can take a 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 a 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

Submitting your evidence

Please keep the following in mind when gathering your evidence:

- The evaluators want to see quality, relevant evidence to demonstrate the required capabilities and HiLLOs. It's more important to carefully select your evidence and present it in an organised way, than provide large volumes of minimally relevant evidence
- Triangulated evidence will make a stronger application
- Evidence of your recent practice (i.e. less than 5 years old) will be given more weight, as it reflects current capabilities
- Your evidence must be legible

Your evidence **must** be accompanied by a pro forma signed by the person who is attesting to the validity and accuracy of your evidence (your verifier). It's very important that you read the explanation of how to do this in our important notice about evidence.

You will also need to submit translations of any documents that are not in English. Please ensure the translations you submit meet our translation requirements.

Your evidence must be organised to reflect the structure of the online application for ICM and the SSG

Anonymising your evidence

It is important that you anonymise your evidence before you submit it to us. It is your responsibility and non-anonymised evidence will be returned to you. More information can be found on our website.

You **must** remove:

- All patient identifying details
- Details of patients' relatives
- Details of colleagues that you have assessed, written a reference for, or who have been involved in a complaint you have submitted.

This includes:

- Names (first and last)
- Addresses
- Contact details such as phone numbers or email addresses
- NHS numbers
- Other individual patient numbers
- GMC numbers

The following details **don't** need to be anonymised:

- Gender
- Date of birth

How much evidence to submit

Your evidence **must** cover your knowledge, skills and experience to demonstrate the required HiLLOs and key capabilities in all areas of the ICM Curriculum.

The standards required for the HiLLOs are described in the curriculum framework. If experience demonstrating the HiLLOs and key capabilities was achieved more than five years ago, evidence **must** be provided to demonstrate maintained competence.

As a general guide, most applications are expected to include around 100 electronically uploaded documents. You must ensure that you follow our guidance on how to present and group your evidence in the online application

The total number of documents and assessments presented is less important than the quality of the documents, and the breadth of cases covered. This allows the evaluators to form reliable judgements of performance and capabilities.

It will help us process your application more quickly if you ensure that you only submit evidence that is directly relevant. Triangulation of evidence will strengthen an application – we recommend you delay applying until you have achieved this.

You will not be able to compensate for shortfalls in your evidence of training and experience in a particular area, by providing extra evidence in other areas.

What types of evidence to submit

The speciality specific guidance (SSG) is not exhaustive and you may have alternative evidence. You do not have to submit every type of evidence listed, but you must submit sufficient evidence to address each of the required HiLLOs and associated capabilities.

The formal assessments used by FICM are known as Structured Learning Events (SLEs) and are made up of mini-CEX, CBD, DOPS, ACAT and MSF. These are reliable and valid tools for assessment in medicine recognised by the Academy of Medical Royal Colleges. They are of equal significance and weighting as evidence of key capabilities. Further information on SLEs are in Appendix I.

Top Tips from the FICM CESR Advisory Group

In our experience, unsuccessful CESR applications fail because they provide inadequate or poor evidence of current capability covering the entire curriculum. Below are some top tips for you to consider when making an application:

- Before submitting a CESR in ICM, you must review the current ICM CCT curriculum in conjunction with this document. A strong CESR application will provide evidence to demonstrate that knowledge, skills and experience are equivalent in both the breadth and level of capability, to that set out in the curriculum

- If you do not provide evidence of current capability in all areas of the curriculum, or it is presented in a way that prevents the evaluators from being able to draw from conclusions from your evidence, you may be unsuccessful. This includes the maintenance of HiLLOs and key capabilities over the last five years

- We strongly recommend that your referees provide detailed support for your key capabilities across all or most areas and understand the requirements for specialist training and registration in ICM in the UK

- Most applications cover General ICM adequately, however many do not show sufficient experience of evidence of key capabilities achieved in the following specialties:
  - Anaesthesia (indicative training: 1 year)
  - Internal Medicine (indicative training: 1 year, but can include up to 6 months Emergency Medicine)
  - Speciality ICM placements: Neurosciences, Paediatric and Cardiothoracic (indicative training: 3 months training)
- Failure to show current capability. Where capabilities were acquired more than five years before application they will not be regarded as current, unless evidence is provided to demonstrate maintenance of competence

- Clear evidence of ongoing maintenance of capability or CPD should be presented. CPD should be across the whole curriculum – evidence could include a personal, reflective diary of learning achievements, in addition to detailed evidence of courses attended

- You must provide evidence of managing a broad range of patients, as seen daily by ICM doctors in the UK

We strongly recommend that you closely match your experiences against the current curriculum and provide evidence of equivalence across all areas

How your evidence can be used to demonstrate key capabilities in different HiLLOs

You will notice that some of the suggested evidence is listed more than once. This is because these documents are relevant to more than one HiLLO. For example, MSF can be used to demonstrate competence in most HiLLOs – therefore, you can use the same MSF to demonstrate the required capability across several HiLLOs.

If you have a document that is relevant to more than one HiLLO, don't include multiple copies of it. Instead, provide one copy and list it in your application under each relevant HiLLO, stating that the document is located elsewhere, and you'd like to cross reference it.

Below is a list of evidence that are relevant to most HiLLOs – it is by no means exhaustive, and you are encouraged to submit a variety of evidence.

Evidence	Guidance
Multi Source Feedback (MSF)	MSF is a strong piece of evidence as it is an anonymous feedback exercise. ICM trainees obtain feedback from a minimum of 10 colleagues, annually. You should: • Provided at least 3x MSFs, from different times and placements/jobs • If you don't have MSF, you should include feedback from colleagues of all levels – completed at the time, in the form of letters or references
Appraisal	Appraisal is good evidence of: • Engaging with systems, processes and mandatory requirements • Demonstration of performance, both clinical and non-clinical
Patient Feedback Questionnaire	Formal patient feedback is strong evidence as it is an anonymous feedback exercise. The GMC has a template which can be used in your application. Alternative evidence could include: • Thank you letters and cards from patients • Statements from referees • Testimonials and letters from colleagues • Feedback from patients and colleagues
Supervisor Reports	Contemporaneous reports from trainers/supervisors at the end of placements/jobs are important evidence to affirm and support key capabilities and performance in both clinical and non-clinical activities
Logbooks	Logbooks should include: • Interventional, procedural and case mix details evidencing clinical work across the breadth of the curriculum, workload and patient population • Case mix and details of complementary specialties • Patient's age, sex, diagnosis/management
Referral letters	Referrals are an integral component of ICM. As a guide, you should: • Provide at least two referral letters/emails • Other written communications may include a discharge summary • Coroner reports or Procurator Fiscal letters can be provided
Reflective practice	You should provide: • At least 2 reflective pieces • These should be spread across the application to address relevant HiLLOs • Should be a mixture of clinical and non-clinical practice

SLEs	You should provide a balanced, equal mixture of SLEs across all HiLLOs (except for HiLLO 10). You should: • Provide a minimum of 10 SLEs (in addition to HiLLO 10's requirements) • SLEs can be downloaded from the FICM website Refer to Appendix I for further information
Continuing Professional Development (CPD)	CPD is a vital aspect of evidence which is interwoven throughout **ALL** HiLLOs. CPD represents the acquisition and maintenance of knowledge, skills and key capabilities. You should: • Provide strong supportive evidence, such as certificates from study days, courses, or online learning (e.g. e-ICM and eLFH) Courses you may want to provide evidence of include: • Life support • Teaching • Simulation • Management • Research methodology • Business • Communication • Education

Evidence of training and qualifications

Substantial primary evidence for any previous training towards a medical qualification should only be submitted if the training is directly relevant to your CESR capabilities and dates from the past five years. Otherwise, certificates of completion are sufficient evidence of training.

Primary medical qualification (PMQ)	If you hold full registration with us, you do not need to submit your PMQ as we saw it when we assessed your application for registration. If you do not hold registration, you will need to have your PMQ independently verified by ECFMG before we can grant you full registration with a licence to practise. You can find out more about primary source verification on our website. You only need to get your PMQ verified by ECFMG. The rest of your evidence should be verified in line with our guidance.

Specialist medical qualification(s)	The test of knowledge in the ICM CCT curriculum is the Fellowship of the Faculty of Intensive Care Medicine (FFICM) Exam. An application is unlikely to be successful if an equivalent exam, or evidence of considerable formal academic activity in ICM, has not been provided. Currently acceptable examinations include: ▪ FFICM ▪ EDIC ▪ DICM ▪ FCICM (Including full training programme and success in exam) Exams for other specialties which have an ICM component are unlikely to be considered equivalent. Please provide an **authenticated copy** of any specialist medical qualifications you hold. There are no qualifications from outside Europe that enable automatic entry to the Specialist Register in any specialty. An evaluation is made based on an applicant's whole career and therefore two applicants with the same qualifications but different training and/or experience may not receive the same decision. If your specialist medical qualification is from outside the UK, please ensure that you provide the following evidence **in addition** to your qualification: ▪ Training curriculum or examination syllabus ▪ Formal period assessments completed during training (these may be older than 5 years)

Recent specialist training	If you have worked in posts approved for a specialist training programme for a relevant qualification outside the UK in the past five years, please provide an **authenticated copy** of the curriculum or syllabus that was in place when you undertook your training. If a formal curriculum or syllabus (including assessment methods) is not available please provide a letter from the awarding body outlining the content of the training programme or examination. You must provide evidence of formal periodic assessment during your training. This evidence must have been completed at the time the training was undertaken (if it is completed retrospectively less weight will be given to the information provided). If you do not supply formal assessment documents, the curriculum must demonstrate how you were assessed. A detailed letter of verification from an educational supervisor would satisfy this requirement. If areas for development were highlighted, please provide evidence to demonstrate that you have subsequently addressed them. If you have undertaken approved specialty training towards a CCT or CESR(CP) in Intensive Care Medicine in the UK in the past five years, you should provide a copy of your ARCPs.
Specialist registration outside the UK	Please provide an **authenticated copy** of details of the registration requirements of that authority.

Evidence of employment in posts and duties (including training posts)

Employment letters and contracts of employment	The information in these letters and contracts **must** match your CV. They will confirm the following: ▪ dates you were in post ▪ post title, grade, training ▪ type of employment: permanent, fixed term, or part time (including percentage of whole time equivalent)

Job descriptions	These **must** match the information in your CV. They will confirm the following: ▪ your position within the structure of your department ▪ your post title ▪ your clinical and non-clinical commitment ▪ your involvement in teaching or training.
Rotas	You must provide samples of your rotas from the last three years. These should demonstrate your weekly clinical and non-clinical activities. For example, if you worked a 1:8 rota, you should submit eight consecutive weeks' rota to represent that placement.
Departmental / Unit annual caseload statistics	You should provide departmental and unit caseload statistics, activity data, range and scope of work undertaken in a placement from the last three years.
Appraisal	You **must** provide consecutive annual appraisal from the last five years

The suggested evidence for each HiLLO is not exhaustive and you may have alternative and additional evidence. You do not have to supply every type of evidence listed, but you must submit sufficient evidence to address each of the required HiLLOs and associated key capabilities. The triangulation of evidence will strengthen an application.

HiLLO 1: The doctor will be able to function successfully within NHS organisational and management systems whilst adhering to the appropriate legal and ethical framework

Standard expected: Level 4

Key Capabilities:

- Understand, incorporate and implement national legislation (e.g. 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

Suggested Evidence
• SLEs – as described on page 10
• MSF – as described on page 9
• Declaration of no restrictions on registration or Certificate of Good Standing
• Certificates of completion for the following courses: o Information governance o Data protection
• Evidence demonstrating an understanding of UK data protection issues and concepts of confidentiality. Evidence could include: o Reflections on cases where maintaining confidentiality caused difficulty
• Involvement in developing clinical or organisational policies and procedures. Evidence could include: o Protocol o Minutes of meetings, with attendance demonstrated
• Minutes of meetings or email to confirm attendance at Directorate or higher management meeting
• Postgraduate qualifications or other evidence of further study in management/leadership
• CPD evidence: o Simulation o Human Factors

- Supervisor reports – as described on page 10
- Evidence or letters demonstrating your role as an appraiser or assessor of others

HiLLO 2: The doctor will be focused on patient safety and will deliver effective quality improvement, whilst practising within established legal and ethical frameworks

Standard expected: Level 4

Key Capabilities:

- 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

Suggested Evidence
• SLEs – as described on page 10
• MSF – as described on page 9
Quality improvement (QI) project, clinical audit and clinical governance – evidence of: • Personal involvement in projects, which led to improvement in patient care • Project report and documentation (e.g. protocols or forms) developed as part of project • Minutes of meetings where project discussed, demonstrating attendance and participation
• Portfolio of evidence of self-study
• Minutes of meetings demonstrating your participation in and development of, patient safety procedures • Case reviews, showing participation in the meeting

- Learning and reflections from significant events and challenging cases – as described on page 10
- Feedback from colleagues – this could include:
  - Clinical feedback
  - Educational feedback
- Supervisor reports – as described on page 10

HiLLO 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

Standard expected: Level 4

Key Capabilities:

- 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

Suggested Evidence

- SLEs – as described on page 10

- Qualifications or evidence of further study involving undertaking research:
  - Good Clinical Practice course

- Involvement in research studies within the department, or further study (e.g. MSc/MD/PhD). Evidence could include:
  - Minutes of meetings
  - Personal involvement in study enrolment and trial activity
  - Publications
  - Posters
  - Abstracts
  - Oral presentations

- Involvement in journal clubs:
  - Minutes / event advertisement listing your presentation
  - Attendance lists
  - Presentation delivered
  - Feedback from presentation
- CPD – as described on page 10
- Supervisor reports – as described on page 10

HiLLO 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

Standard expected: Level 4

Key Capabilities:

- 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

Suggested Evidence

- SLEs – as described on page 10
- MSF – as described on page 9
- CPD record of educational activity from the last 5 years – as described on page 10
- Evidence of teaching sessions delivered:
  - Posters advertising teaching events you've delivered
  - Teaching timetables clearly identifying your sessions
  - Presentation slides of teaching you've delivered
  - Letter(s) / email(s) from the Education Centre or Supervisor, confirming your regular teaching involvement – confirming dates and sessions you've taught

- Letters from colleagues describing your role in supervising, mentoring or teaching:
  - Junior doctors
  - Nurses
  - Physician assistants
  - Other allied healthcare personnel
- Evidence of teaching on ‘Life Support’ courses
- Feedback from those taught (formal/informal feedback)
- Evidence or letters demonstrating your role as an appraiser, assessor or examiner
- Supervisor reports – as described on page 10

HiLLO 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

Standard expected: Level 4

Key Capabilities:

- 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 peri-partum 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

Suggested Evidence

This is the specialty specific guidance for Intensive Care Medicine

Please make sure you are reading the latest version. You can find all the guidance you need at www.gmc-uk.org.

• SLEs – as described on page 10
• Logbook of procedures – may be included in a general logbook of caseload activity, as described on page 10. Logbooks should demonstrate: o Your management of a broad range of patients, as seen day-to-day by ICM doctors
• Attendance at a transfer course, **or** • Logbook evidence of patient transfers
• Evidence of valid ALS / ATLS (or similar)
• Feedback from colleagues
• Reflective notes on: o Clinical incidents o Cases that have influenced practice o Significant events o Personal dilemmas Further information on a page 10
• Supervisor reports – as described on page 10

HiLLO 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

Standard expected: Level 4

Key Capabilities:

- 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

Suggested Evidence
• SLEs – as described on page 10
• Evidence of undertaking echocardiography or ultrasound training, and demonstration of maintenance of knowledge and skill: o Case mix logbook
• CPD record of educational activity from the last 5 years – as described on page 10
• Letters or email correspondence to/from colleagues: o Discussing patient management o Showing collaboration in patient care

- Reflective notes on:
    - Clinical incidents
    - Cases that have influenced practice
    - Significant events
    - Personal dilemmas

Further information on a page 10

- Supervisor reports – as described on page 10

HiLLO 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

Standard expected: Level 4

Key Capabilities:

- 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 sold organ transplantation
- Lead and contribute to the skill mix of a multidisciplinary team that will deliver the perioperative management of patients undergoing surgical procedures

Suggested Evidence
• SLEs – as described on page 10
• Logbook of procedures – may be included in a general logbook of caseload activity, as described on page 10. Logbooks should demonstrate: o Your management of a broad range of patients, as seen day-to-day by ICM doctors
• CPD record of educational activity from the last 5 years – as described on page 10
• Reflective notes (as described on page 10) on: o Clinical incidents o Cases that have influenced practice o Significant events o Personal dilemmas

HiLLO 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

Standard expected: Level 4

Key Capabilities:

- 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

Suggested Evidence

- SLEs – as described on page 10
- Logbook of procedures and activities – may be included in a general logbook of caseload activity, as described on page 10. Logbooks should demonstrate:
  - Your management of a broad range of patients, as seen day-to-day by ICM doctors
- Attendance at rehabilitation or ICU follow-up clinics, such as minutes of meetings, letters from clinics indicating applicant's presence, referral letters
- Letters or email correspondence to/from colleagues:
  - Discussing patient management
  - Showing collaboration in patient care
- CPD record of educational activity from the last 5 years – as described on page 10

- Reflective notes on:
    - Clinical incidents
    - Cases that have influenced practice
    - Significant events
    - Personal dilemmas

Further information on page 10

- Supervisor reports – as described on page 10

HiLLO 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

Standard expected: Level 4

Key Capabilities:

- 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

Suggested Evidence
• SLEs – as described on page 10
• Postgraduate qualifications or evidence of further study involving leadership / management
• Letters or email correspondence to/from colleagues, as described on page 10: o Discussing patient management o Showing collaboration in patient care
• Supervisor reports – as described on page 10
• Evidence of attendance at management or Hospital Board meetings, or other meetings which indicate leadership and management capabilities in the wider health environment, such as minutes, action plans and results

- Evidence of organisation of, attendance or actions from MDT meetings

HiLLO 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

Standard expected: Level 3

Key Capabilities:

- 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

Suggested Evidence

Please note: The Initial Assessment of Anaesthetics Competency (IAAC) on its own is **not** sufficient. It can be used to demonstrate competency at the 6 month level if you have had Anaesthetic training outside the UK.

• Logbook of more than 300 cases in total, showing development and progression of skills • You should be able to demonstrate performing emergency Anaesthesia for simple surface surgery in ASA 1 and 2 patients under local supervision
• At least 12 SLEs for appropriate Core Anaesthesia procedures – this does not include the SLEs to demonstrate the IAAC
• Supervisor reports – demonstrating completion of the equivalent to a year of Anaesthesia training
• Equivalent completion of two units of Core training, excluding ITU and Transfer Medicine, via appropriate SLEs, WBAs, logbooks, etc
• Anaesthesia records of charts could also be used, however on they are insufficient on their own

HiLLO 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

Standard expected: Level 3

Key Capabilities:

- 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

Suggested Evidence
• SLEs – as described on page 10
• CPD record of educational activity from the last 5 years – as described on page 10
• Supervisor reports – as described on page 10
• Letters or email correspondence to/from colleagues, as described on page 10: o Discussing patient management o Showing collaboration in patient care
• Logbook of caseload and mix appropriate to a medical placement – as described on page 10

- Evidence to show you're working in a General ICU which accepts medical patients
- Evidence to show you're attending EM and ward referrals

Evidence could include:

  - Logbook
  - Unit caseload activity

- ALS or other Life Support courses

- Reflective notes on:
  - Clinical incidents
  - Cases that have influenced practice
  - Significant events
  - Personal dilemmas

Further information on page 10

HiLLO 12: Doctors specialising in Intensive Care 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

Standard expected: Level 3

Key Capabilities:

- 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 patient
- 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

Suggested Evidence
• SLEs – as described on page 10
• CPD record of educational activity from the last 5 years – as described on page 10
• Supervisor reports – as described on page 10

- Letters or email correspondence to/from colleagues:
    - Discussing patient management
    - Showing collaboration in patient care

- Logbook of caseload and mix appropriate to a 3 month placement

- Evidence to show you're working in a unit which accepts referrals
- Evidence to demonstrate a short attachment to a specialist Neurosciences Unit

Evidence could include:

- Logbook
- Unit caseload activity

- Reflective notes on:
    - Clinical incidents
    - Cases that have influenced practice
    - Significant events
    - Personal dilemmas

HiLLO 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

Standard expected: Level 3

Key Capabilities:

- 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.

Suggested Evidence
• SLEs – as described on page 10
• CPD record of educational activity from the last 5 years – as described on page 10
• Supervisor reports – as described on page 10
• Letters or email correspondence to/from colleagues, as described on page 10: o Discussing patient management o Showing collaboration in patient care
• Logbook of caseload and mix appropriate to a 3 month Paediatric placement and/or • Logbook of attendance at Paediatric emergencies

- Evidence of completion of following courses:
  - APLS or EPALS
  - Child safeguarding
  - Appropriate Paediatric CPD

- Reflective notes on:
  - Clinical incidents
  - Cases that have influenced practice
  - Significant events
  - Personal dilemmas

Further information on page 10

HiLLO 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

Standard expected: Level 3

Key Capabilities:

- 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

Suggested Evidence
• SLEs – as described on page 10
• CPD – as described on page 10 • Evidence of completion of ALS
• Supervisor reports – as described on page 10

- Letters or email correspondence to/from colleagues, as described on page 10:
  - Discussing patient management
  - Showing collaboration in patient care

- Logbook of caseload and mix appropriate to a 3 month placement

- Evidence of having worked in a unit which accepts referrals or a short attachment to a specialist unit. Evidence could include:
  - Logbooks
  - Caseload activity data

- Evidence of undertaking echocardiography or ultrasound training, and demonstration of maintenance of knowledge and skill:
  - Case mix logbook

- Reflective notes on:
  - Clinical incidents
  - Cases that have influenced practice
  - Significant events
  - Personal dilemmas

Further information on page 10

Appendix I

Mapping of SLEs and HiLLOs

High Level Learning Outcomes (HiLLOs) – Intensive Care Medicine	Structured Learning Events (SLEs)				
	ACAT	CBD	Mini-CEX	DOPS	MSF
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 focussed on patient safety and will deliver effective quality improvement, whilst practising within the established legal and ethical framework					✓
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 in Intensive Care Medicine will know what is required to be an effective clinical teacher and will provide educational and clinical supervision to all doctors in training	✓				✓
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	✓	✓	✓	✓	
6) Intensivists 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 and the subsequent provision of advanced organ system support therapies. This will include both pharmacological and mechanical interventions	✓	✓	✓	✓	
7) Will be skilled in the provision of pre-operative resuscitation and optimisation of patients and their post-operative management optimising their physiological status including advanced organ system support where required and managing their pain relief	✓	✓	✓	✓	

8) 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 treatment, discussing end of life care with patients and their families and facilitating organ donation where appropriate	✓	✓	✓		
9) Will have the knowledge and understanding to manage a critical care service, including leading a multidisciplinary team and managing multiple critically ill patients	✓	✓			✓
10) 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) Will have the knowledge and understanding of how to manage acutely ill patients and have the diagnostic, investigational and patient management skills required to care for ward-based patients and outpatients.	✓	✓	✓	✓	
12) Intensivists 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) Will be competent in recognising and providing initial stabilisation and management of common paediatric emergencies and is familiar with child protection legislation in the context of intensive care medicine practice	✓	✓	✓	✓	
14) Will be familiar with the special needs of, and be 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	✓	✓	✓	✓	