INTERCOLLEGIATE BOARD FOR TRAINING IN INTENSIVE CARE MEDICINE (IBTICM)

THE CURRICULUM FOR THE CCT IN INTENSIVE CARE MEDICINE

COMPETENCY-BASED TRAINING AND ASSESSMENT

PART I

Reference Manual for Trainees and Trainers

Revisions and comments:

Comments on the training programme are welcome from all, and should be directed to the Chair of the IBTICM. It will be kept under review and any changes to be implemented will come into effect six months following their publication.

CONTENTS

Terminology and scope of these documents:
The term 'intensive care' in this document is synonymous with 'critical care' or 'intensive
therapy'. 'Intensive care unit (ICU)' is synonymous with critical care unit or 'intensive
therapy unit (ITU)'. High dependency, step-down and outreach care are also considered
in these documents.

SUMMARY

These documents are entitled *The CCT in Intensive Care Medicine: Competency-based Training and Assessment*, but the principles described apply to all training undertaken for the purpose of programmes supervised by the Intercollegiate Board, whether Intermediate training, Advanced Training or training intended to lead to the award of the CCT in ICM with a CCT in a specialty of primary appointment. For the purpose of the CCT programme the terms Step 1 and Step 2 training were originally introduced, to refer to the <u>Specialist Registrar</u> components of training in ICM. The terms can also be used in the context of Intermediate and Advanced Training and are defined as follows:

- Step 1: Intermediate Specialty Training in ICM (four to eight months, normally six, of general adult ICM);
- Step 2: Advanced Specialty Training in ICM (eight to 18 months, normally 12, of ICM)

This is a multidisciplinary training programme which has been developed by the Intercollegiate Board for Training in Intensive Care Medicine (IBTICM) in conjunction with the parent Royal Colleges, Regional Advisors and trainees in ICM, and many other contributors. It is a programme in evolution; revisions will be published when required.

There are six documents:
- Part I (this booklet) is an overview of competency-based training in ICM. It includes current – but evolving – criteria and standards for training, and is provided for reference.
- Part II is the Education & Training Record and Intermediate Curriculum. All trainees in ICM must maintain the ETR. It forms an essential component of the RITA (record of in-training assessments) process, and is also an essential component for the optional UK Diploma in ICM.
- Part III contains the documents for the formal assessments of competence in ICM and the complementary specialties at Basic Level.
- Part IV contains the documents for the formal assessments of competence in ICM at Intermediate Level (Step 1 Training).
- Part V contains the documents for the formal assessments of competence in ICM at Advanced Level (Step 2 Training).
- Part VI contains the documents for the formal assessments of cardiopulmonary resuscitation at Basic, Intermediate and Advanced Training Levels.

Trainees should not normally be expected to progress to a higher stage in training in ICM unless they have satisfactorily completed the preceding stages. Although not an ideal arrangement complementary specialty training may be allowed after Intermediate (Step 1) Training, but must be completed satisfactorily before commencement of Advanced (Step 2) Training.

The Intercollegiate Board will acknowledge satisfactory completion of all of the components of Intermediate or Advanced training formally by letter. Appointment to an approved programme in a post designated for CCT training, followed by satisfactory completion of the training programme and the assessments of competence to Advanced (Step 2) Level will permit trainees to acquire a CCT in ICM awarded jointly with the CCT in the specialty of primary appointment.

1: OBJECTIVE, DURATION AND UNDERLYING PRINCIPLES OF THE PROGRAMME

Objective of the programme

The objective of the programme leading to the award of a Joint CCT in Intensive Care Medicine is to produce high quality patient-centred doctors skilled in ICM as well as their specialty of primary appointment with appropriate knowledge, skills and attitudes to enable them to practise at consultant level in both ICM and their specialty of primary appointment. The Joint CCT referred to in this document may only be acquired jointly with one of the specialties of primary appointment of Anaesthesia, Emergency Medicine, Medicine or Surgery.

Entry criteria for the programme

Entry to all training programmes will require only Foundation Programme competences as set out in the *Curriculum for the Foundation Years in Postgraduate Education and Training.* Trainees applying for a Joint CCT post in ICM will first need to have been appointed to a training post in one of the specialties of primary appointment of Anaesthesia, Emergency Medicine, Medicine or an Acute Surgical Specialty. Before progression to the ICM stage of specialty training, it is desirable that trainees have approximately three months experience of Intensive Care Medicine in a pattern defined by the Intercollegiate Board obtained in whole or in part during the following postgraduate training stages: Acute Care Common Stem (ACCS) Programme at the start of Specialty Training, as part of a Specialty Training Programme in one of the specialties of primary appointment or during training received in a Fixed Term Specialty Training Appointment (FTSTA). This exposure to ICM will allow career decision making and perhaps assessment of aptitude for the speciality. Successful acquisition of the competences to an appropriate level described in the Competency-Based Training Programme documents for Intensive Care Medicine at Basic Level, as defined by the IBTICM and approved by the Postgraduate Medical Education and Training Board (PMETB), before application, is also desirable. Acquisition of the competences in the complementary specialties of Anaesthesia and Medicine, as laid out within the Competency-Based Training Programme documents for Intensive Care Medicine, will also be desirable before application, but it will be possible to achieve any outstanding competences in the complementary specialties after entry to the CCT programme.

Trainees must enter the CCT programme by appointment in open competition as laid down by national regulations. Trainees may be appointed to advertised Joint CCT training posts in Intensive Care Medicine early in Specialty Training, and no later than the end of indicative year five of the specialty of primary appointment programme.

In the future it may be possible to apply directly for a joint specialty training programme of Intensive Care Medicine and one of the specialties of primary appointment (listed in 1.2) at entry to Specialist Training. Similarly, it may be possible in the future to apply for a single specialty CCT in ICM.

Structure of training

The interaction between the specialty of primary appointment programme and the ICM Programme is necessarily complex and requires close cooperation in planning by the Programme Directors and Regional Advisers in ICM and the specialty of primary appointment. The ICM programme will continue to deliver training in the generic aspects

of the specialty of primary appointment programme and where it is appropriate will arrange joint assessments and Recordings of in-Training Assessments.

The competency-based training programme in Intensive Care Medicine (ICM) requires:

i. training in Intensive Care Medicine;
ii. training in the complementary acute specialty of anaesthesia for trainees whose specialty of primary appointment is medicine, an acute surgical specialty or emergency medicine;
iii. training in medicine[1] for trainees whose specialty of primary appointment is anaesthesia, an acute surgical specialty or emergency medicine;
iv. acquisition of a CCT in one of the specialties of primary appointment of Emergency Medicine, Anaesthesia, Medicine or an Acute Surgical Specialty.

ICM training in the joint programme is structured as Basic Training, Intermediate (Step 1) and Advanced (Step 2) Training. Basic Training will be undertaken as a single block of three months. Step 1 will be undertaken as a single block or as a maximum of two blocks of training in general ICM; if it is taken as two blocks these should be of approximately equal duration. Training may be extended as necessary for the trainee to acquire the necessary competences in the complementary specialties before starting Step 2 training. Step 2 training will be planned as a continuous programme within the final 2 years of the total Specialty Training Programme; exceptions to this will only be permitted for obstetric or medical reasons or with the prior approval of the IBTICM. During the blocks of Intensive Care Medicine training in both Steps 1 and 2, the trainee's duties will be exclusively dedicated to the practice of Intensive Care Medicine throughout the hospital.

All training in ICM will take place within the United Kingdom, in approved units, with the exception of any proportion of Advanced (Step 2) Training undertaken in suitable overseas centres with prior approval by the Intercollegiate Board and the appropriate Dean of Postgraduate Medicine. Basic and Step 1 training must be acquired in the United Kingdom (UK). In terms of indicative periods, six months as a minimum of Advanced (Step 2) training must be undertaken in the UK; the remainder may be carried out in approved training units overseas. Prospective approval from the appropriate Dean and IBTICM is mandatory.

Satisfactory completion of all programmes will be required for the award of multiple certification in the specialty(ies) of primary appointment and Intensive Care Medicine. The CCTs will be awarded once training is completed to the satisfaction of the Intercollegiate Board and the College of the specialty(ies) of primary appointment and accepted by the Postgraduate Medical Education and Training Board (PMETB) as so.

Duration of training

Stated training times are indicative, based on the usual considered necessary for acquisition of relevant competences, with the understanding that trainees may acquire competences at different rates. Training times will be varied according to a trainee's progress. The total duration of the joint programme for any particular trainee will vary with the specialty of primary appointment, how much of the specialty of primary appointment's programme is allowable for training in ICM and how much of the ICM programme is allowable for the programme of the specialty of primary appointment. The

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[1] When considering 'Medicine' as a complementary specialty it is understood that this will be an acute medical specialty with unselected acute medical take. Up to one half of this indicative period may be spent in Emergency Medicine.

components that must be carried out to meet the requirements of the ICM section of the Joint CCT are set out in the table below in months:

	Minimum	Maximum	Normal
Basic ICM	3	3	3
Complementary Anaesthesia	4	8	6
Complementary Medicine	4	8	6
Intermediate (Step 1) ICM	4	8	6
Advanced (Step 2) ICM	8	18	12

A basic period of three months is considered to be the minimum required for the trainee to become familiar with the specialty of ICM and the indicative minimum, maximum and normal are therefore identical for this part of the programme. For all other parts of the programme it is considered that the minimum is the shortest period in which the most able trainee will be able to achieve the designated competences and the maximum is that time at which trainee and trainer should consider the appropriateness of the trainee staying in the programme. A table showing how the indicative durations of total training can be calculated for different specialties of primary appointment can be found in the Appendix.

Underlying principles

The following information summarises the principles of the training programme which trainees must fulfil to obtain the ICM component of a Joint CCT.

The principles of the UK CCT training programme are that it:
- is patient-orientated;
- is competency based;
- is planned;
- is evaluated;
- has clear objectives;
- is supervised;
- allows time for study; and
- accommodates the specific career needs of individuals

Generic Learning Outcomes

There is much knowledge in all walks of postgraduate medical training that is common to all specialties. The section below is not intended to replace the content of the specialties of primary appointment but rather to cast the generic aspects into a specific ICM context in a complementary manner. This is particularly true of the skills of team working and communication; these are cornerstones of good intensive care practice.

The generic topics considered are:
- Audit
- Communication
- Governance
- Information management and technology
- Management
- Patient Safety
- Presentation Skills
- Research Methodology
- Teaching

- Team-working

Audit

Clinical audit was defined as 'the systematic critical analysis of the quality of medical care, including the procedures used for diagnosis and treatment, the use of resources and the resulting outcome and quality of life for the patient' in the DH document 'Working for Patients'.[2] Clinical audit identifies opportunities for improvement in patient care and the ways of realising them. This is done through reviewing the delivery of discrete aspects of healthcare to identify deficiencies and identifying ways in which they can be remedied.

The audit cycle includes the following steps:
- observing current practice
- setting standards of care
- comparing practice to standards and implementing change
- re-observing practice to ensure that change has been implemented effectively

Clinical audit can facilitate the change in culture towards evidence-based medicine through clinical guidelines. Standards of care of service delivery can be developed using evidence as their base and may become part of the process of adapting guidelines to local use. Clinical audit can also be used to measure the outcomes of care including patient satisfaction.[3]

The major purpose of clinical audit is to establish and maintain standards of patient care in the context of 'best practice' – the result of striking a reasoned balance between quality, quantity and cost.

The trainee in ICM will participate in audit and more senior trainees are expected to initiate and lead audit projects. These should be designed under supervision and resourced appropriately. The audits should not be confined to the functioning of the ICU; some of the most useful are those that consider long-term outcome and rehabilitation after ICU admission in a holistic manner.

Communication

Communication is an important component of patient care in the critical care setting. The added dimension of a patient unable to communicate requires the involvement of other members of the family or significant others in the patient's life. Traditionally, communication in medical school curricula was incorporated informally as part of clinical teaching, but without a specific or intense focus on the skill of communicating itself. There is now increased interest in researching patient-doctor communication and recognizing the need to teach and measure this specific clinical skill. A systematic review of randomized clinical trials and analytic studies of physician-patient communication confirmed a positive influence of quality communication on health outcomes.[4] To be effective, the clinician must gain an understanding of the patient's perspective on his or her illness. Patient concerns can be wide ranging, including fear of death, mutilation and disability. Distrust of the medical profession is increasingly common and makes effective communication, at least in the early stages of consultation with a patient or relatives, more difficult. Potential outcomes, real or imagined, may be of

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[2] Department of Health White Paper: Working for Patients, 1989
[3] Raising the Standard: The Royal College of Anaesthetists, 2000
[4] Teusch C: Med Clinics of North America. 2003; 87(5):1115-45

great concern. Patient values, cultures and preferences need to be explored. Gender is another element that needs to be taken into consideration. Ensuring key issues are verbalized openly is fundamental to effective patient-doctor and relative-patient communication. Many patients in ICUs cannot communicate verbally but are able to communicate by other means such as writing and non-verbal means. For this reason eye contact and facial expression are both important and bidirectional.

Many patients admitted to ICUs whether as planned admissions or as emergencies are perilously ill. Particularly in the case of unexpected admission the breaking of bad news is a skill that must be developed in the context of the following interactions:

- Patient's/significant others' prior knowledge
- Appropriate speed of delivery in language comprehensible to the recipient
- Confirming understanding
- Appropriate reiteration
- Dealing with others' grief
- Allowing time for assimilation
- Expressing sympathy to an appropriate degree
- Planning and arranging follow-up, either in person or with other team members, for instance palliative care experts

Governance

The Department of Health defines clinical governance as the system through which NHS organisations are accountable for continuously improving the quality of services and safeguarding high standards of care, by creating an environment in which clinical excellence will flourish (2006). It is a central tenet of practice that risk is inevitable and patient safety incidents (PSIs) will occur. Most incidents can and should be managed internally, although some will require the involvement of external bodies. It is vital that ICM trainees have a clear understanding of their roles and responsibilities, in addition to those of other staff members and organisations (Guidelines for the NHS – Investigating Patient Safety Incidents 2006) including:
- Clinical risk manager
- Incident Co-ordination Groups
- National Patient Safety Authority
- Health and Safety Executive
- Healthcare Commission
- Police Service

Risks may arise from both individual and systems failures and ICM trainees should able to recognise both. On a personal practice level they should:
- Recognise potential risks to patients and staff as a result of interventions
- Act in a manner so as to actively minimise risk
- Communicate efficiently so as to minimise risk
- Report incidents that could have or did lead to harm
- Preserve or safeguard evidence relating to incidents in which they are involved

At a systems level it is important they:
- Comply with systems designed to diminish risk
- Understand that systems do fail, but recognise the importance of them doing so in a 'fail safe' manner.
- Actively take part in PSI reporting, attending meetings and undertaking audit

Since risk is inevitable in the healthcare system, trainees must have a clear understanding of the important features of consent laid out by GMC in1998 (Seeking

patient consent: The ethical considerations) and re-iterated in 2006 (Good medical practice):

- Patients must be given information in a way they can understand
- Doctors should ensure that patients understand the risks and benefits of both treatment and non-treatment options
- Doctors must respect the right of patients to be fully involved in decisions about their care

Furthermore, in the ICM setting a proportion of patients will be unable to consent to procedures and treatments due to the severity of their condition. ICM trainees should be aware of the clinicians' role in these circumstances in:

- Taking responsibility for care where an individual is unable to do so
- Understanding the difference between consent (by a patient) and assent (by a relative)

Information Management and Technology

Paper records in the NHS have become unworkable owing to their bulk, lack of adequate filing personnel and facilities, and the problems of transmitting data from one interested clinician to another. Furthermore it is recognised that storage of certain items of information is not only cheaper and easier when in electronic format, but the data is more informative since it is easier to manipulate. This is particularly true in imaging applications. These great changes been recognised by the Department of Health which has launched its 'Connecting for Health'[5] initiative in response. The Department of Health's strategy for developing IT in the NHS, published in 2002, 'Delivering 21st Century IT Support for the NHS – A National Strategic Programme'.[6] This refined the information strategy, focussing on fewer targets and set out the scope and strategy of the National Programme for IT (NPfIT). The key developments are: the implementation of Contract Systems, NHS Care Record Service, Choose and Book, Electronic Transmission of Prescriptions, and Picture Archiving and Communications Systems, all of which will have a profound effect on how all medical staff work within the NHS. The introduction of 'Payment by Results' will make adequate data collection a prerequisite for securing funding for continuing activity

The standard of the European Computer Driving Licence (ECDL)[7] is considered appropriate for health professionals. It is an information technology qualification, established in 1988, and is the only IT qualification to be endorsed by the EU member states as a European Award. In 1996 the British Computer Society began promoting the ECDL within the UK. The NHS (in England) adopted the ECDL as the reference standard for basic IT skills in 2001. NHS Connecting for Health manages the NHS Basic IT Skills (ECDL) Service and offers basic IT learning materials and testing to NHS employees across England, Wales and Northern Ireland. It is therefore considered appropriate that Intensive Care Trainees should complete the ECDL or complete the acquisition of a knowledge base with this as its minimum level. Of course many ICM trainees already exceed this level and since the formal course leading to the ECDL is time consuming trainees are only encouraged to sit the formal course if they start from a low level.

The seven modules that make up the ECDL are:

- Basic concepts of IT

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[5] www.connectingforhealth.nhs.uk
[6] Department of Health Delivering 21st Century IT Support for the NHS – A National Strategic Programme London: Department of Health, 2002
[7] www.ecdl.nhs.uk

- Using the computer and managing files
- Word processing
- Spreadsheets
- Databases
- Presentation
- Information and Communication

In addition to the generic skills defined above, it is essential that trainees in ICM develop a working knowledge of:
1. The Critical Care Minimum Data Set (CCMDS)
2. Severity scoring systems [e.g. APACHE (Acute Physiology and Chronic Health Evaluation)]
3. The Intensive Care National Audit & Research Centre (ICNARC)

The World Wide Web is an invaluable resource for patients and their relatives. Trainees in ICM must appreciate that this is the case and be able to interpret the information presented to them by patients and their relatives, and to dispel misconceptions that may have been obtained from this source.

The World Wide Web is also an invaluable resource for medical professionals. Trainees should be familiar with searchable databases to obtain current evidence based medical information. These include Medline and the British National Formulary.[8]

The threat to confidentiality posed by electronic patient records is an, as yet unresolved, problem that must be borne in mind by trainees.

Management

The NHS is an extremely large conglomerate, whose required outcomes (societal healthcare) are to be achieved with the minimum of expenditure. Thus, whilst clinical skills are central to the end results, all parts of the team and process are necessary for success to occur – mandating the need for effective management. Clinicians in ICM may choose to take part in this management process at a variety of levels, such as management of:
- The multidisciplinary team that makes clinical decisions on a day by day basis
- A unit as a whole – requiring involvement in a wide diversity of areas such as staffing, equipment, finance and safety
- Strategic development of a unit

Lack of involvement in management is not an option for any clinician. The GMC specifically states that doctors will have to act in management roles, albeit at a range of levels (Management for Doctors 2006).

Specific management strategies in business change at least as often as they do in clinical scenarios. Physicians who wish to undertake a wide involvement in this field would be wise to contact the British Association of Medical Managers (BAMM) early in their career path, and become familiar with relevant National documentation (e.g. Code of Conduct for Managers, DH 2002). However, it is vital that all ICM clinicians gain grounding in the basic tools that will allow them to confidently deal with the changing management practices they will encounter.

The optimal management of a clinical situation mandates the work of a multidisciplinary team – with each member being aware of the skills brought to the situation by others.

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[8] www.bnf.org

Having a level of self-awareness that allows them to define their own strengths and weaknesses may aid this process (e.g. Myers-Briggs, Belbin). Similarly, the running of departments and hospitals requires a range of people. Unless clinicians are aware of the wide range of skills, provided by a range of differently trained individuals, required to effectively undertake this, they are likely to be marginalized and their views taken less seriously. Trainees should be aware of this well of knowledge and skill early in their training – and extend their own involvement in it consistently during their training.

Patient Safety

The Department of Health publication 'An Organisation with a Memory'[9] gave great impetus to the patient safety movement in the NHS. It drew attention to the scale and pattern of potentially avoidable patient safety incidents and the devastating consequences these can have on patients, their families and the healthcare staff involved. This report also acknowledged that there has been little systematic learning from patient safety incidents. It proposed solutions based on developing a culture of openness, reporting and safety consciousness. One of the key areas identified was "A much wider appreciation of the value of the systems approach in preventing, analysing and learning from patient safety incidents".

Building a Safer NHS for Patients[10] required the NHS to establish agreed definitions of incidents for the purposes of reporting and recommended the establishment of the National Patient Safety Agency[11] to instigate a national (England and Wales) system for reporting, and learning from error.

The cardinal aspects of patient safety are incorporated in the curricula of the specialties of primary appointment. Nevertheless, the importance of this subject dictates that it should be a constant part of the trainee's education. Furthermore, the relative newness of the subject causes it to be liable to frequent changes and these must be incorporated into the learning process.

During training the trainee must:

- Participate in clinical governance and morbidity and mortality meetings
- Have a working knowledge of Critical Incident reporting
- Foster a culture of openness
- Be willing to admit personal error and deal with the consequences in an appropriate manner
- Understand the tools that can be used in risk management and patient e.g. www.saferhealthcare.org.uk

By the end of training the trainee must:

- Have a working knowledge of root cause analysis
- Have a knowledge of the purpose and function of the National; Patient Safety Agency
- Understand the responsibility to report to the appropriate authority lapses of duty specifically defined HSC 1999/198[12]
- Understand the processes for managing clinical and non-clinical risk

[9] Department of Health, 2000. *An Organisation with a Memory*. London: The Stationery Office
[10] Department of Health, 2001. *Building a Safer NHS for Patients*
[11] http://www.npsa.nhs.uk
[12] Health Service Circular 1999/198 The Public Interest Disclosure Act 1998

Presentation Skills

The need to present information effectively to groups of people is central to the successful working life of a clinician in ICM. It will be important in a wide variety of situations embracing both formal and more relaxed but interactive sessions, including:
- Discussions with relatives
- Multidisciplinary team interactions
- Teaching programmes – both at departmental level and more widely
- Requests for service developments – both within and without hospitals
- Research and training meetings
- Interviews for jobs

The GMC highly values these skills in medics; as teachers, managers and clinicians (GMC resource guides: Diversity and equal opportunity – effective communication).

Presentation skills include a range of different, but complementary skills:
- Ensuring optimum surroundings are available for communication to occur
- Lucid oral communication to groups of individuals
- Effective time management during both preparation and presentation
- Non-hindering body language, including posture, gesture and eye contact
- Provision of written material to act as aide-memoires
- Production of useful visual aids

Gaining experience and confidence in these areas does not happen by accident, but rather requires knowledge and practice. ICM trainees should be expected to undertake formal presentations to groups within the training programme, under conditions where their skills can be actively appraised and assessed. Explicit, timely feedback will be required to ensure adequate skill development is occurring. Differing situations provide the opportunity to observe subsets of these skills, but some or all might be expected to occur in a variety of situations, including:
- Discussions with relatives
- Multidisciplinary ward rounds and meetings
- Formal teaching programmes

Research Methods

The purpose of undertaking research during specialist medical training is so as to develop skills that may be of use in a subsequent medical career. Such skills may allow an individual to become:
- A fulltime academic medical researcher
- An academic clinician undertaking research as part of a clinical career
- A clinician capable of keeping up to date in their field of expertise, despite rapid changes in knowledge and societal expectation, over time

The era of all trainees undertaking a period of research is over. Not only is it an inappropriate use of limited research monies for clinicians to undertake poorly designed research, but it is unethical to expect patients to take part in trials which have little hope of altering or adding to the evidence base available for clinical practice.

For future academic researchers and clinicians a period of time undertaking actual research will be required and this, along with effective training curricula is covered in the CCT for clinical researchers. However, for the majority of clinicians, whilst the necessity

to perform research to further their career will be reduced, it will still be vital to develop a specific subset of research skills. In particular, all clinicians should have the ability to:

- Actively question their current practice, against published practice, as regards individual patient care
- Undertake, as far as is possible and practicable, evidence based practice for all patients
- Search the literature effectively to answer questions arising during clinical practice
- Appraise papers and other research output to assess the utility and safety of techniques described

These skills might be expected to allow clinicians to cope with 'The permanence of change' – a feature recognised as of central importance by both PMETB & the GMC in their document 'Regulating doctors, Ensuring good medical practice' (2006). Moreover, the necessity for increasing the numbers of clinical staff taking part in research and improving healthcare on the basis of evidence is enshrined in the Department of Health Document 'Best Research for Best Health' (2006). However, such skills can be developed in formal teaching programmes, so long as effective assessment of learning is enshrined within them. This might be expected to include evidence of active participation in and assessment during:

- Case based learning discussions
- Journal club presentations
- Ethics presentations regarding both clinical and research scenarios
- Development of potential research protocols to answer important questions in areas of personal interest, where literature is as yet unavailable

Teaching

'Doctors with responsibilities for teaching, training and providing CPD should gain and develop appropriate knowledge, skills attitudes and behaviours' – so say PMETB and the GMC in their document 'Regulating doctors, Ensuring good medical practice' (2006). The GMC further states, in its document 'Good medical practice' (2006) that all doctors should contribute to training, and should therefore be trained in the practice of teaching.

As with any skill, clinical or otherwise, features of effective teachers are not inherent in all, but can be developed. Society no longer expects or accepts that individuals can undertake a clinical skill, practiced upon patients, with no training in that skill. The same should be expected of teaching; since the impact of poor teaching can reverberate through generations of clinicians, in terms of their clinical practice. In terms of the NHS, appropriate training in the practice of teaching might be expected to improve the provision of healthcare, by ensuring that doctor-teachers provide clinicians, patients and relatives of the future, knowledge important to their life or practice, in an effective and timely manner.

Some trainees will develop a particular interest in training and teaching as part of their long-term career plans, and these will be expected to undertake CPD to further these aspirations. However, all trainees should be expected to understand the importance of, and be able to take part in the provision of:

- The different, but linked processes, of appraisal and assessment
- Appraisal of trainees – in particular, eliciting strengths and weaknesses for further development
- Provision of clear learning outcomes at local level; in terms not only of knowledge and skills, but also of attitudes and behaviours
- Appropriate assessment at local level, against both local and national standards, using methods that are recognised to be both valid and reliable

It would be expected that such knowledge and skills might be developed by:
- Undertaking a short introductory formal session in teaching and learning
- Active involvement in appraisal – already acknowledged as a requirement for all doctors
- Practising making assessments and providing feedback, whilst individual skills in assessment are being assessed

Team working

A user participant's view of effective critical care:
> "…where teams of staff work across whole communities to get patients on the right track to leading a normal as possible life again" [13]

ICM is a complex system in which patient care is managed by teams of qualified and unqualified persons and experts in ICM and others whose specialist advice and skills are integral to patient care in its broadest sense. For cases that have more than the shortest ICU stays the number of persons involved usually exceeds one hundred. Quite clearly, then, organisation, management, training and constant review of the team structures and participants is effective for delivery of effective intensive care.

It is recognised that outcomes of health care services are not dependent on single professional groups but are a product of team working[14] [15] [16]. In relation to critical care, the links between patient outcome and teamwork are strong enough to justify using strategies to improve teamwork and collaboration[17] as well as culture and communication[18] [19] with its potential impact on staff retention, staff effectiveness and patient outcomes.

Furthermore, ICM may be perceived as an extended part of different teams delivering patient care; for instance the Royal College of Surgeons of England has established the Extended Surgical Team working party and this is exploring the relationships, not only within surgical teams but in their interactions with others. Many patients managed by Intensivists are admitted to hospital under the initial care of another specialist. I t is necessary for a practitioner of ICM to value and foster team-working and this must particularly be emphasised during training.

The trainee in intensive care will:
- Recognise and value the extent of the central and wider teams supporting patients in ICUs

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[13] Department of Health: Improving services to patients through ongoing development of critical care teams: A project report Drs Kim Manley and Sally Hardy May 2006 Gateway 6492

[14] Senge PM (1990) The fifth discipline; the art and practice of the learning organisation. Currency Doubleday. New York

[15] Borrill CS, Carletta J, Carter AJ, Dawson F, Garrod S, Rees A, Richards A, Shapiro D, West MA (1999) The effectiveness of Health Care Teams in the National Health Service, Aston Centre for Health Service Organisation Research Report

[16] Kennedy I (Chairman) (2001) Learning from Bristol: The report of the Public Inquiry into Children's Heart Surgery at the Bristol Royal Infirmary 1984-1995. Department of Health

[17] Wheelan S, Burchill C, Tilin F. The link between teamwork and patients' outcomes in intensive care units. American Journal of Critical Care 2003; 12(6) 527-34

[18] Shortell SM; Zimmerman JE; Rousseau DM; et al. The performance of intensive care units: Does good management make a difference? Medical Care 1994; 32:508

[19] Audit Commission (1999) Critical to Success: the place of efficient and effective critical care serviced within the acute hospital. Audit Commission. London

- Realize that his or her position in the team varies from time to time and in different circumstances
- Know that the whole team functions better than the sum of its parts
- Lead and follow appropriately
- Engender leadership and team-working among his or her colleagues

Equality and Diversity

Patients, trainees and trainers and all others amongst whom interactions occur in the practice of Intensive Care Medicine have a right to be treated with fairness and transparency in all circumstances and at all times. Equality characterises a society in which everyone has the opportunity to fulfil his or her potential. Diversity addresses the recognition and valuation of the differences between and amongst individuals. Promoting equality and valuing diversity are central to the ICM Curriculum. Discrimination, harassment or victimisation of any of these groups of people may be related to: ability, age, bodily appearance and decoration, class, creed, caste, culture, gender, health status, relationship status, mental health, offending background, place of origin, political beliefs, race, responsibility for dependants, religion and sexual orientation.

The importance of Equality and Diversity in the NHS has been addressed by the Department of Health in England in 'The Vital Connection'[20], in Scotland in 'Our National Health: A Plan for Action, A Plan for Change'[21] and in Wales by the establishment of the NHS Wales Equality Unit. These themes must therefore be considered an integral part of the NHS commitment to patients and employees alike. The theme was developed in the particular instance of the medical workforce in 'Sharing the Challenge, Sharing the Benefits – Equality and Diversity in the Medical Workforce'[22].

Furthermore, Equality and Diversity are enshrined in legislation enacted in both the United Kingdom and the European Union, some of it dating back to the nineteen seventies. Prominent among the relevant items of legislation are:

- Equal Pay Act 1970
- Sex Discrimination Acts 1975 and 1986
- Indirect Discrimination and Burden of Proof Regulations 2001
- Race Relations Act 1976 and Race Relations (Amendment) Act 2000
- Disability Discrimination Act 1995
- Employment Rights Act 1996
- Human Rights Act 1998
- Employment Relations Act 1999
- Maternity and Paternity Leave Regulations 1999
- Part Time Workers Regulations 2000
- Employment Act 2002
- European Union Employment Directive and European Union Race and Ethnic Origin Directive
- Age Discrimination Act 2006

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[20] The Vital Connection: An Equalities Framework for the NHS: DH, April 2000
[21] Our National Health: A Plan for Action, A Plan for Change: Scottish Executive, undated
[22] Sharing the Challenge, Sharing the Benefits – Equality and Diversity in the Medical Workforce: DH Workforce Directorate June 2004

It is therefore considered essential that all persons involved in the management of training (Board, Tutors, Training Programme Directors et al) are trained and well versed in the tenets of Equality and Diversity and it is expected that all trainers should be trained in Equality and Diversity.

It is also considered essential that all trainees in ICM should undergo formal certificated training in Equality and Diversity as part of the ICM programme or part of the programme of the specialty of primary appointment. The benefits of this training are:

1. To educate the trainee in the issues in relation to patients, carers and colleagues and others whom they may meet in a professional context
2. To inform the trainee of his or her reasonable expectations from the training programme
3. To advise what redress may be available if the principles of the legislation are breached

2: INTRODUCTION TO THE PROGRAMME: COMPETENCE AND PROFESSIONAL PRACTICE

Purpose of this document:

This document describes the competences expected of trainees in intensive care medicine, at various points of Specialty Training. It replaces all previous training documents published by the Intercollegiate Board for Training in Intensive Care Medicine (IBTICM) relating to the Joint CCT (formerly CCST) in Intensive Care Medicine. Its content applies to all trainees in ST and FTSTA posts undergoing training in ICM. It will be reviewed annually and any changes to be implemented will come into effect six months following their publication. The IBTICM wishes to receive comments on the Training Programme from trainers, trainees, and other interested parties, particularly patients. These comments should be addressed to the Chairman of the Board.

Curricula leading to a Certificate of Completion of Training (CCT) are required by the Postgraduate Medical Education and Training Board (PMETB) to be competency based. The curriculum for trainees in Intensive Care Medicine (ICM) has been developed to reflect this philosophy. This series of documents describes the competences expected of trainees working towards a Joint CCT in ICM, and has been drawn up after wide consultation with Intensivists from all specialties of primary appointment, trainees, and representatives of specialty of primary appointment training programmes within the Royal Colleges. It also includes advice from Intensivists in many other countries [20]. The Board is indebted to the many individuals and organisations who have participated in this exercise, and acknowledges the use of important source materials which are identified in the references and materials for further reading.

Defining 'competence'

Patients rightly expect doctors in training and specialists to demonstrate competence and professionalism in practice. Each specialty should be able to describe the essential knowledge and skills that together define that specialty, and explain how competence to practise is determined and measured. The purpose of competency-based training is therefore to define for a specific trainee "*the knowledge, skills and attitudes required to undertake safe clinical practice at a level commensurate with stated objectives*".

Professional practice is also described as being "*more than the performance of clinical skills, no matter how complex. It very importantly carries a built-in commitment to standards, and the attitudes which will maintain those standards throughout life*" (Royal College of Anaesthetists' submission to the Specialist Training Authority 2000).

Competence has been defined more broadly as '*the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served*' (Epstein RM, Hundert EM 2002). This document therefore identifies the knowledge, skills and attitudes expected of doctors at various stages in their training in intensive care medicine, and provides guidance to trainees and trainers on methods of assessment. At all times trainers and trainees are expected to comply with the guidance issued by the GMC and by Royal Colleges[1-5].

The NHS Litigation Authority (NHSLA), which has subsumed the Clinical Negligence Scheme for Trusts (CNST) referred to in earlier versions of the Curriculum, has issued standards expected of Trusts. The relevant standard is Standard 2, the 'Competent & Capable Workforce'. In section 5 the documentation that each Trust must hold relating

to the management of trainees, their supervisory meetings and the verification of clinical skills are defined.

The NHSLA has three levels of accreditation, above level 0:

Level 1: 2.5

As a minimum the approved document(s) detailing the procedures to ensure that all medical staff in training (SpRs, F1 and F2 trainees) are appropriately supervised during their clinical placements must include a description of the:

- roles and responsibilities, both across the organisation and locally

- system for ensuring that effective supervision is in place for all medical staff in training in all areas of the organisation

- requirements in relation to the frequency and timing of supervisory meetings

- systems to ensure that medical staff in training have the basic clinical skills required before they work independently

- process for monitoring the effectiveness of all of the above

Level 2: 2.5

The organisation can demonstrate compliance with the standards set out within the approved document(s) which describes a systematic approach to the supervisory process for medical staff in training on initial appointment and ongoing thereafter described at level 1, in relation to the:

- system for ensuring that effective supervision is in place for all medical staff in training in all areas of the organisation

- systems in place to ensure medical staff in training have the basic clinical skills required before they work independently

Level 3: 2.5

The organisation can demonstrate monitoring the effectiveness of the minimum requirements contained within the approved document(s) which describes a systematic approach to the supervisory process for medical staff in training on initial appointment and ongoing thereafter described at level 1, in relation to the:

- system for ensuring that effective supervision is in place for all medical staff in training in all areas of the organisation

- systems in place to ensure medical staff in training have the basic clinical skills required before they work independently

Where the monitoring has identified deficiencies, recommendations and action plans have been developed and changes implemented accordingly

These standards emphasise the need for the assessment of competence and the responsibility of documenting competences and the achievement of training objectives.

Workplace assessments and formal examinations

Assessments of trainees will take place in the workplace and by examination, including specialty of primary appointment exams or equivalent national exams. Trainees are also encouraged to take the UK Diploma of Intensive Care Medicine or the European Diploma in Intensive care Medicine as an additional indicator of specialist knowledge

and commitment. However, although formal examinations are important quality benchmarks, they test knowledge in artificial conditions, and do not usually assess practical competence in the workplace. Competency-based training provides the means to assess trainees in a standardised manner in their place of work and while delivering care to patients. This common framework for assessment allows the IBTICM and the Royal Colleges to support the high quality of training already provided, and to accommodate existing methods for teaching and assessment. It also makes explicit the minimum standards that must be achieved for the purposes of equivalence of training, and recognising training obtained in other countries. These documents consequently define the minimum competences in knowledge, skills and attitudes (including behavioural patterns) that are required to complete Basic, Intermediate (Step 1) and Advanced (Step 2) training. It should be emphasised that these are minimum standards, and it is anticipated that trainees will acquire additional competences during training.

3: LINKING COMPETENCY-BASED TRAINING TO EXISTING METHODS

Overview

Medical training in the UK has traditionally been divided into five years as an undergraduate, one year as a pre-registration house officer, two to four years general or Basic training as a Senior House Officer (SHO), and five to six years specialty training as a Specialist Registrar (SpR). This has now changed with the development of Foundation Programmes (which includes the pre-registration House Officer year plus one additional year) providing two years of experience in a range of disciplines that may include acute medicine and intensive care. The Foundation Programme also requires a demonstration of competence in a range of generic attributes defined in the Curriculum for the Foundation in Postgraduate Education and Training Years' The ICM training programme, being competency-based, can interdigitate well with these developments.

The Board has contributed to Foundation Training by developing competences in the care of the acutely ill patient. These competences can be found in the Curriculum for the Foundation Years in Postgraduate Education and Training, and are reproduced here in Part III of the ICM documents (3.2(b) and 3.2(c)). We have termed these 'Initial assessment of competence in the management of the acutely ill patient'. These competences may be acquired at any time during training in the Foundation Years, ACCS programme, ST 1 or 2, or in a FTSTA post in a relevant discipline.

The Joint ICM programme is built on the philosophy that the practice of ICM is strengthened by multidisciplinary input, and that prior and future training in other disciplines is an essential component in producing experienced clinicians. Basic training usually involves exposure to a range of activities within a primary discipline such as internal medicine, anaesthesia or surgery. In this document this is also referred to as Basic Training. Trainees will usually complete part or all of their primary speciality examinations during this time. They then apply for training posts at Specialty Registrar level to gain specialist training in their chosen discipline. Satisfactory completion of training is recognised with the award of a Certificate of Completion of Training (CCT) in the specialty of primary appointment. During their specialty training programmes, trainees can usually undertake variable periods in activities approved by their Royal Colleges, such as specialty and subspecialty training, or research. This includes competitive application for ST posts in ICM, part or all of which period (depending on the relevant Royal College) can be taken in lieu of training in their primary speciality. Satisfactory completion of training in a post designated for the purpose of the CCT programme will result in the award of a dual CCT in ICM and in the specialty of primary appointment. A CCT in ICM alone cannot presently be awarded.

Training in Intensive Care Medicine

The current requirements for training in ICM are summarised in the Table on pages 12-13. The normal total duration of training will be 33 months, of which 21 months are in intensive care, and six months are spent in each of anaesthesia and medicine. Indicative durations are now quoted however to take account of the fact that competence assessment is to be the mechanism for establishing appropriateness to enter the later stages of training. A variable proportion of this training can be acquired during specialty of primary appointment training. For example, all anaesthetists will undertake at least three months of ICM in ST1 or ST2 level either as part of an anaesthetic programme, an ACCS programme or in a FTSTA post as part of their primary speciality training, and the requirement for anaesthetic training is subsumed in the primary speciality. Similarly,

physicians will have satisfied the requirement for complementary speciality training in acute medicine. It should be emphasised throughout that the periods of training represent *indicative* requirements, and where *all* necessary competences have been acquired in a shorter training period, that period will be, by definition, an adequate period. The anticipated limits are tabulated on page 5.

Before trainees can be appointed to a ST post in ICM, they must have been appointed to a ST post in anaesthesia, internal medicine/acute medical specialty, surgery, or emergency medicine, ('the specialty of primary appointment') and have completed satisfactorily the three months of Basic training in ICM. European regulations do not allow the award of a CCT in the absence of competitive entry to a Specialty training programme, so trainees who wish to acquire a CCT-ICM must undergo a competitive interview prior to appointment to a ST post in ICM. The latest point at which a trainee can enter the CCT-ICM programme is after satisfactory completion of Intermediate (Step 1) Training and before Advanced (Step 2) Training.

Basic Training in ICM

The indicative minimum basic requirement is three months training in ICM. To allow immersion in the specialty this training must be undertaken as a single block. All trainees in anaesthesia and some in acute medicine will obtain Basic training in ICM in years one or two of the specialty of primary appointment. Others will have obtained the requisite competences in a period of ICM training during the Foundation Years and others will have similar opportunities in the ACCS or in FTSTA posts Although the indicative requirement is for three months those posts which offer the longer periods of continuous training in ICM provide better opportunities for reinforcement of learning, improved continuity of clinical care, and more effective integration of the trainee in the ICU team and the activities of the unit. The Board recognises the added value of a more prolonged period of continuous exposure to intensive care at this level and recognises that the trainee who is in a post of a longer duration and with appropriate educational and training content may move on to acquire the competences of Intermediate training in a seamless manner.

Complementary Specialty Training

Complementary specialty training comprises indicative periods of four to eight months in anaesthesia, and four to eight months in medicine. The medicine component may include a maximum of 50% of emergency medicine (EM). Complementary specialty training may be acquired in the following circumstances:

> Specialty Training years 1-3
> Acute Care Common Stem Training
> Fixed Term Specialty Training Appointments

It can also be offered as part of CCT-ICM training programmes. It is usual for a proportion to form part of primary speciality training in anaesthesia or internal medicine – thus anaesthetic trainees will need medicine as the complementary specialty and physicians will need anaesthesia, while surgical trainees must acquire both.

Training in the care of the acutely ill patient can be acquired during Basic Training in GIM or ICM. The *Initial assessment of competence in the management of the acutely ill patient'* (see Part III, 3.2(b) or 3.2(c)) may be conducted at any time during Basic training, including the Foundation Year programme, or General Internal Medicine (GIM) training.

Specialty Training (ST) in ICM: Intermediate and Advanced Levels

Specialist education and training in ICM comprises Intermediate and Advanced components.

Intermediate Training (Step 1)
is an integral part of the CCT-ICM programme, but it is also available as a separate component for those trainees who wish to acquire competences that equip them to contribute to the care of critically ill patients without necessarily becoming specialist Intensivists. It consists of between four and eight months dedicated education and training in ICM at ST Level, with a normal expected duration of six months, complementary specialty training in anaesthesia and medicine, and the prior acquisition of three months ICM at Basic Level. Step 1 refers to the four to eight months ST training in ICM. This must be taken as either one or two blocks and, if the latter, these should be of approximately equal duration

Intermediate competences can be acquired outside the CCT-ICM programme provided that training has been undertaken to the standards defined by the Board and in programmes of training approved by the Board. There is no formal Intermediate level certification other than confirmation by the relevant Regional Advisor and the Board that the trainee has satisfactorily completed this training.

Advanced Training (Step 2)
consists of a further continuous block of ICM, in addition to the prior acquisition of Intermediate (Step 1) training. The expected duration required to achieve the competences is eight to eighteen months, with a period of twelve months the expected norm. It can only be acquired after competitive entry to an approved programme of training in ICM. Up to six months of Advanced Training may be undertaken in approved units overseas, given prior approval by the Board and return to the UK more than three months before the CCT date. This is the training required for those who anticipate a career as an Intensivist either with or without a parallel commitment to the specialty of primary appointment.

Specialist level training in ICM therefore requires between fifteen and twenty nine months in intensive care and between four and eight months each in medicine and in anaesthesia, mostly in addition to the training required for specialisation in a specialty of primary appointment (anaesthesia, medicine, surgery, emergency medicine). Satisfactory completion of training in ICM and in the specialty(ies) of primary appointment will result in the award of a joint CCT: [specialty(ies) of primary appointment-ICM]. A CCT-ICM cannot presently be awarded alone in the absence of a CCT in a specialty of primary appointment.

Appointment to a ST post in ICM leading to a CCT-ICM

Before a trainee can be appointed to a ST post in ICM, he or she must have
 ➢ acquired the competences of Basic training in ICM
 ➢ been appointed to a Specialty Training post in anaesthesia, medicine, surgery, or emergency medicine

Appointment is competitive and Deanery based. It is permitted for trainees with a specialty of primary appointment Training Number with one Deanery to apply for training in ICM in a different Deanery. Trainees will retain the Training Number of their specialty of primary appointment following appointment to the ICM training programme.

As trainees will usually leave their primary speciality training programme to acquire ICM training, it is essential that Regional Advisors plan the appointments process and the individual training programmes as far in advance as possible, and that they maintain close communication with the relevant primary speciality training committees. A lead-in time of six months between appointment and taking up the appointment is desirable.

Competences and the Intermediate Curriculum

Competency-based training clarifies what should be taught and learnt, and how these elements should be assessed. Sections 4 & 5 (vide infra) describe methods of assessment. Confirmation of satisfactory competence must be documented using the forms provided in Parts III, IV, V and VI of the training manuals. These define the minimum criteria for satisfactory completion of ICM training at Basic Level, at Intermediate Level, Advanced (Specialist-CCT) Level and finally the particular competences relating to Cardiopulmonary Resuscitation.

It is important to realise that although competency-based training takes precedence over modular time-based training, trainees are expected to spend the minimum periods defined for the various components of training. This is in explicit recognition of the fact that ICM is a practical as well as an intellectual discipline and therefore experience is required. However, trainees are likely to progress at different speeds and achieve competences at different rates. Some trainees may therefore require longer periods than others in particular modules, while others may progress faster and thus encompass a greater variety of competences or achieve a wider portfolio of skills. Equally, it is important that ICM training occurs in certain minimum continuous periods so that the trainee may benefit from the experience of continuity of care of multiple complex disease processes co-existing and evolving over relatively short periods.

The Syllabus on which the competences are based is described in detail under specific domains in the Education & Training Record (Part II of these documents). The documents should be used:

➢ by trainees as a guide to their progress and to facilitate self-directed learning
➢ by trainers to consider how best to arrange the clinical experience which can be offered within a training programme.
➢ as a resource for planning educational programmes and tutorials.

Implications of competency-based training for specialists: ensuring a safe environment for patient care through group competences

Learning is – or should be – a life-long process, and it is clearly unrealistic to expect the acquisition and retention of competence to be static. Specialists may refine, acquire or lose competences in various areas depending on the clinical environment in which they work. It is thus possible for a consultant who has previously undertaken ICM training to Intermediate Level, to acquire through professional practice the competences expected of a specialist and to work as a specialist, though without the specific recognition of a CCT in ICM. Similarly, a specialist in ICM may find over the years that he or she has through underexposure lost competence in a particular skill or procedure. In this situation it is the responsibility of the ICU team to ensure that the necessary competences are available (within the group, the unit, hospital or service) to ensure a safe environment, adequate training and supervision, and the delivery of quality patient care.

SUMMARY OF REQUIREMENTS FOR TRAINING IN INTENSIVE CARE MEDICINE

	Definitions and requirements	Variances	Notes
Basic ICM Training	Three months ICM training in educationally approved posts	Must be taken as a continuous block. Time may be extended if competences are not acquired in 3 months.	It is desirable that this is completed before entry to ST-ICM programme. It may be undertaken as part of ST training in the specialty of primary appointment prior to entry to the ST-ICM programme or in an FTSTA or as part of ACCS training.
Complementary Specialty Training	4-8 months of anaesthesia and 4-8 months of acute medicine (of which up to 50% may be Emergency Medicine.),	The period may vary according to rate at which competences are acquired.	Competences may be acquired after Joint CCT ST-ICM appointment, but must be satisfactorily completed before starting Step II training.
ST post in specialty of primary appointment	Essential prior requirement for Joint CCT ST-ICM training.	None.	Specialty Registrar training programme in Emergency Medicine, Anaesthesia, Medicine or Surgery.
Competitive entry to ST-ICM programme	Competitive application to 'open' ST post in ICM. The trainee must already have a National Training Number in a specialty of primary appointment. Trainees must have been assessed as competent at Basic Level.	None.	Training post must be open to applicants from Anaesthesia, Internal Medicine, Surgery and Emergency Medicine. Closed or specialty-specific posts cannot be used for joint CCT ST-ICM training.
Intermediate (Step 1) Level Training	4-8 months of ICM, generally taken in the first 3 yrs of specialty of primary appointment training. Trainees must have been assessed as competent at Basic Level. All trainees must	Minimum blocks of one half of projected duration of module Intermediate Level ICM training (outside the CCT-ICM programme) can be counted towards Joint CCT ST-ICM programme provided that training is to the standards defined by the IBTICM. If the trainee elects not to	Trainees wishing to undertake Intermediate Level training within their specialty of primary appointment must discuss this with the Regional Advisors in ICM and in the specialty of primary appointment. Trainees should be supervised by the IBTICM as well as the specialty of primary appointment, and must register with the IBTICM if they wish to receive recognition of Intermediate training, even if

	complete the Education and Training Record, including ten case histories.	continue to Step 2, this period may be designated Intermediate Training, but if appointed to the joint CCT ST-ICM, this may replace part or all of Step I.	they do not intend to progress to Advanced Level Training.
Advanced (Step 2) Level Training	Eight to eighteen months, with an indicative period of ICM training in a single block, taken in the later stages of specialty of primary appointment training. Trainees must have satisfactorily completed Basic and Intermediate training in ICM and Complementary Specialty training.	Trainees who enter the Joint CCT programme without having done more than Basic ICM Training may complete the requirements for the ICM component of the Joint CCT in a single continuous module.	Trainees who undertook Intermediate (Step I) training outside the CCT ST-ICM programme must undergo a competitive allocation process for entry to Advanced (Step 2) Training. Advanced Level Training taken outside the CCT ST-ICM programme will not count towards a CCT in ICM. Advanced Level Training must be undertaken in the final 2 indicative years of the joint CCT ST-ICM programme. Maximum of 6 months prospectively approved and satisfactorily completed overseas ICM training may be counted.
CCT-ICM plus CCT specialty of primary appointment	Awarded as a Joint CCT to trainees who have satisfactorily completed both specialty of primary appointment training and ICM.	None.	

All specialist training in ICM must be undertaken in units that have been approved by the PMETB.

4:   GENERAL PRINCIPLES OF SUPERVISION AND ASSESSMENT

The purpose and nature of assessment

Assessment is an iterative process designed to ensure that trainees progress through and eventually complete the training programme with a sufficient body of knowledge, with the necessary skills and with appropriate attitudes to practise the specialty competently and ultimately independently. Assessments in medicine commonly comprise two types, examinations and workplace based assessments.

Examinations

In the Joint CCT in ICM the examinations required by the specialty of primary appointment to proceed through the training programme of the specialty of primary appointment are taken to be a sufficient test of the fundamental scientific principles underlying the practice of ICM. The clinical knowledge and skills are assessed by processes of workplace based assessment that are described in more detail below. Trainees undertaking the Joint CCT programme are encouraged to sit the Diploma of Intensive Care Medicine towards the end of their training. This is a professional examination involving the production of a dissertation, which may be exempted by a previous thesis for a higher degree, and discussion with examiners to ascertain appropriate integration of knowledge into practice. This examination is not a required part of the programme. Henceforward in this section on assessment the word assessment will be used to mean workplace based assessment (WBA).

Supervision and progression to independent practice

All patients receiving or requiring critical care are entitled to receive that care under the overall supervision of a designated consultant. The level of supervision and the extent to which care will be delivered by trainees or non-specialists is the responsibility of the consultant. Every doctor must therefore be prepared and able to oversee the work of less experienced colleagues and must make sure students and qualified doctors in training are properly supervised[23]. Trainees should seek advice and assistance as early as possible whenever they are concerned about patient management. At all stages of training, a supervisor must attend whenever a trainee requests them to do so.

An essential part of the process of becoming a specialist involves gaining confidence in independent practice, and learning how to supervise other less experienced members of the team. Senior trainees must therefore gain instruction in, and experience of, supervising more junior staff. Although a junior trainee may refer to them as their first line of advice and assistance, both of these trainees (the junior and senior) will be subject to supervision from a designated consultant. There will be some occasions during highly specialised training when it will be inappropriate for senior trainees to act as supervisors: they themselves may then require close supervision from a consultant.

There are three levels of supervision:

- **Immediately available**
  the supervisor is with the trainee or can be present within seconds of being called.

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[23] *Good medical practice*, GMC 1998, paragraph 10: *The doctor as teacher*, GMC 1999, paragraph 5.

- **Local**
  the supervisor is on the same geographical site, is immediately available for advice and is able to be with the trainee within 10 minutes of being called.
- **Distant**
  the supervisor is rapidly available for advice but is off the hospital site and/or separated from the trainee by more than 10 minutes. The maximum time or distance separation permitted will depend upon the combination of the trainee's competence, the nature of the clinical work, local geography and traffic conditions. Local guidelines should be in place and followed. Support for trainees during distant supervision is specifically reviewed as part of the Quality Assurance process. Distant supervision requires that both trainee and supervisor consider that it is appropriate, that the trainee knows the limitations within which he or she can work, and that the trainee can manage the likely progression and complications of disease processes and of procedures undertaken until the supervisor arrives. It is the responsibility of consultants and managers to ensure that patients are cared for in a safe environment.

Principles of workplace based assessment

Trainers must be honest and objective when assessing trainees: otherwise, not only does the process become fundamentally flawed, but patients may be put at risk[24]. The first point of contact for all trainees in ICM is their Board Tutor, who is the equivalent of a specialty of primary appointment College Tutor. The Board Tutor will need to maintain good communication with the trainee's specialty of primary appointment College Tutor, as well as with the Regional Advisor in ICM, who in turn will communicate both with the corresponding specialty of primary appointment RA and with the IBTICM. Assessments must be performed by the Board Tutor or other designated consultants who meet the criteria to be trainers[25].

All trainees must maintain their Education & Training Record (Part II of the training documents), as the basis for a personal portfolio documenting all relevant aspects of training including educational contracts and the outcome of assessments.

The assessment of competence should observe the following principles:
- Assessment should be targeted at stated objectives; methods should be as reliable as possible.
- Assessment of competence is an essential professional requirement that should be conducted carefully but with the minimum of disruption to clinical activity.
- Assessment (including that of attitudes) will progress throughout training from well defined, predominantly skill and knowledge based measures at Basic Level to wider professionally based measures in the later stages of specialist training.

Assessments will be based on the observations of several individuals.

Aims of Assessment

The general aims of assessment of doctors in training are to ensure adherence to the precepts of Good Medical Practice[26], namely:
- Good clinical care
- Maintaining good medical practice

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[24] *The doctor as teacher*, GMC 1999, paragraph 7
[25] A trainer is defined in *The CCT in Anaesthesia, I: General Principles*
[26] Good Medical Practice, General Medical Council, May 2001

- Teaching and training, appraising and assessing
- Maintaining good relationships with patients
- Working with colleagues
- Maintaining probity
- Maintaining health

The aims of assessment are to ensure that the trainee has met the required standards of development and learning outcomes at each stage in the curriculum, and that he or she is making satisfactory progress. In particular, these standards include the requirements that a doctor practising intensive care medicine has demonstrated:

- an understanding of the responsibilities of being a member of the medical profession
- the ability to exercise professional judgement
- a proactive approach to continuing professional development including reflective practice, educational contracts and portfolios
- evidence of actions to ensure optimal use of educational materials and opportunities, progress in training, and continuing professional development
- an understanding of the multi-professional nature of health care
- the specific knowledge, skills and attitudes required to practise intensive care medicine

Methods of Assessment

Assessment is conducted in the workplace, often (and most appropriately) during routine clinical practice, and should incorporate the views of several individuals with sufficient knowledge of the trainee to make a judgement. Assessment is most emphatically not an examination, and is not intended to test all aspects of a trainee's knowledge. In essence, it should determine whether the trainee is safe, sensible, supportive and sensitive, in his dealings with patients, relatives and colleagues. It should demonstrate development of knowledge in specific domains, and may appropriately be repeated to test different levels of knowledge of the same subject as training progresses.

Examples:

- A patient's urine output has been low for several hours. During the ward round the consultant determines whether the trainee has identified this fact, has considered possible causes, and can briefly propose appropriate actions to remedy the problem.
- Transfer of a mechanically ventilated patient to the CT scanner is planned. The trainee describes the steps required to make this a safe transfer, and performs the task under supervision of a more experienced registrar.
- The decision has been made to discontinue active treatment and allow a patient to die. The senior nurses report that the trainee was supportive and empathic in his approach to the family and the nurse at the bedside.
- A trainee frequently arrives late for clinical duties, is often absent from the unit at busy times, has failed to complete his educational contract in the first two weeks of the module, and has failed to leave his telephone contact number. His medical and nursing colleagues know little of his personal circumstances.

In the first example, the assessment takes only a few minutes; if the trainee has not identified the problem, he may not yet be 'safe', even though he may have a good grasp of theoretical knowledge. This episode can then become a learning opportunity instead of an assessment. In the second, two trainees have been assessed, the more junior in his ability to perform the transfer, the more senior in his ability to supervise a junior

colleague. In the third example, assessments have been made by other experienced individuals, thus sharing the burden of competency assessment and utilising information from several sources. In the fourth, there is very likely to be some underlying personal or attitudinal problem which may indicate that this doctor is unsuitable for continued practice in intensive care (and perhaps in medicine generally), and mandates investigation. In all these examples, it is expected that the trainer will make the judgements of competence based on direct personal observation by himself together with experienced colleagues.

Good assessment is a fundamentally important task, and central to the process of 'growing' better doctors. It will only work if clear aims are set and agreed with the trainee at the beginning of the programme or each module, with regular review. Assessment is thus a continuous process but with key points for recording purposes. These include the development of an educational contract early in each module of training, regular meetings between trainer and trainee, and clear documentation.

Specific forms of assessment include:

- Mini clinical evaluation exercise (Mini-CEX)
- Direct observation of procedural skills (DOPS)
- Case based discussion (CBD)
- Multi-source feedback (MSF)

Mini-CEX is an evaluation of an observed clinical encounter with developmental feedback provided immediately after the encounter. A Mini-CEX is one form of observed clinical encounter; there should be a different observer for each mini-CEX, where possible. Observers may be experienced trainees or consultants and should include the Board Tutor. Each Mini-CEX should represent a different clinical problem.

DOPS is a structured check list for the assessment of practical procedures. DOPS is another doctor-patient observed encounter and could replace or parallel Mini-CEX in some circumstances. It comprises one or two observed procedures in appropriate areas of work with a different observer for each encounter, where possible. Observers may be consultants, trainees, nurses or allied health professionals. Each DOPS should examine a different procedure.

CBD is a structured discussion of clinical cases managed by the trainee. Its particular strength is evaluation of clinical reasoning. It comprises a structured discussion of real cases in which the trainee has been involved and allows the trainee's decision-making and reasoning to be explored in detail.

MSF is a collation of views from a range of co-workers and was previously described as 360° assessment. There should be a large number of raters, most of who should be consultants, fellow trainees and nursing and allied health professional colleagues. The views of non-professional colleagues and patients may also be of value and it is considered appropriate, and has been validated for the trainee to name his own list of raters. This form of assessment is also known as a peer assessment tool (PAT) or team assessment of behaviour (TAB).

These assessment tools are all valuable in determining the knowledge and skill of trainees but they all have other values. DOPS and Mini-CEX can assess trainee-interaction and the attitude of trainees, as can MSF and CBD. CBD is particularly valuable in assessing the trainee's capacity to integrate his theoretical knowledge into good clinical care; MSF also assesses this, and the trainee's personal presentation and level of self-awareness.

The educational environment

Assessment should be based on multiple perspectives, including all experienced health care personnel. Important insights into a trainee's abilities can be gained from senior nurses, physiotherapists, ward clerks and others who regularly interact with doctors. The views of patients and relatives may also inform the process. Assessment is not a passive process, and the trainee should be encouraged to participate in reflective learning and self-assessment. The Education and Training Record is intended to provide the basis for an educational portfolio which facilitates this reflective learning.

For this approach to be effective, a supportive environment is essential, and must be accompanied by clear learning strategies. Each trainee should have a mentor to whom he can turn for advice. Trainees should be encouraged to take responsibility for their own education, and to offer their own views on the training and support that they receive. Constructive criticism should flow both ways, and the ethos of the clinical environment should be based on openness, trust, and a firm focus on patient safety.

Timing and documentation of assessments

Assessment is a continuous process, but the European Working Time Directive and the consequent introduction of shift-working place constraints on the ability of trainers to interact with trainees. This is why it is so important to undertake the assessments during routine clinical work whenever opportunities present, and to involve all colleagues with sufficient expertise to assist with and inform the process of assessing competence.

Competence assessments should not be made too early in modular training, or so late that the validity of the process is undermined or the chance for remediation lost. It is the responsibility of the trainees to ensure that their documents are up to date, and failure to complete the competency assessments may be an indicator of poor organisational skills.

Trainees who are progressing through a number of modules do not need to complete all the competency assessments during the first module. Indeed, it is unlikely that, for example, all the Advanced Level competences could be completed within the first six months; adequate time is required not only for acquisition of skills but also for their reinforcement and integration.

Trainers should ensure that at least one other colleague is involved in confirming that a trainee has acquired each set of competences. Assessments have greater validity if they are informed by the opinions of a number of other colleagues.

It is essential that potentially adverse assessments are identified early. It is not only unfair for the trainee to learn at the end of a module that he has not met a safe standard; it is also difficult to implement remedial training.

Trainees in difficulty

Failing trainees are a rarity. They are a surprise, because trainees in any medical speciality have a record of success. They have come through school exams with high grades, achieved admission to medical school and sustained an adequate level of success therein, and then joined, and persevered in, speciality training. Some have moved half way across the world, enduring cultural dislocation as well as climatic stress. They have been examined, assessed, tested and tried, and overall not found wanting. This is if anything more applicable to Intensive Care Joint CCT trainees than those in other specialities, as they must successfully negotiate acceptance into the training scheme taking into account their achievements in their parent speciality. These are high

fliers: how can they fail? But are at risk of doing so, and it may help in managing those at risk to understand why.

Trainees in Intensive Care Medicine (ICM) typically have the following characteristics:

- Aged between twenty five and thirty five
- An unbroken record of examination and assessment successes
- High personal, family and peer group expectations of success

They are in the later stages of psychological maturation and in this period, fundamental alterations in behaviour are unusual, as are radical changes in career pathway. When these high achievers begin to fail, it cannot be dismissed as just one of those things, can happen to anyone: there is usually a cause. If you are involved in running a training program, there must be a duty to find that cause, and remedy it if it can be remedied, before removing the trainee from the program.

Impending failure

Impending failure may become apparent in different ways:

- Failure to acquire knowledge and skill based competences in a timely manner, resulting in failure to pass assessments.
- Poor working relationships with colleagues, poor professional relationships with patients & families.
- Inability to apply knowledge appropriately in clinical situations

Impending failure may arise from adaptive or personal causes.

Adaptive Causes

Adaptive causes of failure include:
- Failure to integrate knowledge into clinical practice: there may be inappropriate ranking of differential diagnoses; poor choice of diagnostic tests or therapeutic trials; or simply failure to recognise patterns or achieve straightforward diagnoses
- Attitudes which are overly hierarchical, intolerant of advice and demonstrate poor leadership skills. This may stem from poor role models, or a rigid, insecure personality.

These causes of failure are difficult to manage, as they arise from the personality. This is very difficult to change and may be impossible within the structures of training programs. Behaviour modification may succeed, in less severe manifestations. Such trainees may need to be redirected to less challenging fields of endeavour, or to less demanding roles within the field

Personal causes

Personal causes of failure have many origins which should be considered. They include:

- Illness, commonly psychiatric, but also physical. Depression is not uncommon in this age group and professional demands may unmask obsessive compulsive disorder. Physical illness, though less common, may be masked, for example hypothyroidism.
- Injury, particularly previous head injury, may have limited the trainee's physical or intellectual capacity.

- Indulgence: excessive use of alcohol or drugs and too active a social life may be a major factor in poor performance.
- Insight, developing late, into what the trainee increasingly realises is the wrong choice of speciality or career, may manifest as failure to perform satisfactorily.
- Internal conflicts owing to cultural dislocation or religious incompatibility with medical practice may be problematic
- Finally, difficulties in personal relationships may cause underperformance

Any of these problems can occur, often without warning, sometimes multiply: it is common for depressives to exacerbate their state by overindulgence in alcohol, or for physical or mental upsets to be exacerbated by relationship difficulties.

These problems may be well known to the peers of the trainee when the trainers are oblivious. In many cases a quiet chat with a sensible fellow trainee may be enough to clarify the problem, though multi source feedback may be necessary to back this up evidentially.

Not all problems are remediable, but some are, and others get better with time. Trainees should be able to expect, at the very least, that failure will be seen as needing support and investigation rather than simply resulting in removal from a training program.

It is rare for trainees to present significant problems in training and professional practice, and the great majority are hard working and enthusiastic when they form part of a supportive team committed to quality care. Those few trainees who demonstrate difficulties in meeting appropriate standards of practice can usually be helped to overcome their problems by close monitoring, structured training and a supportive environment.

Occasional trainees will present more difficult problems for the trainer. The most common are inappropriate attitudes and forms of behaviour which may become manifest in many ways and which are often more apparent to nursing staff and the trainee's peers than to senior medical staff. Failure to identify and ameliorate these problems can lead to considerable dissatisfaction amongst the staff, with adverse consequences for team-working and patient care. Less frequently, lack of competence has serious implications for patient safety. Unsafe trainees cannot be allowed to function without direct supervision and may have to be excluded from the clinical environment. It is not acceptable to allow failing doctors to continue in practice without remedial action being taken. In these circumstances, precise documentation with specific instances supported by other colleagues is essential to justify the action taken. Patient safety must come first.

Several agencies or responsible bodies may be involved in helping a failing trainee. The first is the Board Tutor. Where patient safety is an issue, the Tutor should inform the Trust and the specialty Clinical Tutor, and may need to invoke disciplinary procedures. The Deanery must be informed and their advice taken. When the problem is due more to poor performance and suboptimal training, the Tutor should discuss matters with the primary speciality tutor and relevant regional training committee. In the case of STs in the early stages of training, this should be directed initially through the relevant specialty of primary appointment. Problems affecting more senior trainees in ICM should be directed to the Regional Advisor in ICM and the regional ICM training committee, who will liaise with the relevant primary speciality committee. The Deanery should be involved if remedial action is ineffective.

Finally, the working environment of the ICU, or even an acute hospital environment of any specialty may evoke manifestations of stress in some trainees. This is particularly the case if there is instability in other aspects of the trainee's life simultaneously. Such episodes are rarely sufficient to require a career and most may be managed by local

trainers once recognition of the problem has occurred. Failing easy resolution, the services of Staff Health Departments and Deanery counselling services should be invoked.

Responsibilities of the Board Tutor

The Board Tutor is the equivalent of a Royal College Tutor. He or she has the responsibility for managing the pastoral care and education of trainees in ICM, monitoring their progress during training, contributing to regional training committees and their work, and supporting the work of the Board. The Tutor is responsible to the Board via the Regional Advisor. Tutors are not expected to undertake all educational activities themselves, but should coordinate the delivery of training and education and the assessment of trainees' competence by other experienced and senior members of staff, by whom the Tutor should be fully supported. Tutors must be committed to multidisciplinary training, and must ensure timely and effective implementation of educational processes.

A full description of the roles and responsibilities for Tutors is available from the Board.

5: ESTABLISHING AND MAINTAINING EDUCATIONAL PROCESSES IN ICM

The Education & Training Record: establishing a framework for individual learning

All trainees must maintain their Education & Training Record (Part II of the training documents). When they start a training module in ICM they should:
- complete an educational agreement or equivalent method for assessing training needs within the first two weeks
- attend to self-directed learning
- arrange dates for regular review of their progress at least every three months
- undergo formal Assessments of Competence (Parts III, IV and V).
- recognise that assessment will involve the professional judgement of the assessor
- recognise that assessment is a continuous process especially that of behaviour and attitudes
- arrange presentation of records of in-service training assessments (RITA) to demonstrate that they have documented satisfactory progress
- maintain a portfolio of educational activities within their ETR.

Tutors will be expected to communicate closely with the relevant College Tutor for the trainee's primary speciality. There should be an initial assessment at the start of training (within the first few days), and an outline educational agreement must be established between trainer and trainee within the first two weeks. This should be reviewed regularly. Progress should be assessed at least every three months, and should be based on the educational contract and the formal Assessments of Competence (Parts III, IV and V).

Using the Intermediate Curriculum for ICM (Part II, ETR) for teaching and reflective practice

The curriculum for training in adult ICM is described in The Education & Training Record (Part II) categorised by domains. These domains relate to the whole course of training in ICM. The content of each domain is presented as *Knowledge, Skills, Attitudes and behaviour,* and *Workplace training objectives*, in addition to basic sciences for which only knowledge is listed. The *Workplace training objectives* are intended to assist trainees' self-directed learning and to indicate key aspects of clinical practice that they could be expected to demonstrate in order to satisfy their workplace assessments. The competences only refer to adult practice, except for the section for paediatric intensive care, which lists the paediatric competences expected of a practitioner of adult intensive care.

The curriculum can be used by trainers to evaluate the range of clinical experience which may be available in their training programmes, and for the trainees to monitor their own progress from Basic, through Intermediate, to Advanced training. Both will find it useful in developing local educational programmes, from informal bedside teaching to structured tutorials and formal lectures. It may also be used to provide a framework for appraisal, perhaps with greater emphasis being placed on aspects of professionalism.

Trainees need to understand that learning is an active process fostered by enthusiasm and sustained by commitment. Apathy will eventually inhibit the most committed of teachers. Informal teaching at the bedside often needs the stimulus of an enquiring mind if it is not to be displaced by service demands. Tutorials and lectures require active

participation by the trainees, and cannot always be delivered within normal working hours.
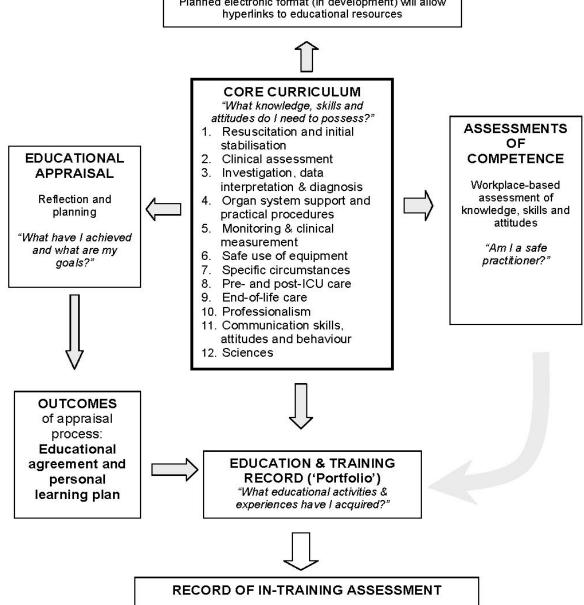
CORE CURRICULUM, APPRAISAL & COMPETENCY ASSESSMENT

Relationships and documentation of educational processes and outcomes

EDUCATIONAL RESOURCE FOR TRAINERS & TRAINEES

Topics for formal and informal educational activities

Planned electronic format (in development) will allow hyperlinks to educational resources

CORE CURRICULUM
"What knowledge, skills and attitudes do I need to possess?"
1. Resuscitation and initial stabilisation
2. Clinical assessment
3. Investigation, data interpretation & diagnosis
4. Organ system support and practical procedures
5. Monitoring & clinical measurement
6. Safe use of equipment
7. Specific circumstances
8. Pre- and post-ICU care
9. End-of-life care
10. Professionalism
11. Communication skills, attitudes and behaviour
12. Sciences

EDUCATIONAL APPRAISAL

Reflection and planning

"What have I achieved and what are my goals?"

ASSESSMENTS OF COMPETENCE

Workplace-based assessment of knowledge, skills and attitudes

"Am I a safe practitioner?"

OUTCOMES of appraisal process: **Educational agreement and personal learning plan**

EDUCATION & TRAINING RECORD ('Portfolio')
"What educational activities & experiences have I acquired?"

RECORD OF IN-TRAINING ASSESSMENT

Workplace assessments

Assessments of Competence:

The framework for documenting the achievement of minimum competences is presented in Parts III (Basic), IV (Intermediate), V (Advanced) and VI (CPR) of the training documents. All trainees must complete these assessments satisfactorily to progress to the next stage in training. The knowledge, skills and attitudes which will be assessed are described in detail in these documents, and may be amplified by reference to the Intermediate Curriculum (Part II: The Education & Training Record). It is essential that the trainee's Education & Training Record (Part II) is kept up to date, and reviewed regularly by trainer and trainee.

Workplace assessments concentrate primarily on clinical skills, attitudes and behaviour together with a confirmation that the trainee has a practical understanding of the knowledge base. When assessing clinical competence the assessor is not required to cover all aspects of the curriculum, as this is clearly impractical; knowledge will be tested more specifically in the relevant specialty of primary appointment examinations and the optional UK Diploma of Intensive Care Medicine. It is not expected that every aspect of a clinical skill will be individually investigated and assessed; rather that trainers will become confident, through their personal knowledge of the trainees, that the individual trainee has acquired sufficient competence in an area of practice to be identified formally as safe to practice to a given level of independence or supervision.

The IBTICM expects its local assessors to use their judgement in confirming that a trainee has achieved an appropriate level of competence, recognising individual variations in ability, aptitude and application. What is required of the assessor is a confirmation that the trainee has been trained in the relevant aspect of practice and has attained a minimum standard that would be acceptable to other trainers ('Limen Referencing').

Assessment of attitudes and behaviour

These are an integral part of the workplace assessments. Any problems identified must be discussed with the trainee. Examples of unsatisfactory attitudes and behaviour are given in each assessment document (Parts III, IV, V) for guidance. Serious problems must be explored and documented in a transparent and supportive manner, and discussed confidentially with the Regional Advisor in ICM and with the Tutor or RA in the trainee's primary speciality, as described above. Problems that may affect safe patient care require meticulous handling, and supervisors should follow local policies in relation to the legal and professional aspects of supporting, counselling and managing underperforming doctors.

Documentation

Throughout the programme the Regional Advisor in ICM must be involved in completion of RITA (Record of In-Training Assessment) documentation.

Part III: Basic Level ICM and complementary speciality competences.

Entry to Intermediate Training in ICM is dependent on satisfactory completion of three months ICM at Basic Level. The trainee is also likely to have acquired one or more elements of complementary speciality training (4-8 months each of anaesthesia and medicine). Given that these elements may be undertaken in different hospitals at widely separate times, and that Basic Training is not necessarily part of a specialist training programme, basic competences in ICM and complementary specialties must be

documented meticulously. To assist with this assessment, the trainee and Board Tutor (for the intensive care module) or the relevant specialty of primary appointment College Tutor (for anaesthesia and medicine modules) must complete the Basic Assessment of Competency (Part III of the training documents).This summarises the minimum standards required for consideration for competitive entry to specialty training in ICM. Both the trainee and the Board Tutor must keep a copy of the assessments, which should be copied to the specialty of primary appointment College Tutor.

Parts IV & V: Intermediate and Advanced (Steps 1 and 2) Training

For STs, in addition to the formal assessments of competence at Intermediate and Advanced Level, the RITA mechanism will apply, and will therefore involve the Regional Advisor in ICM (RA-ICM). During Intermediate Training the competency assessments (Part IV) will be copied both to the primary speciality tutor or head of school, and to the RA-ICM, by the Tutor-ICM. Either the RA-ICM or deputy (usually the relevant Tutor-ICM) will attend the specialty of primary appointment RITA organised by the trainee's specialty of primary appointment supervisors. At Advanced Level, the RITA will be organised by the RA-ICM, with a representative supervisor (identified by the specialty of primary appointment RA) attending. Again, the assessment must include completion of the Advanced Level competences (Part V), which summarises the minimum standards required for successful completion of training and the award of a Joint CCT in ICM and in the specialty of primary appointment. Trainees must also bring to the RITA their ETR (Part II) with additional materials included in the portfolio.

The RITA meeting is not an appropriate point at which to discover that there are problems with an individual's training. However, if remedial action has not resolved the problem, the RITA may be a useful forum at which relevant trainers from ICM, the specialty of primary appointment and the Deanery may meet with the trainee. If a trainee does not meet the necessary standard on an individual assessment, a later re-assessment must be carried out. Whether the whole of the assessment or just the relevant component should be repeated is left to the discretion of the assessor, but the reasoning behind the decision must be documented and agreed with the trainee.

Summary of the training process

The trainee at

Basic Level will:
- undertake Basic training in approved posts for ICM
- undertake complementary speciality training if available and appropriate
- be supervised by the primary speciality, and jointly with the Tutor-ICM for the ICM element
- maintain the ETR (Part II)
- complete the Part III assessments of competence

Intermediate (Step 1) Level will:
- be in an approved numbered ST post in a primary-specialty
- have undergone competitive entry to specialty training in ICM if following the CCT-ICM programme
- have completed the Basic Level (Part III) competences and requirements
- be able to undertake complementary speciality training if this was not acquired at Basic Level
- be supervised by the Tutor-ICM and RA-ICM in conjunction with the specialty of primary appointment
- maintain the ETR (Part II)

- complete the Part IV assessments of competence and requirements

Advanced (Step 2) Level will:
- have completed Basic and Intermediate Level assessments of competence and requirements
- have undergone competitive entry to an specialty training post in ICM if Step 1 training was completed outside a CCT-ICM training post
- be supervised by the Board Tutor and RA-ICM
- maintain the E&TR (Part II)
- complete the Part V assessments of competence and requirements

SUMMARY OF ASSESSMENTS OF COMPETENCE (Parts III, IV, V, VI)

The trainee will be assessed in the following areas:

During training in anaesthesia:

a) Preoperative assessment
b) General anaesthesia for ASA I or II patients (including equipment and anaesthetic machine check)
c) Rapid sequence induction
d) CPR skills
e) Clinical judgement, attitudes and behaviour
f) Confirmation of satisfactory completion of training in anaesthetic module

During training in medicine:

a) General aspects of clinical history taking, examination and investigation of patients
b) Initial assessment of competence in the management of the acutely ill patient (also 3.3(c)
c) CPR skills (if not already assessed in anaesthetic or intensive care modules or no ALS course in preceding 12 months)
d) Clinical judgement, attitudes and behaviour

During training in intensive care medicine:

Basic Level

a) CPR skills (if not already assessed in anaesthetic or internal medicine modules, or no ALS course in preceding 12 months)
b) Either:
    i) Airway management skills, or
    ii) Rapid sequence induction and tracheal intubation (assessed in anaesthetic module)
c) Initial assessment of competence in the management of the acutely ill patient (also 3.2(b)
d) Organ support and practical procedures
e) Communication skills, clinical judgement, attitudes and behaviour

Intermediate Level

f) Practical procedures, comfort care and organ system support
g) Patient management: assessment, investigation, monitoring and diagnosis
h) Outreach and Transport care
i) CPR skills (if not a current holder of an ALS provider certificate)
j) Communication skills, Attitudes and Behaviour

Advanced Level

a) Team management
b) Teaching, supervision, audit and organisation
c) Admission, discharge, follow-up and end-of-life care
d) Special circumstances
e) CPR skills, or ALS provider certificate
f) Communication skills, attitudes and behaviour

DESCRIPTORS OF LEVELS OF COMPETENCE

	Basic	Intermediate	Advanced (CCT)
Overview	Basic Level trainees are expected to understand the general principles of intensive care medicine, to be familiar with the more common conditions and reasons for admission, to be able to identify patients at risk of organ system failures, and to resuscitate and stabilise critically ill patients. They will also know the degree of urgency required in summoning senior help. Intermediate Level trainees will have developed these skills further, often in relation to their specialty of primary appointment (Anaesthesia, Medicine, Surgery and Emergency Medicine). Specialty level (CCT) trainees will have acquired broad knowledge of general and specialist aspects of ICM. They will also have skills in management and service organisation, in teaching and audit, and well developed integrative skills.		
Knowledge	Presentation and treatment of common life-threatening emergencies	Detailed knowledge of general aspects of critical care	General and specialist aspects of critical care, including management of the service
Skills	Manages initial assessment and stabilisation of emergencies safely. Provides continuing care under supervision.	Stabilisation, assessment, routine management and investigation of critically ill patients on a daily basis. Improving diagnostic skills	Defines and supervises long-term collaborative management plans for larger numbers of patients. Leads whole ICU team effectively. Teaches and supervises junior colleagues. Integrates information.
Attitudes	Recognises limitations, refers and communicates promptly and effectively.	Proactive, able to co-ordinate and supervise care delivered by junior trainees. Recognises limits of expertise and summons help appropriately	Ensures that critical care service functions effectively within wider environment. Supports service development and research. Plans personal professional development

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APPENDIX:

Indicative Durations of ICM Components of Joint CCT Programmes

CCT	Minimum Duration	Maximum Duration	Expected Duration
ICM + Anaesthesia	Time required* by specialty of primary appointment less recognised ICM time plus 15 months ICM plus 6 months acute medical specialty	Time required by specialty of primary appointment less recognised ICM time plus 29 months ICM plus 6 months acute medical specialty	Time required by specialty of primary appointment less recognised ICM time plus 21 months ICM plus 6 months acute medical specialty
ICM + Medical Specialties	Time required by specialty of primary appointment less recognised ICM time plus 15 months ICM plus 6 months anaesthesia	Time required by specialty of primary appointment less recognised ICM time plus 29 months ICM plus 6 months anaesthesia	Time required by specialty of primary appointment less recognised ICM time plus 21 months ICM plus 6 months anaesthesia
ICM + Surgical Specialties	Time required by specialty of primary appointment less recognised ICM time plus 15 months ICM plus 6 months anaesthesia plus 6 months acute medical specialty	Time required by specialty of primary appointment less recognised ICM time plus 29 months ICM plus 6 months anaesthesia plus 6 months acute medical specialty	Time required by specialty of primary appointment less recognised ICM time plus 21 months ICM plus 6 months anaesthesia plus 6 months acute medical specialty
ICM + Emergency Medicine	Time required by specialty of primary appointment less recognised ICM time plus 15 months ICM plus 6 months anaesthesia plus 3 months acute medical specialty	Time required by specialty of primary appointment less recognised ICM time plus 29 months ICM plus 6 months anaesthesia plus 3 months acute medical specialty	Time required by specialty of primary appointment less recognised ICM time plus 21 months ICM plus 6 months anaesthesia plus 3 months acute medical specialty

* In all cases time required is time required to obtain competences