

The National Education and Competence Framework for Advanced Critical Care Practitioners

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March 2008

This document has been compiled in conjunction with representatives from The British Association of Critical Care Nurses, The Intensive Care Society, The Intercollegiate Board for Training in Intensive Care Medicine and The Royal College of Nursing Critical Care Forum.

Foreword

This framework builds on the work of the Changing Workforce Programme development sites that tested the role in clinical practice, the National Practitioner Programme Critical Care Board, the Education and Competence Advisory Party, higher education institutions (HEIs) and clinical colleagues, drawn from a range of backgrounds, with a specific interest in critical care development.

Many critical care units have introduced new roles or have extended the scope of practice of nurses, technicians, physiotherapists and clinical pharmacists. These developments have been in response to variations in recruitment and retention patterns, the impact of the Working Time Directive, increasing complexity of care pathways and technology, and maximising opportunities to prevent or reduce the risk of critical illness in medical and surgical patients in general ward areas.

The local focus in role development has resulted in wide variations in the scope of professional practice and variations in education and training to support role extension and expansion, with no mechanism to recognise the transferability of such roles. The result is potential confusion for patients and public and variable standards of practice.

Example from an acute hospital trust

MH worked initially as a staff nurse in the intensive care unit (ICU) for seven years gaining considerable experience, skill and expertise. In 1995 MH gained a sister's post on the ICU and, in addition to her sister's role, trained along with the other sisters to become a Critical Care Practitioner. The Critical Care Practitioner course ran for a year and, although locally run, was well structured and required the trainees to undertake an intensive tutorial programme, a prolonged period of supervised practice, and formative and summative assessment. In addition to this, the Critical Care Practitioners underwent yearly re-accreditation and had to attend a specified number of tutorials.

For personal reasons MH moved away from the area in 2004 and applied to a number of ICUs, giving details of her previous position, Critical Care Practitioner role and training. Unfortunately none of the units would accept her Critical Care Practitioner qualification saying that she would have to retrain in their units before she could practise. After a number of months being told the same thing, MH became disillusioned and has since left nursing altogether.

This document describes:

- The role of an Advanced Critical Care Practitioner
- How the role should function within the critical care team
- The benefits of introducing the role in clinical practice
- A National Framework of Education and Competence for the role within recognised standards of practice

The advanced practitioner role is one of two new non-medical roles in critical care. The second is that of an assistant practitioner in critical care. It is important that the benefits of both roles are considered by the critical care team as part of redesigning a future sustainable workforce for critical care services. The roles are designed to make a significant contribution to the care and management of critically ill patients and their families, as well as offering structured clinical career progression for appropriate members of the critical care team.

At present it is likely that entrants to the advanced role will be from established health professionals. In future, wider access to such roles may be possible, attracting a range of vocationally qualified people and graduates into interesting and challenging career opportunities within critical care services. Access by people without a healthcare background will require an appropriate programme of introduction, which would be expected to last at least one year before enrolment in Advanced Critical Care Practitioner training. The description of this background training is outside the remit of this document.

The framework defines the essential core elements of the role that would lead to formal recognition of the Advanced Critical Care Practitioner; beyond this core there is the possibility of local flexibility to cater for specialist areas.

The role described in this document is based on the medical model of teaching, responsibility and care delivery, and is designed to develop a high-level, trained, accredited, recognised, transferable practitioner to address a service need in critical care and the career aspirations of experienced staff who wish to stay in a clinical role. Senior medical support will be available for clinical advice either directly or indirectly as appropriate. Access to medical support will be on-site and within minutes. Access to multidisciplinary professional support and advice is essential and must be available.

The Advanced Critical Care Practitioner will:

- Have advanced knowledge and skills in critical care and provide a direct contribution to the assessment, treatment and planning of care, and evaluation of the outcomes of patients with critical illness
- Function as part of the critical care team and will work within a defined scope of practice and to clinical standards agreed nationally and applied within a local clinical setting
- Prescribe elements of care and treatment that will be delivered by other members of the healthcare team
- Be able to refer the patient for diagnostic tests and to other healthcare professionals for a specialist opinion
- Have a high degree of autonomy and authority to make clinical decisions, supervised by a medical consultant in intensive care medicine
- Be required to undertake audit of the service and their practice as well being subject to peer-review and appraisal
- Be involved in the training and supervision of others

The Advanced Critical Care Practitioner role is a new way of working for health professionals working in critical care. It is acknowledged that the role described crosses the professional boundaries of many functions within critical care, including medicine, nursing, technical, physiotherapy and clinical pharmacology. The role is designed to ensure that patients receive timely and effective care. The role will deliver some elements of medical practice and may provide a method of closing the knowledge and skills gap likely to result from the reduction in trainee numbers due to shortened training time; it will also provide a highly proficient supporting role to the senior medical team.

The development of new roles is often contentious, with perceived threats to the training, role and status of existing healthcare professionals and standards of patient care. This document defines the role of the Advanced Critical Care Practitioner and its scope and limitations in clinical practice, and describes a process of education, assessment and skills acquisition based on National Workforce Competences, which is nationally recognised and transferable and can contribute to the holistic care of patients.

As in most parts of the New Ways of Working programme, the title has been a most contentious area; it has been decided to retain the name Advanced Critical Care Practitioner for the present. It is possible that new titles may evolve as the model develops.

About this document

The Changing Workforce Programme emerged from the NHS Plan and was charged with testing and developing new ways of working to improve both patient care and patient/staff satisfaction through the best use of skills. This document has been produced through the work of the National Practitioner Programme Board for Critical Care, and the Education and Competency Advisory Party (see Appendix 2 for a list of individual contributors).

The content of the document has also been informed by the significant contribution from trainee Critical Care Practitioners and their mentors/supervisors, managers and clinicians, working within development sites including:

- Hinchingsbrooke Healthcare NHS Trust
- James Paget Healthcare NHS Trust
- Royal Devon and Exeter Healthcare NHS Trust
- Sheffield Teaching Hospitals Foundation Trust
- Shrewsbury and Telford Hospitals Trust
- Southampton University Hospitals Trust
- Southport and Ormskirk Hospitals Trust

Key stakeholders

The Critical Care Practitioner programme was managed under the auspices of the Changing Workforce Programme. Contributions and guidance were received from the Intensive Care Society, the Intercollegiate Board for Training in Intensive Care Medicine, the Royal College of Nursing, the British Association of Critical Care Nurses, the Adult Critical Care Stakeholder Forum, Critical Care Networks, Strategic Health Authorities, Skills for Health and the National Workforce Review Team.

Intended audience

- Members of all healthcare professional groups
- Regulators, advisory groups, professional bodies and trade unions within the health sector
- Patients and the general public
- Strategic Health Authorities
- Deaneries and Workforce Development Directorates
- Higher education institutions
- Critical care service managers
- Potential employers of Advanced Critical Care Practitioners
- Critical Care Networks

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1 Introduction

1.1 The role of the Advanced Critical Care Practitioner

The purpose of the Advanced Critical Care Practitioner role is to provide care that is focused on patients and their needs, save life, recognise acutely ill patients, initiate early treatment, support patients through critical illness and, where appropriate, enable a dignified death. The inclusion of Advanced Critical Care Practitioners in the team will enhance continuity and quality of care.

The Advanced Critical Care Practitioner role facilitates a new way of working and complements existing roles within the critical care team. Whilst working autonomously, the Advanced Critical Care Practitioner will always work within a multi-professional team led by a consultant who fulfils the requirements as defined jointly by the Intensive Care Society and the Intercollegiate Board.

An Advanced Critical Care Practitioner in conjunction with the medical team can:

- Undertake an extensive assessment of the critically ill patient, including taking a history and completing a clinical examination
- Perform or order diagnostic and therapeutic procedures
- Prescribe medications and fluids (subject to current legislation)
- Develop and manage an acute management plan and pathway for the patient
- Perform invasive interventions, advanced airway skills, vascular access and other practical skills under appropriate supervision dependent on experience
- Teach and educate patients, relatives and other members of the multi-professional team
- Undertake internal and inter-hospital transfers of critically ill patients

1.2 Scope of practice

The scope of practice for the trainee Advanced Critical Care Practitioner is defined by this document, which addresses both clinical skills and the underpinning knowledge that must be attained, prior to functioning as an Advanced Critical Care Practitioner.

The Advanced Critical Care Practitioner will perform certain clinical activities, some of which were previously in the domain of doctors. To function at this level requires the authorisation of the employer, the successful completion of a course of theoretical study and the acquisition of clinical competences outlined within this Framework, during a defined period of training. Education programmes provided by higher education institutions should be validated locally and accredited by the relevant professional and regulatory bodies.

Advanced Critical Care Practitioners must acknowledge any limitations in their knowledge and skills and must not perform clinical activities they do not feel skilled or competent to perform. As part of their training, they must develop a high level of clinical judgement and decision making.

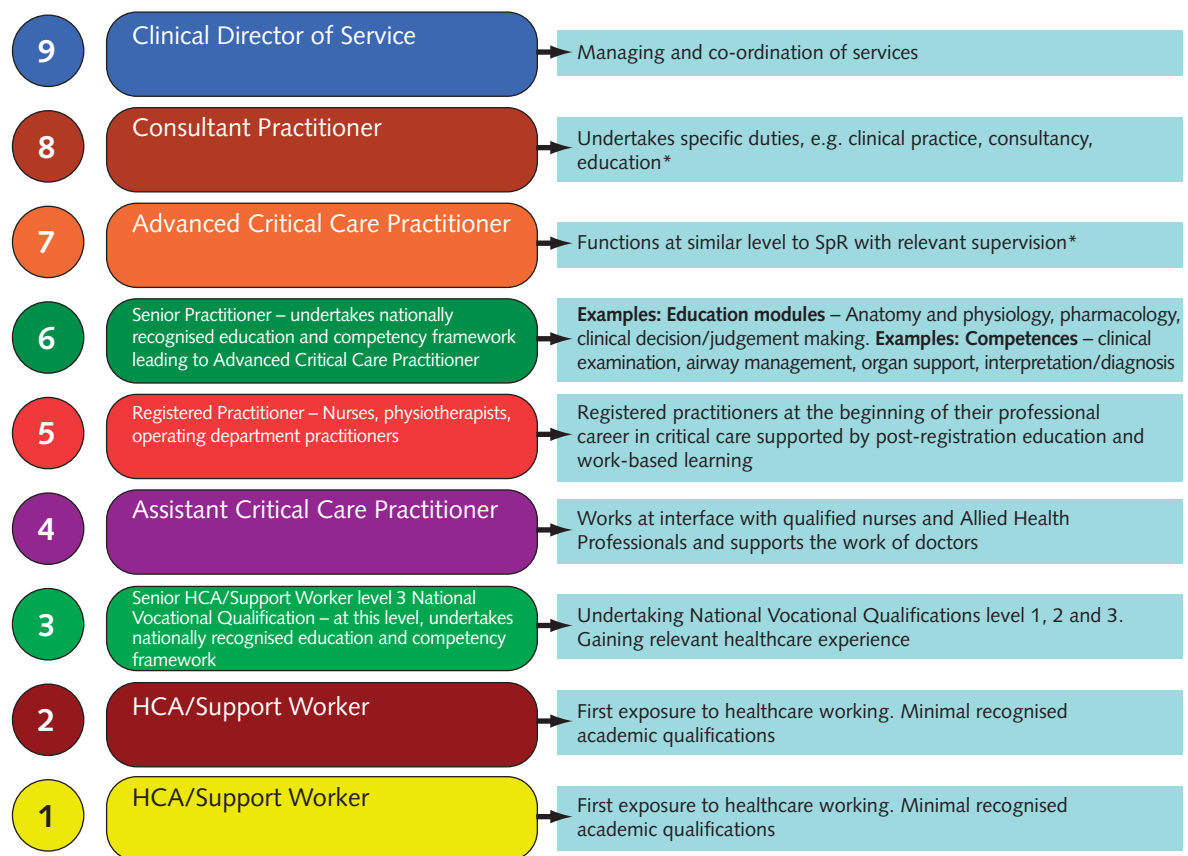
Advanced Critical Care Practitioners must act within the formal code of conduct of their present statutory regulator. Trainee Advanced Critical Care Practitioners are required to practise within the structure of the National Education and Competence Framework, with the appropriate level of supervision.

1.3 Continuing professional development

The Advanced Critical Care Practitioner will need to undertake Continuing Professional Development (CPD) as defined by their current regulator to maintain and update professional competence. CPD should be carried out in conjunction with the clinical supervisor and documented in a portfolio. The Advanced Critical Care Practitioner will be expected to maintain a generalist skill-set and level of competence regardless of the field they happen to be working in at any given time. Periodic reassessment of clinical skills may be required by future regulation but should be considered now by practitioners and employers.

1.4 Career pathways for becoming an Advanced Critical Care Practitioner

Figure 1 Career framework for the Advanced Critical Care Practitioner



*under appropriate level of medical supervision, please see section 7.1.

2 Workforce planning

A number of issues have driven the current focus on role redesign within the NHS:

- An ever increasing demand on healthcare as the population lives longer and treatments advance with technology
- Increasing pressure to maintain cost efficient services
- The development of flexible career pathways for new and existing staff
- Changes in medical training may result in reduced availability of trainee doctors within the clinical environment, with an impact on the continuity of patient care
- The European Working Time Directive

It is suggested that this role should be banded at Agenda for Change level 6 during training and level 7 on qualification. A number of the development site leaders have progressed to level 8a and level 8b.

2.1 Benefits of incorporating Advanced Critical Care Practitioners within the workforce

Data collected from the development sites has highlighted the potential of Advanced Critical Care Practitioners to impact on service delivery. As outlined in *Intensive Care Medicine. Crossing the quality chasm: a new health system for the 21st century* (National Academy Press, 2001), care should be safe, timely, effective, efficient, equitable and patient centred.

2.1.1 Timely care

- Practitioner-led clinical interventions
- Minimising delays in treatment/waiting time for procedures
- Appropriate investigations and initiation of treatment
- Expertise and experience available at the point of care

2.1.2 Effective care

- Providing critical care services 'without walls'
- Supporting level 1/2 category critical care patients within acute ward areas (see Appendix 1 for definitions of these levels of care)
- Reduced deviation from recognised patient care pathways
- Effective use of care bundles
- Implementation of and adherence to protocols and guidelines

2.1.3 Safety

- Enhanced links between services, ensuring continuity and reduction in duplication
- Enhanced communication of the patient's progress
- Practitioner-led referrals for investigations and follow-up

2.1.4 Efficient care

- Improved career opportunities for staff and enhanced workforce and skills retention
- Reduced admissions/readmissions to ICU/High Dependency Unit (HDU) facilities
- Enhanced processes for the transfer of critical care patients
- Reduced length of stay
- Reduced 'hand-offs'
- Reduced risk to patients through clinical interventions
- Enhanced transfer times within and between hospitals
- Enhanced training for junior doctors and the multidisciplinary team
- Working Time Directive compliance
- Improved patient experience

2.1.5 Equitable patient care

- Access to an appropriate level of care wherever the patient is in the hospital

2.2 Development site case studies

As part of the exploration of existing roles and the development of New Ways of Working in Critical Care, eight development sites undertook to explore the Advanced Critical Care Practitioner role in clinical practice. The following section summarises cases studies from two of these sites.

2.2.1 Royal Devon and Exeter Foundation Trust

The original vision was to introduce an Advanced Critical Care Practitioner to ensure continuity and a high standard of care for critically ill patients across the Trust. It was anticipated that the practitioner would facilitate early initiation of care tailored to individual need, which may avert unnecessary admissions to the ICU. The work built on other initiatives already implemented such as the Alert and Early Warning Scoring processes.

The Advanced Critical Care Practitioner role could have an impact on:

- Continuity for patients within and outside ICU
- Multi-professional communication, referrals and patient outcomes
- Clinical career structure for healthcare professionals
- Development of non-registered roles
- Planning to meet the Working Time Directive legislation
- Collaborative working across organisational boundaries

The role

The Advanced Critical Care Practitioner (level 8 within Agenda for Change) works in ICU boundary and acute ward areas undertaking the following autonomous clinical practice:

- Patient assessment – on ICU and acutely unwell patients in ward areas
- Clinical history taking
- Endotracheal intubation – with direct supervision for assessed difficult intubations or where anaesthetic drugs required
- Central venous catheter insertion
- Arterial line insertion
- Provides airway management, vascular access and other support
- Is a member of trauma team – under indirect supervision
- Initiates therapeutic interventions – e.g. alters ventilation settings according to results
- Undertakes solo transfer of the critically ill patient within and between hospitals

Benefits identified

- Introduction of an advisory bleep service, improving the communication between ICU and acute ward areas
- Nurse to practitioner referrals are now a common feature for advice and support
- Enhanced understanding of the Early Warning Score systems
- Patients' and relatives' approval of the role for both clinical and emotional support throughout their ICU journey
- Quality of care is enhanced through use of protocols
- Care is now provided at the appropriate time and in the appropriate setting
- Clinical and therapeutic interventions are timely to the patient's needs
- Patients are seen in a follow-up ICU clinic
- The Advanced Critical Care Practitioner is part of the medical on-call rota, enhancing Working Time Directive compliance
- The Advanced Critical Care Practitioner participates in the induction and training of trainee doctors, offering a unique 'buddy' role
- The Advanced Critical Care Practitioner advises trainee doctors regarding patient management and supports their clinical skills acquisition. A role that the doctors describe as their 'luxury item'
- Consultants are released from routine teaching, enabling them to concentrate on the specialist and more complex aspects of their role
- An opportunity for career progression, while maintaining a high level of patient contact

2.2.2 Sheffield Teaching Hospitals NHS Foundation Trust

The new role was developed as one element of a wider strategy to manage the changing workforce environment resulting from changes in medical training and the planning of a new 36-bed critical care facility in one of the Trust sites.

Following visits to eight sites within England, all of which were utilising a role entitled 'Advanced Practitioner', the following inconsistencies were identified:

- The roles involved different levels of prescribing from limited independent prescribing to no prescribing at all
- There were different interpretations of the term 'Advanced Practitioner'
- Training ranged from no formal training to that of an academic-based masters degree with locally devised clinical competences, none of which were specific to critical care or transferable between organisations
- Grade and remuneration varied from F Grade to nurse consultant for individuals performing the same clinical function

A decision was made by the multi-professional implementation team to scope the role prior to the appointment of any Advanced Critical Care Practitioners.

Methodology used

- Interviews with nurses and doctors working in critical care to ascertain their perceptions of the role
- Activity sampling in critical care settings in order to identify how medical staff spend their time and the potential interface with advanced practitioner roles
- An evaluation of delays in treatment delivery
- Process mapping of the patient pathway
- Consultation with stakeholders regarding extended scope of practice, competences, educational preparation and outcome measures

Example of some of the findings

- Medical and nursing staff agreed the scope and level of practice of the role. They believed that assessment and management of organ support specific to critical care and independent prescribing was essential to the role, but operational management was not part of the role. Autonomous decision making should be on a similar level to specialty registrar (StR 3–5)
- Delays in non-urgent treatment delivery ranged from 15 minutes to 10 hours
- Process mapping highlighted elements of patient care where permanent experienced critical care team members may be more consistent than rotating inexperienced medical trainees. Examples include ongoing management of ventilator support, drugs and fluids, and renal replacement therapy, and adherence to protocols and guidelines

The outcomes of the studies provided the basis for the implementation of Advanced Critical Care Practitioners and began the process of winning the ‘hearts and minds’ of those essential to the implementation and success of the new role.

3 Professional and educational values underpinning the National Education and Competence Framework

3.1 Introduction

Professional values relate to obligations to patients, to professional practice and to professional development. They are influenced by traditions and practice, underpin conduct and provide the foundations upon which this National Education and Competence Framework is built.

3.1.1 Professional values

Professional obligations to patients are:

- A commitment to a partnership of care
- A recognition of the whole person within their social, ethical and cultural context
- The honouring of the relationship of trust with the patient with its concomitant moral and ethical responsibilities
- A dedication to clear, honest and empathetic communication

Professional practice and professional development involves:

- A commitment to:
 - Clinical and technical excellence
 - A professional life and the responsibilities that this implies, especially accountability
 - Lifelong learning and professional self-development
 - Continuous questioning, deliberation and reflection in developing new professional knowledge and understanding
 - Clinical practice commensurate with agreed competences
- Recognising that:
 - Advanced Critical Care Practitioners perform clinical interventions on patients as a necessary part of their care, and in that respect differ from many other non-medically qualified practitioners
 - Advanced Critical Care Practitioners assist with the provision of critical care both within and outside the traditional boundaries of an ICU
 - The dynamic nature of professional knowledge, and the ability to work in this environment, requires the recognition of personal limits

- The ability to:
 - Work with an appropriate level of autonomy within the critical care team
 - Engage in the development of the professional group as a whole by sharing knowledge and understanding to influence and change practice
 - Respect and work in collaboration with colleagues
 - Lead where appropriate
 - Focus on the salient features of practice
 - Exercise wisdom
 - Demonstrate sensitivity to the moral and ethical issues implicit in critical care practice in contemporary society
 - Exercise clinical reasoning and develop professional judgement in practice
 - Support to other team members to maximise learning opportunities

3.2 Educational values for the trainee Advanced Critical Care Practitioner Programme

These are:

- The establishment of a learning partnership between the consultant in critical care medicine and the trainee Advanced Critical Care Practitioner
- The importance of lifelong learning, CPD and self-assessment
- The importance of learning to communicate with a range of different people
- The importance of discussion in the process of teaching and learning
- The recognition that intuition and intuitive responses are a fundamental element of developing the expert practitioner
- The importance of research into practice and the development of good practice
- The undertaking of good evaluation to allow development and refinement of the National Education and Competence Framework

Trainee Advanced Critical Care Practitioners must:

- Examine their own professional and personal values
- Recognise that clinical practice is the key arena in which education takes place and is therefore to be valued
- Develop clinical skills through practice and a thorough knowledge of the theory behind that practice
- Understand professional judgement within the context of critical care
- Understand the moral and ethical elements relevant to critical care
- Develop reflective practice and motivation in the learning process

4 Education and Competence Framework

4.1 Introduction

The primary responsibility for the achievement of the required learning rests with the trainee. The clinical environment provides many of the most important learning experiences for healthcare professionals. Unlike other learning environments, the education of the trainee is not the primary purpose of such environments and the trainee must learn how to make best use of the opportunities available without imposing upon patients or disrupting the provision of service.

4.2 The principles of teaching and learning

It is important that trainees are provided with a broad range of clinical experiences and receive appropriate mentorship/supervision throughout their training programme. The trainee will be responsible for acquiring some theoretical knowledge through self-directed learning.

The trainee will need to learn how to:

- Gain new advanced skills within the practice setting
- Carry out specialist and core critical care interventions/practices
- Bring core and specialist critical care theory into relationship with practice
- Think about and utilise the complex relationship of theory and practice to support good practice
- Use reflection and deliberation to improve and develop practice
- Use reflection on practice to identify learning and learning needs
- Interrelate appropriately and in a variety of ways with all others in the clinical setting
- Theorise during practice (i.e. how to formulate, during a particular practical incident, new ways of thinking and doing that go beyond what the text book can offer)
- Theorise practice itself (i.e. how to recognise, in a particular piece of practice, the principles, assumptions, beliefs and theories that actually shaped that practice)

A range of learning and teaching methods may be utilised, including: lectures, seminars, group tutorials and problem-based workshops delivered locally by expert staff from a variety of disciplines but mainly critical care consultants.

Group work will involve trainee-led case presentations and reflective-based action learning sets using learning diaries. Selected extracts from this work will contribute to the Learning Portfolio to demonstrate personal insights derived from experience.

Directed self-study study guides, recommended texts and e-based materials will form the basis of the work, though trainees would also be expected to critically select a wide range of written material to support individual development needs appropriate to their organisation.

Trainees will need to extend their skills in cognitive, psychomotor, behavioural and attitudinal domains, including clinical skills directly needed to assess, diagnose and treat patients, and affective skills necessary to communicate effectively with patients and colleagues, manage difficult situations and act professionally in complex organisations.

Trainees are likely to have a considerable range of existing skills. Base-line assessment and individually constructed skills acquisition learning contracts based on the needs of their specific role will maximise individual potential. Clinical skills laboratories and simulators will be utilised where possible to provide a safe environment for clinical skills learning. Practice-based skills development should be planned to offer safe supervisory support from local multi-professional staff with appropriate expertise.

The majority of the programme will be undertaken in the critical care clinical environment in which the trainee will initially observe practice and progressively work towards developing clinical competence. The curriculum should enable trainees to be exposed to and gain experience in a range of critical care environments. This will involve observation, working under supervision and then increasingly independent practice as the trainee progresses through the programme. This experience may also involve visiting other areas, and shadowing or consulting experts. A clinical mentor should be identified to offer continuity of support, though trainees would be expected to frequently discuss case management and clinical decision making with a variety of experienced staff.

4.3 The aims and outcomes of the National Education and Competence Framework

4.3.1 Aims of the framework

- That all trainee Advanced Critical Care Practitioners achieve a common standard through nationally accredited education and training
- That incremental development and the demonstration of competence is encouraged to enable the trainee to practise as an Advanced Critical Care Practitioner in clinical practice
- The demonstration of theoretical knowledge, practical skills and an understanding of professional judgement
- That patient safety is maintained at its heart, with clinical practice as the context for learning
- The encouragement of the development of personal and intellectual attributes necessary for life-long professional development

The framework will enable the trainee Advanced Critical Care Practitioner to:

- Develop both clinical competence and confidence in caring for patients within a multidisciplinary/multi-professional team
- Offer care to patients, from Level 1 through to Level 3, which is based on sound evidence and good judgement
- Review and critique their practice in order to improve it

4.3.2 Outcomes of the framework

On completion of the training programme and in accordance with the framework, the trainee Advanced Critical Care Practitioner will have demonstrated:

- An understanding of the responsibility of being an Advanced Critical Care Practitioner and the values that underpin this
- A range of theoretical and practical knowledge related to their core and specialty practice
- A range of practical clinical skills related to their core and specialty practice (see Table 1 Functions of the Advanced Critical Care Practitioner)
- The development of professional judgement
- Technical and practical clinical skills and their ongoing development
- An understanding of their role within the wider critical care team and the limitation of their scope of practice
- The understanding and use of reflective practice, deliberation and other educational processes appropriate for examining and developing their own professional practice
- An understanding and respect for the multidisciplinary/multi-professional nature of healthcare and their role within it

Table 1 Functions of the Advanced Critical Care Practitioner

- Undertake comprehensive clinical assessment of a patient's condition
- Request and perform diagnostic tests
- Initiate and manage a clinical treatment plan
- Undertake invasive interventions within the scope of practice
- Provide professional leadership and support within a multi-professional team
- Work autonomously in recognised situations
- Demonstrate comprehensive knowledge across a range of subject areas relevant to the field of critical care
- Critically analyse, evaluate and synthesise different sources of information for the purpose of assessing and managing the care of a critically ill patient
- Apply the principles of diagnosis and clinical reasoning that underlie clinical judgement and decision making
- Apply theory to practice through a clinical decision-making model
- Apply the principles of therapeutics and safe prescribing
- Understand the professional accountability and legal frameworks for advanced practice
- Function at an advanced level of practice as part of the multidisciplinary team as determined by the competency framework
- Apply the principles of evidence-based practice to the management of the critically ill patient
- Understand and perform clinical audit

4.4 Progression through the training programme

All HEIs and employing institutions must ensure that they have in place a rigorous and formally constituted process to ensure that trainees progress. This is dependent on the demonstration of appropriate clinical skills, professional behaviour and fitness to practice as well as academic performance.

The clinical supervisor and the trainee will need to review, at the beginning of the programme and following formative or summative assessment, the trainee's objectives, guided by:

- The requirements of the core theoretical components
- The requirements of the relevant specialty clinical competences
- The trainee's knowledge and existing capability with respect to the theoretical and clinical competences
- The local circumstances of the clinical environment

4.5 Recommended length of the training programme

4.5.1 Overview of the structure of the framework

It is anticipated that trainees will normally exit the framework at postgraduate diploma level. Some institutions might wish to provide the opportunity to progress to a Masters degree upon completion of the required modules.

Employers, in partnership with higher education providers, may develop full-time or part-time routes through the framework in response to local priorities and needs.

The structure of the Advanced Critical Care Practitioner course will be highly dependent on the institution running it and the nature of the entrant's previous healthcare background and experience. For this framework, it is therefore only possible to state the structural specification which all courses must meet.

4.5.2 Overall length of the programme

The overall length of the programme leading to exit with a postgraduate diploma will normally be equivalent in length to a two-year postgraduate programme, i.e. the minimum length of the programme will be 90 weeks' integrated theory and practice. The two years represents the minimum period of training necessary, based on feedback from the critical care development sites, and recognises that some trainees may need targeted training, which may extend this time. Trainees will engage in an integrated theory and practice approach over a 45-week period for each year. This is the minimum length of time required in order to enable the development of the knowledge base and the competences/skills identified, but it is also the minimum time in which effective professional socialisation can be achieved. Ninety weeks is equivalent to six semesters (three semesters per year) of a full-time programme. Some programmes may be delivered on a part-time basis.

4.5.3 Clinical experience in the programme

It is anticipated that there will be a 70/30 per cent split in favour of workplace learning, the majority of which will be undertaken in a critical care clinical environment including taught formal sessions. It should be emphasised that learning in skill centres should complement but not replace learning in clinical settings.

Ninety weeks should constitute the minimum of 3150 hours of nominal study, assuming a 35-hour week. Of this time a minimum of 2205 hours should be designated as clinical learning. Up to 945 hours of designated clinical learning time may consist of learning in skills centres, but a minimum of 1200 hours will be spent in practice in the clinical area.

A variety of critical care settings will be used in order to provide appropriate learning opportunities to develop the knowledge and skills to fulfil the competence requirements. These will include adult general wards and may include specialist critical care units. The programme should provide environments where trainees can gain varied experience.

4.6 Criteria for entry to the programme

4.6.1 Major entry groups

It is envisaged that the most likely candidate for the training programme will be a healthcare professional with recent critical care experience. However, in the future it is anticipated that entry will be open to applicants such as new/direct entrants to healthcare who may or may not have experience of working in acute care environments. Work carried out by the National Workforce Review team may highlight future workforce patterns for critical care services illustrating where there are likely to be gaps in the service.

Before starting the programme, trainees must, for the present:

- Be registered as a healthcare professional, with recent experience of working within critical care
- Have practised, and be able to demonstrate evidence of continuing professional development, in critical care
- Have a bachelor-level degree or be able to demonstrate academic ability at degree level
- Be in a substantive recognised trainee Advanced Critical Care Practitioner post

In addition to the entry requirements outlined above, education providers will require evidence of support from the applicant's host employer and an identified consultant in critical care to be their clinical supervisor.

The prospective trainee Advanced Critical Care Practitioner must demonstrate:

- Commitment to patient care and patient safety
- Understanding of the relationships within the multidisciplinary/multi-professional team, especially with respect to the changing role of critical care
- Recognition of the role and responsibilities of being a trainee

- Understanding of the framework with particular respect to their own work and educational experience
- Aptitude for clinical practice
- Recognition that educational as well as clinical development will be required

4.6.2 Accreditation of prior experiential learning

It is recognised that practitioners currently working in roles entitled ‘advanced critical care practitioner’ may find that their training does not equip them to achieve the depth and breadth of competence set out in this document. They are highly valued and have acquired significant skills and expertise and are an important resource. Their employers are encouraged to support them in undertaking tailored fast track courses, through HEIs, to meet their needs utilising accreditation of prior learning/experiential learning (APL/APEL).

4.6.3 Equivalence

To create an equivalence tariff or where no approved tariff exists, a mapping exercise must be carried out using the education providers mapping process. Mapping must clearly demonstrate how equivalence has been calculated using the criteria of the time taken, expressed as notional student workload and level of academic difficulty mapped against the National Framework Competence Level Descriptors.

Evidence must be in a form that demonstrates equivalence, in education provider terms, to level of academic difficulty and achievement of learning outcomes. Students must in all cases present evidence that learning has taken place and that equivalence can be demonstrated. Appropriate evidence may include transcripts, portfolios, essays written for the purpose, unit outlines, interviews, work-based projects, vivas or completion of the usual assessment associated with the unit(s) for which equivalence is being claimed.

Exemptions from the procedure to meet the requirements of professional and statutory bodies are possible if written evidence is provided at the time of validation.

5 Assessment, supervision and theoretical components of the programme

5.1 Competence

Competence is defined within a professional context as the broad ability with which a professional person is able to practise to the required standards in a predetermined range of clinical fields and across a range of situations. This broad definition includes attributes that can be applied, clinical performance (Stuart, 2003), and the use of professional judgement (Carr, 1993).

Competences, therefore, are the elements performed to a predetermined standard, which combine to create professional competence in a defined role (Stuart, 2003).

5.2 The role of assessment

Assessment is a fundamental aspect of teaching and learning, and is a continuous process. It ensures the appropriate development of the trainee and covers any of the situations in which aspects of their education or training are measured, recognised, or formally appreciated, whether this is by a teacher, an educator, a patient or the learner themselves. It is concerned with demonstrating how well, and in what ways, the trainee has profited from the learning opportunities as reflected in their self-knowledge and deliberation with those who teach them.

Assessment involves some subjectivity and there is no single method that will overcome this. The professional judgement of the clinical supervisor will always be a key component of the process. Teachers make everyday, ongoing judgements of those who are learning, and in order to be fair, such judgements must be part of a well-planned process involving multiple perspectives. The trainee Advanced Critical Care Practitioner and all those who receive the results of such judgements must understand this. The trainee's insight into his/her development will be essential.

Assessment can be divided into summative and formative:

- **Summative assessment** relates to the setting of standards and of assessments to judge whether they have been met, and thus protects the public and employers by ensuring that all those qualifying from a programme have achieved the required competences, knowledge, skills and professional behaviours that underpin them. Equally, it protects the educational institution by ensuring that there is no devaluation of the degrees or other qualifications that they offer.
- **Formative assessment** is a 'no stakes' examination, in which failure does not bar progress or affect grades or classification. Its main purpose is to provide feedback and enable students to identify their learning needs to focus their future efforts effectively. Formative assessment will be largely continuous, rather than an event-based process, with a portfolio of evidence playing a key role.

Formative and summative assessment both have a role in shaping learning. While formative assessment may enable a student to prioritise learning in response to their current performance profile, it is summative assessment that sets the initial learning agenda. Candidates look at what they are going to be tested on and what form the test will take, as a major determinant of what they are going to learn. It is vital that assessment should drive students towards education, intellectual development and the application of knowledge and professional judgement, rather than the simple accumulation of knowledge and the unquestioning use of protocols.

The nature of the assessment process appropriate to one domain may be entirely different from that for another. We need, for example, to know that a student can perform a particular skill. Skills development takes longer for some students than for others and it may be perfectly appropriate for these individuals to go several times round the learning and testing cycle until they have achieved the standard required. It may be perfectly appropriate for students to demonstrate in an examination that they can apply knowledge and professional judgement in a given scenario, but in terms of professional behaviour, we need to know that a student habitually acts in an appropriate way towards patients (suggesting assessment in practice) rather than that they can behave appropriately in an examination situation.

5.3 Factors guiding assessment

Assessment will take account of professional and educational values, attitudes, knowledge, clinical skills, technical skills of the trainee and the needs of the employing authority. It will be informed by the:

- Clinical supervisor's professional judgement
- Need to ensure that assessment provides a high quality learning experience for both the trainee and the clinical supervisor
- Need to ensure that all learning opportunities are well utilised
- Need for all parties to understand the purpose of the assessment and assessment criteria
- Need for multiple perspectives on each assessment
- Recognition that the soundness of the assessment is related to the rigour with which the multiple perspectives are collected, recorded and utilised
- Need for assessment to develop through and across the programme, where differences in specialties need to be taken into account
- Need to engage the trainee in self-assessment throughout the process
- Need to ensure that there are no surprises for the trainee at the summative and final assessments through effective use of formative assessments
- Need for the trainee to satisfy the required standard by the end of each negotiated learning period, and the end of the programme
- Need to subject the summative assessment process of the framework for Advanced Critical Care Practitioner's to quality assurance procedures

5.3.1 Assessment requirements of the framework

The framework requires trainees to maintain a portfolio of evidence. This will contain a record of progress and will inform the assessment process and its outcome. In all assessments (formative or summative), attention to the following information will ensure that multiple perspectives (many observations by one person and/or observations by many different people) on the trainee Advanced Critical Care Practitioner's progress will be properly considered.

Account must be taken of:

- The visible performance of the trainee
- How the trainee has related theory to practice
- The trainee's ability to articulate understanding of the values and assumptions that have influenced their performance
- The impact of the trainee's performance on others involved
- How the trainee has used the learning opportunities provided
- The trainee's knowledge of themselves
- How much input there has been from the clinical supervisor
- How the resulting judgements compare with those made of the trainee by others
- How the resulting judgements of the trainee compare with the trainee's self-assessment

HEIs running the Advanced Critical Care Practitioner programmes will need to develop an assessment strategy for their courses, which achieves the following:

- Fulfils requirements for Masters/postgraduate diploma level assessment
- Has high predictive validity for the requirements of the role
- Samples the competency framework appropriately
- Uses a variety of assessment methods
- Contains both formative and summative elements
- Is consistent with assessment loads on other National Practitioner Programmes of the same exit level
- Supports the recommendations outlined in *Principles for an assessment system for postgraduate medical training* by the Postgraduate Medical Education and Training Board (2004)

A variety of techniques exist to assess clinical knowledge and skills and it is likely that institutions will employ a range of methods, which reflect their educational approach and the requirements of the role. They will need to include techniques which assess diagnostic ability and case management.

It is likely that institutions will include some of the following approaches:

- Objective Structured Clinical Examination (OSCE)
- Expanded case histories with vivas
- Simulated scenarios

- Clinical vivas
- Multiple-choice question examinations
- Direct observation of technical skills with discussion against set criteria
- Portfolios
- Detailed clinical record of at least 20 cases managed
- Seminars

In the early years of the Advanced Critical Care Practitioner programmes it is envisaged that consultants in intensive care medicine or nominated senior trainees in the critical care setting will carry out assessment of the clinical skills. In time, as the profession evolves, experienced Advanced Critical Care Practitioners may carry out elements of assessment, e.g. assessment of individual competences.

5.3.2 Determining levels of supervision

For trainee Advanced Critical Care Practitioners the level descriptors outlined within the context for competence section (section 7.1) should be used to inform the assessment of progress in any given situation. This can be seen as a ladder of supervision with progression from demonstrating knowledge through to independent performance.

It is recognised that an Advanced Critical Care Practitioner will not have the wider range of knowledge and skills acquired through medical training and will therefore work within a supervisory framework. Overall supervision (direct or indirect) will be provided by a consultant in intensive care medicine but elements of supervision could be provided by other senior medical practitioners. Where the supervising consultant in intensive care medicine is not physically present they must always be readily available for consultation, and it is identified that ultimate responsibility for standards of patient care lies with the consultant in intensive care medicine.

Supervising consultants in intensive care medicine will be accountable overall for the work of the Advanced Critical Care Practitioner, in a similar manner to their responsibilities for trainee doctors. Advanced Critical Care Practitioners will still be accountable for their own practice, within the boundaries of supervision and defined scope of practice. The General Medical Council's *Good Medical Practice* Guide (May 2001, 3rd edition) states that:

Delegation involves asking a nurse, doctor, medical student or other health care worker to provide treatment or care on your behalf. When you delegate care or treatment you must be sure that the person to whom you delegate is competent to carry out the procedure or provide the therapy involved. You must always pass on enough information about the patient and the treatment needed. You will still be responsible for the overall management of the patient.

Advanced Critical Care Practitioners work under the supervision of consultants in intensive care medicine throughout their professional lives. While this may appear to contrast with autonomous practice in nursing and other health professions, it should be remembered that all health professionals, including doctors, remain professionally and managerially accountable to others throughout their working lives despite being independent, clinically autonomous practitioners. The particular position of Advanced Critical Care Practitioners relates to the fact that they are working in association with and under the supervision of the consultant as an integral part of the critical care team.

6 Key points of the National Education and Competence Framework

In addition to outlining the recommended theoretical study elements, competences and skills, this framework describes the level of responsibility, the scope of practice and limitations of the Advanced Critical Care Practitioner when contributing to the diagnosis, clinical interventions, treatment and management of the critically ill patient.

The development of common standards of clinical practice requires:

- Fostering liaison between the NHS and local higher education providers
- A recognised structure of education and competence that allows the individual practitioner the time for individual professional development
- A process of national approval via recognised professional bodies
- The development of a career pathway which enhances professional and personal development

As such, the key areas covered by this framework include the following:

- Theoretical components recommended to underpin the role in clinical practice
- The core competences to determine a practitioner's level of competence to practise
- Clinical skills to be acquired
- Core learning outcomes
- Supervision processes
- Assessment processes
- Scope of practice and limitations of the role

6.1 The context for the specification of theoretical study

Public confidence of a new profession relies upon the introduction of a robust regulatory framework that ensures national education and practice standards are in place, adhered to and monitored. The purpose of this framework is to make those national standards explicit and to inform training programmes of the educational outcomes and practice standards that must be met.

This document identifies those standards through competence achievement and outcomes that demonstrate that the graduates are fit for practice. Therefore, the underpinning education can be delivered in a manner that best fits the teaching philosophy of the education establishment and local clinical placement opportunities.

However tightly the specification of minimum standards might be worded, they are still open to different interpretations by individual institutions, teachers and students.

6.2 The recommended core theoretical components

By the end of the training programme the trainee Advanced Critical Care Practitioner must demonstrate their knowledge of the core components of theory outlined below. For full breadth and depth of requirements, please refer to section 7 of this document.

Core anatomy, physiology and pathophysiology
<ul style="list-style-type: none">• Cellular physiology• Homeostasis• Systems anatomy, physiology and pathophysiology:<ul style="list-style-type: none">– Respiratory– Cardiovascular– Neurological– Gastrointestinal and hepatic– Musculoskeletal– Endocrine– Immunological– Haematological
History taking and examination
<ul style="list-style-type: none">• Admission, history taking and assessment, and daily review• Physical assessment of the critically ill patient• Effective note writing and ward round case presentation technique• Medico-legal requirements in the context of written notes
Core radiology
<ul style="list-style-type: none">• Indications for chest x-ray and chest x-ray interpretation• Indications for CT and MRI scanning and basic head, chest and abdominal CT/MRI interpretation• Indications for thoracic and abdominal ultrasound• Ultrasound of major vessels for line insertion• Echocardiography: indications for and basic interpretation• Radiation and radiation governance requirements
Principles of microbiology
<ul style="list-style-type: none">• Principles of microbiological sampling including blood culture and bronchoalveolar lavage• Infection diagnosis and management• Appropriate antibiotic selection, prescribing, administration and monitoring• Antimicrobial approach to management of invasive devices• Principles of infection control
Principles of laboratory medicine
<ul style="list-style-type: none">• Biochemistry as it relates to critical care• Laboratory and near patient testing• Haematology as it relates to critical care• Haematology testing and blood cross matching
Clinical reasoning
<ul style="list-style-type: none">• Differential diagnosis for commonly encountered critical care conditions• Physiological diagnosis and decision making

Principles of pharmacology and prescribing

To include:

- Mechanism of drug action
- Pharmacokinetics and pharmacodynamics
- Side effects and their management
- Administration
- Monitoring
- Therapeutic ranges
- Metabolism and excretion
- Overdose

For each of these groups of drugs:

- Sedatives
- Analgesics
- Cardiovascular drugs – including antiarrhythmics and vasoactive drugs
- Drugs acting on the respiratory system
- Drugs acting on the kidney
- Anticonvulsants
- Muscle relaxants
- Therapeutic use of hormones, including insulin, steroids, thyroxine
- Drugs acting on the gastrointestinal tract
- Management of patients following accidental or deliberate drug overdose and where to seek poisons advice and support
- Knowledge of where to find information about medication patient may be receiving before admission

Technology in critical care

Principles of use and function of equipment used to support patients in critical care to include:

- Safety
- Equipment set up
- Use of alarms
- Cleaning and infection control
- Troubleshooting
- Limitations to their use
- Optimising their use

For the following types of equipment:

- Oxygen delivery systems
- Humidification systems
- Ventilators
- Non-invasive ventilators
- Oxygen saturation monitoring
- End-tidal CO₂ monitoring
- Blood gas analysers
- Chest drainage systems
- The range of tracheostomy products
- Cardiac monitoring
- Invasive and non-invasive blood pressure measurement
- Cardiac output monitoring
- Defibrillators
- Internal pacemakers
- External pacemakers
- Intracranial pressure monitoring
- Cerebral function monitoring
- Peripheral nerve stimulators

Technology in critical care (continued)

- Renal support modalities
- Specialised critical care beds
- The range of wound care products and devices
- Specific equipment for patient transport
- Computerised patient charting and information systems

Discharge planning and rehabilitation

- Optimising post-ICU survival
- Critical care outreach
- Physical and psychological sequelae of critical illness
- Follow-up clinics

End of life care

- Effective pain and symptom support
- Treatment limitation decision making, including advance directives, proxy decision making, do not resuscitate orders
- Effectively communicating treatment limitation decisions. (NB the Advanced Critical Care Practitioner will not be responsible for making treatment limitation decisions but will contribute to decision making discussions as a member of the critical care multi-professional team)
- The role of the patient's family in end of life care and treatment limitation decision making
- Approaches to supporting the patient and family/friends of terminally ill patients
- Bereavement support
- Management of the patient diagnosed brain-stem dead
- Understanding how diagnosis of brain-stem death is made

(NB the Advanced Critical Care Practitioner will not be responsible for the diagnosis of brain-stem death)

Organ/tissue donation

- Management of the brain-stem dead organ donor
- Transplant co-ordination
- Discussing donation with families

Patient safety, risk management and clinical governance

- The evidence for protocol use in critical care
- Developing a culture of patient safety
- Management of gases failure in critical care areas
- Management of electrical failure in critical care areas
- Management of critical care units in the event of fire
- Reducing risk in critical care
- Learning from critical incidents

Clinical leadership and management within the context of the multidisciplinary team

- Dealing with one's own and others' poor performance
- Inspiring others
- Introducing innovations
- Organisational issues for critical care and its impact upon the wider healthcare system

Learning and teaching
<ul style="list-style-type: none">• Keeping up with research and best evidence• Developing a habit of enquiry• Different approaches to teaching and learning• Effective seminar presentation• Effective conference presentation• Supervising and mentoring others
Communication
<ul style="list-style-type: none">• The unique requirements for effective communication with the critically ill patient and their family and carers• Communicating effectively in emergency situations• Communicating effectively when requesting telephone advice or making referrals• Effective communication in teamwork
Surgical procedures and what they involve
<ul style="list-style-type: none">• Understand the nature of specific surgical procedures in order to provide optimum post-operative management and recognise complications
Legal issues
<ul style="list-style-type: none">• Treatment limitation decision making• Consent and the capacity of the critically ill patient to consent or refuse treatment• Advance directives• Proxy decision making• Referral to the coroner• Clinical negligence• Research on the critically ill patient• The Human Tissue Act• Police access to information or tissue samples• The rights of children, the mentally incompetent and the elderly <p>(NB the Advanced Critical Care Practitioner will not be expected to work with children under the age of 15. It should be noted, however, that they may be expected to assist with the management of children for short periods of time in some hospitals. Where that is the case they would be supported in acquiring the appropriate skills)</p>
Ethics
<ul style="list-style-type: none">• Critical care resource management• Religious beliefs and their relevance in intensive care including end of life issues and care of the body after death• Cultural and ethnic differences• Treatment limitation and withdrawal decisions
Evidence and research
<p>It is expected that the Advanced Critical Care Practitioner will develop some skills in appraising different sources of evidence and an awareness of research, audit, service development/evaluation.</p>

7 The National Education and Competence Framework

7.1 The context for the specification of competence

The competences identify core elements, which are deemed essential to the role, while allowing for flexibility within local settings to meet service needs. Each individual practitioner will take professional responsibility for their autonomous practice including acknowledgement of their limitations and when to 'refer the patient on' to medical colleagues.

The Advanced Critical Care Practitioner competences have components common to those of doctors in training allocated to the critical care environment as well as competency frameworks that have developed within critical care nursing. The competences have been developed in consultation with medical training schemes and other National Practitioner Programme projects.

The main source is Competency-Based Training in Intensive Care Europe (CoBaTrICE), a European Society of Intensive Care Medicine collaborative project. Utilising a common set of competences clearly illustrates the similarities and differences between the roles of Advanced Critical Care Practitioners and accredited medical practitioners.

Within the National Education and Competence Framework each competence statement defines the scope of practice expected at three levels as follows:

- Is able to perform independently
- Is able to perform with indirect/direct supervision
- Demonstrates knowledge of ...

The level 'Is able to perform independently' refers to generic competences that are considered essential for the general role and remit of an Advanced Critical Care Practitioner working within any critical care setting.

The level 'Is able to perform under supervision' refers to competences that require a level of supervision, from the critical care consultant or designated deputy, due to either the risk associated with the practice element or policy requirements. Supervision falls into two levels:

- Indirect – where the supervisor is contactable but does not need to be present with the Advanced Critical Care Practitioner. This level of supervision requires attendance of the supervisor within 5 to 30 minutes. The time allowed for the supervisor to attend would depend on the experience of the individual Advanced Critical Care Practitioner, the clinical condition of the patient and local circumstances
- Direct – where the supervisor is present with the Advanced Critical Care Practitioner

The level 'Demonstrates knowledge of' refers to those competences that are not appropriate to identify as essential to the general role. However, some competences designated to this level may be appropriate to develop further if appropriate to local circumstances. There are a number of competences which cannot be taken forward due to policy restriction.

As each core competence is described within its domain the practice level and supervision required will be specified using the application of the following matrix.

Core competence	
Is able to perform independently	
Is able to perform under indirect supervision (Indirect = supervisor available to Advanced Critical Care Practitioner within 5 to 30 minutes)	
Is able to perform under direct supervision (Direct = present with Advanced Critical Care Practitioner)	
Demonstrates knowledge of	

The competences reflect the specific requirements of the role and are intended to complement the existing mandatory requirements of employer/employee responsibilities for standing obligations such as:

- Equipment training
- Infection control
- Health and safety
- Risk management
- Cardiopulmonary resuscitation
- Handling and moving
- Fire safety

The core competences identified in this document are divided into four main domains:

- Clinical
- Professional
- Leadership
- Teaching and supervision

There are a number of competences that may be relevant to more than one domain; however, in order to reduce repetition they have been placed in the most appropriate domain.

7.2 Recommended assessment processes

Assessment of the Advanced Critical Care Practitioner will require access to a number of resources. The National Education and Competence Framework intends to leave this open for individual organisations to adopt the most appropriate means of assessment available to them in consultation with their local higher education provider, but this must be a rigorous process. Examples of assessment processes can be found in section 5.

7.3 Specification of core competences

The Advanced Critical Care Practitioner moves freely between the application of the following components responding to the individual patient and their situation, applying their knowledge and skills flexibly in accordance with critical care patient pathways, care bundles and guidelines.

Clinical core competences
<ul style="list-style-type: none">• Resuscitation and first stage management of the critically ill patient• Interpretation of clinical data and investigations in the assessment and management of critical care patients• Diagnosis and disease management within the scope of critical care• Therapeutic interventions/organ system support• Practical procedures• Peri-operative care• Patient comfort and psychological care• Discharge planning and rehabilitation• End of life care• Patient transport
Professional core competences
<ul style="list-style-type: none">• Patient safety and healthcare governance• Health system management• Professionalism
Leadership core competences
<ul style="list-style-type: none">• Professional relationships with members of the healthcare team• Development of clinical practice
Teaching and supervising core competences
<ul style="list-style-type: none">• Participates in multidisciplinary teaching and assessment of others

7.4 Clinical core competences

The competences are presented as broad statements and do not specify the individual skills required to undertake a particular competence. Patient care at this level is much more than a list of practical tasks and the use of these overarching statements more clearly reflects the skills required of an Advanced Critical Care Practitioner. Local users may find it helpful for particular instances or particular trainees to break some of these stems down to their component tasks; further guidance on these is available in the CoBaTrICE framework.

Although there is an expectation that the Advanced Critical Care Practitioner will make limited differential diagnoses, their diagnostic skills will be predominantly physiologically based, the diagnosis of the underlying disease process is not within their defined scope and remains the remit of the broader medical team.

In order for the Advanced Critical Care Practitioner to manage any situation there are a number of common elements they need to undertake as part of an ordered approach to the assessment and management of the critically ill patient, including:

- Assess and recognise signs and symptoms of acute physiological instability
- Order relevant investigations and monitoring
- Identify life-threatening conditions
- Formulate limited differential diagnosis
- Understand pathophysiology and altered physiology
- Initiate management strategies and care plans
- Apply protocols and care bundles
- Instigate appropriate 'referral on' mechanisms to the appropriate healthcare professional
- Resuscitation and initial management of the critically ill patient

7.4.1 Competence Matrix 1: Resuscitation and first stage management of the critically ill patient

The Advanced Critical Care Practitioner will be required to manage a critically ill patient who has acutely deteriorated, often in circumstances where the specific cause or underlying medical diagnosis is unclear. The Advanced Critical Care Practitioner will be required to recognise, diagnose and manage the presenting signs and symptoms in order to prevent further deterioration and stabilise the patient's condition.

Resuscitation and first stage management of the critically ill patient	
Is able to perform independently	<ul style="list-style-type: none">• Can recognise, assess, stabilise and manage a critically ill patient who has acutely deteriorated or collapsed• Can diagnose and manage cardiopulmonary resuscitation to advanced life support provider level to include the management of common arrhythmias• Can manage the post-resuscitation period including the management of the airway, circulation, dysrhythmias and metabolic state• Can triage and prioritise patients appropriately within the critical care environment

The altered physiology which the Advanced Critical Care Practitioner may be expected to manage includes:

- **Cardiovascular instability** including hypotension and hypertension, shock (cardiogenic, hypovolaemic, septic), acute chest pain, common rhythm disturbances
- **Respiratory impairment** including bradypnoea, hypoventilation, tachypnoea, hyperventilation, dyspnoea, the unprotected airway, pulmonary oedema, hypoxaemia, hypercarbia, collapse or consolidation, pleural effusion, pneumothorax (simple and tension), upper and lower airway obstruction
- **Gastrointestinal impairment** including abdominal pain and distension, upper GI haemorrhage, diarrhoea and vomiting
- **Metabolic, hormonal and toxicological derangement** including electrolyte and acid–base disturbances, hypothermia, hyperthermia
- **Neurological impairment** including altered consciousness, acute confusional states, coma, acute seizures
- **Haematological impairment** including severe anaemia, coagulation disorders
- **Musculoskeletal impairment** including burns
- **Genito-urinary and renal impairment** including altered renal function

7.4.2 Competence Matrix 2: Interpretation of clinical data and investigations in the assessment and management of critical care patients

The Advanced Critical Care Practitioner will be required to synthesise large amounts of data in order to promote an informed assessment and management plan, which will include the ability to make a proper physical examination of the following systems in the context of critical care:

- Cardiovascular
- Respiratory
- Gastrointestinal
- Metabolic
- Neurological
- Nutritional state
- Musculoskeletal
- Genito-urinary and renal

Interpretation of clinical data and investigations in the assessment and management of critical care patients	
Is able to perform Independently	<ul style="list-style-type: none"> • Can obtain a history of the current condition and previous health status and perform an accurate clinical examination • Can undertake timely and appropriate investigations including microbiological sampling • Can perform, interpret and adjust respiratory management plans according to blood gas analysis • Within legal frameworks can order and interpret chest x-rays • Can monitor appropriate physiological functions and recognise and manage trends in variables • Can integrate clinical findings with laboratory investigations to form a differential diagnosis of organ dysfunction. • Can initiate and manage basic organ support as defined in the Critical Care Minimum Dataset
Is able to perform under indirect supervision (Indirect = onsite and off site)	<ul style="list-style-type: none"> • Can integrate clinical findings to advanced organ support after consultation with critical care consultant as defined in the Critical Care Minimum Dataset
Demonstrates knowledge of	<ul style="list-style-type: none"> • Indications for Computerised Tomography (CT) imaging • Indications for Ultrasound Scan (USS) imaging • Indications for Magnetic Resonance Imaging (MRI) • Indications for Echocardiography (transthoracic/transoesophageal)

7.4.3 Competence Matrix 3: Diagnosis and disease management within the scope of critical care

The Advanced Critical Care Practitioner will need to make accurate limited diagnosis to ensure the initiation of prompt treatment plans within their scope of practice. The Advanced Critical Care Practitioner will be required to review the patient's clinical progress and modify treatments according to the patient's response.

Diagnosis and disease management within the scope of critical care	
Is able to perform under indirect supervision (Indirect = onsite and off site)	<ul style="list-style-type: none"> • Can manage the care of the critically ill patient with specific medical conditions • Can manage the care of the critically ill patient with chronic and co-morbid diseases and identify the implications of chronic disease on the critically ill patient • Can manage the patient with pulmonary infiltrates including acute lung injury syndromes (ALI/ARDS) and their causative factors • Can manage the care of the septic patient • Can identify and minimise factors contributing to impaired renal function • Can identify and minimise factors contributing to impaired liver function
Demonstrates knowledge of	<ul style="list-style-type: none"> • How to manage a patient in the critical care environment following trauma • How to manage a patient in the critical care environment following burns • How to manage a patient in the critical care environment following spinal injuries • The implications of critical illness in the context of pregnancy • How to manage a patient in the critical care environment following intoxication with drugs or environmental toxins • How to identify significant changes in raised intracranial pressure • How to manage a patient preparing for or following organ transplantation • How to manage a patient with a malignant disease

Critical care diseases and conditions should be specified according to national and local need but may include, for example:

- Sepsis including shock syndromes, inflammatory response, common infection-causing organisms, multi-organ failure sequelae
- Cardiovascular disorders including crescendo or unstable angina, acute myocardial infarction, left ventricular failure, right ventricular failure, pulmonary embolus, cardiac tamponade, atrial tachycardia, ventricular tachycardia, atrial and ventricular fibrillation, pacing box failure
- Respiratory disorders including pneumonia, asthma, chronic obstructive airways disease
- Gastrointestinal disorders including altered nutritional states (obese to cachetic), pancreatitis, jaundice, hepatobiliary disorders
- Metabolic and endocrine disorders including diabetes, adrenal insufficiency, thyroid and electrolyte disorders
- Neurological and neuromuscular disorders including head injury, epilepsy, brain death, critical illness neuropathy
- Haematological disorders including major blood transfusion, immunosuppression, immunoincompetence
- Renal disorders including acute renal failure

7.4.4 Competence Matrix 4: Therapeutic interventions/organ system support

The Advanced Critical Care Practitioner will be required to initiate, manage and perform interventions for continued patient organ support within the critical care environment.

Therapeutic interventions/organ system support	
Is able to perform Independently	<ul style="list-style-type: none"> • Can independently prescribe drugs and therapies • Can manage and wean patients from invasive ventilatory support • Can initiate, manage, and wean patients from non-invasive ventilatory support • Can manage fluids and vasoactive drugs to support the circulation, including the drug groups vasopressors and inotropes • Can request and administer blood and blood products • Can correct electrolyte, glucose and acid–base disturbances • Can assess and prescribe nutritional support • Can manage continuous renal replacement therapy
Is able to perform under indirect supervision (Indirect = onsite and off site)	<ul style="list-style-type: none"> • Can manage the care of the critically ill patient with specific acute medical conditions • Can initiate invasive ventilatory support • Can initiate continuous renal replacement therapy • Can manage antimicrobial drug therapy in consultation with appropriate medical teams • Can manage multiple organ dysfunction (MODS) and the interactions between organ system support interventions
Demonstrates knowledge of	<ul style="list-style-type: none"> • Mechanical assist devices to support the circulation • Mechanisms for prescribing blood and blood related products

In order for Advanced Critical Care Practitioners to undertake patient organ support they need to undertake an ordered approach to the initiation and delivery of therapeutic interventions, which takes account of a number of key elements including the ability to:

- Describe and identify relevant anatomy
- Understand pathophysiology and altered physiology
- Understand the implications and associated risks
- Describe and perform methods and techniques
- Ensure safe use and management of equipment and monitoring devices
- Order relevant investigations and monitoring
- Initiate therapeutic strategies and care plans including modification according to patient response
- Instigate appropriate ‘referral on’ mechanisms to the appropriate healthcare professional

Legal frameworks for drug and blood prescribing and local arrangements for medicine use need to be considered.

7.4.5 Competence Matrix 5: Practical procedures

The Advanced Critical Care Practitioner will be required to initiate and perform practical procedures required to facilitate organ support, therapeutic interventions and legal frameworks for consent will need to be considered locally.

Practical procedures	
Is able to perform independently	<ul style="list-style-type: none"> • Can perform comprehensive airway assessment • Can perform emergency airway management to ALS provider standard • Can initiate and manage oxygen administration devices • Can perform needle thoracocentesis for immediate management of tension pneumothorax • Can initiate and manage appropriate methods for measuring cardiac output and derived haemodynamic variables • Can perform peripheral venous catheterisation • Can perform central venous catheterisation, including renal replacement catheters, using USS and landmark techniques • Can perform arterial catheterisation and arterial blood sampling • Can perform external cardiac pacing • Can perform defibrillation and cardioversion • Can perform electrocardiography (ECG/EKG) • Can perform nasogastric tube placement in a critically ill patient • Can perform urinary catheterisation
Is able to perform under direct supervision (Direct = present with Advanced Critical Care Practitioner)	<ul style="list-style-type: none"> • Can manage an airway by intubation to Mallampati Grade II if no drugs are required • Can manage the airway during percutaneous tracheostomy • Can manage the airway during procedures requiring sedation, e.g. cardioversion • Can perform thoracocentesis via chest drain for pleural effusions using Seldinger technique
Demonstrates knowledge of	<ul style="list-style-type: none"> • How to recognise and manage difficult intubation • How to manage a failed intubation • How to perform thoracocentesis via a chest drain for pleural effusions using Seldinger technique • Invasive and non-invasive methods of measuring cardiac output • The principles of Sengstaken tube use (or equivalent) and placement and the management of portal hypertension • The indications for and safe conduct of gastroscopy

In order for the Advanced Critical Care Practitioner to undertake the relevant practical procedures they need to undertake an ordered and safe approach to the execution of the procedures which takes account of a number of key elements, including the ability to:

- Describe and identify relevant anatomy and physiology
- Understand the implications and risks associated with the procedure(s)
- Describe and understand methods and techniques
- Ensure safe use and management of equipment including aseptic techniques
- Order relevant investigations
- Prioritise workload order
- Prepare the patient and environment for the procedure
- Ensure a safe approach to and execution of the procedure
- Initiate therapeutic strategies and care plans including modification according to patient response
- Manage procedure aftercare and complications
- Refer on to the appropriate healthcare professional when required

7.4.6 Competence Matrix 6: Peri-operative care

The Advanced Critical Care Practitioner will be required to manage peri-operative patients within their scope of practice in collaboration with multi-professional teams.

Peri-operative care	
Is able to perform under indirect supervision (Indirect = onsite and off site)	<ul style="list-style-type: none"> • Can manage and optimise the pre-operative care of the high risk patient • Can manage and optimise the pre-operative care of the elective patient • Can manage the post-operative care of patients following high risk, emergency and elective surgery
Demonstrates knowledge of	<ul style="list-style-type: none"> • How to manage the care of the patient following cardiac surgery • How to manage the care of the patient following craniotomy • How to manage the care of the patient following solid organ transplantation

7.4.7 Competence Matrix 7: Patient comfort and psychological care

The Advanced Critical Care Practitioner will be required to support patients and dependants in a compassionate and understanding manner during the period of the patient's critical illness.

Patient comfort and psychological care	
Is able to perform independently	<ul style="list-style-type: none"> • Can identify and aim to minimise psychological sequelae of critical illness for patients and dependants • Can recognise the risks of sedative and neuromuscular drugs in the critically ill patient and limitations of assessment in the setting of multiple organ dysfunction or failure • Can manage the appropriate use of sedation and neuromuscular blockade, including the assessment of both
Is able to perform under indirect supervision (Indirect = onsite and off site)	<ul style="list-style-type: none"> • Can manage the assessment, prevention and treatment of pain including the use and prescription of patient controlled analgesia • Can manage the administration of analgesia via an epidural catheter including top-up analgesia, the management of overdose and inappropriate placement

In addition to the core skills the Advanced Critical Care Practitioner will need to:

- Communicate effectively and explain difficult clinical information using terms and language understandable to the patient and relatives
- Enable patients and relatives to make informed choices and understand the consequences of the choices they make
- Provide supportive care and coaching (distraction techniques) through difficult procedures

7.4.8 Competence Matrix 8: Discharge planning and rehabilitation

The Advanced Critical Care Practitioner will be required to support the rehabilitation process of the critically ill patient which starts on admission to critical care and continues after discharge. The Advanced Critical Care Practitioner within their scope of practice needs to minimise the physical and psychological consequences of critical illness.

Discharge planning and rehabilitation	
Is able to perform independently	<ul style="list-style-type: none">• Can identify and minimise the long term consequences of critical illness• Can inform patients and carers about the requirements for continuing care after discharge from critical care• Can manage the safe and timely discharge of patients from the ICU/HDU
Demonstrates knowledge of	<ul style="list-style-type: none">• The physical and psychological challenges for rehabilitation• The significance and relevance of critical care patient follow-up both within hospital and following discharge

7.4.9 Competence Matrix 9: End of life care

The Advanced Critical Care Practitioner within their scope of practice may be required to actively participate in the management of the dying patient. This involvement will include situations where management and care plans include the limitation or withdrawal of treatment to a critically ill patient where the emphasis of care is placed on the minimisation of distress to both the patient and their dependants.

End of life care	
Is able to perform independently	<ul style="list-style-type: none"> • Can manage the appropriate aspects of the procedure for withholding or withdrawing treatment once agreed with the multidisciplinary team • Can communicate care plans and discuss end of life care with patients and their dependants • Can manage the process of palliative care of the critically ill patient
Is able to perform under indirect supervision (Indirect = onsite and off site)	<ul style="list-style-type: none"> • Can optimise organ function ready for brain death testing

In addition to the core skills, the Advanced Critical Care Practitioner will need to:

- Take account of ethical issues
- Minimise the distress to patients and dependants

7.4.10 Competence Matrix 10: Transport

The Advanced Critical Care Practitioner may be required to transport critically ill patients safely, for both intra- and inter-hospital transfers.

Transport	
Is able to perform independently	<ul style="list-style-type: none"> • Can undertake transport of the critically ill patient outside the ICU/HDU including the mechanically ventilated and spontaneously breathing patient in accordance with local guidelines and standards

The Advanced Critical Care Practitioner must consider national and local transportation guidelines including those produced by the Intensive Care Society.

7.5 Professional core competences

7.5.1 Competence Matrix 11: Patient safety and health system management

The Advanced Critical Care Practitioner will have a responsibility to promote and help ensure the safety of patients, visitors and staff. This responsibility involves a professional approach to the maintenance and improvement of healthcare systems, standards and processes in the delivery of the service.

Patient safety and health system management	
Is able to perform independently	<ul style="list-style-type: none">• Can participate in a daily ward round as part of the multidisciplinary team• Can comply with local infection control measures• Can identify environmental hazards and promote safety for patients and staff• Can identify and minimise risk of critical incidents and adverse events• Can organise a case conference with multidisciplinary team involvement• Can apply protocols, guidelines and care bundles• Can apply appropriate critical care scoring systems for assessment of severity of illness, case mix and workload• Can demonstrate an understanding of the Advanced Practitioner position within the wider and local organisation including clinical responsibilities, levels of accountability and systems of working

In order for the Advanced Critical Care Practitioner to contribute to patient safety and healthcare management systems they need to undertake an ordered approach which takes account of a number of key elements, including the ability to:

- Behave in a professional manner
- Identify and minimise risk in the work environment
- Apply protocols and guidelines
- Adhere to local and national policy and guidelines
- Communicate and document appropriately
- Develop collaborative care plans
- Participate in monitoring processes

7.5.2 Competence Matrix 12: Professionalism

The Advanced Critical Care Practitioner will be expected to function as an autonomous practitioner within a specialist healthcare team. The professional behaviour required includes maintaining competence and standards of care delivery, the maintenance of ethical standards, critical appraisal, and continuing personal and professional development.

Professionalism	
Is able to perform independently	<ul style="list-style-type: none">• Can communicate effectively with patients, relatives and carers• Can communicate effectively with members of the multi-professional healthcare team and other agencies• Can maintain accurate and legible records• Can involve patients, dependants and carers in decisions about care and treatment as appropriate to the critical care setting• Can respect cultural and religious beliefs and demonstrate an awareness of the impact of these beliefs on care of the critically ill patient and their dependants and carers• Can ensure patient confidentiality and apply legal frameworks related to patient information• Can take responsibility for safe patient care appropriate to level of practice• Can formulate clinical decisions within their area of practice with respect for ethical and legal principles in the multidisciplinary team context• Is aware of the implications of consent and relevant issues as applied to the critical care environment

Professionalism includes elements of communication, professional relationships with patients and relatives, and self-governance as described below.

Communication
<ul style="list-style-type: none">• Understands communication is a two-way process• Is sensitive to the reactions and emotional needs of others• Is able to communicate at all levels• Gives accurate information and ensures comprehension, clarifies ambiguities• Listens• Uses appropriate non-verbal communication

Professional relationships with patients, relatives and carers

- Focuses on the needs of the patient, family and carers
- Maintains trust and reassures appropriately
- Listens
- Is polite and caring
- Seeks the views and opinions of the patient
- Shows respect for the patient's wishes, privacy, dignity and confidentiality
- Is unprejudiced
- Views each patient as an individual

Self-governance

- Accepts responsibility for safe patient care, including continuity of care
- Shows initiative and adopts a proactive, problem-solving approach
- Manages stress
- Is decisive when action is needed
- Respects and applies ethical principles
- Promotes the highest quality of practice, education and research
- Is unbiased
- Is interested and motivated
- Seeks learning opportunities and has insight into personal educational needs, strengths and limitations
- Seeks help, appropriately acknowledges and learns from mistakes
- Recognises and seeks to address unprofessional behaviour in others
- Manages time and organises self effectively
- Wears appropriate attire and has good personal hygiene
- Is accessible, punctual and reliable

7.6 Leadership core competences

7.6.1 Competence Matrix 13: Professional relationships with members of the healthcare team

The Advanced Critical Care Practitioner will be approachable and will lead and delegate appropriately. This includes the promotion of respect and value of others' roles, effective exchange of information, and support of all members of the multidisciplinary team. The Advanced Critical Care Practitioner will be punctual and reliable and arrange cover for their absence. The individual practitioner will behave as a good ambassador for the role of Advanced Practitioners, acting professionally and behaving considerately towards other professionals and patients, acting as a role model.

The Advanced Critical Care Practitioner needs to demonstrate competences and behaviours relevant to:

- Leadership
- The importance of working within a multi-professional environment
- Collaboration and consultation
- Clinical support
- Awareness of their own behaviour and its effects on others

Professional relationships with members of the healthcare team

Is able to perform independently

- Can collaborate, consult and promote team-working
- Can ensure continuity of care through effective communication with the multidisciplinary team
- Can appropriately supervise, and delegate to others, the delivery of patient care as appropriate to their level of expertise and practice
- Can support clinical staff outside the critical care unit to enable the delivery of effective care as appropriate to the Advanced Critical Care Practitioner scope and level of expertise

7.6.2 Competence Matrix 14: Development of clinical practice

Dynamic development of clinical practice is essential for the Advanced Critical Care Practitioner to deliver high quality patient care. Transparent evaluation and audit of the service delivered provides crucial evidence for the improvement of clinical standards, not only enhancing local care delivery but also adding to the body of knowledge promoting best practice within the wider critical care community.

This competence will include elements relating to:

- Current developments in clinical practice and guiding principles of critical care professional and specialist organisations
- Current developments and guiding principles of the local NHS trust and regional critical care network

Development of clinical practice	
Is able to perform independently	<ul style="list-style-type: none">• Can seek learning opportunities and integrates new knowledge into clinical practice, including that of clinical decision making• Can take a lead to develop clinical and professional practice relevant to the role in order to ensure the delivery of high quality best practice care• Can participate in research or audit and quality assurance activities under supervision• Can support patients (and their dependants and carers, as appropriate) in understanding the evidence base for their care and clinical management in terms of their personal circumstances

7.7 Teaching and supervising core competences

7.7.1 Competence Matrix 15: Participation in multidisciplinary teaching

As members of a multidisciplinary team, Advanced Critical Care Practitioners have teaching responsibilities to colleagues and patients and their relatives, and therefore need to develop the skills, attitudes and practices of competent teachers and supervisors relevant to the clinical area and their role.

These competences will include attention to the following elements:

- Educational and assessment methods and principles relevant to the role and clinical environment
- Continuing professional development
- Self-directed learning
- Organisational structures supporting education and training
- Cross professional education and training

Participates in multidisciplinary teaching	
Is able to perform independently	<ul style="list-style-type: none"> • Can participate in the educational activities and teaching of the multidisciplinary team and other groups appropriate to the role and level of knowledge • Can deliver teaching sessions on an aspect of clinical practice relevant to the local setting, utilising appropriate preparation and teaching methods • Can maintain accurate and legible education and training records and documentation • Can take responsibility and participate in the continuing professional development of staff and others relevant to the role and position within the organisation • Can demonstrate a learner-centred approach to practice by facilitating and supporting the learning of other students, trainees and colleagues
Demonstrates knowledge of	<ul style="list-style-type: none"> • The basic principles of how adults learn

8 National recognition and transferability

To ensure national recognition and transferability of the role, ideally there would be regulatory and accreditation frameworks in place to ensure common standards across all Advanced Critical Care Practitioners and practitioner programmes. In the current absence of these frameworks a National Reference Panel has been established to oversee the development of an accreditation framework supported and endorsed by the Intensive Care Society, Intercollegiate Board for Training in Intensive Care Medicine, Royal College of Nursing and the British Association of Critical Care Nurses.

9 Glossary of terms

Clinical assessor	An accredited physician with responsibility for assessing trainee Advanced Critical Care Practitioners in the practice setting. The roles of clinical assessor and supervisor may be combined.
Clinical supervisor	An accredited physician with responsibility for supervising an identified trainee Advanced Critical Care Practitioner within their multidisciplinary team.
Competence	In this framework, competence is defined within a professional context as the broad ability with which a professional person is able to practise to the required standards in a pre-determined range of clinical fields and across a range of situations. This broad definition includes attributes that can be applied to clinical performance (Stuart, 2003), and the use of professional judgement (Carr, 1993).
Core knowledge	The knowledge base to underpin professional practice that is common to all Advanced Critical Care Practitioner programmes irrespective of the particular specialty.
Core syllabus	The detail of the generic subject knowledge and range of skills required by all Advanced Critical Care Practitioners regardless of specialty focus. This has been developed and agreed upon by a broad spectrum of academic advisers and specialty associations within the Intensive Care Society.
Critical care patient	See Appendix 1 detailing levels of critical care.
Differential diagnosis	Distinguishing between two or more diseases and conditions with similar symptoms by systematically comparing and contrasting clinical findings, including physical signs and symptoms, as well as incorporating the results of laboratory tests and other appropriate diagnostic procedures.
Direct supervision	Where an appropriately qualified physician works alongside the trainee Advanced Critical Care Practitioner to monitor and assess performance and to verify compliance with appropriate standards/care protocols.
Indirect supervision	Where an appropriately qualified physician is readily available in physical proximity to provide guidance and advice to the trainee Advanced Critical Care Practitioner undertaking duties in accordance with appropriate standards/care protocols.

Mentor	An experienced professionally qualified practitioner (i.e. physician, senior Advanced Critical Care Practitioner) with appropriate education and training to facilitate learning and supervise trainee Advanced Critical Care Practitioners within the practice setting.
National Educational and Competence Framework	The main educational document providing the background, development, entry routes, definitions, structure of education and training, and assessment strategy for trainees on the programme.
Patient-centred care	Care which: a) explores the patient's main reason for the visit, concerns and need for information; b) seeks an integrated understanding of the patient's world – that is their whole person, emotional needs and life issues; c) finds common ground on what the problem is and mutually agrees on management; d) enhances prevention and health promotion; and e) enhances the continued relationship between the patient and health professional.
Procedural skills	These relate to the awareness of various clinical procedures associated with routine and non-routine tasks and the ability to implement the procedure effectively.
Professional judgement	The application of relevant knowledge and experience within the context provided by clinical standards (that reflect the collective judgement of the profession) and rules of professional conduct in reaching decisions where a choice must be made between alternative possible courses of action.
Specialist knowledge	The knowledge relevant to a particular specialty, which is over and above the core knowledge expected of all Advanced Critical Care Practitioners in any specialty.
Tacit knowledge	That which is developed from experience. Most practitioners have a high level of tacit knowledge in their specialist area. This means that they undertake activities without having to think very hard about them. However, the danger is that they use only tacit knowledge for practice and do not develop new ways of thinking about their practice, and that this could lead to errors.

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Appendix 1: Intensive Care Society – Levels of Care 2002

Level 0

Patients whose needs can be met through normal ward care in an acute hospital.

Level 1

Patients at risk of their condition deteriorating, or those recently relocated from higher levels of care whose needs can be met on an acute ward with additional advice and support from the critical care team.

Level 2

Patients requiring more detailed observation or intervention including support for a single failing organ system or post-operative care, and those stepping down from higher levels of care.

Level 3

Patients needing monitoring and support for two or more organ systems, one of which may be basic or advanced respiratory support.

Appendix 2: Main contributors to the National Education and Competence Framework

Critical Care Programme Board members

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THE INTERCOLLEGIATE BOARD FOR TRAINING IN INTENSIVE CARE MEDICINE



Hinchingbrooke Health Care 
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