Developing training in perioperative medicine

Postgraduate training plays a central role in what defines anaesthesia as a profession. Almost all NHS departments employ trainees, and the influence that training exerts on the everyday work of anaesthetists is significant. Trainees make up an important part of the workforce and play a key role in the provision of services in anaesthesia and intensive care medicine, especially in terms of ‘out-of-hours’ work. In the process of training, the knowledge, skills and professional values are defined for the future consultant workforce that will form the backbone of NHS services for decades to come.

The current cohort of Core Trainees in anaesthesia is likely to be working in the NHS until the mid-2050s, and the changes that they will encounter will be considerable. Perioperative medicine is set to become increasingly important, and developments in training will be required to provide consultants with the knowledge and skills to meet the challenges that lie ahead.

The Perioperative Medicine Programme, established by the Royal College of Anaesthetists in January 2015, sets out a vision for development of the specialty of anaesthesia to improve patient care in the period before, during and after surgery. It seeks to develop a patient-centred, evidence-based approach to managing risk and stratifying treatment, and to establish this into mainstream clinical practice throughout the UK. The concepts that it espouses are to be introduced into the training programme to provide a baseline for the education and training of future consultants.

The role of the CCT curriculum

The anaesthetic training programme in the UK leads to the award of a Certificate of Completion of Training (CCT). All aspects of the training programme are described in the ‘Curriculum for a CCT in Anaesthetics’. This document sets out the processes of training and defines the knowledge, skills and professional values and behaviours that are required. These areas may be said to define the characteristics and abilities of the profession as a whole. The details of the curriculum are set out in seven Annexes: Professionalism in medical practice; Core, Intermediate, Higher and Advanced level training; general training for anaesthetists in Intensive Care Medicine; and non-clinical areas, defined as teaching and training, academic and research, quality improvement and management. Each area is divided into Units of Training (UoTs) which are further divided into the individual competencies set out in terms of knowledge and skills. Each competency is mapped to an assessment matrix, the FRCA exam (for core and intermediate training), and one or more domains of the GMC’s ‘Good Medical Practice’. The curriculum and its annexes thus provide a comprehensive template for all elements of the training programme required both for ‘generalist’ and sub-specialty training.

The current CCT curriculum was established in 2010, and included input from specialist societies, College Tutors and Regional Advisers, clinical directors, trainees and patient representatives. The changes over the previous (2007) version mainly related to the incorporation of workplace-based assessments for each of the competencies.

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It is something of a paradox that the significantly greater level of detail provided in the current curriculum requires far more updating than the more nebulous time-based approach to training that was experienced in previous decades.

Although perioperative medicine is not emphasised in the curriculum, it is well established in terms of service provision. The result is that some important aspects of these services are not currently assessed within the training programme. It is ironic that a new consultant, with many years of undergraduate and postgraduate training, may work in areas of clinical practice in which they have never been formally trained or assessed. Perioperative medicine does however form a significant part of the everyday experience gained by trainees, who often contribute to the care of patients in the perioperative setting. In fact this arguably forms a significant part of the ‘service’ role of trainees, although this is not formally recognised within the training programme.

**Rationale for changes**

The curriculum sets the standard for the training of all CCT holders in the UK, and as such it forms a basis for consultant practice. Whilst it is clear that not all consultants will be expected to have a significant role in perioperative medicine, it is important to ensure that there is a universal standard attained by all trainees that will support established services such as pre-operative assessment clinics.

It was important to consider what sort of training can be established on a scale that will accommodate all anaesthetic trainees. Whilst there are many centres of excellence providing notable perioperative services throughout the country, these individual units could not be expected to provide training for such large numbers. Furthermore, teaching hospitals are already required to provide a considerable amount of sub-specialty training. Increasing the burden of training on teaching hospitals would benefit neither those departments themselves, who would have to fit ever more complex and onerous requirements into their local programmes, nor District General Hospitals that would risk losing trainees. Training in perioperative medicine must therefore be deliverable within a DGH setting. The training environment will depend on both services provision and the clinical expertise of trainers. It is not envisaged that all hospitals in the UK will be required to provide every element of training in perioperative medicine; however, it is known that most already have services such as assessment clinics, facilities for advanced intraoperative monitoring, and enhanced recovery pathways in place.

The emphasis of training in perioperative medicine will establish a patient and anaesthetic centred approach to caring for patients. Most current units of training are defined by the surgical specialties to which they relate, rather than by any particular specifics of anaesthetic practice (although this is arguably the most practical way to set out the training programme). New UoTs in perioperative medicine will incorporate a focus on patient status and wishes, medical comorbidity and the choice of anaesthetic modality independent of surgical specialty, focussing on generic physiological and pathological concepts.

It has been important to try to ensure that the introduction of new UoTs will not compromise other areas of anaesthetic training. Since the advent of the European Working Time Directive and the 48-hour working week, exposure to clinical work has significantly decreased amongst all trainees and it was considered essential that there were not undue compromises placed on experience and training in theatre. As such, units are designed to run in tandem with other clinical units over the course of each stage of training with signoff not expected until near the end of that level. By adopting this approach it is anticipated that there will be a high degree of flexibility in gaining competencies and that the small amount of time which will be spent outside theatre will not have an undue effect on clinical attachments.

### Units of training

The Units of Training that have been developed will be mandatory for all trainees at Core, Intermediate and Higher stages of training. They will be organised into preoperative, intraoperative and postoperative sections, each containing competencies referring to knowledge and skills. Some competencies are already contained within the curriculum, and some have been developed *de novo*, becoming more challenging at each stage of training. Units can be summarised by themes:

**Core Training: The Basis of Anaesthetic Practice (0 to 3-6 months):**
- Rationale for perioperative care.
- Obtaining a detailed individualised history and physical examination.
- Understanding of common preoperative investigations.
- Specific anaesthetic evaluation.
- Management of postoperative pain and fluid requirements.
- Management of common postoperative complications.

**Core Training: Basic Anaesthesia (3-6 to 24 months):**
- Knowledge of the effects of acute and chronic disease.
- Perioperative management of medications.
- Special considerations for specific patient groups.
- Liaison with other medical specialties.
- Use of invasive monitoring.
- Indications for postoperative referral to critical care.
- Introduction to clinic based practice.

**Intermediate Training (ST3-4):**
- Use of risk-scoring systems.
- Enhanced Recovery Pathways.
- Management of complex co-morbidities.
■ Working as part of a multidisciplinary team.
■ Advanced haemodynamic monitoring.
■ Management of perioperative deterioration.

Higher Training (ST5-6)
■ The use of critical analysis in perioperative medicine.
■ Limitations of investigations and treatment strategies.
■ Complex clinical decision making.
■ Leadership of assessment clinics and MDTs.
■ Minimisation of risks and complications.
■ Communication with patients and colleagues in complex situations.

Units will establish the concept of perioperative medicine from the very beginning of the training programme. All competencies will be mapped to workplace based assessments and Good Medical Practice. Those to be completed in Core and Intermediate training will be mapped to the Primary and Final FRCA respectively.

Implementation and quality management
It is anticipated that the new UoTs in perioperative medicine will be incorporated into the curriculum from August 2016, and the training framework required for their successful introduction will need to be in place at this time. This will require working with Clinical Directors, College Tutors, Regional Advisors and Training Programme Directors as well as communication with trainees themselves. Changes to the e-portfolio will ensure that progress and sign-off can be recorded in the same way as other units.

Departments will be encouraged to ensure that the agenda around perioperative medicine is led by anaesthetists with the emphasis firmly on leadership and training. It is anticipated that appropriate services will be in place in sufficient numbers of departments to ensure that implementation within existing training programmes will be easily achievable. Module leads with expertise in perioperative medicine will need to be recruited, and will have responsibility for managing and signing off perioperative medicine units, supported by College Tutors. It is expected that when equipped with a clear set of objectives and learning outcomes, trainees will also play an active role in ensuring that they achieve the required outcomes successfully.

Training is managed within each school of anaesthesia through a comprehensive process of quality management with ultimate accountability to the GMC. Standards are continually monitored through informal systems such as trainee feedback, as well as formal processes such as the GMC’s annual National Training Survey and quality visits undertaken by schools with RCoA involvement. The standards and requirements for training set out by the GMC provide considerable support for standards in both training and clinical services.

Advanced training and the future
At the current time there is no specific provision for advanced training. However, many fellowships in perioperative medicine have been approved by mapping competencies to other advanced units such as general duties. Competencies are generally more open ended at this level of the curriculum, reflecting the requirements for professional qualities and overall clinical expertise. These posts may be undertaken within a training programme, and there are also a number of opportunities for trainees wishing to undertake Out Of Programme Experience (OOPE) in perioperative medicine. Such posts will provide opportunities for those wishing to take up consultant posts with significant responsibilities in this field.

The ‘Shape of Training’ review has set out proposals for training in the future which include ‘credentialing’, whereby specific posts are approved to provide training in specific areas of clinical practice. These would probably be undertaken after completion of a training programme, although the exact details around these proposals remain in the early stages of discussion. However, such training would be entirely feasible in perioperative medicine, and the potential for multidisciplinary training in such posts would reflect the approach that is already well established in many services.

The incorporation of perioperative medicine into the anaesthetic training programmes will ensure that the consultant workforce is trained to practice in established services and contribute to their further development. It will also help to establish a professional identity for anaesthetists as leaders in perioperative medicine.

References