Training in cardiology – the next decade

'The assessment of doctors' performance has become an important issue'

John Greenwood
Chairman, BJCA

The introduction of the first specialist registrar training programme in December 1995 brought a radical overhaul in higher specialist training. Each speciality produced a curriculum establishing specific training objectives against which the progress of an individual trainee could be judged. Since then all trainees have been subjected to an annual review of progress, commonly called the RITA (Record of In-Training Assessment), performed by a small speciality-based panel. Subject to satisfactory progress at each RITA, the individual continues through the training programme and eventually gains a Certificate of Completion of Specialist Training (CCST).

There are drawbacks to this process, however. It is rather subjective being based simply around an educational supervisor (consultant) who 'signs up' a trainee as competent in the management of particular clinical problems or the performance of procedural skills in their 'Grey Book'. In addition, many of the requirements for the performance of these procedural skills were purely 'number based' rather than competency based, which took no account of whether an individual was a relatively quick or slow learner. Whilst this system is adequate for the majority of junior doctors, it has not been a robust or objective measure of poor performance. With recent high profile cases, such as the Bristol Report, the assessment of doctors' performance has become an important issue, whether they are in training or fully trained. This has led the Royal College of Physicians (RCP) and the Joint Committee of Higher Medical Training (JCHMT), in collaboration with the Specialist Advisory Committees (SACs), to re-write the curricula and develop new methods of assessment. Importantly, both of these changes will not be applied retrospectively, i.e. they will only apply to those individuals who were awarded a National Training Number (NTN) after 1st January 2003.

New educational principles have been incorporated into the new curricula, although they are not particularly different in terms of core knowledge. They are now competence-based and set out the knowledge, skills, and attitudes to be acquired by trainees before they may be awarded a CCST. Launched in December 2002, there is a generic curriculum that applies to all trainees in all specialities, and also a specific curriculum for each speciality (further details are available for download from the JCHMT website www. jchmt.org.uk).

New methods of assessment

To complement the new curricula, the JCHMT and the RCP (London) are currently piloting three chosen assessment methods that will focus on important aspects of real clinical performance.

1. *Mini-CEX (Clinical Evaluation Exercise)*: This is designed to assess the clinical encounter and the educational supervisor will directly observe the trainee in real clinical situations. It is likely that each of the skills of history taking, clinical examination, communication, patient consideration, diagnosis, management plan and overall competence will be scored. Each encounter is anticipated to take approximately 15–20 minutes and they will be repeated on multiple patients in different environments, for example out-patient departments, wards and the emergency department.
2. *DOPS (Directly Observed Procedural Skill):* Designed by the RCP to move away from the 'numbers based' approach to competency, this will involve the educational supervisor directly observing a trainee undertaking a

certain procedure and then grading each of the procedure's specific components. In cardiology, for example, the pilot study includes diagnostic angiography and will grade the following aspects of the procedure: aseptic technique, vascular access, selection of catheters and manipulation, acquisition of images, radiation exposure and arterial access management.

3. *360° Assessment:* This is designed to be an objective method of assessing behaviour and attitudes such as communication, leadership, team working, attitude to patients and staff, punctuality, reliability, honesty and integrity. Up to 15 people from all disciplines working with the trainee, including peers, nurses and technicians, will complete a structured questionnaire in confidence, covering each of these points.

These three assessment methods will be performed each year with the trainee and, whilst the pilot study will help to determine the absolute numbers for each method, it is anticipated that four Mini-CEX, four DOPS and one 360° assessment could be performed annually. This clearly will be more time consuming both for the trainee and the trainer, in a system that is already time limited. The advantages are that it should lead to a more structured approach to training, highlight any deficiencies earlier for the individual (or region) not performing well, and any future question of competence as a consultant could be supported with robust documentation of training. One final point is that, at the present time, it is not the wish of the JCHMT to introduce an exit exam, but there does remain a possibility of some form of early/mid-term assessment of core cardiology knowledge which may well be MCQ (multiple choice question) based.

Workforce requirements

Impending consultant employment can be an anxious time if one is unsure of a final career pathway. Giving trainees an idea at an early stage of training of likely workforce requirements at the time of their CCST would be very useful. However, within the cash-limited NHS, it often requires a leap of faith to expect any projected workforce requirements to be translated into fully funded whole-time equivalent consultant posts. One aspect of the recently published *'Fifth report on the provision of services for patients with heart disease'* concerns staffing and that, in conjunction with the report from the *British Cardiac Society Working Group on Cardiology Workforce Requirements* (www.bcs.org.uk), should make very interesting reading. The Department of Health has announced that it does not expect any cardiologist to be working without a colleague by 2004. In terms of absolute consultant numbers the target figure was one cardiologist per 80,000 population or 830 cardiologists in the UK. The current number is around 630. A recent European survey put the UK almost at the bottom of the league table of number of cardiologists (below many former Eastern Block countries) with only 12 cardiologists per million population (pmp). It has been calculated that the UK currently requires 35–40 cardiologists pmp, still only two-thirds of most of Europe and the USA. This figure does not take into account the impact of an ageing population, changes in training/assessment and the European Working Time Directive (EWTD). Furthermore, it is predicted that there will be proportionally more part-time cardiologists as the speciality tries to attract more women into substantive career posts. Currently only about 18% of cardiology specialist registrars and 7% of consultants are female.

Sub-specialties

As well as increasing absolute numbers of cardiologists, there are proposals for further evolution in the way that consultant services are provided, both at the level of secondary and tertiary care. In secondary care it is likely that there will be a move towards a separate cardiology on-call rota, which will require a minimum of six cardiologists (to comply with the EWTD). This will necessitate relinquishing responsibility to the acute general medical take. In order to meet planning needs and National Institute for Clinical Excellence (NICE) guidelines, it is predicted that there will be a significant increase in sub-specialisation at secondary care level, with many district general hospitals (DGHs) providing angiography, pacing, defibrillator implantation and biventricular pacing services. Indeed, the 'typical' DGH may consist of six cardiologists: four with an interest in coronary heart disease (including angioplasty and pacing), and one each with an interest in heart failure and imaging.

Looking at particular areas of sub-specialisation, predicted figures for future percutaneous coronary intervention (PCI) and electrophysiology procedures are startling. Although the National Service Framework target of 750 PCI procedures pmp has only just been achieved, there are calls to immediately plan for 1,400 PCIs pmp (still below many other European countries) and potentially for 2,000–3,000 PCIs pmp in the future. Furthermore, the British Pacing and Electrophysiology Group (BPEG) have indicated that to achieve the NICE recommendations of an implantable cardioverter defibrillator (ICD) implantation rate of 50 pmp, it will require an increase from 43 to 84 electrophysiologists. Recent evidence suggests that the requirements for ICD implantation may be up to 400 pmp, and with the potential of up to 10% of heart failure patients benefiting from biventricular pacing, requirements for 200–300 electrophysiologists may be a very conservative estimate. This all goes

to suggest that – for the foreseeable future – job prospects remain remarkably good from a trainee's perspective.

Summary

Many changes are soon to be implemented which will have a major impact on the training programme experience. We hope that when this is coupled with the EWTD and the progressive move to partial or full shift systems, the proposed new methods of education and assessment will produce an increase in the quality of training to match the reduction in quantity. Looking at future employment prospects, if the recommendations of the Fifth Report are implemented in full, then those currently in training or shortly about to start, will reap the benefits of continued consultant expansion. The drive towards the sole practice of cardiology (without general medicine) and increased sub-specialisation within cardiology at secondary care level looks set to continue. This can only be good for the speciality and, more importantly, to the advantage of all those with cardiovascular disease.

John Greenwood
Lecturer in Cardiology, and Chairman,
British Junior Cardiologists' Association
Academic Unit of Cardiovascular Medicine,
Jubilee Wing, The General Infirmary,
Leeds, LS1 3EX.
(email: medjgre@leeds.ac.uk)

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