

REVIEWS

A&E/ICU interface: training in intensive care medicine

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Accident and emergency (A&E) medicine and intensive care have obvious clinical links. Critically ill patients are often managed by A&E physicians before admission to the intensive care unit (ICU) (submitted data). These clinical links are being strengthened by managerial and training links so that A&E staff at all levels may now have significant input into intensive care, and vice versa. The document *Comprehensive critical care*¹ provides a framework in which these links can be developed further.

The training programme in intensive care medicine (ICM) provides an opportunity for trainees from all disciplines to have more formal training in intensive care and A&E trainees have been quick to seize this opportunity. The aim of this article is to outline the structure of training currently available in ICM. Other sources of information are suggested at the end of the article and each region has a regional advisor in ICM who knows the training opportunities locally. Details of how to contact each regional advisor in ICM are available from the Intercollegiate Board for Training in Intensive Care Medicine (IBTICM).

History

As long ago as 1992, an Intercollegiate Committee for Training in Intensive Therapy was formed that reported directly to the Presidents of the Royal Colleges of Physicians, Surgeons and Anaesthetists. There was also representation from the Intensive Care Society. The primary responsibility of this committee was to set standards for training in ICM.

This committee has evolved into the Intercollegiate Board for Training in Intensive Care Medicine (IBTICM). It still has powers delegated to it by the various Royal Colleges and has now implemented the training programme devised by the previous committee and established the Diploma in Intensive Care Medicine. In addition, the IBTICM sought specialty recognition for ICM; on the 6 June 1999, this was granted.

Training in intensive care medicine

The IBTICM has recognised ICUs throughout the United Kingdom as suitable for training. Those selected must have a clinical workload with an appropriate range of severity of illness as well as consultant cover and an established training programme. For ease,

Box 1 The aims of basic training in ICM

To develop:

- An understanding of what ICM can and cannot do for patients
- The ability to liaise with other teams involved in the care of a patient
- Both knowledge and understanding of the pathophysiology and initial management of organ failures
- Skills in basic practical procedures
- An understanding of the drugs and monitoring methods commonly used on the ICU
- An ability to interpret investigations
- An understanding of ICU scoring systems

training in ICM has been subdivided into three components, basic, intermediate and advanced level.

Basic training

The Royal Colleges and IBTICM recommend that any trainee in an acute medical or surgical specialty should do three months' basic training in ICM. SHO training is being reviewed at the moment and one suggestion is that all trainees should do some critical care. Basic training in ICM provides an insight into the management of critically ill patients; its other aims are outlined in box 1.

Basic training in ICM is three months in total and any individual module should be at least a month long. The training should be in an ICU recognised for training and ideally the on call should be for intensive care alone. Basic training can be done at SpR level as a secondment or as part of SHO training. While SHO posts of longer than three months obviously improve experience in ICM, no more than three months of ICM at SHO level can be counted towards further training in ICM.

Intermediate training

Intermediate training in ICM is designed for those who will be involved in the clinical management of critically ill patients in the future. It is done at SpR grade and builds on basic

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Box 2 The aims of intermediate training in ICM

To develop:

- The knowledge, skills and understandings gained during basic training in ICM so that an appropriate and effective patient management plan can be devised and implemented
- Professional attitudes
- Communication skills
- The ability to investigate and diagnose appropriately
- Competence in relevant practical skills
- An appreciation of ethical issues
- An understanding of brain stem death and organ donation
- Basic management skills
- Critical appraisal skills for research and audit

training. Intermediate training aims to develop the knowledge, skills and attitudes outlined in box 2.

Trainees planning intermediate training should register their proposed training plan with the IBTICM through their regional advisor in ICM. The components of the training are:

- The three months' basic training in ICM (as above).
- Six months of ICM at SpR level.

This must be in an accredited ICU and in modules of at least three months in duration. The on call responsibility must be solely for the management of critically ill patients.

- The complementary specialty.

This involves experience in other specialties. Trainees in A&E medicine must do at least three months' medicine in a post recognised for training in general medicine that has an unselected on call and at least six months' anaesthesia. This experience can be gained through an SHO post or an SpR secondment but a secondment should be taken in one block for each specialty and have common educational objectives. It may be possible to do some complementary training overseas but this should be discussed with the regional advisor in ICM *in advance*.

- The educational record.

This record is kept by the trainee and demonstrates that they have met a satisfactory standard during the training modules and been exposed to a range of experience in ICM. An important component of the educational record is the case summaries. This entails the trainee writing up 10 case reports of 1000 words each. They should demonstrate a deeper knowledge of aspects of ICM and some learning points after reflecting on the patient's management. An educational supervisor and/or the regional advisor in ICM should assess the summaries.

Once all these components are completed, trainees can have their training recognised by the IBTICM at intermediate level. A list of those with intermediate training in ICM is kept

Box 3 The aims of advanced training in ICM

To develop:

- The knowledge, skills and attitudes gained during basic and intermediate training so that an ICU can be organised effectively and efficiently
- Knowledge, skills and understandings in specialist areas or where there are perceived gaps in previous training
- Skills in management, budgeting, training, research and audit

by the IBTICM. Ultimately the application for recognition will take place as part of the in-training assessment process. At the moment there are regional variations and the regional advisor in ICM can offer advice on local procedures.

Advanced training

Advanced training in ICM is designed for those who want to have a significant clinical and managerial role in an ICU. Intermediate level training must be completed and advanced level training builds on this and aims to develop the knowledge and skills outlined in box 3.

To meet these aims, a 12 month training programme is designed around the needs of the individual trainee. The regional advisor in ICM and the IBTICM must approve the planned programme in advance and review evidence that the programme has been satisfactorily completed. Up to six months of advanced training can be taken overseas, provided certain conditions are met; it must be:

- Prospectively approved by the IBTICM
- Take place in an ICU that is approved for training in ICM by a recognised body
- Provide educational supervision for the trainee
- Designed as a whole to fulfil the trainee's aims.

It is essential that anyone hoping to undertake advanced level training discuss this with their regional advisor in ICM at the earliest opportunity.

Competency based training

The present system of training is based on the amount of time spent in a post. This is being replaced by a system of training based on the knowledge, skills and attitudes gained during the post. The end point of this will be an assessment of the trainee's competence in specific areas and in the future staff will have to demonstrate that they are competent in certain areas as a condition of their employment.

Intensive care is the first specialty to produce a complete training programme based on the development of competencies. The programme will be implemented after February 2001 once final ratification has been made by the Colleges. The trainees will then have an

amended training record to document the competencies they have achieved.

The CCST in ICM

A programme of training has been approved that leads to a joint CCST in ICM and a parent specialty, such as A&E medicine. Essentially, this programme is the same in both content and duration as a combination of intermediate and advanced training. Trainees who have completed their basic and complementary training will be eligible to apply for the posts. Unfortunately, technical problems with the entry procedure into the joint CCST programme have meant that trainees cannot yet be recruited into it. Hopefully these problems will soon be resolved and the programme implemented.

The diploma in ICM

The diploma in ICM requires in depth knowledge of ICM and experience of ICM to at least intermediate level or its equivalent. Candidates submit a dissertation of up to 10 000 words on a subject relevant to intensive care. The dissertation could be a review, a piece of original research or an abstract from a higher degree. As well as the dissertation, there are three oral examinations: one on the dissertation, one on the case summaries and one on various topics in ICM. Anybody planning to sit the diploma in ICM should discuss their plans and their proposed dissertation subject with their regional advisor in ICM at an early opportunity.

A career involving ICM

While training in ICM is essential if you are applying for a consultant post with an intensive care component, there is still a need to demonstrate your commitment to the specialty of ICM in other ways. As has always been the

case, consultant appointments are made on the strength of the applicant and their application. Your curriculum vitae is a measure of this and should include some evidence of research, audit and teaching in intensive care related subjects as well as other activities related to ICM. It is also useful, and often fun, to join societies, such as The Intensive Care Society and your regional intensive care society. Attending their meetings will provide you with both an update in various topics and a forum to meet other trainees in ICM. It is essential that your experience of ICM is as rounded as possible.

A significant expansion is planned in intensive care over the next few years,¹ ICUs will become larger and outreach teams will support the appropriate management of sick patients wherever they are in the hospital. The implications for ICM as a specialty are huge and there will have to be an expansion in staffing at all levels. This expansion will provide opportunities for all those interested in ICM, whether they wish to complement their training with some experience of ICM or whether they wish to pursue a career in ICM.

Further information

Information can be obtained from: The Intercollegiate Board for Training in Intensive Care Medicine, 48–49 Russel Square, London WC1B 4JY (web site: www.ics.ac.uk). The Intensive Care Society, Tavistock House, Tavistock Square, London WC1H 9HR (web site: www.ics.ac.uk). The North West Intensive Care Specialty Training Committee (web site: www.icu.org.uk).

¹ Department of Health. *Comprehensive Critical Care, a review of adult critical care services*. London: Department of Health, 2000.