

College of Intensive Care Medicine: changes to intensive care medicine training

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Intensive care medicine (ICM) services for the 28 million residents of Australia and New Zealand are provided to patients at the point of care within public hospitals largely free of charge. Australia has a parallel private system of ICM, funding for which comes from both private insurance and the state-funded Medicare system. New Zealand, by contrast, has a much more limited private system, largely comprising postoperative cardiac surgical intensive care services. Intensive care organisation is fundamentally based on “closed” units, in which the ICM specialist takes primary responsibility for day-to-day patient care for the duration of the intensive care unit stay, with interdisciplinary collaboration.

The College of Intensive Care Medicine (CICM) provides the standards for training and certification of ICM specialists in Australia and New Zealand. The CICM works closely with the Australian and New Zealand Intensive Care Society (ANZICS), with both binational organisations contributing to improving ICM delivery in Australia and New Zealand, and building on the strong foundations of partnership between the two countries. While there is close cooperation between the organisations, it is the College that takes responsibility for the training, certification and continuing professional development of ICM specialists.

In 1972, the Board of the Faculty of Anaesthetists of the Royal Australasian College of Surgeons (FARACS) initiated moves to form a “section of intensive care” within the RACS. Subsequently, the same group initiated discussions on setting up a joint specialist advisory committee with the Royal Australasian College of Physicians (RACP), with endorsement from ANZICS.¹ The following 4 years were taken up by unsuccessful attempts by the RACS, RACP and ANZICS to agree on a single joint curriculum or diploma, so that by 1976, training could culminate either with a qualification from the FARACS as an “Endorsement in Intensive Care”, or as an FRACP award by the Intensive Care Specialist Advisory Committee.¹

In 1992, the FARACS became the Australian and New Zealand College of Anaesthesia (ANZCA), with the RACP ICM pathway continuing in parallel. The foundation in 2001 by the RACP and ANZCA of a Joint Faculty of Intensive Care Medicine (JFICM) finally produced a single structure and a unified pathway for general ICM training. This unified faculty subsequently embarked on forming a new stand-alone College in 2008, with the CICM formally established

ABSTRACT

The College of Intensive Care Medicine provides the standards for training and certification of intensive care medicine specialists in Australia and New Zealand. After reviewing and revising its training program, the College recently launched a new training curriculum for all trainees registering from 2014, aimed at maintaining quality. In this article, we aim to outline the context, changes and future directions for intensive care medicine training in Australia and New Zealand.

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in 2010 — an international first for ICM.² Figure 1 shows how Fellow numbers have evolved, to the point where, as of June 2014, there are 956 CICM Fellows, with an average annual output of 55 new Fellows since the JFICM became the CICM. About 80% of new Fellows are employed as intensivists in ICM, and 70% of these are practising full-time ICM.³

The establishment of the ICM training program, from its JFICM inception to the formation of the CICM, was an

Figure 1. Trends in College of Intensive Care Medicine fellowship numbers since the inception of the Joint Faculty of Intensive Care Medicine



Fellow denotes those receiving their fellowship in the year indicated.
* Year to 26 June.

iterative process. Developments included the introduction of the formal project, regular summative in-training assessment, basic and advanced training, and the requirement for trainees to complete a series of formal clinical assessments and, later, the fellowship examination.

A distinct paediatric intensive care pathway was formally introduced by the JFICM Board in 1997 in the form of an "Endorsement in Paediatric Intensive Care" for trainees who fulfilled JFICM requirements and passed the paediatric intensive care examination. This examination was initially held annually, although the numbers of new paediatric ICM Fellows have remained low (Figure 1).

In 2011, the CICM underwent an accreditation process, conducted jointly by the Australian Medical Council and the Medical Council of New Zealand.⁴ The recommendations in the resulting report provided impetus for a review of the training processes CICM employed, and to map the curriculum to the various assessment processes. Between 1999 and 2009, the average hours that doctors work in Australia fell by 8%.⁵ A commonly held opinion was that changes in trainee work-patterns might limit clinical exposure, and the desire to employ more robust educational techniques than a simple apprenticeship model with experiential learning and a high-stakes examination were also incentives for the review.⁶

In 2014, following input from the fellowship, a new curriculum was launched by the CICM.⁷ This coincided with the introduction of a transparent, criteria-based trainee selection process, together with changes to the primary examination exemption policy, with provision for those wishing to pursue dual accreditation (and supervision) with another College. A cornerstone of CICM policy is never to disadvantage existing trainees by curriculum changes. Therefore, the new curriculum is applicable only to those registering from 1 January 2014.

The new CICM training is a minimum 6-year program, that can only be commenced after 12 months of general-hospital experience is completed. Training includes 42 months of specific ICU training divided into three stages: foundation training of 6 months' duration; core training of 24 months' duration (after completing the first-part examination requirements); and the final transition year of 12 months. One year of anaesthesia and one year of medicine are also required. The medicine component requires exposure to both unselected acute medical admissions and "longitudinal care" in the form of outpatient follow-up. Generally, all core ICM training needs to be prospectively approved, although new trainees will continue to be assessed for recognition of prior learning where appropriate.

The 103 accredited core-training hospitals are inspected (about) 5-yearly, and assessed for training, casemix and

quality by the CICM Hospital Accreditation Committee. The training program aims to produce high-quality specialists with a broad range of general ICM experience (including adequate exposure to trauma, cardiac and neurosurgical patients). Within the 6-year framework, ICM trainees require at least 3 months of rural hospital experience, 6 months of accredited paediatric exposure, and a transition year aimed to develop the non-clinical characteristics of an autonomous medical specialist (eg, administration, teaching and management skills).

In addition to the time-based training requirements, trainees must complete a suite of prescribed online learning packages with associated assessments and specific skill-based courses (eg, echocardiography). These courses have clear learning outcomes, allowing for multiple course providers to develop resources that could satisfy CICM training requirements. For example, although the Basic Assessment and Support in Intensive Care (BASIC) course is accredited as a foundation course for CICM, this does not prevent another provider developing an alternative course that would meet the described objectives.⁸ Trainees are required to submit a formal project, which is assessed by designated assessors before being approved by the censor. This is intended to ensure that all trainees are versed in practical audit and research methodology.

The ICM exit examination has existed since 1979, initially in the form of the "fellowship examination" conducted by the Section of Intensive Care of the FARACS. This may have been the first ICM examination in the world.⁹ At that time ICM practice was barely 20 years old, and most ICU care was being provided (on a part-time basis) by practitioners with no formal ICM training. The principal advocate of the examination was the late Professor G A (Don) Harrison, who considered formal assessment of the many specific skills and areas of knowledge required to practise as an intensive care specialist essential for the foundation of ICM as a separate specialty.^{7,8} Today, the longevity of the examination and common training pathway for ICM means that most Australian and New Zealand ICM specialists have passed the examination.¹⁰

The ICM primary examination (which assesses the basic science components of ICM practice) is a later addition, being first held in 2007. Trainees enrolled before 2014 could claim exemption from sitting the primary exam by completing one of a number of other Australian and New Zealand colleges' examinations. Review of curricula identified variable differences in syllabus breadth, depth and content of these other examinations, compared with the CICM primary exam. New CICM trainees are therefore required to complete the CICM primary examination, or complete fellowship of another approved acute specialty college.

The CICM has acknowledged the need to develop a comprehensive summative assessment program. It now includes observed clinical assessments (with management plan formulation) in the form of eight observed clinical encounters. In addition, trainees perform clinical competency assessments for specific procedures (eg, percutaneous tracheostomy). Trainee progression (from novice to fellowship level) is assessed in seven domains of medical practice. This is based upon the CanMEDS framework, a landmark curriculum model developed in 1993 and updated in 2005 by the Royal College of Physicians and Surgeons of Canada.¹¹ Progression is evaluated using a web-based in-training evaluation report.

Feedback is provided during each attachment through regular formative and summative interviews with college-appointed supervisors of training. The aim is to encourage trainee behaviour that is consistent with good ICM practice, rather than to focus activities on simply “passing the exams”. Notwithstanding this, the examinations remain powerful drivers of study, and allow the CICM to assess trainees’ understanding of core knowledge and to audit the success of other assessment processes within the training program.¹² While the CICM training program is accredited to produce ICM specialists for the Australian and New Zealand health workforce, over half of the candidates presenting for the CICM fellowship examination are international medical graduates.⁹ After gaining their fellowships, many of these international graduates stay, but over 20% of CICM Fellows currently practise outside Australia and New Zealand (unpublished data from CICM).¹³ The drive by the Australian and New Zealand governments for medical workforce self-sufficiency has increased graduate numbers from local medical schools. Increased placement of local graduates in Australian and New Zealand hospitals has dramatically decreased the training opportunities for overseas doctors. The CICM remains committed to providing accreditation for comprehensive training outside Australia and New Zealand, specifically in Hong Kong, where the entire program can be completed. In Singapore, India, the United Kingdom, Ireland and Canada, training for more limited periods in CICM-accredited hospitals can be undertaken.

Having embarked on the 2014 curriculum, there is little doubt that the CICM program will require fine-tuning to ensure its currency and relevance to clinical practice. Within the current framework, courses, assessments and online packages will all be expanded and enhanced over time.

The Australian and New Zealand ICM pioneers laid the foundations for robust ICM training systems. These refinements are made with the intent of positively evolving the

standard of ICM training and practice, and ultimately the quality of intensive care delivered to patients.

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