

Education for the Australian and New Zealand Perfusionist

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The certification and education processes for perfusion have played a major role in the success of the cardiovascular perfusion profession over the past 20 years. Now, more than ever, the role of education, both initial and continuing, and the technical base upon which we practice requires updating and expanding to ensure the role of the perfusionist into the future. In Australia and New Zealand, the formal perfusion education system is relatively “new” as compared to the United States; however, we believe we have created a system that is optimal for our current practice, population and geographical location. Australia with a population of about 20 million, has over 50 cardiac surgery units in 11 cities, with over 23,000 cases performed /year (National Heart foundation survey 1998) (1); whereas, in New Zealand, with a population of over 3 million, over 3,500 cases are performed in their 13 units situated in five cities. Open-heart surgery with perfusion has been performed “down under” since the early 1960s with clinical perfusionists, like their colleagues in many other countries, coming from a variety of backgrounds. This eclectic group were generally self-taught and trained in-house with the only formal certification available being the American Board exams. The disjointed nature of the profession was evident in the late 1970s, when two Australian states, New South Wales and Victoria, had perfusion societies; whereas, the other states and New Zealand had no structured body. This demonstrated a need for a national society.

In 1982 the Australasian Society of Cardiovascular Perfusionists, Inc. (ASCPV) (2) was formed at the first Annual Scientific Meeting held in Sydney. Currently, we have 140 full members from Australia and New Zealand, and we have just held our 19th meeting (Abstracts in Issue 4, Vol. 34, *JECT*). The establishment of a formal education system for the training and ongoing accreditation for clinical perfusionists in Australia and New Zealand was a major objective of the formation of the ASCVP. In 1989, after numerous discussions and the results from a referendum of members of the Society, the Australasian Board of Cardiovascular Perfusion (ABCP) (3) was formed under the auspices of the ASCVP, The Royal Australasian



College of Surgeons, and The Australian and New Zealand College of Anaesthetists. The Board's aim was to establish codes of ethics and practice, establish credentialing, and support and maintain perfusion education. The formation of a single board to govern Australia and New Zealand was made easier by the geographical location of each country, both being English language-based, and supporting similar standards of education.

The major issue was how this course was to be structured given the low volume of students who would participate at any given time, currently we have 15 students. A traditional model incorporating a post-graduate university degree was deemed to be too expensive; whereas, a central school of perfusion model, with some clear advantages with respect to gaining collective experience and excellence, was not practical because of the large distances between different regions (some in excess of 4,000 km apart). Similarly, state/country-based perfusion schools, were also not feasible, except in the largest centers, such as Sydney, Melbourne, or Auckland. The final solution was to establish a 2-year post-graduate, correspondence course. This course was designed to combine theoretical and practical training in a modular method, provided at an approved hospital and under the guidance of a supervisor.

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Received December 12, 2002; accepted January 11, 2003.

The current prerequisites for entry into the course are a Bachelor of Science or Applied Science Degree from an Australian or New Zealand University, and employment as a trainee perfusionist in an Australian or New Zealand accredited hospital. To deal with the practicing perfusionists at the time the course was introduced, current practitioners were either able to use a grandfather clause, undertake an examination, or gain automatic entry into the course to gain a certificate in clinical perfusion (CCP [Aust]).

The course itself contains 13 modules, with each topic having general objectives, that provide the teaching goals and specific objectives, the means by which the trainees demonstrate their attainment of these goals, and a reading and reference list (see the syllabus at the ASCVP web site). The course is then administered by the local supervisor, with many of the objectives requiring either lecture/tutorial-based learning, self-directed learning, or a practical component. The theoretical notes are not provided by the ABCP, so it is up to the institution of employment to provide the day-to-day structure of the course, in addition to the theory and tutorials. Each module, when all objectives are completed and assessed by the supervisor, is examined by the ABCP, with each examination marked by both supervisor and ABCP to ensure the student's understanding and competency in the topic. To complement the theoretical component, there is also an "on the job" component, which requires the completion of 200 cases and the maintenance of a log of all clinical activity.

Upon successful completion of the 13 module examinations and submission of a satisfactory logbook, the student is then eligible to sit for the final examinations. These are held over 2 days, with written long answer and multiple-choice components, and an oral examination, each section

requires a 60% to pass. The ABCP changed the name of the certification in 2002 from Certificate in Clinical Perfusion (CCP [Aust]) to the Australasian Diploma of Perfusion.

January 2003 saw the commencement of our recertification process, the aim of which is to implement a system or recertification that will not only be achievable by the majority of practicing clinical perfusionists but will not compromise the level that the board perceives as optimal, in maintaining our competency and knowledge. A certificate in clinical competency in perfusion (CCP) will be issued upon recertification and will be valid over 3 years. The Australasian perfusion education system currently in position provides our trainee perfusionists with a basic education in clinical perfusion and has not been designed to delve deeply into such specialty areas pediatric perfusion or research. The development of new courses, standards, and guidelines in emerging new technologies are important and we must progressively update our education process to include the continual changes in perfusion practice, for not only the trainee but also the accredited perfusionist.

The Australasian Society Of Cardiovascular Perfusionists are holding their 20th Annual Scientific Meeting on 7–9 November 2003 in Perth, Western Australia (4). A good excuse to come down for a visit.

REFERENCES

1. National Heart Foundation of Australia. Available at: <http://www.heartfoundation.com.au>.
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3. Australasian Board of Cardiovascular Perfusion. Available at: <http://www.perfusion.com.au>.
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