

Education programs at the new Australian School of Advanced Medicine at Macquarie University

Rufus Clarke and Michael K Morgan

The Australian School of Advanced Medicine has been established at Macquarie University, Sydney, to provide university-based programs for medical specialists. The school will be based at a new state-of-the-art hospital (Macquarie University Private Hospital), construction of which is about to start (see Box).

The education programs, at specialist and subspecialist levels, will be for medical practitioners who wish to acquire a documented set of professional competencies at a university rather than in the traditional service environment. However, the programs will be rigorously practical and competency-based: for example, surgeons will spend 3 days a week on clinical work, and will be summatively assessed on consistent achievement of a set of clearly defined surgical and professional competencies. Eligibility to graduate will be based on assessment of the trainee's contribution to the work of the team responsible for health care,^{1,2} rather than on the traditional criteria of largely academic examinations, and time spent in training.

Training in the private sector

The private sector is an as-yet largely untapped source of additional training resources to meet the needs of the coming wave of new medical graduates. The private sector is a logical training setting for those specialties in which most clinical practice is conducted in a private setting.

In future, the increased number of specialists will lead to more competition, and those with additional qualifications may be at an advantage for employment.

At the subspecialist (post-Fellowship) level, the rationale for these programs lies in the current dearth of formal training programs in some specialties in Australia. Many specialists have to travel overseas to undertake training and often receive no formal

ABSTRACT

- The Australian School of Advanced Medicine at Macquarie University, Sydney, will provide competency-based university medical specialist training in a private hospital environment.
- The rationale is the need for additional and innovative programs to meet emerging demands, and alternative training programs to increase the opportunities for doctors to achieve their career goals.
- The programs will focus on learning (not teaching), on developing a comprehensive set of professional competencies, on teamwork, and on research.
- Special features of the programs include: the potential for scholars to progress at a variable pace; the use of facilities for simulation and practice; and rigorous evaluation.
- The school is developing strong linkages with other institutions, nationally and internationally.
- Challenges include the recruitment of fee-paying trainees; the time commitment required of faculty members; a reliable and bias-free assessment system; and ethical concerns about undertaking training activities on private patients.

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qualification for doing so. Australia now has the skills and expertise (both clinical and educational) to mount such programs.

At the specialist (College Fellowship) level, some current training programs and examinations may not be a sound basis for lifelong learning and continuous quality improvement, given their teacher-centredness and the common lack of constructive alignment between learning objectives, learning activities and examinations.³ It has been argued that professional competence, rather than time served, should be the criterion for success.⁴

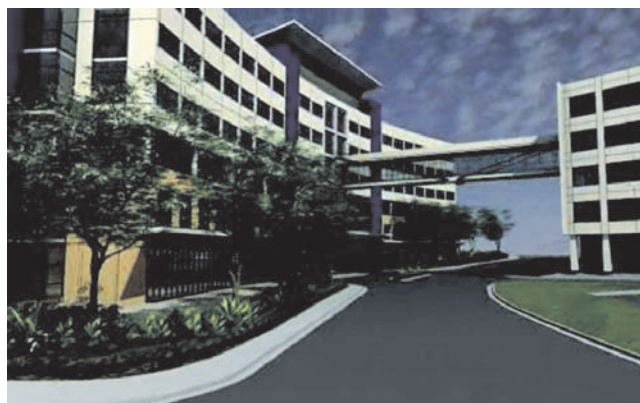
The Macquarie programs

The programs are based on that pioneered by the Mayo brothers at the Mayo Clinic in Rochester, Minnesota. The educational approach of the school has four themes.

First is the recognition that its major activity is not teaching, but learning, and that all members of the school are engaged in lifelong learning. Therefore, those who enrol will be called Scholars, and faculty members will be called Advanced Scholars, symbolising their recognition that they, too, are still learning. Advanced Scholars will be expected to enrol in Macquarie University programs that will advance their understanding and implementation of the principles of adult learning.

The second theme is comprehensive competence. Scholars will develop a high level of technical competence in their specialist or subspecialist fields, as well as demonstrated competence in generic areas, such as ethical and professional clinical practice and the practice of education and research.⁵ Scholars will be expected to be

The planned Macquarie University Private Hospital



Computer simulation of the on-campus Macquarie University Private Hospital in Sydney, due to open in 2009. The hospital is on the left, and the clinical sciences building on the right. ♦

reflective about their experiences and their practice, and will be required to commit these reflections to paper for exploration. Support from mentors will be provided for this, and for all the Scholars' learning activities.

The third theme is teamwork. Good patient outcomes arise from the coordinated actions of all members of the clinical team, medical and non-medical, and not just from the expertise of one clinician.⁶ There will be an emphasis on conscious exploration and analysis of team function and how it can be maintained and improved, both in terms of patient outcomes and as a learning environment.

The final theme is research. The mission of the school is "to improve medicine". This improvement will occur not only through clinical and professional competence, but also through the creation and dissemination of knowledge. Scholars will be required to know the evidence base supporting their practice and to contribute actively and effectively to that evidence. Enrolment in intercalated or combined research degrees will be encouraged.

There will also be a strong emphasis on contributing to educational research, particularly on the impact of educational strategies on professional practice and patient outcomes.

Being competency-based, the programs allow Scholars to proceed at their chosen pace. Some Scholars may progress more rapidly or more slowly than others through the program, or may enrol part-time.

Formative feedback is essential to competence. Scholars will have repeated opportunities to practise both clinical and general professional skills and will receive detailed feedback until their performance is as good as it can be. Feedback will come from conventional sources and from innovative sources, such as digital recordings of operative techniques and interactions within the operating room, from colleagues, including other health professional staff, and from patients and family members.

Scholars will have timely access to simulation and skills-laboratory facilities for developing individual and team skills, and will have dedicated time for learning and reflection.

Formative and summative evaluation of the programs will be a prominent feature of the School. Evaluation will be sought from a range of stakeholders, including Scholars, Advanced Scholars, hospital professional and administrative staff, employers of the graduates, and patients and families. Patient outcomes, however, will play a limited role in program evaluation, because they depend on factors more complex than the educational experiences of one member of the health care team.

National and international linkages

At the national level, the School has negotiated a memorandum of understanding with the Royal Australasian College of Surgeons (RACS) and the Neurosurgical Society of Australasia, which will enable some neurosurgical trainees to substitute their Macquarie University Master of Surgery program for part of the College's Surgical Education and Training program, which leads to Fellowship of the College. However, the Macquarie University program is not a substitute for the RACS Surgical Education and Training program for those wishing to practise surgery in Australia. As the College's program is accredited by the Australian Medical Council (AMC), separate AMC accreditation of the Macquarie programs at this level will not be necessary, and the professional development

of graduates will similarly remain under the aegis of the College of which they become Fellows.

Similar memoranda of understanding are expected to be negotiated for collaboration with other surgical and medical specialties, and active negotiations are also in progress with other tertiary institutions and public-sector hospitals.

We are also considering education programs for career paths which are evolving or in transition, such as general hospital medicine and general hospital surgery.

At the international level, the School has negotiated a memorandum of understanding with Universiti Kebangsaan Malaysia, to enable Malaysian surgeons to undertake part of their training in Australia, and similar arrangements with other South-East Asian institutions may follow. We believe that strong links with educational institutions in South-East Asia are an essential investment in Australia's future.

Challenges

Financial barriers confront the recruitment of Scholars, who will be expected to pay fees of \$42 000 per year for full-time enrolment. Some of this may be offset by scholarships, possibly from the Commonwealth Government, which has expressed interest in the School's development.

The personalised nature of the learning environment will mean that Advanced Scholars will have to distribute some of their time to Scholars' and their own education. Advanced Scholars will be well known, sought-after leaders in their own fields, but will also acknowledge their own need to continue learning. The effect of the Scholar on the Advanced Scholar's learning is as relevant to the learning process as the obverse.²

The work-based assessment system will ensure validity ("measuring what we want to measure") and positive educational impact ("Scholars learning what we want them to learn"), but to develop assessments that are reliable and free from personal bias will require careful planning and meticulous implementation and evaluation.^{7,8}

A question frequently raised with us is the ethical propriety of using private patients in training programs. We believe that close supervision by Advanced Scholars will minimise risk to patients, and there is evidence that patient outcomes are no worse with the active participation of supervised specialist trainees.⁹ Trainees in general practice have, for many years, undertaken minor procedures on private patients under supervision. It is unethical not to inform patients about what we propose. Patient care is a team effort, and patients should be told that they are entrusting their care to a cohesive and efficient team, rather than to a single individual.

Conclusion

The practice of education, like clinical practice, has to advance, and advances have to be based on evidence. We contend that "improving education" is an essential contribution to "improving medicine".

These innovative programs are attracting attention, and there are challenges to be faced. But we believe that this initiative is overdue, and could represent the greatest single advance in medical education in Australia since the introduction of problem-based learning at the Newcastle Medical School in the 1970s.

Competing interests

None identified.

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