

## MATTERS ARISING

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## Medical education in Australia: changes are needed

Reflections of discontent with Australia's current system of medical education followed a number of recent articles (MJA 2005; 183: 461-463; MJA 2005; 183: 444-445; MJA 2006; 184: 319-320; MJA 2006; 184: 346-348)

### How not to effect change in curricula

Bogda Koczwara, Michael B Barton, Martin H Tattersall, David R Turner, Ian N Olver and Darren L Starmer

**TO THE EDITOR:** We read with interest two recent articles and an editorial on the state of medical education in Australia.<sup>1-3</sup> As cancer clinicians and academics, and members of the Oncology Education Committee of the Cancer Council Australia, we have been following medical student education about cancer in Australia for almost 20 years and have learned first hand what is *not* sufficient to achieve change.

**Highlighting the need:** Cancer claims more lives than any other disease<sup>4</sup> and is set to increase in incidence by 31% over the next decade,<sup>5</sup> yet medical curricula devote little time to cancer education because of competition with other disciplines, historical precedent, personal preferences or just lack of teachers.

**Developing a national curriculum:** An ideal oncology curriculum,<sup>6</sup> developed in Australia in 1999, has been endorsed by the International Union Against Cancer, yet has been taken up by a minority of medical schools in Australia. This is largely because of the lack of a national medical curriculum and the absence of a compliance mechanism through national credentialling.

**Demonstrating deteriorating standards:** A comparative study published in 2003 highlighted the fact that recent medical graduates had less exposure to cancer patients than those who graduated 11 years earlier, and that their knowledge was inferior.<sup>7</sup>

Evidently, community awareness, recommended curricula and evidence of system failure do not effect change. Why? Perhaps because, in the present system, curriculum content is divorced from medical outcomes. There is little or no feedback linking curricula to their consumers: medical students, postgraduate training programs and patients. The Australian Medical Council, the main accrediting body for medical curricula, is more concerned with process than content or outcomes. There is no national outcomes monitoring, nor an exit exam.<sup>8</sup> No one knows whether students achieve

desired outcomes. We do not even agree on what these are.

Outcomes of medical education must feed back to content and process. To do this, we must monitor outcomes nationally, provide feedback to medical schools and have mechanisms to effect change based on such feedback.

Without closing the loop, medical education seems to have some features of cancer: vigorous but uncontrolled growth, and uncertain outcome.

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### Return to workforce-based training

Geoffrey A Couser

**TO THE EDITOR:** McGrath and colleagues raise important questions about medical training in Australia.<sup>1</sup> Their solutions take an admirable overall approach to policy, but fail to fully acknowledge the current reality of training and service delivery in the health sector. The Productivity Commission is certainly taking a broad approach to these matters,<sup>2</sup> but I wonder if more lateral thinking and a reference to the past might help provide a solution?

In 1910, the landmark Flexner report recommended that universities take over undergraduate training so that a uniform standard could be achieved.<sup>3</sup> Previously, many hospitals trained their own doctors, hence the term "teaching hospital". I am increasingly of the opinion that the pendulum has swung too far since Flexner, and that universities now are ill-equipped to train the doctors of the 21st century. Doctors in hospitals and communities are largely responsible for the clinical training of students anyway, and it is also in these arenas that prevocational and vocational training occur. It appears that the universities are the odd ones out when the full spectrum of medical education is considered. Very little "higher education" takes place during a basic medical degree — it is hard to argue against the notion that a basic medical degree has more in common with "further education" and the training of a trade. With this in mind, might it not be sensible for hospitals to take over the training of doctors again? There have been similar recent calls for nursing and school-teacher training to return to workforce-based training, and they moved to universities far more recently than doctors.

Such a move could have a number of tangible benefits. All levels of training would be in alignment, thereby achieving the educational Holy Grail of "vertical integration". Medical students would be immersed in a clinical environment from the start, thereby experiencing a true integrated curriculum. They would also be exposed to workforce requirements and this could address a

number of current concerns surrounding graduates' readiness for work.<sup>4</sup> It would return public hospitals to being eminent training institutions, and would give true meaning to the term "teaching hospital". Other health professionals could be trained within a similar model, introducing an interdisciplinary approach to training from an early stage. Basic sciences could be taught by scientists and clinicians alike throughout all stages of the course, all employed by the one institution and providing many educational benefits. Community-based education would be incorporated in a "hub and spoke" model, and clinical linkages would be significantly improved.

Such an innovative move could bring medical education and service delivery back into alignment. Any impediments would be purely technical and, of course, political — and easily overcome.

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## National exit exam needed to test core knowledge

Ian N Bernadt

**TO THE EDITOR:** The article by Sanson-Fisher and Lynagh criticising problem-based learning (PBL)<sup>1</sup> has elicited surprisingly little response, especially in light of the fact that these authors are from the University of Newcastle, the institution that first introduced PBL in Australia.

The authors cite evidence that PBL students have inferior overall knowledge and competence than students taught by traditional curricula. Most medical faculties now have in-house education centres which are involved increasingly in learning process rather than content. The education centre in the Faculty of Medicine, Dentistry and Health Sciences at the University of

Western Australia, for example, incorporates personal and professional development "as one of the four themes" in the curriculum<sup>2</sup> — this includes such topics as ethical behaviour, diversity (what the patient brings to the relationship), self-evaluation (what the doctor brings to the relationship), teamwork, self-care and stress management. The old adage: "Those who can, do. Those who can't, teach. Those who can't teach, teach teachers" applies so appropriately to these new education centres.

I support Lawson-Smith in calling on the Minister for Health, the Australian Medical Council, the Australian Doctors' Fund, the learned Colleges, all interested colleagues and medical students to support the proposal for a national exit exam based on the most important function of a medical school: *core knowledge*.<sup>3</sup>

Medical students and medical schools should compete nationally in an examination to assess core knowledge. "Competition promotes the pursuit of excellence" should surely be the mantra of every medical school.

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## Medical student access to patients

Andrew Thomson

**TO THE EDITOR:** The recent article by Olson et al<sup>1</sup> and the accompanying editorial by Crotty<sup>2</sup> confirm the impressions of anyone who has graduated from an Australian medical school within the past 30 years.

The paucity of clinical cases has probably been more significant in teaching hospitals in cities larger than Newcastle (where Olson and colleagues are based), as there has traditionally been a preponderance of student teaching in such institutions. This is something that seems to be slowly fading

as new medical schools emerge in smaller cities, such as Canberra.

What is harder to measure is the time and angst associated with the process of determining which patients are accessible for medical students. Students can be frustrated not only by the concerns of the nursing staff, but also by paramedics, technicians, clerks, relatives, other students and, perhaps most discouraging of all, patients themselves.

Once this minefield of obstacles is negotiated, interaction with the patients is highly variable in terms of the learning opportunities afforded. Perversely, the most "valuable" patients in this sense can sometimes be the least accessible as they spend so much of their time away from the ward undergoing investigations. Crotty's call to expand clinical teaching into the private sector has some merit, particularly as supervising consultants would be keen to make the student-patient interaction relatively efficient. I believe a more concerted effort to tap into the clinical resources in the expanded ambulatory sector is also required. Whatever "solutions" are found, it is hard to imagine that the clinical exposure of senior medical students to patients will be adequate any time soon.

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## Altruism can no longer support community-based training

Jill E Thistlethwaite

**TO THE EDITOR:** The article by McGrath and colleagues summarised neatly the challenges facing medical education in Australia.<sup>1</sup> One solution suggested by Crotty for meeting the training needs of medical students at a time of increasing student numbers and decreasing numbers of hospital inpatients is to move a greater proportion of medical education into the community.<sup>2</sup> Internationally, many medical schools are adopting a more community-based curriculum,<sup>3</sup> while in Australia, students are spending a greater proportion of their time in general practices and other community settings.

However, community-based education should not come cheaply. Many general practitioners have been hosting students in their practices for years, and are motivated to do so because of an interest in education and the stimulus provided by students in keeping up-to-date.<sup>4</sup> Rarely are they solely involved because of remuneration. While there are payments for teaching, these do not reflect the time and loss of earnings that GPs incur in providing attachments.

If GPs are to be asked to be more involved in the undergraduate curriculum, there should be a true costing of the process. GPs who teach students are often involved in vocational training of GP registrars and, from this year, in supervising interns in general practice through the PGPPP (prevocational GP placement program). I am concerned that we are approaching full capacity, and that finding quality GP placements for all these students and junior doctors will become very difficult. One solution for practices that provide a substantial amount of training would be to pay them enough to employ an extra doctor either to carry the teaching load or free up others to do so. However, even if there was the funding for this, at present, there is a shortage of GPs to provide patient care, let alone education.

There certainly needs to be a rethink in relation to the prestige given to clinicians who teach, adequate training in education for clinical tutors, and the necessary resources to provide good learning experiences. Not only do I believe that all medical students should have the opportunity to work and learn within general practice, but that all junior doctors should have at least one attachment in the community. GPs will need support, training and space to offer this, and we should not continue to rely on their altruism to support medical training.

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## Registrars cannot provide full teaching for juniors

**Kenneth Wong**

**TO THE EDITOR:** I was recently amazed to learn that the solution to the educational needs of prevocational doctors was more teaching from registrars.<sup>1</sup> My understanding was that registrars were themselves in a predominantly learning position, desperately hoping to glean some scraps of wisdom from consultant doctors. Often, the registrar, this supposed demi-god of all knowledge, is only 1 or 2 years ahead of the prevocational doctor and permanently juggling yet another postgraduate examination and the rigours of clinical duties. Then, with Australian medical schools springing up here and there, there are the inevitable hordes of medical students. So, registrars have an inherent and significant conflict of interest, namely, self-education to be able to continue climbing the slippery slope of postgraduate vocational education versus the altruistic provision of education for others.

Perhaps graduating medical students need to take personal responsibility for their own education. Continuing medical education (CME) is a lifelong process that requires individual initiative. Support from the various specialist Colleges is welcome but not essential. Weaning prevocational doctors from their dependency on "formal education" is an essential first step towards independent clinical practice. This is not to say that CME for prevocational doctors should not be supported, but rather that it is unrealistic to demand that it should all be spoon-fed from registrars. An informal verbal survey of my registrar colleagues unanimously showed that we would all like to expand our teaching load, but not at the expense of clinical care.

So what can the system do to support the beginners? Nurses have clinical nurse educators, and soldiers have drill sergeants. The nursing education system and the army have both recognised the value of employing personnel purely for educational purposes. The medical profession could do likewise.

The pretence that service is educational for prevocational doctors should be denounced. Routine tasks performed by prevocational doctors that do not require medical expertise, but consume much time, could perhaps be delegated to non-medical professionals. This would free up time for medical education on the job.

However, protected time for teaching by adequately remunerated clinical teachers requires workforce expansion and, ultimately, public funding and political will.

Finally, from within a profession that often subscribes to the view that good resident staff are seen but not heard (that is, work hard and don't complain), recognition by consultants that they too were once beginners may lead to positive cultural changes.

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## Rural internship for final-year medical students

**Tarun Sen Gupta**

**TO THE EDITOR:** Recent reports have highlighted problems with our capacity to teach medical students.<sup>1,2</sup> Others have described workforce problems, calling for innovative approaches.<sup>3</sup> The Rural Internship program at the James Cook University (JCU) School of Medicine may contribute to such strategies.

The first regionally based medical program in Australia, the School was founded in 2000 and has recently graduated its first cohort.<sup>4</sup> All final-year students undertake an 8-week rural internship, having previously completed 12 weeks of structured rural placements in their 2nd and 4th years, and a core 2nd-year subject — Rural, Remote, Indigenous and Tropical Health.

The rural internship allows students to develop and practise clinical skills in a rural context. All students in the first cohort completed the rotation in 2005 in hospitals across northern Queensland, usually in groups of two or three, providing full-time inpatient, outpatient and after-hours duties under supervision. Hospitals were in rural and remote communities (Rural, Remote and Metropolitan Area classifications 4–7; comprising rural areas with populations < 24 999 to remote areas with populations < 5000), with demonstrated capacity to supervise and teach. Most were 2–4-doctor hospitals, although one larger hospital (Mt Isa, 35 doctors) and one smaller hospital (Moranbah, one

doctor) were used. Supervision was provided by experienced rural doctors (medical superintendents and senior medical officers) holding an FACRRM or equivalent.

Evaluation in the first year included student questionnaires, site visits, interviews and follow-up teleconferences with instructors. Early evaluation suggests that the rural internship provides senior students with valuable experience in the health care team. Students accept limited responsibility and further their abilities and confidence to undertake the role of the intern. Importantly, specific feedback from medical superintendents indicated that the rural interns made a net contribution to the system when teaching time and supervision were considered. The rotation appears to meet educational objectives without burdening (indeed, possibly bolstering) the local workforce. This is consistent with other reports of students undertaking extended rural experiences.<sup>5</sup> It also addresses a common conundrum: rural instructors and communities are keen to teach students and appreciate the long-term workforce implications, but are constrained by resources, particularly time.

This model extends and enhances apprenticeship-style medical education through its rural focus, distributed delivery and involvement of the entire cohort of students. The contribution to patient care by senior students and junior doctors creates a consultant–registrar–resident model, in which experienced rural doctors function as consultants providing advice, support and tuition rather than predominantly face-to-face patient care. We feel that this innovative approach should be explored in other settings.

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## Lessons to be learnt from general practice training

William Coote

**TO THE EDITOR:** Three recent articles discuss Australia's medical education arrangements,<sup>1-3</sup> but do not propose a way forward.

Dahlenburg notes "at least 10 different agencies are involved in postgraduate training", leading to a "modern Tower of Babel", but proposes eight more "independent" entities. McGrath et al comment timidly that a Productivity Commission suggestion for a national advisory council "has merit", and Downton et al simply comment: "It is time to comprehensively review the oversight and governance of postgraduate medical education and training."

None of these articles even mentions General Practice Education and Training (GPET), an innovative Australian initiative. GPET was established in 2001 as an incorporated entity with a board appointed by the federal Minister for Health. GPET has established regional training providers (RTPs) across Australia. GPET is required under its constitution and government funding arrangements to provide postgraduate training according to standards determined by medical colleges.

For general practice, GPET provides features these authors find lacking in Australia's medical education arrangements, such as "overarching governance and coordination", "integrated mechanisms to draw together the interests of stakeholders", "alignment between workforce planning, education and training needs" and "alternatives to teaching hospitals".<sup>4</sup> GPET manages the interaction between autonomous colleges and a funding agency, and conflict between the focused desires of young doctors and workforce policies, while organising training outside public hospitals.

Change is difficult, perhaps more so in medicine than in other sectors. Michael Foot, once leader of the British Labour Party, reflecting on political differences with the British Medical Association, wrote: "Much the strongest bent in the medical mind was a non-political conservatism, a revulsion against all change, a habit of intellectual isolation which enabled them to magnify any proposals for reform into a totalitarian nightmare. Nothing good could ever come from the meddling of outsiders."<sup>5</sup>

GPET was a political response to effective lobbying from rural doctors rather than imposition of some grand centralist plan.

Nevertheless, the imagined threat to professional autonomy evoked gloomy foreboding about "training standards spiraling downwards".<sup>6</sup> Maybe Dahlenburg, McGrath and Downton realise controversy would follow any proposal for a medical education system with attributes they see missing, such as overarching governance, more coordination, alignment of workforce needs with trainee numbers, and wider distribution of training resources. It might require some consolidation of organisations, common structures and processes across disciplines, and some direction in the distribution of training resources.

Maybe these authors do enough by raising the issues and are wise to leave others to debate whether centralised control and coordination could solve the problems they describe. Maybe they took the advice of a well known Englishman and decided not to mention the war.<sup>7</sup>

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## Medical student input to workforce planning

Ruth E Blackham, Ian R Rogers and Ian G Jacobs

**TO THE EDITOR:** We surveyed current medical students and interns in Western Australia over the 5 weeks from 23 September to 30 October 2005 to determine their awareness of, and views on, the imminent increase in clinical student and intern numbers as a result of federal government plans to increase medical student numbers nationwide, and to seek opinion on proposed strategies to cope with the demand on health education resources.

### Western Australian students' perceptions of the impact of increased student numbers resulting from federal government plans to increase medical student numbers nationwide

Perceived effect	Positive	Tending positive	Neutral	Tending negative	Negative
Overall effect on health system	28%	27%	16%	18%	12%
On career prospects	3%	6%	31%	38%	22%
On teaching provided	4%	4%	13%	32%	48%
On training positions	4%	5%	14%	42%	35%
On average practitioner income	1%	3%	53%	26%	17%
On the medical profession	22%	31%	26%	13%	7%

Percentages may not total 100% because of rounding. ◆

The study was in the form of a web-based survey. The questionnaire consisted of five sections: demographic information, awareness of changes, predicted impact of these, teaching strategies and a free-text section for comments and concerns. The predicted impact question focused on the medical profession, career prospects, teaching, training positions and programs, average income of medical practitioners and overall effect on the health care system.

There were 561 responses to the questionnaire (of a possible 1083). Respondents comprised 27 interns (of 134; 20.1%) and 534 medical students (503 of 909 [55.3%] from the University of Western Australia and 31 of 40 [77.5%] from Notre Dame University). The medical students comprised 118/212 from 1st year (56%), 108/207 from 2nd year (52%), 103/151 from 3rd year (68%), 84/141 from 4th year (60%), 71/126 from 5th year (56%), and 50/112 from 6th year (45%). There were 323 women (57.6%); and 70 respondents (12.5%) were aged over 24 years and 10 (1.8%) were aged less than 18 years.

Respondents' perceptions of the impact of increased student numbers are shown in the Box. Of the 561 respondents, 501 (89.3%) believed more clinical teachers in teaching hospitals to be important in ensuring the increased number of medical students are taught effectively. Further, 246 (43.9%), 303 (54%) and 311 (55.8%), respectively, indicated that general practice, rural hospitals, and private hospitals are important additional or alternative strategies. Themes that emerged from the free-text section of the survey were dissatisfaction with problem-based learning, expanded roles for junior doctors as teachers, and concerns about high ratios of students to tutors.

While it has been widely acknowledged that the current methods of teaching need revision and will not cope with the influx in medical student numbers,<sup>1-4</sup> planning for expansion of educational roles in non-traditional settings will require input from medical students as they are the "consumers" of these resources. We therefore suggest increased student input to workforce planning be sought at all levels to ensure newer teaching strategies will be effective in educating the impending influx of medical students.

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**Competing interests:** Ruth Blackham and Ian Rogers are members of Medical Defence Association of Western Australia (MDAWA). MDAWA provided a single \$50 book voucher as a prize incentive for survey respondents.

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