

# Meeting the challenges of training more medical students: lessons from Flinders University's distributed medical education program

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Medical education in Australia is undergoing a time of unprecedented change and challenge. In large part, this has been brought about by an acknowledgement that Australia needs to train more doctors to meet the present and future demands on our health services.<sup>1</sup> The Australian Government has responded by increasing the numbers of medical students at existing medical schools and by creating new medical schools across the country.<sup>2</sup>

While this increase in student numbers may be a welcome break in the drought for under-served regions in Australia, providing the students with a high-quality clinical education presents significant challenges to universities and health services. It is likely to be impossible to meet this demand by merely scaling up the existing clinical training venues. New venues are needed at both undergraduate and postgraduate levels, including an increased role for the private and ambulatory care sectors.

It is also important to ensure that these new graduates will practise in the areas in which they are most needed. Thus, there is likely to be an even greater role for rural, remote and outer metropolitan health services in clinical education. It would be counterproductive if this much-needed redistribution of the medical workforce was achieved by coercion, for which there is little evidence of success.<sup>3</sup> What is needed are graduates who *want* to practise in areas of need, potentially for less financial reward than they would receive in high-resource settings. Yet current evidence shows a decline in altruism and humanism in medical students during the course of medical school.<sup>4</sup>

The Flinders University Parallel Rural Clinical Curriculum (PRCC) was initiated in the Riverland region of South Australia in 1997.<sup>5</sup> The PRCC enables students to choose to spend the entire third year of their 4-year graduate-entry medical program in rural general practices and local hospitals, being supervised principally by private general practitioners and supported by local and visiting private specialists. In 2009, this model was undertaken by 64 of Flinders University's 135 Year 3 students across South

## ABSTRACT

**Objective:** To use data from an evaluation of the Flinders University Parallel Rural Community Curriculum (PRCC) to inform four immediate challenges facing medical education in Australia as medical student numbers increase.

**Design, setting and participants:** Thematic analysis of data obtained from focus groups with medical students undertaking the PRCC, a year-long undergraduate clinical curriculum based in rural general practice; and individual interviews with key faculty members, clinicians, health service managers and community representatives from 13 rural general practices and one urban tertiary teaching hospital in South Australia. Data were collected in 2006 and re-analysed for this study in January 2009.

**Main outcome measures:** Participants' views grouped around the themes of the four identified challenges: how to expand the venues for clinical training without compromising the quality of clinical education; how to encourage graduates to practise in under-served rural, remote and outer metropolitan regions; how to engage in a sustainable way with teaching in the private sector; and how to reverse the current decline in altruism and humanism in medical students during medical school.

**Results:** Participants' views supported the PRCC approach as a solution to the challenges facing Australian medical education. The enabling capacity of the PRCC's longitudinal integrated approach to clinical attachments was revealed as a key factor that was common to each of the four themes.

**Conclusions:** The continuity provided by longitudinal integrated clinical attachments enables an expansion of clinical training sites, including into primary care and the private sector. This approach to clinical training also enables students to develop the skills and personal qualities required to practise in areas of need.

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Australia, Victoria and the Northern Territory. Using the PRCC as a case study, we sought evidence to inform the challenges facing medical education in Australia and to assist medical educators in dealing with them.

## METHODS

Data for this study were collected as part of an external international evaluation of the PRCC conducted in 2006. These data were re-interrogated in January 2009 to determine what light they may shed on the four immediate challenges facing medical schools in Australia:

- how to expand the venues for clinical training without compromising the quality of clinical education;
- how to encourage graduates to practise in under-served rural, remote and outer metropolitan regions;
- how to engage in a sustainable way with teaching in the private sector; and

- how to reverse the current decline in altruism and humanism in medical students during medical school.

A cross-sectional study design was used. Focus group discussions with PRCC students and in-depth individual interviews with key faculty members, clinicians, health service managers and community representatives from 13 rural general practices and one urban tertiary teaching hospital in South Australia were recorded using a digital voice recorder and transcribed verbatim by an external transcriber. Transcripts were checked by the interviewer, and returned to interviewees for checking, where this had been requested. Transcripts were then de-identified and imported into NVivo 7 (QSR International, Melbourne, Vic) for thematic analysis.

The research protocol was approved by the Human Research Ethics Committee of the University of the Witwatersrand,

Johannesburg, and the Social and Behavioural Research Ethics Committee of Flinders University. Participation was voluntary, and all respondents gave informed consent, with the assurance of anonymity and confidentiality.

**RESULTS**

Individual interviews were conducted with 87 people (Box), and six focus group discussions involving 45 students were held. The results are grouped according to the four challenges.

**Expanding venues for clinical education**

The Flinders Year 3 model of “many roads leading to one destination” was seen as successful. However, a commonly held belief was that students at other sites must be better off.

Students, they all think the others are getting better or more or different to what they are getting, the grass is always greener no matter where you are. (Year 3 student)

All sites were seen to have their strengths and weaknesses and, it was argued, were suited to different students, depending on their goals, personal situations and learning styles.

At the urban tertiary hospital, there was some question about the appropriateness of patients and opportunities for student participation for the learning outcomes required.

So the other thing is that the case mix at [the tertiary hospital] means that a significant number of common conditions students are going to have to learn from either tutorials or their own learning, because they won't see them in the tertiary setting. (Academic clinician, tertiary hospital)

**Encouraging graduates to work in under-served areas**

Both clinicians and the broader community reported that the PRCC had improved attitudes towards rural practice.

...we've changed the status of rural medicine from being a place where doctors go because they can't make it in the city to where doctors go who have got exceptional qualities, are good teachers, are practising a good standard of medi-

**Summary of interviewees**

Group	Total
University-based staff	
Faculty leaders	6
Academics (non-clinical)	9
Clinicians	
Academic coordinators (departmental or site-based)	8
General practitioners	19
Other specialists	6
Other hospital staff (eg, clinical nurses)	5
Managers	
Health service bureaucrats	8
Practice managers	5
Hospital managers (chief executive officers, directors of nursing, etc)	7
Academic support staff	
Administrators	10
Community or local government representatives	4
<b>Total</b>	<b>87</b>

cine with a wide variety of important patients ... (Senior faculty member)

However, students found that the isolation from their peers and other support structures was more significant than they had anticipated. While many students enjoyed being involved in a small community, others found this learning experience somewhat intimidating and claustrophobic.

... from that whole lack-of-anonymity point of view I've actually chosen to do my shopping down at [another town] ... rather than doing my weekly shopping down at the local store, it is just too close, every person you see you've seen up at the clinic. (Year 3 student)

**Sustainable teaching in the private sector**

GPs in private practice spoke of the stimulation offered by their role as teachers, which had given “new meaning” to their practice. The depth of strong positive feelings in this regard was unexpected.

Seeing the results of them gradually learning how to do it, it's quite rewarding, I've enjoyed that. (GP preceptor)

Students in these long-term placements became an asset over time. Although different models were used in different practices,

it became clear that parallel consulting was the favoured model. This model involved the student seeing his or her own patient in a separate consulting room (once the GP was confident in the student's abilities) and presenting the patient to the GP at the end of each consultation, while the GP continued seeing his or her own patients, calling in the student to demonstrate particular aspects of importance.

The doctors and other staff in the private practices appreciated their relationship with the university and the students, taking great pride in being part of the academic endeavour and helping to train the future generation of doctors. There was a sense of purpose and renewal among the practice staff in being an “academic practice”.

The students bring in a sort of fresh attitude to the practice. (Practice manager)

Very few patients requested not to have a student present or not to see a student. In contrast, there were many examples given of patients who came to see a particular student and who developed strong relationships with their student-carers. Community representatives described their experience of being patients of students with great enthusiasm.

**Promoting altruism and humanism in medical students**

The following educational success factors of the PRCC, particularly continuity, were mentioned repeatedly by the range of participants.

*Relationships:* Students reported developing personal relationships with patients, GPs and practice staff, thus reinforcing the importance of understanding people in health care.

I've learnt an incredible amount about interactions with people, hearing people on the ground, seeing people day to day and the continuity of seeing people over time and having relationships grow and, you know, understanding that relationship, not just from a medical perspective, but from a sort of life perspective as well. (Year 3 student)

*Continuity:* This was important in two ways. First, students reported that seeing the same patient over time and following the course of his or her illness and health care experience from home to practice to hospital — whether involving recovery or deterioration — was invaluable. In addition, the continuity of relationships with faculty members (GPs and academic coordinators)

facilitated monitoring the students' coverage of the curriculum over the year, despite the lack of a formal discipline-based structure.

**Context:** Students lived and worked in the context of their patients, and of their teachers, thus having the chance to see and experience the influence of this on professional practice, on illness and on health care.

**Mentoring:** Students were individually mentored, guided and coached through the year, which provided them with opportunities for personal and professional growth in addition to educational development.

**Responsibility:** Students were not just observers, but contributed directly to patient care.

The students feel more a part of the team, they feel like they are actually helping the patient as opposed to just going in and standing around a bed with a whole lot of other students. (GP preceptor)

## DISCUSSION

Previous studies have demonstrated the sustained academic success,<sup>6</sup> viability in a Medicare-funded environment,<sup>7</sup> and personal development impact<sup>8</sup> of the Flinders approach to using alternative settings for clinical education. Graduates of the PRCC are between five and seven times more likely to choose a career in rural practice compared with their tertiary-trained peers.<sup>9</sup> This study provides important insights beneath the surface of these headline achievements, to inform the ongoing development of medical education in Australia.

A key factor shown in these data as being common to each of the four themes is the enabling capacity of the longitudinal integrated approach to clinical attachments. This continuity approach has been supported by others<sup>10</sup> as being a key organising principle for medical education. The longitudinal integrated approach opens up primary care sites for extended clinical learning, thus aligning medical education with the increased emphasis in health policy on health promotion, illness prevention and hospital avoidance.

This study shows that student perceptions of the differences between sites must be addressed proactively. Rather than insisting on standardisation of approaches, the key to addressing this concern is a clear articulation of curricular goals so that students and faculty are confident that their particular

“road” will deliver them successfully to their assessment destination.

Our study suggests that some anxiety among students about isolation and distance from central resources is inevitable. However, by being given time and supportive role models to learn strategies to overcome this anxiety, this experience may be an important contributor to seeing future practice in under-resourced settings as a realistic and achievable option. Seeing their patients in their homes, schools, shops and sporting clubs and receiving thank-you cards from them at the end of the year are powerful motivators for students to return to this sense of community.

In addition, these data suggest that continuity of supervision — seeing the student progress over the course of the year — brings significant benefits to private clinicians and to their patients. Opportunities exist, especially later in their extended placements, for students to take some of the load from private clinicians, through supervised assistance with aspects such as medication reviews, monitoring of chronic disease, referral letters, and minor procedures. Students can follow up and support their patients as they visit specialists and allied health professionals, thus facilitating interprofessional learning and providing some continuity for the patient in these often independent contexts.

The evidence from the PRCC students and faculty gives confidence that longer engagement with individual students in the private sector may, paradoxically, be less demanding and more rewarding than shorter-term interactions.

This study provides encouragement to medical schools in Australia facing the challenge of creating the workforce our nation requires. The continuity provided by longitudinal integrated clinical attachments enables an expansion of clinical training sites, including into the private sector. This approach to clinical training also encourages students to develop the skills and personal qualities required to practise in areas of need. It begs the question — why are more students not able to take advantage of these benefits?

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## COMPETING INTERESTS

None identified.

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