The challenges of teaching in a general practice setting

Rod Pearce, Caroline O Laurence, Linda E Black and Nigel Stocks

ABSTRACT

- An attractive strategy to meet the increasing need for medical education is teaching in community general practice.
- General practice will be in a position to meet and sustain this need only if various conditions are met, including:
  - Teaching is undertaken in general practice at all levels of medical education (medical student, postgraduate years 1–3 and GP vocational training);
  - Standards and quality of teaching are maintained while the number of sites involved increases;
  - Further Australian research is conducted into innovative models of general practice teaching and their cost-effectiveness; and
  - Appropriate remuneration and infrastructure is available to support practices and general practitioners involved in teaching.

MJA 2007; 187: 129–132

For editorial comment, see page 66. See also pages 124 and 133

Medical education in Australia is facing a crisis. It is estimated that the number of domestic graduates will increase by 81% between 2005 and 2012, and, with the inclusion of international students, Australia will be producing more than 3000 medical graduates annually in 5 years.[1]

The quality of the teaching experience provided in general practice,[2] and the success of programs such as the Prevocational General Practice Placement Program (PGPPP), make community general practice an attractive solution for the education of the increased number of medical students and junior doctors.[3]

There is no coordinated system for collecting data on general practice teaching in Australia, but Box 1 shows our estimate of the number of teaching practices involved in medical education in 2006 at various training levels; many practices are involved at more than one level, but the degree of overlap cannot be determined. With an estimated total of 3000 medical students, 900 interns and 600-plus registrars requiring placement in general practice by 2012, the numbers seem well short of meeting the requirement, unless more sites are recruited, or larger numbers are trained per site.

Before practices consider undertaking training, they need to be aware of the challenges of community-based teaching.[2,7-9] Teaching impacts not only on the trainers, but also on other practice staff, patients and the students, junior doctors and registrars themselves. Summarised below and in Box 2 are the issues that general practitioners in the community face when they undertake to teach, and a range of evidence and solutions that should be considered.

GP and practice perspective

Practices involved in undergraduate medical education have been shown to have better quality premises and significantly better performance on quality indicators.[19] In addition, students provided stimulus for the GP trainers, encouraged reflective practice and brought variety to the day-to-day work of the practice.[8,20-22]

However, teaching students increased the workload, not only through the teaching itself, but also through the administration and preparation required for teaching and assessment, and in addition reduced flexibility in GPs' working practice.[8,10,22]

To be involved in teaching, a practice needs to expand beyond the provision of core clinical services, and to make organisational changes to provide both the training and the patient load to sustain teaching. The GPs doing the training need dedicated clinical time for their own patients, as well as time to teach.

Patient perspective

Patients' willingness to participate in medical education is vital for the sustainability of community-based teaching.[11] Patients overall were found to enjoy their involvement in teaching, as it provided the opportunity for longer consultations and to learn more about their conditions, and improved their view of their illness.[8,23] But teaching can also impact on patients' relationships with their GPs, and patients must clearly be able to choose when they want to be involved in teaching.[12,24]

Cost perspective

An equally important challenge to providing teaching in the general practice setting in a sustainable manner is the financial cost. Little research has been undertaken on the cost to GPs and practices of teaching, and whether the support provided is adequate to cover this. For practices to be involved in teaching, they require the physical space to allow students, junior doctors and registrars to see patients independently, before presenting to their supervisor.[2,8,25]

Medical educator perspective

Being taught in the community has many benefits for the learner, including more one-on-one teaching, greater access to patients

1 Estimated number of practices involved in teaching in general practice, 2006*

Training level	No. of practices	% of all practices in Australia†
Medical student	1305	13.6%
PGPPP (PGY1–3)	38	0.39%
GP vocational training	1933	20.1%

* Source: Medicare Australia,[4] Australian College of Rural and Remote Medicine (Ms Trish Johnston-Smith, PGPPP Administrator, Australian College of Rural and Remote Medicine, personal communication), Royal Australian College of General Practitioners,[5] and General Practice Education and Training Ltd (Mr Rodger Coote, General Manager Information and Program Support, General Practice Education and Training Ltd, personal communication).
† Total of 9600 general practices in Australia (Australian Bureau of Statistics data, 2002[6]).
PGPPP = Prevocational General Practice Placement Program.
PGY = postgraduate year. ◆

2 Challenges for teaching in general practice and possible solutions

Perspective and challenges	Possible solutions
General practitioner	
• Time to teach • Obtaining skills in teaching • Impact of teaching on GP's relationship with patients	• While studies cite workload and lack of time as reasons for not teaching,[10] many practices do teach, and delegation of teaching to registrars (vertical integration), interns, practice nurses and external organisations should be explored. • Regional Training Providers provide training and up-skilling of teaching skills, and Departments of General Practice should provide resources for GPs to gain appropriate teaching skills. • Anecdotal experience and some research indicate that patients who are accurately informed of the skill level of the "learner" will mostly be very comfortable with their involvement.[11,12] However, patients will generally view the senior GP as their ongoing main doctor.
Practice	
• Willingness of patients to be involved in teaching, including longer consultations, less access to their GP and potentially longer waiting times • Organising various levels of teaching into the practice structure • Sufficient space to allow teaching at various levels • Sufficient patient numbers to support an additional teaching load	• Several studies indicate that patient satisfaction is not reduced by student teaching but that patients require sufficient information about the students and the nature of the teaching.[10,13] • The distinction between a learner's skill level and range needs to be clearly detailed: ie, registrars are competent doctors who are learning how to be competent GPs. • Experience shows that successful programs have registrars teaching junior doctors, who also teach students.[14] • More readily available infrastructure funds for all general practices committed to (and deemed suitable for) teaching across the medical training continuum, both rural and urban is required. Australian research shows this is working in rural areas, but more needs to be done in urban areas.[14] • Not all teaching requires extra space,[15] although independent consulting for undergraduate students in higher years is desirable.
Patient	
• Consent obtained, and opportunity to say no if required • Involvement in teaching may limit access to preferred GP • Additional costs	• Patients will accept student consultations as long as they subsequently see their GP.[16] • Patient information can be made available in the waiting room and consulting rooms to reiterate that patients have a choice about whom they consult. • Research suggests that consent for a student to be present is given more readily for physical rather than psychological complaints, and is less likely to be given for male students by young women who consult a female doctor.[12,17] • Offering higher rebates for patients accepting involvement in teaching programs and schedules. • Spare rooms, consulting rooms, computers and patient files need to be available to ensure the needs of patients and students and trainees are recognised.
Cost	
• Opportunity cost to GPs and practices for their involvement in teaching at all levels — medical student, intern, PGY2 and registrar • Adequacy of current subsidies and reimbursements for teaching • Additional resources and equipment	• In rural practice, student attachments exceeding 5 months may increase GP productivity without loss of patient satisfaction.[18] • Australian data are lacking, and appropriate cost evaluation of different models is needed across all training levels. • There is a need to develop region-, size- and practice-specific models that accommodate all approaches to community-based teaching. • Subsidies and reimbursements attempt to recognise effort but should be updated to more accurately reflect actual cost. • Equipment and other resources needed for teaching can be determined and funded from a central pool, instead of the current arrangements where they are predominantly funded by private practices.
Medical education provider	
• Difficulty in recruiting additional practices and GPs to be involved in teaching • Impact of the increased numbers of students, junior doctors and registrars on quality of teaching	• Should all students get equal time in general practice, and should their education be general or specific to the discipline of general practice? • Teaching against a pre-determined curriculum relevant to the learner's level (GP, registrar, intern or student) may mean that many different teachers can be involved in the in-practice teaching program — medical, allied health and other staff in the practice. • Research has established that many GPs teach for altruistic and personal reasons. Adequate recognition of these values by universities and the public could enhance participation (eg, with academic status, awards and publicity). ◆

with chronic conditions, as well as access to patients with undifferentiated illness outside the hospital setting. However, currently fewer than 20% of practices in Australia are involved in teaching. In the face of increasing numbers of students and registrars, the challenge for medical educators is how to maintain the interest of the current group of teachers and to attract new GPs, while still ensuring a high-quality educational experience.

Solutions

To resolve these issues, community general practice must be more innovative in how it organises and provides teaching. Research in other countries and in Australia suggests a number of solutions. With medical students, registrars and now junior doctors being taught in general practice, it is an opportune time to explore the benefits of vertical integration.[14] Evidence from other countries and the hospital setting provides a model where more senior doctors teach junior doctors. Models that work well under vertical integration include DeWitt's service–learning model, which allows productivity while teaching;[15] and the "hub and spoke" model of teaching practices, where a main practice provides core teaching, with linked practices undertaking an ancillary role.[26] This allows the involvement of practices that might otherwise have had no role because of lack of teachers, space or patient load. For vertical integration to be effective, key organisations must work together, pool resources, support existing teaching practices and encourage new practices to be involved in teaching.

Another approach is to make better use of other practice staff and health services. Rotations through public health organisations, and sessions with private specialists, pharmacists or nurse-led diabetes or asthma clinics during general practice placements could provide GP trainers with a break from teaching. Other practice staff could also be utilised in teaching. Administrative staff might coordinate "volunteer" patients whose medical problems could be reviewed by students.

These models require practices and associated organisations to think more laterally. However, for these solutions to be effective, practices must have the space to accommodate more than one level of student or postgraduate doctor.

A popular solution to resolving some of the issues outlined above is financial. However, missing from the debate is evidence on the direct and indirect costs of teaching at all levels of training. Existing research has focused on particular programs.[18,27] Further research is required to determine what support is appropriate, particularly support for infrastructure.

Conclusion

Teaching in the general practice setting will play an increasingly important role in the training of medical practitioners.[3] The increased teaching requirement for general practice provides challenges, but is an opportunity to expose more medical students, junior doctors and registrars to the specialty of general practice. General practice has the potential to provide a greater breadth of exposure to health conditions and unique settings, and to allow the acquisition of new skills.

To allow general practice to maintain current teaching levels and to respond to the increasing load, practices and trainers require support in a number of areas, particularly remuneration of direct and indirect teaching costs. While research on viable models for general practice exist,[28] the costs and benefits associated with teaching have not been included in the modelling. Research is needed on models that will increase teaching efficiency. In addition, we need to accurately calculate the level of support required across the teaching continuum in both urban and rural environments. This research would inform the debate and provide evidence for appropriate strategies to accommodate the increased teaching load.

Competing interests

None identified.

Author details

Rod Pearce, MB BS, FAMA, GP Supervisor Liaison Officer[1]
Caroline O Laurence, BA(Hons), MHSM, Senior Research Fellow[2]
Linda E Black, BA(Psych), DipApplPsych, MAPS, Chief Executive Officer[1]
Nigel Stocks, MD, FRACGP, FAFPHM, Professor of General Practice[2]
1 Adelaide to Outback GP Training Program, Adelaide, SA.
2 Discipline of General Practice, University of Adelaide, Adelaide, SA.
Correspondence: caroline.laurence@adelaide.edu.au

References

1 Joyce C, Stoelwinder J, McNeil J, Piterman L. Riding the wave: current and emerging trends in graduates from Australian university medical schools. *Med J Aust* 2007; 186: 309-312.
2 Murray E, Modell M. Community-based teaching: the challenges. *Br J Gen Pract* 1999; 49: 395-398.
3 Martin A, Laurence C, Black L, Mugford B. General practice placements for pre-registration junior doctors: adding value to intern education and training. *Med J Aust* 2007; 186: 346-349.
4 Medicare Australia. Medicare Australia statistical reporting. All Divisions of General Practice (999). Approved practices in the quarterly calculations by activity. Participation in PIP. http://www.medicareaustralia.gov.au/providers/health_statistics/statistical_reporting.shtmlh (accessed Jun 2007).
5 Royal Australian College of General Practitioners. Prevocational General Practice Placements Program Training Collaboration. http://www.racgp.org.au/Content/NavigationMenu/educationandtraining/vocationaltraining/Prevoc/PGPPPcollaboration/default.htm (accessed Jun 2007).
6 Australian Bureau of Statistics. Statistics. 8685.0 – Private medical practices, Australia, 2001–02. http://www.abs.gov.au/Ausstats (accessed Jun 2007).
7 MacDonald J. A survey of staff attitudes to increasing medical undergraduate education in a district general hospital. *Med Educ* 2005; 39: 688-695.
8 Mathers J, Parry J, Lewis S, Greenfield S. What impact will an increased number of teaching general practices have on patients, doctors and medical students? *Med Educ* 2004; 38: 1219-1228.
9 Parry J, Greenfield S. Community-based teaching: killing the goose that laid the golden egg? *Med Educ* 2001; 35: 722-723.
10 Larsen K, Perkins D. Training doctors in general practice: a review of the literature. *Aust J Rural Health* 2006; 14: 173-177.
11 Coleman K, Murray E. Patients' view and feelings on community-based teaching of undergraduate medical students: a qualitative study. *Fam Pract* 2002; 19: 183-188.
12 O'Flynn N, Spencer J, Jones R. Consent and confidentiality in teaching in general practice: survey of patients' views on presence of students. *BMJ* 1997; 315: 1142.
13 Benson J, Quince T, Hibble A, et al. Impact on patients of expanded, general practice based, student teaching: observational and qualitative study. *BMJ* 2005; 331: 89.
14 Rosenthal D, Worley P, Mugford B, Stagg P. Vertical integration of medical education: Riverland experience, South Australia. *Rural Remote Health* 2004; 4: 228.
15 DeWitt D. Incorporating medical students into your practice. *Aust Fam Physician* 2006; 35: 24-26.

16 Bentham J, Burke J, Clark J, et al. Students conducting medical student consultations in general practice and the acceptability to patients. *Med Educ* 1999; 33: 686-687.
17 Kijakovic M, Parkin C. The presence of medical students in practice consultations: rates of patient consent. *Aust Fam Physician* 2002; 31: 487-489.
18 Worley P, Kitto P. Hypothetical model of the financial impact of student attachments on rural general practice. *Rural Remote Health* 2001; 1: 83.
19 Gray R, Carter Y, Hull S, et al. Characteristics of general practices involved in undergraduate medical teaching. *Br J Gen Pract* 2001; 51: 371-374.
20 Jones S, Oswald N, Date J, Hinds D. Attitudes of patients to medical student participation: general practice consultations on the Cambridge community-based clinical course. *Med Educ* 1996; 30: 14-17.
21 Hampshire A. Providing early clinical experience in primary care. *Med Educ* 1998; 32: 495-501.
22 Walters L, Worley P, Prideaux D, et al. The impact of medical students on rural general practitioner perceptors. *Rural Remote Health* 2005; 5: 403.
23 Howe A, Anderson J. Involving patients in medical education. *BMJ* 2003; 327: 326-328.
24 Williamson C, Wilkie P. Teaching medical students in general practice: respecting patients' rights. *BMJ* 1997; 315: 1108-1109.
25 Gray J, Fine B. General practitioner teaching in the community: a study of their teaching experience and interest in undergraduate teaching in the future. *Br J Gen Pract* 1997; 47: 623-626.
26 Commonwealth Department of Health and Family Services. General practice education: the way forward. Final report of the Ministerial Review of General Practice Training. Canberra: Commonwealth Department of Health and Family Services, 1998.
27 Murray E, Jinks V, Modell M. Community-based medical education: feasibility and cost. *Med Educ* 1995; 29: 66-71.
28 Rural Doctors Association of Australia. Viable models of rural and remote practice. Stage 1 and Stage 2 report. Canberra: Rural Doctors Association of Australia, 2003.

(Received 8 May 2007, accepted 6 Jun 2007) ❑