

# ‘Learners as teachers’ in general practice: stakeholders’ views of the benefits and issues

Peter Silberberg FRACGP MBBS Dip PH  
General Practitioner

Christine Ahern MBBS FRACGP  
Director of Training

Thea F van de Mortel PhD  
Director of Research

North Coast GP Training, Ballina, NSW, Australia

## WHAT IS ALREADY KNOWN IN THIS AREA

- Hospital-based studies have reported that near-peer teaching can improve the learning of both the teacher and the recipients of that teaching.
- Reported facilitators of teaching by registrars in general practice include teacher training and remuneration.

## WHAT THIS WORK ADDS

- Learners and supervisors in general practice find near-peer teaching beneficial.
- Additional strategies to encourage near-peer teaching include asking learners to teach, mentoring, providing short but regular opportunities to teach, highlighting the clinical relevance of teaching skills, having longer placements for medical students, and allowing learners to teach in areas of interest, expertise or need.

## SUGGESTIONS FOR FUTURE RESEARCH

- Further quantitative research with a larger, more diverse sample is required to determine if participants’ views are representative of the general practice population.

**Keywords:** general practice, medical education, medical students, near-peer teaching, prevocational trainees, registrars, vertical integration

## SUMMARY

### Objectives

To explore stakeholders’ perceptions of learners teaching (near-peer teaching) in general practice in order to inform training policy.

### Design

Qualitative semi-structured interviews were conducted with 29 general practice stakeholders. Interviews continued until data saturation was

reached. Transcribed interviews underwent thematic analysis.

### Setting

Nine general practices in NSW, Australia.

### Participants

Eleven general practitioner supervisors, eight general practice registrars, two prevocational general practice placement programme trainees, and eight medical students.

## Results

Learners expressed positive attitudes towards learners teaching, and half were already teaching. Learners and supervisors felt near-peer teaching could enhance their own learning. Supervisors suggested near-peer teaching reduced time pressures on themselves, helped them to keep current, was a form of succession planning, and brought financial benefits to the practice. Having time to assess the capabilities of learners prior to allocating them teaching roles was considered important. Strategies suggested by learners to encourage near-peer teaching include asking learners to teach, mentoring, providing short but regular opportunities to teach, highlighting the clinical relevance of teaching skills, having longer placements for medical students, and allowing learners to teach in areas of interest, expertise or need.

## Conclusions

Participants looked favourably upon learners teaching in general practice, and felt it could enhance learning. Suggestions were made to facilitate near-peer teaching in general practice. Further quantitative research with a larger and more diverse sample is required to determine if these results can be generalised to the wider general practice population.

## INTRODUCTION

Teaching competencies are included in multiple medical curricula in Australia and the United Kingdom, including those of junior doctors,<sup>1,2</sup> and general practice registrars (GPRs).<sup>3,4</sup> A framework has also been developed to vertically integrate the role of the 'Doctor as Educator' across multiple training levels.<sup>5</sup> Additionally, Dick *et al*<sup>6</sup> and Anderson and Thomson<sup>7</sup> recommend that teaching roles be shared between learners and GP supervisors to alleviate teaching pressures related to increasing numbers of trainees and students requiring placements in general practice. While teaching by 'near-peers' – teachers that are closer to the learners in the learning continuum<sup>8</sup> – is traditional in teaching hospitals,<sup>9</sup> it is less well established in general practice.<sup>6</sup>

Only 33% of Australian GPRs report teaching a junior,<sup>10</sup> which is considerably lower than the 62% of British GPRs who report teaching.<sup>11</sup> Perceptions on whether GPRs should teach in general practice vary. According to Dodd *et al*,<sup>12</sup> 77% of their West Australian registrar sample felt registrars could teach in general practice, although only 52% of GPs concurred. The reason for this discrepancy is unclear. However, not all registrars had worked in general practice, and not all GPs were supervisors so the relevance of the findings is limited.

Studies conducted in the hospital and

undergraduate settings have demonstrated that near-peer teaching can be beneficial. Near-peer teachers reinforce their own learning through increased preparation and explanation of concepts to others.<sup>13,14</sup> Recipients of near-peer teaching also benefit.<sup>15</sup> Outcomes for learners can be equivalent to, or better than, those obtained through traditional teaching,<sup>16–18</sup> particularly when learner-teachers receive training. Near-contemporaries are seen as more approachable (social congruence), and can target teaching at the appropriate level due to the smaller knowledge gap between teacher and learner (cognitive congruence).<sup>8,14,18,19</sup>

However, a literature review on teaching by GPRs identified only three papers whose primary focus was on registrars teaching.<sup>9</sup> More needs to be known about GPRs' perceptions of teaching or being taught by another learner. The views of medical students and prevocational trainees on general practice placements also need to be sought. Strategies to encourage learners to teach, and to overcome GP supervisors' reluctance to allow GPRs and other learners to teach, are required. This paper explores key stakeholders' perceptions of 'learners as teachers' in an attempt to address these issues.

## METHODS

Study design consisted of semi-structured interviews analysed thematically with investigator triangulation. Qualitative research methods suit situations where the researchers are attempting to understand participants' subjective experiences and beliefs.<sup>20</sup> Qualitative research is also useful when there is little information on the topic under examination, as it can provide rich data to inform the development of subsequent quantitative research instruments. Thematic analysis was chosen as the specific method to examine the concept of 'learners as teachers' as it provides a systematic process for analysing qualitative data to provide a rich, detailed account of the topic under consideration, and a means of identifying, interpreting and reporting on patterns in the data.<sup>21</sup>

Following ethics approval from Southern Cross University, participants were recruited via an email invitation outlining project aims and requirements. Over the study period invitations to participate were sent to 58 stakeholders in nine teaching-accredited general practices, and 29 (50%) consented to participate. Individual ~3060 minute semi-structured interviews were conducted with 11 GPs, eight GPRs, two prevocational trainees (PTs), and eight medical students (MSs) situated in nine general practices in the Hastings-Macleay, Mid-north Coast and Northern Rivers areas of NSW, Australia. Purposive sampling ensured that volunteers were recruited from each of the participant categories and from a mixture of practices with varying commitment to vertically integrated teaching models, to allow for a wide variety of views and experiences both positive and negative.





The interview questions were developed with feedback from a stakeholder reference group to enhance credibility of the interview data.<sup>24</sup> Interviews were conducted by two GP educators (CA and PS) and a health services researcher (TM). Participants were recruited until interview transcripts revealed no new information was being obtained (data saturation).<sup>21</sup> Interviews were recorded and transcribed. Three researchers independently conducted a thematic analysis using NVivo9,<sup>22</sup> following the steps described in Braun and Clarke.<sup>23</sup> These steps included becoming familiar with the data, generating initial codes, searching for themes, reviewing the themes, refining the themes, reporting on the themes and providing supporting data extracts.

Investigator triangulation, which involves several researchers analysing the data independently, provides credibility in qualitative data analysis.<sup>24</sup>

## RESULTS

Near-peer teaching was occurring in 89% of practices, 39% of learners had been the recipient of near-peer teaching, and 50% of learners had taught in general practice. Near-peer teaching activities included:

- juniors sitting in or parallel consulting with the registrar
- small-group teaching
- developing presentations for clinical meetings.

### Benefits to learners receiving near-peer teaching

Learning was potentially improved through social and cognitive congruence between the learners and learner-teacher. Registrars considered they were more in tune with what medical students needed to know, and medical students reported feeling more comfortable with people closer to themselves in age. Near-peer teaching provided different, and sometimes more current, perspectives for learners and offered opportunities to fill gaps created by the gender of the supervisor (Table 1).

### Benefits to learner-teachers

Near-peer teachers also benefited from teaching others by increasing and validating their knowledge. The teaching skills learnt were applicable to the clinical setting, through better communication and patient education skills. Some learners also considered teaching to be a collegial and enjoyable experience that provided variety in the workplace and built relationships. In addition, supervisors felt that teaching was a broadening experience that made registrars' aware of the satisfactions and

difficulties of teaching, and improved their ability to manage their learning plans.

### Benefits to supervisors and practices

Sharing teaching roles reduced time pressures on supervisors and was financially beneficial to the business, and providing a platform for the development of learners' teaching skills was considered a form of succession planning. Additionally, the up-to-date knowledge learners often brought to the practice helped supervisors stay current (Table 1).

### Barriers to near-peer teaching

Learners' capabilities were sometimes seen as a barrier to near-peer teaching. Some learners lacked confidence in their own knowledge and skills, and supervisors were sometimes concerned about the learners' capabilities, and how to determine when the learner was ready to teach. In addition, while some registrars were paid to teach, lack of remuneration was an issue for senior registrars who relied on a percentage of their billings for income. Parallel consulting with juniors slowed down their patient throughput and impacted on their income. A lack of expectation for learners to teach was a further barrier (Table 2).



### What would help learners to teach?

Learners would consider teaching if they were asked to teach, and if they could teach in an area of expertise/interest, or a topic linked to their own learning needs as a means of building confidence and motivation (Table 3). Other ways to build confidence included starting with a very short teaching session, and practicing regularly. Teaching someone with considerably less knowledge and experience was considered less confronting. Highlighting the similarities between the attributes of a teacher and a doctor was seen as helpful.

Learners could also be better supported in teaching roles, for example through teacher training, time to plan and prepare, and remuneration for teaching. Registrars suggested that parallel consulting was more efficient and less of a financial impost when student placements were longer (Table 3).

Supervisors felt that near-peer teaching would be encouraged by having an accredited teaching career pathway. They also felt that supervisors should be providing mentoring and feedback on learners' teaching performance. Supervisors suggested that teaching roles be allocated later in the term to allow them the opportunity to assess the learners' readiness to teach, but supervisors also needed to consider that registrars almost certainly had taught juniors prior to entering general practice.

**Table 1** Perceived benefits of near-peer teaching in general practice

Quote	Code	Theme
'as a younger, or less experienced doctor, I think you can remember what med school was like and you're sort of more in tune with what [medical students] need to know and what their level of learning is' (GPR12)	Cognitive congruence	Improved learning for recipients
'Registrars do provide some teaching that in fact I can't provide, or can't provide very well, in the form of being closer to them from a cultural point of view, from an age stratification point of view' (GP136)	Social congruence	
'I guess the people that are closer to you, you feel a little bit more comfortable with' (MS25)		
'it is good to get a different perspective working with different doctors ... everyone's got their different ways of doing things ... [you] sort of develop your own skills from seeing other people work' (MS71)	Get a wider range of perspectives	
'the [male] GP ... doesn't do many pap smears [or] breast examinations ... it was good to get that confidence [working with the female registrar]' (MS71)	Exposure to teaching by both genders	
'because they're ... fresh out of evidence-based training it feels like they tend to be a little more up-to-date on some things ... it's really great' (MS33)	Improved currency of knowledge	
'you've got to know your stuff before you can teach it' (GPR92)	Improving learner-teacher's knowledge	Builds learner-teacher's knowledge and skills
'it was quite useful because I validated my knowledge in front of my supervisor and ... [was] tested on it by teaching those below me and learned from both the supervisor and juniors' (GPR34)	Validating learner-teacher's knowledge	
'It actually improves registrars' broad mindedness when they have to teach. They can see some of the issues involved in teaching people, the satisfaction and difficulties in doing that, so I think it helps them to put their learning needs into better perspective, if they have to be not just a learner but a teacher as well' (GP136)	Learner-teachers become better learners	
'it might help you with communicating with your patients as well' (GPR35)	Learning a transferrable skill	Improved patient care
'A bit different from just doing the GP job all the time ... I get to talk to people that aren't patients, it's enjoyable' (GPR83)	Teaching can be collegial and enjoyable	Builds social capital
'you can use the guys with more knowledge to teach the guys with less knowledge so it actually does unburden you a little bit from direct one-on-one teaching' (GP11)	Reduces the burden on supervisors	Increases supervisor capacity
'it's good for the business. One of the things that's gladdened my heart recently is to have the [prevocational] doctor and the medical student who I'm not paying, sitting in there working together seeing patients I'm getting money for and I'm getting paid for having them there ... and they're all enjoying it' (GP7)	Financially beneficial	
'succession planning in that you can teach a trainee to teach earlier and they get used to it then that's going to be part of their practice going forward so that if they remain in the practice they should have less qualms or stresses about continuing to teach as they go forward' (GP11)	A form of succession planning	
'I get to learn out of that too ... it's been 20 years since I was at uni and these young guys know shit that I have no idea about ... It's sort of vertical in both directions' (GP77)	Supervisors learn too	

### Monitoring of, and feedback on, near-peer teaching

Small-group teaching by near-peers was usually supervised. Several practices provided feedback on the presentation and how the approach could be

adjusted to improve teaching quality. Teaching via parallel consulting was largely unmonitored. In some instances supervisors reported that medical students expressed satisfaction with the teaching provided by seniors, but no formal mechanisms were employed to assess student satisfaction or learning outcomes.

**Table 2** Perceived barriers to near-peer teaching in general practice.

Quote	Code	Theme
'I feel quite shy about it because I feel how could I teach, I'm only a registrar, maybe I'm not safe to teach, maybe I don't have any knowledge, maybe I'd get it wrong, so it's more my feelings of inadequacy about being a teacher' (GPR34)	Learner-teachers feeling inadequate	Lack of confidence in learner-teachers' teaching skills and knowledge
'If the registrars have got it wrong and they're teaching the students and I'm not there to correct it then there's a problem ... the biggest negative is just how do you judge when they're at the right level?' (GP77)	Supervisors concerns about learner-teachers' teaching ability	
'Registrars don't seem particularly keen on fulfilling something which isn't really a core responsibility of theirs and losing income in the process' (GP18)	Inadequate remuneration	Lack of near-peer teaching culture and financial support
'What is needed is for there to be a change in the culture of how we think about training in general practice. It should be more along the lines of ... the hospitals where registrars are teaching' (GP1)	Lack of expectations that learners should teach in general practice	

## DISCUSSION

While there is a body of literature on the benefits of near-peer teaching to both near-peer teachers and the recipients of that teaching in non-general practice settings,<sup>8,14,16,17</sup> what little has been published on near-peer teaching in general practice is often based on anecdote or opinion.<sup>25</sup> Additionally, while General Practice Education and Training<sup>25</sup> states that processes should be 'driven by the learner and their choices', to date the views of key stakeholders such as junior doctors and medical students placed in general practice are virtually absent. This study obtained the views of all key stakeholder groups in the general practice setting, and provides new information on strategies to increase the uptake of teaching roles by learners in general practice.

Our participants perceived that several benefits reported by hospital-based studies on near-peer teaching are also applicable to general practice, for example, improvements to learning through social and cognitive congruence between the learners and learner-teacher,<sup>8,14,18,19</sup> and enhanced self-learning for learner-teachers.<sup>26,27</sup> Dick *et al.*<sup>6</sup> hypothesised that vertically integrated models would increase learning through the provision of a broad range of learning experiences, and our participants confirmed this. New benefits perceived by our learners included validation of the learner-teachers' knowledge, and increased workplace enjoyment through the development of rewarding relationships and variety in the teaching. Near-peer teaching also offered opportunities to fill gaps created by the supervisors' gender, and provided an avenue for sharing up-to-date information with other learners and supervisors.

Supervisors confirmed that sharing teaching roles could reduce time pressures upon them, which was previously suggested by Dick *et al.*<sup>6</sup> Our supervisors additionally perceived that near-peer teaching provided a means for facilitating succession

planning, increased financial returns, and could make registrars more cognisant of the difficulties and satisfaction inherent in teaching, which may make them more broad-minded. Supervisors suggested that teaching roles be allocated later in the term to allow them to judge the capabilities and readiness of the learner to teach.

Our learners suggested new ways to increase the uptake of near-peer teaching in general practice, including:

- asking the learner to teach. Many are willing to teach but are not given the opportunity
- allowing registrars to teach learners who are more junior as this is less threatening
- allocating adequate preparation time
- provision of teaching tips, including information on how to structure a teaching session
- allowing learners to teach in an area of interest, expertise or need as this provides additional motivation to teach
- starting with short sessions, which are less threatening, and encouraging regular practice (while avoiding overload)
- highlighting the clinical relevance of developing teaching skills.

Both registrars and supervisors suggested that financial disincentives for registrars who teach must be addressed, supporting previous research by Dick *et al.*<sup>6</sup> Teaching of juniors by registrars may be more common in hospitals because hospital-based trainees are salaried, while senior GP registrars may rely on a percentage of their billings for income. Potential solutions include:

- paying senior registrars for teaching time
- ensuring medical student practice incentive payments (PIP) go to the person doing the teaching in a timely manner<sup>6</sup>
- having longer placements for medical students to streamline the parallel consulting process.

**Table 3** Strategies to facilitate near-peer teaching

Quote	Code	Theme
'when I was in the hospitals, I'd regularly take a teaching, clinical or theoretical session with [medical students] and I used to really enjoy it. It's a bit more difficult in GP land ... registrars just don't seem to be asked to do it with medical students in GP' (GPR12)	Just ask!	Provide teaching opportunities
'be cognisant of the fact that ... registrars have usually been fulfilling that same role in the hospital prior to their engagement at your practice' (GP18)	Awareness of registrars' prior teaching experience	
'[let] people present what they're interested in, ... you'd get a better result than just getting someone to churn through something that they don't really know about or understand; so either knowledge or experience, or interest in the topic would be beneficial' (GPR34)	Teach in area of knowledge, expertise or interest	Build confidence
'having each level teach what is most recent to them, I think is effective' (MS12)		
'I feel comfortable teaching medical students. I mightn't feel as comfortable teaching someone closer to my level of training' (GPR 12)	Let learner-teachers teach someone considerably more junior	
'I can talk about anything for ten minutes, but actually doing a half hour lecture fills me with more dread' (GPR34)	Start with small sessions	
'[teaching was] better the more I did, and that's why I think if it was made a regular thing that would almost be easier ... when I first started I really hated it because I just felt very stupid ... but the more I have done it, the more beneficial it's been' (GPR34)	Regular practice	
'A template for thinking through how you structure a session of teaching [would be useful]' (PT6)	Provide teaching training	Provide support
'It's usually something that comes up in tutorials ... about the sorts of things you can do, how you can make that teaching interesting, enjoyable, some tips like, "you don't have to know all the answers"' (GP27)		
'if I can go away and research a topic ... it doesn't really matter what the levels of the other people in the room are, I can still do a good job at covering the topic' (GPR83)	Provide time to plan and prepare	
'it's got to be paid. I come to work to earn a wage for my family ... if you take away from your income stream for teaching it should be replaced' (GPR99)	Remuneration	
'when the registrars prepare [to teach] they could be overloaded ... so I wanted to not do that too often' (GP66)	Avoid overload	
'you'd have to have somebody there for a particular amount of time where you'd start with them in the same room and then you know what their skills are and you're confident with leaving them alone and if people come for short periods of time then most of your time will be getting to that stage and then they'll be gone before they really run in parallel very well' (GPR83)	Longer student placement	Knowing the learner and their capabilities
'I want to know them a bit before it happens so ... it needs to happen later in the term ... they need to be capable and confident, and competent enough that they can see their own patients ... and lead a session' (GP42)	Supervisor confidence in the learner	
'at our orientation they were talking about what qualities a teacher has and what qualities a doctor has and there are lots of the same qualities, so [I thought] that's kind of true isn't it, I do teach my patients every day' (PT1)	Doctors and teachers have similar qualities	Stress clinical relevance of teaching

While few juniors in this study had taught, the proportion of our registrar participants who taught was considerably higher than the Australian national average. There was widespread support for near-peer teaching from stakeholders, which differs from the findings of Dodd *et al.*<sup>12</sup> These findings may represent a potential selection bias towards participants with a positive attitude towards

teaching. The small sample, prevents generalisation from the findings.

Despite significant enthusiasm for near-peer teaching in this study, national utilisation of learners as teachers is still patchy. However, training capacity constraints will dictate that near-peer teaching be more widespread in the future. For this to occur, a substantial cultural shift will be required. Supervisors

and learners need to let go of their fears of having learners teach. Some supervisors are fearful of 'dropping' the learner into an uncomfortable and foreign environment, but in truth that happens already when the learner first comes to work in their practice. Our study demonstrates that as long as the right environment is provided, learners are not only willing to teach, but gain substantial benefits from the experience.

While teaching skills are core components of the curricula of both GP colleges,<sup>3,4</sup> anecdotally few Australian GP training programmes include a formal teaching syllabus, or associated assessment. The final exams for fellowship of the respective GP colleges have not to date covered teaching skills. If we are to expect learners to teach, then a coordinated national approach to implementing teaching training in medical education is required.

## CONCLUSIONS

Participants had positive attitudes towards learners teaching in general practice. With sufficient support, near-peer teaching could reduce pressures and financial burdens on GP supervisors and have a positive impact on learners' knowledge and enjoyment. Quantitative research with a larger and more diverse sample is required to determine if these experiences and views are representative of the wider general practice population.

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The interview questions are available from the authors upon request.

