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To cite this article: Margaret Henderson, Susan Upham, David King, Marie-Louise Dick & Mieke van Driel (2018) Medical students, early general practice placements and positive supervisor experiences, *Education for Primary Care*, 29:2, 71-78, DOI: [10.1080/14739879.2017.1409084](https://doi.org/10.1080/14739879.2017.1409084)

To link to this article: <https://doi.org/10.1080/14739879.2017.1409084>



Published online: 01 Jan 2018.



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RESEARCH



Medical students, early general practice placements and positive supervisor experiences

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ABSTRACT

Introduction: Community-based longitudinal clinical placements for medical students are becoming more common globally. The perspective of supervising clinicians about their experiences and processes involved in maximising these training experiences has received less attention than that of students.

Aims: This paper explores the general practitioner (GP) supervisor perspective of positive training experiences with medical students undertaking urban community-based, longitudinal clinical placements in the early years of medical training.

Methods: Year 2 medical students spent a half-day per week in general practice for either 13 or 26 weeks. Transcribed semi-structured interviews from a convenience sample of participating GPs were thematically analysed by two researchers, using a general inductive approach.

Results: Identified themes related to the attributes of participating persons and organisations: GPs, students, patients, practices and their supporting institution; GPs' perceptions of student development; and triggers enhancing the experience. A model was developed to reflect these themes.

Conclusions: Training experiences were enhanced for GPs supervising medical students in early longitudinal clinical placements by the synergy of motivated students and keen teachers with support from patients, practice staff and academic institutions. We developed an explanatory model to better understand the mechanism of positive experiences. Understanding the interaction of factors enhancing teaching satisfaction is important for clinical disciplines wishing to maintain sustainable, high quality teaching.

ARTICLE HISTORY

Received 9 May 2017

Revised 1 August 2017

Accepted 21 November 2017

KEYWORDS

Clinical clerkship; general practice; medical students; preceptorship; primary health care; longitudinal clerkship; early clinical experience

What is already known in this area?

Longitudinal placements

- Have many benefits for students and supervisors.
- Allow the development of student-supervisor relationships which are important for learning.
- Have been studied more from the student rather than from the supervisor perspective.

What this work adds

This work

- Provides the supervisor perspective to help understand the processes involved in enhanced teaching and learning experiences in early longitudinal clinical placements.
- Identifies the interplaying factors and mechanisms by which supervisor enthusiasm is triggered and maintained.
- Connects the findings of previous work and illustrates how the combination of experienced teachers and motivated students appears to add a synergistic positive influence to the training experience.

Suggestions for future work or research

Further work could

- examine how best to encourage and develop student enthusiasm to initiate the cycle
- study the use of the model to identify training issues in practice/clinical settings.

Introduction

Community-based longitudinal clinical placements are becoming more common not only in the latter (traditionally referred to as ‘clinical’) years of medical programmes but also in the early (‘pre-clinical’) years. Longitudinal placements involve: ‘regular, recurrent placement in the same setting with the same preceptor (and thus with access to the same patient base) over a period of time’ [1]. Time spent on the placement ranges from 1/2 day per week to several days per week over 12 weeks or longer. Considerable information is available about the benefits gained from these placements by clinical supervisors, patients and particularly students [1–5] and there is increasing interest in understanding the underlying processes in creating such positive training experiences.

Student learning in longitudinal placements is promoted by the development of relationships with the clinical supervisor, patients and the community over time [1,6–8]. It is likely that these relationships and the training experience are enhanced by ‘good’ clinical mentors and ‘good’ students. The characteristics of good clinical mentors and teachers are covered in the literature [9,10] and the characteristics of good students are receiving more attention. Characteristics of a ‘good mentee/learner’ have been reported as including willingness to learn and develop, willingness to participate, and being conscientious [11], enthusiastic and motivated [12].

Several authors have developed models to explain the relationships which develop in longitudinal placements and how these enhance learning [3,8]. Kelly et al. developed a model describing the breadth of experience and the relationships involved in these placements resulting in enhanced student learning [6].

However, much of this work has been done in longitudinal integrated placements during the latter years of training and does not discuss the mechanisms by which a positive training experience occurs from the clinical supervisor perspective.

The Urban Longitudinal Integrated Community Care (Urban LInCC) project (Box 1) provided a longitudinal early clinical learning placement in general practice for a subset of Year 2 (of a 4-year course) medical students at The University of Queensland.

In Australia, general practice is defined as a specialty that provides: ‘person-centred, continuing, comprehensive and coordinated whole person healthcare to individuals and families in their communities’ [13]. Terms such as ‘family medical practitioner’, ‘family physician’ and ‘family doctor’ are used to describe the primary care medical practitioner in the international literature [14]. Initial evaluations demonstrated this was a positive experience for both students and GPs.

The high level of supervisor satisfaction in the initial evaluations triggered our interest in exploring the reasons and possible mechanisms for this satisfaction. In this paper, we explore what makes a training experience positive for clinical supervisors in an early longitudinal clinical placement. We identify factors associated with an enhanced GP supervisor training experience and we propose a model (Figure 1) to explain the potential interplay of these factors and mechanisms involved.

Methods

An exploratory qualitative research design was used. A convenience sample of 12 of the 25 Urban LInCC GPs who participated in the project in 2013, took part in individual semi-structured telephone interviews conducted by one researcher (LM) as part of the overall evaluation of the project. GPs were selected to include a range of participating practices based on practice location (inner versus outer metropolitan practices), and GP supervisor experience in the Urban LInCC project (number of students supervised and placement duration). (Table 1) The interview questions explored successful and less successful aspects of the placement, the effect of continuity of teaching on relationship development, how the teaching load was shared, student exposure to continuity of care and chronic disease management, desired student attributes, student development over the placement and suggested changes to the programme.

Interviews were audio-taped, transcribed, and then inductively analysed [15] to identify major themes. Two members of the research team (SU, MH) coded emerging

Box 1. Urban LInCC project details for 2013.

Urban LInCC Project 2013

Aimed to provide an early longitudinal clinical experience in general practice for medical students.

Students ($n = 33$)

- in Year 2 of a 4 year graduate program
- applied to participate and their selection was based on predetermined criteria
- spent 1/2 day per week for 13 (28 students) or 26 weeks (5 students) in a general practice in addition to their other curriculum workload
- were provided with suggested practice-based learning activities matched to their weekly problem based learning curriculum content.

GPs ($n = 25$)

- were experienced GP teachers
- were provided with an orientation meeting, suggested practice-based activities matched to curriculum document, practice visits and telephone calls.

Mechanisms of positive training experiences: A supervisor perspective



Figure 1. Model of the proposed interactions and mechanisms of a positive training relationship from the GP supervisor perspective.

Table 1. Characteristics of interviewed GPs.

Practice Location	<10 km from central business district (CBD)	6
	>10 km from CBD	6
Placement Numbers and Duration	1 student × 26 weeks	5
	2 students × 13 weeks each	3
	1 student × 13 weeks each	4

themes independently using sentences or phrases as units of analysis. Variations in coding were discussed and agreement reached on designated themes and sub-themes. Themes which appeared to relate to facilitating a positive training experience for the GPs were then selected to determine their interactions and the other themes were put aside. A model was developed to propose explanations for these identified themes and their interactions. (Figure 1)

One of the coders was a GP experienced in education and training and confident with the context sensitivity of the data [16].

Results

Factors which created a positive training experience for GPs fell under seven broad headings, forming the outer

layers of our proposed model (Figure 1): those relating to attributes of the GPs, students, patients, practice and teaching institution, feedback and the effects of longitudinal placement. Aspects of these provided triggers which facilitated the teaching process demonstrated by the inner layer of the model.

Whilst challenges were reported relating to pressure of time and difficulties in providing teaching and learning opportunities, these negative comments were reported considerably less frequently than positive comments and are not the focus of this paper.

Factors contributing to positive GP supervisor experiences

GP supervisor attributes

GP supervisor attributes likely to promote student learning and the teacher-student relationship emerged, including the enjoyment of teaching and the teaching experience, the reflective and flexible approach to their teaching, their pro-active and interactive teaching approaches, and the involvement of other staff.

Most of the experienced GP teachers reported enjoying teaching for varying reasons including enhancing their learning and educating the students about general practice.

... if I don't know something I'll get them to look it up, and I find the students teach me a lot of things in that way. (GP6)

For me, the importance of second year is the GP exposure, is the – is the exposure to general practice. And, hopefully encouraging the student to, to consider it as part of their future. (GP4)

Flexibility to fit with student learning and logistical needs as well as reflection about their teaching were mentioned by some GPs.

And on the days when it was more difficult for her to come ... we changed it around. (GP4)

So I, I guess I'm always sort of constantly reflecting on this and ... trying to improve that. (GP12)

Teaching approaches included being pro-active with organising student and patient experiences and attempting to make most sessions interactive.

I would encourage the patients that were particularly interesting to come back in a week's time, come back and see us on Thursday. (GP11)

Well, yeah, history taking, we tried to select a particular aspect of history that they should gather.' (GP10)

Involvement of other practice staff and health professionals was quite common but not all GPs did this.

And she'd do some time with Dr ... and the other GPs here and some time with me. (GP3)

I had him sit in with one of the registrars ... and the nurse ... and the practice manager ... (GP10)

Student attributes

Student attributes were mentioned frequently. GPs spoke positively about the enthusiasm and keenness of the students, which were seen as desirable characteristics.

For this particular student, there was a great enthusiasm to be shown anything at a clinical level. (GP7)

They need to be keen. (GP6)

Competence, being a proactive learner and reliability were important for some GPs.

I was confident if I left him in a room with a patient he'd take a good history for me. (GP6)

She said: "Look, I need to do some of these things; can we do those?" ... it was to her credit that she reminded me of the things that she needed out of her time here. (GP3)

But she always texted me and let me know if it was going to be a different day and was that okay. (GP4)

Others felt that desired student qualities included an interest in people and ability to relate to them.

They have to like people and they have to be very patient and they have to be able to exhibit some empathy. (GP10)

Patient attributes

Patient attributes related to their keenness and willingness to be involved in the teaching process. The patients' ability to accept or decline having a student present in the consultation was also mentioned by one GP.

I don't think we had one person [patient] who didn't want him [student] to be in the room ... they were all interested in ... him. (GP11)

Well, I mean, amazingly most of the patients were quite keen to be involved in the teaching and with a few exceptions – usually young people with personal issues they wanted to discuss, particularly if it involved genitals, but beyond that, especially old patients, were very keen and they're also very keen to give some time to being interviewed in a separate room with a student. (GP10)

And yet they're quite happy on top of that... to have a student join us, or as I say, maybe ask the student to leave. (GP2)

Practice attributes

Practice attributes were seen to be supportive of training. GPs commented on the training culture of their practices and involving the student in the team.

I think it just gives us that – that general feeling of this is actually a training practice and this is and this is – we're all into learning ... and I think reflects the culture of the practice. (GP12)

The way the staff and the patients got to know her and expected her to be part of a team and accepted her as part of a team. (GP5)

Teaching institution attributes

Teaching institution attributes included providing an understanding of the programme, contacting the GPs, and the selection of students.

The actual support – written and personal – has been very good ... (GP3)

It started well with the meeting that was held at Royal Brisbane [Hospital] and we were able to meet the person who we were going to be supervising, so that was a good thing to do. (GP7)

Feedback

GPs received indirect feedback about aspects of their work. Student progress provided feedback about student learning. The GPs perceived that students changed in two ways predominately – in their confidence levels and in their skills acquisition.

I think her confidence has increased. ... towards the end there she was game to say: "And what do you think about doing such and such?" and "Why wouldn't you do such and such?" You know, to actually be confident enough to openly discuss a case. (GP8)

My impression was that they were more efficient in getting the information from an examination and from a history than they were when they started. (GP10)

It was helpful for GPs to receive, indirectly via the student, patient feedback about their interactions with the GP.

And the patients would sometimes express their opinion of me to the student, which they otherwise wouldn't do ... I found that I got some feedback from the patients that I otherwise may not have got. (GP10)

And they [patients] believed that the student would then tell me things that in my rush, I may not have picked up. (GP13)

Effects of the longitudinal placement

For some GPs, the effects of the longitudinal placement included the importance of the development of a positive relationship with the student over time.

It's very hard when somebody's there a short time to get a comfort level in the teaching relationship that you can get over a longer period of time. ... It's just a much more positive sort of thing when that relationship is healthy and close. (GP5)

You get to know each other a bit and there's a bit more comfort there. (GP3)

The duration of the placement was provided exposure to patients and opportunities for building on learning experiences.

They were one of the values of the longer time ... So, people that were coming back for chronic care started to know her. She started to know them. (GP5)

Just the fact that he was there for a longer term, so it gave us more opportunity to build on his knowledge and build on his experiences. (GP6)

Trigger comments

Additionally, some trigger comments which implied processes that facilitated the teaching cycle were identified and related to positive student attributes, the effect on teachers, the acquisition of skills, and confidence. These are represented in the middle circle of the model (Figure 1).

If they're more enthusiastic, it lubricates us in encouraging their involvement and it, it makes the patients' acceptance of their involvement all the more powerful. (GP5)

As her knowledge increased etcetera, if we'd covered examinations, for example of an abdomen, I'd just say: "Go now from beginning to end, show us how you do it." (GP8)

Certainly there was improving confidence and a willingness to try new things. (GP7)

Challenges for GP supervisors

Time pressures

Some GPs found difficulties with the additional time taken to teach students.

It's made me, I'm horribly, always behind. It's made me a little bit more that way and the reception staff had to be on my back. (GP8)

And the other thing is it doesn't, even if you're just booking two or three an hour, it still doesn't take much to start running behind, and then you can say: "Okay, well I'll let you take the history from this patient." And then that starts off and then that's good and then you wish you had more time to actually just go through some of the questions and why you'd ask this question and that question, but you're thinking, I've got to keep moving so, I suppose, there's always time pressure. (GP9)

Mainly because it does take some time and additional time which you have to devote to them means sacrificing some patients. (GP10)

Difficulty providing appropriate teaching and learning opportunities

I guess we didn't get to do a lot of different types of physical examination. There were ears and throats and chests and abdomens, and so on, but that was the limit of it and things like sutures and fractures, we didn't actually have many of those during the sessions that I had with him, bit of a downside. (GP11)

It's a relatively short time and I did my best to get them exposed each session, but in terms of becoming efficient at doing a cardiovascular examination, they may really have only done one of those in the whole thing. And one knee and one respiratory, and so each of those requires a thinking process that's not automatic at first. (GP10)

You don't know if you're actually showing them things that they've seen a hundred times, or telling them things that they know inside out and boring them to death, or whether in fact it's all quite new and intriguing. (GP8)

Model development

Using themes that emerged from the study and GP supervisor trigger comments relating to these themes, we constructed a model to reflect the themes and their interactions and proposed mechanisms facilitating a positive training relationship from the GP supervisor perspective. The model was developed by team discussion during the analysis phase. In addition to information provided by GPs in the semi-structured interviews, consideration was given to information gathered from informal contacts with students and GPs.

Keen and enthusiastic students ignite the GP's enthusiasm to teach which triggers provision of proactive learning opportunities that increase student skills, ability, confidence and competence. This further triggers student and supervisor teaching interest. (Figure 1)

This process evolves over time supported by direct and indirect feedback which occurs to and from students. The longitudinal experience allows the relationship to build, as well as allowing the student to develop further and experience more learning opportunities. It is enabled by the GP attributes of enthusiasm and flexible, reflective teaching; the patient attributes of supporting the GP's teaching role and willing to be involved; and the practice attributes of a teaching culture. Institutional support adds to the positive training experience.

Discussion

This study identified several attributes contributing to GP supervisors' positive experiences with students in longitudinal placements. Insights gained from these GPs indicate the factors which enhanced their teaching experiences related to student attributes, patient attributes, practice attributes and teaching institution support. The attributes of the teachers themselves also appeared to enhance the experience via student learning.

GPs expressed their enjoyment of teaching and their approaches were flexible, reflective and proactive which promoted the teacher-learner relationship with the student and student learning. They spoke of the keenness of the students, their knowledge base and good interpersonal skills. Students with these attributes provided a motivation for both the GPs and practice staff to want to teach and involve them, resulting in more learning opportunities for the students. GPs seemed to respect the students and benefited from watching them gain confidence and learn.

The contribution of patients to the teaching and learning process was recognised by GPs and appeared to provide affirmation of the GP's own teaching role. GPs reported that patients generally enjoyed and accepted having students and were able to provide information and feedback to students, which was also helpful to the GP. The practice attributes providing support for the GP teaching role included a teaching culture which welcomed the student as part of the clinical team, as well as being able to adapt to problems of teaching such as running late. Generally, GPs appreciated support from the teaching institution; activities such as the provision of programme and curriculum information and contact with academics were regarded as helpful.

Much of our findings are in keeping with those of other studies: the GP perspective [17]; supervisor enjoyment and teaching approaches consistent with good clinical

teaching [10,18]; positive student attributes [11,12] which trigger teacher enthusiasm [19]; the contribution of the supervisor-student relationship to student learning both generally [12,20] and especially in longitudinal placements [1,6,8]; student development and implicit feedback to the GP [3]; patient acceptance and enjoyment of teaching [21–23]; practice and institution support for teaching [24–26] and the pressures of time.[27–29]

This study identified some mechanisms and processes by which a positive training experience may occur from the GP supervisor perspective and connects findings of the previous studies. It illustrates how the combination of experienced teachers (supported by practice, patient and institution attributes) and motivated students appears to add a synergistic positive influence to the training experience.

The results of this study illustrate a highly functioning supervisor experience based on a small number of participants who were experienced clinicians and supervisors. The students participating in this project were high-calibre, motivated students who underwent a selection process and willing to extend their study workload. These groups may not reflect the complete spectrum of supervisors and students participating in other longitudinal general practice placements however this study can suggest goals to aim for to enhance teaching interactions.

Due to a number of logistical factors, the majority of student placements were for 13 rather than 26 weeks. This length is shorter than some definitions of longitudinal placements but they approached the minimum duration considered to be longitudinal in the review by Thistlethwaite et al. [1].

The paper focuses on the positive GP supervisor experiences because this was the aspect of the original evaluation data which led us to ask the question: 'Why did this work so well?' While asking this question has some elements of a 'realist approach' to evaluation (which seeks to identify what works, for whom, in what circumstances and why [30,31]), our data collection and evaluation did not adhere to the guidelines [32] and we are unable to report it as such. Realist evaluations are useful to explore the complex effects of an intervention and how they may vary in different circumstances. The approach is based on the interaction of the context (the conditions where it is introduced) and the mechanisms (underlying changes in the reasoning and behaviour of participants) which create the outcome. [30,31] We believe that further research into this area would benefit from adopting a realist approach.

Although our selection of students represented an already keen and enthusiastic cohort, and our participating GP supervisors were keen and experienced teachers, it is proposed from our developed model that preparing students to be interactive and engaged (i.e. 'good students')

will enhance the learning experience for both them and the supervisor. How and where this is best done requires further research including the perspectives of the GPs, patients, students and teaching institutions.

The combination of participant and organisation attributes and interactions, time and feedback facilitated the training experience for general practitioners supervising medical students in our urban longitudinal early clinical placements. The model proposes a framework for understanding these interactions and could be used for assessing and enhancing supervisor satisfaction. It is possible that this could be extrapolated to clinical placements in other disciplines.

At a time when community-based clinical teaching workloads are increasing, further understanding of and support for the supervisor perspective may help to keep it sustainable and rewarding.

Ethical approval

The project was approved by The University of Queensland Behavioural and Social Sciences Ethical Review Committee.

Disclosure statement

No potential conflict of interest was disclosed by the authors.

Funding

The Urban LInCC project was funded by a grant from Health Workforce Australia.

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