Clinical teachers working in primary care: What would they like changed in the medical school?

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ABSTRACT

INTRODUCTION: General practitioners (GPs) working as clinical teachers are likely to influence medical students' level of community-based learning. This paper aimed to ascertain clinical teachers' views in relation to The University of Auckland about their clinical learning environment.

METHOD: A total of 34 clinical teachers working in primary care contributed to this study. To gauge their level of involvement in teaching and learning, the clinical teachers were asked about issues such as their confidence, available time, sufficient clinical learning opportunities, clear learning objectives to teach students and what they would like changed.

FINDINGS: The GPs appeared confident, felt there were sufficient learning opportunities for students and that their students were part of the team. Less experienced teachers expressed less confidence than more experienced peers. There was some hesitancy in terms of coping with time and feedback. Some clinical teachers were unclear about the learning objectives presented to students.

CONCLUSION: Several issues that emerged—including available time and financial rewards—are difficult to resolve. Curriculum and selection are evolving issues requiring constant monitoring and alignment with increasing numbers of students studying medicine, increased ethical awareness, more diverse teaching systems and more advanced technologies. Non-faculty clinicians need adequate representation on curriculum committees and involvement in clinical education initiatives. Issues of cultural competency and professional development were raised, suggesting the need for more established links between university and GPs.

KEYWORDS: Primary health care; clinical teaching; general practitioners

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Introduction

General practitioners (GPs) working as clinical teachers are likely to influence medical students' level of community-based learning. There is a growing international literature documenting the interaction between medical students and the primary health care environment[1,2] and there are some substantive benefits for students wishing to study and further practice in primary care in New Zealand (NZ).[3] It has further been documented that half of all NZ GPs are, or have been, involved in teaching,[4] but 47% report being challenged by lack of time. Furthermore, medical students clearly acknowledge the value of their general practice interaction as it enables them to witness "excellent communication skills, attitudes, and rapport with patients". Student feedback has also shown the multi-layered role of the general practitioner as teacher and clinician working with a diverse mix of patients.[2]

The present study extends previous research that focuses on students' views of the general practice teaching environment by qualitatively collating the views of primary care clinical teachers. More specifically, this study asked these teachers about what they would like to change in The University of Auckland Faculty of Medical and Health

Sciences' (FMHS) medical programme. This is an important area of study as GPs are becoming a crucial component of the integrative system of health care,[5] and involvement from medical schools will likely be instrumental in meeting this synthesis.

The FMHS medical programme (MB ChB) is usually a six-year programme, which includes Year 1 of the Bachelor of Health Sciences or the Bachelor of Science in Biomedical Science. However, graduate applicants may be admitted to Year 2 of the programme, or only complete part of the Year 1 courses, depending on their previous study. During the first three years students concentrate on learning the science that underpins clinical practice, followed by a focus on learning in clinical environments. The final year is a trainee intern year where students are supervised.[6] The FMHS medical programme is currently faced with an increase in the intake of entrants,[7] which further motivated the present researchers to consider clinical teachers' needs in terms of faculty support.

Several unique factors make general practice an instructive learning environment for students. Some of the characteristics cited are related to issues of contact (often the first port of call), the ability to work with other professionals and specialists, its patient-centredness, the history of the patient–doctor relationship, the need for effective communication skills, community involvement and time spent working independently in the field, and the holistic nature of the profession.[1] There is also the need for GPs to work actively in partnership with their patients in relation to making clinical decisions about treatment or care.[8] A further aspect worthy of consideration is the business model of general practice,[9] which creates a potentially distinctive learning experience for students.[10] These characteristics are unique to general practice and thus make a rich resource and diverse learning environment for medical students. Moreover, it needs to be acknowledged that the service delivery of general practice is undergoing certain changes, such as increased problems with recruitment, increased student numbers, the way in which GPs interact with other service deliveries, and the ageing population of practitioners.[11–13]

WHAT GAP THIS FILLS

What we already know: Many New Zealand general practitioners (GPs) are involved in teaching medical students in their practice and students clearly acknowledge the value of their general practice interaction, particularly in developing their communication skills, attitudes and rapport with patients. The views of GP clinical teachers are less known.

What this study adds: Some GP clinical teachers would like more clarity around the teaching objectives, teaching guidance and professional development options. Some are limited by time and financial constraints in the teaching they can provide.

An area of university involvement in general practice has been in developing links to improve recruitment to, and retention of doctors in, rural practices,[14,15] which is an area of particular relevance to the NZ context,[16,17] especially in terms of developing cultural safety and cultural competence.[18] Some worrying statistics have been reported in relation to the problems encountered by GPs, such as work stress related to excessive paperwork, bureaucracy, multiple problems raised in each consultation, pressure to keep to time and combining work and family.[19] Interestingly, no specific mention was made in relation to teaching commitment and work associated with university. However, these are areas that could have been investigated in more depth in relation to this learning environment.

The present study used a mainly qualitative approach to investigate the views of clinical teachers with respect to their involvement with students in early clinical training. The overarching research question was: "What would clinical teachers like to change about medical school?" The term 'medical school' was chosen as a commonly used generic term.

Method

Procedure

Questionnaires were sent to clinical teachers working in primary care (GPs) who teach Year 4 and Year 5 students in the FMHS medical (MB ChB) programme at The University of Auckland, through an administrator working in the Department of General Practice and Primary Health Care. Questionnaires were anonymously

returned to the researchers via the administrator. The study was approved by The University of Auckland Human Participant Ethics Committee (Ref. 2008/531).

Questionnaire

Clinical teachers were asked to respond to a set of six questions: (1) I feel confident to teach students; (2) I have sufficient time to teach students; (3) learning objectives are clear; (4) there are sufficient clinical learning opportunities for students' needs; (5) feedback was given regularly [to students]; and (6) students feel part of the team. Each item offered five response options (strongly agree, agree, neutral, agree, and strongly agree). These questions were designed by two clinical educators working at The University of Auckland and by considering a student evaluation form used to evaluate the clinical learning environment (the DREEM questionnaire).[20] These clinical educators are interested in the nexus between general practice and university, hence there is possibly some bias associated with this design, but equally likely, bias has been minimised due to commonsense pragmatism and detailed clinical teaching experience. Teachers were also asked about how long they had been teaching (less than 10 years; 10 years or more).

Following on from this, an open-ended questions was posed: "If you could change three things about medical school, what would they be?" The notion of three things was mooted to increase the likelihood of a focused response. This open-ended format created a teacher experiential viewpoint and allowed teachers to comment on their teaching experiences in reference to the FMHS at The University of Auckland.

Analysis

Colaizzi's phenomenological method was incorporated[21] and employed to develop a set of the open-ended commentaries and to create a set of emerging themes. Initially, two educators familiar with the issues facing clinical education read through the commentaries independently to get a sense of the remarks. Subsequently, these two educators met and discussed their ideas to formulate a set of themes, to discuss any differences in interpretation, and to consider the implications of the themes. To ensure a robust system of review and analysis, two additional clinical educators not involved in the original analysis evaluated the significance of the themes.

Findings

Participants

A total of 34 self-selected clinical teachers working in primary care (GPs) contributed to this study. Demographic information such as age, sex,

Table 1. Correlations between the six questions

Questions	Q1	Q2	Q3	Q4	Q5
Q2	0.39*				
Q3	0.24	0.31			
Q4	0.22	0.55†	0.20		
Q5	0.60†	0.36*	0.27	0.35*	
Q6	0.16	0.18	0.17	0.38*	0.08

* $p<0.05$
† $p<0.01$

Table 2. Clinical teachers' views on teaching: frequency data for each question

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
			n (%)		
1. I feel confident to teach medical students		2 (6)	1 (3)	16 (47)	15 (44)
2. I have sufficient time to teach students	2 (6)	6 (18)	10 (31)	15 (44)	1 (3)
3. Learning objectives are clear		3 (9)	8 (24)	17 (50)	6 (18)
4. There are sufficient clinical learning opportunities for students' needs		1 (3)	3 (9)	10 (29)	20 (59)
5. Feedback is given regularly [to students]	1 (3)	2 (6)	5 (15)	16 (47)	10 (29)
6. Students feel part of the team on the rotation			4 (12)	12 (35)	18 (53)

gender and ethnicity were not obtained, primarily to avoid identification of respondents and to protect their anonymity. There was some indication that the sample was a mix of experienced (10 years or more, n=11) versus less experienced (less than 10 years, n=9) teachers, although 14 respondents did not respond to this item. A series of Mann Whitney U tests were conducted to evaluate any potential differences between the emerging and more established clinical teachers across the six items. The results of the test indicate that only one ("I feel confident to teach students") of the six items yielded a significant result, z=-3.12, $p<0.01$; teachers with less experience teaching (less than 10 years) had an average rank of 6.39, while more experience teachers (10 years or more) had an average rank of 13.86, indicating a lack of confidence amongst the less experienced teachers.

Responses to the six items

A series of Pearson correlations were conducted between each of the six questions (see Table 1). There were significant positive correlations between questions 1 and 2 ($r=0.39$, $p<0.05$), questions 1 and 5 ($r=60$, $p<0.01$); questions 2 and 4 ($r=0.55$, $p<0.01$), questions 2 and 5 ($r=0.36$, $p<0.05$), questions 4 and 5 ($r=0.35$, $p<0.05$) and questions 4 and 6 ($r=0.38$, $p<0.05$). These results suggest that the items are not independent and that certain elements of teaching are inter-related with other elements, although level of causation cannot be inferred. Areas of positive correlation include: (1) confidence and time; (2) confidence and feedback; (3) time and opportunity; (4) time and feedback; (5) opportunity and feedback; and (5) feedback and team involvement.

Responses to the items were collated in terms of count data and row percentages and are presented in Table 2. Clinical teachers responded favourably (agreed) to items 1 (91%), 4 (88%) and 6 (88%). Therefore, this group of GPs appeared to be confident, felt there were sufficient learning opportunities for students, and felt their students were part of the team. However, less experienced teachers expressed less confidence than their more experienced peers.

There was some hesitancy in terms of responses (disagree and neutral) to items 2 (55%), 3 (33%) and 5 (24%), indicating that there is likely to be a critical number of GPs teaching students who struggle with time and feedback, and are unclear about the learning objectives presented to students.

Commentaries obtained from the open-ended question: "If you could change three things about medical school, what would they be?"

Thematic analysis of the data revealed four significant areas in which respondents identified opportunity for change. These were curriculum issues, time and financial constraints, selection and attitudinal concerns, and professional development. The order in which these themes have been presented was not in any way related to levels of importance as the study was exploratory and inductive and did not aim to create definitive links or levels of causation between ideas.

Curriculum issues

The first curriculum issue raised was in terms of learning objectives which somewhat reinforced the pattern of results shown in Table 2. One participant (P1) commented:

> P1: "Learning objectives at present are written up by students but I feel there should be a general framework from the department."

Secondly, two participants (P2 and P3) suggested amendments to the content of the course, and one participant (P4) has suggested earlier exposure to primary care. Additionally, one participant (P5) suggested a change in emphasis with respect to the teaching of Maori health:

> P2: "More teaching on consultation skills and dynamics."

> P3: "More teaching on medical ethics and the history of medical practice."

> P4: "I would start students in general practice from day one of medical school for six months."

> P5: "Maori health is important, but must be kept in the valid context of community health status

and needs of non-Maori and ESL [English Second Language] patients."

Time and financial constraints

One participant (P6) echoed the issue of time constraints as inferred from an inspection of the response data presented in Table 2. A further participant (P7) has expressed concern in relation to financial compensation:

P6: "Delegated requirements for delegated time, e.g. 30 mins specifically to teach a student out of a day's schedule."

P7: "Govt/university needs to fund GPs, i.e. need dedicated space and true compensation/payment."

Selection and attitudinal concerns

Three participants (P8, P9 and P10) indicated concerns with respect to the professional attitude of students, the selection process and criteria for selection:

P8: "Professional attitude from some medical students."

P9: "Change the selection process with less reliance on academic achievement and more emphasis on personality and communication skills."

P10: "I would limit the number of female students to 30%."

Professional development

Four participants (P11–P14) expressed a need for teaching guidance and more professional development options. One participant encountered difficulties with adjustment to the notion of biculturalism and the cultural difference of tangata whenua and appears to seek further development opportunities from the university. This comment may echo the concerns of other international doctors working in NZ.

P11: "Teaching seminars and chance to talk to other teachers."

P12: "More written guidance on what to teach..."

P13: "Having only lived in NZ for [a short while and] coming from UK my knowledge of Maori culture is limited. However, working in a community that is 70% Maori my understanding of the common illnesses that affect Maori is quite good. More information from the medical school on what to teach about Maori health/culture would be helpful to me."

P14: "Feedback for staff as well as for students regarding teaching."

Discussion

There are several critical issues that are likely to have important implications for the present and future workforce involving both university and clinical teachers working in primary care. The following discussion will consider each of the following concerns identified in the results section: (1) curriculum issues, (2) time and financial constraints, (3) selection and attitudinal concerns, and (4) professional development.

Curriculum issues

Two issues were raised from the short questionnaires and commentaries, which related to learning objectives and content. Some of the content issues highlighted included more teaching about consultation skills and dynamics, medical ethics, earlier exposure and cultural issues.

The issue of learning objectives is likely to be a communication or training and development problem between clinical teachers and university. The links between university and clinical teachers are constantly being developed[22] which is essential for transparent communication between major stakeholders involved in the education of medical students. McKimm and colleagues have stated that the six-year courses running in NZ have two bookends and four middle years that can be equally divided.[22] The first of the two-year split focuses on the underpinning sciences while the latter two years concentrate more on the clinical sciences; however the boundaries between underpinning sciences and clinical experience are becoming more indistinct and clinical relevance is occurring earlier in the programmes with respect to increased case-based learning,

e-learning, small group work and fewer lectures. One implication is the importance of creating more learning opportunities in the primary care setting; however, this also entails dealing with the challenges of recruitment and increased student numbers.[12,13]

Time and financial constraints

Time and financial constraints are two issues that have certain themes that resonate within NZ and overseas as burgeoning problems.[4,14,19] In this study, time was also found to be positively correlated with confidence and opportunity, suggesting that time allocation for teaching is related to two other crucial areas of teaching. Both of these issues are not easily fixed by university or other administrative bodies. Dowell and colleagues have presented a clear paper indicating that there are numerous confounders to this problem in the form of paperwork, bureaucracy, multiple issues that may arise during consultations and so forth. Furthermore, the cost to the general practitioner may be confounded by year or experience of the trainee.[9] In an Australian study, financial costs were found to be associated with the training of medical students ($73.80 per day), but financial benefits associated with the training of junior doctors and registrars. The study authors suggested implementation of a "graduated subsidy rate, reflecting the varied costs of teaching within the stages of medical student training."

One area in which universities can assist is through clear communication about the needs of students and related issues such as assessment.[23] A recent NZ workshop delivered some necessary information to rural GPs that aimed to improve educational proficiency and awareness for a group of doctors who are often isolated from the mainstream.[24] Some specific areas covered were ways to work effectively in small groups, how to teach when busy, how to develop appropriate levels of pitch, and employing effective assessment procedures. These initiatives are crucial on several levels such as the provision of information, enabling skill acquisition and creating forums whereby educational issues can be addressed and aired by both general practitioners and university personnel.

Selection and attitudinal concerns

As mentioned in the curriculum issues section, selection of medical students is a vital area of inquiry and has been raised by some of the GP teachers in this study. One problem that has been highlighted in the literature is the vulnerability of general practice in NZ in terms of meeting the needs of the population and the reliance on overseas trained doctors.[22,25] Poole and colleagues[25] have identified that students selected through 'Rural Origin Medical Preferential Entry' scheme (ROMPE) were shown to have a higher interest in general practice than non-ROMPE students, and this level of interest was also observed in relation to students with Maori and/or Pacific Island ancestry. However, this study also showed that students at entry showed a 40% interest while those students at exit showed a 29% interest, indicating an attitudinal change during the study period. The study reported that selection of students based on specific background is fraught with problems, and, therefore, suggested that aspects of curriculum may assist in maintaining a positive attitude to general practice as a viable career option, including building constructive attachment experiences and generating a positive image of general practice within the university system.[25]

The selection processes used in the medical schools within NZ are well documented.[22,26,27] Nonetheless, the participants' comments in relation to selection suggest that some GPs do not agree with this system of selection or are unaware of the complexities in developing this process. It is important for universities to develop this dialogue with practitioners and to disseminate valuable information to key stakeholders involved in primary care education. The medical programme has a system for constantly reviewing medical student selection policies[28] and the issue is currently being rigorously debated in light of workforce needs, the changing demographics of the population, the ageing population and increasing student numbers with a new invigorated curriculum envisaged for 2013.

The issue of Maori health was raised in two comments and this is likely linked to both selection and attitudinal concerns.[29] Maori health is a key domain of medical education.[30] The areas

of cultural safety and cultural competence are key requirements of clinical practice,[18,30] especially in the culturally rich landscape of NZ.[31] This is further reinforced by selection processes to ensure equitable representation of Maori and Pacific people in the medical programme. At present, up to 24% of the medical student intake is via the Maori and Pacific Admission Scheme.[32] Furthermore, to encourage students from regional and rural backgrounds to enter the medical programme, up to 16% of the medical student intake is via the 'ROMPE' scheme.[33] Female students have a greater preference for general practice than their male peers, related to career flexibility.[25] There is evidence to suggest that rural immersion programmes do engender an interest in general practice, especially in rural areas, and medical programmes could promote more attractive incentives for students to engage with these types of immersion strategies.[34]

Professional development

The clinical teachers in this study further emphasised a need for greater professional development initiatives from the FMHS medical programme, and such initiatives will likely be welcomed by the less experienced teacher who expressed less confident ratings than their more experienced peers. 'Teach the teacher' series have been formally implemented overseas[35,36] and have become an informal activity within the upper North Island[37] and elsewhere in NZ.[24,38] Gallagher and Pullon suggest that such workshops allow an "uncommon opportunity to interact with the university, and to indicate what organisational improvements could be made to enhance their teaching roles".[38]

Cultural competence is a major issue that needs to be addressed in NZ, given its multicultural society and ethnic diversity.[31] This may be further exacerbated due to the influx of international doctors[22,39,40] in particular in rural areas.[41] The notion of cultural competence has been documented by different organisations such as the New Zealand Medical Council and The Royal New Zealand College of General Practitioners.[42,43] McKimm and colleagues stated that 60% of doctors practising in NZ were trained overseas, and one of the salient problems is that many of these doctors only stay in the country for a short period of time, making it difficult for them to gain a deep insight into the complexity of the NZ cultural landscape.[22] Therefore, it is imperative that 'teach the teacher' initiatives tackle the issue of professional development in the area of medical education and in particular address the need for all NZ doctors to be culturally competent with a particular focus on improving Maori health.[30] In addition, these sessions can incorporate ways to educate and interact with students from different cultural backgrounds to the dominant European way of life, especially given the wide cultural diversity of the medical student cohort.[44]

Feedback was also an area highlighted by the respondents in this study, with one participant requesting more formalised 'written guidance'. Moreover, the responses to the question related to the provision of feedback was positively correlated with confidence, time and team involvement, indicating that the ability to disseminate information is likely related to enhanced confidence and team involvement and may be moderated by the availability of time. One issue of importance is the need to close the loop between teachers, universities and students, so that organisations and individual teachers can learn and develop. Feedback is a well versed concept and practice in medical education.[45–47] The impact of feedback will likely influence the individual, and organisation. Archer has developed a new model that can be used to encompass the complexity and contextual nature of the feedback system by considering aspects of culture and focusing on tasks.[46] In order to meet the needs of clinical teachers there needs to be a way of finding appropriate and effective ways of feeding back on teaching performance and aligning and valuing teaching within the service-driven model.

Limitations to this study

It is important to acknowledge the small size of this study and the fact that it was region specific and thus may not readily be generalisable to other regions in NZ or overseas. We acknowledge that further information could have made the comments more defined, such as demographic data, whether they practise in their own practices or not, or their level of qualification in clinical edu-

cation. However, the confidential and anonymous nature of the survey deterred us from collecting information that could lead to identification. The six quantifiable questions, the probe question and qualitative nature of the study are foundational to further research in this important area of study.

Overall conclusion

The aim of the present study was to collect and collate the views of clinical teachers working in primary care with students from the FMHS medical programme. The probe question aimed to elicit useful comments from clinical teachers that could inform further development and enhancement of the medical programme and develop the relationship between the university and GPs.

The commentaries and questionnaire responses affirmed the need for further cohesion between this university and the GP teachers. Several perennial and burgeoning issues emerged from the findings. One area of concern that is not easily resolved is around time and financial rewards, as documented previously.[4] Other issues in the areas of curriculum and selection are evolving issues that require constant monitoring and alignment with increasing numbers of students studying medicine,[7] increased ethical awareness,[48] more diverse teaching systems[49] and more advanced technologies.[50] A way forward is to ensure that non-faculty clinicians have adequate representation on curriculum committees and more involvement in formal[51] and informal[37] clinical education initiatives. Lastly, issues of cultural competency and professional development were raised and suggest more established links between the university and GPs.[24,37]

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COMPETING INTERESTS
None declared.