

Educating vocationally trained family physicians: a survey of graduates from a postgraduate medical education programme

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ABSTRACT

INTRODUCTION: Since 1991 the University of Otago, Dunedin, New Zealand has offered postgraduate qualifications specifically designed to educate general practitioners (GPs) about their unique work environment.

AIM: To determine motivations and impacts of postgraduate education for practising GPs.

METHODS: Survey of the 100 graduates of the University of Otago, Dunedin postgraduate general practice programme. Ninety five living graduates were approached and 70 (73.7%) responded. Quantitative data about disposition of respondents before enrolling and after completion of the programme were analysed using chi-square and paired *t*-tests. Free text responses about motivations, impacts and outcomes of the program were thematically analysed.

RESULTS: 64 GPs graduated with a postgraduate diploma and 36 with a masters degree in general practice. Although the mean number of graduates was 3.5 and 2.0 (respectively), annual enrolments averaged 25.1. Most graduates (60.9%) were aged in their 40s when they started studying and most (94.3%) had a spouse and/or children at home.

Intellectual stimulation and challenge motivated study. Outcomes included perceived improvement of medical care delivery; development of critical thinking about medical epistemology, education, and research; and personal growth. Graduates increased engagement in academic and advisory roles, published papers, and some completed doctoral studies.

Respondents valued scholarship and enjoyed the learning environment, but felt their qualification had low perceived value within the profession. Cost and a perception of time commitment were important barriers to study.

DISCUSSION: This voluntary postgraduate medical education complements traditional medical training but has low external value despite personal, practising and professional benefits. Graduates valued engagement above completion of a qualification.

KEYWORDS: Medical education; general practitioners; scholarship; professionalism

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Introduction

The terms ‘medical education’ and ‘medical training’ should be considered separately. Medical *training* is task-directed towards the development and practical application of knowledge and

skills in treating disease and caring for patients. Medical training develops in various stages to form competent doctors: initial qualification training at medical school; vocational training to develop specific clinical expertise; and continued training, usually through continuing professional

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WHAT GAP THIS FILLS

What is already known: Vocational training develops specific clinical expertise but continuing education in addition to training develops deeper understanding of medicine and competence in teaching and research.

What this study adds: GP graduates valued the postgraduate diploma and masters programmes of the University of Otago, Dunedin but there is a need for career pathways for graduates. GP graduates increased their involvement in non-clinical professional roles after programme completion.

development (CPD) programmes to ensure doctors remain up-to-date and clinically competent. *Educated* doctors, however, in addition to their training, have acquired deeper understanding of the 'why' of medical practice, teaching, and research, and how that impacts themselves, patients, the profession, and society.¹

In the early 1990s the University of Otago in Dunedin developed a postgraduate education programme to provide a reflective learning environment for general practitioners (GPs) who had completed their formal undergraduate and medical specialist training, were engaged in continuing CPD programmes, but sought deeper understanding of the epistemology and practice of medicine, medical education and research. The course was based on a programme developed in the University of Western Ontario.²

Internationally, only a small number of postgraduate programmes relevant to family medicine have a similar philosophical approach. Most programmes are clinically focused training qualifications, while others concentrate on research, often from a public health perspective. There is little previous research on the outcomes for GPs of their undertaking postgraduate study similar to the Otago postgraduate programme. This small body of research³⁻⁵ indicates that students in such courses may change their professional roles, increase their teaching and research activities and outputs, become more coherent in integrating the art, science and technology of medicine, and gain a sense of personal achievement from their studies.

The programme and its participants

Graduation with a Postgraduate Diploma in General Practice (PGDipGP) or Master of General Practice (MGP) from the University of Otago is restricted to medically qualified students, although allied health professionals have also successfully studied alongside doctors and cross-credited completed papers to other qualifications. With these exceptions, students in the programme almost always study part-time while continuing to work clinically as GPs. Initially the MGP degree was awarded on completion of a thesis, following three taught papers (Teaching and Learning in Medical Practice, The Nature of General Practice, and Research Methods in General Practice). Subsequently, further elective papers addressed medical ethics, medical anthropology and the epistemology of complementary medicine. The option of obtaining a PGDipGP without completing a thesis became available in 1999, mainly in response to students wishing to complete only the paper-based component of the original degree. More recently, students appear content to enter and leave the course, studying papers of choice rather than completing either qualification, stimulating this research to investigate motivations and outcomes of engaging in this type of education.

The papers have a similar format. Most begin and end with a face-to-face residential workshop, but they are otherwise distance taught with students accessing a core of supplied readings, punctuated by regular audio- or video-interactions with each other and faculty. Assessment is by written assignments relevant to the particulars of each paper. Papers taught over two semesters carry 30 points, one semester papers carry 15 points and 120 points are required for a PGDipGP. Students aiming to complete a PGDipGP usually do so in 3-4 years of part-time study. A thesis carrying 120 points is completed over a further 2-3 years to meet the requirements for an MGP.

We conducted this research to establish whether the programme met the learning needs of its graduates and to define its value from the perspectives of the GP students, the medical profession, and society (by its perceived impact on patient care). We also aimed to define the characteristics, motivations, impacts and outcomes of PGDipGP

and MGP graduates, and the real and perceived barriers to their enrolment and completion of the programme.

Methods

We surveyed everyone whose final graduating qualification from the programme was PGDipGP or MGP (University of Otago) from 1991 to June 2013. We created a list of graduates using the University of Otago databases and e-mailed each graduate with a letter of invitation to participate in the study, and a questionnaire. The Medical Council of New Zealand contacted doctors for whom we could not obtain an email address. Non-responders after three weeks were re-contacted by e-mail or telephone to encourage participation.

Free text responses to open-ended questions provided students' reports of their motivation for engaging and continuing in the programme, the impact and outcomes of their study at personal, practicing and professional levels, and their ideas about the programme itself. Responses were analysed thematically by reading and re-reading responses, searching for themes and subthemes using a pragmatic approach consistent with Immersion Crystallisation⁶ and related methods of analysing qualitative data^{7,8}. Quotes representative of themes are presented in the results with a respondent identifier to each comment (course and year of graduation).

We collected quantitative data on respondents' demography (age, sex, family responsibilities), practice location (urban or rural), and related medical activities engaged in before and after respondents completed their qualification. These data were first analysed descriptively using summary measures (percentages, medians and ranges, or means and standard deviations). We used chi-square tests to establish whether differences existed between PGDipGP and MGP graduates in their age, sex, and years in practice at initial enrolment and *t*-tests to measure differences in the amount of clinical work graduates performed when they enrolled. Paired *t*-tests compared time spent in clinical work by graduates at the start of their study, on completion of their course, and at the time of the survey. We used the 0.05 level of significance with no adjustment for multiple tests.

Ethics approval was provided by the Otago Ethics Committee.

Results

The programme produced 100 graduates from 1991–2013: 36 MGP and 64 PGDipGP graduates. At the time of this study, four MGP graduates had died and another was seriously ill so we did not invite that doctor to participate in this study. Twenty-four graduates could not be contacted and one declined to participate. There was a therefore a 73.7% response rate to the survey (70/95): 45 (64.3%) respondents had graduated with a PGDipGP and 25 (35.7%) with an MGP.

The average annual number of PGDipGP and MGP graduates 1996–2012 was 3.5 and 2.0 respectively. In 2002 time limits to completion of both qualifications were implemented and in that year 20 people graduated with a PGDipGP and 11 with an MGP. By contrast, the mean number of students enrolled annually in taught papers was 25.1, over the programme's 20 years.

Characteristics of graduates

Table 1 shows the characteristics of respondents at entry to their course of study. Most graduates were male (MGP 65.6%; PGDipGP 69.4%). Although most (60.9%) were aged in their 40s when they started studying, more PGDipGP than MGP graduates started studying when they were aged > 50 years ($P = 0.046$) and had worked in clinical practice ≥ 20 years ($P = 0.009$). There were no differences between the courses in the urban/rural location of graduates' practices or in the mean time spent in clinical practice per week. All PGDipGP and most MGP (84.0%) graduates had a spouse when they enrolled and most also had children or other dependents at home (84.0% and 77.8% of PGDipGP and MGP graduates, respectively).

Motivations for enrolling

Motivations for entering the programme included needing intellectual stimulation and challenge, desire to improve clinical practice, and a wish to enhance teaching and research skills (either for their own sake or to facilitate entry into academic careers). Without implying that their clinical work was

Table 1. Respondent characteristics at entry to the MGP and PGDipGP course

	PGDipGP N = 45 (64.3%)	MGP N = 25 (35.7%)	Total N = 70 (100.0%)	p-value*
Age:				
< 40 years	11 (24.4)	4 (16.7)	15 (21.7)	0.046
40–49 years	23 (51.1)	19 (79.2)	42 (60.9)	
>= 50 years	11 (24.4)	1 (4.2)	12 (17.4)	
Sex:				
Male/Female	35/10	12/13	47/23	0.017
Years in practice:				
< 10 years	11 (24.4)	6 (24.0)	17 (24.3)	0.009
10–19 years	16 (35.6)	17 (68.0)	33 (47.1)	
>= 20 years	18 (40.0)	2 (8.0)	20 (28.6)	
Practice location:				
Rural	24 (53.3)	9 (36.0)	33 (47.1)	0.127
Urban	21 (46.7)	16 (64.0)	37 (52.9)	
Sessions in clinical practice (mean) [§]	8.4 (s.d. 1.78)	7.8 (s.d. 2.26)		0.192

* Chi-square test for differences between graduates of the PGDipGP and MGP courses.

[§] t-test for difference in means.

Some respondents omitted to provide some demographic data. Columns do not always sum to the total in each category.

not in itself challenging and stimulating, respondents indicated that they needed learning opportunities different from those they could usually access.

I had been involved in teaching general practice ... and was aware that it had a separate skill set, but I was unable to articulate this clearly. I felt that I had general practice 'sorted out' and was looking for academic stimulation. [Respondent 65, PGDipGP 1999]

Outcomes for graduates

With respect to patient care delivery, we identified two major themes. The first was a focus on whole person care and the second was the value attached to fostering critical thinking around the epistemology of medicine, educational theories and their applications, and critical appraisal of medical research.

Anything that enhances the self-awareness of the doctor is good for patient care. [Respondent 45, PGDipGP 2007]

Overall, because of the academic and policy and training work I do, many patients are better off. [Respondent 22, MGP 2000]

For others, the most significant practising outcomes were changes in their relationships with patients. This applied particularly to challenging patients and the change was related to the reflective nature of the programme and iterative discussions between students and faculty.

I now look forward to seeing patients that most of my colleagues see as 'heartsink': I run towards them rather than away from them. Some of my most memorable and cherished patients were 'heartsink' when I first met them – putting a lot of thought, time and work into them has made me really appreciate the relationship. [Respondent 07, PGDipGP 2008]

I moved from a doctor-centred model of care to a patient-centred model. It has given me the confidence to do so knowing that there is evidence to support my position. It has allowed me to question existing norms and to critically review existing evidence so that, together with the patient, we can achieve the best outcome. [Respondent 27, PGDipGP 2008]

Respondents considered the programme's impact on their personal and working lives and in the wider context of their professional practice. At a personal level, respondents commented on the programme's contribution to changes in the direction of their lives. Some acknowledged that it had launched their academic career. Others appreciated the opportunities provided by the programme to think more deeply about the nature of medical work and gain insight into the impact on themselves and their families of practising medicine. Additionally, the programme had placed demands on their family lives.

It helped to make the move to a fulltime academic role easier and gave me the confidence I needed to progress in that role. [Respondent 04, MGP 2008]

I am happier in general practice, so that flows through to personal life. I have far better understanding of the nuances of the general practice consultation, so less stress and more comfortable with what I am doing and why. I understand myself better and the course has been great for my mental health. [Respondent 28, PGDipGP 2008]

My wife said that I was often preoccupied and less present at home over the four years I did the MGP.
[Respondent 02, MGP 2006]

This programme offered opportunities for clinically active GPs to engage in structured discussions around challenging aspects of their work, with positive consequences for their clinical practice. Additionally, respondents reported being better able to critically appraise research, engage in teaching and research, and achieve clarity about their role in clinical practice.

Respondents experienced better collegiality and improved relationships with their practice teams and other health care providers.

My relationship with my hospital colleagues changed. As I became more articulate about what general practice did and the skill set required, I was able to engage with hospital staff in a different, more self-assured way. [Respondent 65, PGDipGP 1999]

At the end of the programme and at the time of the survey, respondents worked significantly fewer clinical sessions than when they first enrolled (mean 8.2 sessions at the start of their study versus 7.7 sessions at the end ($P = 0.016$) and 6.0 sessions at the time of the survey ($P < 0.001$)). However, many graduates engaged in professional activities other than clinical general practice. At enrolment, 21 respondents (30.0%) spent on average 3.0 sessions per week working in other clinical settings (such as hospice or emergency departments), academic activities, or in policy advising roles. After completing their study the time spent in these activities increased to a mean of 4.2 sessions ($P = 0.007$). Figure 1 shows the organisations graduates contributed to, and Figure 2 shows the roles they filled.

Although 25 respondents (35.7%) indicated they had published in the medical literature, only 15 (21.4%) held university appointments. The 12 respondents who provided data about their publications had written 1–179 papers (median = 14). Of the 10 published respondents without university appointments, the number of publications ranged from 1 to 8 (median = 2). Four respondents subsequently completed doctoral study (PhD or MD).

Meeting graduates’ learning needs

Respondents indicated that the programme met their need for personal development and intellectual stimulation relevant to their clinical practice. The programme enabled access to a way of thinking about what it meant to be a doctor and

Figure 1. Organisations PGDipGP and MGP graduates contributed to. *RNZCGP = Royal New Zealand College of General Practitioners (professional organisation); PHO = Primary Health Organisation (government agency); DHB = District Health Board (government agency)

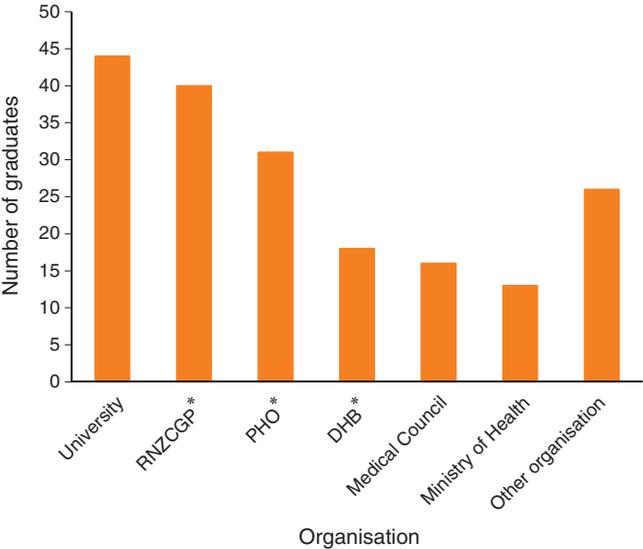
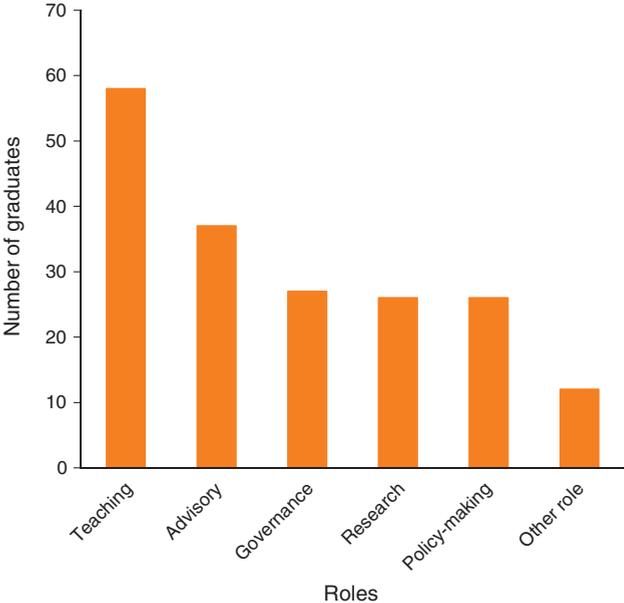


Figure 2. Roles adopted by PGDipGP and MGP graduates



how they should practice that had hitherto been unavailable to them. It allowed them to consider the 'self' of the doctor as it related to the delivery of patient care, and how caring for patients impacted on their professional and personal lives.

GPs are often isolated professionally and can easily get into a rut ... The chance to stand back and look at the big picture is I think a major factor in helping GPs avoid burn-out. [Respondent 46, MGP 2000]

Regarding medical professionalism, respondents observed that the essential scholarship of the programme deepened their understanding of the philosophy of practice, teaching, and research and enhanced their ability to contribute usefully in those fields. The different areas of professional practice that our graduates engage in (Figures 1 and 2) indicate the breadth of learning provided by this postgraduate programme.

Barriers to study, and solutions

Perceived programme strengths included a learning environment that appealed to GPs, collegiality with fellow students and faculty, enjoying themselves, and having a reasonably manageable study workload.

I felt this provided stuff I had been searching for since entering medical school. [Respondent 45, PGDipGP 2007]

However, 44 respondents (62.9%) also noted that the time commitment required for postgraduate education was a significant barrier to their initial enrolment. The course was voluntary and one of many competing priorities for time in their lives. However, preconceptions about the programme's heavy workload were often inaccurate and respondents found ways to manage their study and incorporate it into their clinical and personal lives.

Cost was a further barrier to enrolment. Although some respondents had external financial support for their study, most self-funded their study. Sourcing external funding was the only solution to this problem offered. Respondents also commented that postgraduate study had a low perceived value within the profession and that

apart from the academic opportunities afforded by holding a postgraduate qualification, there was little financial reward for graduates. They added that significant policy change is needed to value and remunerate postgraduate study and qualifications.

Discussion

This research indicates that our graduates sought and found learning opportunities in the programme different from conventional CPD. It was transformative learning⁹ that positively impacted their personal, practising and professional lives. Respondents believed the programme improved their patient care by attention to delivering whole-person care and more astute delivery of scientific and evidence-based medicine enabled by enhanced skills in critical appraisal. Improved teaching and researching skills were valued, even by graduates who did not gravitate towards an academic career. Perhaps more importantly, our graduates became active or increased their activity in many other spheres of professional work, carrying their learning into community, managerial and governance roles. These outcomes show the value of becoming educated, beyond clinical training.

Respondents valued the safe and collaborative learning environment they experienced and the commitment of faculty to their personal development. This was achieved by paying close attention to introducing the learning concepts for each paper and using students' clinical practice and their prior learning experiences as the basis for reflection and the creation of new ideas and theories, consistent with the principles of Kolb's experiential learning cycle.¹⁰ Faculty pay particular attention to ensuring safe group processes, especially around personal disclosure, and fostering collegiality.

Obviously the programme's content is important, but it is not content that the respondents commented on; it was their personal change and how this positively impacted patient care and engagement with wider professional commitments. We suggest that the graduates' persistence with the course despite their clinical and other professional responsibilities and their family lives, may

have been sustained by this sense of personal satisfaction with this type of learning environment.

Respondents in this study highlighted that for most GPs, holding a university-based postgraduate qualification in general practice makes little difference to their remuneration for teaching or clinical work, with the possible exception of a doctorate which is usually required for a professorial level university appointment. Mostly in New Zealand there is no requirement for medical teachers to hold qualifications higher than Fellowship of the Royal New Zealand College of General Practitioners (and then, only for *vocational* training). They felt their learning was often undervalued within the profession and unacknowledged for its value in improving whole-patient care. We speculate that this may account for the discrepancy between the number of enrolments in papers that meet students' needs for education as distinct from training, and the low rate of completion of the diploma or degree that is perceived as lacking value.

The results of this study suggest that transformational medical education should complement traditional medical training and be valued accordingly. There is no need for this type of learning to be confined to GPs: it should be available to all healthcare providers.

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OTHER DISCLOSURES

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DISCLAIMERS

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