

A survey of strategies for increasing the number of medical learners in all Tasmanian general practices

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Abstract

Introduction: Australia has a worsening workforce shortage of general practitioners and of doctors entering training in this specialty. This study aimed to explore the current capacity and enablers and barriers to increasing clinical placements for medical learners in the rural Australian state of Tasmania.

Methods: A cross-sectional survey of all 559 general practitioners (GPs) and 151 practice managers in Tasmania in 2010 was conducted using online and postal delivery. Survey data were analysed quantitatively.

Results: The response rate was 67% (376) for GPs and 40% (61) for practice managers. GP teaching rates within the previous 2 years were 72% for medical students, 19% for junior doctors, 36% for registrars and 23% for international medical graduates (IMGs). GPs agreed that they taught because of previous positive experiences (91%), enjoyment (85%), wanting to inspire learners to work in general practice (84%), because they considered it their professional duty (83%) and because they thought it kept them clinically up-to-date (80%). Only 15% taught because of remuneration. The reasons that GPs had not taught were lack of opportunity (45%), concern about negative impact on patient care (31%) and income (27%) and lack of self-confidence to teach (24%). Practice managers agreed enablers for teaching would be more GPs to teach (77%), better remuneration (71%), more room to house learners (64%), less “red-tape” to take on learners (62%) and more support from learners’ organisations (64%). Sixty-one percent of GPs expressed interest in upskilling as a teacher/clinical supervisor.

Conclusions: Tasmanian general practitioners and their practice organisations already deliver a lot of clinical teaching and supervision to medical learners. This is enjoyed by GPs, but increased funding to cover the cost of supervising learners, the provision of

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GP teacher/supervisor training and more efficient administrative support of GPs and their practices could lead to an increase in capacity to provide more clinical placement weeks than is currently the case.

Keywords: general practice; clinical supervision; practice manager; undergraduate medical education; workplace-based learning; international medical graduate.

Introduction

Australia reports a current and worsening shortage of general practitioners/family physicians (Crettenden et al., 2014). As general practitioners (GPs) have a key role in delivering primary care, a shortage of general practitioners is a serious problem in Australia, as in other countries (AAMC, 2008; OECD, 2008; Teljeur, Thomas, O’Kelly, & O’Dowd, 2010). The situation is likely to worsen as the GP population ages and retires (Brett, Arnold-Reed, Hince, Wood, & Moorhead, 2009; Ono, Lafortune, & Schoenstein, 2013). In contrast, demand for their services is likely to increase due to the changing healthcare needs of an ageing population, who increasingly have non-communicable diseases to prevent and manage (Britt et al., 2011; WHO, 2006).

As in many other countries, Australia’s core policy to overcome the GP shortage is to train more GPs or recruit overseas trained GPs/international medical graduates (IMGs) to work in Australia (HWA, 2012b; OECD, 2008). To achieve this outcome, the provision of quality supervised clinical placements in general practice for medical learners is required. The medical learners in Australian general practice include medical students, junior doctors, GP registrars, who may or may not be IMGs, and IMGs not in a registrar training program (Thistlethwaite, Leeder, Kidd, & Shaw, 2008).

Clinical placement demand has risen quickly and will continue to rise. The number of Australian medical student graduates rose from 1,469 in 2003 to 3,441 in 2013 (MTRP, 2015). The need for medical student clinical placements in general practice will keep growing at least until 2017, when Australia’s expansion of medical student numbers stops (MTRP, 2015). Junior doctor prevocational general practice placement program (PGPPP) training required 252 weeks Australia-wide when the program started in 2004–2005 (MTRP, 2010), rising to 8,940 weeks in 2011 (GPET, 2012), with previous plans to increase this to at least 11,700 weeks (HWA, 2012a). Although the PGPPP was abandoned in 2014 due to its cost, there is pressure to reinstate it (Swannell, 2014; Wilson & Feyer, 2015), with Anderson, Haesler, Stubbs and Molinari (2015) noting that it provided a valuable adjunct to junior doctor training, and will form part of a new “Integrated Rural Training Pipeline” policy initiative (Ley & Nash, 2015; Woolley, Sen Gupta, & Murray, 2016). The number of training weeks for registrars in the Australian General Practice Training (AGPT) program was 37,703 in 2003, increasing to 87,602 weeks in 2011 (GPET, 2012), with plans for increases over the next decade (Roxon, 2010). In 2003, IMGs made up 27% of the GP workforce, rising to 35% in 2009–2010, with the expectation that this will continue to rise, especially in areas of workforce need in outer regional and remote locations (HWA, 2014).

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Tasmania is a rural state of Australia with a population who are aging faster and have worse health outcomes than the Australian average (DHHS, 2013). The population is the most dispersed of any state, with a dispersed general practice workforce to match. The state has a chronic shortage of GPs in the more remote general practices (TML, 2012). In 2010, the annual census of GPs found 62% of Tasmanian GPs had Australian medical degrees, with 40% obtained from the state's only university. IMGs accounted for 29% of the workforce, with 9% of unknown background (GPTas, 2010). The percentage of GP care provided to Tasmanians by IMGs remained steady, at about 40%, between 2009 and 2013 (Australian Government, 2014).

The state's single university has a medical school requiring general practice placements for medical students during the last 3 years of a 5-year course. The author has been closely associated with the GP placement program since 2003. Each year's third-, fourth- and fifth-year cohorts, each of 120 students, spends about 4 weeks in general practice. In 2010, the medical school placed students occasionally in 14 practices and continuously in 61 practices across the island. A total of 71 practices accepted medical students, giving close to 15,000 weeks of placement time. Medical students from other universities are also placed in rural general practices under the auspices of programs such as the John Flynn Placement Program, designed to increase student interest in rural practice (ACRRM, 2015).

In 2010, the state's postgraduate vocational training programs for junior doctors in general practice (PGPPP) and GP registrars was provided by one regional training provider, General Practice Training Tasmania (GPTT). In 2010, GPTT had 44 accredited general practices, providing supervision for 12, 3-month placements for PGPPP learners and for 84 registrars. Registrar placements vary from those on leave through to fulltime practice (GPTT, 2012). Most of GPTT's accredited practices also provide medical student placements. The requirement for IMG supervision is not known for the 2010 period, however the author has been informed that the state's rural workforce agency, Health Recruitment Plus, recruits up to 30 IMGs per year and has been doing so for many years (HRPlus, personal communication, 2015).

A survey of practice managers and GPs working in South Australia and currently teaching found that scope to increase general practice teaching capacity in existing teaching practices was dependent on more GPs being willing to be supervisors, more physical space to house learners and increased payment for providing clinical placements (Laurence & Black, 2009a). As the pressure for placements increase, including all of a region's general practices and GPs in the supervision effort should be considered. A whole-of-cohort study of the factors enabling the engagement of all of a region's practices and GPs in delivering supervision has not been previously undertaken.

Aim

This study was designed to ask the *entire* population of general practice managers and general practitioners in Tasmania how much clinical supervision and teaching of medical learners was currently being undertaken; how much more could be provided; and what factors GPs and practice managers saw as influencing an increased capacity to supervise and teach medical learners.

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Methods

Study population

All 559 Tasmanian GPs and 151 general practice managers were invited to participate in this study. In some practices, especially in smaller practices, a GP may fulfil both roles.

A minimum risk ethics approval was provided by the University of Tasmania's Human Research Ethics Committee (H11197).

Design

A cross-sectional survey, based on a literature review of similar tools (Gray, 1997; Laurence & Black, 2009b; Pullon & Lum, 2008) and piloted to 6 GPs and 2 practice managers, was sent to all Tasmanian GPs and general practice managers in May 2010. The surveys were delivered either online or by post as part of General Practice Tasmania's annual census (GPTas, 2010). Due to technical difficulties, the survey to practice managers was delivered entirely by post in 2010, which may have contributed to a lower response rate than in previous years. The census has traditionally delivered a high response rate, hence the attraction in using it for this study.

The GP survey covered four areas: self-report of involvement in teaching and/or supervision over the previous 2 years and desire to teach or supervise in the future, factors affecting the GPs decision to teach or supervise and whether they wanted to increase their skill in teaching and supervision.

The practice manager survey covered three areas: self-report of teaching and/or supervision activity over the previous 5 years, the reasons contributing to a decision to host learners over the next 2 years and the factors enabling an increase in practice teaching and supervision activity.

Analysis

Descriptive statistical analysis of the survey using SPSS was undertaken (IBM, 2013). Not every question was answered by all respondents; therefore, responses were calculated as valid percentages. The brief comments made by some GPs in the free-text sections of the survey provided little additional information to the closed questions so were not formally analysed (O'Cathain & Thomas, 2004).

Results

General practitioner responses

Three hundred and seventy-six of 559 Tasmanian GPs (67%) responded. GPs self-report of the level of medical learner they had taught over the previous 2 years and their interest in future teaching, factors influencing their desire to teach and reasons for not teaching in the previous 2 years are reported in Table 1. A majority of the survey's GPs expressed interest in becoming involved now, or in the future, in teaching extra medical learners, responding positively to engaging with PGPPP junior doctors (69%) and/or registrars (55%) and/or IMGs (66%).

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Table 1
General Practitioner Survey Responses (n = 376)

Question 1: Have you been involved in teaching and/or supervision of the following learners in the last 2 years?					
Level of learner	Yes	No, but I would like to be involved	No, but I would consider it in the future	No, and I never intend to become involved	Missing data
Undergraduate student	267 (72)	15 (4)	66 (18)	24 (6)	4
Pre-vocational General Practice Placement Program (PGPPP)	69 (19)	44 (12)	206 (57)	41 (12)	16
General practice registrar	134 (36)	41 (11)	160 (43)	35 (10)	6
International medical graduate	85 (23)	32 (9)	207 (57)	40 (11)	12
Question 2: Please indicate if any of the following factors influence your decision to teach and/or supervise.					
Factor	Yes			No	Missing data
I enjoy teaching and supervising learners	276 (85)			47 (15)	53
I see it as my professional duty	264 (83)			54 (17)	58
I hope to inspire learners to consider general practice as a career	264 (83)			54 (17)	58
The financial benefits are an incentive	47 (15)			268 (85)	61
Teaching encourages me to keep my skills and knowledge up to date	253 (80)			64 (20)	59
I have had positive experiences when teaching and supervising learners	283 (91)			29 (9)	64
Question 3: If you have not been involved in the teaching and supervision of learners during the last 2 years, please indicate if the following factors have contributed.					
Factor	Yes			No	Missing data
I have not had the opportunity to teach or supervise a learner	50 (45)			61 (55)	265
I have previously had a negative experience with a student and/or trainee	9 (9)			95 (91)	272
I don't feel confident to teach	24 (24)			76 (76)	276
I feel that having a student or trainee would impact on the quality of care I could provide my patients	32 (31)			72 (69)	272
I feel I would be financially disadvantaged	27 (27)			74 (73)	275

Note: (Valid percent) = (n = 376 minus missing data)

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GP-identified teaching and/or supervision skills

When GPs were asked if they were interested in increasing their current skill in clinical teaching or supervision, 36% (129) said yes, 25% (92) were unsure and 39% (143) said no. Those answering yes were asked to indicate what further training they would find helpful. The brief responses covered the two areas of GP clinical skills and GP teaching skills. Suggestions on how they would like to improve teaching skills included evaluation of their current performance, use of a visiting clinical educator and formal programs offered by the educational organisations linked to their learners.

Comparing all Tasmanian GPs with responders and de-identified GPs with identified GPs

Of the 376 survey respondents, 262 GPs gave consent to be demographically identified. The identifiable survey GPs versus all Tasmanian GPs (in brackets) (GPTas, 2010) was 53% male (55%), 47% female (45%), with 15% from the northwest region (18%), 29% from the north (25%) and 56% from the south (57%), suggesting survey respondents reflected the gender and geographic distribution of all Tasmanian GPs.

Comparison of responses from GPs who were willing to be identified to those who wanted to remain anonymous found that both groups were just as likely to have taught all four levels of medical learners in the previous 2 years, and no significant difference in responses regarding financial benefits acting as an incentive, agreeing that teaching assists in keeping them clinically up-to-date, having positive experiences with learner or reasons not to teach existed. However, there were significant differences favouring identifiable GPs for enjoyment of teaching ($\chi^2(1) = 8.4, p = 0.004$), seeing teaching as their professional duty ($\chi^2 = 16.3, p < 0.0001$) and wishing to inspire learners to be GPs ($\chi^2 = 12.7, p < 0.0001$).

Practice manager responses

Sixty-one practice managers of Tasmania's 151 general practices (40%) responded to the survey.

Practice reasons for teaching

At the practice level, of those who intended hosting learners over the next 2 years, reasons given for doing so were aligned to seeing a need to address workforce shortages and having adequate physical space to accommodate either observing (usually medical students) or consulting (usually PGPPP, registrar or IMG) learners. Payment for teaching was felt to be inadequate and, therefore, was not considered an incentive. Factors reported as enabling an increase in a practice's capacity to teach and supervise learners were, in order of importance, more GPs to share the teaching load, better pay for teaching, more room to accommodate learners, more support from the learners' educational organisation and less "red-tape" to host learners (Table 2).

No dataset permits a comparison of the geographic spread of responding practice managers to all Tasmanian practice managers. Answers to the first question in the practice manager's survey about the type of learner the practice had hosted over the previous 5 years did not add to the picture provided by GP responders; therefore, they are not reported here.

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Table 2
General Practice Manager Survey Responses (n = 61)

Question: If your practice intends to have learners during the next 2 years, please indicate if the following reasons have contributed to this decision.			
Factor	Yes	No	Missing data
The practice sees the need to increase the GP workforce	39 (85)	7 (15)	15
The practice has consulting rooms large enough to accommodate a learner as an observer	39 (80)	10 (20)	12
The practice has a consulting room the learner can use to see patients whilst being supervised by their GP teacher	36 (71)	15 (29)	10
The practice has a study area that learners can use to seek information (internet, textbooks) relevant to the patient they are involved with	32 (67)	16 (33)	13
The financial payments for teaching & supervision are an adequate incentive	27 (53)	24 (47)	10
Question: Which of the following would enable you to increase your current capacity for teaching and supervision?			
Factor	Yes	No	Missing data
Increased financial payments for teaching and supervision	35 (71)	14 (29)	12
More general practitioners to share the teaching/supervision load	37 (77)	11 (23)	13
Additional rooms and equipment to accommodate the learners	32 (64)	18 (36)	11
Reduction of the amount of "red tape" involved in having learners in the practice	30 (62)	18 (38)	13
Increased support from the institution that send learners to you	31 (64)	17 (36)	13

Note: (Valid percent) = (n = 61 minus missing data)

Discussion

The study yielded three main results. Firstly, a large amount of clinical supervision and teaching of medical learners already takes place in Tasmanian general practice, and this is enjoyed by the majority of GPs. The largest group of medical learners being taught are medical students.

Secondly, as endorsed by practice managers, increasing general practice clinical placement capacity will depend on getting more GPs to supervise/teach, along with improving payments for teaching, increasing space to house learners and improving the relationship with the educational institutions associated with learners.

Thirdly, there is significant interest in increasing the provision of clinical supervision and teaching for junior doctors, registrars and IMGs. This is likely to be related to a perceived need to increase the medical workforce in Tasmania general practice, as the current GP workforce, and the population they care for, ages (Britt & Miller, 2009).

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The perception of practice managers (77%) that the number of GPs undertaking teaching/supervision roles within their practice would have to rise to increase capacity underscores the need for more teaching/supervising input from the state's GPs. The large number of GPs reporting supervision of medical students over the previous 2 years (72%) and a high level of enjoyment of teaching and supervising (85%) suggests a good foundation exists to build upon. While many GPs may have taught/supervised medical students and/or GP registrars, IMGs or PGPPP junior doctors, the reality may be that the in-practice load is not equally shared. A GP's self-report of their contribution may reflect supervision of learners every day through to only a day a year. Those who had not been given an opportunity to teach/supervise (45%) may need to be mentored to do so. Those who feel that supervising a student or trainee would impact on the quality of care provided to their patients (31% of GP sample) and those lacking confidence to teach (24% of GP sample) may respond to teaching/supervision skills building.

The finding that a group of GPs, who had taught/supervised in the past 2 years, did not enjoy teaching (15%) and didn't teach to inspire learners (16%) or see it as their professional duty to teach (17%) raises the issue of how to approach their contribution to the teaching team. As medical students are influenced by preceptors in making career choices (Stagg, Prideaux, Greenhill, & Sweet, 2012), their involvement may be detrimental to the cause of increasing the GP workforce. Perhaps these GPs could also benefit from skills training.

As recognised in Wearne, Dornan, Teunissen, & Skinner's (2012) review of GPs as supervisors in postgraduate clinical education, some of our study GPs wished to up-skill as supervisors in particular clinical areas of practice as well as teaching skills. Therefore, Tasmania's relevant education institutions need to review their GPs skills training in supervision/teaching and clinical practice as other states have done (Christensen, 2008; Laurence & Black, 2009a).

The financial disincentive reported by all GPs (85%) and practice managers (71%), and given as a factor for not teaching by non-teaching/supervising GPs (27%), is likely to be associated with medical students. Laurence, Black, Karnon and Briggs' (2010) cost-benefit analysis of 2007 data undertaken in another Australian state is highly relevant to this study. They found that non-medical student learners were associated with adequate subsidies and learner income generation to offset the costs of teaching. But modelling of medical students' effects on practice income ranged from a net loss of \$1385 per week for third-year students to \$630 per week for sixth-year students (Laurence et al., 2010). GP consultations change when a medical student is present (Price, Spencer, & Walker, 2008), and generally take longer (Sturman, Régo, & Dick, 2011) unless the practice has the extra consulting room to permit the parallel consulting ("wave") model (DeWitt, 2006; Walters, Worley, Prideaux, & Lange, 2008). Longer consultations lead to fewer patients being seen in a day and, therefore, lost income. The use of a consulting room for a student also represents lost income that could be generated from alternative service delivery (Laurence et al., 2010). Thus, medical students in the practice lead to overall financial loss unless the student is on a longitudinal placement of more than 2 months (Hudson, Weston, & Farmer, 2012). The current study supports Laurence

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et al.'s (2010) suggestion "that a review of subsidies for undergraduate teaching is necessary, particularly as the demand for teaching practices will increase substantially over the next 5 years" (p. 608). Therefore, the increase from \$100 to \$200 per session for supervising a medical student in general practice, introduced in 2015, is likely to assist in building medical student placement capacity (Australian Government, 2014–15). Other strategies to increase undergraduate medical student GP placement capacity could include the use of the placement to deliver significant learning opportunities outside of the consulting room, such as those involved in undertaking clinical audits (Mauldon, Radford, & Todd, 2014) or understanding the context of aged care within a residential aged care facility (Robinson et al., 2015).

GP skills building and extra payments for teaching/supervising learners are not the only issues that our respondents agreed may enable an increased capacity to supervise medical learners. Two thirds of practice managers agreed that having room to house learners was also likely to increase capacity for supervision. In Australia, extra space, such as consulting rooms and dedicated teaching rooms, have been provided for medical student training in rural areas, permitting both wave consulting and longitudinal placements (Department of Health, 2014). Extending this model to urban practices via the same degree of funded support is likely to produce the same outcome (Mahoney, Walters, & Ash, 2012). The projected increased numbers of registrars will also lead to a need for extra consulting rooms. Some of the required infrastructure has been delivered by the primary care infrastructure grants of 2010–2012 (Department of Health, 2010), but more will be needed if the recommendation to provide second-year junior doctors with training in general practice settings within 1–2 years is enacted (Wilson & Feyer, 2015).

Practice managers agreed that teaching/supervision capacity would be enabled most of the time (62%) by reducing "red tape", for example, by vertically integrating and/or streamlining the accreditation, reporting and payment processes of each educational institution (Thomson, Anderson, Mara, & Stevenson, 2011) and by increased support from learners' institutions. A GP's comment that the "practice is many thousands of dollars out of pocket through not being paid for students, as paperwork never seems to get done in time for PIP [practice incentive] payment" illustrates a perception that the bureaucratic process of claiming a subsidy for student teaching (PIP payment) is onerous. Laurence et al.'s (2010) study also calculated a considerable cost to the practice in administrative engagement with learners' institutions, with shorter placements relatively more expensive for the practice to administer.

While this study has produced findings similar to other studies (Laurence & Black, 2009b; Pullon & Lum, 2008; Sturman et al., 2011; Thomson, Allan, & Anderson, 2009; Thomson, Haesler, Anderson, & Barnard, 2014), those studies did not involve every GP and practice in a geographic area. A strength of this study was the inclusion of all GPs in the rural Australian state of Tasmania, and their practice managers. Another strength of this study is the high GP response rate. GP survey response rates are usually low, leading to concerns about response bias (Bonevski, Magin, Horton, Foster, & Grgis, 2011).

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While the use of the annual Tasmanian general practice census was chosen as a vehicle for the survey, to maximise the response rate, it also meant a limited number of issues could be addressed, which is a weakness of the survey. Another weakness was the lower response rate of practice managers (40%). The study population of Tasmanian general practices and GPs which/who are more regionally and rurally distributed and care for older and sicker people than the rest of Australia (DHHS, 2013) may be viewed as a weakness or a strength; providing care in the Tasmanian context amplifies issues that other Australian states and other countries are expected to face with ageing populations (WHO, 2006). The context of family physician/general practice training also differs between countries (Hays & Morgan, 2011), potentially limiting the study's international applicability.

Another weakness of the surveys is limiting the topic to medical learners in general practice. It may be that GPs have other learners to supervise, such as nurse practitioners (Schadewaldt, McInnes, Hiller, & Gardner, 2013), or that some teaching/supervision of medical learners is undertaken by other healthcare providers, such as practice nurses (Smith, Cotton, & O'Neill, 2009).

Conclusion

Tasmanian general practitioners and their practice organisations already deliver a lot of clinical teaching and supervision to medical learners. This is enjoyed by GPs, but increased funding to cover the cost of supervising learners, the provision of GP teacher/supervisor training and more efficient bureaucratic support of GPs and their practices could lead to an increase capacity to provide more clinical placement weeks than is currently the case.

In the case of medical student learners, teaching/supervision approaches that do not lead to slower patient care delivery and resultant lost practice income may also increase placement capacity. This may require the increased use of general practice placements to provide learning opportunities that take place outside of the consulting room.

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