General practice vocational training

Past experience – Contemporary issues – Future challenges
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AGPT
LEARNING IN GENERAL PRACTICE

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The statements or opinions expressed in this Supplement reflect the views of the authors
and do not necessarily represent the official policy or views of GPET.

Mr Rodger Coote (Chief Operating Officer, GPET) passed away suddenly on Saturday, 28 May, aged 41 years,
at The Canberra Hospital. Rodger was passionate about building a robust general practice education and training program for
Australia. Rodger saw this MJA Supplement as one way of informing and encouraging debate on the future of general practice
education and training. The GPET board, staff, and contributors to the Supplement acknowledge Rodger’s substantial
contribution to the MJA Supplement and to general practice medical training in Australia.

Front cover concept: Dr Paul Goldsbrough
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General practice education and training: past experiences, current issues and future challenges

Michael R Kidd, Justin J Beilby, Elizabeth A Farmer, Claire L Jackson and Stephen C Trumble

Reflection on past achievements and future challenges 10 years after the establishment of the Australian General Practice Training program

On 5 March 2001, the Australian Government established General Practice Education and Training (GPET). The main role of this new company was to establish the Australian General Practice Training (AGPT) program.

Ten years later, the AGPT is strong, dynamic and continuing to evolve. This supplement was commissioned by GPET to review the activity of the past decade, to examine contemporary issues in general practice education and training, and to explore some of the future directions for the training of Australia’s general practitioner workforce.

Capturing past experience

Australian general practice vocational training has come a long way since 1973, when the Whitlam Labor Government provided funding to the Royal Australian College of General Practitioners (RACGP) to set up the original Family Medicine Programme, (later renamed the RACGP Training Program).

In the first section of this supplement, two prominent Australian general practice educators, Wilcock and Coote (page S55) and Trumble (page S59), look back and provide their perspectives on the evolution of general practice vocational training in Australia, the legacy of the previous RACGP program, the events leading to the establishment of GPET and the AGPT program, and progress made over the past decade. Hays and Morgan examine the general practice training programs in New Zealand, Europe (including the United Kingdom and Ireland), Asia and North America and compare these with the developments in Australia (page S63).

Contemporary issues

The AGPT was created with a set of expectations — to establish a regionalised model of training, to improve vertical integration of general practice education, and to foster innovation. The second section of this supplement addresses these contemporary issues affecting general practice training.

Campbell and colleagues examine whether the regionalisation focus of GPET has succeeded in meeting the needs of rural Australia and addressing maldistribution of the medical workforce (page S71). Stocks and colleagues describe the scope of vertical integration in Australian general practice through the establishment of regional training providers, and assess the linkages that have developed with universities and their rural clinical schools to improve integration in medical student training with the training of recent medical graduates and general practice registrars (page S75). Martin and Reath provide an assessment of innovations in general practice training in Aboriginal and Torres Strait Islander health (page S67), while Kitchener and colleagues examine innovations in linking military medicine to general practice education and training (page S79).

Finally, the current president of the World Organization of Family Doctors (Wonca), Professor Richard Roberts, and colleagues provide a global perspective on the challenges of primary health care delivery to the people of all nations, and the education and training needs of each country’s future GPs (page S84).

Future directions

At the start of the second decade of the AGPT program, Australia is moving through a process of health system reform that promises to shake up the delivery of primary medical care through the transformation of Divisions of General Practice into broader primary health care organisations called “Medicare Locals”, through the Australian Government’s investment in a network of “GP super clinics” and expanded general practices for primary care delivery, and through plans to better integrate both community-based health care and hospital care. The establishment of Health Workforce Australia has also created an urgent need for clarity around how we educate and identify supervisors for all medical and other health profession graduates.

The supplement’s third section looks at the opportunities ahead and how all those involved in general practice training can seize them. Harris and colleagues discuss the trends that are putting pressure on Australia’s primary health care workforce and the implications for future training (page S88). Laurence and colleagues examine the strengths and weaknesses of the current regionalised training model and look at opportunities for expanded roles (page S92). Emery and colleagues propose a series of training reforms to better meet future professional needs of GPs (page S97), and Thomson and colleagues examine ways to ensure future sustainability by ensuring adequate support of this nation’s GP teachers (page S101).

What lies ahead?

Reading through the supplement demonstrates many commonalities, with several observers reporting the same events from slightly different perspectives. However, it also reveals some of the challenges for general practice training over the years ahead.

It is clear that the enhanced apprenticeship model of general practice training has served Australia well, but by its very nature the apprentice ends up cast in the mould of the master. It is a confronting reality that tomorrow’s GP will look very different to yesterday’s, and even today’s. GP supervisors need the flexibility to train registrars for quite a different role to what their own has been.

General practice training must allow registrars to develop into what they need to be to best meet the future health care needs of their patients and their communities.

It also appears that a focus on competency-based training is inevitable if we are to produce a sufficient number of GPs with the right skills to meet Australia’s evolving health needs.
defining the outcomes of training by competencies, rather than by time served in a specific location, may be a way to provide future GPs with a myriad flexible, yet integrated, pathways offered by a range of providers that lead to the same professional standard. It could also allow for more contemporary competencies to be added to the GPs traditional skill set, for example in management, teaching, research, quality and safety, teamwork, e-health and leadership.*

At the same time as the vertical integration model needs to be reinforced across undergraduate and postgraduate medical training, better horizontal links must be established with other craft groups. This will strengthen interprofessional learning as general practice moves more to team-based care, to better meet the complex needs of many of our patients and our communities.

Perhaps the future lies not in a single, rigid pipeline that delivers a fully trained — yet somewhat startled — new GP to an area of medical workforce need, but in acknowledging that there are multiple ways in which each new doctor can acquire, to established end points, the competencies required for safe, independent and appropriate general practice.

Acknowledgements
As the invited editors of this supplement, we thank the board and staff members of GPET who have supported its development, especially Rodger Coote and Paul Goldsborough. We thank the contributing authors and the members of the regional training providers who have shared their experiences from the first 10 years of the AGPT. We thank the many stakeholder organisations that support high-quality general practice education and training including our colleges and other professional organisations, our universities, our Divisions of General Practice and our partner organisations. And we thank this nation’s GPs and GP registrars and the staff and patients of the many hundreds of general practices involved in general practice training across Australia.

Competing interests
The editors have not received any financial support for their work on this supplement. Michael Kidd is a past president of the RACGP, president-elect of the Wonca, a board member of Northern Territory General Practice Education, chair of the Australian Government’s Ministerial Advisory Committee on Blood Borne Viruses and Sexually Transmissible Infection and a member of the Australian Government’s Medical Training Review Panel. Justin Beilby is current deputy chair of Medical Deans Australia and New Zealand, and was the board chair of the Adelaide to Outback General Practice Training Program from 2003 to 2011. Claire Jackson is the current president of the RACGP. Stephen Trumble was a GPET Board member from 2003 to 2011. He facilitated a workshop for GPET, the RACGP and Australian College of Rural and Remote Medicine in December 2009, his fee was shared equally between the three. His expenses were covered for attendance at the AGPT convention in Alice Springs, September 2010.

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* The RACGP will be addressing each of these areas in the development of its curriculum program in 2011.

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The Australian General Practice Training program — reflections on the past decade

Simon M Willcock and William Coote

How has general practice vocational training progressed towards the original goals established by the federal government and General Practice Education and Training 10 years ago?

Over the past two decades, the federal government has used various financial and regulatory levers to influence the organisation and activities of Australian general practitioners. A contentious initiative was the 2001 decision to cease funding the Royal Australian College of General Practitioners (RACGP) Training Program and to create a government-owned company, General Practice Education and Training (GPET) to implement a national vocational training program for general practice. GPET was created to establish a system of regional training providers (RTPs) and to oversee the implementation of a new system of general practice vocational training, the Australian General Practice Training (AGPT) program.

Disentangling and weighting the many influences that led to this decision is best left to other historians. Hayden White, a central figure in academic debate about the nature of history, suggests it is difficult to get an objective history of a scholarly discipline, because if the historian is himself a practitioner of it, he is likely to be a devotee of one or another of its sects and hence biased; and if he is not a practitioner, he is unlikely to have the expertise necessary to distinguish between the significant and the insignificant events of the field’s development.

However, three broad themes dominated academic, political and policy debate on general practice education in the years leading to the establishment of GPET and the AGPT program.

First, reference to fragmentation of the general practice education “continuum” was common. In 1988, the “Doherty Report” recommended that “stronger links … be developed between university general practice units and the institutions providing vocational training for general practitioners.” In 1991, Kamien and MacAdam listed “cooperation with the RACGP-Family Medicine Program (FMP)” as a priority for general practice undergraduate departments. The future of general practice, a 1992 government report, noted the “artificial separation between undergraduate and continuing education” and the “guarded relationship between academic general practice and the FMP” resulting in “little scope for ensuring continuity in what is taught.”

Second, establishment of the Australian College of Rural and Remote Medicine (ACRRM) challenged the hegemony of the RACGP over general practice vocational education. The ACRRM was incorporated in 1997 by the Rural Doctors Association of Australia as an acknowledgement of:

- the importance of rural and remote medicine as a broad but discrete form of general practice
- the need for well-designed vocational training and continuing medical education for rural doctors, and
- the need to address the shortage of rural and remote doctors in Australia, by providing them with a separate and distinctive professional body.

Third, the federal government wished to leverage the arrangements through which it funded general practice vocational education and training, to pursue medical workforce policies to manage overall numbers of GPs (and general practice Medicare outlays) and the distribution of general practice trainees.

The 1998 report of the Ministerial Review of General Practice Education and Training considered these influences in the context of broader changes in the way medical care was being provided, referring to all these forces as: “environmental barriers and constraints leading to calls for overhaul of the GP vocational training environment”. The report concluded that “the RACGP [training program] is now confronted with myriad conflicting demands brought about by influences that it cannot fully control”. It recommended fundamental changes, most significantly “development of local collaborative arrangements, or consortia, in education-service delivery” with a national body to promote “better coordination at all levels of the general practice education continuum”.

From a political perspective, the establishment of GPET in 2001 was a government response to an astute, coordinated and persistent political campaign by rural doctors’ organisations. Rural doctor advocates wanted more rural influence and control over public funds that support general practice training, arguing that the RACGP Training Program had become “metrocentric”.

From a workforce policy perspective, the government instituted measures through GPET to boost the supply of doctors in rural areas. These included an unequivocal requirement that all registrars undertake a minimum 6 months’ training in rural areas, and financial incentives for trainees who undertook additional rural-based training.

A key educational aim underpinning the establishment of GPET and the AGPT program was regionalisation to facilitate vertical integration of training, thereby fostering an environment that would encourage innovation and competition between RTPs (over, for example, quality and cost of training and the nature and length of the educational experience). Other outcomes included a well trained, appropriately distributed workforce in sufficient numbers to meet the health needs of a growing and ageing population, and those of Indigenous Australians.

Ten years on

The establishment and subsequent history of GPET and the AGPT program between 2001 and 2011 raise many interesting questions. To what extent has vertical integration of general practice training and education actually occurred across medical school, pre-vocational and vocational training entities in terms of measurable outcomes? To what extent have RTPs been able to innovate, caught as they are between contractual obligations to GPET and the need to deliver training according to, at times, prescriptive college requirements? Has the overall supply of GPs (particularly in rural regions) been boosted by the new arrangements?
Regionalisation outcomes — vertical integration, competition and innovation

Initial hopes, at least by the federal government, for competition between RTPs did not eventuate in any substantial sense for two main reasons.

First, GPET was required to ensure training met existing “college standards”. This was a late addition to the GPET constitution following lobbying by general practice organisations, and significantly defined the educational content of the new program. RTPs were free to explore innovative delivery models, but the curriculum prescribed for all RTPs to achieve these standards was essentially constant.

Second, there was an effective exclusion of completely new prime providers by criteria defining governance of RTPs that restricted participation to entities controlled by collaborations of local general practice interests such as medical colleges and Divisions of General Practice. At least two universities sought to become prime providers, but these proposals were unsuccessful.

Despite GPET’s development of a vertical integration framework, integration of education and training across the undergraduate, postgraduate and vocational spectrum struggled to evolve in the early years of the AGPT program, with the focus on more urgent training imperatives such as registrar selection and recruitment for an increased number of training places per year (rising from 450 to 600 in 2004). Some university-based departments of general practice have been contracted by RTPs to deliver components of registrar training, and many RTP medical educators have university appointments. In recent years, vertical integration has gained further momentum with:

• the transition to GPET of the Prevocational General Practice Placements Program — an experiential program in community-based general practice for junior hospital doctors,10 and
• GPET-funded initiatives to foster general practice exposure within medical schools, including support for the General Practice Students Network and GP Compass programs.

GPET continues to seek collaborative opportunities with medical schools to foster integration of student placements with prevocational and vocational training. However, this has been hampered by funding mechanisms and incentive schemes for undergraduate student placements that are not sufficiently aligned with prevocational and vocational training supervisor and practice support initiatives.

The regionalised model has facilitated local decision making by identifying local health needs, local opportunities for training of registrars by resident supervisors, and more local career development opportunities for supervisors and educators. Many large RTPs have recognised the need to develop regional nodes that address the unique needs of the local population while operating within an overarching governance structure. One outstanding example has been the Kimberley Aboriginal Medical Services Council’s medical education project, which has improved general practice access for area-of-need populations and has provided an effective model for engaging a diverse spectrum of stakeholders.11

Some RTPs, for example, Coast City Country General Practice Training (covering Wollongong, Canberra, the Riverina and the New South Wales South Coast) and Western Australia General Practitioner Education and Training, have developed “nodal” operational models, servicing multiple regional communities while achieving administrative efficiencies.

The perennial problem of efficiency versus local representation has continued, however — some smaller RTPs proved unsustainable and the original 22 RTPs (from 32 valid applicants) were reduced to 17 through a series of mergers.

Workforce training — capacity, resources and distribution

From the outset, RTPs across Australia were encouraged by GPET to develop registrar training capacity in areas of medical workforce need. Box 1 highlights significant growth in training service delivery from the initial 2003 AGPT training year — registrars have increased by 88% in metropolitan locations and 102% in rural, remote and metropolitan areas (RRMA 3–5). RRMA 6 and 7 also experienced a significant 64% increase. However, the absolute number completing training does not yet meet the demand for additional GPs.

Box 2 shows the growth in the number of GP registrars who completed terms in Indigenous health posts by RRMA between

<table>
<thead>
<tr>
<th>RRMA</th>
<th>2003</th>
<th>2009</th>
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<tbody>
<tr>
<td>1–2</td>
<td>257</td>
<td>502</td>
</tr>
<tr>
<td>3–5</td>
<td>167</td>
<td>348</td>
</tr>
<tr>
<td>6, 7</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

RRMA = Rural, Remote and Metropolitan Areas. * Source: General Practice Education and Training, unpublished data. † Where registrars trained in more than one RRMA category during the year, they are counted once in each. The totals for RRMA columns and state rows include each registrar only once. ‡ In 2010, the system for categorising remoteness changed from RRMA to the Australian Standard Geographic Classification — Remoteness Area (ASGC-RA). These systems are not comparable and 2010 data are not available in RRMA format.
The AGPT program and its regionalised delivery system are now well established in Australia. It is generally acknowledged as a successful program, and is now broadly accepted by the profession and government. The system continues to be future-focused, and is cohesive, responsive to changing community needs and well positioned for future challenges and opportunities.

In retrospect, the fundamental aims and outcomes for GPET and the AGPT program remain relevant today. The decline in general practitioner workforce in remote and rural Australia is one of the immediate issues that emerged was the uneven capacity to host general practice training in Aboriginal and Torres Strait Islander health training post. Today, 66% of all general practice training in Aboriginal and Torres Strait Islander health occurs in northern Australia. Some of the challenges to expanding training capacity in ACCHSs in southern Australia include long-term supervisory vacancies and inadequate infrastructure. Solutions may require a review of the scope of current AGPT programs, and will certainly need close collaboration with other agencies involved with health service provision to Indigenous communities.

Conclusions

In 2003, some 2 years after its establishment, GPET developed its Framework for General Practice Training in Aboriginal and Torres Strait Islander Health. Since then, a range of issues and challenges have emerged, with important lessons learned. GPET has recognised the benefit of improved collaboration with Aboriginal and Torres Strait Islander organisations, and these partnerships will continue to inform AGPTs Aboriginal and Torres Strait Islander health training initiatives. Evaluation of the Framework suggested that the comprehensive, multilevel approach to Aboriginal and Torres Strait Islander health training has been one of the program’s strengths. GPET, along with the RTPs, is playing a national leadership role in responding to the specific regional circumstances and needs of Aboriginal and Torres Strait Islander communities in collaboration with the relevant state- and territory-affiliated organisations.

While the regionalised training program model has worked well generally, one of the immediate issues that emerged was the uneven capacity to host general practice training in Aboriginal and Torres Strait Islander Communities. Evaluation of the Framework suggested that the comprehensive, multilevel approach to Aboriginal and Torres Strait Islander health training has been one of the program’s strengths. GPET, along with the RTPs, is playing a national leadership role in responding to the specific regional circumstances and needs of Aboriginal and Torres Strait Islander communities in collaboration with the relevant state- and territory-affiliated organisations.

Increased demand can potentially be offset by exploring new training models, including integrated, interprofessional models in large community-based clinical facilities with a primary care focus. These larger community-based centres of care would be suitable for group activities, including education programs for patients, students and clinicians. There is also scope to expand the historical model of general practice training from a general practice “consultation apprenticeship” model to include significant time in other domains of practice such as emergency medicine, aged care, palliative care and routine procedural work. The rural generalist training approach, introduced by the Queensland Government in 2005 and implemented in Western Australia in 2009, is likely to provide a good model for enhanced diversity in GP vocational training.

Indigenous health training

In March 2010, the Australian Government Department of Health and Ageing announced that AGPT program places would be doubled to 1200 a year by 2014 to meet anticipated need for 3000 extra GPs by 2020. While this is welcome news, it presents a challenge in recruiting additional GP medical educators and supervisors at a time when the general practice workforce is already stressed by service delivery requirements as well as demands for clinical placements in general practice from the undergraduate medical, nursing and allied health sectors. There is, therefore, a need for a comprehensive assessment of training demand in general practice to identify the additional resources required to meet the projected need, particularly in physical infrastructure for clinical training, supervisor support and development, and the establishment of a robust and sustainable workforce of skilled medical educators.

2 Numbers of general practice registrars training in Indigenous health posts by RRMA, 2003 and 2009*†‡

<table>
<thead>
<tr>
<th>RRMA 1–2</th>
<th>RRMA 3–5</th>
<th>RRMA 6, 7</th>
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<td>Queensland</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Western Australia</td>
<td>2</td>
<td>1</td>
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</tr>
<tr>
<td>Northern Territory</td>
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<tr>
<td>Tasmania</td>
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<tr>
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<table>
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<th>RRMA 1–2</th>
<th>RRMA 3–5</th>
<th>RRMA 6, 7</th>
<th>Total in state/territory</th>
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<tbody>
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<td>22</td>
<td>2</td>
</tr>
<tr>
<td>2009</td>
<td>31</td>
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<td>62</td>
</tr>
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</table>

RRMA = Rural, Remote and Metropolitan Areas. † Where registrars trained in more than one RRMA category during the year, they are counted once in each. The totals for RRMA columns and state rows include each registrar only once. ‡ In 2010, the system for categorising remoteness changed from RRMA to the Australian Standard Geographic Classification — Remoteness Areas (ASGC-RA). These systems are not comparable and 2010 data are not available in RRMA format.

2 Numbers of general practice registrars training in Indigenous health posts by RRMA, 2003 and 2009*†‡
practice workforce numbers in rural and remote Australia has been halted, but an ageing workforce and an underrepresentation in the 35–50-year age demographic due to past restrictions on training numbers mean that we will need to significantly increase our entrants into vocationally registered general practice over the next decade to maintain an adequate general practice workforce in both rural and metropolitan Australia. There remains a need for a well trained and appropriately distributed workforce in sufficient numbers to meet the requirements of a growing and ageing population. While contestability of general practice vocational training has not been achieved to any major extent, there is significant progress towards vertically integrated training. The current cohesion between various general practice organisations is likely to facilitate further integration within undergraduate and continuing professional development sectors. Others aims, including regionalisation, workforce distribution, enhanced training capacity, resource development and Indigenous health training, show pleasing progress but require ongoing review, expansion and further development over time, based on experience to date and the evolving needs and demands of our health care system.

Since their establishment in 2001, GPET and the AGPT program have achieved many of the “outcomes for regionalisation” set by the federal government and the GPET Board, particularly in relation to delivery of vocational training and provision of medical education services by GP registrars in areas of greatest need — rural and remote areas, outer metropolitan regions and Indigenous communities. Underpinning these outcomes is the economic question: Have the policy outcomes of GPET and the AGPT program justified the resources required to maintain GPET and 17 regional RTP offices?

Finally, the experiences of GPET and the AGPT program should be of interest to the wider profession as components of training in many specialist disciplines move outside the traditional public hospital setting into private practices and private hospitals; and as the health system places increasing emphasis on preventive and primary care. Pressure for a formal process for recognising, meeting and administering the costs incurred by both practitioners and facilities is likely to emerge within other health professions and disciplines. It is reasonable to state that the AGPT program experience provides a useful template for change within the broader professional education and training environment.

Competing interests

Simon Willcock has been GPET Board Chair since 2005. William Coote was the GPET Foundation Chief Executive Officer from 2001 to 2004, and is the board chair of Coast City Country General Practice Training. He received a fee for his work on this manuscript.

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The evolution of general practice training in Australia

Stephen C Trumble

The 2009 general practice-themed issue of the Journal used a Darwinian motif to explore the development of Australian general practice into a species that seems unsure of its place in the current health environment. That issue’s editorial painted Australian general practice as a poorly led discipline that was corporatised and bureaucratised, riven by internal politics, and stricken by heavy-handed government control. With such powerful political, corporate and societal forces all acting to shape the profession at the same time, “intelligent design” seems a more apt metaphor than Darwin’s somewhat passive evolutionary model. Certainly, successive federal governments have chosen to play a creationist role rather than benignly allowing general practice to evolve at its own pace.

Nevertheless, there is some merit in looking at the way the discipline of general practice (and, more specifically, general practice training) has responded to the many major changes in its environment over the past 60 years. Most of these changes have been too sudden and non-negotiable to allow leisurely adaptation of existing approaches, much in the way that meteorite strikes enliven otherwise sluggish evolutionary processes in uncompromising fashion. But, in 2011, the heritage of Australian general practice training can still be clearly seen in its current manifestation.

Defining the discipline

A landmark article published in The Lancet in 1950 by a visiting Australian physician, Joseph Collings, cast scorn upon the ill-defined discipline of British general practice:

it is accepted as being something specific, without anyone knowing what it really is. Neither the teacher responsible for instructing future general practitioners, nor the specialist who supposedly works in continuous association with the GP nor for that matter the GP himself, can give an adequate definition of general practice. Though generally identified with the last century concept of “family doctoring”, usually it has long ceased to be this.

Collings went on to recommend that the role and scope of general practice within the newly developed British National Health Service be immediately clarified by GPs themselves. This “meteorite” galvanised the establishment of the British College of General Practitioners in 1952; committees on undergraduate and postgraduate education were established the following year, and guidelines for medical student and postgraduate training were established the following year, and guidelines for medical student and postgraduate training were developed over the ensuing decade.

These British developments were keenly observed from the antipodes. Faculties of the British college were formed in each Australian state during the 1950s and, in 1958, coalesced to form the Australian College of General Practitioners. Both colleges gained a Royal Charter in the 1960s. The Australian College’s early aims included establishing general practice education for undergraduates and regular continuing postgraduate education, but no mention was made of a specific vocational training program for the developing discipline at that time.

While the Royal Australian College of General Practitioners (RACGP) currently defines general practice as: “the provision of primary continuing comprehensive whole-patient medical care to individuals, families and their communities”, its British counterpart expands the World Organization of Family Doctors (Wonca) Europe definition to list 11 characteristics of general practice that include such important elements as coordinating care, providing advocacy, being person-centred, dealing with undifferentiated illnesses, and promoting health. General practice’s consultation style is presented as unique, and it is mastery of this vital doctor–patient interaction that distinguishes the discipline. Indeed, becoming competent in the consultation is at the heart of general practice training.

The birth of Australian general practice training

Following a successful approach to the new Labor government in 1973, a small amount of money ($1.1 million) was granted to the RACGP to set up a training program dubbed the Family Medicine Programme (FMP), the forebear of today’s Australian General Practice Training (AGPT) program.

The FMP was initially an optional program of educational support for those commencing as GPs. Approved hospital terms were followed by subsidised, supervised terms working in educationally accredited general practices with enhancements such as seminars and feedback on observed practice from visiting educators. For what was always intended to be a training program with vocational end points, the early years of FMP were remarkably unstructured and lacking in measurable outcomes. Although the RACGP already conferred its Fellowship by examination, it was not at that stage the novice’s required “ticket of entry” to a general practice career, but rather an opportunity for practising GPs to demonstrate their mastery of the craft. An educational philosophy

ABSTRACT

• Training for general practice in Australia has undergone a 60-year evolutionary process punctuated by revolutionary events.
• The discipline of general practice has also evolved significantly over this period.
• Today’s Australian general practice training program strongly resembles its ancestors, with adaptations that better suit its regionalised environment.
• General practice training has been affected frequently by political and professional forces.
• Many of these forces were powered by the government’s need for general practice training to deliver immediate workforce solutions, and the profession’s struggle to respond.
• Pressure on general practitioners to train increasing numbers of clinical learners is challenging traditional apprenticeship models.
• The Australian general practice training program needs to continue to evolve if it is to remain successful within its volatile environment.

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that eschewed formal examinations and workforce orientation frequently put the FMP’s leadership at odds with government and with the RACGP itself, as evidenced by a slew of reviews both internal and external over its three decades of survival.  

The RACGP examination for Fellowship eventually became the compulsory end point of training and entry to the profession in 1995, following the introduction of a vocational register in 1989 onto which existing GPs could be “grandfathered” if they had not undertaken the examination.  

Vocational registration allowed recognised GPs access to higher Medicare rebates in return for continuing their professional development.  

General practice as a specialty

The last two decades of the 20th century were a time of major change in Australian general practice and its vocational training program, although the cores of each remained largely unaffected.  

While the RACGP collaborated with the government on the establishment of the vocational register, a new species of general practice organisation appeared in the form of federally funded Divisions of General Practice, which sought to coordinate local general practice services and achieve better health outcomes within defined regions.

Meanwhile — in the general practice training biosphere — the FMP had been revised and refocused following a significant 1982 review commissioned by the then Federal Minister for Health.  

Its loose 4-year arrangement was tightened and requirements added for a minimum 6 months in subsidised and supervised general practice placements, strengthening the master–apprentice relationship between supervisors and registrars.  

A formal end point was added in the form of a Certificate of Satisfactory Completion of Training, which provided some exemptions from sections of the Fellowship examination (still an optional undertaking at that time).  

Further revisions occurred over ensuing years, with the FMP evolving into a 3-year program comprising 1 year of accredited post-internship hospital rotations, 1 year of supervised general practice posts, and 1 year of further approved clinical experience — a structure that is still evident in today’s program.  

An obligation to better target medical workforce development was acknowledged, with the requirement for GP registrars to undertake part of their training in an “area of medical service need”, usually rural.  

By this time, the program was being administered by a network of offices in each capital city with regional offices in North Queensland, the Northern Territory and Australian Capital Territory, Gippsland and rural New South Wales, all coordinated by a national office in Melbourne.

The evolution of vocational training — and the discipline of general practice itself — was again hastened by government intervention during the 1990s.  

Apart from fixing the RACGP examination as the compulsory end point of training, the Health Insurance Amendment Act (No. 2) 1996 (Cwlth) mandated a competitive entry scheme for remote areas which continues today.  

In June 2000, the then federal Minister for Health and Aged Care responded with an announcement to a group of rural doctors that: “The way forward”

Ongoing government concerns about the state of education and training for GPs led to another major government review of general practice education in 1997 (the Ministerial Review of General Practice Training).  

The RACGP Training Program was the major focus of the review, with particular attention given to rural training and vertical integration.  

The budget for general practice training was increased and 50 new places were added to the existing 400 on the condition that 150 of those places were based in smaller rural areas.  

Financial incentives of up to $60 000 over 3 years were offered to registrars to take up those rural places.  

While attempts were made by the RACGP Council to reform the management of the Training Program during the last years of the decade (including engaging with rural and university stakeholders on steering committees), the program struggled towards the new century, maintaining its focus on educational quality rather than responding to the abrupt climate shift towards workforce supply.  

Perceived neglect of rural concerns had become a significant political issue during the late 1990s, and politicians were aware of voter backlash in country electorates.  

A small group of rural doctors proved effective politically in this volatile environment and pressure mounted on the government for a separate training program for rural general practice, beyond the existing small pilot scheme for remote areas which continues today.  

In June 2000, the then federal Minister for Health and Aged Care responded with an announcement to a group of rural doctors that: “The way forward”

The delivery of education and training for GPs will move towards a regionalised approach over the next 18 months, which will be overseen by a new Board of General Practice Education and Training.

This was the most interventionist of the four options proposed by the 1997 review in its report, The way forward.  

The RACGP’s
monopoly on training for general practice ended 18 months later when funding became contestable through General Practice Education and Training (GPET). The RACGP Training Program's final "dinosaur killer" had arrived.

The birth of the Australian general practice training program

The first years of the new century were a time of frenetic activity as the regionalised general practice training environment took shape. GPET was established on 5 March 2001 under the Corporations Act 2001 (Cwlth) and the Commonwealth Authorities and Companies Act 1997 as a company limited by guarantee, with the federal Minister of Health and Aged Care (representing the Commonwealth) as its sole member. With some independent directors and others nominated to the Minister by general practice stakeholder organisations, GPET's prime role was to establish a regionalised training program — the Australian General Practice Training (AGPT) program.

In response, the RACGP established its subsidiary company, General Practice Education Australia (GPEA), which operated between 2001 and 2004 to complete the training of registrars already enrolled with the College, and to train new entrants in regions where local providers were not yet ready to do so.

Local general practice stakeholders such as universities, Divisions of General Practice, rural workforce agencies and Aboriginal community controlled health organisations formed not-for-profit companies to bid for training contracts from GPET. Their boards also included nominees of the RACGP and ACRRM, Aboriginal representatives, supervisors and current registrars. These training consortia and the regional boundaries they claimed developed to best suit the environments in which they found themselves. The whole state of Western Australia, for example — occupying one-third of Australia’s land mass, remained one region, while GPET’s 22 new RTPs were required under the conditions of their contract with GPET (and as enshrined in GPET’s constitution) to provide training according to the standards of the profession. Nevertheless, the 22 new RTPs were required under the conditions of their contract with GPET (and as enshrined in GPET’s constitution) to provide training according to the standards of the profession. This meant that RTPs delivered the new AGPT along very similar lines to the preceding RACGP Training Program and used the College’s curriculum to help their registrars prepare for its examination, which remained the sole end point of training. This monopoly was finally broken in 2007 when the Australian Medical Council granted interim accreditation to ACRRM to provide a pathway to the specialty of general practice. Thus, a registrar enrolled with GPET to train for general practice in AGPT with an RTP could now choose to prepare for Fellowship of ACRRM or Fellowship of the RACGP (with an optional extension to gain a Fellowship in Advanced Rural General Practice) or both.

Central to the concept of regionalisation is using local training opportunities to prepare doctors to meet the specific needs of the community within which they are training. While the training program remains generally similar in each of the 17 RTPs that remain from the 22 pioneers (following several mergers), local influences appropriately enhance the details. Darwin would be pleased at the diversity the original species has acquired as it strives to succeed in each environment, while the progenitors of the FMP would still recognise the centrality of the GP supervisor in guiding the registrar’s development.

The way further forward

As a regionalised general practice training program, AGPT approaches its 10th anniversary in 2011 as a significantly evolved creature from its origins as the RACGP’s FMP in 1973. Whereas medical workforce considerations were clearly secondary to educational concerns for the RACGP, GPET receives much more specific direction as to the Minister’s expectations of the AGTP program. The 2009 Ministerial “Statement of Expectations” outlines the government’s expectations as:

- implementation of 900 new training places in 2011;
- taking over of the Prevocational GP Placements Program previously managed by the colleges;
- expansion of vocational training in Indigenous health;
- encouraging innovation and integration in training models; and
- increasing the attractiveness of general practice as a career.23

The environment within which AGPT is delivered continues to change, so further evolution of the program can be expected. Health care reform remains a major government initiative and, as is the case overseas, primary care in Australia is increasingly seen as needing strengthening and connecting as the centrepiece of an effective, efficient and sustainable health system. True vertical integration of the general practice training pathway — by which the future GP is conveyed seamlessly from medical school to independent general practice by the same training provider — remains an unachieved goal.

The increasing number of clinical learners who need to be placed in general practice is putting pressure on the apprenticeship model that has underpinned medical training for centuries. Preparing the next generation of GPs in an effective, efficient and sustainable manner will require reappraisal of this powerful but expensive model. The introduction of “GP superclinics” and “Medicare locals” (both government-funded initiatives designed to strengthen and expand primary care) will also exert significant influence on the continuously evolving training program.

The Darwinian view of evolution is somewhat brutal: a species that is poorly suited to a changed environment needs to make way for one that is better suited. And that newly dominant species had better keep an eye on the weather if it wishes to retain its place. Extinction is only a moment away for those who live in the moment rather than anticipate the future.

However, it is wrong to say that evolutionary success has much to do with being “better” than one’s antecedents. Despite Spencer’s sociological interpretation of Darwin’s theories of natural selection as “survival of the fittest” — phraseology that Darwin himself eagerly adopted — successful evolution has less to do with strength and merit than the ability to read a changing environment and to effectively change to suit it.

Competing interests

I was a GPET Board member until August 2009. I facilitated a workshop for GPET, the RACGP and ACRRM in December 2009, my fee was shared equally between the three. I was Victorian State Director of the RACGP Training Program from 1998 until 2001. I was the inaugural CEO of GPEA from 2001 to 2002.
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General practice in Australia has a strong role in the health care system, setting high professional standards and an organised general practice training program. For most people seeking health care, general practice is the first point of medical contact. Most other medical services are accessed by referral from general practitioners, who therefore must be able to manage, at least initially, a wide range of health problems.

Since its establishment in 1958, the Royal Australian College of General Practitioners (RACGP) has been responsible for academic standards for this broad scope of practice. Professional recognition as a GP requires 3 or 4 years of training, and assessment for Fellowship. In 1974, the Australian Government funded the RACGP’s Family Medicine Program, which for about 25 years, was the sole general practice training provider. The Australian College of Rural and Remote Medicine (ACRRM) was established in 1997 in response to concerns about rural training and workforce needs and, in 2007, was accredited to provide vocational training for general practice in Australia through its Fellowship training and assessment pathways.

In June 2000, vocational general practice training became the responsibility of a new, independent organisation known as General Practice Education and Training. General practice training was decentralised and delivered through a network of independent regional training providers (RTPs). This model is largely government-funded, with an annual budget appropriation of $91 million during the 2009–10 financial year, aiming to enhance community responsiveness and address regional workforce needs.

Hence, Australia has a structured training program, delivered through RTPs, and incorporating two sets of College curricula, training and practice standards, assessment requirements and qualifications. Training includes supervised placements in both hospitals and general practices, complemented by formal practice-based teaching and regular educational sessions.

An international comparison of general practice training programs

General practice training in Australia has evolved in response to local and overseas developments. Learning from overseas programs is complicated by variations in general practice roles across national borders. General practice is not universally a strong, first-point-of-contact profession. For example, the United States model sees family medicine as one of several “primary care” specialties that compete with each other for patients. Another model, commonly seen in the developing world, sees general practice as a weak, low-status occupation for doctors without specialty training and patients who cannot access specialists.

This wide international spectrum of practice, ranging in scope from broad generalist to narrower specialist, is reflected in the variety of training models. This article compares the current Australian General Practice Training program with equivalent programs in selected countries and regions — the United Kingdom and Ireland, Europe, North America, and the Asia–Pacific region — based on selected issues listed in the Box, including details of the training programs and their governance. More detailed comparative information is available elsewhere.

ABSTRACT

• General practice training in Australia continues to evolve. It is now the responsibility of an independent organisation, is delivered by regional training providers, and comprises a structured training program.

• Overseas, general practice varies in its importance to health care systems, and training models differ considerably.

• In some cases training is mandatory, in others voluntary, but the aim is always similar — to improve the quality of care delivered to the large majority of populations that access health care through primary care.

• We review the current status of vocational general practice training in Australia, compare it with selected training programs in international contexts, and describe how the local model is well placed to address future challenges.

• Challenges include changes in population demographics, increasing comorbidity, increasing costs of technology-based health care, increasing globalisation of health, and workforce shortages.

• Although general practice training in Australia is strong, it can improve further by learning from other training programs to meet these challenges.

New Zealand

Despite having a similar health care system, New Zealand has a different approach to general practice training. Although training and certification by assessment are mandatory for recognition as a GP, there are two routes to achieving this. The formal pathway is through the Investment Relationships and Purchasing arm of Health Workforce New Zealand, which provides a limited number of funded training posts in accredited teaching practices and a comprehensive, supporting educational program. There is also an “independent” pathway, in which aspiring GPs organise and fund their own training. There are two stages of training — General Practice Education Program (GPEP) 1, a 12-month GP placement in a training practice that follows junior hospital training, and GPEP 2, a 2-year immersion in general practice, based on continuing professional development participation and workplace-based assessments. A primary membership examination (Primex) is taken at the completion of GPEP 1, and fellowship assessment is taken after GPEP 2.

United Kingdom and Ireland

The UK has mandatory 3-year training program for the recognised specialty of general practice. Individuals apply to enter after their first postgraduate year. Assessment comprises an end-point written and clinical objective structured clinical examination leads to Membership of the Royal College of General Practitioners, which has responsibility for standards. Rural training is available.
in certain regions, such as Wales and Scotland. A recent review recommended extending the duration of vocational training from 3 to 4 years,8 but as yet there is no decision.

General practice training in Ireland is a mandatory 4-year program, commencing after a 1-year internship, and is delivered through regionalised training providers. The Irish College of General Practitioners (ICGP) administers the training, including accreditation, standard setting, curriculum development and summative assessment.9 The ICGP membership examination consists of written and oral components.

Europe

Europe contains a collection of different health systems and considerable variation in general practice training models. In Northern European countries (Belgium, the Netherlands and Scandinavian countries),10 general practice is a recognised specialty and is the access point for specialist care. There are specific training programs of 3–4 years’ duration, similar to the UK. Assessment processes vary considerably, from examinations to participation in continuing professional development. Other European countries have weaker general practice roles; general practice is not always recognised as a specialty, and has less well defined training programs. Some countries have voluntary general practice training programs that are similar in principle to the northern European models.

North America

Family medicine is a strong, recognised specialty in Canada, where specialist care is accessed through primary care. There is a defined curriculum approved by the College of Family Physicians of Canada,11 and an end-point examination that must be taken during the final 6 months of training. Training commences directly after medical school and is provided through province-based, university-affiliated programs, some of which offer specific rural training. The training period is only 2 years, but is more concentrated than in Australia, with 1 year in an academic family medicine practice under intense supervision.

In the US, family medicine is one of several primary care specialties (general internal medicine and paediatrics are others), and patients may self-refer directly to any specialists. There is a defined curriculum, approved by the American Board of Family Medicine,12 and training commences directly after medical school, via state- or university-based programs. Specific rural practice training programs are available in some states. Certification assessment requires computerised knowledge testing, covering a wide range of knowledge and problem-solving abilities.

“Commonwealth” Asia

Perhaps because of their common colonial British heritage, Malaysia, Hong Kong and Singapore have similar general practice vocational training arrangements, commencing after a basic medical education degree. General practice is moderately strong, although not a requirement for patient access to specialists. Voluntary training is available and leads to recognised qualifications.13

In Malaysia, the “high-quality” route to practice is a self-directed training program following 3 years of mandatory community service as a junior doctor. Trainees may then either complete a 2-year, mentored distance-education course that leads to a Diploma in Family Medicine, or sit the conjoint RACGP–Malaysian Fellowship examination.14 Some doctors complete both requirements.

In Hong Kong, the Hong Kong College of Family Physicians (HKCFP) has a 6-year (4 years basic, 2 years higher) specialty training program that is assessed by both an exit and a conjoint HKCFP–RACGP Fellowship examination.

Singapore has a joint government–university–private practice approach and a three-level training pathway: The first level is a 1-year, flexibly delivered training program leading to a Diploma in Family Medicine. The second level is a 3-year, higher-level training program that results in a Masters degree. The third level is Fellowship of the College of Family Physicians, which offers a further 2 years of training for members who wish to be regarded as leaders of the profession.

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**Comparison of key features of selected general practice training systems**

<table>
<thead>
<tr>
<th>Country</th>
<th>Mandatory</th>
<th>Entry</th>
<th>Duration</th>
<th>Defined curriculum</th>
<th>Formal assessment</th>
<th>Regional</th>
<th>University affiliation</th>
<th>Governance</th>
<th>Funding source</th>
<th>Assessment independent</th>
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<tr>
<td>Australia</td>
<td>Yes</td>
<td>PGY 2</td>
<td>3 years</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Weak</td>
<td>Government</td>
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<td>Yes</td>
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<tr>
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<td>Yes</td>
<td>PGY 2</td>
<td>3 years</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Weak</td>
<td>Mixed</td>
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<td>Varies</td>
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<td>6 years</td>
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<td>Yes</td>
<td>No</td>
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<td>Self</td>
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<td>No</td>
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<td>Self</td>
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<tr>
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<td>1–6 years</td>
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<td>No</td>
<td>Strong</td>
<td>Self</td>
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<td>PGY 3</td>
<td>3 years</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Weak</td>
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<td>Yes</td>
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<td>Yes</td>
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<td>Yes</td>
<td>Strong</td>
<td>Government</td>
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<tr>
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<td>Yes</td>
<td>Strong</td>
<td>Government</td>
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</table>

PGY = postgraduate year.
“Non-Commonwealth” Asia–Pacific region

The rest of Asia and the western Pacific have variable arrangements. General practice is often weak, with little specific training or recognition. Some countries, particularly the Philippines and Japan, have US-style primary care and training programs. The Pacific island states, including Fiji and Papua New Guinea, have weak general practice roles, with no formal recognition as a specialty and no specific training or certification processes.

Reciprocity of training

The RACGP has bilateral agreements with equivalent professional bodies in several countries that may accelerate recognition of GPs who move between countries. Such arrangements are usually restricted to those who can demonstrate that they have completed a defined training program and passed a specialty “certification” examination. This allows direct passage, without further training, to either the local certification examination or a portfolio-based assessment of suitability for practice. These arrangements exist between Australia and New Zealand, Canada, the US, Ireland, the UK and Singapore. Those who have passed the conjoint RACGP examinations in Malaysia and Hong Kong are also eligible for Australian recognition. However, the arrangements vary somewhat between countries, are subject to change, and require appropriate immigration and basic licensing procedures, so precise arrangements should be checked.

How do we compare and what can we learn?

Internationally, general practice and general practice training face several challenges, including: rapidly ageing populations; increasing burdens of chronic disease and comorbidities; increasing community-based health care delivery; balancing a burgeoning evidence base with holistic, patient-centred care; and workforce shortages, particularly in rural areas. How is the Australian vocational training system placed to address these challenges compared with its international counterparts? What can Australia learn from training programs elsewhere?

Australian vocational general practice training has several strengths. The existing structures and processes are rigorous by international standards. Formal training is mandatory for vocational recognition, and there are robust training standards, and assessment and accreditation processes. Both the RACGP and the ACRRM curricula reflect community needs, including specific coverage of Aboriginal health, rural health, multicultural health, population health, procedural skills, workforce development and GPs as teachers. The separation of delivery of training from curriculum and assessment standards is sound. The RACGP examination has proven validity and reliability, and the ACRRM assessment pathway is demonstrating potential to address extended rural practice workforce development.

Despite these strengths, lessons can be learned from elsewhere in facing current challenges. The first challenge relates to the model of training and delivery of “core” curricular content. The current model, preferred by mainstream general practice, is clinical apprenticeship. This potentially exposes trainees to a wide range, and changing patterns, of patient demographics and clinical presentations — the “curriculum walks in the door”. However, this variability may lengthen the training time necessary to cover core learning. Could training be made shorter and more efficient? In North America, patient contact and training arrangements are more standardised in teaching practice managed by university departments. In Australia, however, not all relationships between RTPs and universities are strong.

The second challenge is how to respond to pressure to expand the medical workforce through increasing registrar numbers and hastening training completion. Can training capacity be increased without reducing the current flexibility? The popularity of general practice training may fall if there are reductions in recognition of prior learning, part-time training, additional “special skills” training and generous leave entitlements, as these are important issues for registrars as gender mix and work patterns evolve. The New Zealand independent pathway is seen as one way to increase capacity without additional cost, but are the standards the same as in the formal pathway?

This raises the third challenge — the complex, difficult to compare, issue of funding. Australian Government funding for general practice training is relatively generous, higher than in New Zealand, where there is a partial “user-pays” system, but lower than in the UK, where registrars’ salaries in general practice terms are paid in full. There are no data comparing the cost efficiency and quality of international models of GP training, so any decision on this issue may be a compromise between politics and professional norms.

The fourth challenge, which is shared with the rest of the developed world, is the shift in focus of health care delivery and medical education from hospitals to the community. As a result, an increasing number of undergraduate and postgraduate health care learners are now concentrated in community settings. Following the recent expansion of undergraduate medical education, the number of Australian medical graduates will double by about 2014. While this will increase competition for training places in general practice, the strong emphasis on providing registrars with teaching skills in vertically integrated training facilities may enhance general practice teaching capacity, although this may take some time.

The fifth challenge, addressing the increasing cost of technology-based health care, is difficult to achieve in general practice training. While the government aims to increase the role of primary medical care, where expensive investigations tend to be less necessary and less available, general practice training generally lags behind the evolution of the role of general practice. The most notable exception to this is in the UK, where general practice training is closely linked to health system structures. Australia should consider improving the training of GPs for the broader health care management roles that the government wants them to adopt.

The sixth challenge is how to ensure that general practice training produces graduates with the skills to critically appraise the expanding information and evidence base for medical practice. The Australian focus on research literacy may be less than elsewhere: for example, all GP registrars in the UK must complete a formal clinical audit. Although the curricula of both Australian Colleges specifically include research, critical appraisal and evidence-based medicine, teaching and assessment in these areas vary considerably, with only some individual RTPs requiring participation in a research project.

The final challenge is the impact of globalisation on health care. Although reciprocity exists for Australian and selected other jurisdictional qualifications, these arrangements are based on similar practice styles and training systems. Australian curricula
are relatively weak on preparing GPs for work in the broader international environment, and particularly in developing countries. Although this is not regarded as a priority for Australian general practice training, the successful internationalisation of undergraduate medical education in Australia may be an example to follow, potentially increasing the relevance and status of Australian GP training to an increased range of countries than currently in reciprocal arrangements.

Conclusion
General practice training in Australia has evolved from a voluntary process for a minority of GPs into a high-quality system with a defined curriculum and certification assessment for a recognised specialty. This reflects the central role of primary care in the health system. The management and delivery of training occurs through RTPs, and is separated from the Colleges, which provide the standards of practice and training. There are strong similarities between training in Australia and training in the many other countries, and reciprocal recognition is allowed with some of these countries. Despite these strengths, there is room to improve further through learning from how other countries’ training programs approach efficiency and funding of training, the globalisation of health care and the relationship between training and evolving health system roles.

Competing interests
None identified.

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General practice training in Aboriginal and Torres Strait Islander health

Mary E Martin and Jennifer S Reath

The 10–12-year gap in life expectancy between Indigenous and non-Indigenous Australians remains a cause of ongoing grief for Aboriginal and Torres Strait Islander peoples, and a source of shame for all Australians. This gap in life expectancy has prompted government action through the Council of Australian Governments’ (COAG) agreement to “Close the Gap”. Strategies proposed include addressing size and quality of the health workforce through providing an adequate workforce to meet Aboriginal and Torres Strait Islander health needs by increasing the recruitment, retention, effectiveness and training of health practitioners working within Aboriginal and Torres Strait Islander health settings and increasing the number of health professionals who are themselves Aboriginal or Torres Strait Islander.

General practitioners are key members of the health workforce in Aboriginal and Torres Strait Islander communities. General practice vocational training activities provide one means of addressing the COAG aims. In this article, we review the history of general practice vocational training in Aboriginal and Torres Strait Islander health, identify current initiatives and recommend future approaches.

The history of vocational training in Aboriginal and Torres Strait Islander health

The first call for improved training of health professionals in Aboriginal and Torres Strait Islander health came from the National Aboriginal Health Strategy (NAHS) in 1989. This was echoed in subsequent reports. The organisations and processes involved in development of general practice curricula in Aboriginal and Torres Strait Islander health training are described in Box 1.

The colleges’ curricula were developed in partnership with the National Aboriginal Community Controlled Health Organisation (NACCHO). For the Royal Australian College of General Practitioners (RACGP), this partnership was enacted through a Joint Consultative Committee between the RACGP and NACCHO. In 1997, the RACGP became the first Australian medical college to mandate training in Aboriginal health. By 2001, the RACGP curriculum was being implemented in every state and territory except Tasmania. In 2007, when the Australian College of Rural and Remote Medicine (ACRRM) was accredited by the Australian Medical Council, Aboriginal and Torres Strait Islander health training was also mandated for registrars training for the ACRRM Fellowship.

In 2001, responsibility for delivery of general practice vocational training moved from the RACGP to General Practice Education and Training (GPET), which contracts with regional training providers (RTPs) to deliver training. Cultural and medical educators delivering the RACGP Aboriginal health curriculum were concerned that gains made might be lost as new RTPs struggled to deliver an all-encompassing general practice curriculum. GPET responded by establishing an Aboriginal and Torres Strait Islander Health Training Reference Group to oversee development and implementation of a Framework for General Practice Training in Aboriginal and Torres Strait Islander Health. Following endorsement of the Framework by the GPET Board in 2003, RTPs were required to deliver training in accordance with the GPET Framework.

GPET employed an Indigenous Program Officer and an Indigenous Health Education Consultant to support RTPs implementing the recommendations of the Framework, and funded training advisor positions in each state and territory NACCHO affiliate to improve collaboration between RTPs and Aboriginal community controlled health services (ACCHSs). Cultural and medical educators working with RTPs were supported to attend annual workshops providing opportunities for networking and sharing training approaches.

In parallel with the development of the GPET Framework, the Committee of Deans of Australian Medical Schools (now part of Medical Deans Australia and New Zealand) developed a framework requiring inclusion of Aboriginal and Torres Strait Islander health in medical curricula. Also at this time, the Australian Government Department of Health and Ageing formalised a previous agreement with the RACGP, allowing health services employing GP registrars in Aboriginal and Torres Strait Islander health training positions to obtain reimbursement of their salaries while also billing Medicare for registrar-incurred general practice items. This addressed NACCHO’s concerns about the financial viability of general practice training in ACCHSs.

Thus, RTPs were required and supported to deliver training in accordance with the GPET Framework, in conformity with the RACGP and ACRRM curricula. This training would build on learning required in Australian medical schools, and be developed and delivered in partnership with Aboriginal and Torres Strait Islander people and organisations. Critically, Aboriginal and Torres Strait Islander health training posts (84% of these in ACCHSs by 2005) were supported financially to provide training.
Innovative approaches to training were supported. One example in the Kimberley region provided a vertically integrated training model, including a medical educator who was employed by the regional ACCHS organisation. This model provided high-quality training for many registrars, some of whom returned as GPs (personal communication, Associate Professor David Atkinson, Medical Educator, Kimberley Aboriginal Medical Services Council, Broome, WA).

The GPET Framework was based on best evidence available at the time and informed by consultations with a wide range of stakeholders. Evaluations of the implementation of the GPET Framework in 2005 and 2008 reported an increase in Aboriginal and Torres Strait Islander training placements undertaken since the Framework was introduced, although variation was noted in RTP implementation of the Framework. The later evaluation noted that not only was the consultation informing its development of value, but the very existence of such a Framework was of benefit.

Both reports recommended enhanced recruitment and support of Aboriginal and Torres Strait Islander educators and mentors and improved processes for tracking training and related outcomes. The Framework is currently being updated.

**Current status**

In 2008, the GPET Board endorsed the recommendations of the evaluation of the Framework and has implemented many of those recommendations. Board and organisational responses have included:

- appointment of a NACCHO representative to the Board of Directors and provision of cultural awareness training for the Board and executive;
- increased staff allocation to Aboriginal and Torres Strait Islander health training including the establishment of a full-time Aboriginal- and/or Torres Strait Islander-identified position;
- revision of terms of reference and representative structure of the (now) GPET Aboriginal and Torres Strait Islander Health Training Advisory Group;
- continuation of the Aboriginal and Torres Strait Islander salary reimbursement program with trial of a regionalised model of reimbursement; and
- improvement of data collection systems to enable GPET to track progress in Aboriginal and Torres Strait Islander health training.

RTPs have worked with NACCHO affiliate-based training advisors to recruit and support new Aboriginal and Torres Strait Islander training posts. The number of registrars undertaking training in these posts continues to increase (Box 2). Funding through the COAG “Close the Gap” agreement will provide additional Aboriginal and Torres Strait Islander health training positions.

GP registrars have led two key recent initiatives. With Aboriginal and Torres Strait Islander health addressed in the core curriculum of both the RACGP and ACRRM, registrars demanded that assessment reflect this. Both colleges now regularly include assessment of Aboriginal and Torres Strait Islander health learning outcomes in their Fellowship examinations. More recently, GPET has supported

### 1 Timeline for general practice curriculum development in Aboriginal and Torres Strait Islander health

<table>
<thead>
<tr>
<th>Date</th>
<th>Organisations</th>
<th>Action</th>
<th>Outcome</th>
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<tbody>
<tr>
<td>1989</td>
<td>National Aboriginal Health Strategy Working Party</td>
<td>Recommended improved training of health professionals working in Aboriginal and Torres Strait Islander communities</td>
<td>National Aboriginal Health Strategy agreed and published4</td>
</tr>
<tr>
<td>1991</td>
<td>First National Rural Health Conference</td>
<td>An Aboriginal and Torres Strait Islander health curriculum design committee was subsequently formed, including representation from NACCHO, Aboriginal community controlled health services, the Rural Doctors Association of Australia, Queensland Health and the CRANA</td>
<td>Agreed curriculum development process with oversight by a steering committee with majority NACCHO representation and representation from the RACGP Rural Faculty, the CRANA and the ARDTA7</td>
</tr>
<tr>
<td>1994</td>
<td>NACCHO, RACGP Rural Faculty, CRANA and ARDTA</td>
<td>Curriculum Design Project (funding provided through a Rural Health Support, Education and Training program grant)</td>
<td>Final Position Paper endorsed by RACGP and NACCHO, RACGP–NACCHO Joint Consultative Committee tasked to oversee implementation</td>
</tr>
<tr>
<td>1997</td>
<td>NACCHO and RACGP</td>
<td>Development of RACGP Aboriginal and Torres Strait Islander Health Curriculum and RACGP Training Program Aboriginal Health Training Module10</td>
<td>Training in Aboriginal and Torres Strait Islander health mandated for all RACGP general practice trainees</td>
</tr>
<tr>
<td>1997–2006</td>
<td>ACRRM</td>
<td>Development of ACRRM Primary Curriculum including domain in Aboriginal and Torres Strait Islander health11</td>
<td>With Australian Medical Council accreditation in 2006, training in Aboriginal and Torres Strait Islander health was mandated for the ACRRM Fellowship</td>
</tr>
</tbody>
</table>

ACRRM = Australian College of Rural and Remote Medicine. ARDTA = Australian Rural Doctor Trainees’ Association. CRANA = Council of Remote Area Nurses of Australia. NACCHO = National Aboriginal Community Controlled Health Organisation. RACGP = Royal Australian College of General Practitioners.

### 2 General practitioner registrar training in Aboriginal and Torres Strait Islander health posts18

![Graph showing general practitioner registrar training in Aboriginal and Torres Strait Islander health posts](#)
Aboriginal and Torres Strait Islander registrars to meet regularly. In response to their recommendations, an Indigenous registrar liaison officer position is to be established.17

GPET, RTPs and the Aboriginal and Torres Strait Islander educators, organisations and communities with whom they work have achieved many targets of the original Framework. Others remain to be substantially addressed.15 It is timely to review the literature to determine what new evidence has emerged for approaches taken to date, and what new approaches may be relevant in the future.

Evidence for training approaches

A recent review of cultural competency training highlighted the need for:
• organisational commitment, including development of a cultural competence training policy;
• maintenance of partnerships to enable development, implementation and evaluation of training;
• clear description of the purpose, goals and learning objectives for training;
• needs assessment before training and ongoing evaluation; and
• use of self-directed learning resources, workshops, field visits and cultural immersion, and mentoring and follow-up activities.19

Organisational approaches highlighted in the review are similar to those being implemented in accordance with the GPET Framework. The colleges’ curricula provide descriptions of the purpose, goals and learning objectives for training.9,11 The development of resources and learning approaches specific to general practice vocational training has been addressed to varying extents across RTPs. National resource development, such as a learning guide that is adaptable to different local contexts, would help RTPs deliver the colleges’ curricula.

Content areas for such a guide could include those identified for orientation of GP registrars working in remote Aboriginal communities,20 such as communication skills and cultural safety training, population health, personal and professional role delineation and self-care, and consideration of organisational issues.

The need for recognition and support of the role played by Aboriginal health workers in mentoring non-Indigenous health workers has been highlighted by those engaged in general practice training.21 A study identified barriers and facilitators for Aboriginal and Torres Strait Islander community members in taking on roles as educators and mentors.22 Community members reported being motivated by a desire to “break down the barriers between Indigenous and non-Indigenous people” and to provide a role model for young people.22 Teaching was noted to be difficult in the context of a lack of training, personal illness, family and community responsibilities, and the confronting nature of the subject matter. Learner ignorance and lack of interest were also noted as barriers. Community members were reported to prefer small group informal teaching approaches. Provision of teaching resources and training, as well as recognition and remuneration for teaching, were recommended.22

If, as required in the GPET Framework, these key people are to remain actively engaged in general practice vocational education, the recommendations of these studies will need to be addressed.

Recommendations for future development

Although medical schools in Australia now teach students about Aboriginal and Torres Strait Islander health, for many GPs their first substantial experience in this area occurs during vocational training. It is critical that this experience occurs in a well supported learning environment, facilitating development of skills and attitudes that promote effective work within these communities.

Evaluations of general practice vocational training indicate that Aboriginal and Torres Strait Islander health training posts provide this learning environment.15,16 However, with training numbers expected to increase, these services, like other general practice training posts, will need to expand their capacity. This will require development and resourcing of innovative teaching approaches such as vertical integration of training, if the increased numbers are not to be achieved at the cost of compromising quality of that training.23,24

RTPs will require support to develop and maintain innovative teaching approaches which can improve capacity, as well as quality of general practice training in this area. Joint college-endorsed teaching resources may be useful.

In rural and remote areas, international medical graduates, who often provide medical services in Aboriginal and Torres Strait Islander communities with minimal orientation or training, could also benefit from these teaching approaches.25

Both the NAHS5 and the Close the Gap targets3 highlight the importance of training Aboriginal and Torres Strait Islander health professionals and this is also recognised in the GPET Framework.11 Ongoing close partnership with the Australian Indigenous Doctors’ Association (AIDA) in engaging with Aboriginal and Torres Strait Islander medical students and providing support throughout their training will be critical in recruiting these doctors to general practice. Both colleges will similarly need to work with AIDA to support their retention in the workforce.

The key to success of all endeavours in this area is partnership with Aboriginal and Torres Strait Islander people and organisations. This must include support and training for cultural educators and mentors. Where general practice training in Aboriginal and Torres Strait Islander health has succeeded to date, it is when these partnerships have been well attended. They not only provide the groundwork for general practice training in Aboriginal and Torres Strait Islander health, but also build capacity in these communities through provision of training and employment.

General practice training in Aboriginal and Torres Strait Islander health is an important strategy in closing the gap, and people engaged in these activities are key contributors with Aboriginal and Torres Strait Islander peoples to changing the future.

Competing interests

Queensland Aboriginal and Islander Health Council receives funding from GPET for Mary Martin’s employment. Jennifer Reath worked as a consultant to GPET from 2002 to 2008.

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Regionalisation of general practice training — are we meeting the needs of rural Australia?

David G Campbell, Jane H Greacen, Patrick H Giddings and Lesley P Skinner

It is well recognised that, compared with metropolitan areas, rural Australia is characterised by poorer health outcomes, which are linked to poorer access to health services and undersupply of general practice workforce.1-4 Distribution of the general practice workforce was central to the deliberations of the Ministerial Review of General Practice Training.5 The Review’s 1998 report called for the establishment of a National Council for General Practice Education and Training. It proposed four options for the role of the National Council and implementation of the report’s recommendations, and ultimately the Minister adopted Option 4 of the report — a full-funding role for the proposed National Council. This was not the preferred option of the Review Committee.5

The concept of “social accountability” of medical education programs, initially defined in 1994 by the World Health Organization and the World Organization of Family Doctors,6,7 was also intrinsic to Recommendation 2 of the Review’s 1998 report, which stated that

“The Review Group recommends the development of collaborative general practice education operating at the local level, to ensure efficient delivery of high-quality general practice education through mechanisms that are responsive to community needs.”8

The Review led to the introduction of a package of reforms to general practice training, including an increased quota of available training places from 400 to 450 (from 2001); the introduction of a dedicated Rural Pathway covering Rural, Remote and Metropolitan Areas (RRMA) 4–7 locations; the introduction of a mainly urban General Pathway; and the provision of financial incentives for Rural Pathway registrars.

Central to this was the establishment of General Practice Education and Training (GPET), a government-owned company limited by guarantee, in March 2001, and the regionalised and “contestable” Australian General Practice Training (AGPT) program to be delivered by 22 regional training providers (RTPs) across Australia, in January 2002.

Training places have increased steadily since then, with the intention that the intake will increase to 1200 per year by 2014.8

The regionalised general practice training program has now been in existence for almost a decade, so it is timely to ask if the program is meeting the needs of rural Australia in terms of producing a sufficient rural general practice workforce with the necessary skills for rural practice.

Impacts to date

Rural workforce numbers

The direct impact of GP registrar numbers on the rural workforce should not be underestimated. Data from 2008 show that nationally, GP registrars comprise about 11% of the rural and remote medical workforce,3 and these doctors are a significant component of the workforce in rural practices.

ABSTRACT

- The concept of “social accountability” has underpinned the development of many medical education programs over the past decade.
- Success of the regionalisation of the general practice training program in Australia will ultimately be measured by the ability of the program to deliver a sufficient rural general practice workforce to meet the health needs of rural communities.
- Regionalisation of general practice training in Australia arose from the 1998 recommendations of the Ministerial Review of General Practice Training. The resultant competitive structure adopted by government was not the preferred option of the Review Committee, and may be a negative influence on rural workforce, as the competitive corporate structure of regional training providers has created barriers to meaningful vertical integration.
- Available data suggest that the regionalised training program is not yet providing a sustainable general practice workforce to rural Australia.
- The current increase in medical student and general practice training places provides an opportunity to address some of these issues.
- In particular, it is recommended that changes be made to registrar selection processes, the rural pipeline and vertical integration of training, and training for procedural rural practice.
- To achieve these goals, perhaps it is time for another comprehensive ministerial review of general practice training in Australia.

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However, retention is an issue — in January 2008, only 27% of previous Rural Pathway registrars were still working in rural practice (RRMA 4–7); another 29% of rural pathway graduates had worked in a rural area (RRMA 4–7) since graduating, with approximately one-third of their total services provided in rural areas.10

Rural Australia suffers from a chronic undersupply of medical practitioners. In 2008, the Rural Doctors Association of Australia estimated that there was a shortfall of 1000 doctors in rural and remote areas of Australia.11

In addition, Australia continues to rely on international medical graduates (IMGs) to support the workforce. In 2008, 41% of doctors in rural and remote areas of Australia were IMGs.10

IMGs also make up a steadily increasing proportion of GP registrars.12 In 2008, 55% of all Rural Pathway registrars were doctors subject to the 10-year moratorium (ie, either IMGs or international students who have graduated from an Australian university).12 These doctors are subject to Medicare provider number restrictions that require most of them to work for either 5...
the Rural and Remote Areas Placement Program, which was half of these placements in rural practice. (The PGPPP was built on years 1–3 to undertake rotations in general practice, with about 25% of all Commonwealth-supported places in medical practice during medical training. Under the Rural Undergraduate Support and Coordination program, all medical students in Australia after graduation, and undertaking general practice training via the Rural Pathway, which is the predominant means of access to a provider number.

In a major analysis of rural general practice workforce trends and policy drivers over the past 30 years, Rural Health Workforce Australia examined the profile of the workforce 11 years after the introduction of the Medicare Provider Number Legislation. This analysis shows that the number of Australian-trained general practitioners in rural and remote Australia has risen from 4086 in 1995–96 to 4514 in 2006–07 — an increase of 10.5%. However, analysis of the GP registrar cohort shows that a significant number of international fee-paying Australian graduates are staying on in Australia after graduation, and undertaking general practice training on the Rural Pathway.

The Rural Health Workforce Australia paper concluded that: “If these trends continue there is reason to believe that IMGs and international Australian graduates will comprise the bulk of new additions to the rural and remote workforce.”

This analysis should be considered within the broader context of other national programs designed to encourage exposure to rural practice during medical training. Under the Rural Undergraduate Support and Coordination program, all medical students in Australia undertake a 4-week placement in rural communities. In addition, under the Rural Clinical Schools program, from 2005 onwards, 25% of all Commonwealth-supported places in medical schools (ie, “domestic” students) spend at least 1 year in a rural clinical placement. For example, of the 1904 domestic graduates from Australian medical schools in 2009, at least 476 had spent a year or more in a rural placement during their clinical training.

In addition, the Prevocational General Practice Placements Program (PGPPP) provides opportunities for doctors in postgraduate years 1–3 to undertake rotations in general practice, with about half of these placements in rural practice. (The PGPPP was built on the Rural and Remote Areas Placement Program, which was designed to provide rural placement opportunities for doctors in the prevocational years.) In 2010, 948 junior doctors rotated through the PGPPP program.14

Skills required for rural practice
Rural general practice is characterised by a broader scope of practice than metropolitan practice, and by more engagement with procedural and hospital practice. An advanced or special skills training post as part of registrar training is a required component of the Australian College of Rural and Remote Medicine (ACRRM) program, and an optional addition to the Royal Australian College of General Practitioners (RACGP) program. Unfortunately, in the past 5 years, there has been an annual mean of only 21 registrars undertaking anesthetics training, and 42 undertaking obstetrics and gynaecology training (Box).

There has been a significant reduction in the number of acute care health services in rural Australia over the past 30 years, with a concurrent decline in numbers of rural procedural GPs. Between 2002 and 2008, there was a decline in the proportion of rural practitioners providing procedural services from 24% to 20%. As a consequence, rural residents need to travel greater distances than previously to access medical care, including maternity services, surgery, anesthetics and acute inpatient hospital care.

Thus, available data suggest that a decade after its inception, the regionalised general practice training program has not yet begun to meet the needs of rural Australia, in terms of a sustainable general practice workforce and the range of services required by rural communities.

Recommendations
We believe that the following changes to the regionalised AGPT program will ensure that RTPs take maximum opportunity of the significant increase in Australian medical graduates over the next few years:8
• AGPT selection processes and policies should meet evidence-based criteria, and should be designed to ensure recruitment of doctors with an interest in a rural career.
• RTPs need to ensure that their vocational training programs are part of a training continuum involving rural-origin medical students, rural medical undergraduate programs and rural prevocational training programs (the “rural pipeline”).
• The current vocational training structure must provide appropriate training pathways that equip graduates with the skills for rural practice, especially “rural generalist” and procedural practice.

Selection into the Australian General Practice Training program
Current policy on selection into the AGPT program may be having a negative impact on rural workforce. Research over many decades has shown that the most consistent indicator of choice of a rural career is rural origin. There has been no explicit policy within the AGPT program to ensure that an adequate proportion of entrants are of rural origin.

In Australian medical education, selection of the “best” available applicants has not necessarily supported the rural medical workforce. Government was obliged to introduce a requirement for medical schools in Australia to recruit at least 25% of their intake from rural-origin students. In acknowledgement of the lower level
of academic opportunity in many rural communities to support entry into medical school, the rural entrant score was lowered.\(^{19}\)

The competitive selection of the “best” applicants into general practice training, without any specific requirement to select for “rural intent”, will have a similar negative impact on rural workforce.

In Victoria and New South Wales, changes have been made to the selection process for 2011, with rurally based RTPs able to select partially on the basis of a “connection to rural” with individual applicants. This needs to be expanded nationally to ensure a significant intake of rural-origin applicants and graduates of rural clinical schools.

**Structural effects — the rural pipeline and collaboration in medical education**

Opportunities for doctors to undertake most of their medical training in rural environments is often referred to as the rural pipeline.\(^{20,21}\)

Five key points along the pipeline are:

- the formation of career aspirations during the school years;
- medical school admission procedures;
- exposure during medical school and during residency training to rural clinical practice;
- a curriculum oriented to rural health delivery; and
- a system of educational and professional support for practising rural doctors.

RTPs in Australia are required to demonstrate engagement with other levels of medical education to support integrated training for medical practice.\(^{22}\)

The competitive structure of the AGPT program involving individual corporate entities within fixed geographical boundaries is not directed toward achieving such outcomes. This competitive environment is focused on encouraging RTPs to directly deliver the “core business” of general practice training within a fixed budget, without meaningful effort to integrate with other levels of medical education.

To contribute to the rural pipeline, RTPs must develop shared programs and activities with rural clinical schools, rural medical schools and local hospitals. Examples include practice support, accreditation of training posts, joint training arrangements, and professional development support for hospital- and community-based supervisors and teachers. This engagement will have a positive impact on selection into the program and the nature of training provided.

RTPs now also have responsibility for the PGPPP. This provides rural RTPs with a significant opportunity to collaborate with regional and rural hospitals to develop effective local models of procedural training, as part of the rural pipeline, to enable rural clinical school graduates to continue their training in a rural environment.

Regionalisation of the national program should not be deemed to be successful until the vast majority of RTPs are engaged in meaningful vertical integration of medical education.

**Appropriate training pathways**

The AGPT program apprenticeship model of training has focused mainly on the community practice environment, with less attention to hospital-based training.\(^{23}\) Many registrars are credited with a year of recognition of prior learning on joining the AGPT program, if they have completed an accredited year of hospital training before joining the program. It is possible for a registrar to complete their training without further exposure to a hospital environment. This does not prepare them for rural medical practice.

The relatively small number of registrars undertaking procedural skills training needs to be addressed.

With an increase in the numbers of trainees, there is the opportunity to increase the amount of training undertaken in rural hospitals, in both general rotations and posts specifically accredited for procedural training, including joint community–hospital procedural posts.

A feature of the development of rural clinical schools since 2005 has been strong engagement with rural and regional hospitals, as well as the establishment of clinical academic leadership and academic infrastructure for teaching procedural skills. Rural clinical schools, RTPs and rural hospitals need to work in partnership to increase the number of procedural training positions in rural and regional Australia.

The introduction of the Rural Pathway within the AGPT program was designed to ensure an adequate proportion of entrants undergo training in rural areas. Since the ACRRMs initial accreditation by the Australian Medical Council in February 2007, registrars have had a choice between the RACGP training program and the ACRRM pathway. The ACRRM Vocational Preparation Pathway was designed to prepare GPs specifically for rural practice, with a fully integrated rural preparation curriculum. Some RTPs have been slow to accept and promote the ACRRM pathway to registrars. Only 45 of the more than 600 entrants to the AGPT program in 2009 identified themselves as ACRRM pathway registrars.\(^{24}\)

The Rural Generalist Pathway in Queensland has been successful in attracting junior doctors with an interest in rural procedural practice.\(^{25}\) This program encompasses four of the five key components of the rural pipeline discussed above, and is specifically designed to train participants in the skills required for rural procedural practice. The Rural Generalist Pathway is being considered by other states, and has recently been reviewed by the Australian Government as a solution to rural workforce requirements.\(^{26}\) RTPs and rural clinical schools need to embrace this program as a key workforce strategy, with appropriate modification to fit the procedural workforce models of relevant jurisdictions.

**Conclusion**

It is clear from currently available data that the regionalised AGPT program is not meeting the general practice workforce needs of rural Australia. The development of RTPs has been marked by a significant focus on establishment of corporate structures, appropriate governance and financial responsibility. This focus has perhaps been at the expense of workforce outcomes. It is interesting that the establishment of regionalised training was not accompanied by a comprehensive prospective evaluation of the process.

It is therefore recommended that the program develops a more strategic workforce focus, including adoption of trainee selection policies based on evidence for workforce outcomes.

RTPs are now well established entities, and need to use their solid foundation to become more outward-looking and collaborative. Rural RTPs have a responsibility to meet the general practice workforce requirements of their communities. This requires engagement with the other elements of the rural pipeline, and ensuring they provide rurally orientated and, in particular, pro-
Cedurally orientated programs of vocational training for generalist practice.

It is recommended that a comprehensive review of general practice training in Australia be undertaken. This review should make recommendations specifically around the performance of RTPs to deliver rural workforce outcomes, with a view to ensuring that the increased number of medical graduates over the next few years leads to appropriate and sustainable distribution of Australia’s general practice workforce.

Competing interests
David Campbell and Patrick Giddings are on the Board of the Australian College of Rural and Remote Medicine. Patrick Giddings is the Chief Executive Officer of the Remote Vocational Training Scheme.

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Vertical integration of teaching and clinical training in Australian general practice has been the topic of reviews and several recent articles. In the international literature, vertical integration often relates to undergraduate medical curricula. However, an accepted definition in Australia is “the coordinated, purposeful, planned system of linkages and activities in the delivery of education and training throughout the continuum of the learner's stages of medical education”.

Although vertical integration is not new in the hospital teaching environment, it has not been part of teaching and training in Australian general practice and its implementation will require a large shift by organisations and practices. Opportunities for vertical integration can be identified in various contexts within the vocational education and training continuum:

- Within a general practice, it occurs when general practitioner supervisors are responsible for in-house training of medical students, Prevocational General Practice Placements Program (PGPPP) doctors, GP registrars, international medical graduates and new GP supervisors. Here, various integrated teaching opportunities between all learners can arise.
- At a local level, students, PGPPP doctors, GP registrars and supervisors can be involved in training workshops together.
- At regional and state levels, where universities and/or regional training providers (RTPs) coordinate placements, linkages and support across a region can help make the most of infrastructure, learning opportunities, and supervisor support and leadership.

Several issues have prompted interest in vertical integration in Australian general practice, including:

- Increased medical student intake across universities and subsequent demand for community placements.
- Interest from state health departments in general practice as a place to train junior medical officers corresponding with the shift of chronic disease management to the community.
- Federal funding for PGPPP posts — it is thought that PGPPP encourages doctors to consider general practice as a career.
- Provision of high-quality training in education for practitioners at all levels of experience, from prevocational medical officers to specialist GPs.
- Greater work satisfaction for GPs who work as educators.

The benefits of vertical integration can include:

- Providing trainees at all levels with experience in teaching — “teaching how to teach” transcends all levels of training, therefore this is an efficient use of education resources.
- To be able to teach requires a revision of one's own knowledge — therefore, this is a very useful exercise in continuing professional development for registrars and specialists.
- Development of intraprofessional communication skills at all levels.

In 2004, General Practice Education and Training released a vertical integration framework for regional training and education providers. The Framework sought to guide and aid vertical integration initiatives in the vocational training sector. It was also intended to be “used in contract arrangements and resource allocation” and was expected to evolve and be evaluated over time. Six years after its release, it is therefore timely to:

- assess what progress has been made in developing structures to support vertical integration;
- summarise the depth and breadth of initiatives across Australia, noting that, to date, only individual projects have been described in conferences and as case studies in some published articles; and
- assess the extent to which these structures and initiatives are sustainable.

**Method**

All 17 RTPs in Australia were contacted in mid 2010 and asked:

- Is vertical teaching happening in your organisation or among doctors being trained by your organisation?
- Who is teaching whom? For example, advanced registrars teaching PGPPP doctors, or basic-term registrars teaching medical students.

We also contacted several rural clinical schools, departments of general practice and members of the Royal Australian College of General Practitioners (RACGP) Council to identify any initiatives that may not have been known to the RTPs. Telephone calls were followed up with emails and information entered into a database. Two of us (NPS and OF) reviewed the database and independently determined categories for all the activities listed. We then met and compared our categorisations and resolved differences by discussion. Limited quantitative analysis was undertaken because we did not ask the RTPs how many practices, supervisors, registrars, PGPPP doctors or students were involved in vertical integration.

After categorising the types of vertical integration activities being undertaken, we asked three RTPs to provide case studies to highlight innovative examples of vertical integration across Australia.
The placement of PGPPP doctors into training practices had been a concept that could be adopted by other RTPs. The first illustrates how the different from supervisor training, but they valued both equally. Also said that students recognised that registrar teaching was structured support to achieve good educational outcomes. It was transvers were not always willing or able to teach and needed access to PGPPP doctors. There was acknowledgement that registrars would become more widespread when practices in their area had integration capacity. Two RTPs commented that vertical integration of general practice education and training are summarised in Box 1. We received responses from all 17 RTPs (100%). We quantified what level of vertical integration each RTP had achieved and categorised examples of vertical integration by how formal or informal they were.

Based on their responses, six RTPs were not involved with vertical integration activities in their area, two were starting to encourage vertical integration, four were aware of vertical integration occurring in some practices (with these practices often using quite advanced models), two RTPs had developed vertical integration to a stage where they were evaluating their programs, and three were collaborating or significantly engaged with universities or rural clinical schools in supporting vertical integration models. These RTPs had incorporated vertical integration into the structure of their training. For example, one university in South Australia sends medical students to a country area where they can subsequently undertake intern, PGPPP and finally GP registrar training without moving and thus benefit from, and contribute to, vertically integrated teaching. Other current examples of vertical integration of general practice education and training are summarised in Box 1.

Some RTPs had sought additional funds to increase vertical integration capacity. Two RTPs commented that vertical integration would become more widespread when practices in their area had access to PGPPP doctors. There was acknowledgement that registrars were not always willing or able to teach and needed structured support to achieve good educational outcomes. It was also said that students recognised that registrar teaching was different from supervisor training, but they valued both equally.

The case studies highlighted three aspects of vertical integration that could be adopted by other RTPs. The first illustrates how the placement of PGPPP doctors into training practices had been a catalyst for vertical integration (Box 2). The second shows how contractual arrangements between an RTP and a university facilitated the integration of vertical integration into their training program (Box 3). The third highlights how training in rural and remote Australia was not a barrier to the development of a vertical integration model (Box 4).

Results
We have identified that many RTPs in Australia are adopting vertical integration of general practice education and training. Many encourage practices that take registrars, PGPPP doctors and medical students to foster vertical integration of teaching, but this is not part of a formal program. Some RTPs have incorporated the concept of vertical integration into the structure of their training. RTPs with close associations with universities and rural clinical schools are leading these initiatives.

Teaching is a part of RACGP and ACRRM curriculum for registrars, so although registrars may have variable interest in teaching students, it is considered by both colleges to be a key part of general practice professionalism. This does not, however, mean that all registrars will make good and enthusiastic teachers; this may partly explain why RTPs in our survey reported variability in the uptake of registrars teaching students. In hospitals, there has been the general expectation that registrars in training will teach junior doctors and students attached to their specialty area, but these registrars are rarely given formal training in teaching. To be effective teachers, GP registrars will need to recognise their own strengths and weaknesses, receive training and be given support by their GP supervisors. Supervisors will have to remain responsible for oversight of the curricula and ensure students have appropriate clinical support.

### 1 Summary of examples of vertical integration of general practice education and training in RTPs in Australia

<table>
<thead>
<tr>
<th>Informal structure</th>
<th>Formal structure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approach to vertical integration</strong></td>
<td><strong>Integration of teaching across all levels</strong></td>
</tr>
<tr>
<td>General support and encouragement for vertical integration</td>
<td></td>
</tr>
<tr>
<td><strong>Type of training undertaken</strong></td>
<td><strong>Academic registrars are trained to teach medical students in universities (eg, clinical skills and problem-based learning)</strong></td>
</tr>
<tr>
<td>Registrars are exposed to a variety of teaching methods and taught basic skills</td>
<td>Registrars attend teacher training run by RTPs (“teaching on the run”; “skilled teacher program”)</td>
</tr>
<tr>
<td><strong>Practical examples</strong></td>
<td>Payments for registrars to teach others in a practice or sessions at training program offices</td>
</tr>
<tr>
<td>Registrars teach PGPPP doctors and medical students (eg, ad-hoc advice, tutorials or informal supervision)</td>
<td>Coordinated placements and formal arrangements for vertically integrated teaching from registrar to PGPPP doctor to students</td>
</tr>
<tr>
<td>Overseas-trained doctors, PGPPP doctors and medical students are encouraged to attend educational release days for registrars</td>
<td>Infrastructure support for vertical integration of teaching</td>
</tr>
<tr>
<td><strong>Integration of teaching across all levels</strong></td>
<td>Regular joint teaching sessions that accommodate the different curricula of students, PGPPP doctors and registrars</td>
</tr>
<tr>
<td><strong>General support and encouragement</strong></td>
<td>Medical educators, supervisors and registrars deliver seminars in junior medical officer education program</td>
</tr>
<tr>
<td></td>
<td>General practice grand rounds with supervisor registrar and student input</td>
</tr>
<tr>
<td></td>
<td>Journal clubs run by registrars</td>
</tr>
<tr>
<td></td>
<td>Advanced registrars involved in the General Practice Students Network or the First Wave Scholarship Program</td>
</tr>
</tbody>
</table>

PGPPP = Prevocational General Practice Placements Program. RTP = regional training program.
To foster vertical integration of teaching, we believe that strong and clear communication must be established between the RTPs and local tertiary institutions, followed by clear communication with individual general practices and GP educators. This is essential to ensure that the curricula are covered to the satisfaction of both bodies. Integrated educational events, for instance, can be very challenging for GP educators who are expected to simultaneously meet the needs of different learners and organisations if curricula are not aligned.

Although from our limited survey it was apparent that RTPs with close associations with universities had been successful at adopting vertical integration, it must be recognised that the current system of funding and tender can actually work against integration because it can create competition between universities, RTPs and Divisions of General Practice. In our survey, we noted that where RTPs and universities had contractual arrangements (ie, Australian National University/CCCT [Box 2] and NTGPE [Box 3]), there appeared to be good integration across all levels of educational delivery and structural support, as judged by the depth and breadth of their vertical integration program.

Our survey had some limitations. Although we contacted all RTPs, the replies may not necessarily have been from staff with comprehensive knowledge of all past and present educational initiatives. To mitigate this problem we contacted other providers of medical education. Secondly, we relied on self-report and did not verify that the initiatives or programs existed; however, given the nature of the information being requested this seemed unnecessary. Finally, we did not quantify the number of activities or how effective those activities were. Such a survey would require more resources than were available and would have been a greater burden on RTPs to compile. We were only made aware of two RTPs that were formally evaluating their vertical integration initiatives. However, we believe that our survey is a guide to the depth and breadth of vertical integration activities currently being undertaken in Australia.

Further development of vertical integration of teaching and training would provide an opportunity for general practice to position itself as a leader in medical education for medical students. This could also be extended to include multidisciplinary teaching in large practices, with a variety of allied health professionals (“horizontal integration”), but this would require greater resources and further study to determine its viability. In both of these scenarios, there is clearly a need for improved practice infrastructure, educational support and a strong ethos for teaching among the general practice community with a focus on training in education. RTPs and universities can foster this training but there must be highly skilled and motivated specialist GPs leading such developments in the community. There is a small but growing number of GPs who are taking the initiative to upskill in teaching and training, but a formalised program to help GPs meet the
educational needs of the future should be implemented. This should happen soon, because there is a “medical student tsunami” just around the corner.9

Acknowledgements
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Competing interests
Nigel Stocks is a board member of the Adelaide to Outback RTP.

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References

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Training Australian Defence Force Medical Officers to civilian general practice training standards — reflections on military medicine and its links to general practice education and training

Scott J Kitchener, Elizabeth Rushbrook, Leonard Brennan and Stephen Davis

Military medicine has been an area of change over the 10 years of the Australian General Practice Training (AGPT) program. Recent conflicts in Timor Leste and Afghanistan and disaster responses in Pakistan and Indonesia have focused attention and recognition on the importance of primary health care in the work of the Australian Defence Force (ADF).

The goal of the AGPT program is to produce competent, confident practitioners able to practise in a variety of settings, including rural and remote areas. Similarly, the ADF trains doctors to become competent, confident, independently deployable Medical Officers who have completed all military and military health training requirements and the civilian standards of primary health care specialisation. Primary health care training uses the AGPT program delivered by federally funded regional training providers (RTPs).

The AGPT guidelines accommodate variations to the program for ADF registrars. However, despite a training-rich environment and employer policies encouraging training of this selected group of doctors, many ADF registrars still encounter difficulties progressing through the AGPT compared with civilian registrars.

This article examines the links of military medicine to civilian general practice education and training, drawing attention to the variations and difficulties in, and successful approaches for, training ADF Medical Officers, to distil some suggestions for improvement.

Progression to an independently deployable military Medical Officer

Although final decisions on Medical Officer career management lie with single services (the Royal Australian Navy, the Australian Army and Royal Australian Air Force), the ADF Medical Officer Career and Salary Structure (MOCSS) provides a common framework and salary structure. Reviewed in April and May 2010, the MOCSS now includes four competency levels, referred to as Medical Levels (ML1–4), from registered medical officer without military or civilian specialist qualifications to fully trained specialist. MOCSS applies to Medical Officers receiving their Commission after 31 July 2003.

For doctors entering ADF service after sponsorship through their medical degree, the third postgraduate year is usually the first year of full-time uniformed service. Introductory military officer and military medical training occurs during this year. It is also the year that the most intensive practice-based teaching would normally occur in the (civilian) general practice training programs. At the same time, the new Medical Officers must make the transition from hospital-based civilian practice to military primary care practice, and adapt to military life.

To reach ML1, a Medical Officer must have completed a medical degree, hospital internship and residency years and have unconditional registration in Australia. Proximal supervision is provided during ML1. To progress beyond ML1, a minimum of 3 months of supervised clinical training in a civilian general practice placement is required. To progress to ML2 (deployable with supervision), Medical Officers must also complete initial officer training specific to their service, in which they are introduced to the distinct cultures of the Navy, Army or Air Force. This is a valuable introduction to networks of colleagues, administrative processes and, for many doctors, the first exposure to leadership and management.

Survival training, ship’s damage control, firefighting and weapons training are not only essential skills of the military, but also provide insights into the environmental and occupational health of the working environment.

Medical Officers are also expected to enter a postgraduate training program. Although specialty training in primary health care is encouraged, some Medical Officers elect to pursue training in other specialties such as public health, medical administration or occupational medicine.

To become a deployable Medical Officer (ML3), further military and military health training and completion of a specialist training program in either the Royal Australian College of General Practitioners or the Australian College of Rural and Remote Medicine is required. Both colleges have standards, operating policies and requirements of registrars, and each college program is supported by a curriculum.

Although these programs may be undertaken independently by Medical Officers, the AGPT program makes positions available for ADF registrars. The AGPT has guidelines defining the requirements of the registrar training program, which make specific accommodation for ADF registrars.
Medical Officers who successfully progress to other recognised specialty qualifications are classified as ML4.

Military medical training has some tri-service and some service-specific training requirements. All services expect completion and maintenance of the Emergency Management of Severe Trauma (EMST) course. Aeromedical evacuation (AME) is a feature of military medicine — all Navy and Army Medical Officers receive training in rotary-wing AME. Air Force Medical Officers are trained in both rotary- and fixed-wing AME. Navy Medical Officers are trained in underwater and decompression medicine. Army Medical Officers complete the Regimental Medical Officers Introductory Course and the Logistic Officers Basic Course, both of which build knowledge of operational field health support. Air Force Medical Officers are required to complete aviation medicine training and an Operational Health Support Course. These courses draw on the expertise and experience that ADF health services have demonstrated regularly in the past two decades of peacemaking, peacekeeping, disaster relief and warlike operations. They are not only rich and unique training experiences, but are necessary to prepare ADF Medical Officers for military practice.

Current training models in Australian Defence Force health facilities

To accommodate military and military health training and civilian medical training requirements during their first year of uniformed service, doctors are posted to one of a limited number of military health facilities. These facilities generally provide both military and clinical supervision to facilitate transition from civilian hospital practice to military practice.

Navy Medical Officers typically are posted to a Sydney or Perth facility supporting Navy members to progress through ML1. Once at ML2, Navy Medical Officers will post to the Fleet, usually for a 2-year posting, during which they will serve about 7 months a year at sea.

Army ML1 Medical Officers are generally posted to the 1st or 2nd Health Support Battalions in Sydney and Brisbane, respectively, or to Lavarrack or Robertson Barracks Medical Centres in Townsville and Darwin, respectively. All these facilities are accredited as composite posts to deliver the AGPT program with releases to suitably accredited civilian general practices. These military facilities include “satellite” clinics of Regimental Aid Posts, which are like general practices supporting individual battalions on the base. After reaching ML2, Medical Officers are likely to be posted to a field unit, such as an infantry battalion, and may undertake specific preparation for deployment with this unit. Alternatively, they may be deployed to a health support battalion.

Air Force ML1 Medical Officers are usually posted initially to larger medical facilities near Brisbane, Sydney, Newcastle or Adelaide for 2 years before being posted to smaller facilities. These postings are also accredited for AGPT training in a composite arrangement with suitable civilian practice. Typically progressing to ML2 after the first year of uniformed service, Air Force Medical Officers are considered deployable in support of flying operations and may be deployed on operations, exercises or AME missions for up to 8 months in the next 2 years, which can affect AGPT training requirements. Posting to remote flying bases, for example Royal Australian Air Force Tindal, Northern Territory, presents difficulties in maintaining suitable civilian and ADF clinical supervisors.

Difficulties and variations

ADF Medical Officers experience some unique challenges during their AGPT experience as a result of their work environment and circumstances, including:

- consistency and continuity issues around learning plans, clinical experience and placement approvals;
- variable supervised primary care experience;
- lack of supervisors and supervision; and
- limited specific RTP workshop opportunities.

Consistency and continuity issues

Registrars typically join the AGPT in their first or second postgraduate year. They are required to nominate and be selected by an RTP by June of that year. Later in their second postgraduate year, Medical Officers will receive a military posting for their first uniformed year of service. They will be posted again 2 or 3 years later. Consequently, ADF registrars need to change RTPs even before they begin the AGPT program and, commonly, at least once during the program. The AGPT guidelines accommodate these postings. However, with 17 RTPs in Australia, ADF registrars have experienced lack of continuity in learning plans and inconsistent recognition of military courses, exercises, deployments or placements from RTPs.

Learning plans are constructed for all AGPT registrars in collaboration with their supervisors and medical educators to meet individual learning needs. Supervisors working in ADF health facilities are often able to reconcile civilian and military primary care learning needs, but few RTPs have medical educators who are able to provide balanced civilian and military guidance based on experience and competency in both environments. Although ADF health training of Medical Officers provides exceptional clinical training opportunities, these are often unfamiliar to RTP medical educators who have not practised in the military. Without being familiar with the vocational end point or the military clinical environment, it is difficult for civilian medical educators to guide ADF registrars or their learning needs. Consequently, ADF registrars report receiving military health training not approved for inclusion in their training and inconsistency between RTPs regarding training approvals.

Approval of deployments and exercises for training has varied for ADF registrars. Prospective accreditation for training of these experiences is sometimes difficult to obtain through the RTP and college, with a limited time for the approval process even though deployments and exercises are defined by operational orders that detail the nature of required health support and the supervisory arrangement for Medical Officers. Medical educators at RTPs and college censors without military experience have limited opportunity to develop an understanding of ADF clinical experiences and placements, particularly in relation to deployments and exercises, so are often not equipped to assess the placement.

Managing variable supervised primary care experience

To progress to ML2, Medical Officers must complete 6 months of supervised primary care in an appropriate civilian setting, preferably including 3 months of supervised general practice in an accredited practice. Some ADF registrars arrive at their first uniformed posting with this experience from the Pre-vocational General Practice Placements Program (PGPPP). The PGPPP is funded by the Australian Government Department of Health and...
Effect on the progress of Australian Defence Force registrars

The difficulties, variations and challenges above have been identified from anecdotes provided by ADF registrars. However, do these issues translate into demonstrable delays for ADF registrars in passage through their general practice training? General Practice Education and Training (GPET), which administers the AGPT program for the Australian Government Department of Health and Ageing, has provided data regarding ADF registrars compared with other registrars in the program.

ADF registrars are a small proportion of the AGPT cohort (Box 1). The number of ADF registrars increased steadily from 14 in 2002 before stabilising at over 80 for the past 4 years, possibly reflecting the implementation in 2003 of MOCSS. The proportion of ADF registrars as a percentage of the total registrar cohort peaked in 2007, followed by a small but noticeable decline and falling enrolment. In 2009, ADF registrars did not fill the recruitment quota available into AGPT of 25 places.

The ADF withdrawal rate has been less than or equal to the civilian rate in all years except 2008, which coincided with the peak in Medical Officer support deployed to operations in Iraq and Afghanistan.

The sample size of ADF registrars successfully completing the AGPT program is small (Box 1). Nevertheless, analysis of the 2010 ADF registrars data (Box 2) indicates that it does take longer for ADF registrars to achieve Fellowship. The mean difference in duration is statistically significant ($P<0.05$).

Discussion

Military medicine training in Australia requires completion of a complex array of military, military health and civilian primary health care training programs that are conducted concurrently.

The essential challenges for ADF Medical Officers entering Medical Officer training are:

- meeting the training requirements of two unfamiliar systems with variable support from their ADF and civilian advisors who often struggle to understand their counterpart systems;
- reconciling the RTP system with Australian and overseas Defence postings;
- coming to terms with practising in an ADF primary and preventive health care environment rather than a civilian hospital-based system; and
- acclimatising to military life.

Limited specific regional training provider workshop opportunities

Workshop-based training provided by RTPs is usually tailored to registrars’ needs and varies between RTPs in content and delivery pattern. This adds to the difficulties of ADF Medical Officers who articulate workshop programs from two RTPs when transferring to a new posting and a new RTP.

Workshop content is guided by college curricula to complement typical civilian practice-based learning. ADF registrars’ experiences are often not typical of civilian practice-based learning, which creates specific and different needs for additional workshop teaching. However, no specific ADF registrar workshops are routinely provided to complement their other learning and experiences.

<table>
<thead>
<tr>
<th>Training year</th>
<th>ADF registrars (%)</th>
<th>Civilian registrars</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Withdrawals</td>
</tr>
<tr>
<td>2002</td>
<td>14 (1.81%)</td>
<td>0</td>
</tr>
<tr>
<td>2003</td>
<td>27 (2.25%)</td>
<td>0</td>
</tr>
<tr>
<td>2004</td>
<td>35 (2.15%)</td>
<td>0</td>
</tr>
<tr>
<td>2005</td>
<td>54 (2.87%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>2006</td>
<td>61 (3.03%)</td>
<td>2 (3%)</td>
</tr>
<tr>
<td>2007</td>
<td>85 (3.97%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>2008</td>
<td>88 (3.93%)</td>
<td>7 (8%)</td>
</tr>
<tr>
<td>2009</td>
<td>80 (3.40%)</td>
<td>2 (3%)</td>
</tr>
<tr>
<td>2010</td>
<td>83 (3.24%)</td>
<td>0</td>
</tr>
</tbody>
</table>

Lack of supervisors and supervision

Accredited ADF health facilities release Medical Officers for sessional civilian practice (composite posts), particularly for early terms of the AGPT program, to provide a well rounded primary care exposure. Arrangements vary regarding provision of supervision and teaching responsibilities during these terms, although they are generally provided by the ADF health facility. In the accredited facilities mentioned earlier, supervisors are generally civilian contract health practitioners. However, because few contracts specify a general practice supervision requirement, there is the risk that previously accredited ADF health facilities may not always be able to meet the AGPT supervision requirements for training. In these circumstances, Medical Officers cannot count this time and experience towards their AGPT requirements, ultimately lengthening training time and the time taken to achieve deployable status (ML2 or 3).

Limited specific regional training provider workshop opportunities

Workshop-based training provided by RTPs is usually tailored to registrars’ needs and varies between RTPs in content and delivery pattern. This adds to the difficulties of ADF Medical Officers who articulate workshop programs from two RTPs when transferring to a new posting and a new RTP.

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<table>
<thead>
<tr>
<th>Total</th>
<th>ADF registrars</th>
<th>Civilian registrars</th>
</tr>
</thead>
<tbody>
<tr>
<td>61</td>
<td>2561</td>
<td></td>
</tr>
</tbody>
</table>

Mean time in years between start and Fellowship dates (SD)

- Mean weeks of prior learning recognised (SD)

ADF = Australian Defence Force.
The data available support the anecdotal evidence from ADF registrars that they are experiencing delays through their training. Our examination of the ADF registrars’ training structure and the available data suggests that there is scope for further improvement in the structural efficiency of military medical training across and between the major stakeholders — Defence Health, GPET and the AGPT program, RTPs and the colleges — that would lead to a smoother vocational path for Medical Officers.

Defence Health

While ADF health services have made efforts to accommodate the Medical Officer training programs, improvements in supervision and coordination are still possible and desirable. The role of contract health practitioners, who commonly provide primary clinical supervision in military health facilities in Australia, should be recognised in their contracts. Although informal arrangements with contractors exist, inclusion of the requirement in all contracts would improve certainty of recognised training for ADF Medical Officers.

The contribution of civilian practices supporting composite placements with military health facilities must also be recognised. Accommodating transient, sessional registrars from the ADF is not an efficient business model, but the efforts of civilian practices clearly do support the ADF through professional development of Medical Officers. This important contribution is noteworthy.

Examination of options for simplifying and streamlining the ADF–RTP liaison process would be potentially effective in producing independently deployable Medical Officers sooner. Resources for liaison between the ADF and the 17 RTPs are both limited and thinly spread, limiting communication and coordination. There is a single ADF Postgraduate General Practice Training Manager, who has numerous other roles, available in Canberra to advise the 17 RTPs nationally. This function requires more staff members and coordination. The current need for RTPs to liaise directly with the appropriate ADF health facility is also inefficient. One option which would simplify the process is to reduce the number of RTPs managing Medical Officers and accrediting placements.

General Practice Education and Training and the Australian General Practice Training program

The AGPT Guidelines make allowances for ADF Medical Officers in the program. Collectively, these allowances approximate a military pathway through training. Annual RTP allocations of registrars are made according to rural or general pathways available in the AGPT program. Perhaps a similar approach should be considered to allocate ADF registrars to a military pathway that involves RTPs with suitable medical educator expertise.

Opportunities for vertical integration are emerging with the provision of both the AGPT program and PGPPP through GPET. Meeting the basic requirement for 3 months of civilian general practice training with the PGPPP terms should be mandatory for ADF registrars, to expedite passage to ML2 and meet AGPT guidelines for ADF registrars.1

Colleges

There is scope for specific college curricula for military medicine, as there are for other primary care fields of practice. Military advisors to college censors could be made available, as they are in other specialist colleges, to consistently advise on training programs, including placements and courses. Military advisors could also lead the development of special skills or advanced training programs with dedicated curricula using the rich training opportunities for ADF registrars.

Prospective approval of placements on deployments and exercises by medical educators suitably familiar with these should be possible with the generic health planning available for these operations. Noting that deployed roles for ML2 Medical Officers are not that variable and supervision is always specified in operational orders, the approval model could function in the same way as accreditation of other placements in the program by accreditation committees.

Regional training providers

The role of RTPs in supporting ADF registrars has some opportunities for improvement. Consistency of training approval may be partially addressed at college level. However, recognition of military health training could be vested in medical educators familiar with the training at RTP and college levels. Decisions, advice and mentoring must be consistent and based on an understanding of both AGPT and military training requirements. There is a role for medical educators with specific military and general practice experience and competence. An educator with such expertise could also construct workplace-based training more tailored for ADF registrars, learning needs to complement their military practice-based experience.

Conclusion

Military medicine training is intimately connected with primary health care vocational training. ADF registrars are a select group of doctors in a supportive training environment, but take longer to complete the AGPT program.

There are opportunities for improving the efficiency of ADF Medical Officer training through coordination, understanding and recognition of the complex training program required of doctors to become independently deployable Medical Officers.

Competing interests

None identified.

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The family doctor is the foundation of the most successful health care systems. Depending on the setting, family physicians may be called on to perform major surgery (rural Australia), attend births (Canada), care for patients in hospital (United States), manage multiple chronic conditions (the Netherlands), oversee public health functions (Cuba), or any combination of these. Although there may be differences in specific services provided by individual physicians within and between health care systems, family doctors share two common objectives: a commitment to sustain an ongoing therapeutic relationship with their patients (continuity) and a willingness to address any of their health care concerns or needs (comprehensiveness).

Family doctors’ training reflects the diversity of their health care systems and communities. After 3–6 years of medical school, vocational training in family medicine ranges between 2 and 5 years and is structured around one of two basic models: apprenticeship (Europe) and residency practice (North America). In an apprenticeship, the trainee is posted with the practice of one or more experienced family doctors who serve as mentors and trainers while the trainee provides care to those doctors’ patients. In a residency practice, a new patient is matched with a trainee who serves as that patient’s doctor until the completion of training, when a handover occurs to the next generation of trainees — all while under the supervision of the residency program teachers.

This article uses the terms family doctors, family physicians, general practitioners and primary care physicians interchangeably, and defines these doctors as physicians who are regarded as qualified specialists in family medicine, usually after completing formal postgraduate training in the discipline. It should be noted that in some countries, such as the US, general internists and general paediatricians are also considered primary care physicians.

The changing world of family doctors

Most advanced health care systems depend on family doctors. Compared with more narrowly focused specialists, primary care physicians more effectively improve the equity and outcomes of health services, as well as the health of populations.1 Even in a system as subspecialist-oriented as the in US, where three out of four doctors are limited-practice specialists, family physicians total more patient visits each year than any other specialist,2 and are the only physicians distributed geographically in the same proportion as the general population.3

However, there are a number of challenges facing family medicine, including rising patient and physician expectations, growing complexity of care, burgeoning technology, expanding knowledge base, shifting resources, changing physician workforce, and waver ing student interest. For example, about 30% of Canadian family physicians have a special clinical interest or focused practice (eg, in geriatrics, palliative care, sports medicine),4 which results inevitably in demands for academic programs and certification in those areas. The increasing feminisation of family medicine — most trainees and younger family doctors in many countries are now women — has required training programs and health planners to make adjustments to workforce assumptions to accommodate the needs of women during the childbearing years. Another challenge is that family doctors in rural and isolated communities typically must possess a wider range of maternity care and surgical skills than those in urban settings.5

The challenges facing family medicine are magnified in developing countries, where the limited funds for health care are often devoured by hospital and specialty services in larger cities or by specific diseases, such as HIV.6 Compounding the problem is the shortage of qualified primary care workers because of limited training capacity and the loss of practitioners through “brain drain” to developed countries.7,8 In many countries in sub-Saharan Africa, the dearth of qualified health workers means that a single family doctor may oversee the health care needs of a population of 10 000 to 20 000 individuals, making personal continuity with individual patients nearly impossible.9 In these settings, continuity of care is provided through the management protocols executed by an extended primary health care team.

Even with these challenges, the World Health Organization has concluded that robust primary health care is needed now more than ever, in developed and developing countries.10 Representing nearly 200 countries, the WHO World Health Assembly adopted a resolution urging member states to “accelerate action towards universal access to primary health care” and “to train and retain adequate numbers of health workers . . . including . . . family physicians”.11 The response of family medicine to these challenges and high expectations has been to develop new models of practice and training.

New models of practice

Having adequate numbers of family physicians will depend on practice environments that family doctors find satisfying and

ABSTRACT

• Family medicine is undergoing dramatic transformation around the world. Its organisation, delivery, and funding are changing in profound ways.
• While the specifics of primary care reform vary, a common emerging strategy involves establishment of primary health care teams that provide improved access, use electronic records, are networked with other teams, and are paid using blended payment schemes.
• More family doctors are needed in all countries. New approaches beyond the traditional apprenticeships or residency programs will be required to meet global demand.
• Training of family doctors must change to prepare tomorrow’s family physician for a different practice reality.
• Curricula are more competency-oriented, rather than time-focused.
• Today’s trainees can anticipate a career that includes periodic reassessment of their knowledge base and competency.
• This article explores these trends and offers some strategies that have proved effective in various parts of the world for training increased numbers of qualified family doctors.


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sufficiently remunerative when compared with other career choices. The rising expectations and growing complexity of primary care require new models of practice. Family doctors are aggregated increasingly into multi-physician groups comprised of teams of health care professionals with diverse skills. These teams offer more convenient and dependable access, and provide more comprehensive services.

Changes in practice structure and function are occurring around the world, although the specifics vary from one country — or even one community — to another. In Ontario, Canada, the new models of care are known as family health teams. Patients roster with a family physician, who is part of a group of family doctors who agree to provide extended office hours and access to care 24 hours a day, 7 days a week. Family physicians in such teams are supported with a blended remuneration system, which includes pay for performance and capitation. Funding is provided for other health care professionals, such as nurses, dietitians, pharmacists and mental health workers. Grants are given for electronic medical record implementation. Teams must have a governing board, which can include members of the public. In the UK, the modernised primary health care team is described as the Patient-Centered Medical Home (PCMH) and promises improved performance and satisfaction.

Denmark, the Netherlands, Spain and the United Kingdom are considered to have the strongest primary health care systems in Europe, mainly due to reforms aimed at transferring power and control information through classification and electronic record systems, positively affect national health outcomes, promote social equity, and provide services that have high population satisfaction. In the UK, the National Health Service is built explicitly around the GP, with conscious efforts to integrate and coordinate primary health care services with the other components of the health care system.

As illness patterns in developed and developing countries shift from infectious diseases to chronic conditions, there is increased demand to promote healthier lifestyles and to increase the capacity of primary care practices to offer enhanced preventive, behavioural and mental health services. Depending on the community's needs and available resources, the primary care practices of tomorrow may include traditional healers, community outreach workers, specially trained nurses, exercise specialists, social workers, psychologists and psychiatrists. The trend is to move beyond mere collocation — to integrate these other health care professionals into the fabric of the practice, and incorporate behavioural and mental health screening and assessment into the training and duties of all members of the primary health care team.

New practice models create the need for new payment models that account for the population served through severity adjustment and document trainees' competence. The move to work-hour restrictions requires training programs to find the proper balance between continuity of care and the need to hand over care before the onset of trainee fatigue. In the US, the P4 (Preparing the Personal Physician for Practice) Initiative has enabled 14 family medicine residency programs to explore innovative ways to have family medicine residents learn and experience the new model of practice encompassed by the PCMH.

Vocational training

There is a trend toward competency-based, rather than time-based, training requirements, with trainees expected to demonstrate certain competencies in order to progress to the next level of training. For example, Denmark established a new general practice training scheme in 2003, which includes 119 competencies to be demonstrated over 5 years of training. Standardised patients, in-training examinations, 360-degree evaluations (in which trainees also evaluate trainers), and the compilation of educational portfolios are becoming commonplace tools to assess and document trainees’ competence. The move to work-hour restrictions requires training programs to find the proper balance between continuity of care and the need to hand over care before the onset of trainee fatigue. In the US, the P4 (Preparing the Personal Physician for Practice) Initiative has enabled 14 family medicine residency programs to explore innovative ways to have family medicine residents learn and experience the new model of practice encompassed by the PCMH.

To increase placement of family doctors in more disadvantaged areas, some US residency programs create special training tracks with only a few residents located in the rural or urban practice of

Student interest

Initiatives to interest students in careers as family doctors include:

- Nurturing interest in science as early as primary or secondary school, or having these young students shadow a family doctor.
- Selecting students for medical school who are more likely to choose a career in family medicine. Medical students more likely to become family doctors are those who are from a rural background, are older on entry, express an early interest in family medicine, wish to practise in a rural or disadvantaged area, have parents who are less affluent, or prefer clinical practice to research.
- Being mindful that during medical school certain factors predict and influence choosing family medicine, such as early and continued exposure to family doctors throughout the curriculum, along with formal clerkships or rotations in family medicine;
- the presence of a department of family medicine at the medical school;
- targeted efforts to identify and cultivate medical student interest in family medicine including early clinical experiences in the preclinical years, such as following an expectant family through pregnancy, birth, and early childhood of the infant;
- paying students for participation in extracurricular experiences, such as immersion in a family doctor's practice during a break in the school year or assisting an academic family physician with an ongoing research project;
- creating special tracks for family medicine that weave together curricular, extracurricular, summer, and counselling experiences throughout the medical school continuum;
- starting special interest groups in medical schools to inform and support students interested in family medicine; and
- developing loan repayment or scholarship programs for those choosing primary care or practice in underserved areas — students who accumulate high levels of educational debt appear to be less inclined to choose family medicine.

- Bringing students together through family doctor associations at local, state, regional and national levels to promote the discipline and groom future leaders.
Continuing professional development

Creating a family doctor does not always begin, and certainly does not end, with formal postgraduate training. The most successful health systems plan for between 1000 and 1500 patients per full-time-equivalent family doctor.1 This translates to 6–10 million family physicians to cover the world’s population of over 6 billion, or about 10–20 times the estimated number of currently qualified family doctors; a number that far exceeds the foreseeable output of today’s training programs.

Consequently, other approaches to qualifying family doctors are needed, especially in more resource-limited settings. One strategy has been to have trained family doctors mentor community-based physicians and provide a practice pathway to qualification through a structured learning program. Brazil has embarked on an ambitious effort to establish 90 000 family health units to serve its 180 million people while gradually upgrading the qualifications of the unit doctors through such a mentoring program. Another innovation is to qualify community physicians through an online curriculum such as Profam, which was developed in Argentina.29 Successful case-based supervision and training models have been instituted in Belize, India, and Uganda to improve the mental health skills of primary care doctors.30

Once qualified family doctors are established in practice, their participation as preceptors for students or trainees or as contributors to a practice-based research network can increase their satisfaction with, and improve their chances for staying in, the practice. Such participation requires adequate structure and financial support.

Demonstrating continued competence through periodic re-examination, performance measurement, and peer assessment is becoming as or more important than initial qualification. US family doctors have been required to undergo periodic examination to maintain specialty certification as a family physician since the specialty was established in 1969. A revalidation scheme for all UK doctors, including GPs, is scheduled to start in 2012.31 The most recent US trend is to require evidence of quality improvement in practice as a condition for maintenance of certification.32

Conclusions

Policymakers have concluded, and research confirms,1 that patient outcomes are better when their health care is centred in a positive relationship with a trusted family doctor.

With the maturation of the discipline, a clearer picture has emerged to guide workforce planning for family medicine.33 The output of family physicians must be increased. Some expanded training capacity can be achieved by increasing the number of trainees in traditional training programs, and expanding existing programs by creating tracks or training networks that reach into smaller practices or more isolated or deprived settings. However, traditional postgraduate training programs will not achieve the numbers of family doctors needed quickly enough. Therefore, mentoring, online curricula, and other innovative strategies must be developed to support practising community physician efforts to become qualified family doctors.

The capacity of generalist practices must be expanded through integrated and effective primary health care teams. Increased reliance on an extended primary health care team will create demand for interdisciplinary training and more integrated and coordinated collaboration.

Competing interests

None identified.

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The Australian Government Department of Health and Ageing's National Primary Health Care Strategy has identified the importance of improving access to a range of primary health care services and reducing disparities in access on the basis of location and disadvantage of population groups. In some aspects of care, disadvantaged and vulnerable groups (including Indigenous Australians) have greater need but lower patterns of use of primary care as reimbursed by Medicare Australia. Conversely, improving access to primary health care has been demonstrated to help overcome some of the adverse effects of income inequality on health.

Access is determined by a range of factors, including appropriateness, acceptability and availability of health services in time as well as location, and by direct costs to consumers. Out-of-pocket costs are estimated to be close to 20% of total costs, skewing demand to services funded by the Medicare Benefits Schedule rather than allied health or community services. Inadequacies in current Australian data mean that occasions of service are only reported for medical primary care and some private allied health, and not for community health and other services, which together contribute nearly 50% of care.

Health service funding and service provision, including the health care workforce and its distribution, underpin access to primary health care. Maldistribution or fragmentation of this workforce in Australia continues to be a major issue, despite efforts over two decades to correct the problem. The mean number of health workers varies from over 600/100 000 population in the urban areas to 30/100 000 in remote areas, leaving access to the full range of primary health services in rural and remote Australia increasingly expensive or logistically difficult.

Challenges from the broader health care context

The mismatch between current workforce supply and the demand for health care services is likely to get worse before it gets better. There is a variety of reasons for this, including population ageing, population growth in outer urban areas, increasing expectations of consumers about the range and availability of services, changes to the way in which health care is delivered (including multidisciplinary team care), increasing duration and specialisation of health professional training, and ageing of many primary health care professional workforce groups.

Population ageing and the rise of complex chronic diseases will continue to put increasing demands on health services. Almost a third of general practice patients have more than one long-term condition. Prevention and management of chronic diseases require multidisciplinary teams of health professionals who are able to provide well organised, comprehensive care and self-management support. This has emerged as a significant trend since the coordinated care trials and the revamped Enhanced Primary Care program’s Team Care Arrangements in 2005, with particular implications for the nursing and allied health professional workforce. However, there are major disparities between the burden of illness (itself in part due to the lack of access to services) and the distribution of allied health workers, especially in remote, rural and low socioeconomic areas.

The proposed federal health reforms have implications for the composition and skills required of the health care workforce. For example, a shift away from occasion-of-service to care-over-time and performance payment may require health care workers with increased skills in monitoring processes and outcomes of care. The increased focus on prevention at practice and organisation levels will require new skills in prevention throughout life, including in the early years. The integration of federal- and territory- or state-funded primary health care services will also create increased need for clinical leadership and for the development of skills in teamwork, negotiation and optimisation of roles and responsibilities within services and networks.

Trends in the primary health care workforce

The primary health care workforce is diverse, and includes doctors, nurses, allied health professionals and assistants, pharmacists, dentists, Aboriginal health workers and administrative staff with special expertise in primary health care services. These disciplines have different workforce trends and distribution, often as a result of specific fragmented policies and funding models or migration of workers from other parts of the health system or from public to private practice. Overall, however, there are currently significant shortages across a range of health disciplines.

In 2005, it was estimated (based on current service and funding arrangements) that there was a shortfall of 800–1300 general practitioners — 4%–6% of the workforce. The nursing shortage was estimated at 10 000–12 000 nurses, which would require a doubling of the number of nursing graduates to address. As noted above, these shortages are more acute in rural and remote Australia, particularly among doctors’ and allied health professionals. Most sectors of the workforce are affected, but the problem is particularly acute in primary care.

There have been major increases in some disciplines — for example, the number of practice nurses more than doubled between 2004 and 2007 but even this large increase has not kept pace with demand. These workforce cannot be considered in isolation because of the overlap and potential for substitution or enhancement in some of their roles and responsibilities.
The health workforce is ageing, with 16% aged 55 years and older and a mean age of 42 years in 2006.17 GPs tend to age with their practice populations — thus, some of the most demanding and complex health problems are faced by older GPs, who may be trying to reduce their workloads.18 Fewer younger doctors, many of whom have young families, are prepared to work in traditional settings that require long, inflexible work hours, or in isolation from other members of the primary health care team, specialist and support services.19 The need to take time off and/or work part-time to meet parenting responsibilities is also an important factor.

A striking feature of medical workforce training has been the piecemeal, reactive nature of change over the past 20 years. After previous supply restrictions, the past 5 years have seen large increases in funding for students to enter training. These students are expected to graduate between 2011 and 2013, putting increasing demand on postgraduate medical positions in hospitals and pressure for them to be placed in the community.

Additionally, the number of overseas-trained doctors practising in Australia has steadily increased at about 3% a year over the past 5 years, and this group now comprises 41% of the medical workforce in rural and remote areas.7,20

Both these trends are likely to have a significant impact on vocational medical training over the next few years, leading to an announcement by the Australian Government Department of Health and Ageing that the number of general practice training places will be doubled.21 The effectiveness of this strategy in meeting workforce demand will depend on a number of other factors, including retention and distribution. There is currently no explicit national strategy to systematically train a nursing or allied health workforce for primary health care (although some local and state programs exist).

As noted above, there have been major changes to the model of care, with an increasing recognition of the value of multidisciplinary team care through more integrated primary health care services such as GP super clinics. Although preference has been given to areas of need in establishing these services, they are still susceptible to the same overall workforce supply issues. Additionally, few have fully integrated existing community health services to optimise the service and patient experience. Furthermore, they will, for the foreseeable future, provide only a fraction of the primary health care services required. Thus, there will continue to be a need to train health professionals, including GPs, nurses, midwives, and allied health professionals, in and for a range of service types, and for health professionals to work in more distributed health teams. This is likely to be an important role of the new “Medicare Locals”.

Bringing together a mix of health and community disciplines, which may be privately funded (including Medicare-rebatable), with salaried providers from state governments or primary health care organisations as an effective team will require an understanding of the roles of these providers as well as sophisticated organisational skills. Primary health care practitioners will be practising in a range of services of differing size, governance (including corporate, cooperative, not-for-profit, community-controlled and profession-led) and composition. Providers will need a flexible range of skills and capabilities and to be exposed to a variety of service models and other health professionals during their training. Leadership will be required to cope with differences in organisational culture between the different services (eg, between the more hierarchical culture of salaried state health workers compared with the entrepreneurial culture of private practitioners).

The trends in primary health care that may put pressure on the workforce are summarised in the Box.

### Key trends that may put pressure on the Australian primary health care workforce

- Continuing shortfalls in primary health care workforce numbers in most disciplines and maldistribution of some disciplines.
- Increasing median age of the primary health care workforce.
- Changing workforce participation and expectations for working hours.
- Changes to the model of care to involve more disciplines in many aspects of primary health care as part of a health care team.
- Increased requirements for placement in primary health care as part of undergraduate, prevocational and vocational training of many disciplines.

### Strategic implications for future training

Given the increasing subspecialisation of medical specialists, the ever-shortening length of patient stay in hospital, and increased role of nurses, nurse practitioners, midwives and allied health professionals in prevention and pre- and postacute care, the primary health care medical and nursing workforce will need to have a wider range of skills. This will not be simply a matter of traditional placements in acute facilities, but rather of acquiring specific acute care skills that can be used in community settings outside the hospital. There has been significant investment in community-based teaching in some rural areas and this has been supported by those communities. However, this has been less well developed in urban areas.22

This also raises important questions about the degree of specialisation of primary health care providers and how their education will be best provided. Telemedicine may be able to provide some specialist expertise and support in rural and remote areas.23 However, it will be important to train most generalist health disciplines in the management of chronic disease and older people’s health. If GPs are to take on roles as medical team leaders, especially in relation to the care of older patients (in subacute and residential aged care) and of patients with complex conditions in the community, they may need to have some of the skills that more generalist physicians have had in the past.

To cope with changing patterns of disease, primary health professionals need to acquire a range of skills to cope with a new range of roles in prevention, early detection and management of chronic disease. These include new methods of screening, risk assessment, health promotion and interventions to modify risk. There is also a need for primary health professionals to acquire skills to better engage with consumers with low health literacy and from diverse cultural backgrounds (including Indigenous people) and to involve patients in decisions about their care and in self-managing their risk factors or chronic diseases.24,25

Many of these new roles will be shared among health professionals, including nurses, midwives, GPs, nurse practitioners and allied health providers. Roles and evidenced-based guidelines will need to be negotiated for effective care of patients, especially those with chronic conditions. There may also be new categories of health workers (such as health assistants) involved in this care.
Although skill-mix innovation has been a feature of several initiatives, the transfer of such innovations across the health system (especially in urban areas) has been slow. This suggests a need to develop more integrated educational pathways between health disciplines in community settings during all levels of education and training. This will help develop a better understanding of the roles of different professions, and mutual trust and respect between members of primary health care teams.

Interdisciplinary education is difficult to coordinate, given the very different form of the curricula and professional cultures. It could be provided through models of integrated primary health care such as GP super clinics or the primary health care centres or services proposed by the National Health and Hospitals Reform Commission. However, such clinics and centres will be able to provide only a minority of potential training places for the foreseeable future, and thus it will be important to develop capacity (including space) across the range of primary health care services, including existing general practices. Innovative and interdisciplinary models of continuing education of all primary health care workers is important in workforce development. Primary health care organisations (Medicare Locals) may have an important role in developing this educational capacity, including in settings outside traditional general practice.

Primary health care clinicians’ involvement in managing health services will require clinical leadership training to develop new skills in team management and performance measurement. This has been called for in the health reform documents. However, there has been a decline of interest among medical trainees in taking a role in managing practices or community health services. The engagement of primary health care clinicians is essential at all levels to ensure that health service development and improvement is appropriate to the needs of patients and the community. High-quality, well trained management and clinical leadership is essential for bringing about change and creating successful networks of primary health care services. Logically, management training will need to be included in the primary health care reorientation and organisational development.

The skills and competencies must be addressed in the curricula without overburdening it. There is a risk that training will become even longer and more complex. This more comprehensive community-based education may be enhanced by vertical integration across the different levels of training and by addressing multiple capabilities within the same learning activity (eg, technical skills in chronic disease management with organisational skills such as teamwork).

Creating a flexible primary care health workforce that engages at a multidisciplinary level as well as with consumers and the community requires considerable resourcing, including for the retraining of existing primary health care providers. There will be additional pressure and may be some degree of competition among the various needs of different levels of training (eg, university, postgraduate, and vocational training) and among the different disciplines. This competition needs to be managed to prevent it from leading to further fragmentation. This is relevant not only to GPs, but also to nursing and allied health providers, who are increasingly supervising students in the community.

The National Primary Health Care Strategy and the National Health and Hospitals Reform Commission reports suggest that we need to create appropriate practice or service environments that function effectively as both service delivery and training precincts for multidisciplinary teams and provide suitable infrastructure and professional capacity for teaching. Although a doubling of general practice training places has been recently announced, this has not been matched in other primary health care disciplines. Also, it is unclear how the capacity for this training will be developed, especially for community-based interdisciplinary education and training, as there are significant practical barriers to the implementation of more integrated multidisciplinary teaching models. Stronger incentives and practical support are required to enable curriculum planners and teachers to translate into practice what has been, up until now, an often unattainable ideal.

**Conclusion**

Workforce planning needs to improve — Health Workforce Australia is an important initiative but will need to build trust and relationships with professional groups and settings. Currently, most skills-mix innovation is driven by necessity in rural or highly specialised environments but is not generalised across the system. There needs to be greater investment in supporting community practitioners to engage in education and training at all levels and to ensure greater integration across levels of education and disciplines. There also needs to be greater investment in research to evaluate the impact of the new models of funding and care on the primary health care workforce and its capacity to train the next generation of providers.

**Competing interests**

Mark Harris was a member of the Australian Government Department of Health and Ageing Expert Advisory Group on Primary Health Care Strategy. Christine Walker is a member of the Australian Commission for Safety and Quality in Health Care Primary Health Care Subcommittee.

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Getting governance right for a sustainable regionalised business model

Caroline O Laurence, Linda E Black, Mark Rowe and Rod Pearce

The current regionalised model of delivery of the Australian General Practice Training (AGPT) program has been in place now for nearly a decade. Through this period, the governance of general practice has changed, with new partnerships developed and changed decision-making processes implemented.

Although some improvements, arising out of the recommendations of the 1998 Ministerial Review of General Practice Training,1 have been made, there are still ongoing challenges that will test the sustainability of the current regionalised business model of general practice training.

These deliberations include the cost and quality of training, the structural outcomes and training governance issues. Due to the lack of reliable measures and the lack of public access to comprehensive data and robust evidence, this article focuses on governance of general practice education and training at the macro level. It outlines how the decision-making processes have changed, and how they may need to change further if the current regionalised training model is to be sustainable.

Changing governance of general practice education and training

The changing governance of general practice education and training from the 1970s to present is illustrated in Box 1, which summarises the key organisations involved, the changing focus of training and the decision-making model used by the key organisations involved. There has been an increase from two key organisations in the 1970s to six in 2011, with the training focus expanding from a national to a regionalised perspective and incorporating vertical integration of medical training.

Due to the limitations relating to measurement, data access and availability challenges noted above, our examples, with acknowledged limitations, are based on the results of reviews, evaluations and personal observations.

A college-focused model — 1970s to 2001

From the 1970s through the 1990s, all decision-making responsibility rested with the federal government (ie, the previous incarnations of the Australian Government Department of Health and Ageing) and the Royal Australian College of General Practitioners (RACGP).2 They exercised direct decision-making powers over funding and training delivery, respectively — the federal government provided funding and the RACGP managed funds, delivered training and developed the curriculum. During this period, the federal government extended its role when it linked funding and training delivery, respectively — the federal government provided funding and the RACGP managed funds, delivered training and developed the curriculum. During this period, the federal government extended its role when it linked training with quality by making changes to sections 19AA and 19AB of the Health Insurance Act 1973 (Cwlth) and by establishing vocational registration.

A third player entered the general practice education and training environment in 1997 with the establishment of the Australian College of Rural and Remote Medicine (ACRRM). The ACRRM arose from a belief by some that rural and remote medicine was a broad but discrete form of general practice,3 and from a dissatisfaction with the way the RACGP related to its Rural Faculty members. The ACRRM adopted a similar governance and direct decision-making role to the RACGP, but without the legislative recognition as a training program that is required for granting independent vocational registration status as a general practitioner.3

This model of general practice training had several successes during this period, with the increased recognition of quality general practice through vocational registration, the recognition of the wider scope of general practice with the establishment of ACRRM, and recognition and support of general practice as a vocational specialty with changes to the Health Insurance Act in 1996.

A regionally focused model — 2002 to 2011

The 1998 review of general practice training led to the introduction of a regionalised model of general practice education and training using regional training providers (RTPs). In 2001, the Commonwealth Department of Health and Aged Care established a Commonwealth-owned company, General Practice Education and Training (GPET), to establish the new training environment for general practice vocational training.4

ABSTRACT

- The 1998 Ministerial Review of General Practice Training identified several areas for improvement that led to major changes in the provision of general practice training, including the establishment of General Practice Education and Training (GPET) and the regionalisation of training.
- The regionalised training business model has been in place for nearly 10 years, and several key organisations have been involved in its evolution, including the Australian Government, speciality colleges, GPET and regionalised training providers.
- Both the college-focused and regionalised-focused models have had some successes. These include recognition and support of general practice as a vocational specialty, increased numbers of junior doctors undertaking placements in general practice, and increased numbers of registrars training in rural areas.
- This period has also seen changes in the governance and decision-making processes with creation of a new framework that is inclusive of all the key players in the new regionalised training system.
- The future holds challenges for the regionalised training business model as the general practice education and training landscape becomes more complex. The framework in the current model will provide a base to help meet these challenges and allow for further sustainable expansion.
In 2002, the newly established GPET and the RTPs significantly changed the business model of general practice vocational training. The regionalised model now included additional organisations in the governance of general practice education and training, and shifted decision-making responsibilities so that they involved direct, delegated and consultative processes (Box 2). For example, funds management, as a key decision-making responsibility, was delegated to GPET, which in turn delegated aspects of this role to the RTPs. This new model also shifted decision making related to education and training development and delivery — previously held predominantly by the RACGP — to the RTPs.

During the establishment phase of the new model, there was confusion and mistrust regarding the demarcation and devolution of governance and decision-making roles for both new and old organisations, but most notably the colleges, GPET and RTPs. The roles of the new organisations (GPET and RTPs) were evolving and the roles of the old organisations (RACGP and ACRRM) were in a state of flux. With the establishment of the AGPT program, the RACGP vocational training program that had been in place for nearly 30 years was deemed to be at risk, particularly by those who perceived they were losing governance and decision-making roles and responsibilities to new players. However, nearly 10 years on, each organisation’s role is becoming better defined and delineated. Box 2 provides a matrix of the current integrated distribution of governance and decision-making roles across the key organisations — from an RTP perspective.

The current regionalised model for general practice education and training has achieved a number of successes. These include regionalisation of training, general practice exposure during hospital training years, increased rural training, the formal inclusion of Aboriginal and Torres Strait Islander health training in education and training syllabi, and, most recently, the introduction of a streamlined training post/supervisor accreditation process.

The decision to regionalise the general practice vocational training program in 2002 resulted in the creation of 22 RTPs, which were charged with delivering general practice training throughout Australia. In 2011, the number of RTPs was reduced to 17 but still had the same coverage responsibility. Recent reviews indicated that the current training model provides optimal benefits to the Australian community and demonstrated that the current distribution of registrar training is a good match to the distribution of the population (in contrast to the distribution of GPs).

Since 2005, there have been expanded opportunities for junior doctors to be exposed to general practice during their hospital years of general training, through the introduction of the Prevocational General Practice Placements Program (PGPPP). This has built on its much smaller but successful predecessor program, the ACRRMs Rural and Remote Area Placement Program. As an example, in South Australia, the PGPPP annually allows over 110 interns and residents to undertake at least one of their junior rotations in general practice. A study conducted in 2007 confirmed that the inclusion of general practice as a junior doctor rotation was perceived positively by trainees and deemed to be of equal value to hospital-based rotations. Further, supervision and teaching in general practice rotations were deemed to be of

### Box 2: Changing governance of education and training in general practice

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RACGP = Royal Australian College of General Practitioners. ACRRM = Australian College of Rural and Remote Medicine. GPET = General Practice Education and Training. RTP = regional training provider.

In 2002, the newly established GPET and the RTPs significantly changed the business model of general practice vocational training. The regionalised model now included additional organisations in the governance of general practice education and training, and shifted decision-making responsibilities so that they involved direct, delegated and consultative processes (Box 2). For example, funds management, as a key decision-making responsibility, was delegated to GPET, which in turn delegated aspects of this role to the RTPs. This new model also shifted decision making related to education and training development and delivery — previously held predominantly by the RACGP — to the RTPs.

During the establishment phase of the new model, there was confusion and mistrust regarding the demarcation and devolution of governance and decision-making roles for both new and old organisations, but most notably the colleges, GPET and RTPs. The roles of the new organisations (GPET and RTPs) were evolving and the roles of the old organisations (RACGP and ACRRM) were in a state of flux. With the establishment of the AGPT program, the RACGP vocational training program that had been in place for nearly 30 years was deemed to be at risk, particularly by those who perceived they were losing governance and decision-making roles and responsibilities to new players. However, nearly 10 years on, each organisation’s role is becoming better defined and delineated. Box 2 provides a matrix of the current integrated distribution of governance and decision-making roles across the key organisations — from an RTP perspective.

The current regionalised model for general practice education and training has achieved a number of successes. These include

- regionalisation of training, general practice exposure during hospital training years, increased rural training, the formal inclusion of Aboriginal and Torres Strait Islander health training in education and training syllabi, and, most recently, the introduction of a streamlined training post/supervisor accreditation process.

The decision to regionalise the general practice vocational training program in 2002 resulted in the creation of 22 RTPs, which were charged with delivering general practice training throughout Australia. In 2011, the number of RTPs was reduced to 17 but still had the same coverage responsibility. Recent reviews indicated that the current training model provides optimal benefits to the Australian community and demonstrated that the current distribution of registrar training is a good match to the distribution of the population (in contrast to the distribution of GPs).

Since 2005, there have been expanded opportunities for junior doctors to be exposed to general practice during their hospital years of general training, through the introduction of the Prevocational General Practice Placements Program (PGPPP). This has built on its much smaller but successful predecessor program, the ACRRMs Rural and Remote Area Placement Program. As an example, in South Australia, the PGPPP annually allows over 110 interns and residents to undertake at least one of their junior rotations in general practice. A study conducted in 2007 confirmed that the inclusion of general practice as a junior doctor rotation was perceived positively by trainees and deemed to be of equal value to hospital-based rotations. Further, supervision and teaching in general practice rotations were deemed to be of
superior quality. In 2010, the opportunities through PGPPP were expanding significantly across the nation, at equivalent and higher levels than those in SA. Available data indicate that the current training model has increased the number of registrars training in rural regions (Box 3). The rural pathway is now a distinct path that registrars can select from entry, regardless of their fellowship intent, and is available through most RTPs. In 2006, the ACRRM successfully gained recognition of its fellowship as a legislative end point for independent status as a specialist GP. At the same time, the RACGP strengthened its approach and support of rural-oriented registrars. The formal inclusion of Aboriginal and Torres Strait Islander Health training in RTP education and training syllabi continues to be a work in progress, but some achievements have occurred as part of the new regionalised model. During this period, GPET developed a Framework for general practice training in Aboriginal and Torres Strait Islander health and, more recently, a draft guide to general practice training in Aboriginal and Torres Strait Islander health, which will act as a regional component to the framework. GPET also established the Aboriginal and Torres Strait Islander Health Training Advisory Group as a subcommittee to its Board, and, in 2008, created an ongoing professional support network for Aboriginal and Torres Strait Islander GP registrars. Additionally, the number of registrars undertaking training in accredited Aboriginal and Torres Strait Islander medical services has increased from 65 in 2003 to 141 in 2009.

Most recently, the RACGP and the ACRRM have been working in a tripartite relationship with RTPs to introduce a streamlined and delegated training post/supervisor accreditation process. This process replaces the previous college-directed and -controlled process of assessing and accrediting practices and supervisors for the colleges’ training standards. The governance bodies of both colleges have approved an accreditation framework whereby this assessment and accreditation process has been streamlined and delegated to the RTPs. The colleges’ responsibility has shifted to endorsement of the RTP’s recommendations, with a bolstered responsibility for the accreditation of RTPs that includes reviewing the methodology used to conduct this delegated work. This arrangement allows for a more straightforward and ongoing quality assurance process conducted by RTPs to determine the accreditation eligibility of training posts and supervisors — an innovation that came from on-the-ground supervisor feedback.

Implementation is a work in progress, but the decision by the colleges to delegate this important decision making to RTPs, while retaining overall governance responsibility for this area of work, is an important achievement. It also forms a possible template for how future changes can be determined and implemented.

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### 2 Current distribution of decision-making responsibilities and processes for education and training in general practice — an RTP perspective

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<tr>
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RTP = regional training provider. DoHA = Australian Government Department of Health and Ageing. GPET = General Practice Education and Training. RACGP = Royal Australian College of General Practitioners. ACRRM = Australian College of Rural and Remote Medicine.
Ongoing challenges as future possibilities

Although we have outlined the changes in the governance model for education and training in general practice and some of the successes that have resulted from clearer roles and lines of decision making, there are a number of ongoing challenges that will continue to test the sustainability of this model. These challenges include:

- the outcomes of the primary care reforms, which may see changes in GPs' roles and an emphasis on team care;
- the role of generalism within medicine and how training supports this;
- the competition for clinical training places for health students and the impact this will have on teaching practices and access to hospital training positions for GP registrars;
- the issue of the cost of general practice vocational training and the link between funding with outcomes; and
- the expansion of the type and level of training and primary health education that is expected to occur within general practice in the near future.

For example, as shown in Box 1, the future is likely to include more organisations across a broader range of health disciplines that will need to be part of the governance and decision-making framework. Necessarily, the model will need to expand its focus to include vertically and horizontally integrated education and training.

Further, the competing demands of cost, quality and structural perspectives (particularly with regards to retention) will continue into the future. The use of nationally agreed benchmark measures that have been consultatively determined by the key organisations, and monitored over a set period, may assist future debates and inform how to better adapt the regionalised model for the future.

In the interim, we suggest that a significant contributor to the ongoing viability of the regionalised training model would be the continued evolution and development of an integrated governance and decision-making matrix that is better suited to the evolving regionalised business model of general practice vocational training. This requires that the key organisations currently involved in education and training in general practice continue to genuinely and willingly evolve their governance models and decision-making processes to ensure maximum benefit is gained by trainees, trainers, the community and individuals. Equally, it requires incoming organisations to show a similar willingness to discuss and determine governance and decision-making models that will complement regionalised education and training, with a view to achieving the same outcome.

Regardless of the type and level of education and training required in general practice, decision-making responsibilities will continue across fund management, curriculum development, training standards development, education development and delivery, trainee examinations, RTP accreditation, training post/supervisor accreditation, workforce distribution and strategic training policy. Over the past decade, some lessons have been learned about how to more effectively allocate these responsibilities across all parties involved in education and training in general practice. In a more complex environment with more organisations involved, the most significant challenge remains to continuously improve this governance and decision-making framework so that it remains integrated, and strengthens the regionalised model of education and training in general practice.

Conclusion

In the past three decades we have seen an expansion in the number of players involved in education and training in general practice. Throughout this period some hard lessons have been learned, but some clearly identifiable successes have been achieved for general practice vocational training, both before and after the current regionalised training business model. We are of the view that over the past decade, a more integrated matrix of governance and decision making has ensured that many of the objectives specified in the 1998 Ministerial Review of General Practice Training are being met, or at the very least are on target. However, significant challenges remain. The one highlighted in this article is the genuine willingness of all key organisations to continue this integrated model of governance and decision making as the type and level of education and training expands in general practice over the next decade.

If we are able to demonstrate a collective level of maturity that allows for this genuine and respectful collaborative approach, then this model will not only be sustainable, but grow in status as a best-practice regionalised training provider model. It will allow for the development of interdisciplinary teaching, interprofessional education and most importantly collaborative practice that will benefit local patients in local communities. We are of the strong view that this outcome is worthy of pursuit — a sentiment that is being increasingly echoed by international colleagues.

Competing interests

None identified.

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Future models of general practice training in Australia

Jon D Emery, Lesley P Skinner, Simon Morgan, Belinda J Guest and Alistair W Vickery

Australia is currently undergoing significant health care reform, including its first National Primary Health Care Strategy. The strategy provides a timely reminder to all those involved in general practice education and training of the need to ensure that our educational programs reflect the requirements of the future health care system, stating:

It is essential that the future workforce is educated and trained to meet 21st century challenges but in a way that provides the flexibility and willingness to continually reflect on its role and place in the health care team to ensure that skilled resources are used in the most effective and efficient way as clinical practice and teams change.¹

The accompanying report, Primary health care reform in Australia, identified some key strategic issues for Australian general practice.² Common to many developed nations, Australia faces the challenges of an ageing population with a growing burden of chronic disease and multiple morbidities. Hospital-based care is becoming increasingly high-throughput, with significant technological advances. Earlier hospital discharge and new shared care models place greater expectations on general practice to care for patients with more complex needs, and to work as part of a multidisciplinary primary health care team. The general practitioner of the 21st century will need to respond to the increasing super-specialisation of the hospital physician.³

These changes require GPs to assume an expanded role in chronic disease care coordination, managing multiple physical and mental health problems, and to develop a greater understanding of how health care systems can function more effectively. General practice must also expand and develop its role in disease prevention, including promoting healthier lifestyles and supporting patients to change their behaviours.

General practice must deliver safe, high-quality care with mechanisms of continuous improvement and better management of health information, including electronic health records. All GPs need competence in accessing, understanding and applying research evidence and new technologies to their daily clinical practice. While coping with significant technological advances, GPs must maintain a focus on patients and their families, and continue to value excellent consultation skills. They need to develop greater cultural competencies in caring for Indigenous and culturally and linguistically diverse patients. The expansion of community-based medical education means that GPs will need skills in teaching and educational assessment.

Finally, as GPs increasingly work in larger group practices, they must deal with the increased complexity of running an efficient small business. Although many younger doctors are looking for alternatives to managing their own practice, all GPs need a sound understanding of the complexities of Medicare Australia funding and practice management, especially as we move towards blended payment schemes and larger multidisciplinary primary health care teams in general practice.

Future models of training, therefore, must prepare GPs for working in an increasingly complex small business and high-technology environment; as part of a larger, multidisciplinary team; providing safe, high-quality coordinated care for acute and chronic disease as well as disease prevention; and supported through the application of research evidence and continuous improvement systems.

Current models of general practice training

The Australian General Practice Training (AGPT) program currently involves a minimum 3-year full-time equivalent commitment. In broad terms, the first year involves hospital rotations, which, when combined with intern experience, must cover the mandatory terms of internal medicine, surgery, emergency medicine and paediatrics. The following 2 years entail three 6-month terms in general practice, based in two practices. The final 6-month extended skills term provides some choice to develop skills in a particular domain.⁴ For those intending a career in rural and remote medicine, the program includes an additional fourth year of advanced skills training (Box 1).

So how well do our current training models reflect the vision of the future GP described above? Potential innovations in general practice training can be considered in terms of developments in content, duration, place and structure.⁵ Are we teaching the right things, at the right time, in the right setting; and are we allowing sufficient time in training to achieve this? Several key questions around these core issues are worthy of consideration as we contemplate future models of general practice training in Australia.
Mandatory hospital rotations — do they need to be more specifically tailored and accredited towards the needs of general practice training?

Currently, hospital rotations are organised by the junior doctor before commencing the AGPT program. Although there are recommendations about the clinical experience gained during these rotations, these assume that rotational experience equates with educational content. Ideally, hospital posts should reflect the educational needs of a future GP. For example, the internal medicine rotation, while covering sufficient acute severe disease, should also include significant experience in chronic disease management and geriatric medicine, ideally within an ambulatory as well as an in-patient setting. The established accreditation processes attempt to ensure that the educational elements of a rotation are not subsumed by service demand, but this does not consider their educational relevance for future practice.

In the United States, United Kingdom and Ireland, hospital rotations are increasingly associated explicitly with family medicine residency or general practice training programs. In some Canadian hospitals, registrars are attached to family practice teaching wards run by GPs. In Australia, this concept is gathering pace with the establishment of rural generalist career pathways, but this model would probably be harder to implement in metropolitan hospitals, where few GPs have admitting rights.

We suggest the establishment of explicit generalist pathways in which hospital rotations are directly associated with, and accredited for, general practice training. This would ensure the clinical experience gained is directly relevant to general practice. We recommend that hospital rotations are organised so GP registrars work in hospital and general practice settings concurrently to support more integrated learning, as already occurs in some American family medicine residencies and the Prevocational General Practice Placement Program in Australia.

Content gaps — are we teaching all components of the curriculum to sufficient competency?

Current models of general practice training apply the established “novice-to-expert” model that expects the AGPT program to produce doctors who are competent to practise. Subsequent clinical experience and continued professional development allow doctors to become proficient and eventually expert in general practice. However, evidence from systematic reviews suggests that doctors’ performance may in fact deteriorate with increasing years in practice.

Registrars at the end of training do not necessarily feel confident to practise independently in all areas. This partly reflects variable clinical exposure due to different patient populations in training practices and the length of time spent in a single practice. Understanding the natural history of disease within the context of the family and community requires longitudinal educational experience that reflects the importance of continuity of care. This argues for longer periods of training in an individual practice, but at the expense of exposure to a range of sociocultural groups and associated health care needs. An important consideration, therefore, is how to identify competency gaps and incomplete clinical exposure. Learning portfolios and log diaries offer the potential for registrars to reflect on this and plan their learning more effectively.

Experience of this approach by a regional training provider in New South Wales suggests this could be effective (Box 2).

Reflecting on the future needs of Australian primary health care, there are some learning areas that require specific attention. These include working in multidisciplinary primary health care teams, information management and technology, managing complex care needs, and the core academic skills of audit, critical appraisal, research method and teaching skills.

Primary health care teams will grow and become more complex. GP registrars need to learn to work not only as a team member, but also as potential team leaders. They need to understand the
different roles of team members and how to work collaboratively with them, particularly in the context of health promotion and chronic disease management. This could be facilitated through horizontally integrated education within the practice (page S75 in this Supplement) or shared learning, for example, through formal multidisciplinary reviews of care plans.

Advances in individual electronic health records will require GPs to become more competent in information management and technology and more systematic in their use of electronic clinical data. Better electronic health data create opportunities to use health information about the whole practice population to inform clinical audit and quality-improvement strategies. This requires a shift in how GP registrars are taught to use electronic data, including principles of data recording, and how they manage a population of patients as a whole, as well as individual patients’ conditions.

The growing burden of chronic disease is a major challenge facing Australia. Multiple morbidity is increasingly the norm; 58% of patients aged over 75 years attending an Australian general practice have at least three chronic conditions. Managing patients with complex health needs requires significant expertise. GPs without such skills face patient dissatisfaction, increased consultation rates, overinvestigation and work-related stress. Currently, about half of general practice care for chronic illness does not meet optimal standards. Future models of general practice training must respond to this challenge and consider new approaches to exposing registrars to high-quality, systematically planned care for patients with complex chronic disease.

Although a career in academic general practice will probably always attract a small minority of doctors, all GPs require academic skills, including the ability to teach, audit one’s practice using electronic data, and appraise and apply evidence. All doctors have a responsibility to contribute to teaching future generations of health care providers, particularly at a time of significant expansion of medical student and general practice registrar places.

Several approaches to training GP registrars to teach have been evaluated and shown to improve teaching aptitude. Although there is support from Australian GP registrars to teach, few receive formal training in teaching skills and many GP supervisors do not believe registrars are capable of teaching. Interest is growing in vertical integration of teaching in general practice, and the creation of teaching teams incorporating GP supervisors, registrars, pre-vocational doctors and medical students. However, for this to be widely implemented, there must be due considerations of formal training, teaching space and appropriate financial recompense.

Critical reflection about one’s practice and critical application of evidence should also become more prominent in general practice training. Teaching evidence-based medicine can be challenged by negative attitudes from GP supervisors and the fact that general practice still has a relatively poor (but improving) research base. If GP registrars are not taught to apply a research-based approach, doctors will not appraise evidence they are presented with, and may follow inappropriate advice or fail to challenge ill founded assertions.

### Additional training flexibility — should there be opportunities for further tailoring of training based on more explicit career planning?

The current AGPT program includes a 6-month extended skills component that allows GP registrars to tailor their training to some extent. A fourth year of advanced training is available for those planning a career in rural and remote general practice. Future models of general practice training could develop this concept of advanced training so that GP registrars are competent across the whole curriculum and can elect to become proficient, or even expert, in certain domains based on explicit career planning. This is consistent with trends towards general practice specialisation within group practices and would replace the extended skills rotation, ensuring that GP registrars have longer to consolidate their skills and experience longitudinal care.

Advanced training options could be developed to cover specific clinical areas (eg, dermatology, aged care and Indigenous health), practice management, public health and health services management, or academic general practice. Some of these already exist in the AGPT program, but could be expanded to allow sufficient time and depth of exposure to gain additional qualifications. Internationally, there are examples of combining general practice training with research training to obtain a higher degree.

Advanced training could offer combined programs leading to a Master of Science, a Master of Business Administration or, given sufficient time, a Doctor of Philosophy. Alternatively, it could lead to additional clinical qualifications, such as a diploma in skin cancer medicine or Indigenous health. Rotations could also be broader and include, for example, placements with primary health care organisations, state departments of health, or practice management teams. Thus, the advanced term would be important in the development of clinical leadership skills and specific proficiencies before completion of the AGPT program.

### Vocational training duration — how much is enough to meet the future health care needs of Australia?

What constitutes an appropriate duration for general practice training is currently under debate in several countries. Some argue that this is the wrong question, which instead should be how to acquire the right competencies. Nonetheless, there is growing concern that, as general practice becomes more complex, a 3-year model is inadequate to produce doctors who are sufficiently compe-
tent and confident to enter independent practice.\textsuperscript{26} The UK Royal College of General Practitioners has debated a 5-year program,\textsuperscript{11} in the US, the Preparing the Personal Physician for Practice training program extends over 4 years.\textsuperscript{22} In Ireland, expanding general practice training for a fourth year improved professional development and confidence to enter independent practice.\textsuperscript{27}

We propose a 4-year program with a tailored final year of advanced training to be seriously considered for Australian general practice (Box 1B). Ideally, this would include hospital rotations integrated with general practice rotations, retaining the current duration of hospital-based training (Box 1C). A simpler initial model would involve ensuring hospital rotations are accredited specifically for general practice training (Box 1B). Completion of the program would be followed by a formal continued professional development program for newly qualified GPs.\textsuperscript{28}

Summary
We have discussed a number of key questions about future models of general practice training that reflect changes to content, duration, place, and structure.\textsuperscript{5} We believe new models of training in Australia must acquire all these types of innovation.

We need to expand curriculum content to meet the challenges of managing complex and multiple morbidity within a clinical team which is integrated through e-health systems. GP registrars must learn to apply best evidence within a well designed practice system that operates as a teaching and learning organisation and values continuous relationships with its patients. We need to adapt hospital and community rotations to meet these educational requirements. An advanced training year should become standard to allow consolidation, exposure to longitudinal care and development of proficiency in areas of relevance to GP registrars’ specific career plans. These changes would have significant financial and administrative implications for general practice training,\textsuperscript{29} however, and could potentially affect the desirability of general practice training, especially for those choosing to train part-time.

Historically, registrar training in Australia has been recognised for its high standards,\textsuperscript{30} but we need to plan for the future needs of the medical workforce and evolve so that newly qualified GPs are adequately prepared for the challenges facing the 21st century generalist.

Competing interests
Belinda Guest is a board member of General Practice Registrars Australia and General Practice Training Valley to Coast.

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Supervision — growing and building a sustainable general practice supervisor system

Jennifer S Thomson, Katrina J Anderson, Paul R Mara and Alexander D Stevenson

The Australian model of vocational training for general practitioners has always been based on an apprenticeship style, where vocational trainees spend their training years in a practice attached to a designated GP supervisor. Despite substantial restructuring of the general practice vocational training system in the past decade, the apprenticeship model of training in the practice setting has remained substantially unchanged.

The model is clearly defined in the current standards of the Royal Australian College of General Practitioners (RACGP) and the Australian College of Rural and Remote Medicine. The GP supervisor is expected to undertake a central, responsible role for the vocational training of GP registrars.

Medical training in the clinical general practice setting is rapidly expanding. Government initiatives to increase general practice prevocational and vocational training positions will likely see the number of trainees in these programs double between 2007 and 2014. The number of medical student places has also increased, as has the requirement for clinical placements in general practice.

If requirements and models of general practice supervision remain the same, it is possible that double the number of GP supervisors will be needed by 2014. However, meeting this demand is likely to be a challenge given that:

- the general practice workforce is already stretched in its clinical load;
- a large proportion of experienced GP supervisors will reach retirement age in the next 10 years;
- the workplace is an independent private business setting, where there is no requirement to participate in any increased training initiatives.

To provide appropriate clinical supervision and achieve an adequate number of skilled GP supervisors over the next few years, strategies will be needed to maintain and expand the existing supervisor workforce and capacity. Although there is limited evidence about what facilitates effective and efficient general practice supervision, this article examines a range of current and potential response options under the themes of recruitment, retention, refreshing, remodelling and resourcing.

Recruitment — filling the gaps

Motivation

Attracting new GP supervisors will require, in part, a better understanding of the motivators for teaching. Altruism in various forms has been identified as the basis for motivation to teach, along with an interest in improving general practice quality, increasing general practice workforce, sharing values and knowledge, as well as believing teaching to be part of a GP’s role.

Teaching also improves morale and increases professional support and the sense of collegiality. Involving clinical teachers in course planning and development and curriculum design can also be an important motivator for teaching through being valued and in developing teaching roles.

ABSTRACT

- This article explores various models and ideas for future sustainable general practice vocational training supervision in Australia.
- The general practitioner supervisor in the clinical practice setting is currently central to training the future general practice workforce.
- Finding ways to recruit, retain and motivate both new and experienced GP teachers is discussed, as is the creation of career paths for such teachers.
- Some of the newer methods of practice-based teaching are considered for further development, including vertically integrated teaching, e-learning, wave consulting and on the run, teaching teams and remote teaching.
- Approaches to supporting and resourcing teaching and the required infrastructure are also considered.
- Further research into sustaining the practice-based general practice supervision model will be required.

Skilling the future general practitioners as teachers

With universities and regional training providers (RTPs) moving towards a vertically integrated teaching model in which juniors are taught by all those senior to them, and both colleges now requiring the attainment of teaching skills in their curricula for all fellows, an opportunity is emerging to meet demand by providing more junior members of the profession with the skills and confidence to teach as junior registrars. This would increase the current GP teacher numbers for medical students and create a future competent, interested general practice teaching workforce. A survey in Western Australia showed that 77% of GP registrars were interested in a teaching role; however, only 52% of GP supervisors supported this role for GP registrars, owing to concerns about funding, time and patient load, and lack of training. Implementation of academic registrar posts, providing registrars with foundation and advanced educational competencies, is another strategy to recruit future GP teachers.

Semi-retired general practitioners as teachers

Recruitment or retention of semi-retired GPs in a teaching role has been suggested. However, this would require a different view from the colleges, which currently expect GP supervisors to work three sessions per week in a clinical role. Noteworthy, though, is news that the Medical Board of Australia has now accepted the teaching role in its definition of medical “practice”.

MJA 2011; 194: S101–S104
Increased teaching load

Asking current supervisors to increase their teaching load could expand teaching capacity. Current GP supervisors have considerable interest in expanding their role to include Prevocational General Practice Placements Program (PGPPP) training; a recent survey in the Australian Capital Territory and southern New South Wales showed that 44% were prepared to do so.20

Retaining and refreshing — providing professional support for GP supervisors

Providing GP supervisors with regular access to ongoing professional development for their teaching role is important to refresh and retain the existing GP supervisor workforce. Some opportunities are listed.

Access to higher education qualifications

Access to higher education qualifications may be an incentive to some current and future supervisors. Some medical schools offer such qualifications and also fund their educators to participate.21

Peer-based professional development

The focus of professional development for teaching skills for GP supervisors has mainly been on structured teaching workshops, but other peer-based professional development models that provide more individual support and practice-based professional development, while still meeting AGPT GP supervisor curriculum requirements, could be developed further.4 It has been shown that peer support and learning activities delivered at the practice can build morale and reduce isolation.22

Feedback to GP supervisors

The provision of meaningful feedback from GP registrars to GP supervisors is important in enhancing and developing mutual skills and increasing confidence. Joint workshops, bringing GP supervisors, GP registrars and students together as both learners and teachers, can enhance the roles of all as learners along a vertically integrated continuum and provide a forum for modelling and mentoring across generations.23 For a confident GP supervisor, the learning relationship is also reciprocal, as the learners often bring with them new information and ideas that can renew the way in which a GP supervisor practises.4

Remodelling

Ensuring GP supervision models are effective and efficient will be even more important in the future; and further research and evaluation will be important in providing appropriate evidence for both new and established practices. A range of evolutionary changes to the basic model are currently being embraced.

Competence-based learning

Competence-based learning is emerging as a new approach to streamline and shorten professional learning and allow interprofessional learning and role sharing.24 This has stimulated debate in Australian medical colleges about ensuring that individual competencies are applied safely in the complex patient care context.25 Additional work is needed to identify core competencies of general practice and, specifically, those that can be safely and more efficiently taught outside the apprenticeship model.

E-learning

E-learning is a feature of the modern learning environment that increases access to educational resources for both trainee and supervisor. An increasing number of interactive learning sites and simulated learning opportunities now exist, with colleges and RTPs offering a range of e-learning tools to the GP teacher and learner. However, these web-based learning solutions must meet the needs of diverse cognitive and learning styles of GP registrars and be carefully applied and evaluated.26 As these methods increasingly form part of the clinical learning environment, it will be important to consider whether clinical teachers are able to use them to enhance teaching and reduce the supervisors’ workloads.

Vertical integration

Decreasing the overall teaching load of GP supervisors as they teach at all tiers of the medical learning spectrum may be possible through the processes of vertical integration of teaching in the practice setting.23 Vertical integration has long been supported, but only recently has it become a reality in some practices that comprise all three levels of teaching — medical student, PGPPP doctor and GP registrar — and supervision.

Some teaching may be more efficiently done with a group of learners at different stages, while other learning needs must be specifically targeted. Another premise in a vertically integrated model is that some of the learning needs of the medical students and junior doctors can be addressed by the GP registrars — a process that also enhances the latter’s learning. Developing and evaluating such supervision models for all levels will be an ongoing challenge.

Teams of GP teachers

The supervision model to date has tended to focus on the GP principal or senior partners as the teachers. Employee doctors within the practice are often only involved in teaching in an ad-hoc fashion, as their primary role is clinical consulting. A survey in South Australia indicated that one of the factors that enabled increasing teaching capacity in a practice was increasing the number of teachers in that practice.27 A shared model, where more GPs within the practice take on some responsibility for teaching under the coordination of a senior GP supervisor, has the potential to enhance the experience and skills for all. The model works quite well when different GP supervisors take responsibility for different levels of learners (Box). Involving others in the practice team, including practice nurses, practice managers and other health professionals, is also occurring.28

The senior GP clinical supervisor

The senior consultant role in the hospital setting, where supervision is a major focus, could be emulated in the general practice sector in the form of a senior GP clinical supervisor who would support a team of more junior supervisors/teachers in a practice. The role could be filled by senior college fellows and mentors appointed to training practices, where they would multitask as senior teachers and peer-based trainers for all levels of training — medical students and junior doctors to GP registrars.29
Remote supervision

Remote supervision is also part of the current mix of supervision methodologies. An example of this approach is the Remote Vocational Training Scheme, which has been operating for 10 years and currently has 35 participating GP registrars. “Distance supervision is provided by phone, email, practice visits and clinical teaching visits. The supervisor is carefully selected, orientated to their new role and offered support and guidance throughout.”30 Expansion of this model may be part of the solution by enabling additional training opportunities in remote locations.

Time-efficient models

With the increasing workload of general practice, time-efficient teaching models, such as “wave consulting” and “teaching on the run”, are evolving and being used. “Wave consulting” allows the GP supervisor to see several booked patients while, in parallel, the junior doctor or medical student is booked to see one chosen patient slowly and independently in an adjoining room, with the GP supervisor joining and completing the consultation with the learner in a booked time frame.31 “Teaching on the run” involves quick exchanges between GP supervisor and learner, and its practical value is now recognised.32 Enabling access opportunities for such exchange, including informal exchange in tea rooms and corridor meetings, can maximise the time available for learning exchange.

Resourcing

Efficient, effective general practice vocational training requires capacity built into the total practice system with resourcing of supervisor and supervision time and infrastructure. Few studies have been undertaken of the real costs of supervision and training in general practice. Studies so far suggest that there is a net financial cost to training practices for teaching medical students, and a small net benefit for teaching junior doctors and GP registrars.33

Infrastructure

One of the significant barriers to expanding and sustaining clinical practice-based teaching is lack of physical teaching infrastructure. A number of national grant programs have provided infrastructure development support for general practice including the National Rural and Remote Health Infrastructure Program,34 the GP super clinics program35 and the Primary Care Infrastructure grants.36 The ACT government has recently provided $2 million in general practice infrastructure development funding, with one of the objectives of this funding being to provide infrastructure for training the future ACT general practice workforce.36

The current grant model for infrastructure funding, while expanding both clinical consulting and teaching space in a small number of practices in Australia, may struggle to meet the required capital development needs for all the anticipated extra trainees. As an offsetting factor, there may be more spare teaching rooms available than previously thought — a recent survey indicated 55% of GP supervisors had access to a spare teaching room.20

Rather than a one-off grant investment approach, an alternative system of investment could be explored that would encourage GPs to invest in their practices and receive a sufficient return from teaching to allow them to initiate capital investment into their practices and ensure a sufficient return on that capital investment. This would require a change of thinking away from capital-based grant funding to improve leverage and provide for ongoing funding for facilities, leasing and teaching arrangements. It would also require differential funding for practices engaged in teaching to build workforce capacity that allows for patient needs to be met within a teaching, as opposed to a pure service, medical practice environment.

Remuneration

Although altruism has motivated much of the teaching in general practice to date, this is not necessarily a sound basis for continued GP supervisor expansion and development.37 Current funding difficulties include:

- no publicly funded staff specialist equivalents in general practice;
- lack of recognition of the teaching role in the Medicare fee-for-service consultation system;
- teaching allowances and Practice Incentives Program payments generally not equivalent to earning while consulting; and
- current programs not usually remunerating GP registrar or junior doctors for a teaching role.

All these barriers require addressing. As an example, a recent initiative by the ACT government offered teaching incentive payments to individual GP supervisors rather than practice payments, with the objective of attracting new GP supervisors to teach Australian National University (ANU) medical students.38

Streamlining administrative requirements

There is a range of accreditation, quality assurance, reporting and payment processes which are part of general practice supervision and add to the administrative cost of clinical teaching. Initiatives by governments, universities, RTPs and colleges to streamline these processes, without compromising quality or safety, could potentially contribute materially to a sustainable system. Vertical integration at an organisational level could improve this situation.

Conclusion

The demand for clinical GP supervisors is increasing as more medical students, hospital doctors and GP registrars are being taught in the general practice clinical setting. Building a sustainable system to manage this change will require renewed efforts from all stakeholders and governments to GP supervisor workforce recruitment and retention, new models of supervision and further teaching-focused investment into general practice.
There is a range of emerging models in general practice supervision and supervisor recruitment strategies; however, we need further research into and evaluation of the effectiveness of some of these solutions, including vertical integration models, GP teacher role development, and financial arrangements.

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Competing interests

Jennifer Thomson, Katrina Anderson and Paul Mara are currently GP supervisors. Jennifer Thomson is an RACGP representative for General Practice Education and Training accreditation review teams and has worked as a consultant for research being undertaken with a grant to the ANU from Coast City Country General Practice Training.

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