

Will increased undergraduate places result in more health professionals for the bush? Lessons from the medical workforce

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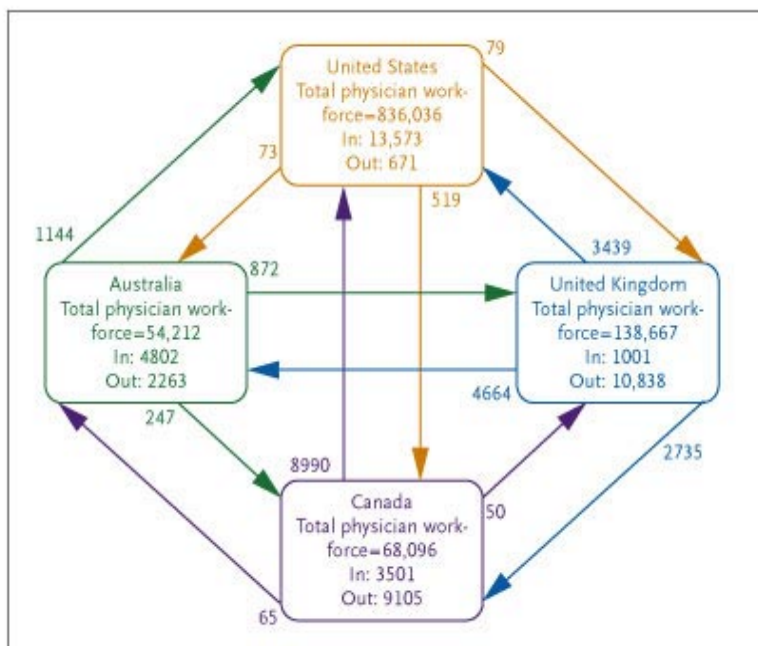
Introduction

According to the World Health Organization (WHO) there is a global shortage of health workers. However, that shortage is not evenly distributed either across or within countries. In other words, there are severe imbalances between developed and developing countries and within those jurisdictions there are further imbalances between urban and rural environments.¹

The English-speaking developed countries have generally resorted to one of two main strategies to address this issue. They have either increased the number of domestic medical school places or they have increased the numbers of International Medical Graduates (IMGs) entering the country. Occasionally, both strategies are used together to boost the medical workforce.

The strength of this global market—as well as its complexity—is well illustrated by the work of Fitzhugh Mullen. His analysis shows that in the four countries of the USA, the UK, Canada and Australia, IMGs comprise between 25% and 28% of their physician workforce, with much of this workforce coming from a mixture of lower income, developing countries but also from within these four recipient nations, as the following diagram illustrates.

Figure 1 Cycling of physicians among four recipient countries²



As this figure illustrates, both the USA and Australia have been net beneficiaries of graduates from the other two countries. In particular, Canada has supplied almost 9,000 graduates to the USA, whilst the UK has provided over 4,600 to Australia. This illustration indicates that countries looking to boost their medical workforce from overseas will be doing so in a much more competitive marketplace than was common just twenty or thirty years ago.

Despite this increased competition, however, there is little evidence that Australia is looking to reduce its reliance upon IMGs in the near future.

Undersupply, oversupply or mal-distribution

The debate in Australia over the optimum numbers of medical practitioners has tended to veer from a belief in an over-supply to one of under-supply.³ These debates have been going on for more than thirty years. For example, the Karmel Report of 1973 recommended that the government fund more undergraduate places in existing medical schools as well as establish new medical schools.⁴ One of the main findings of the report, however, was that there was at that time a maldistribution of medical practitioners, especially in small country towns:

The number of doctors in country areas in which the towns have few doctors, has not kept pace in general with the growth of population in those areas since 1961, even though the population growth in those areas has tended to be less than in other country areas. As a result, doctor population ratios have declined since 1961.⁵

Although the report did not find severe shortages of doctors, it did recommend that there would need to be a 22% increase in doctors by 1991 in order to keep pace with population increases and changes.

However, the target set by the Karmel Report of 180 doctors per 100,000 of the population by 1991 was already exceeded by 1981 largely because the decision to increase the number of domestic medical graduates coincided with a significant influx of doctors from overseas.⁶ As a consequence, from the early 1980s onwards there was talk of Australia having shifted into a period of over-supply of doctors.

Until the mid 1990s, the Commonwealth chose to focus its attention upon trying to restrict the numbers of IMGs entering the country for migration purposes as well as imposing a quota upon the number of IMGs who could sit the Australian Medical Council examination. Thus in 1992, the government imposed a points penalty on doctors applying for permanent residence and the AMC sought to restrict to 200 the number of IMGs who could pass the initial MCQ exam.^{7,8}

Although the Karmel Report had hinted that the issue was more one of maldistribution between urban and rural areas, this has not been a major feature of the policies until recently. Indeed, one of the most striking aspects of the debate has been the lack of acknowledgement that parts of rural and remote Australia have been in a state of permanent under-supply for more than forty years—a situation that cannot be addressed merely by macro decisions to either shrink or grow the medical workforce.

For example, research undertaken in South Australia in 1980 showed that even from the 1960s that State was witnessing a marked reluctance of young graduates to choose general practice as a career in the first instance, and to want to practise in a rural area in the second instance.⁵ This research also showed that the South Australian cadet scheme which bonded medical students to the bush had to be abandoned in the 1970s because too many of the students were choosing to buy their way out of the bond rather than practise in rural areas.

Despite this evidence coming from South Australia, the fact that overall medical practitioner numbers were growing faster than the rate of population growth tended to lull policy makers into believing there was no problem.⁹

It was not until 1996 that the Australian Medical Workforce Advisory Committee (AMWAC) reported a significant over-supply of general practitioners in the capital cities and other major urban areas accompanied by a significant under-supply of general practitioners in rural and remote areas. The urban over-supply was estimated at 4,400 (2,900 FTE) and the rural under-supply was around 500 (445 FTE).¹⁰

This report led directly to the reforms introduced by the Coalition from 1996 to control the apparent over-supply of urban doctors whilst addressing a rural shortage. The first measures involved restrictions on access to Medicare provider numbers. Newly graduating medical students had to undertake vocational training to become GPs before they could get a provider number whilst access to those vocational training places was restricted through the imposition of quotas. Other measures saw IMGs come under the ten year moratorium whereby they had to work in hard to fill areas for ten years before they could obtain an unrestricted provider number.

With these measures, the Commonwealth was able to claim that it was at one and the same time raising standards of care, controlling the over-supply of urban doctors (GPs), controlling the ever-rising costs of Medicare and addressing rural shortages.

By 2000, however, there was yet again a turn towards the belief that Australia was facing a major under-supply of medical practitioners. As a consequence, the Commonwealth has embarked upon a period of major expansion of medical schools and places available to boost the number of domestic graduates, whilst the 2003 Medicare Plus package involved a \$1.08 billion workforce investment, including funding for an additional 1,500 FTE doctors, the majority of whom were to be recruited from overseas.¹¹

Trends in doctor numbers and GP training

The increase in the number of medical schools and places available will have a significant impact upon the number of domestic medical graduates over the next few years.

The following table shows that the number of domestic graduates is expected to have almost doubled in the five years between 2007 and 2012, with almost 3,000 students graduating per annum by 2012.

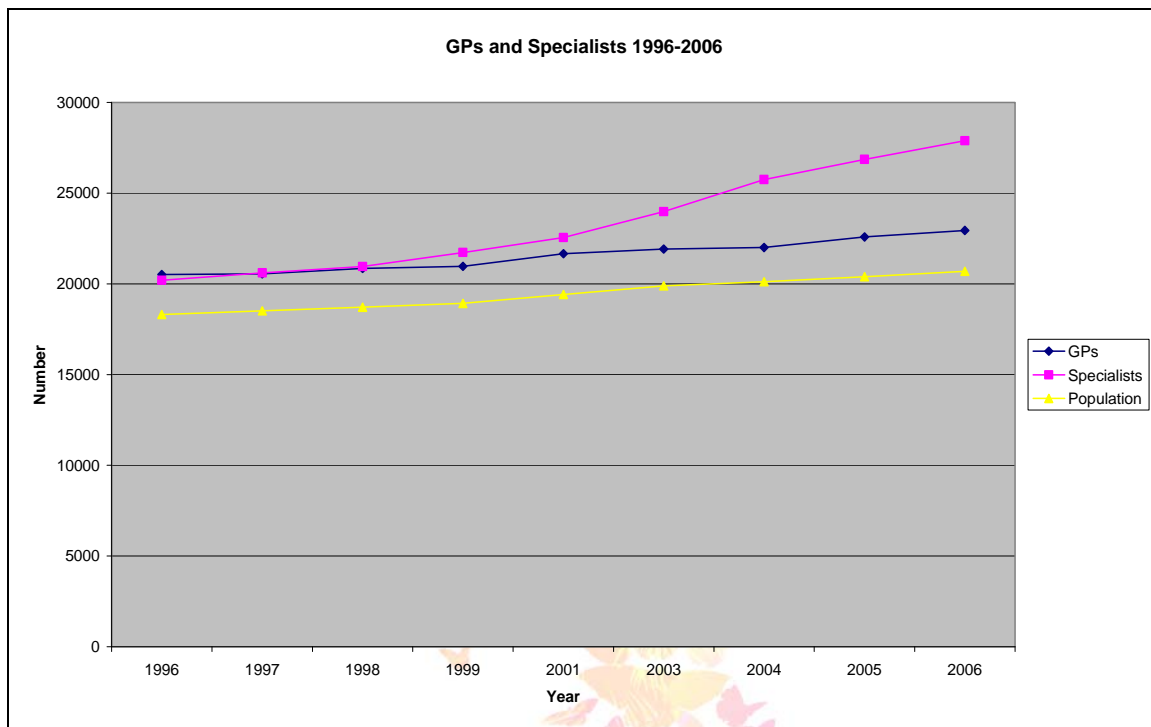
Table 1 Numbers of medical graduates expected 2005-2012¹²

Graduate type	2005	2006	2007	2008	2009	2010	2011	2012
Domestic students	1,320	1,335	1,586	1,843	1,970	2,209	2,657	2,945
International students	267	288	327	424	435	417	443	455
Total	1,587	1,623	1,913	2,267	2,425	2,626	3,100	3,400

But according to modelling undertaken by AMWAC in 2005, there would need to be around 1,100–1,200 new entrants into general practice every year between 2007 and 2013 to account for GP ageing and retirement and population changes. On this basis, almost half of the additional medical graduates forecast would have to enter general practice to meet the supply requirements laid out by AMWAC.¹³ The cap on the number of GP training places has recently been lifted so that there will be more than 800 places available by 2011.¹⁴ However, this is still only half of the additional GPs predicted as needed by AMWAC.

To suggest that such a large number of the new graduates will choose general practice is to go against recent trends. In addressing the issue of a shortage of medical practitioners particularly in rural and remote areas, the Commonwealth will also have to address the growing trend away from general practice more generally and towards the other medical specialities. The following chart is a graphic illustration of the changing face of the medical workforce over the decade 1996-2006 in relation to GPs and specialists as well as in terms of population growth over the same period.

Figure 2 GPs and Specialists 1996-2006¹⁵



As this chart clearly indicates, there was a convergence between GP and specialist numbers in 1997 but since then, the number of specialists has grown by 35% whilst the number of GPs had grown only by 11%. This has occurred at a time when our population overall grew by 11%.

Not only have more medical graduates been choosing to become specialists but, in a context of rising medical graduates overall, there has been a decline in the numbers choosing to train as GPs.

Data collated by the Medical Training Review Panel show that whilst there was an increase overall in the number of vocational training positions available between 1997 and 2003 from 5,665 to 6,126, general practice witnessed a decrease of 9.8% or 157 trainees over the same period.¹⁶ This decline reflects the policy decision of 1996 to limit GP training places, as well as the impact of turning general practice into a specialty when remuneration does not reflect that of the other specialties.

Additional data from General Practice Education & Training (GPET) show the ongoing impact of the policy of capping places available per annum in that they have only been able to fill all the available places in three of the past 9 years.^{17, 18}

Table 2 Training places available and acceptances 2000-2008

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Submitted	756	764	661	630	701	668	693	761	728
Training places available	400	450	450	450	600	600	600	600	600
Accepted training places	392	429	457	455	560	532	558	619	564

The lack of sufficient interest in general practice in particular and in rural general practice as reflected in the GPET data may be addressed to some extent by the influence of the Rural Clinical Schools. Unfortunately much of the evidence of the relationship between time spent at an RCS and subsequent rural practice has tended to be both future-oriented and very small scale.¹⁹

We do not currently know, for example, how many students who have passed through the Rural Clinical Schools since their establishment in 2001 have gone on to become rural GPs²⁰ nor indeed how many have done so as a consequence of one of the many scholarships available.²¹ This is an important lacuna because considerable amounts of public money are spent on various programs and incentives designed to attract medical students to rural careers.

When the GP training figures are broken down by general and rural pathways a more disturbing trend is emerging. The following table gives a breakdown of the figures between 2002 and 2005.²²

Table 3 Available places and acceptances by pathway 2002-2005

	2002		2003		2004		2005	
	Available	Filled	Available	Filled	Available	Filled	Available	Filled
General	250	269	250	460	350	357	350	353
Rural	200	191	200	190	250	200	250	179
Total	450	460	450	455	600	557	600	532

More recent data show that since 2005 there has still been a shortfall between places available and acceptance even though the numbers of doctors seeking training on the rural pathway have increased. According to the recent Commonwealth government audit of the rural and regional health workforce, the shortfall between available places and acceptances for 2006, 2007 and 2008 was 18, 3 and 8 places respectively.²³ The following table from GPET breaks these down by state for 2008.¹⁷

Table 4 2008 places available and acceptances by State/Territory

State/Territory	2008 Places Available	2008 Places accepted	2008 Rural Places Available	2008 Rural Places Accepted
NSW and ACT	218	186	79	72
VIC	155	137	70	69
QLD	134	113	62	48
SA	47	45	23	21
WA	58	48	27	17
TAS	16	16	8	8
NT	20	8	15	2
Australia	648	553	284	237

As this table illustrates, there was a shortfall between available rural places and acceptances in all states and territories in 2008 except for Tasmania, where demand for places outstrips supply. This shortfall has been occurring over a number of years as there were 263 rural pathway allocated places in 2004 but only 200 acceptances.¹³

However, an even bleaker picture seems to emerge when greater attention is paid as to where the rural pathway registrars come from. This is important because the recent emphasis upon more medical schools and places in Australia has become an important policy measure to alleviate medical workforce shortages. A crucial test for the policy will be whether domestic graduates are choosing general practice—and rural general practice in particular.

An examination of the profile of rural GPs over the past 11 years demonstrates that the growth in rural and remote GP numbers has come almost exclusively from IMGs.

Table 5 GP headcount by place of basic qualification and broad RRMA²⁴

Year	Urban		Rural and Remote	
	Australia	Overseas	Australia	Overseas
1995-96	14,328	4,631	4,086	1,331
2006-07	13,019	5,243	4,514	2,788
% change on 1995-96	-9.1%	+13.2%	+10.5%	+109.5%

What this table also shows is that over that eleven year period there was an absolute decline in the numbers of Australia-trained GPs—from 18,414 in 1995-96 to 17,533 (a drop of 4%) in 2006-07. At the same time the numbers of IMGs increased absolutely from 5,962 to 8,031 (an increase of 34%).

The good news is that the numbers of Australia-trained GPs rose in rural and remote Australia by 10.5%. However, this does not necessarily mean that these were domestic graduates. As illustrated below, there are also significant numbers of full fee-paying international students staying on in Australia after graduation, a number of whom are undertaking GP vocational training on the rural pathway and are also restricted as to where they can practise.

Table 6 Training pathways Australian medical graduates and international medical graduates 2007-2008^{25,17}

Location of training place acceptances	Australian Medical Graduates		International Medical Graduates		Australian Medical Graduates		International Medical Graduates	
	2007		2007		2008		2008	
	No.	%	No.	%	No.	%	No.	%
General Pathway places in capital cities	228	89%	27	11%	214	87%	33	13%
General pathway places outside capital cities	100	86%	16	14%	73	93%	6	7%
Rural Pathway places	119	48%	129	52%	124	52%	114	48%
Total	447		172		411		153	

The above data show that Australian medical graduates (AMGs) studying to become GPs in 2008 declined as a proportion of acceptances relative to 2007 (down from 447 to 411) but that they increased their representation in relation to the rural pathway. However, this increase is somewhat misleading as it

needs to be borne in mind that not all Australian medical graduates are *domestic* graduates—the figure also includes fee-paying international students who have stayed on to complete their training.

Thus, in 2008, 34 of the 124 AMGs on the rural pathway were subject to the 10 year moratorium and therefore must also be international students who have graduated from an Australian university.¹⁷ All of the 114 IMGs on the rural pathway are subject to the moratorium. This means that out of the 236 rural pathway places accepted, 148 were taken up by doctors from overseas. Domestic medical graduates therefore represented only 38% of rural pathway acceptances, with the remainder of 62% being taken up by doctors subject to the moratorium.

According to data provided by AGPT, there are 2,382 registrars undertaking GP training in 2008. Of these, 1,414 are on the general pathway and 968 are on the rural pathway. The following table breaks these numbers down according to whether the registrars are subject to the moratorium.²⁶

Table 7 AMG and IMGs by training pathway and moratorium

	AMG		IMG	
	Moratorium	Non-Moratorium	Moratorium	Non-Moratorium
General	10	1,222	32	150
Rural	108	416	425	19

As the data show, almost a quarter of all GP registrars are subject to the moratorium (24%). Of these, some 92% are on the rural pathway. In addition, some 55% of all rural pathway places are taken up by registrars who are subject to the moratorium.

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. Therefore it is clear that domestic medical graduates are neither choosing to become GPs and nor are they then choosing to go rural.

Evidence from overseas

The history of policy developments in Australia relating to the medical workforce show that we have essentially veered from a sense of over-supply to one of under-supply, with attention being paid only recently to the fact that parts of rural and remote Australia have been in a state of permanent under-supply for more than forty years.

Recent policy instruments have involved a range of carrots and sticks for young medical graduates including various scholarships (including bonded scholarships), monetary bonuses for rural and remote registrars, the development of University Departments of Rural Health and the Rural Clinical Schools. Whilst it is too early to say whether some of these are working, the evidence strongly suggests that there has been a turning away from general practice more broadly—and even more so for rural general practice—and towards the various specialties. Turning this around will not be easy.

This situation is familiar to a number of developed countries and a number of various policies have been tried and discarded. In Canada, for example, some of the provinces attempted to link the equivalent of provider numbers to geographic locations as a way of ensuring that doctors were channelled into those areas where they were in short supply, whilst others sought to reduce fee payments for doctors setting up practice in an over-serviced area.^{27,28} By and large these schemes were not successful and it would appear that in Ontario, at least, rather than use a stick approach, the provincial government has chosen

more flexible options such as allowing rural physicians to opt out of the fee-for-service payment system because it was recognised that this contributed to burnout as it encouraged doctors to see as many patients as possible.²⁷

An example of an alternative payment system is the Community Sponsored Contracts initiative which was introduced in 1996 in Ontario. These contracts allow doctors practising in small one or two doctor towns to opt to receive a salary in lieu of fee-for-service reimbursement.²⁹

Whether these alternative payment systems work or not is often hard to determine because of the paucity of studies on the impact of various policies upon actual doctor behaviour. It should be noted that alternative payment mechanisms as well as alternative models of service delivery have long been mooted in Australia as one of many solutions to both the rural doctor shortage as well as the rural health gap.³⁰

There is some evidence from Canada that doctors' remuneration preferences have changed over time. For example, a survey of remuneration preferences in 1995 found that 50% chose fee-for-service, 18% preferred to be salaried with the remainder choosing a blend or some other means. By 2003, 37% chose fee-for-service and 27% chose the salary option.³¹ Of significance for the future here in Australia are the reasons behind this change. Two factors have been proposed as contributing to this: regionalisation of health services whereby doctors are directly contracted to deliver a range of services; and the establishment of primary health care groups or networks in provinces such as Alberta and Ontario whereby physicians sign up directly with either a family health network or a family health group.

Given that Australia is in the throes of health reform, including the development of a national primary health care strategy, now might be an appropriate time to explore more flexible payment mechanisms for general practitioners and other health professionals. Certainly in terms of policy instruments, Australia has tended to concentrate on influencing the behaviour of doctors through a range of incentives and programs rather than looking more broadly at how our health system is funded. This has had serious implications for access and equity for some of our most disadvantaged population groups whilst at the same time ensuring fragmentation of service delivery between Commonwealth and State-funded programs.

Presenter

Mandy Leveratt, a historian by training, has had almost twenty years' experience working in the non-government sector in Victoria. Her policy experience has ranged from higher education through to disability services and health. She has also taught social policy at various universities. She is currently Senior Policy Officer with Rural Health Workforce Australia. She has a particular interest in poverty and inequality.

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