

THE AUSTRALIAN MEDICAL WORKFORCE: WORKFORCE CHARACTERISTICS AND POLICY UPDATE

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This paper is designed to provide participants with a quick snapshot of the Australian medical workforce from both a workforce characteristics and a workforce policy perspective.

MEDICAL WORKFORCE CHARACTERISTICS

The most comprehensive source of data on the Australian medical workforce is the Australian Institute of Health and Welfare (AIHW) annual medical labour force survey. The following overview of the Australian medical workforce is a summary of the workforce as at December 1998. The information was released in June 2000. The full report is available through the AIHW website at www.aihw.gov.au

Information on medical training opportunities is from data provided by Australian medical colleges and reported in the annual report of the Medical Training Review Panel.

Total medical workforce

In December 1998 the medical workforce comprised 49,623 practitioners of whom 48,934 were employed and practising in medicine, 393 were on extended leave and 296 were looking for work in medicine. In total, there were 46,078 clinicians in 1998, which represented an increase of 8.9% since 1993 (Table 1). During these five years the Australian population increased by 6.1%.

Between 1993 and 1998 there has been a steady growth in the number of practitioners in each of the main medical occupation categories, with the number of primary care practitioners increasing by 10.2% and the number of specialists increasing by 8.2% (Table 1).

In 1998, of the clinicians, 20,852 (45.3%) were primary care practitioners, 16,490 (35.8%) were specialists, 4,474 (9.7%) were specialists in training; and 4,263 (9.3%) were hospital non-specialists. The hospital non-specialist workforce was largely comprised of doctors in training. In 1998 there were 2,857 non-clinicians.

(Note: the clinical workforce excludes registered medical practitioners who are not in clinical practice.)

Clinicians per 100,000 population

For Australia as a whole there were 244.5 clinicians per 100,000 population in 1998, compared with 238.2 per 100,000 in 1993 (Table 1).

In 1998, there were 110.6 primary care practitioners per 100,000 population, up from 106.5 in 1993 and, there were 87.5 specialists per 100,000 population, up from 85.8 in 1993. The number of medical practitioners per 100,000 population stabilised or declined slightly in 1997 and 1998 after a period of rapid growth.

The 1996 Australian Medical Workforce Advisory Committee (AMWAC) 1996 report, *Australian Medical Workforce Benchmarks*, estimated benchmarks per 100,000 population for Australia in 1994 of 240.6 employed medical practitioners, 222.0 full time equivalents (FTEs); and 221.1 practising clinicians or 205.1 FTE practising clinicians. In 1994, the FTE practising clinicians benchmark was estimated to be 3.4% lower than the 1994 clinical workforce. AMWAC is planning to update the national benchmarks in 2001-02.

Table 2 summarises the number of practitioners across each of the main specialist areas. As with the specialist workforce in total, the number of practitioners in each of the main occupation categories has increased over the past five years (Table 2). While small in terms of total numbers, the most dramatic increases have occurred in the specialties of emergency medicine and intensive care.

Over the next five to ten years this trend can be expected to continue, with the possible exception of paediatrics. The AMWAC is progressively working through detailed reviews of each of the major medical disciplines. These workforce reviews include an assessment of the adequacy of the current workforce and projection of expected requirements and supply for the next decade. Where shortages or surpluses are anticipated, adjustments to the vocational training program are recommended. To date, reviews have been completed for seventeen disciplines, with increases in training program intake recommended for all disciplines except paediatrics and ultimately emergency medicine. At August 2000, over 80% of recommended adjustments to training numbers were in place.

(A full summary of AMWAC reviews and progress with implementation of recommendations is available at the AMWAC website: amwac.health.nsw.gov.au)

Table 1: Employed medical practitioners: occupation, sex and practitioners per 100,000 population, Australia, 1993 to 1998

Occupation	1993	1994	1995	1996	1997	1998	% change 1993-98
Males							
Primary care practitioners	13,255	13,364	13,586	13,828	13,748	13,924	5.1
Hospital non-specialists	2,420	2,620	2,736	2,643	2,586	2,521	4.2
Specialists	13,177	13,151	13,344	13,408	13,471	13,919	5.6
Specialists-in-training	2,863	2,696	2,920	3,013	3,052	2,904	1.5
<i>Total clinicians</i>	<i>31,714</i>	<i>32,104</i>	<i>32,585</i>	<i>32,891</i>	<i>32,857</i>	<i>33,269</i>	<i>4.9</i>
Non-clinicians	1,894	1,773	1,864	1,607	1,833	1,929	1.9
<i>Total</i>	<i>33,608</i>	<i>33,877</i>	<i>34,470</i>	<i>34,498</i>	<i>34,690</i>	<i>35,198</i>	<i>4.7</i>
Females							
Primary care practitioners	5,664	5,989	6,351	6,614	6,760	6,927	22.3
Hospital non-specialists	1,647	1,890	2,033	2,005	1,875	1,741	5.7
Specialists	2,064	2,131	2,260	2,338	2,484	2,571	24.6
Specialists-in-training	1,211	1,289	1,353	1,450	1,555	1,569	29.6
<i>Total clinicians</i>	<i>10,586</i>	<i>11,299</i>	<i>11,998</i>	<i>12,407</i>	<i>12,675</i>	<i>12,809</i>	<i>21.0</i>
Non-clinicians	732	766	863	733	841	927	26.7
<i>Total</i>	<i>11,317</i>	<i>12,065</i>	<i>12,861</i>	<i>13,140</i>	<i>13,516</i>	<i>13,736</i>	<i>21.4</i>
Persons							
Primary care practitioners	18,918	19,353	19,938	20,441	20,508	20,851	10.2
Hospital non-specialists	4,067	4,510	4,769	4,648	4,461	4,262	4.8
Specialists	15,240	15,283	15,604	15,746	15,955	16,490	8.2
Specialists-in-training	4,074	4,258	4,273	4,463	4,607	4,474	9.8
<i>Total clinicians</i>	<i>42,300</i>	<i>43,404</i>	<i>44,583</i>	<i>45,298</i>	<i>45,532</i>	<i>46,078</i>	<i>8.9</i>
Non-clinicians	2,626	2,539	2,748	2,340	2,674	2,857	8.8
Total	44,925	45,942	47,331	47,638	48,206	48,934	8.9
Per cent female							
Primary care practitioners	29.9	30.9	31.9	32.4	33.0	33.2	..
Hospital non-specialists	40.5	41.9	42.6	43.1	42.0	40.9	..
Specialists	13.5	13.9	14.5	14.8	15.6	15.6	..
Specialists-in-training	29.7	30.3	31.7	32.5	33.8	35.1	..
<i>Total clinicians</i>	<i>25.0</i>	<i>26.0</i>	<i>26.9</i>	<i>27.4</i>	<i>27.8</i>	<i>27.8</i>	<i>..</i>
Non-clinicians	27.9	30.2	31.4	31.3	31.4	32.5	..
Total	25.2	26.3	27.2	27.6	28.0	28.1	..
Number per 100,000 population							
Primary care practitioners	106.5	107.8	109.6	111.0	110.2	110.6	3.8
Hospital non-specialists	22.9	25.1	26.2	25.2	24.0	22.6	-1.3
Specialists	85.8	85.1	85.8	85.5	85.7	87.5	1.9
Specialists-in-training	22.9	23.7	23.5	24.2	24.7	23.7	3.5
<i>Total clinicians</i>	<i>238.2</i>	<i>241.8</i>	<i>245.1</i>	<i>245.9</i>	<i>244.6</i>	<i>244.5</i>	<i>2.6</i>
Non-clinicians	14.8	14.1	15.1	12.7	14.4	15.2	2.5
Total	253.0	256.0	260.2	258.6	259.0	259.6	2.6

Source: Australian Institute of Health and Welfare

Table 2: Specialist medical practitioner supply, Australia, 1994 to 1998

Discipline	1994	1995	1996	1997	1998	% increase
						1993-98
Number of practitioners						
Surgeons	2,603	2,512	2,708	2,868	2,938	12.9
Emergency	110	222	244	285	296	169.1
Intensive care	144	194	259	220	232	61.1
Medical	10,940	10,894	11,003	11,074	11,433	4.5
Paediatric	770	768	801	816	869	12.9
Pathology	715	728	729	730	722	1.0
Total	15,282	15,318	15,744	15,993	16,490	7.9
Number per 100,000 population						
Surgeons	14.6	13.9	14.8	15.5	15.7	7.6
Emergency	0.6	1.2	1.3	1.5	1.6	156.5
Intensive care	0.8	1.1	1.4	1.2	1.2	53.6
Medical	61.3	60.3	60.1	59.8	61.0	-0.4
Paediatric	4.3	4.2	4.4	4.4	4.6	7.6
Pathology	4.0	4.0	4.0	3.9	3.9	-3.7
Total	85.6	84.8	86.0	86.3	88.0	2.9

Source: Australian Institute of Health and Welfare

Geographic distribution

Geographic maldistribution remains a feature of the Australian medical workforce. In 1998 there was a 26.8% difference between the State and Territory with lowest and highest supply. Among the States and Territories there were 220.3 clinicians per 100,000 population in Western Australia and 225.6 in Queensland, compared with 243.4 in Victoria, 255.1 in New South Wales and up to 273.4 in South Australia and 279.4 in the Australian Capital Territory. It should be noted that South Australia provides significant, but unquantified, specialist services to the Northern Territory on a fly-in/fly-out basis and the Australian Capital Territory provides specialist and hospital services to south-eastern New South Wales.

In 1998, there were 122 GPs per 100,000 population in capital cities compared with 107 in other metropolitan areas, 110 in large rural centres, 93 in small rural centres, 77 in other rural areas and 66 in remote areas. There were 111 specialists per 100,000 population in capital cities compared with 79 in other metropolitan areas, 104 in large rural centres, 45 in small rural centres, 8 in other rural areas and 12 in remote areas. However most specialties have outreach services to rural areas that are not reflected in these numbers (Table 3).

Table 3: Medical practitioners per 100,000 population: geographic region, Australia, 1998

Occupation	Capital city	Other metrop.	Large rural centre	Small rural centre	Other rural area	Remote area	Total
Primary care	122.0	107.0	109.7	93.0	77.2	65.8	110.6
Hospital non-specialist	27.7	25.4	28.7	8.3	2.6	15.3	22.6
Specialists	111.3	78.8	103.8	45.3	8.1	11.7	87.5
Internal medicine	30.4	19.6	23.2	10.4	1.6	3.5	23.2
Pathology	5.0	3.1	4.0	2.1	0.1	0.0	3.8
Surgery	18.6	16.7	22.2	10.9	2.5	3.7	15.6
Other specialties	57.3	39.5	54.4	21.9	3.9	4.4	44.9
Specialists-in-training	33.2	19.9	12.6	1.5	0.4	5.6	23.7
<i>Total clinicians</i>	<i>294.1</i>	<i>231.1</i>	<i>254.8</i>	<i>148.2</i>	<i>88.3</i>	<i>98.4</i>	<i>244.5</i>
Non-clinicians	19.9	10.0	12.2	6.1	2.8	6.7	15.2
Total	314.0	241.1	267.0	154.4	91.1	105.2	259.6

Source: Australian Institute of Health and Welfare

Medical workforce by age and sex

In 1998, 51.7% of the workforce was aged under 45 years and 9.4% of the workforce was aged 65 years and over.

The proportion of the workforce aged 65 years or more has increased between 1993 and 1998; with 10.8% of primary care practitioners and 10.6% of specialists in this age group in 1998, compared with 10.3% and 9.9%, respectively, in 1993.

The representation of women in the workforce has increased from 25.2% in 1993 to 28.1% in 1998. Female practitioners comprised 33.2% of the primary care workforce, 57.8% of primary care trainees, 35.1% of specialist trainees and 15.6% of the specialist workforce. 57% of female specialists were in just six disciplines (anaesthesia, diagnostic radiology, obstetrics and gynaecology, paediatrics, and pathology). Similarly, 80% of female specialists in training were also in six disciplines (anaesthesia, adult internal medicine, emergency medicine, obstetrics and gynaecology, paediatrics and psychiatry).

Hours worked

In 1998, the average hours worked were 48.8, up marginally from 48.1 in 1994. However, those doctors working 65 hours or more per week increased from 10.8% in 1994 to 17.0% in 1998.

In 1998, male clinicians worked an average of 52.7 hours per week and female clinicians an average of 39.6 hours per week. Male doctors are more likely to work excessively long hours than are female doctors. This variation in workforce participation has remained remarkably stable during the past four years. Variation in hours worked is also evident based on discipline and stage of career, with younger doctors (20-35 years) working comparatively long hours.

On average, primary care practitioners worked 45.3 hours per week in 1998, while the comparative figure for specialists was 51.5 hours. This was largely influenced by gender as 33.2% of GPs were female compared with 15.6% of specialists and a larger proportion of females than males worked less than 35 hours per week. In general practice, 52.2% of females compared with 13.6% of males worked less than 35 hours per week. In specialist practice, 32.7% of females compared with 12.4% of males worked less than 35 hours per week.

The highest proportions of doctors reporting working 80 or more hours per week were surgeons (14.9%), internal medicine specialists (10.2%), specialists-in-training (8.2%), and general practitioners (5.5%).

The metropolitan and rural workforces

In 1998, there were 7,757 practitioners who worked in a rural or remote area of Australia. This represented 15.6% of all medical practitioners. This contrasts with the overall population distribution of 28.7% living in rural/remote areas in 1998.

The occupation profile is quite different for the metropolitan and rural medical workforces. For example, of the 7,757 medical practitioners located in a rural or remote area, the majority (4,667 ie 60.2%) were primary care practitioners, 7.4% were hospital non-specialists, 25.7% were specialists, 4.1% were specialists-in-training and the remaining 4.1% were non-clinicians. On the other hand, of the 41,177 medical practitioners in metropolitan Australia, only 39.3% were primary care practitioners, 8.9% were hospital non-specialists, 35.2% were specialists, 10.4% were specialists-in-training and 6.2% were non-clinicians.

Medical practitioners employed in rural and remote areas worked an average of 51.1 hours per week compared with 48.0 hours per week worked by practitioners in metropolitan areas.

In 1998, 698 medical practitioners indicated that the employment setting of their main, second or third job was an Aboriginal health service. No information from the AIHW labour force survey is available on how many of these doctors were Aboriginal or Torres Strait Islanders. However, the 1996 Australian census indicated that there were 29 general practitioners, 12 medical practitioners in training, 20 specialists and 21 medical administrators who identified as Aboriginal or Torres Strait Islander.

Public hospital workforce

In 1998, there were 21,793 medical practitioners working in public hospitals, comprising 44.5% of all practising medical practitioners. This workforce was predominantly made up of specialists (51.6%) and specialists-in-training (18.5%), with primary care practitioners and hospital non-specialists accounting for 25.5% of the workforce.

Medical education

1,206 Australian citizen/permanent resident students completed undergraduate medical degree courses in 1998. 45.9% of medical graduates were female. There were 150

overseas citizens (including from New Zealand) who completed basic medical degrees in 1998.

1,334 Australian citizen/permanent resident students commenced undergraduate medical degree courses in 1999. The proportion of female students commencing medical degrees increased from 43.6% in 1989 to 52.7% in 1999. Of the 1999 commencing students, 88.1% originated from a capital city or other metropolitan area and 11.4% came from a rural or remote area. Around one in eight medical students at Australian universities are from overseas.

Table 4: All medical students: citizenship and level of course, Australia, 1999

Citizenship	Undergraduate	Postgraduate	Total
Australian citizens/permanent residents	6,568	2,484	9,052
New Zealand citizens	40	59	99
Other overseas citizens	1,016	215	1,231
Total	7,624	2,758	10,382
% overseas students	13.9	9.9	12.8

Source: AIHW from Department of Education, Training and Youth Affairs data.

Vocational medical training

As at May 2000, the Medical Training Review Panel (MTRP) estimated that there were 5,680 medical vocational training positions or trainees in specialist training programs.

(Not all colleges have training positions; several have accredited training programs within hospitals/institutions. As a result, for these colleges data are recorded on the number of registered advanced trainees in a training program not the number of training positions.)

The major areas of vocational training in 2000 were general practice (1,455 trainees, 25.7%), emergency medicine (688 trainees, 12.1%), psychiatry (667 training positions, 11.8%), surgery (546 training positions, 9.6%), anaesthesia (454 training positions, 8.0%) and adult medicine (443 trainees, 7.8%).

In 2000, 43.3% (2,456) of vocational trainees were female, ranging from 65.2% of paediatrics trainees to 12.8% of surgery trainees. Other training programs with high levels of female participation are general practice (60.3%), obstetrics and gynaecology (49.5%), anaesthesia (49.0%), psychiatry (46.0%), public health medicine (48.2%), and radiation oncology (48.1%).

6.5% of trainees were undertaking part time training.

Since national data on training placements was first collected in 1997, the number of first year placements estimated to be available in the next year has increased by 10.9%. The main increases since 1997 have been in adult medicine (56), general practice (50) and surgery (34).

The total number of vocational training placements has shown little change since 1997, however there have been some noticeable adjustments within disciplines. Disciplines that have shown increases in total training placements since 1997 have been surgery (68, principally in general surgery and urology), emergency medicine (86), radiodiagnosis (34) and dermatology (14). The largest decreases in total training numbers have been in general practice (148) and paediatrics (38); although from 2001 the number of first year placements available in general practice will increase following the Commonwealth Government's decision to increase the intake from 400 to 450.

Medical migration

In 1998, there were 10,408 overseas-trained doctors in the Australian medical workforce, representing 21.3% of employed medical practitioners. 95.7% of these overseas trained doctors are Australian citizens or permanent residents.

During 1998-99, 2,224 doctors who were citizens of foreign countries arrived in Australia to take up temporary medical employment. Of these temporary resident doctors (TRDs), 32.9% were occupational trainees. This latter group are predominantly in Australia to gain additional training, education and experience consistent with their career intentions. The majority (57.4%), of TRDs were either primary care practitioners or hospital-non-specialists and 35.9% of TRDs were located in a rural or remote area. Of the TRDs, 57.1% were from the United Kingdom or Ireland, 12.2% from Asia, 11.3% from New Zealand and 6.9% from South Africa. The number of TRDs entering Australia has increased from 667 in 1992-93 to 2,224 in 1998-99.

During 1998-99, 408 doctors who were citizens of foreign countries permanently migrated to Australia, while 232 doctors permanently migrated from Australia. Of the 408 doctors, 39.5% previously resided in Asia, 14.1% in New Zealand and 16.3% in the United Kingdom or Ireland.

In 1999, some 220 permanent resident overseas-trained doctors passed the Australian Medical Council (AMC) examination and were eligible for registration. A further 59 overseas trained specialists qualified for registration after recognition of their qualifications by a specialist medical college and the AMC.

MEDICAL WORKFORCE POLICY INITIATIVES

On the whole, the Australian medical workforce is characterised by a comparative excess in supply of general practitioners in capital cities, a general shortage of specialists and an undersupply of doctors (general practitioners and specialists) in rural and remote areas. In most specialist disciplines, there is a need for more specialists-in-training to meet projected increases in demand associated with growth in the population, ageing of the population and advances in medical technology and medical treatments. Aboriginal and Torres Strait Islander people are under-represented in the medical workforce. The predominantly male medical workforce is ageing, while among young doctors the representation of women is increasing and these trends are impacting on workforce supply and patterns of practice.

Workforce policy efforts have been focussed on redressing the maldistribution of the workforce while constraining growth of overall practitioner numbers. Many of the policy initiatives are based around training and education measures.

Distribution

To improve workforce distribution a range of government initiatives are in place. The emphasis is on improving medical practitioner supply in rural and remote Australia and include measures to recruit and support rural origin medical students, develop a focus on rural practice in medical training and retain existing rural practitioners. These initiatives are summarised below.

Medical education

- programs to attract rural students to medicine, such as high school promotion activities and mentoring schemes;
- university scholarships for rural origin students;
- provision for medical graduates to “work off” university fees debt by practising in rural areas;
- introduction of a new scholarship, covering an additional 100 medical students (whether from rural backgrounds or not) who make a commitment to practise in rural areas for six years. Medical school intakes will be increased cumulatively by 100 places and scholarship holders will be unable to receive government rebates under Medicare for services delivered in urban areas until they have met their rural service obligation;
- funding of a new medical school in rural Australia, based at James Cook University, Townsville, which is in northern Queensland;
- establishment of ten clinical schools and ten university departments of rural health in rural areas to create a better infrastructure for rural medical training. These institutions will increase training opportunities in rural settings and attract more country students to medicine. The academic positions should mean more practising clinicians in the areas where facilities are located, and they will provide local practitioners with clinical support, research capacity and continuing medical education opportunities; and
- a scholarship scheme named after John Flynn, founder of the world’s first flying doctor service, will provide 600 students with experience in general practices, hospitals and other facilities in remote areas.

Vocational training

- from 2001, the general practice training program will include a minimum of 200 dedicated rural first year training placements (out of a first year total of 450 placements);
- a pilot program to include rural general practice experience in postgraduate years one and two is underway. Participants spend 10 to 13 weeks in a training location;
- a GP rural training stream aimed at building interest in and skills for rural practice, with placements in regional hospitals and rural practices plus advanced training in areas of work commonly undertaken by GPs in rural areas (anaesthesia, obstetrics and psychiatry). Funding for measures to maximise the uptake of this training - financial

incentives to students and additional training places in rural locations – has recently been provided by the Commonwealth Government;

- in specialist disciplines, rural and regional vocational training placements enable advanced trainees to undertake accredited training in their specialty at a rural or regional hospital, and more recently in rural community settings. Some specialist training programs now include compulsory rural placements; and
- some medical College training programs have also developed training placements that are community based in addition to the traditional hospital based approach. These developments are being driven by changes occurring in the acute care hospital environment (eg shorter length of stay, day only surgery, hospital-in-the-home).

Recruitment and retention

- Rural Workforce Agencies are funded to recruit and support doctors for rural and remote communities;
- the Commonwealth Government's Rural Retention Program financially subsidises long-serving primary care practitioners in locations in need of retention support, with payments based on variables reflecting general remoteness and access to services, social interaction and peer support;
- State and Territory Governments continue to fund a range of support measures, including accommodation, relocation assistance and salary bonuses; and
- the Commonwealth Government's Rural Health Support, Education and Training Program funds education, training and support initiatives that enable rural health workers to progress collective efforts to improve the health status of rural and remote communities.

Funding is also provided for measures which supplement or otherwise improve rural and remote service provision, including:

- the Royal Flying Doctor Service;
- a female GP "fly-in-fly-out" program, newly established for women in remote areas;
- "outreach" arrangements under which urban specialists provide care to rural and remote communities on a visiting basis;
- service substitution, where GPs providing specialist services are assisted with insurance, Medicare rebates and specialist support;
- a Regional Health Services Program is targeting small rural communities (usually less than 5,000 people) to identify local priorities and develop and support health services to meet those needs, with joint Commonwealth and State/Territory funding. Services covered include primary medical care, health promotion, mental health services, aged care services, physiotherapy and podiatry; and
- State and Territory governments are beginning to introduce limited substitution of nurse practitioners. One state has given nurses limited responsibility to administer drugs and another has passed legislation allowing appointment of nurse practitioners under prescribed circumstances. State and Territory governments are also trying to boost the rural allied health workforce.

Aboriginal and Torres Strait Islander workforce initiatives

Boosting the representation of Indigenous Australians in the workforce is also a focus. The Commonwealth Government:

- funds university programs to attract and support Indigenous medical students; and
- has recently commissioned a national project to provide better data on the numbers and types of health professionals working in Aboriginal health services.

Overseas trained doctors

TRDs continue to be employed in significant numbers to meet workforce supply shortfalls, although their migration to, and employment in Australia is restricted to ensure that they do not contribute to the maldistribution of the workforce.

Permanent stay of OTDs is severely restricted, with visas generally only granted to practitioners who are going to work in areas of workforce shortage, which are generally rural areas and parts of the public hospital system, or who have immediate family in Australia. Eligibility for temporary visas to work as a TRD is similarly restrictive, and usually based on a maximum stay of 12 months and filling a designated area of need (ie. workforce shortage which has proved difficult to recruit Australian doctors to fill).

Restricted visa eligibility is matched by restricted access to Medicare rebates: OTDs can only access government rebates if they practise in areas of workforce shortage.

A combination of these restrictions and steady interest by OTDs in practising in Australia has had an impact on the workforce. Schemes for entry of OTDs into rural practice under conditional arrangements are being developed. Arrangements vary among States and Territories, but generally provide overseas trained GPs with various incentives, including assistance in gaining permanent residence and unconditional medical registration in return for completion of five years' rural service. The Commonwealth and State/Territory Governments have recently agreed on a national model to ensure consistent arrangements with agreed standards for these schemes.

AMWAC recently surveyed the Commonwealth and all State health authorities requesting information on numbers of OTDs being recruited under these schemes. While around 120 appear to have been recruited in four States to May 2000, it appears that up to 200 may be recruited during 2000. In terms of supply modelling, it is not known what the attrition rate of OTDs recruited for five years will be, nor how many who complete their five year commitment will then choose to remain in rural areas. This will be monitored in coming years.

An increase in the medical school entry cohort by 100 additional places for OTDs whose qualifications were not immediately recognised for practice in Australia was trialed in 1999. Instead of sitting the licensing examination for OTDs, candidates who agreed to undertake five years of rural practice were admitted to the final years of an Australian medical course and allowed to convert their qualification to an Australian degree. Evaluation of this program is underway.

Government rebate restrictions (“provider number” legislation)

As well as restricting the access to Medicare rebates of OTDs (noted above), access of Australian medical graduates is also limited. Since November 1996 new medical practitioners have been required to complete a recognised postgraduate vocational training program to be eligible to provide medical services that attract Medicare benefits. The legislation affects any doctor who had not completed his/her intern year before 1 November 1996.

Prior to gaining postgraduate qualifications (in general practice or another specialist discipline), graduates can only receive rebates if they work in supervised positions as rural locums, or provide after hours home visit services with approved deputising services. This policy:

- ensures better quality medical services, by effectively preventing graduates from working unsupervised in private general practice without training; and
- encourages young doctors to enter training programs or work in salaried positions in the public hospital system.

The rebate restriction has:

- reduced the oversupply of GPs in metropolitan areas from approx 4,000 in 1996 to an estimated 2,000 in 1999;
- generated savings of approximately \$556 million over four years, with ongoing savings of approx \$250 million per year - the result of doctors remaining in hospitals and/or undertaking postgraduate training, rather than adding to the oversupplied GP workforce in metropolitan areas;
- provided doctors to rural areas under the Rural Locum Relief Program; and
- established primary care as a distinct discipline, requiring training and experience.

When the restriction was introduced in 1996, the Government made it a temporary measure, so that the effects on employment opportunities of junior doctors could be monitored. With no detrimental effects in evidence, the Commonwealth Government is now seeking to make the restriction permanent, although some parts of the medical workforce remain opposed, believing that it restricts their professional autonomy.

Changes in medical education

At both graduate and post high school entry level, universities are changing their medical school admissions' policies with the aim of selecting students who are academically able and who possess personal qualities and other skills appropriate to the study of medicine. This is resulting in greater diversity in student background.

Four medical schools (Flinders University of South Australia, University of Queensland, University of Sydney and for one-third of its entrants, the University of Melbourne) have introduced a four-year graduate entry medical course. This is affecting the age at which students begin and complete their medical studies.

In general, most medical schools have affirmative action programs for rural students and Aboriginal and Torres Strait Islander students and some schools have subquotas (eg James Cook University has a subquota for rural and indigenous students, the Flinders University of South Australia has subquotas for Northern Territory students and for Aboriginal and Torres Strait Islander students. The University of Newcastle has a comprehensive approach to recruiting, selecting, training and graduating indigenous students and the University of Sydney reserves a number of places annually for indigenous students).

Innovations in medical school curricula include an increased community and rural experience and an increased emphasis on clinical skill acquisition and on problem solving.

Recently medical schools have been restructuring final year medicine to make it more of a student internship in order to smooth the transition from medical student to doctor.

State based Postgraduate Medical Councils, with the support of the MTRP, have been established to facilitate the development of structures and processes to support and improve the training received by doctors in their first two postgraduate years and to assist them to make wise career choices.

Appendix A: The Australian health system – a summary

Every two years the Australian Institute of Health and Welfare reports on Australia's health, providing national information on health needs and services and the development and evaluation of health policies and programs. The following summary of the organisation of the Australian health system is taken from *Australia's Health 2000*. A full copy of the report can be obtained from the AIHW website at www.aihw.gov.au

The Australian health system is complex, with many types and providers of services and a range of funding and regulatory mechanisms. Those who provide services include medical practitioners, other health professionals, hospitals and other government and non-government agencies. Funding is provided by the Commonwealth Government, State and Territory Governments, health insurers, individual Australians and a range of other sources.

The Commonwealth Government's funding includes two national subsidy schemes, Medicare and the Pharmaceutical Benefits Scheme. These schemes cover all Australians and subsidise their payments for medical services and for a high proportion of prescription medications bought from pharmacies. The Commonwealth and State/Territory governments also jointly fund public hospital services so they are free of charge to patients. Between them, these funding provisions aim to give all Australians, regardless of their personal circumstances, access to adequate health care at an affordable cost or no cost.

Many patients' first contact with the health system is through a general medical practitioner (GP). Patients can choose their own GP and are reimbursed for all or part of the GP's fee by Medicare, depending on the GP's billing arrangements. For specialised medical care patients can be referred by a GP to specialist medical practitioners, other health professionals, hospitals and community-based healthcare organisations. Australians also visit dentists and other private sector health professionals of their choice. Charges are met by the patients themselves, or with support of private health insurance, which Australians may purchase for these or hospital services.

Patients can access public hospitals through emergency departments, where they may present on their own initiative, or via the ambulance services, or after referral from a medical practitioner. Admitted patients are charged nothing for their treatment, food and accommodation, unless they choose private treatment. Emergency department and outpatient services are free.

Australians may choose to be private patients in hospital, if they use a private hospital, or choose to be treated as a private patient in a public hospital. Private patients can choose their own doctor. The hospital's services must be paid for by the patient or, for members, with the support of their private health insurance fund. Medicare subsidises the fees charged by doctors for services provided to private patients in hospitals, and private health insurance funds also contribute towards medical fees for insured patients.

The health service system is regulated in various ways. Private hospitals are licensed by State/Territory Governments. Medical practitioners and other health professionals are registered for practise in each State/Territory.

In addition to the services outlined above, the Commonwealth, State and Territory Governments and local governments provide public health services, community health services and ambulance services.

Appendix B: Definitions of common terms used in this paper

Clinician

A medical practitioner who is involved in the diagnosis and/or treatment of patients.

Geographic classification

The Rural, Remote and Metropolitan Areas classification has been used to classify the geographic location of practitioners.

Metropolitan comprises:

1. capital cities, consisting of each of the 8 State/Territory capital cities - Sydney, Melbourne, Brisbane, Perth, Adelaide, Hobart, Darwin and Canberra
2. other metropolitan areas - centres with a population of 100,000 or more, of which there are six - Newcastle, Wollongong, Queanbeyan (part of Canberra-Queanbeyan), Geelong, Gold Coast-Tweed Heads, Townsville

Rural and remote

The remainder of the country, although the area is classified into five areas based on population and distance from a major urban centre. For example large rural centres have a population ranging from 25,000 to 99,999; small rural centres a population ranging from 10,000 to 24,999.

General practitioner

A practitioner engaged in the primary care of patients.

General practitioner trainee

A medical practitioner under the supervision of an Royal Australian College of General Practitioners (RACGP) Fellow in a job recognised as leading to RACGP Fellowship.

Hospital non-specialist

Medical practitioners mainly employed in a salaried position in a hospital who do not have a recognised specialist qualification and who are not undertaking a training program to gain a recognised specialist qualification. They include resident medical officers and interns and other salaried hospital career practitioners and exclude specialists-in-training.

Intern

A resident medical practitioner working in a hospital, usually in the first year of service after graduating from medical school.

Medicare

The national health insurance system, which covers Australians for services provided by qualified private medical practitioners. Payment is based on an established schedule of fees. Practitioners are not obliged to adhere to the schedule fees, except in the case of participating optometrists.

For private admitted patients in hospitals the Medicare benefit is 75% of the schedule fee, but the gap between the benefit and schedule fee is insurable with private health insurance organisations. For non-hospital services, a benefit of up to 85% of the schedule fee is payable. Patients are responsible for payments of amounts charged above the schedule fee. Some services do not qualify for Medicare benefits. These include services provided by public authorities and most government funded community health services.

Overseas trained doctor (OTD)

A person who obtained an initial medical qualification in a country other than Australia. The qualification must be recognised as equivalent to an Australian medical qualification for the person to obtain registration as a medical practitioner in Australia.

Specialist

A medical practitioner with a qualification awarded by, or which equates to that awarded by, the relevant specialist professional medical college in Australia. Specialist recognition is normally based on successful completion of a program of appropriate supervised training covering a minimum of six years after initial medical graduation.

Specialist-in-training

A medical practitioner who has been accepted by a specialist medical college into a training placement supervised by a member of the college.

Temporary resident doctor (TRD)

A citizen of another country who has an immigration visa enabling them to be employed as a medical practitioner in Australia. The person's qualification must be recognised for conditional registration by the relevant State/Territory medical board.

Appendix C: Useful Australian websites

From the medical workforce perspective three websites are most useful. These are:

- Australian Institute of Health and Welfare – www.aihw.gov.au
- Australian Medical Workforce Advisory Committee - amwac.health.nsw.gov.au
- Commonwealth Department of Health and Aged Care – www.health.gov.au

These sites contain a mix of general information, recent reports and specific information on particular medical workforce issues.

From the AMWAC website access is available to the following, which may be of use when searching on specific medical workforce issues:

- Australian Institute of Health and Welfare
- Commonwealth Department of Health and Aged Care
- State/Territory Health Departments
- Australian Medical Council
- Australian Medical Association
- each Australian medical college
- Centre for Rural Health
- each Rural Workforce Agency
- each Australian medical school
- Australian Medical Registration Boards