

Medical labour force 2000

Bulletin

Introduction

This report presents findings from the annual Medical Labour Force Survey for 2000. It is condensed compared with reports released of previous surveys, for the purpose of accelerating the release of updated data and pending the release of results of the 2001 survey which are expected to be available later in 2003. Where appropriate, comparisons have been made with data drawn from earlier Medical Labour Force Surveys. To view the full range of information available, please visit the web site at: <http://www.aihw.gov.au>.

Main findings

- There were an estimated 56,115 registered medical practitioners in Australia in 2000 and 51,106 were working in medicine.
- The average age of the medical workforce was 46.5 years, up from 44.9 years in 1995 and continuing an ageing trend.
- The proportion of female practitioners continued to rise, with 30.0% in 2000 compared with 27.2% in 1995.
- Medical practitioners worked an average week of 45.5 hours, a decline since 1995 when they worked an average of 48.2 hours.
- In 2000, almost half (48.2%) of practitioners worked more than 50 hours per week, a decline since 1995 (53.0%).
- Across regions, generally the medical practitioner rate decreased and their hours increased as regional population lessened: the rate (per 100,000 population) ranged from 307 in 'Capital cities' to 94 in 'Other rural areas' and average hours per week ranged from 45.0 in 'Capital cities' to 49.1 in 'Remote areas'.
- At a national level, the lower average weekly hours and an increased practitioner rate resulted in a decline in full-time equivalent rates in 2000. Based on a 45-hour week, the rate declined from 279 in 1995 to 270 in 2000.

CONTENTS

Introduction	1
Main findings	1
About the survey	2
Composition of the medical labour force	3
Geographic distribution	6
Regional features	8
Working hours	9
Glossary	11
Reference	11

Medical labour force, 2000

About the survey

Method

Each state and territory medical board conducts an annual renewal of practitioner registration and the survey questionnaire was sent to all medical practitioners as part of the registration renewal process. The results of the 2000 survey relate to the period October–December 2000 when the renewal notices and the survey were dispatched. Survey data on practice activity refer to the 4-week period before completion of the questionnaire by each medical practitioner.

2000 survey estimates of the number of practitioners... are not directly comparable with previous surveys.

Scope and coverage

The scope of the Medical Labour Force Survey is all practitioners registered with the medical board in each state/territory and eligible to practise. Coverage in some states excludes medical practitioners who registered for the first time during the current year and practitioners with a conditional registration.

Response rate

The responses to the AIHW Medical Labour Force Surveys represented 73.2% of the medical registrations in all states and territories in 2000 (Table 1).

Table 1: Medical Labour Force Survey: estimated survey response rate, states and territories, 2000

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
2000 response rate	82.0	67.4	73.7	59.6	73.5	68.2	65.4	59.8	73.2

Source: Medical Labour Force Survey, 2000.

The overall response rate can only be estimated, not determined with complete accuracy. It is known that some medical practitioners who were registered in more than one state or territory completed a questionnaire in just one state or territory. It is not known how often this occurred because it is not possible to match survey records across jurisdictions.

In addition, the technique used to produce estimates for the survey as a whole were different in 2000. The new procedures required changes which tightened the definitions of 'responding' and 'non-responding' to the survey which, in turn, have lowered slightly the estimated response rate for 2000. Calculated using the previous method, the estimated national response rate would have been 75.7%.

Break in series

In 2000 there were significant changes to the questionnaire used for the survey, designed to improve and expand the information collected about the hours worked by medical practitioners. The expanded information on the fields of practice has led to a change in the way clinicians and non-clinicians are defined. The new method classifies practitioners who spent part of their time in clinical work but the majority of their time working in a non-clinical medical occupation into the occupation in which they worked the most hours. In previous surveys, these practitioners were all assigned the occupation of clinician. For this reason, the 2000 survey estimates of the number of practitioners in each field of work or occupation are not directly comparable with previous surveys.

Notes on the AIHW labour force estimates

The figures produced from the Medical Labour Force Survey are estimates and, as noted above under 'Response rate', the estimation technique changed in 2000. Not all medical practitioners who were sent a questionnaire responded to the survey. Estimates of the whole practitioner population are based on survey data which have been weighted to match the available registration information. In 2000, complete registration data were available for four jurisdictions (and excluded Western Australia, Tasmania, the Australian Capital Territory and the Northern Territory). For Western Australia and the Northern Territory, weighting was based entirely on respondents' characteristics, whereas weighting for the Australian Capital Territory was based on sex data from registrations and age data for respondents. For Tasmania, no age or sex data were available. Additional estimation has been made for survey respondents for whom age, sex and labour force status were not known, either because some survey questions were incomplete or because medical boards' registration data were incomplete or not provided. Where registration data were not available, it was assumed in the estimation that survey non-respondents in each state/territory had the same characteristics as respondents.

Rounding of estimates may result in numbers not adding up to totals in some tables.

Composition of the medical labour force

Size

The total number of practitioners working in medicine increased between 1999 (50,329) and 2000 (51,106). However, the changed reporting method for practitioner activity in 2000 (see 'Break in series' above) has affected the distribution of practitioners across clinical and non-clinical occupations. The new method, which is based on the occupation in which the practitioner spent the most hours, has resulted in the higher estimate of non-clinical practitioners in 2000 (4,487 compared with 2,892 in 1999) as well as the lower estimate of clinicians (46,619 compared with 47,436 in 1999) (Figure 1; AIHW 2003).

For the first time in the survey, non-clinicians who spent part of their time in clinical work have been identified separately. In 2000, there were an estimated 2,020 practitioners in this 'part-time' clinician group (representing 45.0% of practitioners in non-clinical occupations). These practitioners can be added to the 46,619 clinicians to give an estimate of 48,639 who were engaged in clinical work, irrespective of hours. Although the result is not directly comparable with previous surveys, this is the best approximation in method and shows an increase since 1999 of approximately 1,203 practitioners engaged in clinical work.

Of these 2,020 'part-time' clinicians, most were specialists (1,161) followed by primary care practitioners (450), specialists-in-training (178) and hospital non-specialists (131) (Table 2).

Table 2: Practitioners who spent some time in clinical work: type of clinical work, number, 2000

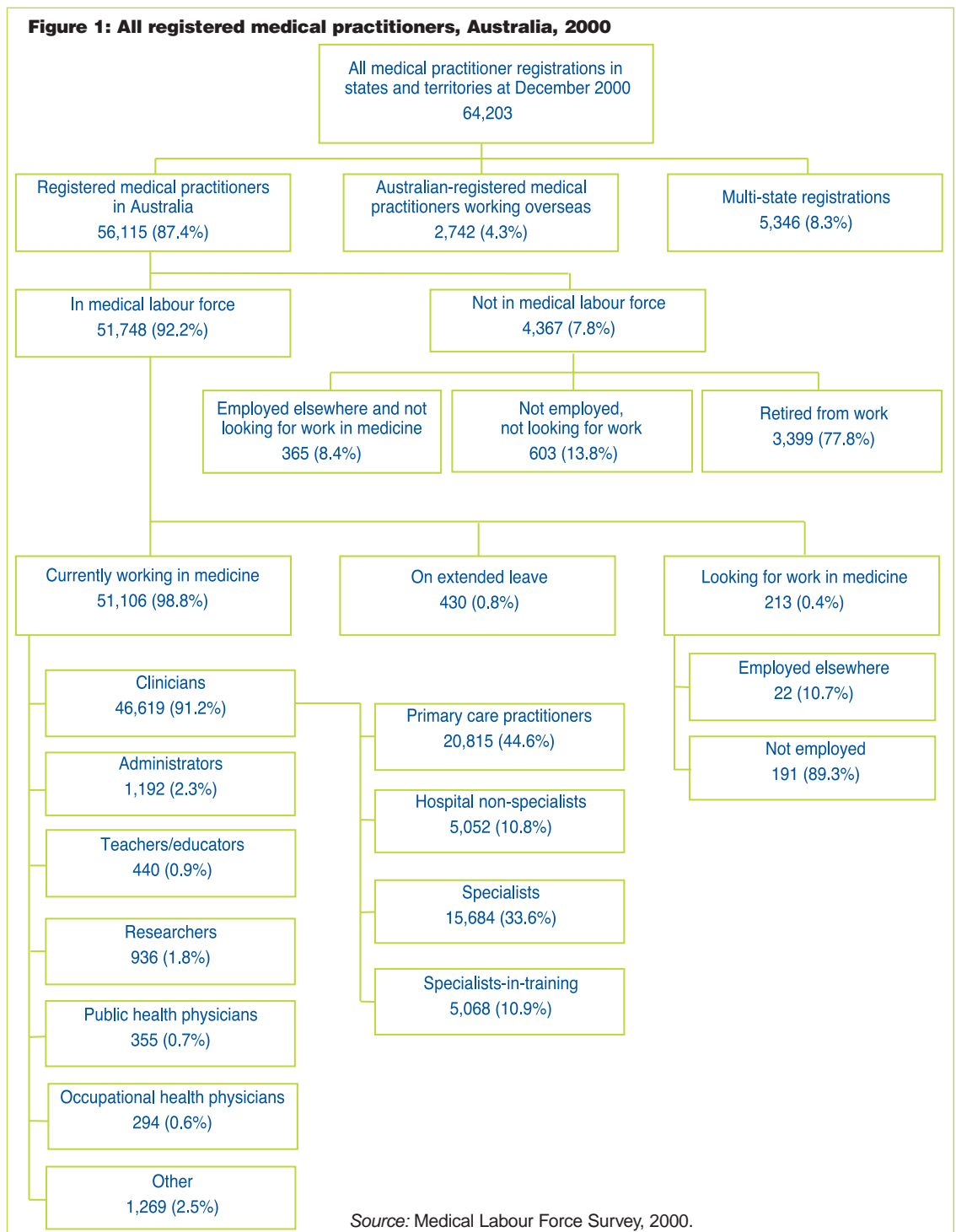
	Primary care	Hospital non-specialist	Specialist	Specialist-in-training	Unknown	Total
Non-clinicians	450	131	1,161	178	100	2,020
Clinicians	20,815	5,052	15,684	5,068	—	46,619
Total	21,265	5,183	16,845	5,246	100	48,639

Source: Medical Labour Force Survey, 2000.

Medical labour force, 2000

Most practitioners working in medicine in 2000 were clinicians (91.2%), of whom just under half (44.6%) were primary care practitioners (mainly general practitioners), approximately one-third (33.6%) were specialists, and the remainder were either specialists-in-training or hospital non-specialists (10.9% and 10.8% respectively) (Figure 1).

In 2000 there were 51,106 practitioners working in medicine.



Age

The general trend of an ageing medical workforce continued in 2000 with an average age of 46.5 years for employed practitioners, compared with 44.9 years, five years earlier. In 2000, the average age of clinicians was 46.3 years and the average age of non-clinicians was slightly older at 48.7 years. Hospital non-specialists and specialists-in-training were the youngest on average (33.2 and 32.9 years respectively), which is not unexpected given that these are the main choices for practitioners after completing their initial training (Table 3).

Sex

In 2000, the proportion of female practitioners continued its upward movement, with 30.0% compared with 27.2% five years earlier (Table 3).

In 2000, female clinicians were more likely to be hospital non-specialists (41.5%) than specialists (17.6%). The proportion of female specialists-in-training was double (37.7%) the proportion employed as specialists and, although this could indicate stronger future growth in the proportion of practising female specialists, a comparison over time between the two groups suggests a slow growth:

- the female proportion of specialists-in-training steadily increased from 31.6% in 1995 to 37.7% in 2000
- the female proportion of practising specialists has grown more slowly, from 14.0% in 1995 to 17.6% in 2000.

Table 3: Employed medical practitioners: occupation, number, per cent female and average age, 1995 and 2000

Occupation	1995			2000		
	Number	% female	Average age	Number	% female ^(a)	Average age ^(b)
<i>Clinician</i>	44,583	27.0	44.3	46,619	29.9	46.3
Primary care	19,937	31.6	45.8	20,815	34.4	48.5
Hospital non-specialist	4,769	42.0	31.1	5,052	41.5	33.2
Specialist	15,604	14.0	49.0	15,684	17.6	50.0
Specialist-in-training	4,273	31.6	31.7	5,068	37.7	32.9
<i>Non-clinician</i>	2,748	31.2	48.6	4,487	31.6	48.7
Administrator	737	31.2	47.1	1,192	29.7	49.2
Teacher/educator	173	29.1	51.7	440	40.5	49.4
Researcher	284	33.5	46.0	936	32.5	43.0
Public health physician	461	39.5	43.6	355	36.8	44.9
Occupational health physician	237	16.0	50.7	294	20.8	50.5
Other	855	30.7	52.1	1,269	30.7	52.4
Total	47,331	27.2	44.9	51,106	30.0	46.5

(a) Includes imputed sex distribution for Tasmania, based on 1999 Medical Labour Force Survey data.

(b) Excludes data for Tasmania.

Source: Medical Labour Force Survey, 1995 and 2000.

Medical labour force, 2000

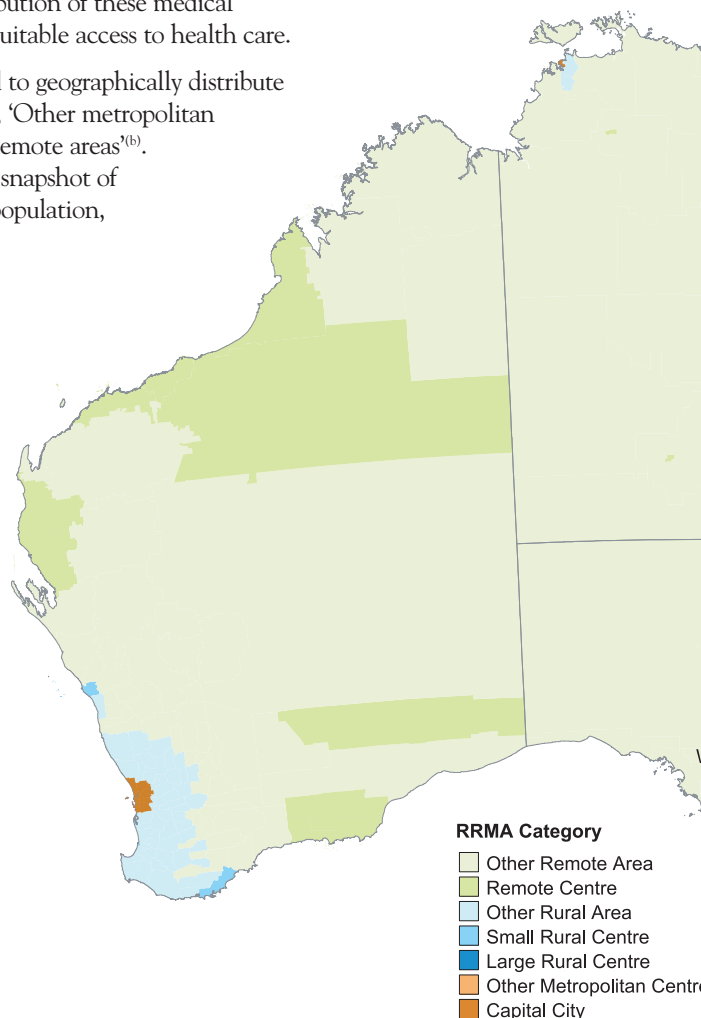
Geographic distribution

There were an estimated 19.2 million resident Australians in 2000^(a) and around 51,106 medical practitioners providing services to this population. The geographic distribution of these medical practitioners and the services they provide are important for planning equitable access to health care.

The Rural, Remote and Metropolitan Areas Classification has been used to geographically distribute medical practitioners into the following six types of region: 'Capital city', 'Other metropolitan centre', 'Large rural centre', 'Small rural centre', 'Other rural area' and 'Remote areas'^(b).

These areas are mapped (Figure 2) and selected characteristics provide a snapshot of practitioners by their main working location, relative to the Australian population, across the different regions (Tables 4 to 9).

Figure 2: Rural, remote and metro



Capital cities

About 12.25 million (64.0%) Australians lived in 'Capital cities' where some 37,644 (73.7%) medical practitioners provided services. The average age of these practitioners was 46.3 years and they worked an average of 45.0 hours per week.

Table 4: Employed medical practitioners in 'Capital cities': occupation, number and rate, 2000^(c)

Occupation	Number	Rate ^(a)
<i>Clinicians</i>	33,893	277
Primary care	13,913	114
Hospital non-specialist	3,602	29
Specialist	12,128	99
Specialist-in-training	4,251	35
<i>Non-clinicians</i>	3,751	31
Total	37,644	307

Other metropolitan centres

About 1.47 million (7.7%) Australians lived in 'Other metropolitan centres' where some 3,509 (6.9%) medical practitioners provided services. The average age of these practitioners was 46.2 years and they worked an average of 46.7 hours per week.

Table 5: Employed medical practitioners in 'Other metropolitan centres': occupation, number and rate, 2000^(c)

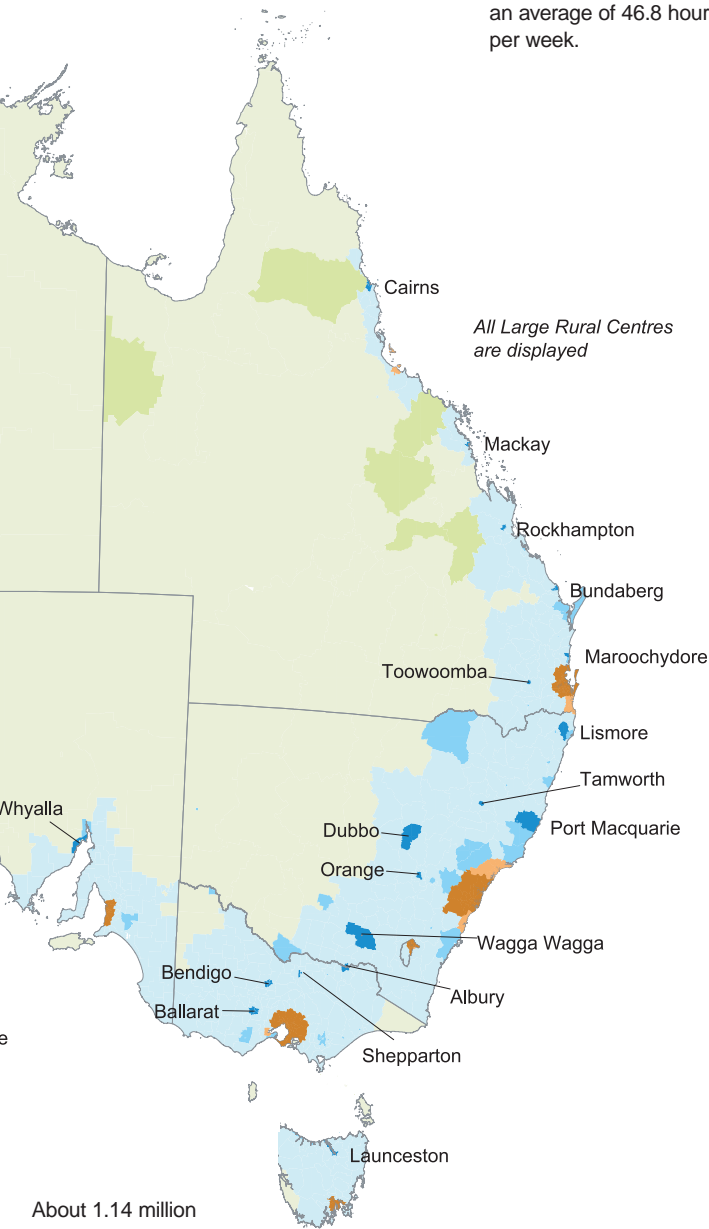
Occupation	Number	Rate ^(a)
<i>Clinicians</i>	3,297	224
Primary care	1,470	100
Hospital non-specialist	429	29
Specialist	1,066	73
Specialist-in-training	333	23
<i>Non-clinicians</i>	211	14
Total	3,509	239

Large rural centres

Table 6: Employed medical practitioners in 'Large rural centres': occupation, number and rate, 2000^(c)

Occupation	Number	Rate ^(a)
<i>Clinicians</i>	2,921	256
Primary care	1,158	102
Hospital non-specialist	440	39
Specialist	1,146	101
Specialist-in-training	177	16
<i>Non-clinicians</i>	165	15
Total	3,086	271

metropolitan areas of Australia



About 1.14 million (5.9%) Australians lived in 'Large rural centres' where some 3,086 (6.0%) medical practitioners provided services. The average age of these practitioners was 45.6 years and they worked an average of 47.5 hours per week.

Small rural centres

About 1.24 million (6.5%) Australians lived in 'Small rural centres' where some 2,001 (3.9%) medical practitioners provided services. The average age of these practitioners was 47.3 years and they worked an average of 46.8 hours per week.

Table 7: Employed medical practitioners in 'Small rural centres': occupation, number and rate, 2000^(a)

Occupation	Number	Rate ^(a)
<i>Clinicians</i>	1,896	154
Primary care	1,148	93
Hospital non-specialist	184	15
Specialist	501	41
Specialist-in-training	64	5
<i>Non-clinicians</i>	105	9
Total	2,001	162

Other rural areas

About 2.5 million (13%) Australians lived in 'Other rural areas' where some 2,343 (4.6%) medical practitioners provided services. The average age of these practitioners was 47.9 years and they worked an average of 46.4 hours per week.

Table 8: Employed medical practitioners in 'Other rural areas': occupation, number and rate, 2000^(a)

Occupation	Number	Rate ^(a)
<i>Clinicians</i>	2,289	92
Primary care	1,941	78
Hospital non-specialist	99	4
Specialist	228	9
Specialist-in-training	21	1
<i>Non-clinicians</i>	53	2
Total	2,343	94

Remote areas^(b)

About 0.56 million (2.9%) Australians lived in 'Remote areas' where some 745 (1.5%) medical practitioners provided services. The average age of these practitioners was 42.3 years and they worked an average of 49.1 hours per week.

Table 9: Employed medical practitioners in 'Remote areas': occupation, number and rate, 2000^(a)

Occupation	Number	Rate ^(a)
<i>Clinicians</i>	689	123
Primary care	469	84
Hospital non-specialist	111	20
Specialist	75	13
Specialist-in-training	34	6
<i>Non-clinicians</i>	56	10
Total	745	133

(a) Australian Bureau of Statistics estimated resident population figures at December 2000. Rates based on numbers per 100,000 population.
 (b) The classification provides two types of remote area, 'Remote centres' and 'Other remote areas' and, although shown separately in Figure 2, figures for these have been combined in Table 9 because of the small numbers in each.
 (c) Medical Labour Force Survey, 2000.

Medical labour force, 2000

Regional features

Practitioner rates

Overall, practitioners in 'Remote areas' were more likely to be younger and work more hours per week than practitioners in other regions. As could be expected, specialists were concentrated in 'Capital cities' (rate of 99 per 100,000 population), although on a par with this, was the supply of specialists in 'Large rural centres' (rate of 101 per 100,000 population). The higher average hours worked by practitioners based in 'Remote areas' is linked to comparatively lower rates of practitioners being based in these regions. The ratio of practitioners to the population in each region shows that comparatively lower rates of practitioners were also a feature of 'Small rural areas' and 'Other rural areas' (Tables 4 to 9).

Practitioner supply

However, service provision in these areas was supplemented by 1,353 practitioners based in more populated regions also practising in a second less populated region. For example, of these practitioners, an estimated 676 mainly based outside 'Other rural areas' and 'Remote areas' worked some hours per week in these regions. Most (289) were based in 'Capital cities', and an estimated 213 of them practised, on average, one day per week in 'Other rural areas' (8.7 hours) and 76 of them averaged one day (8.4 hours) per week in 'Remote areas'. Practitioner mobility across regions was not limited to the example above and included some practising in a second region of higher population than their main work location and others working in a second region of the same type. However, most of those who practised in a second region of a different type, did so in a less populated region (Table 10).

An estimated 289 city-based practitioners also practised in 'Other rural areas' or 'Remote areas' one day per week on average.

Table 10: Number of practitioners and hours per week worked in second work location, by region of main work location, 2000^(a)

Main region	Second region											
	Capital cities		Other metro centres		Large rural centres		Small rural centres		Other rural areas		Remote areas	
	Number	Hours	Number	Hours	Number	Hours	Number	Hours	Number	Hours	Number	Hours
Capital cities	13,776	10.6	186	9.3	142	8.3	159	9.3	213	8.7	76	8.4
Other metro centres	137	9.5	1,048	10.3	17	9.4	34	9.8	24	8.3	9	5.0
Large rural centres	69	7.8	11	8.0	476	9.1	139	9.1	192	7.3	19	4.5
Small rural centres	86	9.0	13	9.1	32	11.4	320	8.9	111	7.7	11	7.9
Other rural areas	129	9.3	24	6.7	45	8.1	80	7.0	546	9.1	21	5.2
Remote areas	17	9.2	n.p.	—	4	14.9	8	22.0	10	5.6	135	11.1

(a) Excludes 1,714 practitioners who did not report the regions in which they worked.

— denotes nil or rounded to zero.

n.p. denotes not publishable.

Source: Medical Labour Force Survey, 2000.

Working hours

Average hours

Traditionally, medical practitioners have regularly worked a high number of hours per week, particularly if providing direct patient care. This is gradually changing. A comparison over time of total weekly hours worked by practitioners shows a decline in the average week worked from 48.2 hours in 1995 to 45.5 hours in 2000 (Table 11; AIHW 2003). However, in 2000, the proportion of practitioners working 50 hours or more per week remained high at almost half (48.2%) of all practitioners (Table 11). This is down from 53.0% in 1995.

Table 11: Average weekly hours worked, and proportion working 50 hours or more, 2000

Occupation	Average weekly total hours	Average weekly clinical hours	Proportion working 50 hours or more
<i>Clinician</i>	45.6	42.1	48.4
Primary care	42.1	40.0	38.0
Hospital non-specialist	47.3	45.9	52.4
Specialist	48.4	42.1	56.8
Specialist-in-training	50.7	48.4	61.1
<i>Non-clinician</i>	43.5	12.0	46.1
Administrator	47.8	12.4	59.5
Teacher/educator	42.2	11.6	41.3
Researcher	48.2	12.0	55.0
Public health physician	43.8	9.7	43.2
Occupational health physician	39.0	11.8	34.8
Other	37.5	11.9	31.9
All medical practitioners	45.5	40.8	48.2

Source: Medical Labour Force Survey, 2000.

Clinicians, who are the main providers of direct patient care, worked an average week of 45.6 hours in 2000 compared with non-clinicians, whose average working week was 43.5 hours. Clinicians spent around 92% of their time in clinical work, working an average of 42.1 hours per week in clinical work, compared with their total weekly work hours (average 45.6). Within this group, specialists averaged lower clinical hours than fellow clinicians, spending around 87% of their total weekly hours (48.4) in clinical work. It was reported above that just under half (45.0%) of non-clinicians spent some part of their time in clinical work. These 'part-time' clinicians averaged one to two days per week engaged in clinical work (12.0 hours on average, ranging from 9.7 hours for public health physicians to 12.4 hours for administrators) (Table 11).

Full-time equivalent supply of practitioners

The relationship between average hours worked and the practitioner rate by region (above) showed, generally, that the rate of medical practitioners decreased and their hours increased as regional population lessened. This variability in practitioner supply and the

Medical labour force, 2000

The impact of higher hours worked is evident in 'Remote areas' and 'Large rural centres'.

contribution which higher-than-average hours make to supply can be gauged by converting their average hours worked into a 'full-time equivalent' (FTE) number¹ of practitioners. The FTE rate based on two alternative 'standard' working weeks shows 'Capital cities' with the largest supply of practitioners. Because practitioners in 'Capital cities' worked an average of 45 hours per week (see 'Geographic distribution' above), the FTE based on a 45-hour week equals the actual practitioner rate (307) (Table 12). The impact of the higher average hours worked is evident in 'Remote areas' and 'Large rural centres'. In 'Remote areas', for example, the practitioner rate of 133 equates to a rate of 145 FTE based on a 45-hour week (Table 12).

Table 12: Employed medical practitioners: region, FTE rate and practitioner rate, 2000

	Capital cities	Other metro centres	Large rural centres	Small rural centres	Other rural areas	Remote areas	Australia ^(a)
FTE rate (per 100,000 population, based on 35 hours per week)	395	318	368	217	124	186	347
FTE rate (per 100,000 population, based on 45 hours per week)	307	248	286	168	97	145	270
Practitioner rate (per 100,000 population)	307	239	271	162	94	133	267

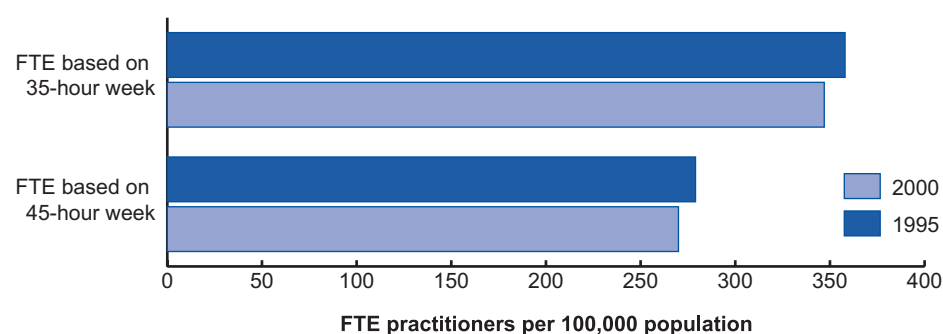
(a) Includes 1,714 practitioners who did not report the regions in which they worked.

Source: Medical Labour Force Survey, 2000.

When the contribution of practitioners based outside these regions is factored in, the regional inequity lessens. The example above in 'Regional features' cited 289 city-based practitioners who also practised in 'Other rural areas' or 'Remote areas'. Based on the average number of hours they worked in rural/remote areas, these 289 practitioners equated to approximately 55 FTE practitioners working a 45-hour week (a supply increase of 2 FTE practitioners per 100,000 across these two regions).

At a national level, FTE rates declined in 2000 compared with those in 1995 (Figure 3), a result of lower average weekly hours (45.5 compared with 48.2 in 1995) and an increased practitioner rate (267 per 100,000 population compared with 260 in 1995) (AIHW 2003).

Figure 3: Employed medical practitioners: FTE rate, 1995 and 2000



Source: Medical Labour Force Survey, 1995 and 2000.

Glossary

Clinician: A medical practitioner who is involved in the diagnosis and/or treatment of patients, including recommending preventive action. In this publication, a medical practitioner who spends most hours engaged in clinical practice is classified as a clinician.

Geographic classification: The Rural, Remote and Metropolitan Areas Classification (Department of Primary Industries and Energy & Department of Health and Family Services 1994) has been used to classify the geographic location of medical practitioners responding to the annual survey. The geographic boundaries of these categories are based on the 1991 population census.

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.

Occupation: A description of the job function within the field of medicine:

- clinician: a medical practitioner mainly involved in the diagnosis, care and treatment of individuals
- administrator: a person mainly employed in medical administration
- teacher/educator: a person teaching or training persons in medicine
- researcher: a person primarily engaged in medical research
- public health physician: a medical practitioner primarily engaged in identifying disease and illness, along with their treatments and any preventive measures which affect the health of the general public
- occupational health physician: a medical practitioner primarily engaged in identifying disease and illness, along with their treatments and any preventive measures arising from particular occupations or industries
- other: a job function in medicine which is not one of the above—for example, industrial relations.

Primary care practitioner: A practitioner in general practice or in the primary care of patients and other practitioners whose main practice is unreferred patient attendances.

Specialist: A medical practitioner with a qualification awarded by, or which equates to that awarded by, the relevant specialist professional college in Australia to treat certain conditions.

Specialist-in-training: A medical practitioner who has been accepted by a specialist medical college into a training position supervised by a member of the college.

Reference

AIHW (Australian Institute of Health and Welfare) 2003. Medical labour force 1999.

AIHW Cat. No. HWL 24. Canberra: AIHW (National Health Labour Force Series No. 24).

1. The number of full-time equivalent practitioners equals the number of practitioners multiplied by the average weekly hours worked, divided by the number of hours in a 'standard' full-time working week. Two alternatives are provided for a 'standard' working week: 35 hours (the workforce 'standard') and 45 hours (close to the 'standard' worked in 2000 by practitioners). The FTE number is converted to a rate per 100,000 population for comparison with the actual rate (per 100,000) of practitioners.



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