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# **Medical labour force 2001**

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Most importantly, we also thank the medical practitioners who took the time to complete the survey. Without their cooperation, it would not be possible to maintain this collection, which is used to underpin planning and policy decisions.

## Symbols and other usages

Throughout this publication, data may not add to the totals shown due to the estimation process for non-response. Percentages may not add to 100.0 due to rounding.

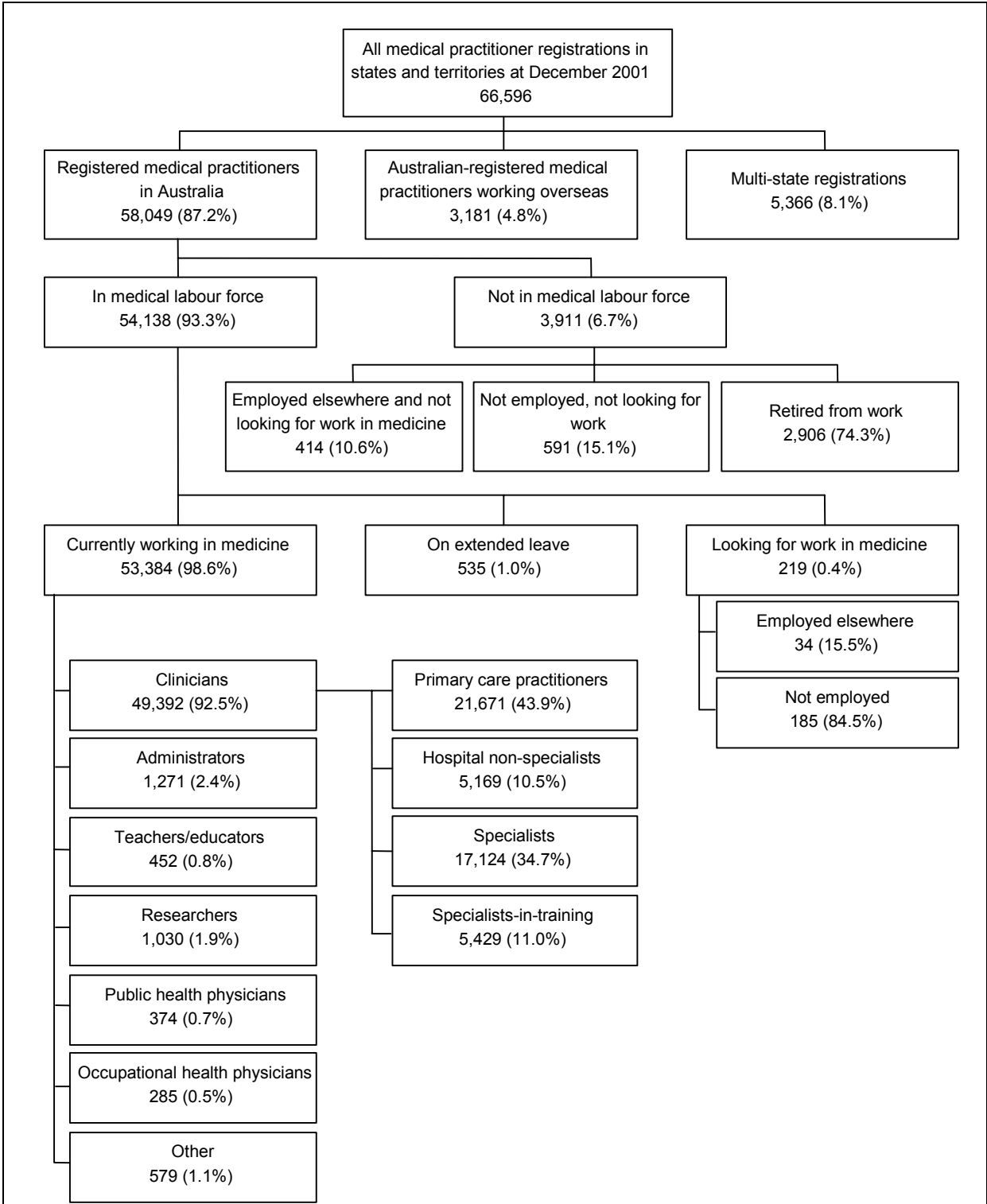
Italics within a table denote a subtotal.

- Nil or rounded to zero
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- n.a. Not available
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# 1 Main findings

- There were an estimated 58,049 registered medical practitioners in Australia in 2001, and 93.3% were in the medical labour force.
- Most of the practitioners working in medicine in 2001 were clinicians (92.5%), of whom just under half (43.9%) were primary care practitioners (mainly general practitioners), approximately one-third (34.7%) were specialists, and the remainder were either specialists-in-training or hospital non-specialists (11.0% and 10.5% respectively).
- The medical labour force was, on average, older in 2001 than in 1996, with all employed practitioners averaging 46.1 years and 44.9 years, respectively.
- The proportion of female practitioners continued to rise, with 30.7% in 2001 compared with 27.6% in 1996.
- Medical practitioners worked an average week of 45.4 hours in 2001, a decline from 48.1 hours in 1996. In 2001 medical practitioners across all occupations averaged 40.4 hours per week in clinical work.
- In 2001, almost half (47.4%) of practitioners worked 50 hours or more per week, a decline over the five years from 1996 (52.4%). Of clinicians, specialists-in-training (58.3%) and specialists (56.2%) were more likely to work long working weeks in 2001.
- Average weekly hours dropped from 48.1 to 45.4 between 1996 and 2001, and the practitioner rate rose from 260 to 275 practitioners per 100,000 population. These two factors balanced out, so that the supply of full-time equivalent (FTE) practitioners per 100,000 remained the same in both years. Based on a 35-hour week, there were 357 FTE practitioners per 100,000 population in both years; based on a 45-hour week, there were 278 FTE practitioners per 100,000 population in both years.
- Across regions in 2001, generally the medical practitioner rate decreased and their hours increased as regional population lessened: the rate (per 100,000 population) ranged from 318 in 'Major cities' to 113 in 'Very remote' areas, and average hours per week ranged from 45.1 in 'Major cities' to 52.6 in 'Very remote' areas. The overall picture in 1996 was similar, with the practitioner rate (per 100,000 population) ranging from 299 in 'Major cities' to 92 in 'Very remote' areas and average weekly hours from 47.8 in 'Major cities' to 53.7 in 'Very remote' areas.
- From 1996 to 2001 there was an increase in the number of practitioners in all states and territories. In the Northern Territory (up 47.4%), the Australian Capital Territory (23.9%) and Victoria (18.2%) there were higher percentage increases than experienced nationally (12.2%). When converted to a full-time equivalent practitioner rate, there was an increase in supply in four jurisdictions: Victoria, Tasmania, the Northern Territory and the Australian Capital Territory. Supply in New South Wales and Tasmania remained stable and there were decreases in the remaining states.

# 2 Composition of the medical labour force



Source: Medical Labour Force Survey, 2001.

Figure 1: All registered medical practitioners, Australia, 2001



## Size

There were 53,384 registered medical practitioners working in medicine in Australia in 2001, a rise of 12.2% from 1996 (Table 1). Most of the employed practitioners in 2001 were clinicians (92.5%), of whom just under half (43.9%) were primary care practitioners (mainly general practitioners), approximately one-third (34.7%) were specialists, and the remainder were either specialists-in-training or hospital non-specialists (11.0% and 10.5% respectively). Administrators and researchers made up a large proportion of the non-clinical workforce (31.8% and 25.8% respectively), which also included teachers/educators, public health physicians and occupational health physicians (11.3%, 9.4% and 7.1% respectively).

With the survey changes in 2000, it has been possible to identify non-clinicians who spend part of their time in clinical work. In 2001, there were an estimated 1,987 'part-time' clinicians, of whom 56.9% (1,130) were specialists (Table A4). These 'part-time' clinicians represent 3.9% of the total number of practitioners who undertook some clinical work.

### Break in series

*A change to the reporting method for practitioner activity was introduced in 2000 (see 'Break in series' in Appendix B: Explanatory notes) and has affected the distribution of practitioners across occupations. The new method is based on the occupation in which the practitioner spent the most hours. In order to provide some comparisons over time, data from earlier surveys have been re-calculated, resulting in figures that are different from estimates published in the past. The re-calculation method is an approximation only and this should be kept in mind when comparing pre-2000 data with data collected in 2000 and 2001.*

## Age and sex

The medical labour force was, on average, older in 2001 (46.1 years) than in 1996 (44.9 years) (Table 1). Just over a quarter (26.3%) of male practitioners were aged 55 years or more in 1996; this rose to 29.2% in 2001 (Figure 2). The proportion of females aged 55 years or more grew from 9.8% to 11.5%. Conversely, the proportions of males and females aged less than 45 years decreased between 1996 and 2001 (from 47.7% to 44.0% for males and from 72.8% to 66.0% for females).

The proportion of females in the medical labour force also continued to increase. In 1996, females formed 27.6% of the medical labour force; this proportion in 2001 was 30.7% (Table 1).



# Occupation

## Clinicians

### Primary care practitioners

The number of primary care practitioners grew by 7.4% between 1996 and 2001 (from 20,185 to 21,671) (Table 1). This is equivalent to an increase of 2 primary care practitioners per 100,000 population (from 110 in 1996 to 112 in 2001).

**Table 1: Employed practitioners: selected characteristics, 1996 and 2001**

Main occupation	Number	% female	Average age	Number	% female <sup>(a)</sup>	Average age <sup>(b)</sup>
	1996			2001		
<i>Clinician</i>	43,756	27.5	44.6	49,392	30.6	45.9
<i>Primary care</i>	20,185	32.0	46.3	21,671	34.9	48.3
Vocationally registered <sup>(c)</sup>	17,176	29.8	47.7	18,787	33.7	49.3
RACGP trainee	1,184	59.3	31.5	1,265	46.0	37.2
Other	1,824	35.1	42.8	1,619	40.1	43.5
<i>Hospital non-specialist</i>	4,199	45.5	30.8	5,169	44.6	34.0
RMO/intern	3,190	48.8	28.0	3,189	47.6	29.3
Career and other medical officers	1,010	35.2	40.3	1,980	39.8	40.5
<i>Specialist</i>	15,236	14.8	49.6	17,124	18.9	49.7
Internal medicine	3,829	13.1	48.8	4,396	19.1	48.6
Pathology	757	27.8	49.8	869	29.1	50.2
Surgery	2,838	3.6	51.6	2,814	7.4	51.6
Other specialties	7,812	18.4	49.2	9,045	21.4	49.6
<i>Specialist-in-training</i>	4,136	34.3	31.8	5,429	37.1	33.1
Internal medicine	1,192	41.0	30.8	1,401	37.7	32.6
Pathology	143	52.4	32.3	217	58.8	32.4
Surgery	594	12.6	31.0	876	22.6	32.0
Other specialties	2,206	35.4	32.6	2,935	39.5	33.7
<i>Non-clinician</i>	3,817	27.7	48.1	3,991	31.8	48.2
Administrator	882	25.9	48.6	1,271	28.8	49.2
Teacher/educator	524	24.0	49.4	452	35.7	50.2
Researcher	784	28.8	41.8	1,030	34.2	41.4
Public health physician	464	41.7	43.7	374	40.4	44.1
Occupational health physician	320	16.6	51.6	285	20.8	51.6
Other	844	27.3	53.7	579	30.9	56.3
<b>Total</b>	<b>47,573</b>	<b>27.6</b>	<b>44.9</b>	<b>53,384</b>	<b>30.7</b>	<b>46.1</b>

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

(b) Excludes data for Tasmania.

(c) Includes RACGP Fellows in 1996; this category was not available in the 2001 survey.

Source: Medical Labour Force Survey, 1996 and 2001.

The average age of primary care practitioners increased by two years between 1996 and 2001 (from 46.3 years to 48.3 years). This was despite the increased proportion of female primary care practitioners (32.0% in 1996 and 34.9% in 2001) who were, on average, younger than their male colleagues (43.9 years for females and 50.6 years for males in 2001).

**Hospital non-specialists**

The hospital non-specialist labour force grew by 23.1% and aged by 3.2 years on average between 1996 and 2001 (Table 1). The growth can be attributed to the near doubling of the number of Career and other medical officers over the period (from 1,010 to 1,980). The number of RMOs/interns remained stable (3,190 and 3,189 respectively). In 2001, there were 27 hospital non-specialists per 100,000 population, a rise of 4 from 1996.

**Specialists**

The number of specialists increased by 12.4% between 1996 and 2001 (from 15,236 to 17,124) (Table 1). This is an increase of 5 specialists per 100,000 population (from 83 to 88).

Over the five years, there was some variation in the amount of growth across the specialist fields. Internal medicine, Pathology and Other specialties all increased in the five years from 1996 (by 14.8% for Internal Medicine and Pathology, and 15.8% for Other specialties); however, Surgery decreased slightly (by 0.8%). Surgery was the most male-dominated specialty, with less than one in ten being female (7.4%) in 2001, followed by Internal medicine in which one in five (19.1%) were female.

Unlike most other medical occupations, the average age of specialists changed little between 1996 (49.6 years) and 2001 (49.7 years), and this held true for all the broad specialty areas (Table 1). While the number of females increased in all age groups over the five years, the number of males remained relatively stable in most age groups, apart from three noticeable increases: the number aged 40–44 years increased from 2,096 to 2,413; the number aged 55–59 years increased from 1,530 to 2,118; and the number aged 60–64 years increased from 1,037 to 1,337 (Figure 3).

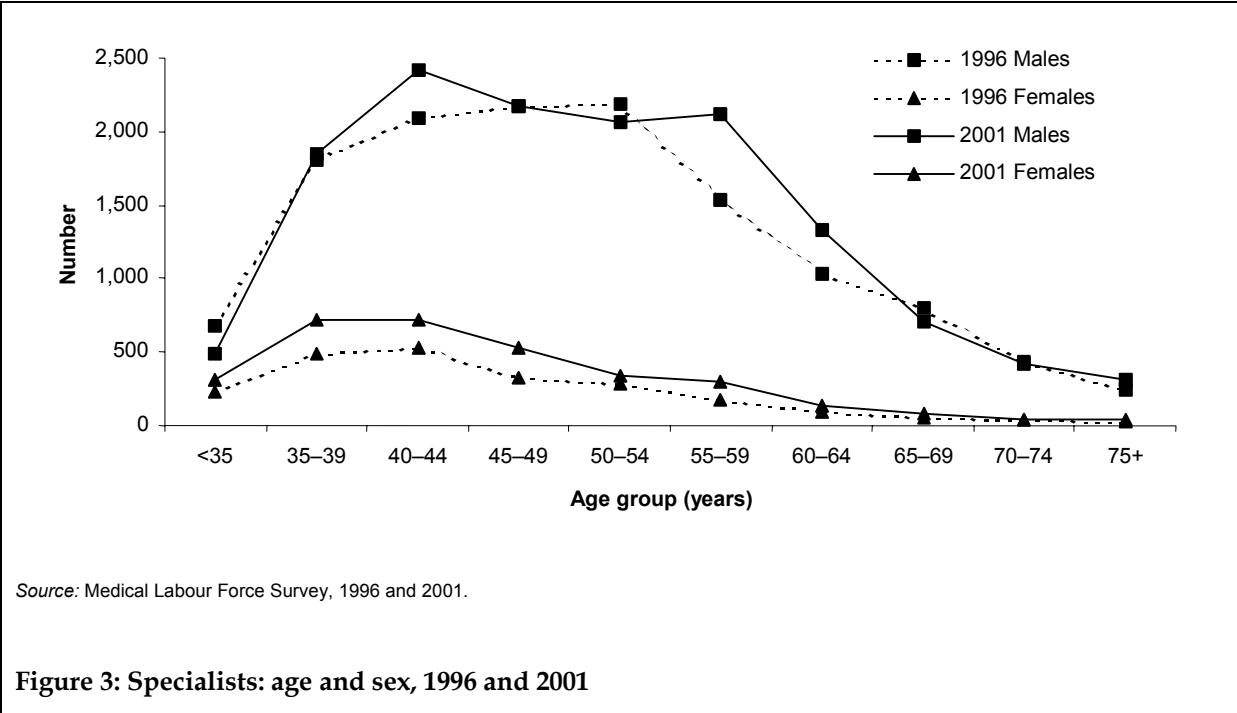


Figure 3: Specialists: age and sex, 1996 and 2001

## Specialists-in-training

The number of specialists-in-training grew by almost a third between 1996 and 2001 (from 4,136 to 5,429) (Table 1). Trainees in the fields of Pathology grew by 51.6% and in Surgery by 47.4%. Specialists-in-training were slightly older in 2001 (33.1 years) than in 1996 (31.8 years) and the proportion of females increased slightly (from 34.3% to 37.1%). In the specialist field of Pathology, more than half the trainees were female in 2001 (58.8%). Despite an almost doubling of the proportion of female Surgical trainees between the two survey years (from 12.6% to 22.6%), Surgery still remained the specialty field with the lowest proportion of female specialists-in-training.

## Non-clinicians

The non-clinical labour force increased slightly (4.6%) between 1996 and 2001 (from 3,817 to 3,991) (Table 1). Among the non-clinical occupations, administrators and researchers increased in number between 1996 and 2001 (by 44.1% and 31.4% respectively). Of the other non-clinical fields, decreases occurred in public health physicians, teachers/educators and occupational health physicians (down by 19.4%, 13.7% and 10.9% respectively). While the average age of non-clinicians remained relatively unchanged, the proportion of females increased from 27.7% in 1996 to 31.8% in 2001.

# 3 Working hours

## Occupation

The functions of a medical practitioner can vary, and many allocate their time across more than one medical occupation. The level of clinical work performed by non-clinicians is of particular interest because it contributes to the provision of direct patient care. It is also important to know how much time clinicians spend in non-clinical work. The average hours practitioners spent per week in the different medical occupations show the extent to which this occurred (Table 2).

Medical practitioners across all occupations averaged 40.4 hours per week in clinical work. Of clinicians, specialists-in-training tended to average relatively high hours in clinical work (48.6 hours), and they also averaged 15.1 hours as occupational health physicians. Hospital non-specialists averaged 9.8 hours per week as administrators and, conversely, administrators averaged 12.8 hours in clinical work. Overall, non-clinicians averaged between 6.9 hours to 12.8 hours per week in clinical work, depending on their main occupation.

Practitioners continued the trend of working fewer hours (AIHW 2003a, 2003b). Between 1996 and 2001, practitioners reduced their average weekly hours by almost 3 hours (from 48.1 hours to 45.4 hours) (Table 3). Across the occupations, teachers/educators reduced their average working week by 6.4 hours and hospital non-specialists by 4.8 hours. Administrators' weekly hours were stable between 1996 and 2001 (48.1 to 48.2 respectively) although those administrators working 50 or more hours per week rose by 3.4 percentage points (from 55.8% to 59.2%).

**Table 2: Employed practitioners: average weekly hours in all medical occupations, 2001**

Main occupation	All medical occupations							Total
	Clinician	Administrator	Teacher/ educator	Researcher	Public health physician	Occupational health physician	Other	
<i>Clinician</i>	41.8	7.0	4.4	6.4	6.6	6.9	7.5	45.6
Primary care	39.4	6.7	3.9	5.1	6.2	6.1	7.0	41.9
Hospital non-specialist	45.2	9.8	4.3	6.9	9.1	5.1	8.9	47.1
Specialist	41.5	7.1	4.6	6.7	6.8	8.3	7.5	48.3
Specialist-in-training	48.6	5.4	3.8	5.7	5.5	15.1	8.8	50.8
<i>Non-clinician</i>	11.7	28.4	12.0	26.3	32.3	32.2	26.7	43.2
Administrator	12.8	34.7	6.9	8.2	7.7	9.1	7.0	48.2
Teacher/educator	10.2	9.9	23.7	11.1	6.8	3.9	5.5	38.1
Researcher	11.3	7.8	6.6	34.7	12.4	7.3	6.7	45.5
Public health physician	6.9	10.7	6.2	8.6	42.3	12.0	24.0	44.4
Occ. health physician	11.6	9.6	4.7	7.4	—	36.3	8.9	39.9
Other	12.8	2.8	3.0	10.8	3.1	10.0	28.9	32.6
<b>All employed practitioners</b>	<b>40.4</b>	<b>9.9</b>	<b>5.3</b>	<b>11.8</b>	<b>18.3</b>	<b>19.2</b>	<b>13.1</b>	<b>45.4</b>

Source: Medical Labour Force Survey, 2001.

Although clinical hours worked have been calculated on slightly different bases in the two survey years (a result of the changed reporting method initiated in 2000), estimates show the average clinical hours worked per week reduced by 5.0 hours (45.4 hours in 1996 to 40.4 hours in 2001) compared with a reduction of 2.7 hours in practitioners' average total hours (48.1 to 45.4 respectively) (Table 3).

**Table 3: Employed practitioners: average weekly hours worked, and proportion working 50 hours or more, 1996 and 2001**

Occupation	Average weekly total hours	Average weekly clinical hours	% working 50 hours or more	Average weekly total hours	Average weekly clinical hours	% working 50 hours or more
	1996			2001		
<i>Clinician</i>	48.4	46.3	53.0	45.6	41.8	47.5
Primary care	44.9	43.5	43.8	41.9	39.4	37.3
Hospital non-specialist	51.9	51.3	64.6	47.1	45.2	50.2
Specialist	50.2	46.5	57.6	48.3	41.5	56.2
Specialist-in-training	54.8	54.0	69.5	50.8	48.6	58.3
<i>Non-clinician</i>	44.5	12.8	45.5	43.2	11.7	46.6
Administrator	48.1	12.2	55.8	48.2	12.8	59.2
Teacher/educator	44.5	14.4	46.6	38.1	10.2	36.1
Researcher	47.7	13.3	52.8	45.5	11.3	50.0
Public health physician	45.5	8.5	44.3	44.4	6.9	43.0
Occupational health physician	41.8	11.4	38.0	39.9	11.6	41.4
Other	38.2	10.6	30.6	32.6	12.8	25.2
<b>All employed practitioners</b>	<b>48.1</b>	<b>45.4</b>	<b>52.4</b>	<b>45.4</b>	<b>40.4</b>	<b>47.4</b>

Note: Calculation of 'clinical hours' differed between 1996 and 2001, due to differences in the surveys.

Source: Medical Labour Force Survey, 1996 and 2001.

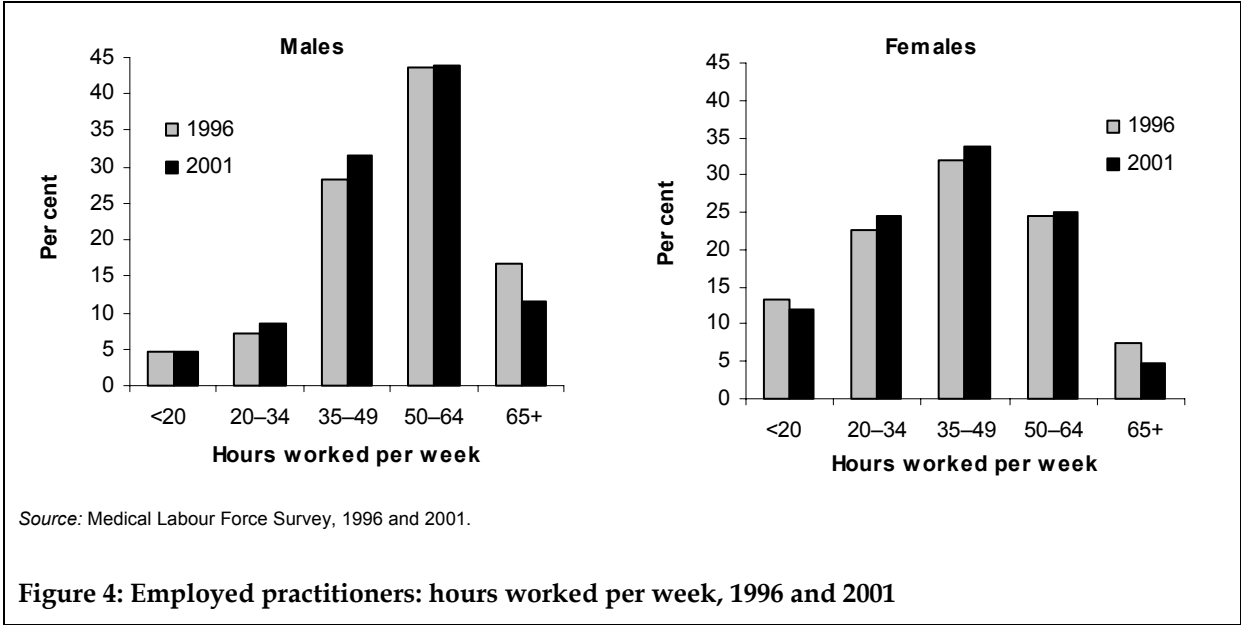
Overall, the proportion of practitioners working 50 hours or more in total per week declined by 5 percentage points (from 52.4% to 47.4%) (Table 3). Of the clinicians, primary care practitioners were less likely to work 50 hours or more per week in 2001 (37.3%) than other clinicians, of whom at least half worked 50 hours or more (ranging from 50.2% to 58.3%, depending on occupation) and this picture was similar in 1996. The proportion of hospital non-specialists working 50 or more hours per week decreased from around two-thirds (64.6%) in 1996 to a half (50.2%) in 2001 whereas the proportion of specialists who worked 50 or more hours per week remained almost unchanged (57.6% in 1996 and 56.2% in 2001).

## Sex

While female practitioners have traditionally worked fewer hours than males, the gap has closed slightly. In 1996, males worked an average of 51.1 hours and females an average of 40.2 hours per week, a 10.9-hour difference. However, in 2001, males and females worked 48.4 and 38.8 hours per week respectively, a 9.6-hour difference.

Despite a continued shift towards working fewer hours, the distribution of hours worked by male practitioners remained skewed towards long working weeks. More than half (55.2%) of male practitioners worked 50 or more hours per week (Figure 4). However, the proportion of male practitioners who worked 65 or more hours per week did decrease between 1996 and 2001, from 16.7% down to 11.4%.

The distribution of hours worked was less skewed for females than males. In 2001, a higher proportion of female practitioners worked less than 35 hours per week (36.5% compared with 13.2% for males) (Figure 4). The proportion of female practitioners who worked less than 20 hours per week decreased (from 13.3% in 1996 to 12.1% in 2001), as did the proportion who worked 65 or more hours per week (7.5% in 1996 to 4.8% in 2001).



# Overall supply of practitioners

Data on the size and characteristics of the medical labour force present a valuable profile of doctors, but do not give a picture of the overall level of service they provide. Because medical practitioners tend to average long working weeks, the contribution which these hours make to the level of service needs to be taken into account to effectively measure the overall supply of practitioners.

Supply can be measured by converting the hours worked into a 'full-time equivalent' (FTE) number of practitioners (see box).

This is a useful measure of supply because it takes into account hours worked. For medical practitioners, FTE numbers and rates are generally higher than practitioner numbers and rates, because they work relatively high hours per week.

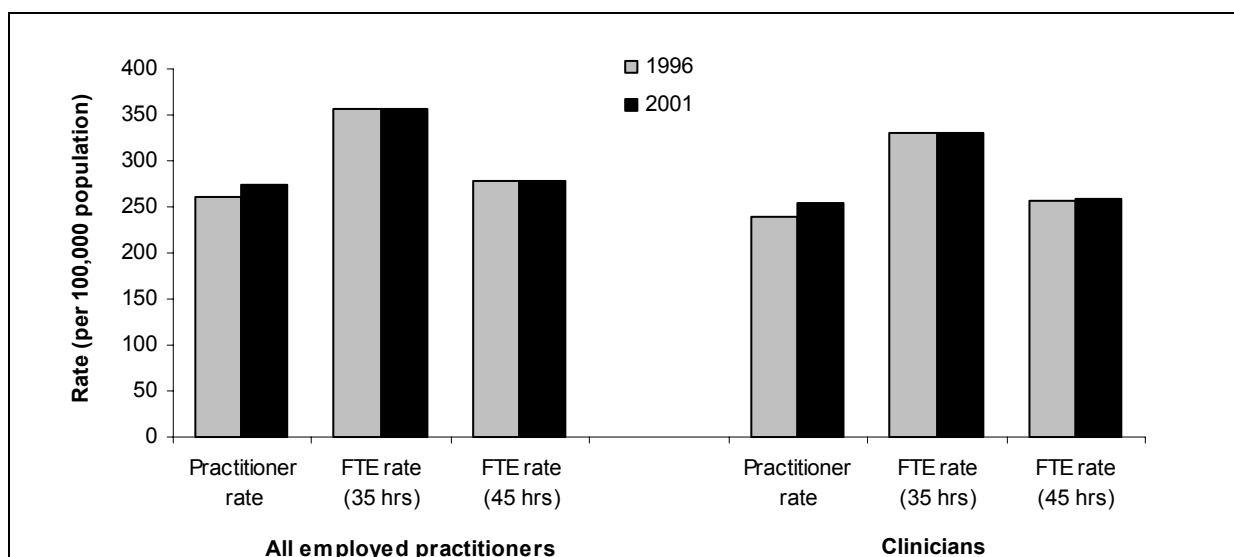
The number of practitioners per 100,000 population (or the practitioner rate) in 2001 was 275, an increase of 15 since 1996 (Figure 5). However, when this is converted into an FTE rate, it takes into account the fall in average hours worked between 1996 and 2001. The FTE rate shows that the supply of practitioners was the same in the two survey years (357 and 278 per 100,000 population based on a 35-hour and a 45-hour week, respectively, in both years).

The practitioner rate for clinicians also increased between 1996 and 2001 (from 239 to 254 per 100,000 population) (Figure 5). Again, there was little difference in the FTE rate of clinicians between 1996 and 2001 (331 and 332 per 100,000 population, respectively, for a 35-hour week; and 257 and 258 per 100,000 population, respectively, for a 45-hour week).

### Full-time equivalent

*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 general workforce 'standard') and 45 hours (close to the 'standard' or average worked in 2001 by medical practitioners). While a 35-hour or 38-hour week is the standard in many industries, the 'typical' working week varies between occupations. Two 'standard' weeks are shown to more easily enable FTE comparisons across occupations.*

*The FTE number is converted to a rate per 100,000 population for comparison with the practitioner rate (per 100,000).*



Source: Medical Labour Force Survey, 1996 and 2001; ABS, 1997 and 2002.

Figure 5: All employed practitioners and clinicians: FTE practitioner rate, 1996 and 2001

# 4 Geographic comparisons

## Regions

There were an estimated 19.4 million resident Australians in 2001 (ABS 2002) and around 53,384 medical practitioners providing services to this population. The geographic distributions of these medical practitioners and the services they provide are important for planning equitable access to health care.

### Major cities

About 12.87 million (66.3%) Australians lived in 'Major cities' where some 40,919 (79.8%) medical practitioners provided services. The average age of these practitioners was 46.1 years and they worked an average of 45.1 hours per week.

**Table 4: Employed practitioners in 'Major cities': 2001**

Occupation	Number	Rate <sup>(a)</sup>
<i>Clinicians</i>	37,532	292
Primary care	15,170	118
Hospital non-specialist	3,872	30
Specialist	13,845	108
Specialist-in-training	4,646	36
<i>Non-clinicians</i>	3,387	26
<b>Total</b>	<b>40,919</b>	<b>318</b>

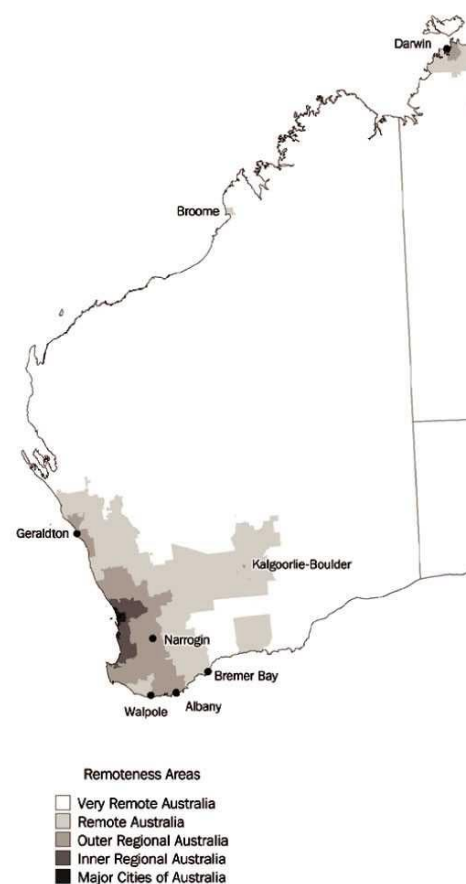
### Inner regional

About 4.03 million (20.7%) Australians lived in 'Inner regional' areas where some 6,937 (13.5%) medical practitioners provided services. The average age of these practitioners was 46.4 years and they worked an average of 46.6 hours per week.

**Table 5: Employed practitioners in 'Inner regional' areas: 2001**

Occupation	Number	Rate <sup>(a)</sup>
<i>Clinicians</i>	6,652	165
Primary care	3,706	92
Hospital non-specialist	669	17
Specialist	1,922	48
Specialist-in-training	355	9
<i>Non-clinicians</i>	285	7
<b>Total</b>	<b>6,937</b>	<b>172</b>

**Figure 6: Australian Standard Geographic Classification (ASGC) Remoteness Areas**

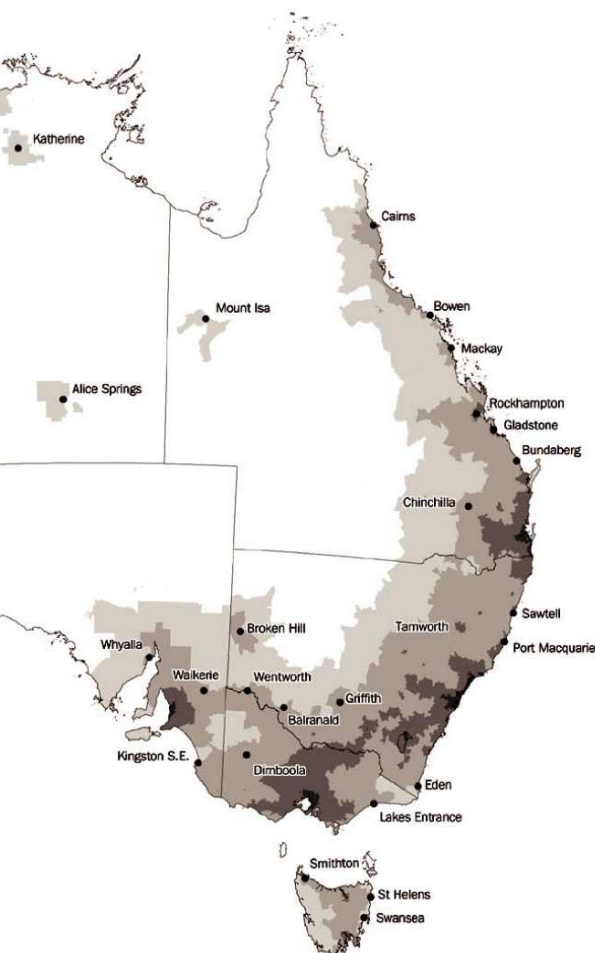


(a) Per 100,000 population.

Source: Medical Labour Force Survey, 2001; ABS 2002.



The Remoteness Area Structure of the ASGC has been used to geographically distribute medical practitioners into the following five regions which are classed by remoteness: 'Major cities', 'Inner regional', 'Outer regional', 'Remote' and 'Very remote'. These areas are mapped (Figure 6) 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 8).



#### Notes

1. The sum of the practitioners in each region (Tables 4 to 8) do not add to the total for Australia (53,384) because 2,075 practitioners did not report the region in which they worked.
2. The geographic classification used to present regional data has changed. The Remoteness Area Structure of the ASGC was introduced from 2001. Prior to this, the Rural, Remote and Metropolitan Areas (RRMA) classification was used to differentiate between regions (see 'Geographic classification' in the Glossary).

### Outer regional

About 2.01 million (10.4%) Australians lived in 'Outer regional' areas where some 2,849 (5.5%) medical practitioners provided services. The average age of these practitioners was 45.5 years and they worked an average of 47.1 hours per week.

**Table 6: Employed practitioners in 'Outer regional' areas: 2001**

Occupation	Number	Rate <sup>(a)</sup>
<i>Clinicians</i>	2,717	135
Primary care	1,718	85
Hospital non-specialist	231	11
Specialist	604	30
Specialist-in-training	165	8
<i>Non-clinicians</i>	132	7
<b>Total</b>	<b>2,849</b>	<b>141</b>

### Remote

About 0.32 million (1.7%) Australians lived in 'Remote' areas where 401 (0.8%) medical practitioners provided services. The average age of these practitioners was 43.0 years and they worked an average of 48.2 hours per week.

**Table 7: Employed practitioners in 'Remote' areas: 2001**

Occupation	Number	Rate <sup>(a)</sup>
<i>Clinicians</i>	371	114
Primary care	248	76
Hospital non-specialist	56	17
Specialist	51	16
Specialist-in-training	16	5
<i>Non-clinicians</i>	30	9
<b>Total</b>	<b>401</b>	<b>124</b>

### Very remote

About 0.18 million (0.9%) Australians lived in 'Very remote' areas where some 203 (0.4%) medical practitioners provided services. The average age of these practitioners was 42.6 years and they worked an average of 52.6 hours per week.

**Table 8: Employed practitioners in 'Very remote' areas: 2001**

Occupation	Number	Rate <sup>(a)</sup>
<i>Clinicians</i>	198	111
Primary care	145	81
Hospital non-specialist	39	22
Specialist	12	7
Specialist-in-training	2	1
<i>Non-clinicians</i>	4	2
<b>Total</b>	<b>203</b>	<b>113</b>

## Practitioner distribution

Overall in 2001, practitioners in 'Very remote' and 'Remote' areas were more likely to be younger and work more hours per week than practitioners in other regions. Compared with their colleagues based in 'Major cities', practitioners in 'Very remote' and 'Remote' areas were, on average, 3 years younger and worked longer weeks by some 7.5 hours and 3 hours respectively (Tables 4 to 8).

The higher average hours worked by practitioners based in less populated (more remote) areas reflects comparatively fewer practitioners being based in these regions. A comparison of the number of practitioners in each region shows that more than three-quarters (79.8%) of practitioners reported providing services to two-thirds (66.3%) of the population (those living in 'Major cities'), with the remaining practitioners distributed across the remaining third (33.7%) of the population (those living in the other regions).

However, just over half of the 40,919 practitioners in 'Major cities' were either specialists (13,845), specialists-in-training (4,646) or non-clinicians (3,387) and are concentrated in 'Major cities' because they are generally associated with hospitals and the services that hospitals provide, together with facilities for research, training and advanced equipment for treatment. In terms of direct access to health care, primary care practitioners (who are mainly general practitioners) are the main providers and, because they are less likely to be hospital-based, their distribution is slightly nearer to the distribution of the population (approximately 72.3% in 'Major cities' and 27.7% in remaining regions<sup>1</sup>).

The supply of primary care practitioners was more even across regions than for all practitioners. This is most apparent when the primary care practitioner rates in 'Major cities' (118 per 100,000 population) and in 'Very remote' areas (81 per 100,000 population) are compared with the rates for all practitioners (318 and 113 per 100,000 population respectively). Indeed, the primary care practitioner rate in 'Very remote' areas (81 per 100,000 population) was actually higher than the rate in 'Remote' areas (76 per 100,000 population). This is in contrast to all practitioners, for whom the rate in 'Remote' areas (124 per 100,000 population) was higher than the rate in 'Very remote' areas (113 per 100,000 population).

The overall picture five years earlier, in 1996, also shows a regional pattern of lower average ages and higher average weekly hours, with increased remoteness. The average age of practitioners ranged from 44.8 years in 'Major cities' to 41.0 years in 'Very remote' areas and average weekly hours from 47.8 in 'Major cities' to 53.7 in 'Very remote' areas (Table A3).

The primary care practitioner rate shows the ratio of such practitioners to the population has remained stable in all regions except 'Very remote' areas where the rate has risen, reducing the disparity between 'Very remote' areas and other regions, in particular with 'Major cities'. In 1996, the primary care practitioner rate in 'Major cities' (116 per 100,000 population) was almost double the rate in 'Very remote' areas (66 per 100,000 population) (Table A2). This compares with 2001 rates of 118 and 81 per 100,000 population, respectively. The primary care practitioner rates in 'Inner regional', 'Outer regional' and 'Remote' regions were, respectively, 90, 82 and 78 per 100,000 population in 1996 and 92, 85 and 76 per 100,000 population in 2001.

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<sup>1</sup> Note: excludes practitioners who did not report the region in which they worked.

## Inter-regional practices in 2001

Although 'Major cities' had a higher practitioner rate than less populated regions, service provision outside 'Major cities' has been augmented by practitioners with inter-regional practices. In 2001, some 788 practitioners based in 'Major cities' also practised in a less populated region. For example, 32 of these city-based practitioners averaged a day per week (7.3 hours) in 'Remote' areas and 13 averaged a day (6.2 hours) per week in 'Very remote' areas (Table 9). A similar number of practitioners based in 'Outer regional' areas provided services to 'Remote' areas (where 26 of them averaged 19.1 hours per week) and 'Very remote' areas (where 25 of them averaged 8.4 hours per week). In total, 'Remote' and 'Very remote' areas were provided with services from 98 practitioners based outside these regions and when the hours they worked are factored in, they equated to approximately 29 practitioners working a 35-hour week (a supply increase of 11 FTE practitioners per 100,000 population across these two regions).

This example is an approximation rather than a precise measure because not all practitioners reported the regions in which they worked; however, it is indicative of the contribution inter-regional practices made to remote areas.

**Table 9: Number of practitioners and hours per week worked in second work location, by region of main work location<sup>(a)</sup>, 2001**

Main region	Second region									
	Major cities		Inner regional		Outer regional		Remote		Very remote	
	Number	Hours	Number	Hours	Number	Hours	Number	Hours	Number	Hours
Major cities	14,745	10.8	599	9.5	144	8.7	32	7.3	13	6.2
Inner regional	360	11.7	1,648	10.1	185	6.8	—	—	2	2.1
Outer regional	36	10.3	105	6.9	640	12.2	26	19.1	25	8.4
Remote	4	19.7	3	8.0	8	12.4	72	8.6	18	9.9
Very remote	4	1.2	—	—	7	9.0	9	6.9	38	14.4

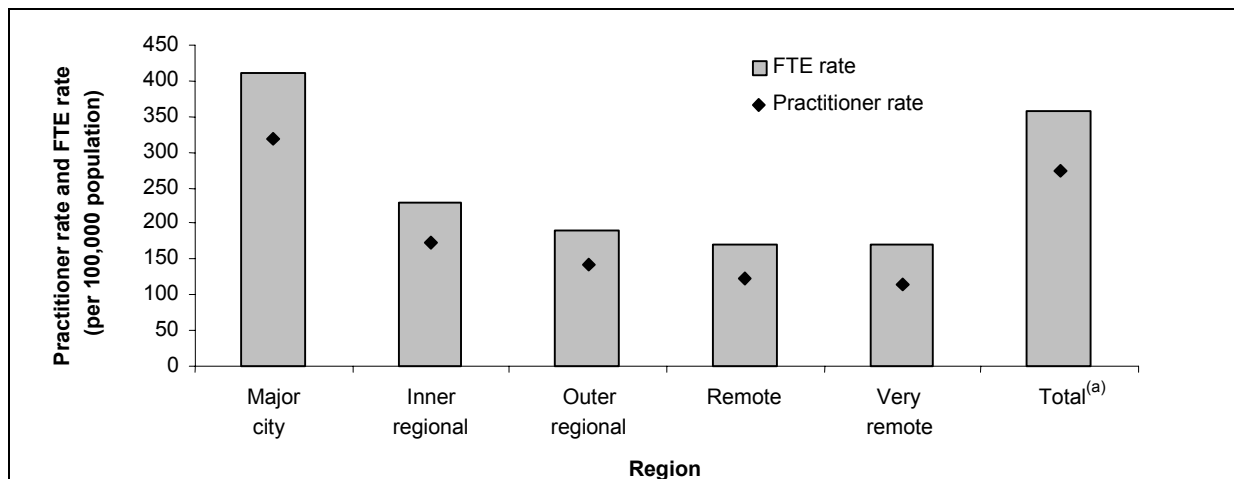
(a) Excludes 2,075 practitioners who did not report the regions in which they worked.

Source: Medical Labour Force Survey, 2001.

Practitioner mobility across regions was not limited to the examples 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, of practitioners who practised in a second region of a different type (1,581), two-thirds (66.1%) did so in a less populated region.

## Supply of practitioners

The practitioner rate and average hours worked by region showed, generally, that the practitioner rate decreased while the hours increased with remoteness. When regions are compared using the FTE rate in each (based on a 35-hour working week), the FTE supply in 2001 was higher than the rate of practitioners (Figure 7). The impact of higher average weekly hours worked by those based in 'Very remote' areas (52.6 hours) is apparent when compared with 'Remote' areas (48.2 hours). When the differential hours are considered, the practitioner rates (per 100,000 population) of 113 in 'Very remote' and 124 in 'Remote' areas both result in an FTE rate of 170 practitioners per 100,000 population.



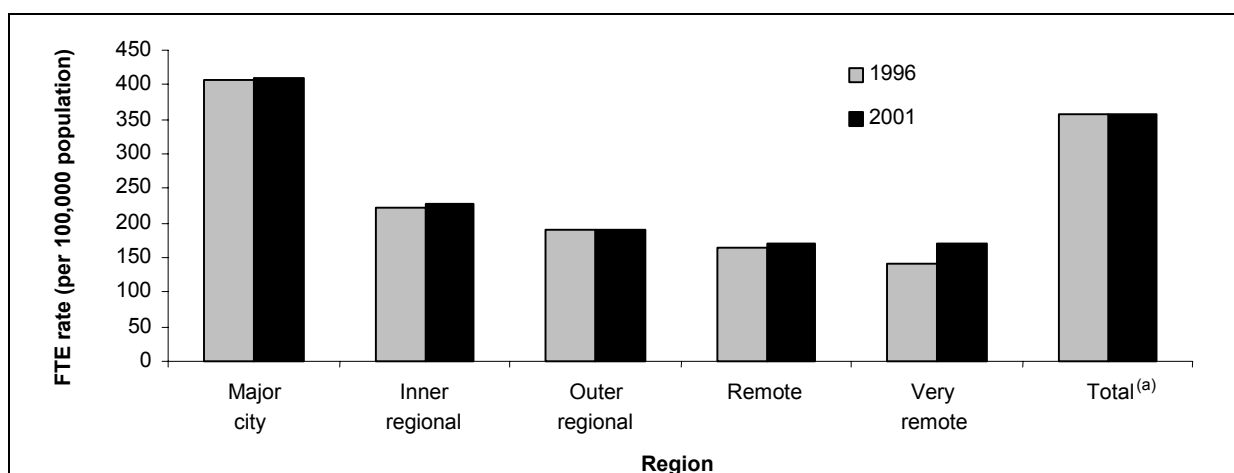
(a) Includes practitioners who did not report the region in which they worked.

Source: Medical Labour Force, 1996 and 2001; ABS 2002.

**Figure 7: Employed practitioners: region of main occupation, FTE rate (35-hour week) and practitioner rate, 2001**

Between 1996 and 2001, FTE rates showed small to moderate increases in areas classed as 'Inner regional' (from 222 to 229 per 100,000 population), 'Remote' (from 164 to 170 per 100,000 population) and 'Very remote' (from 142 to 170 per 100,000 population) (Figure 8).

From 1996 to 2001 there was an increase in the practitioner rates for all regions but this was accompanied by a decrease in practitioners' average weekly hours (Tables 4 to 8 and Table A3). In 'Major cities' and 'Outer regional' areas the increase in practitioner rates and the reduction in average weekly hours balanced out, resulting in little change to the practitioner supply over the five years (Figure 8).



(a) Includes practitioners who did not report the region in which they worked.

Source: Medical Labour Force, 1996 and 2001; ABS, 1997 and 2002.

**Figure 8: Employed practitioners: region of main occupation, FTE rate (35-hour week), 1996 and 2001**

# States and territories

## Distribution

In 2001, there were some variations in practitioners' characteristics across jurisdictions. Practitioners in Victoria were more likely to be older (48.2 years compared with 46.1 years nationally), whereas those in the Northern Territory were more likely to be younger (40.7 years) than colleagues elsewhere in Australia (Table 10). Higher proportions of female practitioners were evident in the two territories with the Northern Territory nearing half (44.9%) and the Australian Capital Territory just over a third (34.8%), compared with less than a third (30.7%) nationally.

Between 1996 and 2001, there was an increase in practitioner numbers in all jurisdictions. In the Northern Territory (up 47.4%), the Australian Capital Territory (23.9%) and Victoria (18.2%) there were higher percentage increases than experienced nationally (12.2%).

In 1996, the variation in age across jurisdictions was less apparent than in 2001, with the average age ranging from 43.2 years in the Northern Territory to 46.4 years in the Australian Capital Territory.

**Table 10: Employed practitioners: selected characteristics, states and territories, 1996 and 2001**

Characteristic	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>1996</b>									
Number	16,885	11,972	7,852	4,151	4,244	1,117	913	439	47,573
% female	27.6	27.2	27.7	27.5	26.7	26.1	31.3	35.8	27.6
Average age	45.9	44.6	43.6	45.2	44.0	44.9	46.4	43.2	44.9
<b>2001</b>									
Number	18,677	14,147	8,453	4,529	4,586	1,212	1,131	647	53,384
% female <sup>(a)</sup>	30.4	30.7	30.4	31.9	29.7	25.6	34.8	44.9	30.7
Average age <sup>(b)</sup>	45.8	48.2	45.3	46.1	45.2	n.a.	46.5	40.7	46.1
<b>% increase in practitioner numbers, 1996 to 2001</b>									
	10.6	18.2	7.7	9.1	8.1	8.6	23.9	47.4	12.2

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

(b) 2001 data unavailable for Tasmania.

Source: Medical Labour Force Survey, 1996 and 2001.

## Supply of practitioners

The jurisdictions with highest practitioner rates in 2001 were the Australian Capital Territory, the Northern Territory and South Australia (354, 327 and 303 per 100,000 population respectively) (Table 11). The practitioner rate increased from 1996 to 2001 in all jurisdictions except Queensland (which decreased from 235 to 233 per 100,000 population). When converted to an FTE rate, there was an increase in supply in four jurisdictions: Victoria (from 364 to 382 per 100,000 population), Tasmania (from 313 to 318 per 100,000 population), the Northern Territory (from 327 to 426 per 100,000 population) and the Australian Capital Territory (from 396 to 453 per 100,000 population).

**Table 11: Employed medical practitioners: states and territories, 1996 and 2001**

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Practitioner rate (per 100,000 population)</b>									
1996	272	263	235	235	288	235	296	241	260
2001	284	294	233	238	303	257	354	327	275
<b>FTE practitioner rate (per 100,000 population) based on a 35-hour week</b>									
1996	379	364	317	314	392	313	396	327	357
2001	371	382	305	305	388	318	453	426	357
<b>Population as at 31 December</b>									
1996	6,204,728	4,560,142	3,338,690	1,765,256	1,474,253	474,443	308,251	181,843	18,307,606
2001	6,575,217	4,804,726	3,628,946	1,901,159	1,511,728	471,795	319,317	197,768	19,413,240

Source: Medical Labour Force Survey, 1996 and 2001; ABS, 1997 and 2002.

## Primary care practitioners

As the main initial contacts for direct health care, the supply of primary care practitioners is a useful indicator of people's access to these services. Primary care practitioners are more evenly distributed across geographic regions than are other types of practitioner (see section 'Practitioner distribution'). Similarly, it is useful to view state and territory differences in access to health care by comparing their primary care practitioner numbers.

## Distribution

In 2001, primary care practitioners were, on average, 2.2 years older than medical practitioners overall (48.3 compared with 46.1 years) and included a higher proportion of females (34.9% compared with 30.7% for all practitioners) (Table 12 and Table 1). This national pattern was generally reflected across jurisdictions.

**Table 12: Primary care practitioners: selected characteristics, states and territories, 1996 and 2001**

Characteristic	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>1996</b>									
Number	7,215	4,800	3,398	1,840	1,791	565	379	196	20,185
% female	30.5	32.1	33.1	33.6	30.9	30.7	43.9	46.1	32.0
Average age	48.1	45.5	45.4	46.2	44.6	45.1	46.1	42.8	46.3
<b>2001</b>									
Number	7,522	5,612	3,455	1,957	1,830	615	420	259	21,671
% female <sup>(a)</sup>	33.7	35.3	35.7	36.5	33.4	26.4	46.8	50.0	34.9
Average age <sup>(b)</sup>	49.0	48.7	47.0	48.2	47.2	n.a.	48.8	44.0	48.3
<b>% increase in primary care practitioner numbers, 1996 to 2001</b>									
	4.3	16.9	1.7	6.3	2.2	8.8	10.8	32.3	7.4

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

(b) 2001 data unavailable for Tasmania.

Source: Medical Labour Force Survey, 1996 and 2001.

In all jurisdictions, primary care practitioners worked lower average weekly hours than medical practitioners overall, ranging from 5.8 hours per week less in the Northern Territory to 2.4 hours per week less in Tasmania (Table 13). This is, in part, a reflection of higher proportions of female practitioners in primary care and the fact that female practitioners generally work fewer hours per week than males (Figure 4).

**Table 13: Employed practitioners: average weekly hours worked, states and territories, 1996 and 2001**

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
All practitioners									
1996	48.7	48.5	47.2	46.7	47.7	46.6	46.8	47.4	48.1
2001	45.8	45.4	45.9	44.8	44.8	43.3	44.8	45.5	45.4
Primary care practitioners									
1996	47.1	44.3	43.6	42.7	44.7	42.1	40.1	42.6	44.9
2001	42.7	41.0	42.4	41.2	42.3	40.9	39.6	39.7	41.9

Source: Medical Labour Force Survey, 1996 and 2001.

A comparison of the rates for primary care practitioners with the rates for all medical practitioners shows some differences in supply across the states and territories and, effectively, some differences in direct access to health care. While these comparisons can be useful, they are limited in that they do not take into account the different levels of urbanisation across the states and territories, nor the different population profiles.

Although the rate for all practitioners in 2001 was highest in the Australian Capital Territory (354 per 100,000 population), followed by the Northern Territory (327 per 100,000 population, see table 11), the primary care practitioner rates in the two territories differed little (132 and 131 per 100,000 respectively) and were not markedly higher than the other jurisdictions (Table 14).

A comparison of all practitioners with primary care practitioners over time within a jurisdiction can also provide a different picture. In South Australia, for example, the rate for all practitioners increased between 1996 and 2001 (from 288 to 303 per 100,000 population), whereas the primary care practitioner rate was unchanged (121 per 100,000 population in both years) (Table 11 and Table 14).

At a national level, the FTE rate shows that the supply of primary care practitioners declined from 1996 to 2001 (141 to 134 per 100,000). This is in contrast to the FTE for all practitioners, which remained stable (357 per 100,000 in both years) (Table 11 and Table 14).

**Table 14: Primary care practitioners: practitioner and FTE rate, states and territories, 1996 and 2001**

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Practitioner rate (per 100,000 population)</b>									
1996	116	105	102	104	121	119	123	108	110
2001	114	117	95	103	121	130	132	131	112
<b>FTE practitioner rate (per 100,000 population) based on 35-hour week</b>									
1996	156	133	127	127	155	143	141	131	141
2001	140	137	115	121	146	152	149	149	134

Source: Medical Labour Force Survey, 1996 and 2001; ABS, 1997 and 2002.

# Appendix A: Detailed tables

**Table A1: Employed practitioners: main occupation, 1996 to 2001**

Main occupation	1996	1997	1998	1999	2000	2001
<i>Clinician</i>	43,756	44,194	44,684	45,999	47,372	49,392
Primary care	20,185	20,134	20,429	20,616	21,081	21,671
Hospital non-specialist	4,199	4,321	4,172	4,469	5,121	5,169
Specialist	15,236	15,155	15,605	16,460	16,008	17,124
Specialist-in-training	4,136	4,584	4,479	4,455	5,162	5,429
<i>Non-clinician</i>	3,817	4,004	4,233	4,224	3,733	3,991
Administrator	882	855	912	890	1,205	1,271
Teacher/educator	524	520	524	541	428	452
Researcher	784	734	724	767	950	1,030
Public health physician	464	528	540	669	363	374
Occupational health physician	320	322	311	308	298	285
Other	844	1,046	1,222	1,049	490	579
<b>Total</b>	<b>47,573</b>	<b>48,198</b>	<b>48,917</b>	<b>50,223</b>	<b>51,106</b>	<b>53,384</b>

*Note:* Figures for all years have been revised. Revisions are a result of changed clinician definition and changes in the survey estimation method (see 'Break in series' in Appendix B: Explanatory notes).

*Source:* Medical Labour Force Survey, 1996 to 2001.

**Table A2: Employed practitioners: region of main occupation, 1996**

Main occupation	Major city		Inner regional		Outer regional		Remote		Very remote		Total	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
<i>Clinician</i>	32,995	273	5,716	152	2,480	127	337	103	150	87	43,756	239
Primary care	14,039	116	3,394	90	1,606	82	254	78	113	66	20,185	110
Hospital non-specialist	3,233	27	390	10	204	10	34	11	31	18	4,199	23
Specialist	12,227	101	1,721	46	592	30	36	11	6	3	15,236	83
Specialist-in-training	3,496	29	210	6	77	4	12	4	—	—	4,136	23
<i>Non-clinician</i>	3,129	26	281	7	130	7	26	8	9	5	3,817	21
<b>Total</b>	<b>36,124</b>	<b>299</b>	<b>5,997</b>	<b>160</b>	<b>2,609</b>	<b>133</b>	<b>363</b>	<b>111</b>	<b>159</b>	<b>92</b>	<b>47,573</b>	<b>260</b>

*Notes*

- Figures by region exclude 2,320 practitioners who did not report the region in which they worked whereas the totals by occupation include these practitioners.
- Rates are per 100,000 population.

*Source:* Medical Labour Force Survey, 1996; ABS 1997.



**Table A3: Employed practitioners: selected characteristics, 1996**

	Major city	Inner regional	Outer regional	Remote	Very remote	Total
Average age	44.8	45.3	45.1	43.4	41.0	44.9
Average weekly hours	47.8	48.7	49.7	51.5	53.7	48.1
Practitioner rate (per 100,000 population)	299	160	133	111	92	260
Population	12,098,432	3,753,536	1,956,338	326,994	172,306	18,307,606

*Notes*

1. Figures by region exclude 2,320 practitioners who did not report the region in which they worked whereas the total includes these practitioners.
2. Rates are per 100,000 population.

Source: Medical Labour Force Survey, 1996; ABS 1997.

**Table A4: Practitioners who spent some time in clinical work: type of clinical work, 1996 to 2001**

	Primary care	Hospital non-specialist	Specialist	Specialist-in-training	Unknown	Total
<b>1996</b>						
Clinicians	20,185	4,199	15,236	4,136	—	43,756
Non-clinicians	389	82	739	135	55	1,399
<b>Total</b>	<b>20,574</b>	<b>4,281</b>	<b>15,975</b>	<b>4,270</b>	<b>55</b>	<b>45,155</b>
<b>1997</b>						
Clinicians	20,134	4,321	15,155	4,584	—	44,194
Non-clinicians	331	67	704	108	64	1,274
<b>Total</b>	<b>20,465</b>	<b>4,388</b>	<b>15,859</b>	<b>4,693</b>	<b>64</b>	<b>45,468</b>
<b>1998</b>						
Clinicians	20,429	4,172	15,605	4,479	—	44,684
Non-clinicians	373	56	767	116	48	1,359
<b>Total</b>	<b>20,802</b>	<b>4,228</b>	<b>16,371</b>	<b>4,594</b>	<b>48</b>	<b>46,043</b>
<b>1999</b>						
Clinicians	20,616	4,469	16,460	4,455	—	45,999
Non-clinicians	327	75	717	121	57	1,296
<b>Total</b>	<b>20,943</b>	<b>4,544</b>	<b>17,176</b>	<b>4,576</b>	<b>57</b>	<b>47,296</b>
<b>2000</b>						
Clinicians	21,081	5,121	16,008	5,162	—	47,372
Non-clinicians	410	124	1,126	157	100	1,917
<b>Total</b>	<b>21,491</b>	<b>5,244</b>	<b>17,135</b>	<b>5,318</b>	<b>100</b>	<b>49,289</b>
<b>2001</b>						
Clinicians	21,671	5,169	17,124	5,429	—	49,392
Non-clinicians	448	170	1,130	166	74	1,987
<b>Total</b>	<b>22,118</b>	<b>5,339</b>	<b>18,253</b>	<b>5,595</b>	<b>74</b>	<b>51,379</b>

Note: Figures for all years have been revised. Revisions are a result of changed clinician definition and changes in the survey estimation method (see 'Break in series' in Appendix B: Explanatory notes).

Source: Medical Labour Force Survey, 1996 to 2001.

**Table A5: Specialists: main specialty of practice and sex, 2001**

Specialty of practice	Clinicians			Non-clinicians	All specialists		
	Number	% female	Average age	Number	Number	% female	Average age
<i>Internal medicine</i>							
Cardiology	649	10.0	48.2	40	689	9.8	48.1
Clinical genetics	39	72.1	46.9	4	43	65.8	47.6
Clinical haematology	149	21.0	48.2	22	172	19.9	47.9
Clinical immunology	86	10.1	50.5	24	109	13.1	51.0
Clinical pharmacology	4	—	40.0	12	17	—	44.5
Endocrinology	256	26.1	48.1	83	339	27.7	47.0
Gastroenterology	450	12.5	47.2	55	505	16.3	46.4
General medicine	404	14.0	54.3	41	445	14.8	54.4
Geriatrics	254	33.2	46.7	29	283	31.5	47.3
Infectious diseases	125	19.7	42.8	41	166	22.4	43.0
Medical oncology	171	24.6	43.7	24	195	23.7	43.4
Neurology	251	9.5	52.8	43	294	13.6	51.5
Nuclear medicine	166	13.9	47.3	—	166	13.9	47.3
Paediatric medicine	744	28.0	48.6	105	849	28.4	48.7
Renal medicine	144	19.3	47.9	36	180	20.1	46.9
Rheumatology	227	29.1	49.6	29	256	31.1	48.2
Thoracic medicine	277	10.6	47.9	47	324	14.8	46.3
<i>Pathology</i>							
General pathology	108	7.6	52.2	12	120	6.9	53.6
Anatomical pathology	511	33.9	49.6	11	522	33.1	49.9
Clinical chemistry	52	15.1	55.8	16	68	17.6	54.9
Cytopathology	22	69.0	47.3	3	24	61.8	47.3
Forensic pathology	31	8.9	55.0	3	34	8.2	54.3
Haematology	57	40.7	49.5	19	75	39.3	48.9
Immunology	n.p.	n.p.	n.p.	n.p.	13	—	47.2
Microbiology	88	26.0	46.9	22	109	24.1	48.2
<i>Surgery</i>							
General surgery	924	8.6	52.6	48	972	8.7	53.1
Cardiothoracic surgery	106	3.7	51.4	n.p.	107	3.6	51.5
Neurosurgery	125	16.1	48.9	12	137	15.7	49.7
Otolaryngology (ENT)	299	8.7	52.0	8	307	8.5	52.4
Orthopaedic surgery	703	3.6	51.3	55	758	3.4	52.2
Paediatric surgery	57	24.3	54.7	5	62	26.7	54.0
Plastic surgery	248	11.5	50.6	5	253	11.3	50.7
Urology	239	2.8	50.4	9	248	3.3	50.5
Vascular surgery	113	4.4	51.8	3	116	4.3	52.2
<i>Other specialties</i>							
Anaesthesia	2,197	20.7	48.4	41	2,238	20.6	48.6
Dermatology	329	25.3	51.3	9	338	25.7	51.2
Diagnostic radiology	1,135	18.8	49.6	33	1,168	19.4	49.7
Emergency medicine	442	17.5	41.0	29	470	17.3	41.2
Intensive care <sup>(a)</sup>	298	14.0	44.9	18	316	14.1	45.1
Medical administration	14	10.2	48.2	210	224	20.0	51.6
Obstetrics & gynaecology	1,123	20.1	51.8	46	1,169	20.2	52.0
Occupational medicine	29	—	55.2	174	203	12.3	52.2
Ophthalmology	642	11.6	52.0	12	653	12.1	52.2
Psychiatry	1,937	29.0	51.4	160	2,097	29.2	51.4
Public health medicine	27	28.5	50.6	201	228	29.4	49.6
Radiation oncology	182	26.1	43.9	13	195	26.9	44.3
Rehabilitation medicine	172	20.6	49.8	22	194	21.1	49.6
Other	520	21.9	50.5	156	676	20.6	51.2
<b>Total</b>	<b>17,124</b>	<b>18.9</b>	<b>49.7</b>	<b>2,002</b>	<b>19,125</b>	<b>19.4</b>	<b>49.8</b>

(a) Due to differences in state survey designs, three 'Intensive care' categories have been collapsed into one.

Note: The classification of specialists as clinicians or non-clinicians is based on the occupation in which they worked the most hours (see 'Break in series' in Appendix B: Explanatory notes).

Source: Medical Labour Force Survey, 2001.

**Table A6: Specialists-in-training: main specialty and sex, 2001**

Specialty of practice	Clinicians			Non-clinicians	All specialists-in-training		
	Number	% female	Average age	Number	Number	% female	Average age
<i>Internal medicine</i>							
Cardiology	86	12.6	32.3	10	96	11.3	32.4
Clinical genetics	n.p.	n.p.	34.0	5	7	24.3	34.0
Clinical haematology	29	30.3	34.2	4	34	39.4	33.8
Clinical immunology	16	91.1	30.5	—	16	91.1	30.5
Clinical pharmacology	5	23.4	33.0	n.p.	7	40.4	33.0
Endocrinology	57	40.0	33.6	15	72	36.6	33.5
Gastroenterology	68	20.9	32.5	6	74	22.1	33.7
General medicine	353	31.1	31.6	10	363	30.3	31.6
Geriatrics	64	44.8	34.0	n.p.	66	45.9	33.8
Infectious diseases	34	38.5	31.4	n.p.	36	42.2	31.4
Medical oncology	53	47.7	32.3	12	65	57.6	33.0
Neurology	30	35.1	32.4	6	37	39.6	32.6
Nuclear medicine	37	51.4	36.2	n.p.	39	49.7	36.5
Paediatric medicine	433	47.6	32.8	29	462	48.1	32.7
Renal medicine	54	41.1	32.5	n.p.	55	40.1	32.5
Rheumatology	22	32.9	30.5	n.p.	25	38.8	30.7
Thoracic medicine	57	19.4	32.7	—	57	19.4	32.7
<i>Pathology</i>							
General pathology	n.p.	n.p.	n.p.	n.p.	3	48.7	30.5
Anatomical pathology	118	60.2	31.6	11	129	59.6	31.6
Clinical chemistry	11	74.8	36.6	3	14	59.6	36.4
Cytopathology	—	..	..	—	—	..	..
Forensic pathology	4	100.0	31.0	—	4	100.0	31.0
Haematology	50	58.4	32.5	n.p.	51	59.4	32.9
Immunology	17	41.2	30.4	9	26	43.6	31.4
Microbiology	15	51.9	38.3	3	18	59.2	37.3
<i>Surgery</i>							
General surgery	370	28.5	31.3	35	405	27.0	31.3
Cardiothoracic surgery	36	24.8	33.0	5	41	21.7	32.5
Neurosurgery	32	47.9	34.3	5	37	41.4	33.5
Otolaryngology (ENT)	49	12.1	31.5	n.p.	51	11.7	31.3
Orthopaedic surgery	218	7.9	31.9	n.p.	219	7.8	31.9
Paediatric surgery	17	91.5	34.5	n.p.	18	92.1	33.6
Plastic surgery	43	16.7	34.1	8	51	18.3	34.3
Urology	79	4.3	33.4	—	79	4.3	33.4
Vascular surgery	32	59.0	34.5	—	32	59.0	34.5
<i>Other specialties</i>							
Anaesthesia	607	31.5	32.4	3	610	31.8	32.4
Dermatology	48	31.7	36.0	4	52	37.5	35.3
Diagnostic radiology	262	26.0	33.0	n.p.	263	26.4	33.0
Emergency medicine	573	39.3	33.0	3	576	39.1	33.0
Intensive care <sup>(a)</sup>	94	28.6	33.6	—	94	28.6	33.6
Medical administration	3	54.3	35.0	33	35	67.5	38.1
Obstetrics & gynaecology	320	49.8	34.3	5	325	49.9	34.3
Occupational medicine	7	—	34.4	19	26	27.4	35.9
Ophthalmology	122	32.4	33.9	n.p.	123	33.1	33.9
Psychiatry	610	50.0	35.3	22	632	50.4	35.3
Public health medicine	6	100.0	34.8	33	39	67.6	40.0
Radiation oncology	57	36.5	31.0	n.p.	59	35.6	31.0
Rehabilitation medicine	40	50.0	35.7	—	40	50.0	35.7
Other	185	42.8	33.6	9	194	44.0	33.6
<b>Total</b>	<b>5,429</b>	<b>37.1</b>	<b>33.1</b>	<b>329</b>	<b>5,758</b>	<b>37.6</b>	<b>33.2</b>

(a) Due to differences in state survey designs, three 'Intensive care' categories have been collapsed into one.

Note: The classification of specialists as clinicians or non-clinicians is based on the occupation in which they worked the most hours (see 'Break in series' in Appendix B: Explanatory notes).

Source: Medical Labour Force Survey, 2001.

# Appendix B: Explanatory notes

## Method

Each state and territory medical board conducts an annual renewal of practitioner registration. As part of the registration renewal process, the survey questionnaire was sent to all medical practitioners in all jurisdictions except New South Wales, where approximately 25% of practitioner renewals were sent the questionnaire. This was, in effect, a random sample and the New South Wales estimates based on this are considered to be reliable at the state level. The results of the 2001 survey relate to the period when the renewal notices and the survey were dispatched. Survey data on practice activity refer to the four-week period before completion of the questionnaire by each medical practitioner.

## 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 in 2001 represented 64.5% of the medical registrations in all jurisdictions excluding New South Wales (Table B1).

**Table B1: Estimated survey response rate, states and territories, 2001**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total <sup>(a)</sup>
<b>2001 response rate</b>	n.a.	63.9	76.8	36.4	71.3	65.4	71.6	60.3	64.5

(a) Excludes NSW because of incomplete information on the number of practitioners in the survey.

Source: Medical Labour Force Survey, 2001.

The overall response rate is an approximation also because some medical practitioners were registered in more than one state or territory and may have 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.

## **Break in series**

### **Changes to the questionnaire**

In 2000, significant changes to the survey questionnaire were introduced. They were 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. Since 2000, practitioners who spent part of their time in clinical work but the majority of their time working in a non-clinical medical occupation are assigned the occupation in which they worked the most hours. In previous surveys, these practitioners were all assigned the occupation of clinician. In this publication, clinician and non-clinician numbers have been revised for surveys prior to 2000 to enable general comparisons; however, the method used is a close approximation only, not the same measure, and this must be kept in mind when comparing pre-2000 data with data collected from 2000 onwards. As a result of the revision, pre-2000 figures presented in this publication are different from estimates of clinicians and non-clinicians published in the past.

### **Changes to the estimation method**

A different method of survey estimation was introduced in 2000 to improve survey processing. This method was also used to produce estimates for the 2001 survey. For consistency across surveys, estimates for surveys prior to 2000 have been revised using the same method. As a result of the revisions, pre-2000 figures presented in this publication are different from estimates published in the past.

## **Notes on the AIHW labour force estimates**

The figures produced from the Medical Labour Force Survey are estimates. Not all medical practitioners who were sent a questionnaire responded to the survey, and estimates of the whole practitioner population are based on survey data which have been weighted to match the available registration information. In 2001, complete registration data were available for four jurisdictions (but not for Victoria, Western Australia, Tasmania and the Australian Capital Territory). Where registration data were not available, estimation was made on the basis that survey non-respondents in each state/territory had the same characteristics as respondents. The exception was Tasmania for which no age or sex data were available, either from registration data or from the survey.

Additional estimation has been made for survey respondents who provided incomplete labour force information, again on the basis that survey non-respondents had the same characteristics as respondents.

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

# Glossary

## **Full-time equivalent (FTE) supply of practitioners**

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). While a 35-hour or 38-hour week is the standard in many industries, the 'typical' working week varies between occupations. Two 'standard' weeks are shown to more easily enable FTE comparisons across occupations.

The FTE number is converted to a rate per 100,000 population for comparison with the practitioner rate (number of practitioners per 100,000).

## **Geographic classification**

There are several classifications used to differentiate between various regions in Australia. The two main ones used in health labour force planning are the Rural, Remote and Metropolitan Areas (RRMA) classification and the Australian Standard Geographical Classification (ASGC). The Remoteness Area Structure of the ASGC, produced by the Australian Bureau of Statistics, has been used in this publication to present regional data for medical practitioners. Prior to 2001, the RRMA classification was used. A brief explanation of the classifications is provided below (AIHW in press).

The RRMA classification allocates each Statistical Local Area (SLA) in capital cities and metropolitan centres with a population equal to or greater than 100,000 to the Metropolitan zone and to the RRMA classes of Capital city and Other metropolitan centre respectively. All other SLAs are allocated to either the Rural or Remote zone based on the SLA's score on an index of remoteness.

The Remoteness Area Structure of the ASGC is based on the Accessibility/Remoteness Index of Australia (ARIA+) where the remoteness index value of a point is based on the physical road distance to the nearest town or service in each of five population size classes based on the 2001 Census of Population and Housing. These classes are:

- Major cities of Australia
- Inner regional Australia
- Outer regional Australia
- Remote Australia
- Very remote Australia.

## **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 (RMO) and interns, as well as career and other salaried hospital practitioners.

## **Intern**

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

## **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 including recommending preventative action. In this publication, a medical practitioner who spends most hours engaged in clinical practice is classified as a clinician;
- 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 that 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; and
- 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. This category includes practitioners recognised by Medicare as VRGPs, RACGP Fellows, RACGP trainees (see definitions below) and other practitioners whose main practice is unreferral patient attendances.

### **RACGP**

Royal Australian College of General Practitioners.

### **RACGP trainee**

A medical practitioner under the supervision of an RACGP Fellow in a job recognised as leading to the RACGP Fellowship.

### **Resident medical officer (RMO)**

A medical practitioner undergoing further training in a hospital after completing an internship, but who has not commenced a recognised general practice or specialist practice training program.

### **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.

### **Vocationally registered general practitioner (VRGP)**

A primary care practitioner who has been registered by the Health Insurance Commission as a recognised general practitioner.

# References

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