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Contents

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5 Geographic comparisons

Regions: a summary

In 2003, there were an estimated 19.9 million resident Australians (ABS 2003) and around 56,207 medical practitioners delivering 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.

Major cities

In 2003, about 13.18 million (66.3%) Australians lived in Major cities where some 43,010 (79.2%) medical practitioners provided services. The average age of these practitioners was 45.7 years and they worked 44.2 hours per week on average. This compares with an average age of 45.5 and an average working week of 45.2 in 2000.
30.7% were female in 2000, and 32.6% in 2003.

Table 5: Employed practitioners: Major cities, 2000 to 2003

	FTE rate[(a)]			
Occupation	**2000**	**2001**	**2002**	**2003**
Clinicians	*285*	*293*	*288*	*294*
Primary care	105	106	105	102
Hospital non-specialist	32	31	29	36
Specialist	108	115	114	115
Specialist-in-training	40	41	40	42
Non-clinicians	*25*	*25*	*24*	*26*
Total	**309**	**319**	**312**	**321**

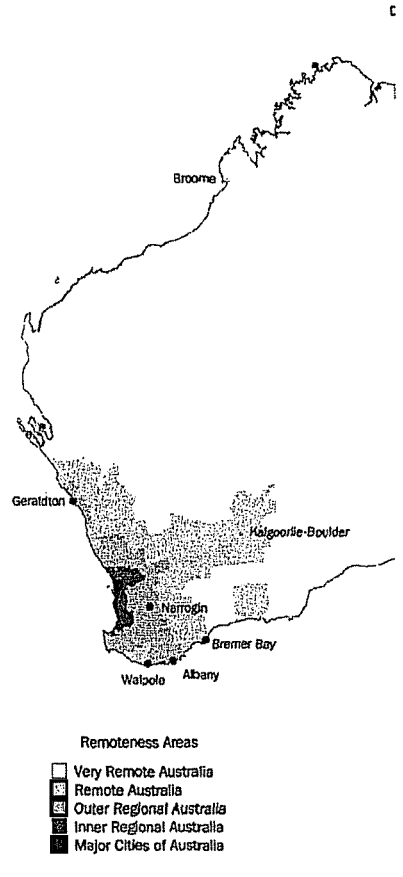
Inner regional

In 2003, about 4.15 million (20.9%) Australians lived in Inner regional areas where some 7,446 (13.7%) medical practitioners provided services. The average age of these practitioners was 46.8 years and they worked 44.8 hours per week, on average. This compares with an average age of 45.7 and an average working week of 46.0 in 2000.
26.3% were female in 2000, and 27.4% in 2003.

Table 6: Employed practitioners: Inner regional, 2000 to 2003

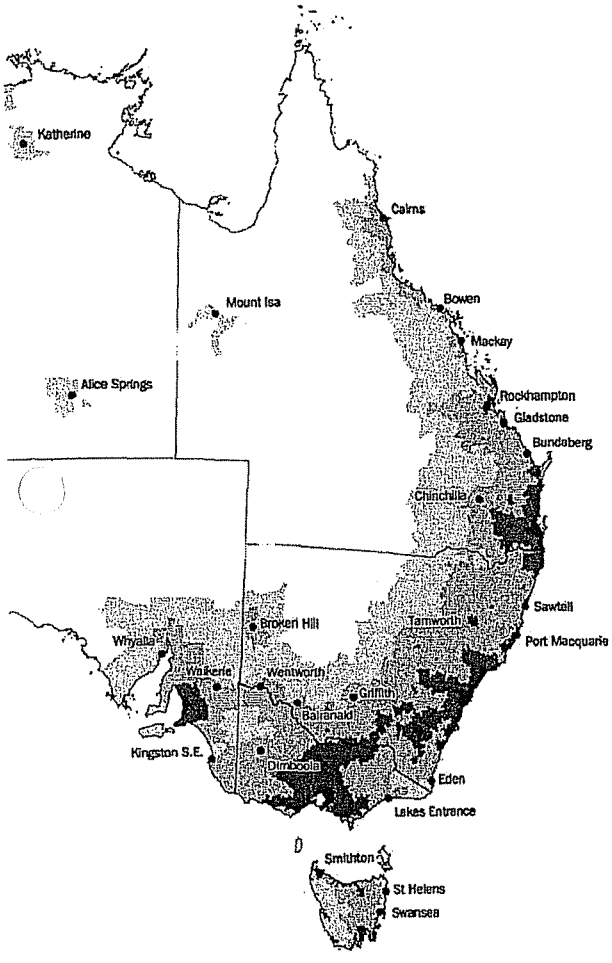
	FTE rate[(a)]			
Occupation	**2000**	**2001**	**2002**	**2003**
Clinicians	*166*	*172*	*169*	*170*
Primary care	88	91	90	89
Hospital non-specialist	18	17	14	17
Specialist	51	54	55	55
Specialist-in-training	9	11	10	9
Non-clinicians	*6*	*7*	*7*	*8*
Total	**172**	**179**	**176**	**178**

Figure 7: Australian Standard Geographical Classification (ASGC) Remoteness Areas



(a) FTE rates are per 100,000 population and based on a 45-hour week

The Remoteness Area Structure of the ASGC has been used to present the geographical distribution of medical practitioners across the following five regions: 'Major cities', 'Inner regional', 'Outer regional', 'Remote' and 'Very remote'. These areas are mapped (Figure 7), and selected characteristics provide a picture of practitioners by their main working location, relative to the Australian population (Tables 5 to 9).



Notes

1 Figures in the tables and associated text in this section exclude practitioners who did not provide the region in which they worked. The number of practitioners who did not provide their region of main job for each year is as follows: 1,881 in 2000; 2,014 in 2002; 1,816 in 2002; and 1,870 in 2003.

2 Postcode updates to the ASGC concordance have resulted in some small revisions to the 2001 FTE rates.

Outer regional

In 2003, about 2.04 million (10.2%) Australians lived in Outer regional areas where some 3,154 (5.8%) medical practitioners provided services. The average age of these practitioners was 45.1 years and they worked 46.2 hours per week, on average. This compares with an average age of 45.0 and an average working week of 47.8 in 2000. 28.7% were female in 2000, and 30.3% in 2003.

Table 7: Employed practitioners: Outer regional, 2000 to 2003

	FTE rate[(a)]			
Occupation	**2000**	**2001**	**2002**	**2003**
Clinicians	*139*	*142*	*138*	*149*
Primary care	83	87	80	85
Hospital non-specialist	13	12	15	19
Specialist	34	33	35	36
Specialist-in-training	10	9	8	10
Non-clinicians	*8*	*7*	*8*	*10*
Total	**147**	**148**	**146**	**159**

Remote

In 2003, about 0.32 million (1.6%) Australians lived in Remote areas where some 498 (0.9%) medical practitioners provided services. The average age of these practitioners was 44.7 years and they worked 47.8 hours per week, on average. This compares with an average age of 43.2 and an average working week of 47.6 in 2000. 32.0% were female in 2000, and 31.5% in 2003.

Table 8: Employed practitioners: Remote, 2000 to 2003

	FTE rate[(a)]			
Occupation	**2000**	**2001**	**2002**	**2003**
Clinicians	*143*	*134*	*130*	*154*
Primary care	99	89	86	97
Hospital non-specialist	21	20	19	24
Specialist	17	19	19	26
Specialist-in-training	6	6	6	7
Non-clinicians	*10*	*10*	*10*	*9*
Total	**152**	**144**	**140**	**163**

Very remote

In 2003, about 0.18 million (0.9%) Australians lived in Very remote areas where some 230 (0.4%) medical practitioners provided services. The average age of these practitioners was 43.4 years and they worked 50.0 hours per week, on average. This compares with an average age of 41.0 and an average working week of 49.9 in 2000. 32.0% were female in 2000, and 35.0% in 2003.

Table 9: Employed practitioners: Very remote, 2000 to 2003

	FTE rate[(a)]			
Occupation	**2000**	**2001**	**2002**	**2003**
Clinicians	*128*	*123*	*134*	*133*
Primary care	100	92	93	95
Hospital non-specialist	21	25	28	30
Specialist	n.p.	5	10	7
Specialist-in-training	5	n.p.	n.p.	n.p.
Non-clinicians	*10*	*n.p.*	*7*	*10*
Total	**138**	**126**	**141**	**143**

Regions in detail

Practitioner distribution

Overall in 2003, 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 Remote and Very remote areas were, on average, 1 to 2 years younger and worked longer by some 4 hours and 6 hours per week, respectively (Tables 5 to 9).

The higher average hours worked by practitioners based in less populated (more remote) areas reflects comparatively fewer practitioners being based in these regions. More than three-quarters[1] (79.2%) 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, over half of the 43,010 practitioners in Major cities were specialists (14,580), specialists-in-training (5,116), or non-clinicians (3,621) and are concentrated there because they are generally associated with hospitals and the services that hospitals provide, together with facilities for research, training and advanced equipment for treatment (Table A7). 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 70% in Major cities and 30% in remaining regions[1]).

Supply of practitioners

The supply of practitioners increased in all areas between 2000 and 2003, despite a decrease in average hours during that time. Larger increases in the FTE rate of supply occurred in Major cities and Outer regional areas, with an increase of 12 FTE practitioners per 100,000 population (from 309 in 2000 to 321 in 2003 for Major cities and from 147 to 159 for Outer regional areas), followed closely by Remote areas (an increase of 11 FTE). Smaller increases in the FTE rate occurred in Very remote areas (from 138 to 143), followed by Inner regional areas (from 172 to 178) (Tables 5 to 9).

In general, most occupations showed increases in supply across all regions, despite the decreases in average hours. An exception was primary care practitioners. The FTE supply of primary care practitioners in Major cities decreased from 105 per 100,000 population in 2000 to 102 in 2003. Outside the Major cities, the FTE rate of primary care practitioners fell slightly in Remote areas, with 97 FTE per 100,000 population (down from 99 in 2000), followed by Very remote areas with 95 per 100,000 population (down from 100 in 2000).

Between 2000 and 2003, in all regions except Remote areas, the rising proportion of female practitioners was in keeping with the national picture. In Remote areas, the female proportion decreased by half a percentage point from 32.0% to 31.5%, although this proportion was close to the national figure of 31.9% in 2003. An increase of 3 percentage points occurred in Very remote areas (from 32.0% in 2000 to 35.0% in 2003), nudging the female representation to over one in three practitioners. Compared with the national figure, the proportion of female practitioners in Inner regional areas was low (27.4%), although this was up slightly from 2000 (26.3%).

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[1] Note: excludes practitioners who did not report the region in which they worked.

Inter-regional service delivery in 2003

The above comparisons of changes in regional supply between 2000 and 2003 showed the interaction of working hours with the practitioner rate, and the effect on supply. These measures of supply were based on the total hours worked in all locations by practitioners and were shown by region of main work location.

However, 40.2% (24,189) of practitioners reported practising in a second work location and, for 9.5% (2,067) of them, their second practice was located in a different region type from that of their main practice (Tables 10 and A1). Most of these practitioners (62.5% or 1,292) worked in a second location in a less populated region. By way of example, the following discussion on inter-regional service delivery focuses on these practitioners, the extent to which they work in a different region type and the fact that this changed the regional distribution of supply in 2003.

In 2003, there was a higher practitioner rate in Major cities than less populated regions, although some 946 practitioners based in Major cities also practised in a less populated region. Most of them had a second practice in Inner regional areas (757 practitioners), followed by 155 in Outer regional, 19 in Remote and 14 in Very remote areas. In another example, some 69 practitioners based in Outer regional areas practised in Remote or Very remote regions (29 and 40 practitioners, respectively).

In the example of the city-based practitioners, the 19 who worked in Remote regions spent a day per week (8.8 hours, on average) in their second region, and the 14 who worked in Very remote areas spent more than a day per week (11.0 hours, on average) in theirs. In the other example, the 69 practitioners based in Outer regional areas who provided services to Remote or Very remote regions worked, on average, 10.8 hours per week in their second region (Table 10). In total, Remote and Very remote areas were provided with services from 114 practitioners based outside these regions and when the hours they worked are factored in, they equated to around 26 practitioners working a 45-hour week (a supply increase of 11 FTE practitioners per 100,000 population across these two regions). Against this, the hours worked in a second region of a different type by practitioners based in Remote or Very remote regions should then be re-allocated to their second work region.

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 providing medical services in remote areas.

Table 10: Number of practitioners and average hours worked per week in second work location, by region of main work location[a], 2003

	Second region									
	Major cities		Inner regional		Outer regional		Remote		Very remote	
Main region	Number	Hours	Number	Hours	Number	Hours	Number	Hours	Number	Hours
Major cities	**17,108**	**10.5**	757	10.4	155	9.9	19	8.8	14	11.0
Inner regional	513	10.3	**1,839**	**9.4**	235	7.9	6	11.6	6	2.5
Outer regional	73	9.8	113	8.5	**732**	**10.5**	29	10.8	40	10.8
Remote	11	11.5	4	15.9	24	10.1	**66**	**11.6**	31	11.3
Very remote	7	9.8	—	—	8	11.9	21	9.4	**38**	**11.0**

(a) Includes only those practitioners who reported a main and a second work location.

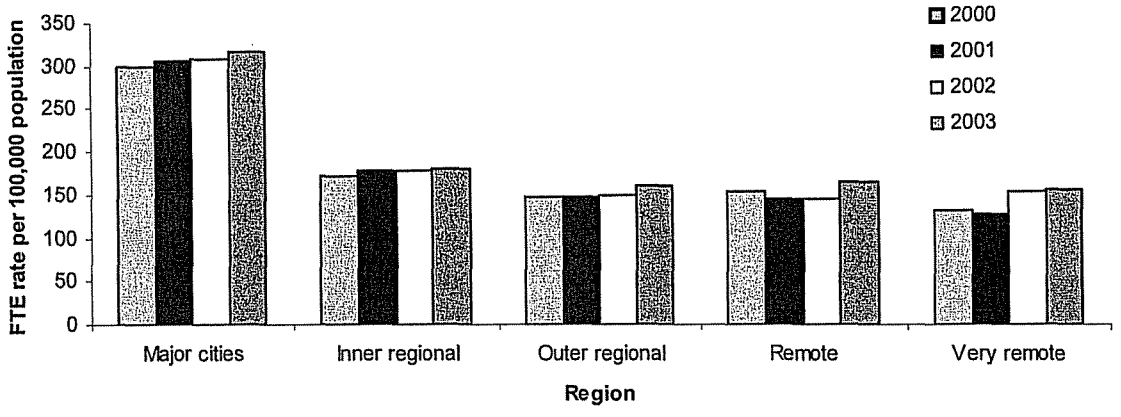
Note: Figures for practitioners with a second work location in a region of the same type as their main work location are shown in bold print.

Source: Medical Labour Force Survey, 2003.

Regional supply

When the hours practitioners worked in all regions are assigned to the region in which they provided services (rather than where they were based), the apparent regional disparity in supply is reduced. For example, in Major cities the FTE rate reduced when, first, the hours worked by city-based practitioners in another region were subtracted and, second, the hours of practitioners based outside Major cities who worked in Major cities were added (321 FTE per 100,000 population reduced to 316) (Table 9 and Figure 8).

In contrast, when actual delivery hours were calculated in the same way for Very remote areas, the supply of practitioners increased by 14 FTE, from 143 to 157 FTE per 100,000 population (Table 9 and Figure 8). Using this method, there were increases in the other regions of between 2 and 3 FTE per 100,000 population (from 178 to 181 for Inner regional, from 159 to 161 for Outer regional and from 163 to 166 for Remote areas).



Source: Medical Labour Force, 2000 to 2003; ABS, 2000 to 2003.

Figure 8: Employed practitioners: FTE rate (45-hour week) by geographic region, 2000 to 2003

States and territories

Distribution

Between 2000 and 2003, there was an increase in practitioner numbers in all jurisdictions. In the Northern Territory (up 58.3%), Tasmania (up 16.8%) and Victoria (up 13.4%) there were higher percentage increases than experienced nationally (up 10.0%) (Table 11).

In 2003, there were some variations in practitioners' characteristics across jurisdictions. Practitioners in Tasmania were more likely to be older (48.0 years) and those in the Northern Territory were more likely to be younger (40.0 years) than colleagues elsewhere in Australia (45.9 years, nationally) (Table 11). There was more variation in age across jurisdictions in 2003 than in 2000 when the average age ranged from 42.0 years in the Northern Territory to 47.1 years in Victoria.

Higher proportions of female practitioners were evident in the two territories, with the Northern Territory around 43.0% and the Australian Capital Territory 36.0%, compared with less than a third (31.9%) nationally. However, the Northern Territory was the only jurisdiction where the

proportion of females decreased between 2000 (43.3%) and 2003. The largest increase in the proportion of females occurred in Tasmania, up 5.5 percentage points (from 26.2% to 31.7%).

Table 11: Employed practitioners: selected characteristics, states and territories, 2000 and 2003

Characteristic	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
					2000				
Number	17,907	13,040	8,121	4,648	4,552	1,145	1,134	559	51,106
% female	29.8	29.7	30.3	30.5	29.4	26.2	35.6	43.3	30.1
Average age	45.6	47.1	44.2	45.8	44.7	n.a.[(a)]	46.3	42.0	45.6
					2003				
Number	19,188	14,782	9,173	4,709	4,928	1,338	1,204	886	56,207
% female	31.5	32.0	30.9	33.3	30.4	31.7	36.0	43.0	31.9
Average age	46.2	45.5	46.2	46.6	44.9	48.0	46.5	40.0	45.9
					% change in practitioner numbers, 2000 to 2003				
	7.2	13.4	13.0	1.3	8.3	16.8	6.2	58.3	10.0

(a) Average age not available for Tasmania in 2000.

Source: Medical Labour Force Survey, 2000 and 2003.

Supply of practitioners

The jurisdictions with highest practitioner rates in 2003 were the Northern Territory, the Australian Capital Territory and South Australia (446, 372 and 323 per 100,000 population respectively) (Table 12). The practitioner rate increased between 2000 and 2003 in all jurisdictions except for Western Australia, which decreased from 248 practitioners per 100,000 population in 2000 to 241 in 2003. When converted to the FTE rate of supply, once again there were increases in all jurisdictions except Western Australia, where the FTE rate decreased from 245 in 2000 to 232 in 2003 per 100,000 population.

Table 12: Employed practitioners: states and territories, 2000 to 2003

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
					Practitioner rate (per 100,000 population)				
2000	276	275	228	248	302	243	360	286	267
2003	287	301	241	241	323	280	372	446	283
					FTE practitioner rate (per 100,000 population) based on a 45-hour week				
2000	283	277	234	245	301	229	357	289	270
2003	288	298	236	232	313	258	365	451	279

Source: Medical Labour Force Survey, 2000 to 2003; ABS, 2000 to 2003.

Note: the sharp increase in practitioner numbers registered in the Northern Territory has led to a noticeable increase in the FTE rate of supply. The increase in registrations is mainly a result of a large increase in practitioners working in the Northern Territory but residing elsewhere. This trend may be due to a number of reasons such as transient employment, and increased Aboriginal medical services in the more remote health regions which rarely attract permanently placed doctors.

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', p.14). Similarly, it is useful to view state and territory differences in access to health care by comparing their primary care practitioner supply. A comparison of the primary care practitioner rates with the rates for all medical practitioners shows some variation in supply across the jurisdictions and, by implication, some differences in access to the health care system. 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, or the different population profiles.

Distribution

In 2003, primary care practitioners were, on average, 2.9 years older than medical practitioners overall (48.8 compared with 45.9 years) and included a higher proportion of females (36.2% compared with 31.9% for all practitioners) (Tables 13 and 11). This national pattern was generally reflected across jurisdictions. In the Northern Territory close to half (49.3%) of primary care practitioners were female. Between 2000 and 2003, primary care practitioner numbers increased in all jurisdictions except Western Australia (down from 2,007 to 1,985, a 1.1% decrease) and the Australian Capital Territory (down from 451 to 398, an 11.7% decrease).

Table 13: Primary care practitioners: selected characteristics, states and territories, 2000 and 2003

Characteristic	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
					2000				
Number	7,236	5,377	3,408	2,007	1,806	587	451	210	21,081
% female	32.6	33.6	35.7	35.1	33.7	25.3	46.3	49.8	34.0
Average age	49.2	47.4	46.1	47.8	46.9	n.a.[(a)]	48.0	44.0	47.8
Males	51.7	49.9	48.4	50.6	49.2	n.a.[(a)]	49.8	48.3	50.3
Females	44.1	42.7	42.0	42.7	42.3	n.a.[(a)]	45.9	39.7	43.1
					2003				
Number	7,338	5,736	3,667	1,985	1,845	624	398	324	21,919
% female	35.0	36.6	36.4	36.9	33.5	40.2	44.5	49.3	36.2
Average age	49.8	48.3	48.6	49.4	47.5	49.0	49.8	44.1	48.8
Males	52.2	50.8	51.1	52.6	49.7	51.9	52.5	46.9	51.4
Females	45.4	43.9	44.1	43.9	43.2	44.6	46.6	41.2	44.4
					% change in primary care practitioner numbers, 2000 to 2003				
	1.4	6.7	7.6	–1.1	2.1	6.4	–11.7	54.7	4.0

(a) Average age was not available for Tasmania in 2000.

Source: Medical Labour Force Survey, 2000 and 2003.

In all jurisdictions, primary care practitioners worked fewer average weekly hours than medical practitioners overall, ranging from 5.6 hours per week less in the Northern Territory to 2.5 hours per week less in South Australia (Table 14). 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 3).

Table 14: Primary care practitioners compared with all practitioners: average weekly hours worked, states and territories, 2000 and 2003

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Primary care practitioners									
2000	43.0	41.0	42.4	40.9	42.2	39.4	40.0	39.3	41.9
2003	42.2	40.6	40.3	39.6	41.1	38.5	39.6	39.9	40.9
All practitioners									
2000	46.1	45.4	46.1	44.5	44.8	42.4	44.6	45.5	45.5
2003	45.1	44.6	44.0	43.2	43.6	41.5	44.1	45.5	44.4

Source: Medical Labour Force Survey, 2000 and 2003.

A comparison of all practitioners with primary care practitioners over time within a jurisdiction can provide an interesting picture. For example, both New South Wales and the Australian Capital Territory experienced increases in the rate of all practitioners between 2000 and 2003 (from 276 and 360 to 287 and 372 respectively), whereas the primary care practitioner rates decreased (from 112 and 143 to 110 and 123 respectively) (Tables 12 and 15).

While the national primary care practitioner rate was the same in 2000 and 2003 (110 per 100,000 population), changes in rates at the jurisdiction level were varied. Decreases in the rate of primary care practitioners occurred in New South Wales (from 112 to 110), Western Australia (from 107 to 102) and the Australian Capital Territory (down 20 practitioners per 100,000 population, from 143 to 123) (Table 15).

Increases occurred in Victoria (from 113 to 117), South Australia (from 120 to 121) and Tasmania (from 124 to 131). Queensland was the only jurisdiction to be the same in both years (96 practitioners per 100,000 population), after declining in 2001 and 2002. Also in Queensland, the practitioner rate was consistently the lowest of all jurisdictions.

At a national level, the supply of primary care practitioners decreased slightly between 2000 and 2003 (from an FTE rate of 102 to 100). This is in contrast to the FTE rate for all practitioners, which increased (from 270 to 279 FTE) (Tables 12 and 15). There were supply decreases in New South Wales (by 4 FTE per 100,000 population), Queensland (also by 4 FTE), South Australia (by 3 FTE) and the Australian Capital Territory (by 19 FTE).

Table 15: Primary care practitioners: practitioner and FTE rate, states and territories, 2000 and 2003

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
				Practitioner rate (per 100,000 population)					
2000	112	113	96	107	120	124	143	107	110
2003	110	117	96	102	121	131	123	163	110
				FTE practitioner rate (per 100,000 population) based on 45-hour week					
2000	107	103	90	97	113	109	127	94	102
2003	103	105	86	90	110	112	108	145	100

Source: Medical Labour Force Survey, 2000 and 2003; ABS, 2000 to 2003.