

3 Trends in the medical labour force

Introduction

Every year when medical labour force figures are released they receive a great deal of attention from State/Territory and Commonwealth health departments because they provide feedback about the response of the profession to earlier planning decisions and because they are used to underpin future action. The health of the population is one of the most critical areas of wellbeing and governments are continually monitoring the balance between maintaining a reasonable standard of public health and meeting the expense of training future medical practitioners.

The need (demand) for medical practitioners depends on the number of patients, their propensity to require health care and their range of illnesses. For example, a population with relatively high proportions of old people or of infants is likely to have greater need for medical practitioners than one with large proportions of young childless adults. Changes in the size of a population over time as well as shifts in these characteristics will alter the level of demand.

On the supply side, the size and composition of this labour force is influenced by the number and characteristics of those entering medical school, the capacity of the system to retain those already practising and the resources available to assist doctors in their work. For example, increases in the proportion of female medical students may signal greater proportions of younger doctors preferring part-time hours (that is, less than 35 hours per week using the ABS definition); population declines in some regions may discourage young doctors from setting up practice there; and the availability of technological tools may allow some diagnostic procedures to be transferred from doctors to other health professionals.

These demand and supply factors have all been undergoing change up to the turn of the century. The general population has been increasing in number and ageing, while also becoming more metropolitan and more educated; and the ethnic mix is constantly changing. There have also been changes in the characteristics of the medical labour force itself. The labour force is becoming more feminised and older, and the number of doctors choosing to work shorter hours is increasing. Added to this are advances in medical techniques and technology. How to ensure an adequate and appropriate supply of doctors into the future in this environment remains an ever more complex question.

The effects of these changes are not always apparent from year to year, and are often hidden by short-term fluctuations in numbers – genuine changes are more noticeable over a longer time span. This report focuses on the characteristics of the medical labour force in 1999, and identifies any changes in its composition and nature since 1995. This time period was chosen because it is long enough for genuine changes to be observed yet short enough to provide evidence of recent trends.

Changes in composition of the medical labour force

The labour force remained relatively unchanged between 1995 and 1999 in terms of structure (proportions in each occupation), but it grew, and there were substantial changes in demographics and working patterns.

In December 1995, the medical labour force comprised 48,032 practitioners, of whom 47,331 (98.5%) were employed and practising in medicine. By December 1999, there had been a 6.1% growth in the medical labour force (to 50,984 practitioners) and a 6.3% growth in employed medical practitioners (to 50,329).

3.1 Employed medical practitioners

The medical workforce has been becoming more specialised over recent years. Over half of the 6.3% growth in the number of employed medical practitioners between 1995 and 1999 occurred among specialists (which grew by 9.5% from 15,604 to 17,091) and specialists-in-training (which grew by 8.6% from 4,273 to 4,640). Smaller growth occurred for primary care practitioners (from 19,937 to 20,966, or 5.2%), while the number of hospital non-specialists decreased slightly (0.6%) in the four years from 4,769 in 1995 to 4,740 in 1999 (Tables A.2, A.3 and 8).

Table 8: Changes in employed medical practitioners: selected characteristics by occupation, Australia, 1995–99

Occupation	Growth in numbers (%)	Change in % female (percentage points)	Change in average age (years)
<i>Clinician:</i>	6.4	2.3	1.4
Primary care	5.2	2.7	1.9
Hospital non-specialist	-0.6	-1.6	1.3
Specialist	9.5	2.7	0.9
Specialist-in-training	8.6	5.8	0.6
<i>Non-clinician:</i>	5.2	1.7	1.1
Administrator	-25.6	1.7	2.5
Teacher/ educator	28.3	-3.0	0.1
Researcher	7.7	4.7	1.0
Public health physician	36.9	0.9	-1.1
Occupational health physician	5.9	-1.5	1.2
Other	9.2	1.8	1.8
Total	6.3	2.2	1.1

Source: Medical Labour Force Survey 1995.

Indeed, general practice itself is also being regarded as a specialty area, with its own equivalent to the specialists' colleges (the Royal Australian College of General Practitioners, or RACGP, established in 1969), affording equal status with other disciplines. General practitioners, who made up 86.7% of primary care practitioners in 1999, are required to fulfil a stringent set of criteria before becoming eligible for vocational registration with the RACGP. These criteria include: completion of a formal general practice training program; attainment of fellowship of the RACGP by examination; demonstration of ongoing involvement in continuing education and quality assurance; and agreement to participate in peer review through an independent peer review organisation (DHAC 2000). There was also a moderate increase of 5.2% in the small number of non-clinicians since 1995, with most of this confined to public health physicians, where there was a 36.9% rise from 461 in 1995 to 631 in 1999. Public health physicians were the youngest of all those medical occupations in which there were no trainees, and they were also the only field in which the average age of

practitioners decreased between the two survey years (by 1.1 years from 43.6 to 42.5 years). This would suggest that public health medicine is a burgeoning field within the medical profession.

The only field of employed non-clinicians that showed a large percentage decrease was administrators, which fell by 25.6% between the two survey years (from 737 to 548). However, an increase of 9.2% in the number of practitioners indicating an 'other' occupation may account for some of this apparent decrease.

3.1.1 Demographic changes

The medical labour force is ageing and the proportion of female practitioners has been increasing. The national average age increased by one year from 44.9 years in 1995 to 46.0 years in 1999 (Tables 2 and 8). This is related to a drop in the number of practitioners aged under 35 years and increases in age groups between 45 and 65 years (Figure 2).

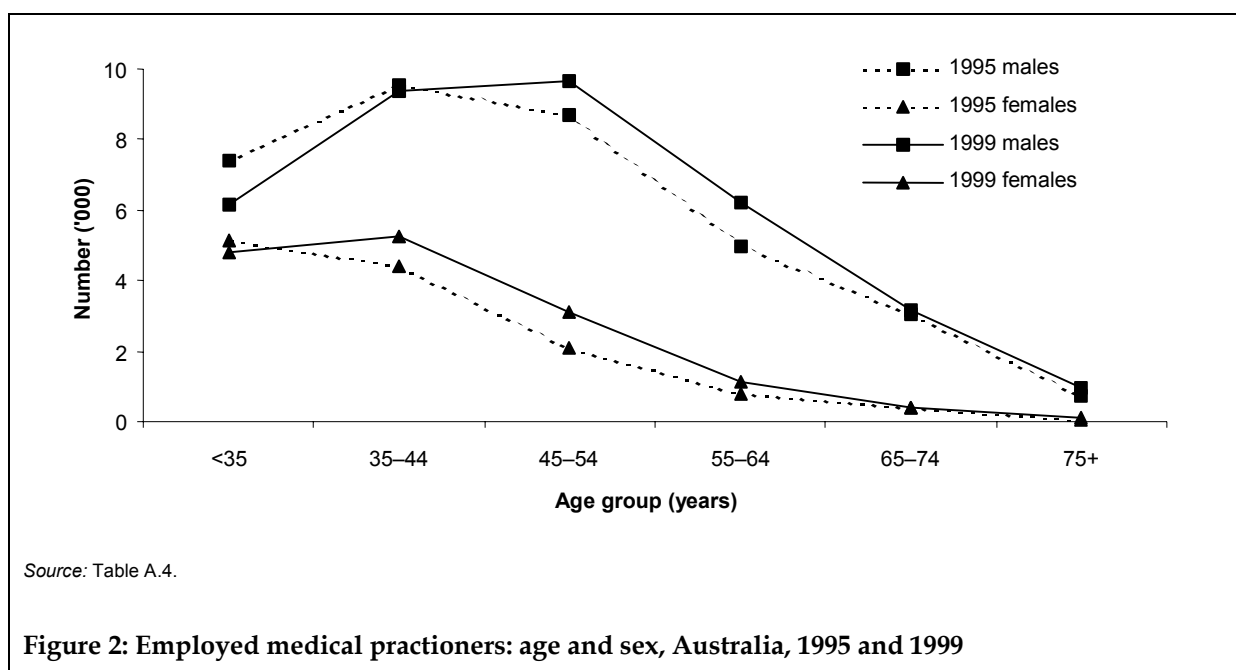


Figure 2: Employed medical practitioners: age and sex, Australia, 1995 and 1999

It is likely that the profession will continue to age over the next few years, for three reasons:

- the average age of students commencing undergraduate medicine courses has been increasing since 1995. This will result in older graduates entering the profession from about 2001 onwards (see 4.1 Education);
- the movement of the largest age/sex cohorts in the profession in 1999 (men aged 45–54 years and women aged 35–44 years) into older age brackets will act to increase the average age. Once this 'bulge' has moved through to retirement, however, the average age is likely to stabilise or even decrease; and
- if recent tendencies to move into specialty areas continue, there will be a larger proportion of specialists: these tend to be older than other clinicians, and the average age of specialists and specialists-in-training is increasing (Table 8).

The proportion of females employed in the Australian medical labour force increased by 2.2 percentage points from 27.2% in 1995 to 29.4% in 1999 (Tables A.2, A.3 and 8). This trend

is also likely to continue over the next few years: the proportion of students completing undergraduate and postgraduate medical courses who are female has been increasing steadily throughout the 1990s and the proportion of females commencing undergraduate courses (and who will complete from 2000 onwards) has also risen (see 4.1 Education). The greatest increase in the proportion of females occurred in specialists-in-training, rising by 5.8 percentage points from 31.6% in 1995 to 37.4% in 1999. Conversely, the proportion of females working as a teacher/educator fell by 3.0 percentage points from 29.1% in 1995 to 26.1% in 1999 (Tables A.2, A.3 and 8).

3.1.2 Changing work patterns

Over most of the 1990s, medical practice has been typified by long working hours, particularly for clinicians, who are in direct patient contact, and even more markedly for hospital doctors. In 1999 the average total weekly hours worked by all medical practitioners was 45.6 hours, and that for clinicians was 45.9 hours. This compares with 48.2 hours in 1995 for all medical practitioners and 48.7 for clinicians (45.3 hours for primary care practitioners, 50.5 hours for specialists, 55.0 hours for specialists-in-training and 52.4 for hospital non-specialists) (Table 9).

Table 9: Average weekly hours worked, and proportion working 50 hours or more per week: medical practitioners^(a) and selected other occupations^(b), Australia, 1995 and 1999

Occupation	1995		1999	
	Average weekly hours	Proportion working 50 hours or more	Average weekly hours	Proportion working 50 hours or more
<i>Clinician:</i>	48.7	54.2	45.9	47.4
Primary care	45.3	44.5	42.4	37.9
Hospital non-specialist	52.4	68.0	48.2	54.4
Specialist	50.5	58.2	48.1	53.0
Specialist-in-training	55.0	69.8	51.7	61.8
<i>Non-clinician:</i>	42.7	<i>n.a.</i>	41.3	38.7
All medical practitioners	48.2	53.0	45.6	46.9
Managers & administrators	48.7	52.3	46.8	49.6
Professionals	39.1	25.8	37.8	23.7
All full-time workers	40.9	24.8	41.2	25.8
All workers	34.6	18.7	34.5	19.1

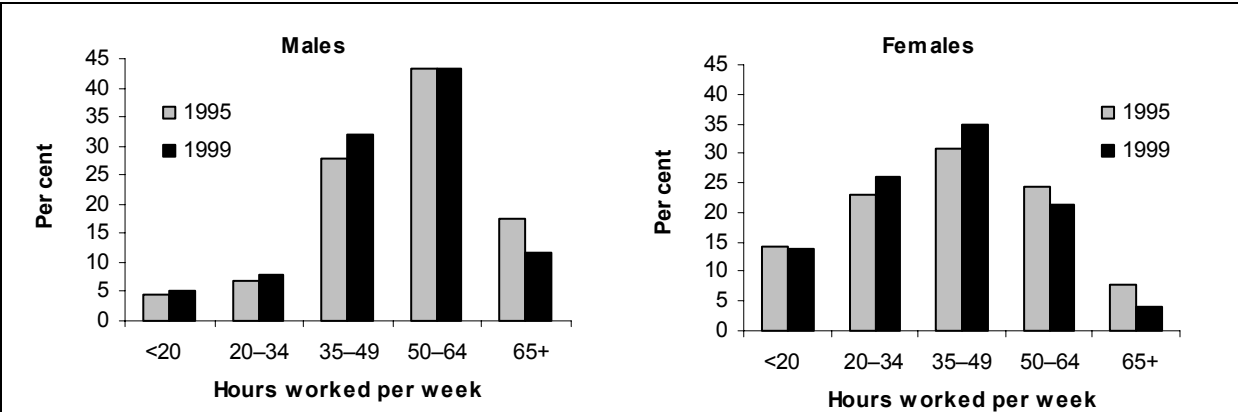
(a) Weekly hours for medical practitioners are calculated from the Medical Labour Force Survey.

(b) Weekly hours for Managers & administrators, Professionals, all full-time workers and all workers are from ABS Monthly Labour Force Surveys conducted in 1995 and 1999.

These averages are higher than all three standards for a working week discussed earlier in this report (35, 40 and 45 hours). The average for clinicians was on a par with those worked by Managers and administrators (48.7 hours per week), but well in excess of most other workers, including those in Professional occupations (39.1 hours per week) (Table 9). In 1995, 53.0% of all medical practitioners and 54.2% of all clinicians were working 50 hours per week or more. Again, this was very similar to Managers and administrators (52.3%), but much higher than Professionals (25.8%) and other workers, a situation that may have implications for the wellbeing of doctors as well as their patients, and may indicate workforce shortage.

Several studies, both in Australia and in other countries, have demonstrated a link between burnout and a number of other factors, including hours worked for medical practitioners. Burnout is a syndrome defined as a triad of emotional exhaustion, depersonalisation and a reduced sense of personal accomplishment (Maslach, Schaufeli & Leiter 2001). For example, a longitudinal study of UK doctors demonstrated a two-way link between stress and emotional exhaustion (the central component of burnout), and suggested that one of the contributing factors may have been workload (McManus, Winder & Gordon 2002). A study of emergency physicians and trainees in Australia showed a correlation between burnout and male sex, trainee status, longer working hours, weekend shifts, shift work, work dissatisfaction, self-reporting of feeling stressed and a desire to stop working in the emergency department (Goh, Cameron & Mark 1999). However, a recent study of Australian general practitioners aged 35–45 years (the age group deemed to be most vulnerable to stress) failed to establish a link between work stress and severity of mistakes (Winfield & Veale 2002). While it is clear that some doctors may be experiencing work-related stress, there is limited evidence to indicate that patient care is being compromised.

In recent years, efforts have been made to encourage the reduction in the number of hours worked by medical practitioners, especially hospital doctors. In particular, the Australian Medical Association (AMA) has been conducting a ‘Safe Hours Campaign’ from 1996 in an endeavour to increase awareness of the risks associated with the long hours worked by medical practitioners, especially junior hospital doctors (AMA 2002). The ultimate aim of the campaign was the development of a national industry standard for hours worked and workloads for hospital doctors in Australia, to be achieved by 1999.



Source: Table A.5.

Figure 3: Employed medical practitioners: hours worked per week, Australia, 1995 and 1999

Possibly as a result of this campaign, the average hours worked and the proportions working 50 hours or more per week dropped between 1995 and 1999 for both male and female practitioners. This resulted in substantially lower hours for clinicians (to 45.9 hours per week on average) and the drop was apparent in all clinical fields, with average hours falling from 45.3 to 42.3 for primary care practitioners, from 50.5 to 48.1 for specialists, from 55.0 to 51.7 for specialists-in-training and from 52.4 to 48.2 for hospital non-specialists. The proportion of medical practitioners working 50 hours per week or more fell from 53.0% to 46.9% (and from 54.2% to 47.4% for clinicians).

This was against the national trend for all employed persons, but in line with those for Managers and administrators; and Professionals. By 1999 the average weekly hours worked by full-time employed Australians had risen from 40.9 to 41.2 hours, while there was a drop from 48.7 to 46.8 hours per week for Managers and administrators, and from 39.1 to 37.8 hours per week for Professionals (ABS 1995 and 1999b). This still leaves a large discrepancy in hours worked between medical practitioners and many other Australian workers.

Drops in average hours worked occurred in most non-clinical areas too, although practitioners in these fields were already working much shorter hours than clinicians. The exceptions were teachers/educators (where average hours increased from 35.5 to 41.6 hours) and researchers (from 41.7 to 44.5 hours). The largest decrease occurred for occupational health physicians for whom average hours worked fell from 40.5 per week in 1995 to 37.5 in 1999 (Tables 2 and 8).

At the same time, the proportion of all employed medical practitioners working part-time hours increased between 1995 and 1999. In 1995, 18.4% of practitioners worked fewer than 35 hours a week; the proportion increased to 20.5% in 1999 (Table A.5). This was consistent with national trends during the period: the percentage of all employed Australians who worked part-time rose from 24.5% in 1995 to 26.1% in 1999 (ABS 1995, 1999b).

Despite the decrease in hours worked by practitioners, the number of full-time equivalents actually increased (from 65,182 in 1995 to 65,571 in 1999, based on a standard working week of 35 hours) (Table 12). This appears counter-intuitive, but is related to the swing from both extremes (very short hours and very long hours) to moderate hours (35–49 per week) for both sexes, and to the effect of an increasing number of female practitioners in the medical labour force. Almost 40% of female medical practitioners worked part-time in 1999, compared to 37% in 1995, but in 1999 part-time females were more likely to work between 20 and 34 hours, and slightly less likely to work under 20 hours than in 1995 (Figure 3).

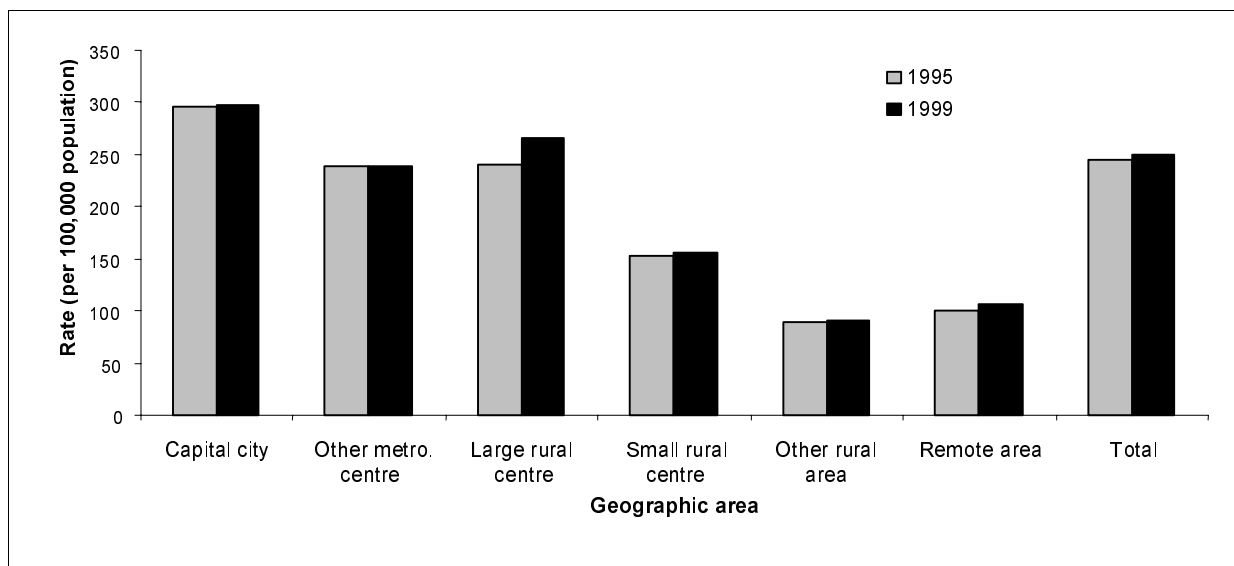
3.2 Clinicians

In 1999 there were 47,436 employed medical practitioners who were clinicians. This represented a rise of 6.4% since 1995. During this time, the Australian population rose by 4.7% (see Tables A.2 and A.3). While most clinicians are male (70.8% in 1999), the proportion of females has been increasing: in 1995 73.0% were male.

A number of other factors also changed over the period. The two most important of these were shorter working hours of clinicians (acting to lessen supply); and a general ageing of the population (acting to increase demand, although the proportion of infants in the population is also a relevant factor). Issues of supply and demand are addressed in more detail at 2.3 State/Territory and geographical distribution.

Geographic distribution

The geographic location of clinicians in Australia is partly a product of the distribution, sizes and types of hospitals, needs of individual communities, practitioner preferences, government incentives and training facilities. Equitable access to health care for all Australians, no matter where they live, has been a planning priority for all levels of government for many years, and a number of schemes have been introduced to attract and retain doctors in areas outside the major cities.



Source: Table A.6.

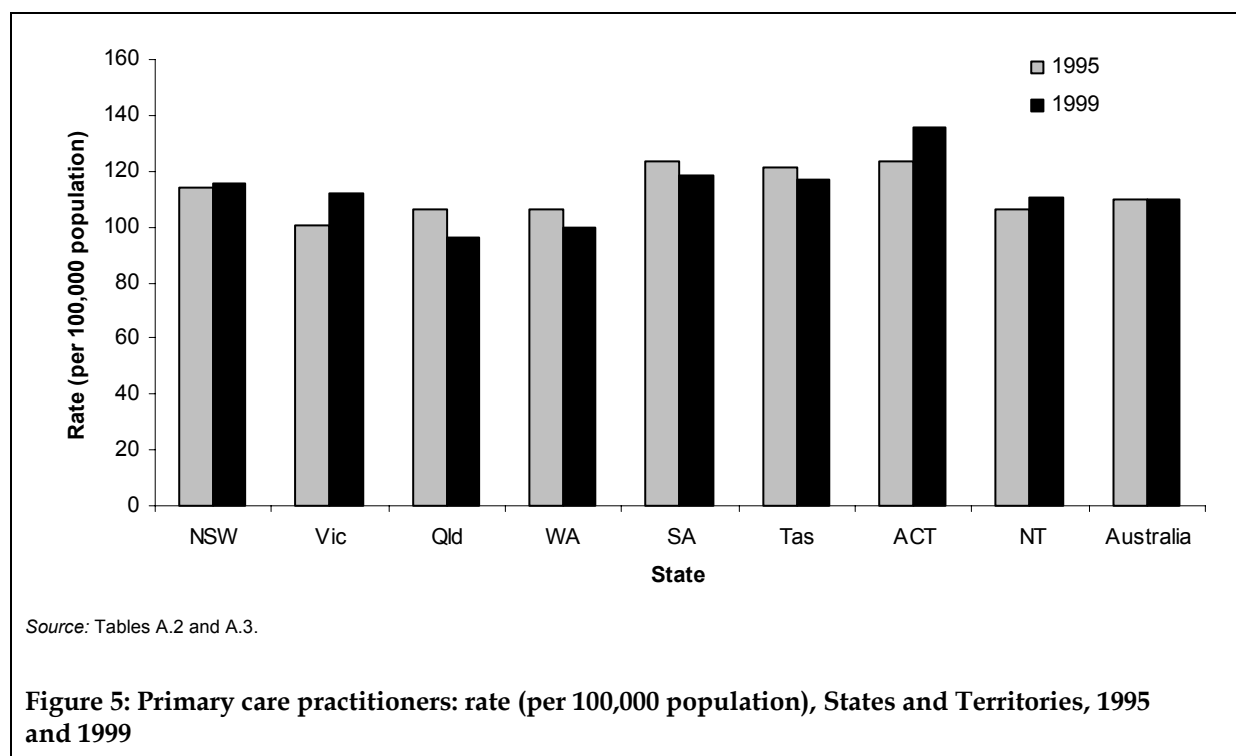
Figure 4: Clinicians: geographic area of main job, rate (per 100,000 population), Australia, 1995 and 1999

Figures from the 1995 and 1999 Medical Labour Force Surveys show that the supply of clinicians increased in all geographic regions. Most of the growth occurred in 'Large rural centres', where they increased by almost 25 clinicians per 100,000 population (from 240.4 in 1995 to 265.1 in 1999) (Figure 4). The next largest growth occurred in 'Remote areas' (from 100.4 to 107.2). 'Other metropolitan centres' recorded only a slight increase of 1 clinician per 100,000 population (from 237.9 in 1995 to 238.9 in 1999).

Clinicians comprise primary care practitioners (44.2% of employed clinicians in 1999), hospital non-specialists (10.0%), specialists (36.0%) and specialists-in-training (9.8%). The remainder of this chapter provides comparative detailed information about these clinicians, including changes between 1995 and 1999.

3.2.1 Primary care practitioners

In 1999, there were 20,966 employed primary care practitioners. This represented an increase of 1,029 (5.2%) practitioners since 1995. There was only a very small increase in the supply nationally, from 109.6 per 100,000 population in 1995 to 110.1 per 100,000 in 1999 (Figure 5). This small increase in the national rate does not reflect the large variation in rate changes between the States and Territories. The Australian Capital Territory, already among the States and Territories with the highest rate, reported the greatest increase of 12.6 practitioners per 100,000 population from 123.3 per 100,000 in 1995 to 135.8 per 100,000 in 1999, while in Queensland there was a decrease of 10.1 per 100,000 population, from 106.4 per 100,000 to 96.3 per 100,000 (Tables A.2 and A.3).



The proportion of females in the primary care practitioner labour force is increasing, reflecting the trend for all employed medical practitioners. While there was only a 1.0% increase in the number of male primary care practitioners, there was a 14.1% increase in female primary care practitioners between 1999 and 1995 (see Table A.7). This compares with an overall increase of 15.2% in the total number of female employed medical practitioners.

The primary care practitioner workforce is also ageing. In 1995, 22.5% of primary care practitioners were aged 55 years and over; by 1999, this proportion had grown to 25.1% (Table A.7). During that time their average age increased from 45.8 to 47.7 years (Table 10).

Geographic distribution

The supply of primary care practitioners in rural and remote Australia rose between 1995 and 1999, and there was a corresponding large decrease in 'Other metropolitan centres'. In 1999, there were 8.1% more primary care practitioners in 'Remote areas', and 9.7% more in 'Large rural centres' than in 1995 (from 389 to 421 and from 1,083 to 1,188, respectively) (Table 10). The number of primary care practitioners in 'Other metropolitan centres' fell almost 4% between 1995 and 1999. The number of practitioners in other geographic areas increased at a similar rate to the national increase of 5.2%.

On average, primary care practitioners working in 'Remote areas' were younger than their colleagues in other geographic areas (42.3 years compared to a national average age of 47.7 in 1999) (Table 10). The proportion of females was also comparatively high (33.6%). One possible explanation for this is that younger practitioners with few family commitments are drawn to remote locations to gain experience before settling down in areas with better access to services. Just over 45% of female primary care practitioners working in 'Remote areas' were aged under 35 years (Table A. 9), compared with just under 20% in 'Capital cities'.

Table 10: Primary care practitioners: selected characteristics by geographic area, 1995 and 1999

Geographic area	1995				1999				% change 1995-99
	No.	Rate ^(a)	% female	Average age	No.	Rate ^(a)	% female	Average age	
Capital city	13,904	120	34.2	45.8	14,697	121	36.8	48.0	5.7
Other metro. centre	1,585	116	28.7	46.2	1,526	105	29.3	48.4	-3.7
Large rural centre	1,083	99	29.1	45.4	1,188	105	34.0	46.2	9.7
Small rural centre	1,120	94	25.7	45.3	1,167	95	29.5	46.7	4.2
Other rural area	1,857	76	22.5	45.3	1,967	79	25.8	46.8	5.9
Remote area	389	70	31.3	41.5	421	75	33.6	42.3	8.3
Total	19,937	110	31.9	45.8	20,966	110	34.6	47.7	5.2

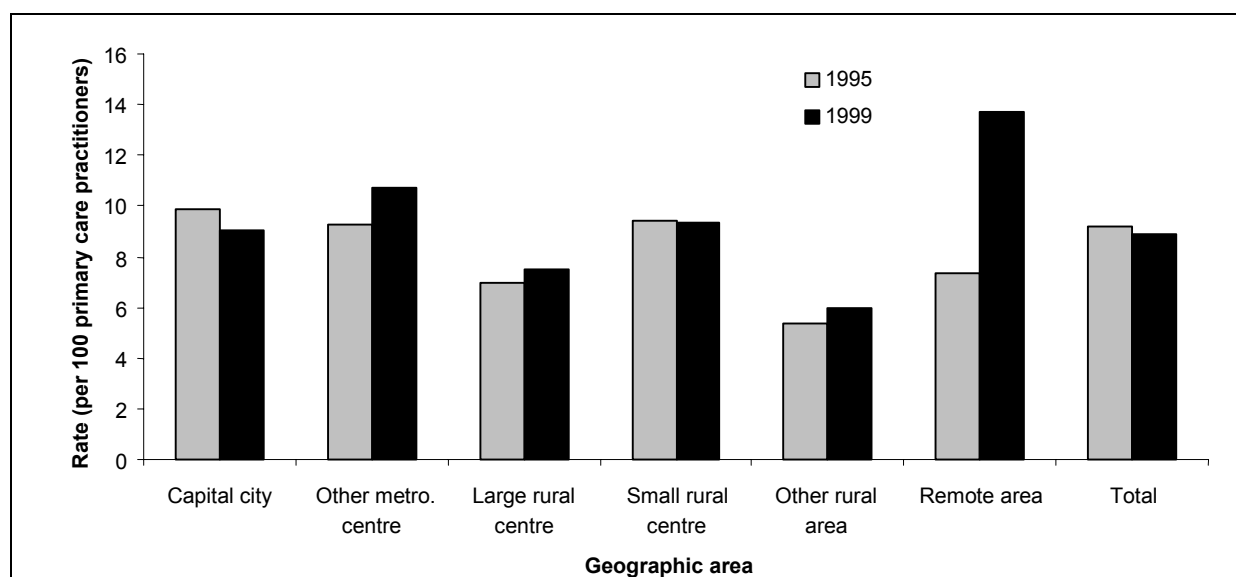
(a) Per 100,000 population, based on ABS estimated resident population figures at 31 December 1995 and 1999.

Source: Medical Labour Force Surveys, 1995 and 1999.

Primary care practitioners in 'Other metropolitan centres' were older on average (48.4 years in 1999) than their colleagues in other geographic areas. Between 1995 and 1999, the largest increase in the average age of primary care practitioners occurred in 'Capital cities' and 'Other metropolitan centres' (both up by 2.2 years), while the smallest increase occurred in 'Large rural centres' and 'Remote areas' (both up by 0.8 years).

Primary care locums and deputising service practitioners

Primary care locums and deputising service practitioners provide an important backup or relief service to primary care practitioners who take a break from work.



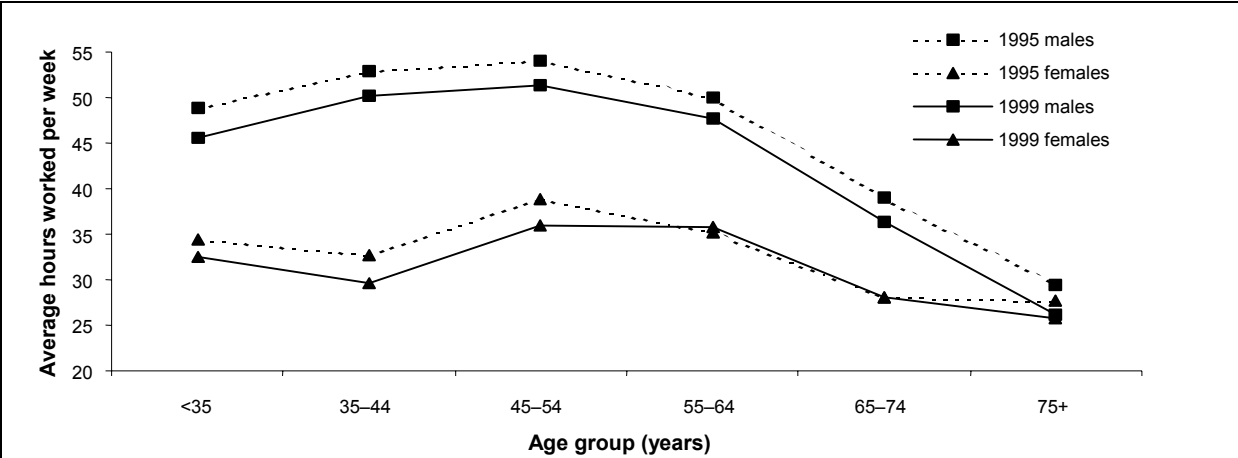
Source: Table A.10.

Figure 6: Primary care locums and deputising service practitioners: geographic area of main job and rate (per 100 primary care practitioners), Australia, 1995 and 1999

Of the 20,966 primary care practitioners in 1999, 1,711 (8%) were working as a locum or in a deputising service. This was an increase of 38 practitioners from 1995, but represented a slight decrease from 9.3 to 9.0 per 100,000 population between 1995 and 1999 (Table A.10). This comprised almost a doubling in the rate of locum and deputising service practitioners in 'Remote areas' from 4.8 to 9.0 per 100,000 population and a drop from 10.9 to 10.0 per 100,000 population in 'Capital cities'. However, due to the small number of practitioners generating the numbers in 'Remote areas', these changes should be treated with caution. In order to gauge the availability of relief for primary care practitioners, the number of locum and deputising service practitioners can also be presented as a rate per 100 primary care practitioners (see Table A.10). Nationally there were 8.9 locums per 100 primary care practitioners, and this varied from 5.9 per 100 in 'Other rural areas' to 13.7 per 100 in 'Remote areas'. Between 1995 and 1999 the rate of locum and deputising service practitioners per 100 GPs increased in all areas except 'Capital cities' (down from 9.9 in 1995 to 9.0 in 1999) and 'Small rural centres' (where it remained at 9.4).

Hours worked

The average number of hours worked by primary care practitioners in 1999 (42.3 per week) was less than in 1995 (45.3), a pattern that was consistent with the total medical labour force. Female primary care practitioners worked fewer hours (34.2 per week in 1995 and 32.3 in 1999) than male practitioners (50.5 and 47.7 per week, respectively) in both survey years in all age groups, but converging in the oldest age groups (Figure 7). Males in all age groups, and females in all groups except 55–64 years and 65–74 years, worked fewer hours in 1999 than in 1995.



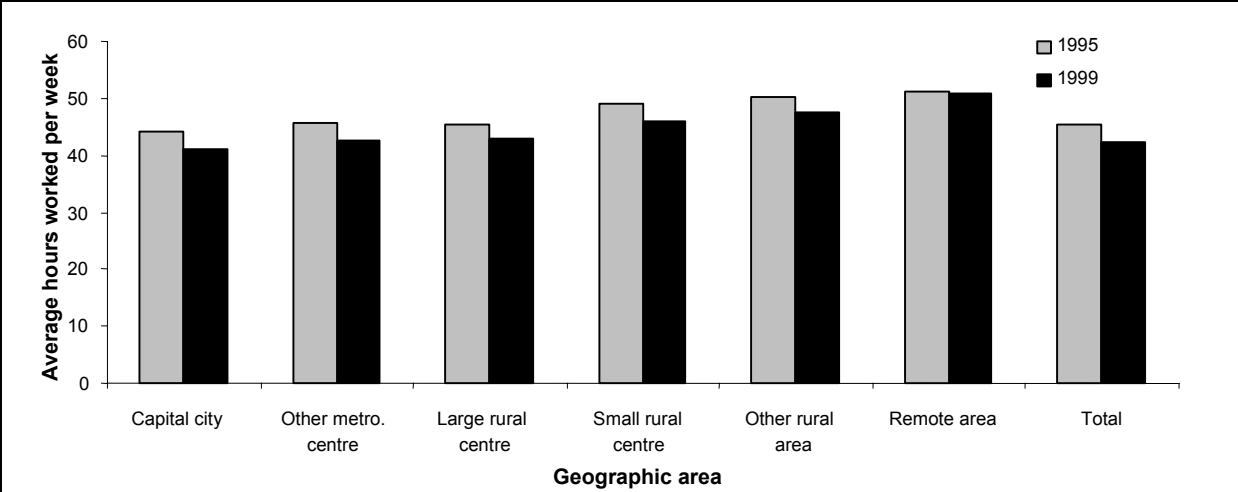
Source: Table A.7.

Figure 7: Primary care practitioners: sex, age and average hours worked per week, Australia, 1995 and 1999

The average number of hours worked by primary care practitioners in both 1995 and 1999 increased with remoteness. Primary care practitioners in 'Remote areas' worked more hours per week on average (51.2 and 51.0 hours per week in 1995 and 1999 respectively) than practitioners in all other geographic areas (Figure 8), possibly indicating a relative under-supply in those areas. This is despite the relatively high proportion of females working in this region, who generally work shorter hours than their male colleagues. However, as stated

earlier, there is a large proportion of females working in 'Remote areas' who are aged less than 35 years (45%) (Table A.9). Females in this age group tend to work full-time.

The geographic region with the next highest hours was 'Other rural areas' (50.2 and 47.4 hours per week in 1995 and 1999 respectively). This compared with primary care practitioners in 'Capital cities' who worked an average of 44.3 hours per week in 1995 and 41.2 hours per week in 1999. The only geographic area that did not show a substantial drop in average hours worked between 1995 and 1999 was 'Remote areas'.



Source: Table A.8.

Figure 8: Primary care practitioners: geographic area of main job and average weekly hours, Australia, 1995 and 1999

3.2.2 Hospital non-specialists

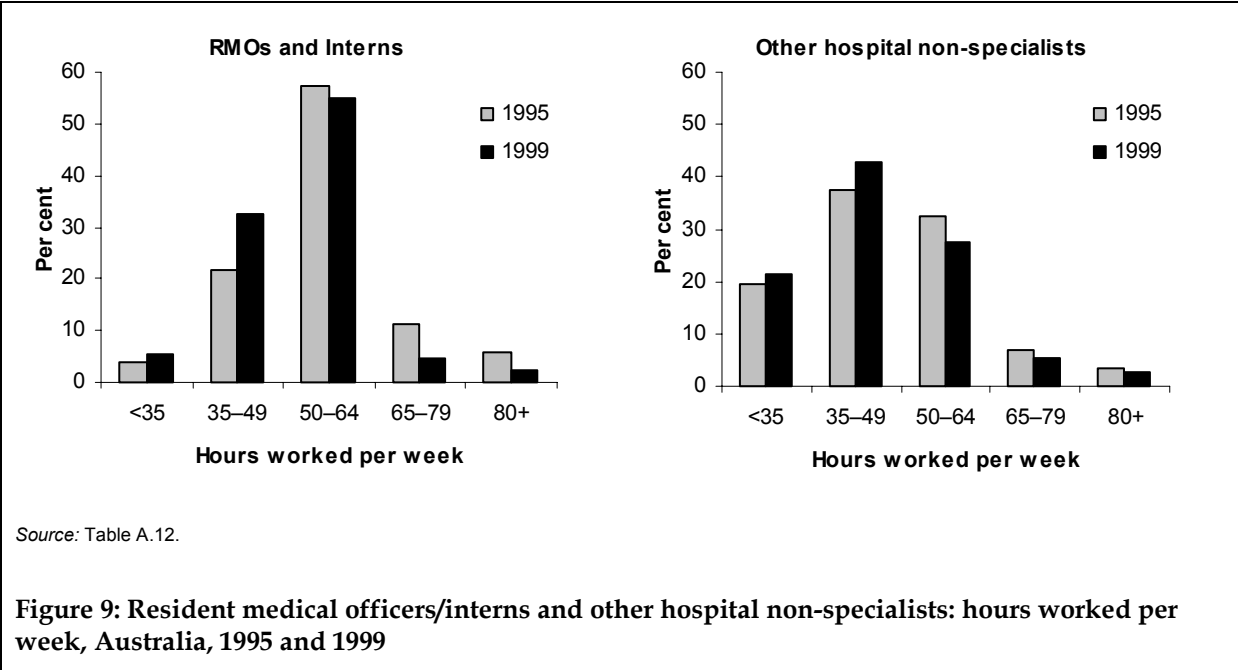
In contrast to the other clinical occupations, the number of hospital non-specialists employed in Australia fell marginally between 1995 and 1999 (from 4,769 to 4,740) (Table A.12). The decrease occurred only in female hospital non-specialists (falling from 2,034 to 1,945), while the number of males increased (from 2,736 to 2,796). This is the only clinical occupation in which this pattern of change in demographics occurred, suggesting that female practitioners are broadening their choice of occupation within the medical profession. Even so, it remains the occupation with the highest proportion of females in the employed medical labour force.

Hours worked

Hospital non-specialists worked 48.2 hours per week on average in 1999, long hours in comparison with their other clinical colleagues. This is particularly the case with RMOs and interns, with 62.1% working 50 or more hours a week in 1999 (and 7.1% working 65 or more hours per week) (Figure 9). In comparison, just under half (46.7%) of all employed practitioners worked 50 or more hours per week. The number of hours worked by other hospital non-specialists was not as high as those worked by RMOs and interns. Just over a third (35.5%) of other hospital non-specialists in 1999 worked 50 or more hours per week (with 7.9% working 65 or more hours) (Figure 9).

Notwithstanding the declining number of females in this occupation, the number of hours worked by hospital non-specialists has decreased greatly. The proportion of hospital non-

specialists who worked 50 or more hours per week decreased between 1995 and 1999 (from 67.8% down to 54.4%), while the proportion who worked less than 35 hours per week increased (from 7.2% to 10.0% respectively).



3.2.3 Specialists and specialists-in-training

The number of employed specialists in Australia increased from 15,604 in 1995 to 17,091 in 1999, a 9.5% increase (Table A.13). In this time, the group of surgery specialties grew the most at more than 18% (from 2,580 to 3,050), while the group of pathology specialties grew the least at 4.5% (from 751 to 785).

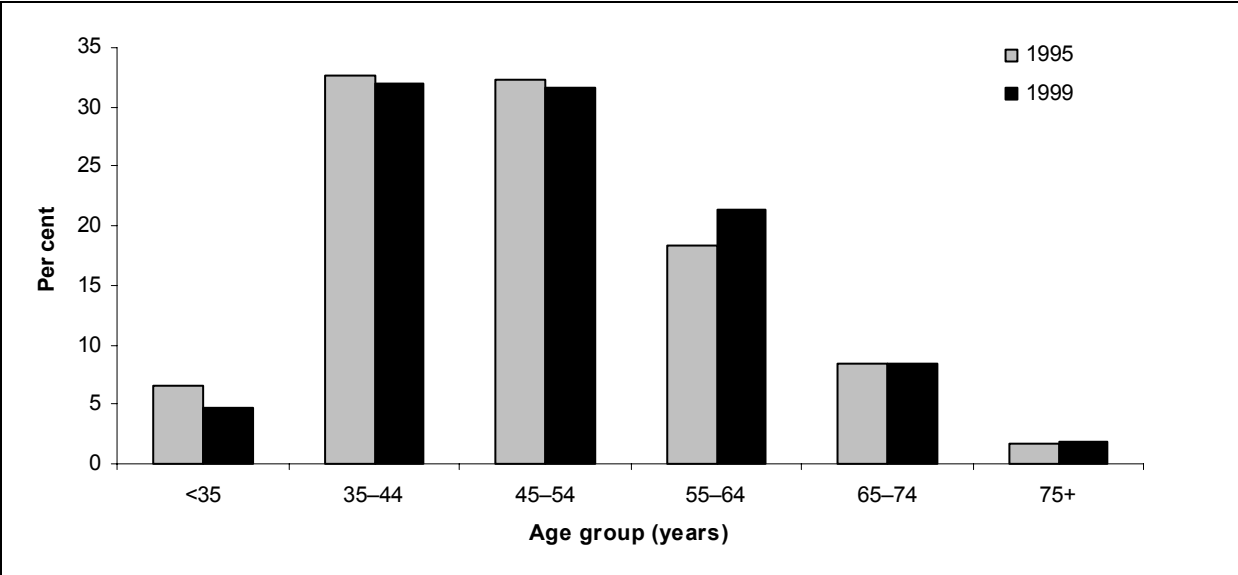
In 1999, psychiatry (2,088, 12.2%), anaesthesia (2,052, 12.0%) and diagnostic radiology (1,107, 6.5%) were the three largest areas of specialty. In 1995, psychiatry (1,892, 12.1%) and anaesthesia (1,810, 11.6%) were also the largest two specialties, followed by general surgery (1,041, 6.7%). Obstetrics and gynaecology was also a large specialty in both 1995 and 1999 (981, 6.3% and 1,100, 6.4% respectively) (Table A.13).

The number of specialists-in-training grew by almost 9% between 1995 and 1999, from 4,273 to 4,640. There were gains in the three specialties, internal medicine (61 trainees, or 4.9%), pathology (31 trainees, or 23.1%) and surgery, (55 trainees, or 8.7%) as well as a general increase of 9.7% across the other specialties (Table A.15).

The average age of both specialists and specialists-in-training has been increasing. The average age of specialists was 49.0 years in 1995, increasing slightly to 49.9 years in 1999 (see Table A.14), and the proportion aged 55 years or over increased from 28.4% to 31.8% (Figure 10). For specialists-in-training, the average age was 31.7 years in 1995 and 32.3 years in 1999, which would be explained in part by the increasing average age of students completing undergraduate medicine courses (see 4.1 Education).

In what has traditionally been a male-dominated field, the proportion of females in the specialist medical labour force has been increasing. There were 29.9% more female specialists

in 1999 than in 1995, the largest growth in females of all the clinical occupations. Female specialists made up 14.5% of the total number of specialists in 1995 (Table A.14), and by 1999, this proportion had grown to 17.2%. This is primarily a consequence of the increasing number of females training to become specialists (from 31.7% in 1995 to 37.4% in 1999).



Source: Table A.14.

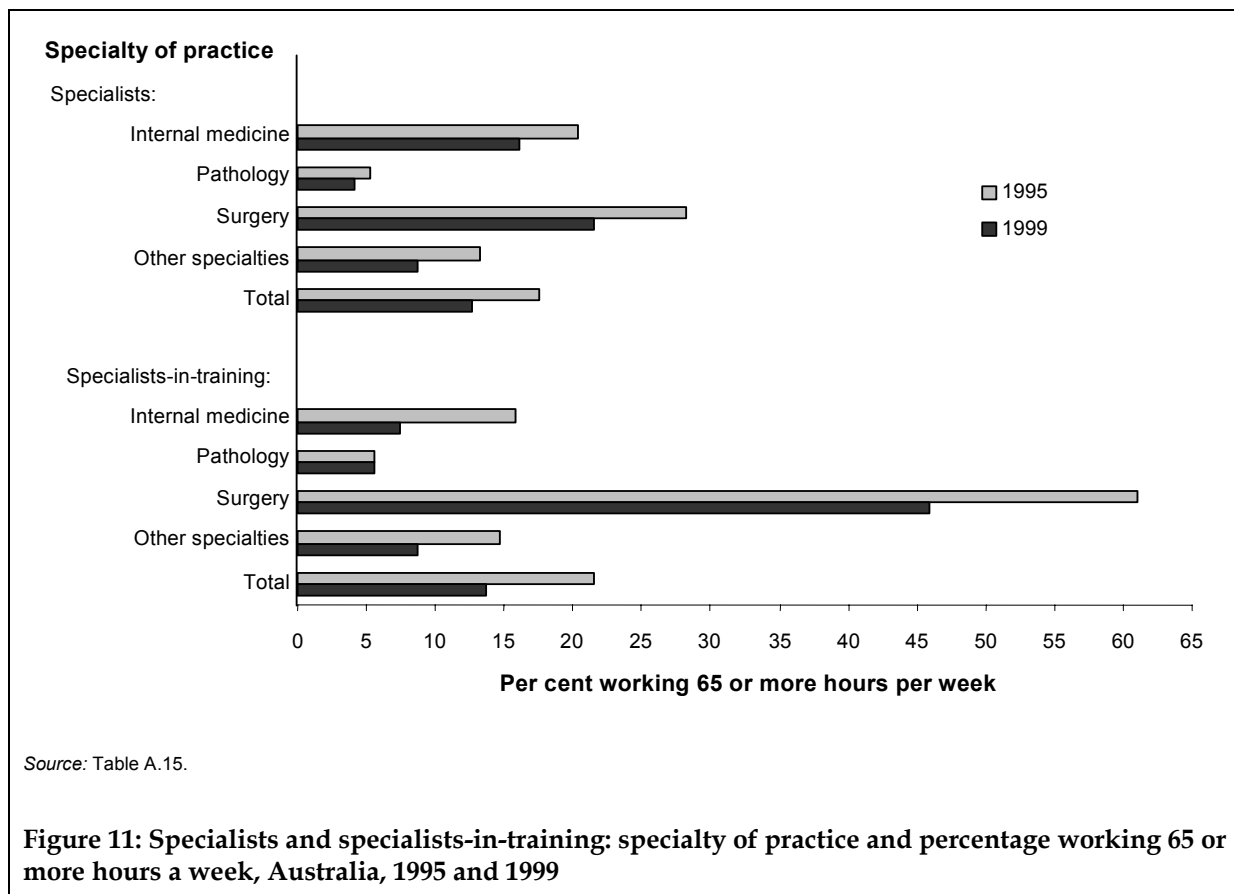
Figure 10: Specialists: age group, Australia, 1995 and 1999

Hours worked

As was the case for medical practitioners in other fields, specialists and specialists-in-training have also been decreasing the number of hours they work. Specialists in 1995 worked an average of 50.5 hours per week, while in 1999 this fell to an average of 48.1 hours per week (Table A.15). For specialists-in-training the average number of hours worked per week also dropped, from 55.0 to 51.7 hours per week between 1995 and 1999.

Along with this, there have been marked decreases in the proportions of specialists and specialists-in-training working 65 or more hours per week (Figure 11). In 1995, almost 18% of specialists as a whole, including more than a quarter (28.2%) of surgeons, worked more than 65 or more hours per week. These proportions fell in 1999 to 12.7% of specialists as a whole and 21.5% of surgeons.

Despite the decrease in the number of hours worked between 1995 and 1999 by specialists-in-training, this group continued to have the highest proportion of all medical practitioners who worked 65 or more hours per week. In 1995, 21.6% of specialists-in-training worked 65 or more hours per week, reducing to 13.7% in 1999 (compared with 14.8% and 9.6% for all employed practitioners in 1995 and 1999, respectively). The longest hours worked was by specialists-in-training in the field of surgery; 60.9% of these practitioners worked in excess of 65 hours per week in 1995, falling to 45.9% in 1999.



Geographic distribution

Specialists and their trainees are generally associated with hospitals and the services and equipment they provide. There are, however, some specialties that require a stronger presence in rural and remote Australia. Amongst these are obstetricians, anaesthetists, general surgeons and psychiatrists. Presented in this section of the report are specialists by geographic area of their main job. This does not capture specialists who may make regular visits to regions outside of their main practice location, nor temporary resident doctors (see 4.2 Migration), many of whom are stationed in remote areas but are not routinely included in the medical labour force collection.

The largest percentage growth in the number of specialists occurred in 'Remote areas' (28.6%) followed by 'Other rural areas' (25.5%), although the numbers were quite small (Table 11). These percentage increases translate into small increases of specialists from 12 to 15 per 100,000 population for 'Remote areas' and from 7 to 8 per 100,000 population for 'Other rural areas', between 1995 and 1999.

The largest proportion of specialists who were female occurred in 'Remote areas' in both 1995 and 1999 (18.9% in both years). While the proportion of females grew in all regions between 1995 and 1999, the proportion in 'Capital cities' approached that of 'Remote areas' by 1999 (having increased from 15.9% in 1995 to 18.7% in 1999).

Specialists in 'Other rural areas' and 'Remote areas' are older than their counterparts in other regions, which is in contrast to primary care practitioners. In 1999, specialists in 'Other rural areas' and 'Remote areas' were aged on average 54.7 years and 53.0 years respectively, while the average age in 'Capital cities' was 49.9 years (Table 11). The largest increase in average age occurred in 'Remote areas' where it rose from 49.9 years in 1995 to 53.0 years in 1999.

Table 11: Specialists: selected characteristics by geographic area of main job, 1995 and 1999

Geographic area	1995				1999				% change 1995-99
	No.	Rate ^(a)	% female	Average age	No.	Rate ^(a)	% female	Average age	
Capital city	12,563	109	15.9	49.0	13,708	113	18.7	49.9	9.1
Other metro. centre	1,144	84	8.7	48.3	1,207	83	11.7	49.2	5.5
Large rural centre	1,123	103	8.2	48.0	1,300	115	9.5	49.0	15.8
Small rural centre	546	46	8.4	49.8	589	48	11.9	50.8	7.7
Other rural area	160	7	7.1	54.0	201	8	10.3	54.7	25.5
Remote area	67	12	18.9	49.9	86	15	18.9	53.0	28.6
Total	15,604	86	14.5	49.0	17,091	90	17.1	49.9	9.5

(a) Per 100,000 population, based on ABS estimated resident population figures at 31 December 1995 and 1999.

Source: Medical Labour Force Surveys, 1995 and 1999.

Because of the large number of specialties, it is not feasible to present a geographic analysis of all of them in this publication. For the four specialties with greatest presence in rural and remote Australia, however, their rates are depicted in Figure 12. In both 1995 and 1999, the number per 100,000 population of specialists practising in general surgery, anaesthesia, and obstetrics and gynaecology in 'Large rural centres' was greater than in all other geographic areas. This is largely on account of patients from more remote areas travelling to these centres for treatment.

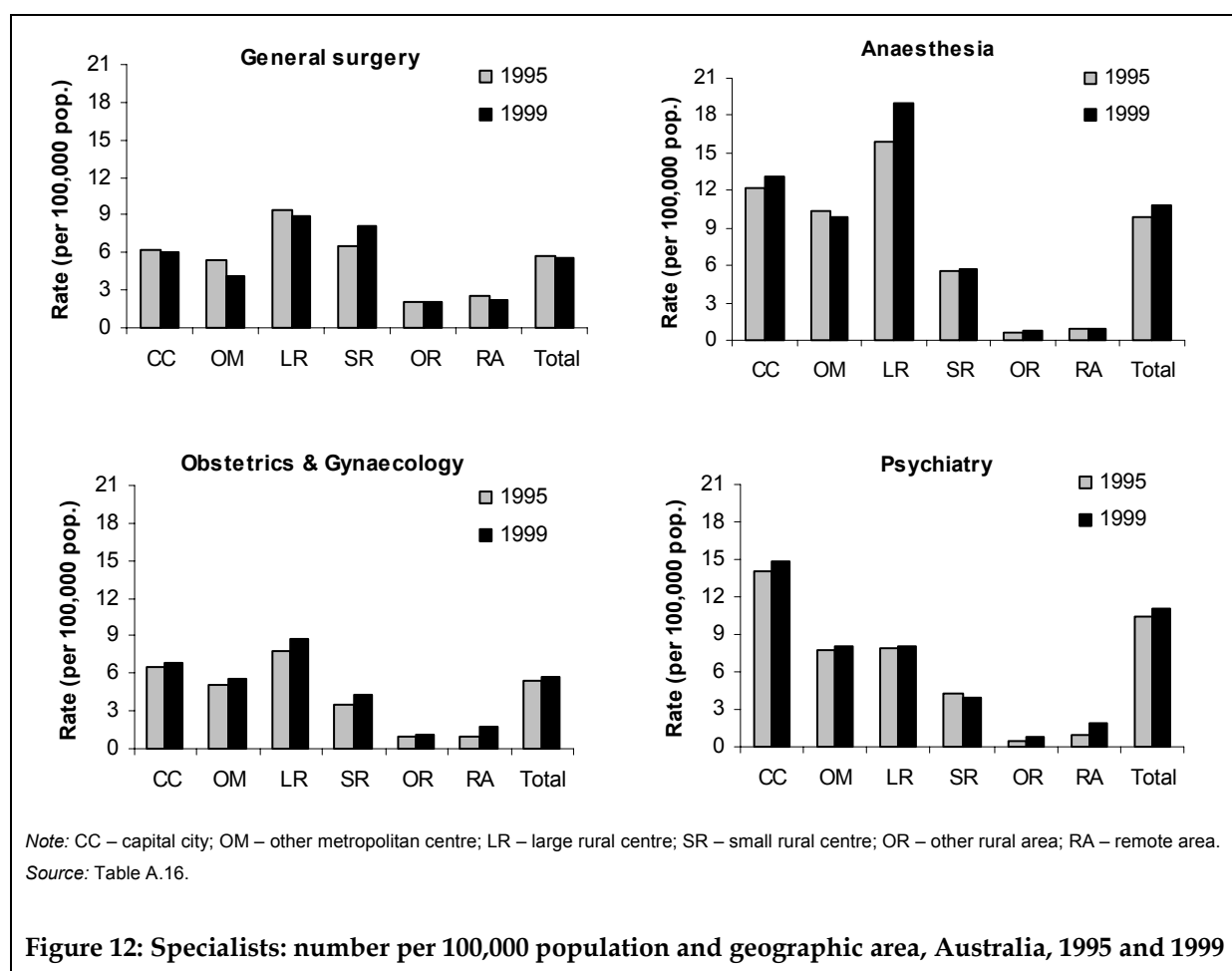


Figure 12: Specialists: number per 100,000 population and geographic area, Australia, 1995 and 1999

The geographic distribution was much different for psychiatry than for other occupations. The rate of psychiatrists practising in 'Capital cities' per 100,000 population in 1999 was far greater than all other regions (14.8), while the rate for 'Large rural centres' was the same as for 'Other metropolitan centres' (8.1) (Figure 12). In contrast, there were 3.9, 0.8 and 1.8 psychiatrists per 100,000 population in 'Small rural centres', 'Other rural centres' and Remote areas', respectively, in 1999.

This regional distribution of psychiatrists corresponds with information in a more recent report into mental health services in Australia (AIHW 2002). This report revealed that there were more mental health-related hospital separations per 1,000 population *with* specialised psychiatric care for patients from metropolitan areas than in other areas, but the pattern for mental health-related separations *without* specialised psychiatric care was reversed. There were 10.4 separations with specialised care per 1,000 in metropolitan areas, falling to 5.3 and 2.9 per 1,000 population for patients from rural and remote areas respectively. There were 4.3 separations without specialised care per 1,000 population for patients from metropolitan areas, rising to 6.3 and 8.7 per 1,000 for patients from rural and remote areas, respectively.

3.3 State and Territory comparisons

3.3.1 Supply of medical practitioners

The largest absolute growth between 1995 and 1999 in the number of employed medical practitioners occurred in New South Wales, where they increased by 9.9% or 1,646 (from 16,684 to 18,330), accounting for over half (54.9%) of the total increase in Australia of 2,998 employed medical practitioners (from 47,331 to 50,329). The largest proportional increases were in the Australian Capital Territory (17.7%) and the Northern Territory (16.4%), and the smallest were in Victoria (0.2%) and South Australia (3.8%) (Tables 12, A.2 and A.3).

State/Territory comparisons of changes in the number of medical practitioners may be misleading, however, unless seen in conjunction with the population growth in each jurisdiction over the period and changes in the working hours of medical practitioners. In terms of FTE per 100,000 population, the largest increases were in the Northern Territory, in which the number of practitioners grew by 67.3 per 100,000, and in the Australian Capital Territory, where there was a growth of 58.2 per 100,000. In four States, New South Wales, Victoria, Queensland and South Australia, there were decreases in the FTE of medical practitioners per 100,000; New South Wales by 8.1, Victoria by 29.1, Queensland by 19.9, and South Australia by 26.7 per 100,000 population.

This compares with a negligible movement in the supply nationally (from 358.3 to 344.2 per 100,000 population), which suggests that the actual supply of practitioners did not change greatly during this period. The reverse was true for clinicians, though: between 1995 and 1999 FTE clinicians decreased slightly from 329.8 per 100,000 population to 326.6. Again, this does not indicate any large movement over the period. There was variation between the States and Territories, however. Decreases were recorded only in Victoria, Queensland and South Australia; there were increases in all other jurisdictions, the largest in the Northern Territory (from 313.3 to 377.8 FTE per 100,000) and the Australian Capital Territory (from 352.2 to 412.7).

Table 12: Employed medical practitioners: States and Territories, 1995 and 1999

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Year	(Number)								
1995	16,684	12,107	7,806	4,094	4,207	1,116	877	439	47,331
1999	18,330	12,137	8,238	4,505	4,367	1,208	1,032	511	50,329
	(FTE)								
1995	23,358	16,604	10,527	5,475	5,890	1,460	1,193	614	65,182
1999	23,829	15,952	10,569	5,869	5,589	1,532	1,389	792	65,571
	(FTE medical practitioners per 100,000 population)								
1995	378.6	365.8	318.7	313.0	400.3	308.0	390.0	340.3	358.3
1999	370.5	336.7	298.8	313.7	373.6	325.5	448.2	407.6	344.2
	(FTE clinicians per 100,000 population)								
1995	350.6	323.3	299.5	293.0	380.3	283.6	352.2	313.3	329.8
1999	354.2	317.5	290.0	294.5	344.9	305.7	412.7	377.8	326.6

Source: Medical Labour Force Surveys, 1995 and 1999; ABS estimated resident population figures at 31 December 1995 and 1999.

3.3.2 Age and sex

There was a national rise from 27.2% in 1995 to 29.4% in 1999 in the proportion of medical practitioners who were female. This was reflected in rises in each jurisdiction except Tasmania, where there was a slight fall from 27.5% to 26.5%. The largest increase was in the Australian Capital Territory (from 31.4% to 35.0%) (Table 13).

The average age of employed medical practitioners increased in every State and Territory, the highest increase occurring in Victoria, where it increased from 44.9 years in 1995 to 48.1 years in 1999 (Table 13). Tasmania had the oldest practitioners both in 1995 and 1999 (46.1 and 48.4 years respectively), while both in 1995 and 1999 the youngest practitioners were in the Northern Territory (42.3 years and 43.4 years respectively).

Table 13: Employed medical practitioners: percent female and average age, States and Territories, 1995 and 1999

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Year	(% female)								
1995	26.8	27.2	27.3	27.6	26.3	27.5	31.4	33.3	27.2
1999	28.8	30.0	29.6	29.2 ^(a)	28.9	26.5	35.0	36.5	29.4
	(Average age)								
1995	45.5	44.9	43.0	44.1	45.6	46.1	45.2	42.3	44.9
1999	46.0	48.1	43.9	n.a. ^(b)	46.1	48.4	46.6	43.4	46.0

(a) Data relating to sex was not available for Western Australia in 1999. The data presented here is based on the sex distribution of the 1997 Medical Labour Force Survey.

(b) Information relating to age was not available from Western Australia in 1999.

Source: Medical Labour Force Surveys, 1995 and 1999.