

Medical labour force 1999

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Contents

List of tables.....	vii
List of figures.....	ix
Abbreviations.....	x
Symbols and other usages.....	x
Acknowledgments.....	xi
Preface.....	xiii
Explanatory notes.....	xiv
1 Main features.....	1
2 Overview of the medical labour force in 1999.....	4
2.1 Introduction.....	4
2.2 Employed medical practitioners in 1999.....	4
2.2.1 Clinicians.....	4
2.2.2 Non-clinicians.....	6
2.3 State/Territory and geographic distribution.....	6
2.3.1 State and Territory distribution.....	6
2.3.2 Geographic distribution.....	10
3 Trends in the medical labour force.....	12
3.1 Employed medical practitioners.....	13
3.1.1 Demographic changes.....	14
3.1.2 Changing work patterns.....	15
3.2 Clinicians.....	17
3.2.1 Primary care practitioners.....	18
3.2.2 Hospital non-specialists.....	22
3.2.3 Specialists and specialists-in-training.....	23
3.3 State and Territory comparisons.....	27
3.3.1 Supply of medical practitioners.....	27
3.3.2 Age and sex.....	28

4	Future growth in the medical labour force	29
4.1	Education.....	29
4.1.1	Medical students in university	30
4.1.2	Postgraduate specialist training	31
4.2	Migration	32
	Appendix A: Detailed tables	35
	Glossary	57
	References	63
	Related publications	64

List of tables

Table 1:	Medical Labour Force Survey: estimated survey response rate, States and Territories, 1995 and 1999	xv
Table 2:	Employed medical practitioners: selected characteristics by occupation, Australia, 1999	5
Table 3:	Employed medical practitioners: occupation, States and Territories, 1999	7
Table 4:	Employed medical practitioners: States and Territories, 1999.....	8
Table 5:	Medicare services 1998–99, and patient consultations 1995 and 2001, States and Territories	9
Table 6:	Employed medical practitioners: occupation, geographical region, Australia, 1999	10
Table 7:	Employed primary care practitioners: geographic region, Australia, 1999.....	11
Table 8:	Changes in employed medical practitioners: selected characteristics by occupation, Australia, 1995–99.....	13
Table 9:	Average weekly hours worked, and proportion working 50 hours or more per week: medical practitioners and selected other occupations, Australia, 1995 and 1999.....	15
Table 10:	Primary care practitioners: selected characteristics by geographic area, 1995 and 1999.....	20
Table 11:	Specialists: selected characteristics by geographic area of main job, 1995 and 1999.....	26
Table 12:	Employed medical practitioners: States and Territories, 1995 and 1999.....	28
Table 13:	Employed medical practitioners: percent female and average age, States and Territories, 1995 and 1999.....	28
Table 14:	Australian citizens and permanent residents commencing undergraduate medicine courses: university and average age, and proportion female, 1991–2000.....	30
Table 15:	Vocational training positions 1998 and 1999, and available first-year places 1999 and 2000, Australian specialist colleges.....	32
Table 16:	Australian Medical Council examination and specialist assessment results, 1992–93 to 1999–00	34
Table A.1:	All registered medical practitioners: employment status and sex, States and Territories, 1999	35
Table A.2:	Employed medical practitioners: occupation, sex and rate, States and Territories, 1999	36
Table A.3:	Employed medical practitioners: occupation, sex and rate, States and Territories, 1995	37
Table A.4:	Employed medical practitioners: age and sex, Australia, 1995 and 1999.....	38
Table A.5:	Employed medical practitioners: hours worked per week and sex, Australia, 1995 and 1999	38

Table A.6:	Clinicians: geographic area of main job and sex, Australia, 1995 and 1999.....	39
Table A.7:	Primary care practitioners: age and sex, Australia, 1995 and 1999	40
Table A.8:	Primary care practitioners: sex, geographic area of main job, average age and average hours worked per week, Australia, 1995 and 1999	41
Table A.9:	Primary care practitioners: sex, geographic area of main job and age, Australia, 1999	42
Table A.10:	Primary care locums and deputising service practitioners: geographic area of main job, Australia, 1995 and 1999	42
Table A.11:	Hospital non-specialists: age and sex, Australia, 1995 and 1999.....	43
Table A.12:	Hospital non-specialists: position and total hours worked per week, Australia, 1995 and 1999	44
Table A.13:	Specialists: main specialty of practice, sex and rate (per 100,000 population), Australia, 1995 and 1999	45
Table A.14:	Specialists and specialists-in-training: age and proportion female, Australia, 1995 and 1999.....	47
Table A.15:	Specialists and specialists-in-training: total hours worked per week, Australia, 1995 and 1999	48
Table A.16:	Selected specialists: geographic area of main job, Australia, 1995 and 1999	49
Table A.17:	Medicine student course completions: residency ^(a) and level of course, Australia, 1990–99	50
Table A.18:	Temporary migration of Australian and non-Australian medical practitioners to and from Australia for employment: type of migration and country of previous/future residence, 1992–93 to 1999–00.....	51
Table A.19:	Permanent migration of Australian and non-Australian medical practitioners to and from Australia for employment: type of migration and country of previous/future residence, 1992–93 to 1999–00.....	53
Table A.20:	Medicare: Number of services and services per capita by sex and age, and by patient State and Territory, 1998–99.....	54
Table A.21:	Estimated yearly losses of medical practitioners from retirement or death, Australia, 1995 and 1999	56

List of figures

Figure 1:	All registered medical practitioners, Australia, 1999	3
Figure 2:	Employed medical practitioners: age and sex, Australia, 1995 and 1999	14
Figure 3:	Employed medical practitioners: hours worked per week, Australia, 1995 and 1999	16
Figure 4:	Clinicians: geographic area of main job, rate (per 100,000 population), Australia, 1995 and 1999	18
Figure 5:	Primary care practitioners: rate (per 100,000 population), States and Territories, 1995 and 1999	19
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	20
Figure 7:	Primary care practitioners: sex, age and average hours worked per week, Australia, 1995 and 1999	21
Figure 8:	Primary care practitioners: geographic area of main job and average weekly hours, Australia, 1995 and 1999	22
Figure 9:	Resident medical officers/interns and other hospital non-specialists: hours worked per week, Australia, 1995 and 1999	23
Figure 10:	Specialists: age group, Australia, 1995 and 1999	24
Figure 11:	Specialists and specialists-in-training: specialty of practice and percentage working 65 or more hours a week, Australia, 1995 and 1999	25
Figure 12:	Specialists: number per 100,000 population and geographic area, Australia, 1995 and 1999	26
Figure 13:	Medicine student course completions: residency and level of course, Australia, 1990-99	31
Figure 14:	Temporary migration of non-Australian medical practitioners to Australia for employment: length of migration, 1992-93 to 1999-00	33
Figure 15:	Permanent migration of Australian medical practitioners from Australia and non-Australian medical practitioners to Australia for the purpose of employment, 1992-93 to 1999-00	34

Abbreviations

ABS	Australian Bureau of Statistics
AHMAC	Australian Health Ministers' Advisory Council
AIHW	Australian Institute of Health and Welfare
AMA	Australian Medical Association
AMC	Australian Medical Council
AMWAC	Australian Medical Workforce Advisory Committee
DEST	Department of Education, Science and Training
DIMIA	Department of Immigration and Multicultural and Indigenous Affairs
ENT	ear, nose and throat
FTE	full-time equivalent
GP	general practitioner/primary care practitioner
MCQ	multiple choice questions (examination)
metro	metropolitan
OMP	other medical practitioner
OTD	overseas-trained doctor
RACGP	Royal Australian College of General Practitioners
RMO	resident medical officer
TRD	temporary resident doctor

Symbols and other usages

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

Throughout this publication, percentages may not add up to 100.0 due to rounding.

Italics within a table denote a subtotal.

– denotes nil or rounded to zero.

. . denotes not applicable.

n.a. denotes not available.

n.p. denotes not publishable.

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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.

Preface

In common with most other countries in the world, Australia is facing the challenges presented by an ageing population and a corresponding ageing of the general workforce. In the area of health, these challenges are twofold: providing for the particular health problems of an increasing elderly population; and replacing older health workers as they exit the workforce through retirement. In the worst case, these trends could result in heavier workloads for a depleted health workforce.

To avoid such a scenario, there has been an increased focus by policymakers and workforce planning bodies on maintaining an adequate health workforce for all Australians over the coming decades. For the medical profession, the long lead time between commencing and completing training, within a climate of rapidly advancing technologies and techniques, introduces a further level of complexity into the planning process. It is therefore critical to have detailed and reliable sources of data to describe the size and characteristics of the current medical workforce; of new entrants to the workforce (newly qualified graduates and immigration of doctors); and of those who are leaving for various reasons, including retirement. It is also important to monitor the supply of medical practitioners across the various regions of Australia.

The most reliable source of detailed data about medical practitioners in Australia is the Medical Labour Force Survey, which has been conducted each year since 1993 in each State and Territory, in conjunction with their registration processes. This publication presents findings from the 1999 survey, supplemented by data from various other sources, to portray a picture of the medical labour force in 1999. Comparisons are made with 1995 to show medium term trends over the previous four years, while student enrolment figures are used as a basis for projecting future trends.

The Institute places on record its appreciation to the large proportion of doctors in Australia who responded to the survey. In doing so, they are assisting planning and resource allocation nationally, both within the profession and across the whole health system.

This publication differs from those of previous years in several respects. It provides deeper analysis and insights through a focus on particular issues and more extensive use of other data sources. The findings are presented in a more easily digested format, enhanced with carefully chosen tables and figures. The Appendix in the publication contains a smaller number of tables providing only the main statistics, while a comprehensive set of tables containing 1999 data has been placed on the Institute's web site (<http://www.aihw.gov.au>). This package provides both broad background figures for the general reader as well as much more detailed and readily accessible information than has previously been the case, in spreadsheets suitable for planning purposes.

The Institute welcomes readers' suggestions for further improvements to the publication. These can be emailed to labourforce@aihw.gov.au.

Richard Madden
Director
January 2003

Explanatory notes

Background

In 1990, the Australian Health Ministers' Advisory Council (AHMAC) commissioned the Australian Institute of Health and Welfare (AIHW) to develop national health labour force statistics about the major registrable health professions. Data collections based on a national minimum data set were developed addressing the workforce planning needs of the health professions, government, service providers and educational institutions.

This report is the seventh in a series of publications based primarily on the annual Medical Labour Force Survey. The information contained within this report is drawn from the 1995 and 1999 Medical Labour Force Surveys, as well as information supplied by the Department of Education, Science and Training and the Department of Immigration and Multicultural and Indigenous Affairs. To view the full range of information available from the 1995 and 1999 surveys, as well as more detailed information from the additional data sources, please visit the web site at: <http://www.aihw.gov.au/publications/health.html>.

Scope and coverage

The scope of the Medical Labour Force Survey is all practitioners registered with the medical board in each State and Territory and eligible to practise.

Coverage in some States may exclude medical practitioners who registered for the first time during the current year and practitioners with a conditional registration. These conditional registrants include interns and temporary resident doctors, who are not required to renew their registration at the standard renewal date. In some jurisdictions, practitioners known to the boards to be not practising because they were retired, overseas or had moved interstate were not included in the survey.

Method

Each State and Territory medical board conducts an annual renewal of practitioner registration and the survey questionnaire was sent to all medical practitioners as part of the registration renewal process.

Timing

The statistics in this publication relate to registration renewals during the period October–December 1995 and October–December 1999. The renewal notices and the survey were dispatched in all States and Territories in September 1995 and September 1999. The dispatch date is generally three months before the expiry of registration. Survey data on practice activity refer to the four-week period before completion of the questionnaire by each medical practitioner.

Response rate

The responses to the AIHW Medical Labour Force Surveys represented 79.6% and 78.6% of the total medical registrations in all States and Territories in 1995 and 1999, respectively (Table 1). The estimated response rates for individual States and Territories ranged from 91%

in New South Wales to 65% in both South Australia and Tasmania in 1995; and from 92% in Queensland to 36% in Tasmania in 1999.

Table 1: Medical Labour Force Survey: estimated survey response rate, States and Territories, 1995 and 1999

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	(per cent)								
1995 response rate	91.3	73.9	75.4	n.a. ^(a)	65.0	65.0	67.5	67.7	79.6
1999 response rate	88.0	73.3	92.0	61.7	66.1	35.7	63.3	61.6	78.6

(a) The Medical Labour Force survey was not distributed in Western Australia in 1995. Estimates based on responses to the 1996 Western Australia survey were used in calculating 1995 responses in *Medical Labour Force 1995* and the present publication.

Source: Medical Labour Force Surveys, 1995 and 1999.

The overall response rate can only be estimated, not determined with complete accuracy. It is known that some medical practitioners who were registered in more than one State or Territory completed a questionnaire in just one State or Territory. How often this occurred cannot be ascertained because matching survey records among States and Territories is not possible.

Complete data were not available for all responding medical practitioners, either because not all survey questions were completed or because medical boards' initial registration data were incomplete or not provided.

AIHW labour force estimates

Medical practitioners may register in more than one State or Territory. Thus, in estimating the medical labour force, it is important to reduce as much as possible the consequent duplication in statistics.

The estimation of the number and characteristics of employed medical practitioners in each State and Territory was based on the responses of those practitioners employed only or mainly in the State or Territory of registration. Practitioners who were on leave for three months or more, although employed, were excluded from most tables of employed practitioners because not all States and Territories collected data on practitioners who were on leave.

It was assumed for all estimates that non-respondents to the survey in each State and Territory had the same labour force characteristics as had respondents, and the survey data were scaled up to the registrations by distributing the non-response numbers on the basis of this assumption. In 1995 and 1999, sex and age data were available for all registered medical practitioners for five jurisdictions (excluding Western Australia, the Australian Capital Territory and the Northern Territory), and for these States the estimation process was based on the response rate by sex and age group. The estimation process may overestimate the numbers of medical practitioners in the workforce in each State and Territory if non-respondents are more likely to be those with multiple registrations not in their home State or Territory or those not in the medical labour force. This survey error may be greater in the two Territories, which have higher proportions of doctors registered in other jurisdictions, and lower proportions of doctors practising solely in the Territories. The scaling procedures may have introduced rounding errors, so that in some tables numbers may not add up to totals.

Comparability with data in previous reports

There are some differences between data published in this report and data published in *Medical Labour Force 1995* (AIHW 1997). The 1993, 1994 and 1995 figures were revised by a benchmarking process against increases in Medicare providers to 1996. These increases closely matched increases in medical practitioners between 1993 (projected from the 1991 Census) and the 1996 Census. This current report incorporates all revisions and amendments made to 1995 data.

Additional data sources

Additional data in this report came from a variety of sources:

- the Australian Bureau of Statistics
- the Department of Education, Science and Training
- the Department of Immigration and Multicultural and Indigenous Affairs.

The Australian Bureau of Statistics

The Australian Bureau of Statistics (ABS) conducts the National Health Survey every six years. A random sample of households is surveyed regarding a broad range of health and wellbeing issues. Information from the 1995 survey was used to determine the number of people who consulted a medical practitioner in the two weeks preceding the survey in that year.

The Department of Education, Science and Training

The Department of Education, Science and Training (DEST) requires all universities to provide data on students commencing, enrolling in and completing all university courses. This information provides the number and characteristics of new entrants to medical courses, as well as those currently enrolled in medicine and those who graduate with medical degrees.

The Department of Immigration and Multicultural and Indigenous Affairs

The Department of Immigration and Multicultural and Indigenous Affairs (DIMIA) obtains data on the number of medical practitioners arriving both temporarily and permanently into Australia to work. Information is also gathered on the number of Australian medical practitioners leaving Australia temporarily to find employment overseas, as well as those who plan to permanently settle in another country. This information is retrieved from incoming and outgoing passenger cards distributed to all air and sea passengers.

1 Main features

The medical labour force in 1999

In 1999 there were 55,218 registered medical practitioners in Australia, after allowing for multiple registrations and those who were overseas.

Most of these (92.3%) were in the medical labour force.

Of those currently working in medicine in 1999, nearly all (47,436 or 94.3%) were clinicians, comprising 20,966 primary care practitioners (44.2%), 17,091 specialists (36.0%), 4,740 hospital non-specialists (10.0%) and 4,640 specialists-in-training (9.8%).

The average age of medical practitioners was 47.7 years, and those in capital cities and other metropolitan areas were older on average (48.0 and 48.4 years, respectively), while those in remote areas were younger (42.3 years).

Employed practitioners worked 45.6 hours per week on average, and just under half (47%) worked 50 or more hours per week in 1999. Clinicians worked 42.0 hours per week, on average, in direct patient care.

Primary care practitioners worked 42.3 hours per week on average (47.7 hours per week for males and 32.3 for females). Their average hours increased steadily with increasing remoteness, from 41.2 hours per week in capital cities to 51.0 hours in remote areas.

Resident medical officers (RMOs) and interns worked longer hours than employed medical practitioners in general, with 62% working 50 hours or more per week in 1999.

There were 264.2 employed medical practitioners per 100,000 people in Australia in 1999, ranging from 333.1 per 100,000 in the ACT to 232.9 per 100,000 in Queensland.

Changes since 1995

There was a 6.3% growth in the number of employed medical practitioners and a 6.4% increase in the number of clinicians since 1995. By comparison, the Australian population rose by 4.7%.

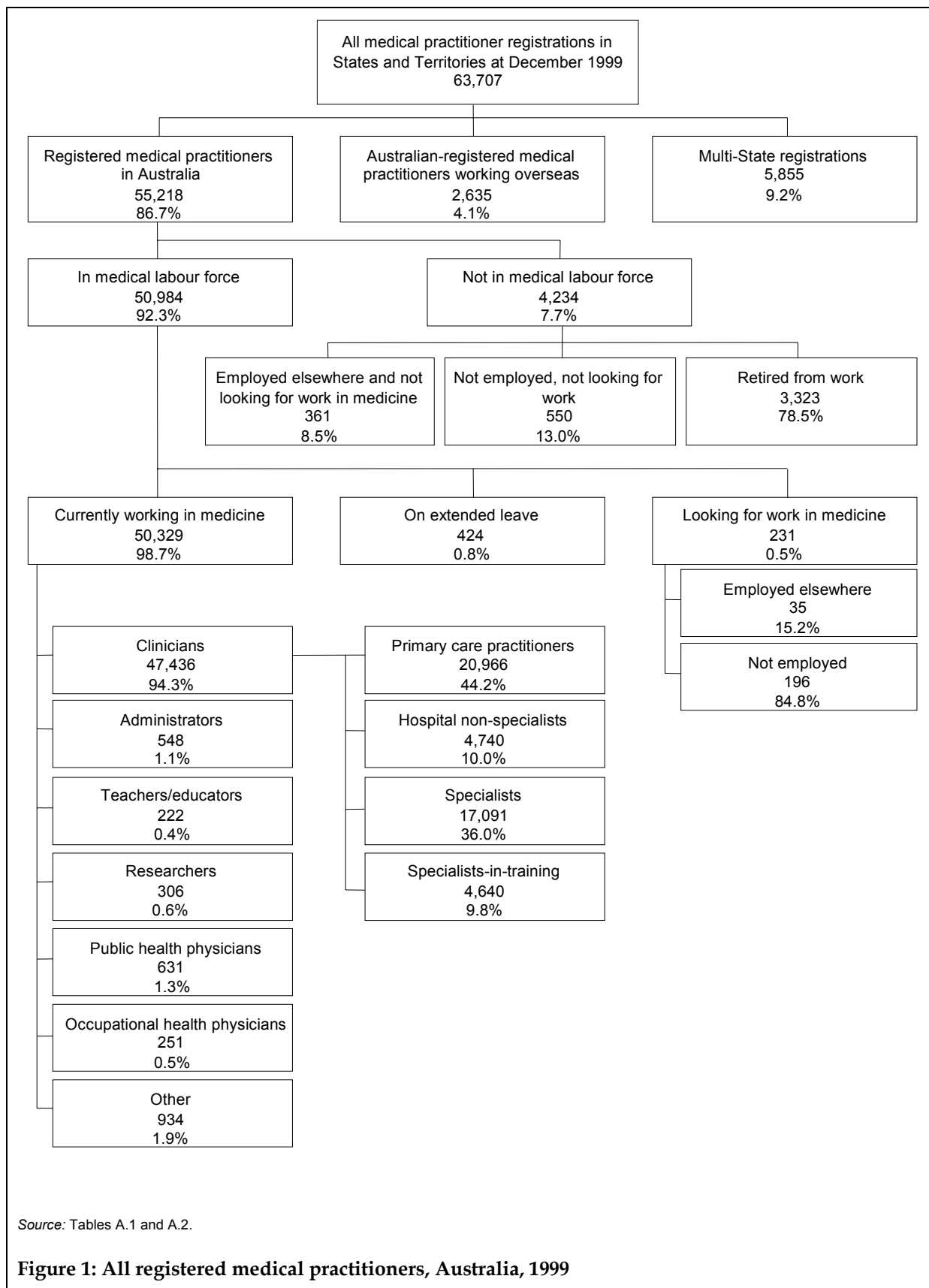
This resulted in a slight rise in the supply of medical practitioners from 260 per 100,000 people in 1995 to 264 per 100,000 in 1999.

The supply of medical practitioners rose in New South Wales, Western Australia, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory, and fell in the other States.

The supply of clinicians increased in all geographical regions – most of the growth occurred in large rural centres, where there was an increase from 240 to 265 per 100,000.

The proportion of employed medical practitioners who were female rose from 27.2% to 29.4%; the average age increased from 44.9 years to 46.0 years; and the average number of hours worked per week decreased from 48.2 to 45.6.

It is likely that these trends will continue because of increasing proportions of students commencing undergraduate medicine courses who are older and who are female.



Source: Tables A.1 and A.2.

Figure 1: All registered medical practitioners, Australia, 1999

2 Overview of the medical labour force in 1999

2.1 Introduction

In December 1999, the Australian medical labour force comprised 50,984 medical practitioners, of whom 50,329 (98.7%) were employed and practising in medicine (Figure 1). This compares with the much larger nurse labour force (233,982 in 1999 of whom 224,595, or 96.0%, were working in nursing) and the smaller pharmacy labour force (15,176 in 1999, of whom 14,747, or 97.2%, were working as pharmacists).

This overview outlines the main characteristics and the geographic distribution of the three groups of clinicians and the small group of non-clinicians in 1999.

2.2 Employed medical practitioners in 1999

Of the 50,329 employed practitioners in 1999, the vast majority (94%) were clinicians. Specialists also made up a large group (36%), and hospital non-specialists and specialists-in-training (each 10%) made up the remainder. Non-clinicians (administrators, educators, researchers, etc.) accounted for the remaining 6% of employed practitioners.

The majority of employed practitioners were male (70.6%), their average age was 46.0 years and as a group they worked an average of 45.6 hours per week (Table 2).

2.2.1 Clinicians

Clinicians are the broad body of practitioners responsible for diagnosing and/or treating patients. The 47,436 clinicians in 1999 supplied the Australian population at a rate of 249 per 100,000 people, and most (70.8%) were male. Clinicians comprise primary care practitioners (the largest group at 44.2%); hospital non-specialists (10.0%); specialists (36.0%) and specialists-in-training (9.8%).

Primary care practitioners

Primary care practitioners (mostly general practitioners) form the largest body of clinical practitioners because they are usually the first point of contact for patients, for primary care. Not only do they deal with common illnesses, provide advice and administer ongoing care, but they also have the skills and knowledge to recognise more serious conditions that require specialist services.

There were 20,966 employed primary care practitioners in Australia in 1999, and most were vocationally registered general practitioners (VRGPs) (18,180, or 86.7%). Another 894 (4.3%) were GP trainees, and those termed 'other medical practitioners' (OMPs), whose main practice is unreferred patient attendances, made up the remaining 1,892 (9.0%).

Table 2: Employed medical practitioners: selected characteristics by occupation, Australia, 1999

Occupation	No.	Rate ^(a)	% female	Average age	Average weekly hours
<i>Clinician:</i>	47,436	249.0	29.2	45.7	45.9
Primary care	20,966	110.1	34.6	47.7	42.3
Hospital non-specialist	4,740	24.9	41.0	32.4	48.2
Specialist	17,091	89.7	17.2	49.9	48.1
Specialist-in-training	4,640	24.4	37.4	32.3	51.7
<i>Non-clinician:</i>	2,892	15.2	32.9	49.7	41.3
Administrator	548	2.9	32.9	49.6	44.8
Teacher/ educator	222	1.2	26.1	51.8	41.6
Researcher	306	1.6	38.2	47.0	44.5
Public health physician	631	3.3	40.4	42.5	44.7
Occupational health physician	251	1.3	14.5	51.9	37.5
Other	934	4.9	32.5	53.9	37.0
Total	50,329	264.2	29.4	46.0	45.6

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

Source: Medical Labour Force Survey 1999.

Over a third (34.6%) of the 20,966 primary care practitioners in 1999 were females, compared with 29.2% for all clinicians. With an average age of 47.7 years, primary care practitioners are younger than specialists (49.9 years) and work shorter hours than other clinicians (42.3 hours per week on average, compared with 48.1 hours per week for specialists, 51.7 for specialists-in-training and 48.2 for hospital non-specialists) (Table 2).

Hospital non-specialists

Hospital non-specialists are medical practitioners mainly employed in a salaried position in a hospital who do not have a recognised specialist qualification and are not undertaking a training program to gain a recognised specialist qualification. They include resident medical officers (RMOs) (including some GP trainees), interns and other salaried hospital career practitioners, and exclude specialists-in-training. In 1999, there were 4,740 medical practitioners in this group, comprising 3,368 RMOs and interns and 1,372 other medical practitioners (Tables 2 and A.12).

The average age of hospital non-specialists was 32.4 years, and females made up a relatively large proportion (41.0%) of this group in 1999 (Table 2).

Hospital non-specialists tended to work longer hours (48.2 hours per week on average) than other clinicians, but this was mainly for RMOs and interns, who worked much longer hours than OMPs (50.0 and 44.0 hours per week, respectively) (Table A.12).

Specialists and specialists-in-training

Specialists are medical practitioners who have been awarded a qualification by a specialist professional college to treat certain conditions. Specialists-in-training are practitioners who have been accepted by a specialist professional college into a training position supervised by a member of the college and who are working towards a specialist qualification. There were 17,091 specialists in 1999, of whom 17.2% were female – a much lower proportion than other clinical areas. The proportion of females was much higher, however, among the 4,640

specialists-in-training (37.4%), suggesting that the proportion of females in the specialist workforce will rise in future years (Table 2).

The average age of specialists was 49.9 years – older than other clinicians. Reflecting the fact that most medical practitioners who undertake specialty training do so early in their careers, the average age of specialists-in-training was 32.3 years in 1999. While specialists tend to work longer hours (48.1 per week) than primary care practitioners (42.3), specialists-in-training work longer hours still (51.7 per week, on average) (Table 2).

In 1999, psychiatry (2,088, 12.2%), anaesthesia (2,052, 12.0%), diagnostic radiology (1,107, 6.5%), obstetrics and gynaecology (1,100, 6.4%) and general surgery (1,058, 6.2%), each with over 1,000 practitioners, were the largest areas of specialty. The specialties with the largest proportions of female practitioners were cytopathology (45.0%), haematology (44.0%) and clinical genetics (a new specialty) (41.6%). These specialties were all very small, with no more than 65 practitioners. Among larger specialties, females represented over a quarter of practitioners in geriatrics, infectious diseases, paediatric medicine, anatomical pathology, dermatology and psychiatry (Table A13).

2.2.2 Non-clinicians

There were 2,892 non-clinicians employed in 1999. This small group comprised 548 administrators, 222 teachers and educators, 306 researchers, 631 public health physicians, 251 occupational health physicians and another 934 whose particular occupation was not known (Table 2).

Non-clinicians tended to be slightly older than clinicians (49.7 years on average, compared with 45.7 years), and all of the above groups worked relatively short average hours, ranging from just under 45 hours per week for administrators, researchers and public health physicians to 41.6 hours per week for teachers and educators and 37.5 hours per week for occupational health physicians. Just under a third of non-clinicians (32.9%) were female (Table 2).

2.3 State/Territory and geographic distribution

2.3.1 State and Territory distribution

In 1999, over a third of all medical practitioners (36.4% or 18,330) were in New South Wales, and almost a quarter (24.1%, or 12,137) were in Victoria. These two States accounted for similar proportions of the Australian population (33.8% and 24.8%, respectively in 1999). The smallest number worked in the Northern Territory (1.0% or 511), although these are supplemented by practitioners who mainly work in another jurisdiction but who sometimes travel to work in the Northern Territory (Table 3).

The highest numbers of both clinicians and non-clinicians were in New South Wales and the second highest of each were in Victoria, although there were more hospital non-specialists employed in Queensland (1,164) than in Victoria (686).

Table 3: Employed medical practitioners: occupation, States and Territories, 1999

Occupation	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	Persons								
<i>Clinician</i>	17,372	11,374	7,960	4,202	3,996	1,142	933	458	47,436
Primary care	7,445	5,296	3,406	1,866	1,767	550	421	215	20,966
Hospital non-specialist	1,920	686	1,164	425	300	74	110	61	4,740
Specialist	6,094	4,450	2,622	1,526	1,509	433	312	145	17,091
Specialist-in-training	1,913	941	769	384	421	85	90	37	4,640
<i>Non-clinician</i>	958	763	279	303	371	66	100	53	2,892
Total	18,330	12,137	8,238	4,505	4,367	1,208	1,032	511	50,329
Population (000)	6,431.6	4,738.2	3,537.2	1,496.2	1,871.2	470.8	194,314	310.0	19,049.4

Source: Medical Labour Force Survey 1999; estimated resident population figures at 31 December 1999.

Raw numbers do not, however, allow for differences in population characteristics in each jurisdiction that affect service usage, such as age and sex profiles and geographic distribution. For example, the median age of their populations ranged from 28.6 years in the Northern Territory to 36.2 years in South Australia; and the number of females for every 100 males varied from 89 in the Northern Territory to 103 in Tasmania in 1999. At the same time, the Australian Capital Territory, Western Australia, South Australia and Victoria are highly urbanised, with 99.9%, 73.3%, 73.2% and 72.5% of their respective populations living in their capital cities in 1999. Tasmania, Queensland and the Northern Territory are the least urbanised, with over half of their populations living outside their capital cities (ABS 2000).

Further, raw numbers do not allow for differences between jurisdictions in the working patterns of practitioners. The variation in the average hours worked by medical practitioners between States and Territories can be taken into account by calculating and comparing differences in the number of full-time equivalent (FTE¹) practitioners per 100,000 population in each jurisdiction. The ABS defines a full-time job as being one where at least 35 hours are worked per week on average, and many full-time equivalent calculations are based on this.

The concept of a full-time equivalent also turns on what may reasonably be regarded as a full-time job, and this may vary depending on the time period under consideration. For example, early last century, the agreed working hours for full-time employees was about 49 hours per week. By 1948 all State industrial tribunals and the Commonwealth Court of Conciliation and Arbitration had adopted the 40-hour week. This remained the case until the early 1980s, when a 35- or 38-hour week was the standard in many industries (ABS 1995). Between 1988 and 1998, however, both the proportion of people working part-time hours and the proportion working at least 45 hours per week increased (ABS 1999a).

Moreover, the 'typical' working week varies between occupations. In 1998, the proportion of employed people working between 35 and 44 hours was highest for Tradespersons and related workers (45.1%) and lowest for Managers and administrators (22.2%). Managers and administrators were more likely to work 45 hours or more (58.6%) than under 45 hours, and more likely to do so than any other broad occupational group. Associate professionals and Professionals were the groups next most likely to work 45 hours or more each week in 1998 (44.6% and 33.5%, respectively) (ABS 1999a). This may be a reflection of the more 'open-ended' nature of some of those jobs, where workers are either expected to complete their

¹ The number of full-time equivalent practitioners was calculated by multiplying the number of practitioners by the average hours worked per week, then dividing by the number of hours in a 'standard' full-time working week. In this report, three alternative scenarios are provided for a 'standard' working week: 35 hours, 40 hours and 45 hours

work regardless of the time they take to do so, or they are responsible for their own hours (and possibly income); and where trade union influence is weaker. This is especially true of the medical profession, where patient care does not fit neatly into a specified time period and where many are responsible for their own practice and set their own hours. Accordingly, doctors tend to work longer hours than many other occupations. On the other hand, long or increasing hours worked per week may indicate a shortage of practitioners.

Therefore, to cater for various scenarios (longer hours generally worked by professionals versus shortages of professionals), this report uses three 'standard' weeks, a 35-hour week, a 40-hour week and a 45-hour week, for calculating supply in terms of FTE. There is of course the risk, when projecting the supply of medical practitioners into the future based on current working patterns, of assuming that doctors are willing to work long hours and will continue to do so. FTE figures based on all three 'standards' (35-, 40- and 45-hour weeks) are given in Table 4.

Table 4: Employed medical practitioners: States and Territories, 1999

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number	18,330	12,137	8,238	4,505	4,367	1,208	1,032	511	50,329
Number per 100,000 population	285.0	256.2	232.9	240.8	291.8	256.6	333.1	263.2	264.2
All medical practitioners									
FTE per 100,000 population (based on 35-hour week)	370.5	336.7	298.8	313.7	373.6	325.5	448.2	407.6	344.2
FTE per 100,000 population (based on 40-hour week)	324.2	294.6	261.4	274.5	326.9	284.8	392.2	356.7	300.5
FTE per 100,000 population (based on 45-hour week)	288.2	261.9	232.4	244.0	290.6	253.2	348.6	317.0	267.7
Clinicians									
FTE per 100,000 population (based on 35-hour week)	354.2	317.5	290.0	294.5	344.9	305.7	412.7	377.8	326.6
FTE per 100,000 population (based on 40-hour week)	309.9	277.9	253.7	257.7	301.8	267.5	361.1	330.6	285.7
FTE per 100,000 population (based on 45-hour week)	275.5	246.9	225.6	229.1	268.3	237.8	321.0	293.8	254.0

Source: Medical Labour Force Survey 1999; ABS estimated resident population figures at 31 December 1999.

Because doctors tend to work long hours, the actual supply of medical practitioners in FTE (whether based on a 35-, a 40- or a 45-hour week) is usually somewhat higher than the raw numbers suggest. (The reverse is the case in those professions, such as nursing, where a high proportion work part-time.) The difference between the supply and the raw numbers, however, diminishes substantially under the scenario of a 45-hour 'standard' working week.

Clinicians form the majority (94% in 1999) of practitioners, and they are the ones who are involved in direct patient care. It is hence more relevant to health care policy to compare the supply in terms of FTE clinicians per 100,000 population in each State and Territory. These are also shown in Table 4 using all three standards (35-, 40- and 45-hour weeks).

In 1999, the highest rates of FTE clinicians were in the Australian Capital Territory and the Northern Territory (361.1 and 330.6 FTE per 100,000, respectively, based on a standard week of 40 hours). Almost all of the population in the Australian Capital Territory (99.9% in 1999) lives in the capital city, and Canberra is a major regional centre that services surrounding areas of New South Wales. In the Northern Territory vast areas are very sparsely populated, and it is likely that much of the working hours of clinicians is spent in travelling. Apart from

those two jurisdictions, supply of clinicians was highest in New South Wales and South Australia (309.9 and 301.8 FTE per 100,000, respectively, based on a standard week of 40 hours) (Table 4).

Supply would be expected to differ between jurisdictions, however, given their distinctive population characteristics (such as their age and sex profiles), which act to influence usage (demand) in various ways. For example, States and Territories with the oldest age profiles such as Tasmania (median age 36.1 years) and South Australia (36.2 years) might be expected to have greater need for medical services than those with the youngest age profiles such as the Northern Territory (median age of 28.6 years) (Table 5).

Medicare services

State/Territory usage can be compared broadly by using Medicare statistics regarding the number of services per capita in 1998–99 delivered by registered Medicare providers (who are clinicians, and include primary care practitioners and specialists). These show that services provided were highest in New South Wales (11.7 per capita) and Victoria (11.0). The lowest were in the Northern Territory (5.8 services per capita) (Table 5). These rates have not been standardised for age or sex, and therefore might be expected to reflect differences in the age/sex profiles between the States and Territories.

Table 5: Medicare services 1998–99, and patient consultations 1995 and 2001, States and Territories

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT ^(a)	Australia
Medicare services (per capita)	11.72	11.04	10.77	9.53	10.32	9.85	9.01	5.75	10.90
Patient consultations (per 100,000 population, 1995)	248.1	230.1	222.3	215.9	234.8	221.1	219.7	191.1	232.9
Patient consultations (per 100,000 population, 2001)	257.5	244.1	239.2	229.9	237.1	235.5	222.4	n.a.	244.7
Median age of population (years)	35.3	35.1	34.3	33.9	36.2	36.1	32.4	28.6	34.9

(a) Estimates of consultations relate to predominantly urban areas only.

Source: Medicare statistics, 1984–85 to March quarter 2002, Department of Health and Aged Care; ABS Cat. no. 4368.0, 1997; and ABS estimated resident population figures at 31 December 1995.

Medicare services account for only a portion (albeit a very large portion) of all services delivered to patients by clinicians. They do not include services provided for workers' compensation, services provided for hospital outpatients or services provided in hospitals for public patients.

Patient consultations

An alternative way of looking at service provision is through doctor consultation rates. It is known that people in some age groups consult doctors more frequently than those in other age groups, and in most age groups consultations are more frequent for females than for males.

The ABS National Health Survey provides an estimate of the number and rates per 1,000 population of people who consult a doctor (clinician) over a two-week period. These rates have been standardised by age and sex to the Australian population to take account of the different age and sex profiles of the populations in each State and Territory, and therefore should not reflect these differences. Nevertheless, there were differences in usage.

In 2001, the rate of doctor consultations was highest in New South Wales (257.5 per 100,000) and lowest in the Australian Capital Territory (222.4 per 100,000). The pattern of usage across the States and Territories for consultation rates was the same as the pattern for Medicare services, (although no data from the survey was available for the Northern Territory). There was an increase in consultation rates in every State and Territory between 1995 and 2001. This was possibly a consequence of increased community awareness of, or attitudes to, certain health conditions (ABS 2001).

2.3.2 Geographic distribution

While it is important to examine the supply of practitioners in each State and Territory because jurisdictional responsibilities occur within those boundaries, from an equity perspective, it is also important to examine the supply of practitioners in each geographic region. In 1999, over three-quarters (38,619 or 76.7%) of all medical practitioners were employed in capital cities (Table 6). This is more than their population share: in 1999, 63.8% of the population lived in capital cities (ABS 2000). It would be expected that medical practitioners would be concentrated in capital cities, however, because many of the large hospitals are located there, together with facilities for research, teaching and training and advanced 'high-tech' equipment for treatment.

Table 6: Employed medical practitioners: occupation, geographical region, Australia, 1999

Occupation	Capital city	Other metro centre	Large rural centre	Small rural centre	Other rural area	Remote area	Total
<i>Clinician:</i>	36,169	3,480	3,006	1,925	2,256	602	47,436
Primary care	14,697	1,526	1,188	1,167	1,967	421	20,966
Hospital non-specialist	3,637	413	390	141	77	82	4,740
Specialists	13,708	1,207	1,300	589	201	86	17,091
Specialists-in-training	4,127	334	128	27	11	13	4,640
<i>Non-clinician:</i>	2,450	139	117	80	64	42	2,892
All employed practitioners	38,619	3,618	3,123	2,005	2,320	644	50,329
Population (000)	12,170.3	1,456.6	1,133.6	1,230.7	2,491.2	561.4	19,043.9

Source: Medical Labour Force Survey 1999; ABS estimated resident population figures at 31 December 1999.

When considering primary care practitioners only, who are less likely to be hospital-based, then the distribution is somewhat more even, with 70.1% being employed in capital cities in 1999. Generally, the number of practitioners decreased with increasing remoteness, except that in 'Other rural areas' there were more clinicians (including primary care practitioners and hospital non-specialists) than in small rural centres. This is because about twice as many people live in 'Other rural areas', collectively, as in small rural centres. In fact, the greatest imbalance is in 'Other rural areas', because although 13.1% of the population lived there in 1999, only 4.6% of all medical practitioners had their main practice in those areas.

The distribution of primary care practitioners is more equitable than for clinicians and medical practitioners generally. As noted before, this is not surprising since a sizeable proportion of other clinicians (particularly specialists and specialists-in-training) work in large hospitals, which are generally located in population centres. In terms of access to general health care, it is more reasonable to compare the supply of primary care practitioners than other types of practitioners, across regions.

Again, numbers alone do not give the complete picture, because for primary care practitioners, the progressive decrease in the numbers with increasing remoteness is partly compensated for by corresponding increases in hours they worked, which in 1999 ranged from 41.2 hours per week on average in capital cities to 51.0 hours per week in remote areas, (Table A.8). Hours worked can be taken into account through calculating FTE per 100,000 population in each area. Again, these are shown based on standard weeks of 35, 40 and 45 hours.

Even when translating the numbers of doctors into FTE, there is a gradual decrease in FTE primary care practitioners per 100,000 with increasing remoteness. There is, however, a similar rate of supply in 'Other metropolitan centres' as in 'Large rural centres' (111.6 and 112.4 per 100,000, respectively, based on a standard 40-hour week) and a similar rate of supply in 'Other rural areas' as in 'Remote areas' (93.5 and 95.63 per 100,000, respectively, based on a standard 40-hour week) (Table 7). This does indicate a degree of inequity in access to primary health care across the geographic regions.

Table 7: Employed primary care practitioners: geographic region, Australia, 1999

	Capital city	Other metropolitan centre	Large rural centre	Small rural centre	Other rural area	Remote area	Total
FTE per 100,000 population (based on 35-hour week)	142.1	127.5	128.4	124.4	106.9	109.3	133.1
FTE per 100,000 population (based on 40-hour week)	124.3	111.6	112.4	108.9	93.5	95.6	116.5
FTE per 100,000 population (based on 45-hour week)	110.5	99.2	99.9	96.8	83.1	85.0	103.5

Source: Medical Labour Force Survey 1999; ABS estimated resident population figures at 31 December 1999.

Ideally, these comparisons of supply should be seen against usage patterns across the geographical regions, as it is very likely that the different age profiles and different health status would lead to differences in usage rates. However, at the time of printing it was not possible to obtain either Medicare services rates or doctor consultation rates by remoteness categories.

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).

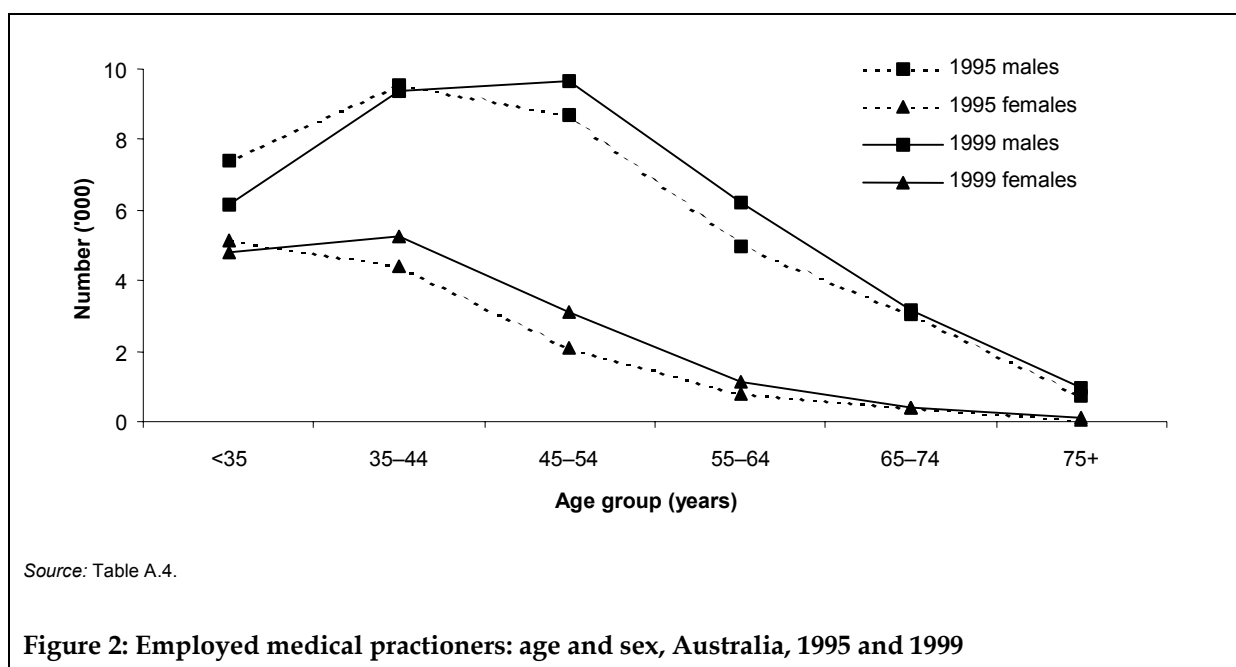


Figure 2: Employed medical practitioners: age and sex, Australia, 1995 and 1999

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

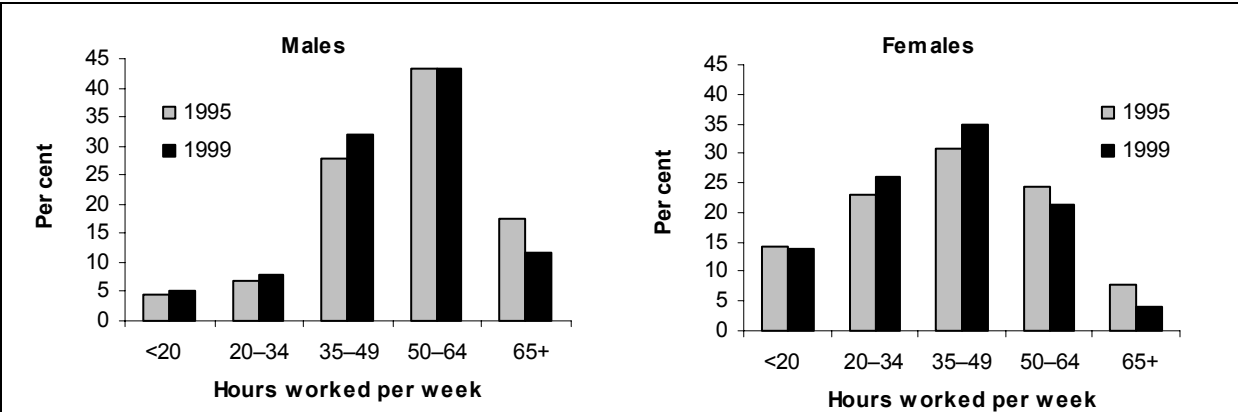
(a) Weekly hours for medical practitioners are calculated from the Medical Labour Force Survey.

(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).

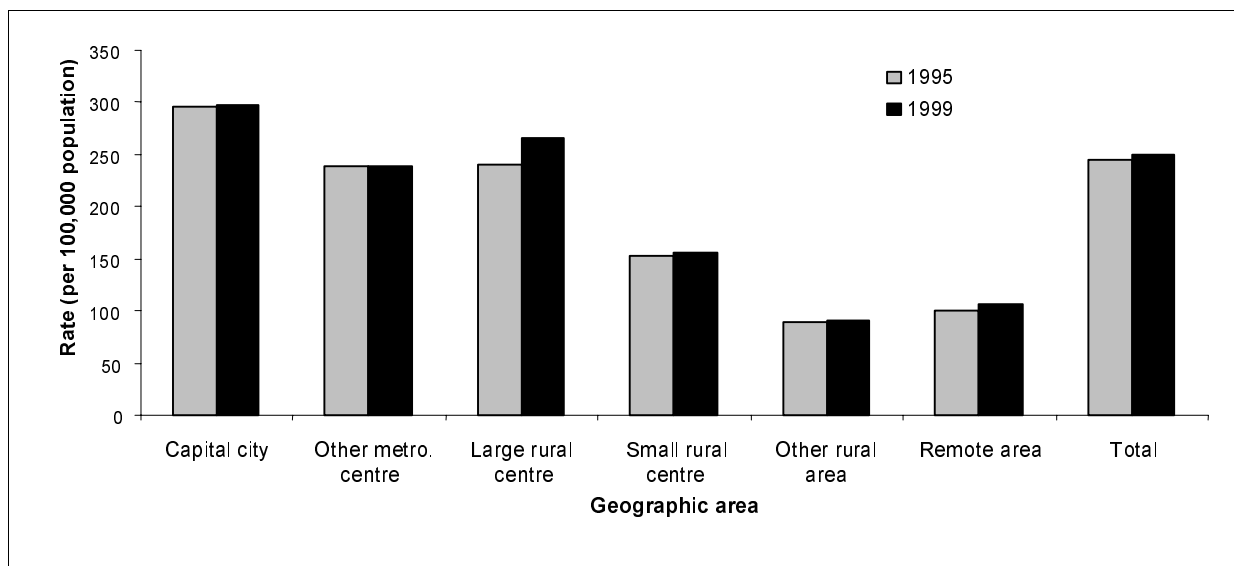
3.2 Clinicians

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.

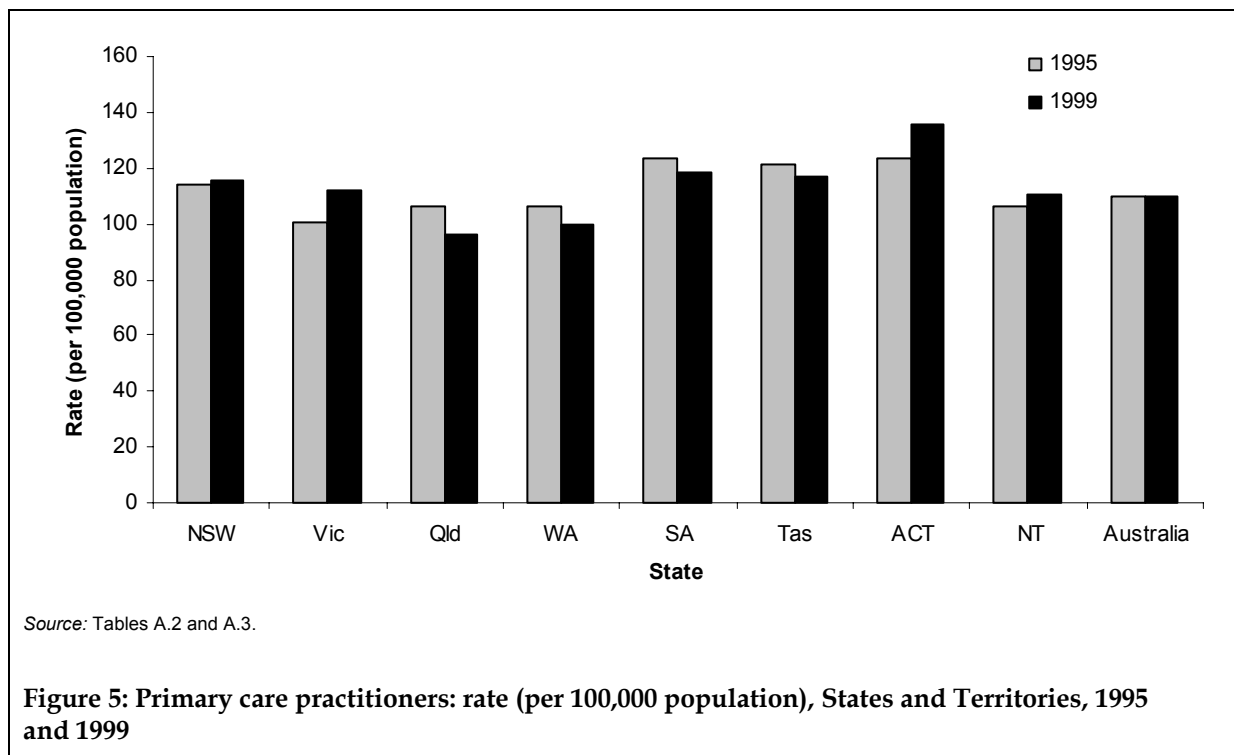
Figure 4: Clinicians: geographic area of main job, rate (per 100,000 population), Australia, 1995 and 1999

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

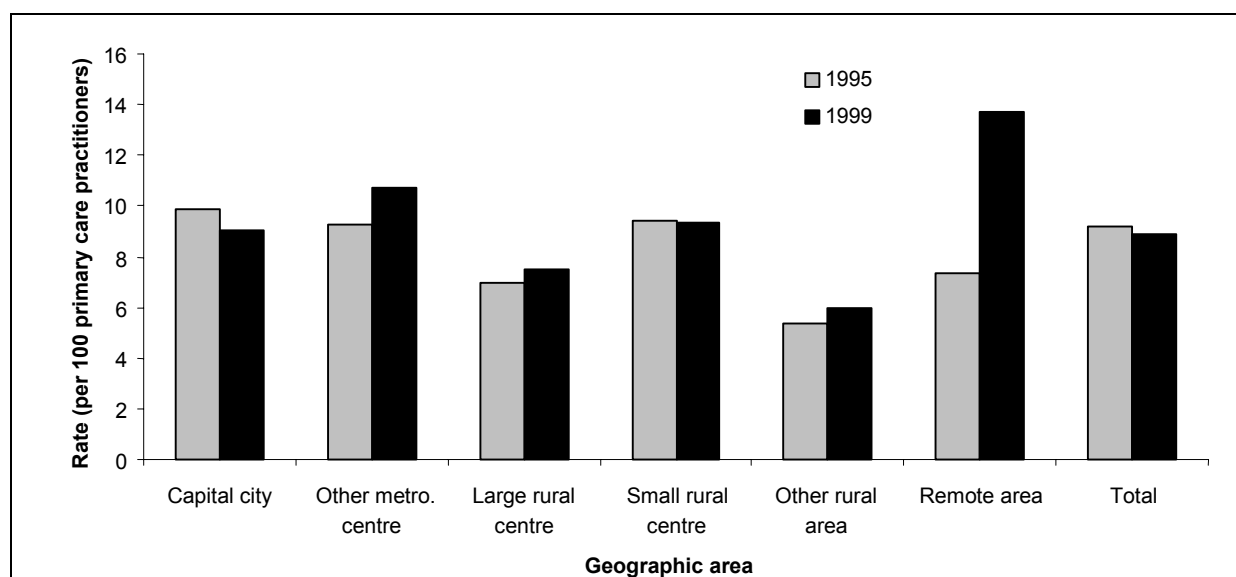
(a) Per 100,000 population, based on ABS estimated resident population figures at 31 December 1995 and 1999.

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.



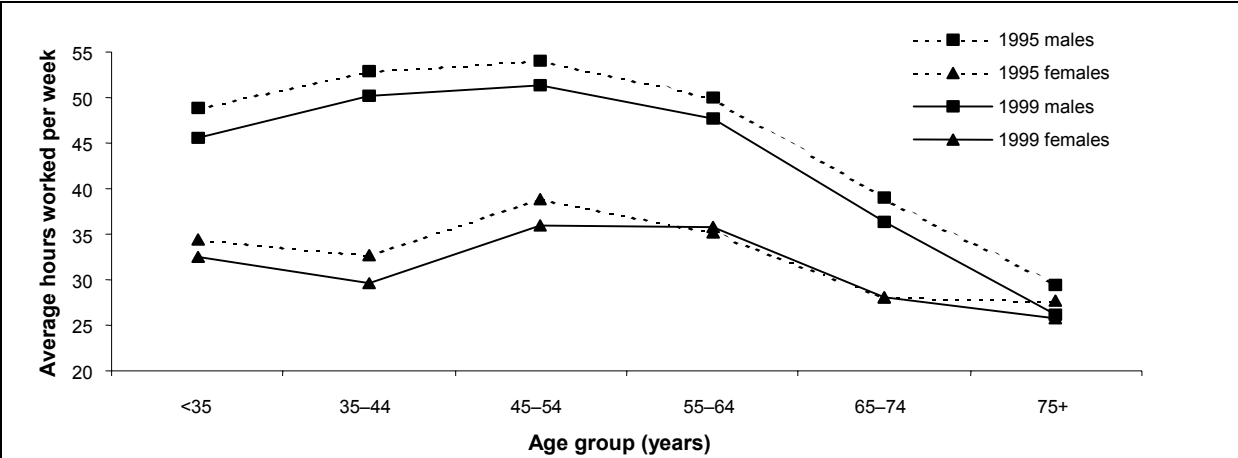
Source: Table A.10.

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.



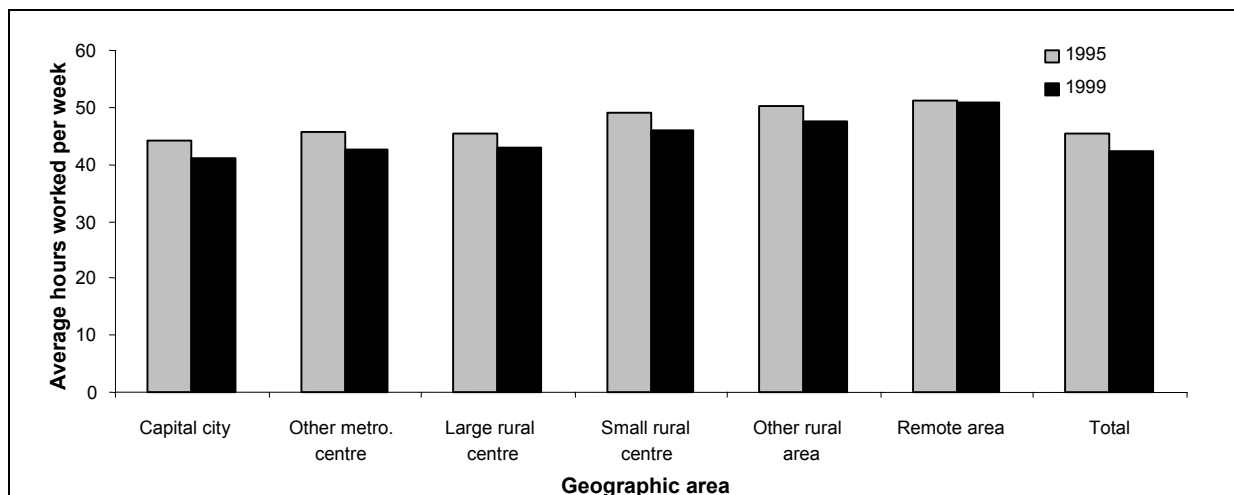
Source: Table A.7.

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

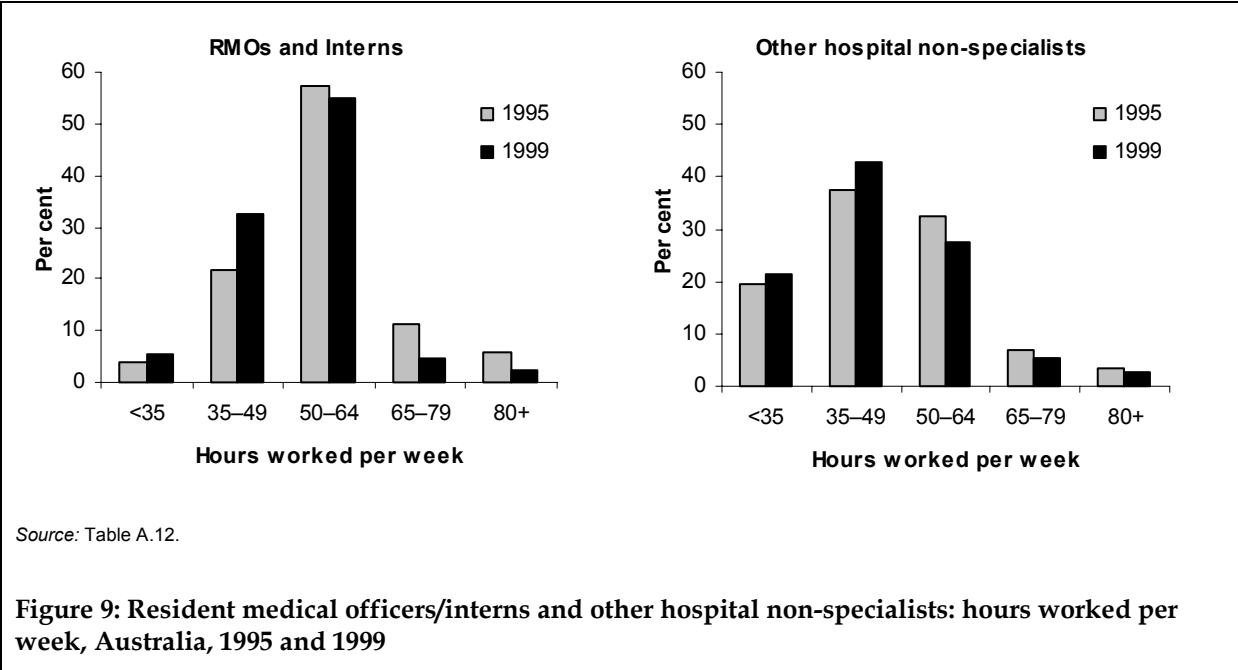
In contrast to the other clinical occupations, the number of hospital non-specialists employed in Australia fell marginally between 1995 and 1999 (from 4,769 to 4,740) (Table A.12). The decrease occurred only in female hospital non-specialists (falling from 2,034 to 1,945), while the number of males 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).

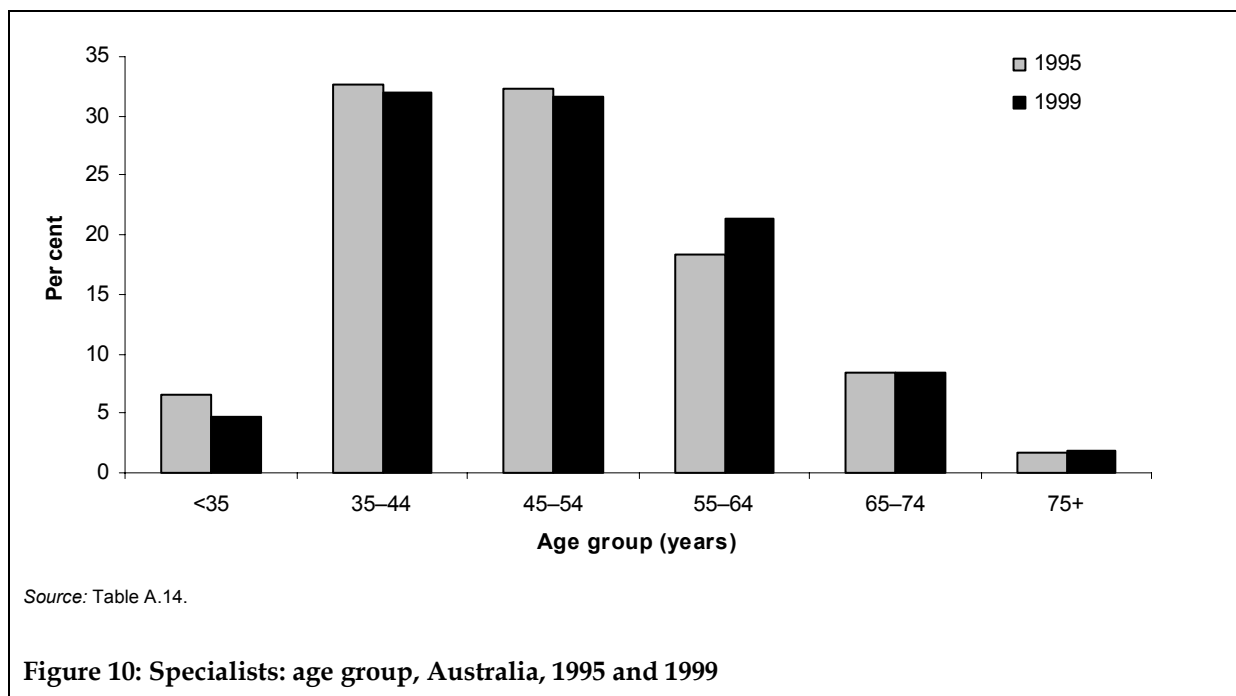
In 1999, psychiatry (2,088, 12.2%), anaesthesia (2,052, 12.0%) and diagnostic radiology (1,107, 6.5%) were the three largest areas of specialty. In 1995, psychiatry (1,892, 12.1%) and anaesthesia (1,810, 11.6%) were also the largest two specialties, followed by general surgery (1,041, 6.7%). Obstetrics 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).

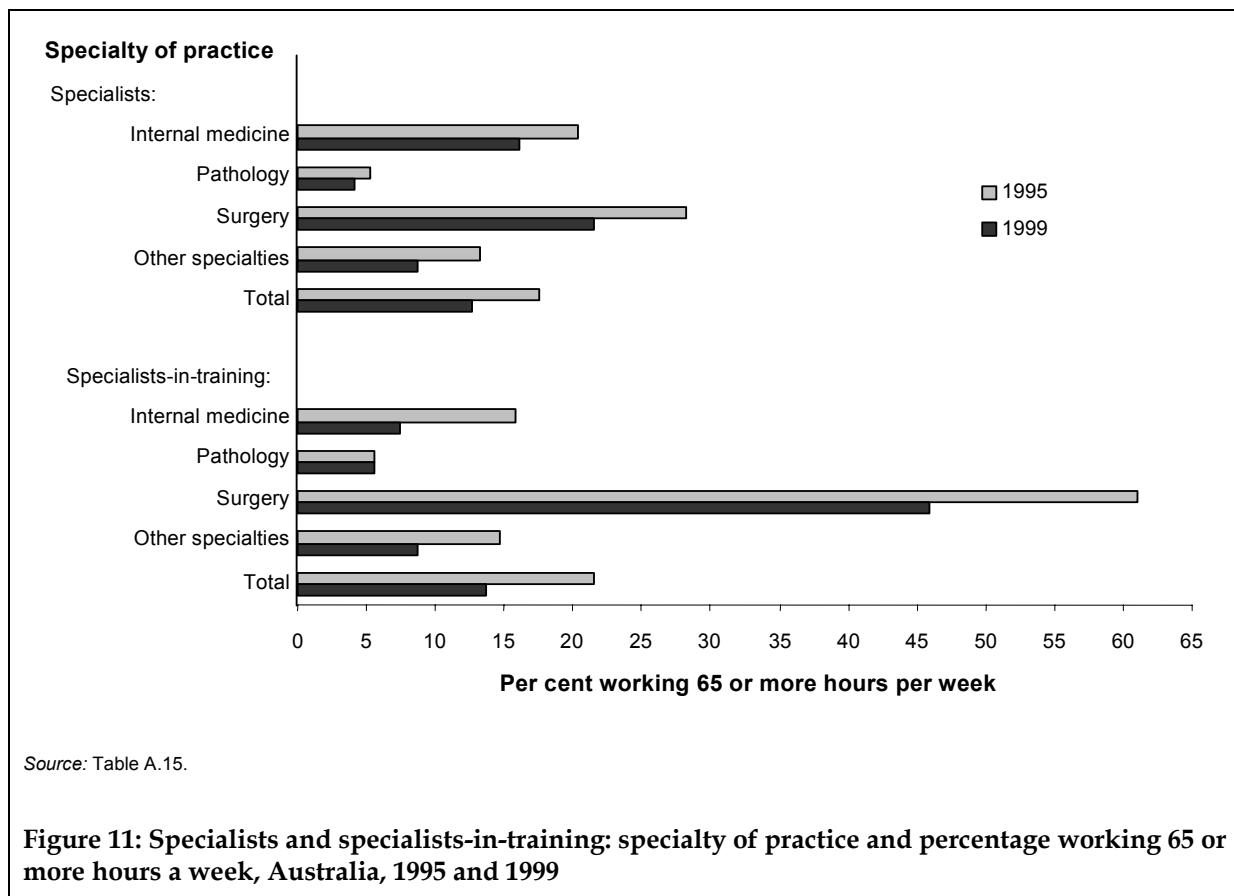


Hours worked

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.

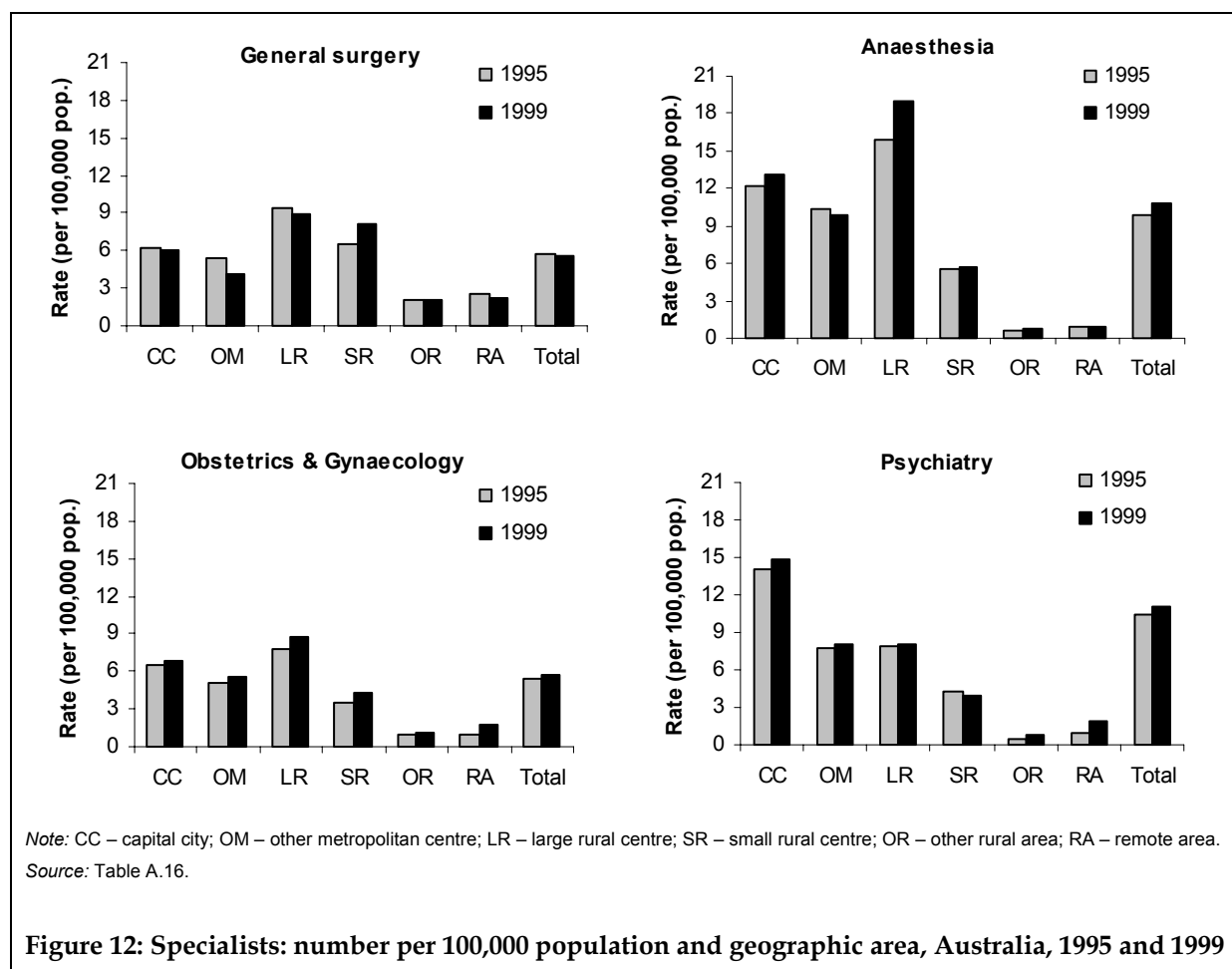


Figure 12: Specialists: number per 100,000 population and geographic area, Australia, 1995 and 1999

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.

4 Future growth in the medical labour force

Estimated net growth, 1995–99

Additions to the Australian medical labour force occur through two channels – the training of new practitioners permanently residing in Australia and the immigration of qualified overseas practitioners. Some churning occurs among those who leave the workforce temporarily (for example, to raise their family or for a temporary break). Losses occur mainly through retirement, death, permanent emigration and increases in temporary migration.

Between 1996 and 1999 a total of 4,970 Australian citizens or permanent residents completed medical undergraduate degrees (Table A.17), and between 1996–97 and 1999–00, inclusively, another 1,928 overseas-trained medical practitioners entered the labour force through the Australian Medical Council (AMC) examination and specialist assessment results (Table 16) and there was a net increase of 965 in temporary immigration of medical practitioners for a short-term stay (Table A.18). While it is not known how many medical practitioners retired or died in any one year, an estimate can be calculated from the progressive decreases over the time period in the cohorts moving into and through the age brackets of 55 years and over. It is assumed that practitioners in these age groups who cease practice do not return, and that all those aged 75 and over are retired (even though some do indicate on their survey form that they work for at least one hour each week).

Using this method, an estimated 2,013 medical practitioners ceased practice from retirement or death between 1996 and 1999 (Table A.21). Between 1995–96 and 1999–2001, a further 2,567 emigrated permanently or for a long-term stay to other countries (Tables A.18 and A.19). Ignoring the effects of churning, this amounts, roughly, to a net gain of 3,283 medical practitioners to the medical workforce between 1995 and 1999. Given the differences in scope, methodology and time periods, and the uncertainty surrounding the assumptions concerning retirement, this is a figure which is in broad agreement with the growth of 2,998 in the number of employed medical practitioners, as obtained from the 1995 and 1999 labour force surveys.

The following sections discuss some of the above components of the flow into and from the medical workforce (education, training and migration) in more detail.

4.1 Education

Medical practitioners undertake many years of training after a highly competitive selection process at the end of their Year 12 schooling. Medical undergraduate degree courses usually take about six years to complete, after which new graduates may spend up to two more years as hospital interns gaining intensive experience in a wide range of medical conditions. This may be followed by postgraduate training to become specialists or vocationally registered general practitioners (VRGPs). Once qualified as a practitioner, doctors are required to uphold high professional standards to maintain their registration.

After such an investment, it is not surprising that nearly all (98.7%) of registered medical practitioners in the medical labour force are employed and practising in medicine.

4.1.1 Medical students in university

Traditionally, people interested in becoming a medical practitioner could apply to study a Bachelor of Medicine/Bachelor of Surgery (MBBS) immediately after finishing their secondary education. However, increasingly more universities are accepting into such courses only those students who have already completed a bachelor degree in another discipline. This has resulted in a relatively large increase in the average age of students commencing undergraduate medicine degrees (from 18.9 years in 1991 to 20.6 years in 2000) (Table 14). The effect of this can also be seen in the decreasing number of employed medical practitioners aged less than 35 years (Table A.4).

Table 14: Australian citizens and permanent residents commencing undergraduate^(a) medicine courses: university and average age, and proportion female, 1991–2000

University	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Flinders University	20.6	20.0	20.1	n.p. ^(b)	n.p. ^(b)	25.5	24.9	25.7	26.3	26.2
James Cook University	..	..	..	..	..	..	..	..	..	18.7
Monash University	18.5	17.8	18.0	18.1	17.8	17.8	18.0	17.7	19.3	18.2
University of Adelaide	18.5	18.7	18.7	18.1	18.0	18.1	17.6	17.7	20.1	18.3
University of Melbourne	18.2	18.2	18.4	18.3	18.6	18.1	18.2	18.1	19.5	18.3
University of New South Wales	18.3	18.2	18.2	18.5	18.4	18.3	18.3	18.3	19.0	18.2
University of Newcastle	22.1	20.9	20.6	22.4	22.4	21.7	22.1	22.1	21.3	21.3
University of Queensland	18.5	18.6	18.1	18.4	n.p. ^(b)	n.p. ^(b)	26.5	23.8	24.6	23.3
University of Sydney	19.7	19.8	20.1	18.9	n.p. ^(b)	n.p. ^(b)	24.5	24.2	23.6	24.2
University of Tasmania	18.2	18.4	17.5	18.8	19.7	19.4	19.2	21.0	23.0	20.1
University of Western Australia	18.2	18.3	18.3	18.3	18.1	18.1	18.5	18.8	19.5	18.2
Total	18.9	18.8	18.7	18.7	18.8	19.1	21.0	20.6	21.5	20.6
Proportion female	48.5	44.7	47.5	48.4	47.3	48.5	45.8	50.3	52.7	53.6

(a) Includes bachelor pass, bachelor honours and graduate entry bachelor courses.

(b) Flinders University, University of Queensland and University of Sydney have introduced a four-year graduate-entry bachelor degree medical course in place of the previous six-year undergraduate course. Each university had a two-year transition period during which only a small number of students with the necessary qualifications were admitted. The first intake to the new course at Flinders University was in 1996 and the first intakes to the new courses at the University of Queensland and the University of Sydney were in 1997.

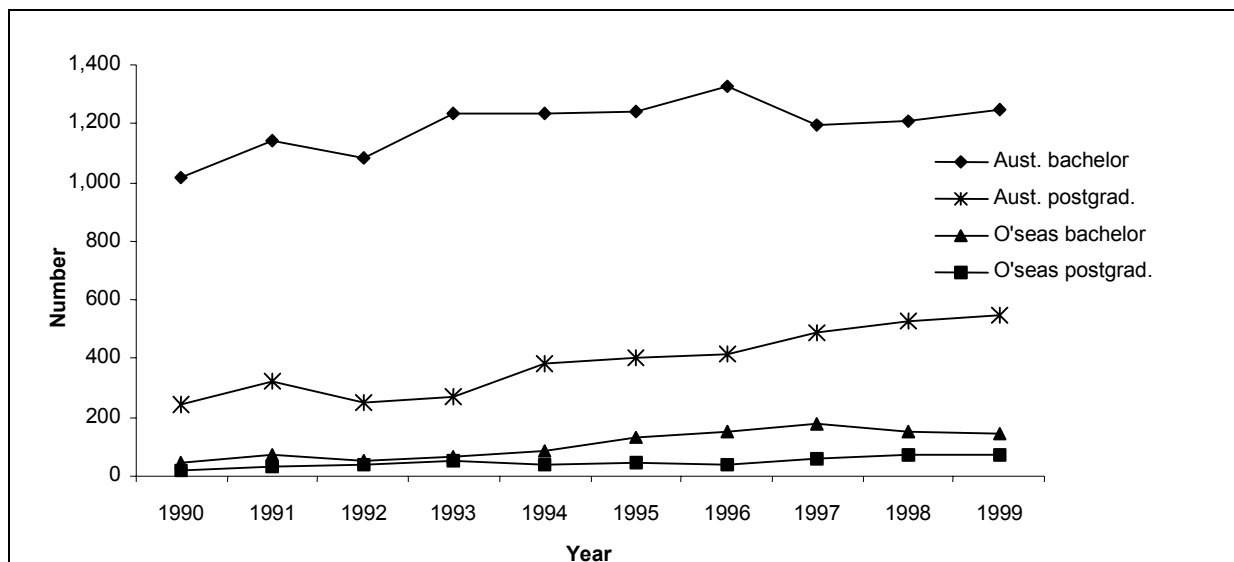
Source: AIHW analysis of DEST data.

Between 1990 and 1999 there was a gradual increase in the number of Australian permanent residents completing undergraduate degrees in medicine, from 1,014 in 1990 to 1,248 in 1999 (Figure 13). The number of Australian permanent residents graduating from postgraduate medicine courses also increased (from 242 students in 1990 to 546 in 1999).

The number of overseas students completing medicine courses in Australia also increased in the 1990s. In 1990, 61 overseas students completed their medical degrees in Australia (Figure 13). This number grew to 222 in 1999, with a peak of 237 in 1997. These students generally return to their home countries after they have completed their studies in Australia.

The proportion of females completing degrees in medicine has been increasing. In 1990, 43.6% of undergraduate medical students and 41.3% of postgraduates were female (Table A.17). These figures had grown to 48.0% and 54.4% respectively by 1999.

The proportion of female practitioners in the medical labour force is likely to continue to increase beyond 1999. Between 1994 and 2000 the percentage of female students commencing undergraduate medicine courses increased from 48.4% to 53.6% (Table 14). These students will start completing their courses and entering the medical profession from 2000.



Source: Table A.17.

Figure 13: Medicine student course completions: residency and level of course, Australia, 1990-99

4.1.2 Postgraduate specialist training

Following the completion of undergraduate or postgraduate university degree and internship, the cream of recently-qualified young doctors are invited to take up a specialist (or general practice) training position. The number of training places available in each specialty is determined by the specialty colleges, and are based on estimates of the future demand for practitioners ('fellows') in each specialty area. The Australian Medical Workforce Advisory Committee (AMWAC) periodically reviews the needs of each specialty and makes recommendations to the colleges. AMWAC reviews typically use AIHW medical labour force and national hospital morbidity data, Department of Health and Ageing Medicare statistics, ABS population projections and other information, applied to the current supply in the specialty field (acquired from college data holdings) to project future requirements.

Practitioners who are not offered, or who do not accept, a training position may register to practise as hospital non-specialists, under supervision, or as 'Other medical practitioners' (OMPs). OMPs are primary care practitioners who may treat patients, but not as an unsupervised general practitioner.

In 1999, there were 5,645 trainees in the specialist colleges, representing a growth of 91, or 1.6% since 1998. In both years, just over a quarter were registered with the Royal Australian College of General Practitioners. Another 13% in each of those years were registered with the Royal Australasian College of Physicians. Other large specialties were emergency medicine (12%), psychiatry (11%) and anaesthetics (10%) (Table 15).

Each year, the Medical Training Review Panel obtains information from the specialty colleges, through AMWAC, about current and likely training opportunities for medical practitioners. According to the Panel, there are likely to be 1,483 first-year places available in 2000 for new trainees (MTRP 2000). This is an increase of 9.9% on the 1,350 first-year places estimated for the previous year. Trainees typically undertake a program lasting between three and five years before being elected to fellowship of their college.

Table 15: Vocational training positions 1998 and 1999, and available first-year places 1999 and 2000, Australian specialist colleges

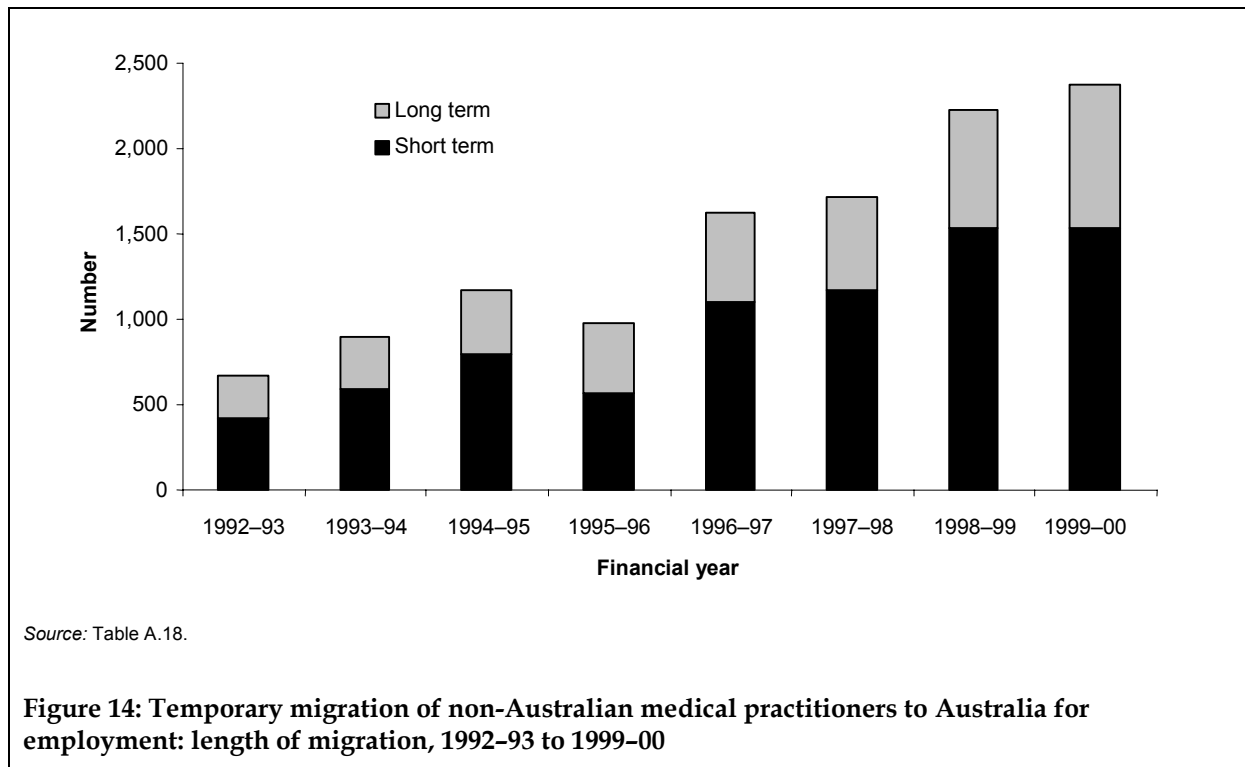
Specialist college	All training places		Expected first-year training places	
	1998	1999	1999	2000
Australian and New Zealand College of Anaesthetists	578	559	165	148
Australasian College of Dermatologists	43	50	8	6
Australasian College for Emergency Medicine	678	655	121	150
Royal Australian College of General Practitioners	1,441	1,478	400	410
Royal Australian College of Medical Administrators	99	99	20	20
Royal Australian College of Obstetricians and Gynaecologists	317	333	55	50
Royal Australasian College of Ophthalmologists	90	91	24	18
Royal College of Pathologists of Australasia	224	221	43	49
Royal Australasian College of Physicians	742	726	199	313
Royal Australian and New Zealand College of Psychiatrists	615	652	122	118
Royal Australian and New Zealand College of Radiologists	236	240	54	62
Royal Australasian College of Surgeons	498	541	139	139
Total	5,561	5,645	1,350	1,483

Source: Medical colleges.

In 2000 AMWAC undertook a survey of 1993–99 medical graduates, which aimed to find out how many planned to access a vocational training placement at some time in the future. Of the 842 respondents, 814 (96.7%) indicated they would seek entry into a medical college training program (or to change into a different training program) in the future. Of these, the bulk indicated a preference for general practice (19.1%), anaesthesia (11.6%), adult medicine (11.2%) and general surgery (10.9%). Although there is a high demand for some disciplines where there are limited opportunities, the reverse is also true. For example, 4.7% indicated dermatology as their preferred specialty area, but only 0.6% of likely training places were in dermatology, and 2.6% indicated psychiatry yet 7.7% of likely training places were in psychiatry (AMWAC 2000).

4.2 Migration

Educating potential doctors from the time they start university to the day they are fully qualified and practising takes many years, especially for those who undertake vocational specialty training. Therefore, using education as a tool to fill short-term planning requirements is very difficult, and it is for this reason that temporary resident doctors play an important role in the Australian medical labour force in this respect. Depending upon current needs, State, Territory and Federal governments have used various incentives to encourage doctors trained overseas to work in Australia temporarily to fill specific positions in hospitals, general practice, and deputising and locum services, particularly in localities nominated as 'areas of need'. These practitioners are termed 'temporary resident doctors' (TRDs) (AMWAC 1999).



As indicated in Figure 14, it seems that incentives have had an effect on the number of doctors entering Australia temporarily for the purpose of employment. In most years since 1992 there was an increase in the number of doctors entering Australia on a temporary visa, and there was a total increase over the period from 667 in 1992-93 to 2,372 doctors in 1999-00. Approximately two in three of these medical practitioners stay for less than 12 months.

Overseas-trained medical practitioners who wish to practise in Australia long term are required to pass a series of exams and assessments conducted by the Australian Medical Council. In order to become a fully registered primary care practitioner or hospital non-specialist, the overseas-trained practitioner must enter through the general registration pathway and pass both a multiple choice questions (MCQ) examination and a clinical examination. Overseas-trained specialists must enter through the AMC/specialist medical college pathway for assessment of their overseas training and experience by the relevant specialist college for the purpose of conditional registration as a specialist. In the financial year 1999-00, 219 candidates passed the general examination process and were eligible for full registration in Australia (Table 16). In the same year, 54 candidates qualified for conditional registration through the specialist pathway.

While many foreign doctors come to Australia permanently for the purpose of employment, it is also true that some Australian doctors migrate permanently to other countries for the same purpose. Between 1992-93 and 1996-97, the number of Australian medical practitioners leaving Australia permanently remained relatively constant at around 150 doctors per year (Figure 15). From 1997-98 onwards, this number steadily increased to 296 doctors per year in 1999-00. During this time, the number of overseas doctors permanently migrating to Australia fluctuated from a peak of 626 in 1995-96, to a low of 358 in 1997-98.

Table 16: Australian Medical Council examination and specialist assessment results, 1992–93 to 1999–00

	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00
Overseas-trained doctors entering through the general registration pathway								
MCQ examination:								
Number of candidates presenting	812	619	688	.. ^(a)	1,382	779	669	769
Number passing/eligible to proceed to clinical examination	297	343	391	.. ^(a)	612	234	372	304
Clinical examination:								
Number exams conducted	434	418	404	518	556	427	459	434
<i>Number passing AMC exam and eligible for registration</i>	193	211	222	266	266	151	220	219
Overseas-trained specialists entering through the AMC/specialist medical college pathway								
Number of applications received	86 ^(b)	191	162	178	151	123	132	220
<i>Total qualified for registration</i> ^(c)	18	69	67	66	63	52	47	54
Total overseas-trained doctors entering the workforce	211	280	289	332	329	203	267	273

(a) No MCQ examination was held in 1995–96.

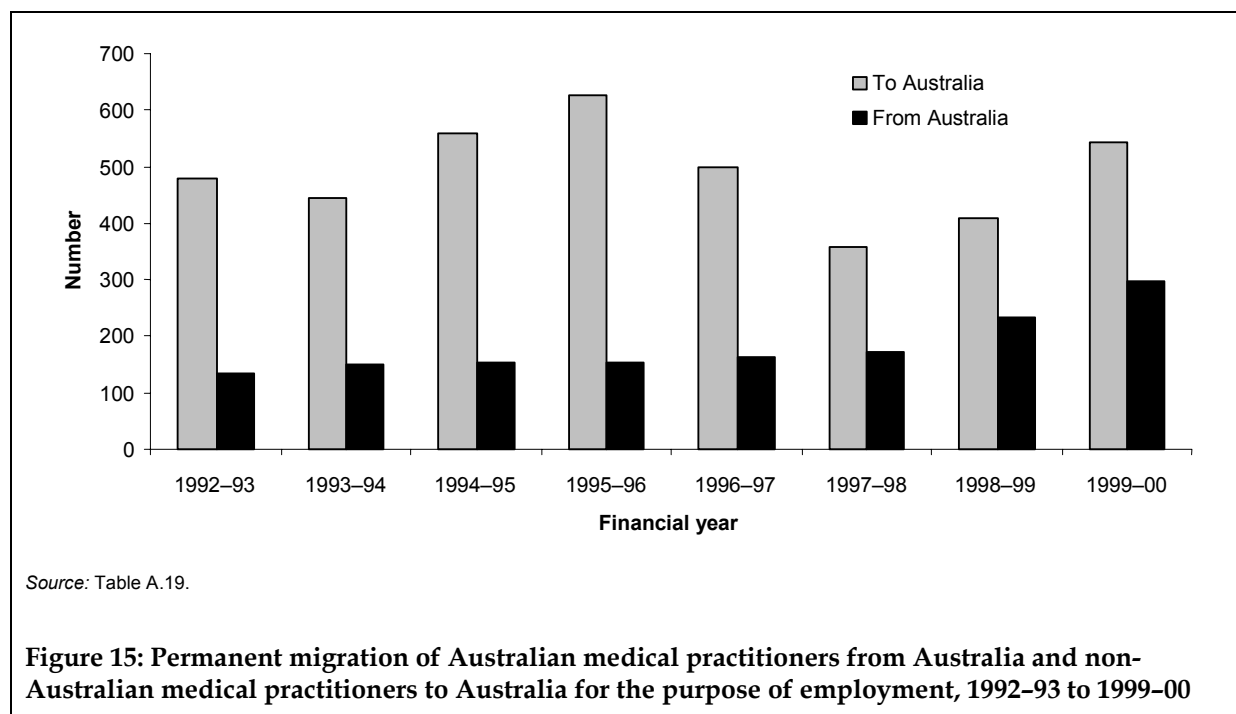
(b) Part-year figure only. AMC/specialist medical college procedures commenced in January 1993.

(c) Applicants qualifying in a particular year may have submitted their applications in a previous year.

Note: This table contains information that has been revised since the previous *Medical Labour Force 1998* publication.

Source: Australian Medical Council.

It can be seen from Figure 15 that in every year since 1992–93, there was a net gain of doctors, although the size of this gain has been smaller since 1997–98 than in the preceding years. It may be that with a general ageing of populations in other developed countries, there have been competing demands for health professionals, including medical practitioners, willing to emigrate from any country, either short term or permanently.



Appendix A: Detailed tables

Table A.1: All registered medical practitioners: employment status and sex, States and Territories, 1999

Employment status	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Males									
Only in this State	12,568	8,277	5,630	3,124	2,879	865	534	306	34,182
Mainly in this State	481	217	167	66	225	21	137	19	1,333
Mainly in another State	671	405	96	81	79	124	151	185	1,792
Only in other States	940	377	646	322	223	70	149	200	2,927
On extended leave	52	34	18	24	8	3	3	6	147
Practising overseas	851	422	228	73	132	30	45	18	1,798
Employed, not in medicine	130	52	15	19	20	2	6	3	248
Currently not employed	190	46	36	20	32	13	8	10	354
Retired from work	996	527	358	261	318	94	59	11	2,623
<i>Total</i>	<i>16,878</i>	<i>10,357</i>	<i>7,194</i>	<i>3,989</i>	<i>3,916</i>	<i>1,222</i>	<i>1,092</i>	<i>758</i>	<i>45,405</i>
Females									
Only in this State	5,180	3,612	2,410	1,309	1,222	319	322	180	14,555
Mainly in this State	101	31	31	6	40	3	39	6	258
Mainly in another State	104	72	12	13	15	12	18	33	279
Only in other States	281	175	126	101	56	40	42	35	856
On extended leave	104	84	53	8	13	3	10	2	276
Practising overseas	307	201	77	183	46	5	12	7	837
Employed, not in medicine	66	37	13	11	11	7	3	1	149
Currently not employed	212	64	45	14	30	7	13	6	392
Retired from work	283	184	69	49	63	23	24	4	700
<i>Total</i>	<i>6,638</i>	<i>4,460</i>	<i>2,836</i>	<i>1,694</i>	<i>1,496</i>	<i>419</i>	<i>484</i>	<i>274</i>	<i>18,302</i>
Persons									
Only in this State	17,748	11,889	8,040	4,434	4,101	1,184	856	486	48,738
Mainly in this State	582	248	199	71	266	24	176	25	1,591
Mainly in another State	775	478	108	94	94	136	169	218	2,072
Only in other States	1,221	552	772	422	279	110	191	235	3,783
On extended leave	156	118	71	32	21	6	13	7	424
Practising overseas	1,157	622	305	256	178	35	57	25	2,635
Employed, not in medicine	197	88	28	29	31	9	10	4	396
Currently not employed	401	110	81	34	62	20	21	16	746
Retired from work	1,279	712	428	310	381	116	82	15	3,323
Total	23,516	14,817	10,030	5,683	5,412	1,641	1,576	1,032	63,707

Source: Medical Labour Force Survey 1999.

Table A.2: Employed medical practitioners: occupation, sex and rate, States and Territories, 1999

Occupation	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	Persons (no.)								
<i>Clinician</i>	17,372	11,374	7,960	4,202	3,996	1,142	933	458	47,436
Primary care	7,445	5,296	3,406	1,866	1,767	550	421	215	20,966
Hospital non-specialist	1,920	686	1,164	425	300	74	110	61	4,740
Specialist	6,094	4,450	2,622	1,526	1,509	433	312	145	17,091
Specialist-in-training	1,913	941	769	384	421	85	90	37	4,640
<i>Non-clinician</i>	958	763	279	303	371	66	100	53	2,892
Administrator	235	93	91	44	46	10	12	18	548
Teacher/educator	67	66	30	23	26	3	4	3	222
Researcher	118	85	25	38	20	3	7	11	306
Public health physician	125	185	75	91	84	25	27	20	631
Occupational health physician	102	41	26	26	35	7	0	13	251
Other	311	293	32	149	92	18	4	35	934
Total	18,330	12,137	8,238	4,505	4,367	1,208	1,032	511	50,329
	Proportion female (per cent)								
<i>Clinician</i>	28.5	29.8	29.4	29.1	28.5	27.0	36.1	37.2	29.2
Primary care	32.9	35.5	35.2	35.2	32.5	34.0	46.8	45.9	34.6
Hospital non-specialist	41.7	32.7	39.5	47.4	49.1	23.8	51.8	59.5	41.0
Specialist	16.6	20.1	15.3	15.2	17.2	14.5	14.1	18.1	17.2
Specialist-in-training	36.0	40.9	36.9	34.6	37.3	47.8	42.5	24.7	37.4
<i>Non-clinician</i>	34.1	33.4	35.1	29.9	33.8	21.6	25.3	30.1	32.9
Administrator	33.9	28.0	38.5	22.2	37.1	49.6	25.5	28.6	32.9
Teacher/educator	22.6	32.4	23.8	24.4	27.0	0.0	0.0	51.1	26.1
Researcher	43.8	32.9	51.5	49.3	28.4	0.0	0.0	0.0	38.2
Public health physician	42.1	43.7	41.0	36.8	38.0	9.1	48.6	51.7	40.4
Occupational health physician	15.4	24.1	13.1	28.0	0.0	0.0	0.0	0.0	14.5
Other	36.1	30.2	27.0	33.8	31.1	38.6	0.0	23.9	32.5
Total	28.8	30.0	29.6	29.2	28.9	26.5	35.0	36.5	29.4
	Rate (per 100,000 population)								
<i>Clinician</i>	270.1	240.0	225.0	224.6	267.1	242.6	300.9	235.7	249.0
Primary care	115.8	111.8	96.3	99.7	118.1	116.9	135.8	110.5	110.1
Hospital non-specialist	29.9	14.5	32.9	22.7	20.0	15.7	35.5	31.6	24.9
Specialist	94.7	93.9	74.1	81.6	100.8	92.0	100.6	74.5	89.7
Specialist-in-training	29.7	19.9	21.7	20.5	28.1	18.0	29.0	19.0	24.4
<i>Non-clinician</i>	14.9	16.1	7.9	16.2	24.8	14.0	32.2	27.5	15.2
Administrator	3.7	2.0	2.6	2.9	2.5	2.1	6.0	5.7	2.9
Teacher/educator	1.0	1.4	0.9	1.5	1.4	0.6	2.0	1.1	1.2
Researcher	1.8	1.8	0.7	2.5	1.1	0.6	3.4	3.5	1.6
Public health physician	1.9	3.9	2.1	6.1	4.5	5.2	13.9	6.3	3.3
Occupational health physician	1.6	0.9	0.7	1.7	1.9	1.6	0.0	4.3	1.3
Other	4.8	6.2	0.9	9.9	4.9	3.9	2.2	11.3	4.9
Total	285.0	256.2	232.9	240.8	291.8	256.6	333.1	263.2	264.2
	(^{'000})								
Population at 31 December 1999	6,431.6	4,738.2	3,537.2	1,871.2	1,496.2	470.8	310.0	194.3	19,049.4

Source: Medical Labour Force Survey 1999; ABS estimated resident population figures at 31 December 1999.

Table A.3: Employed medical practitioners: occupation, sex and rate, States and Territories, 1995

Occupation	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Persons (no.)									
<i>Clinician</i>	15,739	11,142	7,430	3,960	4,037	1,067	802	406	44,583
Primary care	7,031	4,570	3,516	1,862	1,816	575	377	191	19,937
Hospital non-specialist	1,924	1,030	896	317	347	98	94	63	4,769
Specialist	5,376	4,231	2,348	1,440	1,490	323	280	117	15,604
Specialist-in-training	1,409	1,310	670	341	385	72	51	36	4,273
<i>Non-clinician</i>	945	965	377	135	170	49	75	32	2,748
Administrator	223	270	100	42	55	9	28	11	737
Teacher/educator	70	48	30	9	12	4	0	1	173
Researcher	104	79	28	18	27	4	18	5	284
Public health physician	143	148	77	22	40	9	18	4	461
Occupational health physician	95	73	22	10	23	11	0	3	237
Other	310	347	120	34	13	12	11	8	855
Total	16,684	12,107	7,806	4,094	4,207	1,116	877	439	47,331
Proportion female (per cent)									
<i>Clinician</i>	26.6	26.9	27.1	27.3	26.4	27.6	31.8	29.6	27.0
Primary care	29.9	32.0	32.3	33.1	31.0	33.3	41.7	39.7	31.6
Hospital non-specialist	41.5	41.5	41.0	49.5	42.9	42.7	43.0	35.8	42.0
Specialist	14.1	15.4	12.6	12.9	14.0	11.4	12.8	10.8	14.0
Specialist-in-training	32.1	29.8	31.0	35.7	31.8	32.4	41.2	28.3	31.6
<i>Non-clinician</i>	32.4	29.4	33.2	35.3	28.0	27.0	26.8	38.1	31.2
Administrator	33.5	30.4	33.8	40.9	18.9	14.3	26.3	25.0	31.2
Teacher/educator	30.6	38.2	28.6	20.0	0.0	0.0	0.0	0.0	29.1
Researcher	34.8	32.1	40.0	45.5	18.8	33.3	33.3	20.0	33.5
Public health physician	39.2	37.5	40.7	37.5	42.1	42.9	42.9	60.0	39.5
Occupational health physician	19.3	11.8	6.7	11.1	33.3	25.0	0.0	0.0	16.0
Other	32.1	26.8	32.1	40.0	41.4	33.3	28.6	66.7	30.7
Total	26.8	27.2	27.3	27.6	26.3	27.5	31.4	33.3	27.2
Rate (per 100,000 population)									
<i>Clinician</i>	255.1	245.4	224.9	226.4	274.4	225.1	262.3	225.2	245.1
Primary care	114.0	100.7	106.4	106.4	123.4	121.2	123.3	106.0	109.6
Hospital non-specialist	31.2	22.7	27.1	18.1	23.6	20.6	30.9	34.7	26.2
Specialist	87.1	93.2	71.1	82.3	101.3	68.1	91.5	64.6	85.8
Specialist-in-training	22.8	28.9	20.3	19.5	26.1	15.1	16.7	19.8	23.5
<i>Non-clinician</i>	15.3	21.3	11.4	7.7	11.5	10.2	24.5	17.9	15.1
Administrator	3.6	5.9	3.0	2.4	3.7	1.9	9.3	5.9	4.1
Teacher/educator	1.1	1.1	0.9	0.5	0.8	0.8	0.0	0.3	1.0
Researcher	1.7	1.7	0.9	1.0	1.9	0.8	5.8	2.8	1.6
Public health physician	2.3	3.3	2.3	1.2	2.7	1.9	5.8	2.2	2.5
Occupational health physician	1.5	1.6	0.7	0.6	1.5	2.2	0.0	1.9	1.3
Other	5.0	7.6	3.6	2.0	0.9	2.6	3.6	4.6	4.7
Total	270.5	266.7	236.3	234.1	286.0	235.3	286.8	243.1	260.2
(^{'000})									
Population at 31 December 1995	6,168.8	4,539.8	3,303.4	1,749.3	1,471.2	474.1	305.8	180.5	18,193.0

Source: Medical Labour Force Survey 1995; ABS estimated resident population figures at 31 December 1995.

Table A.4: Employed medical practitioners: age and sex, Australia, 1995 and 1999

Year/Sex	Age group (years)						Total
	<35	35-44	45-54	55-64	65-74	75+	
1995							
Males	7,421	9,563	8,722	4,989	3,039	736	34,470
Females	5,159	4,407	2,084	767	373	72	12,861
Persons	12,580	13,969	10,806	5,756	3,412	808	47,331
1999							
Males	6,154	9,371	9,675	6,190	3,169	957	35,515
Females	4,819	5,268	3,109	1,138	379	102	14,814
Persons	10,973	14,638	12,784	7,328	3,547	1,058	50,329
(Per cent)							
1995							
Males	21.5	27.7	25.3	14.5	8.8	2.1	100.0
Females	40.1	34.3	16.2	6.0	2.9	0.6	100.0
Persons	26.6	29.5	22.8	12.2	7.2	1.7	100.0
1999							
Males	17.3	26.4	27.2	17.4	8.9	2.7	100.0
Females	32.5	35.6	21.0	7.7	2.6	0.7	100.0
Persons	21.8	29.1	25.4	14.6	7.0	2.1	100.0

Source: Medical Labour Force Surveys, 1995 and 1999.

Table A.5: Employed medical practitioners: hours worked per week and sex, Australia, 1995 and 1999

Year/sex	Hours worked per week					Total
	<20	20-34	35-49	50-64	65+	
(Per cent)						
1995						
Males	4.5	7.0	27.8	43.3	17.4	100.0
Females	14.2	23.1	30.7	24.2	7.7	100.0
Persons	7.1	11.3	28.6	38.2	14.8	100.0
1999						
Males	5.1	8.1	31.9	43.2	11.8	100.0
Females	13.7	26.1	34.8	21.4	4.0	100.0
Persons	7.4	13.1	32.7	37.1	9.6	100.0

Source: Medical Labour Force Surveys, 1995 and 1999.

Table A.6: Clinicians: geographic area of main job and sex, Australia, 1995 and 1999

Year/sex	Geographic area of main job						Australia
	Capital city	Other metro. centre	Large rural centre	Small rural centre	Other rural area	Remote area	
	(Number)						
1995							
Males	24,555	2,492	2,027	1,444	1,669	398	32,585
Females	9,650	752	590	368	480	158	11,998
Persons	34,205	3,245	2,617	1,812	2,149	556	44,583
1999							
Males	25,071	2,633	2,273	1,470	1,709	418	33,573
Females	11,098	847	732	455	547	184	13,863
Persons	36,169	3,480	3,006	1,925	2,256	602	47,436
	(Number per 100,000 population)						
1995 persons	295.9	237.9	240.4	152.4	88.4	100.4	245.1
1999 persons	297.2	238.9	265.1	156.4	90.6	107.2	249.1

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

Table A.7: Primary care practitioners: age and sex, Australia, 1995 and 1999

Year/Sex	Age group (years)						Total
	<35	35-44	45-54	55-64	65-74	75+	
1995							
Males	1,848	4,239	3,648	1,957	1,507	388	13,586
Females	1,847	2,669	1,204	375	208	49	6,351
Persons	3,695	6,907	4,852	2,332	1,715	436	19,937
1999							
Males	1,307	3,741	4,282	2,402	1,452	534	13,718
Females	1,521	2,991	1,861	591	216	68	7,248
Persons	2,828	6,733	6,143	2,993	1,668	601	20,966
(Per cent)							
1995							
Males	13.6	31.2	26.9	14.4	11.1	2.9	100.0
Females	29.1	42.0	19.0	5.9	3.3	0.8	100.0
Persons	18.5	34.6	24.3	11.7	8.6	2.2	100.0
1999							
Males	9.5	27.3	31.2	17.5	10.6	3.9	100.0
Females	21.0	41.3	25.7	8.2	3.0	0.9	100.0
Persons	13.5	32.1	29.3	14.3	8.0	2.9	100.0
(Average hours worked per week)							
1995							
Males	48.8	52.9	54.0	50.0	39.1	29.4	50.3
Females	34.4	32.7	38.8	35.1	28.1	27.7	34.3
Persons	41.6	45.0	50.2	47.6	37.9	29.2	45.2
1999							
Males	45.5	50.1	51.4	47.7	36.3	26.2	47.5
Females	32.5	29.7	36.0	35.7	28.1	25.7	32.3
Persons	38.6	41.1	46.6	45.4	35.3	26.2	42.2

Source: Medical Labour Force Surveys, 1995 and 1999.

Table A.8: Primary care practitioners: sex, geographic area of main job, average age and average hours worked per week, Australia, 1995 and 1999

	Capital city	Other metro. centre	Large rural centre	Small rural centre	Other rural area	Remote area	Total
Year/sex	(Number)						
1995							
Males	9,150	1,131	768	832	1,438	267	13,586
Females	4,754	454	315	288	419	122	6,351
Persons	13,904	1,585	1,083	1,120	1,857	389	19,937
1999							
Males	9,292	1,079	785	823	1,460	280	13,718
Females	5,404	447	403	345	507	141	7,248
Persons	14,697	1,526	1,188	1,167	1,967	421	20,966
(Average age)							
1995							
Males	48.3	48.6	47.4	47.0	46.6	43.3	48.1
Females	41.1	40.2	41.0	40.5	41.0	37.1	41.0
Persons	45.8	46.2	45.4	45.3	45.3	41.5	45.8
1999							
Males	50.5	50.9	48.3	48.6	48.3	44.6	50.0
Females	43.6	42.1	42.2	42.2	42.1	37.5	43.2
Persons	48.0	48.4	46.2	46.7	46.8	42.3	47.7
(Average hours worked per week)							
1995							
Males	49.8	50.4	50.9	54.3	54.1	53.9	50.5
Females	33.9	33.8	33.0	34.0	36.6	45.4	34.2
Persons	44.3	45.6	45.4	49.0	50.2	51.2	45.3
1999							
Males	47.0	47.2	48.3	49.9	51.4	56.2	47.7
Females	31.7	31.8	32.5	34.4	36.1	40.9	32.3
Persons	41.2	42.6	42.9	45.9	47.4	51.0	42.3

Source: Medical Labour Force Surveys, 1995 and 1999.

Table A.9: Primary care practitioners: sex, geographic area of main job and age, Australia, 1999

Sex/age	Capital city	Other metro. centre	Large rural centre	Small rural centre	Other rural area	Remote area	Total
	(Per cent)						
Males							
<35	9.6	7.0	8.2	11.0	8.8	20.8	9.5
35–44	25.3	25.9	31.7	31.2	34.7	36.6	27.3
45–54	31.3	30.1	34.1	32.2	30.3	27.4	31.2
55–64	18.4	20.8	15.0	13.4	14.5	10.3	17.5
65+	15.5	16.2	10.9	12.2	11.7	5.0	14.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females							
<35	19.8	23.2	21.1	22.3	23.9	45.3	21.0
35–44	40.9	42.8	45.9	39.2	40.4	45.5	41.3
45–54	26.2	23.9	24.6	30.2	23.9	8.4	25.7
55–64	8.7	7.2	6.9	6.4	7.4	0.8	8.2
65+	4.4	2.9	1.5	1.9	4.5	0.0	3.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Medical Labour Force Surveys, 1995 and 1999.

Table A.10: Primary care locums and deputising service practitioners: geographic area of main job, Australia, 1995 and 1999

Geographic area	1995			1999		
	Number	Number per 100,000 pop.	Number per 100 GPs	Number	Number per 100,000 pop.	Number per 100 GPs
Capital city	1,250	10.9	9.9	1,219	10.0	9.0
Other metro. centre	134	9.9	9.3	148	10.1	10.7
Large rural centre	71	6.5	7.0	83	7.3	7.5
Small rural centre	97	8.2	9.4	100	8.1	9.4
Other rural area	94	3.9	5.4	110	4.4	5.9
Remote area	27	4.8	7.4	51	9.0	13.7
Total	1,673	9.3	9.2	1,711	9.0	8.9

Source: Medical Labour Force Surveys, 1995 and 1999.

Table A.11: Hospital non-specialists: age and sex, Australia, 1995 and 1999

	1995			1999		
	Males	Females	Persons	Males	Females	Persons
Age (years)	(Number)					
Under 25	495	467	962	164	149	313
25–34	1,700	1,204	2,904	1,694	1,264	2,958
35–44	330	224	554	499	340	839
45–54	122	98	219	276	140	416
55 and over	89	41	130	163	52	214
Total	2,736	2,034	4,769	2,796	1,945	4,740
	(Per cent)					
Under 25	18.1	23.0	20.2	5.9	7.7	6.6
25–34	62.1	59.2	60.9	60.6	65.0	62.4
35–44	12.1	11.0	11.6	17.8	17.5	17.7
45–54	4.4	4.8	4.6	9.9	7.2	8.8
55 and over	3.3	2.0	2.7	5.8	2.7	4.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Medical Labour Force Surveys, 1995 and 1999.

Table A.12: Hospital non-specialists: position and total hours worked per week, Australia, 1995 and 1999

	1995			1999		
	RMO/intern	OMP	Total	RMO/Intern	OMP	Total
Hours worked	(Number)					
Less than 20	48	64	112	58	111	169
20–34	101	129	230	123	184	307
35–49	820	373	1,193	1,097	589	1,686
50–64	2,161	325	2,486	1,851	378	2,229
65–79	428	70	498	155	72	227
80 and over	216	35	250	84	37	122
Total	3,774	995	4,769	3,368	1,372	4,740
Average hours	54.5	46.5	52.4	50.0	44.0	48.2
	(Per cent)					
Less than 20	1.3	6.4	2.3	1.7	8.1	3.6
20–34	2.7	13.0	4.8	3.6	13.4	6.5
35–49	21.7	37.5	25.0	32.6	42.9	35.6
50–64	57.3	32.7	52.1	55.0	27.6	47.0
65–79	11.3	7.0	10.4	4.6	5.3	4.8
80 and over	5.7	3.5	5.3	2.5	2.7	2.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: RMO — resident medical officer; OMP — other medical practitioner.

Source: Medical Labour Force Surveys, 1995 and 1999.

Table A.13: Specialists: main specialty of practice, sex and rate (per 100,000 population), Australia, 1995 and 1999

Specialty of practice	1995			1999			% change 1995-99
	Specialists	% female	Rate ^(a)	Specialists	% female	Rate ^(a)	
<i>Internal medicine</i>	4,057	13.4	22.3	4,553	16.8	23.9	12.2
Cardiology	487	6.0	2.7	557	6.6	2.9	14.5
Clinical genetics ^(b)	..	..	..	43	41.6	0.2	..
Clinical haematology	136	20.9	0.7	171	20.8	0.9	25.7
Clinical immunology	94	6.8	0.5	98	11.8	0.5	4.1
Clinical pharmacology	18	22.9	0.1	19	6.9	0.1	10.3
Endocrinology	221	16.6	1.2	243	19.7	1.3	9.8
Gastroenterology	368	7.5	2.0	407	9.6	2.1	10.6
General medicine	551	7.9	3.0	557	10.5	2.9	1.2
Geriatrics	197	23.9	1.1	205	25.4	1.1	3.8
Infectious diseases	95	26.5	0.5	125	27.5	0.7	31.0
Medical oncology	161	12.9	0.9	200	21.0	1.0	24.1
Neurology	284	9.4	1.6	290	10.7	1.5	2.3
Nuclear medicine	131	14.2	0.7	129	8.8	0.7	-1.2
Paediatric medicine	687	20.6	3.8	827	26.1	4.3	20.4
Renal medicine	158	18.8	0.9	187	19.0	1.0	18.2
Rheumatology	203	12.2	1.1	213	23.2	1.1	5.0
Thoracic medicine	266	13.1	1.5	280	15.2	1.5	5.4
<i>Pathology</i>	751	25.1	4.1	785	26.7	4.1	4.6
General pathology	112	13.7	0.6	118	10.2	0.6	5.6
Anatomical pathology	371	29.3	2.0	422	31.8	2.2	13.8
Clinical chemistry	59	5.5	0.3	56	8.9	0.3	-3.9
Cytopathology	39	31.9	0.2	24	45.0	0.1	-40.4
Forensic pathology	17	26.2	0.1	15	8.2	0.1	-9.7
Haematology	70	29.2	0.4	65	44.0	0.3	-6.8
Immunology	11	19.9	0.1	13	16.0	0.1	15.3
Microbiology	72	29.4	0.4	72	21.6	0.4	-0.1

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

(continued)

(b) Clinical genetics was not collated in the 1995 Medical Labour Force Survey.

Source: Medical Labour Force Surveys, 1995 and 1999.

Table A.13 (continued): Specialists: main specialty of practice, sex and rate (per 100,000 population), Australia, 1995 and 1999

Specialty of practice	1995			1999			% change 1995-99
	Specialists	% female	Rate ^(a)	Specialists	% female	Rate ^(a)	
<i>Surgery</i>	2,580	3.8	14.2	3,050	4.2	16.0	18.2
General surgery	1,041	3.4	5.7	1,058	3.8	5.6	1.6
Cardiothoracic surgery	94	5.7	0.5	111	6.1	0.6	18.6
Neurosurgery	106	4.1	0.6	113	6.4	0.6	6.1
Orthopaedic surgery	700	1.6	3.8	736	2.5	3.9	5.2
Otolaryngology (ENT)	316	3.6	1.7	298	3.4	1.6	-5.7
Paediatric surgery	70	7.6	0.4	79	17.9	0.4	13.8
Plastic surgery	232	10.2	1.3	267	8.3	1.4	15.0
Urology	206	3.1	1.1	240	1.3	1.3	16.2
Vascular surgery	132	3.7	0.7	149	4.8	0.8	12.8
<i>Other specialties</i>	8,216	17.4	45.2	8,703	21.1	45.7	5.9
Anaesthesia	1,810	18.9	9.9	2,052	18.7	10.8	13.4
Dermatology	287	28.4	1.6	312	32.5	1.6	8.7
Diagnostic radiology	1,020	14.2	5.6	1,107	17.7	5.8	8.6
Emergency medicine	232	16.9	1.3	342	21.9	1.8	47.1
Intensive care	198	8.7	1.1	262	12.2	1.4	32.4
Medical administration	83	9.2	0.5	62	16.6	0.3	-25.1
Obstetrics & gynaecology	981	12.3	5.4	1,100	16.5	5.8	12.1
Occupational medicine	107	14.0	0.6	39	12.7	0.2	-63.9
Ophthalmology	698	10.1	3.8	677	11.3	3.6	-3.0
Psychiatry	1,892	24.8	10.4	2,088	29.6	11.0	10.3
Public health medicine	34	20.0	0.2	52	28.2	0.3	53.4
Radiation oncology	125	24.0	0.7	164	23.1	0.9	31.3
Rehabilitation medicine	170	12.6	0.9	177	20.7	0.9	4.4
Other	263	19.3	1.4	270	24.8	1.4	2.5
Total	15,604	14.5	85.8	17,091	17.2	89.7	9.5

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

(b) Clinical genetics was not available in the 1995 Medical Labour Force Survey.

Source: Medical Labour Force Surveys, 1995 and 1999.

Table A.14: Specialists and specialists-in-training: age and proportion female, Australia, 1995 and 1999

Year/Occupation	Age (years)						Total	Average age
	<35	35-44	45-54	55-64	65-74	75+		
1995								
Specialists	1,021	5,101	5,052	2,857	1,314	258	15,604	49.0
% female	30.3	19.6	11.5	9.1	7.7	4.3	14.5	..
Specialists-in-training	3,512	673	88	—	—	—	4,273	31.7
% female	31.3	32.9	37.0	..	..	..	31.7	..
1999								
Specialists	793	5,459	5,411	3,654	1,444	330	17,091	49.9
% female	36.3	24.2	15.4	10.0	7.1	8.5	17.2	..
Specialists-in-training	3,647	854	134	4	—	—	4,640	32.3
% female	37.9	33.9	47.8	—	..	..	37.4	..

Source: Medical Labour Force Surveys, 1995 and 1999.

Table A.15: Specialists and specialists-in-training: total hours worked per week, Australia, 1995 and 1999

Specialty of practice	Total hours worked per week						Total	Per cent 65+ hours	Average hours
	1-19	20-34	35-49	50-64	65-79	80+			
Specialists									
1995									
Internal medicine	250	289	941	1,748	585	243	4,057	20.4	52.0
Pathology	52	88	270	301	30	10	751	5.3	44.8
Surgery	114	239	507	1,220	541	275	2,896	28.2	55.2
Other specialties	404	801	2,565	3,084	682	363	7,900	13.2	48.8
Total	820	1,417	4,283	6,354	1,837	892	15,604	17.5	50.5
1999									
Internal medicine	256	451	1,123	1,986	550	186	4,553	16.2	50.0
Pathology	48	85	308	312	23	9	785	4.1	43.9
Surgery	156	221	645	1,373	439	217	3,050	21.5	52.5
Other specialties	462	1,116	3,165	3,205	536	218	8,703	8.7	45.8
Total	923	1,872	5,240	6,876	1,548	631	17,091	12.7	48.1
Specialists-in-training									
1995									
Internal medicine	19	33	248	744	131	65	1,240	15.8	54.7
Pathology	2	—	105	20	5	3	134	5.6	46.3
Surgery	8	5	25	209	241	144	632	61.0	67.2
Other specialties	27	106	715	1,086	232	102	2,268	14.7	52.4
Total	55	144	1,093	2,059	608	314	4,273	21.6	55.0
1999									
Internal medicine	17	37	407	743	65	32	1,301	7.4	50.8
Pathology	2	—	103	51	6	3	165	5.6	46.7
Surgery	1	4	42	324	208	107	687	45.9	63.7
Other specialties	18	118	1,020	1,116	142	73	2,487	8.6	49.4
Total	38	160	1,572	2,233	421	215	4,640	13.7	51.7

Source: Medical Labour Force Surveys, 1995 and 1999.

Table A.16: Selected specialists: geographic area of main job, Australia, 1995 and 1999

Year/broad specialty of main practice	Capital city	Other metro. centre	Large rural centre	Small rural centre	Other rural area	Remote area	Total
	(Number per 100,000 population)						
1995							
General surgery	6.3	5.4	9.4	6.5	2.0	2.6	5.7
Anaesthesia	12.2	10.4	15.9	5.5	0.5	0.9	10.0
Obstetrics & gynaecology	6.5	5.1	7.7	3.5	0.9	1.0	5.4
Psychiatry	14.1	7.8	8.0	4.3	0.5	0.9	10.4
1999							
General surgery	6.0	4.2	8.9	8.1	2.1	2.3	5.5
Anaesthesia	13.1	9.8	18.9	5.8	0.7	0.9	10.8
Obstetrics & gynaecology	6.8	5.5	8.8	4.4	1.1	1.7	5.8
Psychiatry	14.8	8.1	8.1	3.9	0.8	1.8	11.0

Note: Population figures for rate calculations can be found in Tables A.2 and A.3.

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

Table A.17: Medicine student course completions: residency^(a) and level of course, Australia, 1990–99

Level of course	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Australian citizens or permanent residents										
Bachelor:										
Graduate entry	—	—	2	5	—	6	4	12	7	53
Bachelor honours	17	204	60	48	57	44	41	42	39	74
Bachelor pass	997	940	1,022	1,181	1,178	1,191	1,282	1,142	1,160	1,121
Total	1,014	1,144	1,084	1,234	1,235	1,241	1,327	1,196	1,206	1,248
% female	43.6	40.8	41.9	41.6	46.6	45.0	47.0	45.0	45.9	48.0
Average age	23.2	23.5	23.5	23.6	23.8	23.7	24.0	23.8	24.0	23.8
Postgraduate:										
Higher doctorate	34	36	35	28	28	39	37	27	42	13
PhD	130	165	142	138	168	190	228	258	262	287
Masters	46	76	37	35	54	58	80	76	72	124
Masters qualifying	—	—	2	—	—	—	—	—	2	—
Diploma/certificate	32	47	36	73	133	118	71	128	153	122
Total	242	324	252	274	383	405	416	489	531	546
% female	41.3	44.1	47.2	40.5	42.6	52.6	50.0	51.9	46.1	54.4
Average age	32.0	31.9	32.7	33.4	34.3	34.3	34.0	35.2	34.8	34.2
Overseas students										
Bachelor	44	73	52	67	85	134	150	180	150	148
Postgraduate	17	34	38	50	41	47	37	57	71	74
Total	61	107	90	117	126	181	187	237	221	222
Number of females	22	36	37	40	48	88	79	91	97	105
% female	36.1	33.6	41.1	34.2	38.1	48.6	42.2	38.4	43.9	47.3

(a) Before 1993, not all universities had citizenship information for all students completing courses, so these data include students for whom citizenship/residency status was unknown. Consequently, data before 1993 may slightly overstate the number of course completions by Australian citizen/resident students.

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

Table A.18: Temporary migration of Australian and non-Australian medical practitioners to and from Australia for employment: type of migration and country of previous/future residence, 1992-93 to 1999-00

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	% 1999-00
Temporary migration to Australia for long-term stay									
Country of previous residence									
New Zealand	50	48	63	41	65	53	96	116	13.8
UK/Ireland	148	193	241	278	325	341	400	453	54.0
Asia	25	32	37	37	56	54	69	104	12.4
South Africa	1	3	7	11	33	47	55	69	8.2
Other countries	17	22	28	45	49	51	67	97	11.6
Total	241	298	376	412	528	546	687	839	100.0
Temporary migration to Australia for short-term stay									
Country of previous residence									
New Zealand	52	57	49	56	58	74	156	104	6.8
UK/Ireland	334	444	641	277	793	778	873	904	59.0
Asia	25	38	46	37	57	103	203	193	12.6
USA/Canada	8	25	36	164	111	100	109	103	6.7
South Africa	—	3	14	20	50	54	98	159	10.4
Other countries	7	28	9	14	29	58	98	70	4.6
Total	426	595	795	568	1,098	1,167	1,537	1,533	100.0
Migration from Australia of temporary visitors after a long-term stay									
Country of future residence									
New Zealand	18	32	20	22	30	49	32	44	5.7
Other Oceania	14	9	17	17	20	12	9	9	1.2
UK/Ireland	187	161	192	269	265	335	190	295	38.0
Other Europe	18	31	35	41	55	49	38	58	7.5
Malaysia	32	26	35	31	32	36	33	46	5.9
China	38	31	39	39	46	60	76	69	8.9
Japan	15	31	25	19	25	24	16	16	2.1
Other Asia	83	76	82	124	139	158	104	139	17.9
USA/Canada	10	21	17	16	32	35	22	29	3.7
South Africa	2	2	4	2	13	26	20	33	4.2
Other countries	14	15	14	25	27	40	37	39	5.0
Total	431	435	480	605	684	824	577	777	100.0

Table A.18 (continued): Temporary migration of Australian and non-Australian medical practitioners to and from Australia for employment: type of migration and country of previous/future residence, 1992-93 to 1999-2000

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	% 1999-00
Migration from Australia of Australian residents for a long-term overseas stay									
Country of future residence									
New Zealand	9	13	12	17	23	16	13	14	3.4
Other Oceania	26	21	18	24	17	12	10	15	3.6
UK/Ireland	163	140	161	147	147	163	155	150	36.5
Other Europe	11	13	12	17	11	9	12	11	2.7
Middle East	23	21	23	22	14	22	21	22	5.4
Hong Kong	54	56	67	50	72	55	58	53	12.9
Other Asia	39	31	36	45	59	47	40	45	10.9
USA/Canada	101	69	93	87	90	88	93	75	18.2
South Africa	2	5	2	6	—	3	1	5	1.2
Other countries	11	10	10	9	9	15	18	21	5.1
Total	439	379	434	424	442	430	421	411	100.0

Source: AIHW from Department of Immigration and Multicultural and Indigenous Affairs data.

Table A.19: Permanent migration of Australian and non-Australian medical practitioners to and from Australia for employment: type of migration and country of previous/future residence, 1992–93 to 1999–00

	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00	% 1999–00
Permanent migration to Australia of overseas residents									
Country of previous residence									
New Zealand	39	49	74	71	63	69	110	260	47.8
Other Oceania	7	5	6	6	5	3	2	3	0.6
UK/Ireland	105	85	119	87	71	44	40	24	4.4
Other Europe	103	55	81	63	59	37	33	35	6.4
Middle East	11	15	22	24	17	16	14	18	3.3
Hong Kong	46	28	31	30	33	7	7	7	1.3
China	25	42	58	186	119	45	65	39	7.2
Other Asia	96	100	110	93	72	71	68	93	17.1
USA/Canada	13	19	13	25	13	19	15	13	2.4
South Africa	12	17	26	16	32	29	25	32	5.9
Other Africa	21	21	14	19	16	13	13	7	1.3
Other countries	2	9	4	6	—	5	16	13	2.4
Total	480	445	558	626	500	358	408	544	100.0
Permanent migration from Australia of Australian residents									
Country of future residence									
New Zealand	29	34	52	49	51	38	41	60	20.3
Other Oceania	1	1	—	2	2	—	1	3	1.0
UK/Ireland	37	31	41	32	37	46	60	85	28.7
Other Europe	6	9	7	6	4	8	13	12	4.1
Middle East	6	10	4	3	8	6	8	9	3.0
Asia	29	37	36	29	41	52	77	79	26.7
USA/Canada	22	25	13	27	15	21	26	43	14.5
Other countries	3	4	1	5	4	2	6	5	1.7
Total	133	151	154	153	162	173	232	296	100.0
Net permanent immigration									
Country of residence									
New Zealand	10	15	22	22	12	31	69	200	..
Other Oceania	6	4	6	4	3	3	1	—	..
UK/Ireland	68	54	78	55	34	–2	–20	–61	..
Other Europe	97	46	74	57	55	29	20	23	..
Middle East	5	5	18	21	9	10	6	9	..
Asia	138	133	163	280	183	71	63	60	..
USA/Canada	–9	–6	—	–2	–2	–2	–11	–30	..
Other countries	32	43	43	36	44	45	48	47	..
Total	347	294	404	473	338	185	176	248	..

Source: AIHW from Department of Immigration and Multicultural and Indigenous Affairs data.

Table A.20: Medicare: Number of services and services per capita by sex and age, and by patient State and Territory, 1998-99

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Males									
Number of services									
0-4	2,211,035	1,492,267	1,166,830	515,068	449,060	127,192	89,913	48,833	6,100,198
5-9	1,265,818	875,204	650,862	291,886	254,576	74,308	52,894	23,708	3,489,256
10-14	1,046,136	716,370	594,584	277,577	221,512	67,160	47,542	17,264	2,988,145
15-19	1,134,544	766,641	641,391	288,158	234,138	71,418	54,527	17,062	3,207,879
20-24	1,238,543	901,322	640,249	293,752	252,092	68,725	57,222	20,468	3,472,373
25-34	3,055,119	2,157,588	1,469,099	693,828	597,178	159,242	121,337	60,566	8,313,957
35-44	3,860,199	2,537,628	1,849,821	880,216	736,236	210,674	141,034	75,824	10,291,632
45-54	4,484,983	2,892,835	2,286,805	1,075,570	861,491	266,550	176,991	84,609	12,129,834
55-64	4,621,044	3,007,791	2,235,065	1,019,115	867,556	280,138	147,345	61,331	12,239,385
65-74	4,958,993	3,356,556	2,238,335	1,027,298	1,046,914	296,835	127,168	31,075	13,083,174
75+	2,857,035	2,097,867	1,320,525	623,894	707,486	158,705	71,840	10,754	7,848,106
<i>Total</i>	<i>30,733,449</i>	<i>20,802,069</i>	<i>15,093,566</i>	<i>6,986,362</i>	<i>6,228,239</i>	<i>1,780,947</i>	<i>1,087,813</i>	<i>451,494</i>	<i>83,163,939</i>
Services per capita									
0-4	9.98	9.44	9.42	7.87	9.33	7.85	8.33	5.38	9.33
5-9	5.54	5.27	4.97	4.26	5.00	4.23	4.78	2.62	5.11
10-14	4.68	4.42	4.61	3.95	4.29	3.79	4.27	2.15	4.44
15-19	5.03	4.66	4.83	4.12	4.55	4.07	4.25	2.25	4.70
20-24	5.48	5.16	4.96	4.09	4.92	4.53	4.01	2.29	5.02
25-34	6.32	5.92	5.53	4.77	5.53	5.18	4.90	3.05	7.56
35-44	7.80	7.07	6.92	5.96	6.49	5.94	5.92	4.53	7.06
45-54	10.46	9.34	9.51	8.36	8.49	8.33	7.94	6.56	9.50
55-64	15.96	14.36	14.29	12.70	12.68	12.68	12.14	9.56	14.49
65-74	22.73	21.11	20.48	18.89	18.81	17.66	18.20	12.77	21.01
75+	20.52	20.72	18.89	18.91	18.90	14.88	18.21	11.38	19.80
<i>Total</i>	<i>9.67</i>	<i>8.94</i>	<i>8.60</i>	<i>7.47</i>	<i>8.44</i>	<i>7.68</i>	<i>7.06</i>	<i>4.43</i>	<i>8.82</i>

(continued)

Table A.20 (continued): Medicare: Number of services and services per capita by sex and age, and by patient State and Territory, 1998–99

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Females									
Number of services									
0–4	1,945,575	1,266,781	1,023,808	448,521	395,605	110,130	82,124	41,316	5,313,860
5–9	1,197,672	837,532	625,719	281,785	241,073	73,061	52,056	21,800	3,330,698
10–14	1,026,732	715,976	584,111	275,390	224,513	70,163	47,338	18,555	2,962,778
15–19	1,816,320	1,239,378	1,117,420	522,478	372,596	138,553	89,085	35,085	5,330,915
20–24	2,587,694	1,833,386	1,467,401	700,888	489,823	169,145	123,002	57,933	7,429,272
25–34	6,743,571	5,018,867	3,503,437	1,785,041	1,287,219	408,341	297,529	157,411	19,201,416
35–44	6,374,320	4,454,446	3,282,264	1,657,225	1,261,676	402,536	267,614	127,305	17,827,386
45–54	6,265,170	4,319,437	3,318,490	1,577,052	1,292,929	415,051	273,636	105,532	17,567,297
55–64	5,289,962	3,595,756	2,611,237	1,184,458	1,064,976	345,703	180,379	50,183	14,322,654
65–74	5,491,555	3,769,830	2,532,747	1,128,937	1,174,751	348,877	144,724	25,248	14,616,669
75+	5,509,842	4,103,542	2,607,109	1,155,161	1,372,607	373,589	141,476	17,033	15,280,359
Total	44,248,413	31,154,931	22,673,743	10,716,936	9,177,768	2,855,149	1,698,963	657,401	123,183,304
Services per capita									
0–4	9.23	8.48	8.69	7.26	8.60	7.16	7.92	4.87	8.57
5–9	5.52	5.31	5.03	4.35	4.99	4.40	4.85	2.60	5.14
10–14	4.81	4.62	4.78	4.12	4.59	4.11	4.39	2.49	4.61
15–19	8.48	7.85	8.90	7.92	7.56	8.17	7.70	5.00	8.22
20–24	11.84	10.94	11.73	10.32	10.11	11.47	9.44	7.39	11.20
25–34	13.90	13.65	13.23	12.69	12.21	12.71	11.75	8.70	13.34
35–44	12.94	12.24	12.16	11.31	11.02	11.01	10.70	8.47	12.17
45–54	14.95	13.83	14.24	12.87	12.60	13.04	12.10	9.84	14.00
55–64	18.52	17.13	17.51	15.46	15.29	15.70	15.27	10.75	17.27
65–74	22.99	21.44	22.02	19.61	19.21	19.15	18.90	12.65	21.61
75+	24.81	25.24	24.92	22.51	22.85	21.58	22.30	15.07	24.43
Total	13.75	13.09	12.94	11.62	12.16	11.95	10.94	7.24	12.95
Total	74,981,862	51,957,000	37,767,309	17,703,298	15,406,007	4,636,096	2,786,776	1,108,895	206,347,243
Services per capita	11.72	11.04	10.77	9.53	10.32	9.85	9.01	5.75	10.90

Source: Medicare statistics, 1984–85 to March quarter 2002, Department of Health and Aged Care.

Table A.21: Estimated yearly losses of medical practitioners from retirement or death, Australia, 1995 and 1999

Age (years)	1995	1999
55–58	2,750	3,721
59–62	2,102	2,636
63–66	1,868	1,864
67–70	1,568	1,480
71–74	881	1,175
75+ ^(a)	0	0
Total losses		2,013

(a) Assumes all practitioners aged 75+ are effectively retired.

Glossary

Age

The number of completed years from year of birth to the year of the survey.

Clinician

A medical practitioner who is involved in the diagnosis and/or treatment of patients, including recommending preventative action. In this publication, a medical practitioner who engages in clinical practice in any job is classified as a clinician.

Country

The *Australian Standard Classification of Countries for Social Statistics* (ABS 1990) has been used to classify country of initial qualification into the following categories:

1. *Australia*
2. *New Zealand*
3. *United Kingdom and Ireland*: England, Scotland, Wales, Northern Ireland, Ireland
4. *Asia*: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Viet Nam, People's Republic of China, Hong Kong, Japan, Democratic People's Republic of Korea (North Korea), Republic of Korea (South Korea), Macau, Mongolia, Taiwan, Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka
5. *Other countries*: all countries not specified above.

Deputising service

A medical practitioner, or group of practitioners, who provides after-hours primary care, but not continuing care, to the patients of the subscribing primary care medical practitioners.

General practitioner (RACGP) trainees

A medical practitioner under the supervision of an RACGP fellow in a job recognised as leading to the RACGP Fellowship. The Health Insurance Commission classifies these trainees as vocationally registered general practitioners in the Medicare data in this report. See also *Vocationally registered general practitioner*.

Geographic region classification

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

Metropolitan areas

1. *Capital cities* consist of the State and Territory capital cities: Sydney, Melbourne, Brisbane, Perth, Adelaide, Hobart, Darwin and Canberra.
2. *Other metropolitan centres* consist of one or more statistical subdivisions that have an urban centre of population of 100,000 or more: Newcastle, Wollongong, Queanbeyan (part of Canberra–Queanbeyan), Geelong, Gold Coast–Tweed Heads, Townsville–Thuringowa.

Rural zone

3. *Large rural centres* are statistical local areas where most of the population reside in urban centres of population of 25,000 to 99,999. These centres are: Albury–Wodonga, Dubbo, Lismore, Orange, Port Macquarie, Tamworth, Wagga Wagga (NSW); Ballarat, Bendigo, Shepparton–Mooroopna (Vic); Bundaberg, Cairns, Mackay, Maroochydore–Mooloolaba, Rockhampton, Toowoomba (Qld); Whyalla (SA); and Launceston (Tas).
4. *Small rural centres* are statistical local areas in rural zones containing urban centres of population between 10,000 and 24,999. These centres are Armidale, Ballina, Bathurst, Broken Hill, Casino, Coffs Harbour, Echuca–Moama, Forster–Tuncurry, Goulburn, Grafton, Griffith, Lithgow, Moree Plains, Muswellbrook, Nowra–Bombaderry, Singleton, Taree (NSW); Bairnsdale, Colac, Echuca–Moama, Horsham, Mildura, Moe–Yallourn, Morwell, Ocean Grove–Barwon Heads, Portland, Sale, Traralgon, Wangaratta, Warrnambool (Vic); Caloundra, Gladstone, Gympie, Hervey Bay, Maryborough, Tewantin–Noosa, Warwick (Qld); Mount Gambier, Murray Bridge, Port Augusta, Port Lincoln, Port Pirie (SA); Albany, Bunbury, Geraldton, Mandurah (WA); and Burnie–Somerset, Devonport (Tas).
5. *Other rural areas* are the remaining statistical areas within the rural zone. Examples are Cowra Shire, Temora Shire, Guyra Shire (NSW); Ararat Shire, Cobram Shire (Vic); Cardwell Shire, Whitsunday Shire (Qld); Barossa, Pinnaroo (SA); Moora Shire, York Shire (WA); George Town, Ross (Tas); and Coomalie, Litchfield (NT).

Remote zone

These are generally less densely populated than rural statistical local areas and are hundreds of kilometres from a major urban centre. Data in this publication are reported for the zone which comprises the two areas shown below.

6. *Remote centres* are statistical local areas in the remote zone containing urban centres of population of 5,000 or more: Blackwater, Bowen, Emerald, Mareeba, Moranbah, Mount Isa, Roma (Qld); Broome, Carnarvon, East Pilbara, Esperance, Kalgoorlie/Boulder, Port Hedland, Karratha (WA); and Alice Springs, Katherine (NT).
7. *Other remote areas* are the remaining areas within the remote zone. Examples are: Balranald, Bourke, Cobar, Lord Howe Island (NSW); French Island, Orbost, Walpeup (Vic); Aurukun, Longreach, Quilpie (Qld); Coober Pedy, Murat Bay, Roxby Downs (SA); Coolgardie, Exmouth, Laverton, Shark Bay (WA); King Island, Strahan (Tas); Daly, Jabiru, Nhulunbuy (NT).

Hospital non-specialist

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

Hours worked

The hours per week that were self-reported by responding medical practitioners as the average hours worked in each medical-related job over the four weeks before the survey. Hours worked exclude time spent on travel between work locations (except travel to call-outs) and voluntary professional activities. In the editing of survey responses, maximum hours worked in all jobs have been limited to 126 hours per week.

Intern

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

Locum tenens

A medical practitioner who acts as a substitute for another medical practitioner while that practitioner is temporarily absent from their practice.

Main job

The job and location in which a practitioner spends the most time. The medical labour force survey has provision for a practitioner to report up to three jobs. These jobs may be similar work in separate locations, for example, a city specialist practice and an outreach practice in rural areas, or different medical-related jobs, for example, a clinical practice and teaching medicine at a university.

Medical labour force

Defined for each State and Territory as:

- registered medical practitioners employed in medicine; plus
- registered medical practitioners not employed in medicine but looking for work in medicine.

Medical practitioners employed in medicine

A registered medical practitioner in an occupation that uses the skills and knowledge of the person's medical qualification. This category includes those on maternity or other extended leave of three months or more.

Mental health-related separations

Mental health-related separations from hospital include all separations with a mental health-related principal diagnosis. Separations with specialised psychiatric care occur if the patient is reported as having one or more days in a psychiatric hospital or in a specialised psychiatric unit of an acute care hospital.

Occupation

A description of the job function within the field of medicine of a person with medical qualifications. The occupations are:

- clinician: a medical practitioner mainly involved in the care and treatment of individuals, including diagnosis and preventative action;
- administrator: a person mainly employed in medical administration;
- teacher/educator: a person teaching or training persons in medicine for their initial qualification or in advanced skills after initial qualification;
- researcher: a person primarily engaged in medical research;
- public health physician: a medical practitioner primarily engaged in identifying disease and illness and the conditions for disease and illness, and in implementing preventative measures which affect the health of the general public;
- occupational health physician: a medical practitioner primarily engaged in identifying disease and illness, and the conditions for disease and illness, and implementing preventative measures which arise from employment in particular occupations or industries; and
- other: a job function in medicine which is not one of the above – for example, industrial relations.

Other salaried hospital career practitioner

Generally, a medical practitioner who mainly works in a hospital after completing all professional training and who is referred to as a career medical officer (CMO) or hospital medical officer (HMO) in most States. This category includes some practitioners who have completed an internship and have been registered to practise under supervision.

Overseas-trained doctor (OTD)

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

Primary care practitioner

A practitioner engaged in general practice or in the primary care of patients. This category includes practitioners recognised by Medicare as VRGPs, RACGP Fellows, RACGP trainees and other medical practitioners whose main practice is unreferral patient attendances.

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.

Separations (hospital)

'Separation' refers to the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care. Details of the episode of care are not recorded when a patient is admitted for two main reasons:

- Patients are not always in a position to provide their personal details when they are admitted
- All information about the treatment received by a patient and their outcomes is known at the time of separation.

Separation can occur on several occasions for any one person.

Specialist

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

The Health Insurance Commission recognises as a specialist a medical practitioner who has made formal application for recognition as a specialist and who:

- is registered as a specialist under State or Territory law; or
- holds a fellowship of a specified specialist college; or
- is considered eligible for recognition as a specialist or consultant physician by a specialist recognition advisory committee.

Where a medical practitioner has been recognised as a specialist or consultant physician for the purposes of the Health Insurance Act, Medicare benefits are payable at the appropriate higher rate for certain services rendered in the practice of the specialty, provided the patient has been referred by:

- another medical practitioner; or
- a registered dental practitioner, where the referral arises out of a dental service; or
- a registered optometrist, where the specialist is an ophthalmologist.

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.

Temporary resident doctor (TRD)

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

Vocationally registered general practitioner (VRGP)

A primary care practitioner who has been registered by the Health Insurance Commission as a recognised general practitioner. The criteria for registration as a vocationally registered general practitioner are certification from either the Royal Australian College of General

Practitioners, a Vocational Registration Eligibility Committee, or the Vocational Registration Appeal Committee, that the practitioner's medical practice is predominantly general practice, and that the practitioner has appropriate training and experience in general practice.

In assessing whether a practitioner's medical practice is predominantly general practice, only services eligible for Medicare benefits are considered. To qualify, 50% of the clinical time and services claimed against Medicare must be in general practice as defined. The RACGP and Vocational Registration Eligibility Committee or Vocational Registration Appeal Committee will have regard to whether the practitioner provides a comprehensive primary medical service, including: treating a wide range of patients and conditions using a variety of accepted skills and techniques; providing services away from the practitioner's surgery on request (for example, home visits); and making appropriate provision for the practitioner's patients to have access to after-hours medical care.

The training and experience which the RACGP regards as appropriate for eligibility is the attainment of Fellowship of the RACGP or other postgraduate qualifications and training of a standard equivalent to that accepted for the award of the Fellowship.

Continued vocational registration depends on the practitioner's involvement in appropriate continuing medical education and quality assurance programs approved by the RACGP, and on the practitioner continuing to work predominantly in general practice.

Work setting

The functional use of the premises where a medical job is located.

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