# 1 Main features

Of the health occupations, medicine has been given the highest priority at the national level by government in terms of workforce planning. The difficulties faced by government and by the profession in addressing imbalances in the supply of medical services are discussed in *Medical Workforce Supply and Demand In Australia – A Discussion Paper* (AMWAC and AIHW 1998). That paper provides an overview of interventions in recent years which influence workforce supply. These include changes in recruitment and training of medical students, increasing use of overseas-trained doctors to fill gaps, recruitment and retention incentive schemes for areas of shortage, changes in access to Medicare provider numbers, incentives for practice amalgamation, changes to registration requirements for overseas-trained doctors, an Australian Medical Association campaign to reduce hours worked by junior hospital doctors and a limited expansion by some State health authorities of the role of nurses.

Many of these changes either had not commenced or had yet to impact on the workforce at the time of principal data collection for this report in late 1997. Change in relation to many recent workforce initiatives will therefore only become apparent in future reports. However, the data do demonstrate progress in relation to a number of longstanding programs, with increases seen in rural general practitioner (GP) numbers, in the proportion of rural students entering medical schools, in the supply of specialists, and in the supply of temporary resident overseas-trained doctors.

More detail may be found in analyses in later chapters of this report, in the data presented in this publication and in supplementary statistical tables published on the Institute's Internet site (http://www.aihw.gov.au).

#### **Overall numbers**

- The Australian medical labour force in December 1997 comprised 49,246 practitioners of whom 48,321 were employed and practising in medicine.
- Of the employed practitioners 45,641 were clinicians and 2,680 were in non-clinical roles as administrators and educators, and in public health and occupational health.
- Of the clinicians, 20,557 (45.0%) were primary care practitioners, 4,475 (9.8%) hospital non-specialists, 15,992 (35.0%) specialists and 4,617 (10.1%) specialists-in-training.
- There were 245.1 clinicians per 100,000 population in Australia in 1997 compared with the average of 253.4 in 1996 in the 29 OECD countries. However, the Australian level of medical workforce provision is significantly greater than in New Zealand and Canada, where the health systems are comparable, and where the medical workforces have a similar structure to that in Australia. These have 209.7 and 210.6 practitioners per 100,000 population respectively in 1996. (OECD 1998).

## Growth in numbers of medical practitioners from 1994 to 1997

Medical Workforce Supply and Demand in Australia – A Discussion Paper (AMWAC and AIHW 1998) noted that excessive workforce growth leading to oversupply might be associated with clinically unnecessary servicing and other undesirable outcomes. On the other hand,

workforce shortages disadvantage patients in terms of access and price of services, as well as being associated with excessive working hours for many medical practitioners.

In *Australian Medical Workforce Benchmarks* (1996) an analysis of 1994 data found that although Australia had close to desirable benchmark numbers of doctors in clinical practice per 100,000 population (229.0 compared with a benchmark 221.1), the workforce was poorly distributed. There were excessive numbers of general practitioners in metropolitan areas but shortages in many medical specialties, in the hospital non-specialist workforce and of doctors of all types in rural areas. The two States with medical workforce provision well below the national average were Queensland and Western Australia, while the State with the highest provision was South Australia.

The length of time taken to fully train general practitioners and specialists means that strategies to address underlying structural problems such as too high a recruitment in the past of medical students from non-rural backgrounds may take 20 years to significantly impact on the distribution of the workforce. Hence, positive changes which may have occurred between 1994 and 1997 are most likely to be the result of short-term solutions such as increasing the numbers of temporary resident overseas-trained doctors, or the outcomes of longer term planning which has been in place for several years. The latter includes enhancements to infrastructure in major rural hospitals by State governments; Commonwealth, State and Local Government incentive schemes for rural practice; and efforts by specialist Colleges, the Rural Doctors Association of Australia and others to increase provision of rural medical services.

Between 1994 and 1997, the following changes occurred:

- The population of Australia increased by 3.7%.
- The total medical workforce increased by 5.2%, with clinicians per 100,000 population increasing by 0.7% in metropolitan areas and by 4.5% in rural areas.
- The specialist workforce increased by 4.6% (0.9% per 100,000 population), with the number of practitioners recognised as surgeons increasing by 3.3% and of non-surgeons by 5.0%.
- The hospital non-specialist workforce was unchanged. However, full-time equivalent (FTE) salaried medical officers in public hospitals increased by 17.5% between 1994–95 and 1997–98. These included accident and emergency and other salaried specialists as well as interns, resident medical officers (RMOs), career medical officers (CMOs) and many temporary resident doctors.
- The general practice workforce increased by 6.2%. The Department of Health and Aged Care (DHAC) data show the number of FTE GPs increased by 5.2% in metropolitan areas and by 2.6% in rural areas.
- The medical workforces in Queensland and Western Australia increased by 8.8% and 10.9% respectively.
- The medical workforce in South Australia increased by 2.3%.

The latest figures on annual change indicate:

- a slowing in the growth of the total medical workforce between 1996 and 1997 to 1.2%;
- the numbers of surgeon Medicare providers increasing by 1.7% between 1996–97 and 1997–98 and of non-surgeons by 4.0%;
- the numbers of specialists-in-training increasing by 2.0% between 1997 and 1998, with surgical trainees increasing by 4.2% and non-surgical trainees by 1.7%;

- a slowing in the growth of the general practice workforce to 0.3% in 1997–98, with FTE numbers increasing by 0.9%; and
- FTE salaried hospital medical officers in public hospitals increasing by 8.3% from 1996–97 to 1997–98.

## **Distribution of medical practitioners**

In December 1997 the distribution of the medical workforce had the following features:

- There was a 22.8% difference between the States and Territories with the lowest and highest supply. There were 223.2 clinicians per 100,000 population in Western Australia, 226.7 in Queensland, 230.1 in the Northern Territory, 232.4 in Tasmania, 244.2 in Victoria, 255.7 in New South Wales, 272.1 in South Australia and 274.0 in the Australian Capital Territory. (It should be noted that the ACT provides a significant amount of medical services to New South Wales residents.)
- The numbers of hospital non-specialists per 100,000 population varied among the States and Territories, from 48.3 per 100,000 population in the Northern Territory to 12.4 in Victoria. High employment of salaried doctors in hospitals in the Northern Territory compensated to some extent for below average employment of doctors in private practice, while low hospital non-specialist employment in Victoria was offset by relatively high specialist and specialist-in-training employment.
- There were 85.9 medical specialists per 100,000 population in Australia up from 85.5 the previous year. Across the States and Territories the rates varied from 100.3 per 100,000 in South Australia and 92.8 in Victoria to 75.1 in Queensland, 69.4 in Tasmania and 56.3 in the Northern Territory.
- There were 108.5 primary care practitioners per 100,000 population in large rural centres (one practitioner per 1,151 population), 95.0 in small rural centres (one per 1,053 population), 76.8 in other rural areas (one per 1,303 population) and 71.7 population in remote areas (one per 1,395 population). In comparison, there were 121.4 primary care practitioners per 100,000 population in capital cities (one per 824 population) and 107.4 in other metropolitan areas (one per 931 population).
- In remote areas the lower provision of primary care practitioners is partially offset by a higher provision of non-specialist hospital doctors. There were 16.9 hospital non-specialists per 100,000 population in remote areas compared with 7.7 in small rural centres and 2.5 in other rural areas.

It is expected that in time an increase in the proportion of medical students with a rural background will result in an increase in the proportion of Australian medical graduates willing to practise in rural areas. In 1998, 13.3% of students commencing initial medical degrees were from rural and remote areas while the proportion ranged between 9.5% and 11.6% for the nine-year period 1989 to 1997. This is still much less than the 25.7% of the 15–24 year old feeder population living in those areas.

## Female medical practitioners

In Female Participation In The Australian Medical Workforce (AMWAC and AIHW 1996) it was estimated that an average female GP over a lifetime will work 66.0% of the hours of an average male GP, while for the average female specialist this proportion was 74.9%. The data also indicated that female doctors are relatively more likely to practise in metropolitan areas than male doctors, and that female medical students are much more likely than males to choose general practice as a career path and less likely to select specialty practice,

especially surgery. A rising proportion of female doctors in the medical workforce may therefore over time be expected to significantly affect both the supply and distribution of medical services, without intervention to adjust training numbers and to make rural and specialist practice more attractive to female doctors.

Features of the female medical workforce in December 1997 were:

- There were 13,549 female clinicians representing 27.8% of the clinician workforce—up from 25.0% in 1993.
- The age distribution of female medical practitioners reflected the general pattern of increasing female participation in higher education and employment. In 1997, females were 10.0% of employed practitioners over the age of 65 years, 13.7% for those aged 55-64 years, 21.3% of those 45–54 years, 33.1% of those 35-44 years, 42.7% of those 25-34 years and 45.2% of those aged less than 25 years. Female participation will continue to increase as the female portion of students commencing initial medical degrees increased from 43.6% in 1989 to 50.3% in 1998, the first time it has exceeded 50%.
- Female practitioners were 33.0% of the primary care workforce overall but were 53.2% of the primary care workforce aged 25–34 years, 40.4% of those aged 35–44 years and tapered off in line with the overall pattern of female participation. Females were 60.4% of the primary care trainees and a continuation of this pattern will lead to a relatively rapid rise in the proportion of female GPs over the next decade.
- Preliminary analysis of the first nine months of 1998–99 data from the Bettering the Evaluation And Care of Health (BEACH) collection has found significant differences in the practice characteristics of male and female GPs (AIHW 1999a). The General Practice Statistics and Classification Unit, a collaborating unit of AIHW at the University of Sydney conducts this collection.

## Hours worked

Hours worked are of particular workforce planning interest because:

- Excessive hours worked per week on a regular basis, such as 65 hours per week or more, have been identified as a leading indicator of workforce shortage.
- Internationally, there have been campaigns to change a medical training culture of excessive hours being the norm for junior hospital doctors. Such hours are considered to be detrimental to doctor performance and therefore not in the interests of quality patient care, while there is also concern about the impact of high levels of stress on doctors from overwork. In 1998 the Australian Medical Association launched a campaign for safer working hours. The *British Medical Journal* (28 November 1998) has reported that the European Commission has proposed making it illegal from 1999 for junior doctors in European Union countries to work more than 54 hours a week on average over four months, and also that governments would be given seven years to reduce this to 48 hours. Such a reduction in working hours suggests the need for a re-engineering of delivery of hospital medical services, possibly involving significant additional employment of hospital non-specialist doctors.
- Increasing part-time employment, particularly with a rising proportion of female doctors, suggests that training numbers may need to be boosted to meet future workforce requirements.

Trends in hours worked between 1994 and 1997 were:

• Average hours worked for all doctors were almost unchanged from 48.1 hours in 1994 to 47.9 hours in 1997.

- The proportion of doctors working 65 or more hours per week increased from 10.8% in 1994 to 14.2% in 1997.
- In general practice, the rise in the proportion of female doctors was accompanied by a slight decline in the average hours worked of all GPs from 44.9 hours in 1994 to 44.7 hours in 1997 and an increase from 9.6% to 11.5% in those working 65 or more hours per week. In rural areas, the rise in the numbers of GPs per 100,000 population was accompanied by a small decline in the average hours worked per week from 49.0 hours to 48.6 hours, and an increase in the proportion of GPs working 65 or more hours per week from 14.4% in 1994 to 16.7% in 1997.
- In the hospital non-specialist workforce, average hours worked were 52.6 in 1994 and 50.4 in 1997 while the proportion working 65 hours or more per week was 7.7% in 1994 and 11.6% in 1997.
- In the surgical specialist workforce where there was 3.3% growth, average hours worked were 54.4 in 1994 and 55.2 in 1997 while the proportion working 65 or more hours per week was 18.5% in 1994 and 28.1% in 1997.
- In the non-surgical specialist workforce, which experienced growth of 5.0%, average hours worked were 48.3 in 1994 and 48.4 in 1997 while the proportion working 65 hours or more per week was 9.3% in 1994 and 14.6% in 1997.
- Among specialists-in-training, where the proportion of females increased from 29.4% to 33.8%, average hours worked were 55.4 in 1994 and 53.5 in 1997 while the proportion working 65 hours or more per week was 22.1% in 1994 and 18.6% in 1997.

Other features of hours worked in December 1997 included the following.

- The highest proportions of doctors reporting working 80 or more hours per week were surgeons (8.9%), specialists-in-training (5.1%), internal medicine specialists (5.0%), and interns and resident medical officers (4.6%). The specialties where more than 10% of the practitioners reported working more than 80 hours per week were medical oncology, forensic pathology, cardiothoracic surgery, neurosurgery, paediatric surgery, and vascular surgery.
- In the primary care practitioner workforce, male vocationally registered general practitioners (VRGPs) worked an average of 51.3 hours per week and female VRGPs worked an average of 33.9 hours per week, mainly because 52.6% of females and only 11.5% of males worked fewer than 35 hours per week.
- Some 4.0% of male and 1.2% of female primary care practitioners respectively worked 80 or more hours per week. These proportions almost doubled in small rural centres, other rural and remote areas (7.2% for males and 2.2% for females).
- Only 4.3% of male and 3.8% of female interns and RMOs worked less than 35 hours per week and 18.4% of males and 15.8% of females worked more than 65 hours per week.
- 60.4% of male specialists worked 50 hours or more per week compared with 32.3% of females. Males worked an average of 51.4 hours per week and females an average of 41.4 hours.
- The supply shortage of medical practitioners in rural and remote regions is reflected in the working hours of practitioners in those areas. Medical practitioners employed in rural and remote areas worked an average of 49.6 hours per week compared with 47.2 hours per week in metropolitan areas. This average was higher in remote areas (50.4 hours) as 87.5% of doctors in remote areas were working full-time (35 hours or more per week). Some 17.1% of rural practitioners and 18.5% of remote practitioners worked 65 hours or more per week, compared with 13.2% in metropolitan centres.

 Average hours per week worked by male VRGPs increased relatively uniformly across all geographic regions, ranging from around 51 hours in metropolitan centres to 55.6 hours in other rural areas and 54.4 hours in remote areas. Female VRGPs worked an average of around 33 hours per week in metropolitan and large and small rural centres, 37.6 hours in other rural areas and 43.6 hours in remote areas.

# Aboriginal medical practitioners and health service employment

At the 1996 population census, there were 29 general medical practitioners, 12 medical practitioners in training, 20 specialists and also 21 medical administrators who identified as Aboriginal or Torres Strait Islander. The specialists included five pathologists and four surgeons.

In 1997 there were 49 Aboriginal and Torres Strait Islanders training to be doctors at Australian universities. In 1998, 10 Aboriginal and Torres Strait Islanders commenced undergraduate medical courses at Australian universities.

In December 1997 there were 522 medical practitioners who indicated that the employment setting of their main, second or third job was an Aboriginal health service. For 218 of these, it was their main job. Of these 218:

- 41.9% were female;
- 65.3% were primary care practitioners; 18.3% were specialists; 2.8% were hospital nonspecialists; 6.3% were specialists-in-training; and the remaining 7.3% worked in a nonclinical field including administration and education;
- 58.5% were employed in a metropolitan area;
- 63.3% worked full-time (35 or more hours per week). The average was 38.1 hours in 1996 and 37.0 hours per week in 1997.

## Medical education and training

In 1998 there were 1,221 Australian citizen and permanent resident students who commenced undergraduate medicine courses. During 1994–96, there was a hiatus in students commencing initial medicine courses while Flinders University, the University of Queensland and the University of Sydney introduced a four-year postgraduate 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 intakes to the new courses at the University of Queensland and the University of Sydney began in 1997. The University of Sydney is expected to reach its planned annual intake of 186 new students in the 1999 academic year.

General practitioner trainees practise under the supervision of an RACGP Fellow. The Commonwealth Government's Medical Training Review Panel collects data from the medical colleges on the numbers of training positions and trainees. The RACGP reported that there were 1,441 general practice trainees in 1998 (Department of Health and Aged Care 1998).

Characteristics of GP trainees in December 1997 included the following.

- 60.4% were female.
- 40.4% of female trainees worked fewer than 35 hours per week and averaged 35.6 hours per week, compared with 11.5% of males working fewer than 35 hours per week and a weekly average of 46.4 hours.

• 68.9% of male trainees were located in metropolitan centres, 28.7% in rural areas and 2.4% in remote areas. Females were less likely to work in rural areas – 74.4% were located in metropolitan centres, 23.1% in rural areas and 2.5% in remote areas.

There were an estimated 4,617 specialists-in-training enumerated in the AIHW medical labour force survey in 1997. In the labour force survey specialists-in-training are self-identified.

In 1998 the Medical Training Review Panel reported that there were 4,120 clinician specialists-in-training in Australia – 3,307 in advanced training positions and 813 in basic training positions (Department of Health and Aged Care 1998). These data exclude general practice trainees, Australians in overseas training positions and the majority of adult medicine and paediatric medicine basic trainees.

The AIHW survey showed that the specialties with the highest numbers in training were anaesthesia (597), psychiatry (568), emergency medicine (441), paediatric medicine (388), and general medicine (320). The 441 trainees in emergency medicine exceeded the 285 specialists who reported that they practised emergency medicine, while at the other end of the scale some specialties had very low percentages of trainees to specialists—particularly vascular surgery (7.0%), cytopathology (0), clinical chemistry (12.7%) and clinical immunology (10.3%). The relatively high number of emergency medicine trainees reflects emergency medicine being a relatively new and rapidly growing specialty; the numbers of trainees are expected to reduce from 668 in 2000 to 177 in 2010 (AMWAC 1997).

## **Temporary resident doctors**

State health authorities during the 1990s have made increasing use of temporary resident overseas-trained doctors (TRDs) to fill positions in hospitals, general practice and locum services.

In 1997–98, there were 1,713 medical practitioners who were citizens of foreign countries who arrived in Australia to take up temporary employment – 546 for a long-term stay and 1,167 for a short-term stay. Of these, 65.3% had previously resided in the United Kingdom or Ireland and 7.4% in New Zealand. This arrival of temporary resident doctors was a 5.3% increase on 1996–97 which had a 65.9% increase on the 980 in 1995–96, despite changes in access by TRDs to rendering of Medicare services introduced in late 1996.

Occupational trainees represented 23.1% of the 1,713 TRDs entering Australia in 1997–98 and these make a significant contribution to the hospital workforce in most States.

Most entered for a stay of less than 12 months with the average expected stay being one year. Of the overseas-trained temporary resident medical practitioners included in the AIHW medical labour force survey:

- 20.4% were employed in primary care, 41.6% were hospital non-specialists, 13.3% were specialists, 21.1% were specialists-in-training and the remaining 3.6% were non-clinicians.
- 52.9% had obtained their initial qualification in the United Kingdom or Ireland, 19.8% in New Zealand, 10.5% in Asia and 16.6% in other countries.
- 64.1% worked in their main job in a metropolitan area, 25.1% in a rural area and 10.8% in a remote area.
- 73.0% practised in acute care hospitals in their main job and 16.9% from private rooms.

Offsetting the flow of TRDs to Australia was the departure of Australian-trained doctors for overseas to gain experience or for further training. During 1997–98, there were 430 Australian citizen or permanent resident medical practitioners who left Australia to take up

temporary employment overseas for more than a year. Of these, 37.9% were intending to work in the United Kingdom or Ireland, 23.7% in Asia, 20.5% in the United States of America or Canada and 3.7% in New Zealand. Data are not available on the number of Australians departing for employment overseas for periods of less than a year.

#### Overseas-trained doctors

Overseas-trained doctors (OTDs) have contributed greatly to the supply of medical practitioners in Australia, both as permanent additions to the workforce and as temporary residents. There were 9,873 overseas-trained doctors in the Australian medical workforce in 1997, representing 20.4% of the 48,321 employed medical practitioners.

Because the medical workforce had been increasing at a much faster rate than population growth, national medical workforce policy since 1992 has been to restrict permanent net additions to the Australian workforce of OTDs to around 200 per year. Changes in government policy during 1999 are to allow limited additional numbers of permanent resident overseas-trained doctors, with recognised skills, to practise in designated rural areas.

More than one in four medical practitioners working in Western Australia, Northern Territory and Tasmania obtained their initial qualification overseas. In Western Australia and Tasmania, 18.8% and 16.7% respectively, qualified in the United Kingdom or Ireland. In the Northern Territory, 13.7% of all practising medical practitioners had obtained their initial qualification from Asia, compared with the national average of 5.9%.

Permanent resident overseas-trained medical practitioners were more likely to work in a rural or remote area if graduates from the United Kingdom or Ireland (28.9% worked in rural areas and 2.6% in remote areas), compared with those who had qualified in Asia initially (10.5% in rural areas and 0.7% in remote areas) or New Zealand (12.8% and 1.2% respectively).

During 1997–98, 173 medical practitioners permanently migrated from Australia, of whom 30.0% went to Asia, 26.6% to the United Kingdom or Ireland, and 22.0% to New Zealand.

## **Permanent migration and Australian Medical Council approvals**

A significant source of permanent additions to the Australian medical workforce is overseas-trained medical practitioners who have permanent resident status and who have gained full or conditional eligibility to practise by meeting examination and other requirements of the Australian Medical Council (AMC). In 1997–98, there were 358 medical practitioners who were citizens of foreign countries who permanently migrated to Australia. Of these 32.4% had previously resided in Asia, 19.3% in New Zealand, and 12.3% in the United Kingdom or Ireland. Historically, many of these permanent migrants have been unable to meet Australian registration requirements and have been unable to practise in Australia.

In 1998, a total of 180 permanent resident overseas-trained medical practitioners passed the AMC's clinical examination and were eligible for registration. A further 53 overseas-trained specialists qualified for registration after recognition of their qualifications by a specialty College and the AMC.

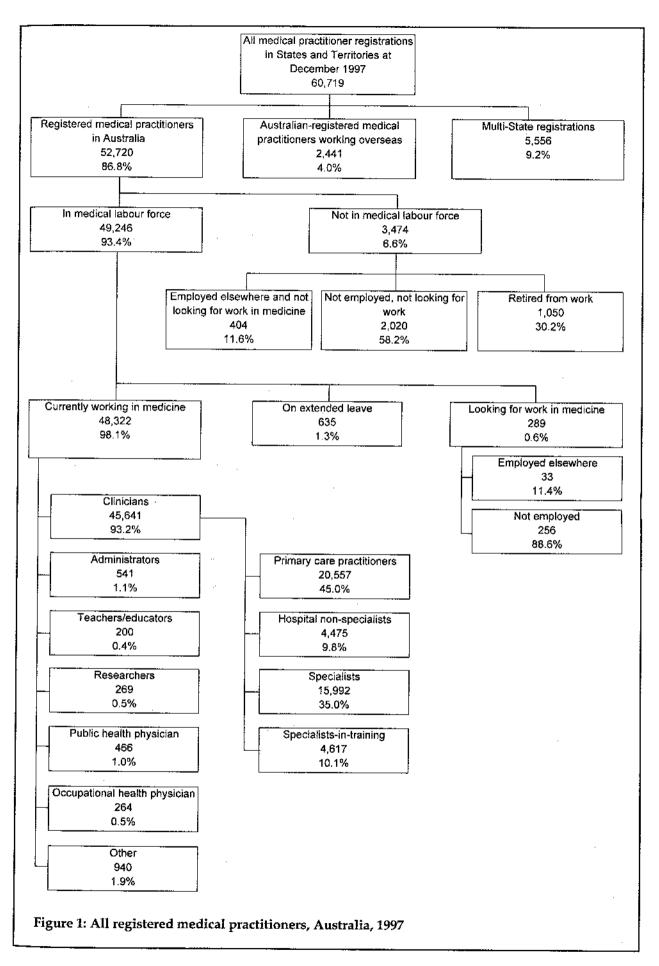


Table 1: Employed clinician medical practitioners: States and Territories, 1993-97

Үеаг	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total
1993	15,036	10,659	6,902	3,912	3,597	1,019	398	778	42,300
1994	<sup>(1)</sup> 15,456	10,838	7,137	3,951	3,781	1,066	383	791	43,404
1995	(r)15,739	11,142	7,430	4,037	3,960	1,067	406	802	44,583
1996	<sup>(r)</sup> 16,045	11,304	7,639	4,068	4,015	1,095	414	836	45,416
1997	16,117	11,306	7,767	4,033	4,044	1,098	433	842	45,641

<sup>(</sup>r) Revision of estimates published in previous reports. See 'Explanatory note'.

Table 2: Employed clinician medical practitioners: occupation and sex, Australia, 1993-97

Type of clinician	1993 <sup>(r)</sup>	1994 <sup>(r)</sup>	1995 <sup>(r)</sup>	1996	1997	% increase 1993 to 1997
			Males			- Mit-en
Primary care	13,255	13,364	13,586	13,864	13,781	4.0
Hospital non-specialist <sup>(a)</sup>	2,420	2,620	2,736	2,653	2,594	7.2
Specialist <sup>(a)</sup>	13,177	13,151	13,344	13,438	13,503	2.5
Specialist-in-training(a)	2,863	2,969	2,920	3,022	3,058	6.8
Total	31,714	32,104	32,585	32,977	32,935	3.8
		1	Females			
Primary care	5,664	5,989	6,351	6,631	6,776	19.6
Hospital non-specialist <sup>(a)</sup>	1,647	1,890	2,033	2,011	1,881	14.2
Specialist <sup>(a)</sup>	2,064	2,131	2,260	2,343	2,490	20.6
Specialist-in-training(s)	1,211	1,289	1,353	1,454	1,559	28.7
Total	10,586	11,299	11,998	12,439	12,706	20.0
•		1	Persons			
Primary care	18,918	19,353	19,938	20,495	20,557	8.7
Hospital non-specialist <sup>(a)</sup>	4,067	4,510	4,769	4,664	4,475	10.0
Specialist <sup>(a)</sup>	15,240	15,283	15,604	15,781	15,992	4.9
Specialist-in-training <sup>(e)</sup>	4,074	4,258	4,273	4,476	4,617	13.3
Total	42,300	43,404	44,583	45,416	45,641	7.9
		Р	er cent fema	le		
Primary care	29.9	30.9	31.9	32.4	33.0	
Hospital non-specialist	40.5	41.9	42.6	43.1	42.0	- 1
Specialist	13.5	13.9	14.5	14.8	15.6	
Specialist-in-training	29.7	30.3	31.7	32.5	33.8	
Total	25.0	26.0	26.9	27.4	27.8	

<sup>(</sup>a) Prior to 1995, Victoria used a questionnaire that was not standardised with the other States and Territories. The main effect was that specialists-in-training were included in the data for specialists or hospital non-specialists. Therefore, the 1993 and 1994 Victorian data for occupation have been estimated based on the distribution of these occupations in 1995 and 1996.

<sup>(</sup>r) Revision of estimates published in previous reports. See 'Explanatory note'.

Table 3: Employed medical practitioners: occupation and sex, States and Territories, 1997

Occupation	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total
				···	Males				2
Clinician	11,724	8,241	5,552	2,905	2,872	791	277	573	32,935
Primary care	4,886	3,519	2,280	1,188	1,191	376	114	227	13,781
Hospital non-specialist	1,046	382	576	186	241	64	51	49	2,594
Specialist	4,695	3,550	2,201	1,247	1,184	289	89	248	13,503
Specialist-in-training	1,097	791	495	284	256	61	24	49	3,058
Non-clinician	595	449	246	163	234	48	11	91	1,837
Administrator	136	105	56	26	24	5	4	14	370
Teacher/educator	49	35	25	25	12	4	0	1	152
Researcher	64	49	13	16	14	0	1	12	171
Public health physician	56	55	42	65	33	. 10	5	11	277
Occupational health physician	94	44	23	14	19	8	1	9	211
Other	194	162	87	16	133	21	0	43	656
Total	12,318	8,690	5,798	3,068	3,106	839	288	664	34,772
				F	emales				
Clinician	4,394	3,065	2,215	1,128	1,172	307	156	269	12,706
Primary care	2,240	1,709	1,160	602	620	194	84	168	6,776
Hospital non-specialist	768	195	421	140	217	49	40	52	1,881
Specialist	839	747	372	240	203	39	17	32	2,490
Specialist-in-training	547	414	262	146	133	25	15	17	1,559
Non-clinician	309	163	126	62	104	16	19	44	843
Administrator	79	29	30	11	14	3	1	3	171
Teacher/educator	23	13	4	1	4	0	0	3	48
Researcher	50	26	6	7	6	1	2	0	98
Public health physician	46	29	37	25	20	<b>5</b>	16	11	189
Occupational health physician	22	20	4	6	0	1	0	0	53
Other	89	47	47	10	60	5	0	27	284
Total	4,703	3,228	2,341	1,190	1,276	324	175	313	13,549
				F	ersons				
Clinician	16,117	11,306	7,767	4,033	4,044	1,098	<i>4</i> 33	842	45,641
Primary care	7,125	5,229	3,440	1,790	1,810	571	198	395	20,557
Hospital non-specialist	1,814	576	996	325	458	113	91	101	4,475
Specialist	5,534	4,296	2,573	1,487	1,386	328	106	280	15,992
Specialist-in-training	1,644	1,205	758	430	389	86	39	66	4,617
Non-clinician	904	612	373	224	338	64	30	134	2,680
Administrator	215	134	85	37	38	8	5	17	541
Teacher/educator	72	48	29	27	16	4	D	4	200
Researcher	115	75	1 <del>9</del>	24	20	1	3	12	269
Public health physician	102	84	78	91	53	15	21	22	466
Occupational health physician	116	63	27	19	19	9	1	9	264
Other	283	209	134	26	192	26	0	70	940
Total	17,021	11,918	8,139	4,258	4,382	1,163	463	977	48,321

Table 4: Employed medical practitioners: occupation, States and Territories, 1997

Occupation	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total
Clinician	16,117	11,306	7,767	4,033	4,044	1,098	433	842	45,641
Primary care	7,125	5,229	3,440	1,790	1,810	571	198	395	20,557
VRGP	5,968	4,446	2,982	1,533	1,512	501	147	346	17,435
RACGP trainee	387	263	167	92	88	41	21	22	1,081
OMPs	771	519	291	165	211	29	30	27	2,042
Hospital non-specialist	1,814	576	996	325	458	113	91	101	4,475
Intern/RMO	1,469	438	643	220	357	96	57	75	3,355
Other	345	139	353	105	101	17	34	27	1,121
Specialist	5,534	4,296	2,573	1,487	1,386	328	106	280	15,992
Internal medicine	1,544	1,104	624	415	361	81	29	81	4,238
Pathology	274	144	123	70	84	18	5	13	730
Surgery	950	760	509	278	251	56	17	47	2,868
Other specialties	2,767	2,289	1,318	724	690	174	55	139	8,156
Specialist-in-training	1,644	1,205	758	430	389	86	39	66	4,617
Non-clinician	904	612	373	224	338	64	30	134	2,680
Administrator	215	134	85	37	38	8	5	17	541
Teacher/educator	72	48	29	27	16	4	0	4	200
Researcher	115	75	19	24	20	1	3	12	269
Public health physician	102	84	78	91	53	15	21	22	466
Occupational health physician	116	63	27	19	19	9	1	9	264
Other	283	209	134	26	192	26	0	70	940
Total employed practitioners	17,021	11,918	8,139	4,258	4,382	1,163	463	977	48,321
				(per 100	),000 popu	ılation)			
Clinician	255.7	244.2	226.7	272.1	223.2	232.4	230.1	274.0	245.1
Primary care	113.1	113.0	100.4	120.8	99.9	120.7	105.0	128.4	110.4
VRGP	94.7	96.1	87.0	103.4	83.4	106.1	77.9	112.5	93.6
RACGP trainee	6.1	5.7	4.9	6.2	4.8	8.6	11.3	7.3	5.8
OMPs	12.2	11.2	8.5	11.1	11.6	6.1	. 15.8	8.7	11.0
Hospital non-specialist	28.8	12.4	29.1	22.0	25.3	24.0	48.3	33.0	24.0
Intern/RMO	23.3	9.5	18.8	14.9	19.7	20.3	30.3	24.3	18.0
Other	5.5	3.0	10.3	7.1	5.6	3.6	17.9	8.7	6.0
Specialist	87.8	92.8	75.1	100.3	76.5	69.4	56.3	91.2	85.9
Internal medicine	24.5	23.9	18.2	28.0	19.9	17.1	15.6	26.3	22.8
Pathology	4.3	3.1	3.6	4.8	4.6	3.7	2.4	4.4	3.9
Surgery	15.1	16.4	14.9	18.8	13.9	11.9	8.9	15.2	15.4
Other specialties	43.9	49.4	38.5	48.8	38.1	36.7	29.4	45.4	43.8
Specialist-in-training	26.1	26.0	22.1	29.0	21.5	18.3	20.6	21.4	24.8
Non-clinician	14.3	13.2		15.1		13.6	16.0	43.7	
Administrator	3.4	2.9	2.5	2.5		1.8	2.7	5.7	2.9
Teacher/educator	1.1	1.0	0.8	1.8		0.8	0.0	1.4	1.1
Researcher	1.8	1.6	0.5	1.6		0.3	1.7	4.0	1.4
Public health physician	1.6		2.3	6.1	2.9	3.2	11.1	7.2	2.5
Occupational health physician	1.8	1.4	0.8	1.3		2.0	0.5	2.8	1.4
Other	4.5	4.5	3.9	1.8		5.5	0.0	22.7	5.0
Total employed practitioners	270.1	257.5	237.6	287.2		246.0	246.1	317.8	259.
Population at 31 Dec. 1997 (prelim)(a)	6 302 451	4 629 903	2 425 609	. 1 492 415	1 812 089	472,672	188,266	307 305	18,619,879

<sup>(</sup>a) Source: AlHW from ABS 30 June 1997 regional data. Excludes Jervis Bay, Cocos Islands and Christmas Island.

Table 5: Employed medical practitioners: occupation and region of main job, 1997

			Region of	main job			
Occupation	Capital city	Other metro centre	Large rural centre	Small rural centre	Other rural area	Remote area	
Primary care practitioners	14,387	1,511	1,206	1,152	1,898	404	20,557
VRGPs	12,107	1,308	1,058	998	1,662	303	
RACGP trainees	700	81	77	68	128	27	•
OMPs	1,580	122	71	86	108	74	
Non-specialist hospital doctors	3,480	404	341	93	61	95	•
Interns/RMOs	2,786	291	194	31	16	38	.,
Other	694	112	148	62	45	58	-,
Specialists	12,835	1,149	1,178	560	194	77	-,
Internal medicine	3,503	294	251	130	41	19	
Pathology	589	57	54	24	6	0	-,
Surgery	2,181	220	254	132	61	20	
Other specialties	6,563	578	619	275	85	37	
Specialists-in-training	4,095	. 307	144	33	15	23	, .
Total clinicians	34,797	3,371	2,869	1,838	2,168	598	
Non-clinicians	2,297	131	120	64	32	35	,
Total employed practitioners	37,094	3,502	2,989	1,902	2,200	634	
	***************************************		(per 10	10,000 popul	ation)		
Primary care practitioners	121.4	107.4	108.5	95.0	76.8	71.7	110.4
VRGPs	102.2	92.9	95.1	82.3	67.2	53.7	93.6
RACGP trainees	5.9	5.8	6.9	5.6	5.2	4.8	5.8
OMPs	13.3	8.7	6.4	7.1	4.4	13.2	11.0
Non-specialist hospital doctors	29.4	28.7	30.7	7.7	2.5	16.9	24.0
Interns/RMOs	23.5	20.7	17.4	2.6	0.7	6.7	18.0
Other	5.9	8.0	13.3	5.2	1.8	10.2	6.0
Specialists	108.3	81.6	105.9	46.2	7.8	13.6	85.9
Internal medicine	29.6	20.9	22.6	10.7	1.7	3.4	22.8
Pathology	5.0	4.0	4.8	2.0	0.3	0.0	3.9
Surgery	18.4	15.7	22.8	10.9	2.5	3.6	15.4
Other specialties	55.4	41.0	55.6	22.6	3.4	6.6	43.8
Specialists-in-training	34.6	21.8	12.9	2.8	0.6	4.0	24.8
Total clinicians	293.6	239.5	257.9	151.6	87.7	106.2	24.0 245.1
Non-clinicians	19.4	9.3	10.8	5.3	1.3	6.2	245.1 14.4
Total employed practitioners	313.0	248.8	268.8	156.9	89.0	112.5	259.5
Population at 31 December 1997 <sup>(a)</sup>	11,851,779	1,407,470	1,112,164	1,212,722	2,472,354	563,391	18,619,879

<sup>(</sup>a) Source: AIHW from ABS 30 June 1997 regional data. Excludes Jervis Bay, Cocos Islands and Christmas Island.

Table 6: All registered medical practitioners: employment status and sex, States and Territories, 1997

Employment status	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total
					Males	••			
Only in this State	11,925	8,377	5,649	2,870	3,055	822	273	511	33,484
Mainly in this State	393	313	149	198	51	17	15	153	1,288
Total	12,318	8,690	5,798	3,068	3,106	839	288	664	34,772
Mainly in another State	610	213	68	84	80	51	158	178	1,443
Only in other States	916	502	550	269	326	233	129	131	3,057
Total	1,527	716	617	353	407	284	286	309	4,499
On extended leave	62	43	19	10	208	1	0	1	344
Practising overseas	836	479	237	141	11	47	8	44	1,804
Employed, not in medicine	133	83	12	21	37	-1	0	8	295
Currently not employed	900	474	72	32	37	12	6	8	1,542
Retired from work	0	0	289	279	240	66	6	0	881
Total	15,775	10,485	7,045	3,904	4,046	1,251	595	1,036	44,137
				F	emales				
Only in this State	4,616	3,167	2,322	1,158	1,272	321	168	280	13,303
Mainly in this State	87	60	20	32	4	4	7	33	248
Total	4,703	3,228	2,341	1,190	1,276	325	175	313	13,551
Mainly in another State	86	45	15	19	13	9	20	33	239
Only in other States	238	183	101	75	101	51	30	39	818
Total	324	228	115	94	114	60	50	72	1,057
On extended leave	85	63	51	16	70	1	3	3	291
Practising overseas	276	177	84	44	28	16	7	6	638
Employed, not in medicine	60	30	13	4	21	7	0	7	142
Currently not employed	384	212	48	41	27	14	2	6	734
Retired from work	. 0	0	61	43	44	21	0	0	169
Total	5,832	3,937	2,714	1,432	1,581	444	237	406	16,583
				F	ersons				
Only in this State	16,541	11,545	7,970	4,028	4,327	1,143	441	791	46,787
Mainly in this State	480	373	169	230	55	21	22	185	1,536
Total	17,021	11,918	8,139	4,258	4,382	1,164	463	977	48,322
Mainly in another State	696	259	82	103	93	60	178	211	1,682
Only in other States	1,155	685	650	344	428	284	158	470	3,874
Total	1,851	944	733	448	521	344	336	381	5,556
On extended leave	146	105	70	25	279	3	3	4	635
Practising overseas	1,112	656	322	184	39	63	15	49	2,441
Employed, not in medicine	193	113	24	26	58	8	0	16	437
Currently not employed	1,284	686	121	73	63	25	9	14	2,276
Retired from work	ū	0	350	322	285	88	6	D	1,050
Total	21,607	14,422	9,759	5,336	5,627	1,695	832	1,441	60,719

Table 7: Employed medical practitioners: occupation, age and sex, Australia, 1997

		•	A	ge (years)				
Occupation	<25	25–34	35–44	4554	55–64	65–74	75+	Total
		<u> </u>		Male	s			
Clinician	252	6,217	9,178	8,745	5,077	2,776	690	32,935
Primary care	0	1,590	4,146	4,029	2,116	1,472	429	13,781
Hospital non-specialist	252	1,760	378	133	56	13	1	2,594
Specialist	0	443	4,078	4,525	2,906	1,290	260	13,503
Specialist-in-training	0	2,423	576	58	0	0	٥	3,058
Non-clinician	37	207	405	438	354	290	106	1,837
Administrator	0	19	96	128	73	45	10	370
Teacher/educator	0	8	30	35	38	33	8	152
Researcher	0	34	45	25	41	15	10	171
Public health physician	27	60	74	46	40	24	6	277
Occupational health physician	0	13	51	61	48	29	9	211
Other	10	73	109	144	113	143	64	656
Total	289	6,424	9,584	9.183	5,431	3,066	796	34,772
		,	-,	Femal		2,222		01,172
April 100				. •				
Clinician	232	4,588	4,461	2,301	751	311	62	12,706
Primary care	. 0	1,807	2,814	1,479	423	219	35	6,776
Hospital non-specialist	232	1,244	260	96	37	12	0	1,881
Specialist	. 0	258	1,156	677	292	81	26	2,490
Specialist-in-training	0	1,279	231	49	0	0	0	1,559
Non-clinician	6	203	284	183	109	46	11	843
Administrator	0	19	76	45	26	5	0	171
Teacher/educator	0	1	24	10	9	4	0	48
Researcher	0	37	35	17	6	3	0 -	98
Public health physician	2	62	60	37	21	8	0	189
Occupational health physician	0	13	18	12	8	1	0	53
Other	4	71	71	62	40	24	11	284
Total	238	4,791	4,745	2,484	860	357	73	13,549
		,		Perso	ns			
Clinician	484	10,805	13,639	11,046	5,828	3,087	752	45,641
Primary care	0	3,397	6,960	5,508	2,539	1,691	464	20,557
Hospital non-specialist	484	3,004	638	229	93	25	1	4,475
Specialist	0	702	5,234	5,202	3,197	1,371	287	15,992
Specialist-in-training	0	3,702	807	107	0	0	0	4,617
Non-clinician	43	410	689	621	463	336	117	2,680
Administrator	0	38	172	172	99	50	10	541
Teacher/educator	0	9	54	45	47	38	8	200
Researcher	0	72	80	42	47	19	10	269
Public health physician	29	122	134	83	60	33	6	466
Occupational health physician	0	26	70	. 73	56	30	9	264
Other	14	144	181	206	153	167	75	940
Total	527	11,215	14,328	11,667	6,291	3,423	869	48,321

Note: A State and Territory dissection of these data is available on the Internet (http://www.aihw.gov.au).

Table 8: Employed medical practitioners: occupation, total hours worked per week and sex, Australia, 1997

		. 1		(per cent)					
Occupation	1–19	20-34	35-49	50-64	65–79	80+	Total	65–79	80+
				Males					
Primary care	5 <b>85</b>	1,200	4,293	5,614	1,537	552	13,781	11.2	4.0
VRGP	424	961	3,620	5,127	1,413	492	12,037	11.7	4,1
GP trainees	9	40	221	130	19	9	428	4.4	2.1
OMPs	152	199	452	357	106	51	1,316	8.0	3.8
Hospital non-specialists	38	111	810	1,300	225	110	2,594	8.7	4.2
RMO/interns	17	62	490	1,044	173	86	1,872	9.2	4.6
Other	20	48	321	256	52	24	722	7.2	3.4
Specialists	680	1,026	3,571	5,695	1,809	722	13,503	13.4	5.3
Internal medicine	222	263	791	1,564	553	197	3,589	15.4	5.5
Pathology	27	40	190	245	21	16	539	3.9	2.9
Surgery	129	189	477	1,192	541	246	2,775	19.5	8.9
Other specialties	302	534	2,113	2,694	694	263	6,599	10.5	4.0
Specialists-in-training	14	49	842	1,509	466	178	3,057	15.2	5.8
Total clinicians	1,317	2,386	9,516	14,118	4,037	1,561	32,935	12.3	4.7
Non-clinicians	252	159	569	679	127	51	1,837	6.9	2.8
Total	1,569	2,544	10,085	14,797	4,164	1,613	34,772	12.0	4.6
			ı	Females					
Primary care	1,301	2.197	2,091	916	188	84	6,776	2.8	1.2
VRGP	1,027	1,813	1,596	739	154	68	5,397	2.9	1.3
GP trainees	90	174	297	78	6	9	653	1.0	1.3
OMPs	183	211	198	99	27	8	726	3.7	1.1
Hospital non-specialists	87	127	608	868	112	80	1,881	5.9	4.3
RMO/interns	21	35	478	785	94	70	1,483	6.4	4.7
Other	66	93	130	83	. 17	10	399	4.4	2.6
Specialists	238	569	870	622	131	59	2,490	5.3	2.4
Internal medicine	88	141	198	173	36	13	649	5.6	2.0
Pathology	10	39	81	53	8	1	191	4.0	0.8
Surgery	4	7	31	34	10	8	93	10.3	8.8
Other specialties	137	383	560	362	77	37	1,556	5.0	2.4
Specialists-in-training	16	118	549	669	151	5 <del>6</del>	1,559	9.7	3.6
Total clinicians	1,642	3,011	4,118	3,075	581	280	12,706	4.6	2.2
Non-clinicians	136	164	313	185	33	12	843	3.9	1.4
Total	1,777	3,176	4,431	3,260	614	292	13,549	4.5	2.2
			1	Persons					
Primary care	1,886	3,397	6,384	6,530	1,725	636	20,557	8.4	3.1
VRGP	1,452	2,774	5,216	5,866	1,567	560	17,435	9.0	3.2
GP trainees	100	213	518	208	25	17	1,081	2.3	1.6
OMPs 1	335	410	650	456	133	58	2,042	6.5	2.9
Hospital non-specialists	124	238	1,418	2,168	336	190	4,475	7.5	4.3
RMO/interns	38	97	967	1,829	267	156	3,355	8.0	4.6
Other	86 .	141	451	339	69	34	1,121	6.2	3.1
Specialists	918	1,596	4,440	6,317	1,940	781	15,992	12.1	4.9
Internal medicine	310	404	989	1,736	589	210	4,238	13.9	5.0
Pathology	36	79	271	298	29	17	730	3.9	2.3
Surgery	133	196	508	1,227	550	255	2,868	19.2	8.9
Other specialties	439	918	2,673	3,056	771	300	8,156	9.5	3.7
Specialists-in-training	30	166	1,391	2,177	. 617	234	4,617	13.4	5.1
Total clinicians	2,958	5,397	13,634	17,192	4,618	1,842	45,641	10.1	4.0
Non-clinicians	387	323	882	864	160	63	2,680	6.0	2.3
Total	3,346	5,720	14,516	18,057	4,778	1,904	48,321	9.9	3.9

Table 9: Employed medical practitioners: occupation, total hours worked per week and geographic location of main job, Australia, 1997

Occupation/ total hours worked	Capital	Other metro	Large rural	Small rural	Other rural	Remote	
per week	city	centre	centre	centre	area	area	Total
Primary care	*					····	
1–19	1,421	120	116	74	120	24	4 000
20–34	2,569	249		74 127	128	31	1,889
35–49	4,660		168	137	234	29	3,387
50–64	4,302	480	339	315	449	115	6,358
65–79	1,067	474	455 440	427	704	160	6,520
80+	369	134	110 20	128	275	46	1,759
Total		54		71	108	23	645
Hospital non-specialist	14,387	1,511	1,206	1,152	1,898	404	20, <b>5</b> 57
1–19	116	6	8	-3	0		422
20–34	179	28	21	3 8	0 2	0 2	133
35-49	1,091	120	117	30	8	33	238
50-64	1,700	214	166				1,398
65-79	258	20	18	42	32	34	2,188
80+	138	20 16	11	3 8	15	17	330
Total	3,480	404		93	6	9	188
Specialists	3,400	404	341	93	61	95	4,475
	766	4*7		0.4	40		
1-19	755 1 2 <b>9</b> 0	47	52 70	24	. 19	6	904
20–34	1,380	85	79	40	18	10	1,612
35 <del>-49</del>	3,656	318	280	158	57	16	4,485
50–64 65–70	4,953	491	521	225	69	36	6,295
6579	1,475	152	180	82	16	9	1,914
80+	623	57	61	29	14	0	783
Total	12,843	1,149	1,173	558	193	76	15, <b>99</b> 2
Specialists-in-training		_					
1-19	28	5	0	0	0	0	33
20-34	150	16	6	4	0	2	177
35–49	1,222	85	41	13	. 6	6	1,374
5064	1,950	138	69	9	3	7	2,176
65–79	542	41	19	8	5	7	621
80+	202	23	9	0	0	1 .	235
Total	4,095	<i>307</i>	144	33	15	23	4,617
Non-clinicians	•						
1–19	330	18	15	14	11	0	387
2034	282	14	12	9	7	0	323
35–49	770	41	37	13	8	13	882
50 <del>-64</del>	729	42	52	21	. 4	18	864
65–79	140	9	3	6	1	0	160
80+	46	8	3	1	. 0	5	63
Total	2,297	131	120	64	32	35	2,680
Total							
1–19	2,650	196	191	114	159	36	3,346
20–34	4,559	392	286	197	261	42	5,737
35–49	11,400	1,043	814	529	528	184	14,497
50-64	13,634	1,358	1,262	724	813	253	18,043
6579	3,482	355	329	227	312	78	4,784
80÷	1,378	158	103	110	128	39	1,914
Total	37,102	3,502	2,984	1,900	2,200	633	48,321
			(per cent of r	egion)			
Primary care				- •			
65–79	7.4	0.0		44.4	44.5	44.0	
80+	7.4	8.9	9.1	11.1	14.5	11.3	8.6
	2.6	3.6	1.6	6.2	5.7	5.8	3.1
Hospital non-specialist	<del>-,</del> .	4.5					
65–79	7.4	4.9	5.2	3.2	24.7	18.1	7.4
80+	4.0	4.1	3.1	8.3	10.0	9.7	4.2
Specialists							
65–79	11.5	13.2	15.3	14.7	8.3	11.5	12.0
80+	4.9	4.9	5.2	5.2	7.0	0.0	4.9
Specialists-in-training							
65–79	13.2	13.2	13.3	23.3	34.1	30.3	13.5
80+	4.9	7.4	6.3	0.0	0.0	5.6	5.1
Total		_					
A		40.4	11.0	44.0	442	40.4	0.0
65–79 80+	9.4	10.1	11.0	11.9	14.2	12.4	9.9