5 Health resources

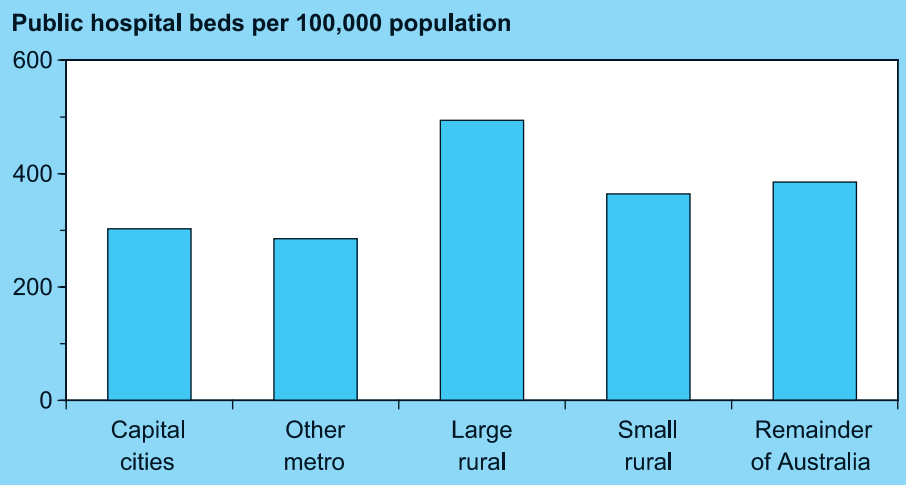
People living in rural and remote zones are considered to have lower access to health care compared with those living in the metropolitan zone. Access difficulties due to distance, time, cost and transport availability in rural and remote zones can be compounded by shortages and uneven distributions of health facilities and health professionals.

Access to health care facilities and health care professionals in rural and remote zones is critical to minimising variation in health outcomes between people living in the metropolitan zone and those living in rural and remote zones. The importance people place on access to a general practitioner (GP) as the first point of contact for any health problem is illustrated by the fact that in 1995, on average, Australians made 5.6 visits to a GP through the year. In light of this emphasis, the General Practice Rural Incentives Scheme was formed to help attract more GPs to set up practice in rural and remote areas. Other points of contact for professional health care such as nurses, pharmacists and physiotherapists are also important to the provision of health services.

Hospital facilities in rural and remote zones can be less accessible than in the metropolitan zone. On average, people living in rural and remote zones need to travel larger distances to receive hospital treatment. People needing more specialised treatments must travel even further to the larger towns and cities or wait longer for these services to come to them on a rotation basis. This leads to a wider role for acute care hospitals in rural and remote zones compared with hospitals in the metropolitan zone. For example, people with chronic conditions such as diabetes and asthma may be hospitalised more frequently in rural and remote zones if they are required to travel long distances for follow-up treatment. Similarly, in communities where no nursing homes are available, the care of nursing-home-type patients often falls to the local hospital, making the role of that hospital broader than that of the usual acute care hospital. This broader use of acute care hospitals is probably reflected in the provision of a higher number of beds in non-metropolitan zones, 484 per 100,000 population, compared with 457 for 'capital cities' and 423 for 'other metropolitan centres'.

This chapter attempts to quantify variation in the supply of health resources between metropolitan, rural and remote Australia by using indicators on hospital services and the availability of key health labour force personnel such as GPs, pharmacists and nurses. Indicators measuring access to health services are also provided. The chapter also examines both public and private hospital expenditure by RRMA category.

Number of hospital beds, 1995–96



Sector	Metropolitan		Rural and remote			Total
	Capital cities	Other	Large centres	Small centres	Remainder of Australia[(b)]	
Private[(a)]	154	139	241	76	26	132
Public[(a)]	303	285	494	364	385	331
Total	457	423	735	439	411	462

(a) Due to privacy restrictions, information on beds available in private hospitals in remote zones is not provided separately.

(b) 'Remainder of Australia' includes 'other rural areas', 'remote centres' and 'other remote areas'.

Notes

1. Based on daily average available beds for 1995–96 where available, and beds at 30 June 1996 where not available.
2. Includes Same Day Facility beds.

Source: AIHW Hospital Establishments database; unpublished ABS data on private hospitals.

Hospital beds

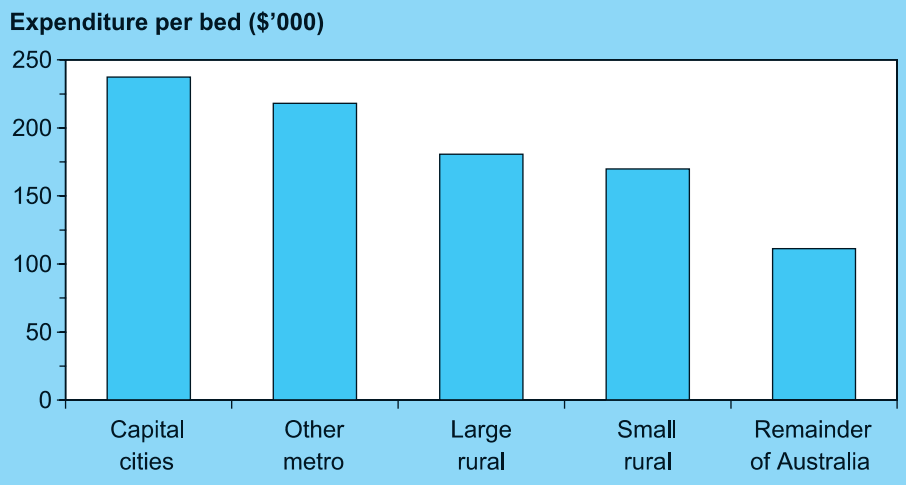
- The number of available beds in acute care hospitals per 100,000 population provides a measure of the capacity of a region to supply acute care hospital facilities. However, variation between hospitals in the areas they serve and the types of services they provide need to be taken into account when interpreting this indicator. For example, large hospitals in central locations serve patients from more remote locations. Also, many rural and remote zone hospitals have a high proportion of nursing-home-type patients who, in metropolitan locations, would be cared for in nursing homes or hostels (AIHW 1997d).
- Acute care hospitals are establishments which provide at least minimal medical, surgical or obstetric services for in-patient treatment and/or care, and which provide round-the-clock comprehensive qualified nursing service. Other necessary professional services may also be available at these facilities.
- The supply of public beds in acute care hospitals per head of population is highest in the rural and remote zones. In 1995–96, 'large rural centres' had 63% more public beds per head of population than 'capital cities', and 35% more than 'small rural centres' and 'other rural areas'. 'Other remote areas' also had a high number of public hospital beds per head of population, with a rate similar to that for 'large rural centres'. The remote zone also records greater lengths of stay for patients (see page 99, Casemix-adjusted average length of stay in hospitals, 1995–96).

- Private hospital bed supply per head of population is the highest in 'large rural centres' and the metropolitan zone, with these types of beds making up one-third of all beds in acute care hospitals in these areas in 1995–96. In contrast, private hospital beds were only 17% and 6% of total acute care hospital beds in 'small rural centres' and 'remainder of Australia' respectively.
- The high rate of beds in acute care hospitals per head of population in 'large rural centres' may be a result of these hospitals supplying specialised services to the other rural areas, which do not have the population numbers sufficient to justify such specialist facilities. Other reasons include a higher percentage of nursing-home-type patients, higher morbidity, and differences in medical practice in 'large rural centres' compared with other areas.

For more information, see:

Reid M & Soloman S 1992. Improving Australia's rural health and aged care services. National Health Strategy Background Paper No. 11. Melbourne: Department of Health, Housing and Community Services.

Expenditure per available hospital bed, 1995–96 ($'000)



Sector	Metropolitan		Rural and remote			Total
	Capital cities	Other	Large centres	Small centres	Remainder of Australia[(b)]	
Private[(a)]	127.7	120.6	114.9	90.5	58.9	122.1
Public[(a)]	237.4	218.1	180.6	169.8	111.2	202.0
Total	200.5	186.1	159.1	156.1	107.9	179.3

(a) Due to privacy restrictions, information on expenditure per available bed is not separately available for private hospitals in remote zones.

(b) 'Remainder of Australia' includes 'other rural areas', 'remote centres' and 'other remote areas'.

Notes

1. Based on daily average available beds for 1995–96 where available, and beds at 30 June 1996 where not available.
2. Includes expenditure on out-patient activity.

Sources: AIHW Hospital Establishments database; unpublished ABS data on private hospitals.

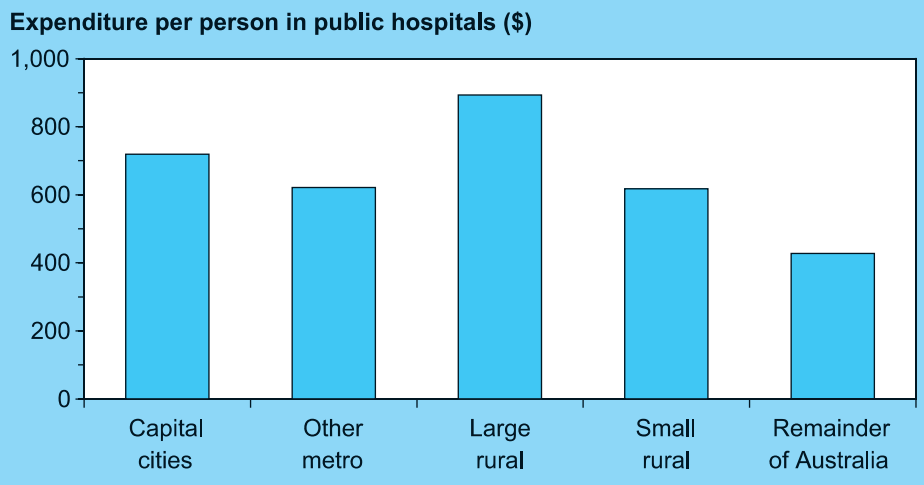
Hospital expenditure

- Expenditure per available bed measures the reported recurrent expenditure for acute care hospitals. It provides an indication of the cost of the services provided by acute care hospitals to their patients.
- Differences across regions largely reflect the different types of services provided in each region. The provision of specialist services in large hospitals for more serious cases, and the use of acute care beds for nursing-home-type patients in rural and remote zones are examples of different uses of hospital facilities. The level of hospital expenditure attributed to in-patients (admitted patients) also affects expenditure as a proportion of the number of available beds.
- The level of expenditure per available hospital bed in acute care hospitals declines sharply with increasing rurality, for both public and private hospitals. In 1995–96, the rate of expenditure in comparison to 'capital cities' was 20% less in 'large rural centres' and 54% less in 'remainder of Australia'.

For more information, see:

Cooper-Stanbury M, Solon R & Cook M 1994. Hospital utilisation and costs study 1991–92. Volume 1. A survey of public hospitals and related data. AIHW Health Services Series No. 5. Canberra: AGPS.

Acute care hospital expenditure per person, 1995–96 ($)



Sector	Metropolitan		Rural and remote			Total
	Capital cities	Other	Large centres	Small centres	Remainder of Australia[b]	
Private[a]	196	167	277	69	15	161
Public[a]	719	621	893	618	428	668
Total	915	788	1,169	686	444	828

(a) Due to privacy restrictions, information on expenditure per available bed is not separately available for private hospitals in remote zones.

(b) 'Remainder of Australia' includes 'other rural areas', 'remote centres' and 'other remote areas'.

Notes

1. Based on daily average available beds for 1995–96 where available, and beds at 30 June 1996 where not available.
2. Includes expenditure on out-patient activity.
3. Based on patients' area of residence, not location of hospital.

Sources: AIHW Hospital Establishments database; unpublished ABS data on private hospitals.

Expenditure on acute hospital care

- Acute care hospitals include public, private and psychiatric hospitals that provide at least minimal medical, surgical or obstetric services for in-patient treatment and care. These hospitals also provide round-the-clock comprehensive qualified nursing service as well as other necessary professional services.
- Acute care hospital expenditure is a major component of the total resources allocated to the health sector. In 1994–95, 34% of total health expenditure was spent on acute care hospitals.
- Hospital expenditure per person in 'large rural centres' is the highest of the RRMA categories, and is 27% higher than that for 'capital cities'. This large difference is partly because the hospitals located in 'large rural centres' serve a much wider area (including 'small rural centres' and the remote zone) than their denominator population base would suggest. Availability of services for more expensive diagnosis-related groups (DRGs) at these hospitals may also add to these costs. Also, economies of scale are much more difficult to achieve in rural hospitals than in larger metropolitan hospitals.
- Hospital expenditure per person in 'small rural centres' is only 75% of the level in 'capital cities', with 'remainder of Australia' less than half the 'capital cities' rate.

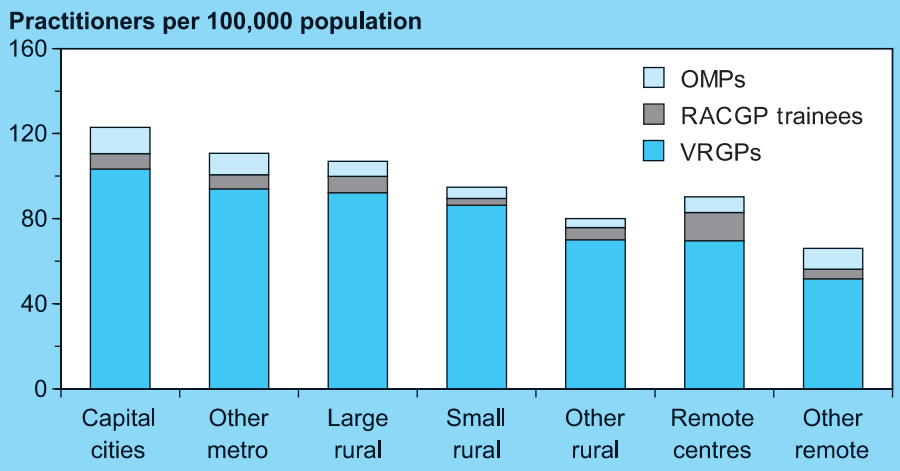
- The highest private hospital expenditure per person was also in 'large rural centres'. However, the level of private hospital expenditure in 'small rural centres' and 'remainder of Australia' is only a fraction of the levels in the metropolitan zone and 'large rural centres'.

For more information, see:

Cooper-Stanbury M, Solon R & Cook M 1994. Hospital utilisation and costs study 1991–92. Volume 1. A survey of public hospitals and related data. AIHW Health Services Series No. 5. Canberra: AGPS.

Australian Institute of Health and Welfare 1997. Health Expenditure Bulletin No. 13. Canberra: AIHW.

Primary care medical practitioners, 1996



	Metropolitan		Rural			Remote		
Doctors per 100,000 population	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	Total
Vocationally registered general practitioners (VRGPs)	103.4	94.0	92.2	86.4	70.1	69.6	51.8	95.1
General practitioner trainees (RACGP trainees)	7.1	6.6	7.7	3.1	5.7	13.3	4.5	6.7
Other medical practitioners (OMPs)	12.4	10.2	7.1	5.4	4.2	7.3	9.8	10.2
Total	122.9	110.8	107.0	94.8	80.0	90.2	66.0	112.1

Source: AIHW.

Medical practitioners

- Inaccessibility of general practitioners (GPs) remains the greatest source of disadvantage for most rural residents (Humphreys et al. 1997). The RRMA distribution of primary care practitioners fits well the known pattern of undersupply of the health labour force in rural and remote areas and oversupply in metropolitan areas (AIHW 1998b).
- The AIHW National Medical Labour Force Survey classifies medical practitioners under three groups: vocationally registered general practitioners (VRGPs) with appropriate training and registration, Royal Australian College of General Practitioners (RACGP) trainees who are being trained as VRGPs, and other medical practitioners (OMPs).
- In 1996 there was almost double the number of practitioners providing services in 'capital cities' per head of population, compared with 'other remote areas'.
- The supply of primary care practitioners per head of population falls sharply in rural areas. In 'large rural centres' the supply rate was 13% below that of 'capital cities', whereas 'small rural centres' and 'other rural areas' had supply rates 23% and 35% respectively less than 'capital cities'. Distances travelled to visit practitioners in the more sparsely settled areas may add further to the rural and remote zone disadvantage.
- The distribution of all three groups of primary care medical practitioners shows a similar pattern of decreasing supply with increasing rurality, though in the case of OMPs and RACGP trainees supply rates in the remote zone are generally higher than in the rural zone. For example, in 'remote centres' the supply of OMPs is 130% higher than that in

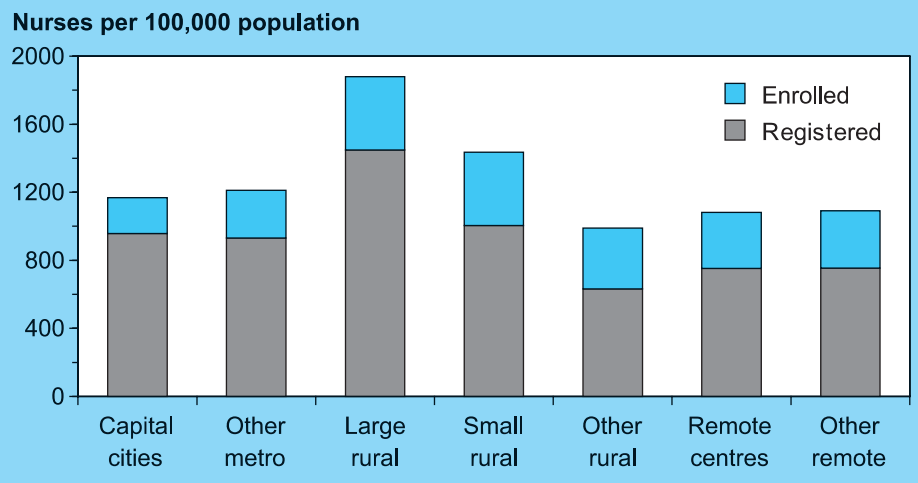
'other rural areas' and the number of RACGP trainees per head of population in 'other remote areas' is 130% higher than that in 'other rural areas'.

For more information, see:

Australian Institute of Health and Welfare 1998. Medical labour force 1996. National Health Labour Force Series No. 13. AIHW Cat. No. HWL 10. Canberra: AIHW.

Australian Institute of Health and Welfare & Australian Medical Workforce Advisory Committee 1996. Australian medical workforce benchmarks. AMWAC Report 1996.1. Canberra: AGPS.

Distribution of nurses, 1995



	Metropolitan		Rural			Remote		
Nurses per 100,000 population	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	Total
Registered nurses	957.4	930.9	1,448.6	1,004.6	631.5	751.8	755.1	938.3
Enrolled nurses	210.8	281.2	429.9	430.9	359.0	330.1	336.8	267.1
Total	1,168.2	1,212.1	1,878.6	1,435.6	990.5	1,082.0	1,091.9	1,205.3

Source: AIHW.

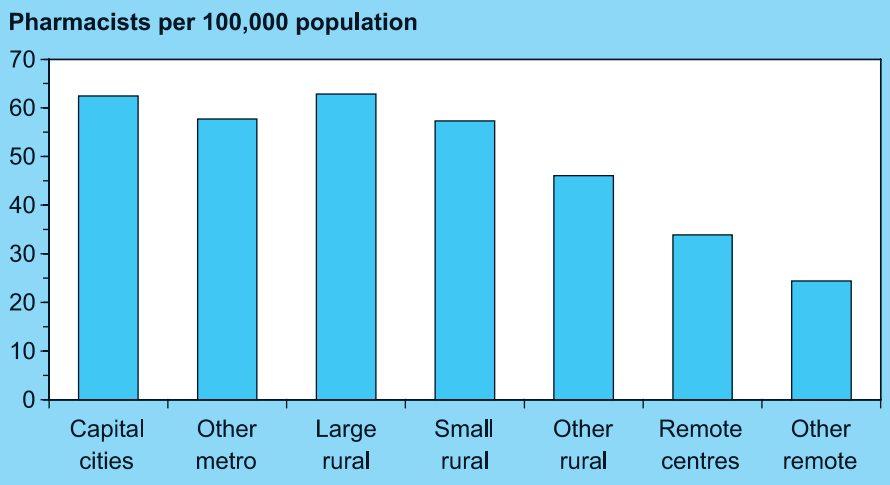
Nurses

- In 1995, there were 171,774 registered nurses and 48,892 enrolled nurses in Australia. Registered nurses have a minimum requirement of a 3-year degree from a tertiary education institution or equivalent from a registered hospital-based program. Enrolled nurses require a 1-year diploma from a tertiary education institution or equivalent from a registered hospital-based program.
- In 1995, almost two-thirds of registered nurses were employed in acute and psychiatric hospitals, with 12% working in nursing homes. Unlike the distribution of primary care practitioners, the distribution of nurses is more even across zones, and closely follows the pattern of hospital bed supply.
- 'Large rural centres' have the largest per capita supply of nurses of all areas. This reflects the relatively large proportion of hospital beds in these areas, which provide high-level hospital services to other rural areas as well.
- Enrolled nurses form a higher proportion of the total nursing workforce in rural and remote zones, compared with the proportion in 'capital cities'. In 'small rural centres', 'other rural areas' and the remote zone, around 30% of nurses were enrolled nurses, compared with 18% in 'capital cities'.
- The higher proportion of nurses working in rural and remote Australia, when compared with GPs, confirms that nurses provide a higher proportion of health care in rural and remote Australia than in the metropolitan zone (AIHW 1998c).

For more information, see:

Australian Institute of Health and Welfare 1998. Nursing labour force 1995. National Health Labour Force Series No. 11. AIHW Cat. No. HWL 6. Canberra: AIHW.

Distribution of community (retail) pharmacists, 1995



Pharmacists per 100,000 population	Metropolitan		Rural			Remote		Total
	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	
Community (retail) pharmacists	62.5	57.7	62.9	57.3	46.1	33.9	24.4	58.6

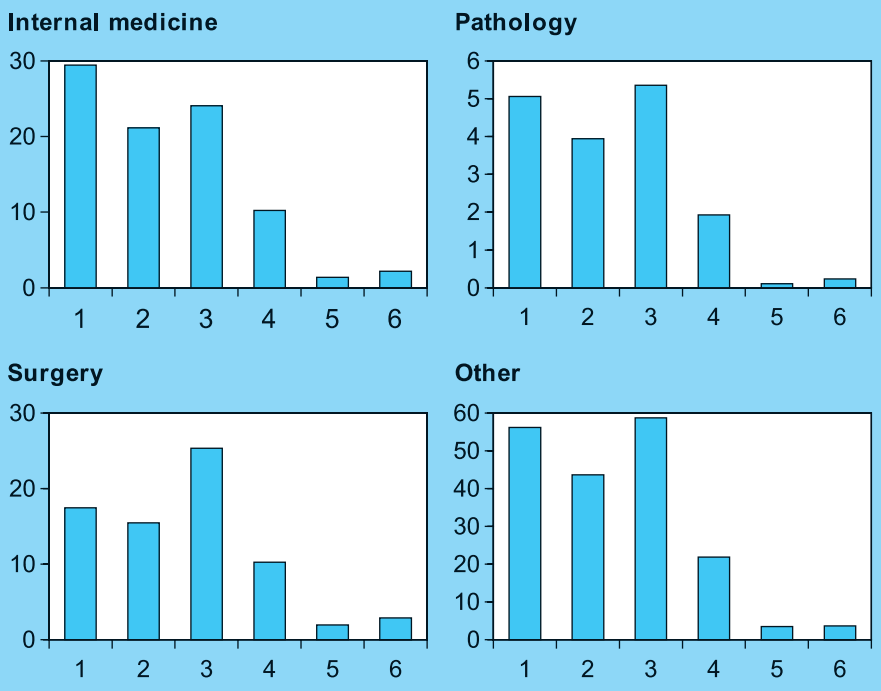
Note: Community pharmacists do not include pharmacists employed as hospital/clinic pharmacists in their main job.
Source: State and Territory Pharmacy Registration Boards.

Pharmacists

- Pharmacists have an important role in complementing the health services provided by general practitioners and specialists.
- Of employed pharmacists in Australia in 1995, 80% were community (retail) pharmacists. The remainder includes hospital and clinic pharmacists, industrial pharmacists, and those in other pharmacy-related employment including administration and education.
- The supply of pharmacists across regions is similar between the metropolitan zone, 'large rural centres' and 'small rural centres', but is substantially lower in 'other rural areas' and the remote zone. 'Other rural areas' are served by 26% less pharmacists per capita than 'capital cities', and the remote zone has around half the number of pharmacists in 'capital cities' per capita.

For more information, see:
Australian Institute of Health and Welfare 1998. Pharmacy labour force 1995. National Health Labour Force Series No. 12. AIHW Cat. No. HWL 9. Canberra: AIHW.

Medical specialists per 100,000 population, 1995



RRMA categories: 1 Capital cities; 2 Other metropolitan centres; 3 Large rural centres; 4 Small rural centres; 5 Other rural areas; 6 Remote zone.

	Metropolitan		Rural				
Medical specialisation	Capital cities	Other	Large centres	Small centres	Other	Remote	Total
Internal medicine	29.4	21.2	24.0	10.2	1.4	2.2	22.7
Pathology	5.1	3.9	5.4	1.9	0.1	0.2	4.0
Surgery	17.4	15.4	25.3	10.3	2.0	2.9	14.8
Other specialties	56.2	43.7	58.7	21.8	3.5	3.7	44.6
Total	108.1	84.2	113.4	44.3	7.0	9.0	86.0

Source: AIHW.

Medical specialists

- Specialists can be grouped into four main types: internal medicine (non-surgical medicine involving diagnosis and treatment of diseases involving the internal organs, for example cardiologists and neurologists), pathology, surgery, and 'other'. Anaesthesia, psychiatry, and obstetrics and gynaecology are the largest specialties in the 'other' group.
- In 1996, the number of specialists per head of population was fairly similar in the metropolitan zone and 'large rural centres', but substantially lower in 'small rural centres', 'other rural areas' and the remote zone. Compared with 'capital cities', 'small rural centres' have less than half the supply per capita of specialists. 'Other rural areas' and the remote zone have less than 10% of the number of specialists per capita in 'capital cities'.
- Of all specialists, surgeons have the highest numbers per capita practising in rural and remote zones. However, the supply of surgeons in 'small rural centres', 'other rural areas', and the remote zone is still only 59%, 11%, and 17% respectively of the corresponding supply in 'capital cities'.

- The numbers above do not reflect outreach services provided by metropolitan-based specialists to rural and remote zones. These outreach services include telemedicine services, as well as periodic visits to rural centres to conduct consultation clinics and/or undertake surgical procedures.

For more information, see:

Australian Institute of Health and Welfare 1998. Medical labour force 1996. National Health Labour Force Series No. 13. AIHW Cat. No. HWL 10. Canberra: AIHW.