

Expenditure and workforce



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Key points

- Australia spent one in every 11 dollars on health in 2005–06, equalling \$86.9 billion, 9.0% of gross domestic product (GDP).
- As a share of its GDP, Australia spent more in 2005 than the United Kingdom (8.3%), a similar amount to Italy (8.9%) and much less than the United States (15.3%).
- Health spending per person was 45% more in 2005–06 than a decade before, even after adjusting for inflation.
- For Indigenous Australians in 2004–05, health spending per person was 17% higher than for other Australians.
- Spending on medications increased by 1.6% between 2004–05 and 2005–06—much less than the average increase of 8.6% per year in the decade before.
- Health is a growing sector—between 2001 and 2006, the 23% growth in numbers employed in health occupations was almost double that for all occupations.
- The profile of the health workforce continues to age—in 2006, 16% of the workforce was aged 55 years and over compared with 12% in 2001.
- Compared with Major Cities, remote areas have less than half the supply of medical practitioners and dentists (number of 'full-time equivalents' per 100,000 population).
- Comparing 2005 with 1997, the overall supply of primary care doctors (mostly general practitioners) was about 9% lower—but in remote areas the supply was 15% higher.

A nation's health depends on the extent and quality of its health services and a range of other determinants of health, including socioeconomic and environmental conditions and the health behaviours of individual members in its society. Chapter 4 provides information on these other determinants of health and Chapter 9 discusses the health sector's performance. Chapter 7 describes the health services that are available in Australia.

This chapter focuses on two key aspects of those health services. Section 8.1 describes how health services are funded and how the funds are spent. Section 8.2 focuses on the health workforce and how it is distributed to support those services. These resources include:

- the funds available for expenditure on health—along with government funding, this includes non-government funding, such as payments by health insurance funds and by individuals through their out-of-pocket contributions
- the health sector's human resources, its capital resources, (such as hospital buildings and medical and other equipment), and the materials and energy consumed during service provision.

8.1 Health expenditure and health funding

This section describes the main components of health expenditure and who provides the health funding. It answers the following questions about health services in Australia:

- How much is spent on health?
- What are the trends in expenditure and funding during the decade up to 2005–06?
- Who provides funding for what types of services?
- How does Australia's health expenditure compare with that of other Organisation for Economic Co-operation and Development (OECD) countries?
- What is the average amount spent on each person and on specific population groups and diseases?
- What is spent on each type of health service and on health infrastructure and who spends it?
- What is the contribution of private health insurance?
- How much will health care cost in the future?

Two terms—'health expenditure' and 'health funding'—are used to describe financial resources used in health. They express concepts that are distinct but related (Box 8.1). Both concepts are needed to explain the financial resources used by the overall health system and those used by the various segments of the system (such as general practice or hospitals).

The bulk of health expenditure is on health goods and services, such as medications and hospital care. For the sake of reporting, health expenditure also includes spending on a number of health-related activities, such as research and administration. However, spending on such items as the training of health professionals and the cost to individuals of private health insurance premiums are not treated as health expenditure; the former is regarded as expenditure on education and the latter as expenditure on insurance.

Expenditure on health comprises recurrent and capital expenditure and depreciation (capital consumption), and together they are reported as total health expenditure. Recurrent expenditure, which relates largely to operating costs, is split according to the major types of health goods and services and health-related activities. Recurrent expenditure is also presented in this chapter for Aboriginal and Torres Strait Islander peoples and other Australians, and by disease. Capital expenditure relates to large-scale investment in plant and facilities that support health services, and it cannot readily be split further.

Box 8.1: Defining health expenditure and health funding

Health expenditure

Health expenditure is reported in terms of who spends the money rather than who ultimately provides the money for any particular expenditure. In the case of public hospital care, for example, all expenditure (on drugs, salaries of doctors and nurses, and so on) is incurred by the states and territories but the Australian Government and others share the funding with them.

Health funding

Health funding is reported in terms of who provides the funds that are used to pay for health goods and services. For example, in the case of public hospitals, the Australian Government funded 41.4% of expenditure in 2005–06 and the states and territories funded 50.6%, together providing over 90% of the funding. Other funding comes from private health insurers and from individuals who incur an out-of-pocket cost when they choose to be treated as private patients.

It is important to note that total expenditure is equal to total funding, as all expenditure has to be funded.

How much is spent on health and is it increasing?

One measure commonly used to describe the relative sizes of health systems in different countries is their expenditure on health expressed as a percentage of their expenditure on all goods and services (known as GDP). It is used to compare what a country spends on health goods and services with what it spends on all goods and services.

The estimated total expenditure on health in Australia in 2005–06 was \$86,879 million, or 9.0% of GDP (Table 8.1). This was similar to the previous year, when health accounted for 9.05% of GDP. A decade earlier, expenditure on health was 7.5% of GDP.

Over the decade, estimated real growth in health expenditure (that is, after removing the effects of inflation) averaged 5.1% per year (Table 8.2). Real growth in expenditure is measured using 'constant prices' (see Box 8.2).

Note, the numbers presented in this report for total health expenditure and the health expenditure to GDP ratio, for 1995–96 to 2003–04, differ from those appearing in previous editions of *Australia's health* because they no longer include expenditure on high-level residential aged care. In accord with practices of other government agencies such as the Department of Finance, the AIHW now classifies all residential aged care as a welfare service. All data in this chapter for prior years, excluding data on future health care costs, have been revised accordingly.

Table 8.1: Total health expenditure and GDP, current prices, 1995–96 to 2005–06

Year	Total health expenditure (\$m)	GDP (\$m)	Ratio of health expenditure to GDP (%)
1995–96	39,047	518,144	7.5
1996–97	42,116	545,698	7.7
1997–98	44,802	577,373	7.8
1998–99	48,502	607,759	8.0
1999–00	52,442	645,058	8.1
2000–01	58,287	689,262	8.5
2001–02	63,448	735,714	8.6
2002–03	68,932	781,675	8.8
2003–04	73,945	840,285	8.8
2004–05	81,125	896,568	9.05
2005–06	86,879	966,442	9.0

Sources: AIHW 2007a; ABS 2007.

Just as prices can increase generally (general inflation), so can those for health items in particular (health inflation). If there is a difference between health inflation and general inflation, this can have an influence on the ratio of health expenditure to GDP. Australia's health inflation has outpaced general inflation in most years during the last decade. Between 1995–96 and 2005–06, health inflation averaged 3.1% a year, whereas the average rate of general inflation was 2.7% a year (AIHW 2007a).

Table 8.2: Total health expenditure and GDP, constant prices^(a), and annual growth rates, 1995–96 to 2005–06

Year	Total health expenditure		GDP	
	Amount (\$m)	Growth rate (%)	Amount (\$m)	Growth rate (%)
1995–96	50,948	..	647,659	..
1996–97	54,015	6.0	673,099	3.9
1997–98	56,266	4.2	703,258	4.5
1998–99	59,393	5.6	739,629	5.2
1999–00	62,786	5.7	769,045	4.0
2000–01	68,090	8.4	784,017	1.9
2001–02	70,802	4.0	813,542	3.8
2002–03	74,334	5.0	839,187	3.2
2003–04	77,036	3.6	873,197	4.1
2004–05	81,125	5.3	896,568	2.7
2005–06	83,601	3.1	922,772	2.9
Average annual growth rates				
1995–96 to 1997–98		5.1		4.2
1997–98 to 2002–03		5.7		3.6
1995–96 to 2005–06		5.1		3.6

(a) See Box 8.2 for an explanation of constant price estimation.

Sources: AIHW 2007a; ABS 2007.

Box 8.2: Constant price and current price expenditure

The use of 'constant prices' is a way of comparing expenditure over time without the distorting effects of inflation. In general, the prices of most goods and services rise over time, although some goods become cheaper because of changes in technology or other factors.

'Current prices' refers to expenditure reported for any year, unadjusted for inflation.

To obtain 'constant prices', the 'current prices' for all years are adjusted to reflect the prices in a chosen reference year. This process enables more realistic comparisons of expenditure to be made over a number of years. 'Constant prices' are also referred to as 'real' expenditure and growth in turn is referred to as 'real growth in expenditure'.

Hence, using 'constant prices' the expenditure in different years can be compared on an equal dollar-for-dollar basis, and the comparison will reflect only the changes in the amount of health goods and services purchased, not the changes in prices of these goods and services caused by inflation. The reference year used in this report is 2004–05.

In contrast, changes in current price expenditure reflect changes in prices through inflation, as well as changes in the amount of health goods and services that are purchased.

Health care—who provides the funds?

Funding for health goods and services comes from different sources, including Australian Government and state/territory and local governments, non-government agencies and individuals.

The major two levels of government provide the bulk of the funding. Local governments also finance certain health services from their own revenue sources, but these are often difficult to distinguish from funds provided to them by state governments. Hence, funding for state and local governments is usually combined.

Australian Government

The Australian Government provides most of the funding for recurrent expenditure on:

- services provided by general practitioners and medical specialists (together known as 'medical services'), and services provided by other health practitioners that are covered or partly covered by Medicare. The Australian Government provided 79% of the funding for medical services in 2005–06 and 23% of the funding for 'other health practitioners'
- pharmaceuticals that are covered or partly covered by the Pharmaceutical Benefits Scheme (PBS) and Repatriation Pharmaceuticals Benefits Scheme (RPBS) (83% was contributed by the Australian Government for these in 2005–06)
- Aboriginal Community Controlled Health Organisations (100%)
- health research (67%).

The Australian Government also partly funds:

- public hospital services (42%) and public health activities such as infectious disease control and health promotion campaigns (54%), through direct funding and through

Specific Purpose Payments (SPPs) to the states and territories. The main health SPPs in 2005–06 were:

- the Australian Health Care Agreements (AHCAs) (see ‘Influence of health service funding agreements’ for more details)
- the Public Health Outcomes Funding Agreements
- for the provision of highly specialised drugs to outpatients in public and private hospitals
- private hospitals, through subsidising private health insurance cover through incentive arrangements (amounting to 34% of the gross funding that is provided through private health insurance funds).

State and territory governments

State and territory governments (including local governments) provide funding for:

- community health services (81% of recurrent funding in 2005–06)
- patient transport (62%)
- public hospital services (51%)
- public health activities (43%).

State and territory governments also fund the regulation of various health activities.

Non-government

Non-government funding comes from:

- out-of-pocket funding by individuals
- benefits paid by private health insurance
- providers of compulsory motor vehicle third-party insurance
- workers compensation insurance.

Non-government sources provide funding for:

- aids and appliances (85% of recurrent funding in 2005–06)
- dental services (81%)
- private hospitals (59%)
- medications (47%).

Health-care funding—how much?

In 2005–06, government funding of health expenditure was \$58,875 million (68% of total health expenditure), with the Australian Government contributing \$37,229 million (43%) and state, territory and local governments contributing \$21,646 million (25%). The non-government sector (households, private health insurance and other non-government sources) funded the remaining \$28,004 million (32%) (Table 8.3).

In current prices, from 2004–05 to 2005–06, Australian Government funding of health expenditure increased by 5%, state, territory and local government funding increased by 12% and non-government funding increased by 7% (tables S43 and S44).

From 1995–96 to 2005–06, the relative shares of funding of total health expenditure remained fairly stable for both the government and non-government sectors (Table 8.3). Around two thirds of funding was provided by governments and a third by non-government providers.

Funding by private health insurance decreased from 11% to 7% over this period. This decline is mostly the result of the Australian Government private health insurance rebate scheme taking over some private health insurance funding (see the later section on 'Funding' under the 'Hospitals' section for further details).

Table 8.3: Total health expenditure by broad source of funds, as a proportion of total health expenditure, current prices, 1995–96 to 2005–06 (per cent)

Year	Government			Non-government				Total
	Australian Government ^(a)	State/territory and local	Total	Health insurance funds	Individuals ^(a)	Other	Total	
1995–96	43.1	23.1	66.3	11.3	15.6	6.8	33.7	100.0
1996–97	41.2	24.6	65.8	11.2	16.4	6.6	34.2	100.0
1997–98	42.1	25.3	67.4	9.5	16.3	6.8	32.6	100.0
1998–99	43.3	23.8	67.1	7.9	17.2	7.8	32.9	100.0
1999–00	44.2	24.7	68.9	6.9	16.7	7.5	31.1	100.0
2000–01	44.3	23.3	67.6	7.1	18.0	7.3	32.4	100.0
2001–02	43.7	23.0	66.6	8.0	18.1	7.3	33.4	100.0
2002–03	43.5	24.0	67.4	7.9	17.3	7.4	32.6	100.0
2003–04	43.3	24.0	67.3	7.8	17.4	7.5	32.7	100.0
2004–05	43.8	23.8	67.7	7.4	17.3	7.6	32.3	100.0
2005–06	42.9	24.9	67.8	7.2	17.4	7.6	32.2	100.0
	Amount (\$m)							
2005–06	37,229	21,646	58,875	6,284	15,086	6,634	28,004	86,879

(a) Australian Government and individuals' expenditure have been adjusted for tax expenditure (see Table S42).

Note: Components may not add to totals, because of rounding.

Source: AIHW 2007a.

Australian Government

In 2005–06, the Australian Government provided \$37,229 million for health goods and services (43% of total expenditure) (Table 8.3). The three areas in which the Australian Government contributed the most funding were medical services (\$12,239 million), public hospital services (\$10,105 million) and benefit-paid pharmaceuticals (\$6,046 million) (Table S44). Much of this funding was provided through Medicare, the AHCA and the PBS and RPBS (see Box 8.3).

The Australian Government Medicare levy raised \$6,525 million in 2005–06 (Table S41). This was equivalent to 18% of the Australian Government's total recurrent health funding for that year.

Box 8.3: Medicare levy

All Australian Government funding for health services comes from its general revenues, one part of which is notionally health-related—the Medicare levy. In 2005–06, this levy funded the equivalent of 17.8% of total recurrent health funding by the Australian Government.

The levy was introduced in 1984 and was originally set at 1.0% of taxable income. It has increased several times since then and is currently set at 1.5% of taxable income. It has also been subject to one-off surcharges from time-to-time to cover non-health initiatives of the Australian Government.

Since October 1997, a further surcharge of 1.0% has been levied on ‘high-income’ earners (individuals earning more than \$50,000 per year and couples earning more than \$100,000 per year) who do not have private insurance cover for hospital care.

State/territory and local governments

The bulk of funding from the remaining two levels of government comes from state/territory governments, with local governments contributing some of the funding for public and community health services. In 2005–06, these two levels of government provided \$21,646 million for health goods and services (25% of total expenditure) (Table 8.3). State/territory and local governments were the major source of funding for community health services (\$3,167 million) and patient transport services (\$899 million). Nationally, more than half of the funding by state/territory and local governments was directed to public hospital services (\$12,374 million or 57% of total state/territory and local government health funding for 2005–06) (Table S44).

Non-government sources

In 2005–06, around one-third of funding on health goods and services was provided by the non-government sector (\$28,004 million or 32% of total expenditure) (Table 8.3). Just over half of this funding came from out-of-pocket payments by individuals (\$15,086 million or 17%). This included circumstances where individuals met the full cost of a service or good, as well as where they shared the funding of goods and services with third-party payers—for example, with private health insurance funds or the Australian Government. In this case, private health insurance funds provided \$6,284 million of funding and the remaining \$6,634 million came from other non-government sources (mainly compulsory third-party motor vehicle and workers compensation insurers).

Non-government sources provided the bulk of funding for dental services (\$4,342 million) and aids and appliances (\$2,378 million). Funding for medications was shared mainly between the Australian Government (\$6,117 million) and individual out-of-pocket payments (\$5,276 million) (Table S44).

Over the decade from 1995–96, funding by private health insurance funds decreased from 11% to 7% of total health expenditure (Table 8.3). This reflected the 30% rebate for private health insurance from the Australian Government. Private health insurance benefits that were previously funded almost entirely by private health insurance premiums were instead funded 30% by the Australian Government. In 2005–06, 4% of total health expenditure was funded by the Australian Government’s 30% rebate and 7% was funded through private health insurance funds (AIHW 2007a).

How does Australia's health expenditure compare with other OECD countries?

For this international comparison, health expenditure per person figures are expressed in Australian dollar values and are calculated after adjusting for differences in the purchasing powers of national currencies, based on broad GDP purchasing power parities (see Box 8.4).

The OECD median health to GDP ratio for 1995, 2000 and 2005 was respectively 7.5%, 8.1% and 9.0% (Table 8.4). Australia's ratio was similar for these periods—slightly lower in 1995 (7.4%), higher in 2000 (8.3%) and lower in 2005 (8.8%).

Australia's health to GDP ratio in 2005 was comparable to Italy's (8.9%) and New Zealand's (9.0%), was more than the United Kingdom's (8.3%) and much lower than the United States (15.3%), which had by far the highest ratio (Figure 8.1).

Australia's average per person expenditure on health was higher than the OECD median in each of the 3 years reported (Table 8.4). In 2005 it was \$4,121 per person, which was similar to that of Denmark, Greece and Ireland—all far below the United States at \$8,833.

Australia's per person out-of-pocket expenditure for health was the same as the median for OECD countries in 1995 (\$335 in current prices) and \$155 above it in 2005 (Table S51). As a percentage of total health expenditure and total household expenditure, Australia's out-of-pocket expenditure rose between the two periods from 16% to 18% and from 2% to 3%, respectively. For the OECD as a whole, although out-of-pocket expenditure remained about the same as a percentage of total household expenditure (3%), the weighted average fell as a percentage of total health expenditure (17% to 16%) between 1995 and 2005.

Government health expenditure in 2005 as a proportion of GDP was 5.9% in Australia, 1 percentage point below the OECD median, and lower than the 6.9% of GDP that the United States governments spend on health (Table S49).

Box 8.4: OECD definition of health expenditure

This section uses a slightly different definition of health expenditure from the rest of the chapter. This is because for national reporting Australia uses the concept of health expenditure that was adopted by the World Health Organization (WHO) in the 1970s. Recently, however, the OECD and WHO have adopted the OECD's System of Health Accounts (International Classification of Health Accounts) as the basis for international reporting of health expenditure. The major difference is the exclusion by the OECD of expenditure on health research and development, food standards and hygiene, and environmental health.

For this international comparison, the estimates of Australia's total health expenditure have been adjusted to fit the OECD's System of Health Accounts framework. Therefore, they differ somewhat from those used elsewhere in this chapter.

Despite recent moves to standardise the international reporting of health expenditure, there continue to be some small differences between countries in terms of what is included as 'health goods and services'. Consequently, although comparative reporting of health expenditure is becoming more and more meaningful, readers are urged to be cautious in drawing conclusions from these comparisons.

Australia's three tiers of government funded 67.0% of total health expenditure in 2005, which was 9.2 percentage points below the OECD median of 76.2%. Over the decade, the Australian governments' contribution to health care increased less than that of the OECD governments overall (1 percentage point and 1.9 percentage points respectively).

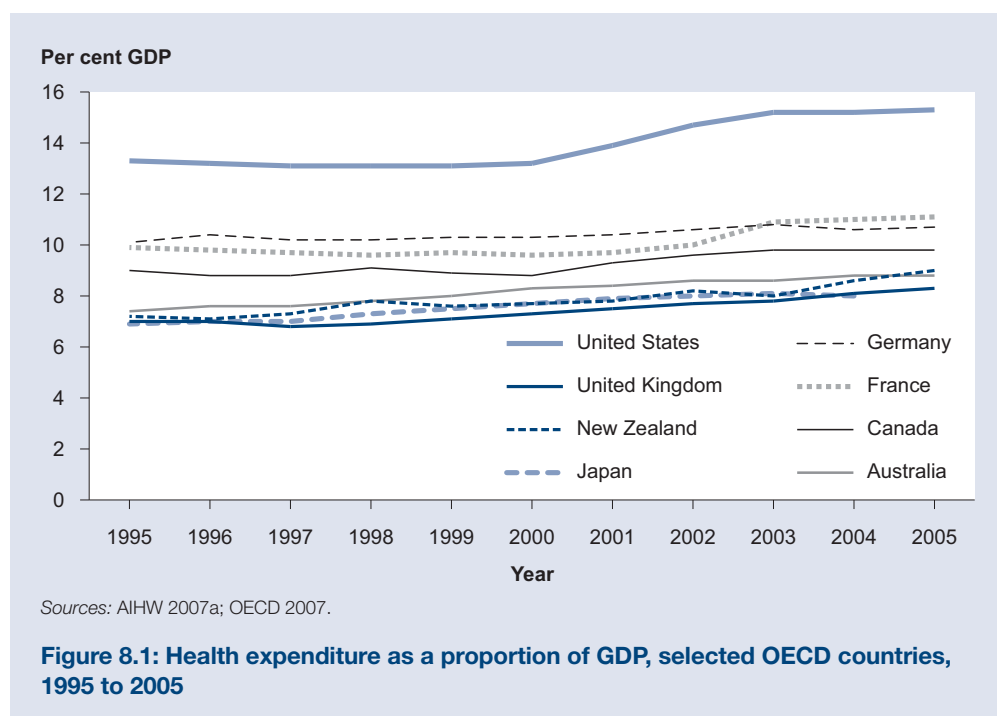


Table 8.4: Health expenditure^(a) as a proportion of GDP and per person, OECD countries, 1995, 2000 and 2005

Country	1995		2000		2005 ^(b)	
	Health to GDP (%)	Per person (A\$)	Health to GDP (%)	Per person (A\$)	Health to GDP (%)	Per person (A\$)
United States	13.3	4,826	13.2	5,985	15.3	8,833
Switzerland	9.7	3,394	10.4	4,167	11.6	5,764
France	9.9	2,726	9.6	3,258	11.1	4,656
Germany	10.1	2,937	10.3	3,451	10.7	4,536
Belgium	8.2	2,416	8.6	3,014	10.3	4,677
Austria	9.8	2,970	10.0	3,701	10.2	4,856
Portugal	7.8	1,447	8.8	2,129	10.2	2,806
Greece	7.5	1,650	9.3	2,555	10.1	4,114
Canada	9.0	2,715	8.8	3,287	9.8	4,590
Iceland	8.2	2,446	9.3	3,533	9.5	4,751
Denmark	8.1	2,433	8.3	3,119	9.1	4,289
Norway	7.9	2,497	8.4	4,037	9.1	6,022

(continued)

Table 8.4 (continued): Health expenditure^(a) as a proportion of GDP and per person, OECD countries, 1995, 2000 and 2005

Country	1995		2000		2005 ^(b)	
	Health to GDP (%)	Per person (A\$)	Health to GDP (%)	Per person (A\$)	Health to GDP (%)	Per person (A\$)
Sweden	8.1	2,288	8.4	2,976	9.1	4,027
New Zealand	7.2	1,642	7.7	2,103	9.0	3,233
Italy	7.3	2,062	8.1	2,722	8.9	3,494
Australia^(c)	7.4	2,111	8.3	2,956	8.8	4,121
United Kingdom	7.0	1,827	7.3	2,435	8.3	3,759
Spain	7.4	1,575	7.2	1,991	8.2	3,112
Turkey	3.4	247	6.6	591	7.6	809
Finland	7.5	1,886	6.6	2,249	7.5	3,217
Ireland	6.7	1,599	6.3	2,387	7.5	4,038
Czech Republic	7.0	1,208	6.5	1,272	7.2	2,041
Slovak Republic	..	..	5.5	779	7.1	1,569
Mexico	5.6	512	5.6	663	6.4	932
Poland	5.5	550	5.5	773	6.2	1,196
Korea	4.1	701	4.8	1,022	6.0	1,819
Hungary	7.3	904	6.9	1,123	n.a.	n.a.
Japan	6.9	2,041	7.7	2,577	n.a.	n.a.
Luxembourg	5.6	2,682	5.8	3,909	n.a.	n.a.
Netherlands	8.3	2,404	8.0	2,958	n.a.	n.a.
Weighted average (29 countries)^{(d)(e)}	9.6	2,485	9.9	3,136	11.1	4,485
Median (29 countries)^(d)	7.5	2,062	8.1	2,722	9.0	4,038

(a) See OECD definition of health expenditure in Box 8.4.

(b) OECD year 2005. For Australia, this is financial year 2005–06, and similarly for OECD years 1995 and 2000.

(c) Expenditure based on the OECD System of Health Accounts (SHA) framework.

(d) Excludes the Slovak Republic. Averages for 2005 incorporate 2004 data for Hungary, Japan, Luxembourg and the Netherlands.

(e) Average weighted by GDP or population.

Note: Expenditure converted to Australian dollar values using GDP purchasing power parities.

Sources: AIHW 2007a; OECD 2007.

How much is health expenditure per person?

In 2005–06, Australia spent around \$4,226 per person on average on health (Table 8.5). This includes expenditure funded by government, by non-government organisations such as private health insurance funds, and by individuals through out-of-pocket expenses. After adjustment for inflation, per person health expenditure grew at an average of 3.8% per year between 1995–96 and 2005–06.

From 2003–04 to 2005–06, estimated per person expenditure on health grew at an average of 2.8% per year. Four jurisdictions—Tasmania (5.6%), Northern Territory (5.3%), Western Australia (3.6%) and Victoria (2.9%)—all had annual growth rates that were higher than the national average (Table 8.6).

Table 8.5: Average health expenditure per person^(a), current and constant prices^(b), and annual growth rates, 1995–96 to 2005–06

Year	Amount (\$)		Growth (%)	
	Current	Constant	Current	Constant
1995–96	2,146	2,800	..	..
1996–97	2,286	2,932	6.5	4.7
1997–98	2,407	3,022	5.3	3.1
1998–99	2,577	3,156	7.1	4.4
1999–00	2,754	3,297	6.9	4.5
2000–01	3,023	3,531	9.8	7.1
2001–02	3,247	3,624	7.4	2.6
2002–03	3,485	3,758	7.3	3.7
2003–04	3,692	3,847	6.0	2.4
2004–05	4,001	4,001	8.4	4.0
2005–06	4,226	4,066	5.6	1.6
Average annual growth rate				
1995–96 to 1997–98			5.9	3.9
1997–98 to 2002–03			7.7	4.5
1995–96 to 2005–06			7.0	3.8

(a) Based on annual average resident population.

(b) Constant price health expenditure for 1995–96 to 2005–06 is expressed in terms of 2004–05 prices.

Source: AIHW 2007a.

Table 8.6: Average health expenditure per person^(a) by state/territory^(b), constant prices^(c), 2003–04 to 2005–06 (\$)

State/territory ^(d)	2003–04	2004–05	2005–06	Average annual growth rate 2003–04 to 2005–06 (%)
NSW	3,859	4,008	4,070	2.7
Vic	3,865	4,023	4,093	2.9
Qld	3,710	3,762	3,867	2.1
WA	3,865	4,114	4,149	3.6
SA	3,950	4,216	4,111	2.0
Tas	3,561	3,750	3,974	5.6
NT	4,616	4,850	5,122	5.3
Australia	3,847	4,001	4,066	2.8

(a) Based on annual average resident population.

(b) Per person expenditure includes all monies spent on health within a state/territory regardless of funding source. That is, it includes expenditure funded by the Australian Government, by state/territory and local governments and by non-government.

(c) See Box 8.2 for explanation of constant price estimation.

(d) ACT per person figures are not included, as the expenditure estimates for the ACT include substantial expenditure for NSW residents. Thus, the ACT population is not an appropriate denominator.

Source: AIHW Health Expenditure Database.

How much is spent on health services for Aboriginal and Torres Strait Islander peoples?

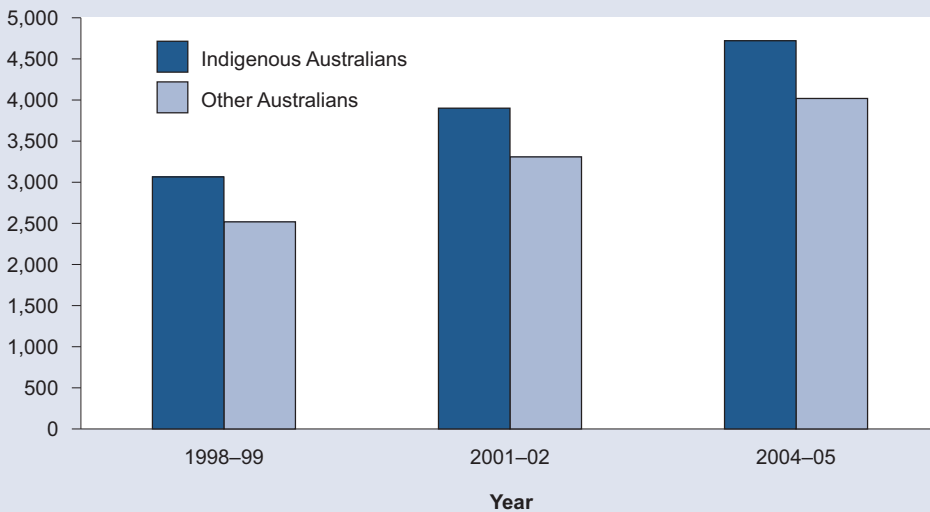
Information on aspects of health status and risk factors for Indigenous people is available in Chapters 3 and 4; and Chapter 5 examines some aspects of diseases and injury for this group. This section presents how much is spent on health services for Aboriginal and Torres Strait Islander peoples. The expenditure can be viewed in the context of the lower health status of Indigenous people—life expectancy for Indigenous people for the period 1999–2001 was some 17 years lower than life expectancy estimates for the total Australian population (AIHW 2007b).

Estimates of recurrent expenditure on health for Aboriginal and Torres Strait Islander peoples have been undertaken at 3-year intervals. The latest in the series relates to the year 2004–05 (AIHW 2008).

In 2004–05, recurrent expenditure on health for Indigenous peoples was estimated at \$2,304 million or nearly 3% of recurrent health expenditure for the entire population (tables S47 and S43). That represents an average of \$4,718 per Indigenous person, 17% higher than the average of \$4,019 for other Australians (AIHW 2008). This was about the same ratio as in 2001–02 and 1998–99 (18% and 22% higher respectively) (Figure 8.2).

There were substantial differences between the patterns of expenditure on Aboriginal and Torres Strait Islander peoples' health and that on the health of other Australians. Indigenous people were more likely than other Australians to use the kinds of health services for which states and territories are mainly responsible (such as admitted patient services in public hospitals and community health services). On a per person basis, expenditure on Indigenous people for state and territory services was 2.3 times that spent on other people.

Per person expenditure (\$)

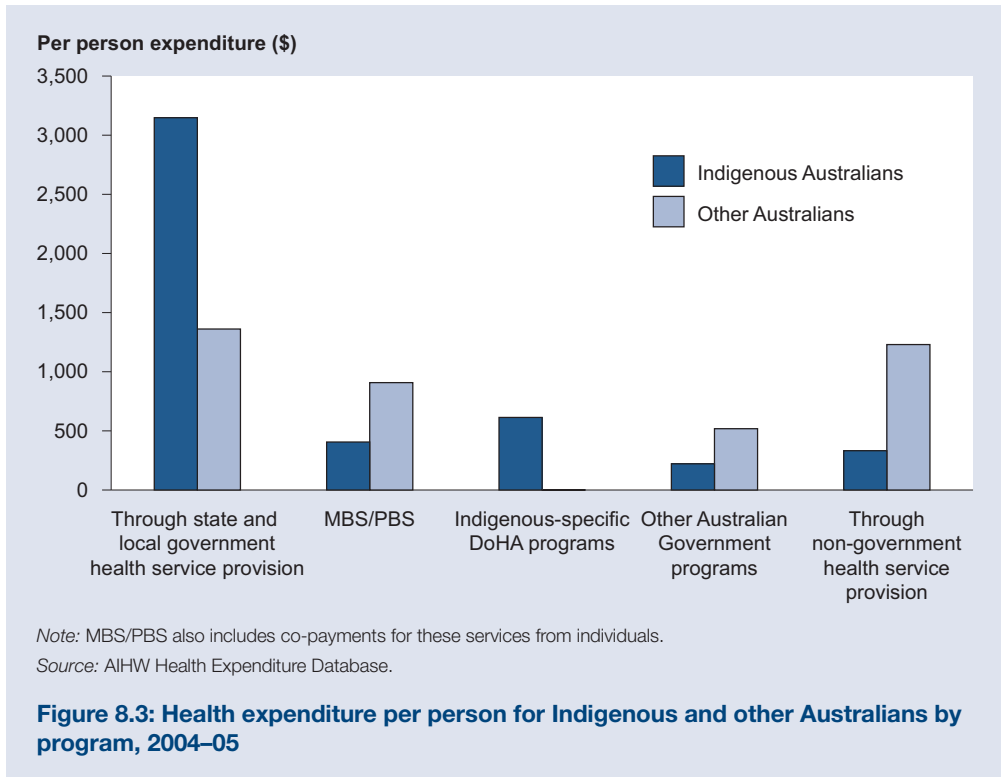


Source: AIHW Health Expenditure Database.

Figure 8.2: Health expenditure per person for Indigenous and other Australians, 1998–99 to 2004–05

For the two major Australian Government funding programs, namely Medicare and the PBS, average expenditure per person on Aboriginal and Torres Strait Islander peoples was less than half (44%) that on other Australians (Figure 8.3). If spending on Indigenous-specific Australian Government programs such as Aboriginal Community Controlled Health Services is included, the overall Indigenous/other Australians expenditure ratio for Australian Government programs in 2004–05 was 0.87:1 (AIHW 2008).

Average per person expenditure on private services (that is, services neither provided nor managed by the Australian Government or state or territory governments), such as private hospital services, private dental services and services provided by other health practitioners, was also much lower for Indigenous people than for other Australians. The Indigenous/other Australians expenditure ratio for all non-government health goods and services combined was estimated at 0.27:1 (AIHW 2008).



What is spent on health services for veterans?

In 2005–06, funding by the Department of Veterans' Affairs (DVA) on health totalled \$3,126 million (Table 8.7), which was 3.9% of recurrent health expenditure for the entire population. This funding related largely to services for veterans, war widows and widowers. The largest amount of DVA funding was for hospitals (\$684 million for public hospital services and \$834 million for private hospitals), medical services (comprising payments to GPs and specialists who are registered with DVA) (\$767 million), and medications (\$468 million). As a proportion of total recurrent health expenditure, DVA funding of private hospitals and patient transport were the largest components (13% and 7% respectively).

Note that elsewhere in this chapter, DVA funding is included in total funding by the Australian Government and not separately identified.

Table 8.7: DVA health funding^(a) by area of expenditure, 2005–06

Area of expenditure	Amount (\$m)	Proportion of DVA health funding (%)	Proportion of total recurrent health expenditure ^(b) (%)
Public hospital services ^(c)	684	21.9	2.8
Private hospitals	834	26.7	12.5
Patient transport	96	3.1	6.7
Medical services	767	24.5	4.9
Dental services	86	2.7	1.6
Other health practitioners	132	4.2	4.4
Community health	2	..	..
Medications	468	15.0	4.1
Aids and appliances	1	..	..
Administration	55	1.8	2.2
Research	2	0.1	0.1
Total	3,126	100.0	3.9

(a) Actual expense for 2005–06. Note these figures exclude some funding for non-health expenditure that is included in Table 8.8.

(b) Proportion of total recurrent health expenditure for each area of expenditure.

(c) Public hospital services excludes dental services, community health services, patient transport, public health and health research undertaken by public hospitals. Can include services provided off the hospital site such as hospital-in-the-home dialysis or other services.

Source: DVA, unpublished data.

DVA-administered health funding increased, in real terms, by 63% from 1996–97—from \$2,069 million to \$3,366 million in 2005–06 (Table 8.8). During the same period, the veteran population eligible to receive this funding decreased by 10% and the number of gold card holders decreased by 3% (Gold card holders are people entitled to the full range of health-care services at DVA expense, including medical, dental and optical care).

Table 8.8: DVA health funding^(a), current and constant prices^(b), the eligible veteran population and number of gold card holders, 1996–97 to 2005–06

Year	DVA-administered health funding		Eligible veteran population ^(c) at 30 June (number)	Gold card holders at 30 June (number)
	Current prices (\$ million)	Constant prices (\$ million)		
1996–97	1,600	2,069	340,327	258,562
1997–98	1,800	2,279	339,310	257,567
1998–99	2,000	2,469	353,840	291,622
1999–00	2,300	2,773	348,996	287,066
2000–01	2,500	2,957	345,131	283,925
2001–02	2,700	3,019	340,716	281,448
2002–03	3,000	3,232	335,160	277,747
2003–04	3,200	3,331	325,798	269,544
2004–05	3,400	3,400	316,333	260,864
2005–06	3,500	3,366	305,229	250,957

(a) Excludes residential aged care subsidy, salaries and administration and certain minor items not directly related to veteran health care (for example, health research).

(b) See Box 8.2 for explanation of constant price estimation.

(c) Includes gold and white card holders. White card holders are entitled to the full range of health-care services at DVA expense, but generally only for those disabilities or illnesses accepted as service-related.

Sources: DVA Annual Reports and DVA unpublished data.

How much is spent on each type of disease and injury?

This section provides an overview of how health expenditure in Australia is distributed among disease and injury groups. The estimates were derived using a method that ensures that they add across disease, age and sex groups to the total Australian health system expenditure for 2004–05 that was able to be allocated by disease (AIHW in press). The estimates provide a useful description of the use and costs of health services in Australia, as well as a reference source for planners and researchers interested in costs and use patterns for particular disease groups.

There are a number of points to note when using disease expenditure data. The estimates:

- are only one measure of the size of the disease burden on the community (that is, the ‘size of the problem’)
- are not the same as loss of health because of disease
- do not mean that the disease with the highest expenditure should necessarily be the top priority for intervention
- should not be regarded as how much would be saved if a specific or all diseases were prevented
- are not an estimate of the total economic impact of diseases in the Australian community. This is because the estimates do not include costs that are not accrued by the health system, such as travel costs of patients, costs associated with the social and economic burden on carers and family, and costs owing to lost quality and quantity of life.

In 2004–05, total health expenditure in Australia was \$81.1 billion. Of this, estimates for disease expenditure were able to be allocated for \$52.7 billion (65%). The remaining \$28.4 billion of health expenditure which could not be allocated by disease included recurrent expenditure of \$23.7 billion for:

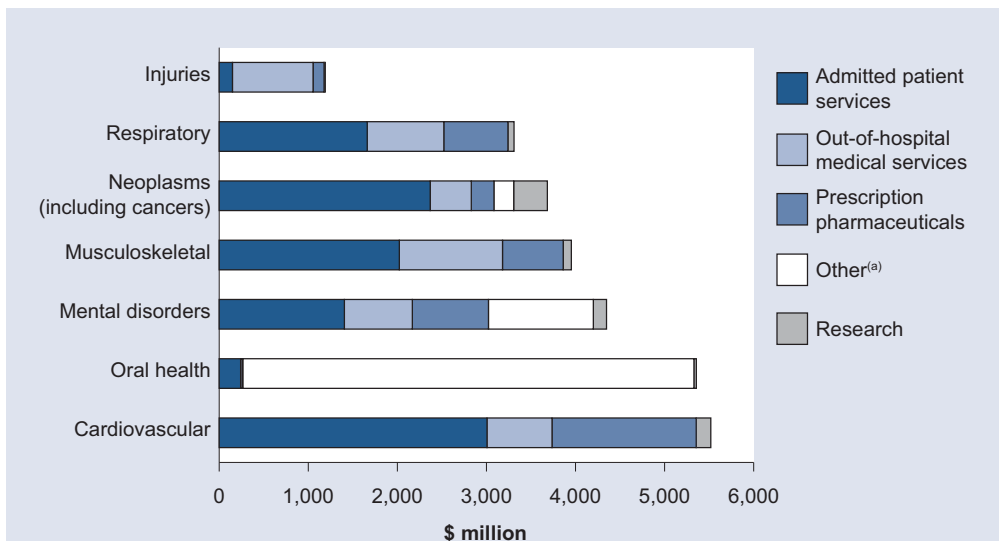
- hospital non-admitted patient services
- community health, excluding community mental health
- public health, excluding cancer screening programs
- health administration
- other health practitioner services, excluding optometry
- non-prescription medications
- patient transport services
- health aids and appliances.

It also included capital expenditure of \$4.7 billion.

Which diseases have the most spent on them?

Seven broad disease groups accounted for an estimated \$29,827 million, or 57% of the allocatable health expenditure in Australia in 2004–05 (Table 8.9). Cardiovascular disease was the most expensive disease group (\$5,923 million or 11% of expenditure) and oral health was the second most expensive (\$5,305 million or 10%).

Different illnesses have different patterns of expenditure by type of health service (Figure 8.4). For cardiovascular diseases, musculoskeletal diseases, cancers and other neoplasms and injuries, expenditure on hospital admitted patient services accounted for a relatively high proportion of total expenditure.



(a) Includes dental services.

Source: AIHW in press.

Figure 8.4: Expenditure on disease by area of expenditure for selected broad disease groups, 2004–05 (\$ million)

Table 8.9: Diseases and injury by broad groups: health system costs by area of health expenditure, 2004–05 (\$ million)

Broad groups	Admitted patient services ^(a)	Out-of-hospital medical services	Dental services	Prescription pharmaceuticals ^(b)	Other ^(c)	Research	Total health expenditure allocated by disease	Proportion of total allocated expenditure (%)
Cardiovascular	3,009	1,114	..	1,636	..	164	5,923	11.2
Oral health	186	22	5,064	6	..	27	5,305	10.1
Mental disorders	1,411	543	..	854	1,177	148	4,133	7.8
Musculoskeletal	2,003	1,178	..	680	..	92	3,954	7.5
Neoplasms (including cancers)	2,381	569	..	236	222	378	3,786	7.2
Respiratory	1,477	1,049	..	725	..	69	3,321	6.3
Genitourinary	1,431	780	..	111	..	24	2,346	4.5
Digestive system	1,849	447	..	764	..	48	3,107	5.9
Nervous system	985	775	..	464	218	291	2,732	5.2
Endocrine, nutritional & metabolic	448	501	..	1,042	..	110	2,101	4.0
Maternal conditions	1,539	117	..	4	..	12	1,672	3.2
Skin diseases	398	452	..	102	..	13	964	1.8
Infectious & parasitic	482	458	..	199	..	184	1,323	2.5
Injuries	2,422	845	..	124	..	14	3,405	6.5
Diabetes	371	288	..	275	..	55	989	1.9
Neonatal causes	422	21	..	1	..	12	456	0.9
Congenital anomalies	209	25	..	2	..	54	290	0.6
Signs, symptoms, ill-defined conditions and other contact with health system ^(d)	3,195	2,717	..	919	..	22	6,853	13.0
Total	24,221	11,900	5,064	8,144	1,616	1,715	52,660	100.0
Proportion of total allocated expenditure (%)	46.0	22.6	9.6	15.5	3.1	3.3	100.0	

(a) Public and private acute hospitals, and psychiatric hospitals. Includes medical services provided to private admitted patients in hospital.

(b) Includes all pharmaceuticals for which a prescription is needed, including benefit-paid prescriptions, private prescriptions and under co-payment prescriptions.

(c) Includes optometry services; community mental health, and breast and cervical screening programs.

(d) Includes services for signs, symptoms and ill-defined conditions where cause of problem is unknown. 'Other contact with the health system' includes fertility control, reproduction and development; elective plastic surgery; general prevention, screening and health examination; and treatment and aftercare for unspecified disease.

Source: AIHW in press.

Spending differences according to age and sex

Health system expenditure allocated by disease was 18% higher for females than for males—\$28.5 billion compared with \$24.1 billion. Expenditure per person was \$2,781 for females, which was 17% higher than the \$2,377 for males. When maternal conditions are excluded, expenditure per person for females was 10% higher than for males (Table 8.10).

This remaining difference for females largely reflects the fact that there are more women than men in the older age groups, where expenditure is highest.

In 2004–05, total allocated health expenditure for males was higher than for females for the young age groups (up to 14 years) and for the older age groups (from 55 years onwards). In contrast, total allocated health expenditure for females was higher than males for the age groups between 15 and 54 years, reflecting costs for child bearing and health expenditure related to the genitourinary system (Figure 8.5). If the effect of the larger number of females at older age groups is eliminated by comparing males and females in the same age groups, the per person pattern of health expenditure was similar for both sexes with the exception of the peak for females at ages 25–34.

Expenditure per person for mental disorders was generally higher for females than males. It was generally higher for males for cardiovascular disease (Table 8.10).

Total allocated health expenditure per person in 2004–05 ranged from \$790 for females aged 5–14 years to \$10,588 for males aged 85 years and over. The male–female difference in per person cost was the greatest, in dollar terms, for the 85 and over age group (\$10,588 for males and \$8,553 for females) (Table 8.10).

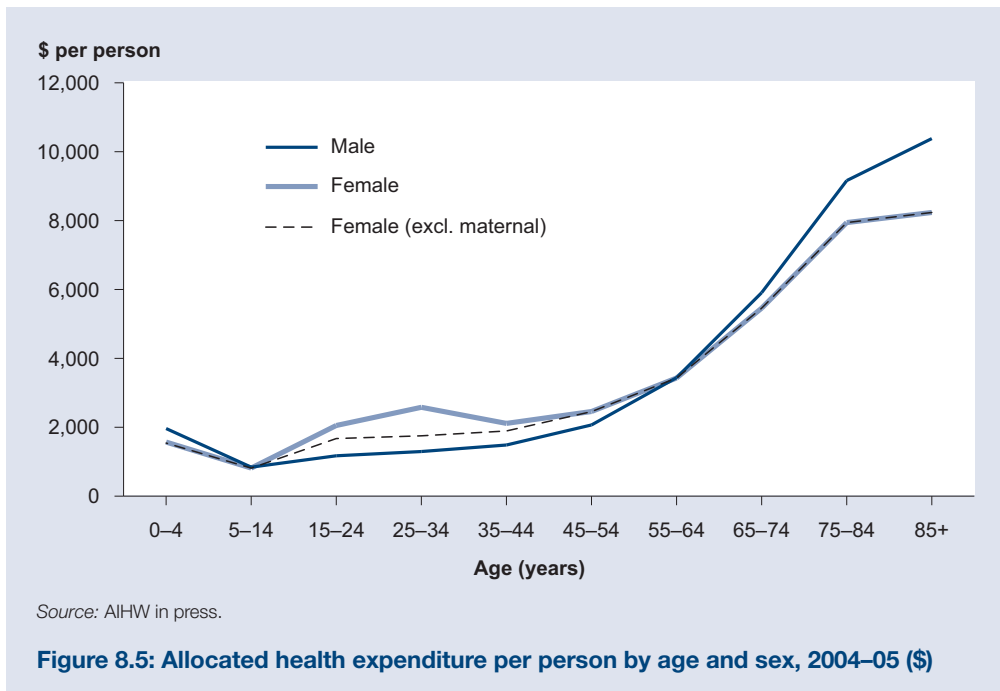


Table 8.10: Allocated health expenditure per person by age, sex and broad disease groups, 2004–05 (\$)

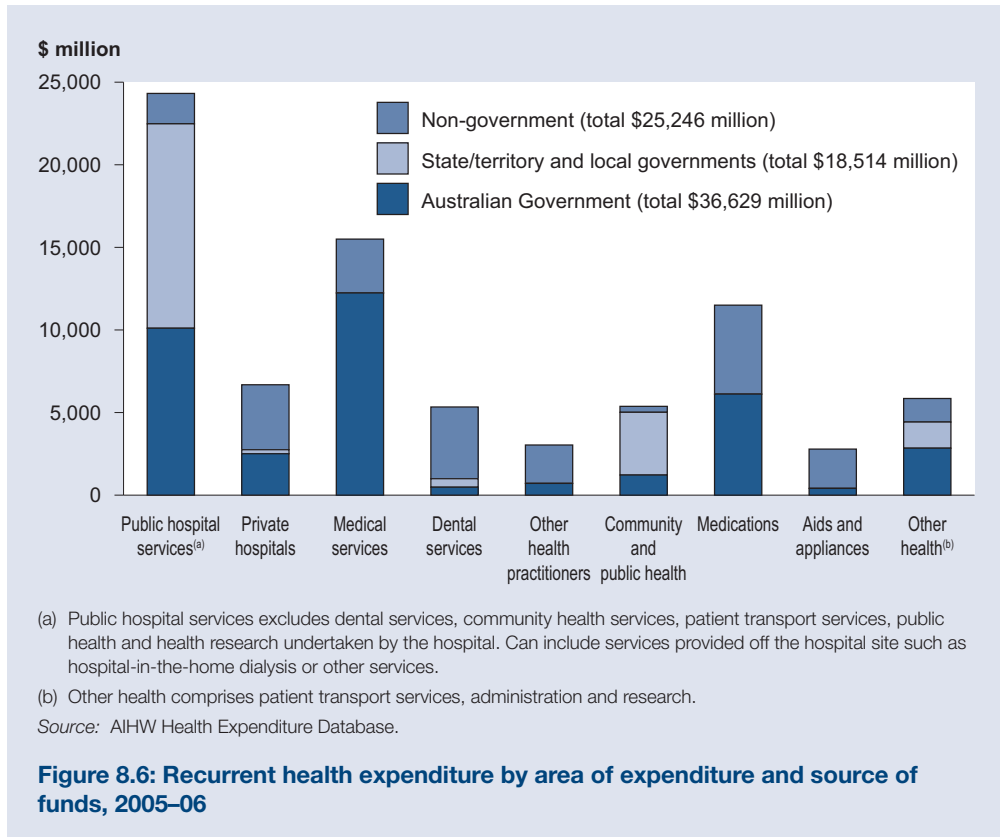
Selected broad disease groups and sex	Age group										Total
	0–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85+	
<i>Cardiovascular</i>											
Male	11	7	14	37	94	276	653	1,336	1,998	2,096	321
Female	8	7	14	34	77	184	416	865	1,517	1,604	260
<i>Oral health</i>											
Male	335	264	409	261	184	157	172	174	180	125	242
Female	301	281	650	314	195	166	156	178	160	122	278
<i>Mental disorders</i>											
Male	75	30	205	306	268	220	197	170	227	243	196
Female	23	47	216	278	273	248	221	237	271	204	209
<i>Musculoskeletal</i>											
Male	16	28	53	76	125	190	327	515	655	514	169
Female	15	26	40	67	114	225	421	708	876	585	218
<i>Neoplasms (including cancers)</i>											
Male	32	19	22	30	60	133	350	733	1,120	1,121	182
Female	32	18	34	59	117	242	357	586	615	544	189
<i>Respiratory</i>											
Male	350	116	74	72	79	94	178	364	679	894	164
Female	260	100	96	86	97	120	194	316	463	509	162
<i>Injuries</i>											
Male	83	102	204	164	140	142	178	265	505	885	178
Female	65	66	90	84	90	110	152	271	625	1,154	156
<i>Maternal conditions</i>											
Female	23	1	307	662	177	3	—	—	—	—	163
Total											
Male	1,968	818	1,285	1,367	1,530	2,080	3,477	5,972	9,155	10,588	2,377
Female	1,618	790	2,014	2,390	2,028	2,420	3,436	5,510	8,060	8,553	2,781
Female (excl. maternal)	1,595	789	1,707	1,729	1,851	2,417	3,436	5,510	8,060	8,553	2,618

Source: AIHW in press.

How much was spent on each kind of health service and who provided the funding?

This section is derived from *Health expenditure Australia 2005–06* (AIHW 2007a) which contains more detailed information on health expenditure and funding. Recurrent expenditure on health in 2005–06 was estimated at \$80,389 million (92.5% of total health expenditure). The largest component was expenditure on hospital services, totalling \$31,003 million (39% of recurrent expenditure) (Table S44; Figure 8.6).

The next largest component was medical services, comprising mainly services provided by registered general practitioners and specialists, excluding those provided to public admitted patients or public outpatients in public hospitals (\$15,499 million or 19% of recurrent health expenditure). Medications (excluding those dispensed in hospitals) came next at \$11,501 million or 14%. Expenditure on dental services (\$5,337 million) and community health (\$3,899 million) accounted for 7% and 5%, respectively.



Hospitals

Expenditure

In 2005–06, hospital expenditure was \$31,003 million. Expenditure on public hospital services represented \$24,319 million or 78% of all expenditure on hospitals during 2005–06, with the balance, \$6,683 million or 22%, spent on private hospitals (Table S45).

In real terms, expenditure on hospitals (both public and private) grew by 4.8% per year between 1995–96 and 2002–03, and by 4.2% between 2003–04 and 2005–06 (Table S45).

For public hospitals, real growth in expenditure was 4.6% per year from 1995–96 to 2002–03. For public hospital services, expenditure increased on average by 4.9% per year from 2003–04 to 2005–06 (see explanation of expenditure relating to public hospitals in the 'Breaks in series' section below).

Real growth in expenditure on private hospitals was slightly lower at 4.5% each year between 1995–96 and 2005–06.

Public hospitals in this report include public psychiatric hospitals, which are public hospitals that cater almost exclusively for the needs of people with mental illness.

Table 8.11: Recurrent expenditure on hospitals^(a) by source of funds, current prices, 1995–96 to 2005–06 (per cent)

Year	Government			Non-government ^(b)	Total
	Australian Government ^(b)	State/territory and local	Total		
1995–96	37.4	35.9	73.3	26.7	100.0
1996–97	35.6	38.1	73.7	26.3	100.0
1997–98	38.2	38.2	76.4	23.6	100.0
1998–99	41.9	36.0	77.9	22.1	100.0
1999–00	43.8	35.8	79.6	20.4	100.0
2000–01	45.0	34.9	79.8	20.2	100.0
2001–02	44.0	35.0	79.0	21.0	100.0
2002–03	43.5	37.5	81.1	18.9	100.0
2003–04	42.6	38.0	80.6	19.4	100.0
2004–05	42.3	38.4	80.7	19.3	100.0
2005–06	40.6	40.5	81.1	18.9	100.0

(a) Includes public and private hospitals. For public hospitals, this includes dental services, community health services, patient transport services, public health and health research undertaken by public hospitals.

(b) Funding by the Australian Government and private health insurance funds has been adjusted for the private health insurance rebate.

Note: Components may not add to totals, because of rounding.

Source: AIHW Health Expenditure Database.

Breaks in series

There have been changes in methods which have led to a break in time series information for both public and private hospitals. As a result, public hospital expenditure from 2003–04 onwards cannot be compared with that from previous years. Similarly, caution should be used when comparing private hospital expenditure from 2002–03 onwards with that from previous years.

Public hospitals and public hospital services

Information on public hospitals expenditure (and its funding) before 2003–04 is referred to as public hospitals expenditure and from 2003–04 onwards is referred to as public hospital services expenditure, because they do not contain all the same elements as each other (for more information, see AIHW 2007a).

However, note that the public hospitals expenditure data for years 2003–04 to 2005–06 presented in tables 8.11 and 8.12 and figures 8.7 and 8.8 used the same calculations as those used for the pre-2003–04 method, to enable comparisons of public hospitals expenditure across the decade. Therefore, expenditure data in these tables for the years 2003–04 to 2005–06 refer to public hospitals expenditure, not public hospital services expenditure.

Private hospitals

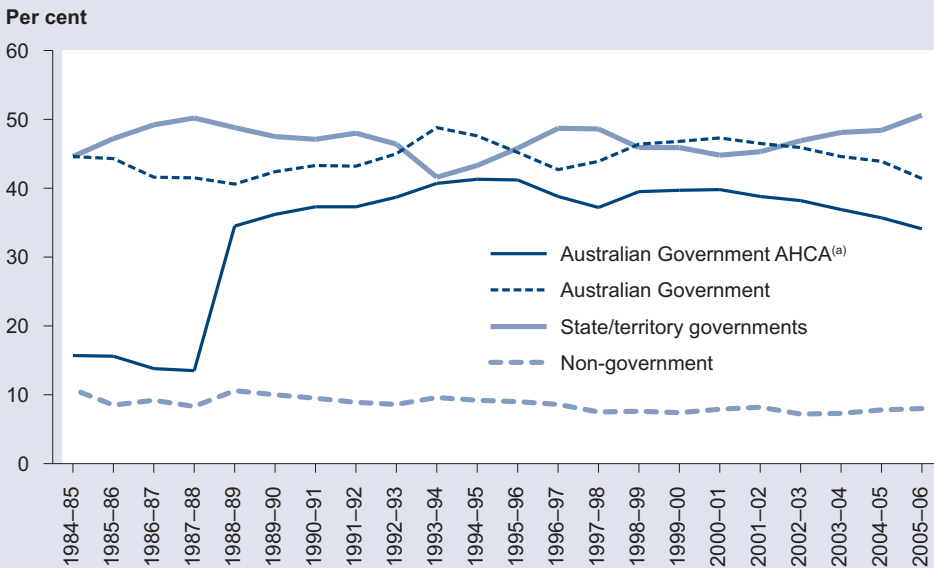
From 2002–03, state and territory governments began identifying their purchases of services from private hospitals as part of their funding of private hospitals expenditure. This change in practice resulted in a change in the estimated state/territory share of funding of hospital expenditure from 35% in 2001–02 to over 37% in 2002–03 and a corresponding drop in the non-government share of funding of this expenditure (Table 8.11).

Funding

In 2005–06, governments accounted for most of hospital funding (81%) (Table 8.11). Over the decade to 2005–06, governments increased their share of hospital funding by 7.8 percentage points—the Australian Government by 3.2 percentage points and the states and territories by 4.6 percentage points. At the same time the non-government funding of public and private hospitals decreased from 26.7% to 18.9%.

Of this 7.8 percentage point increase in the share of government funding over the decade, 5.6 percentage points were the effect of the Australian Government private health insurance subsidy/rebate taking over some of the funding of private health insurance.

The Private Health Insurance Incentives Scheme Subsidy was introduced in 1997, and replaced by a 30% rebate on premiums in January 1999 (Box 8.5). These Australian Government policy measures were aimed at arresting a long-term decline in membership of private health insurance funds. As a result, the Australian Government's share of funding for hospitals increased to 45% by 2000–01, from 36% in 1996–97 (Table 8.11).



(a) Includes Medicare Agreements from 1984–85 to 1997–98.

Note: Public hospitals includes dental services, community health services, patient transport services, public health and health research undertaken by public hospitals.

Source: AIHW Health Expenditure Database.

Figure 8.7: Recurrent expenditure on public hospitals by source of funds, current prices, 1984–85 to 2005–06 (per cent)

In the estimates presented here, the subsidy and the 30% rebate have both been treated as funding by the Australian Government. This reduces the estimated share of funding by private health insurance funds, which is reflected in the drop in the overall non-government share of funding from 26% in 1996–97 to 19% in 2005–06.

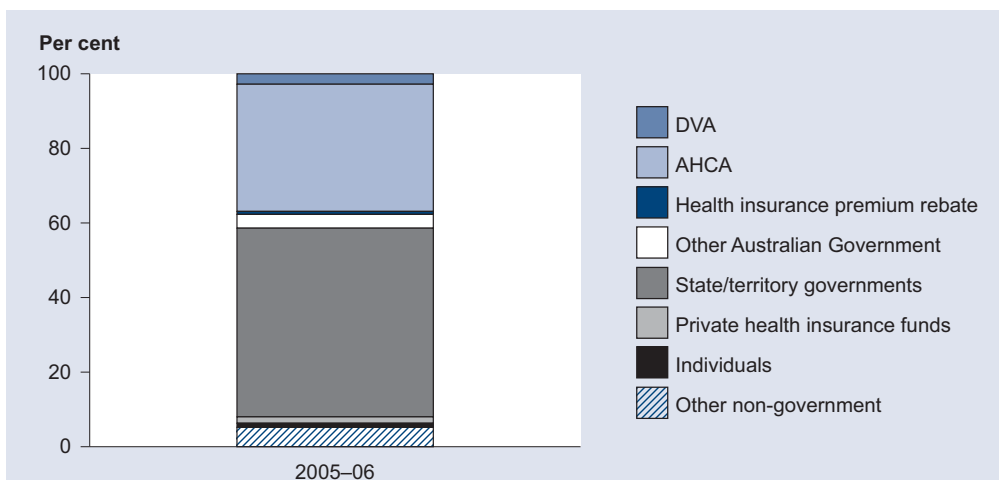
The Australian Government maintained a higher share of overall hospital funding than the state and territory governments throughout all of the 1998–99 to 2002–03 AHCA period. This was largely due to increases in private health insurance membership and therefore increases in Australian Government expenditure due to the 30% premium rebates scheme. This mostly affected the funding provided to private hospitals.

Public hospitals

Funding for public psychiatric and non-psychiatric hospitals includes funding for dental services, community health services, patient transport services, public health and health research where those activities are undertaken in public hospitals, in addition to funding for general hospital treatment provided by public hospitals.

More than 90% of funding for public hospitals comes from governments. The Australian Government's contribution—estimated at 41% in 2005–06—was largely in the form of Specific Purpose Payments (SPPs) under the AHCA's (Table 8.12). The states and territories, which have the major responsibility for operating and regulating public hospitals that operate within their jurisdictions, provided 51% of the funding for public hospitals in 2005–06.

Over the two decades since 1984–85, the relative contributions to public hospital funding by governments and non-government have varied. In 1984–85, the Australian Government and the state and territory governments funded just under 45% each and non-government sources funded the balance (11%) (Figure 8.7). This was the highest proportion of funding by the non-government sector over these two decades. Funding by the Australian Government peaked at 49% in 1993–94 and by the state and territory governments at 51% in 2005–06.



Note: Public hospitals includes dental services, community health services, patient transport services, public health and health research undertaken by public hospitals.

Source: AIHW Health Expenditure Database.

Figure 8.8: Recurrent expenditure of public hospitals by source of funds, 2005–06 (per cent)

In 1995–96, the Australian Government share of public hospital funding was 45% and the state and territory governments share was 46%. In 2005–06, the difference in the relative shares had increased, with the Australian Government providing 41% of public hospital funding and state and territory governments providing 51% (Table 8.12).

The non-government contribution was 9% in 1995–96 and 8% in 2005–06 (Figure 8.7). In 2005–06, this non-government funding consisted of funding from private health insurance (2%), individual out-of-pocket payments (1%) and other non-government funding (5%) such as workers compensation insurers and motor vehicle third-party insurers (1%), and other revenue (4%) (Figure 8.8; AIHW 2007a).

Table 8.12: Recurrent expenditure on public hospitals^(a) by source of government funds, current prices, 1995–96 to 2005–06 (per cent)

Year	Australian Government					State/territory governments	Total government
	DVA	AHCA	Rebates of health insurance premiums	Other Australian Government ^(b)	Total		
1995–96	4.0	41.2	..	—	45.2	45.8	91.0
1996–97	3.6	38.8	..	0.4	42.7	48.7	91.4
1997–98	3.0	37.2	0.2	3.4	43.9	48.6	92.5
1998–99	3.5	39.5	0.4	3.0	46.4	45.9	92.4
1999–00	3.4	39.7	0.6	3.1	46.8	45.9	92.6
2000–01	3.3	39.8	0.7	3.5	47.3	44.8	92.1
2001–02	3.5	38.8	0.7	3.6	46.5	45.3	91.8
2002–03	3.7	38.2	0.7	3.4	45.9	46.9	92.8
2003–04	3.7	36.9	0.7	3.3	44.6	48.1	92.7
2004–05	3.7	35.7	0.8	3.7	43.9	48.4	92.2
2005–06	2.8	34.1	0.8	3.7	41.4	50.6	92.0

(a) Includes dental services, community health services, patient transport services, public health and health research undertaken by public hospitals.

(b) Includes DoHA direct expenditure on public hospitals, such as for blood sector payments and SPPs, excluding AHCA, for public hospitals. These include SPPs for highly specialised drugs, hepatitis C funding, Health Program and Positron emission tomography (PET) Scanner grants.

Note: Lines separate the table according to Australian Health Care Agreement periods.

Source: AIHW Health Expenditure Database.

Public hospital services

The funding amount for the category of ‘public hospital services’ differs from that for ‘public hospitals’. Funding for ‘public hospital services’ is funding for general hospital treatment provided by public hospitals; however, unlike the broader ‘public hospitals’ funding, it excludes funding for additional activities run by public hospitals, namely dental services, community health services, patient transport services, public health and health research. Data are available for this category for 2003–04 to 2005–06.

In 2005–06, the Australian Government provided 42% (\$10,105 million) of the funding for public hospital services, a 2.7 percentage point decrease in funding from 2003–04—the majority through AHCA funding (Table 8.13). In comparison, state and territory governments contributed 51% (\$12,374 million) of funding in 2005–06, an increase over 2003–04 and 2004–05.

Non-government funding of public hospital services represented 8% of total funding for public hospital services in 2005–06 (\$1,840 million), also higher than in 2003–04 and 2004–05.

Table 8.13: Recurrent expenditure on public hospital services^{(a)(b)} by source of funds, current prices, 2003–04 to 2005–06

Year	Australian Government					State/ territory governments	Non- government	Total
	DVA	AHCA	Rebates of health insurance premiums	Other Australian Government ^(c)	Total			
Amount (\$ million)								
2003–04	743	7,500	147	673	9,063	10,099	1,275	20,437
2004–05	814	7,919	180	823	9,735	10,896	1,460	22,091
2005–06	685	8,321	207	893	10,105	12,374	1,840	24,319
Proportion (%)								
2003–04	3.6	36.7	0.7	3.3	44.3	49.4	6.2	100.0
2004–05	3.7	35.8	0.8	3.7	44.1	49.3	6.6	100.0
2005–06	2.8	34.2	0.8	3.7	41.6	50.9	7.6	100.0

(a) Public hospital services excludes dental services, community health services, patient transport services, public health and health research undertaken by the hospital. Can include services provided off the hospital site such as hospital-in-the-home dialysis or other services.

(b) Public hospital services expenditure does not include expenditure on public patients who are contracted with private hospitals as this is part of private hospital expenditure. In 2005–06, this expenditure was \$244 million (Table S44).

(c) Includes DoHA direct expenditure on public hospital services, such as for blood sector payments and SPPs for public hospital services which are not AHCA. These include SPPs for highly specialised drugs, hepatitis C funding, Health Program and PET Scanner grants.

Source: AIHW Health Expenditure Database.

Private hospitals

In 2005–06, more than two-thirds (69%) of total expenditure on private hospitals was funded by private health insurance funds (\$4,598 million) (tables S44 and S53). Of this, 46% was from premiums paid by contributors and other revenues, and the remaining 23% was indirectly funded out of the 30% premium rebates paid by the Australian Government. In 2005–06, those rebates totalled \$3,177 million, and \$1,544 million of that was estimated to have been used in the funding of private hospitals (Table S53).

Private hospital funding also includes funding from public hospitals where they contract a private hospital to provide a service for a public patient.

Medical services

The medical services category refers to services provided by private medical practitioners operating on a fee-for-service basis. Most of these services attract benefits under Medicare and these Medicare payments are included here. Included are medical services provided to private patients in public and private hospitals. Expenditure under some Australian Government programs, such as those encouraging the supply of medical practitioners in regions where there is a shortage, is also included. Excluded are medical services provided to public patients in public and private hospitals.

Expenditure

Expenditure on medical services increased from \$7,872 million in 1995–96 to \$15,499 million in 2005–06, an increase in real terms of 2.6% per year (Table S45).

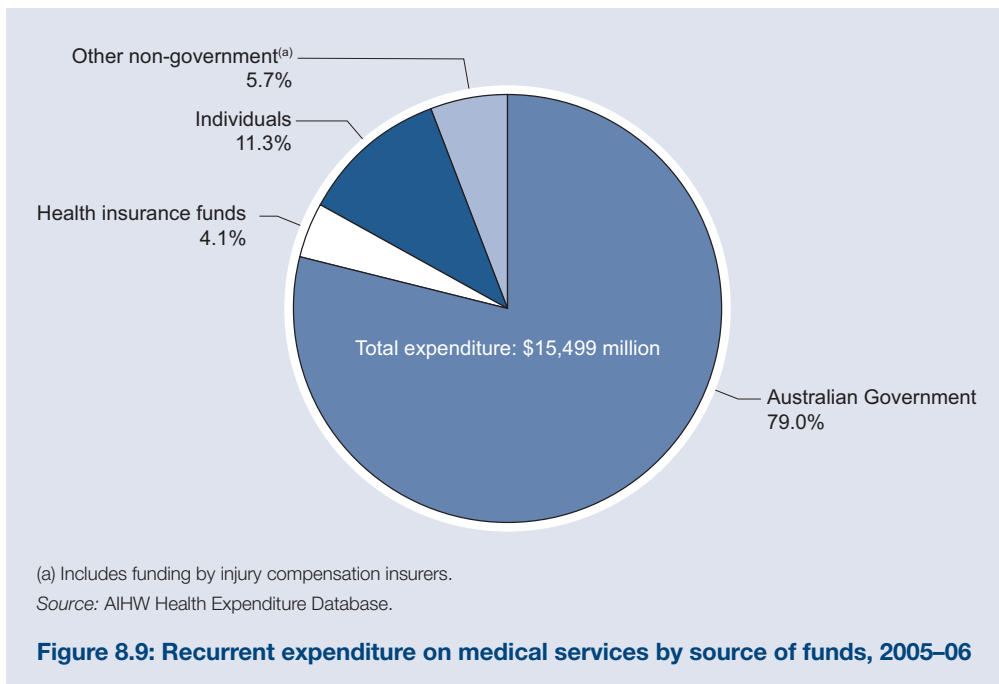
Funding

Most Australian Government funding for medical services was through Medicare benefits (Figure 8.9). The Australian Government also funded medical services for veterans and their dependants through the Department of Veterans' Affairs.

Direct funding of medical services (apart from services delivered within hospitals, as described above) by state, territory and local governments is negligible.

Most of the non-government funding for medical services (estimated at \$3,261 million in 2005–06) was in the form of co-payments by individuals for services provided under Medicare (Table S44). It also includes contributions paid by health insurance funds for services to individuals provided in hospitals and payments by other non-government sources (mostly workers compensation and compulsory motor vehicle third-party insurers).

Of the \$15,499 million spent on medical services in 2005–06, 79% (\$12,239 million) was funded by the Australian Government. This was made up almost exclusively of medical benefits paid under Medicare, with some funding from the DVA for medical services to eligible veterans and their dependants, as well as payments to general practitioners under alternative funding arrangements. Of the remaining expenditure, 11% was funded out-of-pocket by individuals, 4% was from health insurance funds and 6% was other non-government funding.



In 2005–06, individuals' funding of medical services through out-of-pocket payments increased by \$123 million (8%) over the previous year to reach \$1,745 million (tables S43 and S44).

Between 1995–96 and 2005–06, the Australian Government's share of funding for medical services decreased from 83% to 79%, reflecting a rise in the share being met by all parts of the non-government sector (Table 8.14).

Bulk-billing influences the relative shares of funding by the Australian Government and individuals, because services that are bulk-billed do not attract any co-payment by individuals. The trends in the bulk-billing rate parallel trends in the proportion of medical services expenditure funded by individuals. So the peak for individuals' payments in 2003–04 of 12% of medical services expenditure also represented the lowest bulk-billing rate in this period (68%) (Table 8.14). Bulk-billing rates have fluctuated over the last 10 years and in 2005–06 the rate was 72%—similar to that in 1995–96 (71%).

The increase in the Australian Government proportion and the corresponding decrease in the individual proportion in 2004–05 reflect the introduction of the Strengthening Medicare program. From 1 January 2005, the program increased the Medicare benefit paid for general practitioner services from 85% to 100% of the schedule fee.

Table 8.14: Recurrent expenditure on medical services by source of funds, current prices, and proportion of medical services bulk-billed, 1995–96 to 2005–06 (per cent)

Year	Australian Government	Non-government				Total	Total	Bulk-billing rate
		Health insurance funds	Individuals	Other				
1995–96	82.5	2.8	9.6	5.0	17.5	100.0	71.1	
1996–97	81.9	2.8	10.0	5.3	18.1	100.0	71.8	
1997–98	81.7	2.5	10.6	5.2	18.3	100.0	71.8	
1998–99	81.7	2.2	10.7	5.3	18.3	100.0	72.0	
1999–00	82.1	2.2	10.3	5.3	17.9	100.0	72.3	
2000–01	81.5	2.8	10.6	5.1	18.5	100.0	71.4	
2001–02	80.0	3.7	10.7	5.6	20.0	100.0	70.4	
2002–03	78.2	4.1	11.9	5.8	21.8	100.0	67.8	
2003–04	77.2	4.3	12.4	6.1	22.8	100.0	67.5	
2004–05	79.1	4.0	11.1	5.8	20.9	100.0	70.2	
2005–06	79.0	4.1	11.3	5.7	21.0	100.0	71.7	

Source: AIHW Health Expenditure Database.

Medications

Medications comprise:

- PBS or RPBS benefit-paid pharmaceuticals, including Section 100 payments for human growth hormones, IVF and other subsidised medications
- other medications for which no benefit was paid by PBS or RPBS:
 - private prescriptions that do not fulfil the criteria for a benefit
 - under co-payment prescriptions, which are items listed on the PBS/RPBS that are equal to or less than the cost of the statutory patient contribution (co-payment)

- over-the-counter medicines such as pharmacy-only medicines, pain-killers, cough and cold medicines, vitamins and minerals
- a range of medical non-durables such as bandages, bandaids and condoms.

Expenditure on drugs also includes drugs used in hospitals, including highly specialised drugs, for the care of admitted patients, but this is included in hospital expenditure.

Expenditure

In 2005–06, total expenditure on medications was \$11,501 million, comprising \$7,286 million spent on benefit-paid pharmaceuticals and \$4,216 million spent on other medications; this represented 14% of recurrent health expenditure (Table S44). For the period 1995–96 to 2005–06, real growth in medications expenditure averaged 8.6% per year (Table S45). However, in 2005–06, growth in medication expenditure had slowed substantially and was only 1.6% (AIHW 2007a).

In 2005–06, expenditure on pharmaceuticals for which a prescription is required was \$10,551 million, excluding the cost of vaccines purchased and administered under public health programs (Table 8.15). The majority of pharmaceutical expenditure was for benefit-paid pharmaceuticals (69% or \$7,286 million)—including \$232 million for Section 100 payments—and most of this was funded by the Australian Government (83%). Individuals' out-of-pocket expenses accounted for the remaining 17% of benefit-paid pharmaceuticals expenditure.

Table 8.15: Expenditure on pharmaceuticals for which a prescription is required, dispensed in the community and by hospitals^(a), 2005–06 (\$ million)

Provider and funder	Benefit-paid pharmaceuticals	All other pharmaceuticals		Total pharmaceuticals
		Non-hospital ^(b)	Hospital ^(c)	
Community pharmacies				
Funded by				
Australian Government DVA	468	..	..	468
Australian Government DoHA ^{(d)(e)}	5,578	71	..	5,649
Health insurance funds	..	47	..	47
Individuals	1,240	1,072	..	2,312
Injury compensation insurers and other	..	62	..	62
<i>Total pharmacies</i>	<i>7,286</i>	<i>1,252</i>	<i>..</i>	<i>8,537</i>
Public hospitals^(f)	..	..	1,658	1,658
Private hospitals^(g)	..	..	356	356
Total	7,286	1,252	2,014	10,551

(a) Excludes complementary and alternative medicines and over-the-counter medicines for which a prescription is not required.

(b) Includes private prescriptions and under co-payment prescriptions.

(c) Does not include the costs of paying hospital staff to dispense these medications. Dispensary costs are, however, included in the first two columns of this table.

(d) Does not include \$529 million in payments for highly specialised drugs, which are included in the public hospitals and private hospitals rows.

(e) Includes \$232 million in Section 100 payments for human growth hormones, IVF and other subsidised medications.

(f) Includes \$422 million in Australian Government payments to states for highly specialised drugs.

(g) Includes \$107 million in Australian Government payments for highly specialised drugs.

Source: AIHW Health Expenditure Database.

In-hospital drugs expenditure amounted to \$1,658 million spent by public hospitals and \$356 million by private hospitals (Table 8.15). This expenditure included \$529 million for highly specialised drugs.

Funding

The Australian Government contributed \$6,046 million for pharmaceuticals under the PBS and the RPBS in 2005–06. Individuals paid \$1,240 million in co-payments under these schemes and an estimated \$1,072 million by way of payments for non-benefit medications (tables S44 and 8.15).

For 2005–06, government funding under the PBS (not including expenditure under the RPBS) for benefit-paid pharmaceuticals was estimated at \$5,384 million, an increase of \$88 million from 2004–05 (Table 8.16). The shares of funding for the PBS provided by the Australian Government through benefits and by individuals through their co-payments changed little until 1 January 2005, when the co-payment increased from \$23.70 per prescription to \$28.60 for general patients and from \$3.80 to \$4.60 for concessional patients. From 1 January 2008, the general patient co-payment is \$31.30 and the concessional patient co-payment is \$5.00 (DoHA 2007).

Table 8.16: Funding of Pharmaceutical Benefits Scheme^(a) subsidised medications, 2001–02 to 2005–06 (\$ million)

Benefit category	2001–02	2002–03	2003–04	2004–05	2005–06
Patient contributions					
General patients	444	489	545	597	634
Concessional patients	362	370	393	444	489
<i>Total patient contributions</i>	806	860	938	1,041	1,123
Government benefits					
General patients—no safety net	691	751	824	851	850
General patients—safety net	148	170	191	223	216
<i>Total general patients</i>	840	920	1,015	1,073	1,066
Concessional patients—no safety net	2,570	2,747	2,972	3,077	3,145
Concessional patients—safety net	778	908	1,005	1,145	1,173
<i>Total concessional patients</i>	3,348	3,655	3,977	4,223	4,318
<i>Total funding by government</i>	4,188	4,575	4,992	5,296	5,384
Total cost of PBS benefit-paid items^(b)	4,994	5,435	5,929	6,337	6,508

(a) Does not include Repatriation Pharmaceutical Benefits Scheme or 'doctor's bag' pharmaceuticals.

(b) Excludes Section 100 payments for human growth hormones, IVF and other non-PBS subsidised medications.

Note: Components may not add to totals, because of rounding.

Source: DoHA unpublished data.

Dental services

Expenditure

In 2005–06, expenditure on dental services was \$5,337 million, representing 6.6% of total recurrent expenditure on health (Table S44). For the period 2003–04 to 2005–06, real growth in dental services expenditure averaged 1.9% per year—comprising 2.4% for state and territory dental services and 1.8% for private providers. This was half the annual real growth in total recurrent health expenditure of 3.8% (Table S45).

Funding

Just over two-thirds (\$3,573 million) of dental services expenditure was funded by individual out-of-pocket payments, 18.6% by governments and 14.2% by health insurance funds (Table S44).

Public health activities

Expenditure

Public health activities are those that focus on the whole population or on population subgroups, such as those who are targets of cancer screening or immunisation programs. This distinguishes them from treatment services for disease or injury, such as those provided to patients in hospitals. Some information on these public health interventions is available in Chapter 7.

Estimates of expenditure on public health activities are presented in a series of publications from the National Public Health Expenditure Project, an initiative of the National Public Health Partnership. The latest is for 2005–06.

For the latest three years of data, public health expenditure was \$1,263 million in 2003–04, \$1,440 million in 2004–05, and \$1,476 million in 2005–06.

In 2005–06, governments in Australia, through programs administered by their health departments, spent a total of \$1,476 million on public health activities (Table S48; Figure 8.10); this represented 1.8% of total recurrent expenditure on health (Table S44). Real growth in expenditure on public health averaged 4.0% per year from 2003–04 to 2005–06 (Table S45).

Expenditure on organised immunisation accounted for \$318 million (22% of all government expenditure on public health activities) during 2005–06 and was the largest single area of such expenditure (Table S48; Figure 8.10). Selected health promotion activities accounted for a further \$250 million (17%) and communicable disease control activities cost \$245 million (17%). Activities directed at preventing hazardous and harmful drug use accounted for \$176 million (12%).

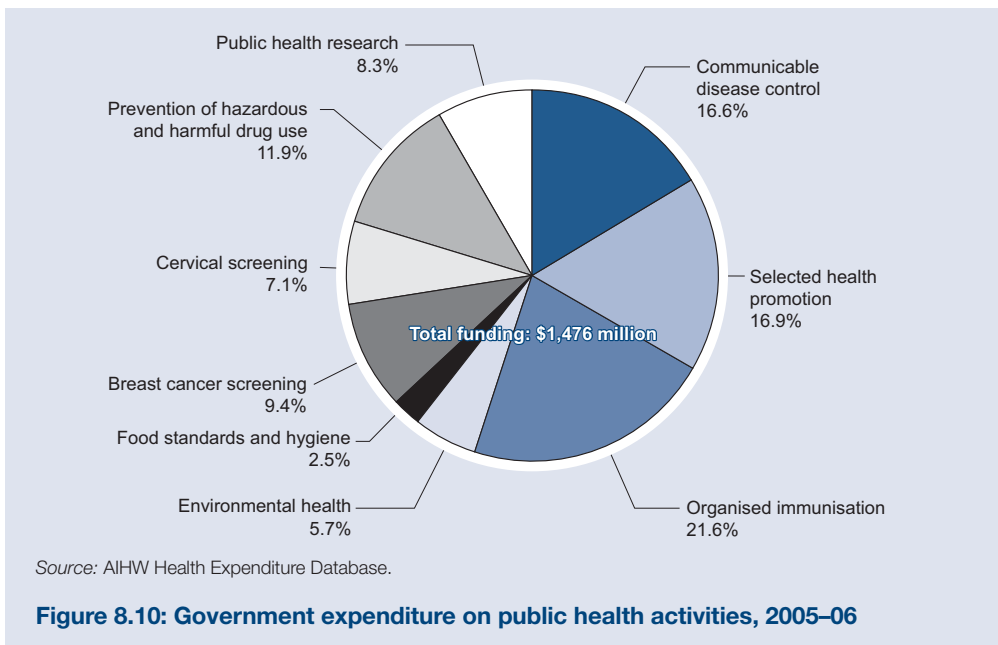


Figure 8.10: Government expenditure on public health activities, 2005–06

Funding

Funding of public health activities is split between the Australian Government (\$798 million or 54% of public health expenditure in 2005–06) and state and territory governments (\$632 million or 43%), plus a small contribution from individuals (\$47 million or 3%) through out-of-pocket payments (Table S44). A substantial proportion of the Australian Government public health funding is through public health grants to the states and territories (\$357 million or 24% of public health expenditure) (AIHW 2007a).

Capital expenditure

There are multiple sources of funding for health infrastructure. For example, the Australian Government funds capital expenditure through grants and subsidies to other levels of government and to non-government organisations. State and territory governments control large capital assets such as hospitals and community health centres.

Total capital expenditure in 2005–06 was estimated to be \$5,167 million—6% of total health expenditure (Table S44). Over half of this (60%) was funded by non-government sources. State/territory and local governments funded 37% of total capital expenditure and the Australian Government funded 4% (Table 8.17). Estimates of capital expenditure are sourced from the Australian Bureau of Statistics and they have been revised for most of the earlier years. Therefore, comparisons should not be made with data provided in previous *Australia's health* reports.

The long-term nature and 'lumpiness' of capital investments means that trend analysis, even over a period as long as a decade, needs to be done with care.

Table 8.17: Capital health expenditure by source of funds, 1995–96 to 2005–06 (per cent)

Year	Government			Non-government	Total
	Australian Government	State/territory and local	Total		
1995–96	4.4	49.6	54.0	46.0	100
1996–97	2.7	52.1	54.8	45.2	100
1997–98	2.6	57.0	59.7	40.3	100
1998–99	5.7	38.6	44.4	55.6	100
1999–00	1.2	45.4	46.6	53.4	100
2000–01	3.7	41.4	45.1	54.9	100
2001–02	4.3	38.9	43.2	56.8	100
2002–03	3.5	36.5	40.1	59.9	100
2003–04	3.6	33.0	36.7	63.3	100
2004–05	4.1	33.7	37.8	62.2	100
2005–06	3.5	36.7	40.3	59.7	100

Note: Components may not add to totals, because of rounding.

Source: AIHW Health Expenditure Database.

What is the role of private insurance in health funding?

All Australians are entitled to receive treatment as public patients in public hospitals at no direct personal cost. As an alternative, private health insurance funds provide cover for their members who choose to be treated as private patients in either public or private

hospitals. They may also provide a range of non-hospital benefits to insured people (Box 8.5). The health benefits paid out by private insurers finance part of the health expenditure incurred by their members.

Since the introduction of private health insurance subsidies in 1997 (Box 8.5), the funding for members' health benefits now comes from a combination of:

- the net premiums paid by members of the funds
- the rebates on premiums paid by the Australian Government under the incentive arrangements.

Private health insurance funds pay benefits for a wide range of health services and, in the information that follows, it has been assumed that the funding that comes from net premiums and government rebates are used in the same proportions.

Box 8.5: Private health insurance arrangements

Since 1984, private health insurance funds in Australia have offered insurance cover for various services provided in public and private hospitals. They also offer cover for a range of non-hospital health and health-related services such as dentistry, physiotherapy, podiatry, pharmaceuticals and spectacles.

The Private Health Insurance Incentives Act 1997 introduced a means-tested subsidy, the Private Health Insurance Incentives Scheme, aimed at assisting low- to middle-income earners to obtain private health insurance cover. This was replaced in January 1999 by a 30% premium rebate payable to anyone with private health insurance cover. From April 2005, the rebate for people aged 65–69 years increased to 35% of the premium, and for people aged 70 years and over it increased to 40% of the premium. Changes to the private health insurance legislation, which took effect on 1 April 2007, allowed health insurers to expand hospital policies to cover medical treatments outside hospital, which substitute for or prevent hospitalisation. They are also able to cover programs to manage chronic diseases.

For private health insurance fund members, health insurance arrangements changed substantially on 1 July 2000, with the introduction of 'Lifetime Health Cover' incentives. These encourage people to continue private health insurance cover throughout their lives. From that date, people who join a health insurance fund before the July following their thirtieth birthday and maintain their hospital cover pay lower premiums throughout their lives than those who join later in life. People aged over 30 years who take out hospital cover pay a loading of 2% for each year their entry age is over 30. Fund members who had hospital cover at 1 July 2000 and maintain it are exempt from the loading. People who were aged 65 years or over at 1 July 1999 are also exempt from premium loading. Changes to 'Lifetime Health Cover' were announced in 2006 and were being implemented progressively from 2007. Under the new legislation, people who keep their health insurance for 10 continuous years, and remain members, will stop paying a loading.

Who funds private health insurance?

In 2005–06, the amount of funding for health services through private health insurance funds (that is, total benefits paid from members' net premiums plus the Australian Government rebate) was \$9,461 million (Table S53). This was 12% of recurrent expenditure on health in that year. Of that, \$3,177 million (34%) was funded from the rebates on private health insurance premiums provided by the Australian Government (tables S44 and S53). The net funding of health services (including health insurance fund administration costs) by the funds themselves (that is, excluding the premium rebate) increased from \$6,038 million in 2004–05 to \$6,284 million in 2005–06 (Table S53).

Box 8.6: Treatment of rebates on private health insurance premiums in the expenditure estimates

Before 1997, all health benefits paid by the funds, plus their administration costs, were regarded as health funding by the funds. The introduction of the Private Health Insurance Incentives Scheme (see Box 8.5) and its replacement non-means-tested 30% rebate meant that some of the money the funds use to pay for health benefits and administration now comes from the Australian Government.

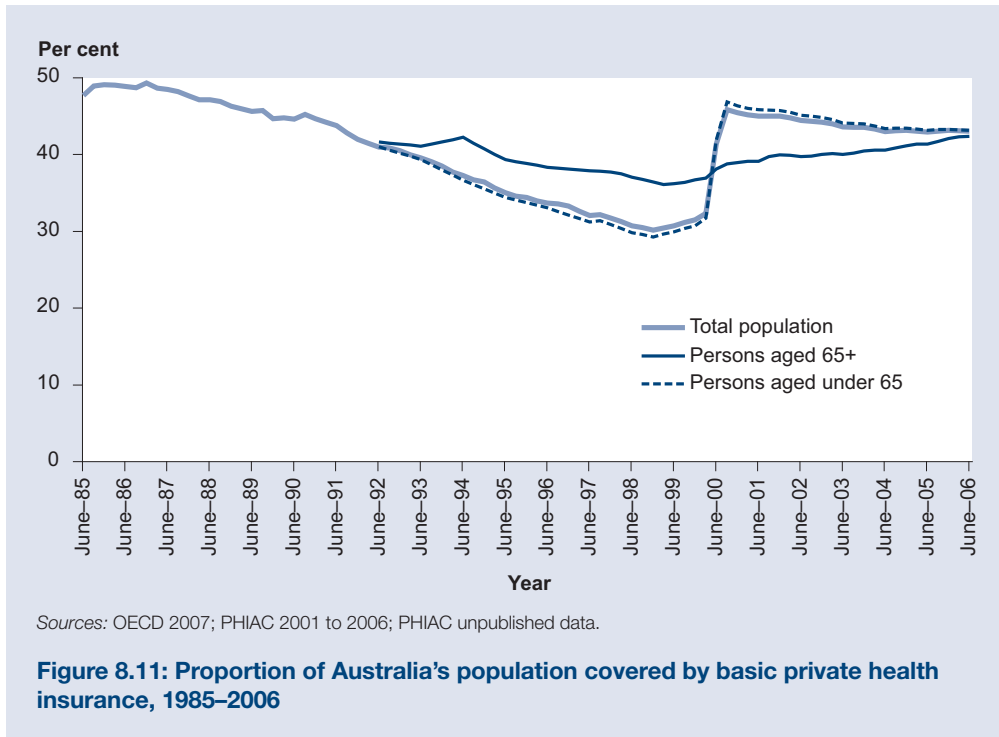
In compiling its estimates, the AIHW allocates the premium rebates paid by the Australian Government across all the expenses incurred by the funds each year—these include benefit payments related to health goods and services; benefit payments for non-health goods and services (such as funeral benefits, domestic assistance and so on); management expenses; and adjustment to provisions for outstanding and future potential claims. But only that part of the rebate that can be attributed to benefits for health goods and services and to management expenses is reported as part of total health expenditure (see further information in Table S53). This amount is deducted from the gross benefits and management expenses paid by the health insurance funds in the calculation of health funding by private health insurance.

What health areas are funded?

Funding by private health insurance funds is chiefly directed towards private hospital services. During 2005–06, private hospitals received \$3,054 million (49%) of the \$6,284 million in funding provided by health insurance funds (Table S53). Other major health areas that received funding were dental services (\$760 million or 12%), administration (\$639 million or 10%) and medical services (\$636 million or 10%). The funding for medical services includes some of the cost of in-hospital medical services which are provided to private admitted patients in hospitals.

Trends in coverage, membership and premiums

At the end of June 2006, 43.5% of the Australian population was covered by private hospital insurance (PHIAC 2006). This was similar to the coverage in the June 2005 quarter (42.8%) but was a fall from a peak of 45.7% at the end of the September 2000 quarter after the introduction of the lifetime cover arrangements in July 2000 (Figure 8.11; Box 8.5).



How much is health care likely to cost in the future?

In this section, health expenditure includes residential aged care (high-care) expenditure. A recent study based on 2002–03 data (Vos et al. 2008) estimated that total health expenditure will increase by 127% over the three decades between 2002–03 and 2032–33, from \$71 billion to \$162 billion (in constant prices)—an increase of \$91 billion (Table 8.19). Over the same period GDP is predicted to increase by 97% (Treasury 2002), so total health expenditure is projected to increase from 9.4% of GDP to 10.8%.

In this study, health-care costs were projected taking into consideration past trends in population growth, ageing, disease rates and shifts in health expenditure combined with judgements on how these trends are likely to apply over the projection period. Estimates were made for each disease, in each age and sex grouping, for each health service type and for treatment versus prevention. These estimates should be interpreted with caution as developments in health technologies and health service use and advances in prevention and treatment may drastically alter the projected outlook for some diseases.

Residential aged care expenditure was expected to show the greatest growth (242% increase) over the three decades, mainly because of the ageing of the population in this period. Pharmaceutical expenditure has the next highest projected growth (145%). Medical services expenditure growth is expected to be somewhat lower (97%) (Table 8.18).

Table 8.18: Change in health and residential aged care expenditure for each area of expenditure, 2002–03 to 2032–33 (per cent)

	2002–03 to 2012–13	2012–13 to 2022–23	2022–23 to 2032–33	2002–03 to 2032–33
Admitted patient services	26	34	31	121
Medical services	26	27	23	97
Pharmaceutical prescriptions	37	37	31	145
Residential aged care (high-care)	43	49	60	242
Other health	22	27	27	97
Total	28	33	33	127

Source: Vos et al. 2008.

Diabetes has by far the greatest projected expenditure increase of the diseases (401%) followed by neurological disorders (280%), musculoskeletal conditions (164%) and dental services (144%) (Table 8.19).

Expenditure on cardiovascular disease can be divided into treatment costs and prevention costs. Expenditure on the treatment of cardiovascular disease is projected to increase by 111%. There is also an expected 96% increase in expenditure on preventing cardiovascular disease through blood pressure lowering drugs and cholesterol lowering drugs. This contributes to an overall increase in cardiovascular expenditure of 105% (\$7.9 billion to \$16.2 billion).

By comparison, the projected increases in expenditure for injuries (67%) and maternal and neonatal conditions (41% and 42%) are low.

The largest absolute increases in projected expenditure between 2002–03 and 2032–33 were for neurological disorders (\$11.2 billion) followed by cardiovascular disease (\$8.3 billion) (Table 8.19).

From the study, the projected change in health expenditure in Australia between 2002–03 and 2032–33 of \$91 billion would have been higher by \$1.3 billion if disease trends were ignored (Vos et al. 2008). Predicted favourable trends in the disease rates of cardiovascular disease, chronic obstructive pulmonary disease (COPD), cancers, injuries and other diseases over the period led to a predicted decrease in expenditure of \$5.0 billion. However, this was countered by the steep increase in projected cases of diabetes and an increase for other diseases, giving a net treatment expenditure increase of \$3.7 billion.

Ageing (\$29 billion) and normal (overall) population growth (\$28 billion) were the main causes for the overall increase projected for the period. Excess health price inflation (the amount by which increases in the cost of health exceed the increases in cost of the economy as a whole) (\$19 billion), changes in volume of health services provided per case (\$14 billion) and, to a lesser extent, treatment proportion (\$1.3 billion) also contributed to the projected increase in expenditure (Figure 8.12).

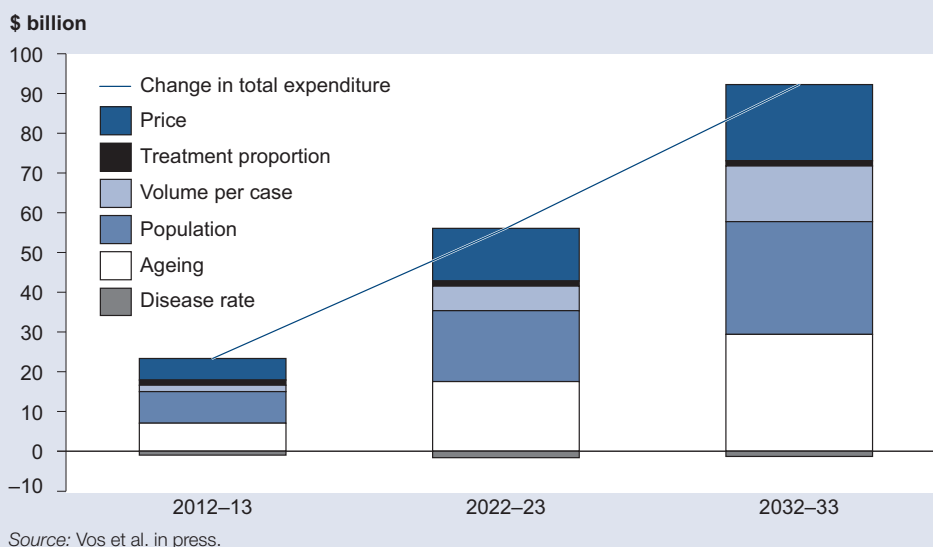


Figure 8.12: Components of projected change in health expenditure

Table 8.19: Projected health expenditure^(a) (2002–03 dollars), 2002–03 to 2032–33

Disease category	Expenditure (billions of 2002–03 dollars)				Per cent change 2002–03 to 2032–33
	2002–03	2012–13	2022–23	2032–33	
Cardiovascular	7.91	10.28	13.00	16.18	105
Respiratory	5.92	7.35	9.66	12.62	113
<i>COPD</i>	0.60	0.65	0.73	0.81	35
<i>Other respiratory</i>	5.32	6.70	8.93	11.81	122
Injuries	5.59	6.48	7.68	9.36	67
Dental	5.10	6.61	9.11	12.43	144
Mental	4.30	5.30	6.69	8.48	97
Digestive	4.04	5.32	7.22	9.66	139
Neurological	3.98	5.91	9.08	15.13	280
<i>Dementia & Parkinson's</i>	3.53	5.30	8.22	13.91	294
<i>Other neurological</i>	0.45	0.61	0.86	1.21	168
Musculoskeletal	3.74	5.13	7.28	9.86	164
Genitourinary	3.06	3.86	5.10	6.80	122
Cancer	2.81	3.54	4.50	5.17	84
Sense disorders	2.29	3.06	4.30	5.13	124
Endocrine, nutritional & metabolic	2.17	2.63	3.33	4.14	91
Skin	1.96	2.52	3.35	4.45	127
Maternal	1.78	1.88	2.23	2.51	41
Infectious	1.55	1.82	2.22	2.70	75
Diabetes	1.39	2.43	4.21	6.97	401
Neonatal	0.52	0.56	0.66	0.74	42
Congenital	0.26	0.28	0.34	0.40	55

(continued)

Table 8.19 (continued): Projected health expenditure^(a) (2002–03 dollars), 2002–03 to 2032–33

Disease category	Expenditure (billions of 2002–03 dollars)				Per cent change 2002–03 to 2032–33
	2002–03	2012–13	2022–23	2032–33	
Other	13.01	16.70	22.27	29.58	127
Total (\$)^(b)	71.38	91.66	122.23	162.32	127
GDP^(c) (\$)^(b)	762	995	1,230	1,500	
Total as per cent of GDP	9.37%	9.22%	9.93%	10.82%	

(a) Projected health expenditure includes expenditure on services provided in high-level residential aged care facilities.

(b) All numbers including 2002–03 are projected from the 2000–01 base level. Actual total health expenditure in 2002–03 was \$73.1 billion based on figures reported in *Health expenditure Australia 2003–04* and actual GDP was \$783 billion.

(c) Calculated from first Intergenerational Report (Treasury 2002: iii).

Source: Vos et al. in press.

8.2 Health workforce

Access to health care and advice is regarded as essential to quality of life, so the size, distribution and effectiveness of the health workforce is the subject of much scrutiny by governments, the media and the community. There is great interest—not only among those currently providing health care, but also in the populations they serve—in real and potential changes in the size and composition of the health workforce. For example, there have been numerous reports in the news media about shortages of doctors and nurses, particularly for rural areas. These pressures have led to a number of recent government initiatives in relation to the health workforce (see Box 8.7 for examples).

Box 8.7: Council of Australian Governments agreements to changes in the health workforce

A recent Productivity Commission review of the Australian health workforce found workforce shortages across a number of health professions, with these shortages being more acute in rural and remote areas and in certain special needs sectors. It also found that the demand for health workforce services will increase with population ageing, growing community expectations and developing technology, while at the same time the health labour market will become more constricted. The Commission made a number of recommendations aimed at training more health workers, increasing the retention and re-entry to the workforce of qualified health workers, and improving the efficiency, effectiveness and distribution of the available workforce (Productivity Commission 2005).

In response to this report, the Council of Australian Governments agreed to a package of reforms to help the health workforce respond to the evolving care needs of the Australian community, while maintaining the quality and safety of health services. Key components of this package are intended to:

- reduce health workforce shortages through significant investments, including additional medical school and higher education nursing places and capital funding for medical schools and nurses' clinical training. The increase in medical school places would result in an expansion in the number of medical school places bonded to areas of workforce shortage
- promote workforce mobility and consistency between jurisdictions by creating national registration and accreditation schemes for health professions

(continued)

- provide greater health service access for rural, remote and Indigenous communities by introducing a new Medicare item for practice nurses and registered Aboriginal health workers to provide ongoing support for patients with chronic disease
- help medical specialist trainees build appropriate skills and experience by providing a new system of training rotations through an expanded range of settings beyond traditional public teaching hospitals, including regional, rural and ambulatory settings, private sector hospitals and practices and community settings
- create a national health workforce taskforce to undertake workforce projects and advise governments on workforce innovations and reforms.

Source: COAG 2006.

This section provides the most recent data on the numbers, demographic characteristics, activity and distribution of health workers. This information is necessary for developing and evaluating policies and programs for the health workforce. Information on the proportion of females in the workforce is provided because females, on average, are more likely to work fewer hours per week than their male counterparts. In addition, the proportion of the workforce aged 55 years and over provides an indication of those likely to retire in the short to medium term.

Data on the health workforce are collected by the Australian Bureau of Statistics through the 5-yearly national population Censuses and monthly labour force surveys, and by the AIHW through surveys of those registering as health professionals. These sources are described in Box 8.8.

The health workforce, as presented in this section, refers to people employed to provide health care. It does not include volunteers, individuals taking action to improve their own health, or people who work in other areas relating to the wellbeing of the population.

Box 8.8: Sources of data on the health workforce

There are three main sources of ongoing data on the health workforce:

- The Australian Bureau of Statistics (ABS) Census of Population and Housing, conducted every 5 years, collects information from all persons aged 15 years and over about their employment status, occupation and industry. Because of the timing of this publication, and the level of detail required, it was not possible to use the latest Census of Population and Housing data as the primary source of information on health workers.
- The ABS Labour Force Survey is a monthly sample survey that includes about 30,000 private dwellings. Households selected for the survey are interviewed each month for 8 months, with one-eighth of the sample being replaced each month. Some data from this survey are reported monthly (such as the unemployment rate), and more detailed information is reported quarterly (industry and occupation). Data from this source are referenced in this issue of *Australia's health* as they provide information on the number of people employed by industry and occupation, as well as the total hours worked (from which workload measures, such as full-time equivalents, can be calculated).

(continued)

- The AIHW compiles the surveys of medical, nursing, dental and allied health workers conducted by the states and territories, usually in conjunction with the registration of health professionals. These are completed yearly for nursing, medicine and dentistry, and less regularly for other professions.

Each of these data sources has its strengths and weaknesses. The Census of Population and Housing, because it includes the whole population, allows the analysis of labour force information for small population groups (for example, the smaller states and territories and the Indigenous population), but only every 5 years. The ABS Labour Force Survey allows annual reporting of the size and distribution of the health workforce but, because it is based on a sample population, has limited capacity to provide detailed information about smaller population groups, particularly smaller groups of allied health professions, or those from small areas. One advantage of the Labour Force Survey is that it collects more detailed information on hours of work than the Census of Population and Housing. It is also available more regularly than the Census data. Occupation in both the Census and the Labour Force Survey is self-identified.

The AIHW health labour force surveys provide more detailed data on a more limited number of health occupations than the ABS collections. The surveys are usually of all people registered with the relevant registration boards for that profession, regardless of employment status. Information is collected on demographic characteristics, labour force status, type of work and location, specialty fields and qualifications of health professionals. However, the AIHW surveys are not compulsory and response rates vary between occupations, states/territories and over time. The most recent information on the medical, nursing and dental workforces, as reported in this edition of *Australia's health*, is from the 2005 AIHW surveys. For the allied health professions, the latest data available are from surveys conducted in 2002 and 2003. Unlike the ABS Census and Labour Force Surveys, the AIHW survey data are not reported using the Australian Standard Classification of Occupation categories.

Health occupations and industries

The number of people employed in health occupations and whether they work in the 'health services' industry is shown in Figure 8.13. Health occupations, as specified in the Australian Standard Classification of Occupations, include medical, dental and nursing workers, medical imaging workers, pharmacists, allied health workers, complementary therapists and other health workers (ABS 1997). For the purposes of this publication, social workers have been added to this group of health occupations.

The health services industry includes those organisations that are mainly engaged in providing health services, such as hospitals, nursing homes, ambulance services, community health services, medical and dental services, and other health services such as pathology, optometry, physiotherapy and chiropractic services (ABS 2006).

The health services industry contained 7% of the civilian labour force in 2006 (Table 8.20). The number of people employed in the health industry has grown considerably since 1986, from 483,900 in August 1986 to 743,800 in August 2006. In the 5 years from 2001 to 2006, growth in health industry employment was 14%, compared with a 10% growth in the civilian labour force over the same period.

Most workers in the health services industry (63%) in 2006 were employed in health occupations; that is, occupations including doctors, nurses, dentists, pharmacists and so forth (Figure 8.13). The remaining workers held other occupations ranging from clerical workers to cooks, gardeners, cleaners and transport drivers.

	Health services industry ^(a)	Other industries	Total
Health occupations	477,800 employed persons e.g. doctors, nurses, dentists, allied health workers, ambulance officers, social workers.	115,500 persons employed in health services occupations in other industries e.g. retail pharmacists.	593,300
Other occupations	276,000 persons employed in other occupations in health services industries e.g. clerical workers, service workers, welfare professionals.		
Total	753,800		

(a) Excludes veterinary services.

Note: Numbers are derived for 2006 by averaging the number employed in the four quarters of that year.

Source: Unpublished data from ABS Labour Force Surveys, 2006.

Figure 8.13: The relationship of health occupations to the health and other industries, 2006

Table 8.20: Persons employed^(a) in the health services industry^(b), August quarter 1986 to August quarter 2006

Year	Employed in health services industry ^(a,b)	All employed persons ('000)	Proportion of all employed persons (%)	Civilian labour force ('000) ^(c)	Proportion of civilian labour force ^(c) (%)
1986	483,900	6,928,900	7.0	7,512,100	6.4
1991	569,100	7,650,300	7.4	8,424,100	6.8
1996	579,100	8,332,800	6.9	9,070,300	6.4
2001	655,000	9,040,000	7.2	9,683,000	6.8
2006 ^(d)	743,800	10,168,000	7.3	10,647,600	7.0
2001 to 2006 increase (%)	13.6	12.5	..	10.0	..

(a) Because of a definitional change in 'employed' and 'unemployed' persons, there is a break in the series for data at the detailed industry level after 1996. Some care should therefore be taken in comparing numbers of employed people within the health industry over time.

(b) Excludes persons employed in veterinary services.

(c) Includes unemployed persons looking for work. Civilian labour force excludes members of the permanent defence forces, certain diplomatic personnel of overseas governments customarily excluded from census and estimated population counts, overseas residents in Australia, and members of non-Australian defence forces (and their dependants) stationed in Australia.

(d) Numbers in this table are for August quarter 2006, whereas estimates in Figure 8.13 are based on an average of all quarters in 2006.

Source: Unpublished data from ABS Labour Force Survey, 1986, 1991, 1996, 2001 and 2006.

In 2006, there were 593,300 people working in health occupations, of whom four in five (477,800) were working in a health industry (Figure 8.13). Those working outside health industries were employed in a variety of other industries, typically community services, government administration, education and defence.

Between 2001 and 2006, the number of workers in these occupations increased by 23%, from 482,700 to 593,300. This was almost double the increase of 12% across all occupations over the same period (Table 8.21). Growth over this period was highest for medical administrators and nursing directors (69% growth), nursing and personal care assistants (55%) and dental practitioners (41%). The two groups with the lowest growth rates were generalist medical practitioners (8%) and professional nursing workers (12%).

People working in health occupations are mainly female. In 2006, 73% of the health workforce was female compared with 45% across all occupations (Table 8.21). The health occupations with the highest proportion of females in 2006 were professional nursing workers and enrolled nurses (both 90%), dental associate professionals and assistants (86%), social workers (81%), other allied health workers and nursing and personal care assistants (both 80%).

Table 8.21: Persons employed in health occupations: number, per cent female and per cent aged 55 years and over, 2001 and 2006

Occupation	2001			2006			Per cent increase in numbers, 2001–2006
	Number	Per cent female	Per cent aged 55 years and over	Number	Per cent female	Per cent aged 55 years and over	
Medical administrators, nursing directors	5,800	63	*12	9,800	73	27	69
Generalist medical practitioners	36,200	34	21	39,000	38	21	8
Specialist medical practitioners	17,200	24	22	20,500	31	26	19
Medical imaging workers	8,200	66	*9	11,000	68	*15	34
Dental practitioners	9,000	20	*12	12,700	25	22	41
Dental associate professionals and assistants	19,200	90	**	23,900	86	*9	24
Nursing worker: professionals	182,000	90	11	203,500	90	17	12
Enrolled nurses	23,200	95	*8	30,000	90	15	29
Nursing and personal care assistants	41,600	71	11	64,600	80	18	55
Pharmacists	12,600	57	*20	16,300	52	17	29
Physiotherapists	11,500	78	*18	13,100	64	*12	14
Psychologists	11,100	72	*13	13,900	72	23	25
Other allied health workers ^(a)	23,300	76	*11	26,600	80	*10	14

(continued)

Table 8.21 (continued): Persons employed in health occupations: number, per cent female and per cent aged 55 years and over, 2001 and 2006

Occupation	2001			2006			Per cent increase in numbers, 2001–2006
	Number	Per cent female	Per cent aged 55 years and over	Number	Per cent female	Per cent aged 55 years and over	
Complementary therapists	7,400	50	*14	8,900	53	*11	20
Social workers	10,200	86	*9	13,600	81	*18	33
Other health workers ^(b)	64,500	50	8	86,200	56	12	34
All health workers	482,700	72	12	593,300	73	16	23
All other occupations	8,576,500	43	11	9,557,000	43	14	11
Total all occupations	9,059,200	44	11	10,150,300	45	14	12

* Estimates have a relative standard error between 25% and 50% and should be interpreted with caution.

** Estimates have a relative standard error greater than 50% and are considered too unreliable for general use.

(a) Includes occupational therapists, optometrists, speech pathologists, podiatrists, dietitians and other health professionals.

(b) Includes medical scientists, occupational and environmental health professionals, medical technical officers, ambulance officers and paramedics, Aboriginal and Torres Strait Islander health workers, massage therapists, primary products inspectors and safety inspectors.

Source: Unpublished data from ABS Labour Force Surveys, 2001 and 2006.

Workforce supply—the stocks and flows

A key issue is the adequacy of supply of health workers. Monitoring and adjusting the supply of health workers to meet the projected needs of the population requires that:

- the current size, composition and working hours of the existing health workforce is measured
- the entries to and exits from the workforce are measurable, and with lead and lag times understood.

New entrants to the workforce are mainly from the education system and skilled immigration. Departures from the workforce include migration, resignations, retirements and deaths.

Not all these elements of workforce supply can be accurately measured. For example, current health workforce migration data are not considered to be of sufficient quality to provide a reasonable measure of this component.

Three aspects of supply are presented here in further detail: the number of students completing higher education health courses, the number of health workers assumed to be soon to retire from the workforce, and the hours worked by health workers.

How many people are completing health courses?

For the health professions (such as registered nurses, medical practitioners, dentists, pharmacists, radiographers, occupational therapists and so on), graduation from a relevant university course is a requirement. Accordingly, an important source of entrants into these occupations is Australian residents completing health-related higher education courses each year.

Between 2001 and 2005, there was an overall increase of 16% in those completing such courses (Table 8.22). Increases were recorded for each health field except podiatry and

optical science. The largest growth occurred in the fields of nutrition and dietetics (81%) and pharmacy (48%). The smallest increases were for medical studies (4%) and nursing (7%). Note that enrolled nurses, unlike registered nurses, undertake their initial education through the Vocational Education and Training (VET) system and are not included in these figures.

The National Health Performance Committee has developed an indicator of sustainability for three professions—pharmacy, medicine and registered nursing: ‘Graduates as a percentage of the total pharmacy, medical and nursing workforce’ (NHPC 2004). The ‘sustainability ratio’ can be calculated using course completions as a percentage of people employed in those professions in the following year, based on AIHW labour force survey data.

Table 8.22: Completions of selected health-related higher education courses^(a) by Australian citizens and permanent residents (excluding New Zealand citizens), per cent female and field of study, 2001 and 2005

Field	2001			2005			Per cent change in number, 2001 to 2005
	Number	Per cent female	Per cent undergraduate ^(b)	Number	Per cent female	Per cent undergraduate ^(b)	
Medical studies	2,085	52.3	66.8	2,158	56.8	62.8	3.5
Nursing	8,217	89.6	69.8	8,794	89.4	67.4	7.0
Pharmacy	683	63.3	88.1	1,009	66.1	85.0	47.7
Dental studies ^(c)	339	54.9	81.1	383	58.5	80.2	13.0
Optical science ^(d)	172	59.9	58.1	156	59.6	55.1	-9.3
Public health ^(e)	1,686	68.7	34.8	2,038	68.9	32.5	20.9
Radiography	571	69.7	67.1	814	66.5	77.0	42.6
Physiotherapy	784	60.1	80.9	896	67.2	72.4	14.3
Occupational therapy	665	90.2	88.4	833	91.4	83.2	25.3
Speech pathology/audiology	401	94.0	80.5	529	93.8	73.3	31.9
Podiatry	145	57.9	93.8	138	64.5	94.2	-4.8
Other rehabilitation therapies ^(f)	646	61.5	50.0	839	68.8	52.4	29.9
Complementary therapies ^(g)	353	65.7	76.8	383	74.2	77.3	8.5
Nutrition and dietetics	248	89.5	51.2	448	90.6	68.1	80.6
Other health ^(h)	2,009	53.0	83.0	2,617	58.2	78.7	30.3
Total	19,004	74.6	69.2	22,035	76.0	67.1	15.9

(a) Health-related courses are defined as those in the broad field of Health excluding veterinary studies, in the Field of Education Classification.

(b) Bachelors (graduate entry, honours, pass), associate degree, advanced diploma, diploma, other undergraduate award.

(c) Includes dental studies, dentistry, dental assisting and dental technology.

(d) Includes optical science, optometry and optical technology.

(e) Includes public health, occupational health and safety, environmental health, Indigenous health, health promotion, community health, epidemiology.

(f) Includes chiropractic and osteopathy, massage therapy, rehabilitation therapies.

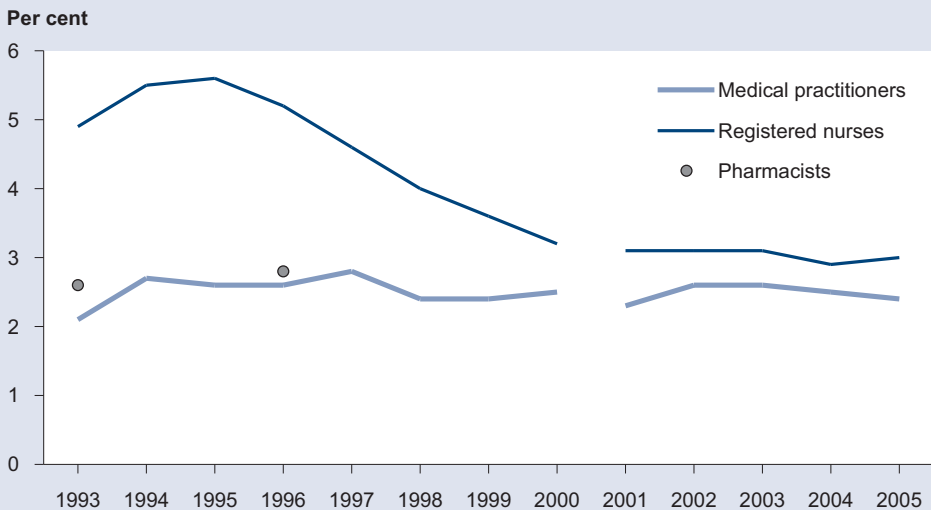
(g) Includes complementary therapies, naturopathy, acupuncture, traditional Chinese medicine.

(h) Includes human movement, paramedical studies, first aid, other health.

Source: Unpublished data from Higher Education Student Statistics collection, DEST.

Between 2001 and 2005 the 'sustainability ratio' was 3% for employed registered nurses (NHPC indicator 3.25, Figure 8.14). During 1994 and 1995, it was above 5%, a high point as many registered nurses took the opportunity to upgrade their hospital-based training to academic qualifications (National Review of Nursing Education 2002). The subsequent decline can be accounted for by fewer nurses upgrading their qualifications. The sustainability ratio for medical practitioners has remained consistently between 2% and 3%.

The ratio for pharmacists was available only for 2 years, 1993 and 1996. For these years it was between 2% and 3%. Course completion information from the Department of Education, Science and Training shows that the number of completions of undergraduate pharmacy courses by domestic students increased from 602 in 2001 to 858 in 2005.



Notes

1. The points in the figure are calculated as the number of Australian citizens and permanent residents (excluding New Zealand citizens) who completed undergraduate degrees at an Australian university in medicine, nursing or pharmacy by the estimated number of employed medical practitioners, registered nurses and pharmacists (respectively) in the following year (multiplied by 100).
2. Care should be taken when interpreting the relationship between completions and employed workforce numbers because the relationship is not always a direct one. That is, not all those who complete an undergraduate course in a particular field will go on to become employed in that field. Some nurses will have already been employed as registered nurses before completing a university course, as training moved from hospitals to universities.
3. Completions refer to undergraduate courses in the relevant field of study (before 2001) and field of education (from 2001 onwards). There is a break in the series due to this change in education classification.
4. Registered nurses only are included, as enrolled nurse training is undertaken in the VET sector, not at university.
5. Data on the number of employed registered nurses were not available for 1996, 1998, 2000 and 2001. Trend estimates have been used to fill in gap years.
6. Only two points are given for pharmacists, 1993 and 1996. While estimates of the number of employed pharmacists are also available for 1999, completion data for 1998 (and 1997) cannot be used because of a shift from 3- to 4-year training courses at that time.

Sources: DEST Higher Education Student Data Collection; AIHW Medical, Nursing and Midwifery and Pharmacy Surveys.

Figure 8.14: Australian citizens and permanent residents who completed selected undergraduate health degrees, as a percentage of employed people in the relevant workforce, 1993 to 2005 (NHPC indicator 3.25 part 1)

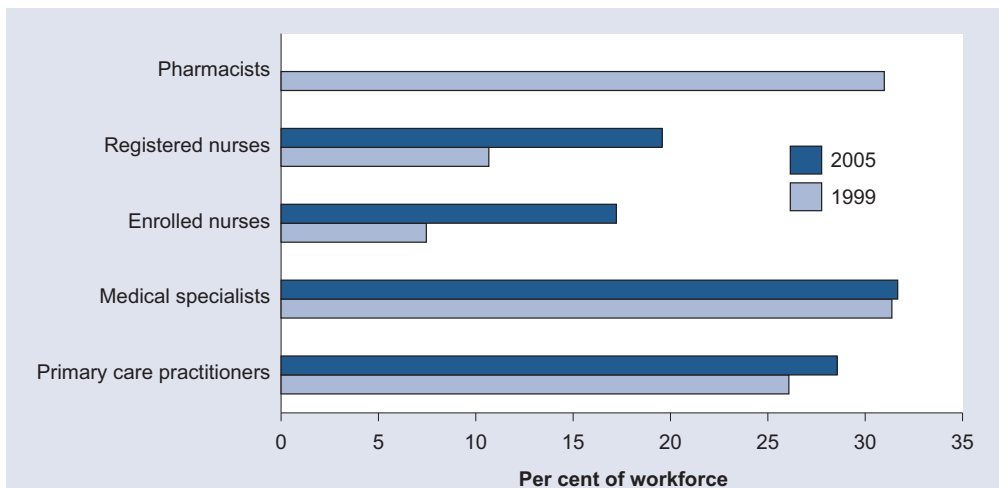
How many health professionals will be retiring from the workforce?

The main reason for permanent loss from the health workforce is the retirement of older workers (although turnover among younger age groups is also likely to occur). Older people do not leave the workforce in a steady stream—the pattern of exits depends on the age profile of the workforce and other factors such as affordability of, and desire for, early retirement.

As with the Australian population and the overall labour force, the health workforce has been ageing. That is, larger proportions of the workforce are in older age groups than previously, because of the progression of the large post-war ‘baby boom’ cohort through the age groups. For example, in 2006, 16% of the health workforce was aged 55 years and over, compared with 12% in 2001. The health workforce is ageing more quickly than the non-health workforce (for which the proportion aged 55 years and over rose from 11% in 2001 to 14% in 2005) (Table 8.21).

Of course, many health workers will be replaced by new entrants, but concerns remain that the health needs of the population will grow as the proportion of older people increases, and that workforce replacements will be insufficient to serve the growing needs.

The National Health Performance Committee indicator of workforce sustainability mentioned above includes the proportion of the workforce aged 55 years and over in five health professions: primary care practitioners, medical specialists, registered nurses, enrolled nurses and pharmacists (NHPC 2004). This indicator is based on information from the AIHW health labour force surveys, and the data for 1999 and 2005 (the most recent years available) are provided in Figure 8.15 (*NHPC indicator 3.25*). These data show that nearly a third of medical specialists (32%) and primary care practitioners (29%) were aged 55 years and over in 2005. For nurses, the proportion aged 55 years and over doubled over the period, from 11% to 20% for registered nurses and from 7% to 17% for enrolled nurses. Data for pharmacists were available only for 1999, when the proportion was 31%.



Notes

1. Excludes hospital non-specialists and specialists-in-training because of the low proportions aged 55 years and over (less than 4% in 2005).
2. Latest data available for pharmacists are for 1999.

Sources: AIHW Medical, Nursing and Midwifery and Pharmacy Surveys.

Figure 8.15: Proportion of employed medical, nursing and pharmacist workforce aged 55 years and over, 1999 and 2005 (NHPC indicator 3.25 part 2)

How many hours do health workers work?

Measuring supply is not just a matter of head counts. Equally important are the number of hours spent working. For example, in some professions, particularly those with a high proportion of females such as nursing, many work part time. In others, such as the medical profession, it is usual to work more than the 'standard' 35 hours per week.

In 2006, health workers worked an average 32.0 hours per week, compared with 34.7 for workers across all other occupations (Table 8.23). The health professions with the longest average working weeks were specialist medical practitioners (45.1 hours), general practitioners (41.1) and dentists (37.4). Those with the shortest working weeks were personal care and nursing assistants (27.4 hours), enrolled nurses (29.5), nursing professionals (29.3), dental assistants (31.0) and other allied health workers (30.5), including occupational therapists, optometrists, speech pathologists and podiatrists.

These differences in the average working week reflect the proportion of female practitioners within each profession. Among the health professions, medical specialists, general practitioners and dentists had the lowest proportion of females (31%, 38% and 25%, respectively). At the other end of the spectrum were the nursing groups (personal care and nursing assistants, enrolled nurses, nursing professionals) and dental assistants, with over 80% of the workforce being female.

Between 2001 and 2006 there was little change in average hours worked in health occupations—down half an hour per week. In terms of full-time equivalents (FTE, see Box 8.9), the combination of changes in numbers and hours worked resulted in a 21% increase in supply overall (from 448,100 FTE in 2001 to 542,200 in 2006).

The FTE rate of the health workforce overall increased by 13% between 2001 and 2006 (from 2,308 to 2,619 per 100,000 population). The FTE rate for medical administrators and nursing directors, in particular, increased by 64% (from 33 to 54 per 100,000 population). Other occupations with high rates of growth in the FTE rate over this period were nursing and personal care assistants (41%), dental practitioners (33%) and social workers (33%).

Box 8.9: Measuring supply: full-time equivalent (FTE) numbers and rates per 100,000 population

The FTE number is the number of full-time workloads provided by health workers. This provides a useful measure of supply as it takes into account both the number of health workers who are working and the hours that they work.

FTE is calculated by: *the number of health workers in a particular category multiplied by the average hours worked by health workers in the category divided by the hours considered to be full time*. The ABS designates 35 hours per week to be full-time work, and this has been used as the basis for calculating FTE for all occupations where ABS data have been sourced. The AIHW also uses 35 hours per week for estimating FTE, except for medical practitioners, where 45 hours per week is used.

The FTE rate (the number of FTE health workers per 100,000 population) is a measure of supply. By defining supply in terms of the FTE rate, meaningful comparisons of supply can be made across geographical areas and over time. In Table 8.23 the FTE rate is calculated as: *the number of FTE health workers divided by the estimated resident population of Australia at 30 June 2001 and 30 June 2006 multiplied by 100,000*.

Table 8.23: Persons employed in health occupations: average hours worked per week and full-time equivalent (FTE) number^(a) and rate, 2001 and 2006

Occupation	2001			2006		
	Average hours worked per week	FTE number ^(a)	FTE rate (per 100,000)	Average hours worked per week	FTE number ^(a)	FTE rate (per 100,000)
Medical administrators, nursing directors	38.7	6,400	33	39.8	11,100	54
Generalist medical practitioners	42.1	43,500	224	41.1	45,800	221
Specialist medical practitioners	43.9	21,600	111	45.1	26,400	127
Medical imaging workers	34.2	8,000	41	34.0	10,600	51
Dental practitioners	36.9	9,500	49	37.4	13,500	65
Dental associate professionals and assistants	31.1	17,000	88	31.0	21,100	102
Nursing workers: professionals	29.7	154,200	794	29.3	170,100	822
Enrolled nurses	28.2	18,700	96	29.5	25,300	122
Nursing and personal care assistants	28.3	33,600	173	27.4	50,500	244
Pharmacists	38.3	13,700	71	35.6	16,600	80
Physiotherapists	30.4	10,000	51	34.3	12,800	62
Psychologists	32.5	10,300	53	31.5	12,500	61
Other allied health workers ^(b)	31.5	20,900	108	30.5	23,200	112
Complementary therapists	35.5	7,500	39	30.3	7,700	37
Social workers	30.2	8,800	45	32.0	12,400	60
Other health workers ^(c)	35.0	64,500	332	33.5	82,500	399
All health workers	32.5	448,100	2,308	32.0	542,200	2,619
All other occupations	35.3	8,643,800	44,525	34.7	9,484,300	45,815
Total all occupations	35.1	9,091,900	46,834	34.6	10,026,500	48,434

(a) Based on a standard full-time working week of 35 hours.

(b) Includes occupational therapists, optometrists, speech pathologists, podiatrists, dietitians and other health professionals.

(c) Includes medical scientists, occupational and environmental health professionals, medical technical officers, ambulance officers and paramedics, Aboriginal and Torres Strait Islander health workers, massage therapists, primary products inspectors and safety inspectors.

Source: Unpublished data from ABS Labour Force Surveys, 2001 and 2006.

Health workforce shortages

A health workforce shortage exists when the available health workforce supply is insufficient to meet the demand for health workers. Assessing the level of demand and the appropriate level of workforce that is therefore needed is not straightforward and requires sophisticated modelling. Recent work in this area has provided evidence that many health occupations are, in fact, experiencing shortages. For example it has been estimated that

there was a shortage of between 10,000 and 12,000 nurses for 2006, rising to an expected shortage of between 10,000 and 13,000 nurses for 2010 (AHWAC 2004). Similarly there is an estimated shortage of between 800 and 1,300 general practitioners (AMWAC 2005).

Another approach used for identifying shortages in the health workforce has been to assess unmet demand for health workers reported by health service organisations. In 2007, the Department of Education, Employment and Workplace Relations (DEEWR) consulted with these organisations and identified shortages in a broad range of health occupations across all states and territories (Table 8.24).

Table 8.24: Skills in demand, health occupations, states and territories, 2006

Occupation	NSW	Vic	Qld	WA	SA	Tas	NT	ACT
Medical imaging worker	S	S	S	M-D	D	S	S	S
Dental worker: professional	S	M-D,R	S	S	S	S	S	S
Dental worker: associate professional and dental assistants ^(a)	*	*	*	*	*	*	*	*
Nursing worker: professional								
Registered nurse	S	S	S	S	S	S	S	S
Registered midwife	S	S	S	S	S	S	S	S
Mental health nurse	S	S	S	S	S	S	S	S
Enrolled nurse	M, R-D	*	D	S	S	D	*	*
Pharmacist	S	R	S	R	S	S	D	D
Physiotherapist	S	S	S	S	R	S	S	S
Other allied health occupations								
Occupational therapist	S	S	S	S	S	S	D	D
Speech pathologist	S	S	S	*	D	S	S	S
Podiatrist	S	S	S	S	*	S	S	S
Social worker	*	R-D	*	*	*	*	R-D	R-D

(a) DEEWR note that dental workers (associate professionals and dental assistants) are also in demand in Australia. However, there is insufficient information to establish whether shortages exist at the state level.

Note: S = statewide shortage, M = shortage in metropolitan (capital city) areas, R = shortage in regional areas, D = recruitment difficulty, R-D = recruitment difficulty in regional areas, * = no shortage was identified.

Source: DEEWR 2007.

Selected health labour forces

The AIHW health labour force surveys provide more detailed data than the ABS Labour Force Survey on the demographic characteristics, working patterns and distribution of some of the major health professions. The AIHW surveys cover all persons registered (or 'enrolled' in the case of enrolled nurses) with the relevant professional registration board. The surveys exclude those who are qualified but not registered. Therefore they include some people who are registered in the profession but not employed. For example, in 2005, 67,890 persons were registered as medical practitioners in Australia, of whom 60,252 (89%) reported that they were working in medicine at the time of the survey. In the same year there were 285,619 registered and enrolled nurses, of whom 244,360 (86%) were employed in nursing.

Medical labour force

In 2005 there were an estimated 60,252 employed medical practitioners, an increase of 25% since 1997 (Table 8.25). However, the FTE supply of practitioners increased by just over 4% in the same period, from 275 FTE per 100,000 population in 1997 to 287 in 2005. A comparison of the two measures is shown in Figure 8.16.

Table 8.25: Employed medical practitioners: selected characteristics, 1997^(a) and 2005

Type of practitioner	Number	Per cent female	Average age	Per cent aged 55 years and over	Average hours per week	FTE number ^(b)	FTE rate ^(c)
1997							
Clinicians	44,194	28	45	21	48	47,140	255
<i>Primary care practitioners</i>	20,134	33	46	23	45	19,999	108
<i>Hospital non-specialists</i>	4,321	42	31	4	51	4,878	26
<i>Specialists</i>	15,155	16	50	30	50	16,839	91
<i>Specialists-in-training</i>	4,584	33	32	2	54	5,481	30
Non clinicians	4,004	29	48	29	42	3,773	20
Total	48,198	28	45	22	48	50,983	275
2005							
Clinicians	56,084	33	45	23	44	54,713	268
<i>Primary care practitioners</i>	22,589	37	49	29	40	20,029	98
<i>Hospital non-specialists</i>	6,632	48	32	4	46	6,808	33
<i>Specialists</i>	19,943	21	49	31	46	20,253	99
<i>Specialists-in-training</i>	6,920	41	32	0	49	7,551	37
Non clinicians	4,168	33	48	29	42	3,853	19
Total	60,252	33	45	24	44	58,511	287

(a) 1997 is the earliest year for which estimates comparable to 2005 are available, because of changes in estimation processes.

(b) Based on a standard full-time working week of 45 hours.

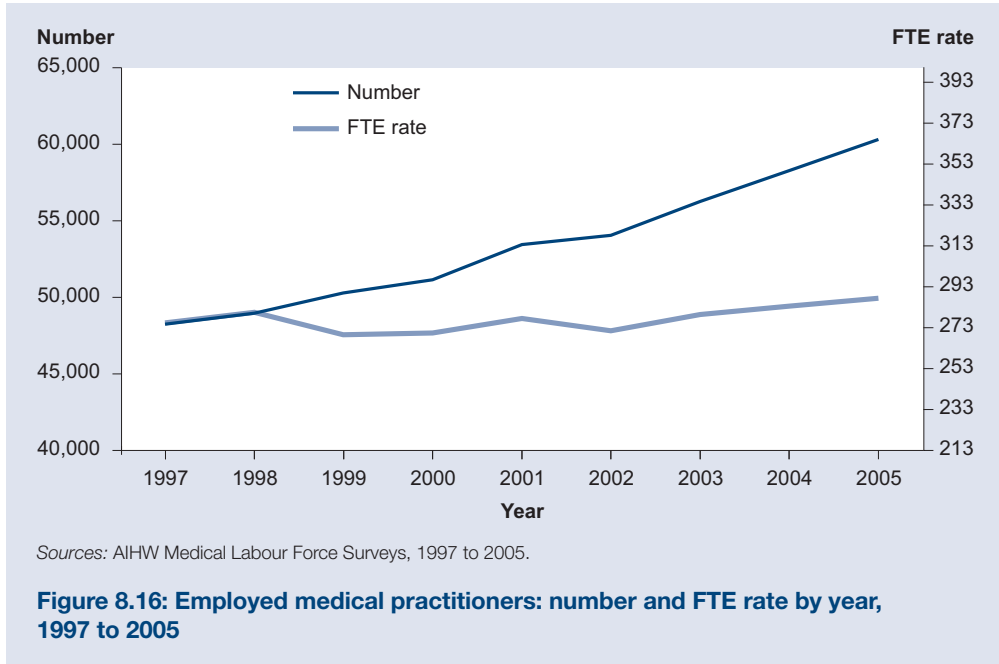
(c) FTE per 100,000 population.

Sources: AIHW Medical Labour Force Surveys 1997 and 2005.

The smaller increase in the FTE rate for medical practitioners over this period, despite the large increase in their numbers, is due to the growth in the population and declining average hours worked. Between 1997 and 2005, the estimated resident population of Australia increased by nearly 10%. During the same period, medical practitioners reduced their average working week by 4 hours (from 48 to 44) (Table 8.25). Both male and female medical practitioners reduced their average working week, by 4 and 2 hours respectively.

In 2005, about a third of all employed medical practitioners were classified as primary care practitioners (37%), a third were specialists (33%), and the remainder were specialists-in-training (11%), non-specialists working in hospitals (11%), and non-clinician doctors (7%) comprising administrators, teachers, researchers, public and occupational health physicians and others (Table 8.25).

Between 1997 and 2005, the number of primary care clinicians rose by an estimated 12% (from 20,134 to 22,589), and their working hours (as with other clinicians) declined. As a result of these factors, and the increase in the Australian population, supply of this group declined from 108 to 98 FTE per 100,000 population over the period. The supply of specialists, specialists-in-training and hospital non-specialists increased over the period.



Medical practitioners are not evenly distributed across Australia, contributing to different levels of health-care access for people living in different geographical areas (see also chapters 3 and 7). The supply of medical practitioners in Australia in 2005 heavily favoured Major Cities, with 335 FTE per 100,000 population. This was much higher than the rates of 181, 153 and 148 in Inner Regional, Outer Regional and Remote/Very Remote areas respectively (Table S56). The supply of primary care practitioners was more even across the geographic regions, ranging from 84 FTE per 100,000 population in Outer Regional areas to 100 in Major Cities.

Over the period from 1997 to 2005, the supply of primary care practitioners in Remote and Very Remote areas increased (from 80 to 92 FTE per 100,000 population), whereas supply declined in the other areas, and nationally. A number of incentives were provided during this period for medical practitioners to practice in remote areas, and these may be having some effect on supply.

The supply of specialists, specialists-in-training and hospital non-specialists either increased or remained stable from 1997 to 2005, in all regions.

Nursing labour force

As shown earlier, nurses are by far the main occupational group in the health workforce. There are two main types of nurses, registered and enrolled nurses. Enrolled nurses typically work alongside registered nurses to provide basic nursing care, undertaking less complex tasks than registered nurses.

In 2005 there were an estimated 244,360 employed nurses, an increase of 10% since 1997 (Table 8.26). Between 1997 and 2005 there was a 13% increase in the number of registered nurses, whereas the number of enrolled nurses declined slightly. In 2005 registered nurses made up 81% of the nursing labour force.

Nationally, the supply of nurses increased 7%, rising from 1,054 FTE nurses per 100,000 population in 1997 to 1,133 in 2005. The majority of this increase occurred after 2001 (Table S60). Although the increase in the number of employed nurses matched population growth (both being 10% over the period), their average working hours increased from 31 to 33 hours per week, leading to the overall increase in supply (Table 8.26).

Table 8.26: Employed registered and enrolled nurses: selected characteristics, 1997^(a) and 2005

Type of nurse	Number	Per cent male	Average age	Per cent aged 55 years and over	Average hours per week	FTE number ^(b)	FTE rate ^(c)
1997							
Registered	176,217	8	41	9	31	156,078	843
Enrolled	46,311	6	40	6	29	38,637	209
Total	222,528	8	40	9	31	195,189	1,054
2005							
Registered	198,315	8	45	20	33	188,683	928
Enrolled	46,044	7	46	17	32	41,572	204
Total	244,360	8	45	19	33	230,396	1,133

(a) 1997 is the earliest year for which comparable estimates to 2005 are available, because of changes in estimation processes.

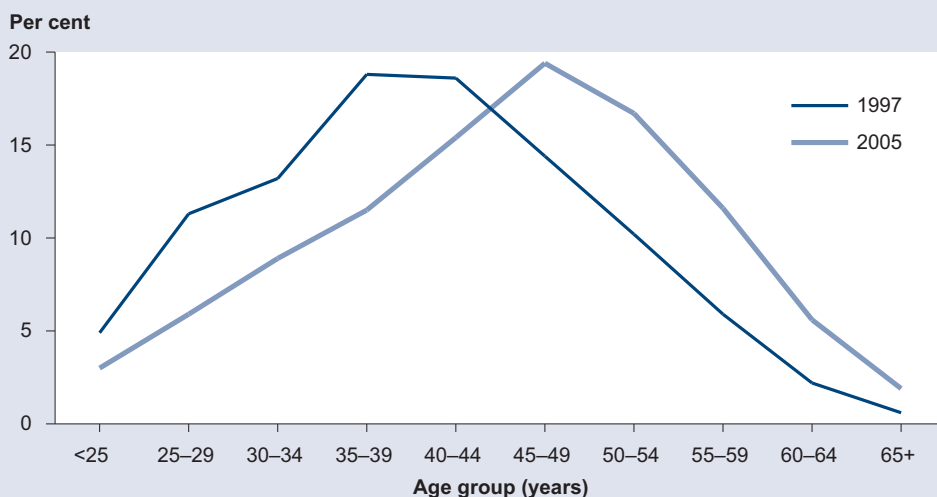
(b) Based on a standard full-time working week of 35 hours.

(c) FTE per 100,000 population.

Sources: AIHW Nursing Labour Force Surveys 1997 and 2005.

The ageing of the Australian nursing workforce is illustrated in Figure 8.17. The peak age group for employed nurses shifted from the 35–39 year group in 1997 to the 45–49 year group in 2005. In addition, the proportion of employed nurses who were aged 55 years and over increased markedly from 9% in 1997 to 19% in 2005 (Table 8.26). Nursing has remained overwhelmingly a female occupation, with just 8% of employed nurses being males.

Unlike with some health professions, the supply of nurses is evenly spread across urban and remote regions. In 2005, the supply was highest in Very Remote areas (1,177 FTE nurses per 100,000 population) and lowest in Major Cities (1,074) (Table S59).



Sources: AIHW Nursing Labour Force Surveys, 1997 and 2005.

Figure 8.17: Age distribution of employed nurses, 1997 and 2005

Dental labour force

The dental labour force comprises dentists, dental therapists, dental hygienists and dental prosthetists. Information about dentists is collected annually from registration boards in each state and territory. For allied dental practitioners, no uniform registration currently exists across jurisdictions. Therefore, information about dental occupations other than dentists is derived from a range of sources including professional associations, dental boards and state health departments. At the time of publication, information on allied dental practitioners was not available for 2005 and hence 2003 data are reported. For dentists, however, 2005 estimates were available.

In 2005, an estimated 10,074 dentists were employed in Australia, a 12% increase in number since 2000 (tables 8.27 and S62). The numbers in the allied dental professions were much lower, and, for two of these—dental therapists and dental prosthetists—the numbers declined between 2000 and 2003.

Table 8.27: Employed dental labour force: selected characteristics, 2003 or 2005^(a)

Dental occupation and year	Number	Per cent female	Average age	Average hours per week	Dentists per 100,000 population	FTE number ^(b)	FTE rate ^(c)
Dentists (2005)	10,074	28	44	38	50	11,053	54
Dental therapists (2003)	1,242	99	40	29	6	1,040	5
Dental hygienists (2003)	577	97	36	29	3	485	2
Dental prosthetists (2003)	795	9	49	43	4	975	5

(a) Data for allied dental practitioners were not available for 2005 and therefore 2003 data have been reported.

(b) Based on a standard full-time working week of 35 hours.

(c) FTE per 100,000 population.

Sources: AIHW DSRU Dental Labour Force data collections, 2003, 2005.

The distribution of the dental labour force in terms of the number of dentists per 100,000 population varied across geographic regions (Table S63). In 2005, dentists were concentrated in Major Cities, where there were nearly three times the rate (59 per 100,000) in Remote and Very Remote regions (20). This pattern was similar in 2003 for dental hygienists. In contrast, dental therapists and dental prosthetists were more evenly spread across geographic regions.

In 2005, 28% of employed dentists were female (Table 8.27), compared with 23% in 2000. Female dentists were on average 38 years of age and worked 34 hours per week. In contrast, male dentists were on average 47 years of age and worked 41 hours per week. For the allied dental professions, dental therapists and dental hygienists were overwhelming female (99% and 97%, respectively in 2003), worked on average 29 hours per week, and were younger than dentists and dental prosthetists (40 and 36 years of age, respectively). Dental prosthetists however, tended to be mainly male (91%), work longer hours (43 hours per week) and be on average older (49 years) than the other dental professions.

Allied health labour force

As Australia moves to more flexible and integrated models of health care and service delivery, information on the size and characteristics of the allied health workforce is increasingly important. The allied health workforce has been described as ‘allies in health’ who work alongside medical practitioners and nurses to provide the best health care to Australians (AHPA 2006). It includes workers from a broad range of professions (Box 8.10).

This section presents information on four of the allied health professions for which data are available from recent AIHW labour force surveys publications—occupational therapists, physiotherapists, psychologists and podiatrists.

Box 8.10: Scope of the allied health workforce

Recognising the limited understanding of the allied health workforce, the Australian Health Ministers’ Advisory Council (AHMAC) commissioned the Australian Health Workforce Advisory Committee (AHWAC) to review this workforce. After considering a wide range of definitions currently in use, the AHWAC report provided a list of health professions that could be considered to make up the Australian allied health workforce:

Audiology, dietetics and nutrition, occupational therapy, orthoptics, orthotics and prosthetics, hospital pharmacy, physiotherapy, podiatry, psychology, radiography, speech pathology and social work.

This list has been used as the basis for reporting on the allied health workforce in this publication.

The AHWAC report concluded that further work was required to clearly define the allied health workforce and the professions that constitute it. In particular, they noted that there are other health professions that seem to fit most definitions of allied health but are not necessarily included in stakeholders’ listings of allied health professions. These include chiropractors and optometrists (AHWAC 2006).

The peak body representing the allied health professions in Australia, Allied Health Professions Australia Ltd, has a membership that is very close to the AHWAC list, with the addition of exercise physiologists, radiation therapists, and sonographers (AHPA 2006).

Not all the allied health professions require practitioners to be registered in any or all states and territories, which limits the usefulness of registration-based data for these professions.

Occupational therapists

Occupational therapists are allied health professionals who teach people how to return to normal activities after injury or illness, using therapy and rehabilitation.

The latest AIHW labour force survey data on occupational therapists are for 2002–03 (AIHW 2006a). Because this is a profession where most jurisdictions in Australia do not require registering, registration data were not available to produce national estimates. As a result, the following information refers only to the 3,107 respondents to the survey who stated that they were employed in occupational therapy. The survey was of all occupational therapists in Queensland, South Australia and the Northern Territory (that is, those jurisdictions where they are registered) and members of Occupational Therapy Australia in the other jurisdictions. The vast majority of employed respondents were female (94%) and reported working in the public sector (72%), most commonly in hospitals, community health services and rehabilitation services. Their average age was 37 years and they worked 36 hours per week, on average.

Psychologists

Psychologists are professionals with expertise in human behaviour who assess and treat people with mental health problems and help people and groups enhance their performance. There were 13,900 clinical and non-clinical psychologists in Australia in 2006, compared with 11,100 in 2001, an increase of around 25% (Table 8.21).

The latest AIHW survey data available on registered psychologists were collected in 2003 from New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory (AIHW 2006b). In 2003, 71% of employed psychologists in these jurisdictions surveyed were female. Their average age was 44 years, with the females being younger than the males, on average. They worked an average of 36 hours per week, with the males generally reporting longer hours than the females (39 hours compared with 34) (AIHW 2006b, 2007c).

Physiotherapists

Physiotherapists are allied health professionals who assess, diagnose and treat people with movement problems resulting from an injury, surgery or a health condition. Based on the ABS Labour Force Survey, there were an estimated 13,100 physiotherapists in Australia in 2006, compared with 11,500 in 2001, an increase of around 14% (Table 8.21).

The AIHW surveyed registered physiotherapists in 2002, in conjunction with the state and territory registration boards and health departments in New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory. The survey found that employed physiotherapists were, on average, aged 39 years and mostly female (76%). They were over-represented in metropolitan areas with 95% of physiotherapists working in these areas. The average hours they worked ranged from 32 in Queensland to 36 in Victoria (AIHW 2006c).

Podiatrists

Podiatrists, also known as chiropodists, are health-care professionals who assess, diagnose and treat disorders of the lower leg and foot that have resulted from developmental abnormalities, disease or injury.

The latest AIHW labour force survey data available on podiatrists are for 2003 (AIHW 2006d), when a survey was conducted in all states except Western Australia. For states participating, 63% of employed podiatrists were female. Their average age ranged from 38

years in Queensland to 40 in Tasmania. Employed podiatrists in 2003 worked, on average, from 37 hours a week (New South Wales) to 42 (Tasmania).

Comparison with other OECD countries

It is difficult to compare the numbers of health professionals in Australia with those in other countries because of differences in how each profession is defined and how workers are registered. The Organisation for Economic Co-operation and Development (OECD) health database includes information on the numbers of health workers in member countries, including those with economies and health systems similar to Australia's—New Zealand, Canada, the United States of America and the United Kingdom. In 2005, Australia had higher numbers of general practitioners and nurses relative to population than did the four other countries (Table 8.28). The rate of dentists was similar in all five countries, whereas that of medical specialists ranged from 0.7 to 1.7 per 100,000, with Australia in the middle of that range.

Australia's higher rate of general practitioners may be due to how these professions are structured in these five countries, or to differences in definitions. The definition of general practitioners used by the OECD includes those medical practitioners working in the ambulatory sector or in hospitals. Of the 29,221 Australian 'general practitioners' in the OECD figures for 2005, 22,589 were 'primary care practitioners' and the remaining 6,632 were non-specialist clinicians working in hospitals (including interns, resident medical officers and career medical officers). Some countries do not include non-specialist clinicians working in hospitals among general practitioners.

Table 8.28: Health professionals employed in selected OECD countries, number and rate^(a), 2000 and 2005

Occupation/year	Australia		New Zealand		Canada		USA		United Kingdom	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
General practitioners^(b)										
2000	26,202	1.4	3,166	0.8	30,636	1.0	262,922	0.9	37,236	0.6
2005	29,221	1.4	3,013 ^(c)	0.7 ^(c)	33,508	1.0	287,706	1.0	42,566	0.7
Medical specialists										
2000	21,170	1.1	2,653	0.7	33,818	1.1	384,508	1.4	77,922	1.3
2005	26,863	1.3	2,946 ^(c)	0.7 ^(c)	36,111	1.1	415,796	1.5	102,074	1.7
Dentists										
2000	8,991	0.5	1,591	0.4	17,314	0.6	168,000	0.6	25,234	0.4
2005	10,069	0.5	1,662 ^(d)	0.4 ^(d)	18,688	0.6	n.a.	n.a.	28,463	0.5
Nurses										
2000	200,910	10.5	36,796	9.6	310,887	10.1	2,249,440	8.0	495,000	8.4
2005	222,974	10.9	38,484 ^(c)	9.5 ^(c)	321,585	10.0	n.a.	n.a.	546,717	9.1

(a) Number of workers per 1,000 population.

(b) Figures for general practitioners for Australia include 6,632 hospital-non-specialists to be consistent with the OECD definition.

(c) 2004 figures.

(d) 2003 figures.

Sources: OECD 2007; 2005 data for Australia are from AIHW Medical and Nursing and Midwifery Labour Force Surveys, 2005 and AIHW DSRU Dental Labour Force data collection 2005.

Primary carers of people with disability

People with disability often receive care and assistance from family members. The provision of unpaid care by family members is an important complement to formal services.

A person who provides informal care or assistance to an individual because of that individual's age, illness or disability is known as a carer. Any assistance received from family or friends living in the same household is considered to be informal assistance, whether or not the provider was paid (ABS 2004). In the 2003 Survey of Disability, Ageing and Carers, the 'primary carer' was defined as the person who provided the most ongoing assistance with core activities of self-care, mobility and communication. In 2003, an estimated 472,500 people, or 3.0% of Australians aged 15 years and over, were primary carers (*NHPC indicator 2.04*, Table 8.29).

Females were more likely than males to be primary carers. There were 337,100 female primary carers (4% of females aged 15 years and over) compared with 135,400 males (2%). About 42% of primary carers were caring for their spouse, 26% for a parent and 23% for a child. Many people reported spending long hours in the caring role. Of primary carers living with their main care recipients: 48% spent on average 40 hours or more per week caring, and 21% spent 20–39 hours per week. Over a third of primary carers had been in the caring role for 10 years or more. About 40% of primary carers themselves had a disability; almost a quarter of those had a severe or profound core activity limitation.

Primary carers of working age had a lower labour force participation rate (39%) than people who were not carers (68%) (ABS 2004; AIHW 2007d). This may have impacts on their economic circumstances and those of their family.

Table 8.29: Primary carers^(a) of people with a disability, by age and sex, 2003 (*NHPC indicator 2.04*)

Age group	Males	Females	Persons	Males	Females	Persons
	Number ('000)			Per cent of population		
15–24	*4.5	13.5	18.1	*0.3	1.0	0.6
25–34	*9.0	35.1	44.1	*0.6	2.4	1.5
35–44	17.0	65.6	82.6	1.2	4.4	2.8
45–54	32.2	82.7	114.9	2.4	6.2	4.3
55–64	25.0	74.8	99.7	2.5	7.6	5.0
65–74	22.9	38.6	61.5	3.6	5.7	4.7
75–84	23.6	25.6	49.1	6.2	5.0	5.5
85+	**	**	*2.5	**	**	*0.9
Total	135.4	337.1	472.5	1.7	4.2	3.0

* Estimates have a relative standard error between 25% and 50% and should be interpreted with caution.

** Estimates have a relative standard error greater than 50% and are considered too unreliable for general use.

(a) A primary carer is a person who provides the most informal assistance. The assistance has to be ongoing, or likely to be ongoing, for at least 6 months.

Note: No information was available regarding primary carers aged under 15 years.

Source: AIHW analysis of ABS 2003 Survey of Disability, Ageing and Carers confidentialised unit record file.

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