Health care expenditure on cardiovascular diseases 2004–05

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Summary

Health care expenditure on cardiovascular diseases 2004–05 is the second report of health care expenditure for cardiovascular diseases. Expenditure estimates are sourced from the Australian Institute of Health and Welfare Disease Expenditure Database. Expenditure data are presented by age, sex and area of expenditure. Some of the key findings of this report are given below.

- Cardiovascular diseases are the most expensive group of diseases in Australia. Allocated direct health care expenditure on cardiovascular diseases amounted to $5.94 billion in 2004–05, that is 11% of total allocated expenditure.
- Substantially more is spent on males ($321 per person) than on females ($261 per person). Much of this difference is due to higher rates of cardiovascular disease among males than females. However, some may reflect differences in the diagnosis, treatment, care and course of the disease between sexes. Further research is required to better explain this result.
- Expenditure per person increases with age, with those aged over 85 years attracting the most expenditure.
- Spending on hospital-admitted patients accounted for approximately half of all expenditure on cardiovascular diseases. Prescription pharmaceuticals were the next most expensive area of expenditure (28%), followed by out-of-hospital medical services (19%) and research (3%).
- Between 2000–01 and 2004–05, inflation-adjusted expenditure on cardiovascular diseases increased by 18%.

1 Introduction

Cardiovascular diseases are one of Australia's leading health problems. In 2006, they accounted for 45,670 deaths (34% of all deaths in Australia) (AIHW 2008a). Cardiovascular diseases are also a leading cause of disability. Around 1.4 million Australians (7% of the population) have a disability related to a cardiovascular problem or condition. In 2003, 18% of the total burden of disease was due to cardiovascular diseases (AIHW: Begg et al. 2007).

Cardiovascular diseases are the most expensive diseases in Australia in terms of health expenditure. In 2004–05, they cost $5.94 billion in allocated recurrent health system expenditure, that is 11% of the total (AIHW in press).

This report details the total allocated health system expenditure associated with cardiovascular diseases in Australia. The term 'expenditure' in this report refers to allocated expenditure unless otherwise specified. These expenditure estimates are for the period 2004–05 and are the most up-to-date currently available. Estimates are presented by area of expenditure: hospital-admitted patients, out-of-hospital medical services, prescription pharmaceuticals and research. Expenditure estimates are also presented by age and sex, and by type of cardiovascular disease where possible.

2 Background: What are cardiovascular diseases?

Cardiovascular diseases are also known as heart, stroke and vascular diseases. They cover all diseases and conditions of the heart and blood vessels. There can be many causes of cardiovascular diseases. In Australia, the main underlying problem is atherosclerosis. This is a condition in which there are abnormal build-ups in the inner lining of the arteries. Made up of fat cholesterol and fibre-like substances, the build-ups are known as plaques. They are most serious when they affect blood supply to the heart (causing angina or heart attack) or to the brain (which can lead to stroke). The process leading to atherosclerosis is slow and complex, often starting in childhood, and it progresses with age.

A number of factors are known to increase the risk of developing cardiovascular diseases. These factors include tobacco smoking, high blood pressure, high blood cholesterol, insufficient physical activity, overweight and obesity, poor nutrition and diabetes. The risk for cardiovascular diseases increases with age, and is higher for men, Aboriginal and Torres Strait Islander peoples, and people from lower socioeconomic groups.

Coronary heart disease and stroke are the most common cardiovascular causes of death. Between them, they accounted for three quarters of all deaths from cardiovascular diseases in 2005 (AIHW 2008a).

2.1 Coronary heart disease

Coronary heart disease, also known as ischaemic heart disease, is the largest single cause of death in Australia, accounting for 23,570 deaths in 2005 (AIHW 2008a). Its two major clinical forms are heart attack and angina. The common underlying problem in coronary heart disease is when plaques formed by atherosclerosis lead to a blockage in the arteries supplying blood to the heart muscle. This can result in heart attack or angina.

A heart attack occurs when a coronary plaque suddenly breaks open. This brings on a blood clot that completely blocks blood flow to the heart muscle downstream. This is a life-threatening emergency which can cause severe chest pain, and possibly collapse and sudden death. If the clot is not promptly treated, some of the heart muscle will die, a condition known as acute myocardial infarction (AMI).

Angina occurs when a plaque has markedly narrowed a coronary artery to the point where, although the blood flow can usually meet most daily demands, it cannot increase to meet extra demands incurred by physical activity or strong emotion, resulting in temporary chest pain. Angina is generally not life-threatening, although people with it are more prone to sudden cardiac death or AMI than the general population.

2.2 Stroke

Stroke (the main form of cerebrovascular disease) is the fifth leading specific cause of disease burden for males and the third leading cause for females (AIHW: Begg et al. 2007). Overall, cerebrovascular diseases were the third leading cause of death among males and the second leading cause of death among females in 2005 (AIHW 2008a). Stroke occurs when a blood vessel carrying blood to the brain is either blocked or bleeds, resulting in part of the brain dying from lack of blood flow. This causes loss of function of the affected part of the brain, leading to death or to impairment in any or all of a range of functions, including movement of body parts, vision, planning, communication and swallowing.

There are two main types of stroke: one is caused by blood clots or other particles (ischaemic strokes) and the other is caused by bleeding (haemorrhagic strokes). Ischaemic strokes occur much more frequently; however, haemorrhagic strokes have a much higher fatality rate.

A related condition is transient ischaemic attack (TIA), which produces temporary symptoms similar to those of a stroke. People who have had a TIA are at high risk of stroke, so a TIA is an important warning sign. In this report, expenditure on TIA is included in stroke expenditure.

2.3 Other cardiovascular diseases

Cardiovascular conditions other than coronary heart disease and stroke account for considerable expenditure. As it is not possible to allocate expenditure to these conditions individually, they are grouped together in the 'Other' category for this report. Cardiovascular conditions in this category of particular note include heart failure, rheumatic fever and rheumatic heart disease, peripheral vascular disease, hypertension and hypertensive heart disease.

Heart failure occurs when the heart becomes damaged or overloaded (which can occur from a variety of diseases and conditions) and functions less effectively in pumping blood around the body. Heart failure causes a large burden on the community, due to the high costs of care and the lower quality of life and premature death of those affected.

Acute rheumatic fever is a delayed complication of an untreated throat infection from Group A *Streptococcus* bacteria. It can involve the heart valves and the heart muscle and its lining. The long-term damage to the heart that results from acute rheumatic fever is referred to as rheumatic heart disease. The condition disproportionately affects Indigenous Australians—in the Top End of the Northern Territory in 2006, Indigenous Australians were almost 35 times as likely to develop the disease than non-Indigenous Australians (AIHW: Penm 2008).

Peripheral vascular disease affects the arteries outside the heart, especially those supplying the legs. It occurs when fatty deposits build up on the inner walls of arteries, reducing blood circulation. In severe cases, a limb-threatening reduction of blood circulation can lead to amputation.

Hypertension (also known as high blood pressure) is a condition where the forces exerted by blood on the walls of arteries are higher than normal. Hypertension is a major risk factor for coronary heart disease, stroke, peripheral vascular disease, heart failure and kidney failure. A complication of hypertension is hypertensive heart disease, where high blood pressure is prolonged or severe enough to cause damage to the heart.

The presentation, prevalence, course and burden of the diseases in the 'Other' category vary greatly. It is not possible to determine the contribution of any given disease to the overall expenditure for this category. As a result, it is important to interpret the findings from this category very cautiously.

3 Methods and limitations

Health expenditure comprises recurrent and capital spending on items such as hospital services, medical services, medicines, community and public health services, and health research. Expenditure on health is reported according to who incurred the expenditure, rather than the source of the funding. The health expenditure reported here is funded by the Australian Government, state, territory and local governments, as well as the non-government sector (such as by private health insurance and individuals).

It is important to note that this report only includes estimates of direct health expenditure—the expenditure related to preventing, diagnosing and treating health problems. These estimates do not include costs of cardiovascular diseases 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 relating to lost quality and quantity of life. Therefore the estimates in this report do not represent the total economic impact of cardiovascular diseases in the Australian community.

It is not possible to allocate all expenditure on health goods and services by disease. Expenditure on most community and public health programs for instance, support the treatment and prevention of many conditions and cannot be allocated to one specific disease or injury. This is also true of capital expenditure on health facilities and equipment, which has the added problem of being characterised by large outlays that fluctuate greatly from year to year. Areas for which health expenditure could not be allocated by disease included:

- hospital non-admitted patient services
- over-the-counter medications
- health practitioner services (excluding optometry)
- community health programs (excluding mental health)
- public health (excluding cancer screening programs)
- health administration
- patient transport services
- health aids and appliances
- capital expenditure.

The method used to derive the estimates in this report ensures that the estimates across disease, age and sex groups add to the total amount of health expenditure that was able to be allocated by disease in 2004–05 ($52.7 billion)—around two-thirds (70%) of total recurrent health expenditure.

The expenditure estimates reported here provide a broad picture of the use of health system resources classified by disease group. The method for estimating disease expenditure however, is a 'top down' approach where total expenditure across the health system is estimated and then allocated to the relevant conditions. Although this method yields consistency, good coverage and totals that add up to known expenditures, it is not as sensitive or accurate for any specific disease as a detailed 'bottom up' analysis of actual costs incurred by patients with that disease. This report only includes allocated expenditure.

Unless otherwise specified, the term 'expenditure' will refer to allocated expenditure throughout this report.

Note that the classifications of diseases in this study were based on the principal diagnosis of the patient. Also note that diseases in this report are grouped according to rules used for burden of disease reporting. These rules were developed to correct for common misclassifications of diseases under the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10). As a result, the classification of diseases here may differ from other reports of cardiovascular diseases, which use only ICD-10 codes. More information on the methods used for burden of disease reporting are given in AIHW: Begg et al. (2007). A table of the ICD codes used for each disease in this report can be found in Appendix 1 (Table A1.1).

Expenditure estimates were apportioned using data from the hospital establishments collection, hospital morbidity records and casemix, Medicare, the Pharmaceutical Benefits Scheme (PBS), the Pharmacy Guild Survey, and the BEACH (Bettering the Evaluation and Care of Health) survey of general practice. Further details of the methods used are given in AIHW (in press).

The methods and data sources used to calculate expenditure in this report are generally similar to those used in the report of 2000–01 expenditure on cardiovascular diseases (AIHW 2004). In most cases, the data sources used for the estimations have remained the same, but a number of changes to the methods make comparisons of disease expenditure between the two reports somewhat problematic.

Several areas of expenditure included in the previous report have not been included in this report. In the report of 2000–01 expenditure, expenditure on non-admitted hospital services, over-the-counter medicines, and other health practitioner services were estimated by adjusting the 1993–94 expenditure for demographic changes. To reduce uncertainty in the 2004–05 estimates, expenditure in these areas has not been allocated by disease. In addition, residential aged care was classified as part of health expenditure for the 2000–01 report. For this report, this expenditure is now classified as welfare expenditure.

Note that this report includes data on changes to expenditure between 2000–01 and 2004–05. These data have been adjusted for the changes to methods over time, and should be considered reliable.

It is important to understand the limitations of these expenditure estimates. Direct expenditure on a disease does not equate to the cost savings that would result from preventing the disease, as a number of other factors need to be considered. For further explanation see AIHW (in press). Although these expenditure estimates are reliable at the broad disease level (all cardiovascular diseases combined), they should be interpreted cautiously for specific diseases as the method is less sensitive and accurate for any specific disease.

Expenditure on prescription pharmaceuticals includes expenditure on all pharmaceuticals in the PBS or RPBS (Repatriation Pharmaceutical Benefits Scheme) for which the Australian Government paid a benefit. It includes under co-payment prescriptions, pharmaceuticals listed in the PBS or RPBS for which the total costs are equal to, or less than, the patient contribution and private prescriptions. It excludes expenditure on over-the-counter medicines including pharmacy-only medicines, aspirin, cough and cold medicines, vitamins and minerals, herbal and other complementary medicines, and a range of medical non-durables, such as bandages, bandaids and condoms. It also excludes expenditure on

Highly Specialised Drugs—these are counted under hospital-admitted patient expenditure. Refer to AIHW (2007) for further information.

The method for distributing prescription medicines expenditure by disease relies largely on general practice prescription data. For diseases where a significant proportion of prescriptions are made by medical specialists, as may be the case with cardiovascular diseases, this may not accurately reflect prescription medicine expenditure.

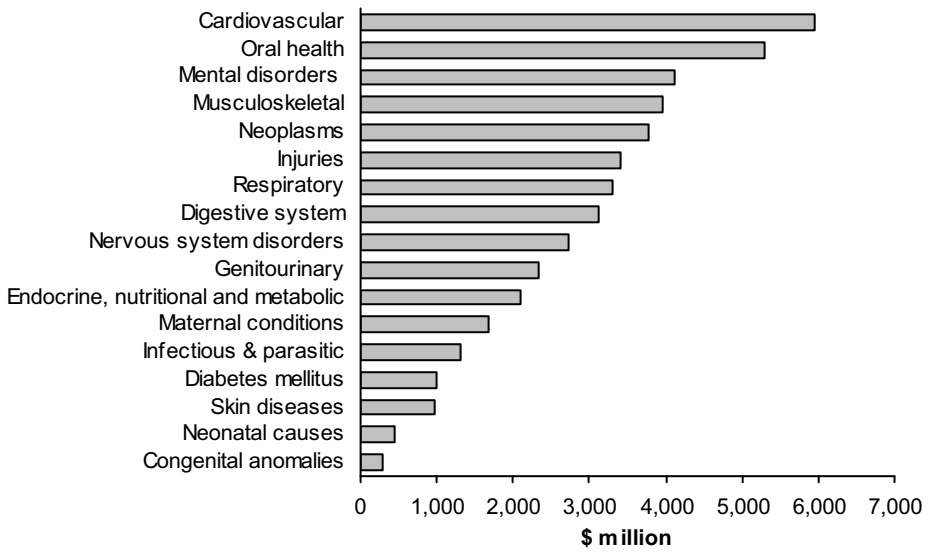
Treatments of dyslipidaemias, such as high blood cholesterol, are classified separately from cardiovascular diseases as 'Endocrine, nutritional and metabolic disorders'. This leads to an underestimation of the total expenditure on medicines used to prevent and treat cardiovascular disease. Similarly, pathology tests for dyslipidaemias would only be included in cardiovascular disease expenditure if the reason given for ordering the tests was a cardiovascular problem.

All calculations of expenditure per person in this report are based on population figures at 30 June 2005 (ABS 2006).

4 How much is spent on cardiovascular diseases?

4.1 All cardiovascular diseases

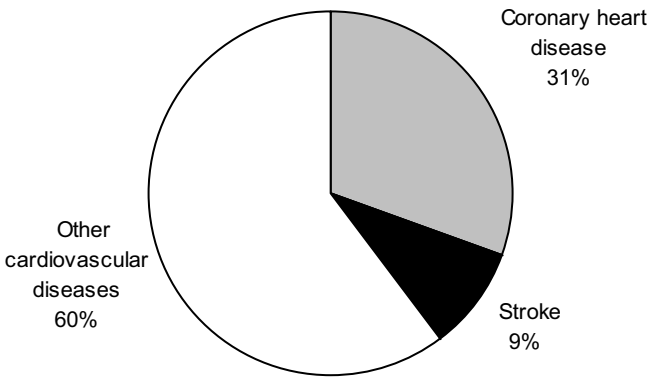
The total health care expenditure for cardiovascular diseases in Australia in 2004–05 was $5,942 million, more than any other disease group. This reflects the fact that cardiovascular diseases are one of the leading causes of burden of disease and injury in Australia (AIHW: Begg et al. 2007). The next highest cost group was oral health at $5,305 million, followed by expenditure related to mental disorders ($4,128 million), musculoskeletal conditions ($3,956 million) and neoplasms ($3,787 million) (Figure 4.1).



Source: AIHW (in press).

Figure 4.1: Health care expenditure by disease group, 2004–05 ($ million)

Coronary heart disease and stroke together accounted for 40% of the total expenditure for cardiovascular diseases during 2004–05. Expenditure on coronary heart disease totalled $1,813 million while expenditure on stroke totalled $546 million (Figure 4.2 and Table A2.1). The expenditure on coronary heart disease and stroke reported here is an underestimate as a substantial portion of pharmaceutical spending related to these conditions is allocated elsewhere. For example, expenditure on medicines to lower blood pressure may be allocated to 'other cardiac conditions' even though a major reason for lowering blood pressure is to reduce the risk of coronary heart disease and stroke. Similarly, expenditure on medication used to lower blood lipids may be allocated outside of the cardiovascular diseases group (see methods and limitations section).



Source: AIHW (in press).

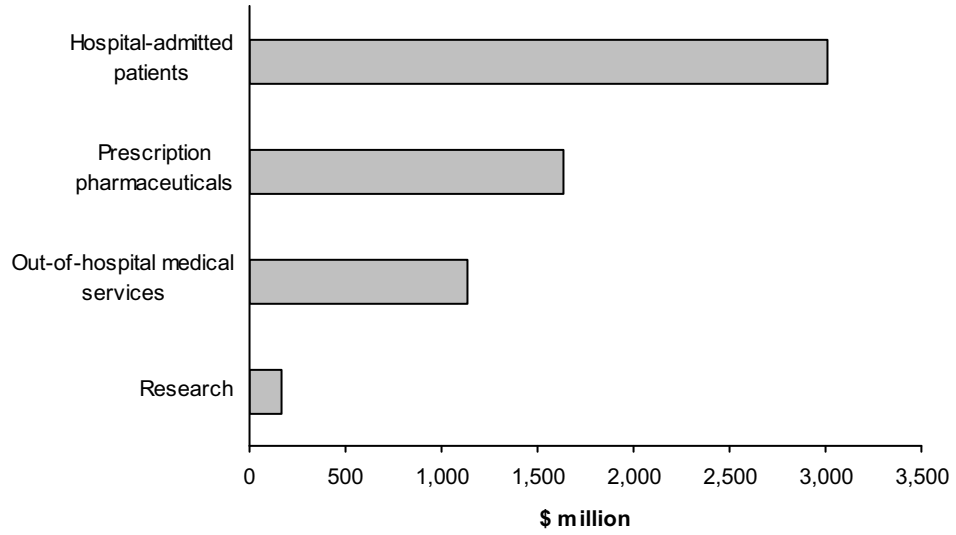
Figure 4.2: Health expenditure by type of cardiovascular disease, 2004–05

4.2 Cost comparison by area of expenditure

Patients admitted to hospital were the most expensive component of expenditure on cardiovascular disease in Australia in 2004–05. Expenditure in this area was $3,009 million, that is 51% of the total. This includes private medical services provided in hospitals.

Prescription pharmaceuticals were the next most expensive sector, accounting for $1,636 million (28%), followed by out-of-hospital medical services ($1,133 million, 19%).

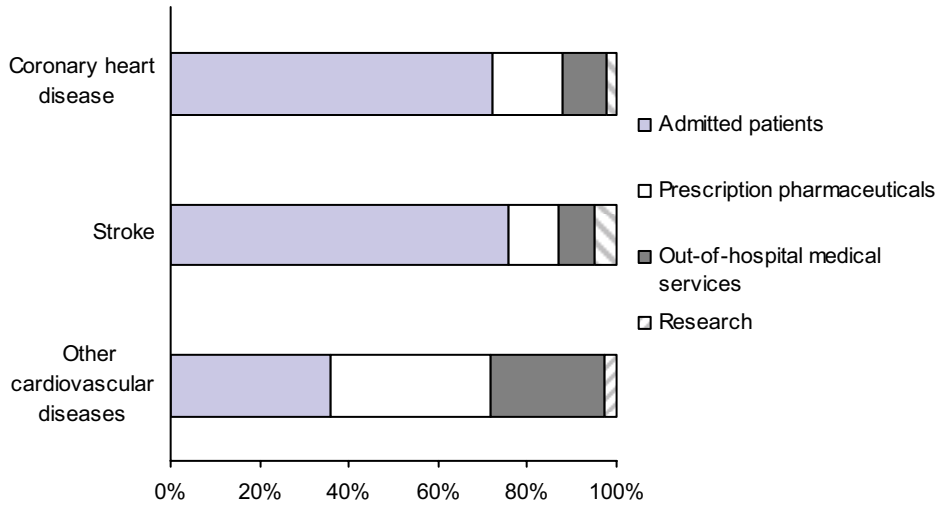
Out-of-hospital medical services include consultations with general practitioners and other specialists as well as imaging, pathology and other diagnostic services. The least expensive health service was research ($164 million, 3%) (Figure 4.3 and Table A2.2).



Source: AIHW (in press).

Figure 4.3: Health care expenditure on cardiovascular disease, by area of expenditure, 2004–05 ($ million)

Spending by area of expenditure differs by type of cardiovascular disease. Expenditure on hospital-admitted patients accounted for a greater proportion of overall expenditure for coronary heart disease and stroke than for other cardiovascular diseases. Conversely, out-of-hospital care and prescription pharmaceuticals accounted for a greater proportion of expenditure for other cardiovascular diseases than for coronary heart disease or stroke (Figure 4.4). For prescription pharmaceuticals, this may be partly due to the allocation of expenditure on medication for lowering blood pressure to the 'Other cardiovascular diseases' category, as described in Section 4.1.



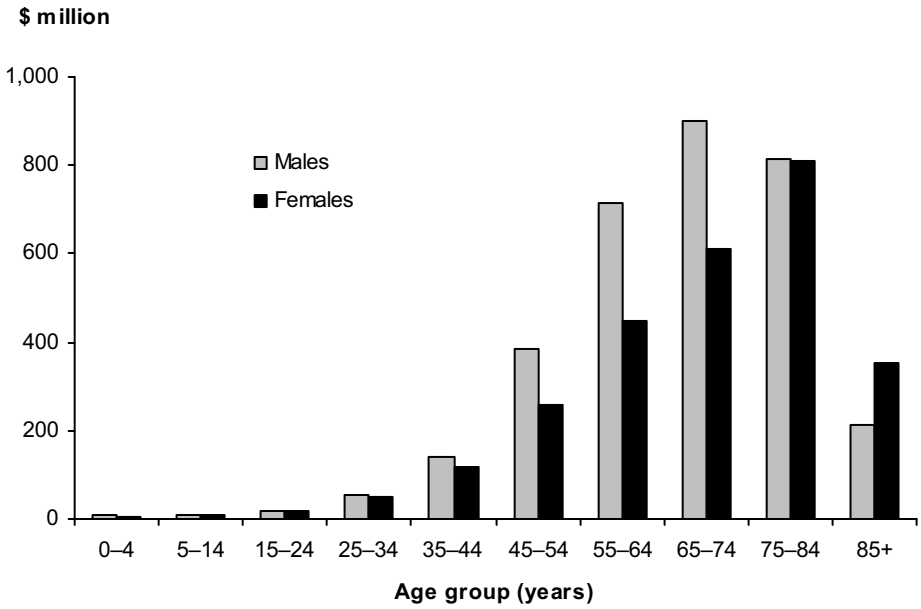
Source: AIHW (in press).

Figure 4.4: Proportion of health care expenditure by type of cardiovascular disease, 2004–05

5 Who is it spent on?

5.1 By age and sex

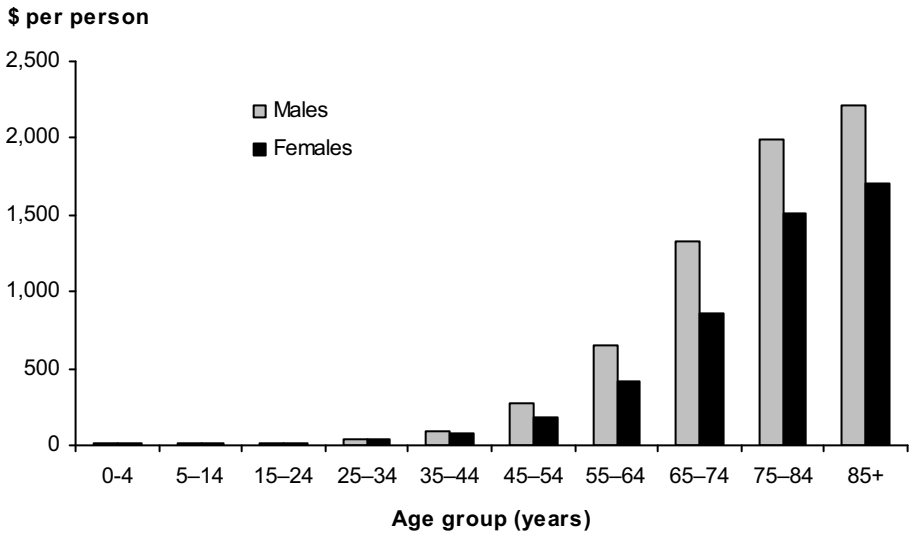
Expenditure on cardiovascular diseases was relatively low in younger age groups and increased sharply from about 45 years. A decline in expenditure in the most elderly age group reflected the smaller population aged over 85 years. While males accounted for more expenditure overall in 2004–05, among people aged over 85 years expenditure on females was greater, reflecting longer life expectancy for females (Figure 5.1).



Source: AIHW (in press).

Figure 5.1: Health care expenditure for cardiovascular diseases, by age and sex, 2004–05 ($ million)

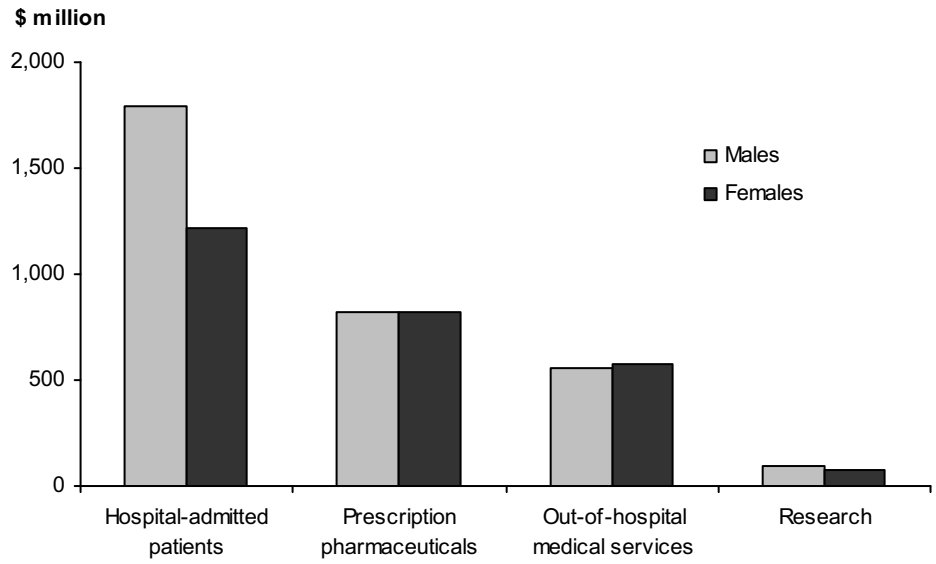
Expenditure per person by age and sex shows a similar pattern. Overall expenditure on cardiovascular disease was $291 per person in Australia in 2004–05. More was spent on males on average ($321 per person) than on females ($261), with more spent on males for all age groups above age 25. Expenditure increased sharply with age from about 45 years. People aged 85 years and over received the most expenditure—over 8 times as much was spent per person in this age group in 2004–05 as was spent on people aged 45–54 years (Figure 5.2 and Table A2.3). These results show that although overall spending on the most elderly age group is lower due to the smaller number of people in these age groups, more is spent per person among the most elderly than for any other age group.



Source: AIHW (in press).

Figure 5.2: Health care expenditure on cardiovascular diseases, per person, by age and sex, 2004–05 ($)

Most of the difference in expenditure between sexes is related to hospital-admitted patients. Expenditure on hospital-admitted patients is substantially greater for males than for females. This reflects the substantially greater number of hospitalisations for males with cardiovascular diseases. In 2004–05, there were approximately 260,000 hospitalisations for males with cardiovascular diseases, compared to around 190,000 hospitalisations for females (AIHW 2008b). Expenditure for other areas of expenditure was roughly equivalent for both sexes, with males attracting slightly more expenditure related to prescription pharmaceuticals and research, and slightly more spent on out-of-hospital care for females. (Figure 5.3 and Table A2.2).

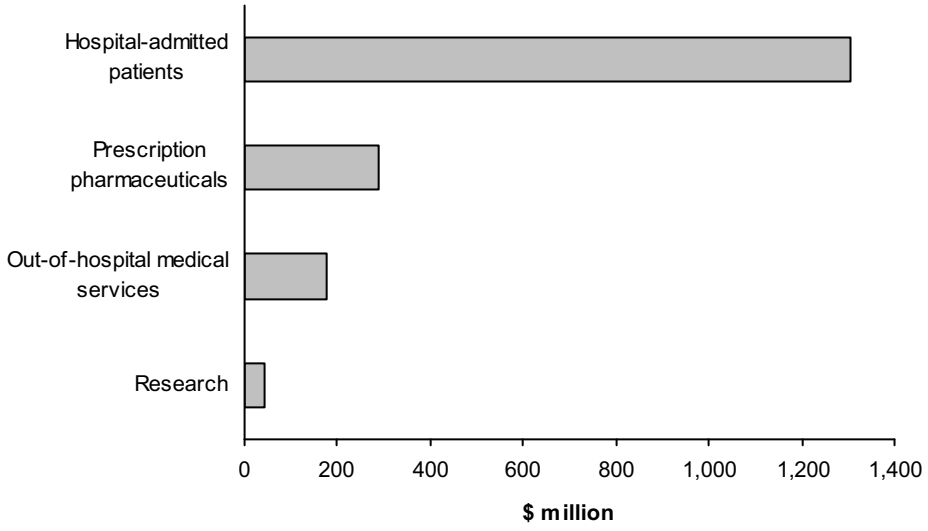


Source: AIHW (in press).

Figure 5.3: Health care expenditure on cardiovascular diseases, by sex and area of expenditure, 2004–05 ($ million)

5.2 Coronary heart disease

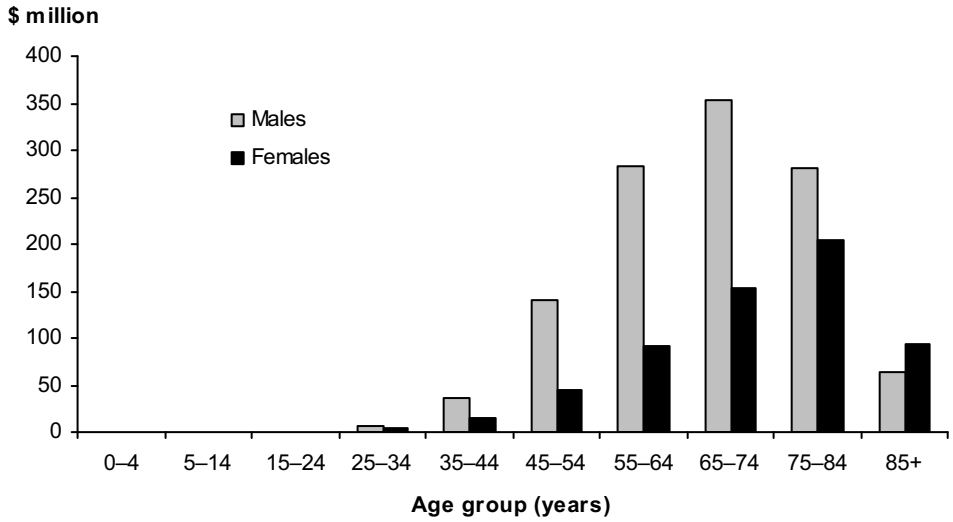
In 2004–05, a total of $1,813 million was spent on coronary heart disease, representing 31% of the total expenditure on cardiovascular disease. The largest proportion was spent on hospital-admitted patients ($1,306 million, 72%). Prescription pharmaceuticals ($287 million, 16%) and out-of-hospital medical services ($177 million, 10%) accounted for the majority of the remaining expenditure. The smallest proportion of funding was allocated to research ($44 million, 2%) (Figure 5.4).



Source: AIHW (in press).

Figure 5.4: Health care expenditure for coronary heart disease, by area of expenditure, 2004–05 ($ million)

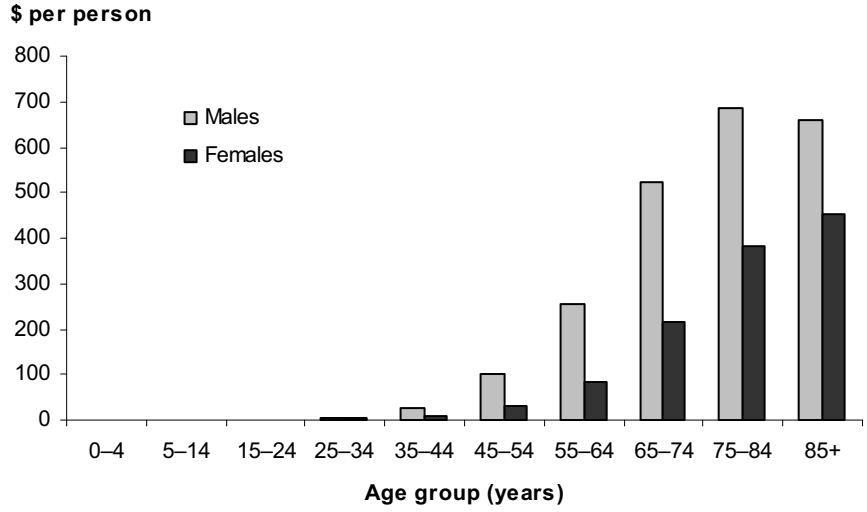
There was a marked increase in expenditure with age from about 35 years for both men and women, but especially so for men. Males received considerably more expenditure than females, with expenditure peaking for males aged 65–74 years. Peak expenditure for females was around 75–84 years. Beyond 84 years of age, more was spent on females than males (Figure 5.5 and Table A2.4), reflecting the later onset of the disease in women and the larger numbers of elderly women than men. When per person expenditure is considered, it is clear that more is spent on males and on the most elderly age groups (Figure 5.6).



Note: Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Figure 5.5: Health care expenditure for coronary heart disease, by age and sex, 2004–05 ($ million)

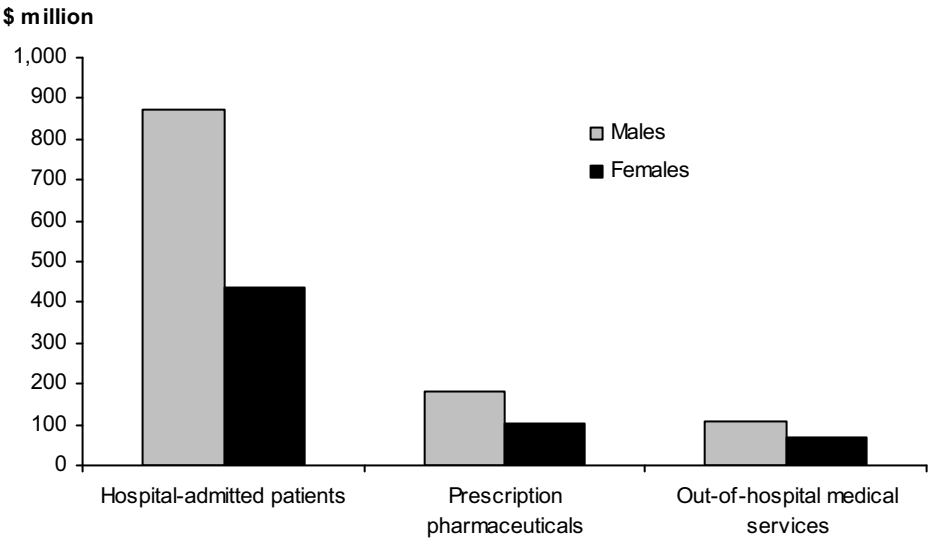


Note: Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Figure 5.6: Health care expenditure for coronary heart disease, per person, by age and sex, 2004–05 ($)

Substantially more was spent on males than females across all areas of expenditure. This was especially true for hospital-admitted patients, where twice as much was spent on males as on females (Figure 5.7 and Table A2.4). Note that this figure excludes expenditure on research, as it is not possible to allocate research expenditure between sexes at this level. Much of the difference between males and females can be explained by the higher rates of coronary heart disease among males (AIHW: 2008c). However, it may also reflect differences in the diagnosis, treatment and care of coronary heart disease between males and females. More research in this area is required to better explain the differences in expenditure between males and females.



Note: Does not include expenditure on research.

Source: AIHW (in press).

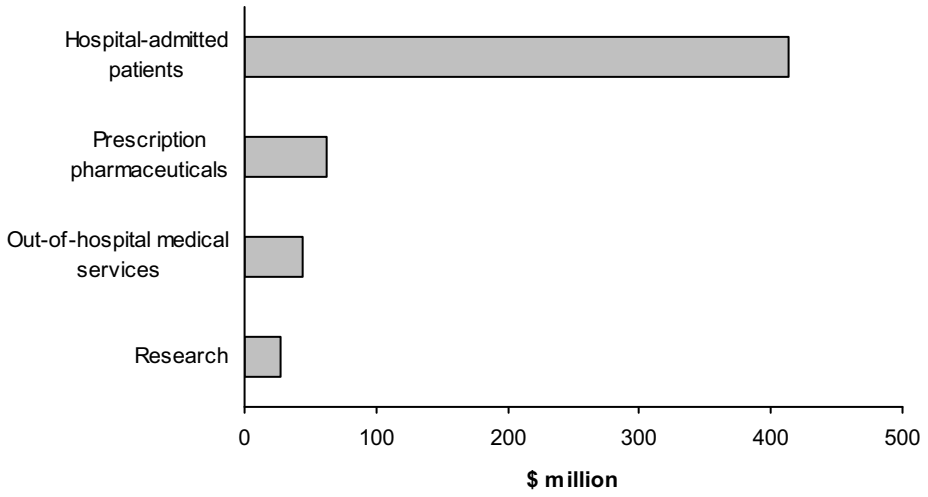
Figure 5.7: Health care expenditure for coronary heart disease, by area of expenditure and sex, 2004–05 ($ million)

5.3 Stroke

Total health care expenditure on stroke amounted to $546 million in 2004–05, that is 9% of the total spent on cardiovascular diseases. The largest proportion was spent on hospital-admitted patients ($414 million, or 76% of the total). The next highest cost areas of expenditure were prescription pharmaceuticals ($62 million, 11%) and out-of-hospital medical services ($44 million, 8%). Expenditure on research was the smallest component of expenditure on stroke ($27 million, 5%) (Figure 5.8). Spending by area of expenditure for stroke does not differ greatly by sex (Table A2.5).

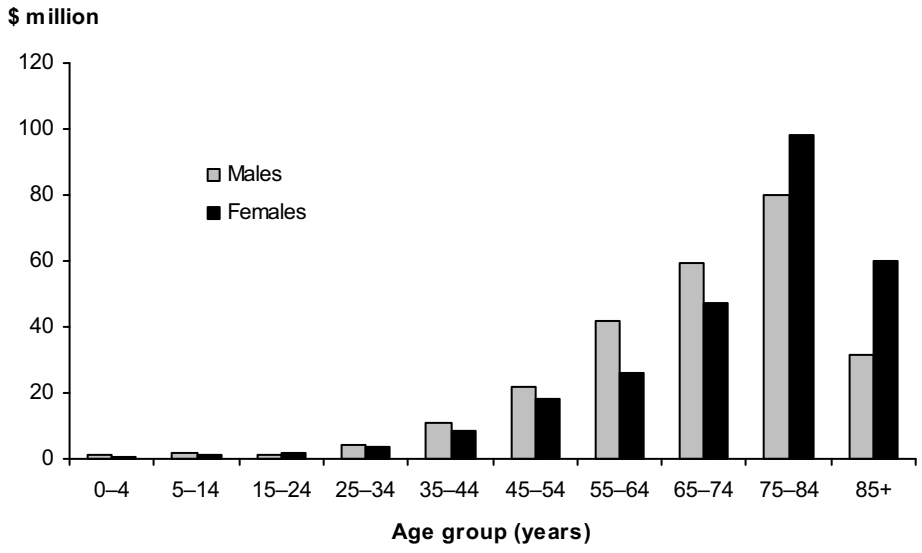
Expenditure on stroke for both sexes begins to increase sharply from about 35 years of age. Expenditure on males in 2004–05 was higher in the age groups up to 75 years, but overall more was spent on women with stroke ($266 million) than on men ($254 million). Note that this excludes expenditure on research, as it is not possible to allocate research expenditure by sex at this level. The higher expenditure on women among those aged 75 or more relates to

the greater life expectancy of women— as stroke mainly affects the elderly, and there are more elderly women than men, it also follows that overall expenditure for stroke will be higher for women (Figure 5.9).



Source: AIHW (in press).

Figure 5.8: Health care expenditure for stroke, by area of expenditure, 2004–05 ($ million)

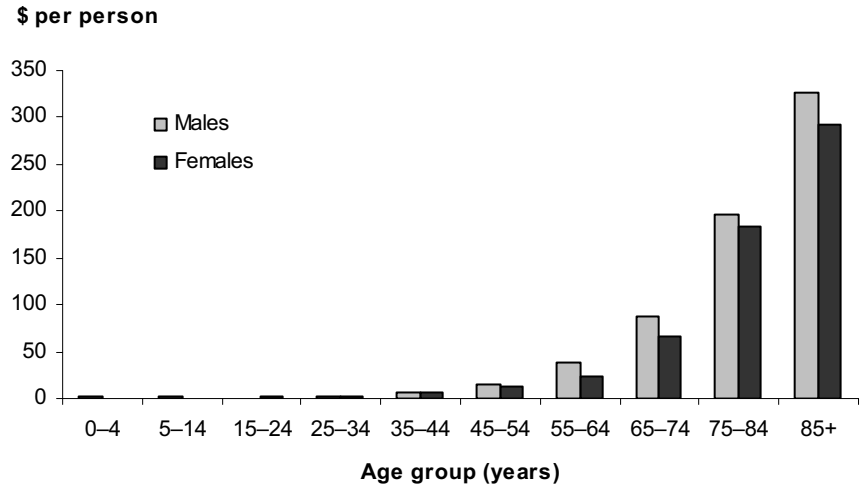


Note: Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Figure 5.9: Health care expenditure for stroke, by age and sex, 2004–05 ($ million)

Expenditure on stroke per person increases noticeably among those in the 85 years and over age group, indicating that among stroke patients, the most elderly attract the most expenditure (Figure 5.10). This reflects the high prevalence of stroke among the most elderly.



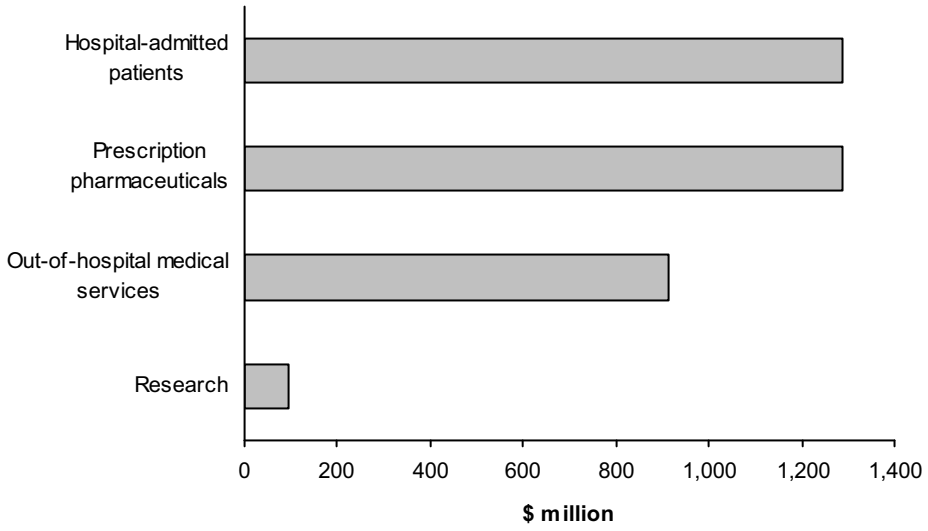
Note: Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Figure 5.10: Health care expenditure for stroke, per person, by age and sex, 2004–05 ($)

5.4 Other cardiovascular diseases

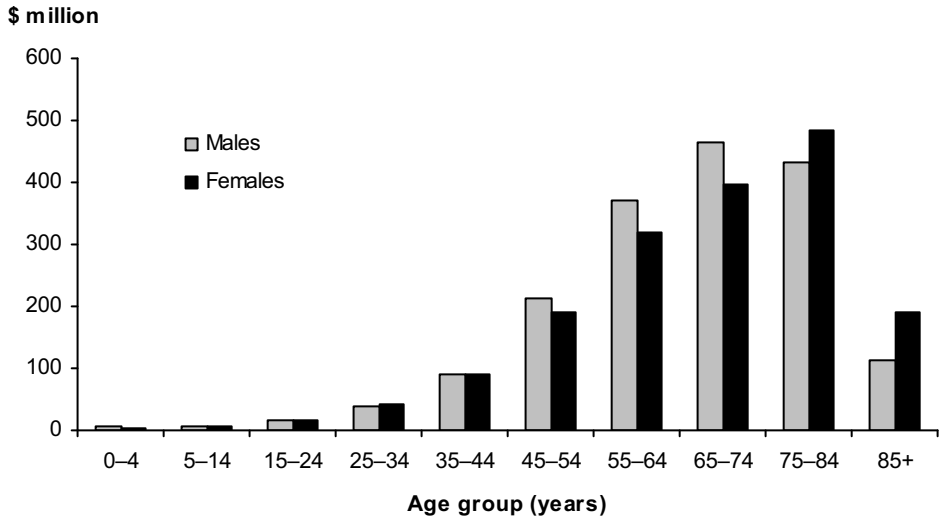
In 2004–05, expenditure on cardiovascular diseases other than coronary heart disease and stroke amounted to $3,582 million, 60% of the total expenditure on cardiovascular disease. Expenditure on hospital-admitted patients ($1,289 million, 36%) and prescription pharmaceuticals ($1,288 million, 36%) were similar. Expenditure on out-of-hospital medical care amounted to $912 million (25%). Research accounted for only a small proportion of expenditure on other cardiovascular diseases ($93 million, 3%) (Figure 5.11).



Source: AIHW (in press).

Figure 5.11: Health expenditure for other cardiovascular diseases, by area of expenditure, 2004–05 ($ million)

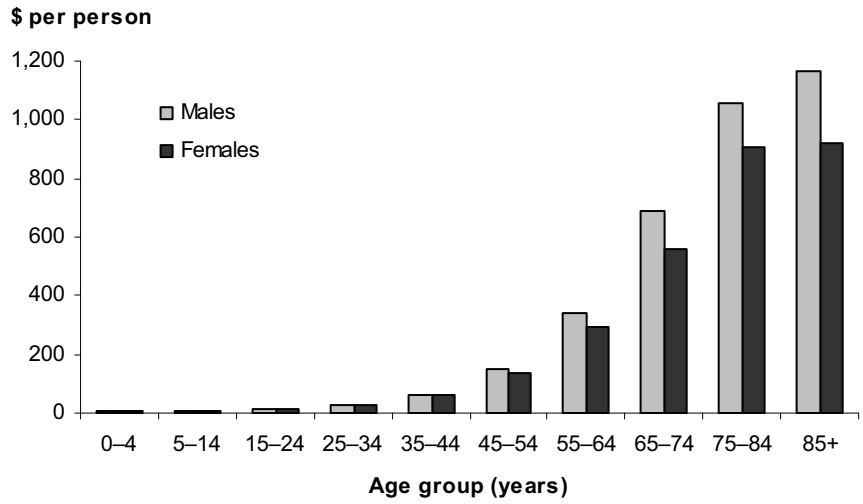
Overall, expenditure on other cardiovascular diseases was similar between males and females ($1,752 million and $1,738 million respectively). Note that this excludes expenditure on research, as it is not possible to allocate research expenditure by sex at this level. Expenditure on hospital-admitted patients was greater for males, while more was spent on females for out-of-hospital care and prescription pharmaceuticals. Expenditure on other cardiovascular diseases begins to increase noticeably from about 35 years for both sexes. Expenditure on men and women was similar for all age groups, but beyond 74 years expenditure on females was greater (Figure 5.12 and Table A2.6). This is due to the larger numbers of females in the more elderly age groups, as per person expenditure shows more is spent on the average male patient than the average female (Figure 5.13).



Note: Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Figure 5.12: Health care expenditure for other cardiovascular diseases, by age and sex, 2004–05 ($ million)



Note: Does not include expenditure on research.

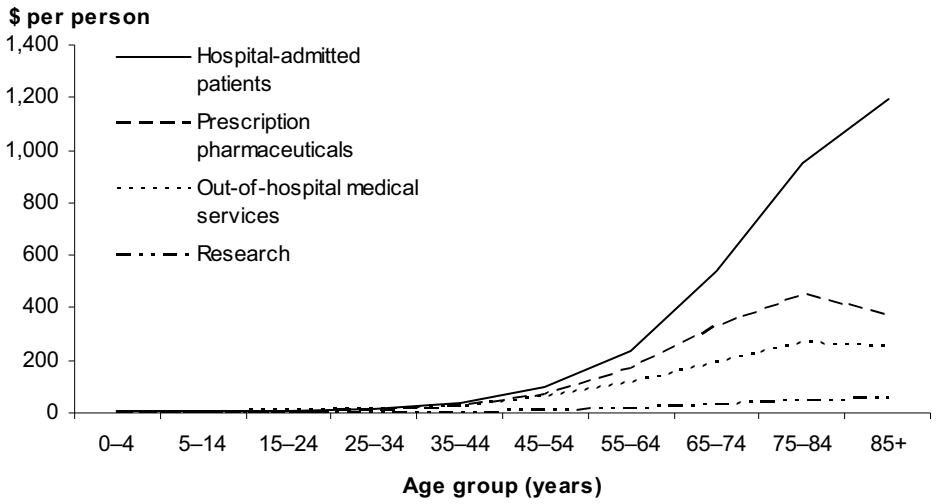
Source: AIHW Disease expenditure database.

Figure 5.13: Health care expenditure for other cardiovascular diseases, per person, by age and sex, 2004–05 ($)

6 Where does the money go?

6.1 All cardiovascular diseases

Hospital-admitted patients received the highest levels of per person expenditure, with expenditure increasing markedly with age. Per person expenditure on prescription pharmaceuticals and out-of-hospital medical services also increased with age, although spending decreased slightly among patients aged over 85 years. Research was a relatively minor component of expenditure (Figure 6.1 and Table A2.7).

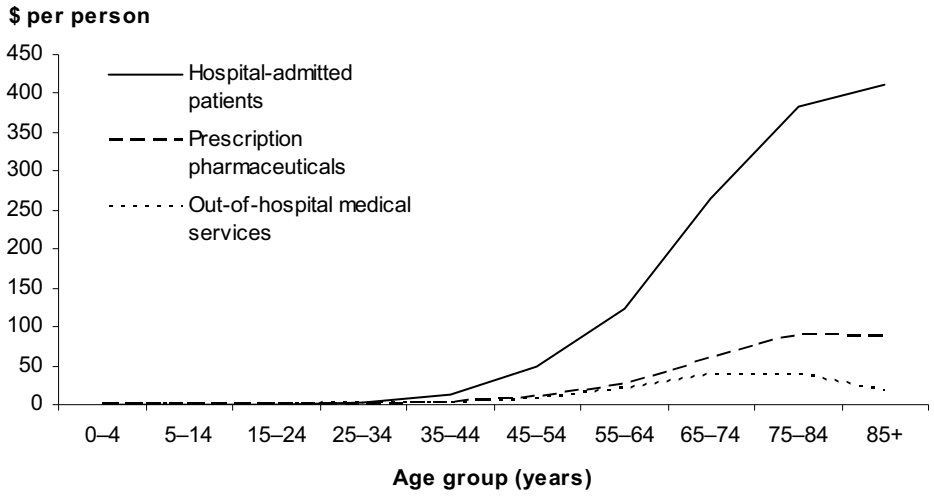


Source: AIHW Disease expenditure database.

Figure 6.1: Health care expenditure for all cardiovascular diseases, per person, by age and area of expenditure, 2004–05 ($)

6.2 Coronary heart disease

For coronary heart disease, hospital-admitted patients received the most per person expenditure by a substantial margin. Expenditure on hospital-admitted patients increased with age, with very large increases seen from about 45 years. Expenditure on prescription pharmaceuticals also increased with age to 85 years, after which expenditure decreased slightly. Expenditure on out-of-hospital medical services increased with age until around 65 years—beyond this point expenditure remained fairly constant before decreasing among patients aged over 85 years (Figure 6.2 and Table A2.8).



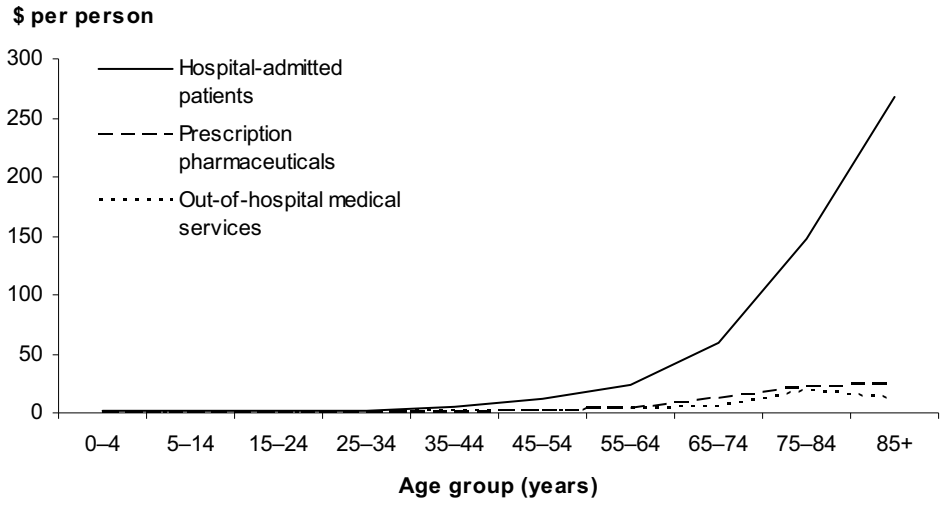
Note: Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Figure 6.2: Health care expenditure for coronary heart disease, per person, by age and area of expenditure, 2004–05 ($)

6.3 Stroke

Among stroke patients, hospital-admitted patients received the majority of expenditure. Spending in this area of expenditure increased noticeably with age, with patients aged over 85 years attracting the most expenditure. Among other areas of expenditure, expenditure increased with age more gradually, with expenditure on out-of-hospital medical services decreasing among patients aged over 85 years (Figure 6.3 and Table A2.9).



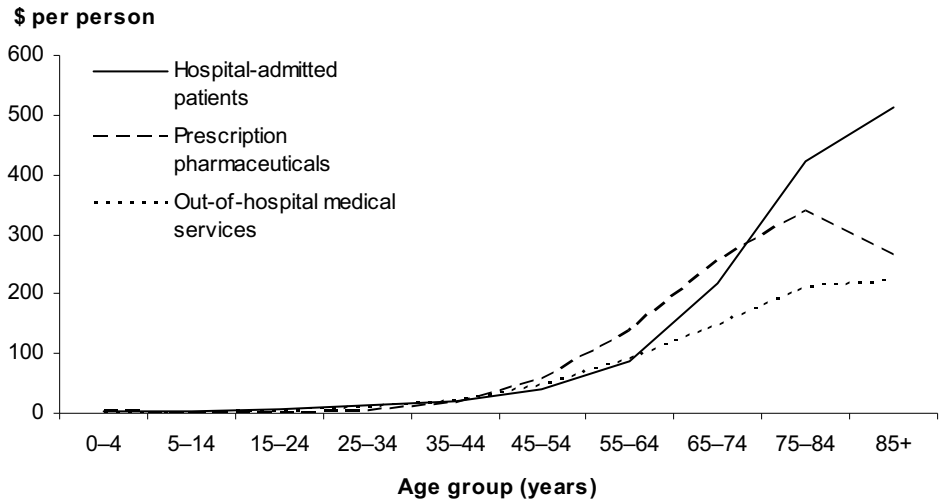
Note: Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Figure 6.3: Health care expenditure for stroke, per person, by age and area of expenditure, 2004–05 ($)

6.4 Other cardiovascular diseases

Per person expenditure on other cardiovascular diseases in 2004–05 was highest for prescription pharmaceuticals in younger age groups, but in patients aged over 74 years hospital-admitted patients received the most expenditure per person. Expenditure per person on prescription pharmaceuticals also increased with age, but decreased among patients aged over 85 years. Expenditure per person for out-of-hospital medical services increased noticeably with age (Figure 6.4 and Table A2.10).



Note: Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Figure 6.4: Health care expenditure for other cardiovascular diseases, per person, by age and area of expenditure, 2004–05 ($)

7 Changes in expenditure over time

To allow reliable comparison, expenditure on health services in 2000–01 have been converted to 2004–05 prices using the total health price deflator (AIHW 2007). Overall expenditure on cardiovascular disease increased by 18% between 2000–01 and 2004–05, after adjusting for health price inflation and changes in classification over time. This represents an increase of $906 million expressed in 2004–05 prices. During the same period, expenditure on all disease types increased by 20% (Table 7.1).

For cardiovascular diseases, the largest increases in expenditure were for out-of-hospital medical services (24%) and prescription pharmaceuticals (21%). Expenditure on hospital-admitted patients grew by 15% during the same period. Change in research expenditure is not included.

Table 7.1: Change in inflation-adjusted spending, 2000–01 to 2004–05

	Hospital-admitted patients	Prescription pharmaceuticals	Out-of-hospital medical services	Total
		Per cent increase		
Cardiovascular diseases	15	21	24	**18**
Whole health system	20	18	20	**20**

Source: AIHW (in press).

This increase in expenditure seems likely to continue into the future. A recent study by Vos et al. (in press) based on 2002–03 data and including residential aged care (high-care) expenditure estimated changes in expenditure until 2032–33 (AIHW: 2008c). Expenditure on cardiovascular diseases was divided into treatment costs and prevention costs. By 2032–33, expenditure relating to treatment is projected to increase by 111%. Expenditure relating to prevention, including medications to lower blood pressure and cholesterol-lowering medications, is projected to increase by 96%. Overall, expenditure on cardiovascular diseases is projected to increase by $8.3 billion (105%), in the three decades between 2002–03 and 2032–33 (Table 7.2). This increase in projected expenditure comes despite a continued decrease in rates of cardiovascular diseases in Australia. The main causes for the projected increase in expenditure are the ageing of the population, and population growth.

Table 7.2: Projected health expenditure[(a)] 2002–03 dollars, 2002–03 to 2032–33

	Expenditure (billions of 2002–03 dollars)				Per cent change
	2002–03	2012–13	2022–23	2032–33	2002–03 to 2032–33
Cardiovascular diseases	7.91	10.28	13.00	16.18	105

(a) Includes expenditure on high-level residential aged care facilities.

Source: AIHW: 2008c.

Appendix 1: Classification of diseases

Table A1.1: Codes for disease categories used in this report

Disease	ICD-10-AM codes
Coronary heart disease	I20–I25, and proportion of I46, I47.2, I49.0, I50, I51.5–9, I70.9
Stroke	G45, I60–I64
Other cardiovascular disease	Balance of cardiovascular diseases
All cardiovascular diseases	**I00–I99 (minus I12, part I13, I85, I127.9), G45, G46**

Source: AIHW: Begg et al. 2007.

Appendix 2: Detailed statistical tables

Table A2.1: Health expenditure on cardiovascular diseases, 2004–05 ($ million)

Disease group	Hospital-admitted patients[a]	Out-of-hospital medical services	Prescription pharmaceuticals[b]	Research	Total expenditure allocated by disease
			$ million		
All cardiovascular diseases	3,009	1,133	1,636	164	**5,942**
Coronary heart disease	1,306	177	287	44	**1,813**
Stroke	414	44	62	27	**546**
Other cardiovascular diseases	1,289	912	1,288	93	**3,582**

(a) Includes private medical services provided in hospital.

(b) Includes all pharmaceuticals for which a prescription is needed, including private prescriptions and under co-payment prescriptions but excludes highly specialised medicines. Also excludes over-the-counter medicines such as vitamins and minerals, first-aid and wound-care products, pain killers and a number of complementary health products sold in both pharmacies and other retail outlets.

Source: AIHW (in press).

Table A2.2: Health expenditure on all cardiovascular diseases by area of expenditure, age and sex, 2004–05 ($ million)

Age (years)	Sex	Hospital-admitted patients[a]	Out-of-hospital medical services	Prescription pharmaceuticals[b]	Research	Total expenditure allocated for cardiovascular diseases
			$ million			
0–4	All persons	7.39	0.57	4.03	0.34	**12.33**
	Males	3.91	0.23	2.71	0.19	**7.05**
	Females	3.48	0.34	1.32	0.15	**5.28**
5–14	All persons	12.02	3.81	1.99	0.51	**18.33**
	Males	6.13	1.64	1.31	0.26	**9.34**
	Females	5.89	2.16	0.68	0.25	**8.98**
15–24	All persons	20.61	12.15	4.78	1.06	**38.60**
	Males	10.82	5.91	2.49	0.55	**19.77**
	Females	9.79	6.23	2.29	0.52	**18.84**
25–34	All persons	47.96	36.22	15.72	2.83	**102.74**
	Males	26.21	17.09	8.30	1.46	**53.06**
	Females	21.75	19.13	7.42	1.37	**49.67**
35–44	All persons	117.61	74.00	59.12	7.11	**257.84**
	Males	69.95	34.24	32.90	3.89	**140.99**
	Females	47.66	39.75	26.22	3.22	**116.86**
45–54	All persons	277.12	160.54	187.76	17.74	**643.16**
	Males	189.56	80.34	103.67	10.60	**384.17**
	Females	87.56	80.20	84.08	7.14	**258.99**
55–64	All persons	515.74	248.37	368.11	32.12	**1,164.34**
	Males	365.44	130.10	199.16	19.71	**714.40**
	Females	150.30	118.28	168.95	12.41	**449.95**
65–74	All persons	750.69	266.41	455.47	41.78	**1,514.34**
	Males	494.35	140.73	241.99	24.88	**901.95**
	Females	256.34	125.68	213.48	16.89	**612.40**
75–84	All persons	899.66	254.15	425.05	44.79	**1,623.64**
	Males	490.85	114.92	186.47	22.47	**814.72**
	Females	408.80	139.24	238.58	22.32	**808.93**
85+	All persons	360.55	76.74	113.86	15.64	**566.79**
	Males	137.83	29.91	40.29	5.90	**213.93**
	Females	222.72	46.84	73.56	9.73	**352.85**
Total	**All persons**	**3,009.35**	**1,132.96**	**1,635.89**	**163.92**	**5,942.12**
	Males	**1,795.05**	**555.12**	**819.29**	**89.91**	**3,259.38**
	Females	**1,214.30**	**577.85**	**816.59**	**74.01**	**2,682.75**

(a) Includes private medical services provided in hospital.

(b) Includes all pharmaceuticals for which a prescription is needed, including private prescriptions and under co-payment prescriptions but excludes highly specialised medicines. Also excludes over-the-counter medicines such as vitamins and minerals, first aid and wound care products, pain killers and a number of complementary health products sold in both pharmacies and other retail outlets.

Source: AIHW Disease expenditure database.

Table A2.3: Health expenditure on cardiovascular diseases per person by age and sex, 2004–05 ($)

Age (years)	Sex	$ per person
0–4	All persons	10
	Males	11
	Females	8
5–14	All persons	7
	Males	7
	Females	7
15–24	All persons	14
	Males	14
	Females	14
25–34	All persons	35
	Males	37
	Females	34
35–44	All persons	85
	Males	93
	Females	77
45–54	All persons	229
	Males	275
	Females	183
55–64	All persons	533
	Males	651
	Females	414
65–74	All persons	1,092
	Males	1,333
	Females	863
75–84	All persons	1,721
	Males	1,994
	Females	1,513
85+	All persons	1,873
	Males	2,215
	Females	1,712

Source: AIHW Disease expenditure database.

Table A2.4: Health expenditure on coronary heart disease by area of expenditure, age and sex, 2004–05 ($ million)

Age (years)	Sex	Hospital-admitted patients[a]	Out-of-hospital medical services	Prescription pharmaceuticals[b]	Total expenditure allocated for coronary heart disease[c]
			$ million		
0–4	All persons	0.02	0.02	0.87	**0.91**
	Males	0.02	0.02	0.68	**0.72**
	Females	0.00	0.00	0.19	**0.19**
5–14	All persons	0.06	0.00	0.03	**0.09**
	Males	0.06	0.00	0.02	**0.08**
	Females	0.00	0.00	0.01	**0.01**
15–24	All persons	0.27	0.24	0.12	**0.64**
	Males	0.17	0.18	0.05	**0.40**
	Females	0.11	0.06	0.07	**0.24**
25–34	All persons	5.92	3.79	1.03	**10.74**
	Males	4.52	2.27	0.49	**7.28**
	Females	1.40	1.52	0.54	**3.46**
35–44	All persons	39.16	6.63	5.47	**51.27**
	Males	29.64	3.43	3.83	**36.89**
	Females	9.53	3.20	1.64	**14.38**
45–54	All persons	134.95	23.10	26.29	**184.34**
	Males	106.52	12.10	20.95	**139.57**
	Females	28.43	11.00	5.34	**44.77**
55–64	All persons	271.81	45.00	57.34	**374.15**
	Males	210.49	30.41	41.12	**282.02**
	Females	61.32	14.59	16.22	**92.13**
65–74	All persons	367.00	54.79	83.48	**505.27**
	Males	258.14	36.24	58.03	**352.42**
	Females	108.86	18.55	25.44	**152.85**
75–84	All persons	362.46	37.30	85.45	**485.21**
	Males	212.51	21.19	46.87	**280.57**
	Females	149.96	16.11	38.58	**204.64**
85+	All persons	124.52	5.82	26.45	**156.78**
	Males	48.81	3.34	11.68	**63.84**
	Females	75.70	2.48	14.76	**92.94**
Total	**All persons**	**1,306.18**	**176.69**	**286.53**	**1,769.40**
	Males	**870.87**	**109.19**	**183.72**	**1,163.79**
	Females	**435.30**	**67.50**	**102.81**	**605.61**

(a) Includes private medical services provided in hospital.

(b) Includes all pharmaceuticals for which a prescription is needed, including private prescriptions and under co-payment prescriptions but excludes highly specialised medicines. Also excludes over-the-counter medicines such as vitamins and minerals, first aid and wound care products, pain killers and a number of complementary health products sold in both pharmacies and other retail outlets.

(c) Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Table A2.5: Health expenditure on stroke by area of expenditure, age and sex, 2004–05 ($ million)

Age (years)	Sex	Hospital-admitted patients[a]	Out-of-hospital medical services	Prescription pharmaceuticals[b]	Total expenditure allocated for stroke[c]
			$ million		
0–4	All persons	1.11	0.00	0.34	**1.45**
	Males	0.60	0.00	0.34	**0.93**
	Females	0.52	0.00	0.00	**0.52**
5–14	All persons	2.54	0.01	0.03	**2.57**
	Males	1.57	0.00	0.02	**1.59**
	Females	0.96	0.01	0.01	**0.98**
15–24	All persons	2.60	0.28	0.17	**3.05**
	Males	1.29	0.00	0.02	**1.31**
	Females	1.31	0.28	0.15	**1.74**
25–34	All persons	6.73	0.35	0.93	**8.01**
	Males	3.53	0.25	0.38	**4.17**
	Females	3.20	0.09	0.55	**3.84**
35–44	All persons	15.14	3.33	1.15	**19.62**
	Males	7.48	2.84	0.82	**11.14**
	Females	7.66	0.50	0.33	**8.48**
45–54	All persons	32.78	3.00	4.36	**40.14**
	Males	17.16	1.50	3.31	**21.98**
	Females	15.62	1.50	1.05	**18.16**
55–64	All persons	51.73	7.78	8.81	**68.32**
	Males	32.32	4.58	5.07	**41.97**
	Females	19.41	3.19	3.74	**26.35**
65–74	All persons	81.95	7.33	17.45	**106.73**
	Males	46.23	4.33	8.88	**59.44**
	Females	35.71	3.00	8.57	**47.28**
75–84	All persons	138.54	18.33	21.06	**177.93**
	Males	65.35	5.87	8.70	**79.92**
	Females	73.19	12.46	12.35	**98.00**
85+	All persons	80.91	3.56	7.42	**91.89**
	Males	27.58	1.71	2.32	**31.61**
	Females	53.33	1.85	5.10	**60.29**
Total	**All persons**	**414.02**	**43.96**	**61.72**	**519.70**
	Males	**203.12**	**21.09**	**29.85**	**254.06**
	Females	**210.90**	**22.88**	**31.86**	**265.64**

(a) Includes private medical services provided in hospital.

(b) Includes all pharmaceuticals for which a prescription is needed, including private prescriptions and under co-payment prescriptions but excludes highly specialised medicines. Also excludes over-the-counter medicines such as vitamins and minerals, first aid and wound care products, pain killers and a number of complementary health products sold in both pharmacies and other retail outlets.

(c) Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Table A2.6: Health expenditure on other cardiovascular diseases by area of expenditure, age and sex, 2004–05 ($ million)

Age (years)	Sex	Hospital-admitted patients[a]	Out-of-hospital medical services	Prescription pharmaceuticals[b]	Total expenditure allocated on other cardiovascular diseases[c]
		$ million			
0–4	All persons	6.26	0.55	2.82	**9.63**
	Males	3.30	0.21	1.69	**5.20**
	Females	2.96	0.34	1.13	**4.43**
5–14	All persons	9.43	3.80	1.93	**15.16**
	Males	4.50	1.64	1.28	**7.42**
	Females	4.93	2.16	0.65	**7.74**
15–24	All persons	17.74	11.62	4.49	**33.85**
	Males	9.36	5.73	2.42	**17.51**
	Females	8.38	5.89	2.07	**16.34**
25–34	All persons	35.31	32.08	13.76	**81.16**
	Males	18.16	14.57	7.43	**40.15**
	Females	17.16	17.52	6.33	**41.01**
35–44	All persons	63.31	64.03	52.50	**179.84**
	Males	32.84	27.98	28.26	**89.07**
	Females	30.47	36.05	24.25	**90.77**
45–54	All persons	109.39	134.45	157.10	**400.94**
	Males	65.88	66.74	79.41	**212.03**
	Females	43.51	67.71	77.69	**188.91**
55–64	All persons	192.20	195.60	301.96	**689.75**
	Males	122.63	95.10	152.97	**370.69**
	Females	69.57	100.50	148.99	**319.06**
65–74	All persons	301.74	204.29	354.55	**860.58**
	Males	189.97	100.16	175.08	**465.20**
	Females	111.77	104.13	179.47	**395.37**
75–84	All persons	398.65	198.53	318.54	**915.72**
	Males	212.99	87.86	130.90	**431.75**
	Females	185.66	110.67	187.64	**483.97**
85+	All persons	155.12	67.37	79.99	**302.48**
	Males	61.44	24.85	26.30	**112.59**
	Females	93.68	42.51	53.69	**189.89**
Total	**All persons**	**1,289.15**	**912.31**	**1,287.64**	**3,489.10**
	Males	**721.06**	**424.84**	**605.71**	**1,751.61**
	Females	**568.09**	**487.47**	**681.92**	**1,737.48**

(a) Includes private medical services provided in hospital.

(b) Includes all pharmaceuticals for which a prescription is needed, including private prescriptions and under co-payment prescriptions but excludes highly specialised medicines. Also excludes over-the-counter medicines such as vitamins and minerals, first aid and wound care products, pain killers and a number of complementary health products sold in both pharmacies and other retail outlets.

(c) Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Table A2.7: Health care expenditure on all cardiovascular diseases, per person, by age, sex and area of expenditure, 2004–05 ($)

Age (years)	Sex	Hospital-admitted patients[a]	Out-of-hospital medical services	Prescription pharmaceuticals[b]	Research	Total expenditure allocated for cardiovascular diseases
			$ per person			
0–4	All persons	5.74	0.44	3.13	0.26	**9.58**
	Male	5.92	0.35	4.09	0.29	**10.66**
	Female	5.56	0.54	2.11	0.23	**8.44**
5–14	All persons	4.39	1.39	0.73	0.18	**6.69**
	Male	4.36	1.17	0.93	0.18	**6.65**
	Female	4.42	1.62	0.51	0.19	**6.74**
15–24	All persons	7.30	4.30	1.69	0.38	**13.68**
	Male	7.50	4.10	1.72	0.38	**13.70**
	Female	7.10	4.52	1.66	0.38	**13.66**
25–34	All persons	16.53	12.48	5.42	0.98	**35.41**
	Male	18.08	11.79	5.72	1.01	**36.59**
	Female	14.99	13.18	5.11	0.94	**34.23**
35–44	All persons	38.76	24.38	19.48	2.34	**84.97**
	Male	46.37	22.70	21.81	2.58	**93.46**
	Female	31.23	26.05	17.18	2.11	**76.58**
45–54	All persons	98.62	57.13	66.82	6.31	**228.89**
	Male	135.69	57.51	74.21	7.59	**274.99**
	Female	61.97	56.76	59.51	5.06	**183.30**
55–64	All persons	236.26	113.78	168.63	14.71	**533.38**
	Male	333.08	118.58	181.52	17.96	**651.15**
	Female	138.42	108.93	155.60	11.43	**414.38**
65–74	All persons	541.45	192.15	328.52	30.13	**1,092.26**
	Male	730.83	208.05	357.75	36.78	**1,333.42**
	Female	361.04	177.00	300.67	23.79	**862.51**
75–84	All persons	953.68	269.41	450.57	47.48	**1,721.14**
	Male	1,201.44	281.27	456.42	55.01	**1,994.15**
	Female	764.40	260.35	446.10	41.73	**1,512.58**
85+	All persons	1,191.23	253.56	376.17	51.66	**1,872.62**
	Male	1,427.13	309.68	417.23	61.11	**2,215.15**
	Female	1,080.69	227.26	356.93	47.23	**1,712.11**
Total	**All persons**	**147.45**	**55.51**	**80.15**	**8.03**	**291.15**
	Male	**176.96**	**54.72**	**80.77**	**8.86**	**321.31**
	Female	**118.29**	**56.29**	**79.55**	**7.21**	**261.35**

(a) Includes private medical services provided in hospital.

(b) Includes all pharmaceuticals for which a prescription is needed, including private prescriptions and under co-payment prescriptions but excludes highly specialised medicines. Also excludes over-the-counter medicines such as vitamins and minerals, first aid and wound care products, pain killers and a number of complementary health products sold in both pharmacies and other retail outlets.

Source: AIHW Disease expenditure database.

Table A2.8: Health care expenditure on coronary heart disease, per person, by age, sex and area of expenditure, 2004–05 ($)

Age (years)	Sex	Admitted patients[(a)]	Out-of-hospital medical services	Prescription pharmaceuticals[(b)]	Total expenditure allocated for coronary heart disease[(c)]
		$ per person			
0–4	All persons	0.01	0.02	0.68	**0.71**
	Male	0.02	0.03	1.03	**1.09**
	Female	0.00	0.00	0.30	**0.31**
5–14	All persons	0.02	0.00	0.01	**0.03**
	Male	0.04	0.00	0.01	**0.05**
	Female	0.00	0.00	0.01	**0.01**
15–24	All persons	0.10	0.09	0.04	**0.23**
	Male	0.11	0.13	0.04	**0.28**
	Female	0.08	0.04	0.05	**0.17**
25–34	All persons	2.04	1.31	0.35	**3.70**
	Male	3.12	1.57	0.34	**5.02**
	Female	0.96	1.05	0.37	**2.38**
35–44	All persons	12.91	2.19	1.80	**16.90**
	Male	19.64	2.27	2.54	**24.46**
	Female	6.24	2.10	1.08	**9.42**
45–54	All persons	48.03	8.22	9.36	**65.60**
	Male	76.25	8.66	14.99	**99.90**
	Female	20.12	7.78	3.78	**31.69**
55–64	All persons	124.52	20.61	26.27	**171.40**
	Male	191.86	27.72	37.48	**257.05**
	Female	56.47	13.43	14.94	**84.85**
65–74	All persons	264.71	39.52	60.21	**364.44**
	Male	381.63	53.58	85.80	**521.01**
	Female	153.32	26.12	35.83	**215.27**
75–84	All persons	384.23	39.54	90.58	**514.35**
	Male	520.15	51.87	114.73	**686.74**
	Female	280.39	30.12	72.14	**382.65**
85+	All persons	411.39	19.22	87.38	**517.99**
	Male	505.41	34.60	120.96	**660.98**
	Female	367.33	12.01	71.64	**450.98**
Total	**All persons**	**64.00**	**8.66**	**14.04**	**86.70**
	Male	**85.85**	**10.76**	**18.11**	**114.73**
	Female	**42.41**	**6.58**	**10.02**	**59.00**

(a) Includes private medical services provided in hospital.

(b) Includes all pharmaceuticals for which a prescription is needed, including private prescriptions and under co-payment prescriptions but excludes highly specialised medicines. Also excludes over-the-counter medicines such as vitamins and minerals, first aid and wound care products, pain killers and a number of complementary health products sold in both pharmacies and other retail outlets.

(c) Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Table A2.9: Health care expenditure on stroke, per person, by age, sex and area of expenditure, 2004–05 ($)

Age (years)	Sex	Admitted patients[a]	Out-of-hospital medical services	Prescription pharmaceuticals[b]	Total expenditure allocated for stroke[c]
		$ per person			
0–4	All persons	0.87	0.00	0.26	**1.13**
	Male	0.90	0.00	0.51	**1.41**
	Female	0.82	0.00	0.00	**0.82**
5–14	All persons	0.93	0.00	0.01	**0.94**
	Male	1.12	0.00	0.01	**1.13**
	Female	0.72	0.01	0.01	**0.74**
15–24	All persons	0.92	0.10	0.06	**1.08**
	Male	0.89	0.00	0.01	**0.91**
	Female	0.95	0.20	0.11	**1.26**
25–34	All persons	2.32	0.12	0.32	**2.76**
	Male	2.44	0.18	0.26	**2.87**
	Female	2.20	0.06	0.38	**2.64**
35–44	All persons	4.99	1.10	0.38	**6.47**
	Male	4.96	1.88	0.54	**7.38**
	Female	5.02	0.32	0.22	**5.56**
45–54	All persons	11.67	1.07	1.55	**14.28**
	Male	12.29	1.08	2.37	**15.73**
	Female	11.05	1.06	0.74	**12.85**
55–64	All persons	23.70	3.56	4.04	**31.30**
	Male	29.46	4.18	4.62	**38.25**
	Female	17.88	2.94	3.45	**24.27**
65–74	All persons	59.10	5.29	12.59	**76.98**
	Male	68.35	6.40	13.13	**87.88**
	Female	50.30	4.23	12.07	**66.60**
75–84	All persons	146.86	19.43	22.32	**188.61**
	Male	159.96	14.37	21.30	**195.62**
	Female	136.85	23.30	23.10	**183.25**
85+	All persons	267.33	11.76	24.51	**303.61**
	Male	285.57	17.73	23.97	**327.27**
	Female	258.78	8.97	24.77	**292.52**
Total	**All persons**	**20.29**	**2.15**	**3.02**	**25.46**
	Male	**20.02**	**2.08**	**2.94**	**25.05**
	Female	**20.55**	**2.23**	**3.10**	**25.88**

(a) Includes private medical services provided in hospital.

(b) Includes all pharmaceuticals for which a prescription is needed, including private prescriptions and under co-payment prescriptions but excludes highly specialised medicines. Also excludes over-the-counter medicines such as vitamins and minerals, first aid and wound care products, pain killers and a number of complementary health products sold in both pharmacies and other retail outlets.

(c) Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Table A2.10: Health care expenditure on other cardiovascular diseases, per person, by age, sex and area of expenditure, 2004–05 ($)

Age (years)	Sex	Admitted patients[(a)]	Out-of-hospital medical services	Prescription pharmaceuticals[(b)]	Total expenditure allocated for other cardiovascular diseases[(c)]
0–4	All persons	4.86	0.43	2.19	**7.48**
	Male	4.99	0.32	2.55	**7.86**
	Female	4.73	0.54	1.81	**7.08**
5–14	All persons	3.44	1.39	0.70	**5.53**
	Male	3.20	1.17	0.91	**5.28**
	Female	3.70	1.62	0.49	**5.80**
15–24	All persons	6.29	4.12	1.59	**12.00**
	Male	6.49	3.97	1.67	**12.13**
	Female	6.08	4.27	1.50	**11.85**
25–34	All persons	12.17	11.06	4.74	**27.97**
	Male	12.52	10.04	5.12	**27.69**
	Female	11.82	12.07	4.36	**28.26**
35–44	All persons	20.86	21.10	17.30	**59.26**
	Male	21.77	18.55	18.73	**59.04**
	Female	19.97	23.63	15.89	**59.48**
45–54	All persons	38.93	47.85	55.91	**142.69**
	Male	47.16	47.77	56.84	**151.77**
	Female	30.79	47.92	54.99	**133.70**
55–64	All persons	88.04	89.60	138.33	**315.97**
	Male	111.77	86.68	139.43	**337.87**
	Female	64.07	92.55	137.21	**293.84**
65–74	All persons	217.64	147.35	255.72	**620.71**
	Male	280.85	148.07	258.83	**687.74**
	Female	157.42	146.66	252.77	**556.85**
75–84	All persons	422.59	210.45	337.66	**970.70**
	Male	521.34	215.04	320.39	**1,056.77**
	Female	347.15	206.93	350.86	**904.95**
85+	All persons	512.51	222.58	264.28	**999.37**
	Male	636.15	257.35	272.29	**1,165.79**
	Female	454.57	206.28	260.52	**921.38**
Total	**All persons**	**63.17**	**44.70**	**63.09**	**170.96**
	Male	**71.08**	**41.88**	**59.71**	**172.67**
	Female	**55.34**	**47.49**	**66.43**	**169.26**

(a) Includes private medical services provided in hospital.

(b) Includes all pharmaceuticals for which a prescription is needed, including private prescriptions and under co-payment prescriptions but excludes highly specialised medicines. Also excludes over-the-counter medicines such as vitamins and minerals, first aid and wound care products, pain killers and a number of complementary health products sold in both pharmacies and other retail outlets.

(c) Does not include expenditure on research.

Source: AIHW Disease expenditure database.

Glossary

Allocated health care expenditure

The spending on health goods and services which can be allocated by a specific disease type. Unless otherwise specified, 'expenditure' in this report refers to allocated health care expenditure.

Angina

Temporary chest pain or discomfort when the heart's own blood supply is inadequate to meet extra needs, for example during exercise.

Atherosclerosis

A process in which fatty and fibre-like deposits build up on the inner walls of arteries, often forming *plaques* that can then cause blockages. It is the main underlying condition in *heart attack, angina, peripheral vascular disease* and *stroke.*

Blood cholesterol

Fatty substance produced by the liver and carried by the blood to supply the rest of the body. Its natural function is to supply material for cell walls and for steroid hormones, but if levels in the blood become too high this can lead to *atherosclerosis* and heart disease.

Capital expenditure

Expenditure on large-scale fixed assets (for example, buildings and equipment with a useful life extending over a number of years).

Cardiovascular disease

Any disease of the circulatory system, namely the heart (cardio) or blood vessels (vascular). Includes, for example, *heart attack, coronary heart disease, angina, heart failure, rheumatic fever, rheumatic heart disease, peripheral vascular disease* and *stroke.*

Cerebrovascular disease

Any disorder of the blood vessels supplying the brain or its covering membranes. The major form of cerebrovascular disease is *stroke*.

Circulatory system

The heart along with the blood vessels, comprising the system that circulates blood around the body to supply oxygen and nutrients to all body tissues and to carry away waste products. Also known as the cardiovascular system.

Community health services

Non-residential health services offered by establishments to patients/clients, in an integrated and coordinated manner in a community setting, or the coordination of health services in the community. This includes health services provided to particular groups such as Aboriginal and Torres Strait Islander people, women, youth and migrants, as well as family planning services, alcohol and drug treatment services, etc.

Coronary heart disease

The primary feature of this disease is insufficient blood supply to the heart itself. The two major clinical forms are heart attack (the insufficient blood supply is sudden and extreme) and angina. The underlying problem is *atherosclerosis*, a complex process where fatty and fibre-like deposits build up on the inner walls of the arteries, often forming plaques. Coronary heart disease is also known as ischaemic heart disease. Also see *heart attack* and *angina*.

Health aids and appliances

Durable medical goods dispensed to non-admitted patients that are used more than once for therapeutic purposes, such as glasses, hearing aids, wheelchairs and orthopaedic appliances and prosthetics that are not implanted surgically but are external to the user of the appliance. Excludes prostheses fitted as part of admitted care in a hospital.

Health expenditure

Comprises *recurrent* and *capital spending* on items such as hospitals, medicines, *community and public health services*, and *health research*.

Health price inflation

The increase in the price of goods and services for the area of expenditure.

Health research

Research undertaken at tertiary institutions, in private non-profit organisations and in government facilities that have a health socioeconomic objective. Excludes commercially orientated research carried out or funded by private business, the costs of which are assumed to be included in the prices charged for the goods and services (for example, medicines that have been developed and/or supported by research activities).

Heart attack

A life-threatening emergency that occurs when a vessel supplying blood to the heart muscle is suddenly blocked completely by a blood clot. The medical term commonly used for a heart attack is *myocardial infarction*.

Highly Specialised Drugs

Highly Specialised Drugs (HSD) are medicines for the treatment of chronic conditions which, because of their clinical use or other special features, are restricted to supply through public and private hospitals having access to appropriate specialist facilities. The HSD program is established under Section 100 of the *National Health Act 1953*. These medicines are funded by the Australian Government as Pharmaceutical Benefits to be supplied to community-based patients—persons who are admitted as a day patient, an outpatient or in-patient on discharge.

Hospital-admitted patient

A patient who undergoes a hospital's formal admission process to receive treatment and/or care. This treatment and/or care are provided over a period of time and can occur in hospital and/or in the person's home (for hospital-in-the-home patients).

Hypertension

High blood pressure.

Hypertensive heart disease

Disease occurring when high blood pressure (hypertension) is severe or prolonged enough to cause damage to the heart.

Medicare

The national, government-funded scheme that subsidises the cost of personal medical services for all Australians and aims to help them afford medical care.

Myocardial infarction

A medical term for *heart attack*. It occurs when a vessel supplying blood to the heart muscle is suddenly blocked, resulting in injury or necrosis (death) of heart tissue.

Out-of-hospital medical services

Services provided by GPs and specialists to non-admitted patients. Includes consultations and services such as imaging, pathology and diagnostic services.

Patient transport services

Expenditure by organisations primarily engaged in providing transportation of patients by ground or air, along with health or medical care. These services are often provided during an emergency but are not restricted to emergencies.

Peripheral vascular disease

A narrowing of blood vessels outside the heart. It occurs when fatty deposits build up on the inner walls of arteries, restricting blood circulation. In severe cases, a limb-threatening reduction of blood circulation can lead to amputation.

Pharmaceutical Benefits Scheme (PBS)

The national, government-funded scheme that subsidises the cost of a wide range of pharmaceutical medicines for all Australians to help them afford standard medicines.

Plaque

A localised area of *atherosclerosis*, especially when raised or built up, and which may cause blockages in arteries.

Prescription medicines

Pharmaceutical medicines available from pharmacies only on the prescription of a registered medical practitioner.

Public health services

Services provided and/or funded by governments that are aimed at protecting and promoting the health of the whole population or specified population subgroups and/or preventing illness or injury in the whole population or specified population subgroup. Public health services do not include treatment services.

Recurrent expenditure

Expenditure incurred by organisations on a recurring basis, for the provision of health services. This excludes *capital expenditure*.

Repatriation Pharmaceutical Benefits Scheme (RPBS)

This scheme provides assistance to eligible veterans (with recognised war or service-related disabilities) and their dependents for both pharmaceuticals listed on the *PBS* and a supplementary repatriation list, at the same cost as patients entitled to the concessional payment under the PBS.

Stroke

A condition where an artery supplying blood to the brain suddenly becomes blocked or bleeds. It often causes paralysis of parts of the body normally controlled by that part of the brain, or speech problems and other symptoms.

Transient Ischaemic Attack (TIA)

A 'mini' *stroke*, with temporary problems in speech or paralysis that last for 24 hours or less, often only minutes. It is a strong warning sign of a more severe stroke.

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