Health system costs of cardiovascular diseases and diabetes in Australia 1993–94

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Health system costs of cardiovascular diseases and diabetes in Australia 1993–94

Colin Mathers and Ruth Penm

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Preface

The Australian Institute of Health and Welfare (AIHW) is undertaking a Disease Costs and Impact Study (DCIS) to estimate the direct costs of health services in 1993–94 attributable to a range of diseases and injury in Australia. The methodology used to carry out these costings has been revised and extended so it now encompasses health sectors accounting for over 90% of recurrent health expenditure. The revised methodology has been used to carry out a comprehensive accounting of disease costs across all chapters of the ICD-9 Classification of Diseases for the year 1993–94. Disease costing reports published in 1998 by AIHW include:

- Health System Costs of Diseases and Injury in Australia 1993–94;
- Disease Costing Methodology used in the Disease Costs and Impact Study 1993–94.
- *Health System Costs of Cancer in Australia 1993–94* (in collaboration with the National Cancer Control Initiative); and

It is intended to publish two further reports for 1993–94 on the costs of musculoskeletal disorders and on the costs associated with mental health problems. Detailed estimates for other disease groups will not be published until the costs estimates are updated to a more recent year, using more up-to-date health service utilisation data now becoming available.

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We also gratefully acknowledge the assistance of the Family Medicine Research Unit of the University of Sydney, for providing a copy of all data contained in the Australian Morbidity and Treatment Survey and for helpful advice.

Summary

Cardiovascular disease is the leading cause of death among Australians, accounting for 53,989 deaths or 42 % of all deaths in 1996. Diabetes mellitus is also a serious and growing health problem among Australians, affecting almost 4% of the population. Diabetes significantly increases the risk of cardiovascular disease and some of the health system costs of cardiovascular disease can be attributed to diabetes. This report provides a systematic analysis of total health system costs of cardiovascular diseases and diabetes in Australia in 1993–94.

Cardiovascular disease and its risk factors, including high blood cholesterol, cost the Australian community \$3.9 billion in direct health system costs in 1993–94. This represents 12% of total recurrent health expenditure, making it the single most expensive disease group in terms of health system costs. The six cardiovascular conditions that accounted for the most of this \$3.9 billion expenditure in 1993–94, in descending order, are:

- ischaemic heart disease \$894 million (23% of total cardiovascular disease costs)
- hypertension \$831 million (21%)
- cerebrovascular disease \$630 million (16%)
- heart failure
 \$411 million (10%)
- cardiac dysrhythmias \$224 million (6%)
- high blood cholesterol \$199 million (5%)

Health system costs for cardiovascular disease rise with age, reaching around \$1,700 per capita per year on average for men and women aged 75 years and over.

The estimated average annual health system cost of hypertension is around \$570 per diagnosed case, compared with around \$210 per case of high blood cholesterol. The average treatment cost for a heart attack (acute myocardial infarction) is estimated to be around \$5,060 for men and \$4,760 for women in the age range 25–69 years.

The lifetime health system costs of stroke, for Australians who have at least one stroke, is estimated to be around \$21,400 for men and \$31,200 for women, or \$25,800 on average for men and women combined.

The direct health system costs of diabetes mellitus are estimated to be \$372 million in 1993– 94, of which Type 1 (insulin dependent) diabetes accounts for an estimated \$155 million and Type 2 (non-insulin dependent) diabetes for \$217 million. When complications of diabetes are taken into account, the total health system costs of diabetes are estimated to be around \$681 million in 1993–94. This corresponds to average annual expenditures of around \$1,730 and \$2,120 per diagnosed diabetic for males and females respectively.

The estimated lifetime costs of Type 1 diabetes are around \$190,000 compared with \$24,970 for Type 2. Estimated lifetime costs for females are 46% higher than those for males, reflecting higher annual treatment costs for females and higher life expectancies for females.

1 Introduction

Cardiovascular disease accounts for more deaths and for more health expenditure in Australia than any other disease or injury group. Cardiovascular disease is one of five priority areas in the new program of National Health Priority Areas agreed to at a meeting of Australian Health Ministers in July 1996. The term cardiovascular disease (or diseases of the circulatory system) refers to all diseases of the circulatory system, including heart disease, stroke and vascular diseases. Diabetes has also been included among the five National Health Priority Areas (the others are injury, mental health and cancer). Its inclusion is a recognition of the substantial burden of illness and the high public costs attributable to diabetes. It affects over 4% of the Australian population, at least 10% of older people, and up to 30% of some Aboriginal communities (Colagiuri et al. 1998). Diabetes significantly increases the risk of cardiovascular disease and some of the health system costs of cardiovascular disease can be attributed to diabetes.

This report provides estimates of the health system costs associated with specific cardiovascular diseases, selected cardiovascular disease risk factors and diabetes, by age and sex, in Australia in 1993–94. These results are derived from the Disease Costs and Impact Study of the Australian Institute of Health and Welfare, which has analysed health expenditures for disease and injury groups, by age and sex, in Australia in 1993–94. A previous report in this series has published estimates of expenditure for cardiovascular disease in total (as defined by the relevant chapter of the International Classification of Diseases Version 9, or ICD-9), by age, sex and health sector (Mathers et al. 1998a).

This report provides similar estimates for specific diseases, such as ischaemic heart disease, at sub-chapter level of ICD-9. These estimates are derived using a methodology that ensures that they add across disease, age and sex groups to the total Australian health expenditure by health sector for 1993–94 as published by the Australian Institute of Health and Welfare (1996a). Such estimates are not elsewhere available in a consistent format for disease groups, and provide a useful perspective on the utilisation and costs of health services in Australia, as well as a reference source for planners and researchers interested in the costs and utilisation patterns for a particular disease group. The report also includes health system costs associated with the detection and treatment of certain cardiovascular disease risk factors, namely high blood pressure (hypertension) and high blood cholesterol. Costs for the diagnosis and treatment of high blood cholesterol are included in this report, although these costs fall within the 'endocrine, metabolic, nutritional and immunity disorders' chapter of ICD-9.

Cost of illness analysis often attempts to measure the total economic cost to society of illness by including not only the direct health sector costs but also indirect costs, which usually focus on lost production due to sickness and premature death, but can include as well costs impacting outside the health care sector (such as police and court costs associated with drug abuse).

The inclusion of indirect costs in cost of illness studies remains an area of debate and controversy, as methodologies for measuring indirect costs are contentious and at an early stage of development. The Australian Institute of Health and Welfare has thus decided to focus on the analysis of direct health system costs in the Disease Costs and Impact Study and to use, where

appropriate, more direct measures of disease impact in health status terms, rather than estimates of indirect costs.

The direct cost estimates presented in this paper provide a useful perspective on the utilisation and costs of health services in Australia for specific diseases, but it is important that their interpretation and limitations are clearly understood. The most important points to note are:

- existing expenditure on a disease, no matter how large or small, does not, in itself, give an indication of the loss of health due to that disease, or the priority for intervention or need for additional health services expenditure. Resource allocation decisions require information not only on average costs and outcomes but also on the marginal costs and marginal outcomes associated with the specific interventions under consideration;
- care should be taken in interpreting direct costs associated with disease treatment as an
 estimate of the savings that would result from disease prevention. The conversion of the
 opportunity cost of resources being devoted to disease treatment, or benefits forgone,
 into expenditure savings involves a number of additional considerations (see Mathers et
 al. 1998b); and
- although the expenditure estimates reported here provide a broad picture of the health system resources usage classified by age, sex and disease group, they should be interpreted with caution for specific diseases. This is because the methodology is a comprehensive satellite national accounts approach, which while yielding consistency, good coverage and totals that add up to known expenditures, is not as sensitive or accurate for any specific disease as a detailed bottom-up analysis of specific health system costs incurred by patients with that disease.

The health system costs of disease presented in this report are an example of a satellite national account. Satellite accounts enable the linkage of non-monetary data sources and analysis to the system of national accounts maintained by the Australian Bureau of Statistics. Monetary expenditure on health services by itself tells us little about what is happening in the health system or about priorities for funding or interventions. But if these expenditures can be linked to output and outcome measures such as number of hospital admissions and changes in health status, then the expenditure information becomes more meaningful, especially if dissected by disease categories. The Australian Institute of Health and Welfare is currently undertaking a satellite accounts project which involves developing a conceptual framework, and documenting and refining the definitions and methodologies used in the health and welfare services expenditure area.

In conclusion, disease costing is not able to provide a comprehensive assessment of the impact of disease on society. Direct health system costs can, nevertheless, be useful indicators of the economic burden which individual diseases place on a society and can help identify and analyse how health resources are allocated among different diseases and population subgroups.

2 Methodology

This section provides an overview of the methodology, which is summarised in Appendix B and described in detail in Mathers et al. (1998b). Cardiovascular diseases and diabetes have been classified according to the International Classification of Diseases Ninth Revision (ICD-9), as shown in Appendix A.

Data sources

Total recurrent health expenditures for 1993–94, as estimated by the Australian Institute of Health and Welfare (1996a), are apportioned by sector using hospital morbidity and casemix data for 1993–94, Medicare and Pharmaceutical Benefits Scheme data for 1993–94, the Survey of Morbidity and Treatment in General Practice 1990–91, and the Australian Bureau of Statistics' National Health Survey 1989–90.

Health sectors

The following sectors of expenditure are included in the disease cost estimates:

- **Hospital inpatients**: inpatient (admitted patient) costs for public hospitals (including public psychiatric hospitals), repatriation (veterans') hospitals and private hospitals. Also included are medical costs for private patients in public and private hospitals (these are included with medical services expenditure in the AIHW health expenditure bulletins).
- **Hospital non-inpatients**: hospital outpatient services and casualty/accident and emergency services.
- **Medical services**: total costs of all private medical services except those to hospital inpatients (medical services for private patients in hospital are included under hospital inpatients). This sector includes consultations with general practitioners and specialists as well as pathology tests and screening and diagnostic imaging services. It includes services to veterans.
- **Pharmaceuticals**: includes costs of prescription drugs (whether listed in the Pharmaecutical Benefits Scheme or not) and non-prescription (over-the-counter) medicines apart from those dispensed in hospitals and included in estimates of hospital costs.
- **Nursing homes**: includes nursing homes for the aged but not residential homes for the young disabled (considered a welfare rather than health expenditure).
- **Dental and allied health services**: includes costs of visits to allied health practitioners excluding pharmacists but including dentists, apart from allied health services provided by hospitals.
- **Other**: includes expenditure for certain cancer prevention programs (national screening programs for breast and cervix cancer, and lung and skin cancer prevention programs), for health and medical research, for home blood glucose testing

equipment and supplies and for administration and other institutional and noninstitutional health expenditure (see Appendix B for more details of these sectors). Note that the expenditure for cancer prevention programs is included entirely in the estimates of the health system costs of cancer and does not affect the estimates for cardiovascular diseases or diabetes.

Total recurrent health expenditure in 1993–94 was \$34,141 million (AIHW 1996a). The sectors listed above accounted for 92% of total recurrent health expenditure, or \$31,436 million. Recurrent expenditure on health care which has not yet been attributed to diseases (\$2,704 million) includes community health services, public health programs (apart from three cancer public health programs), ambulance services, and medical aids and appliances (with the exception of equipment and supplies for home glucose testing by diabetics). Capital expenditure (\$1,833 million) is also excluded from the costings presented here.

Disease impact

This report also contains data for each disease group on the number of deaths and potential years of life lost to age 75 in 1994. Deaths data are derived from the AIHW Mortality Database and classified using the underlying cause of death as coded by the Australian Bureau of Statistics from information provided on death certificates (and in some cases coronial findings). Potential years of life lost to age 75 are calculated by subtracting age at death from 75, for deaths at ages less than 75 years.

Limitations

It must be emphasised that the disease cost estimates reported here are based on attribution of total health expenditures based on available information on the mix of diseases treated and the costs of treatment. For medical and allied health services, and to some extent for drugs, utilisation data relate to 1989–90 or 1990–91 and so costs reported for these sectors will not reflect changes in clinical practice or disease patterns between then and 1993–94. The only exceptions to this are for pathology screening tests for high blood cholesterol, where 1993–94 Medicare data were used. Also, costs of specialist medical services are estimated using 1990–91 data on referral patterns by GPs and costed at the average cost within specialist type. This means, for example, that all pathology tests (apart from cholesterol tests) are assumed to have the same average cost.

3 Costs of cardiovascular diseases in 1993–94

Comparison with other major disease groups

The total health system costs of disease and injury in Australia in 1993–94, summarised at the broad disease group level according to ICD-9 chapters, are shown in Figure 1, ranked in descending order of total costs. Cardiovascular disease, with an estimated total expenditure of \$3,719 million in 1993–94, ranks with digestive system diseases at \$3,715 million, as the most expensive group. The digestive system expenditure includes \$1,830 million for dental services. These are followed by musculoskeletal disorders, injury and mental disorders. The cardiovascular disease group also has the largest institutional costs (hospital and nursing home) of all disease groups. Disease costs at chapter level of ICD-9 have been examined in detail in a previous report (Mathers et al. 1998a).

Costs for the diagnosis and treatment of high blood cholesterol are classified in the 'endocrine, metabolic, nutritional and immunity disorders' chapter of ICD-9. As high blood cholesterol is of concern primarily as a risk factor for cardiovascular disease, its



estimated \$199 million expenditure is included in the following tables in this section, and total cardivascular disease expenditure including high blood cholesterol expenditure, is estimated to be \$3,919 million.

Costs of specific cardiovascular diseases

Figure 2 shows the estimated health system costs associated with specific cardiovascular diseases and risk factors in 1993–94. Ischaemic heart disease accounts for an estimated \$894 million (or 23% of total cardiovascular disease costs), followed by hypertension (\$831 million) and cerebrovascular disease (\$630 million). Costs for the diagnosis and treatment of high blood cholesterol (\$199 million) are also shown in Figure 2, although these costs fall within the 'endocrine, metabolic, nutritional and immunity disorders' chapter. Costs for hypertension (\$831 million) include the costs of detecting and treating high blood pressure (essential hypertension) as well as the costs of treating hypertensive heart and renal disease (which account for \$15.9 million of the total \$831 million).

Table 1 summarises estimated costs of specific cardiovascular conditions by health sector. More detailed estimates of expenditure for the major disease groups shown in Table 1 are given in Appendix C, disaggregated by health sector, age and sex.



Table 1: Cardiovascular disease and risk factors: health system costs by health sector, 1993–94 (\$ million)

	Total		4.5	Pharma-	Allied health	()	())
ICD-9 chapter	costs	Hospital ^(a)	Medical ^(b)	ceuticals	services	Research ^(c)	Other ^(a)
High blood cholesterol ^(e)	199	6	42	135	4	4	8
Hypertension ^(f)	831	55	217	476	20	22	42
Rheumatic heart disease	24	19	2	1	0	0	2
Ischaemic heart disease ^(g)	894	574	88	105	5	11	111
Acute myocardial infarction ^(h)	164	125	3	1	0	2	32
Other	730	449	85	104	5	9	78
Diseases of pulmonary circulation	35	22	3	2	0	1	7
Other forms of heart disease	741	353	93	81	5	11	199
Cardiac dysrhythmias	224	114	36	31	1	4	38
Heart failure	411	157	47	45	4	5	152
Non-rheumatic valvular disease	67	52	7	3	0	1	4
Cardiomyopathy and other ⁽ⁱ⁾	40	29	4	2	0	1	4
Cerebrovascular disease ^(j)	630	283	31	13	5	6	292
Diseases of arteries, arterioles, capillaries	269	180	22	11	2	7	48
Atherosclerosis	60	43	2	2	0	3	11
Aortic aneurysm	60	46	5	2	0	1	5
Other peripheral vascular disease	149	91	15	7	2	3	32
Diseases of veins, lymphatics, other	275	157	46	23	2	3	44
Phlebitis and thrombophlebitis	26	7	10	6	1	0	3
Varicose veins of leg	76	59	7	2	1	1	7
Hemorrhoids	79	42	17	11	1	1	8
Other	93	49	12	5	0	1	26
Unspecified treatment and aftercare	9	6	1	1	0	0	1
Prevention and screening	12	9	1	1	0	0	0
Total cardiovascular disease ^(e)	3,919	1,663	546	849	44	64	753

(a) Public and private acute hospitals, repatriation hospitals and psychiatric hospitals. Includes public hospital non-inpatient services.

(b) Medical services for private patients in hospitals are included under Hospitals.

(c) Estimated as described in Appendix B.

(d) Includes nursing home expenditure and other institutional, non-institutional and administration expenditure. Does not include public health services, community health services, ambulances, or medical aids and appliances.

(e) Costs for high blood cholesterol are classified to the Endocrine, nutritional, metabolic and immunity disorders chapter, but are included in the last row total of this table for cardiovascular diseases.

(f) This category includes essential hypertension (high blood pressure) as well as hypertensive heart and renal disease. The latter account for only \$15.9 million of the total \$831 million health expenditure for this category.

(g) Also known as 'coronary heart disease'.

(h) Known in lay terms as 'heart attack'.

(i) Cardiomyopathy, myocarditis, endocarditis, pericarditis and other diseases of pericardium and endocardium.

(j) Known in lay terms as 'stroke'.

	Hospitals			Medic	Medical services ('000)			
	Admissions ('000)	ALOS (days)	Non-inp. services ('000)	GP	Specialist ^(a)	Total	Prescriptions ('000)	
High blood cholesterol ^(b)	0	2.2	91	639	1,366	2,004	2,354	
Hypertension ^(c)	9	6.3	481	5,265	2,933	8,199	17,493	
Rheumatic heart disease	2	7.9	17	27	43	70	60	
Ischaemic heart disease	138	5.8	268	1,195	1,262	2,457	4,228	
Disease of pulmonary circulation	5	9.9	10	36	61	97	108	
Other forms of heart disease	84	7.7	628	1,448	1,401	2,849	3,615	
Cerebrovascular disease	47	4.2	207	469	461	930	569	
Arteries, arterioles, capillaries	25	10.5	235	260	359	619	411	
Veins, lymphatics, other	62	9.0	177	730	718	1,448	910	
Other	2	14.8	146	44	47	92	41	
Total	374	7.4	2,187	10,115	8,652	18,766	29,788	

Table 2: Cardiovascular diseases: estimated health services utilisation by sector, 1993-94

(a) Includes diagnostic imaging and pathology services.

(b) High blood cholesterol is classified to the Endocrine, nutritional, metabolic and immunity disorders chapter and service utilisation numbers are included in the last row total of this table.

(c) Includes hypertensive disease with organ involvement.

Hospital and nursing home costs account for 60% of all cardiovascular disease treatment costs (Table C.2); the proportion is higher at 87% for cerebrovascular disease and much lower at 7% for hypertension.

Table 2 summarises estimated utilisation of hospitals, doctors and drugs for cardiovascular diseases and high blood cholesterol. In total they accounted for an estimated 374,000 hospital admissions, 18.8 million medical services and 29.8 million prescriptions in 1993–94. More detailed utilisation estimates are also given in Appendix C.

Table 3 shows the estimated health care costs of cardiovascular disease for males and females by health sector in 1993–94. Total hospital inpatient costs for males are 40% higher than those for females, whereas total nursing home costs and pharmaceutical costs are substantially lower for males than females.

Table 3: Health care costs of all cardiovascular disease^(a) by sex and sector of expenditure, Australia, 1993–94 (\$ million)

Sector of expenditure	Males	Females	Male/female ratio
Hospital inpatient	876	637	1.4
Hospital outpatient	73	70	1.0
Nursing home	217	370	0.6
Medical	244	259	0.9
Allied health professional	21	19	1.1
Pharmaceutical	303	412	0.7
Other	108	110	1.0
Total	1,842	1,877	1.0

(a) Not including high blood cholesterol.

Costs and impact of cardiovascular diseases

Table 4 shows estimated health system costs of cardiovascular diseases, for all ages and for people aged less than 75 years, together with numbers of deaths and years of life lost to age 75 in 1994. High blood cholesterol and hypertension are not included in this table, as they are risk factors for cardiovascular diseases and not in themselves direct causes of many deaths. Also included are total costs and mortality impact of diabetes, discussed in more detail in Section 4.

Ischaemic heart disease stands out from all other cardiovascular diseases in terms of both costs and premature mortality impact (Figure 3). Diseases of the veins and lymphatic system, which include varicose veins and hemorrhoids, stand out as having high health expenditure relative to mortality impact.

Table 4: Cardiovascular diseases^(a) and diabetes: total health system costs (\$ million) 1993–94, and total deaths and potential years of life lost to age 75 (PYLL 75), 1994

	Total costs (\$ million)	Costs 0–74 years (\$ million)	Deaths 1994	PYLL 75 1994
Diabetes mellitus ^(b)	387	287	2,751	13,172
Cardiovascular disease				
Rheumatic heart disease	24	22	340	2,316
Ischaemic heart disease	894	699	30,575	112,339
Disease of pulmonary circulation	35	24	217	1,853
Other forms of heart disease	741	361	6,474	24,719
Cerebrovascular disease	630	237	12,838	30,571
Diseases of arteries, arterioles, and capillaries	269	163	3,070	8,277
Diseases of veins, lymphatics, and other circulatory disorders	275	221	256	1,362
Total cardiovascular disease	3,255	2,014	53,770	181,437

(a) Excluding hypertension and high blood cholesterol, which are risk factors for other cardiovascular diseases.

(b) Including costs of \$15.8 million for hypoglycemia and hyperinsulinism. See Table 6 for details.



Figure 3: Cardiovascular diseases and diabetes: health system costs for people aged 0–74 years compared with potential years of life lost to age 75 in 1994

Cardiovascular disease costs by age and sex

Figure 4 illustrates the age–sex distribution of total expenditure on cardiovascular disease and per capita annual expenditure. These rise steeply with age from 40 years onwards. Per capita expenditure for cardiovascular disease reaches around \$1,700 per annum for men and women aged 75 years and over.

Figure 5 shows the age–sex distributions of health system costs per capita for selected cardiovascular disease groups and high blood cholesterol. Detailed information on total costs and health services utilisation by health sector, age, sex and ICD-9 chapter are provided in Appendix Tables C.6 to C.31.







Estimated annual costs per case of hypertension and high blood cholesterol

The first two columns of Table 5 show the estimated prevalence of diagnosed high blood cholesterol and hypertension by age group in 1994. These were estimated using data from the 1995 ABS National Health Survey on numbers of persons reporting high cholesterol and from the 1995 ABS National Nutrition Survey on the numbers of persons with controlled hypertension or treated, uncontrolled hypertension. For the purpose of this analysis, it is assumed that persons reporting that they had high cholesterol would have based this on a doctor's diagnosis.

Total health system costs of hypertension and high blood cholesterol for each age group (given in Tables C.8 and C.26) were divided by the estimated prevalent cases for that age group to obtain estimates of the average annual costs per prevalent diagnosed case in 1993–94. These are shown in the final two columns of Table 5.

The estimated average annual cost per diagnosed case of hypertension is \$572 compared with \$214 for high blood cholesterol. Hypertension costs per case are higher at younger ages, although it should be noted that the estimate for 0–24 year olds is a ratio of two very small estimates and so is not shown. High blood cholesterol costs per case rise with age to around \$240 per year for those aged 45 years and over.

In interpreting these estimates, it should be noted that the health system costs include all costs associated with screening for hypertension and high blood cholesterol, so that the estimated costs per diagnosed case will include a component associated with screening of other people without hypertension or high blood cholesterol as well as the average treatment costs associated with diagnosing and managing the diagnosed case.

	Estimated preval	ence (%)	Estimated annual per prevalent	cost (\$) case
Age group	Treated hypertension ^(a)	High blood cholesterol ^(b)	Treated hypertension	High blood cholesterol
0–24	0.0	0.3	—	46
25–44	2.2	3.5	665	128
45–64	16.0	12.0	552	245
65 and over	33.9	12.5	567	237
All ages	8.0	5.1	572	214

 Table 5: Hypertension and high blood cholesterol: estimated average annual health system costs (\$) per prevalent diagnosed case, 1993–94

(a) Based on reported current treatment for hypertension in the 1995 National Nutrition Survey (unpublished data provided by ABS).

(b) Based on reported high blood cholesterol in the 1995 National Health Survey (unpublished data provided by ABS).

Estimated costs per case of AMI and stroke

Acute myocardial infarction

Boyle and Dobson (1995) estimated total numbers of acute myocardial infarctions (AMI or heart attacks) in 1991–92 using two different methods. Averaging these two estimates results in an estimated 15,634 and 5,314 heart attacks for males and females aged 25–69 years respectively. If we also assume that the incidence of heart attacks has declined at the same rate as ischaemic heart disease mortality for males and females respectively between 1991–92 and 1993–94, then the estimated number of heart attacks in 1993–94 for males and females aged 25–69 years aged 25–69 years are 14,220 and 4,970 respectively.

Total estimated health system costs of AMI were \$57.5 million and \$18.9 million for males and females aged 25–69 years in 1993–94. If we assume that around 20% of heart attacks cause death before contact with medical services (Magnus 1998), then the average treatment cost of an acute myocardial infarction episode in 1993–94 was approximately \$5,060 for males and \$4,760 for females.

These estimates include only the health system costs associated with the AMI episode. Many people who experience AMI will have treatment for ischaemic heart disease before or after the period associated with the heart attack. Estimates are not available for the incidence of ischaemic heart disease as such, so it is not yet possible to estimate lifetime health system costs for a person with ischaemic heart disease.

Stroke

Anderson et al. (1993) carried out a study of the incidence of stroke in Western Australia in 1989–90. Applying their estimates of the age-specific incidence rates of first strokes to the total Australian male and female population, and assuming that the incidence of first stroke has declined 17% between 1989–90 and 1993–94 in line with mortality, we estimate that there were 13,140 and 10,630 first strokes among males and females respectively in 1993–94. Dividing the total health system costs of cerebrovascular disease (Table C.20) by the estimated incident cases gives an average lifetime cost of \$21,420 for males and \$31,160 for females. For both sexes combined, the overall average lifetime health system costs per first stroke were \$25,780. The estimated lifetime cost per first stroke is thus around 60% higher than the average lifetime cost of per incident cancer, excluding non-melanocytic skin cancers, of \$16,135 (Mathers et al. 1998c). Although the incidence of stroke is lower in females than males, the estimated lifetime cost is higher. This reflects the longer average survival of females with stroke, in part because their risks of death from other causes are generally lower.

These lifetime cost estimates are approximate because they are based on the assumption that incidence and mortality rates have been steady over time. As both incidence and mortality for stroke have been declining for several decades in Australia, the estimate of \$25,780 per first stroke will overestimate the actual lifetime costs for current new stroke cases (assuming that the real cost of treating cerebrovascular disease at various ages and stages through the course of the disease remain constant at their 1993–94 values).

4 Costs of diabetes in 1993–94

Direct costs of diabetes mellitus

The total health system costs of diabetes mellitus are estimated at \$387 million in 1993–94 (Table 6, including costs of hypoglycemia and hyperinsulinism). Of this total cost, 26% is for pharmaceutical drugs, 27% for hospital care and 17% for medical services. The costs and health system use shown in this and the following section relate to health services for which diabetes mellitus is identified as the diagnosis or underlying problem. Diabetes mellitus also causes substantial morbidity and mortality due to eye and kidney diseases and limb amputation, and increases the risk of cardiovascular disease (McCarty et al. 1996). Some of the health system costs of these conditions can be attributed to diabetes mellitus, and the total attributable health system costs of diabetes mellitus are estimated in a later section of this report.

Table 6: Diabetes mellitus: estimated health system costs by health sector, 199)3–94
(\$ million)	

	Total costs	Hospital ^(a)	Medical ^(b)	Pharma- ceuticals	Allied health services	Research ^(c)	Other ^(d)
Diabetes mellitus	371.9	96.0	65.5	99.4	18.5	19.8	72.6
Type 1 (Insulin dependent)	155.2	42.3	27.8	41.4	7.6	8.3	27.9
Type 2 (Non-insulin dependent)	216.7	53.7	37.7	58.1	10.9	11.5	44.7
Hypoglycemia and hyperinsulinism	15.9	6.9	1.8	0.7	0.4	1.0	5.0

(a) Public and private acute hospitals, repatriation hospitals and psychiatric hospitals. Includes public hospital non-inpatient services.

(b) Medical services for private patients in hospitals are included under Hospitals.

(c) Includes nursing home expenditure, home blood glucose testing equipment and supplies, and other institutional, non-institutional and administration expenditure. Does not include public health services, community health services, or ambulance services.

There are two major types of diabetes: Type 1 diabetes (also referred to as IDDM or insulin dependent diabetes) and Type 2 diabetes (also referred to as NIDDM or non-insulin dependent diabetes). Type 1 diabetes usually affects young people and is one of the most common serious childhood conditions in Australia, whereas Type 2 diabetes occurs in adults and is usually not diagnosed until after the age of 40 years. The 1995 ABS National Health Survey obtained self-report data on Type 1 and Type 2 diabetes as long-term conditions and as a reason for doctor visits in the last two weeks. Overall, 11% of people who reported that they had diabetes were classified as Type 1, consistent with previous estimates that approximately 10% of diabetes cases are Type 1 (McCarty et al. 1996).

Among those people with diabetes who visited the doctor in the last two weeks, a considerably higher proportion were classified as Type 1, ranging from 100% for ages 0–24 years to 60% for ages 25–34 and between 30 and 50% for ages above 35 years (see Appendix Table A.3 for details).

Although it is possible to distinguish Type 1 and Type 2 diabetes in the hospital inpatient data, diabetes mellitus is recorded as a single code in the other data sources. The estimated proportion of Type 1 diabetics among diabetics who visited a doctor in the last two weeks from the 1995 National Health Survey (unpublished data provided by ABS) was used to estimate non-hospital costs for Type 1 and Type 2 diabetes (see Appendix A for details).

As shown in Table 6, the total direct costs of Type 1 diabetes were estimated to be \$155 million in 1993–94 compared with \$217 million for Type 2 diabetes. A significant proportion of older people admitted to nursing homes from hospital had a principal diagnosis of hypoglycemia or hyperinsulinism (ICD-9 code 251) and it is likely that many of these older people had Type 2 diabetes. Health system costs for hypoglycemia and hyperinsulinism are also shown in Table 6 and totalled \$15.9 million in 1993–94. This diagnosis accounted for an estimated \$4.4 million in nursing home costs compared with \$12.3 million and \$7.3 million for Type 2 and Type 1 diabetes respectively. Because the estimates of non-hospital costs for Type 1 and Type 2 diabetes are based on self-reported survey data and relatively small numbers of respondents, the detailed age–sex distribution of health system costs for diabetes mellitus given in Appendix Table C.28 is not further sub-divided for the two types of diabetes.

Table 7 summarises estimated use of hospitals, doctors and drugs for diabetes. In total, diabetes accounted for an estimated 18,600 hospital admissions, 2.5 million medical services and 1.6 million prescriptions in 1993–94. More detailed utilisation estimates are also given in Appendix C.

	Hospitals			Medical services ('000)			Drugs	
Type of diabetes	Admissions ('000)	ALOS (days)	Non-inp. services ('000)	GP	Specialist ^(a)	Total	Prescriptions ('000)	
Diabetes mellitus	18.6	8.9	417	1,031	1,495	2,526	1,630	
Type 1 (Insulin dependent)	9.5	7.7	164	432	620	1,052	664	
Type 2 (Non-insulin dependent)	9.1	10.1	253	600	875	1,475	967	
Hypoglycemia and hyperinsulinism	2.4	4.2	43	33	36	69	5	

Table 7: Diabetes mellitus: estimated health services utilisation by sector, 1993-94

(a) Includes diagnostic imaging and pathology services.

According to the 1995 National Health Survey and hospital inpatient data, Type 1 diabetics use health services at a much greater rate than Type 2 diabetics. Based on the reported prevalence of Type 1 and Type 2 diabetes in the National Health Survey, the average number of medical services per annum is 5.8 times higher for a Type 1 diabetic on average than for a Type 2 diabetic and the average number of hospital admissions is around 8.4 times higher.

Direct costs of diabetes mellitus by age and sex

Table 8 shows the estimated health care costs for Type 1 and Type 2 diabetes for males and females in 1993–94. Direct costs for females are 18% higher for Type 1 diabetes and 10% higher for Type 2 diabetes.

Table 8: Diabetes mellitus: total health system costs for males and females
by type and female/male ratio, 1993–94 (\$ million)

Type of diabetes	Males	Females	Female/male ratio
Type 1 (Insulin dependent)	71.3	83.9	1.18
Type 2 (Non-insulin dependent)	103.3	113.4	1.10
Total diabetes mellitus	174.6	197.3	1.13

Figure 6 illustrates the age-sex distribution of direct expenditure for diabetes mellitus and per-capita annual expenditure. These expenditures rise steeply with age from 40 years onwards. Per capita expenditure for diabetes reaches around \$100 per annum for men and women aged 75 years and over. Detailed information on diabetes costs and health services utilisation by health sector, age, and sex are provided in Appendix Tables C.28 and C.29.



age group and sex, 1993-94

Health system costs attributable to diabetes

Diabetes mellitus causes substantial morbidity from cardiovascular complications, eye and kidney diseases and limb amputation (McCarty et al. 1996) and some of the health system costs for these conditions can be attributed to diabetes mellitus. Using the attributable fractions given in Appendix Table A.4, the health system costs attributable to complications of Type 2 diabetes have been estimated as shown in Table 9. Complications of Type 2 diabetes accounted for an estimated \$526 million in 1993–94, resulting in a total health system cost of \$681 million attributable to diabetes.

Table 10 gives a breakdown of the total health system costs attributable to diabetes by health sector for males and females aged under 65 years and for those 65 years and over. Over 67% of the total cost relates to men and women aged 65 years and over; this proportion is much higher for women (71%) than for men (62%). Figure 7 illustrates the distribution of health system costs attributable to diabetes by broad health sector for males and females in 1993–94.

Condition	Males	Females	Total	
Type 1 diabetes	71.3	83.9	155.2	
Type 2 diabetes	103.3	113.4	216.7	
Hypoglycemia and hyperinsulinism	7.6	8.3	15.9	
Complications of diabetes				
Hypertension	9.8	22.2	31.9	
Ischaemic heart disease	37.7	30.5	68.2	
Cerebrovascular disease	41.8	33.3	75.1	
Heart failure due to diabetic complications	13.5	23.6	37.1	
Atherosclerosis	3.5	2.3	5.8	
Peripheral vascular disease	2.5	2.0	4.5	
Glaucoma	1.3	2.4	3.8	
Cataract	6.4	13.6	19.9	
Blindness	1.4	2.8	4.2	
Nephropathy	7.0	8.0	15.0	
Chronic skin ulcer	8.2	16.9	25.1	
Absence of extremities	1.7	1.0	2.7	
Total attributable costs	316.9	364.2	681.1	

Table 9: Diabetes mellitus: total attributable health system costs for males and females by condition, 1993–94 (\$ million)

Note: Costs of complications of diabetes estimated using attributable fractions shown in Appendix Table A.4.

	Total costs	Hospitals ^(b)	Nursing homes	Medical ^(c)	Pharma- ceuticals
Males					
Aged less than 65 years	120.8	33.6	0.5	22.4	28.8
Aged 65 years and over	196.2	71.5	30.5	25.7	32.2
All ages	316.9	105.2	31.0	48.2	61.0
Females					
Aged less than 65 years	105.4	25.1	1.5	19.1	27.5
Aged 65 years and over	258.7	70.3	55.1	31.0	47.2
All ages	364.2	95.4	56.6	50.1	74.7
Total	681.1	200.6	87.7	98.3	135.7

Table 10: Diabetes mellitus: estimated attributable health system costs^(a) by health sector, sex and age group, 1993–94 (\$ million)

(a) Costs of complications of diabetes estimated using attributable fractions shown in Appendix Table A.4.

(b) Public and private acute hospitals, repatriation hospitals and psychiatric hospitals. Includes public hospital non-inpatient services.

(c) Medical services for private patients in hospitals are included under Hospitals.



McCarty et al. (1996) estimated that the direct health care costs associated with diabetes in 1995 were \$561 million (see Table 11). They included in this estimate hospital inpatient costs, nursing home costs, medical costs, drug costs and allied health professional costs, but not other types of health expenditure. Dalton and Segal (1996, see Table 11) estimated that the health care costs attributable to diabetes mellitus in 1995 were \$650 million. This is reasonably similar to the estimate given above of \$681 million for 1993–94, although different costing methods were used, and the current study used attributable fractions for

complications based on US estimates. Nevertheless, we can be reasonably confident that the total health system costs attributable to diabetes mellitus in Australia around 1994 to 1995 are in the vicinity of \$650 million to \$700 million.

McCarty et al. (1996) also estimated partial indirect costs associated with diabetes of \$418 million, resulting in the estimate that the total costs, direct and indirect, of diabetes in Australia are in the vicinity of at least one billion dollars per annum. As explained in Section 1, this report has not attempted to estimate the indirect costs of diabetes or other diseases.

	alth system costs (\$			
Study	Year	million)	Comments	
Gross and Tiffen (1991)	1990	420		
McCarty et al. (1996)	1995	561	Does not include research or 'Other administrative costs'	
Dalton and Segal (1996)	1995	650	As quoted in Segal, Dalton and Richardson (1996)	
AIHW Disease Costs and Impact Study	1993–94	681	See Tables 9 and 10	

Table 11: Recent estimates of attributable health system costs of diabetes mellitus in Australia

Annual health costs per treated diabetic

McCarty et al. (1996) have reviewed estimates of the prevalence of diagnosed and undiagnosed cases of diabetes in Australia up to 1995. More recently, data have become available from the ABS 1995 National Health Survey of self-reported diabetes in Australians in 1995. Welborn et al. (1995) analysed similar data from the 1989–90 National Health Survey and assumed that the prevalence of self-reported diabetes gave an estimate of the prevalence of diagnosed (or treated) diabetes. To include individuals with 'undiagnosed' Type 2 diabetes, they doubled the adult prevalences from the National Health Survey.

Table 12 shows the estimated prevalence of 'diagnosed' current diabetes by age and sex for Australia in 1993–94 estimated by applying the prevalence rates from the 1995 National Health Survey to the 1993–94 Australian population. The overall reported prevalence of diabetes is 2.0% and 1.9% for males and females respectively, corresponding to a total of

Table 12: Estimated prevalence of diagnosed diabetes mellitus by sex and age group, Australia, 1993–94

	Male	s	Females		Females Pe		Perso	ersons	
Age group	Per cent	Number	Per cent	Number	Per cent	Number			
Under 25 years	0.16	5,390	0.21	6,831	0.19	12,221			
25–64 years	2.01	94,309	1.71	79,249	1.86	173,558			
65 and over	8.94	83,765	7.01	85,414	7.85	169,179			
All ages	2.04	183,464	1.89	171,494	1.97	354,958			

Source: 1995 National Health Survey (unpublished data provided by ABS).

355,000 Australians with diagnosed diabetes in 1993–94. The reported prevalence rates of diabetes in Australian men and women aged 25 years and over in the 1995 survey are very similar to those from the 1989–90 National Health Survey for men and women aged 25 years and over (Welborn et al. 1995). The overall prevalence of diabetes (diagnosed and undiagnosed) in the Australian population is estimated to be almost 4% (McCarty et al. 1996).

Table 13 shows the estimated average annual health system costs per treated case of diabetes for males and females in 1993–94, calculated by dividing the total attributable health system costs for diabetes mellitus by the estimated prevalence (number) of people with diagnosed diabetes. Average annual costs per diagnosed patient are around \$1,730 for males and \$2,120 for females. The annual health system costs are higher for males than females in the 0–24 years age group, almost identical in the 25–64 year age group, and substantially lower for older men than women. The lower costs of diabetes for older men that women reflects the higher death rates of older men from a range of causes, reducing the time that they live with diabetes. For diabetes in people aged less than 25 years, which is predominantly Type 1, average annual treatment costs are estimated at \$1,370. Average annual costs of diabetes treatment drop slightly to around \$1,200 in the age range 25–64 years and then more than double to \$2,690 in older people, where the health system costs of diabetes complications start to become much larger.

Age group	Males	Females	Persons
Less than 25 years	1,406	1,348	1,374
25–64 years	1,200	1,214	1,207
65 years and over	2,342	3,029	2,689
All ages	1,727	2,124	1,919

Table 13: Estimated average annual attributable health system costs (\$) per diagnosed case of diabetes mellitus, by sex and age group, 1993–94

Lifetime health costs of diabetes

This section presents some approximate estimates of the lifetime health system costs associated with diabetes mellitus. These are calculated by dividing the total annual attributable health system costs by an estimate of the incident (new) cases occurring in the same year. Such lifetime cost estimates are approximate because they are based on the assumption that incidence and mortality rates have been steady over time. Where incidence rates have been increasing or decreasing over time, or where improvements in treatment are altering survival rates, the approximate costs derived below will underestimate or overestimate the actual lifetime costs of treatment. These estimates in 1993–94 dollars also assume that the real cost of treatment at various ages and stages through the course of the illness remain constant at their 1993–94 values.

McCarty et al. (1996) reviewed available studies of the incidence of Type 1 diabetes in Australia. Two recent studies for Western Australia (Kelly et al. 1994) and New South Wales (Verge et al. 1994) estimated that the incidence of Type 1 diabetes in children aged 0–14 years was 14.9 per 100,000 and 14.4 per 100,000 respectively. Using the sex-specific incidence rates of Verge et al. (1994) results in an estimated 557 incident cases of Type 1 diabetes in children aged 0–14 years in 1993–94.

We are not aware of any studies that have attempted to estimate the incidence of Type 2 diabetes among Australians. Murray and Lopez (1996) have developed a computer program called DISMOD for modelling the relationship between incidence, remission, case-fatality and prevalence of a disease. This program was used to estimate the age- and sex-specific incidence of diagnosed diabetes mellitus in Australia from the self-reported prevalence data of the 1995 National Health Survey (see Table 12), on the assumption that remission rates are zero and that diabetic cases have twice the mortality rate of the general Australian population (McCarty et al. 1996). This resulted in an estimated 520 incident cases of diabetes in the age range 15–24 (which we assumed to be half Type 1 and half Type 2) and an estimated 20,800 new diagnosed cases of Type 2 diabetes for Australians aged 25 years and over in 1993–94.

Using these estimates of new annual cases together with estimated attributable health system costs of diabetes mellitus, we can make an approximate estimate of the lifetime costs of a case of diabetes mellitus as shown in Table 14. The estimated lifetime costs of Type 1 diabetes are around \$190,000 compared with \$25,000 for Type 2 diabetes. This is not surprising given that Type 1 diabetes is usually diagnosed in childhood, whereas most Type 2 diabetes is diagnosed at middle and older ages. Lifetime costs for females are substantially higher than for males (46% higher for all diabetes combined), reflecting higher annual treatment costs (Table 13) and higher life expectancies for females.

These lifetime cost estimates are very approximate because they are based on incidence rates modelled from prevalence rates with a number of assumptions, and on the assumption that incidence and mortality rates have been steady over time. They also assume that the real cost of treating diabetes mellitus at various ages and stages through the course of the disease remain constant at their 1993–94 values.

Type of diabetes	Males	Females	Persons
Type 1 (Insulin dependent)	175,200	204,700	190,000
Type 2 (Non-insulin dependent)	20,750	30,400	24,970
Total diabetes	25,880	37,830	31,140

Table 14: Estimated lifetime attributable health system costs (\$) per diagnosed case of diabetes mellitus, by sex, 1993–94

Glossary

ABS: Australian Bureau of Statistics.

Acute hospitals: Establishments which provide at least minimal medical, surgical or obstetrical services for inpatient treatment and/or care, and which provide round-the-clock comprehensive qualified nursing service as well as other necessary professional services. Most patients require a relatively short stay.

Acute myocardial infarction (AMI): Death of part of the heart muscle caused by blockage of an artery supplying the muscle; a type of heart attack.

AGPS: Australian Government Publishing Service.

AIHW: Australian Institute of Health and Welfare.

Allied health services: Services provided by allied health practitioners excluding pharmacists and allied health services provided by hospitals.

ALOS: See Average length of stay.

AMI: See Acute myocardial infarction.

Arrhythmias: Disturbances of the heart's rhythm.

Atherosclerosis: A disease of the arteries in which fatty and scar-like deposits (plaques) form on the inner walls of arteries. It is the most common cause of ischaemic heart disease, stroke and peripheral vascular disease.

Average length of stay: The average number of bed-days (q.v.) per admitted patient episode.

Bed days: The number of full or partial days of stay for patients who were admitted for an episode of care and who underwent separation during the reporting period. A patient who is admitted and separated on the same day is allocated one patient day.

Blood pressure: The pressure of the blood against the walls of the main arteries. The maximum blood pressure (when the heart muscle contracts) is called systolic blood pressure and the minimum, when the heart muscle relaxes, is called diastolic blood pressure. Both are measured in millimetres of mercury (mm Hg). See also **Hypertension**.

Cerebrovascular disease: See Stroke.

Coronary heart disease: See Ischaemic heart disease.

CVD: Cardiovascular disease. A term describing all diseases of the heart and blood vessels. Also known as diseases of the circulatory system.

Department of Veterans' Affairs hospitals: Acute care hospitals operated by the Commonwealth Department of Veterans' Affairs to provide hospital treatment for eligible veterans and their dependants at Commonwealth expense. Department of Veterans' Affairs hospitals are recorded as public sector hospitals for data reporting purposes.

Diabetes: Diabetes mellitus is a collection of closely related diseases characterised by abnormality of insulin levels and impaired glucose tolerance. The two most important forms of diabetes are insulin dependent diabetes mellitus or Type 1 (q.v.) and non-insulin dependent diabetes mellitus or Type 2 (q.v.).

Direct costs: The health system costs of providing prevention and treatment services for health problems.

GP: General practitioner.

Heart attack: Occurs when a coronary artery become completely blocked, because a blood clot has formed at a point of narrowing (see **Ischaemic heart disease**). If some heart muscle dies as a result of the lack of blood, the heart attack is referred to as an acute myocardial infarction (q.v.).

High blood cholesterol: The risk of cardiovascular disease increases with the total cholesterol level in the blood. Based on the National Heart Foundation's recommendations, high blood cholesterol is defined as 5.5 mmol/L or greater.

High blood pressure: See Hypertension.

Hypertension: A person is classified as having hypertension or high blood pressure if they have a systolic blood pressure greater than or equal to 160 mmHg and/or a diastolic blood pressure greater than or equal to 95 mmHg or they are currently being treated for hypertension.

IDDM: See Insulin dependent diabetes mellitus.

Incidence: The number of new cases of a specified disease or condition in a defined time period.

Indirect costs: Costs associated with disease and injury other than direct health system costs. These include lost production due to sickness and premature death, as well as costs impacting outside the health care sector (such as caring costs borne by the family, and police and court costs associated with drug abuse, for example).

Inpatient: Any person formally admitted by a hospital. Healthy newborn infants are excluded unless they have a stay of more than 10 days, or are the second or subsequent birth in multiple births.

Institutional: In this report, denotes the major health care institutions which provide residential care, such as hospitals and nursing homes.

Insulin dependent diabetes mellitus: Also referred to as IDDM, Type 1 diabetes or juvenile-onset diabetes. A form of diabetes that most commonly appears under age 40 and is characterised by an absolute insulin deficiency due to the auto-immune destruction of pancreatic islet beta-cells. Type 1 diabetics are prone to ketosis and severe symptoms and are dependent on daily insulin injections to sustain life.

International Classification of Disease (ICD): WHO's internationally accepted classification of death and disease — the ninth revision (ICD-9) is currently in use.

Ischaemic heart disease (IHD): The most common form of cardiovascular disease, it includes angina and heart attack, and is due to narrowing or blockage of one or more of the coronary arteries which supply the heart with blood. See also **Myocardial infarction**.

Medical services: Private medical services excluding those to hospital inpatients. This includes consultations with general practitioners and specialists as well as pathology tests and screening and diagnostic imaging services. It includes services to veterans.

NIDDM: See Non-insulin dependent diabetes mellitus.

Non-inpatient: Patients not requiring admission to hospital, but who receive treatment in accident and emergency (casualty) departments, undergo short-term specialist treatment (such as minor surgery, radiotherapy or chemotherapy), receive care from a recognised non-admitted patient service/clinic of a hospital or are treated in their own homes through home nursing programs. Previously referred to as outpatients.

Non-inpatient occasion of service: Occurs when a patient attends a functional unit of the hospital for the purpose of receiving some form of service, but is not admitted. A visit for administrative purposes is not an occasion of service.

Non-insulin dependent diabetes mellitus: Also referred to as Type 2 diabetes or adultonset diabetes. NIDDM constitutes about 85–90% of all diabetes in developed countries and its diagnosis usually occurs after age 40. It can be asymptomatic for many years and persons with NIDDM are not ketosis-prone. Although people with NIDDM are not dependent on insulin injections, insulin may be required to control hypoglycaemia. NIDDM is often, but not always, associated with obesity, and patients need to follow a careful diet and exercise regime.

Nursing homes: Establishments which provide long-term care involving regular basic nursing care to chronically ill, frail, disabled or convalescent persons or senile inpatients. In practice, they cater mainly for older people. They must be approved by the Commonwealth Department of Health and Family Services and/or licensed by the State or Territory, or controlled by government departments.

Outpatient: See Non-inpatient.

Over-the-counter drugs (OTC): Pharmaceutical drugs available without prescription. Examples are cough mixtures, simple analgesics and antacids. Some OTCs can be sold only by pharmacists, but many can be sold through non-pharmacy outlets.

PBS: Pharmaceutical Benefits Scheme.

Peripheral vascular disease: Is caused by blocked blood flow to the limbs, usually the legs or the feet.

Pharmaceutical drugs: Includes prescription drugs and over-the-counter medicines.

Prescription drugs: Pharmaceutical drugs available only on the prescription of a registered medical practitioner. These drugs are also known as Schedule Four (or S-4) drugs after the schedule to the State and Territory Acts of Parliament that regulates the sale and distribution of poisons and drugs. Prescription drugs are available only from pharmacists who are regulated by State and Territory laws whether they work in community or in hospital pharmacies.

Prevalence: The number of cases of a given disease or condition present in a given population at a given time. See also: **Incidence**.

Prevention: Refers to all health system activities relating to the primary prevention of diseases and injury, including screening for asymptomatic disease within the hospital and medical sectors.

Private hospitals: Privately owned and operated institutions approved by the Commonwealth Department of Health and Aged Care. Private hospitals cater only for private patients who are treated by a doctor of their own choice and are charged fees for accommodation and medical services. Private hospitals can be classified as acute or psychiatric on the basis of the proportion of acute inpatient services provided.

Psychiatric hospitals: Establishments devoted primarily to the treatment and care of inpatients with psychiatric, mental, or behavioural disorders.

Public health: The programs, services, and institutions, outside the treatment sectors of the health system, which emphasise the prevention of disease and the health needs of the population as a whole.

Public hospitals: As determined by the State or Territory health authority, and includes both recognised and non-recognised hospitals. Recognised hospitals are those nominated by
States and Territories and accepted by the Commonwealth and appearing in schedules to each State/Territory Medicare Agreement (Schedule B in the current Medicare Agreements). They provide free shared-ward accommodation for all who require it and free treatment there by a hospital-appointed doctor. In addition, they provide, to those who are prepared to pay for it (for example, through private insurance), private ward accommodation and the doctor of choice. Thus, public hospitals service much private medical practice as well as public.

PYLL 75: Potential years of life lost to age 75 is a measure of premature mortality which estimates total years of life lost to age 75 due to deaths at ages prior to 75 years.

Recurrent expenditure: Expenditure which recurs continually or very frequently (for example, salaries). It may be contrasted with capital expenditure, such as the cost of hospital buildings and diagnostic equipment, for which the expenditure is made infrequently.

Repatriation hospitals: Acute care hospitals run by the Commonwealth Department of Veterans' Affairs originally set up to provide hospital treatment for eligible veterans and their dependents at Commonwealth expense.

Research: Health and medical research as defined in the Australian Health Expenditure Bulletins (AIHW 1996a).

Rheumatic heart disease: Occurs as a result of childhood rheumatic fever which damages the heart valves.

Separation (or discharge): Occurs when an inpatient leaves hospital to return home, transfers to another institution, or dies. The number of separations in a year is almost the same as the number of hospital inpatient episodes.

Stroke: Also known as cerebrovascular disease. The main type of stroke is due to blockage of an artery supplying blood to the brain (ischaemic stroke), the other (haemorrhagic stroke) by bleeding into the brain or over the surface of the brain.

Treatment: Refers to all health system activities relating to the diagnosis, treatment, rehabilitation and palliation for diseases, injuries and symptoms.

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Appendix A: Classification of cardiovascular diseases and diabetes

Diseases and injury are classified using the Ninth Revision of the World Health Organisation's International Classification of Disease (ICD-9). The disease categories used in this report are defined by groups of ICD-9 codes as shown in Table A.1. The International Classification of Primary Care (ICPC) codes used in the GP survey and the condition codes used in the 1989–90 National Health Survey (NHS) are mapped across to the ICD-9 codes as shown in Table A.1.

Treatment and prevention

The Disease Costs and Impact Study 1993–94 has attempted to classify health system costs for each disease group into two categories: treatment and prevention. Treatment includes all health system activities relating to the diagnosis, treatment, rehabilitation and palliation for diseases, injuries and symptoms. Prevention includes all activities relating to the primary prevention of diseases, including screening for asymptomatic disease. It is important to note that prevention will include some activities within the medical, hospital and allied health sectors as well as the public health sector.

The 1990–91 Survey of Morbidity and Treatment in General Practice in Australia (Bridges-Webb et al. 1992) collected up to four diagnoses for each patient encounter as well as pathology tests and imaging ordered, but did not link the latter tests to particular diagnoses. Screening and diagnostic tests are often not specific to a particular disease group, and the costs of such tests were attributed equally to all diagnoses in encounters where multiple diagnoses were given. Also, the ICPC codes do not always distinguish between preventive and diagnostic screening. As a result, some disease prevention activities in primary care will be costed in the general prevention category and the general treatment category (not specific to an ICD-9 chapter) and will not be included in the costs reported for specific disease groups at the ICD-9 chapter level. In addition, the majority of public health and community health expenditure has not yet been included in the Disease Costs and Impact Study.

For cardiovascular diseases, only \$11.6 million (or 0.3% of total expenditure) was identified as specifically for prevention—it is not possible to distinguish most preventive clinical activity from diagnosis or treatment with the available data sources. The expenditure on CVD prevention is almost certainly a significant underestimate, and for this reason, total health system costs for cardiovascular disease and diabetes have not been disaggregated into prevention and treatment categories for this report.

Disease category	ICD-9 codes	ICPC codes	NHS codes
Diabetes mellitus	250	Т90	78
Non-insulin dependent	2500	(a)	78 ^(a)
Insulin dependent	2501	(a)	78 ^(a)
Hypoglycemia and hyperinsulinism	251	T87	106
High blood cholesterol	272.0	T93 (% based on NHS)	108
Rheumatic heart disease	390–398	K71	19 ^(f) , 82 ^(f)
Hypertensive disease	401–405	K86, K87	72
Hypertension	401	K86	
Hypertension with organ involvement	402–405	K87	
Ischaemic heart disease	410–414	K74–K76	82 ^(f)
Acute myocardial infarction	410	K75	
Other	411–414	K74, K76	
Pulmonary circulatory diseases	415–417	K82, K93, K84 ^(b)	82 ^(f)
Other forms of heart disease	420–429		82 ^(f)
Cardiomyopathy, myocarditis, endocarditis, pericarditis	425	K70 ^(b) , K84 ^(b)	
Other diseases pericardium	423	K84 ^(b)	
Non-rheumatic valvular disease	424	K83, K84 ^(b)	
Cardiac dysrhythmias	426–427	K78–K80, K84 ^(b)	
Heart failure	428	K77	
III-defined heart disease	429	K70 ^(c) , K84 ^(b)	
Cerebrovascular disease	430–438	K89, K90, K92 ^(d)	119, 219
Diseases of arteries, arterioles and capillaries	440–448		
Atherosclerosis	440	K91	15
Aortic aneurysm	441	K99 ^(e)	19 ^(f)
Other peripheral arterial disease	440, 442–448	K92 ^(d) , K99 ^(e)	19 ^(f)
Diseases of veins, lymphatics and other diseases of the circulatory system	451–459		
Phlebitis and thrombophlebitis	451	K94	17 ^(f)
Varicose veins of leg	454	K95	17 ^(f)
Hemorrhoids	455	K96	18
Other diseases of circulatory system	452,453,456–459	K70 ^(c) , K88, K99 ^(e)	17 ^(f) , 19 ^(f)
Unspecified treatment and aftercare	V12.5, V15.1, V42.1, V42.2, V43.2, V43.3, V43.4, V45.0, V45.8, V53.3, V71.7	K28–K29	
Prevention and screening	V17.1, V17.3, V17.4, V81.0, V81.1, V81.2	K24–K27	

Table A.1: Classification of cardiovascular diseases and diabetes, 1993-94

(a) Distributed according to type 1 and 2 distribution of diabetics who visited a doctor in last 2 weeks in the ABS National Health Survey (refer to text for more information). Types 1 and 2 are specified by the fifth digit of ICD-9 code 250.

(b) Distributed according to hospital separations for ICD 417 (pulmonary), 425 (cardiomyopathy), 423 (other diseases of the pericardium), 424 (valvular), 426–427 (dysrhythmias), 429 (ill-defined).

(c) Distributed according to hospital separations for ICD 420–422 (cardiomyopathy etc), 429.89 (ill-defined heart disease), 459.9 (other diseases of the circulatory system).

(d) Distributed according to hospital separations for ICD 433+437 (cerebrovascular), 443+444 (other peripheral artery).

(e) Distributed according to hospital separations for ICD 442+446, 447, 448 (other peripheral artery), 456+457+459 (other diseases of the circulatory system).

(f) Distributed in proportion to hospital separations.

Attribution of medical costs to high blood cholesterol

The ICPC does not have a specific code for high blood cholesterol. Code T93 covers all lipid metabolism disorders. Data from the 1989–90 National Health Survey on numbers of doctor visits for 'high cholesterol' and 'other endocrine, metabolic, nutritional and immunity disorders' were used to estimate the proportion of visits coded to T93 which were attributable to high cholesterol. These proportions are shown in Table A.2. Medicare claims data for 1993–94 were used to estimate the pathology costs associated with high cholesterol separately (\$18.1 million—see Appendix B and Table B.1). Costs associated with GP services (\$15.3 million) and with other specialist medical services (\$9.0 million) were estimated using the fractions shown in Table A.2 and are given in full in Table C.26.

Age group	Males	Females
0–4	0.00	0.00
5–14	0.00	0.00
15–24	0.08	0.08
25–34	0.20	0.40
35–44	0.40	0.50
45–54	0.86	0.86
55–64	0.86	0.86
65–74	0.44	0.44
75+	0.44	0.44

 Table A.2: Proportion of GP visits for lipid metabolism

 disorders (T93) attributed to high blood cholesterol

Diabetes Types 1 and 2

Diabetes mellitus is recorded as code T90 in the GP survey. Type 1 (insulin dependent) and Type 2 (non-insulin dependent) diabetes were not identified separately. The 1989–90 methodology used the proportion of Type 1 diabetes in hospital inpatients to estimate the proportion of GP visits attributable to Type 1. This fraction was around 50%.

The 1995 National Health Survey obtained self-report data on diabetes Type 1 and Type 2 as a long-term conditions and as a reason for doctor visits in the last two weeks. Overall, 11% of people who reported that they had diabetes were classified as Type 1. Among those people who visited the doctor in the last two weeks, a considerably higher proportion were classified as Type 1. As the total numbers of people involved was quite small (87 respondents), a single proportion for both sexes was estimated for each age group as shown in Table A.3.

	Age group											
	0–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75+			
Type 1 proportion	1.00	1.00	1.00	0.60	0.50	0.40	0.30	0.40	0.45			

Table A.3: Proportion of GP visits for diabetes (T90) attributed to Type 1 diabetes

Complications attributable to Type 2 diabetes

Crowley et al. (1992) estimated the costs of long-term complications for Type 2 diabetes (non-insulin dependent) using attributable fractions based on United States estimates by Huse et al. (1989). These attributable fractions are shown in Table A.4 and are used in Section 4 of this report to estimate total health system costs attributable to diabetes mellitus.

The appropriateness of these fractions to Australia depends on the prevalence rates of Type 2 diabetes and of the Type 2 diabetes-related conditions listed in Table A.4. The reported prevalence by age and sex of Type 2 diabetes in Australia in 1995 is broadly comparable but somewhat lower than that for the US population in 1984–86. Improving the reliability of such estimates will require estimation of the relevant attributable fractions based on Australian data. This is being undertaken as part of an Australian Burden of Disease Study currently being carried out by the Australian Institute of Health and Welfare.

		<65 yea	rs old	65 years and over		
Condition	ICD-9 codes	Males	Females	Males	Females	
Circulatory disorders		%	%	%	%	
Hypertension	401–405	2.0	2.2	4.1	6.4	
Ischaemic heart disease	410–414	4.8	6.8	8.4	9.8	
Cerebrovascular disease	430–438	4.8	5.0	17.0	10.1	
Heart failure	428, 429.2–429.3, 429.9	4.8	6.8	8.4	9.8	
Atherosclerosis	440	6.1	5.3	11.5	10.0	
Peripheral vascular disease	443, 459.8–459.9	6.1	5.3	11.5	10.0	
Visual disorders						
Glaucoma	365	7.5	8.4	9.5	9.8	
Cataract	366	5.0	5.6	5.7	5.9	
Blindness	369	11.6	12.9	48.1	49.1	
Other disorders						
Nephropathy ^(a)	580–586	18.0	18.0	18.7	19.3	
Chronic skin ulcer	707	5.0	5.6	26.9	27.6	
Absence of extremities	736	3.1	3.5	18.5	19.1	

Table A.4: Per cent of prevalence of complications attributable to Type 2 diabetes by age and sex

(a) Huse et al. estimated the attributable fractions for nephropathy to be 3.2% and 3.6% for males and females aged under 65 years. Data from the Australian and New Zealand Dialysis and Transplant Register for 1996 indicate that 18.5% of new patients had diabetic nephropathy as the primary renal disease, and this proportion was higher for patients under 65 years than for those aged 65 and over (Disney 1997). For this reason, the attributable fractions for nephropathy under age 65 were adjusted to 18% for both males and females.

Source: Huse et al. (1989).

Appendix B: Summary of disease costing methodology

The Disease Costs and Impact Study (DCIS) takes known aggregate expenditures on health care and apportions these to disease categories using Australian data (hospital morbidity data, case mix data, the national survey of morbidity and treatment in general practice, and the 1989–90 National Health Survey). The DCIS methodology is documented in detail in Mathers et al. (1998b).

Total recurrent health expenditure in 1993–94 is disaggregated by the following dimensions:

- Disease (defined by ICD-9 code groups—see Appendix A)
- Sector (hospital inpatient, non-inpatient, medical, pharmaceutical etc.)
- Program (treatment, prevention)
- Sex (male, female)
- Age (0-4, 5-14, 15-24, ... 65-74, 75+).

The proportion of direct health expenditure included in the disease costings in this report represents 92% of direct health care expenditure (see Table B.2 for a list of the health sectors included). Recurrent expenditure on health care which has not yet been attributed includes:

- community health services;
- health promotion and illness prevention (apart from breast, cervix, lung and skin cancer public health programs);
- ambulance services;
- medical aids and appliances (with the exception of equipment and supplies for home blood glucose testing by diabetics).

The attribution of the direct costs of health services to disease is discussed in more detail below and summarised in Table B.2.

Hospital inpatient services

This sector includes inpatient (admitted patient) costs for recognised public hospitals (including public psychiatric hospitals), repatriation (veterans') hospitals and private hospitals. The proportions of total public acute hospital expenditure which relate to inpatients are given by the inpatient fractions estimated for each State and Territory by the National Health Ministers Benchmarking Working Group (1996).

Disease costs for inpatient services are estimated by apportioning the total inpatient expenditure for each State or Territory to individual episodes of hospitalisation with an adjustment for resource intensity of treatment for the specific episode (using Diagnostic Related Groups or DRGs). Medical costs for private, compensable and other non-public patients in public, repatriation and private hospitals are estimated using DRG-derived medical cost weights and age–sex specific information from the Health Insurance Commission on in-hospital private medical charges for various categories of service. Public psychiatric hospital data for New South Wales and Victoria are used to allocate public psychiatric hospitals inpatient costs. These costs all fall in the mental health chapter of ICD-9.

Outpatient and casualty services

The 1989–90 ABS National Health Survey is used to allocate total expenditure on noninpatient services for 1993–94. Total visits to outpatient clinics (including casualty or accident and emergency departments) for each age–sex–disease group are estimated from the National Health Survey data on numbers of outpatient visits in the two weeks prior to interview. Expenditure is allocated assuming that all visits have the same cost.

Nursing homes

The distribution of main disabling health condition of nursing home residents in the 1993 Australian Survey of Disability, Ageing and Carers is used to allocate total nursing home expenditure for 1993–94 to age–sex–disease categories at ICD-9 chapter level. This expenditure is apportioned to specific disease groups at the sub-chapter level according to the distribution of diagnosis for patients in that age–sex group who transfer from acute hospitals (around 60% of nursing home admissions).

Medical services

This sector includes expenditure on all private medical services apart from those to hospital inpatients. It includes consultations with general practitioners and specialists as well as pathology tests and screening and diagnostic imaging services. The 1990–91 Survey of Morbidity and Treatment in General Practice in Australia (GP survey) is used to allocate age–sex specific out-of-hospital expenditure on medical services to disease diagnoses. This allocation is done separately for general practitioners (based on encounters surveyed in the GP survey) and for 17 categories of specialists (based on the pattern of referrals to each category of specialist in the GP survey).

Age–sex specific out-of-hospital expenditure on medical services is derived from Medicare and Department of Veterans' Affairs (DVA) data. This expenditure covers all charges for which a Medicare or DVA claim has been made. It is adjusted to include expenditure for which claims have not been made using an inflation factor derived from the AIHW health expenditure data on total expenditure on medical services.

This methodology assumes that the pattern of GP services by diagnosis in 1993–94 is the same as that collected in 1990–91, that the pattern of diseases managed by each type of specialist in 1993–94 reflects the pattern of referrals to that specialist type from GPs in 1990–91 and that each referral to a specialist of a given type generates services with equal cost. Estimates of numbers of services and costs for pathology tests for high blood cholesterol were adjusted to reflect Medicare claims and total fees charged for 1993–94 for blood tests involving the measurement of high plasma cholesterol. The Medical Benefits Schedule includes five items of this type (see Table B.1), of which all but the first are multiple tests involving other blood plasma constituents. For the purposes of estimating the costs associated with testing for high cholesterol the fractions shown in the final column of Table B.1 were applied to the costs and numbers of services. Of the total \$26.9 million

expenditure for these tests in 1993–94, an estimated \$18.1 million was attributed to high blood cholesterol.

Medical Benefits Schedule Item	No. of tests ('000)	Estimated fees charged (\$'000)	Fraction attributed to high blood cholesterol
66331	1,019	18,400	1.00
66335	22	364	0.75
66337	33	483	0.75
66339	234	2,969	0.75
66341	431	4,705	0.50
Total	1,740	26,922	

Table B.1: Pathology tests for plasma cholesterol/triglycerides: estimated costs and numbers of tests attributable to high blood cholesterol, 1993–94

Source: Medicare claims data provided by Commonwealth Department of Health and Family Services.

All other screening and diagnostic tests apart from the cholesterol tests shown in Table B.1 were costed based on the 1990–91 pattern of referrals by GPs using the overall average charge per pathology test in 1993–94.

Allied health services

The 1990–91 Survey of Morbidity and Treatment in General Practice in Australia and the 1989–90 ABS National Health Survey are used to allocate total Australian expenditure on allied health practitioners to age–sex–disease groups. Total visits to allied health practitioners in 1993–94 for each age–sex–disease group are estimated from the National Health Survey data on visits to 14 types of allied health practitioners in the two weeks prior to interview. Annual visits to other types of allied health practitioner are estimated from referrals by GPs in the GP survey. Expenditure is allocated assuming that all visits have the same cost. The methodology covers all allied health professionals except pharmacists (see below). Costs for dental services are allocated to the 'Digestive system' chapter of ICD-9 and account for the very large allied health expenditure for that chapter (see Table 1).

Pharmaceuticals

Total pharmaceutical expenditure is decomposed into two components: expenditures on prescription drugs and non-prescription (over-the-counter) pharmaceuticals. The 1990–91 Survey of Morbidity and Treatment in General Practice in Australia together with 1993–94 estimates of total costs and numbers of prescriptions for 40 categories of drug are used to allocate total Australian expenditure on prescription pharmaceuticals to age–sex–disease groups. Expenditure on over-the-counter pharmaceuticals is attributed to disease–age–sex groups using information from the 1989–90 ABS National Health Survey. The methodology addresses all pharmaceutical costs apart from the cost of pharmaceuticals dispensed in hospitals, which are included in estimates of hospital costs.

For each of 40 therapeutic drug groups (Pharmaceutical Benefits Pricing Authority 1994), the relative distribution of prescriptions by disease, age and sex for all community prescriptions in 1993–94 is assumed to be the same as that for prescriptions by general practitioners in 1990–91. For diseases where a significant proportion of prescriptions are made by medical

specialists, this assumption may have limited validity. Detailed estimates of 1993–94 utilisation and expenditure for the 40 drug categories are used as a starting point for attribution to disease–age–sex groups. This takes into account differences in average drug costs across therapeutic categories, average numbers of repeats and relative changes in utilisation and costs across drug categories between 1989–90 and 1993–94.

Public health programs

Community and public health programs in general are not yet included in the estimates of disease costs due to the difficulties in obtaining comprehensive case mix data for these health sectors. However, estimates of the costs for the breast and cervix cancer national screening programs, for skin cancer prevention programs, and for lung cancer's share of anti-smoking activities, have been included in the overall health system costs attributed to diseases and injury (Mathers et al. 1998a).

Research

Estimated total Australian expenditure on health and medical research for major disease and population groups in 1991 (Nicholl et al. 1994) was used to attribute 1993–94 total research spending to chapters of ICD-9. An analysis was carried out of the distribution of NHMRC grants for 1996 (NHMRC 1996) and these data were used to make preliminary estimates of the distribution of research funding across cardiovascular diseases, diabetes, and hypertension and high blood cholesterol. A more detailed analysis of NHMRC and ABS data on research expenditure is being undertaken by AIHW for future disease cost estimates.

Medical aids and appliances

The Disease Costs and Impact Study 1993–94 does not generally include expenditure for medical aids and appliances (\$770 million in 1993–94) in the estimation of disease costs. There is significant expenditure on equipment and supplies for home blood glucose testing by diabetics and estimates of this expenditure have been included in the 'Other' category of costs for Type 1 and Type 2 diabetes in this report (see Appendix Table C.28).

The National Diabetic Supplies Scheme (NDSS) provides subsidised syringes, blood testing strips and reagents. It is administered by Diabetes Australia and funded by grant payments from the Commonwealth Department of Health and Family Services (Department of Health, Housing, Local Government and Community Services 1993) and by patient co-payments. Total expenditure for the NDSS in 1993–94 was \$22.49 million (Diabetes Australia 1998). In the year to 30 June 1998, NDSS serviced 64% of the subsidised test strip market, the other 36% going through private pharmacies via the Pharmaceutical Benefits Scheme (PBS). Although total PBS and other pharmaceutical expenditure has been attributed to diseases including diabetes, the methods used did not apportion costs for blood testing strips. Taking into account pharmacy supply of test strips, the total cost of blood testing supplies has been estimated at \$35.14 million in 1993–94.

The NDSS does not subsidise the purchase of blood glucose monitoring machines, nor does any other government funded program except DVA). Blood glucose monitoring machines sold in Australia are supplied by five manufacturers. Two of these manufacturers supplied data on total annual sales and costs of blood glucose monitoring machines in Australia. For the 12 months from May 1997 to April 1998, there were 43,646 machines sold in Australia for a total cost of \$4.4 million (or an average price of close to \$100 per unit). Although annual sales of such machines have probably increased somewhat between 1993–94 and 1997–98, average prices have dropped. The approximate expenditure on blood glucose monitoring machines was estimated at \$4.4 million for 1993–94.

Data from the NDSS suggests that close to 100% of Type 1 diabetics and around 50% of Type 2 diabetics monitor their blood glucose. Expenditure on monitoring machines was thus apportioned 20% to Type 1 and 80% to Type 2. It is likely that Type 2 diabetics do not monitor their blood glucose levels as often as Type 1 diabetics, so the expenditure on testing supplies was split 40% to Type 1 and 60% to Type 2 (a similar distribution to medical and pharmaceutical costs). Total estimated expenditure for blood glucose monitoring was apportioned to age–sex groups in proportion to total medical plus pharmaceutical costs.

Other institutional, non-institutional and administration expenditure

Other institutional health expenditure (the Red Cross Blood Transfusion Service), other noninstitutional health expenditure (Family Planning Services) and administration expenditure (Commonwealth, State and Territory health authority administration expenses and management expenses of Medicare and registered private health insurance funds) are allocated to disease–sex–age groups in proportion to total health expenditure for other health sectors.

	Table B.2:	Summary of	disease	costing	methodology.	1993-94
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0 00				
Basis of cost attribution to disease– age–sex groups	Data sources			
Separations weighted by DRG cost weight and length of stay.	AIHW National Hospital Morbidity Database 1993–94.			
Bed days.	AIHW National Hospital Morbidity Database 1993–94.			
At chapter level: number of visits in last 2	National Health Survey 1989–90.			
inpatient separations by site.	AIHW National Hospital Morbidity Database 1993–94.			
Separations weighted by DRG-based estimated medical service cost weights.	Medicare data on fees charged for eligible in-hospital medical services in 1993–94.			
	AIHW National Hospital Morbidity Database 1993–94.			
GP encounters weighted by Medicare data on fees charged.	Medicare data on fees charged for eligible out-of-hospital medical services ir 1993–94.			
Medicare data on fees charged.	Australian Survey of Morbidity and Treatment in General Practice 1990–91.			
Prescriptions weighted by relative utilisation and average prescription cost	Pharmaceutical Benefits Scheme utilisation and cost data for 1993–94.			
for therapeutic drug group.	Australian Survey of Morbidity and Treatment in General Practice 1990–91.			
Use of non-prescription medications in the last 2 weeks.	National Health Survey 1989–90.			
Reported visits in the last 2 weeks	National Health Survey 1989–90.			
logener warreiendis by er s.	Australian Survey of Morbidity and Treatment in General Practice 1990–91.			
For ICD-9 chapters: number of residents by main disabling condition.	Survey of Disability, Ageing and Carers 1993.			
Attribution to sub-chapter level on basis of distribution of transfers from acute hospitals.	AIHW National Hospital Morbidity Database 1993–94.			
Estimated costs for breast, cervix, lung and skin cancer prevention programs. Costs of other public health programs not included as yet.	Refer to Mathers et al. (1998b) for details of cancer prevention program costing.			
Estimated expenditure for major disease	Nicholl et al. (1994).			
groups from Nicholl et al. Distributed to detailed disease groups in proportion to NHMRC and other relevant grant distributions.	NHMRC (1996).			
Estimated costs of home glucose testing equipment distributed in proportion to medical plus pharmaceutical costs.	Diabetes Australia (1998).			
Allocated to disease-age-sex groups in	n.a.			
	Basis of cost attribution to disease- age-sex groups Separations weighted by DRG cost weight and length of stay. Bed days. At chapter level: number of visits in last 2 weeks. Sub-chapter level according to inpatient separations by site. Separations weighted by DRG-based estimated medical service cost weights. GP encounters weighted by Medicare data on fees charged. Specialist referrals by GPs, weighted by Medicare data on fees charged. Prescriptions weighted by relative utilisation and average prescription cost for therapeutic drug group. Use of non-prescription medications in the last 2 weeks. Reported visits in the last 2 weeks together with referrals by GPs. For ICD-9 chapters: number of residents by main disabling condition. Attribution to sub-chapter level on basis of distribution of transfers from acute hospitals. Estimated costs for breast, cervix, lung and skin cancer prevention programs. Costs of other public health programs not included as yet. Estimated costs of home glucose testing equipment distributed in proportion to NHMRC and other relevant grant distributions. Estimated costs of home glucose testing equipment distributed in proportion to MHMRC and other relevant grant distributions.			

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Appendix C: Detailed tables cardiovascular diseases and diabetes, 1993–94

Table C.1 shows estimated resident population by age and sex at 30 June 1994, used to calculate costs per capita in this report. Tables C.2 and C.3 show total estimated health system costs and estimated health service utilisation respectively for specific cardiovascular diseases at sub-chapter level of ICD-9 by detailed health sector in 1993–94. Tables C.4 and C.5 similarly show estimated costs and utilisation of health services for diabetes mellitus and high blood cholesterol in 1993–94.

Table C.6 shows total estimated health system costs of cardiovascular diseases by health sector, sex and age group for 1993–94. Table C.7 shows estimated levels of utilisation of health services for cardiovascular diseases by sector, age group and sex in 1993–94.

Detailed information on total costs and health services utilisation by health sector, age, sex and major disease group at sub-chapter level of ICD-9 are provided in Appendix Tables C.8 to C.31 for cardiovascular diseases, high blood cholesterol and diabetes mellitus. Each pair of tables shows costs and utilisation of health services by detailed health sector, age and sex for a given disease group.

Age group	Males	Females	Persons
0–4	661,464	627,683	1,289,147
5–14	1,310,151	1,243,172	2,553,323
15–24	1,396,412	1,336,297	2,732,709
25–44	2,762,031	2,761,005	5,523,036
45–64	1,842,066	1,790,447	3,632,513
65–74	596,874	672,144	1,269,018
75+	315,739	522,916	838,655
Total	8,884,737	8,953,664	17,838,401

Table C.1: Estimated reside	ent population	of Australia, by age	group and sex.	30 June 1994
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Source: ABS 1996.

	Hospital inpatients				Medical services ^(b)		Pharmace	Pharmaceuticals				
ICD-9 chapter	Public hospitals ^(a)	Private hospitals	Non- inpatients	Nursing homes	GPs	Specialis	Prescriptior	Over-the- counter	Allied health	Research	Other ^(c)	Total costs ^(d)
Hypertension	18.7	4.3	31.8	6.7	126.7	89.9	409.6	66.5	20.1	21.8	34.9	831.0
Rheumatic heart disease	13.9	3.8	1.1	0.5	0.7	1.1	0.8	0.7	0.2	0.2	1.0	24.0
Ischaemic heart disease	412.5	144.0	17.7	72.5	32.0	55.9	97.6	7.7	5.5	10.7	38.1	894.4
Acute myocardial infarction	114.1	10.8	0.5	25.3	0.8	2.4	0.8	0.2	0.1	2.0	7.2	164.1
Other	298.5	133.2	17.3	47.3	31.3	53.5	96.8	7.5	5.4	8.7	31.0	730.3
Diseases of pulmonary circulation	18.6	2.9	0.7	5.3	1.0	1.6	1.7	0.3	0.2	1.0	1.4	34.6
Other forms of heart disease	255.5	55.7	41.5	167.1	39.2	53.7	55.4	25.7	4.7	11.0	31.5	740.9
Cardiac dysrhythmias	82.5	13.5	18.3	28.7	12.7	23.1	20.0	10.9	0.7	3.7	9.5	223.6
Heart failure	118.4	21.3	17.8	134.8	23.8	23.0	32.7	12.2	3.9	5.4	17.5	410.9
Non-rheumatic valvular disease	31.3	16.9	3.6	1.6	1.7	4.9	1.6	1.7	_	0.5	2.9	66.8
Cardiomyopathy and other heart diseases	23.3	4.1	1.7	2.0	1.0	2.6	1.0	0.9	0.1	1.4	1.6	39.6
Cerebrovascular disease	235.2	34.2	13.7	265.4	13.2	18.3	10.3	2.7	4.8	5.9	27.0	630.5
Diseases of arteries, arterioles, capillaries	130.8	33.9	15.5	36.5	6.9	14.9	5.8	4.8	2.1	6.6	11.3	269.0
Atherosclerosis	30.4	5.8	6.8	8.1	0.6	1.1	0.3	1.4	0.1	2.7	2.5	59.6
Aortic aneurysm	36.0	6.3	3.8	2.9	1.3	3.7	1.1	0.9	0.2	1.4	2.5	60.2
Other peripheral vascular disease	64.4	21.8	4.9	25.5	5.0	10.1	4.4	2.6	1.8	2.5	6.3	149.3
Diseases of veins, lymphatics, other	87.4	57.7	11.7	32.1	18.4	27.5	17.4	5.9	2.2	2.6	11.7	274.7
Phlebitis and thrombophlebitis	3.4	0.9	2.9	1.7	3.8	5.8	3.7	2.0	0.7	0.3	1.1	26.2
Varicose veins of leg	30.2	27.4	1.2	3.9	2.2	4.6	1.5	0.4	0.6	0.7	3.2	76.0
Hemorrhoids	19.6	20.9	1.8	4.2	7.1	10.2	9.6	1.3	0.7	0.8	3.4	79.3
Other	34.2	8.5	5.9	22.3	5.3	6.9	2.7	2.3	0.3	0.9	4.0	93.2
Unspecified treatment and aftercare	3.4	1.0	1.1	0.6	0.4	0.7	0.7	0.1		0.1	0.4	8.6
Prevention and screening	0.0	0.0	8.5	_	0.7	0.7	0.1	0.8	_	0.2	0.5	11.6
Total	1,176.0	337.5	143.2	586.9	239.1	264.3	599.4	115.3	39.7	60.1	157.9	3,719.4

Table C.2: Total health system costs of diseases of the circulatory system by health sector and disease type, 1993–94 (\$ million)

(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Admissions (is ('000) Bed days ('000) Medical services ^(b) ('00		vices ^(b) ('000)						
ICD-9 chapter	Public hospitals ^(a)	Private hospitals	Public hospitals ^(a)	Private hospitals	Non-inpatient occasions of service ('000)	GPs	Specialist	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Hypertension	7.3	1.7	44.1	12.4	481.0	5,265.2	2,933.3	17,493.0	1,163.5	183
Rheumatic heart disease	1.8	0.4	14.5	2.9	16.7	27.4	43.0	59.7	11.7	14
Ischaemic heart disease	110.3	27.9	656.4	146.5	268.3	1,195.1	1,262.2	4,228.0	317.2	1,984
Acute myocardial infarction	28.6	2.6	233.8	24.4	6.8	26.3	45.2	39.0	4.2	691
Other	81.7	25.3	422.6	122.1	261.5	1,168.8	1,217.0	4,189.0	313.0	1,293
Diseases of pulmonary circulation	4.4	0.7	44.0	6.6	10.2	35.7	61.1	108.1	9.6	146
Other forms of heart disease	70.5	13.0	531.2	109.6	627.5	1,448.2	1,401.2	3,615.3	270.3	4,571
Cardiac dysrhythmias	28.3	4.7	120.3	19.4	277.3	487.1	560.2	1,117.1	40.1	785
Heart failure	33.4	5.4	335.8	70.2	270.0	856.7	681.7	2,340.1	226.6	3,686
Non-rheumatic valvular disease	4.0	1.8	29.2	12.5	55.1	68.3	104.2	104.9	_	45
Cardiomyopathy and other heart diseases	4.9	1.1	46.0	7.5	77.4	36.1	55.1	149.7	3.0	55
Cerebrovascular disease	39.7	7.2	582.7	111.3	206.7	469.1	460.6	568.5	274.5	7,259
Diseases of arteries, arterioles, capillaries	19.6	5.7	190.3	43.2	234.9	259.9	359.4	410.6	119.4	999
Atherosclerosis	4.7	1.0	41.3	7.1	102.9	21.1	26.7	12.1	8.0	221
Aortic aneurysm	3.8	0.8	42.0	8.3	58.2	50.0	84.5	63.4	8.9	80
Other peripheral vascular disease	11.1	4.0	107.0	27.8	73.9	188.7	248.2	335.1	102.5	697
Diseases of veins, lymphatics, other	36.0	26.2	176.0	85.5	176.7	730.5	718.0	909.5	128.3	878
Phlebitis and thrombophlebitis	1.2	0.3	8.3	2.4	43.6	152.3	211.5	257.2	40.6	47
Varicose veins of leg	10.9	10.1	53.7	33.0	17.5	92.5	96.6	62.9	32.0	107
Hemorrhoids	12.6	12.6	31.4	29.2	26.8	279.4	193.3	454.4	40.1	115
Other	11.4	3.1	82.6	20.9	88.8	206.3	216.6	135.0	15.6	609
Unspecified treatment and aftercare	1.2	0.4	3.3	1.4	17.0	13.8	12.0	33.4	_	18
Prevention and screening	0.1	0.0	0.1	0.0	128.6	30.7	35.5	7.6	_	0
Total	291.0	83.1	2,242.5	519.4	2,167.8	9,475.6	7,286.3	27,433.6	2,294.7	16,051

Table C.3: Estimated health service utilisation for diseases of the circulatory system by health sector and disease type, 1993–94

(a) Public acute, public psychiatric and repatriation hospitals.

(b) Out-of-hospital medical services only.

Table C.4: Total health system costs o	f diabetes and high blood cholesterol by	/ health sector, 1993–94 (\$ million)
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	Hospital in	patients			Medical s	ervices ^(b)	Pharmace	euticals				
ICD-9 chapter	Public hospitals ^(a)	Private hospitals	Non- inpatients	Nursing homes	GPs	Specialist	Prescriptior	Over-the- counter	Allied health	Research	Other ^(c)	Total costs ^(d)
High blood cholesterol	0.1	0.0	6.0	_	15.3	27.1	130.5	4.1	4.1	3.7	8.4	199.4
Diabetes mellitus	58.1	10.4	27.6	19.6	25.7	39.8	93.3	6.1	18.5	19.8	53.0	371.9
Insulin-dependent (Type 1)	28.1	3.3	10.8	7.3	10.8	16.9	38.7	2.7	7.6	8.3	20.6	155.2
Non-insulin dependent (Type 2)	29.9	7.0	16.7	12.3	14.9	22.9	54.6	3.4	10.9	11.5	32.4	216.7
Hypoglycemia and hyperinsulinism	3.9	0.2	2.8	4.4	0.8	1.0	0.4	0.3	0.4	1.0	0.6	15.9

(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes home blood glucose testing equipment and supplies, other institutional, non-institutional and administration expenditure.

(d) Excludes expenditure for other public health services, community health services, ambulances.

Table C.5: Estimated health service utilisation for diabetes and high blood cholesterol by health sector and disease type, 1993–94 (\$ million)

	Admissions (('000)	Bed days	('000)	I	Medical serv	rices ^(b) ('000)			
ICD-9 chapter	Public hospitals ^(a)	Private hospitals	Public hospitals ^(a)	Private hospitals	Non-inpatient occasions of service ('000)	GPs	Specialist	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
High blood cholesterol	0.0	0.0	0.1	0.0	90.7	638.7	1,365.7	2,354.1	237.2	_
Diabetes mellitus	16.1	2.5	141.1	24.5	417.1	1,031.4	1,494.9	1,630.4	1,071.4	656
Insulin-dependent (Type 1)	8.7	0.8	66.6	7.2	163.8	431.6	619.9	663.7	439.3	200
Non-insulin dependent (Type 2)	7.4	1.7	74.5	17.3	253.3	599.8	875.1	966.7	632.1	337
Hypoglycemia and hyperinsulinism	2.3	0.1	9.5	0.5	42.7	33.2	35.6	5.2	23.9	200

(a) Public acute, public psychiatric and repatriation hospitals.

(b) Out-of-hospital medical services only.

	Hospital in	patients				Med	ical services	(b)	Phar	maceuticals				
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	Nursing homes	GPs	Specialis	Total medical	Prescription	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	1.5	0.1	2.4	3.9	_	0.1	0.5	0.6	0.0	0.1	0.1	_	0.3	5.0
5–14	1.7	0.2	2.1	4.0	_	0.2	0.0	0.2	0.1	0.1	0.2	_	0.3	4.6
15–24	5.3	1.1	4.4	10.7	_	1.3	3.2	4.5	1.2	0.2	1.5	0.3	1.1	18.1
25–34	11.1	2.8	4.7	18.5	_	3.9	5.6	9.6	4.3	0.9	5.2	0.8	2.2	36.2
35–44	30.9	9.1	7.7	47.7	_	7.8	8.1	15.9	16.7	3.8	20.4	3.6	5.7	93.4
45–54	76.4	27.9	10.0	114.3	2.5	14.7	18.5	33.2	36.3	7.4	43.7	1.2	12.3	207.2
55–64	136.4	49.2	11.0	196.6	10.3	21.9	34.2	56.1	60.4	13.1	73.5	3.1	21.3	360.9
65–74	226.4	67.1	26.2	319.6	44.6	30.8	45.8	76.7	85.5	14.9	100.4	4.0	33.9	579.1
75+	190.1	39.4	4.7	234.2	159.9	24.7	22.4	47.1	50.0	8.0	58.0	8.0	30.6	537.8
Total ^(e)	679.7	196.8	73.3	949.7	217.2	105.5	138.4	244.0	254.6	48.5	303.1	21.0	107.5	1,842.4
Females														
0–4	1.2	0.0	0.3	1.5	_	0.1	0.3	0.3	0.1	0.0	0.1	_	0.1	2.0
5–14	1.1	0.1	0.5	1.7	_	0.2	0.5	0.7	0.3	0.0	0.4	_	0.2	2.9
15–24	3.8	0.7	1.0	5.6	_	1.3	1.6	2.9	1.3	0.3	1.6	_	0.6	10.7
25–34	10.0	4.0	7.6	21.6	_	3.9	5.1	9.1	4.9	1.3	6.2	0.8	2.4	40.0
35–44	18.4	9.4	4.3	32.1	1.1	7.3	11.6	18.9	14.3	4.1	18.4	1.0	4.5	76.1
45–54	33.9	14.1	19.6	67.6	1.3	14.1	17.0	31.1	36.7	9.4	46.1	2.6	9.8	158.4
55–64	64.7	20.7	9.4	94.8	7.4	22.3	26.7	49.0	68.4	14.6	83.0	1.2	15.3	250.8
65–74	138.9	37.0	9.8	185.7	30.5	35.6	34.6	70.2	110.5	20.6	131.1	5.8	27.1	450.4
75+	223.9	54.7	17.5	296.0	329.4	48.7	28.6	77.3	108.4	16.4	124.8	7.3	50.4	885.3
Total ^(e)	496.3	140.8	69.9	707.0	369.7	133.6	125.9	259.5	344.8	66.8	411.7	18.7	110.5	1,877.0

Table C.6: Diseases of the circulatory system: total health system costs by health sector, sex and age, 1993–94 (\$ million)

(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Hospital admissions ('000) Hospital bed days ('000)			('000)		Medica	l services ^(b) (('000)					
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4	0.5	0.0	0.5	2.7	0.1	2.8	37.0	5.0	8.7	13.7	1.5	_	
5–14	0.5	0.1	0.6	2.7	0.1	2.8	32.1	6.6	2.3	8.9	4.4	_	
15–24	1.7	0.5	2.2	7.5	1.0	8.5	66.5	50.4	66.5	116.8	38.9	18.5	
25–34	4.1	1.4	5.4	18.1	3.0	21.1	70.5	158.7	145.9	304.6	192.0	43.8	
35–44	10.4	3.4	13.8	45.7	9.4	55.1	117.3	312.1	219.1	531.2	697.3	210.1	
45–54	21.8	7.7	29.5	111.4	25.3	136.6	151.6	610.2	477.9	1,088.1	1,527.8	68.3	67
55–64	34.6	10.7	45.3	209.4	47.2	256.7	167.0	899.2	853.5	1,752.6	2,633.6	181.7	281
65–74	50.1	13.7	63.8	369.7	82.2	451.9	396.6	1,290.0	1,205.6	2,495.5	3,869.3	228.6	1,218
75+	40.5	8.2	48.7	404.7	82.5	487.2	70.5	922.3	640.1	1,562.5	2,433.6	461.4	4,373
Total ^(c)	164.2	45.7	209.9	1,172.0	250.8	1,422.8	1,109.1	4,254.3	3,619.6	7,874.0	11,398.3	1,212.5	5,940
Females													
0–4	0.4	0.0	0.4	2.2	0.1	2.3	4.4	2.2	4.0	6.3	3.0	—	
5–14	0.4	0.0	0.4	1.9	0.1	2.0	7.3	8.7	13.0	21.7	16.3	_	
15–24	1.4	0.4	1.7	6.0	0.9	6.9	14.9	55.4	36.8	92.2	59.5	_	
25–34	4.0	1.8	5.8	15.5	4.0	19.6	115.7	168.9	131.7	300.6	219.8	46.9	
35–44	6.9	4.0	10.9	28.3	12.7	41.0	65.1	302.4	296.5	598.9	641.4	56.3	31
45–54	10.8	5.3	16.1	56.4	15.6	71.9	296.1	579.2	461.2	1,040.3	1,611.4	149.8	35
55–64	18.1	5.9	24.0	111.9	30.9	142.8	142.5	910.5	705.7	1,616.2	3,040.9	71.9	202
65–74	34.2	8.5	42.7	258.4	56.0	314.4	148.2	1,448.6	1,027.8	2,476.4	5,022.4	333.9	835
75+	50.7	11.6	62.4	586.8	148.3	735.0	264.4	1,745.5	989.8	2,735.2	5,420.5	423.3	9,009
Total ^(c)	126.9	37.4	164.3	1,070.5	268.6	1,339.1	1,058.7	5,221.3	3,666.7	8,888.0	16,035.3	1,082.1	10,111

(b) Out-of-hospital medical services only.

	Hospital in	patients				Medi	cal services	(b)	Pha	armaceuticals				
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	Nursing homes	GPs	Specialis	Total medical	Prescription	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	0.0	_	_	0.0	_	_	_	_	_	_	_	_	0.0	0.0
5–14	0.0	_	_	0.0	_	_	_	_	_	_	_	_	0.0	0.0
15–24	0.2	0.0	_	0.2	_	0.4	1.3	1.7	0.3	0.1	0.4	_	0.2	2.5
25–34	0.6	0.0	2.5	3.1	_	2.0	2.6	4.6	3.5	0.6	4.1	_	0.9	12.6
35–44	0.9	0.1	_	0.9	_	5.1	4.3	9.4	13.6	2.5	16.1	2.9	2.1	31.5
45–54	1.2	0.1	3.3	4.6	0.1	10.0	6.3	16.3	28.8	5.2	34.0	0.6	4.1	59.6
55–64	1.6	0.2	_	1.8	0.1	12.3	10.2	22.5	42.6	7.5	50.1	1.8	5.6	81.9
65–74	2.0	0.3	3.4	5.7	0.4	14.7	11.5	26.2	52.4	8.0	60.4	1.5	6.9	101.1
75+	1.3	0.4	_	1.7	0.6	7.8	4.7	12.5	22.7	2.9	25.6	2.1	3.1	45.6
Total ^(e)	7.8	1.1	9.2	18.1	1.0	52.4	40.9	93.2	163.8	26.8	190.6	9.0	22.8	334.8
Females														
0–4	0.0	_	_	0.0	_	0.0	0.0	0.1	0.1	_	0.1	_	0.0	0.2
5–14	0.1	_	_	0.1	—	0.1	0.1	0.2	0.2	_	0.2	—	0.0	0.5
15–24	0.1	0.0	_	0.1	_	0.6	0.3	0.9	0.7	0.1	0.8	_	0.1	2.0
25–34	0.4	0.0	3.3	3.7	_	1.5	1.7	3.2	2.8	0.6	3.4	_	0.8	11.1
35–44	0.8	0.1	1.6	2.5	_	4.4	3.6	8.0	11.4	2.4	13.7	0.7	1.8	26.8
45–54	1.2	0.2	11.6	13.1	0.1	10.3	7.7	18.0	31.3	5.9	37.2	2.5	5.2	75.9
55–64	1.8	0.4	4.8	7.0	0.1	15.8	12.7	28.5	57.6	10.0	67.6	1.0	7.6	111.8
65–74	3.0	0.9	1.2	5.1	0.4	21.6	14.6	36.2	80.8	12.6	93.4	3.4	10.1	148.6
75+	3.4	1.6	_	5.0	5.1	20.1	8.4	28.5	60.9	8.2	69.0	3.6	8.1	119.4
Total ^(e)	10.9	3.2	22.6	36.7	5.6	74.4	49.0	123.4	245.7	39.7	285.5	11.2	33.9	496.2

Table C.8: Hypertension: total health system costs by health sector, sex and age, 1993–94 (\$ million)

(a) Public acute, public psychiatric and repatriation hospitals.

(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Hospital admissions ('000) Hospital bed days ('000)				Medica	I services ^(b) ('000)						
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4	0.0	_	0.0	0.0	_	0.0	_	—	_	_	_	_	_
5–14	0.0	—	0.0	0.1	—	0.1	—	—	—	_		—	_
15–24	0.1	0.0	0.1	0.4	0.0	0.4	—	16.0	31.5	47.5	12.4	—	—
25–34	0.2	0.0	0.2	0.9	0.0	1.0	37.8	78.9	85.7	164.5	144.5	_	_
35–44	0.3	0.0	0.4	1.5	0.1	1.6	—	210.5	135.3	345.8	544.5	170.3	_
45–54	0.5	0.1	0.5	2.0	0.3	2.3	49.7	417.9	223.6	641.5	1,175.9	36.0	1
55–64	0.6	0.1	0.7	3.2	0.5	3.6	_	523.3	320.9	844.2	1,770.6	102.8	2
65–74	0.7	0.1	0.8	4.0	0.7	4.7	51.9	645.6	379.5	1,025.1	2,214.0	86.7	10
75+	0.4	0.1	0.6	3.6	1.2	4.8	—	314.4	150.4	464.8	992.1	123.3	15
Total ^(c)	2.8	0.5	3.3	15.7	2.8	18.5	139.3	2,206.5	1,326.9	3,533.4	6,853.9	519.0	29
Females													
0–4	0.0	—	0.0	0.1	—	0.1	—	1.6	2.3	3.9	3.0	—	—
5–14	0.0	_	0.0	0.1	_	0.1	—	2.7	4.4	7.1	10.8	—	—
15–24	0.1	0.0	0.1	0.3	0.0	0.3	—	25.1	10.6	35.7	27.3	—	_
25–34	0.2	0.0	0.2	0.6	0.1	0.7	50.1	68.6	46.5	115.0	115.8	_	_
35–44	0.4	0.0	0.4	1.6	0.2	1.8	24.7	183.4	109.8	293.1	488.8	39.6	_
45–54	0.6	0.1	0.7	2.6	0.6	3.2	175.4	428.3	251.2	679.6	1,328.0	143.2	2
55–64	0.8	0.2	0.9	3.8	0.8	4.6	72.7	659.6	394.5	1,054.1	2,489.8	58.0	2
65–74	1.2	0.3	1.5	7.6	2.7	10.3	18.8	912.6	484.1	1,396.7	3,502.7	196.3	10
75+	1.3	0.5	1.8	11.7	5.2	16.9	_	776.8	303.1	1,079.9	2,672.9	207.4	140
Total ^(c)	4.5	1.2	5.7	28.3	9.6	37.9	341.7	3,058.7	1,606.4	4,665.2	10,639.1	644.5	154

Table C.9: Hypertension: health service utilisation by health sector, sex and age, 1993–94

(b) Out-of-hospital medical services only.

	Hospital in	patients				Med	ical services	(b)	Pha	armaceuticals				
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	Nursing homes	GPs	Specialis	Total medical	Prescription	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	0.0	_	_	0.0	_	0.0	_	0.0	0.0	0.0	0.0	_	0.0	0.1
5–14	0.2	0.0	_	0.2	_	_	_	_	_	_	_	_	0.0	0.3
15–24	0.3	0.0	0.2	0.5	_	0.0	_	0.0	0.1	0.0	0.1	_	0.0	0.6
25–34	0.3	0.1	0.0	0.3	_	0.0	_	0.0	_	0.0	0.0	—	0.0	0.4
35–44	0.4	0.1	0.0	0.5	_	0.0	_	0.0	_	0.0	0.0	_	0.0	0.6
45–54	0.7	0.2	0.2	1.1	_	0.1	0.1	0.1	0.0	0.1	0.1	_	0.1	1.3
55–64	1.2	0.4	0.2	1.8	0.1	0.1	0.4	0.5	0.2	0.2	0.4	_	0.1	2.9
65–74	1.4	0.4	0.1	1.8	0.2	0.0	0.0	0.1	0.1	0.0	0.1	_	0.1	2.2
75+	0.5	0.3	0.0	0.8	_	0.0	0.0	0.0	-	0.0	0.0	—	0.0	0.9
Total ^(e)	5.1	1.4	0.7	7.2	0.2	0.3	0.5	0.8	0.3	0.3	0.7	—	0.5	9.4
Females														
0–4	0.0	—	—	0.0	—	—	—	—	—	—	—	—	0.0	0.0
5–14	0.2	0.0	_	0.3	_	—	—	_	—	—	—	—	0.0	0.3
15–24	0.3	0.0	_	0.3	_	0.0	_	0.0	0.0	0.0	0.0	—	0.0	0.4
25–34	0.5	0.0	0.1	0.7	_	0.1	0.0	0.1	0.0	0.0	0.0	_	0.0	0.9
35–44	1.0	0.1	0.0	1.1	_	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	1.5
45–54	1.2	0.5	0.1	1.8	_	0.0	0.0	0.1	0.0	0.0	0.1	_	0.1	2.0
55–64	2.0	0.7	0.0	2.7	_	0.0	0.2	0.3	0.1	0.1	0.2	_	0.2	3.3
65–74	2.4	0.7	0.2	3.2	0.1	0.1	0.2	0.3	0.1	0.1	0.3	0.1	0.2	4.2
75+	1.0	0.4	0.0	1.4	0.3	0.1	0.1	0.2	0.1	0.0	0.2	_	0.1	2.1
Total ^(e)	8.8	2.4	0.4	11.6	0.3	0.4	0.6	1.0	0.5	0.3	0.8	0.2	0.7	14.6

Table C.10: Rheumatic heart disease: total health sy	stem costs by health sector,	sex and age, 1993–94 (\$ million)
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(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Hospital a	admissions (ons ('000) Hospital bed days ('000)				Medica	Il services ^(b) ('000)	0)			
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4	0.0	_	0.0	0.1	_	0.1	—	1.2	_	1.2	1.5	_	
5–14	0.1	0.0	0.1	0.4	0.0	0.4	—	_	_	_	_	_	
15–24	0.0	0.0	0.1	0.4	0.0	0.4	3.2	1.0	—	1.0	3.5	_	
25–34	0.0	0.0	0.1	0.4	0.0	0.4	0.2	0.5	—	0.5	_	_	
35–44	0.1	0.0	0.1	0.5	0.0	0.5	0.6	0.6	—	0.6	_	—	
45–54	0.1	0.0	0.1	0.6	0.1	0.8	2.7	2.8	3.2	6.0	2.9	_	
55–64	0.1	0.0	0.2	1.0	0.2	1.2	3.1	3.7	14.0	17.7	10.4	—	2
65–74	0.2	0.0	0.2	1.3	0.3	1.6	0.8	1.9	1.3	3.2	5.2	_	4
75+	0.1	0.0	0.1	0.7	0.3	1.0	0.0	0.3	1.2	1.5	_	—	
Total ^(c)	0.7	0.1	0.8	5.4	1.0	6.3	10.6	12.0	19.7	31.7	23.4	—	6
Females													
0–4	0.0	—	0.0	0.0	—	0.0	—	—	—	—	_	—	
5–14	0.1	0.0	0.1	0.6	0.0	0.7	—	—	—	—	_	—	
15–24	0.1	0.0	0.1	0.5	0.0	0.5	—	1.8	—	1.8	1.5	—	
25–34	0.1	0.0	0.1	0.7	0.0	0.7	1.5	1.9	1.9	3.8	3.1	—	
35–44	0.1	0.0	0.1	0.7	0.1	0.8	0.5	1.7	1.6	3.3	3.0	7.4	
45–54	0.2	0.1	0.2	1.0	0.3	1.4	1.0	1.3	1.2	2.5	3.6	—	
55–64	0.2	0.1	0.3	1.8	0.5	2.3	0.6	1.6	6.8	8.4	4.6	—	
65–74	0.3	0.1	0.3	2.4	0.5	2.8	2.3	4.1	8.1	12.3	13.0	4.3	1
75+	0.2	0.0	0.2	1.4	0.5	1.9	0.2	3.0	3.7	6.7	7.5	_	7
Total ^(c)	1.2	0.2	1.4	9.2	1.9	11.0	6.2	15.4	23.2	38.7	36.2	11.7	9

Table C.11: Rheumatic heart disease: health service utilisation by health sector, sex and age, 1993–94

(b) Out-of-hospital medical services only.

	Hospital in	patients				Med	ical services	(b)	Pha	armaceuticals				
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	Nursing homes	GPs	Specialis	Total medical	Prescription	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	0.0	_	_	0.0	_	_	_	_	_	_	_	_	0.0	0.0
5–14	0.0	0.0	_	0.0	—	—	_	_	_	—	_	—	0.0	0.0
15–24	0.1	0.0	_	0.1	—	0.0	0.0	0.0	_	0.0	0.0	—	0.0	0.1
25–34	1.6	0.2	0.2	2.0	_	0.1	0.2	0.3	0.1	0.0	0.1	_	0.1	2.5
35–44	13.5	3.4	2.6	19.5	—	0.5	0.7	1.3	1.2	0.2	1.4	0.7	1.3	24.2
45–54	44.4	17.8	1.7	63.9	0.4	2.2	5.7	7.9	4.8	0.6	5.4	0.3	4.5	82.4
55–64	72.8	33.2	4.3	110.3	1.7	4.0	11.5	15.4	10.0	1.6	11.6	0.7	8.1	147.8
65–74	93.5	38.2	3.0	134.7	7.1	5.7	12.6	18.3	19.3	1.5	20.7	0.6	10.5	192.0
75+	47.6	12.3	0.1	60.0	18.9	4.3	4.0	8.3	14.3	0.7	15.0	1.6	6.0	109.9
Total ^(e)	273.4	105.2	11.9	390.5	28.2	16.8	34.7	51.5	49.7	4.6	54.3	3.9	30.5	558.9
Females														
0–4	0.0	_	_	0.0	—	—	_	_	_	—	_	—	0.0	0.0
5–14	_	0.0	_	0.0	_	0.0	_	0.0	0.0	—	0.0	—	0.0	0.0
15–24	0.0	0.0	_	0.1	—	—	_	_	_	—	-	—	0.0	0.1
25–34	0.4	0.0	_	0.4	—	0.1	0.5	0.6	0.2	0.0	0.2	—	0.1	1.3
35–44	2.6	0.5	0.4	3.5	0.2	0.2	1.5	1.7	0.5	0.0	0.5	_	0.3	6.3
45–54	10.1	3.0	1.8	15.0	0.1	0.7	2.0	2.6	2.1	0.2	2.3	0.1	1.2	21.2
55–64	25.1	7.9	0.9	33.9	1.6	1.8	4.8	6.7	5.3	0.5	5.9	0.1	2.8	50.9
65–74	50.7	15.5	2.0	68.2	4.0	4.5	7.6	12.1	17.3	1.4	18.7	0.7	6.0	109.7
75+	50.1	11.8	0.7	62.7	38.5	7.9	4.8	12.8	22.5	1.0	23.5	0.7	8.0	146.1
Total ^(e)	139.1	38.8	5.8	183.7	44.3	15.3	21.3	36.5	48.0	3.1	51.1	1.6	18.3	335.5

Table C.12: Ischaemic heart disease: total health system costs h	by health sector, sex and age, 1993–94 (\$ million)
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(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Hospital a	admissions ('000)	Hospita	al bed days ('000)		Medica	I services ^(b) ('000)			
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4	0.0	_	0.0	0.0	_	0.0	—	_	_	_	_	_	_
5–14	0.0	0.0	0.0	0.0	0.0	0.0	—	—	—	—	_	—	_
15–24	0.0	0.0	0.0	0.2	0.0	0.2	—	0.0	0.2	0.2	_	_	—
25–34	0.5	0.1	0.5	2.3	0.2	2.4	3.6	3.3	5.7	9.0	3.6	—	_
35–44	4.0	0.8	4.7	17.5	2.4	19.9	39.7	17.8	18.1	35.9	50.3	39.8	_
45–54	12.1	3.6	15.7	58.0	13.3	71.3	25.8	85.8	117.5	203.3	198.8	14.7	11
55–64	18.4	6.0	24.4	96.8	26.2	123.0	64.6	153.4	220.8	374.2	432.8	42.4	47
65–74	22.5	6.8	29.3	133.4	34.9	168.3	45.5	234.5	273.2	507.7	822.0	37.1	195
75+	13.1	2.4	15.5	90.9	20.3	111.3	1.6	165.3	100.5	265.7	618.5	92.8	518
Total ^(c)	70.6	19.6	90.2	399.2	97.3	496.5	180.8	660.1	735.9	1,396.0	2,126.0	226.9	771
Females													
0–4	0.0	_	0.0	0.0	_	0.0	—	_	_	_	_	—	_
5–14	—	0.0	0.0	_	0.0	0.0	—	0.6	_	0.6	1.5	_	_
15–24	0.0	0.0	0.0	0.1	0.0	0.1	—	_	_	_		—	_
25–34	0.1	0.0	0.1	0.5	0.0	0.5	—	3.1	10.7	13.8	10.1	_	_
35–44	0.9	0.1	1.0	4.1	0.4	4.4	5.7	8.0	27.5	35.5	22.0	—	6
45–54	3.2	0.8	3.9	14.8	2.4	17.2	27.8	25.1	46.3	71.4	92.5	6.5	2
55–64	7.2	1.8	9.0	37.3	6.8	44.2	13.1	72.3	103.6	175.9	227.3	5.3	43
65–74	13.4	3.1	16.5	80.4	16.1	96.5	30.5	172.1	179.6	351.7	743.5	39.2	110
75+	14.8	2.6	17.4	120.0	23.4	143.4	10.4	253.9	158.6	412.5	1,005.1	39.3	1,053
Total ^(c)	39.7	8.3	48.0	257.2	49.2	306.3	87.5	535.0	526.3	1,061.3	2,102.0	90.3	1,213

Table C.13: Ischaemic heart disease: health service utilisation by health sector, sex and age, 1993–	Fable C	C.13: Ischaemic heart	disease: health	service utilisation	by health see	ctor, sex and age,	1993-94
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(b) Out-of-hospital medical services only.

	Hospital in	patients				Med	ical services	(b)	Pha	armaceuticals				
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	Nursing homes	GPs	Specialis	Total medical	Prescription	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	0.2	0.0	_	0.2	_	_	_	_	_	—	_	—	0.0	0.2
5–14	0.1	_	_	0.1	_	_	_	_	_	—	_	—	0.0	0.1
15–24	0.2	0.0	_	0.2	—	0.0	0.0	0.0	_	0.0	0.0	—	0.0	0.2
25–34	0.4	0.0	0.0	0.5	_	0.0	_	0.0	0.0	0.0	0.0	—	0.0	0.5
35–44	0.7	0.1	0.0	0.8	_	0.0	0.0	0.0	0.0	0.0	0.0	—	0.1	0.9
45–54	1.0	0.1	0.0	1.1	—	0.0	0.0	0.0	0.0	0.0	0.1	—	0.1	1.3
55–64	1.6	0.2	0.1	2.0	0.1	0.1	0.1	0.2	0.1	0.0	0.2	_	0.2	2.6
65–74	2.4	0.4	0.1	3.0	0.6	0.1	0.4	0.5	0.3	0.1	0.4	0.2	0.4	5.0
75+	2.2	0.3	0.0	2.5	1.2	0.2	0.2	0.4	0.2	0.0	0.2	0.0	0.3	4.6
Total ^(e)	8.8	1.2	0.3	10.2	1.9	0.5	0.7	1.2	0.6	0.2	0.8	0.2	1.1	15.4
Females														
0–4	0.2	0.0	—	0.2	—	—	_	—	—	—	_	—	0.0	0.2
5–14	0.0	0.0	—	0.0	_	—	—	—	—	—	—	—	0.0	0.0
15–24	0.2	0.0	_	0.2	_	0.0	0.0	0.0	—	0.0	0.0	—	0.0	0.2
25–34	0.6	0.1	_	0.6	—	0.0	0.5	0.5	0.1	0.0	0.1	—	0.1	1.3
35–44	0.9	0.1	0.1	1.1	_	0.1	0.1	0.2	0.0	0.0	0.0	—	0.1	1.4
45–54	1.0	0.3	0.2	1.5	_	0.1	0.1	0.2	0.2	0.0	0.2	_	0.1	2.0
55–64	1.4	0.3	0.0	1.7	0.3	0.1	0.1	0.1	0.2	0.0	0.2	_	0.2	2.5
65–74	2.6	0.4	0.1	3.1	0.3	0.1	0.1	0.3	0.4	0.0	0.4	_	0.3	4.4
75+	2.9	0.6	0.0	3.5	2.9	0.1	0.1	0.2	0.2	0.0	0.2	_	0.5	7.3
Total ^(e)	9.8	1.7	0.4	11.9	3.4	0.5	0.9	1.4	1.0	0.1	1.2	_	1.4	19.2

Table C.14: Diseases of pulmonary circulation: total health system costs by health sector, sex and age, 1993–94 (\$ million)

(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Hospital a	admissions ('000)	Hospita	al bed days (('000)		Medica	l services ^(b) ((000)			
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4	0.0	0.0	0.0	0.3	0.0	0.3	—	_	_	_	_	_	_
5–14	0.0	_	0.0	0.1	_	0.1	—	_	_	_	_	_	_
15–24	0.0	0.0	0.0	0.3	0.0	0.3	—	0.0	0.0	0.0	_	_	_
25–34	0.1	0.0	0.1	0.9	0.1	1.0	0.0	0.0	_	0.0	0.0	_	_
35–44	0.2	0.0	0.2	1.6	0.1	1.7	0.6	0.5	0.0	0.5	0.0		_
45–54	0.3	0.0	0.3	2.2	0.1	2.4	0.3	0.6	1.8	2.4	3.5		_
55–64	0.4	0.1	0.5	3.8	0.5	4.2	1.9	4.8	5.9	10.7	7.3		3
65–74	0.6	0.1	0.7	5.5	1.1	6.6	1.7	6.4	13.0	19.4	16.9	9.6	16
75+	0.4	0.1	0.5	5.6	0.8	6.3	0.1	5.7	9.6	15.2	11.4	0.0	33
Total ^(c)	2.1	0.3	2.3	20.2	2.7	22.9	4.6	18.0	30.2	48.2	39.1	9.6	53
Females													
0–4	0.0	0.0	0.0	0.2	0.0	0.2	—	_	_	_	_	_	_
5–14	0.0	0.0	0.0	0.0	0.0	0.0	—	_	_	_			_
15–24	0.1	0.0	0.1	0.4	0.0	0.4	—	0.6	0.0	0.6			_
25–34	0.2	0.0	0.2	1.2	0.1	1.2	—	1.7	7.0	8.7	3.8	_	_
35–44	0.2	0.0	0.2	2.0	0.2	2.2	1.3	3.0	4.9	8.0	1.8		_
45–54	0.3	0.1	0.3	2.3	0.6	2.9	2.6	2.2	4.5	6.7	14.5	_	_
55–64	0.4	0.1	0.4	3.5	0.6	4.1	0.4	2.3	3.2	5.4	11.1		7
65–74	0.6	0.1	0.7	6.4	1.0	7.4	1.1	4.1	8.3	12.4	22.0	—	7
75+	0.6	0.1	0.7	7.8	1.5	9.4	0.2	3.8	3.0	6.9	15.8	_	78
Total ^(c)	2.3	0.4	2.8	23.8	3.9	27.7	5.6	17.7	30.9	48.6	68.9	_	93

Table C.15: Diseases of pulmonary circulation: health service utilisation by health sector, sex and age, 1993–94

(b) Out-of-hospital medical services only.

	Hospital in	patients				Med	ical services	(b)	Pha	armaceuticals				
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	Nursing homes	GPs	Specialis	Total medical	Prescription	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	0.7	0.0	_	0.7	_	_	_	_		_	_	_	0.1	0.8
5–14	0.7	0.0	1.5	2.2	_	0.1	_	0.1	0.1	0.0	0.1	_	0.1	2.5
15–24	2.1	0.2	_	2.3	—	0.2	1.3	1.4	0.0	0.0	0.0	_	0.3	4.0
25–34	2.9	0.3	0.5	3.7	—	0.2	0.6	0.9	0.0	0.1	0.1	0.1	0.3	5.1
35–44	5.1	0.9	2.6	8.6	_	0.5	0.6	1.1	0.4	0.5	1.0	_	0.7	11.4
45–54	10.7	2.2	3.5	16.4	0.3	0.9	3.8	4.7	1.4	0.8	2.2	0.1	1.5	25.3
55–64	21.1	4.7	4.8	30.6	1.9	2.5	4.8	7.3	4.4	2.0	6.3	_	2.9	49.0
65–74	41.1	9.5	3.9	54.6	7.5	4.9	10.6	15.5	8.2	3.1	11.4	0.7	5.4	95.1
75+	50.8	10.5	4.4	65.7	46.6	7.5	7.0	14.5	9.6	2.9	12.5	1.4	8.5	149.2
Total ^(e)	135.3	28.2	21.2	184.8	56.4	16.8	28.6	45.4	24.2	9.5	33.7	2.4	19.8	342.4
Females														
0–4	0.6	0.0	_	0.6	—	0.0	0.2	0.2	_	—	_	_	0.1	0.9
5–14	0.6	0.0	_	0.6	—	0.0	_	0.0	0.0	0.0	0.1	_	0.0	0.7
15–24	1.2	0.1	_	1.3	—	0.1	0.5	0.6	0.1	0.1	0.2	—	0.1	2.3
25–34	1.8	0.2	_	2.0	—	0.3	0.7	0.9	0.2	0.4	0.6	—	0.2	3.8
35–44	2.7	0.5	1.8	4.9	—	0.6	1.6	2.3	0.9	1.2	2.1	_	0.6	9.9
45–54	5.6	1.0	5.5	12.1	0.1	1.0	2.5	3.4	1.2	2.4	3.6	—	1.2	20.5
55–64	11.4	2.3	2.5	16.1	0.8	1.8	4.6	6.4	2.9	2.3	5.3	0.0	1.8	30.4
65–74	29.8	6.3	2.0	38.1	5.3	5.0	5.8	10.8	7.9	4.4	12.3	0.4	4.1	70.9
75+	66.2	17.1	8.4	91.7	104.6	13.5	9.2	22.7	17.9	5.4	23.3	1.8	14.6	258.8
Total ^(e)	120.2	27.5	20.3	167.9	110.7	22.4	25.1	47.4	31.2	16.2	47.4	2.3	22.7	398.5

Table C.16: Other forms of heart disease: total health system costs by health sector, sex and age, 1993–94 (\$ million)

(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Hospital a	admissions ((000)	Hospita	al bed days (('000)		Medica	I services ^(b)	('000)			
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4	0.3	0.0	0.3	1.3	0.0	1.3	_	_	_	_	_		
5–14	0.2	0.0	0.2	1.0	0.0	1.0	22.1	2.2	_	2.2	4.4	_	
15–24	0.6	0.0	0.7	2.6	0.1	2.7	_	6.8	22.5	29.3	2.1	_	
25–34	1.0	0.1	1.1	4.4	0.2	4.6	7.5	9.8	9.1	18.9	1.6	6.4	
35–44	1.8	0.3	2.1	7.6	0.8	8.3	39.0	20.3	14.9	35.2	23.9		
45–54	3.4	0.6	4.0	16.7	2.1	18.9	53.1	39.3	72.7	112.0	76.4	7.9	8
55–64	6.2	1.1	7.4	35.6	5.3	41.0	72.7	97.3	118.9	216.3	245.5		53
65–74	11.2	2.1	13.3	72.9	13.8	86.8	59.6	201.1	258.0	459.1	529.1	40.5	205
75+	12.7	2.4	15.1	113.0	23.0	136.0	66.9	265.2	199.4	464.6	648.2	82.8	1,275
Total ^(c)	37.4	6.7	44.1	255.2	45.4	300.6	320.9	642.1	695.6	1,337.6	1,531.2	137.6	1,542
Females													
0–4	0.2	0.0	0.2	1.2	0.0	1.3	_	0.6	1.8	2.3	_		
5–14	0.2	0.0	0.2	0.7	0.0	0.7	_	0.6	_	0.6	2.3		
15–24	0.4	0.0	0.4	1.5	0.2	1.6	_	5.6	8.7	14.2	6.2	-	
25–34	0.6	0.1	0.7	2.6	0.3	2.9	_	10.5	16.1	26.6	12.0		
35–44	1.0	0.2	1.2	3.6	0.5	4.0	27.0	23.7	38.6	62.3	42.9		
45–54	1.8	0.3	2.1	8.5	1.1	9.6	83.7	37.7	54.5	92.2	72.1	_	3
55–64	3.6	0.6	4.2	20.4	3.0	23.3	37.2	73.2	94.4	167.6	167.2	2.5	22
65–74	8.4	1.4	9.7	56.9	9.8	66.7	30.9	188.2	168.1	356.3	535.6	24.9	144
75+	17.0	3.7	20.7	178.1	49.3	227.4	127.8	466.0	323.5	789.5	1,245.9	105.3	2,860
Total ^(c)	33.1	6.3	39.4	276.0	64.2	340.2	306.7	806.1	705.6	1,511.7	2,084.1	132.7	3,029

Table C	C.17:	Other	forms o	f hear	t disease:	healt	h servic	e utilis	sation l	by l	healt	h sector	, sex and	l age,	1993-9	4
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(b) Out-of-hospital medical services only.

	Hospital in	patients				Med	ical services	(b)	Pha	armaceuticals				
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	Nursing homes	GPs	Specialis	Total medical	Prescription	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	0.2	_	_	0.2	_	_	_	_	_	_	_	_	0.0	0.2
5–14	0.0	_	0.7	0.8	—	0.0	_	0.0	0.1	0.0	0.1	—	0.1	0.9
15–24	0.1	0.0	_	0.1	_	_	_	_	_	_	_	_	0.0	0.2
25–34	0.2	_	0.0	0.2	_	0.0	_	0.0	_	0.0	0.0	_	0.0	0.4
35–44	0.5	0.0	0.1	0.6	_	0.0	_	0.0	0.1	0.0	0.1	_	0.1	1.0
45–54	1.9	0.1	0.5	2.5	0.2	0.1	0.4	0.5	0.4	0.1	0.5	_	0.2	4.3
55–64	6.2	0.6	1.7	8.5	1.3	0.8	1.9	2.7	1.6	0.7	2.3	_	0.9	16.2
65–74	17.5	2.6	2.3	22.4	5.4	2.9	5.5	8.4	4.5	1.9	6.3	0.5	2.6	46.1
75+	30.3	5.1	3.1	38.5	36.9	5.4	4.6	10.0	6.8	2.0	8.8	1.2	5.7	101.5
Total ^(e)	56.9	8.4	8.5	73.8	43.9	9.4	12.4	21.7	13.4	4.8	18.1	1.6	9.5	170.9
Females														
0–4	0.2	0.0	_	0.2	_	_	_	_	_	_	_	_	0.0	0.2
5–14	0.0	0.0	_	0.0	_	0.0	_	0.0	0.0	0.0	0.1	_	0.0	0.2
15–24	0.1	0.0	_	0.1	_	_	_	_	_	_	_	_	0.0	0.1
25–34	0.1	0.0	_	0.1	_	0.0	0.0	0.0	0.1	0.0	0.1	_	0.0	0.4
35–44	0.3	0.0	0.0	0.3	_	0.0	_	0.0	0.0	0.0	0.1	_	0.0	0.6
45–54	1.1	0.1	1.2	2.3	0.1	0.2	0.5	0.7	0.4	0.5	0.9	_	0.2	4.3
55–64	3.7	0.4	0.7	4.7	0.4	0.7	0.9	1.6	1.0	0.7	1.6	0.0	0.5	9.3
65–74	12.7	1.5	1.0	15.2	4.4	2.8	2.5	5.3	4.5	2.1	6.7	0.4	1.9	34.6
75+	43.0	10.8	6.5	60.3	86.4	10.7	6.8	17.5	13.3	4.1	17.5	1.8	10.9	195.2
Total ^(e)	61.5	12.8	9.3	83.7	91.4	14.5	10.6	25.1	19.3	7.5	26.8	2.3	13.7	245.2

Table C.18: Heart failure: total health system costs by health sector, sex and age, 1993–94 (\$ million)

(a) Public acute, public psychiatric and repatriation hospitals.

(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Hospital a	admissions ((000)	Hospita	al bed days (('000)		Medica	I services ^(b) ('000)			
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4	0.1	_	0.1	0.3	_	0.3	—	_	—	—	_	_	
5–14	0.0	_	0.0	0.1	_	0.1	11.1	1.1	—	1.1	2.9	_	
15–24	0.0	0.0	0.0	0.1	0.0	0.1	—	_	—	—	_	—	
25–34	0.1	_	0.1	0.5	_	0.5	0.2	0.6	_	0.6	_		
35–44	0.2	0.0	0.2	1.2	0.1	1.2	2.1	1.9	_	1.9	2.9		
45–54	0.7	0.1	0.8	4.9	0.3	5.2	7.3	7.0	8.4	15.4	24.0	_	5
55–64	2.1	0.2	2.3	15.7	1.5	17.2	26.4	33.1	45.5	78.6	94.3		37
65–74	5.3	0.8	6.1	42.5	7.2	49.7	35.2	121.2	150.1	271.3	317.3	26.4	148
75+	8.1	1.3	9.4	84.6	16.5	101.1	46.5	186.4	136.8	323.2	484.2	67.4	1,011
Total ^(c)	16.5	2.4	18.9	149.8	25.6	175.4	128.9	351.3	340.8	692.1	925.6	93.9	1,201
Females													
0–4	0.0	0.0	0.0	0.5	0.0	0.5	_	_	_	_	_		
5–14	0.0	0.0	0.0	0.0	0.0	0.0	_	0.6	_	0.6	2.3		
15–24	0.0	0.0	0.0	0.2	0.0	0.2	_	_	_	_	_		
25–34	0.0	0.0	0.0	0.4	0.1	0.5	—	0.9	0.7	1.6	3.9	_	
35–44	0.1	0.0	0.1	0.7	0.0	0.7	0.5	1.1	_	1.1	4.3		
45–54	0.4	0.0	0.4	2.6	0.2	2.7	17.5	9.3	10.0	19.3	26.9	—	2
55–64	1.2	0.1	1.3	9.2	1.0	10.2	10.3	27.1	19.4	46.5	69.5	2.5	12
65–74	3.7	0.4	4.2	32.8	4.4	37.2	15.1	102.9	70.7	173.6	329.7	24.9	122
75+	11.4	2.4	13.8	137.0	38.9	175.9	97.7	363.6	239.9	603.5	977.9	105.3	2,363
Total ^(c)	16.9	3.0	19.9	186.0	44.6	230.6	141.1	505.4	340.9	846.2	1,414.5	132.7	2,499

Table C.19: Heart failure: health service utilisation by health sector, sex and age, 1993–94

(a) Public acute, public psychiatric and repatriation hospitals.

(b) Out-of-hospital medical services only.

	Hospital in	patients				Med	ical services	(b)	Pha	armaceuticals				
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	Nursing homes	GPs	Specialis	Total medical	Prescription	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	0.2	_	_	0.2	_	0.0	0.0	0.1	_	_	_	_	0.0	0.2
5–14	0.3	_	_	0.3	_	_	_	_	_	_	_	_	0.0	0.3
15–24	0.8	0.0	0.1	0.9	_	0.0	0.2	0.2	0.0	0.0	0.0	0.1	0.1	1.4
25–34	1.5	0.1	_	1.6	_	0.1	0.2	0.3	0.0	0.0	0.0	0.1	0.1	2.0
35–44	3.5	0.1	_	3.7	_	0.1	0.1	0.2	0.1	0.1	0.1	_	0.2	4.2
45–54	7.9	0.6	0.1	8.6	1.5	0.2	0.2	0.3	0.2	0.1	0.3	0.1	0.6	11.4
55–64	16.5	1.9	_	18.4	5.3	0.9	3.1	4.1	0.6	0.4	1.0	0.2	1.6	30.5
65–74	39.1	5.6	5.1	49.8	22.4	2.3	4.0	6.3	2.2	0.5	2.7	0.8	4.5	86.4
75+	49.0	7.0	_	56.0	72.3	2.7	3.0	5.8	1.3	0.4	1.7	1.9	7.6	145.2
Total ^(e)	118.6	15.4	5.3	139.3	101.5	6.4	10.9	17.2	4.4	1.4	5.8	3.1	14.7	281.7
Females														
0–4	0.2	_	_	0.2	_	_	_	_	_	_	_	_	0.0	0.2
5–14	0.1	0.0	_	0.1	_	0.0	0.2	0.2	_	_	_	_	0.0	0.3
15–24	0.7	0.0	_	0.7	_	0.1	0.1	0.2	0.0	0.1	0.1	_	0.1	1.1
25–34	1.3	0.0	0.1	1.4	_	0.0	0.0	0.1	0.0	0.0	0.0	_	0.1	1.6
35–44	2.8	0.4	_	3.2	0.7	0.2	0.9	1.1	0.1	0.1	0.2	0.1	0.3	5.7
45–54	5.4	0.4	_	5.8	0.8	0.3	0.5	0.8	0.4	0.1	0.5	_	0.4	8.3
55–64	11.2	1.8	_	13.0	3.8	0.8	0.9	1.6	0.6	0.3	0.9	0.1	1.1	20.4
65–74	27.1	3.9	0.2	31.2	16.7	1.6	2.8	4.5	1.4	0.4	1.8	0.6	3.0	57.8
75+	67.7	12.3	8.0	88.1	141.9	3.7	1.9	5.6	3.3	0.4	3.8	0.8	13.2	253.4
Total ^(e)	116.6	18.8	8.3	143.8	163.9	6.8	7.4	14.2	5.9	1.3	7.2	1.6	18.2	348.8

Table C.20: Cerebrovascular disease: total health system costs by health sector, sex and age, 1993–94 (\$ million)

(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Hospital a	admissions (('000)	Hospita	al bed days (('000)		Medica	I services ^(b)	('000)			
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4	0.0	_	0.0	0.3	_	0.3	_	1.0	1.3	2.3	_	· _	_
5–14	0.0	_	0.0	0.6	_	0.6	—	—	_	_	· _		_
15–24	0.1	0.0	0.1	1.3	0.0	1.4	1.6	1.6	2.6	4.2	2.3	8 8.4	_
25–34	0.3	0.0	0.3	3.4	0.1	3.5	—	3.7	2.4	6.1	0.7	4.2	_
35–44	0.6	0.0	0.7	6.2	0.3	6.5	_	2.6	2.6	5.3	4.4	· _	_
45–54	1.5	0.2	1.7	15.2	0.9	16.2	1.9	7.5	3.2	10.7	10.1	3.6	41
55–64	3.3	0.5	3.8	35.8	4.0	39.8	_	36.0	65.0	101.0	34.5	5 10.0	145
65–74	6.9	1.4	8.2	85.4	12.6	97.9	77.2	83.6	100.9	184.4	100.2	46.3	612
75+	7.9	1.5	9.4	125.9	21.5	147.5	_	90.6	90.7	181.4	66.0	108.9	1,978
Total ^(c)	20.7	3.6	24.3	274.2	39.5	313.6	80.7	226.7	268.7	495.4	218.1	181.3	2,776
Females													
0–4	0.0	_	0.0	0.3	_	0.3	—	—	_	_	· _		_
5–14	0.0	0.0	0.0	0.2	0.0	0.2	_	0.4	3.4	3.7		· _	_
15–24	0.1	0.0	0.1	1.3	0.0	1.3	—	4.9	4.5	9.4	3.6	. —	_
25–34	0.2	0.0	0.3	2.3	0.1	2.4	1.1	1.5	1.1	2.6	0.3		_
35–44	0.5	0.0	0.5	5.0	2.9	7.9	_	9.8	18.5	28.3	3.5	7.5	20
45–54	0.9	0.1	1.0	9.5	0.8	10.2	—	12.3	12.5	24.8	19.5	· _	21
55–64	2.0	0.2	2.2	25.3	9.5	34.8	_	26.7	21.9	48.6	43.6	4.7	103
65–74	4.7	0.8	5.5	65.7	12.0	77.6	3.4	63.6	74.3	137.9	74.0	33.3	457
75+	10.6	2.4	13.0	198.5	46.6	245.2	121.5	123.2	55.7	178.9	206.0	47.7	3,882
Total ^(c)	19.1	3.6	22.7	308.6	71.8	380.4	126.0	242.4	192.0	434.3	350.4	93.2	4,483

Table C.21: Cerebrovascular disease: health service utilisation by health sector, sex and age, 1993–94

(a) Public acute, public psychiatric and repatriation hospitals.

(b) Out-of-hospital medical services only.

	Hospital in	patients				Med	ical services	(b)	Pha	armaceuticals				
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	Nursing homes	GPs	Specialis	Total medical	Prescription	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	0.2	0.0	_	0.3	_	0.0	0.0	0.1	_	_	_	_	0.0	0.4
5–14	0.1	0.0	0.2	0.3	_	0.0	_	0.0	_	0.0	0.0	_	0.0	0.3
15–24	0.3	0.1	1.3	1.7	_	0.1	0.2	0.3	0.4	0.0	0.4	0.2	0.2	2.7
25–34	0.4	0.1	_	0.5	_	0.2	0.4	0.6	0.0	0.0	0.1	0.1	0.1	1.3
35–44	1.2	0.2	1.9	3.3	_	0.2	0.4	0.6	0.1	0.1	0.2	_	0.3	4.4
45–54	4.2	1.2	0.4	5.8	0.1	0.2	0.8	1.1	0.1	0.2	0.3	0.1	0.5	7.8
55–64	14.3	3.8	1.4	19.5	0.7	0.6	1.4	1.9	0.7	0.7	1.4	0.2	1.7	25.4
65–74	36.8	8.6	6.4	51.8	5.0	1.2	3.6	4.8	0.8	0.8	1.7	0.1	4.5	67.9
75+	29.8	6.2	_	36.0	10.9	0.9	2.2	3.2	0.7	0.6	1.4	0.9	3.7	56.0
Total ^(e)	87.4	20.2	11.5	119.1	16.6	3.5	9.0	12.5	2.8	2.6	5.3	1.6	11.1	166.2
Females														
0–4	0.1	0.0	_	0.1	_	_	_	_	_	_	_	_	0.0	0.1
5–14	0.1	0.0	_	0.1	_	0.0	0.0	0.1	—	—	—	—	0.0	0.2
15–24	0.2	0.1	_	0.3	_	0.0	0.1	0.1	_	0.0	0.0	_	0.0	0.4
25–34	0.5	0.1	1.2	1.8	_	0.2	0.4	0.6	0.0	0.1	0.1	0.0	0.2	2.7
35–44	1.1	0.3	_	1.3	0.1	0.2	1.0	1.2	0.1	0.1	0.2	_	0.2	3.0
45–54	1.8	0.6	_	2.4	0.1	0.3	0.6	0.8	0.2	0.2	0.4	_	0.3	4.0
55–64	5.0	1.4	_	6.3	0.1	0.4	0.7	1.1	0.3	0.4	0.7	0.0	0.6	8.8
65–74	14.4	4.6	2.8	21.7	1.9	0.9	1.5	2.4	0.7	0.9	1.6	0.3	2.1	30.0
75+	20.3	6.6	_	26.9	17.8	1.3	1.6	2.9	1.7	0.6	2.4	0.0	3.5	53.6
Total ^(e)	43.4	13.7	4.0	61.0	20.0	3.4	5.9	9.3	3.1	2.3	5.3	0.4	6.8	102.8

Table C.22: Diseases of arteries, arterioles, capillaries: total health system costs by health sector, sex and age, 1993–94 (\$ million)

(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Hospital admissions ('000)			Hospital bed days ('000)				Medical services ^(b) ('000)					
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of A prescriptions co ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4	0.1	0.0	0.1	0.4	0.0	0.5	—	1.2	1.6	2.8	_	·	_
5–14	0.0	0.0	0.0	0.2	0.0	0.2	2.4	1.5	—	1.5	_	· _	
15–24	0.1	0.0	0.1	0.5	0.0	0.5	20.2	3.5	2.7	6.1	4.1	10.2	
25–34	0.1	0.0	0.1	0.5	0.0	0.6	—	9.5	9.7	19.1	2.6	5.1	_
35–44	0.3	0.1	0.3	1.9	0.1	2.0	28.2	5.9	6.9	12.8	6.6		_
45–54	0.8	0.2	1.0	5.6	1.0	6.6	6.7	9.3	15.4	24.7	5.6	4.3	1
55–64	2.3	0.6	3.0	19.5	3.9	23.3	21.0	21.8	32.1	53.9	34.5	13.3	18
65–74	4.9	1.5	6.4	47.3	10.5	57.8	96.3	45.4	80.0	125.4	51.1	8.4	136
75+	3.6	0.9	4.5	43.9	9.0	53.0	—	35.6	50.2	85.8	39.5	53.6	298
Total ^(c)	11.8	3.4	15.1	115.6	24.6	140.2	174.8	133.8	198.4	332.1	143.9	95.0	453
Females													
0–4	0.0	0.0	0.1	0.2	0.0	0.2	—	—	—	_	_	· _	_
5–14	0.0	0.0	0.0	0.1	0.0	0.1	—	1.9	0.7	2.6	_	· _	_
15–24	0.1	0.0	0.1	0.3	0.1	0.5	—	1.2	2.0	3.2	_	·	_
25–34	0.1	0.0	0.2	0.7	0.1	0.8	17.7	8.8	10.3	19.1	1.9	1.7	_
35–44	0.2	0.1	0.3	2.1	0.3	2.4	—	9.8	22.2	32.0	5.1	—	3
45–54	0.4	0.1	0.6	2.7	0.6	3.3	—	10.5	10.6	21.1	13.2	. —	2
55–64	0.9	0.3	1.2	7.2	1.5	8.8	—	14.4	14.2	28.5	20.6	1.4	2
65–74	2.4	0.8	3.2	20.2	5.6	25.8	42.4	33.6	47.5	81.1	47.2	19.9	52
75+	3.1	1.0	4.1	36.9	10.4	47.3	—	45.9	53.5	99.4	178.6	5 1.4	487
Total ^(c)	7.4	2.4	9.8	70.5	18.6	89.2	60.2	126.1	161.0	287.1	266.7	24.4	546

	Cable C.23: Diseases of arteries	, arterioles, capillaries: h	nealth service utilisation by	health sector, sex and age, 1993–94	
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(b) Out-of-hospital medical services only.
	Hospital in	Hospital inpatients				Med	ical services	(b)	Pha	armaceuticals				
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	Nursing homes	GPs	Specialis	Total medical	Prescription	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	0.1	0.0	_	0.1	_	0.0	_	0.0	_	_	_	_	0.0	0.1
5–14	0.3	0.1	0.4	0.8	_	0.0	0.0	0.1	_	0.0	0.0	_	0.1	1.0
15–24	1.2	0.8	2.2	4.2	_	0.5	0.3	0.8	0.5	0.0	0.5	_	0.3	5.8
25–34	3.3	2.1	1.3	6.7	_	1.2	1.6	2.8	0.7	0.2	0.8	0.5	0.6	11.4
35–44	5.4	4.2	_	9.6	_	1.3	1.8	3.1	1.2	0.3	1.6	_	0.8	15.0
45–54	6.1	5.6	0.6	12.3	0.2	1.1	1.5	2.6	1.0	0.3	1.3	0.0	0.9	17.3
55–64	6.9	4.7	_	11.6	0.4	1.3	2.7	4.0	1.6	0.6	2.3	0.2	1.0	19.5
65–74	9.6	3.8	3.8	17.2	1.4	1.7	3.2	4.9	2.2	0.8	3.1	_	1.5	28.0
75+	8.4	2.3	_	10.7	9.4	1.1	1.2	2.3	1.0	0.3	1.3	_	1.3	25.0
Total ^(e)	41.3	23.6	8.3	73.2	11.3	8.2	12.4	20.6	8.2	2.7	10.9	0.7	6.4	123.2
Females														
0–4	0.0	0.0	_	0.0	_	_	_	_	_	—	_	_	0.0	0.1
5–14	0.1	0.0	_	0.1	_	0.1	0.1	0.2	0.0	—	0.0	—	0.0	0.3
15–24	1.0	0.5	_	1.5	_	0.4	0.4	0.8	0.4	0.0	0.4	_	0.2	2.9
25–34	4.5	3.4	2.3	10.2	_	1.7	1.3	2.9	1.5	0.2	1.7	0.8	0.9	16.4
35–44	6.3	7.5	_	13.8	0.1	1.5	2.7	4.2	1.2	0.2	1.4	0.0	1.1	20.6
45–54	7.4	8.0	_	15.4	0.2	1.5	3.6	5.2	1.3	0.5	1.8	—	1.2	23.9
55–64	6.6	6.0	_	12.5	0.8	1.5	2.6	4.1	1.3	0.8	2.0	_	1.1	20.6
65–74	8.6	4.7	1.1	14.3	1.9	1.7	1.8	3.5	1.7	0.8	2.5	0.3	1.2	23.8
75+	11.7	4.1	_	15.7	17.8	1.9	2.6	4.4	1.7	0.7	2.4	0.4	2.3	43.1
Total ^(e)	46.1	34.1	3.4	83.6	20.8	10.2	15.1	25.3	9.2	3.2	12.4	1.5	7.9	151.5

Table C.24: Diseases of veins, lymphatics, other: total health system costs by health sector, sex and age, 1993–94 (\$ million)

(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Hospital a	admissions (('000)	Hospital bed days ('000)				Medica	I services ^(b)				
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4	0.0	0.0	0.0	0.1	0.0	0.1	—	0.3	_	0.3	_		
5–14	0.2	0.1	0.2	0.3	0.1	0.4	6.5	1.8	2.3	4.1	_		
15–24	0.7	0.4	1.0	1.8	0.7	2.5	33.5	19.5	6.3	25.8	14.6	_	
25–34	1.9	1.1	3.0	5.3	2.4	7.7	19.4	50.9	31.3	82.2	39.0	28.0	
35–44	3.0	2.2	5.3	9.0	5.5	14.5	_	47.2	34.7	81.9	63.1		
45–54	3.1	2.9	6.0	10.7	7.3	18.0	9.0	43.7	34.0	77.7	54.5	1.8	4
55–64	3.0	2.3	5.3	13.4	6.6	20.0	_	53.5	74.7	128.2	89.6	13.3	12
65–74	3.0	1.6	4.7	19.5	8.1	27.6	56.9	69.8	99.7	169.5	128.3		37
75+	2.1	0.7	2.9	20.4	6.2	26.6	_	40.1	36.9	76.9	48.7		256
Total ^(c)	17.0	11.4	28.4	80.5	36.8	117.3	125.3	326.8	319.9	646.7	437.7	43.1	309
Females													
0–4	0.0	0.0	0.0	0.1	0.0	0.1	—	_	_	_	_		
5–14	0.1	0.0	0.1	0.1	0.0	0.2	_	2.6	4.6	7.2	1.8		
15–24	0.6	0.3	0.9	1.7	0.6	2.3	—	14.5	7.0	21.4	21.0	-	
25–34	2.4	1.6	4.0	6.8	3.4	10.2	35.4	69.4	34.3	103.8	72.7	45.2	
35–44	3.5	3.5	7.0	9.1	8.2	17.4	_	60.1	67.6	127.7	68.1	1.8	3
45–54	3.4	3.7	7.1	14.8	9.1	24.0	—	59.8	78.6	138.4	68.0	_	5
55–64	3.0	2.6	5.6	12.4	8.1	20.5	_	58.5	65.0	123.5	68.8		22
65–74	3.1	1.9	5.0	18.5	8.3	26.8	16.0	66.6	52.3	119.0	82.6	16.0	52
75+	3.0	1.2	4.3	31.8	11.0	42.8	_	72.1	88.6	160.7	88.8	22.2	487
Total ^(c)	19.1	14.8	33.8	95.5	48.7	144.2	51.4	403.7	398.1	801.8	471.8	85.2	569

Table C.25: Diseases of veins, lymphatics, o	other: health service utilisation by	health sector, sex and age, 1993-94
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(b) Out-of-hospital medical services only.

	Hospital in	Hospital inpatients				Med	ical services	(b)	Pharmaceuticals					
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	Nursing homes	GPs	Specialis	Total medical	Prescription	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	_	—	_	_	_	_	_	_	_	_	_	_	_	_
5–14	_	_	_	_	_	_	_	_	_	_	_	_	_	_
15–24	_	_	_	_	_	0.0	_	0.0	_	0.0	0.0	_	0.0	0.0
25–34	0.0	_	_	0.0	_	0.1	1.2	1.3	1.1	0.1	1.3	_	0.2	2.8
35–44	0.0	_	_	0.0	_	0.8	2.3	3.1	6.9	0.2	7.2	0.2	0.7	11.2
45–54	0.0	_	1.5	1.5	_	2.5	3.7	6.2	11.8	0.4	12.2	0.3	1.3	21.6
55–64	0.0	0.0	_	0.0	_	2.2	3.5	5.7	17.4	0.5	17.9	0.3	1.6	25.5
65–74	0.0	_	_	0.0	_	1.0	2.0	2.9	14.9	0.4	15.3	0.4	1.2	19.8
75+	0.0	0.0	_	0.0	_	0.1	0.6	0.7	1.7	0.0	1.7	_	0.2	2.6
Total ^(e)	0.0	0.0	1.5	1.6	_	6.7	13.2	19.9	53.9	1.7	55.6	1.2	5.1	83.4
Females														
0–4	_	_	_	_	_	_	_	_	_	_	_	_	_	_
5–14	_	_	_	_	_	_	_	_	_	_	_	_	_	_
15–24	0.0	_	_	0.0	_	0.0	0.0	0.0	0.7	0.0	0.7	_	0.1	0.8
25–34	0.0	_	_	0.0	_	0.2	1.7	1.9	0.4	0.0	0.4	0.3	0.2	2.7
35–44	0.0	_	_	0.0	_	0.6	2.0	2.6	4.9	0.1	5.1	0.2	0.5	8.4
45–54	0.0	_	_	0.0	_	2.1	3.2	5.3	10.0	0.3	10.3	0.4	1.0	17.1
55–64	0.0	_	0.8	0.8	_	4.0	3.6	7.5	31.9	1.1	33.0	1.3	2.8	45.3
65–74	0.0	_	1.1	1.1	_	1.4	2.4	3.8	23.9	0.8	24.6	0.5	1.9	31.9
75+	_	_	2.6	2.6	_	0.3	1.0	1.4	4.8	0.1	4.8	0.2	0.6	9.6
Total ^(e)	0.1	_	4.5	4.5	_	8.6	13.9	22.5	76.6	2.4	79.0	2.9	7.1	115.9

Table C.26: High blood cholesterol: total heal	th system cost	s by health sector, se	x and age, 1993–94 (\$ million)
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(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Hospital a	admissions ('000)	Hospita	al bed days (('000)		Medica	I services ^(b)	('000)			
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4		_	_	_	_	_	—	_	_	_	_	·	_
5–14	—	—		—	—	_	—	—	—	—	_	·	—
15–24		_	_	_	_	_	—	0.4	_	0.4	_	·	_
25–34	0.0	_	0.0	0.0	_	0.0	—	5.7	86.2	91.8	20.9		_
35–44	0.0	_	0.0	0.0	_	0.0	—	34.5	117.6	152.2	122.8	13.4	_
45–54	0.0	_	0.0	0.0	_	0.0	23.0	106.4	157.9	264.3	210.7	20.2	_
55–64	0.0	0.0	0.0	0.0	0.0	0.0	—	92.4	156.8	249.3	314.1	16.8	_
65–74	0.0	_	0.0	0.0	_	0.0	—	42.4	112.2	154.6	274.3	20.3	_
75+	0.0	0.0	0.0	0.0	0.0	0.0	—	3.8	33.1	36.9	29.5		_
Total ^(c)	0.0	0.0	0.0	0.0	0.0	0.0	23.0	285.5	663.8	949.4	972.2	70.6	_
Females													
0–4	—	—		—	—	_	—	—	—	—	_	·	—
5–14	—	—		_	_	_	—	_	—	_	_	·	—
15–24	0.0	—	0.0	0.0	—	0.0	—	0.9	0.1	0.9	12.9	_	—
25–34	0.0	_	0.0	0.0	_	0.0	—	8.6	93.2	101.8	7.4	14.7	_
35–44	0.0	_	0.0	0.0	_	0.0	—	23.8	114.7	138.5	87.3	13.5	_
45–54	0.0	_	0.0	0.0	_	0.0	—	85.0	147.1	232.1	179.1	24.8	_
55–64	0.0	_	0.0	0.0	_	0.0	11.5	161.1	164.4	325.5	576.8	74.0	_
65–74	0.0	_	0.0	0.0	_	0.0	16.3	59.7	121.0	180.8	431.9	26.2	_
75+	_	—	_	_	_	_	39.9	14.1	61.4	75.5	86.5	13.4	_
Total ^(c)	0.0	_	0.0	0.1	_	0.1	67.6	353.2	701.9	1,055.1	1,381.9	166.6	_

Table C.27: High blood cholesterol: health service utilisation by health sector, sex and age, 199	3–94
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(b) Out-of-hospital medical services only.

	Hospital in	Hospital inpatients				Medi	ical services	(b)	Pharmaceuticals					
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	Nursing homes	GPs	Specialis	Total medical	Prescriptior	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	0.3	0.0	_	0.4	_	0.1	0.1	0.1	0.1	_	0.1	_	0.1	0.7
5–14	1.3	0.0	1.0	2.3	_	0.1	0.1	0.2	0.4	0.1	0.4	_	0.5	3.4
15–24	1.4	0.0	_	1.4	_	0.1	0.5	0.6	0.8	0.1	0.9	_	0.6	3.5
25–34	1.3	0.1	_	1.4	_	0.3	1.3	1.6	0.6	0.2	0.8	0.1	1.0	4.9
35–44	2.1	0.2	_	2.3	_	1.0	0.9	1.9	3.7	0.3	4.0	0.9	2.4	11.4
45–54	3.3	0.5	_	3.7	_	1.8	3.0	4.8	3.9	0.5	4.4	0.7	3.7	17.2
55–64	5.5	0.8	5.8	12.2	_	3.0	6.1	9.1	13.8	0.9	14.7	1.5	10.0	47.5
65–74	7.9	1.9	2.1	11.9	1.2	3.7	5.9	9.6	14.2	1.0	15.2	2.9	10.5	51.4
75+	6.7	1.7	1.4	9.7	3.6	2.9	3.3	6.2	7.2	0.3	7.6	1.2	6.4	34.6
Total ^(e)	29.8	5.2	10.3	45.3	4.8	13.0	21.2	34.2	44.6	3.3	47.9	7.2	35.2	174.6
Females														
0–4	0.3	0.0	_	0.3	_	0.0	0.5	0.5	_	_	_	_	0.2	1.1
5–14	1.7	0.0	_	1.8	_	0.1	_	0.1	0.1	0.0	0.1	_	0.3	2.2
15–24	1.7	0.1	_	1.8	_	0.3	0.4	0.7	1.9	0.1	2.0	0.2	1.1	5.9
25–34	1.5	0.1	_	1.6	_	0.3	0.6	0.9	1.1	0.1	1.2	_	0.9	4.5
35–44	1.6	0.2	_	1.8	_	1.1	1.9	3.1	3.5	0.2	3.7	1.1	2.7	12.3
45–54	2.7	0.4	1.1	4.2	_	1.5	2.2	3.7	4.4	0.5	4.9	1.0	3.6	17.3
55–64	4.2	0.7	4.9	9.9	0.8	2.3	3.3	5.6	11.3	0.5	11.8	2.8	7.7	38.5
65–74	6.5	1.3	7.0	14.8	2.7	3.6	5.4	9.0	15.6	0.8	16.3	2.1	11.1	56.0
75+	8.1	2.2	4.2	14.6	11.3	3.5	4.3	7.9	11.0	0.6	11.5	4.0	10.1	59.4
Total ^(e)	28.3	5.2	17.2	50.7	14.8	12.7	18.6	31.3	48.7	2.8	51.5	11.3	37.6	197.3

Table C.28: Diabetes mellitus: total health system costs by health sector, sex and age, 1993–94 (\$ million)

(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes home blood glucose testing equipment and supplies, other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances.

	Hospital a	admissions ((000)	Hospita	al bed days (('000)		Medica	I services ^(b)				
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4	0.1	0.0	0.1	0.8	0.0	0.8	—	2.2	2.9	5.1	1.9	—	_
5–14	0.5	0.0	0.6	2.6	0.1	2.7	15.1	3.8	4.6	8.4	3.1	—	—
15–24	0.6	0.0	0.7	2.7	0.1	2.8	—	4.3	10.1	14.4	6.7	—	_
25–34	0.6	0.0	0.7	2.8	0.1	2.9	—	13.2	31.2	44.5	9.7	3.8	_
35–44	0.8	0.1	0.9	4.6	0.3	5.0	—	39.9	39.1	78.9	55.1	51.8	—
45–54	1.1	0.1	1.2	7.7	0.9	8.6	—	75.5	110.6	186.1	81.6	38.1	_
55–64	1.3	0.2	1.6	12.9	1.5	14.4	88.5	125.6	213.3	338.9	216.6	85.5	_
65–74	1.6	0.4	2.1	19.5	3.9	23.4	31.9	157.6	229.6	387.2	279.9	170.2	34
75+	1.2	0.3	1.6	16.2	4.0	20.2	20.8	108.7	130.7	239.4	154.2	67.3	97
Total ^(c)	8.0	1.3	9.3	69.8	11.0	80.7	156.3	530.6	772.1	1,302.8	808.7	416.6	131
Females													
0–4	0.1	0.0	0.1	0.7	0.0	0.7	—	1.2	6.2	7.4	_		—
5–14	0.8	0.0	0.8	3.6	0.1	3.7	—	1.9	—	1.9	1.8	—	_
15–24	0.8	0.1	0.9	3.3	0.3	3.6	—	13.8	8.5	22.3	14.9	14.1	_
25–34	0.6	0.1	0.6	2.9	0.3	3.2	—	12.0	16.3	28.3	17.1	—	_
35–44	0.6	0.1	0.7	3.7	0.4	4.2	—	34.9	51.9	86.8	46.1	62.8	_
45–54	0.8	0.1	0.9	6.4	0.9	7.3	16.8	60.8	83.3	144.1	91.2	56.3	_
55–64	1.2	0.2	1.4	10.9	1.4	12.3	74.7	95.0	115.3	210.3	172.9	164.5	22
65–74	1.6	0.3	1.9	15.9	2.9	18.7	105.3	143.8	236.9	380.7	272.1	123.6	74
75+	1.6	0.4	2.0	23.9	7.3	31.2	64.0	137.3	204.5	341.8	205.7	233.4	309
Total ^(c)	8.1	1.3	9.3	71.3	13.5	84.8	260.8	500.7	722.8	1,223.6	821.7	654.8	405

(b) Out-of-hospital medical services only.

	Hospital in	Hospital inpatients				Med	ical services	(b)	Pha	armaceuticals				
Sex / age	Public hospitals ^(a)	Private hospitals	Non- inpatients	Total hospital	l Nursing I homes	GPs	Specialis	Total medical	Prescription	Over-the- counter	Total	Allied health	Other ^(c)	Total costs ^(d)
Males														
0–4	0.1	0.0	_	0.1	_	_	_	_	_	_	_	_	0.0	0.1
5–14	0.0	0.0	_	0.0	_	0.0	_	0.0	_	_	_	_	0.0	0.1
15–24	0.1	_	_	0.1	_	0.0	0.1	0.1	_	0.0	0.0	_	0.0	0.2
25–34	0.1	0.0	_	0.1	_	0.0	_	0.0	_	_	_	_	0.0	0.2
35–44	0.1	0.0	_	0.1	_	0.1	0.1	0.2	0.1	_	0.1	_	0.0	0.4
45–54	0.2	0.0	1.5	1.7	_	0.0	0.0	0.0	_	0.1	0.1	_	0.2	2.0
55–64	0.2	0.0	_	0.2	_	0.1	0.1	0.1	_	0.0	0.0	_	0.0	0.4
65–74	0.4	0.0	1.4	1.8	0.2	0.0	0.1	0.1	_	0.0	0.0	_	0.2	2.4
75+	0.6	0.0	_	0.6	1.0	0.0	_	0.0	_	0.0	0.0	_	0.2	1.8
Total ^(e)	1.9	0.1	2.8	4.8	1.2	0.3	0.3	0.6	0.1	0.2	0.2	_	0.8	7.6
Females														
0–4	0.1	_	_	0.1	_	0.0	_	0.0	—	_	_	—	0.0	0.2
5–14	0.0	_	_	0.0	_	_	_	_	—	_	_	—	0.0	0.1
15–24	0.1	0.0	_	0.1	_	0.1	0.1	0.3	_	_	_	0.4	0.1	0.8
25–34	0.1	0.0	_	0.1	_	0.1	0.4	0.5	—	0.0	0.0	—	0.1	0.7
35–44	0.1	0.0	_	0.1	_	0.1	0.1	0.2	_	_	_	_	0.0	0.3
45–54	0.2	0.0	_	0.2	_	0.1	0.1	0.2	_	0.0	0.0	_	0.0	0.4
55–64	0.3	0.0	_	0.3	0.2	0.0	_	0.0	_	0.0	0.0	_	0.1	0.5
65–74	0.4	0.0	_	0.5	0.3	0.0	_	0.0	0.3	0.0	0.4	_	0.1	1.3
75+	0.8	0.1	_	0.9	2.7	0.1	_	0.1	_	0.0	0.0	_	0.4	4.0
Total ^(e)	2.0	0.2	_	2.2	3.1	0.5	0.7	1.2	0.3	0.1	0.5	0.4	0.8	8.3

Table C.30: Hypoglycemia and hyperinsulinism: total health system costs by health sector, sex and age, 1993–94 (\$ million)

(b) Medical services for private patients in hospitals are included under Hospital inpatients.

(c) Includes other institutional, non-institutional and administration expenditure, and research.

(d) Excludes expenditure for public health services, community health services, ambulances, medical aids and appliances.

	Hospital	admissions ('000)	Hospita	al bed days (('000)		Medica	I services ^(b)				
Sex / age	Public hospitals ^(a)	Private hospitals	Total hospital	Public hospitals ^(a)	Private hospitals	Total hospital	Non-inpatient occasions of service ('000)	GPs	Specialist	Total medical	No. of prescriptions ('000)	Allied health consultations ('000)	Nursing home residents
Males													
0–4	0.1	0.0	0.1	0.2	0.0	0.2		—	_	_	_	·	_
5–14	0.1	0.0	0.1	0.1	0.0	0.1		0.5	_	0.5	_	·	_
15–24	0.1	_	0.1	0.2	_	0.2		2.1	2.8	4.8	_	·	_
25–34	0.1	0.0	0.1	0.2	0.0	0.3		1.1	_	1.1	_	·	_
35–44	0.1	0.0	0.1	0.3	0.0	0.3		3.3	4.2	7.5	2.7		_
45–54	0.1	0.0	0.1	0.5	0.0	0.5	22.2	1.8	0.2	2.0	_	·	_
55–64	0.1	0.0	0.1	0.6	0.0	0.6		2.5	3.6	6.1	_	·	_
65–74	0.2	0.0	0.2	1.0	0.0	1.1	20.5	0.1	1.8	1.9	_	·	7
75+	0.2	0.0	0.2	1.5	0.0	1.5		0.9	_	0.9	_	·	27
Total ^(c)	1.2	0.1	1.2	4.5	0.1	4.7	42.7	12.3	12.5	24.8	2.7	_	34
Females													
0–4	0.1	_	0.1	0.2	_	0.2	—	1.2	—	1.2	_	·	_
5–14	0.1	_	0.1	0.1	_	0.1	—	—	—	_	_	·	_
15–24	0.1	0.0	0.1	0.2	0.0	0.2		6.0	6.9	12.9	_	24.0	_
25–34	0.1	0.0	0.1	0.2	0.0	0.2		3.7	11.2	14.9	_	·	_
35–44	0.1	0.0	0.1	0.2	0.0	0.2	—	3.3	2.7	6.0	_	·	_
45–54	0.1	0.0	0.1	0.4	0.0	0.4		3.1	2.3	5.3	_	·	_
55–64	0.1	0.0	0.1	0.5	0.0	0.5		0.5	_	0.5	_	·	5
65–74	0.2	0.0	0.2	1.2	0.1	1.2	_	1.9	_	1.9	2.5	_	8
75+	0.3	0.0	0.4	2.1	0.2	2.3	_	1.4	_	1.4	_	· <u> </u>	73
Total ^(c)	1.1	0.1	1.2	5.0	0.4	5.4	_	20.9	23.1	44.0	2.5	24.0	86

Table C.31: Hypoglycemia and hyperinsulinism: health service utilisation by health sector, sex and age, 1993–94

(b) Out-of-hospital medical services only.