

6 National Health Priority Areas

The National Health Priority Areas (NHPA) initiative is a collaborative effort involving Commonwealth, State and Territory governments. It seeks to focus public attention and health policy on those areas that are considered to contribute significantly to the burden of disease in Australia, and for which there is potential for health gain. The NHPAs agreed by Australian Health Ministers are cardiovascular health, cancer control, injury prevention and control, mental health, diabetes mellitus and asthma. The NHPA initiative recognises that in order to reduce the burden of disease, strategies should be holistic, encompassing the continuum of care from prevention through to treatment and management (AIHW & DHFS 1997).

This chapter provides an overview of the burden of disease associated with the six NHPAs. The burden of cardiovascular disease and renal failure attributable to diabetes has been included with the diabetes burden in this chapter. The six NHPAs account for 70% of the total burden of disease and injury in Australia, comprising 81% of the YLL and 57% of the YLD (Figure 6.1).

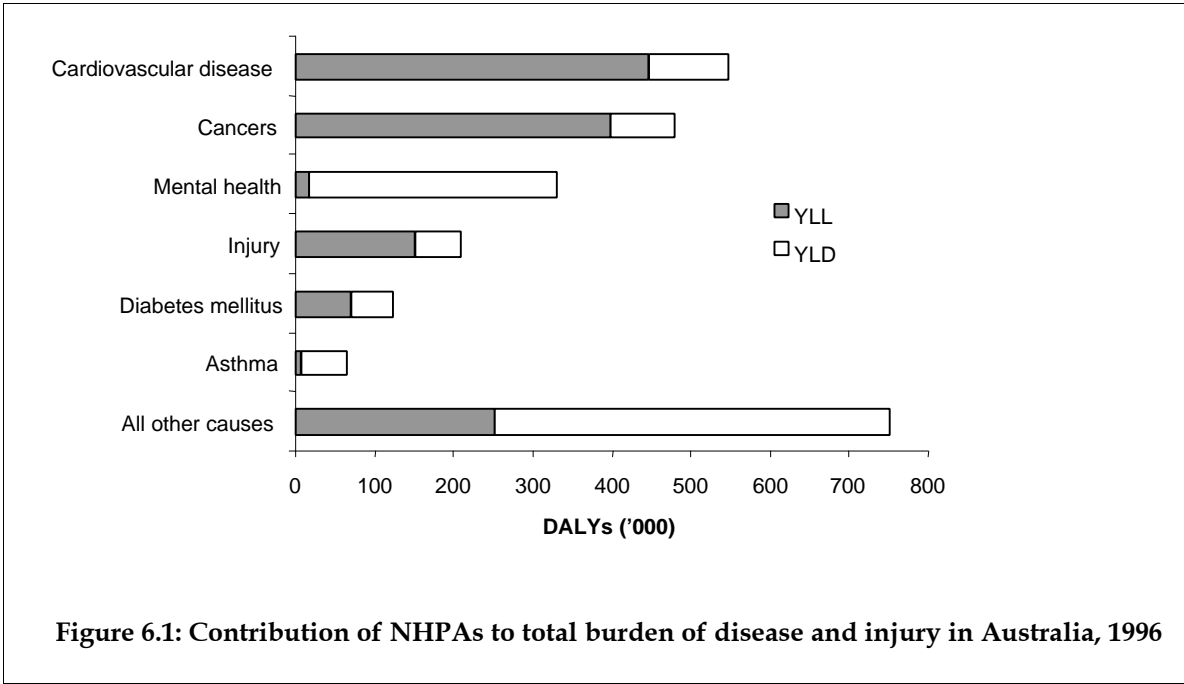


Figure 6.1: Contribution of NHPAs to total burden of disease and injury in Australia, 1996

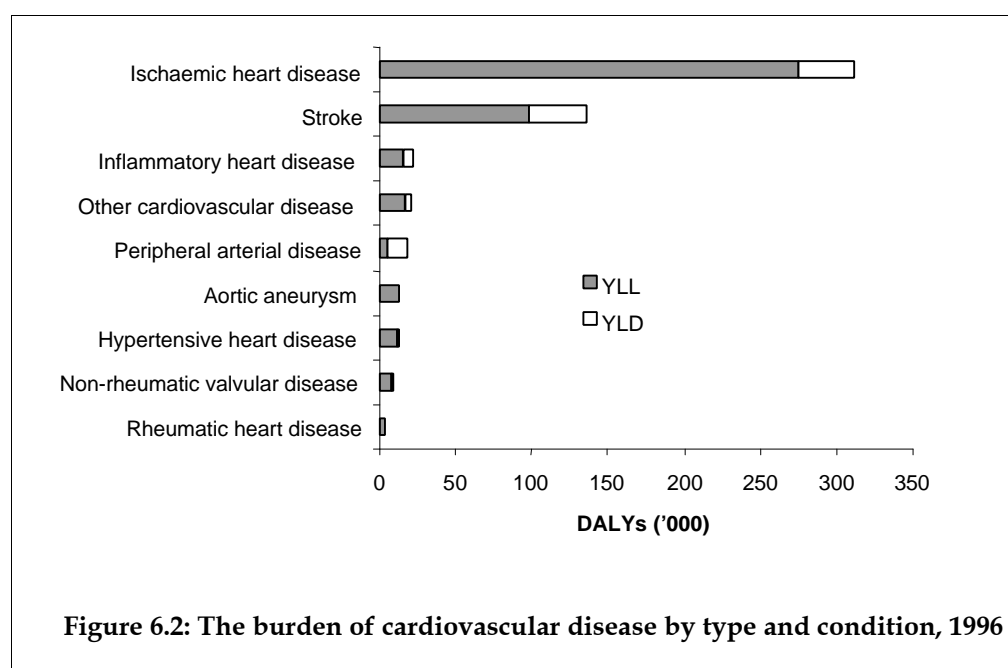
6.1 Cardiovascular disease

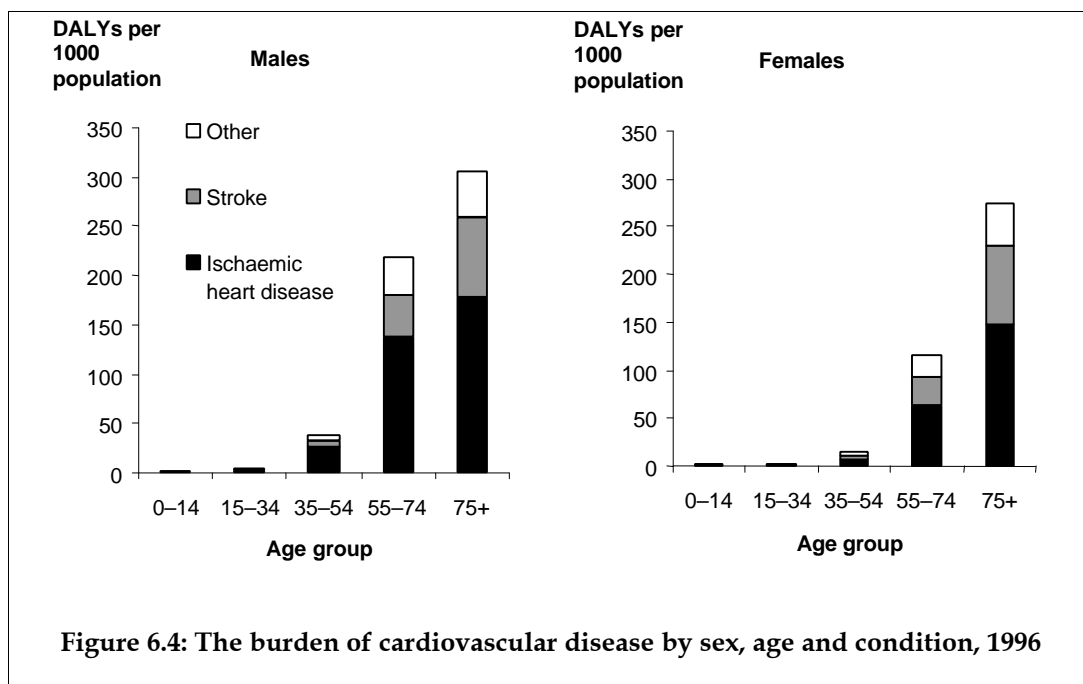
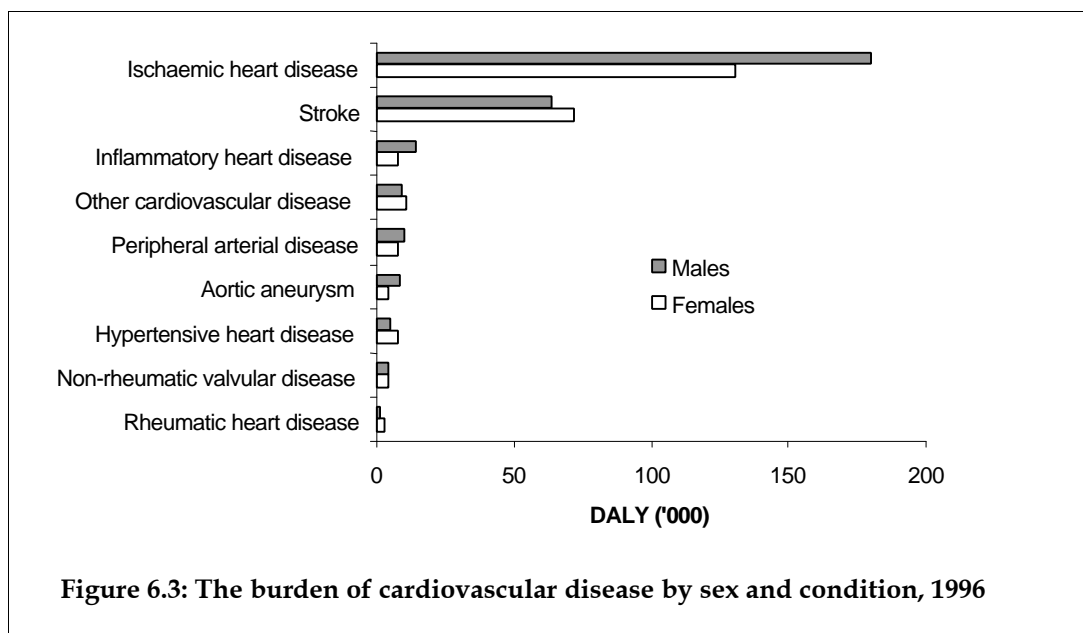
Cardiovascular health can be seen as a test case for Australia's future well-being. In recent years we have made major advances in preventing heart stroke and vascular disease and treating it once it occurs. Despite this, cardiovascular diseases are leading causes of mortality and morbidity in Australia (DHAC & AIHW 1999a). Most of the premature deaths and much of the morbidity caused by cardiovascular diseases are preventable. Further, since these diseases share risk factors with several other conditions including diabetes and some major types of cancer, addressing these risk factors will produce wider health gains than just those flowing directly from a reduction in cardiovascular diseases.

Table 6.1: The burden of disease attributable to cardiovascular disease, Australia, 1996

	Males		Females		Persons	
	Number	Per cent	Number	Per cent	Number	Per cent
Deaths	26,456	38.8	27,335	45.2	53,791	41.8
YLL	237,844	31.6	208,912	35.1	446,756	33.1
YLD	60,823	10.5	41,006	7.0	101,829	8.8
DALYs	298,667	22.5	249,918	21.2	548,584	21.9

Cardiovascular disease is responsible for 21.9% of total DALYs in 1996 (Table 6.1). This represents 41.8% of all deaths, 33.1% of YLL and 8.8% of YLD. The cardiovascular disease burden is dominated by ischaemic heart disease and stroke, which account for almost 57% and 25% of the cardiovascular DALYs respectively (Figure 6.2). The burden of ischaemic heart disease is 38% higher for men than women while the burden of stroke is 12% higher for women than men (Figure 6.3). The rates of DALYs per 1,000 population rise with age and are higher for men than women at all ages (Figure 6.4).





Mathers and Penm (1999a) estimated the direct costs to the health system of cardiovascular disease for Australia in 1993-94 (Table 6.2). These cost estimates cannot be directly related to the DALY estimates because, to the extent that health expenditures for prevention and treatment are effective at reducing the burden of disease, they relate to the burden currently averted by the health system. The burden estimates given above, on the other hand, relate to the current incident burden that is not averted at present by health interventions.

However, the cost estimates do give an indication of the size of the financial burden of cardiovascular disease on the Australian health system. In 1993-94 the total health system costs of cardiovascular disease was estimated at \$3.9 billion or 12.5% of total health expenditure.

Table 6.2: Cardiovascular disease: health system costs (\$ million) by health sector, Australia, 1993–94

	Hospital ^(a)	Medical ^(b)	Pharmaceuticals	Other	All sectors	Per cent of total
Rheumatic heart disease	19	2	1	2	24	0.6
Ischaemic heart disease	574	88	105	127	894	22.8
Stroke	283	31	13	303	630	16.1
Inflammatory heart disease ^(c)	29	4	2	5	40	1.0
Hypertension ^(d)	55	217	476	84	831	21.2
Non-rheumatic valvular disease	52	7	3	5	67	1.7
Aortic aneurysm	46	5	2	7	60	1.5
Peripheral arterial disease	134	17	9	49	209	5.3
Cardiac dysrhythmias ^(e)	114	36	31	43	224	5.7
Heart failure ^(f)	157	47	45	162	411	10.5
Other cardiovascular disease ^(g)	179	48	25	57	309	7.9
High serum cholesterol	6	42	135	16	199	5.1
Unspecified treatment and aftercare	6	1	1	1	9	0.2
Prevention and screening	9	1	1	1	12	0.3
Total cardiovascular disease	1,663	546	849	861	3,919	100.0

Notes:

- (a) Public and private acute hospitals, repatriation hospitals and psychiatric hospitals. Includes public hospital non-admitted services.
- (b) Medical services for private patients in hospitals are included under Hospitals.
- (c) Inflammatory heart disease comprises cardiomyopathy, myocarditis, endocarditis, pericarditis and other diseases of the pericardium and endocardium.
- (d) Hypertension comprises high blood pressure and hypertensive heart and renal disease.
- (e) For the burden of disease estimates, this category has been distributed between ischaemic heart disease and other cardiovascular diseases.
- (f) For the burden of disease estimates, this category has been distributed between ischaemic heart disease, cardiomyopathy, hypertensive heart disease and other cardiovascular diseases.
- (g) This category includes chronic pulmonary heart disease.

Source: Mathers & Penm 1999a, Table 1.

6.2 Cancer

Cancer has a major impact on the Australian community in terms of morbidity, mortality and costs. On average, one in three men and one in four women are likely to develop cancer before the age of 75. The number of new cases has been steadily rising, though much of this rise is due to population growth, the aging of the population and increased rates of detection for some cancers. Mortality from cancer is decreasing, reflecting changes in patterns of exposure to risk factors, changes in treatment and early detection techniques and the use of medical services (DHAC & AIHW 1998a).

Cancer was responsible for 19.1% of total DALYs in 1996 (Table 6.3). This represents 26.8% of all deaths, 29.7% of YLL and 6.8% of YLD. Seven cancers have been identified as the focus of the cancer priority area—lung cancer, skin cancer, cancer of the cervix, breast cancer (among women), colorectal cancer, prostate cancer and non-Hodgkin's lymphoma (NHL). These cancers together account for around 61% of the burden of cancer (DALYs) for men and 63% for women.

Table 6.3: The burden of disease attributable to cancer, Australia, 1996

	Males		Females		Persons	
	Number	Per cent	Number	Per cent	Number	Per cent
Deaths	19,496	28.6	15,030	24.8	34,526	26.8
YLL	211,001	28.0	188,862	31.7	399,863	29.7
YLD	41,117	7.1	37,599	6.5	78,716	6.8
DALYs	252,118	19.0	226,461	19.2	478,579	19.1

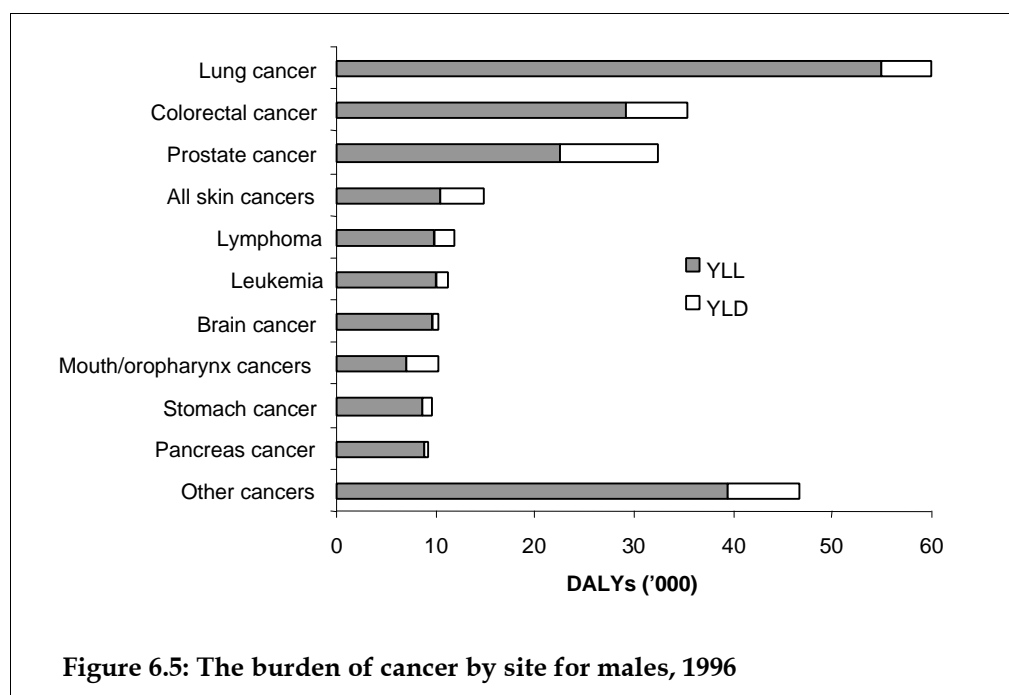


Figure 6.5: The burden of cancer by site for males, 1996

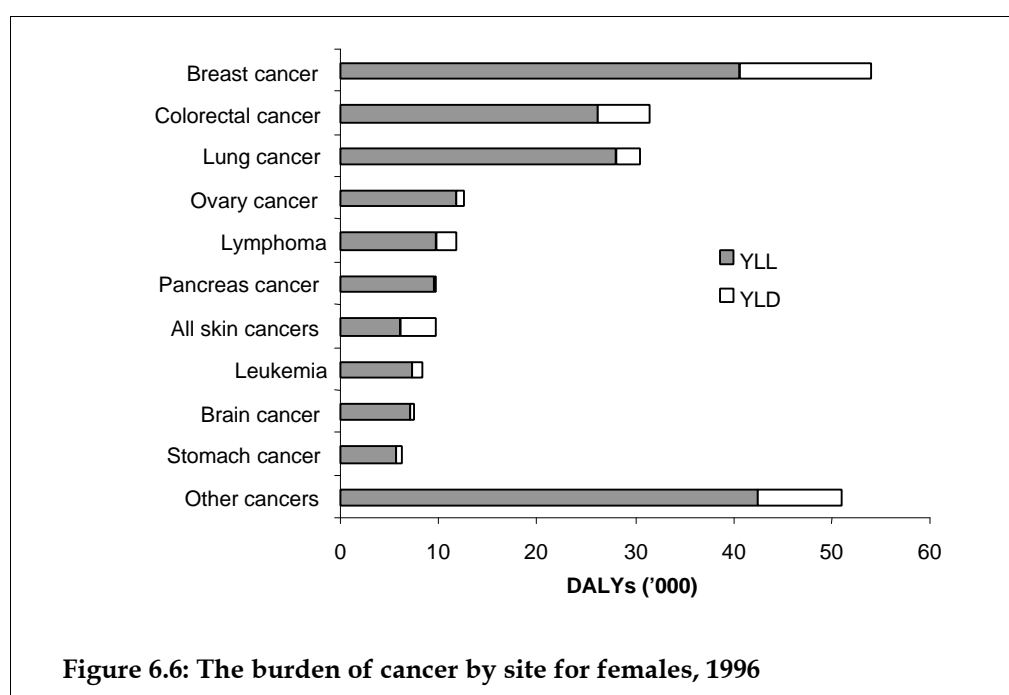


Figure 6.6: The burden of cancer by site for females, 1996

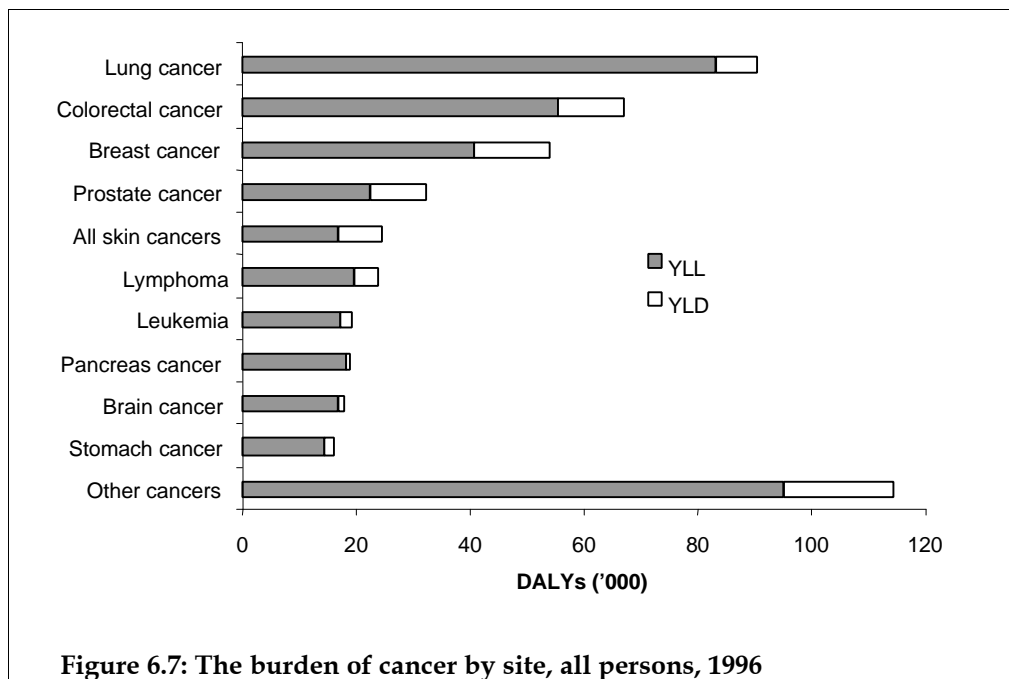


Figure 6.7: The burden of cancer by site, all persons, 1996

The cancer burden for men is dominated by lung, colorectal and prostate cancers, which together account for around 51% of the male cancer DALYs (Figure 6.5). The cancer burden for women is dominated by breast, colorectal and lung cancers, which together account for around 50% of the female cancer DALYs (Figure 6.6). There are considerably more YLL lost for all cancers than YLD, reflecting the fact that the burden of cancer is dominated by mortality rather than lengthy periods of disability (Figure 6.7). The DALY rate per 1,000 population peaks in the age range 55 to 74 for both men and women, with the rate for women

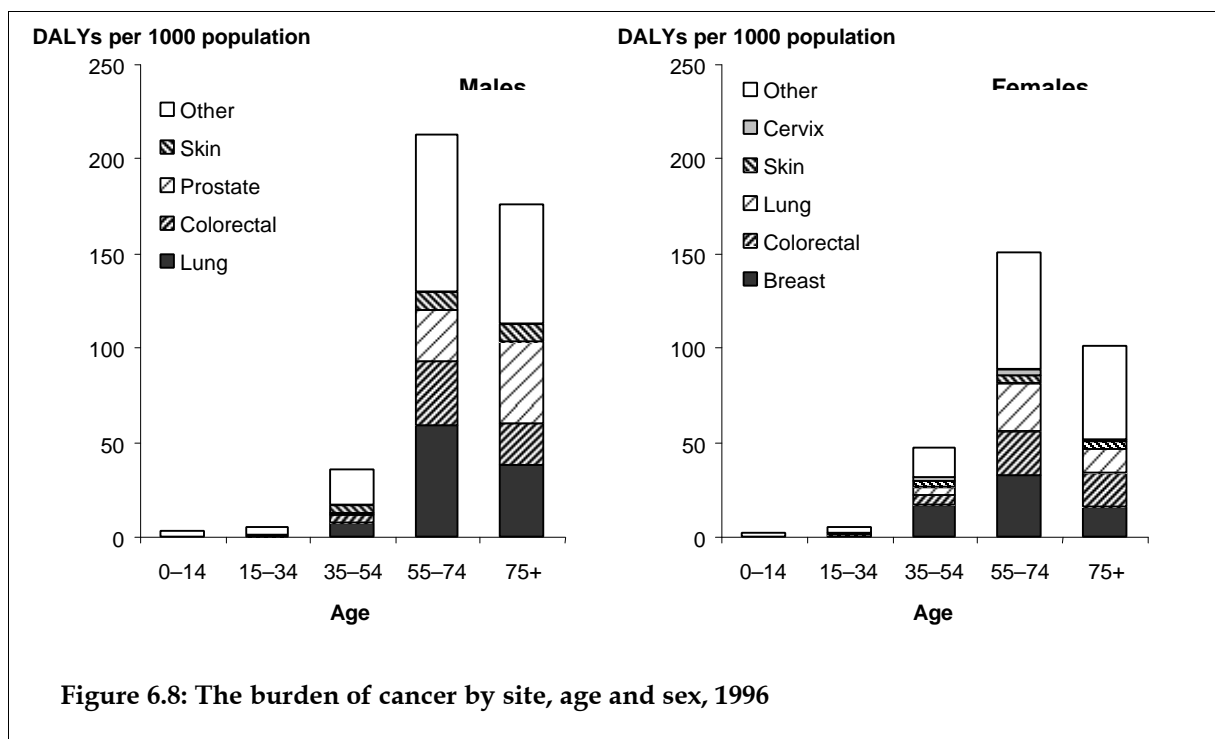


Figure 6.8: The burden of cancer by site, age and sex, 1996

smaller at all ages than that for men. (Figure 6.8). NHL constitutes 93% of the YLL and 89% of the YLD for lymphoma, which together make up 93% of the lymphoma DALYs. Although cancer of the cervix has been identified as one focus of the cancer priority area, it does not appear in the top ten cancers for women listed in Figure 6.6. In fact it contributes the twelfth highest number of DALYs. This is an illustration of the fact that the size of a health problem is not the only determinant of whether or not it should be a priority. Cancer of the cervix is a priority cancer because it is one of the few cancers where precancerous lesions are cost-effectively detectable and treatable. Hence, mortality from this cancer can be largely prevented with current screening and treatment methods.

The estimated financial burden of cancer to the Australian health system is shown in Table 6.4. In 1993–94, the total health system costs of cancer were estimated at \$1.9 billion or 6% of total health expenditure. This expenditure partly relates to burden currently averted by screening and treatment (which is not included in the DALY estimates above) and partly to burden either not successfully treated or arising from the impact of treatment on patients' quality of life.

We can derive a rough estimate of the average cost per DALY currently averted by modelling the progress of the cancer under the hypothetical scenario of no diagnostic or treatment services. The resulting DALY estimate represents the total burden including the burden currently averted by treatment. A very simple model was used which assumed that all cancers surface in the disseminated phase (bypassing the diagnostic and treatment phases) and proceed to the terminal phase and death. The resulting estimates should be regarded as only indicative, but they do provide a guide to the average cost per DALY currently averted.

The model was applied to lung cancer, as an example of a cancer with low cure rates and short survival times, and breast cancer in women, as an example of a cancer with moderate to high cure rates and long survival times. The hypothetical total DALYs for lung cancer with no diagnosis or treatment is 94,615, which is 4.5% higher than the observed DALYs. This corresponds to an average cost of \$26,200 per DALY averted. The hypothetical total DALYs for breast cancer is 112,255 which is a little more than twice the observed DALYs and represents a cost of \$3,145 per DALY averted.

Table 6.4: Cancer: health system costs by health sector, Australia, 1993–94 (\$ million)

	Hospital ^(a)	Medical ^(b)	Pharma- ceuticals	Other	All sectors	Per cent of total
Skin	141	112	5	41	298	15.6
Colorectal	171	11	3	19	205	10.8
Breast	80	11	16	77	184	9.7
Lung	81	7	3	17	107	5.6
Prostate	66	14	8	13	101	5.3
Cervix	22	46	1	17	86	4.5
Other cancers	767	61	17	79	923	48.5
Total	1,327	261	53	263	1,904	100.0

Notes:

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

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

Source: Mathers et al. 1998, Table C2

6.3 Mental health

The remarkable progress in physical and material wellbeing for most Australians over the twentieth century has not necessarily been matched by gains in mental and subjective wellbeing. Based on the 1995 National Health Survey more than one million Australians are estimated to suffer from a mental disorder, with almost half of these affected long-term. Mental disorders form a substantial part of the burden of disease in Australia, accounting for nearly 30% of the non-fatal burden in 1996. Depression is the most common mental disorder reported, both recent and long-term (ABS 1998b) and has been identified as the major focus of the mental health priority area (DHAC & AIHW 1999c).

The burden of mental disorders is dominated by years lost due to disability and considerable effort was put into modelling the impact of mental disorders, drawing on epidemiological data and data from the 1997 National Mental Health Survey carried out by the Australian Bureau of Statistics (ABS 1998b). YLD estimates have been made for 22 specific mental disorders (not including senile dementias which are included among the central nervous system conditions).

Mental illness was responsible for 13.3% of total DALYs in 1996 (Table 6.5). This represents 0.8% of all deaths, 1.4% of YLL and 27.2% of YLD—reflecting the fact mental illness is not a major direct cause of death but it is a major cause of chronic disability. Figure 6.9 shows the distribution of YLL and YLD by main category of mental disorder. Affective disorders account for 33% of the burden of mental disorders, followed by substance use disorders (24%)

Table 6.5: The burden of disease attributable to mental illness, Australia, 1996

	Males		Females		Persons	
	Number	Per cent	Number	Per cent	Number	Per cent
Deaths	630	0.9	381	0.6	1,012	0.8
YLL	13,014	1.7	5,202	0.9	18,216	1.4
YLD	151,216	26.2	164,469	28.2	315,685	27.2
DALYs	164,230	12.4	169,671	14.4	333,901	13.3

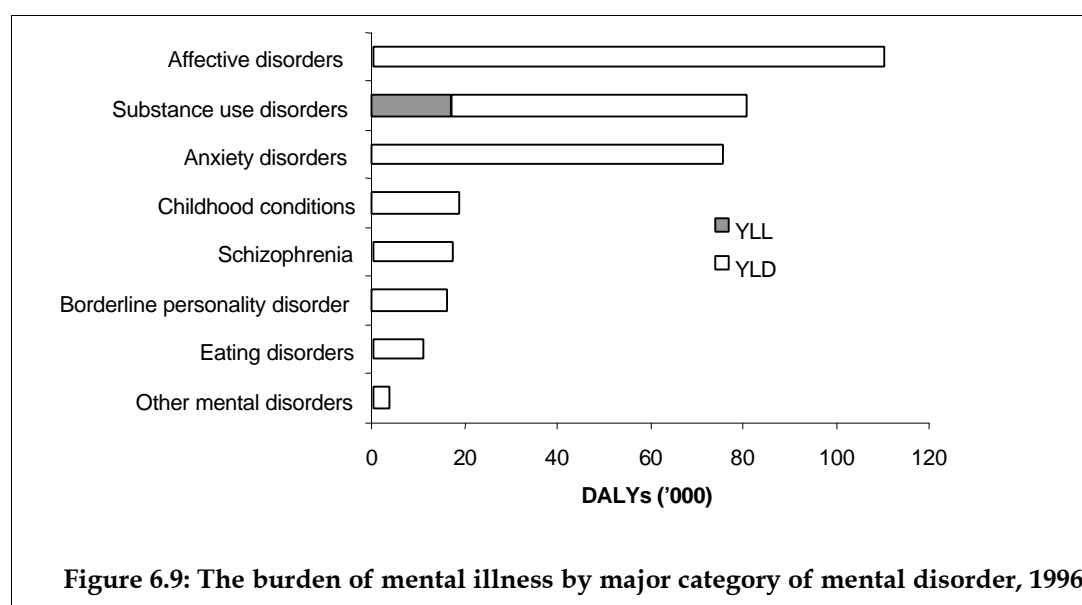
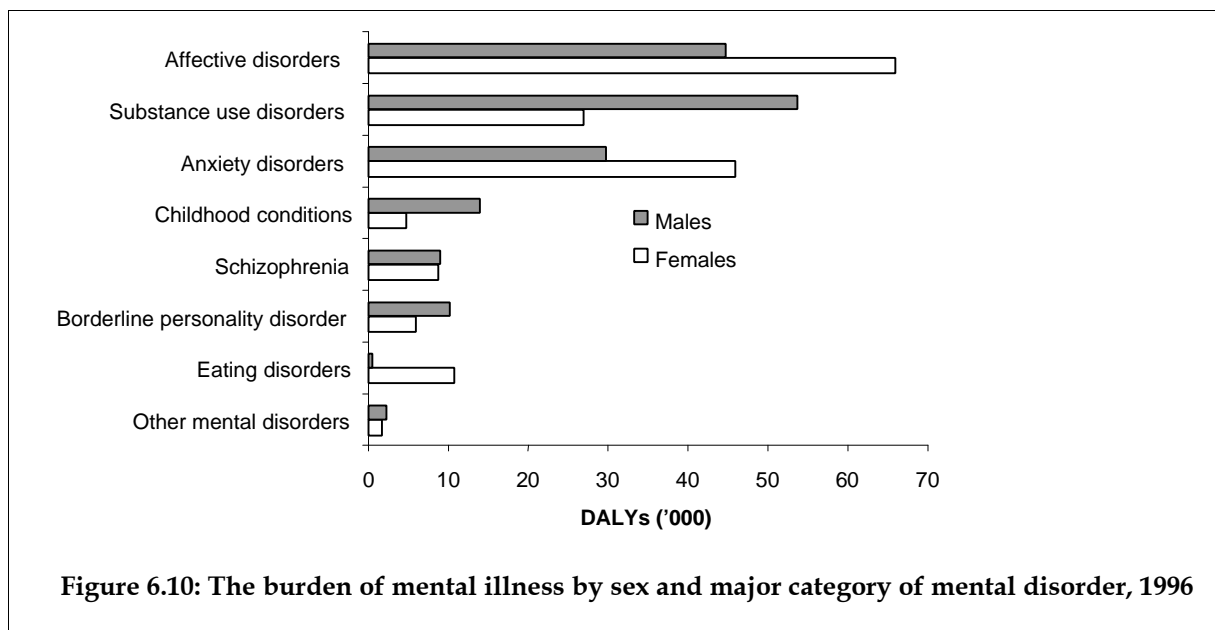


Figure 6.9: The burden of mental illness by major category of mental disorder, 1996



and then anxiety disorders (23%). Alcohol abuse accounts for 56% of the burden of substance abuse in Australia. Substance abuse is the only category with a substantial YLL component.

Figure 6.10 shows the distribution of mental health DALYs by sex and by main category of mental disorder. While the same three conditions dominate for both males and females, the major cause of mental disorder for males is substance use disorders, accounting for 33% of their mental health DALYs. Alcohol abuse accounts for 59% of male substance use disorders. The major cause of mental disorder for women is affective disorders, accounting for 39% of women’s mental health DALYs. This is almost entirely depression (87%).

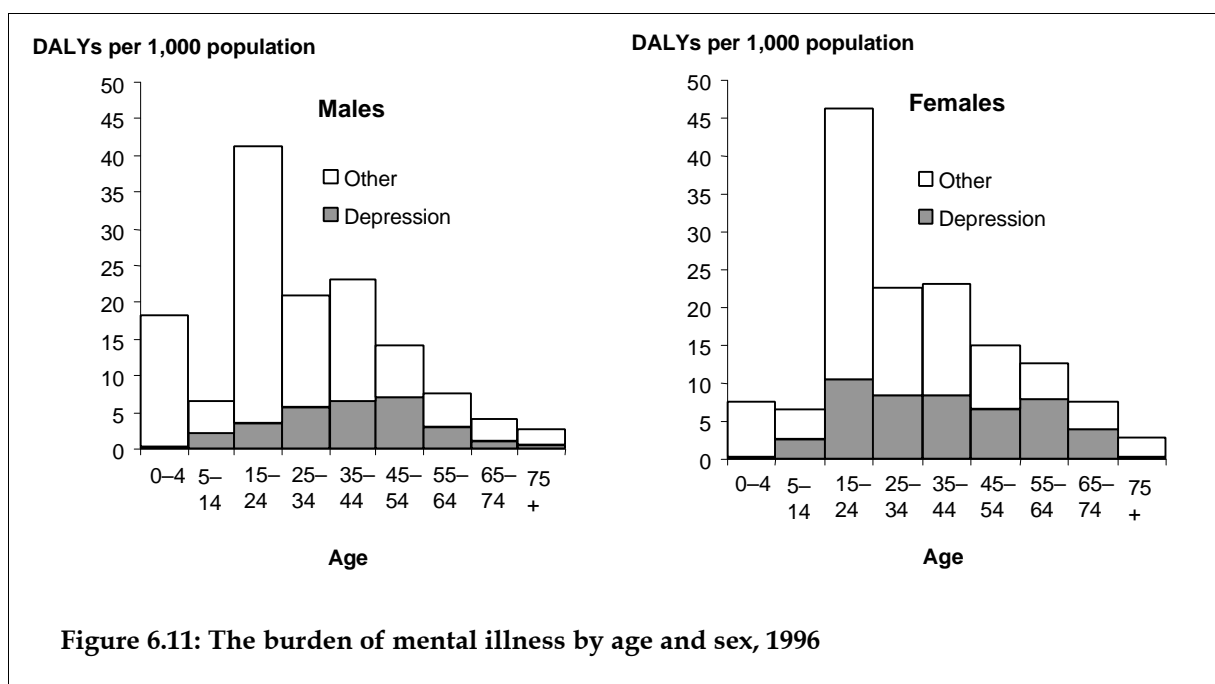


Figure 6.11 shows the distribution by age and sex of DALYs per 1,000 population due to depression and to other mental disorders. The rate peaks in the age range 15 to 24 for both males and females. For males, this is dominated by substance use disorders (43%). For females it is mainly affective disorders (34%) and anxiety disorders (22%). The proportion of the burden attributable to depression peaks at 50% in the 45 to 54 year age group for men and at 64% in the 55 to 64 year age group for women.

Estimated health system expenditure for mental disorders in 1993–94 is shown in Table 6.6. Including specialised community mental health services and drug and alcohol residential centres, the total health system costs of mental disorders are estimated at \$3.0 billion or 9.6% of total health expenditure.

Table 6.6: Mental health: health system costs by health sector, Australia, 1993–94 (\$ million)

	Hospital ^(a)	Medical ^(b)	Pharma-- ceuticals	Other health services ^(c)	Other ^(d)	All sectors	Per cent of total
Dementia	110	11	2	9	582	714	23.6
Substance abuse disorders	136	46	12	18	136	348	11.5
Schizophrenia	275	26	8	106	40	454	15.0
Other non-drug psychosis	63	5	1	6	53	128	4.2
Affective disorders	217	141	68	70	148	644	21.3
Anxiety disorders	24	102	51	25	37	239	7.9
Personality disorders	24	7	1	12	9	53	1.8
Stress and adjustment disorders	28	27	7	31	19	112	3.7
Mental retardation	16	1	0	3	5	26	0.9
Disorders of psychological development	2	2	0	3	10	16	0.5
Eating disorders	14	3	0	1	4	22	0.7
Disorders of childhood and adolescence	10	9	1	19	16	55	1.8
Behavioural syndromes and other mental disorders	17	53	45	9	50	174	5.8
Unspecified mental disorders, prevention and screening	5	6	2	23	1	37	1.2
Total	941	438	199	334	1,110	3,022	100.0

Notes:

- (a) Public and private acute hospitals, repatriation hospitals and psychiatric hospitals. Excludes public hospital non-admitted services.
- (b) Medical services for private patients in hospitals are included under Hospitals.
- (c) Includes hospital non-inpatient services, specialised community mental health services, residential and non-residential treatment services run by non-government organisations, and allied health services.
- (d) Includes National Drug Strategy funding for prevention, research expenditure and other institutional, non-institutional and administration expenditure. Does not include expenditure for other public health services, non-specialised community health services, ambulances, or medical aids and appliances.

Source: AIHW analysis of health expenditure data.

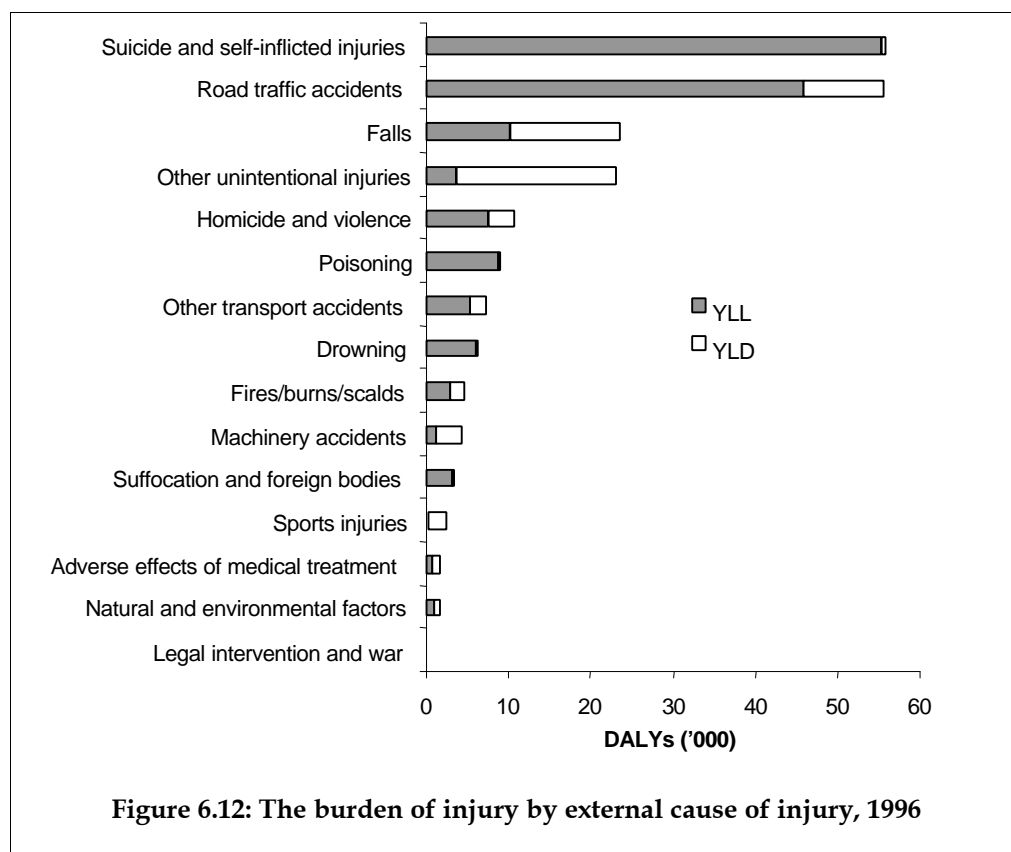
6.4 Injury

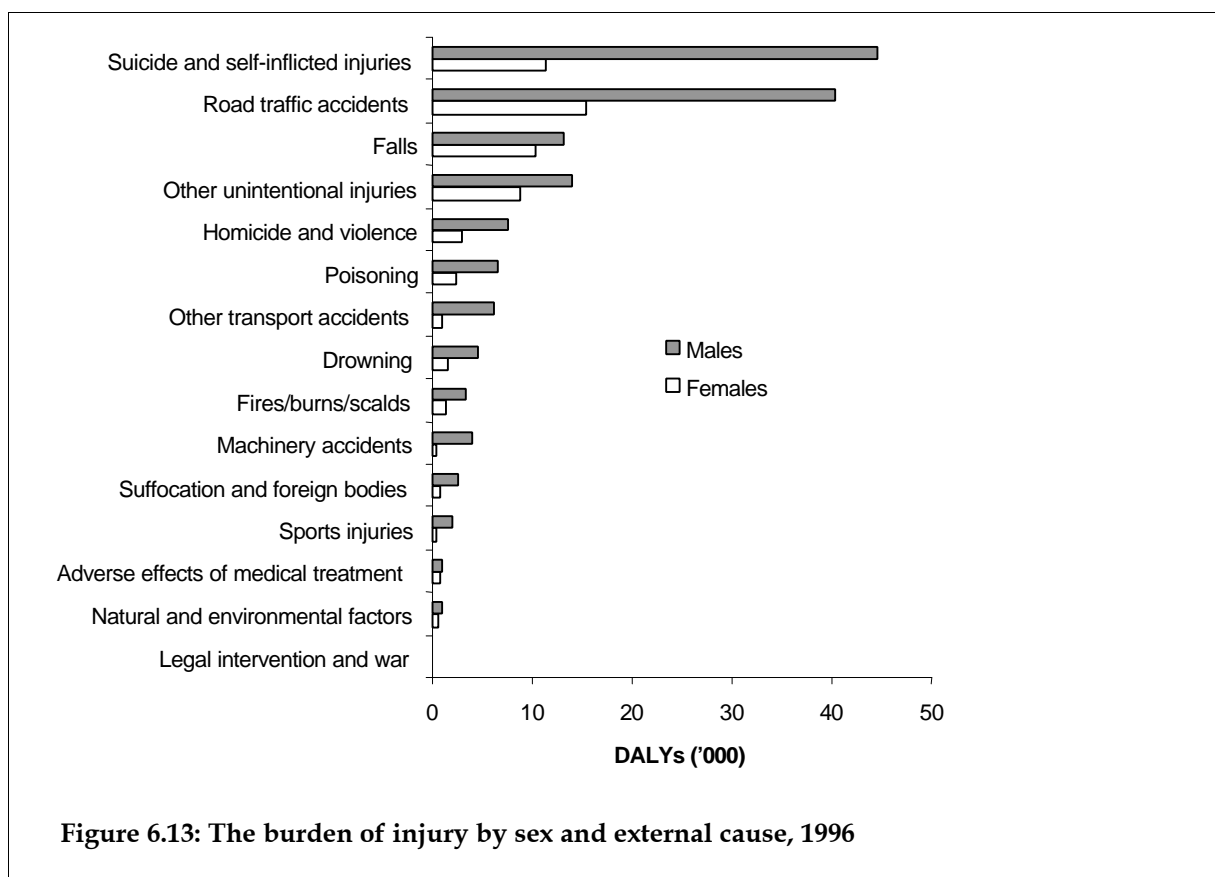
Injury is the principal cause of death in people under 45 years of age, a leading cause of mortality, morbidity and permanent disability in Australia, and a major source of health care costs. Injuries cause a range of physical, cognitive and psychological disabilities that seriously affect the quality of life of injured people and their families. According to the 1993 ABS disability survey, approximately 15% of people with a disability in Australia attribute their disabling condition to an injury or accident. However, the majority of injury is preventable and there are significant opportunities for reducing the burden of injury by implementing effective prevention strategies (DHAC & AIHW 1998b).

Injury was responsible for 8.4% of total DALYs in 1996 (Table 6.7). This represents 5.9% of all deaths, 11.3% of YLL and 5.0% of YLD. Figure 6.12 shows the distribution of injury YLL and YLD by cause of injury. The burden of injury is dominated by suicide and self-inflicted injuries and road traffic accidents, which together comprise 53% of injury DALYs.

Table 6.7: The burden of disease attributable to injury, Australia, 1996

	Males		Females		Persons	
	Number	Per cent	Number	Per cent	Number	Per cent
Deaths	5,422	8.0	2,123	3.5	7,545	5.9
YLL	114,696	15.2	37,587	6.3	152,283	11.3
YLD	36,429	6.3	21,197	3.6	57,627	5.0
DALYs	151,126	11.4	58,784	5.0	209,910	8.4





DALYs for suicide and self-inflicted injuries mostly comprise YLL (99%) while road traffic accidents have a substantial YLD component (18%). Figure 6.13 shows the distribution of injury DALYs by sex and by cause of injury. While the same two causes dominate for both males and females, the major cause of injury for men is suicide and self-inflicted injury, accounting for 30% of men’s injury DALYs. The major cause of injury for women is road traffic accidents, accounting for 26% of women’s injury DALYs.

Figure 6.14 shows the distribution by age and sex of DALYs per 1,000 population due to injury, grouped into the three major causes and an ‘other injuries’ group. The total rate peaks in the age range 15 to 24 for both males and females and then falls with age before rising again for men over 75 and women over 65. The major cause of DALYs in the 15 to 24 year age group is road traffic accidents (39% for males and 46% for females). The major cause at ages 75 and over is falls (69% for men and 45% for women).

Table 6.8 gives estimated direct health system costs of injuries for Australia in 1993–94. The total health system costs of injuries was estimated at \$2.6 billion or 8.3% of total health expenditure. This expenditure partly relates to the injury burden currently averted by treatment (which is not included in the DALY estimates above) and partly to the injury burden remaining after treatment.

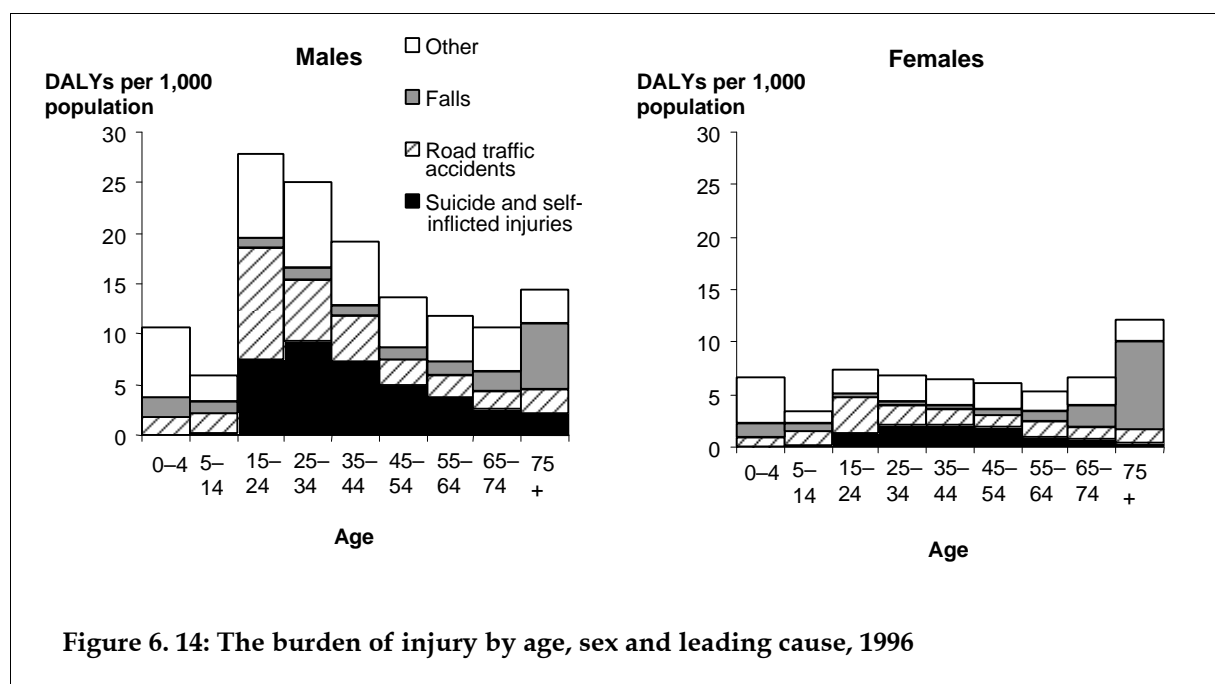


Figure 6.14: The burden of injury by age, sex and leading cause, 1996

Table 6.8: Injury: health system costs by health sector, Australia, 1993-94 (\$ million)

	Hospital ^(a)	Medical ^(b)	Pharmaceuticals	Other ^(c)	All sectors	Per cent of total
Unintentional injuries^(d)						
Road traffic accidents	232	56	16	68	372	14.3
Other transport accidents	37	10	3	7	58	2.2
Poisoning	20	1	1	3	26	1.0
Accidental falls	501	112	32	166	810	31.1
Fire, burns or scalds	41	8	3	4	55	2.1
Accidental drowning	3	1	0	1	6	0.2
Machine injuries	27	8	2	7	44	1.7
Adverse effects of medical treatment ^(e)	300	38	23	43	403	15.5
Other unintentional injuries	381	124	36	87	630	24.2
Intentional injuries						
Suicide and self-inflicted injury	48	11	4	11	72	2.8
Homicide and violence	72	24	7	20	125	4.8
Total injury and poisoning	1,663	393	127	418	2,601	100.0%

Notes:

- (a) Public and private acute hospitals, repatriation hospitals and psychiatric hospitals. Includes public hospital non-admitted services.
- (b) Medical services for private patients in hospitals are included under Hospitals.
- (c) Includes research expenditure and other institutional, non-institutional and administration expenditure. Does not include public health services, community health services, ambulances, or medical aids and appliances.
- (d) Expenditure for injuries unspecified whether intentional or unintentional has been distributed pro rata between unintentional and intentional injuries.
- (e) Includes surgical and medical misadventure, and adverse effects of drugs in therapeutic use.

Source: Mathers & Penm 1999b.

6.5 Diabetes

Diabetes mellitus is a chronic disease, characterised by hyperglycaemia or high levels of blood glucose, which is caused by deficient insulin production and/or resistance to its action. Complications of diabetes include retinopathy, cataract, glaucoma, neuropathy, nephropathy, diabetic foot ulcers and amputations. The prevalence of diabetes is rising, with the estimated number of Australians with diagnosed or undiagnosed diabetes almost doubling since the early 1980s (DHAC & AIHW 1999b).

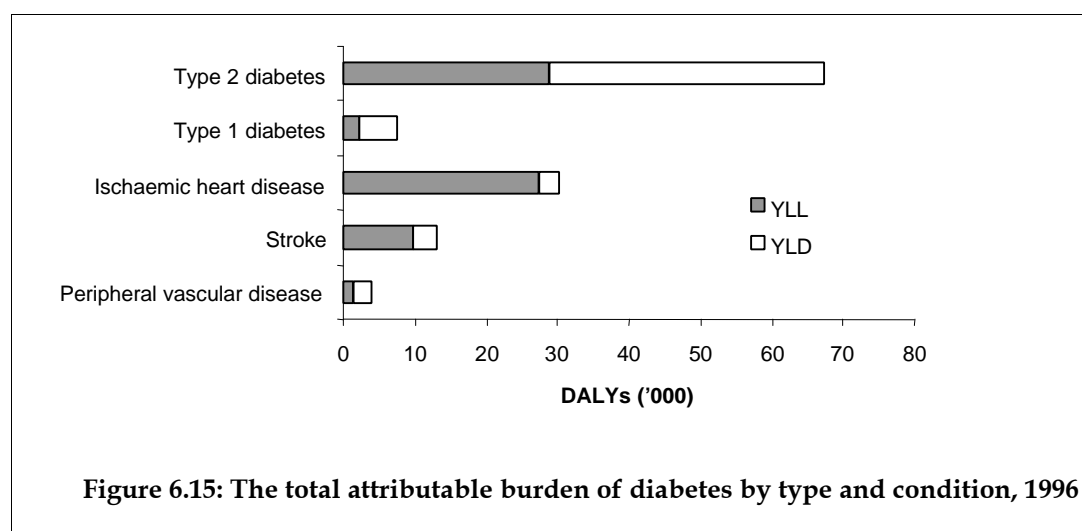
There are two major types of diabetes: Type 1 diabetes (also referred to as IDDM or insulin-dependent diabetes) and Type 2 diabetes (also referred to as NIDDM or non-insulin-dependent diabetes). Around one-half of Type 1 diabetes is incident in childhood and it is one of the most common serious childhood conditions in Australia, whereas Type 2 diabetes occurs in adults and is usually not diagnosed until after the age of 40 years.

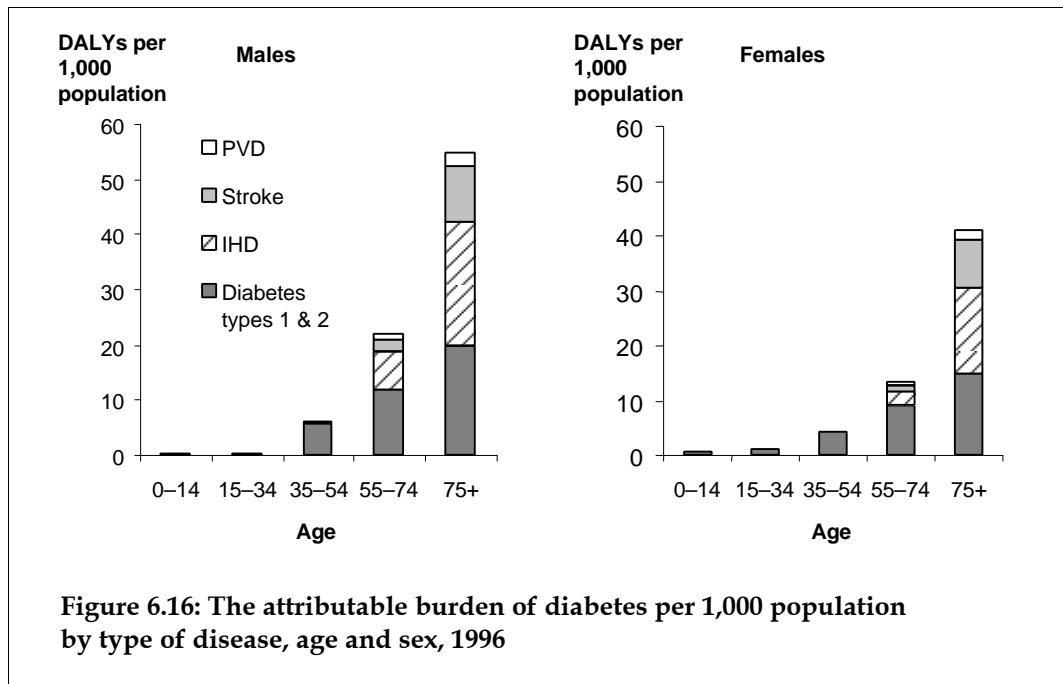
In addition to its direct sequelae, diabetes also contributes to increased risk of ischaemic heart disease, stroke and peripheral vascular disease (AIHW 1999c). Attributable fractions methods were used in Section 5.4 to estimate the total burden associated with diabetes, including the attributable burden of cardiovascular diseases.

Diabetes was responsible for 4.9% of total DALYs in 1996 (Table 6.9). This represents 6.5% of all deaths, 5.2% of YLL and 4.6% of YLD—reflecting the fact diabetes is a major cause of chronic disability as well as premature death. Figure 6.15 shows the total YLL and YLD resulting from Type 1 and Type 2 diabetes directly, as well as the attributable YLL and YLD

Table 6.9: The burden of disease attributable to diabetes, Australia, 1996

	Males		Females		Persons	
	Number	Per cent	Number	Per cent	Number	Per cent
Deaths	4,369	6.4	4,004	6.6	8,373	6.5
YLL	37,233	4.9	32,301	5.4	69,534	5.2
YLD	29,224	5.1	23,778	4.1	53,001	4.6
DALYs	66,457	5.0	56,078	4.8	122,535	4.9





from ischaemic heart disease, stroke and peripheral vascular disease. Overall, diabetes causes almost as much disability burden (43% of total DALYs) as mortality burden. The burden is relatively evenly shared between males and females, with males responsible for 54% of the burden of diabetes. The burden of diabetes, together with attributable heart disease and peripheral vascular disease, is greater for males than females. The attributable burden for stroke is shared equally by males and females.

Figure 6.16 shows the total attributable DALYs per 1,000 population for diabetes by age and sex. The rates for men and women are both small at ages below 35. At ages over 35, the rates are higher for men than women. Between ages 35 and 54 the burden is mainly due to diabetes and its complications. For ages 55 and over, the proportion of burden due to ischaemic heart disease (IHD), stroke and peripheral vascular disease (PVD) rises to 64% for men and 63% for women at ages over 75.

As shown in Table 6.10, the total health system costs attributable to diabetes were estimated to be \$681 million in 1993-94 or 2.2% of total health expenditure for that year. This expenditure partly relates to the potential burden of diabetes averted by treatment, which is not included in the DALY estimates above.

Table 6.10: Diabetes and its sequelae: health system costs by health sector, Australia, 1993–94 (\$ million)

	Hospital ^(a)	Medical ^(b)	Pharmaceuticals	Other	All sectors	Per cent of total
Type 1 diabetes	31	28	41	55	155	22.8
Type 2 diabetes ^(c)	41	40	59	93	233	34.1
Blindness	1	0	0	3	4	0.6
Glaucoma	2	1	0	1	4	0.6
Cataract	12	1	0	7	20	2.9
Nephropathy	9	1	0	5	15	2.2
Chronic skin ulcer	13	4	2	7	25	3.7
Absence of extremities	1	0	0	1	3	0.4
Ischaemic heart disease ^(d)	54	11	13	28	105	15.4
Stroke	31	4	1	39	75	11.0
Peripheral vascular disease ^(e)	6	0	0	4	10	1.6
Hypertension	1	8	19	4	32	4.7
Total	201	98	136	247	681	100.0

Notes:

- (a) Public and private acute hospitals, repatriation hospitals and psychiatric hospitals. Includes public hospital non-admitted services.
- (b) Medical services for private patients in hospitals are included under Hospitals.
- (c) A significant proportion of older people admitted to nursing homes from hospital have principal diagnosis of hypoglycemia or hyperinsulinism and it is likely that many of these older people had Type 2 diabetes. The Type 2 diabetes costs shown here include \$15.9 million for hypoglycemia and hyperinsulinism.
- (d) Includes heart failure due to complications of diabetes.
- (e) Includes atherosclerosis.

Source: Mathers & Penm 1999a, Table 6.

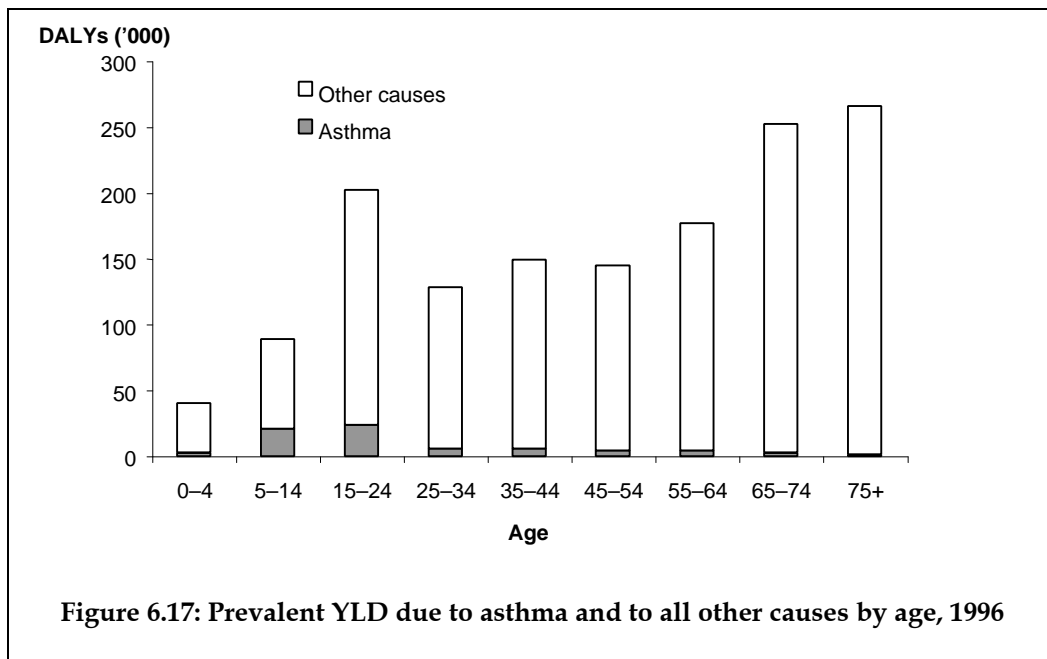
6.6 Asthma

Asthma is the most recently declared national health priority area. Most cases are diagnosed before the age of 15 and it is a leading cause of disability in children. According to the 1995 ABS National Health Survey, around 11% of Australians reported asthma as a recent or long-term condition. Asthma was responsible for 2.6% of total DALYs in 1996 (Table 6.11). This represents 0.6% of all deaths and YLL, and 4.8% of YLD – reflecting the fact asthma is a major cause of chronic disability rather than death.

Seventy per cent of the total burden of asthma is incident in childhood (ages 0–14). The average duration of asthma incident in childhood is estimated to be around 17 years, and for asthma incident in adulthood to be around 30 years. As a result, a larger proportion of the prevalent burden of asthma falls in adulthood: around 67% of prevalent YLD for asthma

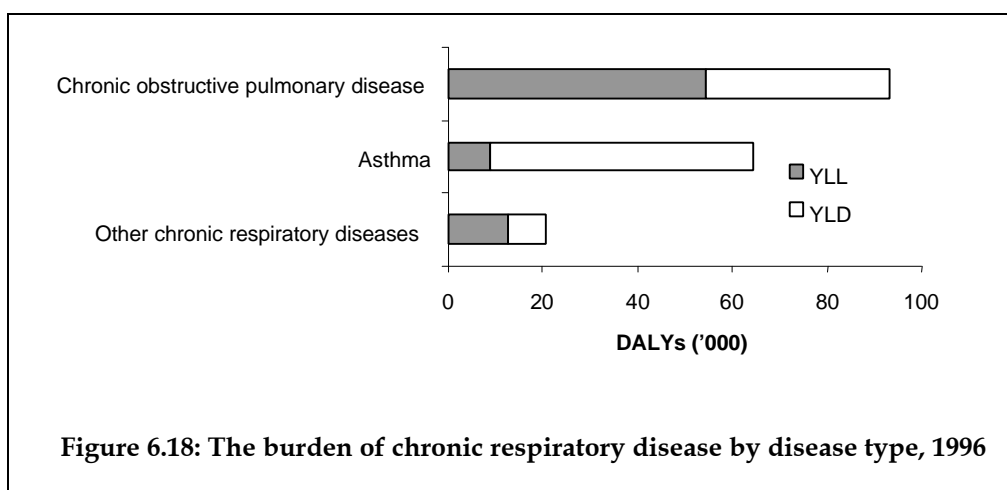
Table 6.11: The burden of disease attributable to asthma, Australia, 1996

	Males		Females		Persons	
	Number	Per cent	Number	Per cent	Number	Per cent
Deaths	300	0.4	433	0.7	733	0.6
YLL	3,620	0.5	5,112	0.9	8,732	0.6
YLD	24,661	4.3	31,130	5.3	55,791	4.8
DALYs	28,281	2.1	36,242	3.1	64,523	2.6



relate to ages 15 and over, and 34% to ages 25 and over. Figure 6.17 shows the prevalent YLD due to asthma and to all other causes by age. The proportion of prevalent YLD due to asthma peaks in the 5-14 year age group, where it represents 24% of all prevalent YLD. In contrast, the absolute burden of prevalent YLD for asthma peaks in the 15-24 year age group, where it represents 12% of prevalent YLD.

Figure 6.18 shows the total YLL and YLD due to asthma compared with other chronic respiratory diseases. Asthma together with chronic obstructive pulmonary disease (COPD) account for the majority of the burden of chronic respiratory diseases. Asthma is responsible for 36% of chronic respiratory disease DALYs while COPD is responsible for 52%. The asthma DALYs are dominated by YLD (87%) while the burden for COPD have a larger mortality component (YLL account for 61% of total DALYs for COPD).



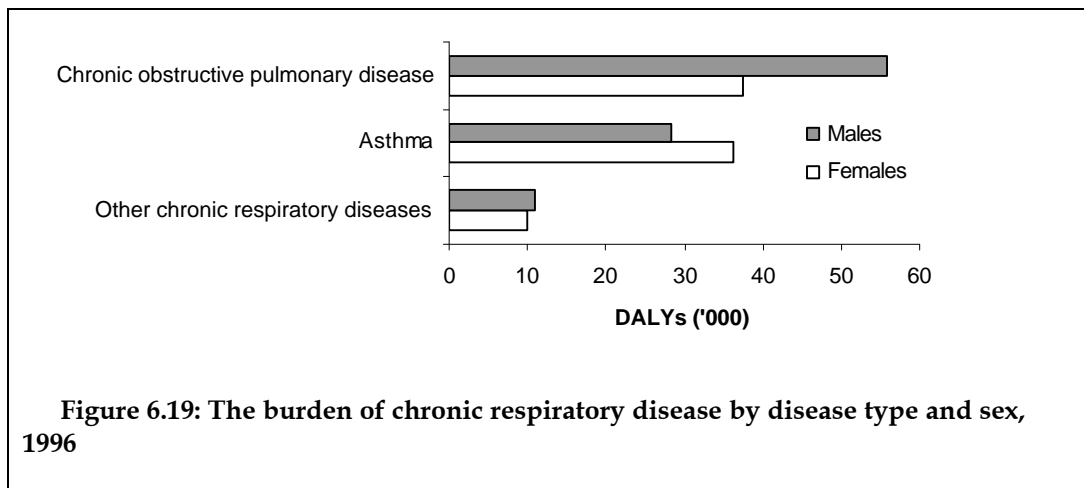


Figure 6.19 shows the DALYs due to asthma compared with other chronic respiratory diseases by sex. Women have a higher proportion of asthma DALYs than men (56%) while men have a higher proportion of COPD DALYs (60%).

Figure 6.20 shows DALYs per 1000 population due to asthma compared with other chronic respiratory diseases by age and sex. Asthma dominates at ages under 15 and reduces with age while the rate for COPD increases with age to peak in the 55 to 74 year age group for men and the 75 and over age group for women.

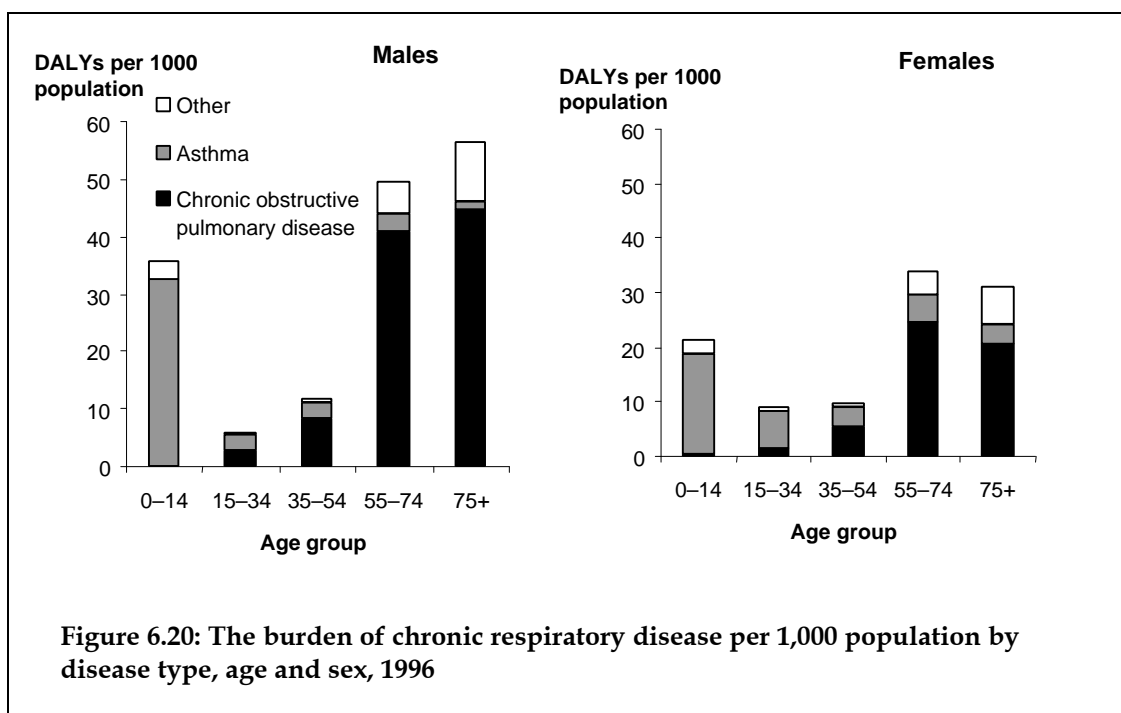


Table 6.12 shows estimated direct costs to the health system of chronic respiratory diseases for Australia in 1993–94. Although asthma accounts for fewer DALYs than COPD, it accounts for more expenditure. In 1993–94 the total health system costs of asthma was estimated at \$478 million, which was 40% of the total expenditure on chronic respiratory diseases, compared with COPD which accounted for 35% of this expenditure. To the extent that current interventions are effective in reducing the severity of symptoms or curing disease, these expenditures relate to the burden of chronic respiratory diseases currently averted by treatment, which is not included in the DALY estimates above.

Table 6.12: Chronic respiratory diseases: health system costs by health sector, Australia, 1993–94 (\$ million)

Expenditure type	Hospital ^(a)	Medical ^(b)	Pharmaceuticals	Other	All sectors	Per cent of total
Asthma	94	102	199	82	478	40.1
COPD ^(c)	112	61	66	61	300	25.2
Other chronic respiratory diseases ^(d)	205	60	87	62	413	34.7
Total	411	223	352	205	1,191	100.0

Notes:

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

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

(c) Excludes extrinsic allergic alveolitis (ICD-9 code 495) and chronic pulmonary heart disease (ICD-9 codes 416.0, 416.8 and 416.9).

(d) Includes extrinsic allergic alveolitis (ICD-9 code 495) but excludes chronic sinusitis (ICD-9 code 473) and peritonsillar abscess (ICD-9 code 475).

Source: AIHW unpublished analysis of health expenditure data.

