Appendix: National Health Priority Areas

The National Health Priority Areas (NHPA) is an initiative of the Australian Health Ministers Conference (AHMC), involving collaboration between the Commonwealth, state and territory governments. The initiative seeks to focus public attention and health policy on those areas that contribute significantly to the burden of disease and injury, but offer scope for improvement (NHPAC 2002).

The NHPA initiative acknowledges that in order to relieve the burden of disease, a holistic approach to health care must be taken, encompassing prevention of disease and injury through to treatment and ongoing management. Currently seven different health areas have been marked for priority attention as NHPAs, namely cardiovascular health, cancer control, injury prevention and control, mental health, diabetes mellitus, asthma, and arthritis and other musculoskeletal conditions.

This appendix provides an overview of NHPAs, in terms of morbidity, disability and mortality. Information is also provided on their overall burden, in terms of disability adjusted life years (DALY) as well as direct health care costs. The appendix also examines the relationships between various NHPAs in terms of co-morbidity and shared risk factors. Time-series information on NHPA indicators is given in Tables S58 to S63.

Focus diseases and conditions

The NHPA initiative has a special focus on specific diseases and conditions within each priority area; these are listed below. However, in this overview, reference to an NHPA includes all diseases and conditions within that priority area, and not just the focus diseases and conditions.

- **Asthma**
- **Cardiovascular health**
  Coronary heart disease; stroke; heart failure; and peripheral vascular disease
- **Cancer control**
  Lung cancer; melanoma; non-melanocytic skin cancers; cancer of the cervix; breast cancer; colorectal cancer; prostate cancer; and non-Hodgkin's lymphoma (NHL)
- **Diabetes mellitus**
  Type 1 diabetes; Type 2 diabetes; and gestational diabetes
- **Injury prevention and control**
  Prevention of falls in older people; falls in children; drowning and near drowning; and poisoning in children
- **Mental health**
  Depression, and depression as a co-morbidity or complication of other NHPAs
- **Arthritis and other musculoskeletal conditions**
  Osteoarthritis, rheumatoid arthritis; and osteoporosis.

Impact of NHPAs on the health of Australians

The impact of individual NHPAs varies considerably in terms of health outcomes. Table A.1 provides an overview of this impact using indicators based on self-reported prevalence, associated disability levels, death rates, and DALY.

Arthritis and other musculoskeletal conditions are the most prevalent NHPAs. Based on the 2001 National Health Survey, it is estimated that almost one in three Australians (32.0%) have the condition. Arthritis and other musculoskeletal conditions are also the main disabling condition for more than one in three Australians with a disability (34.4%). However, arthritis and other musculoskeletal conditions are not a major cause of mortality.

Cardiovascular disease on the other hand is the largest contributor to the burden of disease (21.9% of all DALY in 1996), and the most common underlying cause of death (37.6% of all deaths in 2002). The prevalence of cardiovascular problems is also relatively high, affecting almost one in six Australians (16.8%).

Table A.1: Indicators of the impact of NHPA diseases and conditions (various years)

	Prevalence[a] (2001)		Disability (1998)		Deaths[b] (2002)		Burden of disease (1996)	
NHPA	Number '000	Per cent population	Number '000	Per cent persons with disability	Number '000	Per cent all deaths	DALYS '000	Per cent total DALY
Cardiovascular problems	3,185.9	16.8	312.2	8.6	50.3	37.6	548.6	21.9
Cancer	267.6	1.4	60	1.7	37.6	28.1	478.6	19.1
Mental disorders[c]	1,812.6	9.6	529.2	14.7	3.2	2.4	333.9	13.3
Injury and poisoning[c]	2,241.9	11.9	245.7	6.8	7.8	5.8	209.9	8.4
Diabetes	554.2	2.9	64.4	1.8	3.3	2.5	122.5	4.9
Asthma	2,197.3	11.6	171.1	4.7	0.4	0.3	64.5	2.6
Arthritis[d]	6,058.1	32.0	1,240.2	34.4	1.0	0.8	89.9	3.6
All NHPAs	**9,765.5[e]**	**51.6[e]**	**2,622.8**	**72.7**	**103.6**	**77.5**	**1,847.9**	**73.8**

(a) Self-reported, estimates based on 2001 National Health Survey. All health conditions are long-term except injury which is recorded if occurring in the four weeks prior to interview.

(b) Deaths registered in 2002.

(c) Suicide is included with Injury and poisoning.

(d) Arthritis and musculoskeletal conditions.

(e) Because of the presence of more than one NHPA disease or condition, the total for all NHPAs is less than the sum of numbers in the columns above.

Sources: ABS 1998; ABS 2003; AIHW: Mathers et al. 1999; AIHW National Mortality Database.

Morbidity

The extent of morbidity associated with NHPAs can be gauged from a variety of data sources, with some useful insights into the extent of the problem. However, none of these data sources cover the whole spectrum of illness and morbidity associated with NHPA diseases and conditions. The picture that emerges is therefore composite in nature, and invariably incomplete.

Prevalence

From self-reports, based on 2001 National Health Survey, it is estimated that 51.6% of Australians suffer long-term from one or more NHPA disease or condition (Table A.1). As indicated earlier, arthritis and other musculoskeletal conditions are the most prevalent of these. Cardiovascular problems, injuries, asthma and mental disorders are other highly prevalent NHPAs. However, much smaller proportions of respondents reported having diabetes or cancer. Table A.2 presents prevalence rates for a select set of NHPA diseases and conditions in the two sexes.

Self-reported disease prevalence data have certain inherent problems, in particular if the symptoms are not apparent to the individual. For example, about 2.9% of 2001 National Health Survey respondents reported having diabetes. The 1999–2000 AusDiab survey, using biomedical tests, however, has determined that about one-half of persons with diabetes are unaware of their disease (Dunstan et al. 2001). The AusDiab survey puts the prevalence of diabetes among those aged 25 and over at around 7.0%, in comparison to the much lower estimate based on 2001 National Health Survey self reports.

Table A.2: Prevalence[(a)] of selected NHPA diseases and conditions in Australia, 2001

	Prevalence rate (per 100,000 population)	
NHPA disease or condition	**Males**	**Females**
Cardiovascular disease	125.1	149.8
Cancer	19.6	10.0
Diabetes	30.4	29.1
Asthma	105.0	126.2
Injury	145.4	94.6
Mood (affective) problems	34.3	55.2
Anxiety related problems	33.8	56.0
Osteoarthritis	56.5	91.7
Rheumatoid arthritis	20.2	26.6
Osteoporosis	6.0	25.3

(a) Prevalence rates, given as per 100,000 population, are age-standardised to the Australian population on 30 June 2001.

Source: AIHW analysis of the ABS National Health Survey, 2001.

Hospital separations

Hospital separations represent a different part of the spectrum of NHPA morbidity. In 2001–02, they accounted for about 1.8 million principal diagnoses, or around 29.8% of all hospital separations. They also accounted for about 10 million patient-days (43.7% of the total patient days) that year (Table A.3).

Cardiovascular disease (23.2% of all NHPA-related hospital separations), injuries (22.9%), arthritis and other musculoskeletal conditions (18.4%) and cancer (16.6%) were the major contributors to NHPA-related hospital separations.

Many of the NHPA diseases and conditions, as well as being the main reason for hospitalisation (principal diagnosis) may also be a contributor to hospitalisation for other reasons (additional diagnoses). Diabetes in particular accounts for a much larger

proportion of additional diagnoses than as a principal diagnosis, especially in relation to cardiovascular disease (Figure A.1). In almost 15% of separations with cardiovascular disease as a principal diagnosis, diabetes was listed as an additional diagnosis in 2001–02.

Table A.3: Hospital separations for National Health Priority Areas[a], all hospitals[b], 2001–02

	All separations		Same day separations		Patient days	
Principal diagnosis	Number '000	Per 1,000 population[c]	Number '000	Per cent of all separations	Number '000	Average length of stay
Cardiovascular disease	441.0	22.6	103.0	23.4	2,272.7	5.2
Cancer	316.7	16.2	140.8	44.5	1,624.6	5.1
Mental disorders	264.5	13.5	113.8	43.0	2,742.7	10.4
Injury	436.5	22.4	137.4	31.5	1,814.0	4.2
Diabetes	53.2	2.7	17.7	33.2	301.9	5.7
Asthma	41.0	2.1	7.3	17.9	104.1	2.5
Arthritis[d]	351.1	18.0	146.7	41.8	1,278.7	3.6
Total NHPA separations	*1,903.9*	*97.5*	*666.7*	*35.0*	*10,138.7*	*5.3*
All separations	6,398.2	327.6	3,348.8	52.3	23,201.0	3.6

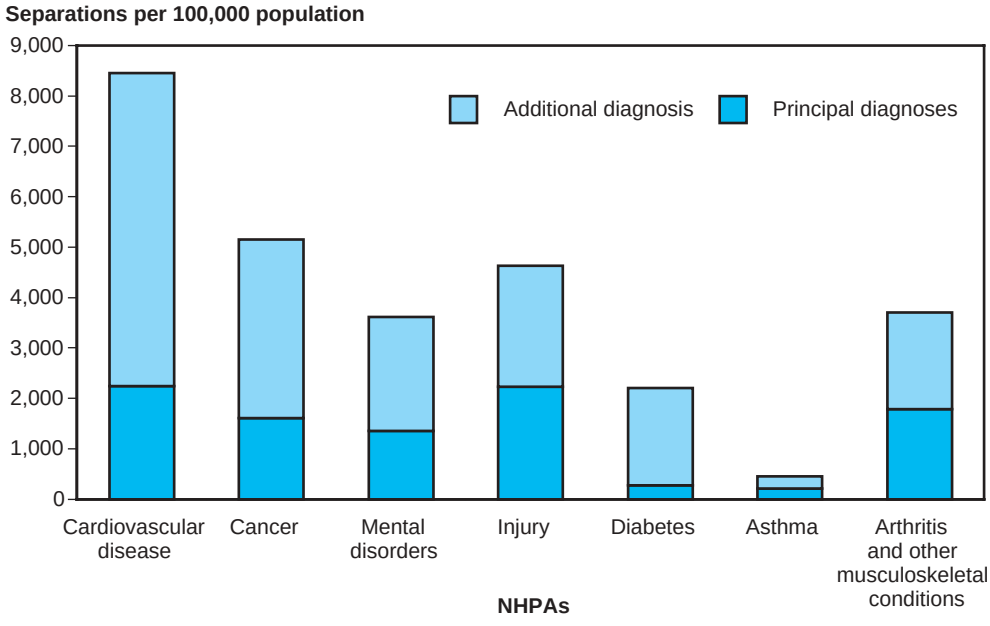
(a) Only separations for which the principal diagnosis corresponds to one of the priority areas have been included. These conditions will also have been reported as additional diagnoses for separations with principal diagnoses not within these priority areas.

(b) Includes public psychiatric hospitals.

(c) Crude rates.

(d) Arthritis and other musculoskeletal conditions.

Source: AIHW National Hospital Morbidity Database.



Source: AIHW National Hospital Morbidity Database.

Figure A.1: Hospital separations for NHPA diseases and conditions, 2001–02

Mortality

NHPA diseases and conditions are the underlying cause in more than three out of four deaths. In 2002, they accounted for 103,649 deaths, or 77.5% of all deaths, in Australia. Table A.4 ranks various NHPA diseases and conditions among the 20 leading causes of death.

Some of the cardiovascular diseases and cancers are responsible for large number of deaths. Coronary heart disease (19.5% of all deaths) and stroke (9.4%) were the leading individual causes of death in 2002, followed by lung cancer (6.1%). In comparison, asthma and arthritis and other musculoskeletal conditions are small contributors to death rates. These highly prevalent diseases tend to contribute more to illness and disability than death (Tables A.1 and A.4).

Death rates have declined for most of the NHPA diseases conditions over the past decade or so and for many NHPA conditions for the past 30 to 40 years. The declines in death rates for coronary heart disease and stroke since the late 1960s, and lung cancer in males since the early 1980s, have been most pronounced, contributing significantly to reduction in death rates overall. Contrasting these trends, lung cancer death rates for females have increased since coding began in the 1940s, and death rates for mental disorders have shown an overall increase since the mid-1960s (AIHW GRIM 2003).

Table A.4: Ranking of various NHPA diseases and conditions as an underlying cause of death, 2002

		Deaths		Ranks	
NHPA	Underlying cause of death	Number	Per cent of all deaths	Males	Females
Cardiovascular disease	Coronary heart disease	26,063	19.5	1	1
	Stroke	12,533	9.4	2	2
	All cardiovascular diseases	*50,294*	*37.6*		
Cancer	Lung cancer	8,110	6.1	3	6
	Breast cancer	2,698	2.0	. .	5
	Colorectal cancer	4,649	3.5	7	8
	Prostate cancer	2,852	2.1	6	. .
	Lymphomas	1,597	1.2	18	16
	All cancers	*37,622*	*28.1*		
Injury and poisoning	Suicide	2,320	1.7	8	20
	Land transport accidents	1,826	1.4	13	. .
	Accidental poisoning	568	0.4	. .	. .
	Accidental falls	629	0.5	. .	. .
	Accidental drowning	232	0.2	. .	. .
	Fire, burns and scalds	115	0.1	. .	. .
	All injury and poisoning	*7,820*	*5.8*		
Diabetes	*All diabetes*	*3,329*	*2.5*	*9*	*10*
Mental disorders	*All mental disorders*	*3,172*	*2.4*	. .	. .
Asthma	*Asthma*	*397*	*0.3*	. .	. .
Arthritis[(a)]	*All arthritis[(a)]*	*1,015*	*0.8*	. .	. .

. . Not applicable because not in top 20 causes of death.

(a) Arthritis and other musculoskeletal conditions.

Source: AIHW National Mortality Database.

Disability and activity restriction

NHPA diseases and conditions are the cause of much disability in the community. Based on the 1998 Survey of Disability, Ageing and Carers, it is estimated that of 3.6 million Australians with a disability, 72.7% had an NHPA disease or condition as their main disabling condition (ABS 1998). Of those with a disability, 34.4% had arthritis and other musculoskeletal conditions as their main disabling condition—the largest contributor to disability. Mental disorders and cardiovascular disease were the other large contributors (Table A.5).

NHPAs contribute similarly to the most severe category of disability. Of the estimated 540,000 Australians with a profound core activity restriction, 71.5% had an NHPA disease or condition as their main disabling condition (Table A.5). The largest contributors to profound core activity restriction were: mental disorders (29.3%), arthritis and other musculoskeletal conditions (19.6%), and cardiovascular disease (14.2%).

Table A.5: National Health Priority Areas and disability, 1998

	Profound core activity restriction		All persons with disability	
Main disabling condition	**Number '000**	**Per cent**	**Number '000**	**Per cent**
Cardiovascular disease	76.6	14.2	312.2	8.6
Cancer	8.4	1.6	60	1.7
Mental disorders	157.5	29.3	529.2	14.7
Injury and poisoning	21.9	4.1	245.7	6.8
Diabetes	1.1	0.2	64.4	1.8
Asthma	13.8	2.6	171.1	4.7
Arthritis and other musculoskeletal conditions	105.2	19.6	1,240.2	34.4
Total NHPA related	***384.5***	***71.5***	***2,622.8***	***72.7***
Non-NHPA diseases or conditions	153.2	28.5	987.5	27.3
Total	**537.7**	**100.0**	**3,610.3**	**100.0**

Source: ABS 1998.

Disability-adjusted life years (DALYs)

NHPA diseases and conditions are estimated to contribute about 73.8% of the total burden of disease in Australia. Of the seven NHPAs, cardiovascular disease is the largest contributor to DALY (21.9%), followed by cancer, mental disorders and injuries (AIHW: Mathers et al. 1999). Arthritis and other musculoskeletal conditions, diabetes and asthma are responsible for relatively smaller proportions of the burden (Table A.1).

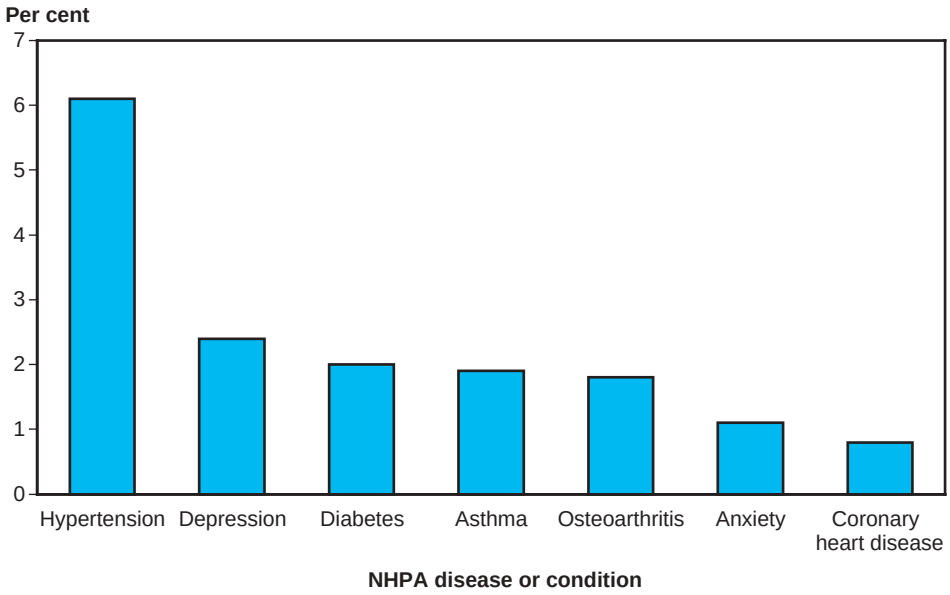
Use of health care services

The high morbidity, disability and mortality associated with NHPAs leads to substantial use of health care services and therefore expenditure on health care. Two of the largest areas of health care use, general medical practice and the hospital system, provide some insight into this aspect of NHPAs.

GP visits

In Australia, a visit to a general practice is usually the first point of healthcare contact. Consulting a doctor is the most common action related to health care taken by Australians. About 24% of Australians visited a GP in the two weeks prior to the 2001 National Health Survey (ABS 2002).

Of the problems managed by GPs in 2002–03 (AIHW: Britt et al. 2003), 29.3% (or 43 problems per 100 encounters) were related to NHPA diseases or conditions. Hypertension was the most frequently managed problem (6.1% of all problems managed), followed by depression (2.4%). Diabetes, asthma, osteoarthritis, anxiety and coronary heart disease were among the top ten problems managed (Figure A.2).



Source: AIHW National Hospital Morbidity Database.

Figure A.2: NHPA-related problems managed by GPs, 2002–03

Hospitalisation and emergency department visits

As described earlier, NHPAs accounted for 29.8% of all hospital separations in 2001–02. Cardiovascular disease accounted for the largest proportion of NHPA separations, followed by injury. NHPAs also accounted for 43.7% of all patient days (Table A.3). Mental disorders were responsible for the highest number of these patient-days, followed by cardiovascular disease.

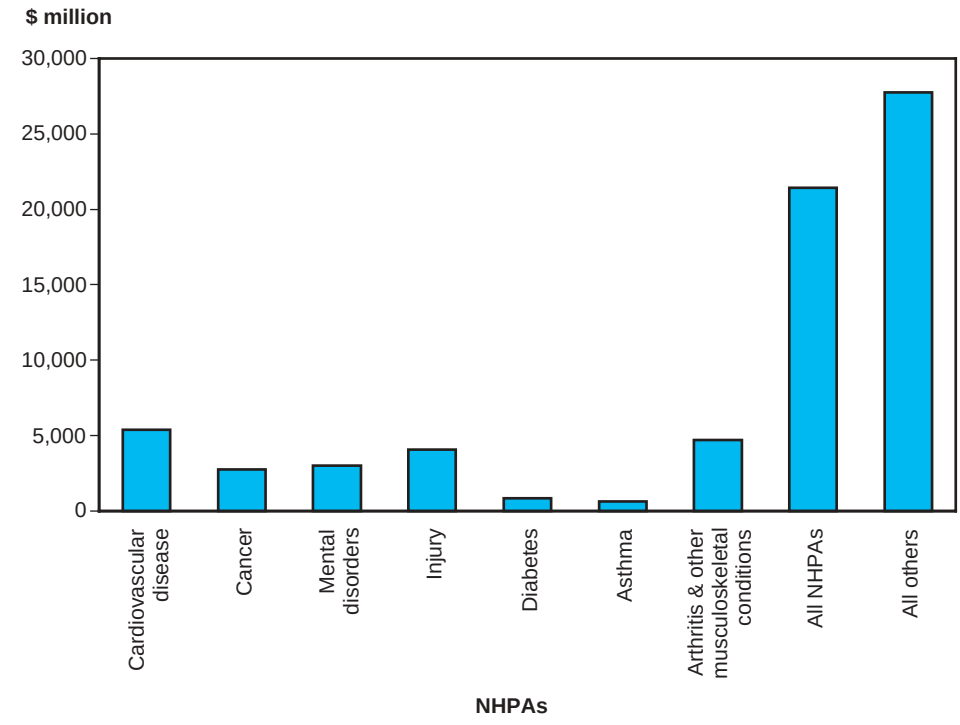
The average length of hospital stay (ALOS) for NHPA diseases and conditions was 5.3 days, compared with 3.6 days for all hospital separations, in 2001–02. The hospital stays were the longest for mental disorders and diabetes, with ALOS of 10.4 days and 5.7 days respectively. Asthma had the shortest ALOS at 2.5 days.

About 35.0% of NHPA hospital separations in 2001–02 were same-day separations, much lower than the average of 52.3% for all hospital separations. Cancer was the NHPA disease with the highest proportion of same-day separations (44.5%), followed by mental disorders (43.0%) and arthritis and other musculoskeletal disorders (41.8%). Chemotherapy-related separations are large contributors to the high proportion of same-day separations for cancer.

Health system costs

Cardiovascular disease, musculoskeletal conditions and injury were all major areas of health expenditure in 2001–02 (Figure A.3). Of the seven NHPAs, cardiovascular disease was the largest area of health expenditure in 2001–02—about $5.5 billion or 11% of allocated health system expenditure. This represented 26% of total NHPA health expenditure.

These estimates cover health system expenditure allocated to each disease. Expenditure on community and public health services, health administration, the transport of patients, and health aids and appliances is not included in the above estimates.



Source: AIHW 2004.

Figure A.3: Health system expenditure for NHPA areas, 2001–02

NHPA co-morbidity

NHPA diseases and conditions are generally chronic in nature and also share several risk factors. The simultaneous presence of more than one NHPA disease or condition is therefore not uncommon. Common NHPA co-morbidities include cardiovascular disease (in particular, coronary heart disease and stroke), diabetes and depression (Table A.6). Individuals with an NHPA disease or condition may also have other non-NHPA diseases or conditions.

Data from two different sources, 2001 National Health Survey self-reports and National Mortality Database, have been used to explore NHPA-related co-morbidities as described below.

Table A.6: Common co-morbidities for selected NHPA diseases and conditions

Selected NHPA disease or condition	Common co-morbidities[(a)]
Coronary heart disease	**Other vascular diseases (e.g. stroke, peripheral vascular disease)**, **diabetes**, **depression**
Stroke	**Other vascular diseases (e.g. coronary heart disease, peripheral vascular disease), diabetes**
Colorectal cancer	Inflammatory bowel disease (e.g. ulcerative colitis, Crohn's disease)
Depression	Anxiety, chronic pain and fatigue, blindness, deafness immobility, multiple sclerosis, **cardiovascular disease**, **diabetes, cancer, rheumatoid arthritis**
Diabetes	**Cardiovascular disease (e.g. coronary heart disease, stroke and peripheral vascular disease)**
Asthma	Respiratory conditions, eczema, sinusitis, hay fever, chronic obstructive pulmonary disease (COPD), **osteoporosis,** cataract, mood swings, heartburn and indigestion
Arthritis (non rheumatoid)	**Osteoarthritis**, inflammatory joint diseases (e.g. gout, **rheumatoid arthritis)**, **cardiovascular disease**
Rheumatoid arthritis	Respiratory and infectious diseases, gastrointestinal disorders, **non-Hodgkin's lymphoma**, secondary amyloidosis, **depression**
Osteoporosis	Chronic liver disease, chronic renal disease**, rheumatoid arthritis**, hyperparathyroidism, hypogonadism

(a) NHPA diseases or conditions are given in bold letters.

Source: AIHW 2002.

Self-reports

Arthritis and other musculoskeletal conditions are the most common long-term NHPA accompaniments. Table A.7 shows these co-morbidities based on 2001 National Health Survey self-reports. In particular, 72% of those reporting injury as a long-term condition also reported the presence of arthritis and other musculoskeletal conditions. Cardiovascular disease was the other commonly co-occurring disease.

Table A.7: Multiple reporting of NHPA diseases or conditions, 2001

Index long-term condition	Other long-term conditions (per cent)						
	Cardio-vascular disease	Cancer	Injury and poisoning	Mental disorders	Diabetes	Asthma	Arthritis[(a)]
Cardiovascular disease	. .	3.6	16.4	12.1	9.4	12.3	57.8
Cancer	43.0	. .	19.3	10.6	5.6	11.1	62.0
Injury and poisoning	23.1	2.3	. .	16.9	3.5	14.1	78.2
Mental disorders	21.2	1.6	21.1	. .	3.6	17.0	47.7
Diabetes	54.0	2.8	14.3	11.9	. .	14.1	57.8
Asthma	17.8	1.4	14.5	14.0	3.6	. .	35.3
Arthritis[(a)]	30.4	2.7	29.1	14.3	5.3	12.8	. .

. . Not applicable.

(a) Arthritis and other musculoskeletal conditions.

Note: Percentages in rows can add to more than 100.0 due to the presence of multiple conditions in individuals.

Source: Derived from 2001 National Health Survey.

Associated causes of death for the NHPAs

Death certificates are another useful source of co-morbidity information. These records not only provide information about the cause of death leading directly to death (the underlying cause of death) but also about those causes that contributed to events around death in some way (associated causes of death).

While cardiovascular disease is the largest underlying cause of death, it is also the cause mentioned most frequently as an associated cause of death (Table A.8). Of 133,707 deaths, 50,294 certificates recorded a cardiovascular disease as an underlying cause of death in 2002. In another 57,496 deaths, a cardiovascular disease was mentioned as an associated cause. Of deaths where cardiovascular disease was listed as an associated cause, in 27,202 cases the underlying cause of death was a non-cardiovascular disease.

Cancer, the second largest underlying cause of death, on the other hand, is listed less often as an associated cause of death. For 37,622 deaths in 2002 where it was recorded as the underlying cause of death, cancer was an associate cause of death in just 11,047 cases.

Table A.8: National Health Priority Areas as underlying and/or additional causes of death, 2002

NHPA	Number of deaths		
	As an associated cause of death(A)	As an underlying cause of death (U)	Ratio (A/U)
Cardiovascular disease	57,496	50,294	1.1
Cancer	11,047	37,622	0.3
Injury and poisoning	5,837	4,994	1.2
Mental health	9,639	3,172	3.0
Diabetes	8,145	3,329	2.4
Asthma	1,028	397	2.6
Arthritis[(a)]	4,147	1,015	4.1

(a) Arthritis and other musculoskeletal conditions

Source: AIHW National Mortality Database

NHPAs most likely to be mentioned as associated causes are diabetes, arthritis and other musculoskeletal conditions and injuries (Table A.8). Deaths due to injury will usually have at least one associated cause of death mentioned—the cause of the injury and the resulting injury.

Risk factors

A variety of risk factors affect the onset, treatment and prognosis of various NHPA diseases and conditions (AIHW 2002). While some of the risk factors such as smoking and physical inactivity are modifiable, several others such as age and heredity are largely non-modifiable. Table A.9 lists risk factors for various NHPAs.

Table A.9: Known risk factors for diseases and conditions in each NHPA

NHPA disease/ condition	Non-modifiable risk factors	Modifiable risk factors
Diabetes Type 1	Heredity	
Diabetes Type 2	Age, heredity, pregnancy, low birth weight, age	Excess weight (particularly obesity), impaired glucose tolerance, physical inactivity, poor diet and nutrition, low birth weight
Asthma	Family history	Excess weight, allergens, exercise, emotion, respiratory tract infections in infancy, low birth weight, viral infections, tobacco smoke, food, chemicals, drugs
Coronary heart disease	Age, male sex, family history	Tobacco smoking, physical inactivity, alcohol misuse, poor diet and nutrition, high blood pressure, high blood cholesterol, excess body weight, diabetes
Stroke	Age, male sex, family history	High blood pressure, high blood cholesterol, atrial fibrillation, transient ischaemic attack, tobacco smoking, alcohol misuse, excess body weight, physical inactivity, poor diet and nutrition
Lung cancer	Age, male sex	Tobacco smoking, environmental tobacco smoke, exposure to asbestos or radon
Colorectal cancer	Heredity, personal or family history of polyps or colorectal cancer, inflammatory bowel disease, age	Poor diet and nutrition, physical inactivity, excess weight
Depression	Family history of depression, being a female adolescent, high trait anxiety and pre-existing anxiety disorders, temperament—reacting negatively to stressors, negative thought patterns, avoidant coping style	Poverty, unemployment, conflict, poor parenting practices, child abuse, exposure to adverse life events, carers of those with chronic physical or mental disorder, older age, residential care
Arthritis	Genetic, female sex, age	Joint trauma and injury, obesity, repetitive occupational joint use, physical inactivity
Osteoporosis	Female sex, family history, low levels of oestrogen after menopause, amenorrhoea lasting more than 6 months before the age of 45, early menopause (before age 45)	Low body weight, low calcium intake, low vitamin D levels, physical inactivity, smoking, alcoholism, use of corticosteroids
Injury prevention	Male sex, younger and older age groups, non-metropolitan areas, lower socioeconomic status	Alcohol consumption, participation in sporting activities and vigorous exercise, non-compliance with safety precautions (e.g. secured pool fencing, wearing seatbelts)
Suicide	Males 20–39 and 80 years and over, unmarried males	

Sources: AIHW 2002; Bradley & Harrison 2004; Steencamp & Harrison 2000; Brownson et al. 1998.

Several of the risk factors are shared by NHPA diseases and conditions (Table A.10). The most common of these are physical inactivity, excess weight, tobacco smoking, poor diet and nutrition, and excess consumption of alcohol. Less commonly shared risk factors are low birth weight, high blood pressure and high blood cholesterol. Diabetes, coronary heart disease, stroke and colorectal cancer between them share the most risk factors, namely physical inactivity, excess weight and poor diet and nutrition.

Table A.10: Common risk factors for the NHPA diseases and conditions

	Risk factor							
NHPA disease or condition	**Physical inactivity**	**Excess weight**	**Poor diet & nutrition**	**Tobacco smoking**	**Alcohol misuse**	**Low birth weight**	**High blood pressure**	**High blood cholesterol**
Type 2 diabetes	✓	✓	✓			✓		
Asthma				✓		✓		
Coronary heart disease	✓	✓	✓	✓	✓		✓	✓
Stroke	✓	✓	✓	✓	✓		✓	✓
Lung cancer				✓				
Colorectal cancer	✓	✓	✓					
Osteoarthritis	✓	✓						
Osteoporosis	✓			✓	✓			
Injury					✓			

Sources: AIHW 2002; Bradley & Harrison 2004; Steencamp & Harrison 2000; Brownson et al. 1998.

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