C Health preface

Health care services are concerned with promoting, restoring and maintaining a healthy society. They involve illness prevention, health promotion, detection and treatment of illness and injury and the rehabilitation and palliative care of individuals who experience illness and injury. More broadly defined, the health system includes a range of activities that raise awareness, thereby reducing the risk and onset of illness and injury (box C.1).

Health care services in Australia are delivered by a variety of government and non-government providers in a range of service settings. The Report concentrates on the performance of public hospitals (particularly, the provision of acute care services to admitted patients and emergency department services) and general practitioners (GPs) because they represent a significant component of government expenditure on health care. According to the most recent comparative data, Australian governments expended $20.5 billion on public hospitals (including psychiatric hospitals) and medical services (which includes payments to GPs and other specialist practitioners) in 1998-99 — 70.2 per cent of recurrent health expenditure[1] (table 5A.54 and AIHW 2001a). The Report also examines the interactions between different service mechanisms for dealing with two health management issues: mental health and breast cancer.

Areas of government involvement in health care provision not covered in the health chapters include:

- community health services (although reporting on community health services for patients with mental disorders is increasing);
- nursing home services (these are reported in chapter 12, 'Aged care services');
- patient transport services (these are reported in chapter 11, 'Emergency management');
- public health programs, other than those for breast cancer and mental health;
- funding for specialist medical practitioners; and
- government support for pharmaceuticals.

[1] Excludes aged care and ambulance services as these areas are covered in other chapters of the Report.

A range of government services, such as public housing, sanitation and water supply, also influence health outcomes. These are not formally part of Australia's health system and are not the subject of the following health chapters. A range of other factors, such as Indigenous status, socioeconomic status and residential location are potential influences on the health outcomes in this Report. It is a priority of the Review to improve the reporting of data on health outcomes and access to health care services for Indigenous people and residents in nonmetropolitan regions of Australia.

Box C.1 **Some common health terms**

community health services: health services for individuals and groups delivered in a community setting, rather than via hospitals or private facilities.

general practitioners: medical practitioners who, for the purposes of Medicare, are vocationally registered under section 3F of the *Health Insurance Act 1973* (Cwlth), hold fellowship of the Royal Australian College of General Practitioners or equivalent, or hold a recognised training placement.

Medicare: Commonwealth Government funding of private medical and optometrical services (Medicare Benefits Schedule). Some users use the term to include other forms of Commonwealth Government funding — for example, funding of selected pharmaceuticals (Pharmaceutical Benefits Scheme) and public hospital funding (Australian Health Care Agreements) — which is aimed at providing public hospital services free of charge to public patients.

public health: an organised social response to protect and promote health and to prevent illness, injury and disability. The starting point for identifying public health issues, problems and priorities, and for designing and implementing medical interventions, is the population as a whole or population subgroups. Public health is characterised by a focus on the health of the population (and particular at-risk groups) and complements clinical provision of health care services.

public hospital: a hospital that provides free treatment and accommodation to eligible admitted persons who elect to be treated as public patients. It also provides free services to eligible non-admitted patients and may provide (and charge for) treatment and accommodation services to private patients. However, charges to non-admitted patients and admitted patients on discharge may be levied in accordance with the Australian Health Care Agreements (for example, charges for aids and appliances).

Sources: AIHW (2000); DHAC (1999).

The remainder of this preface is a summary of the nature of Australia's health care system and a report on the broad outcomes under that system.

Supporting tables for the 'Health preface' are provided on the CD-ROM enclosed with the Report. The files are provided in Microsoft Excel 97 format at

\Publications\Reports\2002\Attach5A.xls or in Adobe PDF format at \Publications\Reports\2002\Attach5A.pdf.

Supporting tables are identified in references throughout this chapter by an 'A' suffix (for example, table 5A.3 is table 3 in the electronic files). They may be subject to revision. The most up-to-date versions of these files can be found on the Review's web page (www.pc.gov.au/gsp/). Users without Internet access can contact the Secretariat to obtain up-to-date versions of these tables (see details on the inside front cover of the Report).

Profile of health services

Roles and responsibilities

The Commonwealth Government's health services activities include:

- funding public hospital services, GPs, some specialist medical services, and public health programs;
- the Pharmaceutical Benefits Scheme (PBS);
- funding and providing nursing home services;
- funding the Commonwealth private health insurance rebate;
- promulgating and coordinating health regulations; and
- undertaking health policy research and policy coordination across the Commonwealth, States and Territories.

State and Territory governments contribute funding for and deliver a range of health care services, such as:

- public hospital services;
- public health programs, including those for mental health;
- home and community care;
- child, adolescent and family health services;
- patient transport;
- health promotion; and
- the regulation, inspection, licensing and monitoring of premises, institutions and personnel.

Local governments are generally involved in environmental control and a range of community based and home care services, although the exact nature of their involvement varies across jurisdictions.

The non-government sector plays a significant role in the health system, delivering general practice and specialist medical and surgical services, dental services, a range of other allied health services (such as optometry and physiotherapy) and private hospital and nursing home services.

Funding

Funding the various components of the health care system is a complicated process. The Commonwealth Government subsidises many of the services provided by the non-government sector (mostly through the Medicare Benefits Schedule, the PBS and the private health insurance rebate) and funds a number of nationally coordinated public health programs. It also provides funding to the States and Territories for public hospital services under the Australian Health Care Agreements.

State and Territory governments, through income raised by taxes and from both general and specific-purpose grants received from the Commonwealth, contribute funds to community health services and public hospitals (through casemix and other payments), which in turn fund specialists (through limited fee-for-service or sessional arrangements). Private individuals, health insurance funds and other non-government institutions also contribute funding to a range of health care providers, both government and non-government.

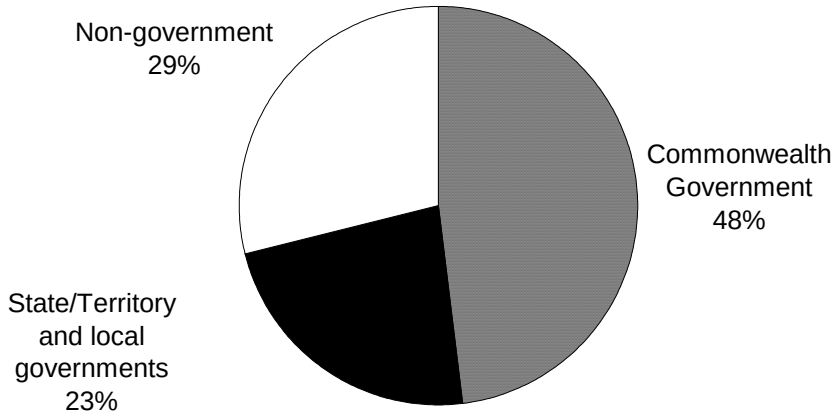
Governments (at all levels) funded approximately 71.2 per cent of total expenditure on health care services during 1999-2000, with the remainder coming from individuals, health insurance funds, and workers' compensation and compulsory motor vehicle third party insurance providers (figure C.1). (The latter two are treated as non-government funding because funds are obtained on the basis of fee-for-service). The Commonwealth Government accounted for the largest proportion of total health care expenditure in Australia (48.0 per cent) in 1999-2000.

Size and scope of sector

Total expenditure (recurrent and capital) on health care services in Australia was estimated to be $53.7 billion in 1999-2000. This was equivalent to 8.5 per cent of gross domestic product (GDP), up from 7.5 per cent in 1989-90. This implies that health care expenditure grew faster than the economy over the last decade. The ratio

of health expenditure to GDP fell slightly from 8.6 per cent in 1998-99 to 8.5 per cent in 1999-2000, however this was primarily due to GDP having faster real growth than health expenditure — 4.3 per cent and 3.0 per cent respectively (AIHW 2001a).

Figure C.1 **Total health expenditure by source, 1999-2000[a, b, c, d, e]**



[a] Expenditure by the Commonwealth Government and the non-government sector has been adjusted for tax expenditures. [b] Based on preliminary estimates by the Australian Institute of Health and Welfare and the Australian Bureau of Statistics. [c] 'Non-government' includes expenditure by individuals, health insurance funds, workers' compensation and compulsory motor vehicle third party insurers. [d] Includes expenditure on nursing homes and patient transport services. [e] Includes recurrent and capital expenditure.

Source: AIHW (2001a); table 5A.53.

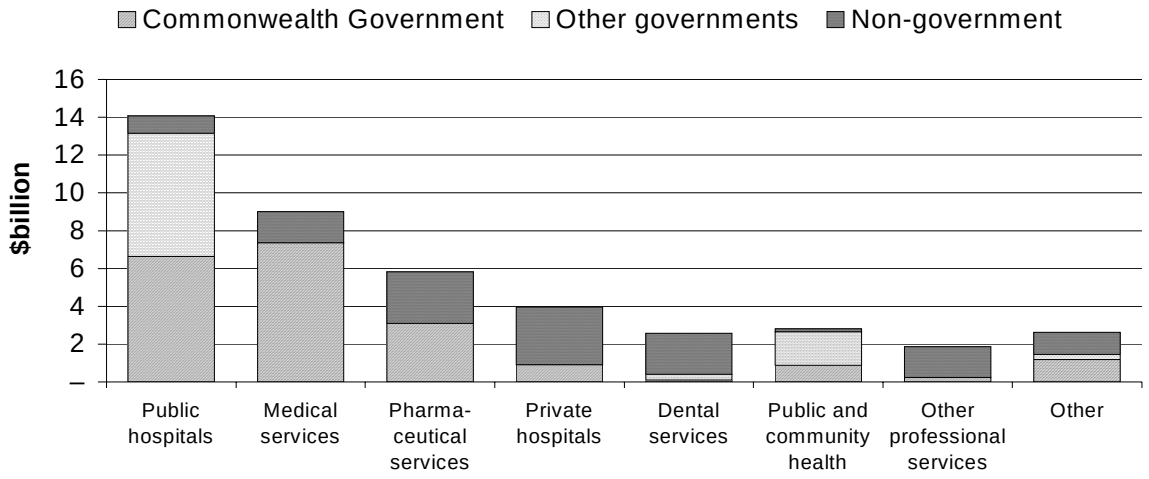
The growth of total expenditure over the last decade was partly the result of an increase in expenditure by the Commonwealth Government. Expenditure by the Commonwealth grew proportionally faster than expenditure by State and Territory governments and non-government sources. Between 1989-90 and 1999-2000 the real average annual rate of growth in expenditure was 5.7 per cent for the Commonwealth Government, 3.0 per cent for State, Territory and local governments and 2.5 per cent for non-government sources (AIHW 2001a). A significant factor was the introduction of Commonwealth programs supporting private health insurance.

On 1 January 1998, the Commonwealth Government replaced the Private Health Insurance Incentive Scheme with a 30 per cent rebate on private health insurance premiums. Total expenditure on the rebate for 1999-2000 was $1.6 billion (AIHW 2001a).

The single largest item of recurrent health care expenditure by government and non-government sources in 1998-99 (the year for which the most recent data are

available) was on public (non-psychiatric) hospitals. Expenditure of $13.7 billion funded 3.9 million separations and 33.7 million non-admitted occasions of service (AIHW 2001a). Government recurrent expenditure on public (non-psychiatric) hospitals of $12.8 billion accounted for 43.7 per cent of total government recurrent expenditure on health care services in that year. Medical services accounted for $7.4 billion of government expenditure (25.2 per cent of all government recurrent expenditure) and pharmaceutical services accounted for $3.1 billion (10.6 per cent) (figure **Error! Not a valid link.**).

Figure C.2 **Total health services recurrent expenditure, 1998-99[a, b, c, d]**



[a] 'Public hospitals' includes funding for public psychiatric hospitals. [b] 'Medical services' are defined as those provided on a fee-for-service basis, including those provided to private patients in hospitals. They also include some expenditure on private medical services that is not based on a fee for service. [c] 'Pharmaceutical services' include (but are not limited to) those provided under the PBS. [d] 'Other' includes funding for aids and appliances, administration and research.

Source: AIHW (2001a); table 5A.54.

Recurrent expenditure on public (non-psychiatric) hospitals by all governments grew by $3.8 billion (in 1998-99 dollars) between 1989-90 and 1998-99. This accounted for 40.7 per cent of growth in government expenditure on health services (figure C.3 and table 5A.55). The public (non-psychiatric) hospital share, however, fell slightly from 45.0 per cent in 1989-90 to 43.7 per cent in 1998-99.

Box C.3 **Overall objectives of the health system**

Government involvement in the health system is aimed at efficiently and effectively protecting and restoring the health of the community by:

- preventing or detecting illness through the provision of services that can achieve improved health outcomes at relatively low cost;
- caring for ill people through the use of appropriate health and medical intervention services;
- providing appropriate health care services which recognise the cultural differences between people; and
- providing equitable access to these services.

Primary prevention strategies are implemented before the diagnosis of an illness and generally aim to:

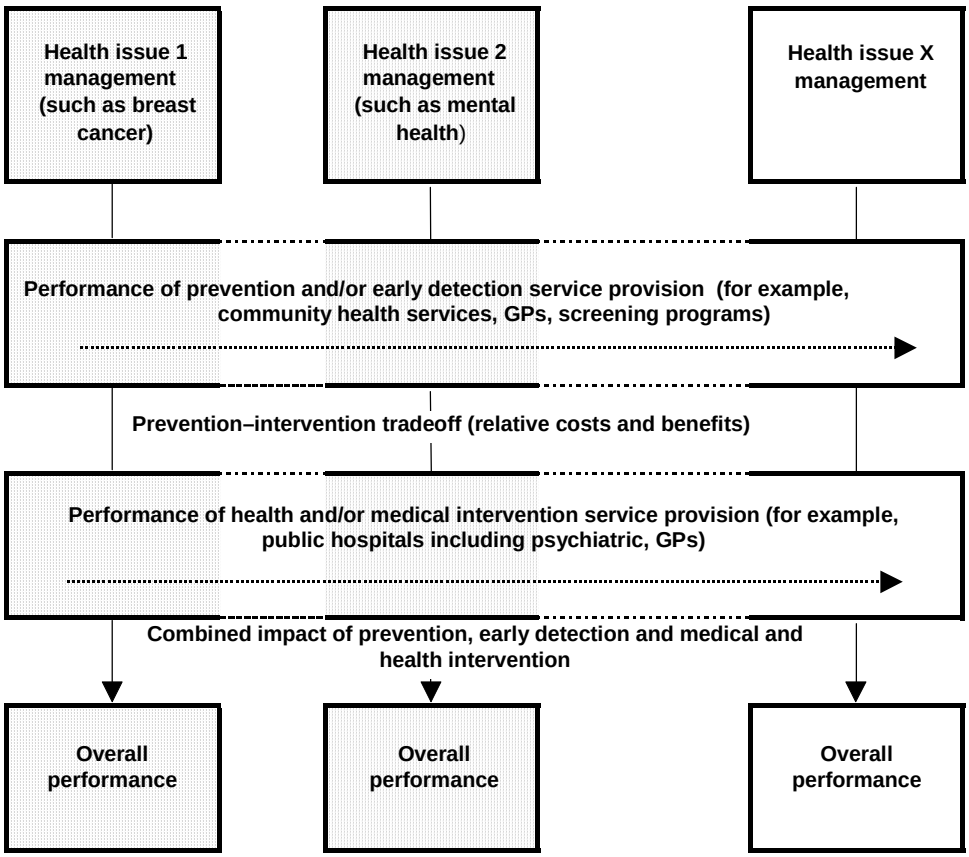
- reduce a person's risk of getting a disease or illness by increasing protective factors; and
- delay the onset of illness.

Medical intervention strategies are implemented after a diagnosis.

Measuring the effectiveness and efficiency of Australia's health system is a complex task. It must account for the performance of a range of services delivered (such as prevention and medical intervention), and for the performance of service providers (such as community health centres, GPs and public hospitals), as well as for the overall outcomes generated by the health system. The Steering Committee has not sought to develop a single unifying performance indicator framework that captures all these aspects of the health system. Instead, it has adopted performance indicator frameworks for each component of the system. The frameworks report on two key aspects of the health system — health care providers and health issues. A complete set of performance indicator frameworks can contribute to an improved understanding of the performance of health care service systems in each jurisdiction.

The measurement approach adopted in this Report is represented diagrammatically (figure C.4). Frameworks of indicators measuring the performance of health service providers across a range of health care issues (represented by the horizontal arrows) are presented for two service delivery mechanisms used in Australia: public hospitals and GPs.

Figure C.4 **Australian health system — measurement diagram**



The appropriate mix of services, including the prevention of illness and injury and medical treatment (prevention versus medical intervention) and the appropriate mix of service delivery mechanisms (hospital based versus community based), are measured by focusing on a health management issue (represented by the vertical arrows). As in previous years, the Report covers breast cancer management and mental health services. The breast cancer management framework integrates the early detection and medical intervention strategies, which should inform the tradeoffs in the allocation of resources between these two strategies. The mental health framework provides information on the interaction and integration arrangements between community based and hospital based providers in meeting the needs of Australians with a mental illness. Performance indicator frameworks are discussed in more detail in chapters 5, 6 and 7.

Measuring health system performance

It is difficult to isolate the effect of health care services on the general health of the population. Socioeconomic factors (such as ethnicity, residential location, income levels and employment rates) and the provision of non-health care government services (such as clean water, sewerage, nutrition, education and public housing) each contribute to overall health outcomes. Indicators of aggregate health outcomes used in this Report include: the prevalence of illness and injury; mortality rates (for infants and all persons, as well as for the leading causes of death); average life expectancy; and the burden of disease and injury (as measured by the years of life lost to mortality or disability).

Where possible, indicators include both Indigenous people as well as the Australian population as a whole. As discussed elsewhere, reporting indicators of performance for Indigenous people is a priority for the Review. Aggregate health outcomes for Indigenous people in Tasmania are discussed in box C.4.

Similarly, the efforts of governments to address health care needs are influenced by factors external to their control, including geographic dispersion, age profiles, racial characteristics and socioeconomic status. Statistical Appendix A provides a summary of some factors that could influence health outcomes and government expenditure. Measures of the efficiency of government and non-government service provision include the per person expenditure on health care services. It is important to remember the limits of these measures, given the effects of other non-health related factors.

Prevalence of illness and injury

One method for measuring overall health outcomes is to use data outlining the prevalence and incidence of illness and injury. The Australian Bureau of Statistics (ABS) published data on the prevalence of illness and injury in 1997 based on the 1995 National Health Survey (table 5A.56). A discussion of the data was included in previous editions of the *Report on Government Services* (including the 2001 Report) and consequently, has not been reproduced here.

Box C.4 **Tasmanian Healthy Communities Survey, 1998**

Data from the Healthy Communities Survey conducted by the Tasmanian Government in 1998 identify key health and wellbeing differences between Aboriginal and non-Aboriginal adults. As well as health status and risk behaviours, the survey addressed determinants which have been found in previous research to influence health and wellbeing gain. While the survey did not attempt to compile a comprehensive picture of the determinants of Aboriginal health in Tasmania, it improved the population level data available on the social, economic, behavioural, psychological, cultural and attitudinal correlates of Aboriginal people's health status in Tasmania. The report on the survey cautions that it is not possible to derive conclusions about causal links from the data, but that the data do provide an evidence base for input to future research, policy and planning processes.

Detailed data from the survey are presented in table 5A.67. In brief, the survey suggested that, in 1998, Aboriginal people had a greater likelihood than the non-Aboriginal population of experiencing a range of health and socioeconomic disadvantages. Aboriginal people tended to be less satisfied with their mental and physical wellbeing, reported poorer socioeconomic status, had more concerns about their community participation, interaction and respect, tended to exhibit more health related risk behaviours and were more likely to report concerns about their family cohesion. Importantly, there were no statistically significant differences in belief in the effectiveness of immunisation, or reported frequency of problems caused by gambling. However, there was also evidence that many Aboriginal people were achieving at the highest levels. For example, there were similar proportions of Aboriginal and non-Aboriginal people who reported having excellent health, affectionate and non-violent family relationships, and high levels of satisfaction with job security and overall standard of living.

The survey highlights that in order to achieve health gain, the challenge for Aboriginal people and policy makers is to identify the strengths that can be built on, and the factors of disadvantage that can be mediated at population, community, family and individual levels.

Key issues in the health and wellbeing of Aboriginal people have emerged. These include the different demographic profile of Aboriginal people, the need for more information about the prevalence of specific illnesses and injuries experienced by Aboriginal people, of the lifestyle and psychosocial factors that contribute to poorer health and wellbeing, and of Aboriginal family and social support structures. There is also a need for more detailed information about education and work trends, economic capability, community capacity, and cultural issues, such as involvement in community activities, respect and recognition, and the importance of place.

Source: Tasmanian Government.

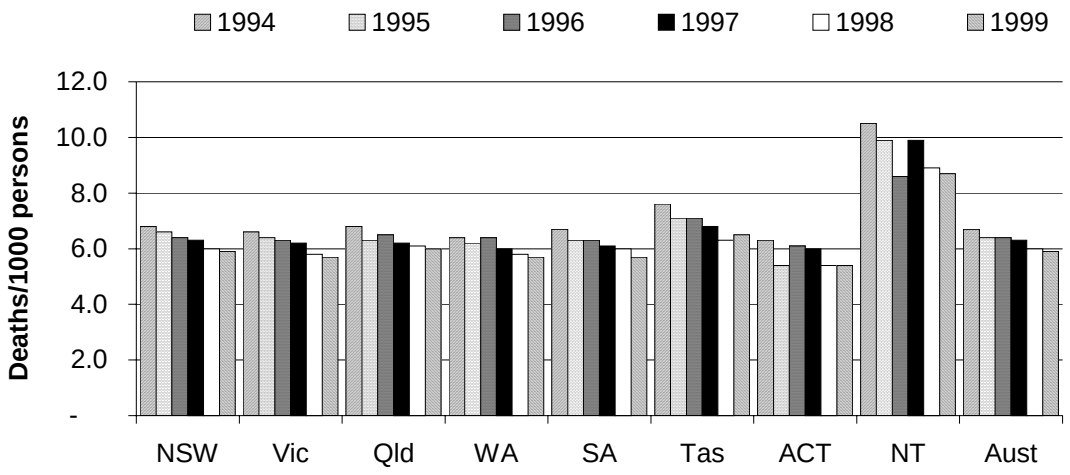
Mortality rates

A second method for measuring overall health outcomes is to use mortality rates among all persons and infants. There were 128 102 deaths in Australia in 1999 (ABS 2000a) which translated into a mortality rate (standardised for age differences across jurisdictions) of 5.9 per 1000 population (figure C.5). Across jurisdictions, mortality rates in 1999 were highest in the NT (8.7 per 1000) and lowest in the ACT (5.4 per 1000).

Mortality rates for Indigenous Australians are reported again this year. In 1999, Indigenous mortality rates in jurisdictions with reliable data were approximately two to three times that of the national average (table 5A.57).

Indigenous mortality, infant mortality, life expectancy, and median age at death need to be interpreted with care. The coverage of Indigenous deaths (and births) in Australia is imperfect. Not every Indigenous registered death (or birth) is appropriately identified as Indigenous. This can result in the underestimation of the number of Indigenous deaths (or births) occurring and, by extension, an underestimation of the mortality (or birth) rate of Indigenous persons (ABS 2000b). The ABS now publishes the Indigenous mortality data for all jurisdictions except Tasmania and the ACT. Changes are being made that will improve the coverage of Indigenous death registrations in these jurisdictions (ABS 2000a).

Figure C.5 **Mortality rate per 1000 persons, age standardised**

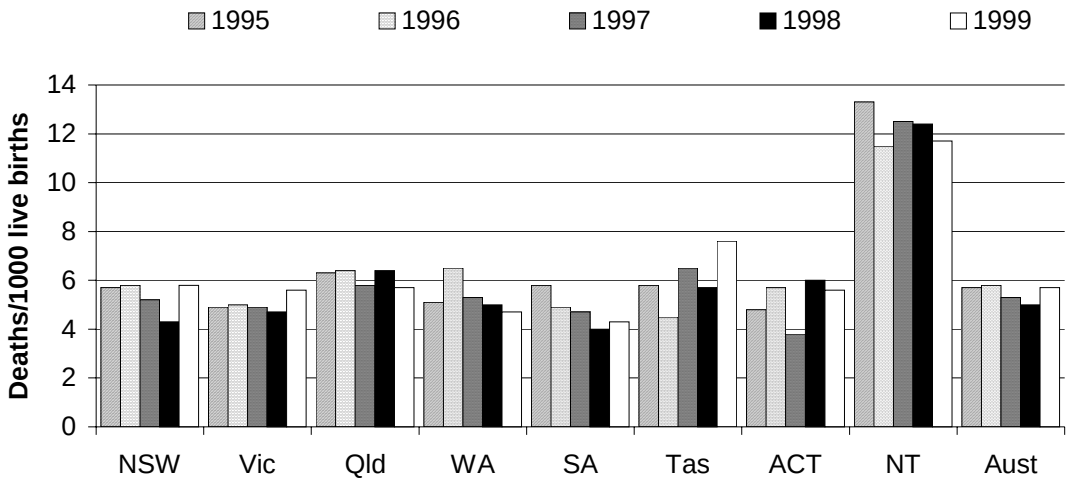


Source: ABS (1997, 2000a and unpublished); table 5A.57.

Infant mortality rates in Australia declined between 1994 and 1998 — from 5.9 to 5.0 per 1000 live births. Between 1998 and 1999, infant mortality rates rose in NSW, Victoria, SA and Tasmania. These increases are reflected in a higher national

infant mortality rate — 5.7 in 1999 (figure C.6). Across jurisdictions, infant mortality rates in 1999 were highest in the NT (11.7 per 1000 live births) and lowest in SA (4.3 per 1000 live births).

Figure C.6 **Infant mortality rate**



Source: ABS (1997, 2000a and unpublished); table 5A.58.

Infant mortality rates for Indigenous Australians are reported for all jurisdictions except Tasmania and the ACT this year. The Indigenous infant mortality rate was between two and three times that of the national average for Indigenous and non-Indigenous Australians in 1999 (table 5A.58). Care must be taken in interpreting these data, given the systematic under-reporting of both infant deaths and births.

Principal causes of death

The main causes of death among Australians in 1999, when measured in terms of broad categories of disease and injury, were diseases of the circulatory system (heart diseases, heart attacks and strokes), neoplasms (tumours and malignant cancers), diseases of the respiratory system (such as chronic obstructive pulmonary disease) and external causes (including accidents and suicide). These accounted for 83.7 per cent of all deaths among males and 80.3 per cent of all deaths among females (table 5A.59).

Table C.1 **Principal causes of deaths, 1999 (per cent)**

	NSW	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*ACT*	*NT*	*Aust*
Male									
Heart disease[a]	22.6	21.0	23.5	20.3	23.0	21.3	19.5	17.9	22.1
Acute myocardial infarction[b]	11.9	11.4	13.4	10.8	12.6	11.6	10.4	5.7	11.9
Stroke[c]	7.7	6.9	7.3	7.1	7.5	7.6	5.1	3.5	7.3
Lung cancer[d]	6.8	6.9	7.2	7.6	6.9	6.7	5.0	5.7	6.9
Prostate cancer	3.5	4.1	3.7	3.4	4.2	3.9	3.1	0.8	3.7
Suicide	2.9	2.7	3.3	3.3	2.7	3.5	5.1	5.3	3.0
Motor vehicle accidents	1.9	2.1	2.2	3.0	2.0	2.9	1.9	6.1	2.1
Female									
Heart disease[a]	21.3	19.8	23.0	19.6	21.2	20.0	17.7	9.9	20.9
Acute myocardial infarction[b]	11.8	11.1	12.8	10.4	13.2	9.7	10.2	4.3	11.7
Stroke[c]	12.9	11.5	12.1	11.5	12.3	10.4	13.7	7.4	12.1
Lung cancer[d]	3.4	3.6	3.6	4.1	3.3	3.0	3.4	3.1	3.5
Breast cancer	3.8	4.4	4.0	4.8	3.6	4.7	5.1	8.0	4.1
Suicide	0.8	0.7	0.8	0.9	0.8	0.5	1.5	1.5	0.8
Motor vehicle accidents	0.9	0.9	0.9	1.3	0.9	1.2	1.1	2.5	0.9

[a] Ischaemic heart disease. [b] Heart attack. [c] Cerebrovascular disease. [d] Cancer of the trachea, bronchus and lung.

Source: ABS (2000a); table 5A.59.

Table C.1 summarises the seven most significant individual causes of mortality among Australian males and females. Ischaemic heart disease, acute myocardial infarction, cerebrovascular disease, lung cancer, prostate and breast cancer, suicide and motor vehicle accidents accounted for 57.1 per cent of all male deaths in Australia in 1999 and 54.1 per cent of all female deaths.

Indigenous Australians in 1999 experienced quite different patterns of mortality than those of the Australian population as a whole. The four major categories of mortality (circulatory diseases, neoplasms, respiratory diseases and external causes[2]) accounted for between 65.9 per cent (WA) and 75.1 per cent (NSW) of deaths among Indigenous males and between 72.1 per cent (Victoria) and 55.6 per cent (WA) of deaths among Indigenous females (table 5A.60). Diabetes mellitus and external causes accounted for between 33.9 per cent (SA) and 20.6 per cent

[2] 'External causes' includes transport accidents, intentional self harm, assault and all other external causes of mortality.

(NSW) of all deaths among Indigenous males and 25.4 per cent (WA) and 8.0 per cent (Victoria) of all deaths among Indigenous females.

Burden of disease and injury

The Australian Burden of Disease and Injury Study (Mathers, Vos and Stephenson 1999) provides a comprehensive assessment of the amount of ill health and disability in Australia — the 'burden of disease'. The burden of disease is measured in terms of the total years of life lost to premature mortality or disability (box C.5). In 1996, premature mortality was responsible for 1.35 million years of life lost in Australia. When adjusted to include the number of years lost to disability resulting from disease or injury, the AIHW estimated the total burden to be 2.5 million Disability-Adjusted Life Years (DALY) in 1996.

Box C.5 **Disability- adjusted life expectancy and adjusted life years**

Both Disability Adjusted Life Expectancy (DALE) and Disability Adjusted Life Years (DALY) are summary measures of population health.

DALE = Life expectancy adjusted for the average time spent in states of less than full health weighted for severity.

DALY = YLL + YLD

YLL = Years of life lost due to premature mortality

YLD = Years of life lost due to disability

The DALE measure estimates the number of years that a person could expect to live in a defined state of health, and is therefore a health expectancy measure. It is a measure of years lived in full health combined with years lived in states of less than full health weighted for severity of disability.

The DALY measure is the number of years lost due to premature mortality (relative to a standard life expectancy) combined with years lived in states of less than full health and is known as a health gap measure. At the population level, it can be interpreted as the gap between current health status and an ideal in which everyone lives into old age free of disease.

'Disability' in this context is defined as any departure from full health, and can include a short-term disability from a common cold, through to a long-term disability such as quadriplegia. This is a broader definition of disability than that often used in common language.

(Continued on next page)

Box C.5 **(Continued)**

Over reliance on aggregated measures such as DALE and DALY can obscure information on the impact of particular disabilities. However, both the mortality and disability components of DALYs can be scrutinised separately.

The definition for YLD shown above is the definition used by the World Health Organisation. The definition that is more commonly used in Australia is 'years of life lost due to disability'.

There may be issues around the acceptability to some groups of people with a disability of both the DALE and DALY concepts in general and the specific weights assigned to various disabilities. There is a need for discussion within the community as to how well the weights (especially those derived from overseas research) reflect the views of both the people most affected by disability and Australian society as a whole. The technical application of the terms from a statistical and data measurement perspective will also be subject to further debate within Australia.

Source: NHPC (2001).

The leading causes of DALYs in Australia in 1996 were ischaemic heart disease and stroke. Together, these accounted for 17.8 per cent of the total disease burden. Chronic obstructive pulmonary disease and lung cancer (also smoking-related diseases) are the third and fifth leading causes of disease burden, accounting for 7.3 per cent of the total. Depression is the fourth leading cause of disease. If the burden attributable to suicide and self inflicted injury is included, then depression rises to third place, accounting for an overall 5 per cent of the total (table C.2).

Table C.2 **Leading causes of disease and injury in Australia, 1996**

	% of DALYs
Ischaemic heart disease	12.4
Stroke	5.4
Chronic obstructive pulmonary disease[a]	3.7
Depression	3.7
Lung cancer	3.6
Dementia	3.5
Diabetes mellitus	3.0
Colorectal cancer	2.7
Asthma	2.6
Osteoarthritis	2.2

[a] Chronic bronchitis and emphysema.

Source: Mathers *et al.* (1999).

Life expectancy

The life expectancy of Australians has improved dramatically since the turn of the century. The average life expectancy at birth in the period 1901–10 was 58.8 years for females and 55.2 years for males. It then rose steadily until it reached 81.8 for females and 76.2 years for males in 1999 (table 5A.61).

Life expectancy at birth varies across jurisdictions. Average life expectancy for males at birth was 77.9 years in the ACT in 1999, compared with 70.6 years in the NT (table C.3). The average for females in WA and SA was 82.1 years, which was seven years longer than that for females in the NT. These differences reflect the large number of Indigenous people living in the NT (compared with other jurisdictions) and the shorter life expectancy of Indigenous people generally (table 5A.61).

Table C.3 **Average life expectancy at birth (years)**

	NSW	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*ACT*	*NT*	*Aust*
Males									
1994–96	75.0	75.6	75.1	75.4	75.3	74.1	76.6	69.2	75.2
1995–97	75.4	75.8	75.4	75.7	75.7	74.8	77.1	70.0	75.6
1996–98	75.8	76.3	75.6	76.1	76.0	75.1	77.5	70.6	75.9
1997–99	76.1	76.7	76.0	76.4	76.4	75.4	77.9	70.6	76.2
Females									
1994–96	80.9	81.2	80.9	81.3	81.3	80.0	81.6	75.0	81.1
1995–97	81.2	81.4	81.3	81.6	81.5	80.1	81.3	74.7	81.3
1996–98	81.6	81.7	81.5	81.9	81.6	80.4	81.6	75.0	81.5
1997–99	81.7	82.0	81.7	82.1	82.1	80.7	81.8	75.1	81.8

Source: ABS 2001; table 5A.61.

Indigenous Australians had considerably worse health than non-Indigenous Australians in 1999 and earlier years. The ABS has published experimental estimates of life expectancy for Indigenous Australians for 1997–99. Based on these estimates, the life expectancy at birth of Indigenous Australians was between 56.3 years in the NT and 54.4 years in SA for males and between 65.2 years in Victoria and 61.4 years in the NT for females (table 5A.61). Care needs to be taken when interpreting these figures as they are estimates only.

Concerns with the under-reporting of Indigenous deaths also affect estimates of life expectancies (ABS 2000b). An alternative measure of longevity is the median age at death, although this does not indicate the current health status of living persons. In 1999, the median age at death in Australia among all Australians was 77.8 years.

Across jurisdictions, median age at death was highest in SA (78.5 years) and lowest in the NT (57.7 years) (ABS 2000a). In contrast, the median age at death for Indigenous Australians was highest among females in Victoria (65.0 years) and lowest among males in SA (46.5 years) (table 5A.62).

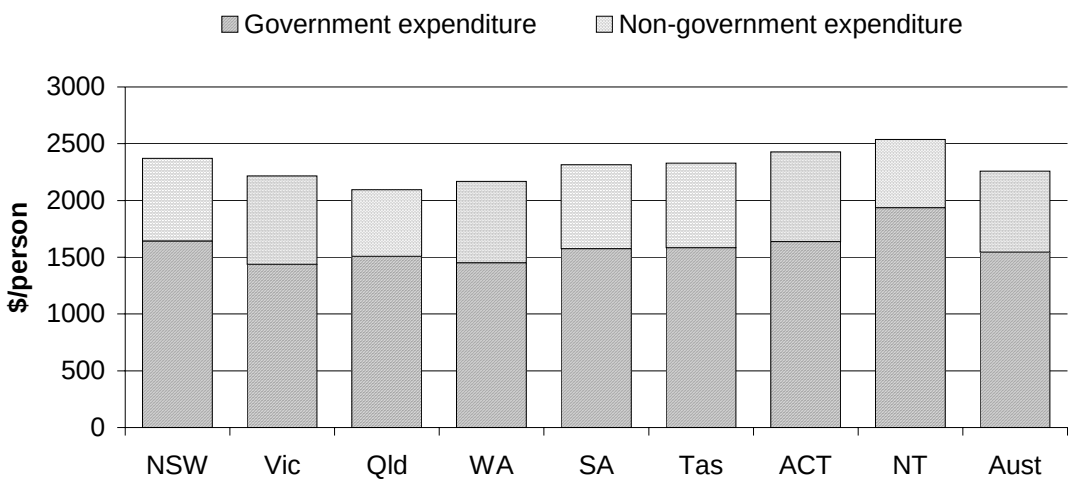
Efficiency of service provision

Total (government and non-government) recurrent expenditure per person can be considered as an imperfect proxy for the efficiency with which health services are provided. As mentioned, a number of factors influence this indicator, including geographic dispersion, differences in population mix and differences in the types of outputs delivered by agencies.

Real government recurrent expenditure on health (excluding nursing homes and ambulance services) rose from $1379 per person in 1995-96 to $1545 in 1998-99 in Australia (table 5A.63). Expenditure in 1998-99 was highest in the NT ($1938) and lowest in Victoria ($1439 per person). Non-government expenditure was highest in the ACT ($790 per person) and lowest in Qld ($585 per person) in 1998-99 (figure C.7).

Real total recurrent expenditure on health care services rose from $2079 per person in 1995-96 to $2259 per person in 1998-99 (excluding expenditure on nursing homes and ambulance services) (table 5A.63).

Figure C.7 **Total recurrent expenditure per person, 1998-99[a]**



[a] Excludes expenditure on nursing homes and ambulance services.

Source: AIHW (2001a); table 5A.63.

Table C.7 **Estimated government expenditures for Indigenous people 1998-99 (dollars/person)[a, b, c]**

	NSW	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*ACT*	*NT*	*Total*
State government									
Admitted patient care	945	793	1 068	1 516	1 434	836	1 206	1 219	1 115
Other health services	884	650	946	1 257	916	809	1 226	1 989	1 090
Commonwealth									
ACCHSs	151	392	157	439	700	**a**	**b**	432	287
Total Commonwealth and local government	na	na	na	na	na	na	na	na	711
Total expenditure through government programs	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**na**	**2917**

a Tasmanian ACCHS funding is included with Victoria. **b** ACT ACCHS funding is included with NSW. **c** Totals may not add as a result of rounding. **na** Not available.

Source: AIHW (2001b).

Comparisons of expenditure on Indigenous health over time

The two reports (AIHW 2001b and Deeble *et al.* 1998) cannot be easily compared because the two sets of estimates are based on different data sources and some of the methods of estimation and costing changed. In addition, under-identification of Indigenous status means that it is difficult to isolate statistical artefacts from real changes over time.

Future directions

The 2001 Report noted that the key challenge for improving the efficiency and effectiveness of the health care system is to improve our understanding of whether health care services are appropriately addressing Australia's health needs. This will continue to be a key challenge over the next decade. The 'appropriateness' of service provision includes:

- the appropriate sequence of events in promoting health care issues and preventing disease and injury in the population, and in treating an individual patient;
- the appropriate level and mix of treatments (for example, the level and mix of separations);

- the appropriate mix of service types (for example, the mix of promotion and prevention, and medical intervention); and
- the appropriate mix of service providers (for example, the mix of public/private health organisations, community based services and hospital based services).

There is already relatively good coverage of performance indicators in some areas where the processes of data specification and capture have been continually refined over a number of years, particularly in hospital care. However, major gaps remain in other areas of the health system, such as primary health and community care. In order to gradually achieve more comprehensive reporting on how well high-level objectives are being met in these areas, there is an ongoing need to develop:

- indicators that cover health services more comprehensively;
- indicators that show the relationship or links between primary health, community care and other sectors; and
- processes to upgrade the quality of the data available for reporting.

Primary health and community care are currently an important focus within health care. As a result, there is increasing recognition of the importance and value of developing and continually refining performance indicators in these areas. An important challenge will be to ensure that reporting on indicators has the potential to lead to action and is highly relevant to policy and practice.

In developing more comprehensive sets of indicators, it is important to focus on the significant aspects of public health or the performance of the health system that are worth measuring. The Review and AHMAC have both commissioned work to consider future directions within the existing range of primary health, and community care services, including general practice, community care, population health, as well as the interfaces between services.

In particular, work is underway that aims to improve and strengthen understanding of the contribution of primary health and community care to overall health system performance, including:

- the refinement of existing performance indicators and/or development of new indicators in areas such as community health and population health;
- improved reporting of the effectiveness of service delivery to specific client groups, including Indigenous people and people in regional, rural and remote areas; and
- work to improve understanding of the interface between services.

Notably, for some years governments have been examining the scope to improve health system performance through service substitution via the Coordinated Care Trials (box C.6).

Work commenced in 2001 on a long term strategy to enhance the capacity of the Review's reporting frameworks to reflect inter-relationships between services. In the first instance, this analysis is focusing on the nexus between general practice and aged care. The Review also instigated the development of a long term strategy (with a five to 10 year view) to improve reporting of the performance of governments in providing health services to Indigenous people.

Box C.6 **Coordinated Care Trials**

In the mid-1990s, the Council of Australian Governments initiated Coordinated Care Trials to develop and test different service delivery and funding arrangements with a view to more appropriately meeting individual care needs within existing resources.

Nine trials were established to conduct a live phase test of coordinated care over a time span ranging from 761 to 944 days. The live phase was completed by 31 December 1999. The trials operated in five States and one Territory.

The trials were aimed at people with chronic illness and complex care needs that involved access to multiple services. Each client in the trial had a care coordinator — often their GP — who developed a care plan. The Commonwealth, State and Territory governments pooled their funds for health and community services for each participant in the trial. The amount of money placed in each pool was based on an estimate of what would otherwise have been spent on services used by trial participants. The care coordinator used money from the pool to buy services set out in the care plan.

One of the original intentions of care coordination was to promote opportunities for service substitution between:

- acute and sub-acute and community based services;
- community based services and residential care; and
- a range of other community based services.

It was hypothesised that the success of coordinated care to improve health outcomes within existing resources would be affected by the extent of substitution between services. In practice, the scope of service substitution across the trials varied and the structure of the trials in some cases hindered substitution activities. Difficulties were also experienced with the complex data needs associated with evaluating the trials. The evaluation report released in 2001 was unable to reach a conclusion about the extent to which service substitution had occurred and noted that the anticipated reductions in Medicare, PBS and hospitalisation that were intended to cover the costs

(Continued on next page)

Box C.6 **(Continued)**

of care coordination were not apparent. However, there may have been changes in service use beyond the period of the trials that were not able to be measured. Overall, while some clients may have experienced some improvement in their sense of wellbeing, this was not achieved within existing resources.

A further round of Coordinated Care Trials targeting the frail aged; those with chronic conditions such as asthma, diabetes, and heart conditions; and Aboriginal communities experiencing problems associated with chronic disease, commenced in early 2001 and will run for three years.

Source: DHAC (2001a).