C Health preface

Part C: Health preface

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

Health services in Australia are delivered by a variety of government and non-government providers in a range of service settings (box HP.1). The *Report on Government Services 2007* (2007 Report) primarily concentrates on the performance of public hospitals (chapter 9), primary and community health services (including general practice) (chapter 10) and the interactions among different service mechanisms for dealing with two health management issues: mental health and breast cancer (chapter 11). These services are selected for reporting as they:

- make an important contribution to the health of the community
- are a priority of governments, for example, they fall within the National Health Priority Areas
- represent significant components of government recurrent expenditure on health care
- have common objectives across jurisdictions.

High level residential aged care services and patient transport services (ambulance services including pre-hospital care, treatment and transport services) are not covered in the health chapters of the 2007 Report, but are reported separately in chapter 8 ('Emergency management') and chapter 12 ('Aged care').

Box HP.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 s. 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: covers Australian Government funding of private medical and optometrical services (the Medicare Benefits Schedule (MBS)); selected pharmaceuticals (under the Pharmaceutical Benefits Scheme (PBS)); and public hospital funding (under the Australian Health Care Agreements (AHCAs)), aimed at providing public hospital services free of charge to public patients.

Primary health care: services that:

- provide the first point of contact with the health system
- have a particular focus on prevention of illness and/or early intervention
- are intended to maintain people's independence and maximise their quality of life through care and support at home or in local community settings.

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 (or 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 people 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. Charges to non-admitted patients and admitted patients on discharge may be levied in accordance with the AHCAs (for example, charges for aids and appliances).

Other major areas of government involvement in health provision not covered in the health chapters, or elsewhere in the 2007 Report, include:

- public health programs, other than those for breast cancer and mental health
- funding for specialist medical practitioners.

A range of government services — such as education, 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 health chapters. Education (chapters 3 and 4) and public housing (chapter 16), however, are included in other chapters of the Report.

Indigenous people and people in rural and remote areas often have different health care needs and may experience poorer health outcomes than those of the general community. It is a priority of the Review to improve reporting on the performance of government provided health care services for Indigenous people and for residents in regional Australia.

Indigenous data in the health preface

The health preface in the 2007 Report contains the following information on Indigenous people:

- an overview of Indigenous health, including information on government policy and programs, expenditure on health services in 2001-02, and data quality
- mortality rates, 2000–2004
- infant mortality rates, 2002–2004
- causes of death, 1999–2001
- life expectancy, 1996–2001
- median age at death, 2004
- birthweight of babies, 2003.

Supporting tables

Supporting tables for data within the ‘Health preface’ of this compendium are contained in attachment HPA of the compendium. These tables are identified in references throughout this chapter by an ‘A’ suffix (for example, table HPA.3 is table 3 in the ‘Health preface’ attachment). As the data are directly sourced from the 2007 Report, the compendium also notes where the original table, figure or text in the 2007 Report can be found. For example, where the compendium refers to ‘2007 Report, p. E.15’ this is page 15 of the ‘Health preface’ of the 2007 Report, and ‘2007 Report, table EA.2’ is attachment table 2 of the ‘Health preface’ attachment of the 2007 Report.

Overview of Indigenous health

The Steering Committee has placed a high priority on reporting on government services to Indigenous people. Data on health outcomes and the provision of health services for Indigenous people are included where possible in this Report. This overview is designed to assist interpretation of these data and provide a broader understanding of Indigenous health issues.

Australian Indigenous people are more likely to experience disability and significantly lower quality of life due to poorer health, and to have shorter life expectancies than the rest of the Australian population (SCRGSP 2005). These patterns are reflected in Australian data on: mortality, life expectancy and birthweights (later in this preface); hospital separation rates; hospitalisation rates for diabetes, assault and infectious pneumonia; fetal, neonatal and perinatal death rates (chapter 9); and suicide (chapter 11).

A number of recent publications include more comprehensive data on the health status of Indigenous people and Indigenous health-related factors. These include *Australia's Health* (AIHW 2006), *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples* (ABS and AIHW 2005), *Overcoming Indigenous Disadvantage: Key Indicators 2005* (SCRGSP 2005) and the *Aboriginal and Torres Strait Islander Health Performance Framework Report 2006* (AHMAC 2006).

Contributing factors

Many interrelated factors contribute to the poor health status of Indigenous people relative to that of other Australians. These include cultural, socioeconomic, geographic and environmental health factors. Recent reports have highlighted:

- Language and cultural barriers to accessing health and health-related services — in 2002 approximately 11 per cent of Indigenous people aged 18 years and over reported difficulties understanding or being understood by service providers. Indigenous people living in remote areas were more likely to report experiencing difficulties than those in non-remote areas (ABS and AIHW 2005).
- Relatively low education levels — nationally in 2004, Indigenous students were around half as likely to continue to year 12 as non-Indigenous students (SCRGSP 2005).
- Relatively low employment and income levels that lead to financial barriers to accessing health services — in 2004-05 the full time employment rate for Indigenous people was much lower than that for non-Indigenous people for both males and females. Both household and individual incomes were lower on average for Indigenous people than for non-Indigenous people (ABS unpublished).

- Relatively high imprisonment rates — after adjusting for age differences, Indigenous people were 11 times more likely than other Australians to be imprisoned at 30 June 2004 (SCRGSP 2005).
- Relatively high rates for health risk factors such as obesity, smoking, harmful alcohol use, substance abuse and violence — in 2004-05, 50 per cent of Indigenous people aged 18 years and over claimed to be cigarette smokers and 16 per cent reported risky/high risk alcohol consumption in the week prior to interview (where risky/high risk alcohol consumption equates to more than 50 millilitres per day for males and more than 25 millilitres per day for females). During 2004-05, Indigenous people were more than four times as likely to be in hospital for alcohol-related mental and behavioural disorders as other people (ABS 2006b).
- Geographic distance to health services, particularly in remote and very remote areas — in 2001, 606 discrete Indigenous communities were located 25 kilometres or more from the nearest primary health care centre, and 943 communities were 50 kilometres or more from the nearest acute care hospital (ABS and AIHW 2005).
- Inadequate and overcrowded housing, particularly in remote and very remote regions — in 2002, 26 per cent of Indigenous people aged 15 years and over (72 600 people) lived in overcrowded households (SCRGSP 2005).

These influences on the health status of Indigenous people vary across regions and across urban, rural and remote areas. Geographic and environmental health factors, for example, are less relevant in urban areas (ABS and AIHW 2005). The extent to which differences across jurisdictions in the reported health outcomes for Indigenous people can be attributed to the performance of government funded health services alone is limited, given the complexity of these other influences on Indigenous health, and ongoing data quality problems (discussed below).

In addition, a wide range of government provided or funded services (other than health services) seek to address the environmental, socioeconomic and other factors that affect Indigenous health. These services include government schools, housing, justice and correctional services, which are discussed elsewhere in this Report. The Steering Committee publication, *Overcoming Indigenous Disadvantage: Key Indicators 2005* (SCRGSP 2005), examines these and other multiple contributors (and their complex cross-links) to health outcomes for Indigenous people.

Government policy and programs

The majority of government expenditure on Indigenous health is made through mainstream health programs (AIHW 2005a). In addition, the Australian, State and

Territory governments fund Indigenous-specific health programs and undertake coordination and research activities. Most Australian Government expenditure on Indigenous-specific health programs is directed to Indigenous-specific primary health. State and Territory governments fund a range of community and public health programs that specifically target Indigenous people within their jurisdictions (see chapter 10).

At the national level, the National Aboriginal and Torres Strait Islander Health Council provides policy advice to the Australian Government Minister for Health on Indigenous health issues. The Council has overseen the development of the National Strategic Framework for Aboriginal and Torres Strait Islander Health, which all health ministers endorsed at the July 2003 Australian Health Ministers Conference. This framework outlines agreed principles and the following nine key result areas for jurisdictions and Indigenous-specific primary health:

- community controlled primary health care
- a health system delivery framework to improve the responsiveness of both mainstream and Indigenous-specific health services to Indigenous health needs
- a competent health workforce with appropriate skills and training in both mainstream and Indigenous-specific health services
- emotional and social wellbeing, focusing on mental health, suicide, family violence, substance misuse and male health
- environmental health, including safe housing, water, sewerage and waste disposal
- wider strategies that have an impact on health in portfolios outside the health sector, such as education, employment and transport
- data, research and evidence to improve information on health service effectiveness in meeting the needs of Indigenous Australians
- resources and finances commensurate with Indigenous health needs, the cost of delivering services and community capacity to deliver health outcomes
- accountability of health services to communities and governments.

The National Strategic Framework is complemented by a National Strategic Framework for Aboriginal and Torres Strait Islander Mental Health and Social and Emotional Wellbeing 2004–2009 (SEWB Framework), which was agreed by the Australian Health Ministers Advisory Council in March 2004. The SEWB Framework sits within the context of the National Strategic Framework for Aboriginal and Torres Strait Islander Health and the Third National Mental Health Plan. For a discussion of the Third National Mental Health Plan (see chapter 11).

Agreements on Aboriginal and Torres Strait Islander Health (framework agreements) have been established in each State and Territory between the Australian, State and Territory governments and the community sector. The agreements promote a partnership approach and commit signatories to work together to:

- increase the level of resources allocated to reflect the level of need
- plan jointly
- improve access to both mainstream and Indigenous-specific health and health related services
- improve Indigenous health data collection and evaluation.

Each State and Territory and the Australian Government is developing an implementation plan under the National Strategic Framework. Taking a whole of government approach, these plans detail information on existing and planned action by each government to improve health outcomes for Indigenous people. They outline programs and policy approaches which are the primary responsibility of each government both within the health department and in other portfolios. Each jurisdiction reports to health ministers on health portfolio progress under the plan every year and on the whole of government contribution every two years.

The Aboriginal and Torres Strait Islander Health Performance Framework has been developed under the auspices of Australian Health Minister's Advisory Council to support the implementation of the National Strategic Framework for Aboriginal and Torres Strait Islander Health (NSFATSIH). The Health Performance Framework is designed to measure the impact of the NSFATSIH and inform policy analysis, planning and program implementation.

Expenditure

It is not always possible to make accurate estimates of health expenditure for Indigenous people and their corresponding service use. For example, Indigenous status is not always clearly stated or recorded. Data on Indigenous status are often unavailable for privately funded services (although they are available for many publicly funded health services). The scope and definition of health expenditures also have some limitations. Other (non-health) agency contributions to health expenditure, such as those incurred within education departments and prisons are not included. There may also be some inconsistencies across data providers resulting from limitations of financial reporting systems and different reporting mechanisms (AIHW 2005a).

The most recent estimates of health services expenditure for Aboriginal and Torres Strait Islander peoples are for 2001-02 (AIHW 2005a). Total recurrent government and non-government expenditure on health services for Indigenous people was estimated at $1788.6 million in 2001-02. This was equivalent to $3901 per Indigenous person compared with $3308 per non-Indigenous person (table HP.1). Because Indigenous people relied heavily on publicly funded health care providers, government expenditures were much higher for them than for other people — $3614 per person compared with $2225 (AIHW 2005a). Expenditure per person was higher for Indigenous people than non-Indigenous people for admitted patient services in public hospitals and for non-admitted patient services in hospitals. It was also higher for community health services. Expenditure per person was lower for Indigenous people than non-Indigenous people for admitted patient services in private hospitals, medical services, dental and other professional services, pharmaceuticals, aids and appliances and for services for older people (table HP.1).

Factors which contribute to the higher levels of health expenditure on Indigenous people include their average higher levels of morbidity and a much larger proportion who live in remote Australia where the cost of service provision is higher.

In 2001-02, governments are estimated to have provided 92.7 per cent of the funding for expenditure on health goods and services for Indigenous people. States and territories contributed 49.5 per cent and the Australian Government, an estimated 43.1 per cent. Non-government sources such as injury compensation insurers, private health insurers and out-of-pocket payments supported the remaining funding by users of services (AIHW 2005a).

The majority of health expenditure on Indigenous people was allocated through mainstream health programs — admitted and non-admitted patient services, community health services, medical and pharmaceutical health services, and public health services. A small proportion of health expenditure was allocated through programs directly targeting Indigenous people, the most significant being the Aboriginal and Torres Strait Islander Health Care Services.

Table HP.1 Total expenditure on health, Indigenous and non-Indigenous people, by type of health good or service, current prices, Australia, 2001-02[a]

	Total expenditure ($ million)			Expenditure per person ($)		
Health good or service type	Indigenous	Non-Indigenous	Indigenous share (%)	Indigenous	Non-Indigenous	Ratio
Hospitals	849.5	21 456.9	3.8	1 852.8	1 132.0	1.6
Admitted patient services	682.5	17 927.4	3.7	1 488.4	945.8	1.6
Private hospital	11.5	5 057.1	0.2	25.1	266.8	0.1
Public hospital	671.0	12 870.2	5.0	1 463.3	679.0	2.2
Non-admitted patient services	142.4	3 116.5	4.4	310.6	164.4	1.9
Emergency departments	34.6	615.7	5.3	75.5	32.5	2.3
Other services	107.8	2 500.8	4.1	235.1	131.9	1.8
Public (psychiatric) hospitals	24.7	413.0	5.6	53.8	21.8	2.5
Medical services	99.6	11 112.5	0.9	217.2	586.3	0.4
Medicare benefit items	75.9	9 185.4	0.8	165.5	484.6	0.3
Other	23.7	1 927.2	1.2	51.7	101.7	0.5
Community health services[b, c]	439.9	2 810.5	13.5	959.3	148.3	6.5
Dental services[b]	21.8	3 734.2	0.6	47.6	197.0	0.2
Other professional services	16.9	2 252.4	0.7	36.8	118.8	0.3
Pharmaceuticals	66.2	9 011.6	0.7	144.4	475.4	0.3
Benefit-paid[d]	42.3	5 471.8	0.8	92.2	288.7	0.3
Other pharmaceuticals	23.9	3 539.8	0.7	52.2	186.8	0.3
Aids and appliances	15.8	2 474.0	0.6	34.5	130.5	0.3
Services for older people	49.9	4 591.6	1.1	108.8	242.3	0.4
Patient transport	62.8	892.7	6.6	137.0	47.1	2.9
Public health activities	72.5	1 029.9	6.6	158.2	54.3	2.9
Other health services (nec)	50.6	1 458.9	3.4	110.4	77.0	1.4
Health administration (nec)	43.1	1 883.6	2.2	94.0	99.4	0.9
Total	**1 788.6**	**62 708.9**	**2.8**	**3 900.8**	**3 308.4**	**1.2**

[a] Total expenditure by type of health good or service is the same as total funding. [b] Community health services include State and Territory government expenditure on dental services. [c] Includes $186.3 million in OATSIH expenditure through Indigenous-specific primary health care services. The Indigenous ratio for the non-Indigenous-specific primary health care services component of community health is estimated at 4.06:1 and for the non-Indigenous-specific primary health care services component it is estimated at 1.07:1. [d] Includes estimates of benefits through the PBS and RPBS.

Source: AIHW (2005a); 2007 Report, table E.1, p. E.17.

About 70.5 per cent of expenditure on health goods and services for Indigenous people were provided through State and Territory and local government programs (table HP.2). Almost half (47.5 per cent or $849.5 million) was allocated to services provided by hospitals (AIHW 2005a). Programs managed by the Australian

Government, including Medicare and the PBS, accounted for nearly a quarter of expenditure (23.4 per cent). Non-government health services accounted for 6.2 per cent of expenditure (table HP.2), which comprised principally dental services, non-benefit pharmaceuticals, and aids and appliances (AIHW 2005a).

Indigenous people's use of primary, secondary and tertiary health services differed from that of non-Indigenous people. Primary health services are those provided to entire populations (community health services and public health activities) and also those provided in, or flowing from, a patient-initiated contact with a health service. Secondary and tertiary services are those generated within the system by, for example, referral or hospital admission (AIHW 2005a). Average expenditure per person for Indigenous Australians was higher for both primary and secondary/tertiary care services than it was for non-Indigenous Australians. Higher Indigenous spending on primary care services came from a much higher use of community health services by Indigenous people. The higher Indigenous spending on secondary/tertiary services was largely in hospitals (AIHW 2005a).

Indigenous Australians have a significantly poorer health status (measured in terms of life expectancy, mortality rates and morbidity), than non-Indigenous Australians. It could therefore be expected that per capita investment of health resources to Aboriginal and Torres Strait Islanders would be higher than for other Australians.

Table HP.2 **Expenditure on health for Indigenous people, by program, 2001-02**

Program responsibility	*Total expenditure ($ million)*	*Per cent of total*
Through State and Territory and local government programs[a]	1 260.5	70.5
Through Australian Government programs[b]	418.1	23.4
Australian Government Health and Ageing portfolio programs	408.8	22.9
Medicare and PBS[b]	118.4	6.6
Indigenous-specific programs[c]	218.3	12.2
Other Health and Ageing portfolio programs	72.1	4.0
Department of Veterans' Affairs programs	9.3	0.5
RPBS	1.3	0.1
Other DVA programs	8.1	0.5
Non-government health services[d]	110.0	6.2
Total	**1 788.6**	**100.0**

[a] Includes Australian Government direct expenditure of $9.1 million on public hospitals. [b] Patient co-payments of $10.8 million under Medicare and PBS are included. [c] Excludes benefits paid for medical services under exclusions from Section 19(2) of the *Health Insurance Act 1973* and for pharmaceuticals under Section 100 of the *National Health Act 1953* in respect of remote area AHSs. [d] Includes private hospital services, dental services, other professional services and health aids and appliances.

Source: AIHW (2005a); 2007 Report, table E.2, p. E.19.

Self-assessed health

In the National Aboriginal and Torres Strait Islander Health Survey 2004-05, just over three-quarters (78 per cent) of the Indigenous people aged 18 years or over reported their health as either, good, very good or excellent and 22 per cent reported their health as fair or poor. Taking into account differences in age structure, Indigenous people overall were almost twice as likely to report their health as fair or poor, than non-Indigenous Australians (ABS 2006b).

Data quality

Good quality data are needed to assess the effectiveness of programs and to evaluate policies designed to improve health services and outcomes for Indigenous people. Despite recent improvements, the quality of the information and estimates on Indigenous health expenditures is limited by underlying data and the calculation methodology. Some of the problems associated with Indigenous health data are outlined in (ABS 2005), and (ABS and AIHW 2006) including:

- Indigenous people are not always accurately or consistently identified in administrative health data collections (such as hospital records and birth and death registrations), given variation in definitions, different data collection methods and inaccurate or incomplete recording of Indigenous status.
- The ABS has introduced a program of three yearly Indigenous household surveys with sample sizes designed to support the production of reliable State and Territory level data, so every three years, some health status and health risk factors are measured. Every six years, and in parallel with the National Health Survey, more detailed Indigenous health status information is collected, together with health service use, health actions, health related aspects of lifestyle and other health risks. This also enables Indigenous to non-Indigenous comparisons for relevant variables. Other health related surveys, which may include an Indigenous identifier, do not necessarily provide reliable data on Indigenous people, because of small sample size, limited geographic coverage or survey design.
- Inconsistent data definitions and differences in the accuracy of identifying Indigenous status have lead to problems making comparisons between jurisdictions, and comparisons over time.
- Experimental estimates of the Indigenous population are re-based by the ABS every five years following availability of new Census data. Once new Indigenous population estimates and projections have been produced by ABS, revisions may be required to various rates and rate ratios used in previous

editions of the Report where those rates data are to be carried forward in new reports.

As part of the development of the Aboriginal and Torres Strait Islander Health Performance Framework, key priorities for data development will be identified to support an ongoing work program of data improvements.

Coverage of Indigenous Australians is especially a concern in some collections, and therefore, data analysis has been limited to jurisdictions with known better coverage. For hospital separations and recent mortality data, only NT, WA, SA and Queensland have been assessed as having acceptable data quality. These four jurisdictions represent 60 per cent of Australia's Indigenous population. Work is underway to improve data quality and this work is being informed by the Health Performance Framework.

Selected indicators of health outcomes

It is difficult to isolate the effect of health care services on the general health of the population. Socioeconomic factors (such as 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. The outcomes and effectiveness of health services are also influenced by population factors external to governments' control, including geographic dispersion, age and ethnicity profiles, and socioeconomic status. Appendix A summarises some of the demographic and socioeconomic factors that can influence health outcomes and government expenditure.

Mortality rates

Most components of the health system can influence mortality rates, although there may be a lag of decades between the action and the effect. A public health campaign to reduce smoking by young people, for example, may reduce premature deaths due to smoking-related conditions some years in the future. Factors external to the health system also have a strong influence on mortality rates.

Data on Indigenous people are limited by the accuracy and extent to which Indigenous people are identified in hospital records. Identification varies across states and territories. The report prepared by the AIHW and endorsed by relevant Australian Health Ministers' Advisory Council committees titled *Improving the Data Quality of Indigenous Identification in Hospital Separations Data* recommends the following:

- Only data from Queensland, WA, SA and the NT should be used for analytical purposes (either at the individual or aggregate level).
- Analyses based on data for Queensland, WA, SA and the NT in aggregate are limited by jurisdictional differences in data quality and the data are not necessarily representative of the jurisdictions excluded.
- Caution should be exercised in using Queensland, WA, SA and the NT time series data for analysis (either individually or in aggregate). Changes in hospitalisation rates for Indigenous people may be a result of changes in the ascertainment of Indigenous status for Indigenous patients (AIHW 2005b).

Data on Indigenous mortality are collected through State and Territory death registrations. The completeness of the identification of Indigenous Australians in these collections varies significantly across states and territories. Because of this variation, care is required in making comparisons on the data. The NT, WA, SA and Queensland, in that order, are generally considered to have the best coverage of death registrations for Indigenous people.[1] For these four jurisdictions combined, the overall rates of mortality for Indigenous people were around twice as high as mortality rates for non-Indigenous people in 2000–2004 (figure HP.1 and table HPA.1). The exact magnitude of this difference cannot be established at this time due to variable identification of Indigenous Australians in death records. Reported mortality rates under estimate the true mortality of Indigenous Australians (ABS and AIHW 2005).

Due to the relatively small number of Indigenous deaths and the consequent volatility in annual mortality rates, the data are presented for the five year period 2000–04. To improve the comparability of age-related mortality rates, indirect age standardisation methods have been used for both the Indigenous and total population rates.

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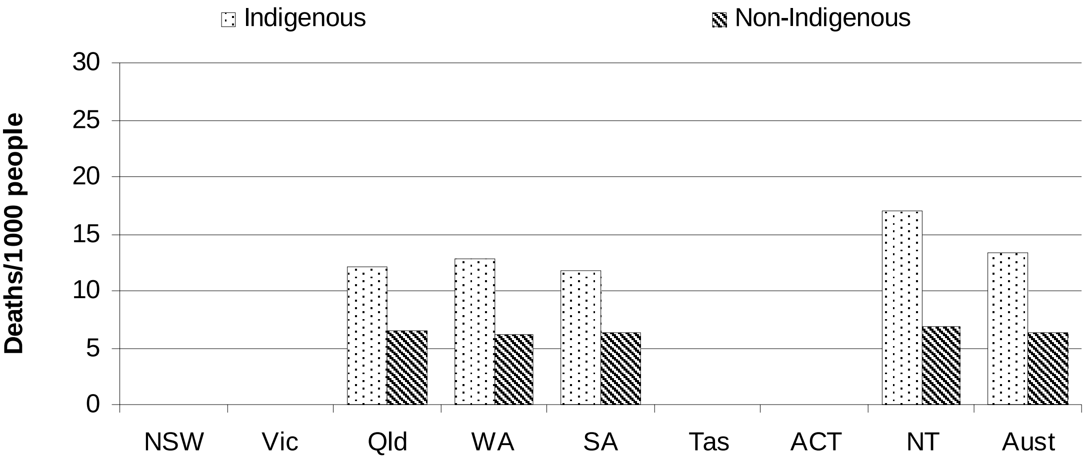
[1] The term ‘coverage’ refers to the number of Indigenous deaths registered as a percentage of the number of expected deaths based on the 2001 Census based experimental Indigenous population estimates and projections.

Figure HP.1 **Mortality rates, age standardised, by Indigenous status, five year average, 2000–2004**[a, b]



[a] Standardised death rates use total persons in the 2001 Australian population as the standard population. [b] Data for NSW, Victoria, Tasmania and the ACT are of insufficient quality to be published.

Source: ABS Deaths Australia (unpublished); table HPA.1; 2007 Report, figure E.9, p. E.26.

Infant mortality rates

The infant mortality rate is defined as the number of deaths of children under 1 year of age in a calendar year per 1000 live births in the same year. Infant mortality rates are presented in this Report as an average over three years to reduce the volatility inherent in the annual rates due to small numbers and annual fluctuations (figure E.10). The infant mortality rate in Australia declined from 5.3 deaths per 1000 live births over the period 1998–2000 to an average of 4.8 deaths per 1000 live births over the period 2002–2004 (table HPA.2).

For the period 2002–2004, the average infant mortality rate for Indigenous children is publishable for NSW, Queensland, WA, SA and the NT (table HPA.3). While the ability to detect significant changes in Indigenous infant mortality can be affected by the small numbers involved, it is clear that Indigenous infant mortality rates remain markedly higher than the national average for all Australians.

Causes of death

In the jurisdictions for which age standardised death rates are available by Indigenous status (Queensland, WA, SA and the NT), death rates were far higher for Indigenous people than for non-Indigenous people during the period 1999–2001. In particular, Indigenous people died from rheumatic heart disease at a rate that was up to 19.4 times that for non-Indigenous people. They died from diabetes at a rate that was up to 15.9 times higher than that for non-Indigenous people; from pneumonia at a rate that was up to 14.3 times that for non-Indigenous people; and from assault at a rate that was up to 12.6 times that for non-Indigenous people (tables HPA.4 and HP.3).[2]

Table HP.3 **Cause of death, age standardised Indigenous mortality ratios, 1999–2001[a, b, c]**

	Qld	*WA*	*SA*	*NT*
Lung cancer	2.7	1.1	2.0	1.7
Diabetes[d]	13.2	15.9	12.2	9.2
Circulatory diseases[e]	4.1	5.4	4.7	5.0
Coronary heart disease	4.3	4.9	4.9	4.0
Rheumatic heart disease	19.4	10.4	np	np
Respiratory diseases	4.8	5.8	7.8	6.2
Pneumonia	9.4	13.0	14.3	10.4
Injury and poisoning[f]	2.0	3.5	3.7	2.2
Road vehicle accidents	1.1	3.5	3.6	1.6
Other accidents	1.9	3.9	6.0	1.7
Self-harm	3.9	3.2	4.3	3.1
Assault	5.4	12.6	5.0	10.3

a Age standardised mortality rate for Indigenous people divided by the age standardised mortality rate for non-Indigenous people. Calculated from death rates per 100 000 people aged less than 75 years. **b** Indigenous deaths data reported in SIMC 2004 and quoted in this table do not reflect ABS revised Indigenous population estimates for 1999 and 2000, nor are they adjusted for differences in the extent of Indigenous identification across jurisdictions or across causes of death. **c** Excludes deaths for which Indigenous status was not stated. **d** Diabetes as an underlying cause or part of a multiple cause. **e** Includes all heart disease, acute myocardial infarction (heart attack) and cerebrovascular diseases (stroke). **f** External causes of death such as land and water transport accidents, falls, poisonings, drowning, other accidents, self-harm and assault. **np** Not published.

Source: SIMC (2004); table HPA.4; 2007 Report, table E.4, p. E.29.

Life expectancy

The life expectancy of Australians improved dramatically during the twentieth century. The average life expectancy at birth in the period 1901–1910 was 55.2 years for males and 58.8 years for females (ABS 2006a). It has risen steadily in each decade since, reaching 78.1 years for males and 83.0 years for females in 2002–2004 (table HPA.5).

The ABS noted that, due to incomplete identification of Indigenous deaths in the underlying source data, changes over time in mortality rates for Indigenous people cannot be determined. ABS Indigenous population estimates and projections

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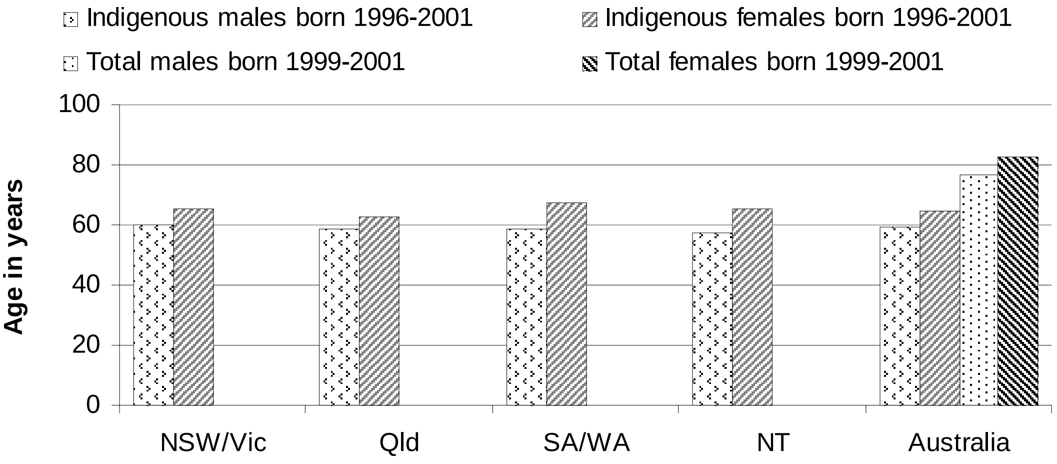
[2] Indigenous deaths data reported in SIMC 2004 and quoted in this Report do not reflect ABS revised Indigenous population estimates for 1999 and 2000, nor are they adjusted for differences in the extent of Indigenous identification across jurisdictions or across causes of death.

assume, for each jurisdiction, constant age specific mortality rates across the period 1991–2009. These data are not comparable to — and replace — life expectancy estimates for Indigenous people previously published by the ABS. They should not be subjected to 'over-precise analysis … as measures of Indigenous health outcomes' (ABS 2004).

The life expectancies of Indigenous Australians are considerably lower than those of non-Indigenous Australians. ABS experimental population estimates indicate a life expectancy at birth of 59.4 years for Indigenous males and 64.8 years for Indigenous females born from 1996 to 2001 (figure HP.2 and table HPA.6). In a similar, but not directly comparable time period (1999–2001) the rates for all Australians were 77.0 years for all males and 82.4 years for females. Variations in life expectancy between Indigenous males and females and for Indigenous Australians in different states and territories should be interpreted with care as they are sensitive to the demographic assumptions and differences in data quality across jurisdictions.

Figure HP.2 **Life expectancy at birth, Indigenous 1996–2001, total population 1999-2001**[a, b, c]



[a] Indigenous data are for the Australian Aboriginal and Torres Strait Islander population, and include an adjustment for undercoverage of Indigenous deaths. [b] Indigenous life expectancy excludes Tasmania and the ACT. For Tasmania and the ACT, use data for Victoria and NSW respectively. [c] Life expectancy data for Indigenous males and Indigenous females are for the period 1996–2001. Data for total males and females cover the period 1999–2001.

Source: ABS (2005); table HPA.6; 2007 Report, figure E.12, p. E.31.

Median age at death

The median age at death represents the age at which exactly half the deaths registered (or occurring) in a given time period were deaths of people above that age and half were deaths below that age. Comparisons of the median age at death for Indigenous and non-Indigenous people are affected by different age structures in the populations and by differences in the extent of identification of Indigenous deaths across jurisdictions and across age groups. Identification of Indigenous status for infant deaths is high, but it falls significantly in older age groups. The median age of death for Indigenous people is therefore likely to be an underestimate.

For all Australian males and females in 2004, the median age at death was 76.8 years and 82.6 years respectively (figure HP.3 and table HPA.7). In the jurisdictions for which the data were available for Indigenous people in 2004 the median age at death for male Indigenous Australians varied between 55.8 and 43.8 years. The median age at death for female Indigenous Australians varied between 63.6 years and 53.5 years (figure HP.3 and table HPA.7).

Figure HP.3 **Median age at death, by sex and Indigenous status, 2004**[a]

a Median age at death by Indigenous status is available in NSW, Queensland, WA, SA and the NT only. The accuracy of Indigenous mortality data are variable as a result of varying rates of coverage across jurisdictions and age groups, and of changes in the estimated Indigenous population caused by changing rates of identification in the Census and births data.

Source: ABS (2005); table HPA.7; 2007 Report, figure E.13, p. E.32.

Birthweight of babies

The birthweight of a baby is an important indicator of its health status and future wellbeing. In 2003, 91.8 per cent of liveborn babies in Australia weighed between 2500 and 4499 grams (Laws and Sullivan 2005). The average birthweight for all live births was 3372 grams. In 2003, the average birthweight of liveborn babies of Indigenous mothers was 3160 grams (tables HPA.8 and HPA.9). This was

212 grams lighter than the average of 3372 grams for liveborn babies of non-Indigenous mothers[3] (Laws and Sullivan 2005).

Babies are defined as low birthweight if they weigh less than 2500 grams, very low birthweight if they weigh less than 1500 grams and extremely low birthweight if they weigh less than 1000 grams (Laws and Sullivan 2005). In 2003, 6.3 per cent of all liveborn babies in Australia weighed less than 2500 grams (figure HP.4). They included 1.1 per cent of babies who weighed less than 1500 grams (table HPA.8).

Among live babies born to Indigenous mothers in 2003, the proportions with low and very low birthweights were around twice the proportions born to all Australian mothers, with 12.9 per cent weighing less than 2500 grams and 2.4 per cent weighing less than 1500 grams (figure HP.4 and table HPA.9).

Figure HP.4 **Babies with birthweights under 2500 grams, by Indigenous status, 2003[a, b, c]**

a Proportion of live births with birthweights under 2500 grams. **b** In the ACT 15.2 per cent of women who gave birth were non-ACT residents. Care must be taken when interpreting percentages. For example, the proportion of liveborn low birthweight babies for ACT Aboriginal or Torres Strait Islander residents was 8.6 per cent in 2003. **c** Data for Indigenous mothers for Tasmania were not available because the 'Not stated' category for Indigenous status was not able to be distinguished from the 'Neither Aboriginal nor Torres Strait Islander origin' category.

Source: Laws and Sullivan (2005); tables HPA.8 and HPA.9; 2007 Report, figure E.14, p. E.33.

Future directions

Improving reporting on Indigenous health is a priority across all of the health chapters. Performance indicators for health services used by Indigenous Australians

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[3] Figures for births to Indigenous mothers exclude Tasmania.

were first published in the 2000 Report. A strategy to improve reporting on Indigenous health was developed in 2003, and improvements have since been made where possible. This work is being informed by the new Aboriginal and Torres Strait Islander Health Performance Framework.

The availability of hospital separations data for Indigenous people is significantly reduced in the 2007 Report compared to previous Reports. Analysis into the quality of Indigenous identification of hospital admitted patient statistics has shown that while the quality is good in some jurisdictions, in other jurisdictions it is poor (AIHW 2005b). Research studies conducted at various times since 1997-98 have shown substantial under identification (and incorrect identification) of Indigenous status in hospital data in several jurisdictions.

The National Committees such as Australian Hospital Statistics Advisory Committee, the Statistical Information Management Group and the National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data have agreed and endorsed recommendations on the use of hospital data and strategies for improvement. Consequently, Indigenous hospital separations data are only available for Queensland, WA, SA and the NT. Data from NSW, Victoria, Tasmania and the ACT were considered to be of insufficient quality.

The AIHW is currently developing a methodology and sampling strategy (funded by AHMAC and Department of Health and Aging) that will allow each jurisdiction to carry out a validation process to get a more recent indication of the current level of under identification in their hospital data. At the end of this project, the jurisdiction will be in a better position to assess whether the situation has improved. The AIHW is also currently undertaking another project funded by the National Health and Medical Research Council, AHMAC and Department of Health and Aging to develop best practice guidelines for identification.

Although some jurisdictions have improved the quality of Indigenous hospital separations data, the lack of progress and ongoing evaluation of data quality in other jurisdictions is disappointing (the problem has been known for ten years). The Steering Committee supports the work of the AIHW to assist jurisdictions to assess the quality of their data, however, primary responsibility for improvement rests with jurisdictions and the Steering Committee strongly encourages all jurisdictions to address this issue as a matter of urgency.

Supporting tables

Supporting tables for data within the 'Health preface' of this compendium are contained in attachment HPA of the compendium. These tables are identified in references throughout this chapter by an 'A' suffix (for example, table HPA.3 is table 3 in the 'Health preface' attachment). As the data are directly sourced from the 2007 Report, the compendium also notes where the original table, figure or text in the 2007 Report can be found. For example, where the compendium refers to '2007 Report, p. E.15' this is page 15 of the 'Health preface' of the 2007 Report, and '2007 Report, table EA.2' is attachment table 2 of the 'Health preface' attachment of the 2007 Report.

Table HPA.1	Mortality rates, age standardised for all causes (per 1000 people)
Table HPA.2	Infant mortality rate, three year average (per 1000 live births)
Table HPA.3	Indigenous Infant mortality rates, three year average
Table HPA.4	Causes of death by Indigenous status, age standardised death rates, 1999–2001 (per 100 000 people)
Table HPA.5	All Australians average life expectancy at birth (years)
Table HPA.6	Indigenous life expectancy at birth (years)
Table HPA.7	Median age at death (years)
Table HPA.8	Birthweights, live births, all mothers, 2003
Table HPA.9	Birthweights of babies of Indigenous mothers, live births, by State and Territory 2003

References

ABS (Australian Bureau of Statistics) 2004, *Calculating Experimental Life Tables for Use in Population Estimates and Projections of Aboriginal and Torres Strait Islander Australians*, Demography Working Paper 2004-3, Cat. no. 3106.0.55.003, ABS, Canberra.

—— 2005, *Deaths 2004, Australia,* Cat. no. 3302.0, ABS, Canberra.

—— 2006a, *Australian Historical Population Statistics,* Cat. no. 3105.0.65.001, ABS, Canberra.

—— 2006b, *National Aboriginal and Torres Strait Islander Health Survey 2004-05, Australia,* Cat. no. 4715.0, ABS, Canberra.

—— and AIHW (Australian Institute of Health and Welfare) 2005, *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples, 2005,* ABS Cat. no. 4704.0, ABS, Canberra.

—— and AIHW 2006, *Recent developments in the collection of Aboriginal and Torres Strait Islander health and welfare statistics 2005*, AIHW Cat. no. IHW 15, ABS Cat. No. 4704.0.55.001, Canberra.

AHMAC (Australian Health Ministers' Advisory Council) 2006, *Aboriginal and Torres Strait Islander Health Performance Framework Report 2006*, AHMAC, Canberra.

AIHW (Australian Institute of Health and Welfare) 2005a, *Expenditures on Health for Aboriginal and Torres Strait Islander Peoples 2001-02*, Cat. no. HWE 23, AIHW Australian Department of Health and Aged Care, AIHW, Canberra.

—— 2005b, *Improving the Quality of Indigenous Identification in Hospital Separations Data*, Cat. no. HSE 101, AIHW Canberra.

—— 2006, Australia's Health 2006, Cat. no. AUS 73, AIHW, Canberra.

Laws, P. and Sullivan, E. 2005, *Australia's Mothers and Babies 2003*, AIHW Cat. no. PER 29, National Perinatal Statistics Unit (Perinatal Statistics Series no. 16), AIHW, Sydney.

SCRGSP (Steering Committee for the Review of Government Service Provision) 2005, *Overcoming Indigenous Disadvantage: Key Indicators 2005*, Productivity Commission, Canberra.

SIMC (Statistical Information Management Committee) 2004, *National Summary of the 2001 and 2002 Jurisdictional Reports against the Aboriginal and Torres Strait Islander Health Performance Indicators*, Cat. no. IHW 12, AIHW, Canberra.