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# E Health preface

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### **Attachment tables**

Attachment tables are identified in references throughout this preface by an 'A' suffix (for example, table EA.3). A full list of attachment tables is provided at the end of this preface, and the attachment tables themselves are available on the CD-ROM enclosed with the Report or from the Review website at <[www.pc.gov.au/gsp](http://www.pc.gov.au/gsp)>.

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 E.1). The Report primarily concentrates on the performance of public hospitals (chapter 10), primary and community health services (including general practice) (chapter 11) and the

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interactions among different service mechanisms for dealing with two health management issues: mental health and breast cancer (chapter 12). These services are selected for reporting as they:

- make an important contribution to the health of the community
- reflect government priorities, 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.

The Australian, State, Territory and local governments spent \$58.3 billion (expressed in 2007-08 dollars) on selected health services, including public hospitals, medical services (including payments to general practitioners [GPs] and other specialist practitioners), community and public health, medications and public dental services in 2007-08. These areas of health care activity accounted for 84.9 per cent of government recurrent health expenditure in 2007-08 (table EA.4). Total public health expenditure by Australian, State and Territory governments on breast cancer screening was \$150 million in 2007-08 (table 12A.6). This includes funding by the Australian Government to states and territories through the Public Health Outcome Funding Agreements (PHOFAs). Government recurrent expenditure on specialist mental health services was estimated to be around \$5.1 billion in 2007-08 (tables 12A.31 and 12A.32). Some of this expenditure was on psychiatric care provided by public (non-psychiatric) hospitals (chapters 10 and 12).

Estimates of government expenditure on health care provision exclude high level residential aged care services and patient transport services (ambulance services including pre-hospital care, treatment and transport services). These services are not covered in the health chapters in this Report, but are reported separately in chapter 9 ('Emergency management') and chapter 13 ('Aged care services').

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### Box E.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 medications (under the Pharmaceutical Benefits Scheme [PBS]); and public hospital funding (under the National Healthcare Agreement [NHA]), 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 treatment free of charge and accommodation to eligible admitted people who elect to be treated as public patients. It also provides services free of charge 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 NHA (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 Report, include:

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

Other 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

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(chapters 4 and 5) and public and community housing (chapter 16) are included in other chapters of the Report.

There is a complex relationship between health behaviours, health outcomes, and the socioeconomic and physical environment in which they occur. It has been well documented that Indigenous people are at a higher risk of experiencing social and economic disadvantage, which may impact negatively on health behaviours and outcomes. It is a priority of the Steering Committee to improve reporting on the performance of government provided health care services for Indigenous people and for residents in regional and remote Australia.

The Council of Australian Governments (COAG) has agreed six National Agreements to enhance accountability to the public for the outcomes achieved or outputs delivered by a range of government services, (see chapter 1 for more detail on reforms to federal financial relations). The NHA covers the area of Health, while the National Indigenous Reform Agreement (NIRA) establishes specific outcomes for reducing the level of disadvantage experienced by Indigenous Australians. The agreements include sets of performance indicators, for which the Steering Committee collates annual performance information for analysis by the COAG Reform Council (CRC).

The measurement details of relevant National Agreement reporting were under development at the time of preparing this Report. It is anticipated that the information reported in this preface will be revised to align with the performance indicators in the National Agreements for the 2011 Report.

## **Profile of health services**

This section provides a brief overview of Australian health services as a whole. More detailed descriptions of public hospitals, primary and community health services, and mental health and breast cancer services are provided in chapters 10, 11 and 12 respectively.

## **Roles and responsibilities**

The Australian Government's health services activities include:

- funding States and Territories through the NHA to deliver public hospital services
- providing rebates to patients for medical services provided by GPs and specialists and delivering public health programs

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- funding the PBS
  - funding high level residential aged care services
  - funding private health insurance rebates
  - funding improved access to primary health care, specialist services and infrastructure for rural and remote communities
  - funding Indigenous-specific primary health
  - promulgating and coordinating health regulations
  - undertaking health policy research and policy coordination across the Australian, State and Territory governments
  - funding hospital services and the provision of other services through the Department of Veterans' Affairs
  - funding the Medicare Safety Net.

State and Territory governments contribute funding for, and deliver, a range of health care services (including services specifically for Indigenous people) such as:

- public hospital services
- public health programs (such as health promotion programs and disease prevention)
- community health services
- public dental services
- mental health programs
- patient transport
- the regulation, inspection, licensing and monitoring of premises, institutions and personnel
- health policy research and policy development
- specialist palliative care
- the Home and Community Care (HACC) program
- aged care.

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

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(such as optometry and physiotherapy), private hospitals and high level residential aged care services.

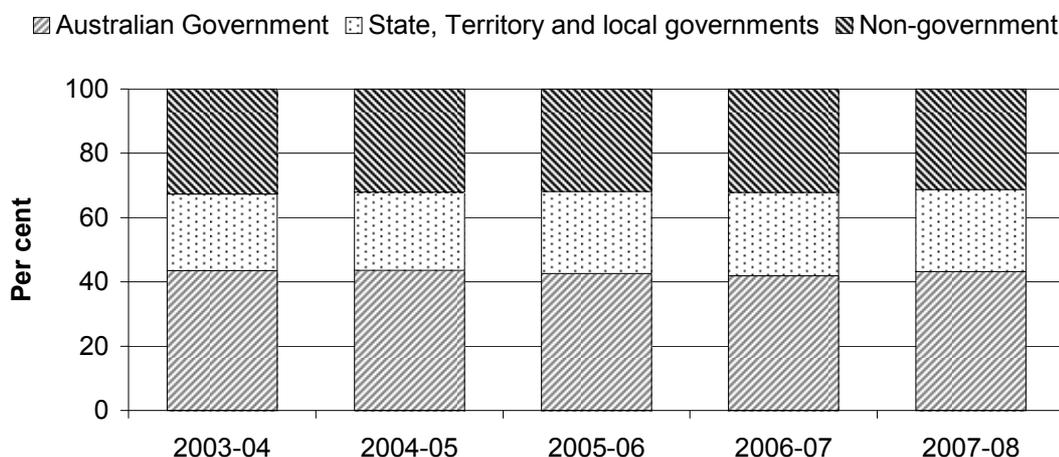
## **Funding**

Funding the components of Australia's health care system is a complicated process. The Australian Government subsidises many of the services provided by the non-government sector (mostly through the MBS, the PBS, the private health insurance rebate and the Medicare Safety Net) and contributes funding to a number of nationally coordinated public health programs. It also provides funding under the NHA (formerly the Australian Health Care Agreements [AHCAs]) to the states and territories for public hospital services.

State and Territory governments, through income raised by taxes and from both general and specific purpose payments received from the Australian Government, contribute funds to public health, 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.

In 2007-08, the Australian, State, Territory and local governments spent \$71.2 billion on total health services, which represents 68.7 per cent of total health expenditure. The Australian Government accounted for the largest proportion of health care expenditure in Australia — \$44.8 billion or 43.2 per cent of the total in 2007-08. State, Territory and local governments contributed \$26.4 billion or 25.5 per cent of total health expenditure in that year (AIHW 2009a). These shares have remained relatively constant over the past 10 years. The remainder was paid by individuals, health insurance funds and workers compensation and compulsory motor vehicle third party insurance providers (figure E.1 and tables EA.1 and EA.7).

Figure E.1 **Total health expenditure, by source of funds (2007-08 dollars)<sup>a, b, c, d</sup>**



<sup>a</sup> Includes recurrent and capital expenditure. <sup>b</sup> Includes expenditure on high level residential aged care (reported in chapter 13) and ambulance services (reported in chapter 9). <sup>c</sup> Expenditure by Australian Government and non-government sources has been adjusted for tax expenditure in relation to private health incentives claimed through the taxation system. <sup>d</sup> 'Non-government' includes expenditure by individuals, health insurance funds, workers compensation and compulsory motor vehicle third party insurers.

Source: AIHW (2009) *Health Expenditure Australia 2007-08*, Cat. no. HWE 46, Health and Welfare Expenditure Series no. 37, Canberra; table EA.1.

## Size and scope of sector

Total expenditure (recurrent and capital) on health care services in Australia was estimated to be \$103.6 billion in 2007-08 (table EA.1). This total was estimated to account for 9.1 per cent of gross domestic product in 2007-08, the same percentage as the previous year and an increase of 1.3 per cent from the 7.8 per cent of GDP in 1997-98 (AIHW 2009a). This indicates that health expenditure grew faster than the economy as a whole over the decade to 2007-08.

The growth of total health expenditure over the past decade was largely the result of an increase in expenditure by the Australian, State, Territory and local governments, which grew proportionally faster than expenditure by non-government sources. Between 1997-98 and 2007-08, the average annual rate of growth in real expenditure was 5.4 per cent for the Australian Government, 5.4 per cent for State, Territory and local governments, and 4.8 per cent for non-government sources (AIHW 2009).<sup>1</sup>

<sup>1</sup> There was a break in series due to differences in definitions of public hospital and public hospital services between 2002-03 and 2003-04.

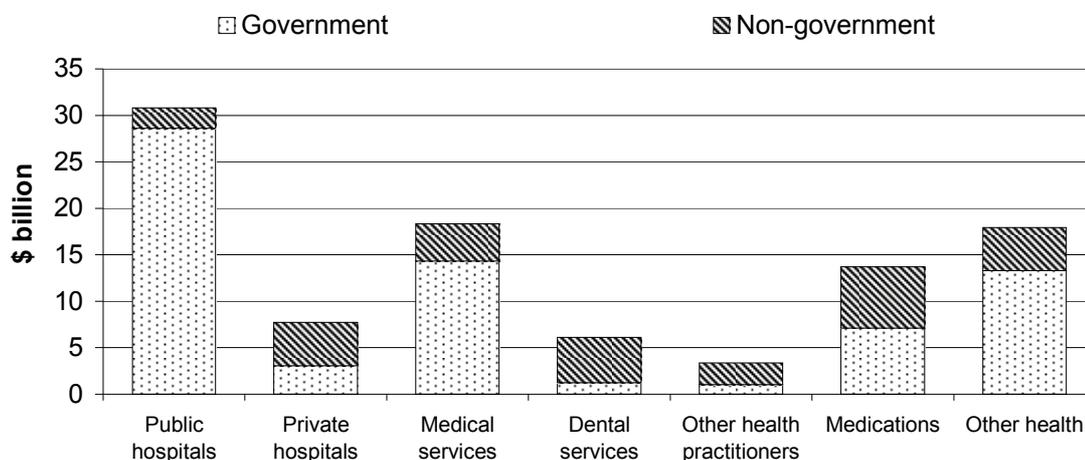
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The introduction of programs supporting private health insurance was a significant factor in the increase in expenditure by the Australian Government in the late 1990s. On 1 January 1999, the Australian Government replaced the Private Health Insurance Incentive Scheme with a 30 per cent rebate on private health insurance premiums. Australian Government expenditure on the rebate has increased each year from \$2.4 billion in 2003-04 to \$3.6 billion in 2007-08 in current prices (that is, not adjusted for inflation) (AIHW 2009a).

The Medicare Safety Net, introduced in March 2004, has also contributed to increased Australian Government expenditure. Under the Medicare Safety Net, patients are reimbursed for 80 per cent of their out-of-pocket costs for medical treatment received in a non-hospital setting, once a certain threshold is reached in a calendar year. Total Medicare Benefits Schedule Medicare Safety Net expenditure was \$257.8 million in the year ending 31 December 2006 (DoHA 2008b).

Public hospitals were the single largest item of recurrent health care expenditure by government and non-government sources in 2007-08. Total real expenditure on public hospitals (which excludes expenditure on community and public health services, dental and ambulance services and health research undertaken by public hospitals) was \$30.8 billion, of which governments paid \$28.6 billion (figure E.2). Public hospitals accounted for 41.7 per cent of government recurrent expenditure on health care services in 2007-08. Medical services accounted for \$14.3 billion of government expenditure (20.9 per cent of total health expenditure) and medications accounted for \$7.1 billion (10.3 per cent) (table EA.2).

Figure E.2 **Recurrent health expenditure, by area of expenditure, 2007-08**<sup>a, b, c, d, e, f</sup>



<sup>a</sup> Government funding of recurrent health expenditure has been adjusted for non-specific tax expenditure. <sup>b</sup> Almost all expenditure on medical services relates to services provided by practitioners on a fee-for-service basis, including those provided to private patients in hospitals. Excluded are the medical component of hospital care provided to public hospital inpatients and the outpatient medical services provided at public hospitals. <sup>c</sup> Medications include (but are not limited to) those provided under the PBS. <sup>d</sup> High level residential aged care services cover services to those residents requiring and receiving a level of care that falls within one of the four highest levels of care. These services are commonly classified as health services expenditure, but are discussed separately in this Report (chapter 13). <sup>e</sup> Government funding on other health practitioners includes DVA funding and DoHA hearing services (audiology component) which was previously included in 'other health'. <sup>f</sup> Other health comprises patient transport services, community health, public health, aids and appliances, other non-institutional health nec., administration and research.

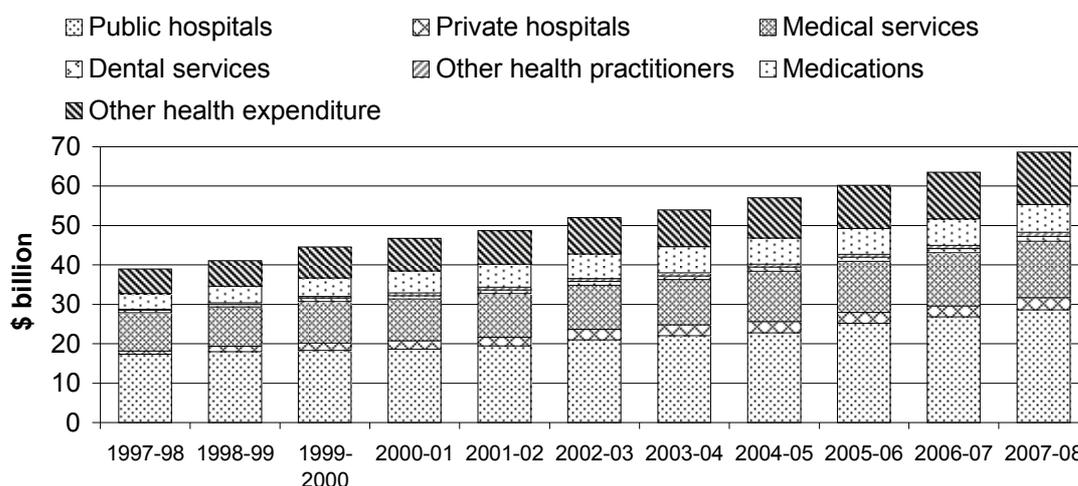
Source: AIHW (2009) *Health Expenditure Australia 2007-08*, Cat. no. HWE 46, Health and Welfare Expenditure Series no. 37, Canberra; tables EA.2 and EA.3.

The relative share of government recurrent health expenditure allocated to public hospitals has fallen from 44.4 per cent in 1997-98 to 41.7 per cent in 2007-08. This decline reflects the more rapid growth over the decade of government expenditure on private hospitals and medications (figure E.3 and table EA.2). The average annual growth rate of government real recurrent expenditure on private hospitals was 13.3 per cent between 1997-98 and 2007-08 (albeit from a relatively low base), compared with 6.2 per cent for medications and 5.1 per cent for public hospitals (table EA.2). Policy measures introduced over the decade that were aimed at restraining growth in government health expenditure included the restriction of Medicare provider numbers, initiatives to encourage the use of generic medication brands, and increases in co-payments for medications.

The high annual growth in expenditure on private hospitals meant it also grew as a proportion of government health care expenditure over the period 1997-98 to 2007-08. Government expenditure on private hospitals increased from 2.2 per cent of government health expenditure in 1997-98 to 4.5 per cent in 2007-08, and the

proportion of expenditure on medication also slightly increased from 10.0 per cent to 10.3 per cent over the same period (table EA.2).

**Figure E.3 Government recurrent expenditure, by area of expenditure (2007-08 dollars)<sup>a, b, c, d, e</sup>**



<sup>a</sup> Medications include (but are not limited to) those provided under the PBS. <sup>b</sup> Almost all expenditure on medical services relates to services provided by practitioners on a fee-for-service basis, including those provided to private patients in hospitals. Excluded are the medical component of hospital care provided to public hospital inpatients, and the outpatient medical services provided at public hospitals. <sup>c</sup> High level residential aged care is reported in chapter 13. <sup>d</sup> Other health comprises patient transport services, community health, public health, aids and appliances, other non-institutional health nec., administration and research. <sup>e</sup> Real (constant price) estimates have been calculated by applying the AIHW total health price index (table EA.7).

Source: AIHW (2009) *Health Expenditure Australia 2007-08*, Cat. no. HWE 46, Health and Welfare Expenditure Series no. 37, Canberra; table EA.2.

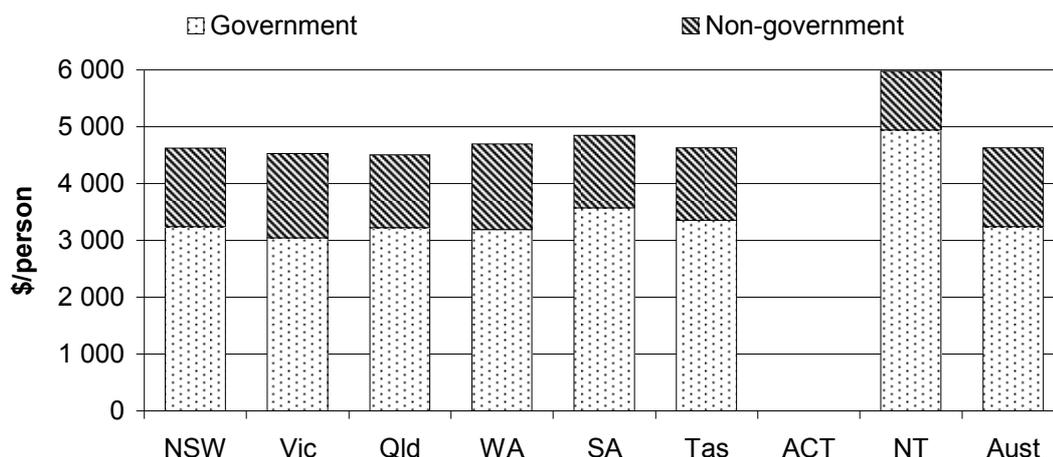
## Health expenditure per person

Health expenditure per person in each jurisdiction is affected by different policy initiatives and socioeconomic and demographic characteristics. Nationally, total health expenditure (recurrent and capital) per person in 2007-08 (expressed in 2007-08 dollars) was \$4890 (table EA.5). Total health expenditure per person in Australia increased from \$4207 in 2003-04 to \$4890 in 2007-08 (expressed in 2007-08 dollars) (table EA.5). The average annual growth rate in average health expenditure per person (expressed in 2007-08 dollars) from 2003-04 to 2007-08 was 3.8 per cent (table EA.5).

Government real recurrent health expenditure per person in Australia increased from \$2696 in 2003-04 to \$3241 in 2007-08 (expressed in 2007-08 dollars). Non-government recurrent expenditure per person in Australia rose from \$1257 in

2003-04 to \$1386 in 2007-08 (expressed in 2007-08 dollars) (figure E.4 and table EA.6).

**Figure E.4 Recurrent health expenditure per person by source of funds, excluding high level residential aged care, 2007-08 (2007-08 dollars)<sup>a, b, c</sup>**



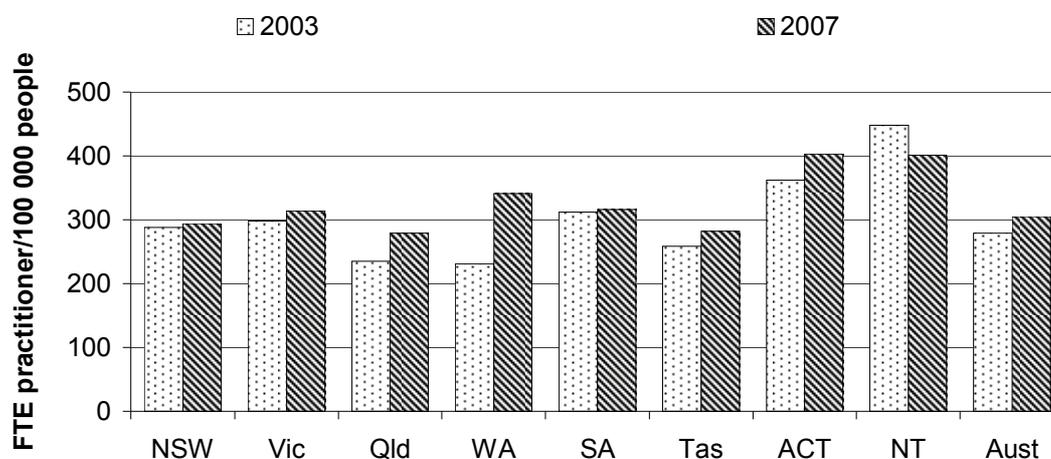
<sup>a</sup> Includes expenditure on high level residential aged care (reported in chapter 13) and ambulance services (reported in chapter 9). <sup>b</sup> Government expenditure includes expenditure by the Australian, State, Territory and local governments. <sup>c</sup> ACT per person figures are not calculated, as the expenditure numbers for the ACT include substantial expenditure for NSW residents, and the ACT population is not the appropriate denominator.

Source: AIHW (2009) *Health Expenditure Australia 2007-08*, Cat. no. HWE 46, Health and Welfare Expenditure Series no. 37, Canberra; table EA.6.

## Health workforce

In 2007, there were 67 208 registered medical practitioners in Australia working in medicine. A further 1604 were in the medical labour force but on extended leave or looking for work. The majority of employed practitioners working in medicine were clinicians (93.2 per cent), of whom 38.5 per cent were primary care practitioners (mainly general practitioners), 34.6 per cent were specialists, 14.1 per cent were specialists-in-training, 11.8 per cent were hospital non-specialists and 0.9 per cent were other clinicians (AIHW 2009b). The number of full time equivalent (FTE) practitioners per 100 000 people by jurisdiction is illustrated in figure E.5.

Figure E.5 **Employed medical practitioners<sup>a, b</sup>**

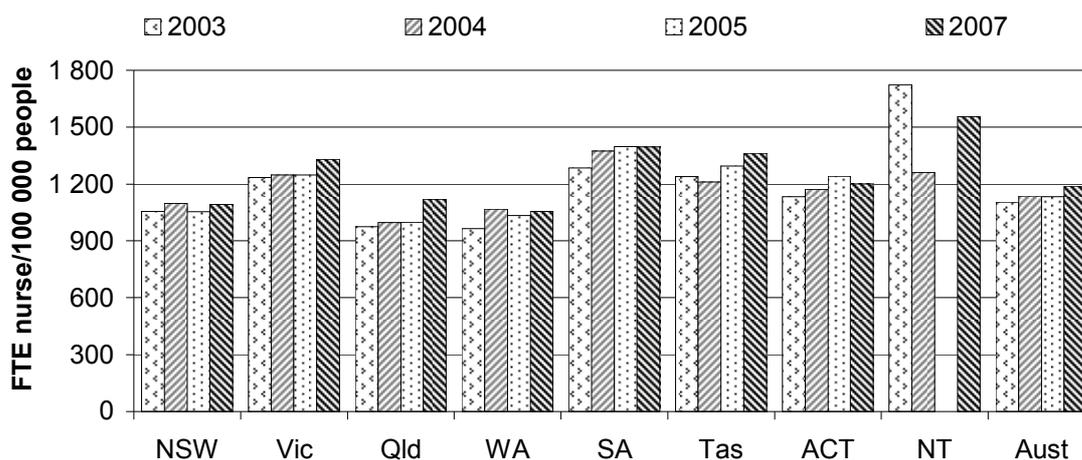


<sup>a</sup> FTE rate (FTE per 100 000 people) is based on standard full-time working week of 45-hours. <sup>b</sup> Number of 'employed medical practitioners' does not include medical practitioners on extended leave.

Source: AIHW (2009) *Medical Labour Force 2007*, Cat. no. HWL 45, National Health Labour Force Series no. 44; table EA.8.

The number of FTE nurses per 100 000 people by jurisdiction is illustrated in figure E.6. The national increase in the FTE nurse rate in Australia arose from both an increase in the number of nurses employed and an increase in average hours worked (AIHW 2009c).

Figure E.6 **Employed nurses<sup>a, b, c, d</sup>**



<sup>a</sup> FTE nurse rate (per 100 000 people) based on a 35-hour week. <sup>b</sup> Number of 'employed nurses' does not include nurses on extended leave. <sup>c</sup> Data for the NT for 2005 are not published. <sup>d</sup> Data for 2006 are not available.

Source: AIHW (2009) *Nursing and Midwifery Labour Force 2007*, AIHW Cat. no. HWL 44, National Health Labour Force Series no. 43; AIHW (2008) *Nursing and Midwifery Labour Force 2005*, AIHW Cat. no. HWL 40, National Health Labour Force Series no. 39; AIHW (2005) *Nursing and Midwifery Labour Force 2003*, AIHW Cat. no. HWL 31, National Health Labour Force Series no. 31; table EA.9.

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## 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 2009). These patterns are reflected in Australian data on: mortality, life expectancy and birthweight (later in this preface); hospital separation rates; fetal, neonatal and perinatal death rates (chapter 10); and suicide (chapter 12).

A number of recent publications include more comprehensive data on the health status of Indigenous people and Indigenous health-related factors. These include *Aboriginal and Torres Strait Islander Health Performance Framework — 2008 Report* (DoHA 2008a), *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples* [Australian Bureau of Statistics (ABS) and AIHW 2008], *Australia's Health 2008* (AIHW 2008b) *Overcoming Indigenous Disadvantage: Key Indicators 2009* (SCRGSP 2009) and *National Aboriginal and Torres Strait Islander Social Survey, 2008* (ABS 2009d).

### Contributing factors

Many Indigenous Australians live today in conditions of clear social and economic disadvantage, which, along with other geographic, environmental and cultural factors, may contribute to poor health.

Educational attainment levels are relatively low for the Indigenous population compared with all Australians. School retention rates for Indigenous school students remain considerably lower than those for non-Indigenous school students, although the disparity between the two groups is slowly lessening (ABS and AIHW 2008). In 2008, the apparent retention rate for Indigenous full-time students from years 7 or 8 to year 10 was 89.2 per cent and to year 12 was 46.5 per cent. This compares with apparent retention rates for non-Indigenous students of 99.8 per cent to year 10 and 75.6 per cent to year 12. Apparent retention rates for Indigenous students from the beginning of secondary school to year 12 increased from 39.8 per cent in 2004 to 46.5 per cent in 2008, while the rate for non-Indigenous Australians remained steady at around 76 per cent (SCRGSP 2009).

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Indigenous people have relatively low employment and income levels that may create financial barriers to accessing health services. Average weekly income for Indigenous people was \$549 in 2006, while the weekly income for non-Indigenous people was \$769 (see Statistical appendix tables AA.2, AA.7, AA.16 and AA.17). Between 2001 and 2006, for those aged 15–64 years the employment to population ratio increased for Indigenous people from 43 per cent to 48 per cent, and for non-Indigenous people from 68 per cent to 72 per cent. The gap remained around 25 percentage points. In the same time period, the unemployment rate for Indigenous people aged 15–64 years decreased from 20 per cent to 16 per cent. However, the unemployment rate for Indigenous Australians was still three times the rate for non-Indigenous Australians (16 per cent compared with 5 per cent), similar to the rate ratios from the 2001 Census (20 per cent compared with 7 per cent) (SCRGSP 2009).

There are high imprisonment rates among Indigenous people. Indigenous prisoners represented 25 per cent of the total prisoner population in 2008-09 (see chapter 8, table 8A.1). After adjusting for age differences, Indigenous adults were 13 times as likely as non-Indigenous adults to be imprisoned in 2008, compared to 10 times in 2000. The Indigenous juvenile detention rate increased by 27 per cent between 2001 and 2007. As at 30 June 2007, Indigenous juveniles were 28 times as likely as non-Indigenous juveniles to have been detained. High imprisonment rates may contribute to the poorer health status of Indigenous people (SCRGSP 2009).

There are close associations between socioeconomic factors and exposure to health risk factors. Indigenous Australians have relatively high rates for some health risk factors such as obesity, substance abuse and violence. In 2008, 47 per cent of Indigenous people aged 18 years and over were daily cigarette smokers (ABS 2009d). Indigenous adults were less likely than non-Indigenous adults to have consumed alcohol in the week prior to interview in 2004-05 (53 per cent compared with 36 per cent). Among those who drank alcohol, rates of long-term risky/high risk alcohol consumption were similar for Indigenous and non-Indigenous Australians after adjusting for age. However, Indigenous adults were twice as likely to consume alcohol at short-term risky/high risk levels at least once a week over the previous 12 month period. Hospitalisation rates for all alcohol-related conditions were higher for Indigenous people than non-Indigenous people in 2006-07 (SCRGSP 2009).<sup>2</sup>

Geographic distance to health services, particularly in remote and very remote areas, contributes to the health disadvantage of Indigenous people. In 2006, a total

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<sup>2</sup> Short term risk is the risk of harm associated with given levels of alcohol consumption on any one occasion. Long term risk is associated with regular daily patterns of alcohol consumption and defined by the average daily intake of alcohol over 7 days of the reference week.

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of 417 (35 per cent) discrete Indigenous communities<sup>3</sup>, with a combined population of 25 486, were located 100 kilometres or more from the nearest Aboriginal Primary Health Care Centre and of those, 92 (22 per cent) were larger communities with a population of 50 or more people. A total of 372 discrete Indigenous communities (31 per cent) were located 100 kilometres or more from the nearest other (State-funded) health centre and of these, 90 (24 per cent) were larger communities. A total of 755 (64 per cent) discrete Indigenous communities were located 100 kilometres or more from the nearest hospital. On a population basis, 25 per cent of Indigenous people living in communities were 100 kilometres or more from the nearest hospital (ABS 2007).

Many Indigenous people live in inadequate and overcrowded housing, particularly in remote and very remote areas. Indigenous people were around five times as likely as non-Indigenous people to live in overcrowded housing in 2006. Overcrowding was highest in very remote areas (65.1 per cent) and lowest in major cities (15.1 per cent) (SCRGSP 2009). There were around 20 700 overcrowded Indigenous households (14 per cent), and 102 400 Indigenous people (27 per cent) living in overcrowded conditions in 2006 (ABS and AIHW 2008). There has been some improvement in housing overcrowding, with the proportion of Indigenous people living in overcrowded housing falling from 31 per cent to 27 per cent between 2001 and 2006 (SCRGSP 2009).

## **Government policies and programs**

The majority of government expenditure on Indigenous health is made through mainstream health programs (AIHW 2008a). In addition, the Australian, State and Territory governments fund Indigenous-specific health programs and undertake coordination and research activities. Indigenous people are high users of public hospital and community health services, and comparatively low users of medical, pharmaceutical, dental and other health services, the majority of which are privately provided.

Most Australian Government expenditure on Indigenous-specific health programs is directed to 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 11).

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<sup>3</sup> A geographic location, bounded by physical or cadastral (legal) boundaries, and inhabited or intended to be inhabited predominantly (that is, greater than 50 per cent of usual residents) by Indigenous people, with housing or infrastructure that is managed on a community basis.

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In October 2008, COAG agreed to six long-term targets for closing the gap between Indigenous and non-Indigenous Australians on health, early childhood development, education, housing, and economic outcomes. The NIRA provides the overarching framework for the six closing the gap targets across the Indigenous-specific National Partnership Agreements (NPAs), and is underpinned by key performance indicators and benchmarks. These performance indicators and benchmarks will be used to monitor progress through annual public reporting and analysis by the COAG Reform Council from 2009-10.

The Australian Government recognises that a multifaceted and sustained approach addressing factors both within and beyond the health system is required to address Indigenous disadvantage. COAG has identified seven ‘building blocks’ which are the strategic platforms that need to be in place in order to comprehensively address the current state of Indigenous disadvantage, and they include:

- healthy homes
- safe communities
- health
- early childhood
- schooling
- economic participation
- governance and leadership.

The ‘building block’ approach integrates policy reforms and implementation to comprehensively address Indigenous disadvantage.

On 29 November 2008, COAG agreed to a \$1.6 billion investment through the National Partnership on Closing the Gap in Indigenous Health Outcomes to help close the gap in life expectancy between Indigenous and non-Indigenous Australians. The Australian Government’s contribution of \$805.5 million (over 4 years) from 2009-10 will address chronic disease risk factors; encourage better management of chronic disease in primary health care services; improve follow up care; and increase the capacity of the primary care workforce to deliver effective health care to Indigenous people.

The Australian Government has established the National Indigenous Health Equality Council (NIHEC) to provide advice on strategic priorities that contribute towards achieving more equitable and sustainable health outcomes for Indigenous people.

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All State and Territory governments and the Australian Government are 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 2 years.

The Aboriginal and Torres Strait Islander Health Performance Framework has been developed under auspices of the Australian Health Ministers' Advisory Council to monitor progress in Indigenous health. The Health Performance Framework is designed to inform policy analysis, planning and program implementation. The first *Aboriginal and Torres Strait Islander Health Performance Framework — 2006 Report* (DoHA 2006) was released in late 2006 and the *Aboriginal and Torres Strait Islander Health Performance Framework — 2008 Report* (DoHA 2008a) was released in December 2008.

## **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 expenditure also have some limitations. For the Indigenous health expenditure data presented below, health covers those services that are directed mainly towards improving health and/or reducing the effects of illness or injury. This is a relatively narrow definition which excludes a number of supportive 'welfare' services and the impact of living conditions on health, for example, housing, sanitation and nutrition. There are also other (non-health) agency contributions to health expenditure, such as those incurred within education departments and prisons, that are not included.

Indigenous health expenditure can also be difficult to identify, as the majority of health expenditure on Indigenous people is allocated through mainstream health programs — admitted and non-admitted patient services, community health services, medical and medications health services, and public health services. A small proportion of health expenditure is allocated through programs directly targeting Indigenous people, the most significant being the Aboriginal and Torres Strait Islander Health Care Services. In total, approximately one-fifth of the

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estimated health expenditure for Indigenous people in 2004-05 came from programs that were specifically designed for them. There may also be some inconsistencies across data providers resulting from limitations of financial reporting systems and different reporting mechanisms (AIHW 2008a).

The most recent estimates of health services expenditure for Indigenous people are for 2004-05 (AIHW 2008a). Between 1995-96 and 2004-05 there has been little change in the per person health expenditure ratio for Indigenous people compared to non-Indigenous people. Total recurrent government and non-government expenditure on health services for Indigenous people was estimated at \$2304 million in 2004-05 or 2.8 per cent of national expenditure on health services, the same proportion as for 2001-02. In 2004-05, \$1.17 per person was spent on Indigenous health for every \$1.00 spent on the health of non-Indigenous Australians. Average total health expenditure per Indigenous person was \$4718 compared with \$4019 per person estimated for non-Indigenous Australians (table E.1). The three largest categories of health expenditure were hospitals, medical services and medications. Together they accounted for 66.7 per cent of all Australian health expenditure in 2004-05 and 58.8 per cent of the spending that was allocated to Indigenous people (table E.1).

Expenditure per person on public hospitals for Indigenous people was around twice that for non-Indigenous people for both admitted and non-admitted patient services. Conversely, expenditure on medical services, dental and other health practitioners and medications was less than half that for non-Indigenous people. Expenditure on aids and appliances was 29 per cent of the non-Indigenous average. However, spending on community health services was over 6.5 times that for other Australians and expenditure for both patient transport and public health were well above the national average (table E.1). Indigenous people tend to rely disproportionately on public hospitals for reasons of access, cost and culture as well as health. In many of the areas where Indigenous people live, hospital admission is the only practical way of receiving anything but the simplest services, and hospital emergency rooms are the most accessible source of affordable medical treatment, including GP-type care. Indigenous people were admitted to public hospitals at nearly 2.5 times the rate for non-Indigenous Australians (AIHW 2008a). More detailed data on Indigenous health expenditure will be reported in the Indigenous Expenditure Report forthcoming in 2010.

**Table E.1 Total expenditure on health services for Indigenous and non-Indigenous people, by type of health good or service, current prices, Australia, 2004-05**

<i>Health good or service type</i>	<i>Total expenditure (\$ million)</i>			<i>Expenditure per person (\$)</i>		
	Indigenous	Non-Indigenous	Indigenous share (%)	Indigenous	Non-Indigenous	Ratio
Hospitals	1 080.7	27 337.6	3.8	2 213	1 386	1.60
Public hospital <sup>a</sup>	1 048.6	21 042.7	4.7	2 147	1 067	2.01
Admitted patient services	799.4	16 226.8	4.7	1 637	823	1.99
Non-admitted patient services	249.2	4 815.8	4.9	510	244	2.09
Private hospital	32.1	6 295.0	0.5	66	319	0.21
High-level residential care	41.7	6 283.4	0.7	85	319	0.27
Patient transport	103.5	1 369.9	7.0	212	69	3.05
Medical services	164.6	14 483.5	1.1	337	734	0.46
Community health services	497.8	3 052.7	14.0	1 019	155	6.59
Dental and other health practitioners	78.0	7 811.8	1.0	160	396	0.40
Medications	109.4	11 056.4	1.0	224	561	0.40
Aids and appliances	18.6	2 591.4	0.7	38	131	0.29
Public health	88.9	1 350.3	6.2	182	68	2.66
Research	46.0	1 669.0	2.7	94	85	1.11
Health administration (nec)	74.6	2 254.5	3.2	153	114	1.34
<b>Total</b>	<b>2 304.0</b>	<b>79 260.4</b>	<b>2.8</b>	<b>4 718</b>	<b>4 019</b>	<b>1.17</b>
<b>Population (2004-05 estimate)</b>	..	..	..	<b>488 335</b>	<b>19 721 423</b>	<b>2.5</b>

<sup>a</sup> Public hospital services exclude any dental services, community health services, patient transport services, public health and health research undertaken by the hospital. .. Not applicable.

Source: AIHW (2008) *Expenditure on Health for Aboriginal and Torres Strait Islander Peoples 2004-05*, Cat. no. HWE 40, Health and Welfare Expenditure Series no. 32, Canberra.

Ninety-three per cent of spending was through programs managed by governments, of which 67 per cent was managed by State and local governments. Indigenous people made proportionally lower use of purely private services. This was an entirely different pattern from that for non-Indigenous Australians, for whom the three sources of supply were almost equally important (table E.2).

**Table E.2 Total expenditure on health for Indigenous people, by program, 2004-05**

<i>Management</i>	<i>Indigenous</i>		<i>Non-Indigenous</i>	
	<i>Total expenditure (\$ million)</i>	<i>Per cent</i>	<i>Total expenditure (\$ million)</i>	<i>Per cent</i>
Through State and local government programs	1 537.1	66.7	26 844.1	33.9
Through Australian Government programs <sup>a</sup>	604.7	26.2	28 163.4	35.5
<i>Total through Government programs</i>	<i>2 141.8</i>	<i>93.0</i>	<i>55 007.4</i>	<i>69.4</i>
Through non-government arrangements	162.2	7.0	24 253.0	30.6
<b>Total</b>	<b>2 304.0</b>	<b>100.0</b>	<b>79 260.4</b>	<b>100.0</b>

<sup>a</sup> Patient co-payments under Medicare and PBS (\$19.2 million Aboriginal and Torres Strait Islander peoples, \$2766.4 million non-Indigenous).

Source: AIHW (2008) *Expenditure on Health for Aboriginal and Torres Strait Islander Peoples 2004-05*, Cat. no. HWE 40, Health and Welfare Expenditure Series no. 32, Canberra.

Spending through Australian Government programs was slightly lower per person for Indigenous people than for other Australians, while spending through State and local government programs for Indigenous people was 2.3 times that for non-Indigenous people. This reflects Indigenous people's greater reliance on public hospitals and community health services than on the services of private medical and pharmaceutical providers with which the Australian Government is more involved (table E.3).

**Table E.3 Expenditure per person on health services, by program, 2004-05**

<i>Management</i>	<i>Indigenous</i>	<i>Non-Indigenous</i>	<i>Ratio</i>
Through State and local government programs	3 148	1 361	2.31
Through Australian Government programs <sup>a</sup>	1 238	1 428	0.87
<i>Total through Government programs</i>	<i>4 386</i>	<i>2 789</i>	<i>1.57</i>
Through non-government arrangements	332	1 230	0.27
<b>Total</b>	<b>4 718</b>	<b>4 019</b>	<b>1.17</b>

<sup>a</sup> Patient co-payments under Medicare and PBS (\$39 per Aboriginal and Torres Strait Islander person, \$140 per non-Indigenous person) are included here, but note they are shown elsewhere in this report as expenditure incurred by the non-government sector.

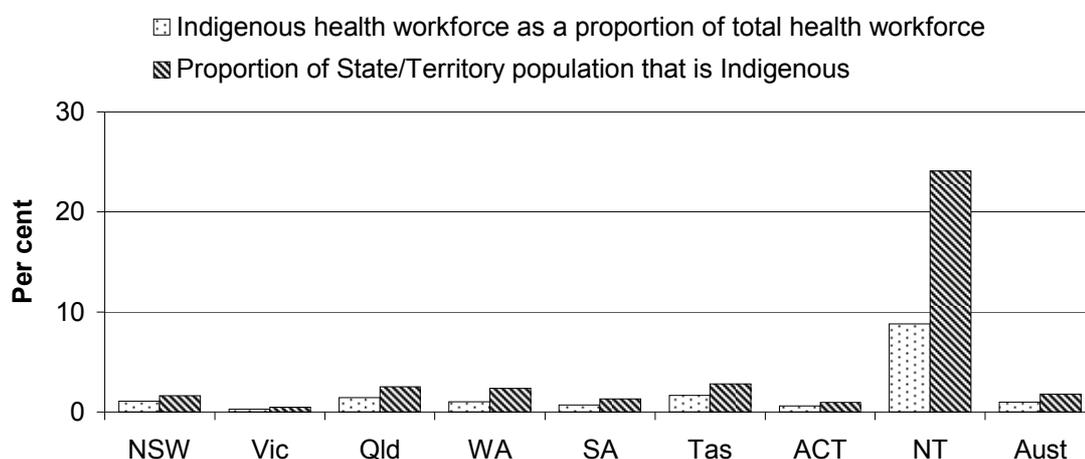
Source: AIHW (2008) *Expenditure on Health for Aboriginal and Torres Strait Islander Peoples 2004-05*, Cat. no. HWE 40, Health and Welfare Expenditure Series no. 32, Canberra.

## Indigenous health workforce

Indigenous people aged 15 years and over were under-represented in almost all health-related occupations, in 2006 (ABS and AIHW 2008). This can potentially contribute to Indigenous peoples' reduced access to health services. One patient satisfaction survey found that the presence of an Indigenous doctor at a community health centre was one of the main reasons for Indigenous people attending the clinic. In addition, the number of Indigenous patients attending the clinic increased markedly following the arrival of the Indigenous doctor and other changes in the service designed to make it more welcoming. Patients reported that an Indigenous doctor was 'more understanding of their needs' (DoHA 2008a).

In 2006, Indigenous people accounted for 1.0 per cent of the health workforce, but comprised 1.8 per cent of the total population (aged 15 years and over). Indigenous health workers are under-represented in each State and Territory (figure E.7). There have, however, been some improvements over time with increases in the number of Indigenous Australians in the health workforce as a proportion of the total health workforce (DoHA 2008a).

Figure E.7 **Indigenous health workforce as a proportion of total health workforce, by jurisdiction, 2006<sup>a, b, c</sup>**



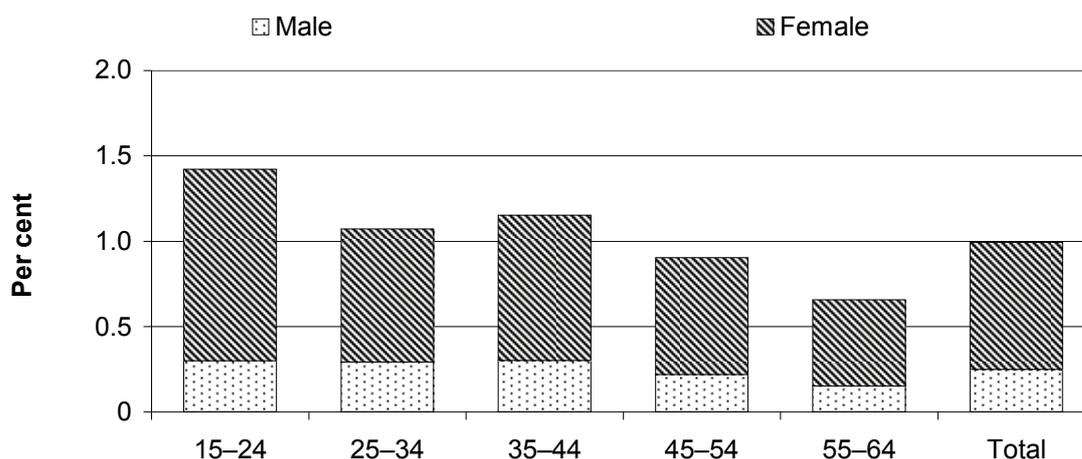
<sup>a</sup> Aged 15 years and over. <sup>b</sup> Cells in this table have been randomly adjusted to avoid the release of confidential data. <sup>c</sup> Australian total data include other territories.

Source: ABS (unpublished), ABS (2007) *2006 Census of Population and Housing*, Canberra; table EA.10.

For younger age-groups, Indigenous people make up a higher proportion of the health workforce — 1.4 per cent of the workforce aged 15–24 years and 1.1 per cent of the workforce aged 25–34 years. Indigenous females represented a higher

proportion of the health workforce than Indigenous males across all age-groups (figure E.8).

**Figure E.8 Indigenous health workforce as a proportion of total health workforce, by age-group and sex, 2006<sup>a</sup>**



<sup>a</sup> Total includes data for the 65 plus age group.

Source: ABS (unpublished), 2006 Census of Population and Housing; table EA.11.

### *Indigenous health workforce by occupation*

In 2006, there were 100 Indigenous people working as medical practitioners and 1223 Indigenous people working as midwifery and nursing professionals (table E.4).

After nursing, Indigenous people in the health workforce were most commonly employed as Aboriginal and Torres Strait Islander health workers (965 people). Aboriginal and Torres Islander health workers may be employed as specialists in areas such as alcohol, mental health, diabetes, eye and ear health, sexual health, or they may work as generalist members of primary care teams, or as hospital liaison officers (table EA.12).

**Table E.4 Indigenous persons employed in selected health-related occupations (per cent), 2006<sup>a, b</sup>**

	<i>Indigenous people</i>	<i>All persons</i>	<i>Per cent of Indigenous people in selected health-related occupations</i>
Health and welfare services managers	141	10 807	1.3
Psychologists	39	13 437	0.3
Health diagnostic and promotion professionals	648	48 079	1.3
Health therapy professionals	321	64 597	0.5
Medical practitioners	100	55 075	0.2
Midwifery and nursing professionals	1 223	200 400	0.6
Health and welfare support workers	2 413	99 957	2.4
Aboriginal and Torres Strait Islander health worker	965	1 010	95.5
<b>Total aged 15 years and over</b>	<b>4 891</b>	<b>492 342</b>	<b>1.0</b>

<sup>a</sup> Aged 15 years and over. <sup>b</sup> Further information on the data included in this table and/or its interpretation is provided in table EA.12.

Source: ABS (unpublished), *2006 Census of Population and Housing*; table EA.12.

### Self-assessed health

Results from the 2007-08 National Health Survey indicate that the majority of Australians (85 per cent) aged 15 years or over reported their health as either good, very good or excellent (ABS 2009b). In the 2008 National Aboriginal and Torres Strait Islander Social Survey, 78 per cent of Indigenous people reported their health as either good, very good or excellent (ABS 2009d). There was a significant decline in Indigenous people reporting their health as fair or poor from 2001 (down from 26 per cent in 2001 to 22 per cent in 2008) (ABS 2009b).

Indigenous people were less likely than non-Indigenous people to report very good or excellent health and the difference between the two populations was greatest in the older age groups (DoHA 2008a). Taking into account differences in age structure between the Indigenous and non-Indigenous populations, Indigenous people overall were almost twice as likely to report their health as fair or poor, than non-Indigenous Australians in 2004-05 (ABS 2006). Indigenous females were more likely to report their health as fair or poor than Indigenous males (24 per cent compared with 19 per cent) (DoHA 2008a).

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## 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 estimates of Indigenous health information is limited by problems with the underlying data. Some of the problems associated with Indigenous health data are outlined in (ABS 2008a), and (ABS and AIHW 2008) including:

- Indigenous people are not always accurately or consistently identified in administrative health data collections (such as hospital records and birth and death registrations) because of variation in definitions, different data collection methods and inaccurate or incomplete recording of Indigenous status. Data on hospital separations, mortality and disease notifications are therefore likely to be underestimated for the Indigenous population.
- Inconsistent data definitions and differences in the accuracy of identifying Indigenous people have led to problems making comparisons between jurisdictions, and over time.
- Problems in accurately estimating the Indigenous population; there is an undercount of the Indigenous population in the Census, particularly in remote areas, and there are data quality problems with the births and deaths statistics which are used to adjust the Census data to produce population estimates and projections.

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

The ABS has implemented 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.

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 the ABS, revisions

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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. The Indigenous population estimates and projections are re-based for this Report.

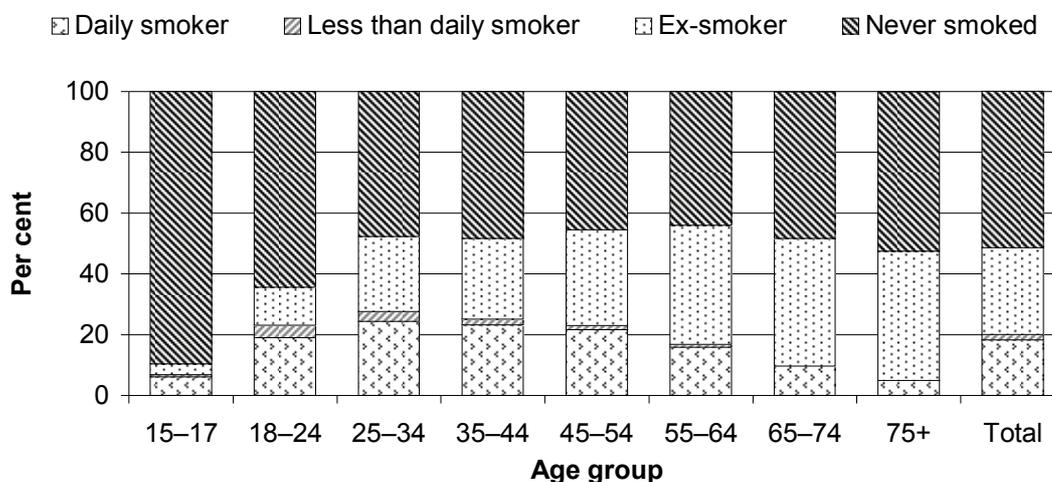
In July 2009, COAG endorsed a \$46.4 million package of Indigenous data development over 4 years as part of *the Integrated Strategy for Closing the Gap in Indigenous Disadvantage*.

## **Health risk factors**

There are a number of behaviours that are risks to health outcomes, for example, smoking, alcohol consumption, dietary habits and exercise, or other factors such as high body mass. The National Health Survey 2007-08 has collected data on these risk factors (ABS 2009b). Selected health outcomes such as life expectancy and mortality are presented in the next section. Health services are concerned with promoting, restoring and maintaining a healthy society. An important part of this activity is reducing health risk factors through activities that raise awareness of health issues to reduce the risk and onset of illness and injury.

Smoking is an important risk factor for heart disease, stroke and lung cancer. These were the three leading causes of death in Australia in 2007 (ABS 2009a). Smoking is responsible for around 80 per cent of all lung cancer deaths and 20 per cent of all cancer deaths (DoHA 2009). Daily smokers accounted for 18.3 per cent of the population in 2007-08. The highest percentages of daily smokers were in the 25–34 year age group (24.4 per cent) and the 35–44 year age group (23.2 per cent). The percentages of daily smokers is lower in older age groups (figure E.9). Males had higher rates of daily smoking than females for the total population (20.2 per cent and 16.4 per cent respectively) and across almost all age groups except those aged 55–64 years (table EA.13).

**Figure E.9 Smoker status, people, 2007-08**



Source: ABS (2009), *National Health Survey 2007-08: Summary of Results, Australia (Reissue)*, Cat. no. 4364.0, Canberra; table EA.13.

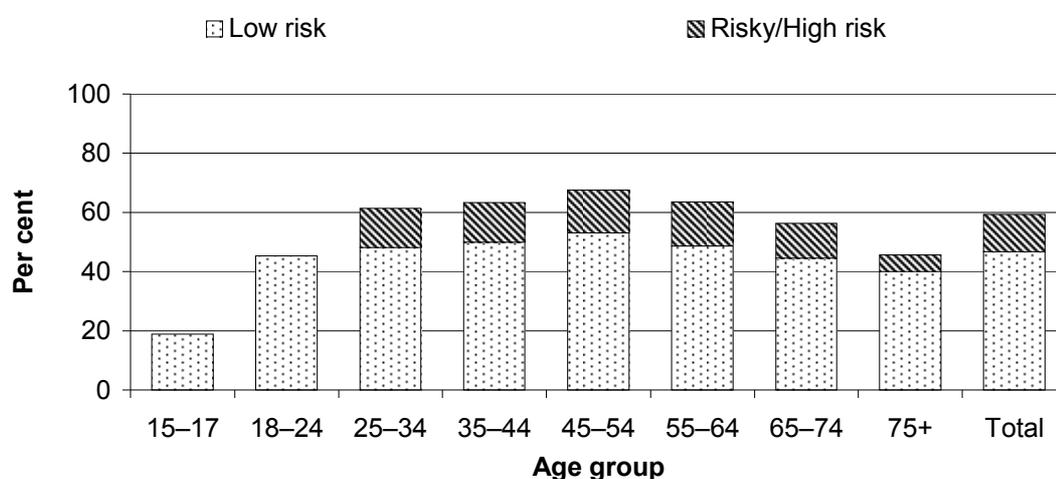
Excessive long term alcohol consumption increases the risk of heart disease, stroke, liver cirrhosis and some types of cancers. Furthermore, it can also contribute to injury and death through accidents, violence, suicide and homicide and can also contribute to financial problems, family breakdown and child abuse and neglect.

In the National Health Survey 2007-08 the ABS derived long term risk levels from the average daily alcohol consumption by people aged 15 years and over based on the most recent three drinking days in the week prior to interview (ABS 2009b). The ABS used the National Health and Medical Research Council (NHMRC) Australian alcohol guidelines of 2001 which defined risky alcohol consumption as more than 50 millilitres and up to 75 millilitres per day for males and more than 25 millilitres and up to 50 millilitres per day for females. High risk consumption was defined as more than 75 millilitres per day for males and 50 millilitres per day for females (NHMRC 2001). The NHMRC has since developed new guidelines. These include, for healthy men and women, drinking no more than two standard drinks on any day. This reduces the lifetime risk of harm from alcohol-related disease or injury (NHMRC 2009).

In 2007-08, 7.4 per cent of the population consumed alcohol at a risky level while 5.2 per cent of the population consumed alcohol at a high risk level. Risky alcohol consumption was highest for those aged 55–64 years at 9.3 per cent while high risk alcohol consumption was highest for those aged 45–54 years at 6.1 per cent (figure E.10).

Females tended to have higher risky alcohol consumption than males (7.8 per cent and 6.9 per cent respectively) in total and across all age groups for which data were reported except for the 25–34 year age group. Risky/high risk alcohol consumption for females was most prevalent in the age groups 18–24 and 45–54 years. Males had higher rates of risky/high risk alcohol consumption than females for all ages (14.4 per cent compared to 10.8 per cent). Risky/high risk alcohol consumption was most prevalent among younger males, accounting for 17.4 per cent of those aged 25–34 years (table EA.13).

Figure E.10 **Alcohol risk, people, 2007-08<sup>a</sup>**



<sup>a</sup> Risky alcohol consumption has been defined by the National Health and Medical Research Council in 2001 as more than 50 millilitres and up to 75 millilitres for males and more than 25 millilitres and up to 50 millilitres for females. High risk consumption has been defined as more than 75 millilitres for males and 50 millilitres for females (NHMRC 2001).

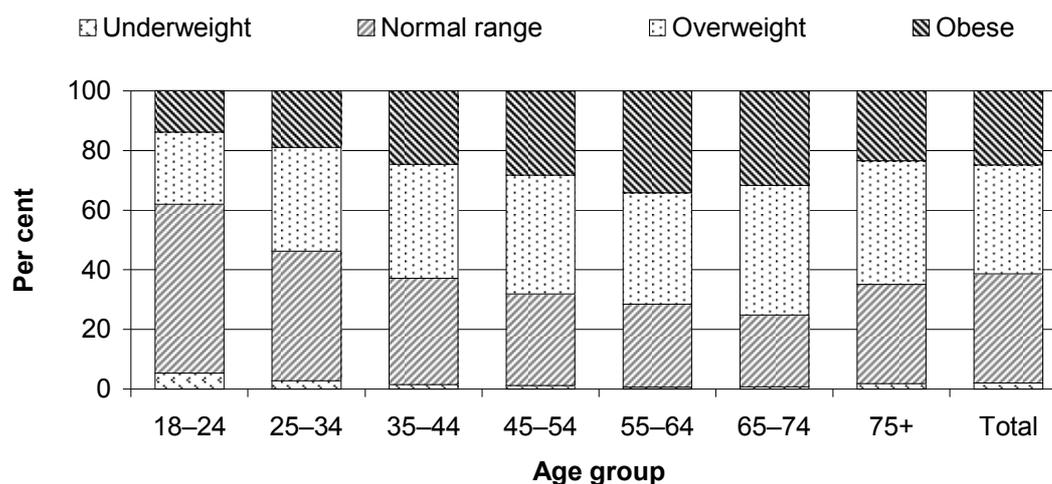
Source: ABS (2009), *National Health Survey 2007-08: Summary of Results, Australia (Reissue)*, Cat. no. 4364.0, Canberra; table EA.13.

Being overweight or obese increases the risk of an individual developing, among other things, heart disease, stroke and type 2 diabetes. The National Health Survey 2007-08 reported measured Body Mass Index (BMI). BMI is calculated as weight (kg) divided by the square of height (m). BMI values are grouped according to World Health Organization (WHO) and NHMRC guidelines. Among adults, a BMI of less than 18.5 is considered underweight, a BMI of 18.5 to less than 25 is considered normal weight, a BMI of 25 to less than 30 is considered overweight and a BMI of 30 and over is considered to be obese (WHO 2000; NHMRC 2003).

Over a third of Australians' measured BMI was in the overweight range and almost a quarter were obese in 2007-08. The percentage of people who were overweight or obese tended to be higher in older age groups, peaking at age 65–74 for those that are overweight (43.5 per cent) and 55–64 for those that are obese (34.2 per cent).

There was a higher percentage of overweight males (42.1 per cent) than females (30.9 per cent), however, the percentage of those who were obese was similar for both males (25.6 per cent) and females (24.0 per cent) (figure E.11 and table EA.13).

**Figure E.11 Body mass index (measured), persons, 2007-08<sup>a</sup>**



<sup>a</sup> BMI is calculated as weight (kg) divided by the square of height (m). BMI values are grouped according to WHO and NHMRC guidelines. Among adults, a person with a BMI less than 18.5 is considered underweight, with a BMI between 18.5 and 25 is considered normal weight, with a BMI between 25 and 30 is considered overweight and over 30 is considered to be obese (WHO 2000; NHMRC 2003).

Source: ABS (2009), *National Health Survey 2007-08: Summary of Results, Australia (Reissue)*, Cat. no. 4364.0, Canberra; table EA.13.

Diet and exercise are also important behaviours that can reduce health risks and improve health outcomes. The NHMRC Australian dietary guidelines recommend a minimum of two serves of fruit per day for adults and five serves of vegetables (NHMRC 2003). A serve of fruit is approximately 150 grams of fresh fruit or 50 grams of dried fruit while a serve of vegetables is approximately 75 grams. Around half of Australians surveyed in the National Health Survey were consuming the recommended two or more serves of fruit per day in 2007-08 and only 8.8 per cent were consuming the recommended five or more serves of vegetables per day (table EA.13). Over a third of all Australians surveyed in the National Health Survey were sedentary in the two weeks prior to interview in 2007-08 with a further 36.9 per cent undertaking a low level of exercise, 21.6 per cent undertook a moderate level of exercise and 6.2 per cent a high level of exercise (table EA.13).

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## Framework for measuring the performance of the health system

Government involvement in health services is predicated on the desire to improve the health of all Australians and to ensure equity of access (box E.2). Governments provide a variety of services in different settings to fulfil these objectives.

Measuring the equity, effectiveness and efficiency of Australia's health system is a complex task. It must account for the performance of a range of services (such as prevention and medical intervention) and of service providers (such as community health centres, GPs and public hospitals), and account for the overall outcomes generated by the health system. 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 (community-based versus hospital-based) play an important role in determining outcomes. Other relevant factors are external to the health system, such as the socioeconomic and demographic characteristics of the population, available infrastructure and the environment.

### Box E.2 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 that recognise cultural differences among people
- providing equitable access to these services
- achieving equity in terms of health outcomes.

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
- delay the onset of illness.

Medical intervention strategies are implemented after a diagnosis.

The former National Health Performance Committee developed the National Health Performance Framework to guide the reporting and measurement of health service

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performance in Australia. A number of groups involved in health performance indicator development have adopted this framework for use within specific project areas and in publications.

In the 2004 Report, the Steering Committee sought to align the general Review framework with the National Health Performance Framework as far as possible, for application to government health services. Complete alignment was not possible, given the different terms of reference of the two committees. The performance framework for health services in this Report thus reflects both the general Review framework and the National Health Performance Framework. It differs from the general Review framework (see chapter 1) in two respects. First, it includes four subdimensions of quality — safety, responsiveness, capability and continuity — and, second, it includes an extra dimension of effectiveness — sustainability (figure E.12). These additions are intended to address the following key performance dimensions of the health system in the National Health Performance Framework that were not explicitly covered in the general Review framework:

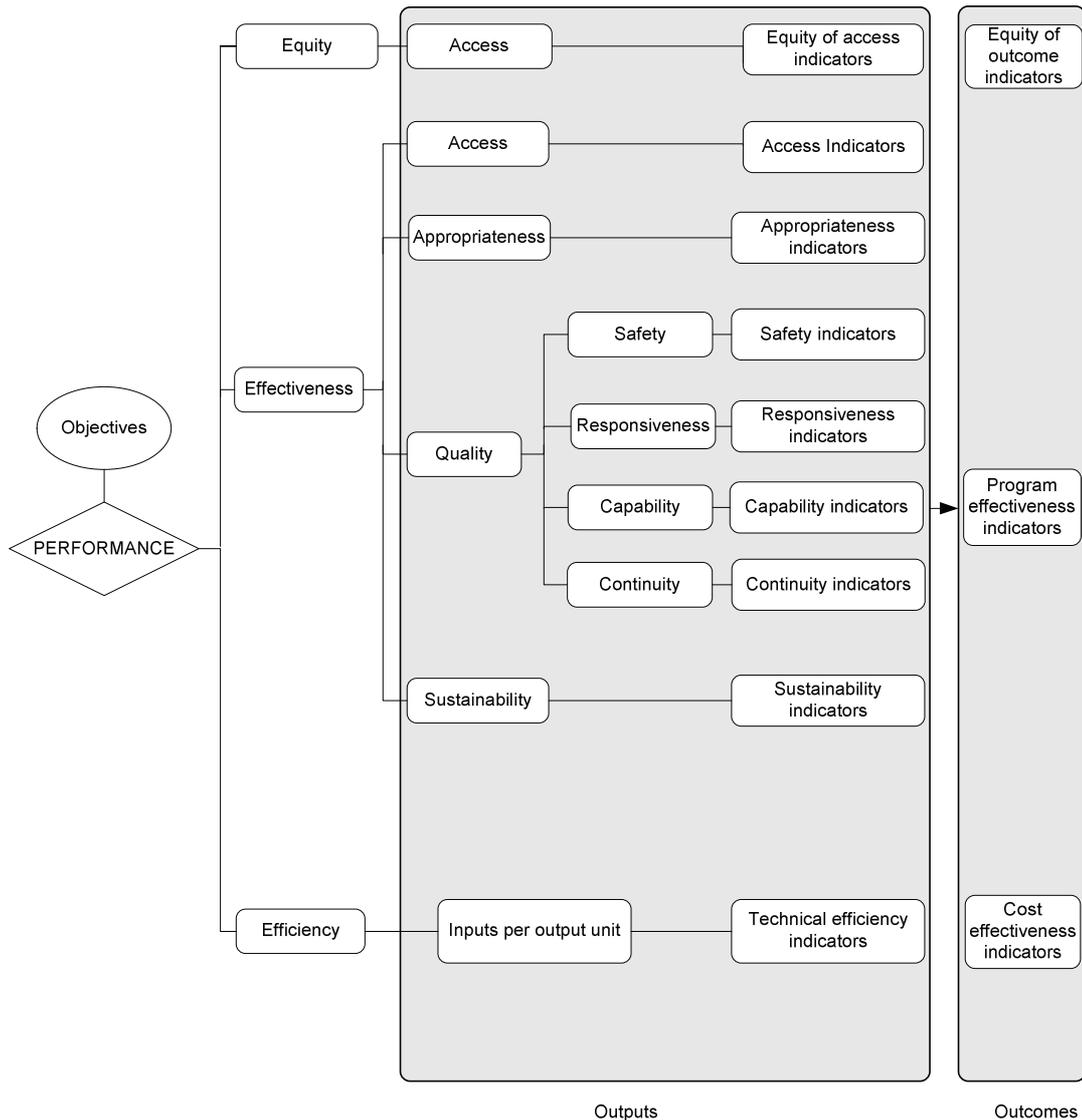
- *safety*: the avoidance, or reduction to acceptable levels, of actual or potential harm from health care services, management or environments, and the prevention or minimisation of adverse events associated with health care delivery
- *responsiveness*: the provision of services that are client oriented and respectful of clients' dignity, autonomy, confidentiality, amenity, choices, and social and cultural needs
- *capability*: the capacity of an organisation, program or individual to provide health care services based on appropriate skills and knowledge
- *continuity*: the provision of uninterrupted, timely, coordinated healthcare, interventions and actions across programs, practitioners and organisations
- *sustainability*: the capacity to provide infrastructure (such as workforce, facilities and equipment), be innovative and respond to emerging needs (NHPC 2001).

Other aspects of the Steering Committee's framework of performance indicators are defined in chapter 1. The Steering Committee has applied this performance framework to health services in two ways.

- It has developed detailed performance indicator frameworks for public hospitals (chapter 10) and primary and community health services (chapter 11).
- It has developed specific frameworks to examine the appropriate mix of services and service delivery mechanisms for two health management issues: breast cancer and mental health (chapter 12).

The Report's statistical appendix contains data that may assist in interpreting the performance indicators presented in this chapter. These data cover a range of demographic and geographic characteristics, including age profile, geographic distribution of the population, income levels, education levels, tenure of dwellings and cultural heritage (including Indigenous and ethnic status) (appendix A).

**Figure E.12 Performance indicator framework for health services**



## 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.

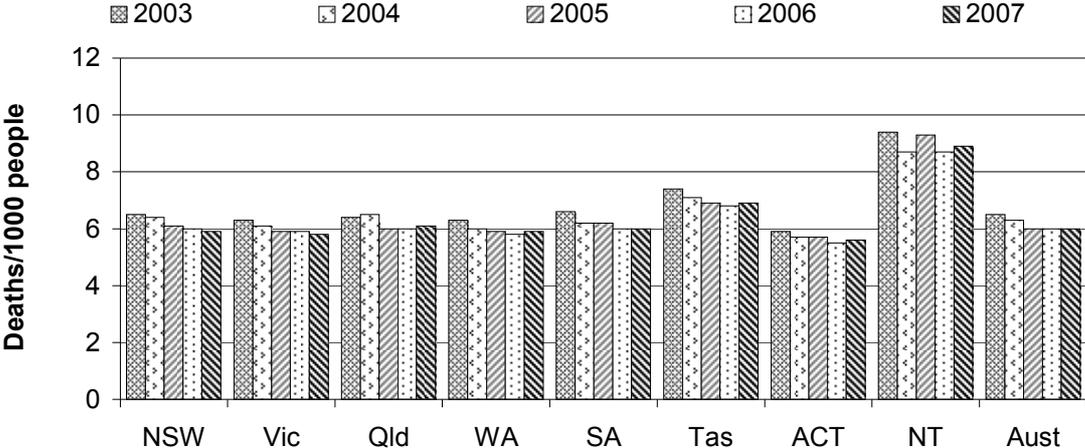
Data on health outcomes presented in this preface include mortality rates (for infants and all people), causes of death, life expectancy at birth, median age at death and birthweight. Where possible, data are presented for Indigenous people as well as the Australian population as a whole.

**Mortality rates**

Most components of the health system can influence mortality rates, although there may be a delay 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.

There were 137 900 deaths in Australia in 2007 (ABS 2008a), which translated into an age standardised mortality rate of 6.0 per 1000 people (figure E.13). Death rates over the last 20 years have declined for all states and territories (ABS 2008a).

**Figure E.13 Mortality rates, age standardised<sup>a</sup>**



<sup>a</sup> Deaths per 1000 standard population. Standardised death rates use total persons in the 2001 Australian population as the standard population.

Source: ABS (2008) *Deaths Australia, 2007*, Cat. no. 3302.0, Canberra; table EA.14.

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### *Indigenous mortality rates*

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 so care is required when making comparisons.

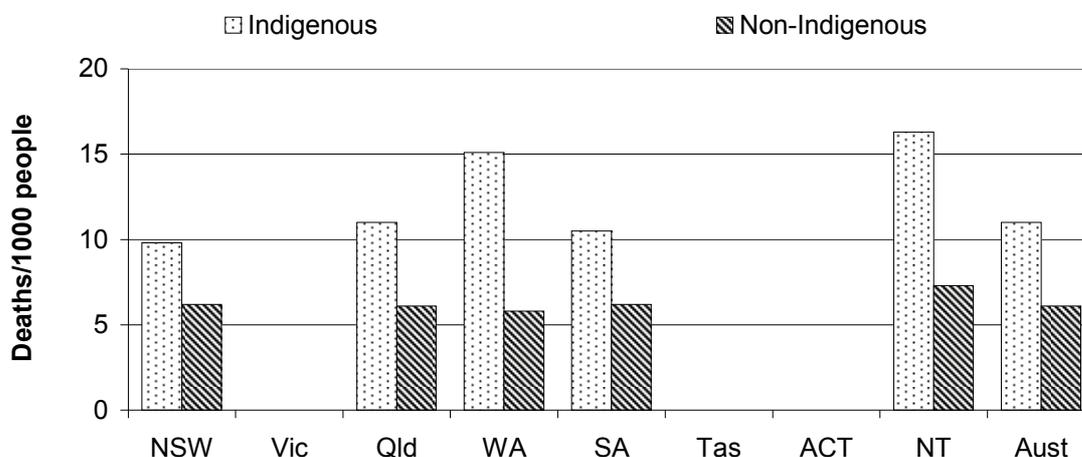
Due to the relatively small number of Indigenous deaths and the consequent volatility in annual mortality rates, the data are presented for the five year period 2003–2007. To improve the comparability of age-related mortality rates, indirect age standardisation methods have been used for both the Indigenous and total population rates.

NSW, Queensland, WA, SA and NT are currently generally considered to have the best coverage of death registrations for Indigenous people (ABS 2009c).<sup>4</sup> For these five jurisdictions combined, the overall rates of mortality for Indigenous people were nearly twice as high as mortality rates for non-Indigenous people based on data for 2003–2007 (figure E.14 and table EA.14). Given issues with identification, mortality rates presented here are likely to be under-estimates of the true mortality of Indigenous Australians (ABS and AIHW 2008).

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<sup>4</sup> The term ‘coverage’ refers to the number of Indigenous deaths registered as a percentage of the number of expected deaths based on experimental Indigenous population estimates and projections from the 2006 Census.

**Figure E.14 Mortality rates, age standardised, by Indigenous status, five year average, 2003–2007<sup>a, b, c, d</sup>**



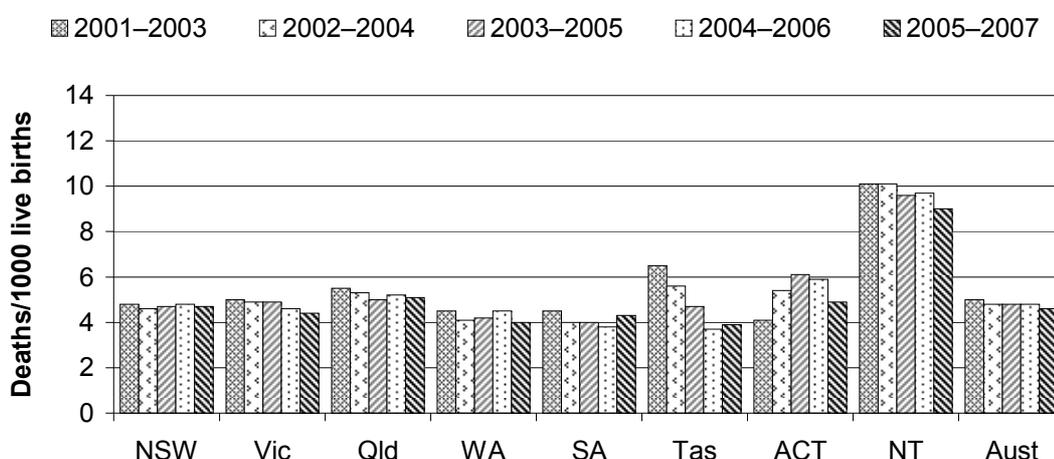
<sup>a</sup> Deaths are based on year of registration of death. <sup>b</sup> Deaths per 1000 standard population. Standardised death rates use total persons in the 2001 Australian population as the standard population. <sup>c</sup> The Australian totals for Indigenous and non-Indigenous data includes all states and territories. <sup>d</sup> Calculations of rates for the Indigenous population are based on *ABS Experimental Projections, Aboriginal and Torres Strait Islander Australians 1991 to 2009* (ABS cat. no. 3238.0, low series, 2001 base). There are no comparable population data for the non-Indigenous population. Calculations of rates for comparison with the Indigenous population are derived by subtracting Indigenous population projections from total Estimated Resident Population and should be used with care, as these data include deaths and population units for which Indigenous status were not stated. ERP used in calculations are final ERP based on 2006 Census.

Source: ABS (unpublished) *Deaths Australia, 2007*; table EA.14.

### 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. The infant mortality rate in Australia declined from 5.0 deaths per 1000 live births over the period 2001–2003 to an average of 4.6 deaths per 1000 live births over the period 2005–2007 (figure E.15).

Figure E.15 **Infant mortality rate, three year average**<sup>a, b</sup>



<sup>a</sup> Figures for Australia include 'other territories'. <sup>b</sup> Four infant deaths were coded to an incorrect state of usual residence in 2005, which led to the revision of the rate of the ACT.

Source: ABS (2008) *Deaths Australia, 2007, Australia*, Cat. no. 3302.0, Canberra.; table EA.15.

### *Indigenous infant mortality rates*

For the period 2005–2007, the average infant mortality rate for Indigenous children was 8.9 per cent for NSW, 9.1 per cent for Queensland, 10.2 per cent for WA, 8.9 per cent for SA and 15.7 per cent for the NT (tables EA.15 and EA.16). For WA, SA and the NT, longer-term trends suggest that the mortality rate for Indigenous infants decreased by 47 per cent between 1991 and 2006. Despite this significant improvement in infant mortality for Indigenous children, rates are still markedly higher than for non-Indigenous Australians (ABS 2008a).

### **Principal causes of death**

The most common causes of death among Australians in 2007 were: diseases of the circulatory system (including heart disease, heart attack and stroke), cancers, and diseases of the respiratory system (including influenza, pneumonia and chronic lower respiratory diseases) (tables E.5 and EA.17). In 2007, malignant neoplasms (cancers) were the main underlying cause of death of 30 per cent of all registered deaths and ischaemic heart disease was the primary cause of a further 16 per cent of deaths (ABS 2009a).

**Table E.5 Cause of death, age standardised death rates, 2007  
(per 100 000 standard population)<sup>a, b</sup>**

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Cancers <sup>c</sup>	174	175	165	175	175	198	170	225	174
Lung cancer <sup>d</sup>	34	34	33	35	33	45	28	53	34
Diabetes mellitus	14	18	15	19	18	23	19	51	17
Mental and behavioural disorders	25	24	19	21	25	28	31	40	24
Diseases of the nervous system	22	25	22	29	26	25	30	16	24
Diseases of the circulatory system	202	185	201	184	203	229	179	249	197
Heart disease <sup>e</sup>	98	93	95	95	101	111	81	109	96
Heart attack <sup>f</sup>	49	44	52	49	50	48	26	50	48
Stroke <sup>g</sup>	51	44	53	40	50	50	46	70	48
Diseases of arteries, arterioles and capillaries	10	9	9	10	10	14	10	10	10
Diseases of the respiratory system	49	47	58	45	45	59	38	67	50
Influenza and pneumonia	9	11	17	10	9	13	7	7	11
Chronic lower respiratory diseases	25	26	23	23	24	35	22	50	25
Diseases of the digestive system	20	20	21	23	20	22	18	39	21
Accidents	34	32	37	44	39	48	37	92	36
Transport accidents	4	5	6	13	9	10	6	21	6
Suicide <sup>h</sup>	8	8	7	12	13	14	9	29	9
<b>All causes</b>	<b>593</b>	<b>574</b>	<b>607</b>	<b>587</b>	<b>603</b>	<b>691</b>	<b>563</b>	<b>889</b>	<b>595</b>

<sup>a</sup> Standardised death rate per 100 000 of the June 2006 population. Rounded to whole numbers. <sup>b</sup> Data are preliminary and will be subject to revision process. See *Causes of Death, 2007, 3303.0 Explanatory Notes 4* for further information. <sup>c</sup> Malignant neoplasms. <sup>d</sup> Cancer of the trachea, bronchus and lung. <sup>e</sup> Ischaemic heart disease and heart attacks. <sup>f</sup> Acute myocardial infarction. <sup>g</sup> Cerebrovascular diseases. <sup>h</sup> Intentional self-harm. Care needs to be taken in interpreting figures relating to suicide due to data limitations. See *Causes of Death, 2007, 3303.0 Explanatory Notes 78-79 and Technical Note: ABS coding of suicide deaths* for further information.

Source: ABS (2009) *Causes of Death Australia, 2007*, Cat. no. 3303.0, Canberra; table EA.17.

### *Causes of death for Indigenous people*

In the jurisdictions for which age standardised death rates are available by Indigenous status (NSW, Queensland, WA, SA and the NT) death rates were

significantly higher for Indigenous Australians than for non-Indigenous Australians during the period 2003–2007. In particular, Indigenous people died: from diabetes at a rate of up to 7.1 times that for non-Indigenous people; from cirrhosis and other diseases of the liver at a rate of up to 6.4 times that for non-Indigenous people; and from diseases of the urinary system at a rate of 4.2 times that for non-Indigenous people. The standardised death rate per 100 000 people for all causes was 2.3 times higher for Indigenous people than for non-Indigenous people (tables E.6 and EA.18).

**Table E.6 Leading causes of death, indirect age-standardised death rate ratio of Indigenous to non-Indigenous population, 2003–2007 (per 100 000 standard population)<sup>a, b, c, d</sup>**

	NSW	Qld	WA	SA	NT	Aust <sup>e</sup>
<i>Underlying causes of death</i>						
Trachea and lung cancers	1.9	1.8	1.9	1.7	2.3	1.9
Diabetes	4.2	9.9	11.7	7.7	7.9	7.1
Ischaemic heart diseases	2.2	2.6	3.3	3.2	3.4	2.6
Strokes	1.8	1.8	3.1	1.7	3.1	2.0
Influenza and pneumonia	1.9	2.4	6.4	3.4	8.2	3.1
Chronic lower respiratory diseases	3.1	2.9	4.6	2.7	4.1	3.4
Cirrhosis and other diseases of liver	4.3	5.1	10.5	5.5	9.1	6.4
Diseases of the urinary system	2.5	4.1	5.7	3.9	9.7	4.2
Certain conditions originating in the perinatal period	1.3	2.0	2.9	2.5	3.0	1.9
Symptoms, signs and ill-defined conditions	3.3	1.8	6.4	4.1	2.0	3.5
Land transport accidents	1.4	1.8	4.0	2.0	2.7	2.7
Intentional self-harm (suicide)	1.3	2.4	2.2	4.4	2.7	2.2
<b>All causes</b>	<b>1.8</b>	<b>2.3</b>	<b>3.3</b>	<b>2.4</b>	<b>3.3</b>	<b>2.3</b>

<sup>a</sup> Indirect standardised death rate per 100 000 population. <sup>b</sup> Denominators used in the calculation of rates for the Indigenous population are *Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians* (ABS Cat. no. 3238.0, series B, 2006 base). There are no comparable population data for the non-Indigenous population. Denominators used in the calculation of rates for comparison with the Indigenous population have been derived by subtracting Indigenous population estimates/projections from total estimated resident population and should be used with care, as these data include population units for which Indigenous status was not stated. <sup>c</sup> Data on deaths of Aboriginal and Torres Strait Islander Australians are affected by differing levels of coverage of deaths identified as Indigenous across states and territories. Care should be exercised in analysing these data, particularly in making comparisons across states and territories and between the Indigenous and non-Indigenous data. <sup>d</sup> Ratio is determined as the number of Indigenous deaths for each non-Indigenous death. To calculate rate ratio, divide the Indigenous death rate by the non-Indigenous death rate. <sup>e</sup> Includes Victoria, Tasmania, Australian Capital Territory and Other Territories. Rates for these jurisdictions are not available.

Source: ABS (unpublished) *Causes of Death Australia, 2007*; table EA.18.

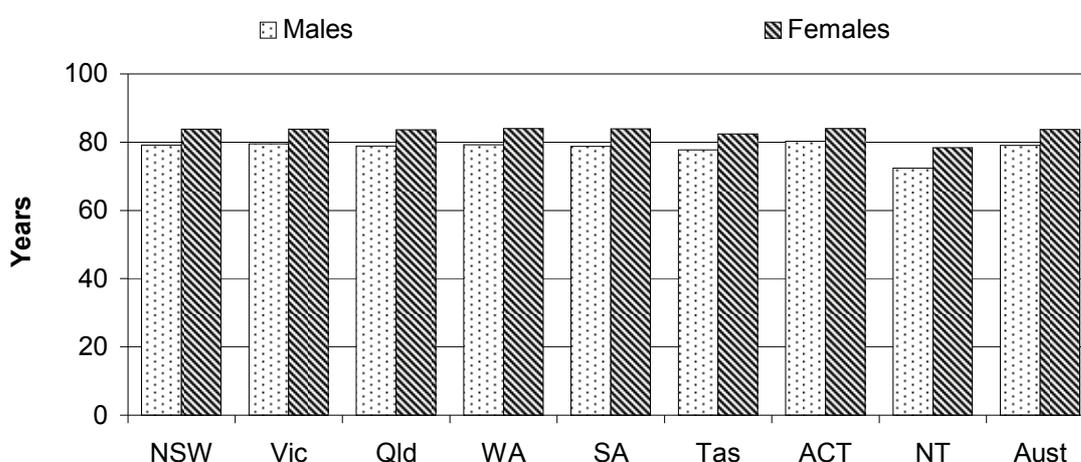
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## Life expectancy

The life expectancy of Australians improved dramatically during the twentieth century and so far during the twenty-first 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 2008b). It has risen steadily in each decade since, reaching 79.0 years for males and 83.7 years for females in 2005–2007 (figure E.16).

Figure E.16 **Average life expectancy at birth, 2005–2007**<sup>a, b</sup>

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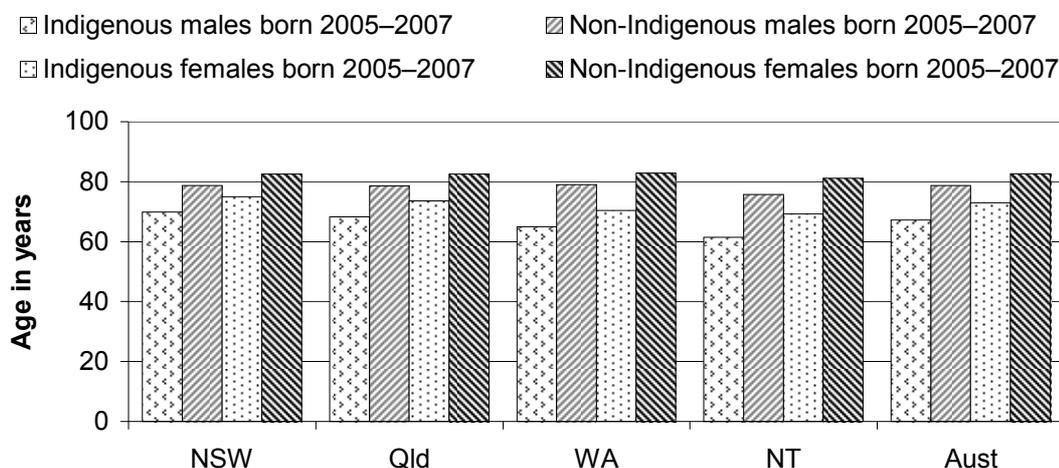
<sup>a</sup> Figures for Australia include 'other territories'. <sup>b</sup> Three year average.

Source: ABS (2008) *Deaths Australia, 2007, Australia*, Cat. no. 3302.0, Canberra; table EA.19.

### *Indigenous life expectancy*

The life expectancies of Indigenous Australians are considerably lower than those of non-Indigenous Australians. ABS experimental estimates indicate a life expectancy at birth of 67.2 years for Indigenous males and 72.9 years for Indigenous females born from 2005 to 2007 (figure E.17 and table EA.20). In the same time period, life expectancy at birth for non-Indigenous males was 78.7 and for non-Indigenous females was 82.6 years (figure E.17 and table EA.20). The methodology used for estimating Indigenous life expectancy has changed since 2009 Report.

Figure E.17 **Indigenous and non-Indigenous life expectancy at birth (years)**<sup>a, b, c, d</sup>



<sup>a</sup> Due to significant changes in methodology, estimates of life expectancy at birth for 2005–2007 are not comparable to previously published estimates. <sup>b</sup> Data are not available for all jurisdictions. <sup>c</sup> Estimates of life expectancy at birth for the total population presented in the ABS Cat. no. 3106.0.55.003 differ from estimates in *Deaths, Australia, 2006* (Cat no. 3302.0). <sup>d</sup> Australia includes all states and territories.

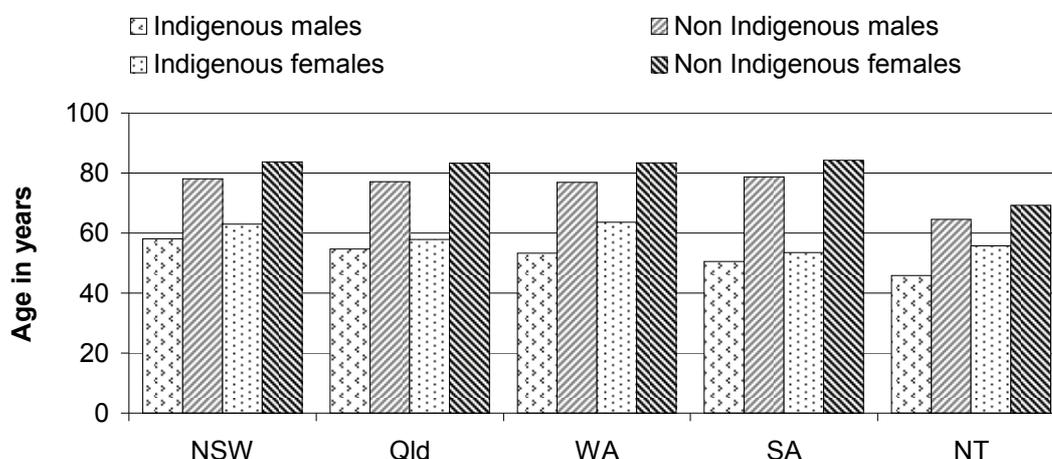
Source: ABS (2009), *Experimental Life Tables for Aboriginal and Torres Strait Islander Australians 2005–2007*, Australia, Cat. no. 3302.0.55.003, Canberra; table EA.20.

## 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 2007, the median age at death was 77.7 and 83.6 years of age, respectively (figure E.18 and table EA.21). In the jurisdictions for which data were available for Indigenous people the median age at death for male Indigenous Australians was between 45.9 and 58.1 years of age. The median age at death for female Indigenous Australians was between 55.7 and 63.0 years of age (figure E.18 and table EA.21).

Figure E.18 Median age at death, by sex and Indigenous status, 2007<sup>a</sup>



<sup>a</sup> Median age at death by Indigenous status is not available for Victoria, Tasmania and the ACT due to data quality issues. <sup>b</sup> The accuracy of Indigenous mortality data is 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 (2008) *Deaths Australia, 2007*, Cat. no. 3302.0, Canberra; table EA.21.

## Birthweight of babies

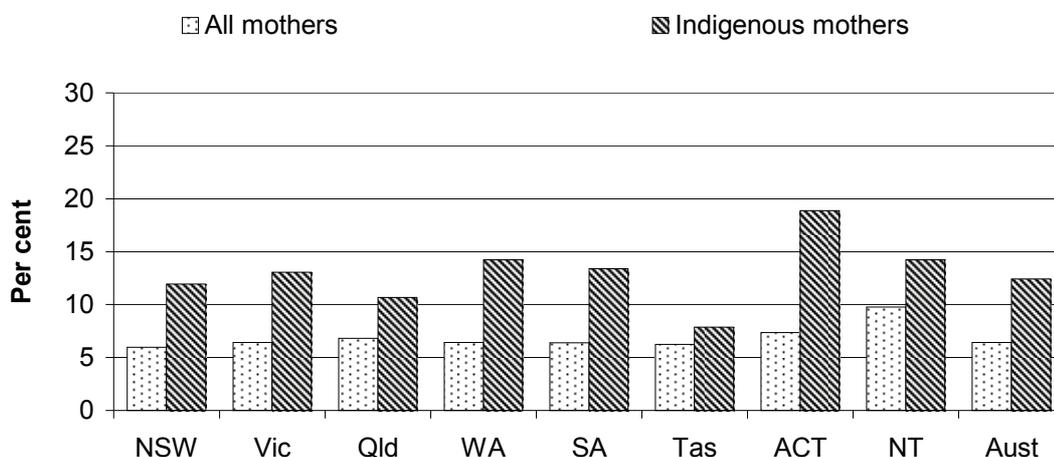
The birthweight of a baby is an important indicator of its health status and future wellbeing. In 2006, 91.8 per cent of liveborn babies in Australia weighed between 2500 and 4499 grams (Laws and Hilder 2008). The average birthweight for all live births was 3370 grams. In 2006, the average birthweight of liveborn babies of Indigenous mothers was 3169 grams (tables EA.22 and EA.23). This was 209 grams lighter than the average of 3378 grams for liveborn babies of non-Indigenous mothers (Laws and Hilder 2008).<sup>5</sup>

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 Hilder 2008). In 2006, 6.4 per cent of all liveborn babies in Australia weighed less than 2500 grams (figure E.19). This included 1.1 per cent of babies who weighed less than 1500 grams (table EA.22).

Among live babies born to Indigenous mothers in 2006, the proportions with low birthweight (12.4 per cent) and very low birthweight (2.3 per cent) were around twice the proportions born to all Australian mothers (figure E.19 and table EA.23).

<sup>5</sup> Figures for births to Indigenous mothers exclude Tasmania.

Figure E.19 **Low birthweight babies (under 2500 grams), by Indigenous status, 2006<sup>a, b</sup>**



<sup>a</sup> Proportion of live births with birthweights under 2500 grams. <sup>b</sup> In the ACT, 16.3 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 born in the ACT to ACT resident Indigenous women in 2006 where the birthweight was less than 2500 grams was 10.8 per cent.

Source: Laws, P. and Hilder, L. (2008) *Australia's Mothers and Babies 2006*, AIHW Cat. no. PER 46, National Perinatal Statistics Unit (Perinatal Statistics Series no. 22), AIHW, Sydney; tables EA.22 and EA.23.

## Future directions

New features and developments in this Report are listed in chapter 2. In addition, each of the health chapters has a section that covers the future directions for reporting.

Improving reporting on Indigenous health is a priority across all of the health chapters. This work is informed by the new Aboriginal and Torres Strait Islander Health Performance Framework and by National Health Agreement reporting.

## COAG developments

### *Report on Government Services alignment with National Agreement reporting*

Future editions of the Health preface will align with applicable National Health Agreement indicators and the NIRA. Further alignment between the Report and National Agreement indicators, and other reporting changes, might result from future developments in National Agreement and National Partnership reporting.

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### *Outcomes from review of Report on Government Services*

COAG agreed to Terms of Reference for a Heads of Treasuries/Senior Officials review of the Report in November 2008, to report to COAG by end-September 2009. The review examined the ongoing usefulness of the Report in the context of new national reporting under the Intergovernmental Agreement on Federal Financial Relations.

No significant changes from this review are reflected in the 2010 Report. Any COAG endorsed recommendations from the review are likely to be implemented for the 2011 Report.

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## Attachment tables

Attachment tables are identified in references throughout this preface by an 'EA' suffix (for example, table EA.3). Attachment tables are provided on the CD-ROM enclosed with the Report and on the Review website ([www.pc.gov.au/gsp](http://www.pc.gov.au/gsp)). Users without access to the CD-ROM or the website can contact the Secretariat to obtain the attachment tables (see contact details on the inside front cover of the Report).

<b>Table EA.1</b>	Total health expenditure, by source of funds (2007-08 dollars)
<b>Table EA.2</b>	Government recurrent health expenditure, by area of expenditure (2007-08 dollars)
<b>Table EA.3</b>	Non-government recurrent health expenditure by area of expenditure (2007-08 dollars)
<b>Table EA.4</b>	Recurrent health expenditure, by source of funds and area of expenditure, 2007-08
<b>Table EA.5</b>	Total health expenditure per person (2007-08 dollars)
<b>Table EA.6</b>	Recurrent health expenditure per person by source of funds, excluding high level residential aged care (2007-08 dollars)
<b>Table EA.7</b>	Total health price index
<b>Table EA.8</b>	Employed medical practitioners
<b>Table EA.9</b>	Employed nurses
<b>Table EA.10</b>	Indigenous health workforce, by State/Territory, 2006
<b>Table EA.11</b>	Indigenous people in health workforce as a proportion of total health workforce, by age group and sex, 2006
<b>Table EA.12</b>	Indigenous persons employed in selected health-related occupations, 2006
<b>Table EA.13</b>	Health risk factors, percent, 2007-08
<b>Table EA.14</b>	Mortality rates, age standardised for all causes (per 1000 people)
<b>Table EA.15</b>	Infant mortality rate, three year average (per 1000 live births)
<b>Table EA.16</b>	Indigenous infant mortality rates, three year average
<b>Table EA.17</b>	All Australians causes of death, standardised death rates 2007 (per 100 000 standard population)
<b>Table EA.18</b>	Leading causes of death, indirect age standardised death rate ratio, 2003–2007 (per 100 000 standard population)
<b>Table EA.19</b>	All Australians average life expectancy at birth (years)
<b>Table EA.20</b>	Indigenous and non-Indigenous life expectancy at birth (years)
<b>Table EA.21</b>	Median age at death (years)
<b>Table EA.22</b>	Birthweights, live births, all mothers, 2006
<b>Table EA.23</b>	Birthweights of babies of Indigenous mothers, live births, by State and Territory 2006

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