E Health sector overview

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| Attachment tables |
| Attachment tables are identified in references throughout this Indigenous Compendium by an ‘A’ prefix (for example, in this sector overview, table EA.1). As the data are directly sourced from the 2014 Report, the Compendium also notes where the original table, figure or text in the 2014 Report can be found. For example, where the Compendium refers to ‘2014 Report, p. E.1’, this is page 1 of the Health sector overview of the 2014 Report, and ‘2014 Report, table EA.1’ is table 1 of attachment EA of the 2014 Report. A list of attachment tables referred to in the Compendium is provided at the end of this chapter, and the full attachment tables are available from the Review website at www.pc.gov.au/gsp. |
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The Health sector overview in the *Report on Government Services 2014*   
(2014 Report) provides an introduction to the Public hospitals (chapter 10), Primary and community health (chapter 11), and Mental health management (chapter 12) chapters of this Report. It provides an overview of the health sector, presenting both contextual information and high level performance information. Data are reported for Indigenous people for a subset of the performance indicators reported in that sector overview — those data are compiled and presented here.

Major improvements in reporting in health this year are identified in each of the service-specific health chapters.

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. 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.

### Indigenous data in the Health sector overview

The Health sector overview in the 2014 Report contains the following information on Indigenous Australians:

* babies born of low birth weight
* birthweights, live births, Indigenous mothers, 2011
* proportion of live-born singleton babies of low birthweight, by maternal Indigenous status, 2011

1. prevalence of risk factors to the health of Australians:

* rates of obesity for adults, by Indigenous status, 2011–13
* proportion of adults who are daily smokers, by Indigenous status, 2011–13
* proportion of adults at risk of long term harm from alcohol (2001 NHMRC guidelines), by Indigenous status, 2011–13

1. selected potentially preventable diseases

* incidence of selected cancers, by Indigenous status, 2010
* age standardised rate of heart attacks, people 25 years and over, by Indigenous status, 2011

1. potentially avoidable deaths

* age standardised mortality rates of potentially avoidable deaths, under 75 years, by Indigenous status, NSW, Queensland, WA, SA, NT, 2007–2011
* mortality and life expectancy
* estimated life expectancies at birth, by Indigenous status and sex 2010–2012
* median age at death, 2012
* mortality rates, age standardised for all causes (per 1000 people), 2008–2012
* infant and child mortality, NSW, Queensland, WA, SA, NT, 2008–2012
* age standardised mortality rates by major cause of death, 2007–2011

1. profile of employed health workforce

* employed health workforce, by state and territory of principal practice, 2012
* Indigenous health workforce, 2011
* persons employed in selected health-related occupations, 2011

1. access to services compared to need

* proportion of people who accessed health services by health status, by Indigenous status, 2012-13.

### Policy context

All levels of government in Australia fund, deliver and regulate health services, with most of the activity performed by the Australian, State and Territory governments. The Australian Government’s health services activities include:

* funding improved access to primary health care, including Indigenous‑specific primary health, specialist services and infrastructure for rural and remote communities

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

* community health services
* mental health programs
* specialist palliative care
* public hospital services

1. public dental services
2. patient transport
3. health policy research and policy development
4. public health (such as health promotion programs and disease prevention)
5. the regulation, inspection, licensing and monitoring of premises, institutions and personnel.

**Profile of health sector**

Detailed profiles for the services within the health sector are reported in chapters 10, 11 and 12, and cover health service funding and expenditure as well as the size and scope of the individual service types.

*Descriptive statistics*

Descriptive statistics for the health sector are included in this section. Additional descriptive data for each jurisdiction are presented in 2014 Report,   
tables EA.5–6.

In 2010-11, Australian, State and Territory government total expenditure on health for Indigenous Australians was $4.2 billion (AIHW 2013a; table E.1). Health expenditure by area of expenditure in 2010-11 is presented for Indigenous and non‑Indigenous Australians in table E.2.

Table E.1 Health funding for Indigenous and non-Indigenous Australians by source of funding, 2010-11

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source of funding | *Amount ($ million)* | | |  |
|  | Indigenous | Non-Indigenous | Total | Indigenous share (%) |
| State and Territory governments | 2 119.2 | 28 172.0 | 30 291.2 | 7.0 |
| Australian Government | 2 040.7 | 52 967.2 | 55 007.8 | 3.7 |
| Direct Australian Government | 1 245.0 | 33 078.3 | 34 323.3 | 3.6 |
| Indirect through Australian State/Territory governments | 746.1 | 13 493.9 | 14 240.0 | 5.2 |
| Indirect through non-governmenta | 49.6 | 6 394.9 | 6 444.5 | 0.8 |
| *All governments* | 4 159.9 | 81 139.2 | 85 299.0 | 4.9 |
| Non-government | 392.1 | 37 964.9 | 38 357.1 | 1.0 |
| **Total health** | **4 552.0** | **119 104.1** | **123 656.1** | **3.7** |

a Includes private health insurance rebates for all Australians. Also includes Specific Purpose Payments covering highly specialised drugs in private hospitals and other payments.

*Source*: AIHW 2013, *Expenditure on health for Aboriginal and Torres Strait Islander people 2010–11,* Health and Welfare Expenditure Series no. 48. Cat. no. HWE 57, Canberra; 2014 Report, table E.1, p. E.6.

Table E.2 Expenditure on health services for Indigenous and non‑Indigenous Australians, 2010-11

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Area of expenditure | Expenditure ($ million) | | |  | Expenditure per person ($) | |  |
| Indigenous | Non-Indigenous | Total | Indigenous share (%) | Indigenous | Non-Indigenous | Ratio |
| Total hospital services | 2 178.0 | 47 527.6 | 49 705.7 | 4.4 | 3 825.6 | 2 169.4 | 1.8 |
| Public  hospitalsa | 2 067.4 | 36 870.4 | 38 937.8 | 5.3 | 3 631.3 | 1 683.0 | 2.2 |
| Admitted patientsb | 1 748.7 | 31 106.6 | 32 855.4 | 5.3 | 3 071.6 | 1 419.9 | 2.2 |
| Non-admitted   patients | 333.0 | 5 749.4 | 6 082.4 | 5.5 | 584.9 | 262.4 | 2.2 |
| Private  hospitalsc | 110.7 | 10 657.3 | 10 767.9 | 1.0 | 194.4 | 486.5 | 0.4 |
| Patient transport | 183.4 | 2 601.4 | 2 784.7 | 6.6 | 322.1 | 118.7 | 2.7 |
| Medical | 376.3 | 22 148.2 | 22 524.5 | 1.7 | 660.9 | 1 011.0 | 0.7 |
| Medicare | 286.0 | 17 380.7 | 17 666.8 | 1.6 | 502.4 | 793.3 | 0.6 |
| Other | 90.2 | 4 767.5 | 4 857.7 | 1.9 | 158.5 | 217.6 | 0.7 |
| Dental | 84.8 | 7 780.8 | 7 865.5 | 1.1 | 148.9 | 355.2 | 0.4 |
| Community healthd | 1 119.6 | 5 172.0 | 6 291.6 | 17.8 | 1 966.5 | 236.1 | 8.3 |
| Other professional | 43.8 | 4 053.4 | 4 097.2 | 1.1 | 77.0 | 185.0 | 0.4 |
| Public health | 185.7 | 1 810.3 | 1 996.1 | 9.3 | 326.2 | 82.6 | 4.0 |
| Medications | 209.9 | 18 215.2 | 18 425.0 | 1.1 | 368.7 | 831.4 | 0.4 |
| Aids and appliances | 15.2 | 3 616.6 | 3 631.8 | 0.4 | 26.7 | 165.1 | 0.2 |
| Research | 124.2 | 4 158.5 | 4 282.7 | 2.9 | 218.2 | 189.8 | 1.2 |
| Health administration | 31.1 | 2 020.1 | 2 051.2 | 1.5 | 54.6 | 92.2 | 0.6 |
| **Total health** | **4 552.0** | **119 104.1** | **123 656.1** | **3.7** | **7 995.4** | **5 436.5** | **1.5** |

a Excludes dental services, patient transport services, community health services, public health and health research undertaken by the hospital. b Admitted patient expenditure estimates are adjusted for Aboriginal and Torres Strait Islander under-identification. c Includes State/Territory governments’ expenditure for services provided for public patients in private hospitals. The estimates are not comparable to previous estimates due to improved methodology. d Includes other recurrent expenditure on health not elsewhere classified, such as family planning previously reported under ‘Other health services (n.e.c.)’. State and Territory expenditure on Closing the Gap initiatives have been allocated to this category for the first time.

*Source*: AIHW 2013, *Expenditure on health for Aboriginal and Torres Strait Islander people 2010-11,* Health and Welfare Expenditure Series no. 48. Cat. no. HWE 57, Canberra; 2014 Report, table E.2, p. E.7.

### Factors affecting demand for services

Health status is linked to demand for health services and is associated with a range of demographic and socioeconomic factors. Financial, educational, geographic and cultural barriers can reduce access to health services and contribute to poorer health outcomes.

Indigenous Australians are generally less healthy than other Australians, die at much younger ages, and have more disability and a lower quality of   
life (AIHW 2012; 2014 Report, tables EA.35 and EA.37). Many Indigenous Australians live in conditions of social and economic disadvantage — a recent study found socioeconomic disadvantage to be the leading health risk for Indigenous Australians in the NT, accounting for 42 to 54 per cent of the life expectancy gap between Indigenous and non-Indigenous Australians (Zhao *et al*. 2013). Indigenous Australians have low income levels when compared to non‑Indigenous Australians (see chapter 2 Statistical context p. 2.4; tables 2A.34–36; SCRGSP 2011). Indigenous Australians have relatively high rates for many health risk factors and are more likely to smoke and to consume alcohol at risky levels (ABS 2013a; SCRGSP 2011; Zhao *et al*. 2013). Indigenous Australians are more likely to live in inadequate and overcrowded housing (SCRGSP 2011) and in remote areas with more limited access to health services. In 2006, 51 992 Indigenous Australians were living in discrete Indigenous communities that were 100 kilometres or more from the nearest hospital (ABS 2007).

Nationally, 3.0 per cent of the total population identified as Indigenous in 2011. Those identifying as Indigenous made up less than 5 per cent of the population   
in each State and Territory except the NT, where the figure was 29.8 per cent   
(table 2A.15 and 2014 Report, table 2A.1).

### Service-sector objectives

Government involvement in health services is predicated on the desire to improve the health of all Australians and to ensure equity of access and the sustainability of the Australian health system. Box E.1 presents the overall objectives of the health system as summarised for this Report, which are consistent with the objectives outlined in the National Healthcare Agreement (MCFFR 2012). Governments provide a variety of services in different settings to fulfil these objectives.

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| Box E.1 Overall objectives of the health system |
| Government involvement in the health system is aimed at efficiently and effectively improving health outcomes for all Australians and ensuring the sustainability of the Australian health system, achieving the following outcomes:   * Australians are born and remain healthy * Australians receive appropriate high quality and affordable primary and community health services * Australians receive appropriate high quality and affordable hospital and hospital related care * Australians have positive health care experiences which take account of individual circumstances and care needs * Australians have a health system that promotes social inclusion and reduces disadvantage, especially for Indigenous Australians * Australians have a sustainable health system. |
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### Sector performance indicator framework

This sector overview is based on a sector performance indicator framework   
(figure E.3). This framework is made up of the following elements:

* Sector objectives — three sector objectives are a précis of the key objectives of the health system and reflect the outcomes in the NHA (box E.1).
* Sector-wide indicators — seven sector-wide indicators relate to the overarching service sector objectives identified in the NHA.
* Information from the service-specific performance indicator frameworks that relate to health services. Discussed in more detail in chapters 10, 11 and 12, the service-specific frameworks provide comprehensive information on the equity, effectiveness and efficiency of these services.

This sector overview provides an overview of relevant performance information. Chapters 10, 11 and 12 and their associated attachment tables provide more detailed information.

Figure E.1 Health services sector performance indicator framework

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| Figure E.1 Health services sector performance indicator framework  More details can be found within the text surrounding this image. |

*Source*: 2014 Report, figure E.3, p. E.11.

### Sector-wide performance indicators

This section includes high level indicators of health outcomes. Many factors are likely to influence outcomes — not solely the performance of government services. However, these outcomes inform the development of appropriate policies and delivery of government services.

#### Babies born of low birth weight

‘Babies born of low birth weight’ is an indicator of governments’ objective that Australians are born and remain healthy (box E.2). The birth weight of a baby is an important indicator of its health status and future wellbeing. Low birth weight babies have a greater risk of poor health and dying, require a longer period of hospitalisation after birth, and are more likely to develop significant disabilities (Goldenberg & Culhane 2007).

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| Box E.2 **Low birth weight of babies** |
| Babies’ birth weight is defined as low if they weigh less than 2500 grams, very low if they weigh less than 1500 grams and extremely low if they weigh less than 1000 grams (AIHW and Li et al. 2013).  A low or decreasing number of low birth weight babies is desirable.  Factors external to the health system also have a strong influence on the birth weight of babies. Some factors contributing to low birth weight include socioeconomic status, size of parents, age of mother, number of babies previously born, mother’s nutritional status, smoking and alcohol intake, and illness during pregnancy (Li et al. 2011).  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2011 data are available for all jurisdictions.   Data quality Information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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In 2011, 93.7 per cent of liveborn babies in Australia weighed 2500 grams or over (AIHW and Li et al. 2013). The average birth weight for all live births was 3367 grams in 2011 (2014 Report, table EA.8).

Nationally, the average birth weight for liveborn babies of Indigenous mothers was 3187 grams in 2011 (table EA.9). Among live-born singleton babies born to Indigenous mothers in 2011, the proportion with low birth weight was twice that of those born to non‑Indigenous mothers (figure E.2).

Figure E.2 Proportion of live-born singleton babies of low birthweight, by maternal Indigenous status, 2011**a, b,** **c,** **d, e**

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| Figure E.2 Proportion of live-born singleton babies of low birthweight, by maternal Indigenous status, 2011  More details can be found within the text surrounding this image. |

a Low birth weight is defined as less than 2500 grams. b Disaggregation by State/Territory is by place of usual residence of the mother. c Data excludes Australian non-residents, residents of external territories and where State/Territory of residence was not stated. d Excludes stillbirths and multiple births. Births were included if they were at least 20 weeks gestation or at least 400 grams birth weight. e Birth weight data on babies born to Indigenous mothers residing in the ACT and Tasmania should be viewed with caution as they are based on small numbers of births.

*Source*: AIHW (unpublished) National Perinatal Data Collection; table EA.10; 2014 Report, figure E.4, p. E.14.

#### Prevalence of risk factors to the health of Australians

‘Prevalence of risk factors to the health of Australians’ is an indicator of governments’ objective that Australians are born and remain healthy (box E.3).

A number of behaviours create risks to health outcomes; for example, lack of exercise, smoking, excessive alcohol consumption, sun exposure and unhealthy dietary habits. 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.

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| Box E.3 **Prevalence of risk factors to the health of Australians** |
| ‘Prevalence of risk factors to the health of Australians’ is defined by the following measures:   * Prevalence of overweight and obesity — the number of people with a Body Mass Index (BMI) in the categories of either overweight or obese, as a percentage of the population. BMI is calculated as weight (kg) divided by the square of height (m). BMI values are grouped according to World Health Organization and National Health and Medical Research Council guidelines.   Among adults, 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 2013).  Children are defined as people aged 5–17 years. For children, obesity is defined as BMI (appropriate for age and sex) that is likely to be 30 or more at age 18 years.   * Rates of current daily smokers — number of people aged 18 years or over who smoke tobacco every day as a percentage of the population aged 18 years or over. * Risk of alcohol related harm over a lifetime — people aged 18 years or over assessed as having an alcohol consumption pattern that puts them at risk of long‑term alcohol related harm, as a percentage of the population aged 18 years or over.   ‘Lifetime risk of alcohol related harm’ is defined according to the 2009 National Health and Medical Research Council guidelines: for males and females, no more than two standard drinks on any day. This has been operationalised as: for both males and females, an average of more than 2 standard drinks per day in the last week.  Rates for all three measures are age standardised.  A low or decreasing rate is desirable for each health risk factor.  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required  2011–2013 data are available for all jurisdictions.   Data quality Information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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##### Prevalence of overweight and obesity

Being overweight or obese increases the risk of an individual developing, among other things, heart disease, stroke and Type 2 diabetes. In 2011-12, over a third of Australians’ measured BMI was in the overweight range and over a quarter were obese (2014 Report, figure E.5; table EA.12).

Nationally, the rate of overweight and obesity was higher for Indigenous adults (71.4 per cent) than for non‑Indigenous adults (62.6 per cent) in 2011–13   
(table EA.16). Data for the rate of overweight and obesity for children by Indigenous status are reported in table EA.18.

*Rates of current daily smokers*

Smoking is an important risk factor for heart disease, stroke and lung cancer. These were the three leading causes of death in Australia in 2011 (ABS 2013b). Smoking is responsible for around 80 per cent of all lung cancer deaths and 20 per cent of all cancer deaths (HealthInsite 2011).

Nationally, Indigenous Australians had higher age‑standardised rates of daily smoking (41.2 per cent) than non‑Indigenous Australians (16.0 per cent) in 2011–13 (table EA.21).

*Levels of risky alcohol consumption*

The National Health and Medical Research Council (NHMRC) reports that excessive long term alcohol consumption increases the risk of heart disease, diabetes, liver cirrhosis and some types of cancers. It can contribute to injury and death through accidents, violence, suicide and homicide, and also to financial problems, family breakdown, and child abuse and neglect (NHMRC 2009).

Nationally, the age standardised proportion of adults at risk of alcohol related harm over a lifetime (2009 NHMRC guidelines) was similar for Indigenous Australians (19.2 per cent) and non‑Indigenous Australians (19.5 per cent) in 2011–13, although results varied across jurisdictions (table EA.24).

*Selected potentially preventable diseases*

‘Selected potentially preventable diseases’ is an indicator of governments’ objective that Australians are born and remain healthy (box E.4).

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| Box E.4 **Selected potentially preventable diseases** |
| ‘Selected potentially preventable diseases’ is defined by the following measures:   * Incidence of selected cancers — incidence of selected cancers of public health importance. * For melanoma, lung and bowel cancer, the measure is defined as the number of new cases in the reported year expressed as a directly age standardised rate. * For breast and cervical cancer in females, the measure is defined as the number of new cases in women in the reported year expressed as a directly age standardised rate. * Data reported for this measure are: * comparable (subject to caveats) across jurisdictions and over time except for NSW and the ACT, for which 2010 data are estimated * incomplete for the current reporting period. Data for 2010 were not available for NSW or the ACT and estimates are reported for these jurisdictions. * Incidence of heart attacks — the number of deaths recorded as acute coronary heart disease deaths plus the number of non-fatal hospitalisations for acute myocardial infarction or unstable angina not ending in a transfer to another acute hospital, expressed as a directly age-standardised rate. * Data reported for this measure are: * comparable (subject to caveats) over time at the national level * incomplete for the current reporting period. Data are not currently available by State and Territory. * Prevalence of type 2 diabetes — the number of people recorded as having Type 2 diabetes as a percentage of the total population aged 18 years or over. * Data reported for this measure are: * comparable across jurisdictions except for the NT where people in very remote areas, for which data are not available, comprise around 23 per cent of the population (see caveats in attachment tables) but are not comparable over time * complete for the current reporting period except for the NT. All required 2011–13 data are reported for all jurisdictions except the NT.   A low or decreasing rate is desirable for each incidence/prevalence rate.  Incidence is defined as the number of new cases in the reported year and is expressed as a rate of the relevant population.  Prevalence is defined as the proportion of the population suffering from a disorder.  Data quality Information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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As well as addressing health risk factors, well-planned disease prevention and early intervention programs help prevent a number of diseases (or more successfully treat diseases through early identification). A number of programs form an important element of preventing disease and improving the health of Australians   
(NPHT 2009), such as:

* immunisation
* cancer screening and early treatment
* early detection and intervention
* individual disease risk assessments and early intervention for biomedical risk factors such as: high blood pressure, high blood cholesterol, or impaired glucose tolerance
* childhood infectious diseases control
* sexually transmitted infections control.

*Incidence of selected cancers*

Nationally, the age standardised rate of lung cancer was 42.8 new cases per 100 000 people in 2010. Bowel cancer, which has been linked to diet, occurred at a rate of 61.8 new cases per 100 000 people in 2010 (table EA.24). Other cancers such as melanoma are also preventable. The incidence of these cancers for 2010, along with breast and cervical cancer, are reported in 2014 Report, figure E.8, p. E.21. 2014 Report, tables EA.26–28 report the incidence of the selected cancers by remoteness, SEIFA IRSD quintiles and Indigenous status.

*Incidence of heart attacks*

The major, preventable risk factors for cardiovascular disease are: tobacco smoking; high blood pressure; high blood cholesterol; insufficient physical activity; overweight and obesity; poor nutrition; and diabetes.

Nationally, the rate of heart attacks was 427 new cases per 100 000 people in 2011 (2014 Report, table EA.30). The incidence of heart attacks was greater for Indigenous Australians (table EA.29). Caution should be taken in interpreting these data as they have been estimated using an algorithm that is under AIHW development. It should be considered an interim measure until current validation work is complete.

*Potentially avoidable deaths*

‘Potentially avoidable deaths’ is an indicator of governments’ objective that Australians are born and remain healthy (box E.5). Avoidable deaths reflect the effectiveness of current and past preventative health activities.

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| Box E.5 **Potentially avoidable deaths** |
| ‘Potentially avoidable deaths’ is defined as potentially preventable deaths (deaths amenable to screening and primary prevention, such as immunisation) and deaths from potentially treatable conditions (deaths amenable to therapeutic interventions) for those aged less than 75 years per 100 000 people aged less than 75 years.  A low or decreasing potentially avoidable death rate is desirable.  Most components of the health system can influence potentially avoidable death rates, although there can be decades between the action and the effect. Factors external to the health system also have a strong influence on potentially avoidable death rates.  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required  2007–2011 data are available for all jurisdictions.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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Indigenous Australians had significantly higher death rates from potentially avoidable deaths (preventable and treatable) over the period 2007–2011, comprising higher potentially preventable deaths per 100 000 people and higher treatable deaths per 100 000 people (figure E.3 and table EA.33). Single year data for all Australians are presented in 2014 Report, table EA.32.

Figure E.3 Age standardised mortality rates of potentially avoidable deaths, under 75 years, 2007–2011**a,** **b,** **c,** **d,** **e,** **f, g, h, i, j**

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| Legend to Figure E.9  More details can be found within the text surrounding this image.  Figure E.3 Age standardised mortality rates of potentially avoidable deaths, under 75 years, 2007–2011, by Indigenous status   a) potentially preventable deaths  More details can be found within the text surrounding this image.Figure E.9 Age standardised mortality rates of potentially avoidable deaths, under 75 years, 2007–2011, by Indigenous status  b) potentially treatable deaths  More details can be found within the text surrounding this image.Figure E.9 Age standardised mortality rates of potentially avoidable deaths, under 75 years, 2007–2011, by Indigenous status  c) all potentially avoidable deaths  More details can be found within the text surrounding this image. |

a Standardised death rates calculated using the direct method, age-standardised by 5 year age groups to less than 75 years. b Excludes deaths where Indigenous status was not provided. c Avoidable mortality is defined as mortality before the age of 75 years, from conditions which are potentially avoidable within the existing health system. d Data based on year of registration. See DQI for more information. e Data are reported by jurisdiction of residence for NSW, Queensland, WA, SA and the NT only. Only these five states and territories have evidence of a sufficient level of Indigenous identification and sufficient numbers of Indigenous deaths to support mortality analysis. f Care should be taken when interpreting deaths data for Queensland as they are affected by recent changes in the timeliness of birth and death registrations. Queensland deaths data for 2010 have been adjusted to minimise the impact of late registration of deaths on mortality indicators. See DQI for more information. g For WA, Indigenous deaths data for 2007, 2008 and 2009 have been revised. See DQI for more information. h Total includes data for NSW, Queensland, WA, SA and the NT only. i Preventable deaths are those which are amenable to screening and primary prevention such as immunisation, and reflect the effectiveness of the current preventative health activities of the health sector. j Deaths from potentially treatable conditions are those which are amenable to therapeutic interventions, and reflect the safety and quality of the current treatment system.

*Source*: ABS (unpublished) *Causes of Deaths, Australia, 2011*, Cat. no. 3303.0; table EA.33; 2014 Report, figure E.9, p. E.25.

*The mortality and life expectancy of Australians*

‘The mortality and life expectancy of Australians’ is an indicator of governments’ objective that Australians are born and remain healthy (box E.6).

Comparing mortality and life expectancy data across populations, including cause, age, sex, population group and geographical distribution, provide important insights into the overall health of Australians (AIHW 2013b). Trends over time in mortality and life expectancy data can signal changes in the health status of the population, as well as provide a baseline indicator for the effectiveness of the health system.

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| Box E.6 **The mortality and life expectancy of Australians** |
| ‘The mortality and life expectancy of Australians’ is defined by the following measures:   * ‘Life expectancy’ — the average number of additional years a person of a given age and sex might expect to live if the age-specific death rates of the given period continued throughout his/her lifetime.   A high or increasing life expectancy is desirable.   * ‘Median age at death’ — 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.   A high or increasing median age at death is desirable.   * ‘Mortality rates’ — the number of registered deaths compared to the total population (expressed as a rate). Rates are provided for: * Australian mortality rate — age standardised mortality per 1000 people * infant and child mortality rates — the number of deaths of children under  one year of age in a calendar year per 1000 live births in the same year (infant mortality rate) and the number of deaths of children between one and four years of age in a calendar year per 100 000 children (child mortality rate) * mortality rates by major cause of death — age standardised deaths, by cause of death compared to the total population (expressed as a rate).   A low or decreasing mortality rate is desirable.  Most components of the health system can influence the mortality and life expectancy of Australians, although there can be decades between the action and the effect. Factors external to the health system also have a strong influence.  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time except for median age at death * complete (subject to caveats) for the current reporting period. All required  2010–2012 data for life expectancy, 2012 data for median age at death and  2012 data for mortality rates are available for all jurisdictions.   Data quality Information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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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 2013c). It has risen steadily in each decade since, reaching 79.9 years for males and 84.3 years for females in 2010–2012 (2014 Report, figure E.10, p. E.27).

The life expectancies of Indigenous Australians are considerably lower than those of non‑Indigenous Australians. ABS estimates indicate a life expectancy at birth of 69.1 years for Indigenous males and 73.7 years for Indigenous females born from 2010 to 2012. In the same time period, life expectancy at birth for non-Indigenous males was 79.7 years and for non‑Indigenous females was 83.1 years (table EA.35). Life expectancy at birth by Indigenous status and sex for NSW, Queensland, WA and the NT are presented in figure E.4.

Figure E.4 Estimated life expectancies at birth, by Indigenous status and sex, 2010–2012 (years)**a,** **b**

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| Figure E.4 Estimated life expectancies at birth, by Indigenous status and sex, 2010–2012   More details can be found within the text surrounding this image. |

a Indigenous estimates of life expectancy are not available for Victoria, SA, Tasmania or the ACT due to the small number of Indigenous deaths in these jurisdictions. b Life tables are constructed separately for Males and Females.

*Source*: ABS (2013) *Life Tables for Aboriginal and Torres Strait Islander Australians 2010–2012*,   
Cat. no. 3302, Canberra; table EA.35; 2014 Report, figure E.11, p. E.28.

*Median age at death*

The median age at death in 2012 was 78.9 years of age for Australian males and 84.7 years of age for Australian females (2014 Report, table EA.36).

Comparisons of the median age at death for Indigenous and non‑Indigenous Australians 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 falls significantly in older age groups. The median age of death for Indigenous Australians is, therefore, likely to be an underestimate.

Caution should be taken when comparing median age at death between Indigenous and non-Indigenous populations. Coory and Baade (2003) note that:

* the relationship between a change in median age at death and a change in death rate depends upon the baseline death rate. So comparison of trends in median age at death for Indigenous and non-Indigenous Australians is difficult to interpret
* changes in the median age at death of public health importance might be difficult to distinguish from statistical noise.

In the jurisdictions for which data were available for Indigenous Australians, the median age at death for male Indigenous Australians was 55.0 years of age. The median age at death for female Indigenous Australians was 61.3 years of age   
(figure E.5 and table EA.37).

Figure E.5 Median age at death, by sex and Indigenous status, 2012**a, b**

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| Figure E.5 Median age at death, by sex and Indigenous status, 2012  More details can be found within the text surrounding this image. |

a Victoria, Tasmania and the ACT are excluded due to small numbers of registered Indigenous deaths. b 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 (2013) *Deaths, Australia, 2012*, Cat. no. 3302.0, Canberra; table EA.37; 2014 Report,   
figure E.12, p. E.29.

*Mortality**rates*

There were 147 098 deaths in Australia in 2012 (ABS 2013c), which translated into an age standardised mortality rate of 553.6 deaths per 100 000 people (2014 Report, figure E.13). Death rates over the last 20 years have declined for all states and territories (ABS 2013c).

*Mortality rates — Indigenous Australians*

Data on Indigenous mortality are collected through State and Territory death registrations. The completeness of identification of Indigenous Australians in these collections varies significantly across states and territories so care is required when making comparisons.

For the period 2008–2012, NSW, Queensland, WA, SA and the NT have been assessed as having adequate identification and number of Indigenous deaths for mortality analysis. For these five jurisdictions combined, the overall mortality rate for Indigenous Australians was 1143.4 per 100 000 people, nearly twice as high as for non‑Indigenous Australians (589.7 per 100 000 people) (figure E.6 and   
table EA.39). Due to identification completeness issues, mortality rates presented here are likely to be underestimates of the true mortality of Indigenous Australians (ABS and AIHW 2008).

Data on longer-term trends for WA, SA and the NT suggest that the mortality rate for Indigenous infants decreased by 62 per cent between 1991 and 2010   
(AHMAC 2012). While this is a significant improvement, infant mortality rates for Indigenous children are still markedly higher than for non-Indigenous children in Australia.

For the period 2008–2012, the average infant mortality rate for Indigenous infants (less than one year) was higher than for non-Indigenous infants in the jurisdictions (NSW, Queensland, WA, SA and the NT) for which there were data available   
(table EA.44). For the same period, the average child mortality rate for Indigenous children (1–4 years) was also higher for these jurisdictions (table EA.44). The combined infant and child average mortality rate for Indigenous infants and children (0–4 years) was 203.3 deaths per 100 000 of the infant and child population in NSW, Queensland, WA, SA and NT. This compared with 91.4 deaths per 100 000 of the infant and child population for non‑Indigenous infants and children   
(table EA.44).

Figure E.6 Mortality rates, age standardised, by Indigenous status,   
five year average, 2008–2012**a, b, c, d, e**

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| Figure E.6 Mortality rates, age standardised, by Indigenous status, five year average, 2008–2012  More details can be found within the text surrounding this image. |

a Deaths are based on year of registration. b Mortality rates are age-standardised to the 2001 Australian standard population. c 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 (ERP) 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. d Total includes NSW, Queensland, SA, WA, and NT combined, based on State or Territory of usual residence. Victoria, Tasmania and the ACT are excluded due to small numbers of registered Indigenous deaths. e Error bars represent the 95 per cent variability band associated with each point estimate. See the DQI for more information.

*Source*: ABS (unpublished), *Deaths, Australia, 2012*; table EA.39; 2014 Report, figure E.15, p. E.32.

*Mortality rates — by major cause of death*

The most common causes of death among Australians in 2011 were cancers, diseases of the circulatory system (including heart disease, heart attack and stroke), and diseases of the respiratory system (including influenza, pneumonia and chronic lower respiratory diseases) (2014 Report, tables E.3 and EA.45).

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 in 2007–11. For these jurisdictions the leading age-standardised cause of death for Indigenous Australians was circulatory diseases followed by neoplasms (cancer) (tables E.3 and EA.46).

Compared to non‑Indigenous Australians, Indigenous Australians died at higher rates from ‘endocrine, metabolic and nutritional disorders’, ‘kidney diseases’, ‘digestive diseases’, and ‘respiratory diseases’ (tables E.3 and EA.46).

Table E.3 Age standardised Indigenous mortality rate (deaths per   
100 000 people) compared to non‑Indigenous rate, by major cause of death, 2007–2011**a, b, c**

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|  | Rate difference — Indigenous rate less non‑Indigenous rate | | | | | | | |  | Rate ratio — Indigenous rate divided by non‑Indigenous rate | | | | | |
|  | NSW | | | Qld | WA | SA | NT | Total |  | NSW | Qld | WA | SA | NT | Total |
| Circulatory diseases | 130.0 | | | 122.7 | 238.3 | 128.3 | 192.9 | 147.0 |  | 1.6 | 1.6 | 2.4 | 1.6 | 2.2 | 1.7 |
| Cancer | 60.5 | | | 76.6 | 87.9 | 26.2 | 114.4 | 76.3 |  | 1.3 | 1.4 | 1.5 | 1.1 | 1.6 | 1.4 |
| External causes | | 27.2 | | 28.4 | 90.3 | 65.7 | 57.7 | 48.1 |  | 1.8 | 1.7 | 3.2 | 2.8 | 1.9 | 2.3 |
| Endocrine and other disorders**d** | | 48.2 | | 103.9 | 140.5 | 42.9 | 167.9 | 94.9 |  | 3.3 | 5.6 | 6.9 | 2.7 | 6.4 | 5.3 |
| Respiratory diseases | | 59.0 | | 48.9 | 71.0 | 62.9 | 98.5 | 64.0 |  | 2.2 | 2.0 | 2.6 | 2.3 | 2.8 | 2.3 |
| Digestive diseases | | 19.9 | | 33.8 | 56.3 | 38.3 | 57.6 | 36.5 |  | 2.0 | 2.7 | 3.8 | 2.9 | 3.2 | 2.8 |
| Kidney Diseases | | 11.7 | | 20.6 | 39.9 | np | 57.6 | 24.8 |  | 2.0 | 3.0 | 4.9 | np | 6.5 | 3.2 |
| Conditions originating in the perinatal period | | 2.0 | | 2.9 | 3.3 | np | 6.6 | 3.2 |  | 1.7 | 2.0 | 3.1 | np | 3.3 | 2.2 |
| Infectious and parasitic diseases | | | 8.4 | 16.2 | 17.7 | np | 31.6 | 15.6 |  | 1.8 | 3.3 | 3.5 | np | 3.4 | 2.8 |
| Nervous system diseases | | - 1.3 | | - 2.7 | 16.2 | 5.7 | 3.8 | 2.1 |  | 0.9 | 0.9 | 1.5 | 1.2 | 1.2 | 1.1 |
| Other causes | 30.0 | | | 28.8 | 73.8 | 33.2 | 75.9 | 42.7 |  | 1.6 | 1.7 | 2.8 | 1.7 | 2.5 | 2.0 |
| **All causes** | **395.7** | | | **480.2** | **835.1** | **439.1** | **864.6** | **555.5** |  | **1.7** | **1.8** | **2.5** | **1.7** | **2.4** | **1.9** |

a All causes of death data from 2006 onward are subject to a revisions process — once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2006 (final) 2007 (final), 2008 (final), 2009 (revised), 2010 (preliminary). See Cause of Death, Australia, 2010 (cat. no. 3303.0) Explanatory Notes 35-39 and Technical Notes, Causes of Death Revisions, 2006 and Causes of Death Revisions, 2008 and 2009. b Age standardised death rates enable the comparison of death rates between populations with different age structures by relating them to a standard population. The current ABS standard population is all persons in the Australian population at 30 June 2001. Standardised death rates (SDRs) are expressed per 100 000 persons. SDRs in this table have been calculated using the direct method, age standardised by 5 year age group to 75 years and over. Rates calculated using the direct method are not comparable to rates calculated using the indirect method. c Data are reported by jurisdiction of residence for NSW, Queensland, WA, SA and the NT only. Only these five states and territories have evidence of a sufficient level of Indigenous identification and sufficient numbers of Indigenous deaths to support mortality analysis. d Endocrine, metabolic and nutritional disorders. **np** not published.

*Source*: ABS (unpublished) *Causes of Death Australia, 2011* Cat. no. 3301.0; table EA.46; 2014 Report,   
table E.4, p. E.34.

#### Profile of employed health workforce

‘Profile of employed health workforce’ is an indicator of governments’ objective that Australians have a sustainable health system (box E.7).

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| Box E.7 Profile of employed health workforce |
| ‘Profile of employed health workforce’ is defined by three measures:   * the full time equivalent employed health workforce divided by the population * the proportion of the full time equivalent employed health workforce under the age of 45 years * the net growth in the full time equivalent employed health workforce.   High or increasing rates in the health workforce measures can give an indication of the sustainability of the health system and its ability to respond and adapt to future needs.  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2012 data are available for all jurisdictions.   Information about data quality for this indicator/measure is at www.pc.gov.au/gsp/reports/rogs/2014. |
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|  |

Nationally, 0.8 per cent of the nursing and midwifery workforce were Indigenous in 2012 (table EA.50). Of people employed in health-related occupations in 2011,   
1.6 per cent were Indigenous. Within health related occupations in 2011, the occupations with the highest percentage of Indigenous Australians were health and welfare support officers, which includes the occupation Indigenous Health Workers   
(tables EA.51–53).

#### Access to services compared to need by type of service

‘Access to services compared to need by type of service’ is an indicator of governments’ objective that Indigenous Australians and those living in rural and remote areas or on low incomes achieve health outcomes comparable to the broader population (box E.8).

Results from the 2011–12 Australian Health Survey indicate that the majority of Australians (85.6 per cent) aged 15 years or over reported their health as either good, very good or excellent (ABS 2012). In the 2012-13 Australian Aboriginal and Torres Strait Islander Health Survey, 75 per cent of Indigenous Australians reported their health as either good, very good or excellent (ABS 2013a).

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| Box E.8 Access to services compared to need by type of service |
| ‘Access to services compared to need by type of service’ is defined as the number of people aged 15 years or over who accessed a particular health service in the past  12 months (for hospital admissions), 3 months (for dental services) or 2 weeks (for other health services) divided by the population aged 15 years or over, expressed as a percentage. Rates are age standardised and calculated separately for each type of service and by categories of self‑assessed health status. Service types are: admitted hospitalisations, casualty/outpatients, GP and/or specialist doctor consultations, consultations with other health professional and dental consultation. Self-assessed health status is categorised as excellent/very good/good and fair/poor. Data are reported for all Australians by remoteness and by Socio Economic Indexes for Areas (SEIFA) and for Indigenous Australians.  High or increasing rates of ‘access to services compared to need by type of service’ are desirable, as are rates for those in disadvantaged groups being close to the rates for those who are not disadvantaged.  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions but not over time * complete (subject to caveats) for the current reporting period. All required  2011‑12 data are available for all jurisdictions.   Data quality information for this indicator is under development. |
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The latest available data for self-assessed health status are from the 2012-13 National Aboriginal and Torres Strait Islander Health Survey for Indigenous Australians (ABS 2013a) and from the 2011‑12 National Health Survey for non‑Indigenous Australians (ABS 2012). Indigenous Australians were less likely than non-Indigenous Australians to report very good or excellent health. Taking into account differences in age structure between the populations, Indigenous Australians overall were more than twice as likely to report their health as fair or poor than non‑Indigenous Australians in 2011–13 (ABS 2013a).

Data for Indigenous Australians are not comparable with data for non-Indigenous Australians due to a slightly different methodology. Nationally, the proportion of Indigenous Australians who accessed services varied significantly by self-assessed health status for hospital admissions and doctor consultations, but not consultations with other health professionals (figure E.7). Data for people accessing health services by Indigenous status in 2004-05 are reported in table EA.57.

Figure E.7 Proportion of Indigenous Australians who accessed health services by health status, 2011‑12**a,** **b,** **c,** **d,** **e, f, g**

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| Legend to Figure E.19   More details can be foudn within the text surrounding this image. Figure E.7 Proportion of Indigenous Australians who accessed health services by health status, 2011 12  a) admitted to hospital  More details can be found within the text surrounding this image.Figure E.7 Proportion of Indigenous Australians who accessed health services by health status, 2011 12  b) consulted a doctor  More details can be found within the text surrounding this image.Figure E.7 Proportion of Indigenous Australians who accessed health services by health status, 2011 12   c) consulted other health professional  More details can be found within the text surrounding this image. |

a Rates are age standardised by State/Territory to the 2001 estimated resident population. b Data are not comparable with data for all Australians due to differences in methodology. c People aged 15 years or over who consulted a doctor or another health professional in the last 2 weeks, or were admitted to hospital in the last 12 months. d Error bars represent the 95 per cent confidence intervals associated with each estimate.

*Source*: ABS (unpublished) *National Aboriginal and Torres Strait Islander Health Survey, 2012-13*, Cat. no. 4727.0.55.001; table EA.56; 2014 Report, figure E.19, p. E.40.

### Cross cutting and interface issues

Many determinants affect Australian’s health (AIHW 2012). They include the delivery of an efficient, effective and equitable health service, but also factors such as individuals’ and communities’ social and economic conditions and background. Major improvements in health outcomes therefore depend on strong partnerships between components of the health system and relationships between the health sector and other government services. Early childhood, education and training services play an important role in shaping a child’s development, which has consequences for overall health and wellbeing in later life (AIHW 2011). Good health is critical to a child’s educational development. Impaired hearing, malnutrition, poor general health, including poor eyesight, anaemia, skin diseases, and sleep deprivation have been identified as having adverse effects on the educational attainment of Indigenous children (AMA 2001).

### List of attachment tables

Attachment tables for data within this sector overview are contained in the attachment to the Compendium. These tables are identified in references throughout this chapter by a ‘EA’ prefix (for example, table EA.1 is table 1 in the Health sector overview attachment). Attachment tables are on the Review website (www.pc.gov.au/gsp).

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| **Table EA.9** | Birthweights, live births, Indigenous mothers, 2011 |
| **Table EA.10** | Proportion of live-born singleton babies of low birthweight, by maternal Indigenous status |
| **Table EA.16** | Rates of overweight and obesity for adults, by Indigenous status, 2011–13 |
| **Table EA.17** | Rates of overweight and obesity for adults, by Indigenous status, 2004-05 |
| **Table EA.18** | Rate of overweight and obesity for children by Indigenous status, 2011–13 |
| **Table EA.21** | Proportion of adults who are daily smokers, by Indigenous status |
| **Table EA.24** | Proportion of adults at risk of long term harm from alcohol (2009 NHMRC guidelines), by Indigenous status |
| **Table EA.28** | Incidence of selected cancers, by Indigenous status |
| **Table EA.29** | Age standardised rate of heart attacks (new cases), people 25 years or over, by Indigenous status, 2007 to 2011 |
| **Table EA.33** | Age standardised mortality rates of potentially avoidable deaths, under 75 years, by Indigenous status, NSW, Queensland, WA, SA, NT, 2007–2011 |
| **Table EA.35** | Estimated life expectancies at birth, by Indigenous status and sex (years) |
| **Table EA.37** | Median age at death, by Indigenous status (years) |
| **Table EA.39** | Age standardised all-cause mortality rate, rate ratios and rate differences, by Indigenous status, NSW, Qld, WA, SA, NT, five year aggregate, 2008–2012 (per 100 000 people) |
| **Table EA.40** | Age standardised all-cause mortality rate, rate ratios and rate differences, by Indigenous status, NSW, Qld, WA, SA, NT, single year, 2006 to 2012 (per 100 000 people) |
| **Table EA.42** | Infant mortality rate by Indigenous status, three year average (per 1000 live births) |
| **Table EA.44** | All causes infant and child mortality, by Indigenous status, NSW, Queensland, WA, SA, NT |
| **Table EA.46** | Age standardised mortality rates by major cause of death, by Indigenous status, 2007–2011 |
| **Table EA.50** | Employed health workforce, by Indigenous status and state and territory of principal practice |
| **Table EA.51** | Indigenous health workforce, by State/Territory, 2011 |
| **Table EA.52** | Indigenous health workforce, by sex, 2011 |
| **Table EA.53** | Indigenous persons employed in selected health-related occupations, 2011 |
| **Table EA.56** | Proportion of Indigenous Australians who accessed health services by health status, 2012-13 |
| **Table EA.57** | Proportion of people who accessed health services by health status, by Indigenous status, 2004-05 |

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