



## Indicators for the Australian National Diabetes Strategy 2016–2020: data update

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*Indicators for the Australian National Diabetes Strategy 2016–2020: data update* provides an update to baseline data, published by the AIHW in 2018, for the 55 indicators identified in the *Diabetes in Australia: focus on the future* implementation plan. These indicators aim to inform the evidence base for assessing progress against the seven high-level goals outlined in *Australian National Diabetes Strategy 2016–2020*. The goals relate to the prevention, early detection, management and care of all forms of diabetes in Australia.

Cat. no: CVD 81

In 2017–18, 43,100 (16%) mothers aged 15–49 who gave birth in hospital were diagnosed with gestational diabetes

In 2017–18, an estimated 5.4% (or 1 million) Australian adults had type 2 diabetes, based on self-reported data

Diabetes death and hospitalisation rates in Remote and very remote areas were twice as high as the rate in Major cities

Incidence rates of type 1 diabetes fluctuated between 12 and 13 cases per 100,000 population, during 2000 to 2018

### Suggested citation

Australian Institute of Health and Welfare (AIHW) 2020. Indicators for the Australian National Diabetes Strategy 2016–2020: data update. Cat. no. CVD 81. Canberra: AIHW.

### Background

The [Australian National Diabetes Strategy 2016–2020](#) (the Strategy), aims to prioritise Australia's response to diabetes and identify approaches to reducing the impact of diabetes in the community (Department of Health 2015). The Strategy outlines seven high-level goals with potential areas for action and measures of progress.

[Diabetes in Australia: focus on the future](#) is the implementation plan (the Plan) developed for the Strategy to operationalise each of the Strategy's goals (AHMAC 2017). The Plan was agreed by all governments as activities that, at that time, could be developed, expanded, or modified to produce targeted, tangible improvements in the prevention, early detection, management and care of all forms of diabetes. The Plan identified 55 indicators, mapped to potential measures of progress, for each goal of the Strategy.

A number of these indicators are currently reported in existing national frameworks (such as the Report on Government Services, the Australian Health Performance Framework, Aboriginal and Torres Strait Islander Health Performance Framework, and Indigenous Primary Health Care National Key Performance Indicators). This report provides updated and trend data (where available) for the 55 indicators identified in the Plan.

# Indicator dashboard

**Note:**

- Indicators are grouped by goal and relevant potential measure of progress, as outlined in the Strategy.
- Statistical change is provided for indicators with a minimum of three data points, across varying time periods. Interpretation of results should be done with consideration of the data limitations.

Change key: ✓ (favourable); ✗ (unfavourable); = (steady); — (not statistically significant); .. (no update/unable to assess trend)

**Goal 1: Prevent people developing type 2 diabetes**



Indicator	Change
<b>People developing or with type 2 diabetes:</b>	
<a href="#">1.1 Incidence of type 2 diabetes</a>	..
<a href="#">1.2 Prevalence of type 2 diabetes</a>	—
<b>Modifiable risk factors in the general population such as overweight and obesity, and levels of physical activity:</b>	
<a href="#">1.3 Waist circumference</a>	—
<a href="#">1.4 Overweight and obesity</a>	✗
<a href="#">1.5 Insufficient physical activity</a>	✓
<a href="#">1.6 Inadequate fruit and/or vegetable consumption</a>	=
<a href="#">1.7 Total energy intake from saturated fatty acids</a>	..
<a href="#">1.8 Exclusive breastfeeding</a>	✓

## Goal 2: Promote awareness & earlier detection of type 1 & type 2 diabetes



Indicator	Change
<b>People tested for risk of type 2 diabetes:</b>	
<a href="#">2.1 Raised blood glucose levels (including diabetes)</a>	..
<b>Other indicators not related to potential measures of progress:</b>	
<a href="#">2.2 Incidence of type 1 diabetes</a>	=
<a href="#">2.3 Prevalence of type 1 diabetes</a>	=
<a href="#">2.4 Uptake of the Practice Incentives Program (PIP) diabetes incentive</a>	..

## Goal 3: Reduce the occurrence of diabetes-related complications and improve quality of life



Indicator	Change
<b>People with diabetes who achieve target levels of HbA1c, albuminuria, cholesterol or blood pressure:</b>	
<a href="#">3.1 People with diabetes who achieve the target level for blood pressure</a>	=
<a href="#">3.2 People with diabetes who achieve target levels for cholesterol</a>	..
<a href="#">3.3 People with diabetes who achieve the target level for HbA1c / Effective management of diabetes</a>	..
<b>People with diabetes undertaking regular assessment for complications:</b>	
<a href="#">3.4 People with diabetes who had an HbA1c test in the last 12 months</a>	=
<b>People with diabetes complications:</b>	
<a href="#">3.5 Prevalence of end-stage kidney disease among people with diabetes</a>	X
<a href="#">3.6 Prevalence of vision loss caused by diabetes</a>	—
<a href="#">3.7 Prevalence of cardiovascular disease among people with diabetes</a>	—
<a href="#">3.8.1 Diabetes hospitalisations by type of diabetes (principal diagnosis) - type 1</a>	=
<a href="#">3.8.2 Diabetes hospitalisations by type of diabetes (principal diagnosis) - type 2</a>	X
<a href="#">3.8.3 Diabetes hospitalisations by type of diabetes (principal diagnosis) - during pregnancy</a>	X
<a href="#">3.8.4 Diabetes hospitalisations by type of diabetes (principal diagnosis)- other diabetes</a>	=

<a href="#">3.9 Hospitalisation for end-stage renal disease as the principal diagnosis with diabetes as an additional diagnosis</a>	—
<a href="#">3.10 Hospitalisations for coronary heart disease or stroke as the principal diagnosis with diabetes as an additional diagnosis</a>	—
<a href="#">3.11 Hospitalisations for ophthalmic conditions with type 2 diabetes as a principal diagnosis</a>	=
<a href="#">3.12 Hospitalisations for lower limb amputation with type 2 diabetes as a principal or additional diagnosis</a>	—
<a href="#">3.13 Hospitalisations for other complications with type 2 diabetes as a principal diagnosis</a>	X
<a href="#">3.14 Deaths from diabetes</a>	=
<a href="#">3.15 Deaths from CHD and stroke among people with diabetes</a>	..
<b>Other indicators not related to potential measures of progress:</b>	
<a href="#">3.16 People with diabetes who achieve the target level for weight/BMI</a>	—
<a href="#">3.17 People with diabetes who have attended a diabetes educator</a>	=
<a href="#">3.18 Quality of life of people with diabetes</a>	..

#### Goal 4: Reduce the impact of pre-existing & gestational diabetes in pregnancy



Indicator	Change
<b>Goal 4 indicators (not related to potential measures of progress):</b>	
<a href="#">4.1 Proportion of pregnant women being tested for gestational diabetes</a>	✓
<a href="#">4.2 Incidence of gestational diabetes</a>	X

Goal 5: Reduce the impact of diabetes in Aboriginal and Torres Strait Islander peoples



Indicator	Change
<b>Aboriginal and Torres Strait Islander people with diabetes complications:</b>	
<a href="#">5.1.1 Hospitalisation for diabetes by type of diabetes (principal diagnosis) - type 1</a>	X
<a href="#">5.1.2 Hospitalisation for diabetes by type of diabetes (principal diagnosis) - type 2</a>	X
<a href="#">5.1.3 Hospitalisation for diabetes by type of diabetes (principal diagnosis) - during pregnancy</a>	=
<a href="#">5.2 Ratio of separations for Aboriginal and Torres Strait Islander people to non-Indigenous Australians, diabetes</a>	X
<a href="#">5.3 Hospitalisation for principal diagnosis of diabetes by additional diagnosis of hospitalisation</a>	..
<a href="#">5.4 Age standardised death rate for diabetes by Indigenous status</a>	=
<a href="#">5.5 Avoidable and preventable deaths from diabetes</a>	..
<b>Aboriginal and Torres Strait Islander people who receive regular testing for complications:</b>	
<a href="#">5.6 Indigenous regular clients with type 2 diabetes who had a blood pressure test (percentage)</a>	✓
<a href="#">5.7 Indigenous regular clients with type 2 diabetes who had a kidney function test</a>	..
<a href="#">5.8 Indigenous regular clients with type 2 diabetes who had a kidney function test with results within specified levels</a>	..
<b>Rates of smoking and alcohol consumption among pregnant Aboriginal and Torres Strait Islander women with diabetes:</b>	
<a href="#">5.9 Women who smoked during pregnancy (age-standardised percentage)</a>	✓

5.10 Indigenous children attending pre-school	✓
<b>Other indicators not related to potential measures of progress:</b>	
5.11 Risk factor status of women who attended an antenatal visit before 13 weeks of pregnancy	..
5.12 Risk factor status of women who attended an antenatal visit in the third trimester of pregnancy	..
5.13 Indigenous regular clients with type 2 diabetes receiving recommended care from Indigenous primary health care services	✓
5.14 Indigenous regular clients of Indigenous primary health care services who had type 2 diabetes and a general practitioner management plan or team care arrangements	✓
5.15 Indigenous regular clients with type 2 diabetes who are immunised against influenza	✓
5.16 Types of lifestyle issues discussed with health professional	—
5.17 Health actions taken by people with diabetes	—
5.18 People without diabetes tested for high sugar levels/risk of diabetes	..
5.19 Selected health issues of Indigenous mothers	..
5.20 Use of antenatal care by selected health issues	..
5.21 Diabetes problems managed by general practitioner	..

## Goal 6: Reduce the impact of diabetes among other priority groups

Indicator	Change
<b>People developing or with type 2 diabetes among priority groups:</b>	
6.1 Prevalence of diabetes by mental health status	..
<b>People among priority groups who are overweight, obese or have other modifiable risk factors:</b>	
6.2 Prevalence of overweight or obesity by mental health status	..

## Goal 7: Strengthen prevention and care through research, evidence and data

Whilst no potential indicators were identified in the [Implementation Plan](#)  for the potential measures of progress for Goal 7, the following update provides information on work being conducted in this space, including both current and future funded projects.

### Goal 7: Update

# Goal 1: Prevent people developing type 2 diabetes

Goal 1 indicators relate to the incidence and prevalence of type 2 diabetes in the population, as well as modifiable risk factors in the general population.

Eight indicators were identified in the [Implementation Plan](#) for Goal 1.

## People developing or with type 2 diabetes:

[1.1 Incidence of type 2 diabetes](#)

[1.2 Prevalence of type 2 diabetes](#)

## Modifiable risk factors in the general population such as overweight or obesity, and levels or physical activity:

[1.3 Waist circumference](#)

[1.4 Overweight and obesity, by age group](#)

[1.5 Insufficient physical activity, by age group](#)

[1.6 Inadequate fruit and/or vegetable consumption, by age group](#)

[1.7 Total energy intake from saturated fatty acids](#)

[1.8 Exclusive breastfeeding](#)

## Indicator 1.1 Incidence of type 2 diabetes

### Considerations

There are currently no complete, national estimates of the incidence of type 2 diabetes in Australia. Part of the picture is available from the National (insulin-treated) Diabetes Register (NDR) which provides information regarding the incidence of insulin-treated type 2 diabetes. Only a proportion of people with type 2 diabetes require insulin treatment; and those who do not are excluded from the NDR. The NDR is derived from two primary data sources: the National Diabetes Services Scheme (NDSS) and the Australasian Paediatric Endocrine Group. Further data development work, including linkage to both the NDSS and other national data sets, will improve the ability to accurately report the incidence of type 2 diabetes.

### Overview

In 2018, there were almost 17,000 new cases of insulin-treated type 2 diabetes recorded on the NDR—2,000 cases per 100,000 registrants with type 2 diabetes not previously using insulin.

## Trends

Age-standardised incidence rates fluctuated between 3,800 and 4,500 per 100,000 population from 2000 to 2006, before rising to a peak of 5,800 cases per 100,000 registrants with type 2 diabetes in both 2009 and 2011. From 2011 onwards, age-standardised incidence rates declined to 4,200 cases per 100,000 registrants with type 2 diabetes in 2018 (Figure 1.1.1).

## Age and sex

In 2018, the incidence of insulin-treated type 2 diabetes was highest in those aged 10–39 years (6,200 cases per 100,000 registrants with type 2 diabetes). After adjusting for age, the incidence was 1.7 times higher in females than males (5,400 and 3,200 cases per 100,000 registrants respectively) (Figure 1.1.1).

## Population groups

In 2018, the incidence of insulin-treated type 2 diabetes was similar by socioeconomic area while rates were more than twice as high among people living in *Major cities* as those living in *Remote and very remote* areas (4,300 and 2,100 cases per 100,000 registrants with type 2 diabetes, respectively) (Figure 1.1.2). However, it is important to note that the NDR may have a lower coverage rate of people living in *Remote and very remote* areas and, as a result, the true incidence in these population groups may be underestimated (AIHW 2020).

## State and territory

In 2018, the incidence rate of insulin-treated type 2 diabetes was lowest in the Northern Territory, with 1,500 cases per 100,000 registrants with type 2 diabetes. Incidence rates were highest in Victoria, with 4,700 cases per 100,000 registrants with type 2 diabetes. Other states had rates ranging from 3,300 to 4,500 cases per 100,000 registrants with type 2 diabetes.

## Aboriginal and Torres Strait Islander people

As the NDR potentially underestimates the number of Aboriginal and Torres Strait Islander registrants with diabetes, the incidence of insulin-treated type 2 diabetes by Indigenous status has not been reported. This is an important data gap for future development. For more information, see the [Methods and classifications](#) page of AIHW's [Incidence of insulin-treated diabetes in Australia](#) web report.

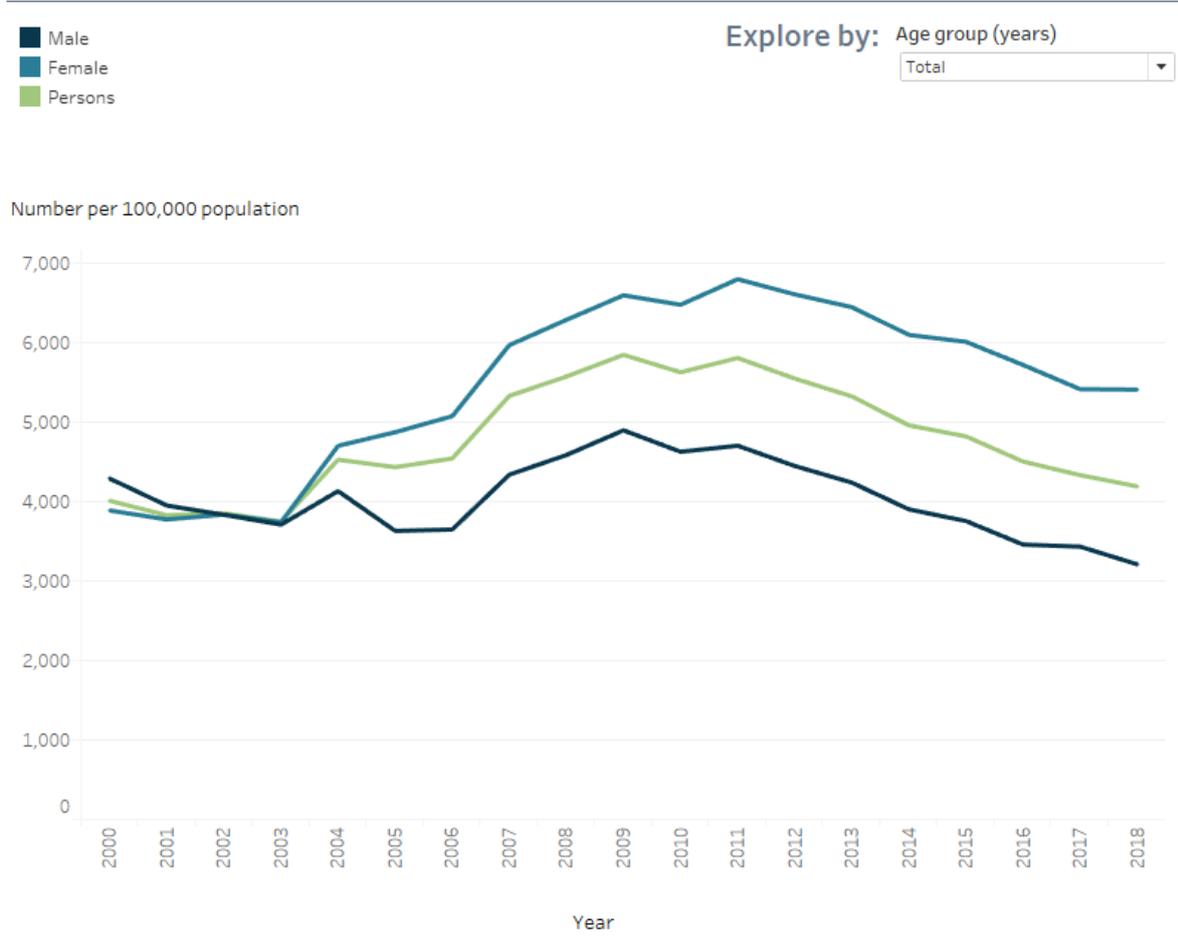
## About the data

The NDR is derived from two primary data sources: the National Diabetes Services Scheme (NDSS) and the Australasian Paediatric Endocrine Group. The NDSS provides access to diabetes self-management information, services, and subsidised products. Coverage of the Australian population with type 2 diabetes registered with the NDSS is unknown, as not all people with type 2 diabetes need insulin treatment or register with the NDSS. However given the incentives that the NDSS provides to people with diabetes, the NDR assumes that the NDSS captures a high proportion of people with type 2 diabetes in Australia and can provide an estimate of the incidence of type 2 diabetes.

Incidence rates were calculated based on the population including all people with type 2 diabetes who have never used insulin, and are registered with the NDSS. The method aims to provide accurate estimates of the incidence of insulin use among the population at risk—people with type 2 diabetes. Breakdowns by Indigenous status not available due to data quality issues.

**Explore the data**

**1.1 Incidence of insulin-treated type 2 diabetes, by age at first insulin use 2000–2018 and selected population groups, 2018**



**Figure 1.1.1**  
**Incidence of insulin-treated type 2 diabetes, by age at first insulin use 2000–2018**

*Note:* Total rates are age-standardised to the 2001 Australian population.  
*Source:* AIHW analysis of the 2018 National (insulin-treated) Diabetes Register  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off



### Indicator 1.1 data specifications

	Definition	Data source
<b>Numerator</b>	Number of people with newly diagnosed type 2 diabetes who require insulin.	AIHW National (insulin-treated) Diabetes Register (NDR) 2018
<b>Denominator</b>	Number of people with type 2 diabetes who have never used insulin, and are registered with the National Diabetes Services Scheme (NDSS).	NDSS

### References

Australian Institute of Health and Welfare (AIHW) 2020. [The National \(insulin-treated\) Diabetes Register 2018; Quality Statement](#). Canberra: AIHW. Viewed 13 July 2020.

## Indicator 1.2 Prevalence of type 2 diabetes

### Overview

In 2017–18, an estimated 5.4%, or 1 million Australian adults had type 2 diabetes, based on self-reported data from the Australian Bureau of Statistics (ABS) National Health Survey (NHS).

### Trends

After adjusting for age, the self-reported prevalence of type 2 diabetes increased from 3.5% in 2001 to 4.8% in 2007–08. Between 2011–12 and 2017–18, the prevalence of type 2 diabetes showed a stable pattern—4.7% in 2011–12, 5.2% in 2014–15 and 4.8% in 2017–18 (Figure 1.2.1).

### Age and sex

The prevalence of type 2 diabetes increased with age, reaching a peak in those aged 75 and over in 2017–18. Among those 75 and over, around 1 in 6 people (16.6%) had type 2 diabetes. After adjusting for age, the proportion of men with self-reported type 2 diabetes was higher than the proportion of women (5.5% and 4.1%, respectively) (Figure 1.2.1).

### Population groups

The age-standardised proportion of people with type 2 diabetes, based on self-reported data from the NHS, was higher among those living in the lowest socioeconomic areas compared with those living in the highest socioeconomic areas (6.9% and 3.4%, respectively) in 2017–18.

After adjusting for age, the prevalence of type 2 diabetes was higher among those living in *Outer regional and remote* areas compared to those living in *Major cities* and *Inner Regional* areas. (Figure 1.2.2).

### State and territory

After adjusting for age, the prevalence of type 2 diabetes was highest in the Northern Territory (7.8%) and lowest in Tasmania (4.3%). Other states had age-standardised proportions ranging from 4.5% to 5.6%.

### Aboriginal and Torres Strait Islander people

In 2018–19, an estimated 1 in 10 Indigenous adults (10.7% , or 51,900 people) had type 2 diabetes, based on self-reported data from the ABS National Aboriginal and Torres Strait Islander Health Survey (NATSIS). There was no significant difference between the age-standardised proportion of Indigenous men and women with type 2 diabetes (14.2% and 13.0%, respectively) (Figure 1.2.2).

Based on estimates from the 2018–19 NATSIS and 2017–18 NHS, Indigenous adults were 2.9 times as likely to have type 2 diabetes as non-Indigenous adults (13.5% compared with 4.7%, after adjusting for age) (Figure 1.2.2).

## About the data

In 2011–12 the ABS found that, based on biomedical data, around 1 in 5 people with diabetes were unaware that they had the condition (ABS 2013a). The 1999–2000 Australian Diabetes, Obesity and Lifestyle Study, based on measured blood sugar levels, found that for every known case of diabetes, there was one undiagnosed case (AIHW 2008).

Therefore, the estimates reported here, which are based on self-report, will be an underestimate of the total prevalence of type 2 diabetes in the Australian population. The proportion of people with undiagnosed diabetes has changed over time and this would have impacted on the prevalence of type 2 diabetes in Australia over time.

## Explore the data

### 1.2 Prevalence of type 2 diabetes among adults, by age group, 2001 to 2017–18 and by selected population groups, 2017–18

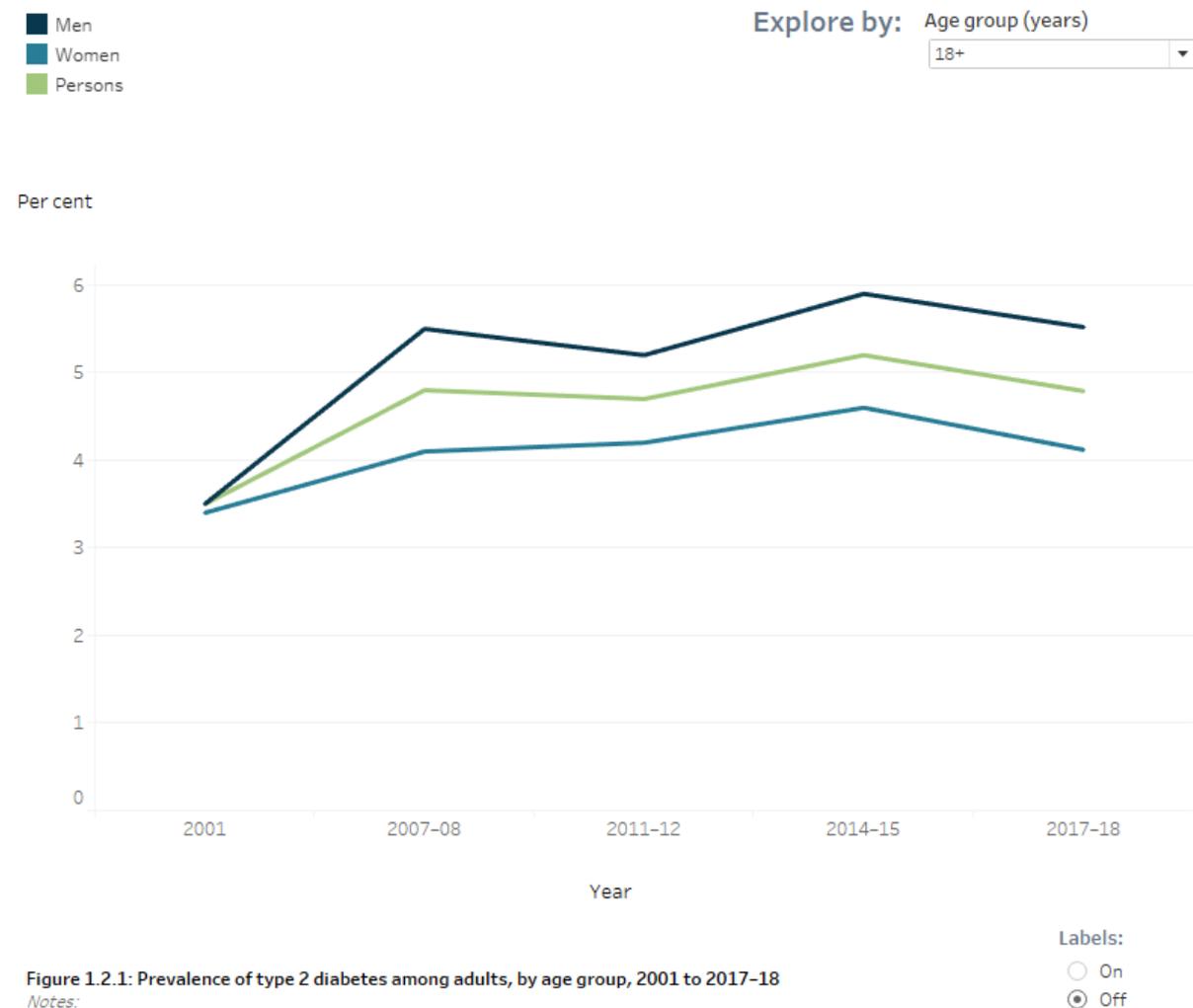


Figure 1.2.1: Prevalence of type 2 diabetes among adults, by age group, 2001 to 2017–18

Notes:

1. Based on self-reported data.

2. 18+ percentage age-standardised to the 2001 Australian Standard Population.

Sources: ABS 2003; ABS 2009; ABS 2013a; ABS 2013b; ABS 2016; ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

## Age/sex—All Australians

- Explore by:
- Age/sex—All Australians
  - Age/sex—Indigenous Australians
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory

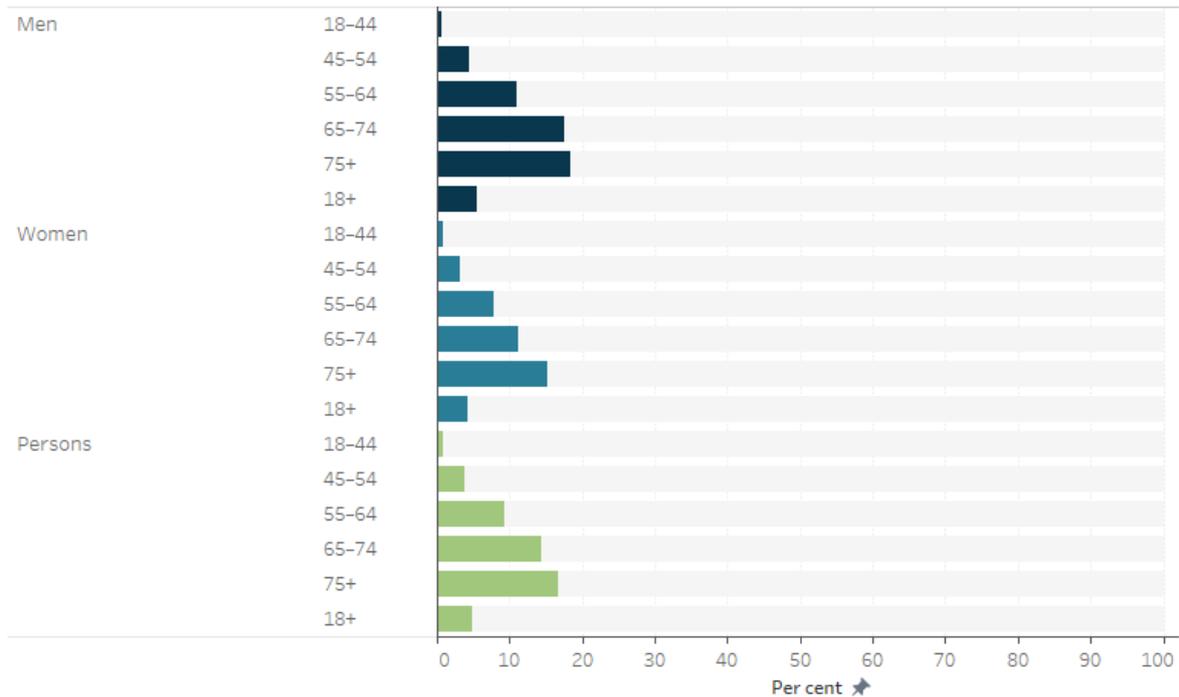


Figure 1.2.2: Prevalence of type 2 diabetes among adults, by selected population groups, 2017-18

Notes:

1. Based on self-reported data.
2. 18+ percentage age-standardised to the 2001 Australian Standard Population.
3. Indigenous status: Indigenous data for 2018-19; non-Indigenous data for 2017-18.

Sources: ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 1.2 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of adults (18+ years) with self-reported type 2 diabetes.	ABS 2019a; ABS 2019b ABS 2016; ABS 2013b; ABS 2009; ABS 2003.
<b>Denominator</b>	Estimated Australian population (18+ years).	ABS 2019a; ABS 2019b ABS 2016; ABS 2013b; ABS 2009; ABS 2003.

### References

Australian Institute of Health and Welfare (AIHW) 2008. [Diabetes: Australian facts 2008](#). Diabetes series no. 8. Cat. no. CVD 40. Canberra: AIHW.

Australian Bureau of Statistics (ABS) 2003. Microdata: National Health Survey, 2001. ABS cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record file. Canberra: ABS.

ABS 2009. Microdata: National Health Survey, 2007–08. ABS cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2013a. Australian Health Survey: biomedical results for chronic diseases, 2011–12. ABS cat. no. 4364.0.55.005. Canberra: ABS.

ABS 2013b. Microdata: Australian Health Survey, National Health Survey, 2011–12. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017–18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## **Indicator 1.3 Waist circumference**

### **Overview**

Based on measured data from the 2017–18 National Health Survey (NHS), an estimated 63% of Australian adults had a waist circumference that put them at an increased risk of chronic disease, including type 2 diabetes (94cm or more for men and 80cm or more for women).

### **Trends**

The age-standardised proportion of people with an at-risk waist circumference has remained steady since 2011–12 (Figure 1.3.1).

### **Age and sex**

Women were more likely to have a waist circumference that put them at increased risk of chronic disease than men, after adjusting for age (65% compared with 59%).

The proportion of men and women with an at-risk waist circumference generally increased with age, with 81% of men aged 65–74 and 84% of women aged 75 and over (Figure 1.3.1).

### **Population groups**

The proportion of people with an at-risk waist circumference was higher among those living in the lowest socioeconomic areas compared to those in the highest socioeconomic areas (67% and 55% respectively). Further, the proportion of people at risk increased with remoteness from 61% of people living in *Major cities* to 65% both for people living in *Inner regional* and *Outer regional and remote areas* (Figure 1.3.2).

## **State and Territory**

After adjusting for age, the proportion of Australian adults with an at-risk waist circumference ranged from 61% to 65% among the states and territories in 2017–18 (Figure 1.3.2).

## **Aboriginal and Torres Strait Islander people**

In 2018–19, 71% of Indigenous adults had a waist circumference that increased their risk of chronic disease, based on data from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS). In this cohort, the age-standardised proportion of Indigenous women was significantly higher than Indigenous men (84% and 65%, respectively) (Figure 1.3.2).

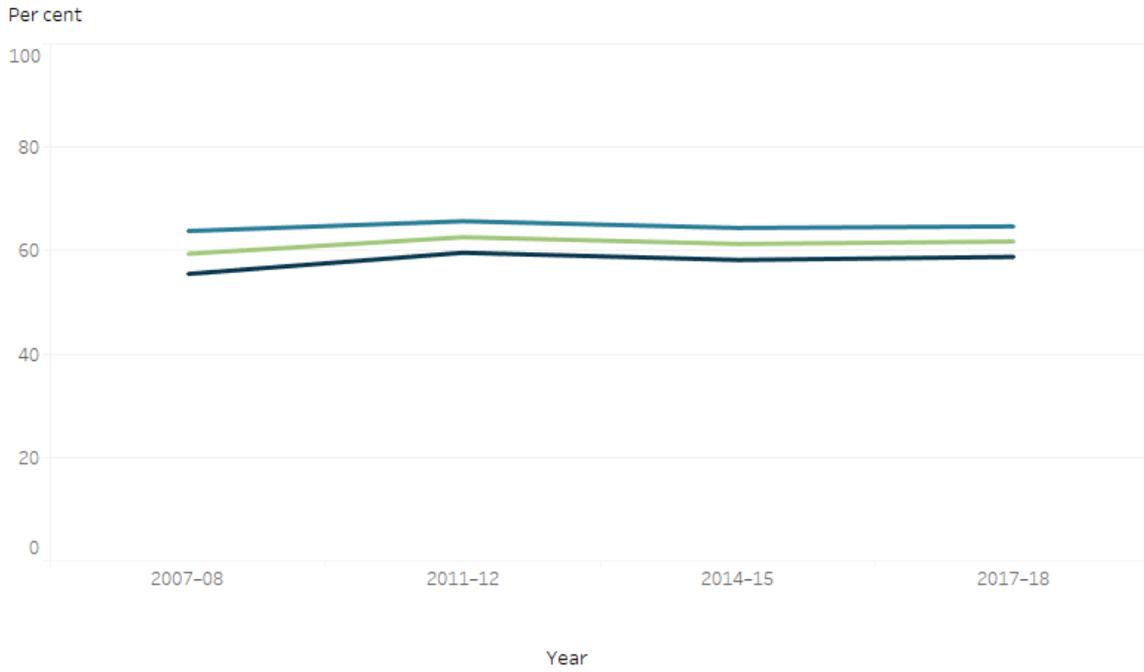
Based on estimates from the NATSIHS and NHS, the age-standardised proportion of Indigenous adults with an at-risk waist circumference was significantly higher compared to non-Indigenous adults (75% compared with 62%, respectively) (Figure 1.3.2).

## **Explore the data**

### **1.3 Waist circumference—proportion of adults with increased risk of developing a chronic disease, by age group, 2007–08 to 2017–18 and by selected population group, 2017–18**

- Men
- Women
- Persons

Explore by: Age group (years)



**Figure 1.3.1: Waist circumference—proportion of adults with increased risk of developing a chronic disease, by age group, 2007-08 to 2017-18**

Notes:

1. Based on self-reported data.
2. 18+ percentage age-standardised to the 2001 Australian Standard Population.

Sources: ABS 2009; ABS 2013; ABS 2016; ABS 2019a; ABS 2019b

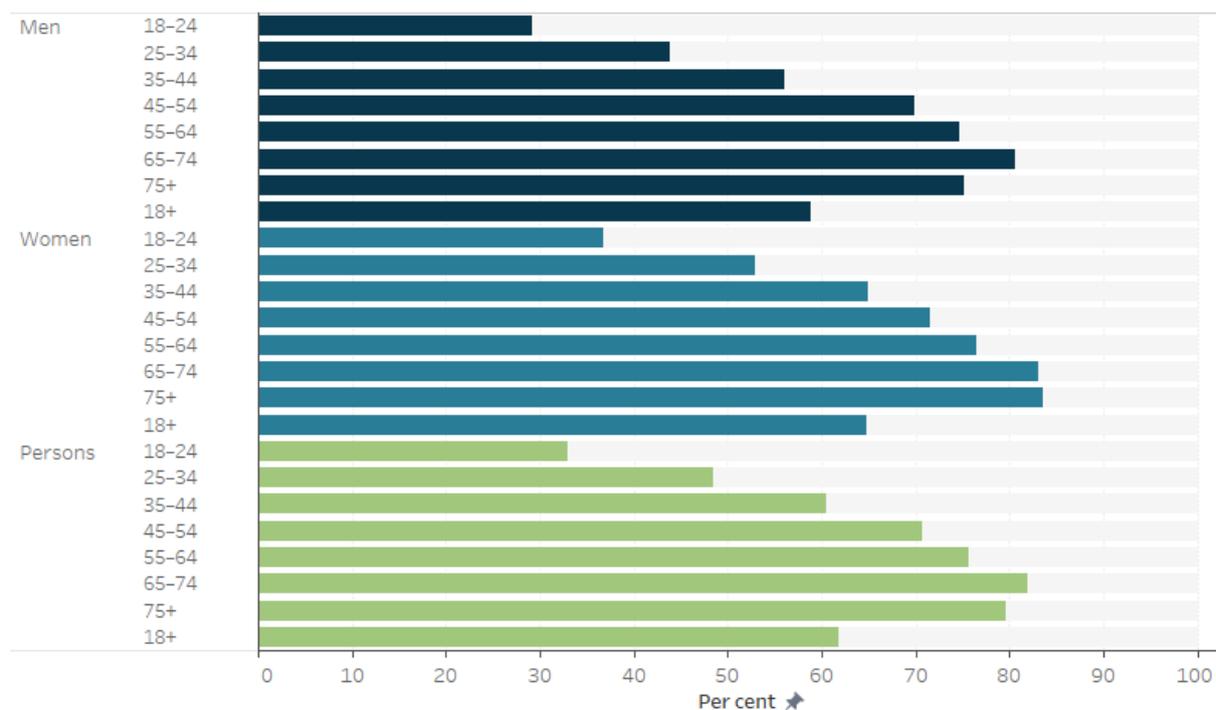
<https://www.aihw.gov.au>

Labels:

- On
- Off

## Age/sex—All Australians

- Explore by:
- Age/sex—All Australians
  - Age/sex—Indigenous Australians
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory



**Figure 1.3.2: Waist circumference—proportion of adults with increased risk of developing a chronic disease, by selected population group, 2017-18**

Notes:

1. Based on self-reported data.

2. 18+ percentage age-standardised to the 2001 Australian Standard Population.

3. Indigenous status: Indigenous data for 2018-19; non-Indigenous data for 2017-18.

Sources: ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 1.3 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of adults (18+ years) with a measured waist circumference which increased their risk of developing a chronic disease ( $\geq 94$ cm for men and $\geq 80$ cm for women).	ABS 2019a; ABS 2019b ABS 2016; ABS 2013; ABS 2009.
<b>Denominator</b>	Estimated Australian population (18+ years).	ABS 2019a; ABS 2019b ABS 2016; ABS 2013; ABS 2009

### References

Australian Bureau of Statistics (ABS) 2009. Microdata: National Health Survey, 2007-08. ABS cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2013. Microdata: Australian Health Survey, National Health Survey, 2011–12. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017–18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## **Indicator 1.4 Overweight and obesity**

### **Overview**

In 2017–18, it was estimated that just over two-thirds (67%) of Australian adults were overweight or obese, based on their measured body mass index (BMI) from the National Health Survey (NHS).

### **Trends**

After adjusting for age, the prevalence of overweight or obesity among Australian adults has increased from 50% in 2001 to 63% in 2007–08. The age-standardised proportion of adults who were overweight or obese remained stable between 2011–12 and 2014–15, before increasing to 67% in 2017–18.

The age-standardised proportion of men who were overweight or obese increased from 58% in 2001 to 74% in 2017–18. The proportion of women who were overweight or obese remained relatively stable (42% in 2001 and 45% in 2004–05), before increasing to 54% in 2007–08. Between 2007–08 and 2014–15, the proportion of women remained relatively stable around 54–55%, before increasing to 59% in 2017–18 (Figure 1.4.1).

### **Age and sex**

The age-standardised proportion of men who were overweight or obese was higher than the proportion of women in 2017–18 (74% and 59%, respectively).

The prevalence of overweight or obesity among Australian adults aged 35–44 was 1.5 times as high as for those aged 18–24 (69% and 46%, respectively). The proportion of Australian adults who were overweight or obese was similar for all age groups over 45–54 (between 72% and 78%) (Figure 1.4.1).

### **Population groups**

In 2017–18, the prevalence of overweight and obesity increased with the level of disadvantage from 62% to 72% among those living in the highest socioeconomic areas and lowest socioeconomic areas, respectively. Further, the prevalence of overweight and obesity increased

with the level of remoteness from 65% in *Major cities* to around 70% in *Inner regional* and *Outer regional* areas (Figure 1.4.2).

### **State and territory**

After adjusting for age, the proportion of Australian adults who were overweight or obese ranged from 64% in the Australian Capital Territory to 69% in Tasmania and South Australia in 2017–18 (Figure 1.4.2).

### **Aboriginal and Torres Strait Islander people**

In 2018–19, after adjusting for age, 77% of both Indigenous men and women were overweight or obese based on measured data from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS). Since 2012–13, this proportion has increased from 72% of Indigenous men and 73% of Indigenous women (Figure 1.4.2).

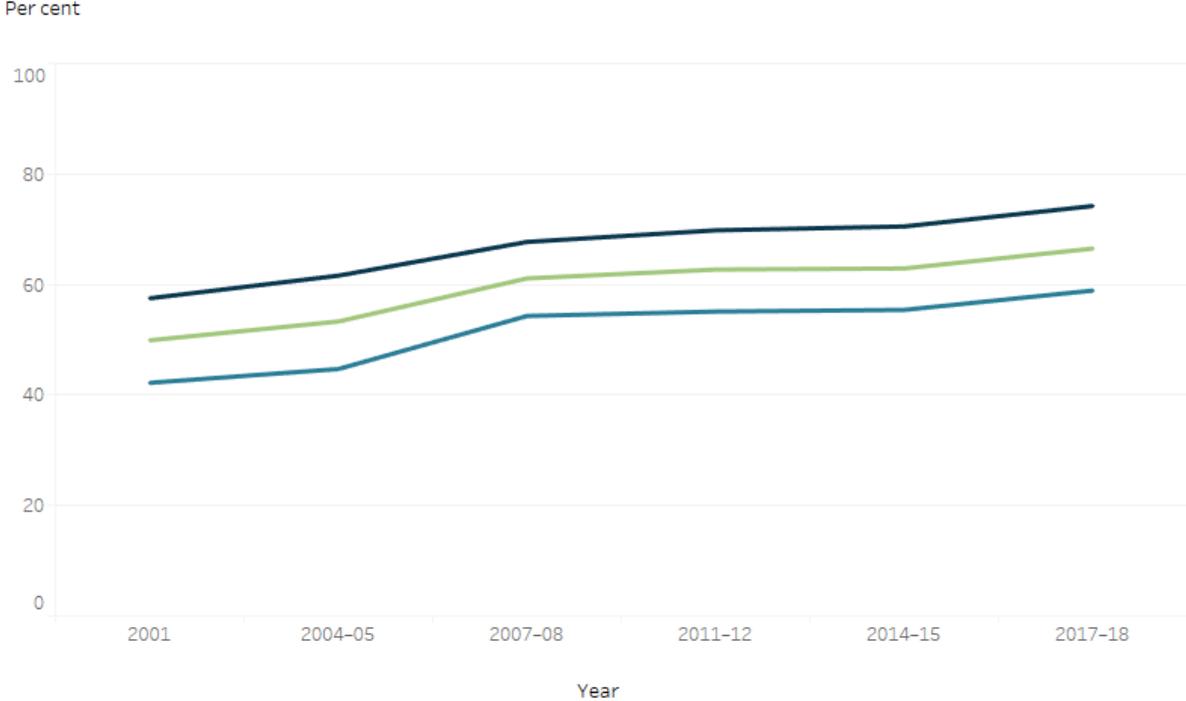
Based on measured data from the 2018–19 NATSIHS and 2017–18 NHS, the age-standardised proportion of Indigenous adults who were overweight or obese were significantly higher compared to non-Indigenous adults (77% compared with 57%, respectively).

### **Explore the data**

### 1.4 Overweight or obesity among persons aged 18+, by age group and sex, 2001 to 2017-18 and by selected population group, 2017-18

- Men
- Women
- Persons

Explore by: Age group (years)



**Figure 1.4.1: Overweight or obesity among persons aged 18+, by age group and sex, 2001 to 2017-18**

*Notes:*  
 1. Based on self-reported data.  
 2. 18+ percentage age-standardised to the 2001 Australian Standard Population.  
*Sources:* ABS 2003; ABS 2006; ABS 2009; ABS 2013; ABS 2016; ABS 2019a; ABS 2019b  
<https://www.aihw.gov.au>

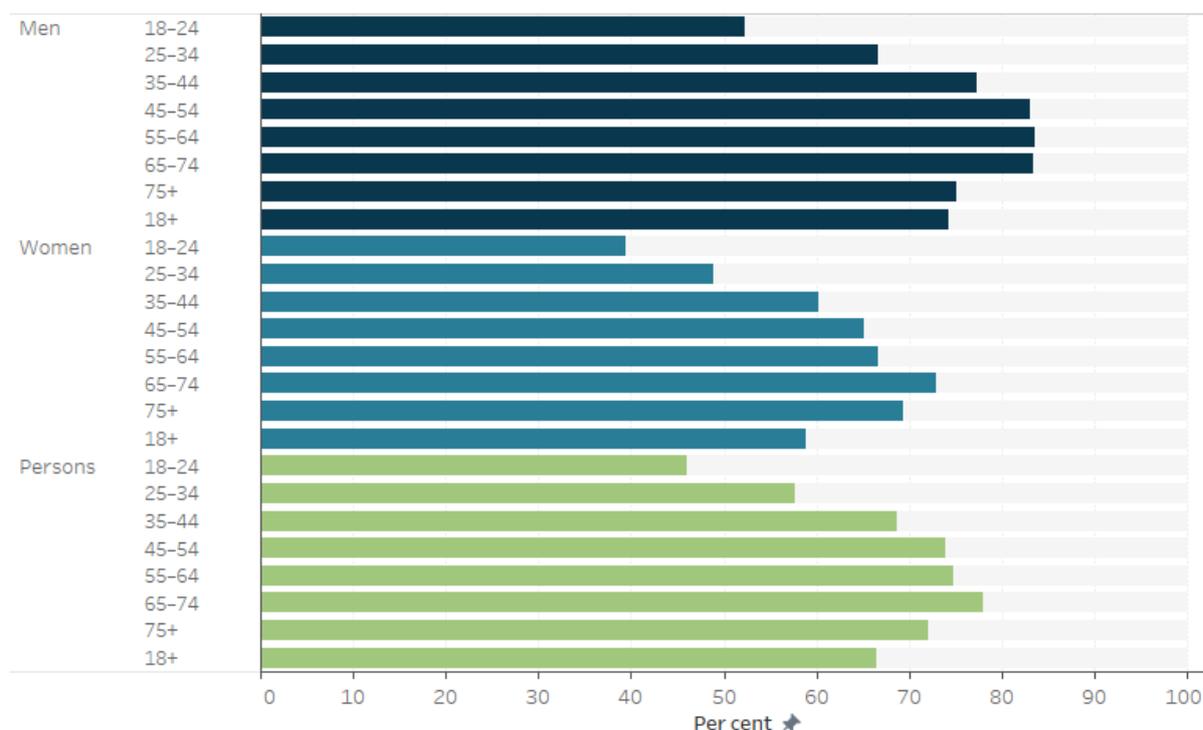
Labels:  
 On  
 Off

## Age/sex—All Australians

Explore by: Age group (years)

(Multiple values) ▾

- Age/sex—All Australians
- Age/sex—Indigenous Australians
- Indigenous status
- Remoteness areas
- Socioeconomic areas
- State/territory



**Figure 1.4.2: Overweight or obesity among persons aged 18+, by selected population groups, 2017-18**

Notes:

1. Based on self-reported data.

2. 18+ percentage age-standardised to the 2001 Australian Standard Population.

3. Indigenous status: Indigenous data for 2018-19; non-Indigenous for 2017-2018.

Sources: ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 1.4 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of adults (18+ years) with a measured body mass index (BMI) $\geq 25$ .	ABS 2019a; ABS 2019b ABS 2016; ABS 2013; ABS 2009; ABS 2006; ABS 2003.
<b>Denominator</b>	Estimated Australian population (18+ years).	ABS 2019a; ABS 2019b ABS 2016; ABS 2013; ABS 2009; ABS 2006; ABS 2003.

Australian Bureau of Statistics (ABS) 2003. Microdata: National Health Survey, 2001. ABS cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record file. Canberra: ABS.

ABS 2006 Microdata: National Health Survey, 2004-05. ABS cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2009. Microdata: National Health Survey, 2007-08. ABS cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2013. Microdata: Australian Health Survey, National Health Survey, 2011-12. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014-15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017-18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018-19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## **Indicator 1.5 Insufficient physical activity, by age group**

### **Considerations**

[\*Australia's Physical Activity and Sedentary Behaviour Guidelines\*](#) provide recommendations on the amount and type of physical activity required for health benefits (Department of Health, 2019). Based on the guidelines, insufficient physical activity is defined here as:

- Adults aged 18-64 who did not complete 150 minutes of moderate to vigorous physical activity across 5 or more days in the last week.
- Adults aged 65 and over who did not complete at least 30 minutes of physical activity per day on 5 or more days in the last week.

In 2017-18, the ABS National Health Survey collected information for the first time on physical activity at work. Therefore, results for 2017-18 include physical activity at work. For comparability across the different National Health Surveys, data for trends exclude physical activity at work.

### **Overview**

Based on self-reported data from the National Health Survey (NHS), it was estimated that more than half (55%) of Australian adults aged 18 years and over were insufficiently active in 2017-18.

### **Trends**

After adjusting for age, there was a slight decrease in the proportion of adults who were insufficiently active between 2007-08 and 2017-18 from 69% to 65%. However rates have not changed since 2011-12. These rates do not include physical activity undertaken at work (Figure 1.5.1).

## **Age and sex**

Women were more likely to be insufficiently active than men (59% compared with 50%) in 2017–18. The rate of insufficient physical activity generally increases with age. It was estimated that around half (51%) of Australian adults aged 18–64 were insufficiently active and 72% of adults aged 65 and over were insufficiently active (Figure 1.5.1).

## **Population groups**

In 2017–18, there were similar levels of insufficient physical activity across remoteness areas with the age-standardised proportion ranging from 54% to 55% between *Major cities* and *Outer regional and remote* areas. Over 3 in 5 (63%) Australian adults living in the lowest socioeconomic areas were insufficiently active compared with 48% of those living in the highest socioeconomic areas (Figure 1.5.2).

## **State and territory**

After adjusting for age, the proportion of adults who were insufficiently active ranged from 50% in the Australian Capital Territory to 57% both in Queensland and South Australia in 2017–18 (Figure 1.5.2).

## **Aboriginal and Torres Strait Islander people**

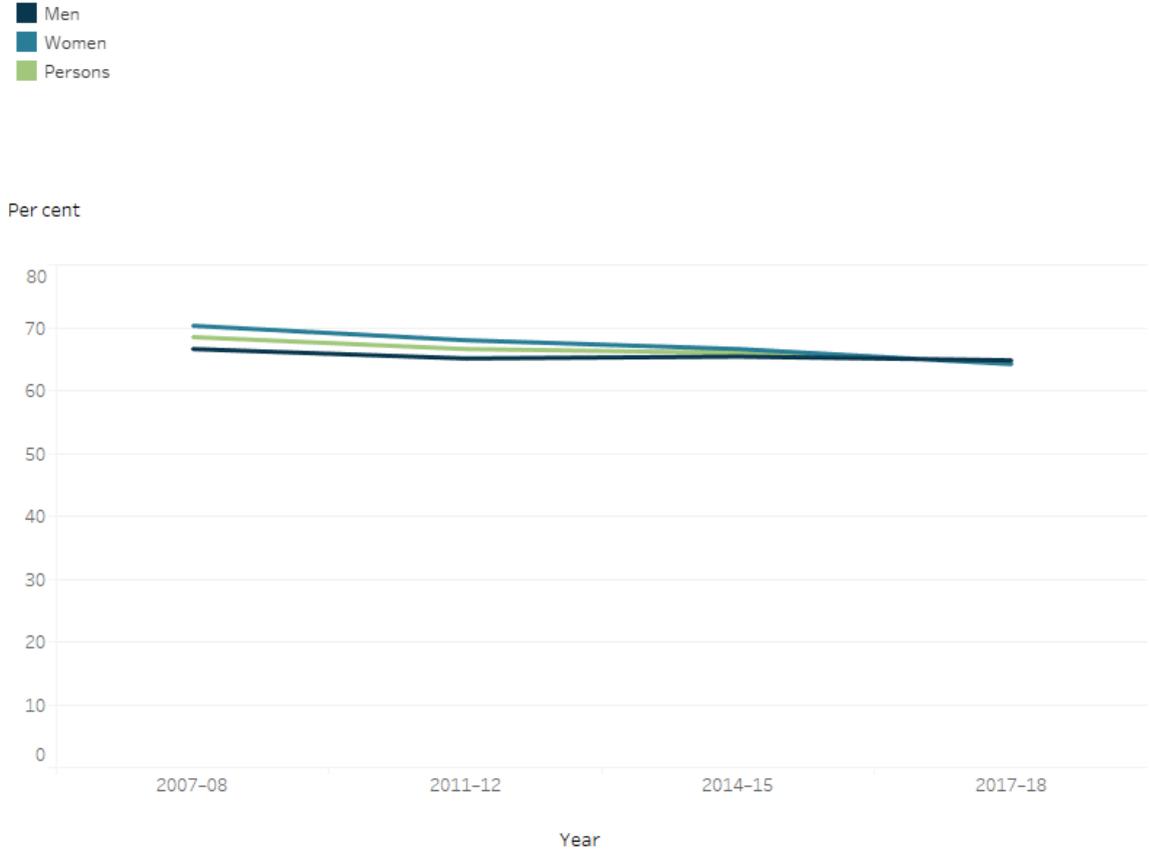
In 2018–19, an estimated two-thirds (60%) of Indigenous Australians were insufficiently active, based on self-reported data from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS).

The age-standardised proportion of Indigenous adults who were insufficiently active was similar to non-Indigenous adults (62% and 64%, respectively), based on estimates from the 2018–19 NATSIHS and 2017–18 NHS (Figure 1.5.2).

Comparable data on physical activity from the 2018–19 NATSIHS were only collected for non-remote areas and exclude physical activity at work. Results presented for non-Indigenous adults from the NATSIHS exclude remote areas and physical activity at work.

## **Explore the data**

### 1.5 Insufficient physical activity among persons aged 18+, by sex, 2007-08 to 2017-18 and by selected population groups, 2017-18



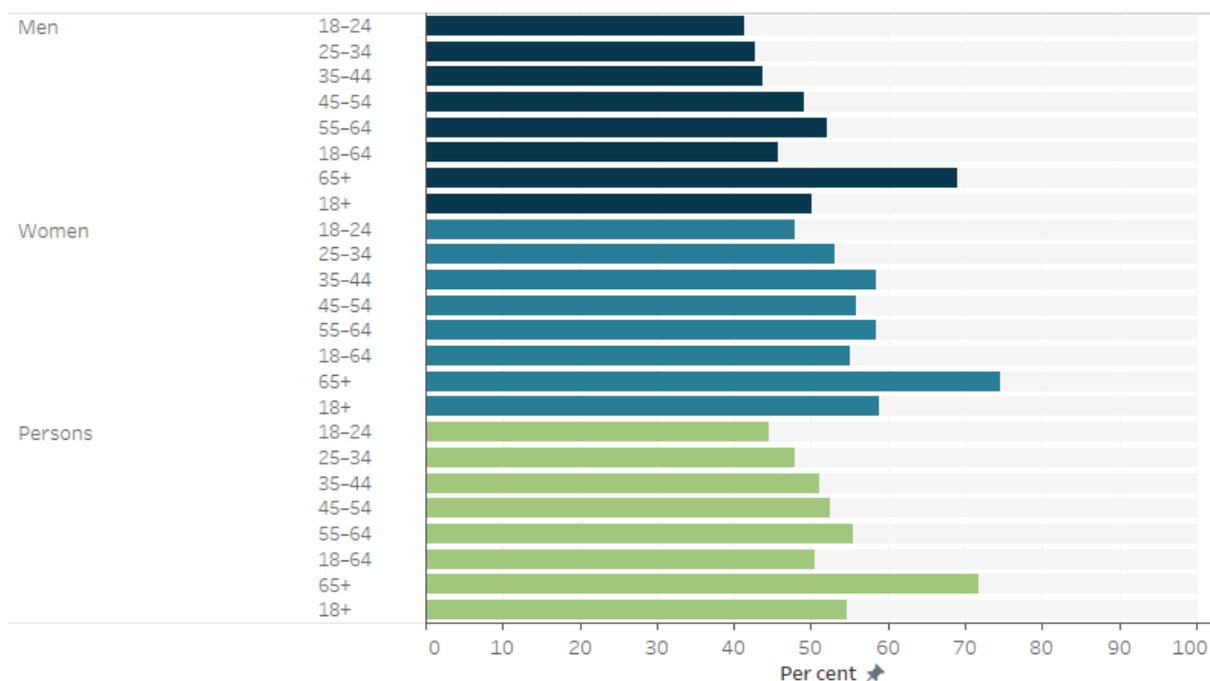
**Figure 1.5.1: Insufficient physical activity among persons aged 18+, by sex, 2007-08 to 2017-18**

Notes:  
 1. Based on self-reported data.  
 2. Age-standardised to the 2001 Australian Standard Population.  
 3. Excludes exercise at work.  
 Source: AIHW 2019a (Table S3)  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

## Age/sex—All Australians

- Explore by:
- Age/sex—All Australians
  - Age/sex—Indigenous Australians
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory



**Figure 1.5.2: Insufficient physical activity among persons aged 18+, by selected population groups, 2017-18**

*Notes:*

1. Based on self-reported data.
  2. 18+ percentage age-standardised to the 2001 Australian Standard Population.
  3. Indigenous data for 2018-19.
  4. Includes exercise at work.
- Sources: AIHW 2019b (Table S1a, S1b, S2a); AIHW 2020 (Table 1.2.5); ABS 2019a; ABS 2019b  
<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 1.5 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of adults (18-64 years) who did not complete 150 minutes of moderate to vigorous activity (where vigorous activity is multiplied by 2) on 5 days in the last week.  Estimated number of adults (65+ years) who did not complete at least 30 minutes of physical activity per day on 5 or more days in the last week.	ABS 2019a; ABS 2019b  AIHW 2020; AIHW 2019a ; AIHW 2019b
<b>Denominator</b>	Estimated Australian population (18+ years).	ABS 2019a; ABS 2019b  AIHW 2020; AIHW 2019a ; AIHW 2019b

## References

Australian Bureau of Statistics (ABS) 2019a. National Aboriginal and Torres Strait Islander Health, 2018–19. Customised report. Canberra: ABS.

ABS 2019b. National Health Survey, 2017–18. Customised report. Canberra: ABS.

Australian Institute of Health and Welfare (AIHW) 2019a (Table S3). Insufficient physical activity: supplementary online tables. Cat. no. WEB 248. Canberra: AIHW.

AIHW 2019b (Table S1a, S1b, S2a). Insufficient physical activity: supplementary online tables. Cat. no. WEB 248. Canberra: AIHW; AIHW 2020. Australia's health performance framework. Supplementary data table (1.2.5). Canberra: AIHW.

AIHW 2020. Australia's health performance framework. Supplementary data table (1.2.5). Canberra: AIHW.

Department of Health 2019. [Australia's Physical Activity and Sedentary Behaviour Guidelines and the Australian 24-Hour Movement Guidelines](#). Canberra: Australian Government Department of Health. Viewed 13 July 2020.

## Indicator 1.6 Inadequate fruit and/or vegetable consumption, by age group

### Considerations

The 2013 Australian Dietary Guidelines recommend a minimum number of daily serves of fruit (1–2 for children and 2 for adults) and vegetables (2.5–5.5 for children; 5–6 or more for men depending on age, and 5 or more for women) (NHMRC 2013). For more information on the dietary guidelines for different age groups, see the [Australian Dietary Guidelines](#).

### Overview

In 2017–18, most Australians aged 2 and over (95%) failed to meet the 2013 [Australian Dietary Guidelines](#) for adequate fruit and vegetable intake, based on self-reported data from the National Health Survey (NHS).

### Trends

The age-standardised proportion of Australians with inadequate fruit and/or vegetable intake remained the same (95%) between 2014–15 and 2017–18 (Figure 1.6.1).

## **Age and sex**

The age-standardised proportion of males with inadequate fruit and/or vegetable intake was significantly higher than the proportion of females (97% and 93%, respectively). The proportion of Australians meeting the guidelines for adequate fruit and/or vegetable intake were similar across age groups (Figure 1.6.1).

## **Population groups**

Inadequate fruit and vegetable consumption was slightly higher in the lowest socioeconomic areas compared with the highest socioeconomic areas (96% compared with 94%). There were no significant differences by remoteness area (Figure 1.6.2).

## **State and territory**

After adjusting for age, there were no significant differences in the proportion of Australians meeting the guidelines for adequate fruit and/or vegetable intake by state and territory in 2017–18 (Figure 1.6.2).

## **Aboriginal and Torres Strait Islander people**

In 2018–19, 96% of Indigenous Australians did not meet the guidelines for adequate fruit and/or vegetable intake, based on self-reported data from National Aboriginal and Torres Strait Islander Health Survey (NATSIHS). After adjusting for age, a slightly higher proportion of Indigenous males than females did not meet the recommended intake (98% and 95%, respectively) (Figure 1.6.2).

Based on estimates from the 2017–18 NHS and 2018–19 NATSIHS, the age-standardised proportion of inadequate fruit and/or vegetable intake was higher among Indigenous Australians compared with non-Indigenous Australians (97% and 95%, respectively) (Figure 1.6.2).

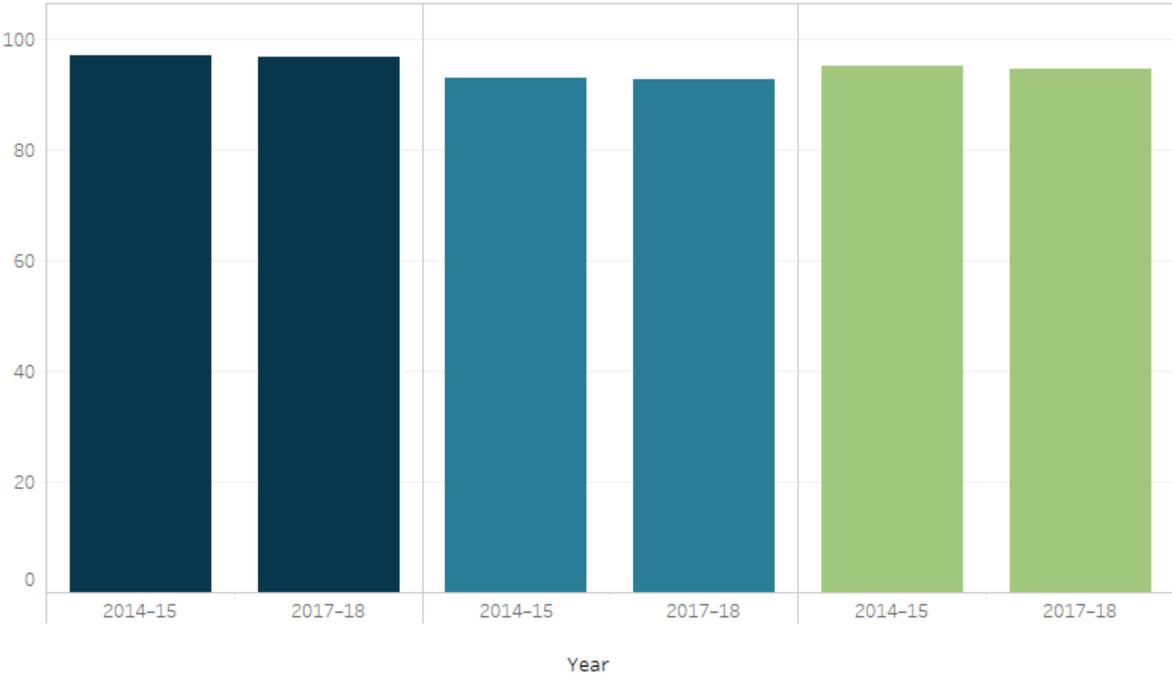
## **Explore the data**

**1.6 Inadequate fruit and/or vegetable consumption by sex and age group, 2014-15 and 2017-18 and by selected population group, 2017-18**

- Males
- Females
- Persons

Explore by: Age group (years) 2+

Per cent



**Figure 1.6.1: Inadequate fruit and/or vegetable consumption by age group, 2014-15 and 2017-18**

*Notes:*  
 1. Based on self-reported data.  
 2. 2+ age group percentage age-standardised to the 2001 Australian Standard Population.  
*Sources:*  
 ABS 2016; ABS 2019a  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

## Age/sex—All Australians

Explore by:

- Age/sex—All Australians
- Age/sex—Indigenous Australia...
- Indigenous status
- Remoteness areas
- Socioeconomic areas
- State/territory

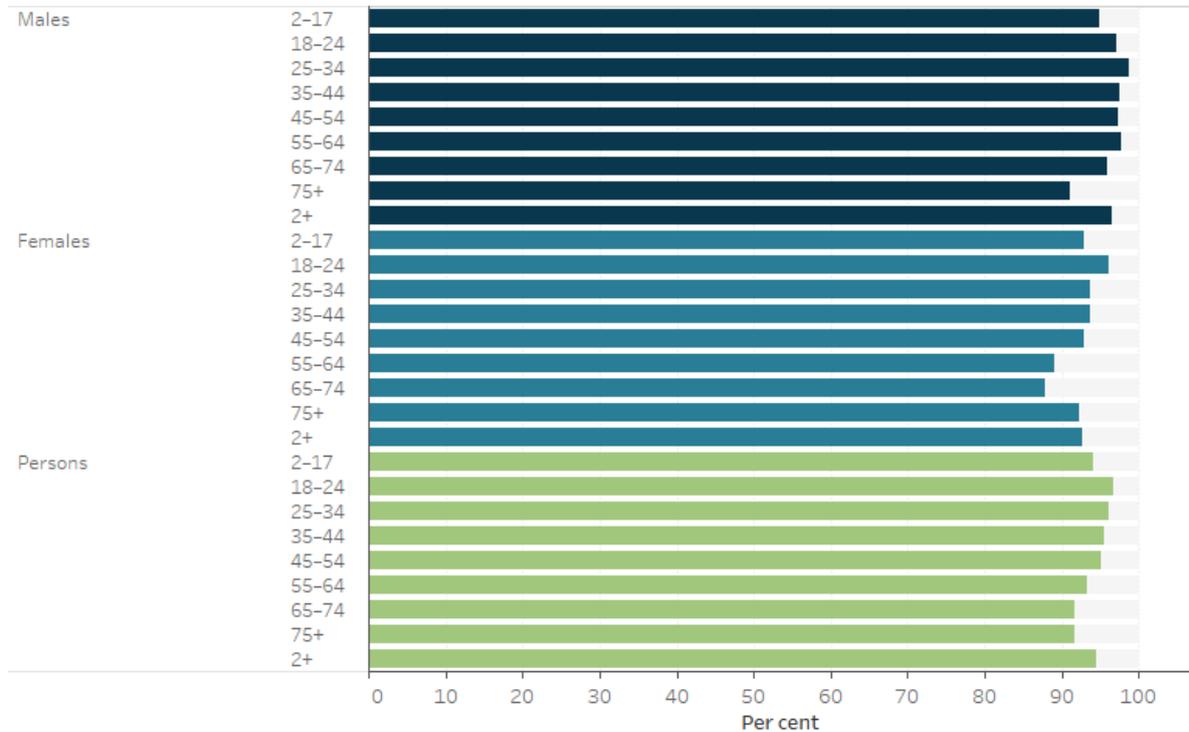


Figure 1.6.2: Inadequate fruit and/or vegetable consumption by selected population group, 2017-18

Notes:

1. Based on self-reported data.
2. 2+ age group percentage age-standardised to the 2001 Australian Standard Population.
3. Indigenous status: Indigenous data for 2018-19; non-Indigenous data for 2017-18.

Sources: ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 1.6 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated population (2+ years) who did not meet the adequate fruit (1-2 for children and 2 for adults) and vegetables (2.5-5.5 for children; 5-6 or more for men depending on age, and 5 or more for women) guidelines.	ABS 2019a; ABS 2019b; ABS 2016.
<b>Denominator</b>	Estimated Australian population (2+ years).	ABS 2019a; ABS 2019b; ABS 2016.

## References

Australian Bureau of Statistics (ABS) 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017–18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

National Health and Medical Research Council (NHMRC) 2013. [Australian Dietary Guidelines](#). Canberra: NHMRC.

## Indicator 1.7 Total energy intake from saturated fatty acids

### Considerations

Data for this indicator are not available for update—baseline results reported.

### Overview

In 2011–12, it was estimated that 12% of energy intake for Australian adults was from saturated fats (including trans fatty acids) based on self-reported data from the National Nutrition and Physical Activity Survey, which exceeds the recommended intake of no more than 10% of energy.

### Age and sex

There was no significant difference between males and females, and little difference across age groups (Figure 1.7).

### Population groups

There was no significant difference in the energy intake from saturated fat by socioeconomic status. While those living in *Major cities* consumed a significantly lower proportion of saturated fat compared with those living in other areas, differences were small (Figure 1.7).

### Aboriginal and Torres Strait Islander people

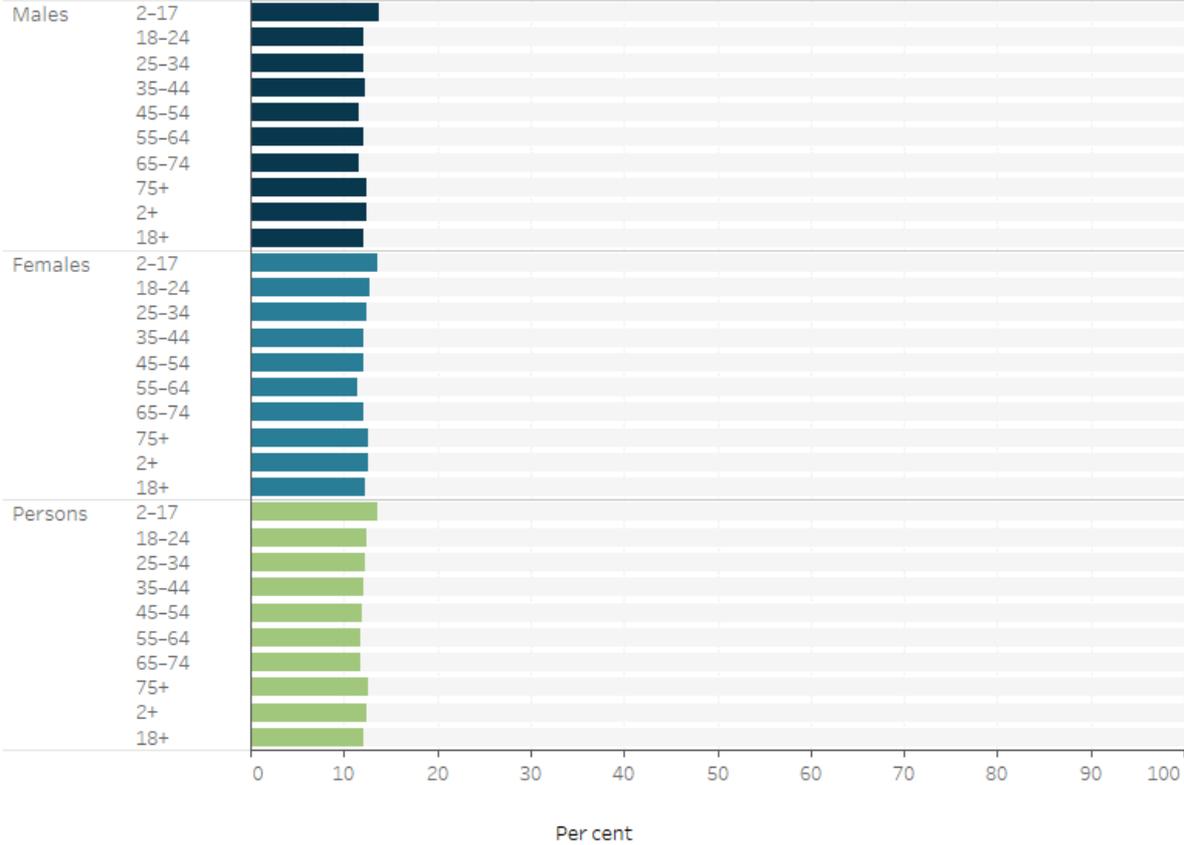
In 2012–13, Indigenous Australians consumed 13% of their total energy intake from saturated fats, based on self-reported data from the National Aboriginal and Torres Strait Islander Nutrition and Physical activity Survey. There was no difference between Indigenous males and females.

### Explore the data

**Total energy intake from saturated fatty acids, by selected population group, 2011-12**

Age/sex

- Explore by:
- Age/sex
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory



**Figure 1.7: Mean contribution to energy intake from saturated fatty acids, by selected population groups, 2011-12**  
 Sources: ABS 2013; ABS 2015  
<https://www.aihw.gov.au>

- Labels:
- On
  - Off

**Indicator 1.7 data specifications**

	Definition	Data source
<b>Numerator</b>	Mean proportion of total energy intake from saturated fatty acids and trans fatty acids (2+ years).	ABS 2015; ABS 2013.
<b>Denominator</b>	Estimated Australian population (2+ years).	ABS 2015; ABS 2013.

## References

Australian Bureau of Statistics (ABS) 2013. Microdata: Australian Health Survey, Nutrition and Physical Activity, 2011–12. ABS cat. no. 4324.0.55.002. Findings based on Expanded Confidentialised Unit Record file. Canberra: ABS.

ABS 2015. Australian Aboriginal and Torres Strait Islander Health Survey: Nutrition Results - Food and Nutrients, 2012-13. ABS cat no. 4727.0.55.005. Canberra: ABS.

## Indicator 1.8 Exclusive breastfeeding

### Considerations

- The current Australian [Infant feeding guidelines](#) recommend that children should be exclusively breastfed to around 6 months of age (NHMRC 2013). Exclusive breastfeeding refers to children receiving only breast milk (including expressed milk) and no other fluids, food or water (with the exception of vitamins, minerals and medicines where necessary).
- Exclusive breastfeeding data are available from the Australian National Infant Feeding Survey 2010 and the National Health Survey (NHS). As no new data is available from the Australian National Infant Survey to update this indicator, only data from the NHS are presented.

### Overview

Based on self-reported data from the 2017–18 NHS, it was estimated that more than 1 in 4 (28%) children aged 6 to 24 months were exclusively breastfed to at least 6 months of age. In 2014–15, it was self-reported that 22% of children aged 6 to 24 months were exclusively breastfed to 6 months of age (Figure 1.8.1).

### Population groups

There were no differences in the proportion of children aged 6–24 months exclusively breastfed to at least 6 months of age by remoteness or socioeconomic areas.

### State and territory

The proportion of children aged 6–24 months exclusively breastfed to at least 6 months varied by state and territory (Figure 1.8.2).

### Aboriginal and Torres Strait Islander people

Based on data from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey, an estimated 16% of Indigenous children aged 6–24 month were exclusively breastfed to at least 6 months. In 2017–18, 29% of non-Indigenous children aged 6–24 months were exclusively breastfed to at least 6 months, based on estimates from the NHS (Figure 1.8.2).

Explore the data

1.8 Proportion of children (age 6–24 months) who were exclusively breastfed for 6 months, by sex, 2014–15 and 2017–18 and by selected population groups

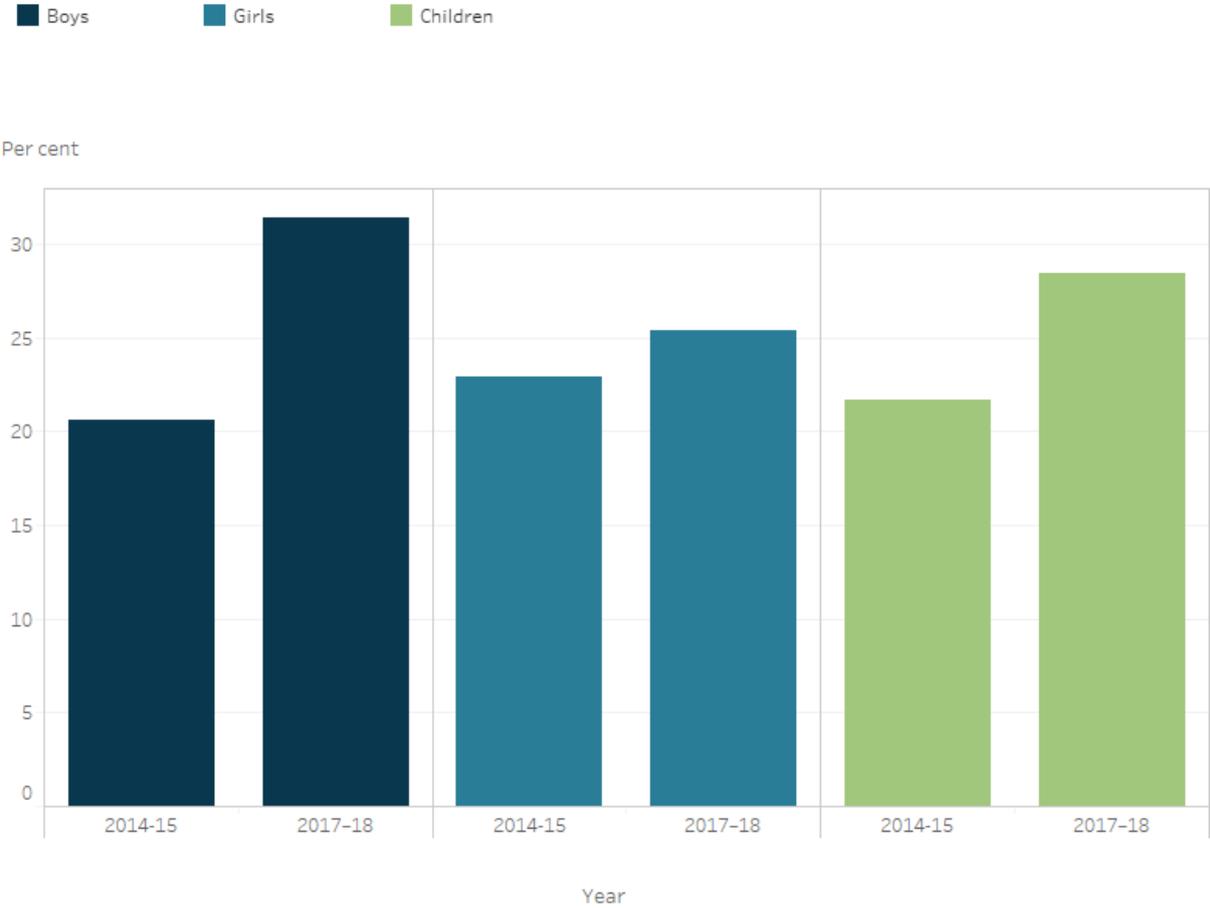


Figure 1.8.1: Proportion of children (aged 6–24 months) who were exclusively breastfed for 6 months, by sex, 2014–15 and 2017–18

Note: Based on self-reported data.

Sources: ABS 2016a; ABS 2019a

<https://www.aihw.gov.au>

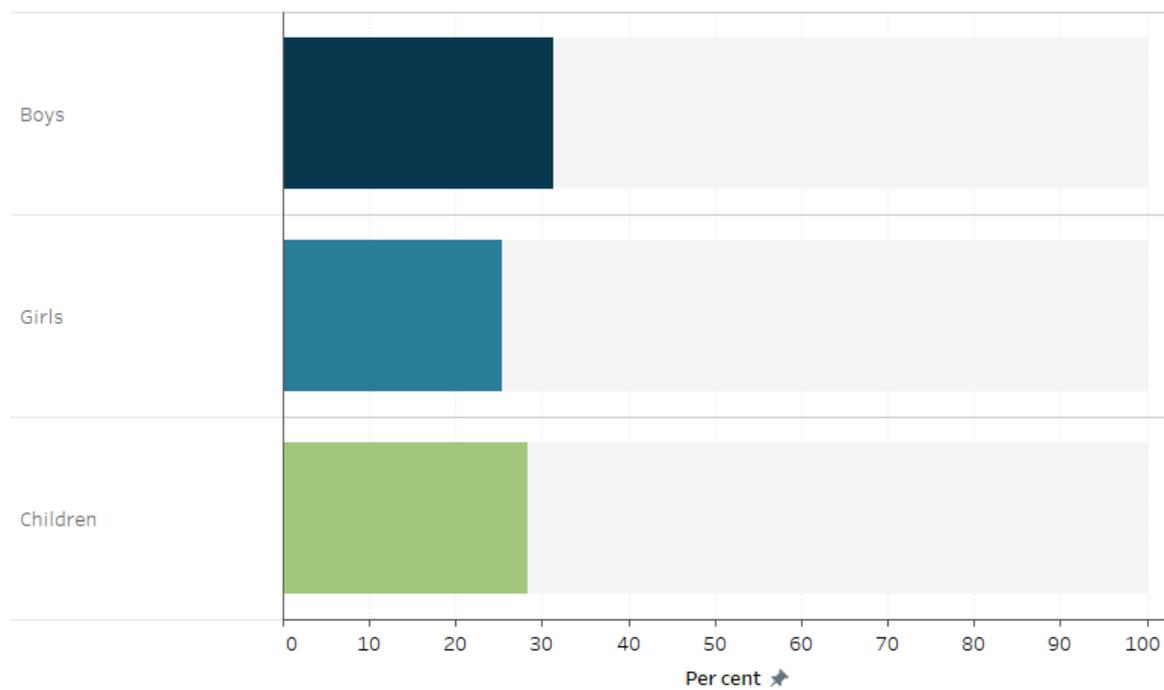
Labels:

- On
- Off

## All Australians

### Explore by: Category

- All Australians
- Indigenous Australians
- Indigenous status
- Remoteness areas
- Socioeconomic areas
- State/territory



**Figure 1.8.2: Proportion of children (aged 6–24 months) who were exclusively breastfed for 6 months, by sex and selected population group, 2017–18**

*Notes:*

1. Based on self-reported data.

2. Indigenous status: Indigenous data for 2018–19; non-Indigenous data for 2017–18.

Sources: ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

**Labels:**

- On
- Off

### Indicator 1.8 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of infants aged 6–24 months who were exclusively breastfed to at least 6 months of age.	ABS 2019a; ABS 2019b; ABS 2016.
<b>Denominator</b>	Estimated number of infants aged 6–24 months.	ABS 2019a; ABS 2019b; ABS 2016.

### References

Australian Bureau of Statistics (ABS) 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017–18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

National Health and Medical Research Council (NHMRC) 2013. [Infant Feeding Guidelines: Summary](#). Canberra: NHMRC.

## Goal 2: Promote awareness & earlier detection of type 1 & type 2 diabetes

Goal 2 of the Strategy focusses on promoting awareness and earlier detection of type 1 and type 2 diabetes in the Australian population.

Four indicators were identified in the [Implementation Plan](#) for Goal 2.

**People tested for risk of type 2 diabetes:**

[2.1 Raised blood glucose levels \(including diabetes\)](#)

**Other indicators not related to potential measures of progress:**

[2.2 Incidence of type 1 diabetes](#)

[2.3 Prevalence of type 1 diabetes](#)

[2.4 Uptake of the Practice Incentives Program \(PIP\) diabetes incentive](#)

### Indicator 2.1 Raised blood glucose levels (including diabetes)

#### Considerations

- Data for this indicator are not available for update—baseline results reported.
- Additional baseline results for the proportion of Australian adults with diabetes or impaired fasting plasma glucose have been provided.

#### Overview

Based on measured data from the 2011–12 ABS Australian Health Survey, it was estimated that around 1.1 million (8.2%) of Australians aged 18 and over had raised blood glucose levels (fasting plasma glucose  $\geq 6.1$ mmol/L comprised of 5.1% of those who had diabetes and 3.1% who had impaired fasting plasma glucose).

#### Age and sex

The age-standardised proportion of men with raised blood glucose levels was higher than the proportion of women in each age group, and the prevalence increased with age between 18 and 74 years for both men and women. An estimated one in five adults aged 65 to 74 had raised blood glucose levels (including diabetes) (Figure 2.1).

#### Population groups

Adults living in the lowest socioeconomic areas had a higher prevalence of raised blood glucose levels than those living in the highest socioeconomic areas (12% and 5%, respectively). After adjusting for age, there were no significant differences by remoteness area (Figure 2.1).

## State and territory

After adjusting for age, there were no significant differences in the prevalence of raised blood glucose levels by state and territory (Figure 2.1).

## Aboriginal and Torres Strait Islander people

In 2012–13, 16% of Indigenous adults had raised blood glucose levels, based on data from the Aboriginal and Torres Strait Islander Health Survey. There was no difference between the age-standardised proportion of Indigenous men and women with raised blood glucose levels.

## Explore the data

### 2.1 Raised blood glucose levels among persons aged 18+, by selected population groups, 2011–12

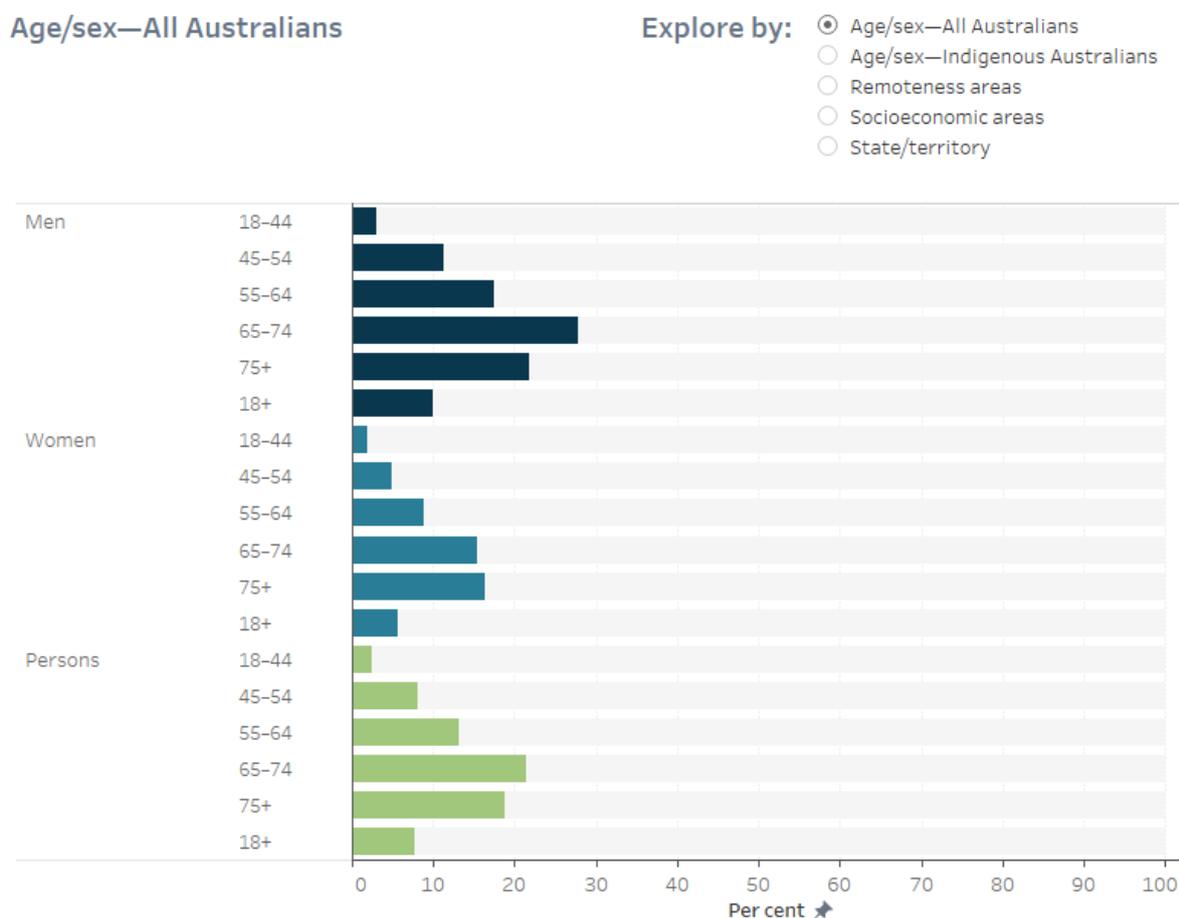


Figure 2.1: Raised blood glucose levels among persons aged 18+, by selected population groups, 2011–12

Notes:

1. Age-standardised to the 2001 Australian Standard Population.
2. Crude rates for age groups.
3. Indigenous status: Indigenous data for 2012–13; non-Indigenous data for 2011–12.

Sources: ABS 2014; ABS 2015

<https://www.aihw.gov.au>

Labels:

- On  
 Off

## Indicator 2.1 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of adults (18+) with raised blood glucose or diabetes (fasting plasma glucose $\geq$ 6.1mmol/L).	ABS 2015; ABS 2014
<b>Denominator</b>	Estimated Australian population (18+years).	ABS 2015; ABS 2014

## References

Australian Bureau of Statistics (ABS) 2014. Microdata: Australian Health Survey, Core Content - Risk Factors and Selected Health Conditions, 2011–12. ABS cat. no. 4324.0.55.003. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2015. Microdata: Australian Aboriginal and Torres Strait Islander Health Survey, Core Content - Risk Factors and Selected Health Conditions, 2012–13. ABS cat. no. 4715.0.30.003. Findings based on Detailed Microdata analysis. Canberra: ABS.

## Indicator 2.2 Incidence of type 1 diabetes

### Overview

In 2018, around 2,800 people were diagnosed with type 1 diabetes—11 cases per 100,000 population.

### Trends

After adjusting for age, incidence rates remained relatively stable, fluctuating between 12 and 13 cases per 100,000 population, during 2000 to 2018 (Figure 2.2.1).

### Age and sex

In 2018, the incidence rate was highest in those aged 10–14 (34 per 100,000 population), and the age-standardised rate was slightly higher in males than females overall (14 and 10 new cases per 100,000 population, respectively) (Figure 2.2.1).

### Population groups

In 2018, the incidence rate was lower in *Remote and very remote* areas (9 cases per 100,000 population) compared with other areas (11–14 cases per 100,000). Incidence rates across socioeconomic areas varied, at 11–14 cases per 100,000 population (Figure 2.2.2).

## State and territory

The incidence rate was highest in Queensland (12 cases per 100,000 population). Other states had rates ranging from 9 to 10 cases per 100,000 population (Figure 2.2.2).

## Aboriginal and Torres Strait Islander people

In 2018, 129 Aboriginal and Torres Strait Islander people were diagnosed with type 1 diabetes—16 cases per 100,000 population. After adjusting for age, the incidence rate of type 1 diabetes was similar among Indigenous Australians and non-Indigenous Australians (both 12 cases per 100,000 population, respectively) (Figure 2.2.2).

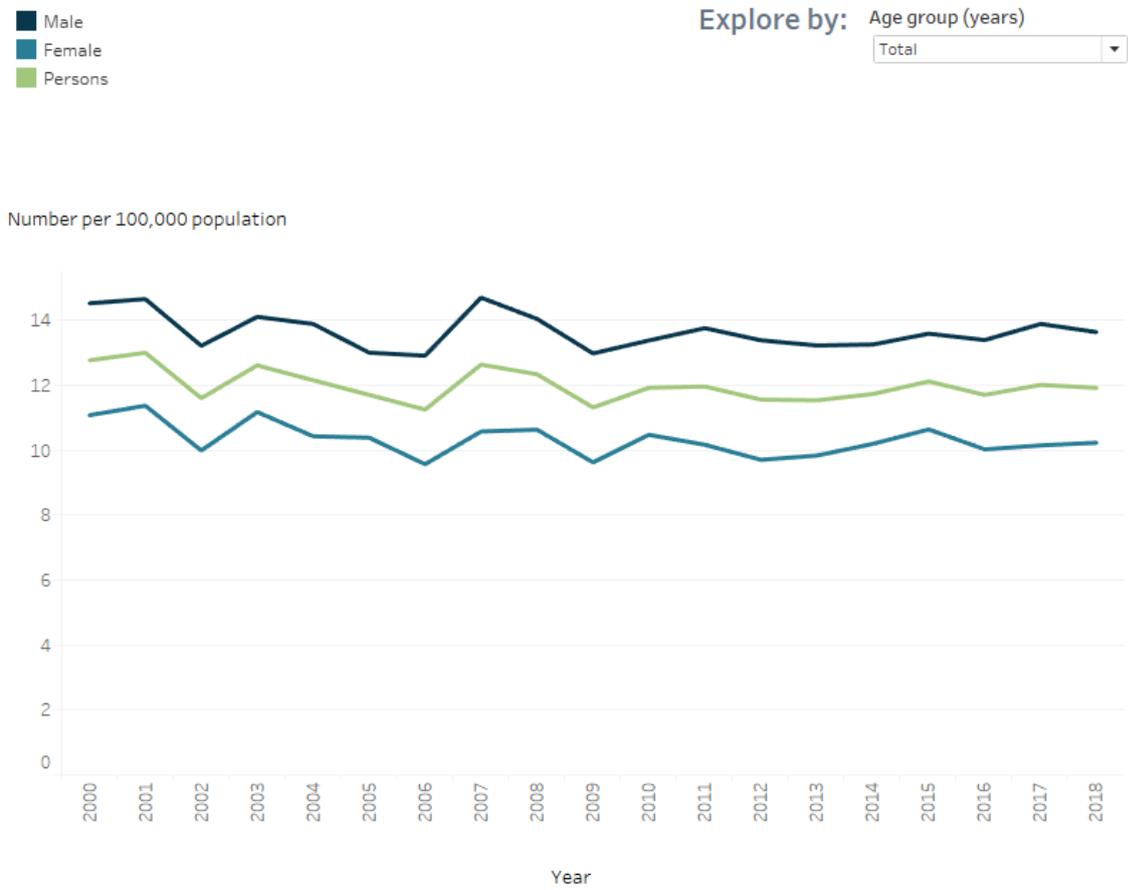
## About the data

Type 1 diabetes incidence data is sourced from the National (insulin-treated) Diabetes Register (NDR). The NDR is derived from two primary data sources: the National Diabetes Services Scheme (NDSS) and the Australasian Paediatric Endocrine Group. In 2002–2003, the classification of diabetes type changed from Insulin-Dependent Diabetes Mellitus (IDDM) and Non-Insulin Dependent Diabetes Mellitus (NIDDM) to type 1 and type 2 diabetes in the NDSS database. All registrants that were registered as IDDM prior to this date were classified as type 1 diabetes, resulting in some people with insulin-treated type 2 diabetes being misclassified as having type 1 diabetes. Some records may remain misclassified, despite efforts to correct them, which may inflate the incidence of type 1 diabetes prior to 2002–2003.

Rates in *Remote and very remote* areas might be influenced by the potentially lower capture on the NDR of people living in these areas (see the [Methods and classifications](#) section of the [Incidence of insulin-treated diabetes in Australia](#) web report).

## Explore the data

## 2.2 Incidence of type 1 diabetes, by age at first insulin use 2000–2018 and by selected population group, 2018



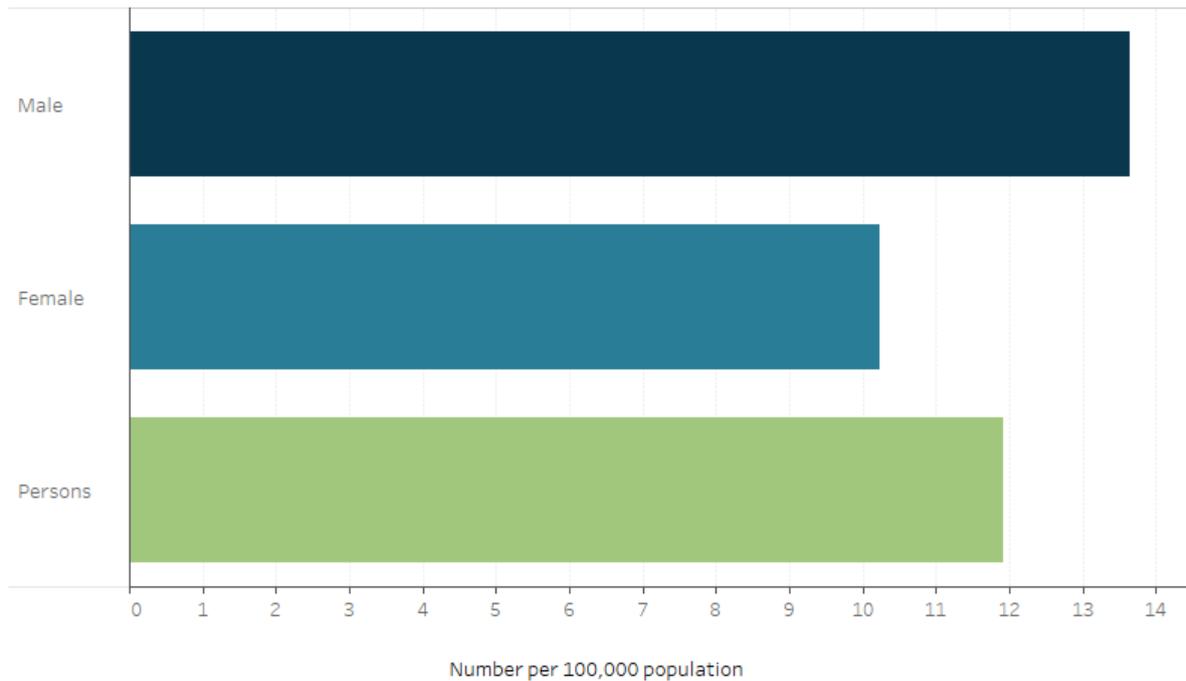
**Figure 2.2.1**  
**Incidence of type 1 diabetes, by age at first insulin use 2000–2018**  
*Note:* Total rates age-standardised to the 2001 Australian population.  
*Source:* AIHW analysis of the 2018 National (insulin-treated) Diabetes Register  
<https://www.aihw.gov.au/>

Labels:  
 On  
 Off

Age/sex

Explore by: Age group (years)  
Total

- Age/sex
- Indigenous status
- Remoteness areas
- Socioeconomic areas
- State/territory



**Figure 2.2.2**  
Incidence of type 1 diabetes, by selected population groups, 2018

Notes

1. Age-standardised to the 2001 Australian Standard Population.
2. Crude rates reported for individual age groups.
3. Rates not publishable for the Northern Territory due to small numbers, confidentiality or other concerns about data quality.

Source: AIHW analysis of the 2018 National (insulin-treated) Diabetes Register  
<https://www.aihw.gov.au/>

Labels:

- On
- Off

### Indicator 2.2 data specifications

	Definition	Data source
<b>Numerator</b>	Number of new cases of type 1 diabetes.	AIHW NDR 2018
<b>Denominator</b>	Estimated Australian resident population.	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

## Indicator 2.3 Prevalence of type 1 diabetes

### Considerations

- There are currently no national data on the prevalence of type 1 diabetes at all ages, but there are estimates for children and young adults.
- The relatively low prevalence of type 1 diabetes, in addition to issues regarding accuracy of reporting relating to diabetes type (i.e. type 1 vs type 2), means producing reliable estimates further disaggregated by age group, sex and population characteristics is currently challenging.

### Overview

As at 31 December 2018, 20,700 children and young adults aged 0–24 had type 1 diabetes in Australia, equating to a prevalence rate of 261 per 100,000 population.

### Trends

The age-standardised prevalence of type 1 diabetes among children and young adults aged 0–24 remained relatively stable during 2013–2018, between 261 and 264 per 100,000 population (Figure 2.3.1).

### Age and sex

In 2018, age-standardised rates were slightly higher among males aged 0–24 than females aged 0–24 (266 and 256 per 100,000 population, respectively) while overall, more than two-thirds (67%) were aged 15–24.

### Population groups

In 2018, the age-standardised prevalence of type 1 diabetes among children and young adults aged 0–24 was higher in *Inner regional* and *Outer regional* areas (169 and 149 per 100,000 population, respectively), compared with 134 per 100,000 population living in *Major cities* (Figure 2.3.2). Rates were slightly higher among the lowest socioeconomic areas compared with the highest socioeconomic areas (263 and 235 per 100,000, respectively) (Figure 2.3.2).

### State and territory

In 2018, the age-standardised prevalence of type 1 diabetes among children and young adults aged 0–24 was highest in Tasmania, with 320 per 100,000 population. The age-standardised prevalence of type 1 diabetes among children and young adults aged 0–24 was lowest in the Australian Capital Territory, with 195 per 100,000 population. Other states had prevalence rates ranging from 249 to 290 per 100,000 population (Figure 2.3.2).

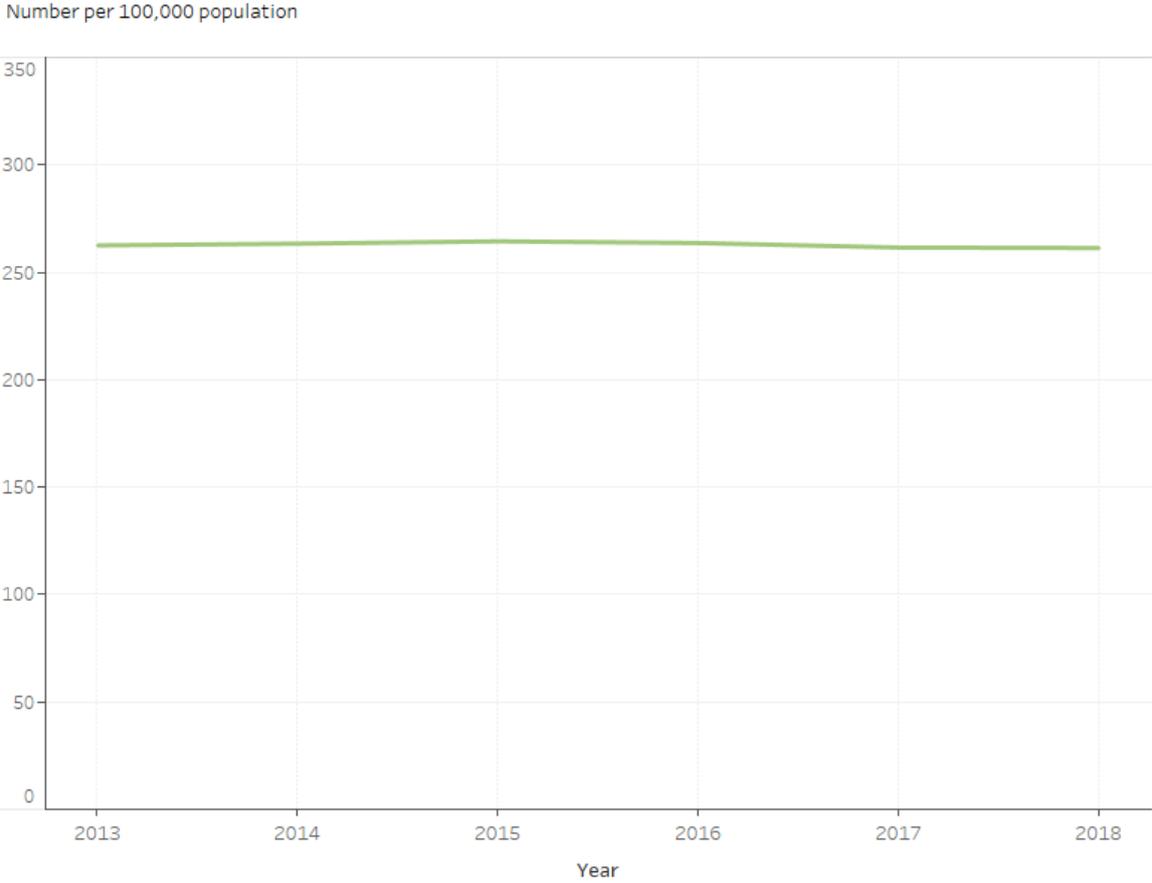
### Aboriginal and Torres Strait Islander people

Among Aboriginal and Torres Strait Islander children and young adults aged 0–24, there were 208 cases of type 1 diabetes per 100,000 population in 2018. After adjusting for age, Indigenous

children and young adults were less likely to have type 1 diabetes than their non-Indigenous counterparts (197 and 232 per 100,000, respectively) (Figure 2.3.2).

**Explore the data**

**2.3 Prevalence of type 1 diabetes among children and young adults aged 0–24, 2013 to 2018 and by selected population group, 2018**



**Figure 2.3.1: Prevalence of type 1 diabetes among children and young adults aged 0–24, 2013 to 2018**

*Note:* Age-standardised to the 2001 Australian Standard Population.  
*Source:* AIHW analysis of the National (insulin-treated) Diabetes Register  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

## Age/sex

- Explore by:
- Age/sex
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory

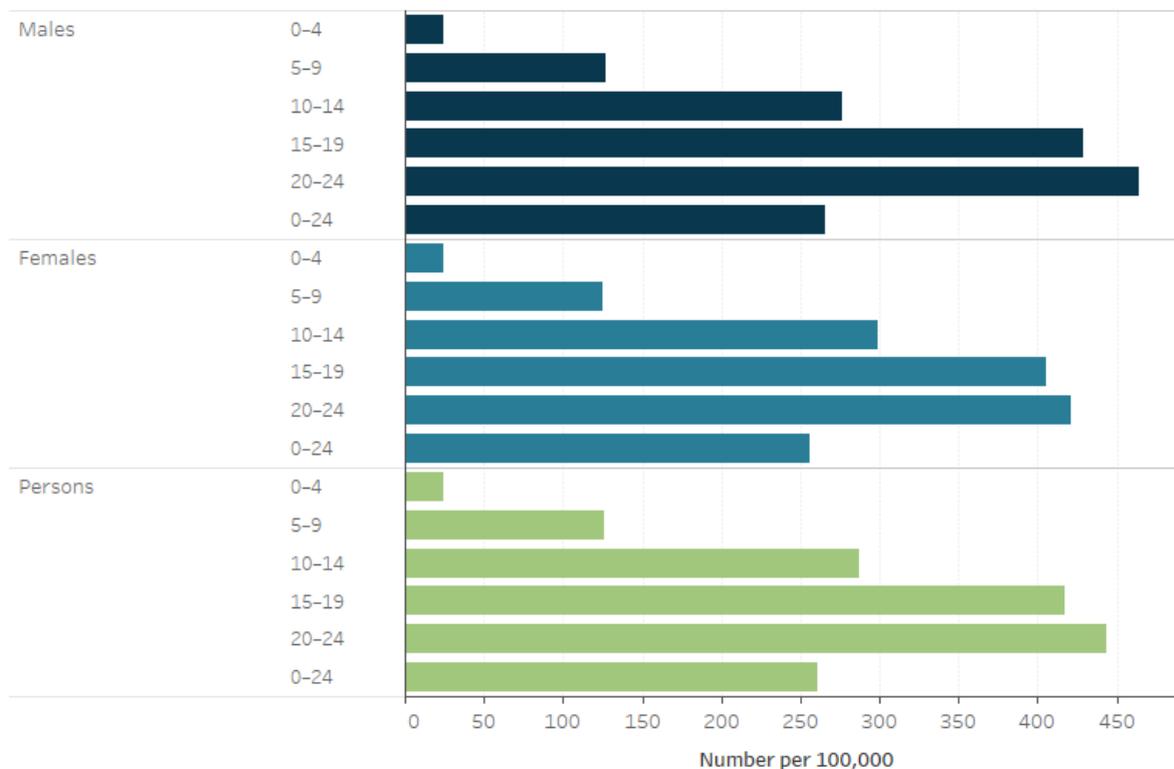


Figure 2.3.2: Prevalence of type 1 diabetes among children and young adults aged 0-24, by selected population groups, 2018

Note: Total rates age-standardised to the 2001 Australian Standard Population.

Source: AIHW analysis of the National (insulin-treated) Diabetes Register..

Labels:

- On
- Off

## Indicator 2.3 data specifications

	Definition	Data source
<b>Numerator</b>	Number of cases of type 1 diabetes (0-24 years).	AIHW NDR 2018
<b>Denominator</b>	Estimated Australian resident population (0-24 years).	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

## Indicator 2.4 Uptake of the Practice Incentives Program Diabetes Incentive

### Considerations

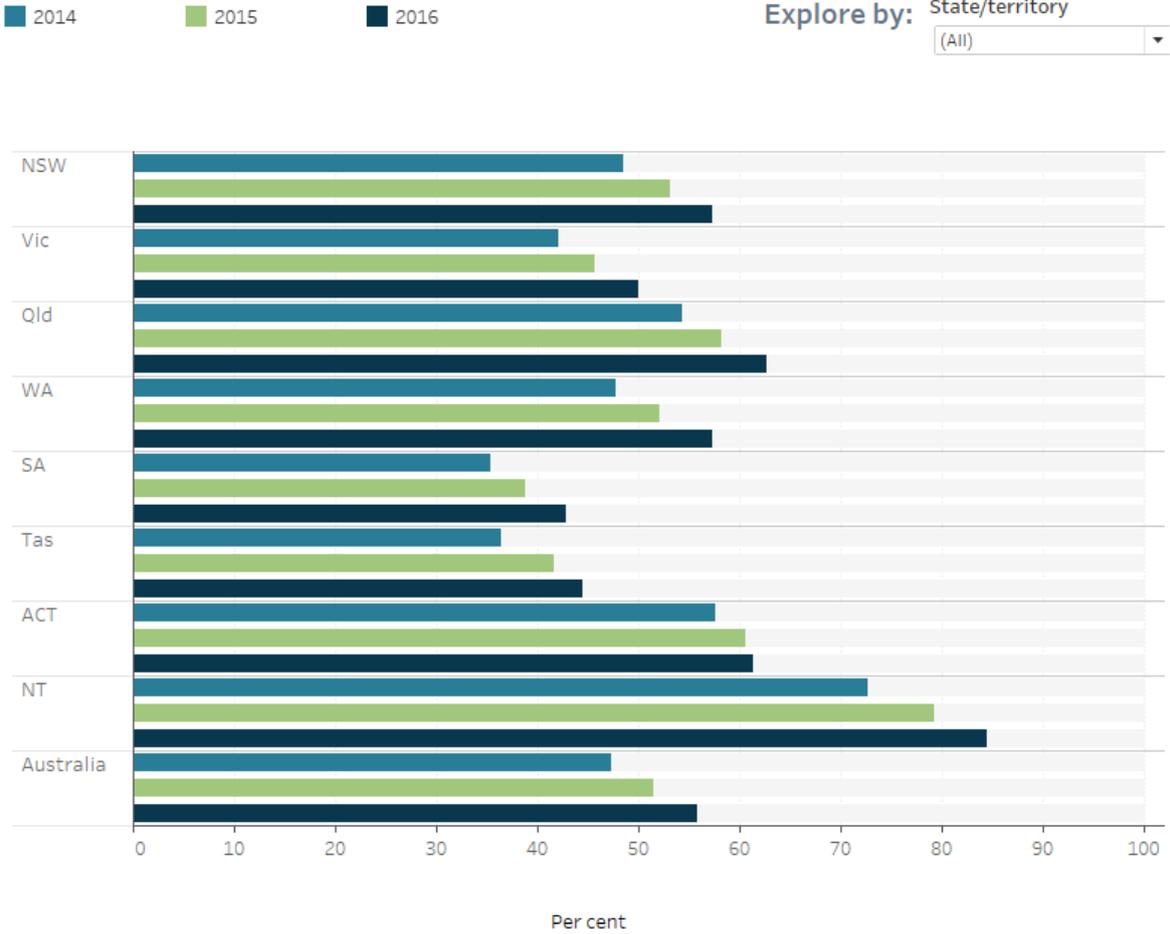
- Data for this indicator are not available for update—baseline results reported.
- The [Practice Incentives Program \(PIP\)](#) is an Australian Government funded initiative that aimed to support general practice activities. The Diabetes Incentive initiative, which was a component of the PIP, aimed to promote earlier diagnosis and effective management of people with diabetes.
- The Diabetes Incentive Initiative ended in its current form in April 2019, with the introduction of the new PIP Quality Improvement (QI) Incentive measures. The new PIP QI measures are:
  - Proportion of patients with diabetes with a current HbA1c result
  - Proportion of patients with diabetes who were immunised against influenza
  - Proportion of patients with diabetes with a blood pressure result (Department of Health 2020).
- Data for reporting against the new PIP QI measures will be available in the future.

### Overview

In 2016, 56% of general practices enrolled in the PIP had registered for the PIP Diabetes Incentive. While the proportion of participating practices has increased since 2014, variation remains between states and territories (Figure 2.4).

### Explore the data

### 2.4 Uptake of the Practice Incentives Program Diabetes Incentive by general practices enrolled in the Practice Incentive Program, May 2014–May 2016



**Figure 2.4: Uptake of the Practice Incentives Program Diabetes Incentive by general practices enrolled in the Practice Incentive Program, May 2014–May 2016**

*Note:* Not all general practices are involved in PIP and the proportion may vary across jurisdictions. Around 85% of patient care was provided by general practices in the PIP (as at May 2016).

*Source:* Productivity Commission 2017  
<https://www.aihw.gov.au>

Labels:  On  Off

#### Indicator 2.4 data specifications

	Definition	Data source
<b>Numerator</b>	Number of General Practices that are involved in the Practice Incentives Program (PIP) who participated in the PIP Diabetes program.	Productivity Commission 2017
<b>Denominator</b>	Number of General Practices that are involved in the Practice Incentives Program.	Productivity Commission 2017

#### Reference

Department of Health 2020. [Practice Incentive Program Quality Improvement Measures User guide](#). Canberra: Australian Government Department of Health. Viewed 17 August 2020.

# Goal 3: Reduce the occurrence of diabetes-related complications & improve quality of life

Goal 3 of the Strategy focusses on reducing the occurrence of complications and improving the quality of life of those living with diabetes.

**Eighteen indicators were identified in the [Implementation Plan](#) for Goal 3.**

**People with diabetes who achieve target levels of HbA1c, albuminuria, cholesterol or blood pressure:**

[3.1 People with diabetes who achieve the target level for blood pressure](#)

[3.2 People with diabetes who achieve target levels for cholesterol](#)

[3.3 People with diabetes who achieve the target level for HbA1c / Effective management of diabetes](#)

**People with diabetes undertaking regular assessment for complications:**

[3.4 People with diabetes who had an HbA1c test in the last 12 months](#)

**People with diabetes complications:**

[3.5 Prevalence of treated end-stage kidney disease among people with diabetes](#)

[3.6 Prevalence of vision loss caused by diabetes](#)

[3.7 Prevalence of cardiovascular disease among people with diabetes](#)

[3.8 Diabetes hospitalisations by type of diabetes](#)

[3.9 Hospitalisation for end-stage renal disease as the principal diagnosis with diabetes as an additional diagnosis](#)

[3.10 Hospitalisation for coronary heart disease or stroke as the principal diagnosis with diabetes as an additional diagnosis](#)

[3.11 Hospitalisation for ophthalmic conditions with type 2 diabetes as a principal diagnosis](#)

[3.12 Hospitalisation for lower limb amputation with type 2 diabetes as a principal or additional diagnosis](#)

[3.13 Hospitalisation for other complications with type 2 diabetes as a principal diagnosis](#)

[3.14 Deaths from diabetes](#)

[3.15 Death rates for coronary heart disease and stroke among people with diabetes](#)

## **Other indicators not related to potential measures of progress:**

[3.16 People with diabetes who achieve the target level for weight / Body Mass Index](#)

[3.17 People with diabetes who have attended a diabetes educator](#)

[3.18 Quality of life of people with diabetes](#)

## **Indicator 3.1 People with diabetes who achieve the target level for blood pressure**

### **Overview**

In 2017–18, more than one third (38%) of Australian adults aged 18 and over with self-reported diabetes achieved the target level for blood pressure (<130/80 mmHg), based on measured blood pressure data from the National Health Survey (NHS).

### **Trends**

After adjusting for age, there was no significant difference in the proportion of Australian adults who achieved the target level for blood pressure in 2011–12, 2014–15 and 2017–18 (34%, 45% and 37%, respectively) (Figure 3.1.1).

### **Population groups**

There were no differences by socioeconomic or remoteness areas in 2017–18 (Figure 3.1.2). Due to small numbers, age-standardised proportions were not derived.

### **State and territory**

There were no differences in the proportion of Australian adults who achieved the target level for blood pressure between states and territories in 2017–18 (Figure 3.1.2). Due to small numbers, age-standardised proportions were not derived.

### **Aboriginal and Torres Strait Islander people**

An estimated 2 in 5 (40%) Indigenous adults with self-reported diabetes met the blood pressure target in 2018–19, based on estimates from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) (Figure 3.1.2).

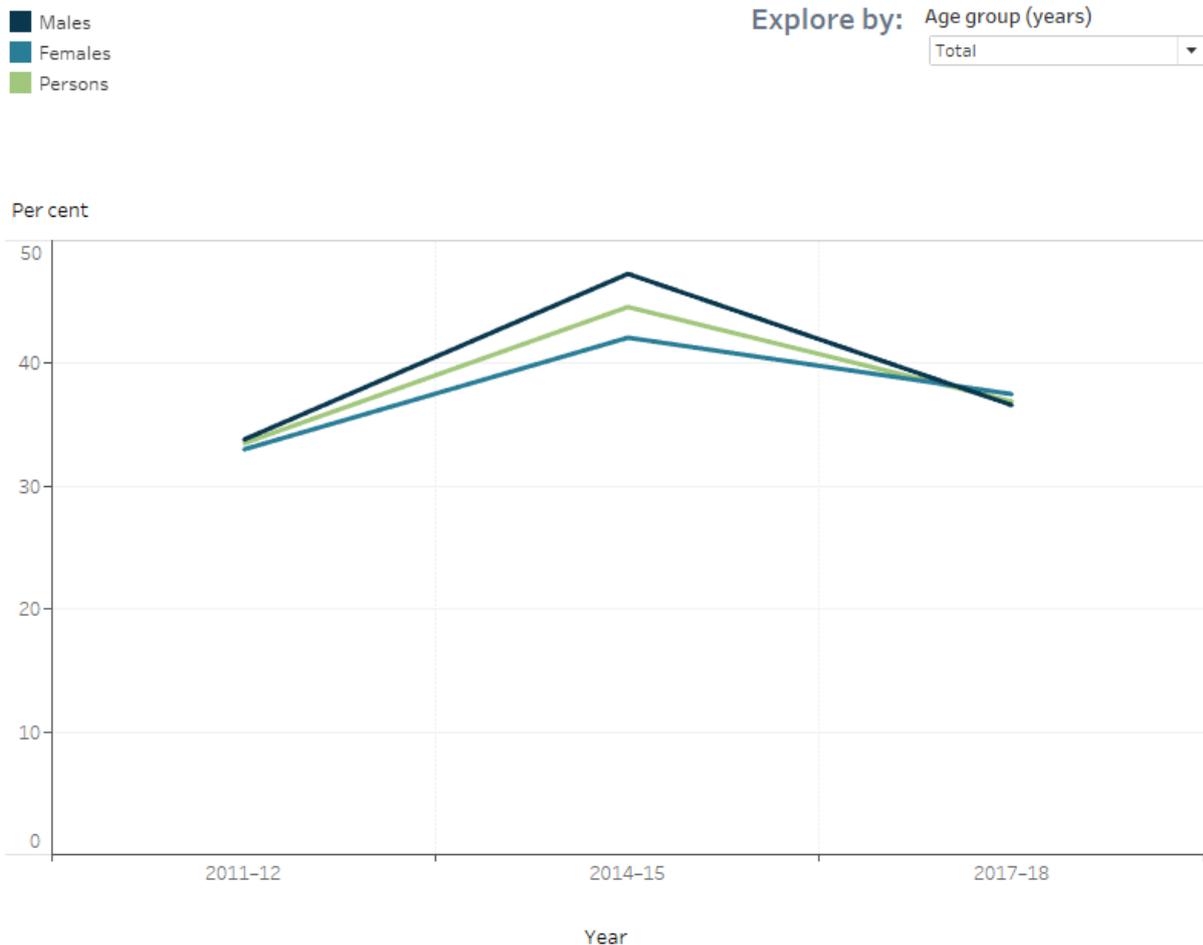
Based on measured data from the 2018–19 NATSIHS and 2017–18 NHS, the age-standardised proportion of people with diabetes meeting the blood pressure target was slightly higher for Indigenous adults compared with non-Indigenous adults, but the differences were not statistically significant (44% and 37%, respectively) (Figure 3.1.2).

## About the data

It should be noted that the estimates obtained from the National Health Surveys are based on relatively small numbers and are associated with large sampling error. The lack of statistical significance does not necessarily mean that there is no difference between the estimates being compared.

## Explore the data

### 3.1 People with diabetes who achieve the target level for blood pressure, by age and sex, 2011-12 to 2017-18 and by selected population group, 2017-18



**Figure 3.1.1: People with diabetes who achieve the target level for blood pressure, by age and sex, 2011-12 to 2017-18**

*Notes:*

1. Total age-standardised to the 2001 Australian Standard Population.
2. Estimates based on self-reported diabetes and physical measurements for blood pressure.

Sources: ABS 2013; ABS 2016; ABS 2019a

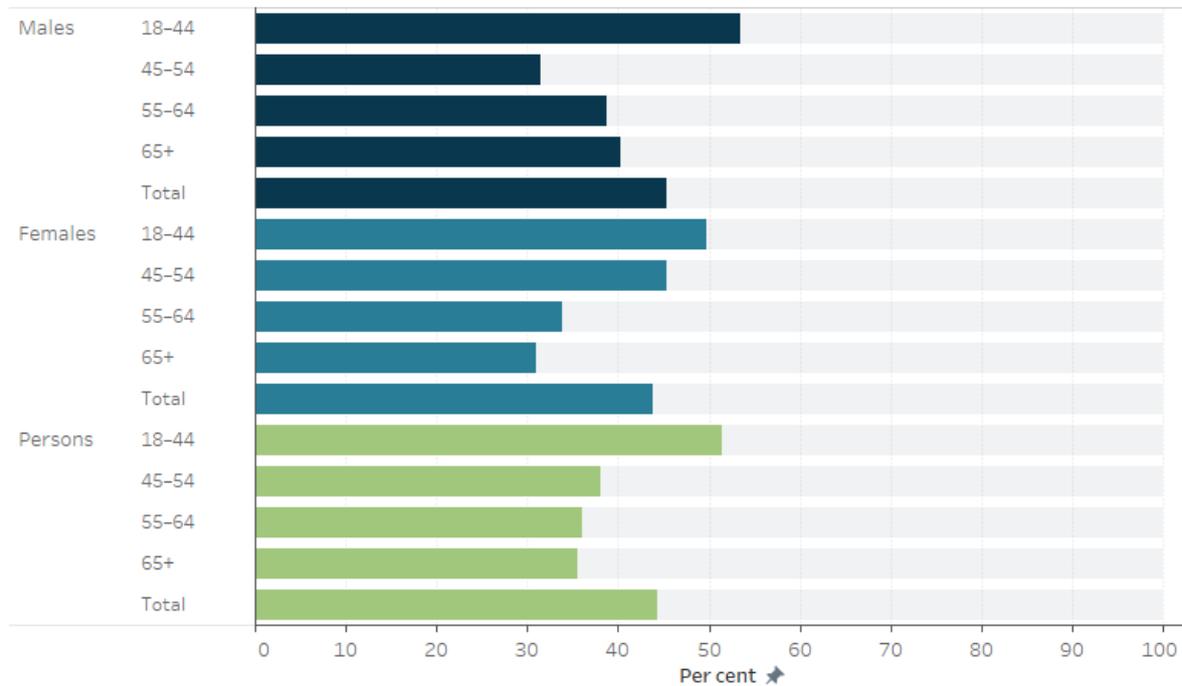
<https://www.aihw.gov.au>

Labels:

- On  
 Off

## Age/sex—Indigenous Australians

- Explore by:
- Age/sex—All Australians
  - Age/sex—Indigenous Australians
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory



**Figure 3.1.2: People with diabetes who achieve the target level for blood pressure, by selected population group, 2017-18**

Notes:

1. Age-standardised to the 2001 Australian Standard Population.

2. Crude rates reported for age groups, remoteness areas, socioeconomic areas and state/territory.

3. Indigenous data for 2018-19.

Sources: ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 3.1 data specifications

	Definition	Data source
<b>Numerator</b>	<p>Estimated number of adults (18+ years) with self-reported diabetes who had blood pressure <math>\leq</math> 130/80 mmHg.</p> <p>Included people with type 1 diabetes, type 2 diabetes, and type unknown.</p>	ABS 2019a; ABS 2019b; ABS 2016; ABS 2013
<b>Denominator</b>	<p>Estimated number of adults (18+ years) with self-reported diabetes.</p> <p>Included people with type 1 diabetes, type 2 diabetes, and type unknown.</p>	ABS 2019a; ABS 2019b; ABS 2016; ABS 2013

## References

Australian Bureau of Statistics (ABS) 2013. Microdata: Australian Health Survey, National Health Survey, 2011–12. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017–18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## Indicator 3.2 People with diabetes who achieve the target levels for cholesterol

### Consideration

Data for this indicator are not available for update—baseline results reported.

### Overview

Based on data from the 2011–12 ABS Australian Health Survey, an estimated 39% of adults with known diabetes met the target levels for total cholesterol (<4.0mmol/L).

### Age and sex

The age-standardised proportion of women who met the total cholesterol target was higher than the proportion of men (60% and 25%, respectively). Among men and women with known diabetes, the age groups most likely to meet the target levels for total cholesterol were 65–74 years for men (47%) and 18–44 years (85%) for women (Figure 3.2)

### Population groups

There was no difference in the proportion who achieved the target level for total cholesterol by remoteness or socioeconomic areas (Figure 3.2).

### Aboriginal and Torres Strait Islander people

In 2012–13, more than one third of Indigenous adults met the target level for total cholesterol (37%), based on data from the Aboriginal and Torres Strait Islander Health Survey. There was little difference between the age-standardised proportion of Indigenous men and women who met the target level (26% and 29%, respectively) (Figure 3.2).

## About the data

It should be noted that the estimates obtained from the National Health Surveys are based on relatively small numbers and are associated with large sampling error. The lack of statistical significance does not necessarily mean that there is no difference between the estimates being compared.

## Explore the data

### 3.2 People with diabetes who achieve the target level for cholesterol, by selected population group, 2011-12

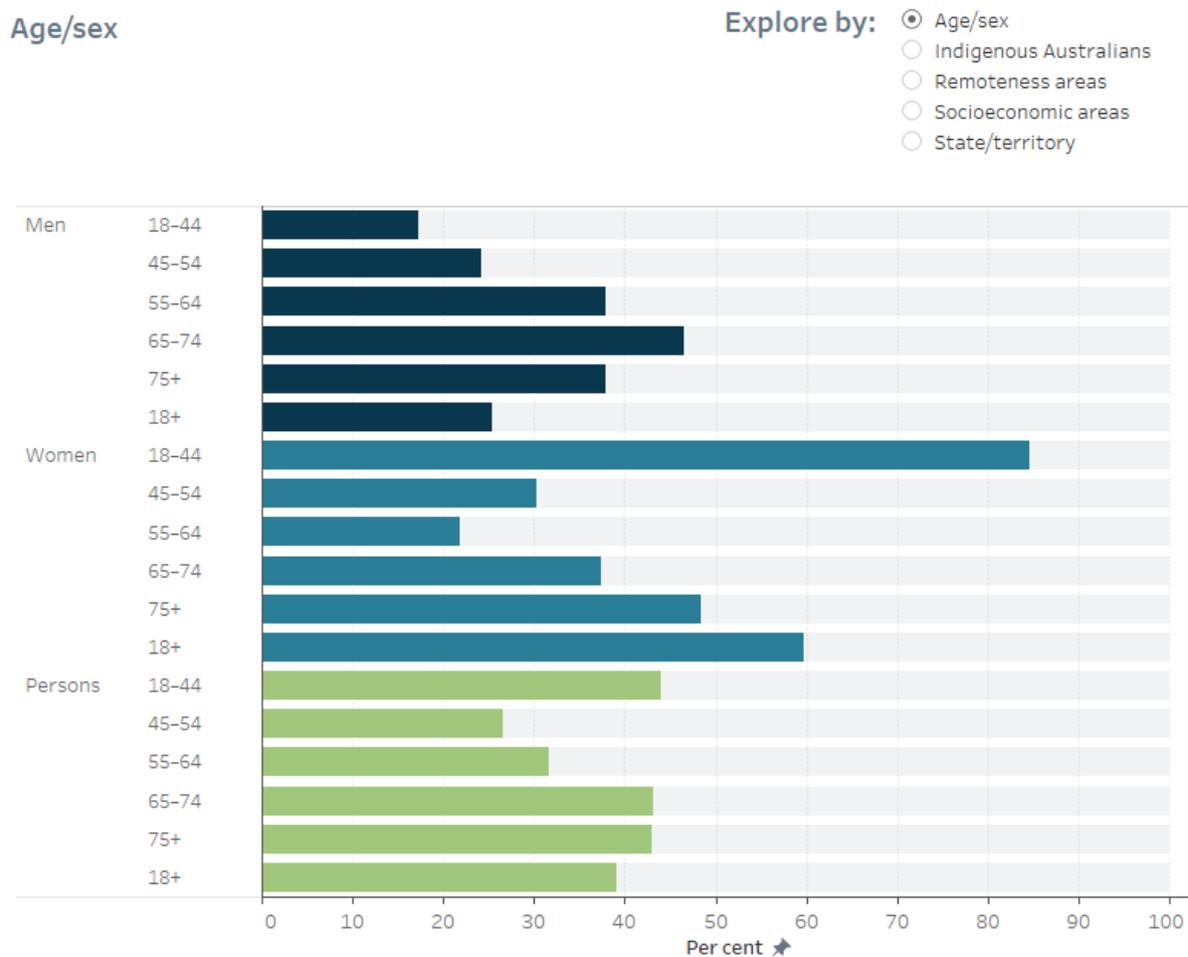


Figure 3.2: People with diabetes who achieve the target level for cholesterol, by selected population group, 2011-12

Notes:

1. 18+ percentage age-standardised to the 2001 Australian Standard Population.

2. Crude rates reported for all other population groups.

Sources: ABS 2014; ABS 2015

<https://www.aihw.gov.au>

Labels:

On

Off

### Indicator 3.2 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of adults (18+ years) with known diabetes who had total cholesterol < 4.0 mmol/L.  Known diabetes includes people ever told by a doctor or nurse that they have diabetes (type 1, type 2 or type unknown) and they were taking diabetes medication (either insulin or tablets); or ever told that they have diabetes and their HbA1c test results were greater than or equal to the cut off point for diabetes (that is, 6.5%).	ABS 2015; ABS 2014
<b>Denominator</b>	Estimated number of adults (18+ years) with known diabetes.  Known diabetes includes people ever told by a doctor or nurse that they have diabetes (type 1, type 2 or type unknown) and they were taking diabetes medication (either insulin or tablets); or ever told that they have diabetes and their HbA1c test results were greater than or equal to the cut off point for diabetes (that is, 6.5%).	ABS 2015; ABS 2014

### References

Australian Bureau of Statistics (ABS) 2014. Microdata: Australian Health Survey, Core Content - Risk Factors and Selected Health Conditions, 2011–12. ABS cat. no. 4324.0.55.003. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2015. Microdata: Australian Aboriginal and Torres Strait Islander Health Survey, Core Content - Risk Factors and Selected Health Conditions, 2012–13. ABS cat. no. 4715.0.30.003. Findings based on Detailed Microdata analysis. Canberra: ABS.

### Indicator 3.3 People with diabetes who achieve the target level for HbA1c/Effective management of diabetes

#### Considerations

- Data for this indicator are not available for update—baseline results reported.
- Baseline data has been restricted to people aged 18–69 years.
- Glycosylated haemoglobin (HbA1c) can be used to assess the average blood glucose over the preceding 6–8 weeks and is considered the best method for assessing glycaemic control (Phillips 2012). Targets for HbA1c in people with diabetes should be individualised, but a general target of less than or equal to 7.0% is recommended for people with type 2 diabetes (RACGP 2020).
- This indicator is for people aged 18–69 years and does not measure people aged 70 years and over who have achieved target HbA1c of less than or equal to 7.0%. The age group (18–69 years) was selected as targets for older people with diabetes are individualised and less strict (RACGP 2020).

- While the data for this indicator relate to people with all types of known diabetes (excluding gestational diabetes) the target HbA1c of  $\leq 7.0\%$  is not considered appropriate for people with type 1 diabetes. The type of diabetes cannot be determined from biomedical estimates from the Australian Health Survey and it is assumed that the vast majority of known diabetes would be type 2 diabetes.
- As the analysis has been restricted to specific age groups, age-standardised proportions were not derived.

## **Overview**

In 2011–12, an estimated 49% of adults aged 18–69 with known diabetes achieved the target level for HbA1c ( $\leq 7.0\%$ ), based on measured data from the Australian Health Survey.

## **Age and sex**

In 2011–12, 52% of men and 44% of women with known diabetes met the target level for HbA1c in 2011–12. Overall, 35% of adults aged 18–49 effectively managed their diabetes and this proportion rose to 55% among those aged 50–59 and 54% among those aged 60–69 (Figure 3.3).

## **Population groups**

The proportion of people who effectively managed their diabetes did not vary by remoteness or socioeconomic areas (Figure 3.3).

## **State and territory**

After adjusting for age, the proportion of people who effectively managed their diabetes varied across the states and territories (Figure 3.3).

## **Aboriginal and Torres Strait Islander people**

In 2012–13, more than one third (36%) of Indigenous adults with known diabetes achieved the target level for HbA1c, based on data from the Aboriginal and Torres Strait Islander Health Survey (Figure 3.3).

## **About the data**

People who had been told by a doctor or nurse that they have diabetes but who were not taking medications for diabetes and their HbA1c test results between 6.5% and 7.0% were also considered to have known diabetes and classified as effectively managing diabetes for this indicator.

## **Explore the data**

### 3.3 People with diabetes who achieve the target level for HbA1c, by selected population group, 2011–12

Age/sex

Explore by:  Age/sex  
 Indigenous Australians  
 Remoteness areas  
 Socioeconomic areas  
 State/territory

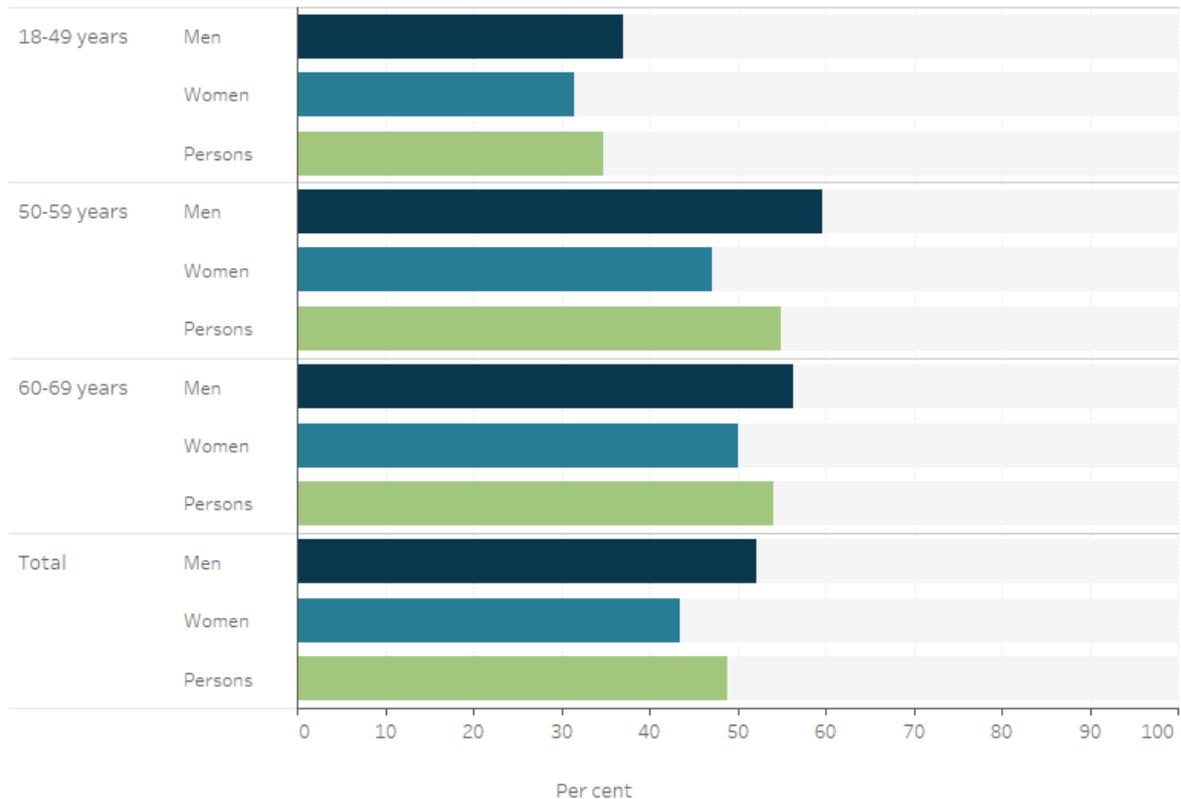


Figure 3.3: People aged 18+ with diabetes who achieve the target level for HbA1c, by selected population group, 2011–12

Sources: ABS 2014; ABS 2015

<https://www.aihw.gov.au>

Labels:

On

Off

#### Indicator 3.3 data specifications

	Definition	Data source
<b>Numerator</b>	<p>Estimated number of adults aged 18–69 years with known diabetes with an HbA1c &lt; 7%.</p> <p>Known diabetes includes people ever told by a doctor or nurse that they have diabetes (type 1, type 2 or type unknown) and they were taking diabetes medication (either insulin or tablets); or ever told that they have diabetes and their HbA1c test results were greater than or equal to the cut off point for diabetes (that is, 6.5%).</p>	<p>ABS 2015; ABS 2014</p>

<b>Denominator</b>	<p>Estimated number of adults (18–69 years) with known diabetes.</p> <p>Known diabetes includes people ever told by a doctor or nurse that they have diabetes (type 1, type 2 or type unknown) and they were taking diabetes medication (either insulin or tablets); or ever told that they have diabetes and their HbA1c test results were greater than or equal to the cut off point for diabetes (that is, 6.5%).</p>	<p>ABS 2015; ABS 2014</p>
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## References

Australian Bureau of Statistics (ABS) 2014. Microdata: Australian Health Survey, Core Content - Risk Factors and Selected Health Conditions, 2011–12. ABS cat. no. 4324.0.55.003. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2015. Microdata: Australian Aboriginal and Torres Strait Islander Health Survey, Core Content - Risk Factors and Selected Health Conditions, 2012–13. ABS cat. no. 4715.0.30.003. Findings based on Detailed Microdata analysis. Canberra: ABS.

Phillips PJ 2012. HbA1c and monitoring glycaemia. *Australian family physician* 41(1/2):37.

The Royal Australian College of General Practitioners (RACGP) 2020. [Management of type 2 diabetes: A handbook for general practice](#). East Melbourne: RACGP. Viewed 4 August 2020.

## 3.4 People with diabetes who had an HbA1c test in the last 12 months

### Consideration

These estimates are based on relatively small numbers and are associated with large sampling error.

### Overview

In 2017–18, it was estimated that 71% of Australian adults with self-reported diabetes had an HbA1c test within the previous 12 months, based on data from the National Health Survey (NHS).

### Trends

After adjusting for age, the proportion of Australian adults with diabetes who reported that they had an HbA1c test remained similar between 2011–12 and 2017–18 (77% compared with 75%, respectively) (Figure 3.4.1).

### Age and sex

There were no differences between age groups, or by sex (Figure 3.4.1).

## **Population groups**

The age-standardised proportion did not differ by socioeconomic areas and remoteness area (Figure 3.4.2). Due to small numbers, age-standardised proportions were not derived.

## **State and territory**

The proportion of Australian adults with diabetes who reported that they had an HbA1c test in the previous 12 months was highest in South Australia (85%) and lowest in New South Wales (67%). Proportions across the other states and territories ranged from 70% to 82% (Figure 3.4.2). Due to small numbers, age-standardised proportions were not derived.

## **Aboriginal and Torres Strait Islander people**

In 2018–19, an estimated 72% of Indigenous Australians with diabetes had an HbA1c test in the past year, based on measured data from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS). Based on estimates from the 2018–19 NATSIHS and 2017–18 NHS, the age-standardised proportion was similar for Indigenous and non-Indigenous adults (73% compared with 75%, respectively) (Figure 3.4.2).

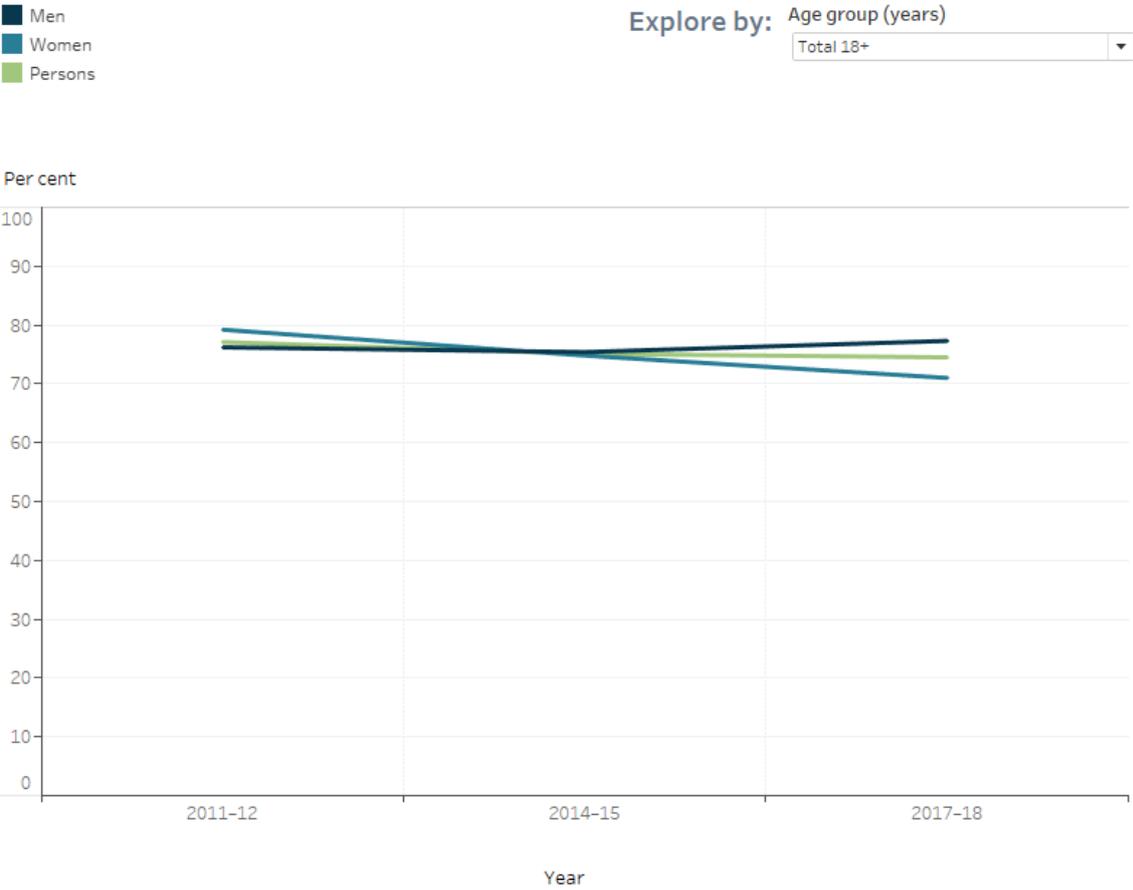
## **About the data**

Data for this indicator from the 2018–19 NATSIHS were only collected for non-remote areas. Therefore, results presented for non-Indigenous adults from the 2017–18 NHS only include non-remote areas.

It should be noted that the estimates obtained from the National Health Surveys are based on relatively small numbers and are associated with large sampling error. The lack of statistical significance does not necessarily mean that there is no difference between the estimates being compared.

## **Explore the data**

### 3.4 People with diabetes who had an HbA1c test in the last 12 months, by sex and age, 2011-12 to 2017-18 and by selected population group, 2017-18



**Figure 3.4.1: People with diabetes aged 18+ who had an HbA1c test in the last 12 months, by sex and age, 2011-12 to 2017-18**  
 Note: Total age-standardised to the 2001 Australian Standard Population.  
 Sources: ABS 2013; ABS 2016; ABS 2019a  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

## Age/sex—All Australians

- Explore by:
- Age/sex—All Australians
  - Age/sex—Indigenous Australians
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory

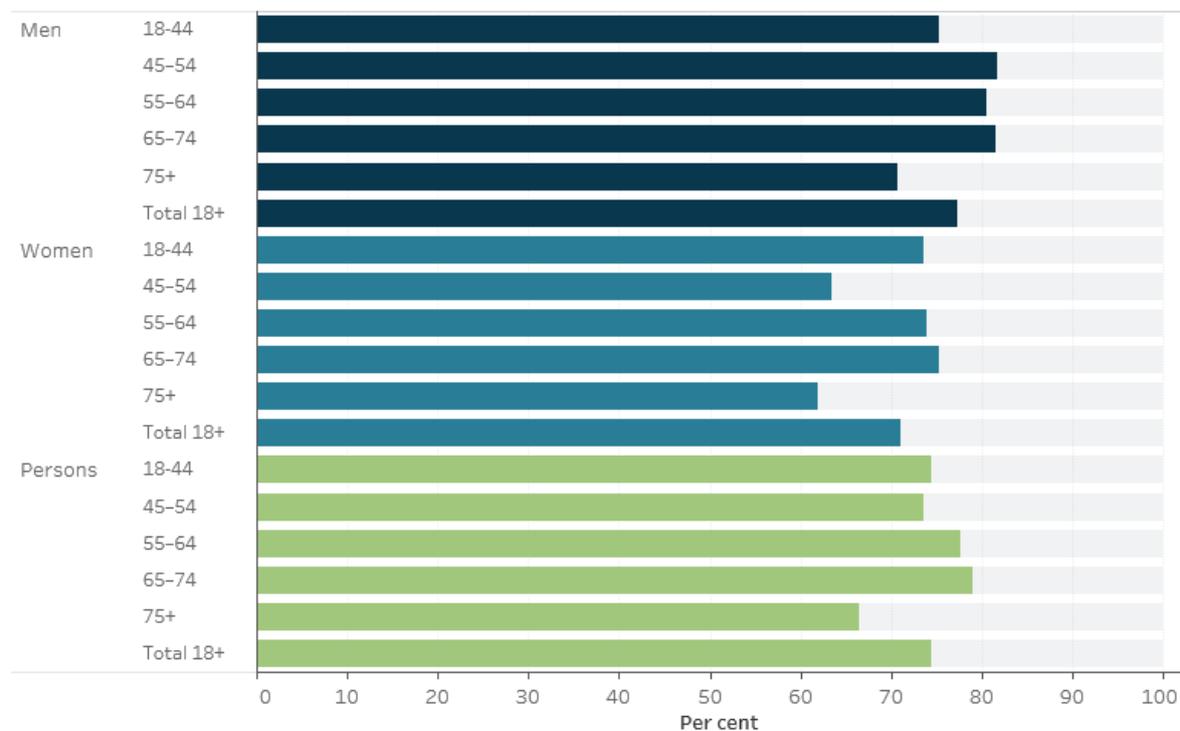


Figure 3.4.2: People with diabetes aged 18+ who had an HbA1c test in the last 12 months, by selected population group, 2017

-18

Notes:

1. Age-standardised to the 2001 Australian Standard Population.

2. Crude rates reported for age groups, remoteness areas, socioeconomic areas and state/territory.

Sources: ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

Labels:

On

Off

### Indicator 3.4 data specifications

	Definition	Data source
<b>Numerator</b>	<p>Estimated number of adults (18+ years) with self-reported diabetes who had an HbA1c test in the previous 12 months.</p> <p>Included people with type 1 diabetes, type 2 diabetes, and type unknown.</p>	<p>ABS 2019a; ABS 2019b; ABS 2016; ABS 2013</p>
<b>Denominator</b>	<p>Estimated number of adults (18+ years) with self-reported diabetes.</p> <p>Included people with type 1 diabetes, type 2 diabetes, and type unknown.</p>	<p>ABS 2019a; ABS 2019b; ABS 2016; ABS 2013</p>

## References

Australian Bureau of Statistics (ABS) 2013. Microdata: Australian Health Survey, National Health Survey, 2011–12. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017–18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## Indicator 3.5 Prevalence of end-stage kidney disease among people with diabetes

### Considerations

- This is a proxy measure based on the prevalence of treated end-stage kidney disease (ESKD) from the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA) and the total population of people with self-reported diabetes from the ABS National Health Survey (NHS).
- This method is likely to underestimate the total population of people with diabetes as some people are unaware they have the condition. In 2011–12 the ABS found that, based on biomedical data, around 1 in 5 people with diabetes were unaware that they had the condition (ABS 2013). In addition, the prevalence of ESKD is likely underestimated, with approximately 50% of people with ESKD remaining untreated (Lim et al. 2019).

### Overview

An estimated 10,400 people with diabetes had treated end-stage kidney disease — 884 per 100,000 population in 2018.

### Trends

After adjusting for age, the estimated prevalence of treated end-stage kidney disease among people with diabetes increased from 623 per 100,000 population in 2008 to 773 per 100,000 population in 2018 (Figure 3.5.1).

### Age and sex

Males had a higher age-standardised prevalence rate than females (804 and 733 per 100,000 population, respectively) and, by age, the rate was highest among those aged 45–54 (1,200 per 100,000 population) in 2018 (Figure 3.5.2).

## **Population groups**

By remoteness area, the prevalence was lowest in *Major cities* and *Inner regional* areas (695 and 733 per 100,000 population, respectively) and highest in *Outer regional/Remote* areas (1,500 per 100,000 population). The prevalence of treated end-stage kidney disease among people with diabetes ranged from 571 per 100,000 population to 1,100 per 100,000 population across the socioeconomic areas (Figure 3.5.2).

## **State and territory**

Rates of treated end-stage kidney disease among people with diabetes varied by state and territory from 624 per 100,000 population in Victoria to 5,800 per 100,000 in the Northern Territory (Figure 3.5.2).

## **Aboriginal and Torres Strait Islander people**

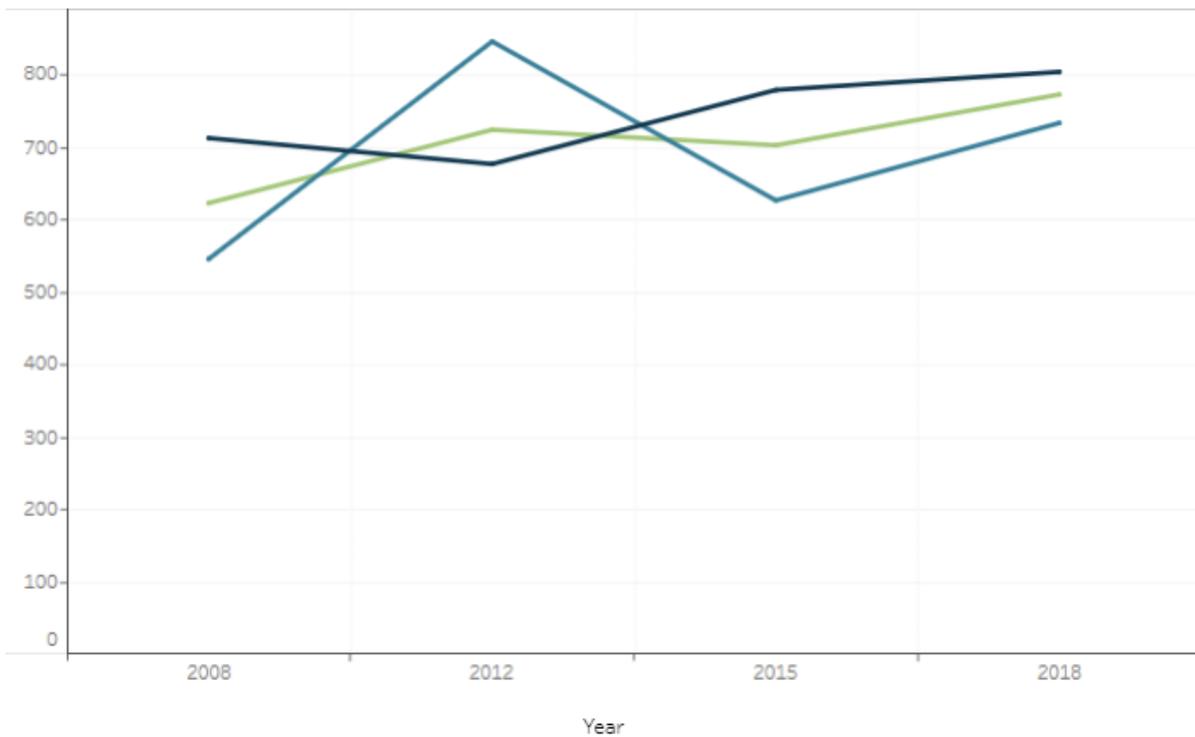
In 2018, an estimated 1,700 Indigenous Australians with diabetes had treated end-stage kidney disease, equating to 2,700 per 100,000 population (the estimated number of people with self-reported diabetes from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey).

## **Explore the data**

### **3.5 Prevalence of treated end-stage kidney disease among people with diabetes, 2008–2018 and by selected population group, 2018**

- Males
- Females
- Persons

Number per 100,000 population



- Labels:
- On
  - Off

**Figure 3.5.1: Prevalence of treated end-stage kidney disease among people with diabetes, by sex, 2008 to 2018**

Note: Age-standardised to the 2001 Australian Standard Population.

Source: AIHW analysis of the Australian and New Zealand Dialysis and Transplant Registry (ANZDATA) data; ABS 2019a

<https://www.aihw.gov.au>

## Age/sex

Explore by:  Age/sex  
 Indigenous status  
 Remoteness areas  
 Socioeconomic areas  
 State/territory

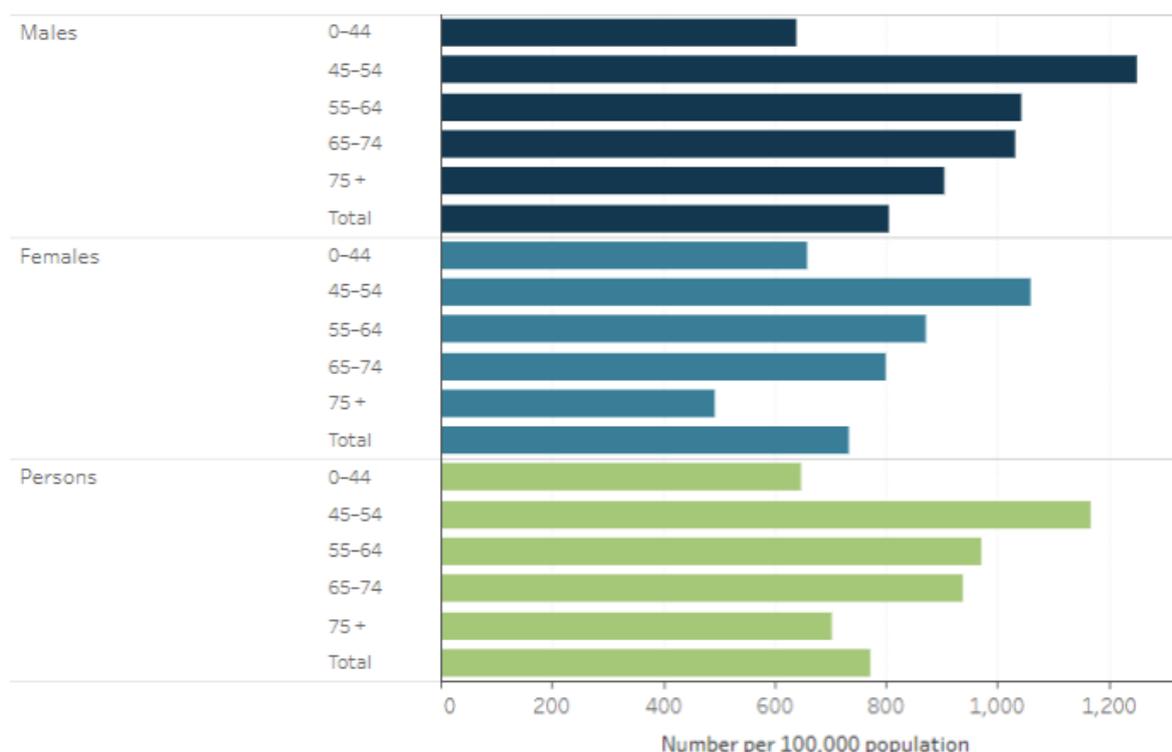


Figure 3.5.2: Prevalence of treated end-stage kidney disease among people with diabetes, by selected population group, 2018

Notes:

1. Total rates age-standardised to the 2001 Australian Standard Population.

2. Crude rates reported for individual age groups and Indigenous status.

Source: AIHW analysis of the Australian and New Zealand Dialysis and Transplant Registry (ANZDATA) data; ABS 2019a

<https://www.aihw.gov.au>

Labels:

On

Off

## Indicator 3.5 data specifications

	Definition	Data source
<b>Numerator</b>	Number of treated end-stage kidney disease cases with diabetes.	ANZDATA 2018
<b>Denominator</b>	Estimated number of adults (18+ years) with self-reported diabetes. Included people with type 1 diabetes, type 2 diabetes, and type unknown.	ABS 2019a; ABS 2019b ; ABS 2016; ABS 2013; ABS 2009

## References

Australian Bureau of Statistics (ABS) 2009. Microdata: National Health Survey, 2007–08. ABS cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2013. Microdata: Australian Health Survey, National Health Survey, 2011–12. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017–18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

Lim WH, Johnson DW, McDonald SP, Hawley C, Clayton PA, Jose MD et al. 2019. Impending challenges of the burden of end-stage kidney disease in Australia. *Medical Journal of Australia* 211(8).

## **Indicator 3.6 Prevalence of vision loss caused by diabetes**

### **Consideration**

These estimates are based on relatively small numbers and are associated with large sampling error. Due to small numbers, age-standardised proportions were not derived.

### **Overview**

Based on data from the 2017–18 ABS National Health Survey, it was estimated that 7.7% or 89,500 adults with self-reported diabetes had vision loss due to their diabetes (self-reported sight condition caused by diabetes).

### **Trends**

There were no significant differences in the unadjusted prevalence of vision loss due to diabetes between 2001 (14.5%) and 2017–18 (7.7%) (Figure 3.6.1).

### **Age and sex**

The prevalence of vision loss caused by diabetes was similar among men and women and across the age groups (Figure 3.6.1).

### **Population groups**

The proportions for both remoteness and socioeconomic areas have a high margin of error and should be used with caution (Figure 3.6.2).

### **State and territory**

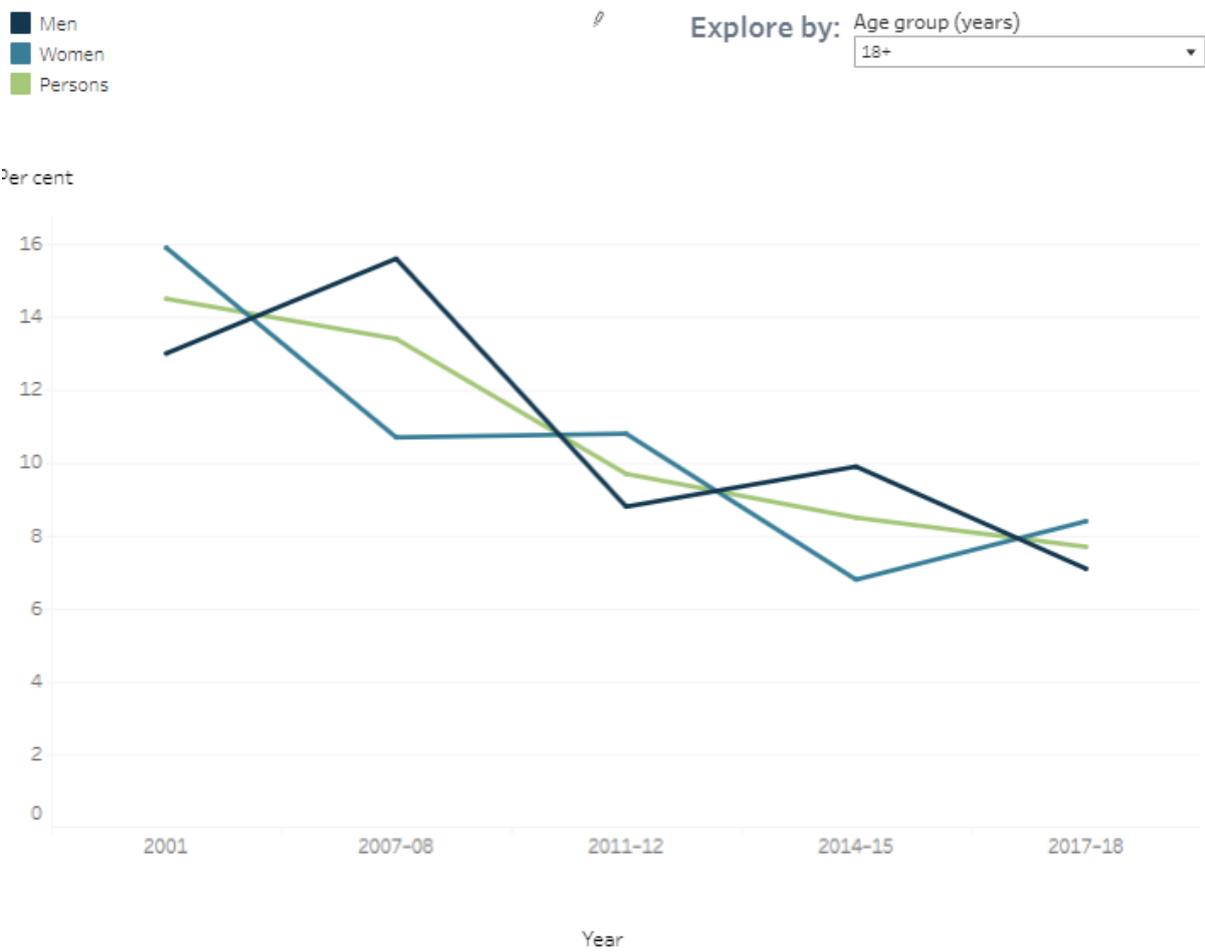
The prevalence of vision loss due to diabetes in 2017–18 varied across the states and territories from 5.7% in Victoria to 11.9% in South Australia (Figure 3.6.2).

**Aboriginal and Torres Strait Islander people**

In 2018–19, an estimated 17.7% of Indigenous Australians with self-reported diabetes had vision loss as a result of the disease in the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS). Based on estimates from the 2017–18 NHS, 7.6% of non-Indigenous Australians have vision loss due to their diabetes (Figure 3.6.2).

**Explore the data**

**3.6 Prevalence of vision loss caused by diabetes among people aged 18+, by age group and sex, 2007–08 to 2017–18 and by selected population group, 2017–18**



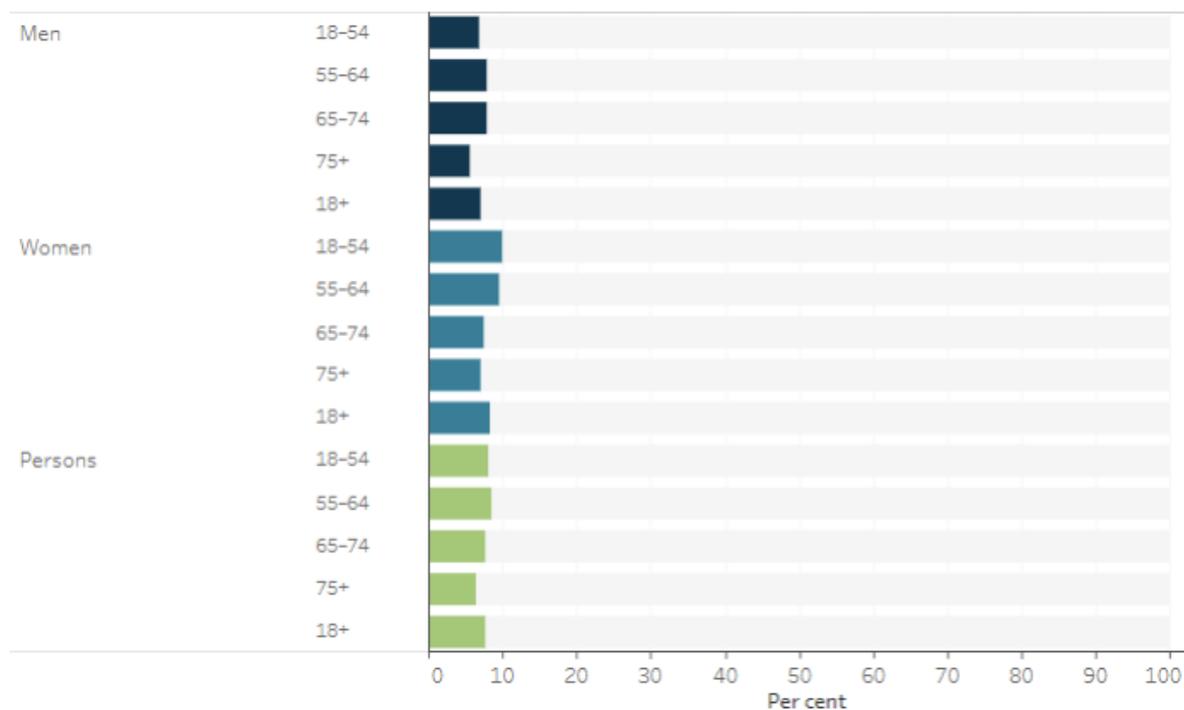
**Figure 3.6.1: Prevalence of vision loss caused by diabetes among people aged 18+, by age group and sex, 2001 to 2017-18**

Note: Based on self-reported data.  
 Sources: ABS 2009; ABS 2013; ABS 2016; ABS 2019a  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

## Age/sex—All Australians

- Explore by:
- Age/sex—All Australians
  - Age/sex—Indigenous Australians
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory



**Figure 3.6.2: Prevalence of vision loss caused by diabetes among people aged 18+, by selected population group, 2017-18**

Notes:

1. Based on self-reported data.

2. Indigenous status: Indigenous data for 2018-19; non-Indigenous data for 2017-18.

Sources: ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 3.6 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of adults (18+ years) with a self-reported sight condition caused by diabetes. Included people with type 1 diabetes, type 2 diabetes, and type unknown.	ABS 2019a; ABS 2019b; ABS 2016; ABS 2013; ABS 2009
<b>Denominator</b>	Estimated number of adults (18+ years) with self-reported diabetes. Included people with type 1 diabetes, type 2 diabetes, and type unknown.	ABS 2019a; ABS 2019b; ABS 2016; ABS 2013; ABS 2009

Australian Bureau of Statistics (ABS) 2009. Microdata: National Health Survey, 2007–08. ABS cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2013. Microdata: Australian Health Survey, National Health Survey, 2011–12. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017–18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## **Indicator 3.7 Prevalence of cardiovascular disease among people with diabetes**

### **Consideration**

These estimates are based on relatively small numbers and are associated with large sampling error. Due to small numbers, age-standardised proportions were not derived.

### **Overview**

In 2017–18, an estimated 660,000 Australian adults with self-reported diabetes had cardiovascular disease (CVD), corresponding to 57% of adults with diabetes, based on self-reported diabetes and cardiovascular data from the National Health Survey (NHS).

### **Trends**

The unadjusted prevalence of cardiovascular disease among people with diabetes varied across the years:

- 58% in 2007–08
- 53% in 2011–12
- 64% in 2014–15
- 57% in 2017–18 (Figure 3.7.1)

### **Age and sex**

There was no difference in the prevalence of CVD among men and women with self-reported diabetes, and proportions increased with age (Figure 3.7.1).

## **Population groups**

There was no difference by remoteness or socioeconomic areas (Figure 3.7.2). The proportions for both remoteness and socioeconomic areas have a high margin of error and should be used with caution.

## **State and territory**

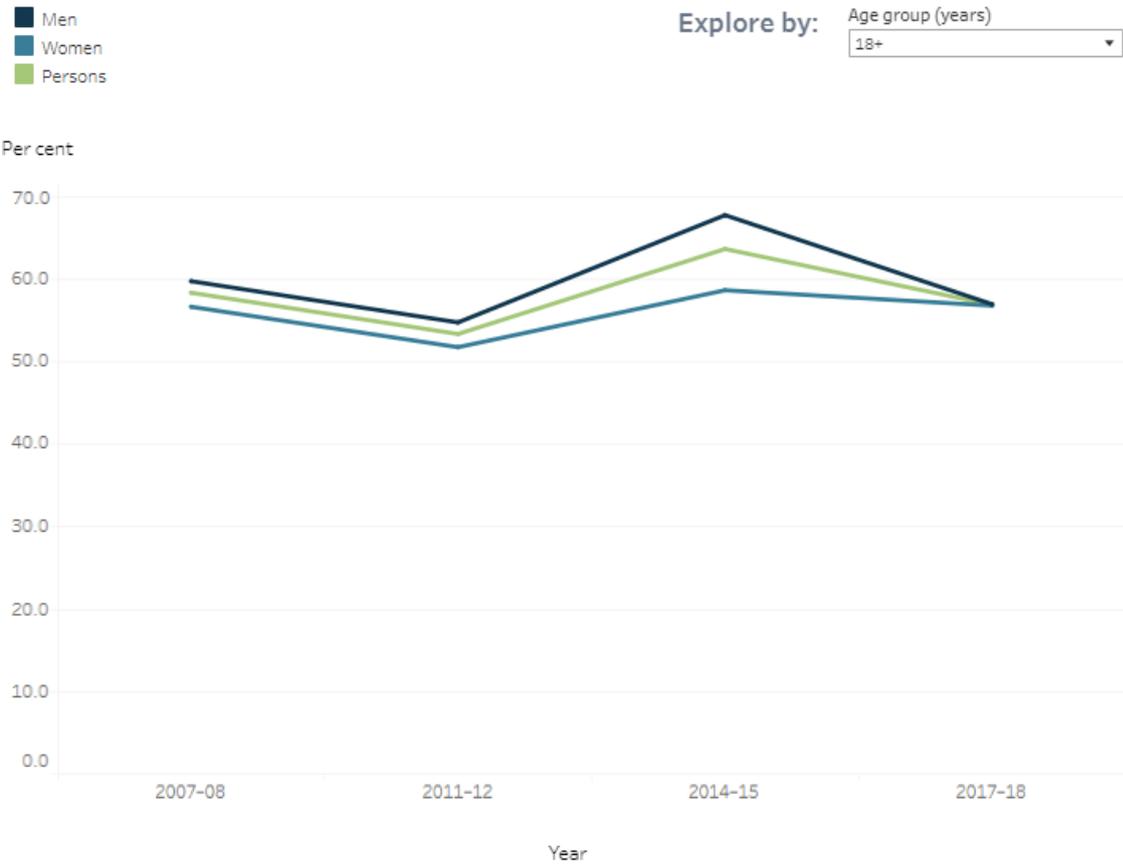
The prevalence of CVD among men and women with self-reported diabetes varied across the states and territories (Figure 3.7.2). The proportions for Western Australia, Tasmania and Australian Capital Territory have a high margin of error and should be used with caution.

## **Aboriginal and Torres Strait Islander people**

Based on self-reported data from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), an estimated 36,600 (58%) of Indigenous Australians with diabetes had CVD in 2018–19. In 2017–18, 57% of non-Indigenous adults with diabetes had CVD, based on self-reported data from the NHS (Figure 3.7.2).

## **Explore the data**

**3.7 Prevalence of cardiovascular disease among adults with diabetes, by age group and sex, 2007-08 to 2017-18 and by selected population groups, 2017-18**



**Figure 3.7.1: Prevalence of cardiovascular disease among adults with diabetes, by age group and sex, 2007-08 to 2017-18**

Note: Based on self-reported data.  
 Sources: ABS 2009; ABS 2013; ABS 2016; ABS 2019a  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

## Age/sex—All Australians

- Explore by:
- Age/sex—All Australians
  - Age/sex—Indigenous Australians
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory

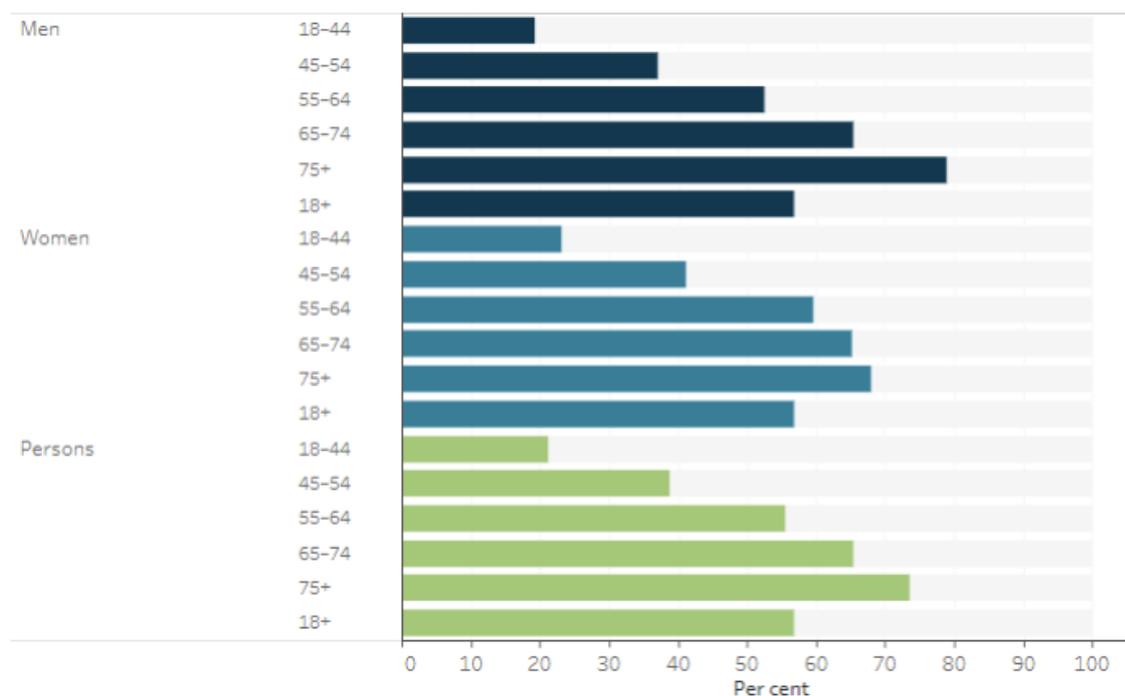


Figure 3.7.2: Prevalence of cardiovascular disease among adults with diabetes, by selected population group, 2017-18

Notes:

1. Based on self-reported data.

2. Indigenous status: Indigenous data for 2018-19; non-Indigenous data for 2017-18.

Sources: ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

Labels:

On

Off

## Indicator 3.7 data specifications

	Definition	Data source
<b>Numerator</b>	<p>Estimated number of adults (18+ years) with self-reported diabetes and cardiovascular disease.</p> <p>Includes people with type 1 diabetes, type 2 diabetes, and type unknown. Cardiovascular disease estimates includes people with angina, heart attack, other ischaemic heart disease, stroke, other cerebrovascular disease, heart failure, other heart disease, hypertensive diseases, tachycardia, oedema, diseases of the arteries and arterioles, other diseases of the circulatory system, abnormalities of heartbeat, cardiac murmurs and sounds, other signs and symptoms</p>	<p>ABS 2019a; ABS 2019b; ABS 2016; ABS 2013; ABS 2009</p>

	involving the circulatory system, other diseases of the veins and lymphatic vessels and varicose veins.	
<b>Denominator</b>	Estimated number of adults (18+ years) with self-reported diabetes.  Includes people with type 1 diabetes, type 2 diabetes, and type unknown.	ABS 2019a; ABS 2019b; ABS 2016; ABS 2013; ABS 2009

## References

Australian Bureau of Statistics (ABS) 2009. Microdata: National Health Survey, 2007–08. ABS cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2013. Microdata: Australian Health Survey, National Health Survey, 2011–12. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017–18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## Indicator 3.8 Diabetes hospitalisations by type of diabetes

### On this page

[3.8.1 Type 1 diabetes](#)

[3.8.2 Type 2 diabetes](#)

[3.8.3 Diabetes during pregnancy](#)

[3.8.4 Diabetes other & unspecified](#)

### Consideration

Symptoms of type 1 and type 2 diabetes are similar, particularly in young adults, and the diagnosed diabetes type, and subsequently coded diabetes type are not always correct (Stone et al. 2010).

### 3.8.1 Type 1 diabetes

#### Overview

In 2017–18, there were around 61,900 hospitalisations with a principal and/or additional diagnosis of type 1 diabetes —250 per 100,000 population.

#### Trends

After adjusting for age, type 1 diabetes hospitalisation rates remained relatively similar between 2012–13 and 2017–18 (222 and 242 per 100,000 population, respectively) (Figure 3.8.1.1).

#### Age and sex

The age-standardised hospitalisation rates for type 1 diabetes were slightly higher in males than females (246 and 240 hospitalisations per 100,000 population, respectively) in 2017–18. Age-specific rates peaked in those aged 65–74 (407 hospitalisations per 100,000 population) (Figure 3.8.1.1).

#### Population groups

Age-standardised hospitalisation rates for type 1 diabetes varied across the remoteness areas, with the highest rate in *Inner regional* (317 per 100,000 population) and the lowest hospitalisation rate in *Remote and very remote* areas (192 per 100,000 population). Rates were 1.6 times as high among those living in the lowest socioeconomic areas compared to those living in the highest socioeconomic areas (305 and 188 per 100,000, respectively) (Figure 3.8.1.2).

#### State and territory

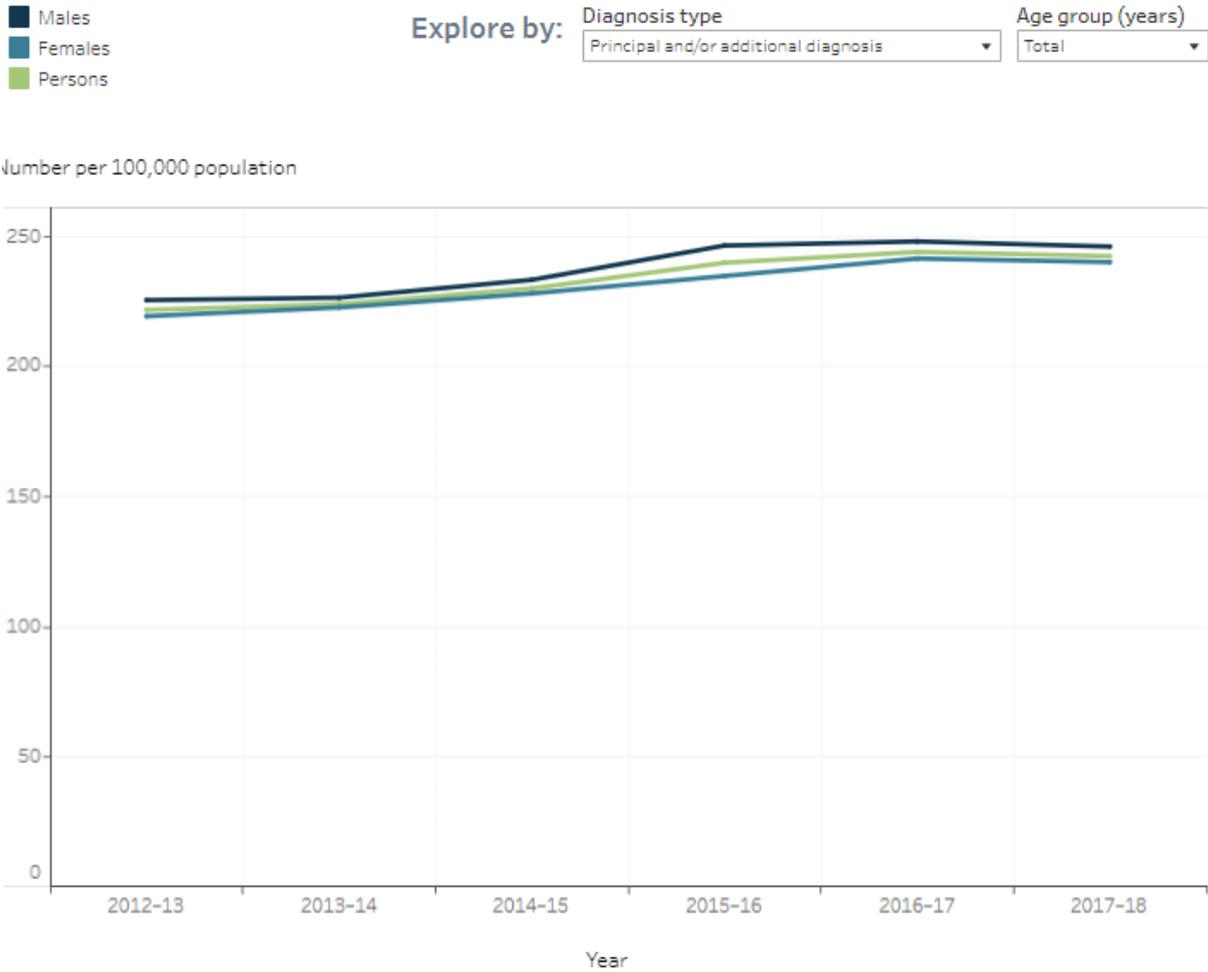
There was some variation between states and territories with the highest hospitalisation rate with a principal and/or additional diagnosis of type 1 diabetes in Tasmania (335 per 100,000 population) and lowest hospitalisation rate in the Northern Territory (149 per 100,000 population) (Figure 3.8.1.2).

#### Aboriginal and Torres Strait Islander people

In 2017–18, there were around 3,000 hospitalisations with a principal and/or additional diagnosis of type 1 diabetes among Aboriginal and Torres Strait Islander people, equating to 361 per 100,000 population. After adjusting for age, the hospitalisation rate was almost twice as high among Indigenous people compared with non-Indigenous people (446 and 233 per 100,000, respectively) (Figure 3.8.1.2).

#### Explore the data

### 3.8.1 Type 1 diabetes hospitalisations, by diagnosis type, age and sex, 2012-13 to 2017-18 and by selected population group, 2017-18



**Figure 3.8.1.1: Type 1 diabetes hospitalisations, by diagnosis type, age and sex, 2012-13 to 2017-18**

Notes:  
 1. Age-standardised to the 2001 Australian Standard Population.  
 2. Crude rates reported for Age group.  
 Source: AIHW analysis of the National Hospital Morbidity Database  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

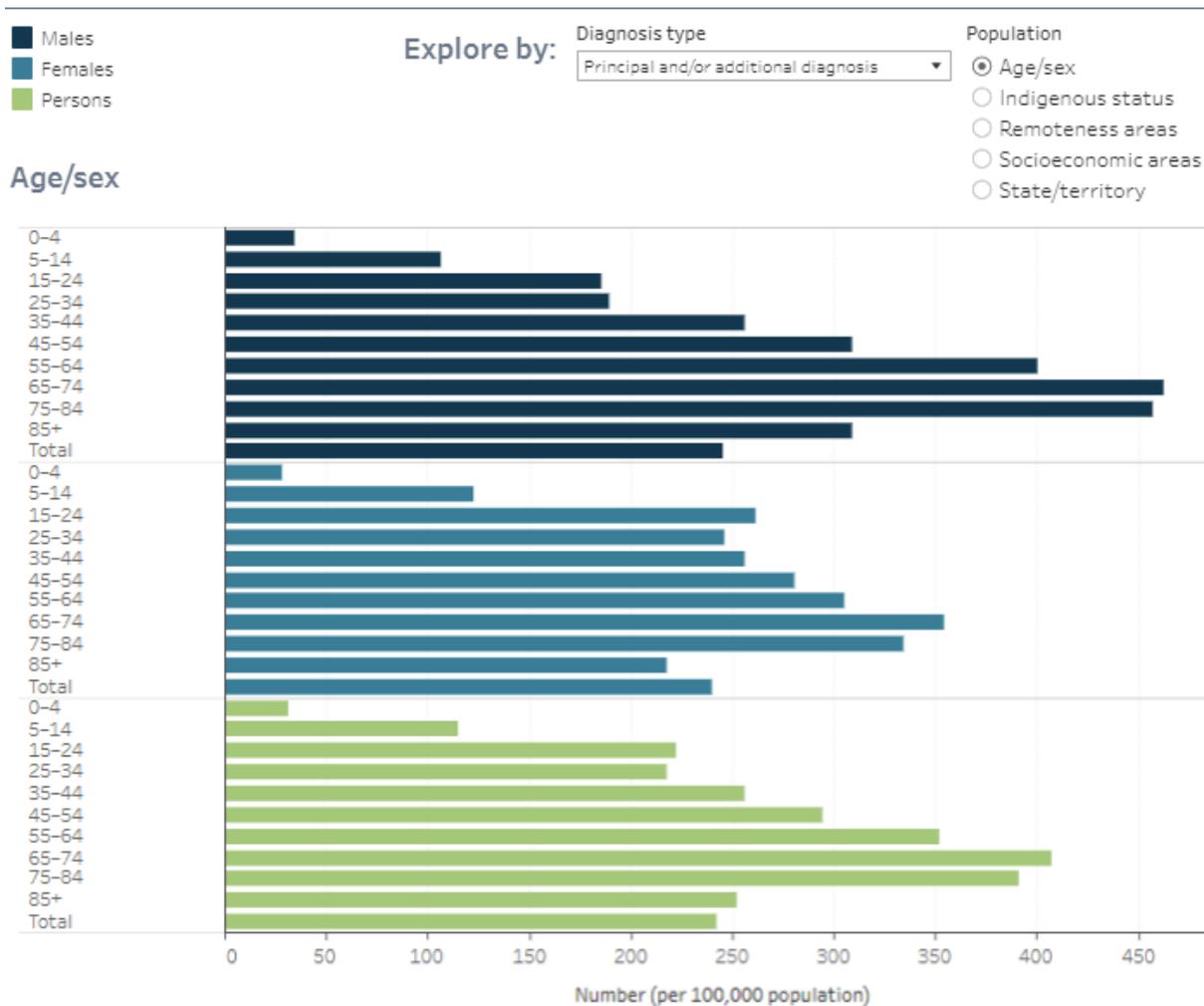


Figure 3.8.1.2: Type 1 diabetes hospitalisations by diagnosis type and selected population groups, 2017-18

Notes:

1. Age-standardised to the 2001 Australian Standard Population.

2. Crude rates reported for Age group.

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

On

Off

### Indicator 3.8.1 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations (principal; additional; principal and/or additional diagnosis) for type 1 diabetes (ICD-10-AM: E10).	AIHW National Hospital Morbidity Database (NHMD)
<b>Denominator</b>	Estimated Australian resident population	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

## 3.8.2 Type 2 diabetes

### Overview

In 2017–18, there were around 1.1 million hospitalisations with a principal and/or additional diagnosis of type 2 diabetes—5,500 per 100,000 population.

### Trends

After adjusting for age, the hospitalisation rates for type 2 diabetes increased from 3,800 per 100,000 in 2012–13 to 4,900 per 100,000 population in 2017–18 (Figure 3.8.2.1).

### Age and sex

The age-standardised hospitalisation rate was 1.4 times as high among men as women (5,700 and 4,100 hospitalisations per 100,000 population, respectively). Age-specific hospitalisation rates increased with age, reaching a peak in those aged 75–84 (24,400 per 100,000 population) (Figure 3.8.2.1).

### Population groups

Hospitalisation rates for type 2 diabetes increased with remoteness and socioeconomic disadvantage. Rates were 2.5 times as high among those living in *Remote and very remote* areas as *Major cities* (11,500 and 4,600 per 100,000 population, respectively). Rates were 2.0 times as high among those living in the lowest socioeconomic areas compared to those living in the highest socioeconomic areas (6,700 and 3,300 per 100,000, respectively) (Figure 3.8.2.2).

### State and territory

Hospitalisation rates for type 2 diabetes varied by state and territory in 2017–18, from 3,300 per 100,000 population in the Australian Capital Territory to 11,100 per 100,000 population in the Northern Territory (Figure 3.8.2.2).

### Aboriginal and Torres Strait Islander people

In 2017–18, there were around 69,000 hospitalisations with a principal and/or additional diagnosis of type 2 diabetes among Indigenous adults, a rate of 14,000 per 100,000 population. The age-standardised hospitalisation rate was almost 5 times as high among Indigenous adults as non-Indigenous adults (19,000 and 4,500 per 100,000, respectively) (Figure 3.8.2.2).

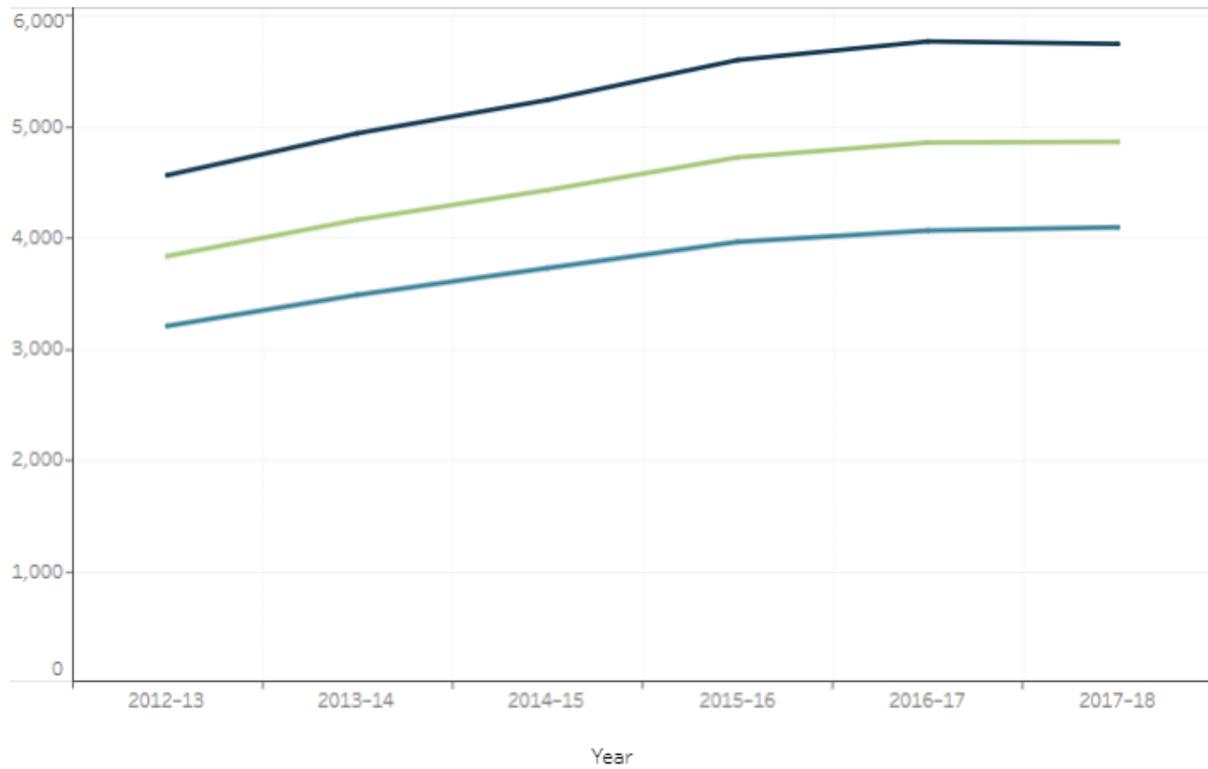
### Explore the data

### 3.8.2 Type 2 diabetes hospitalisations, by diagnosis type, age and sex, 2012-13 to 2017-18 and by selected population group, 2017-18

- Males
- Females
- Persons

Explore by: Diagnosis type Age group (years)  
Principal and/or additional diagnosis Total

Number per 100,000 population



**Figure 3.8.2.1: Type 2 diabetes hospitalisations, by diagnosis type, age and sex, 2012-13 to 2017-18**

Notes:

1. Age-standardised to the 2001 Australian Standard Population.
2. Crude rates reported for Age group.

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

- On
- Off

- Males
- Females
- Persons

Explore by:

Diagnosis type  
Principal and/or additional diagnosis

- Population
- Age/sex
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory

### Age/sex

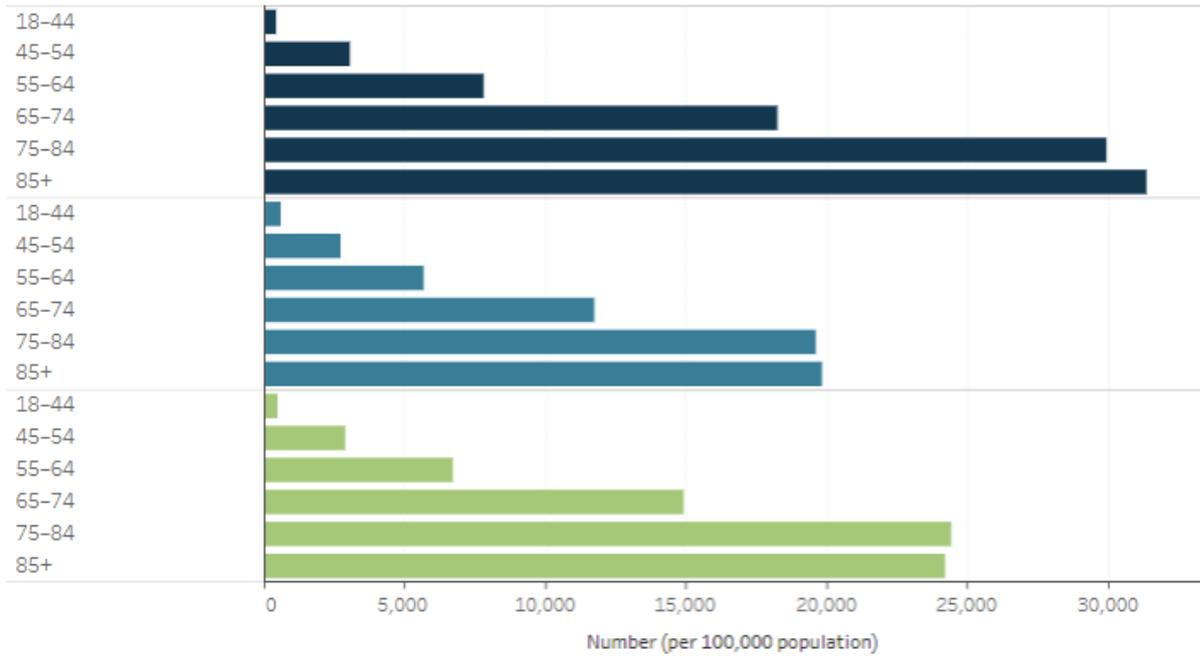


Figure 3.8.2.2: Type 2 diabetes hospitalisations, by diagnosis type and selected population groups, 2017-18

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

On

Off

### Indicator 3.8.2 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations (principal; additional; principal and/or additional diagnosis) for type 2 diabetes (ICD-10-AM: E11).	AIHW NHMD
<b>Denominator</b>	Estimated Australian resident population (18+ years).	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

### 3.8.3 Diabetes during pregnancy

#### Overview

In 2017–18, around 62,800 women were admitted to hospital with a principal and/or additional diagnosis of diabetes during pregnancy, a rate of 18,000 per 100,000 females aged 10–54 years with a pregnancy outcome.

#### Trends

Age-standardised hospitalisation rates increased from 10,300 per 100,000 females aged 10–54 years with a pregnancy outcome in 2012–13 to 20,200 per 100,000 females in 2017–18 (Figure 3.8.3.1).

#### Age

The hospitalisation rate increased with age, reaching a peak in those aged 45–54 (34,200 per 100,000 females) (Figure 3.8.3.1).

#### Population groups

Hospitalisation rates for diabetes during pregnancy rose with increasing socioeconomic disadvantage. Rates were almost twice as high among those living in the lowest socioeconomic areas as those living in the highest socioeconomic areas (26,100 and 14,100 per 100,000 females aged 10–54 years with a pregnancy outcome, respectively). Compared with females living in *Major cities*, those living in *Remote and very remote* areas were 2.5 times as likely to be hospitalised with diabetes during pregnancy (19,400 and 48,500 per 100,000 females aged 10–54 years with a pregnancy outcome, respectively) (Figure 3.8.3.2).

#### State and territory

Rates varied by state and territory with the Australian Capital Territory having the highest rate (29,400 per 100,000 females aged 10–54 years with a pregnancy outcome) and Western Australia having the lowest rate (14,200 per 100,000 females) (Figure 3.8.3.2).

#### Aboriginal and Torres Strait Islander people

Around 3,800 Aboriginal and Torres Strait Islander females were admitted to hospital with a principal and/or additional diagnosis of diabetes during pregnancy, a rate of 24,700 per 100,000 females aged 10–54 years with a pregnancy outcome. Age-standardised rates were 1.8 times as high among Indigenous females in this cohort as non-Indigenous females (36,300 and 19,800 per 100,000 females, respectively) (Figure 3.8.3.2).

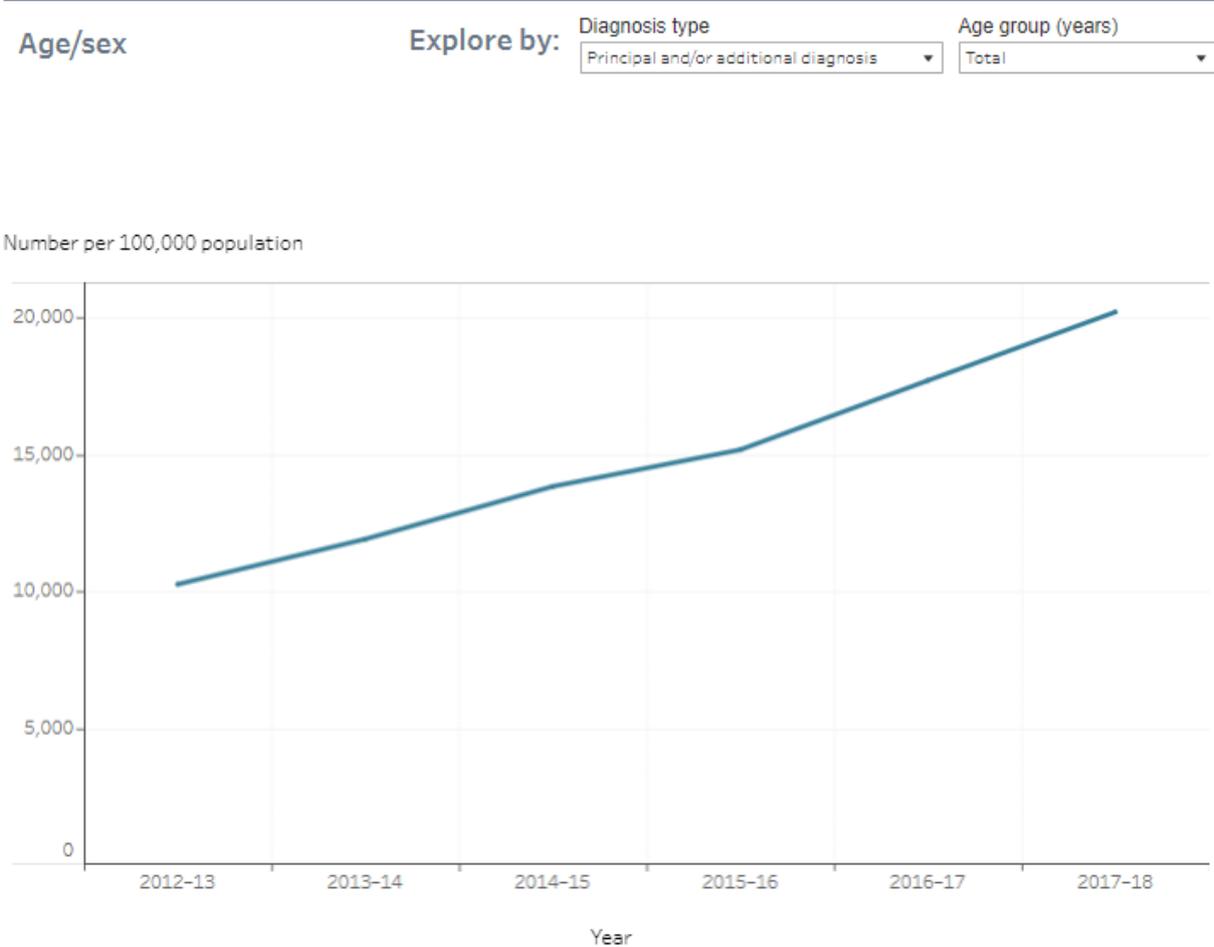
#### About the data

Rates for this indicator have been calculated based on the number of hospitalisations of females with a pregnancy outcome.

Diabetes in pregnancy data includes hospitalisations with principal and/or additional diagnosis of gestational diabetes. Caution should be taken when comparing rates over time, due to a number of factors affecting the diagnosis of gestational diabetes in Australia in recent years. These include the introduction of new diagnostic guidelines and increasing risk factors in the population (see trends discussion in [Incidence of gestational diabetes in Australia](#) for more information).

**Explore the data**

**3.8.3 Hospitalisations for diabetes during pregnancy, by diagnosis type and age group, 2012-13 to 2017-18 and by selected population group, 2017-18**



**Figure 3.8.3.1: Hospitalisations for diabetes during pregnancy, by diagnosis type and age group, 2012-13 to 2017-18**

Notes:  
 1. Age-standardised to the 2001 Australian Standard Population.  
 2. Crude rates reported for Age group.  
 Source: AIHW analysis of the National Hospital Morbidity Database  
<https://www.aihw.gov.au>

Age group  
(years)

Explore by:

Diagnosis type

Principal and/or additional diagnosis

Population

- Age group (years)
- Indigenous status
- Remoteness areas
- Socioeconomic areas
- State/territory

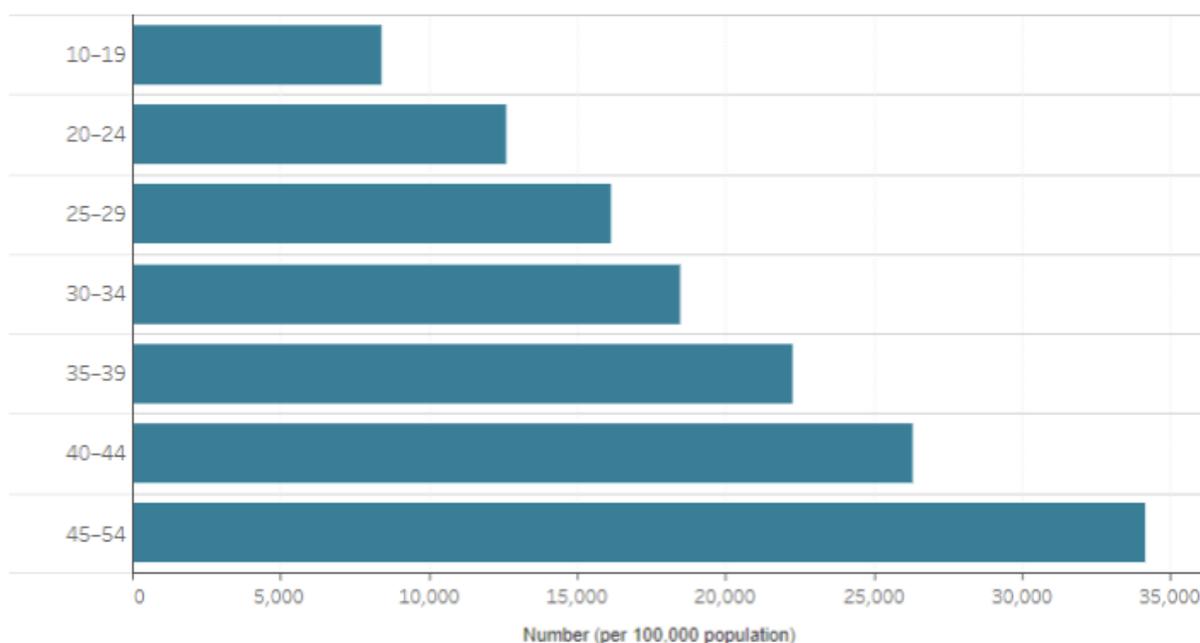


Figure 3.8.3.2: Hospitalisations for diabetes during pregnancy, by diagnosis type and selected population groups, 2017-18

Source: AIHW analysis of the National Hospital Morbidity Database  
<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 3.8.3 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations (principal; additional; principal and/or additional diagnosis) for diabetes in pregnancy (ICD-10-AM: O24).	AIHW NHMD
<b>Denominator</b>	Number of hospitalisations for pregnancy outcomes (ICD-10-AM: Z37, O03 O04, O05, O06, O80, O81, O82, O83, O84, P95 and P964).	AIHW NHMD

### 3.8.4 Diabetes - other and unspecified

#### Overview

In 2017–18, there were around 14,100 hospitalisations with a principal and/or additional diagnosis of other and unspecified diabetes—57 per 100,000 population.

#### Trends

After adjusting for age, hospitalisation rates remained relatively stable between 2012–13 and 2017–18 (between 47 and 54 per 100,000 population) (Figure 3.8.4.1).

#### Age and sex

The age-standardised hospitalisation rates were slightly higher in males than females (57 and 48 hospitalisations per 100,000 population, respectively) in 2017–18. Age-specific rates peaked in those aged 75–84 (170 hospitalisations per 100,000 population) (Figure 3.8.4.1).

#### Population groups

Age-standardised hospitalisation rates were slightly higher among those living in the lowest socioeconomic areas compared to those living in the highest socioeconomic areas (56 and 49 hospitalisations per 100,000 population, respectively), and higher among those living in *Remote and very remote* areas compared to those living in *Major cities* (63 and 53 hospitalisations per 100,000 population, respectively) (Figure 3.8.4.2).

#### State and territory

Rates varied by state and territory with South Australia having the highest rate (75 hospitalisations per 100,000 population) and the Australian Capital Territory having the lowest (25 hospitalisations per 100,000 population) (Figure 3.8.4.2).

#### Aboriginal and Torres Strait Islander people

In 2017–18, there were around 885 hospitalisations with a principal and/or additional diagnosis of other and unspecified diabetes among Aboriginal and Torres Strait Islander people, equating to 156 per 100,000 population. After adjusting for age, the hospitalisation rate was more than 3 times as high among Indigenous people as non-Indigenous people (156 and 48 per 100,000, respectively).

#### Explore the data

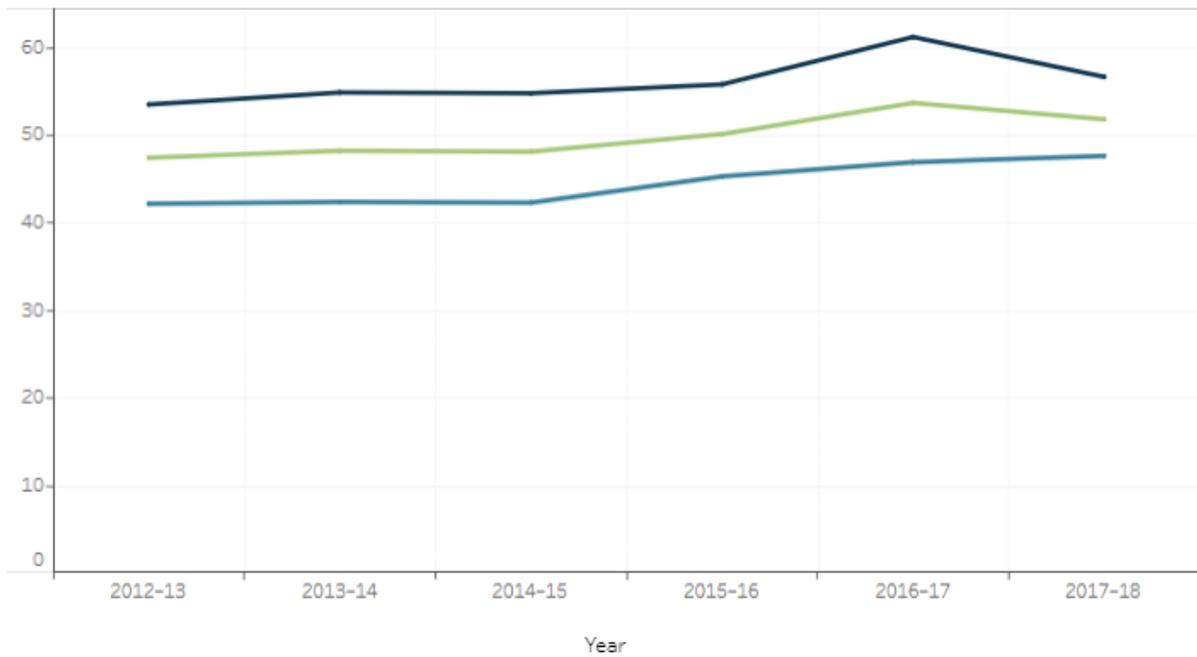
### 3.8.4 Hospitalisations by diabetes type: 'Other & unspecified', by diagnosis type, age and sex, 2012-13 to 2017-18 and by selected population group, 2017-18

- Males
- Females
- Persons

Explore by: Diagnosis type Age group (years)  
Principal and/or additional diagnosis Total

#### Age/sex

Number per 100,000 population



**Figure 3.8.4.1: Hospitalisations by diabetes type: 'Other & unspecified', by diagnosis type, age and sex, 2012-13 to 2017-18**

Notes:

1. Age-standardised to the 2001 Australian Standard Population.
  2. Crude rates reported for Age group.
- Source: AIHW analysis of the National Hospital Morbidity Database  
<https://www.aihw.gov.au>

Labels:

- On
- Off

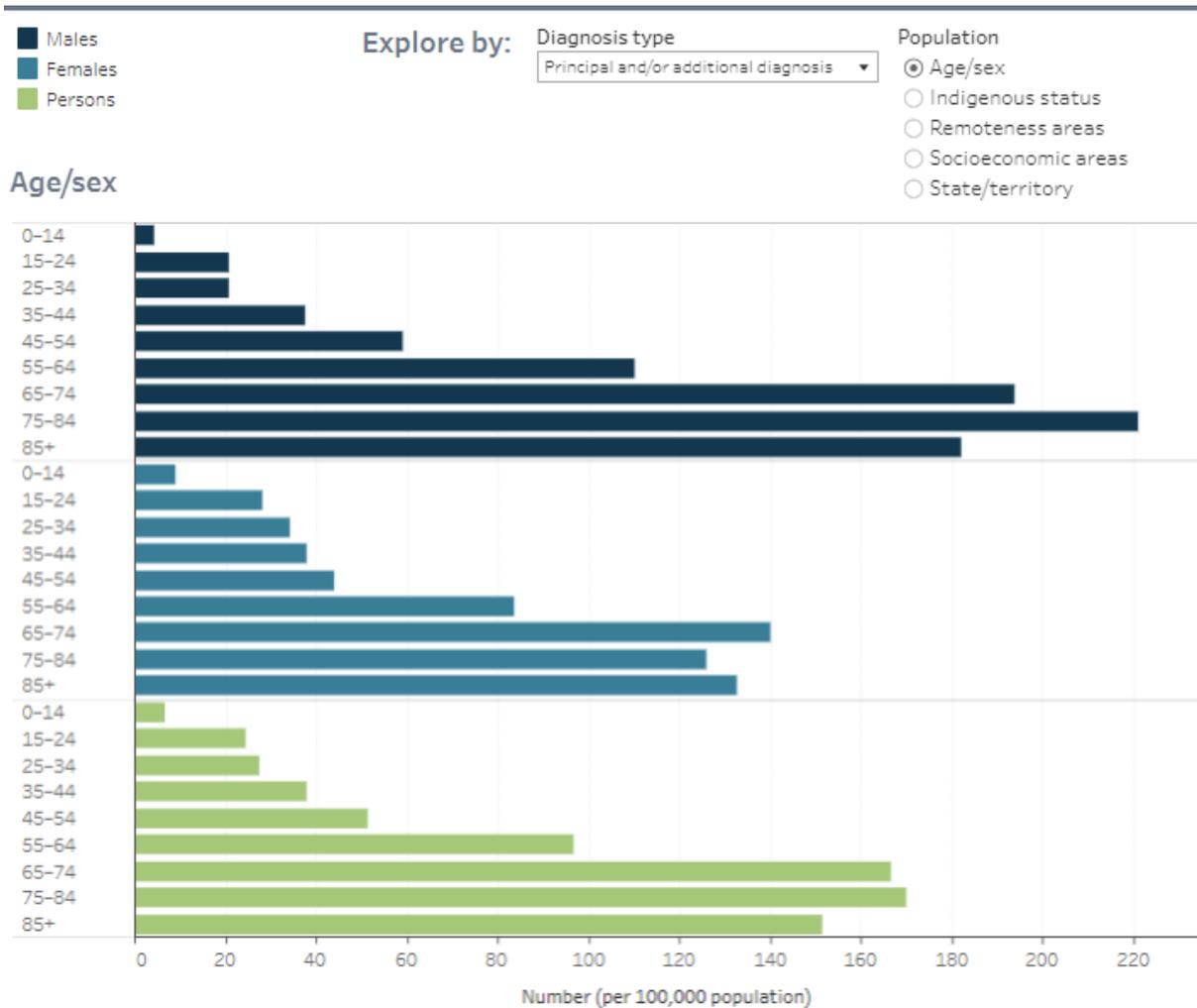


Figure 3.8.4.2: Hospitalisations for diabetes type 'Other & unspecified', by diagnosis type and selected population groups, 2017-18

Source: AIHW analysis of the National Hospital Morbidity Database  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

### Indicator 3.8.4 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations (principal; additional; principal and/or additional diagnosis) for other and unspecified diabetes (ICD-10-AM: E13 and E14).	AIHW NHMD
<b>Denominator</b>	Estimated Australian resident population.	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

## References

Stone MA, Camosso-Stefinovic J, Wilkinson J, Lusignan SD, Hattersley AT & Khunti K 2010. Incorrect and incomplete coding and classification of diabetes: a systematic review. *Diabetic Medicine* 27:491–7.

## Indicator 3.9 Hospitalisation for end-stage renal disease as the principal diagnosis with diabetes as an additional diagnosis

### Overview

In 2017–18, there were approximately 2,800 hospitalisations with a principal diagnosis of end-stage renal disease and an additional diagnosis of diabetes—11 per 100,000 population.

### Trends

The age-standardised hospitalisation rate increased slightly from 8 per 100,000 in 2012–13 to 10 per 100,000 population in 2017–18.

### Sex

After adjusting for age, the hospitalisation rate was higher in males than females (12 and 8 hospitalisations per 100,000 population, respectively) (Figure 3.9.1).

### Population groups

Hospitalisation rates for end-stage renal disease with diabetes as an additional diagnosis were substantially higher among those living in *Remote and very remote* areas, and in the most disadvantaged areas of Australia, when compared to those living in other areas. This, in part, reflects the higher proportion of Indigenous Australians living in *Remote and very remote* and disadvantaged areas of Australia (Figure 3.9.2).

### State and territory

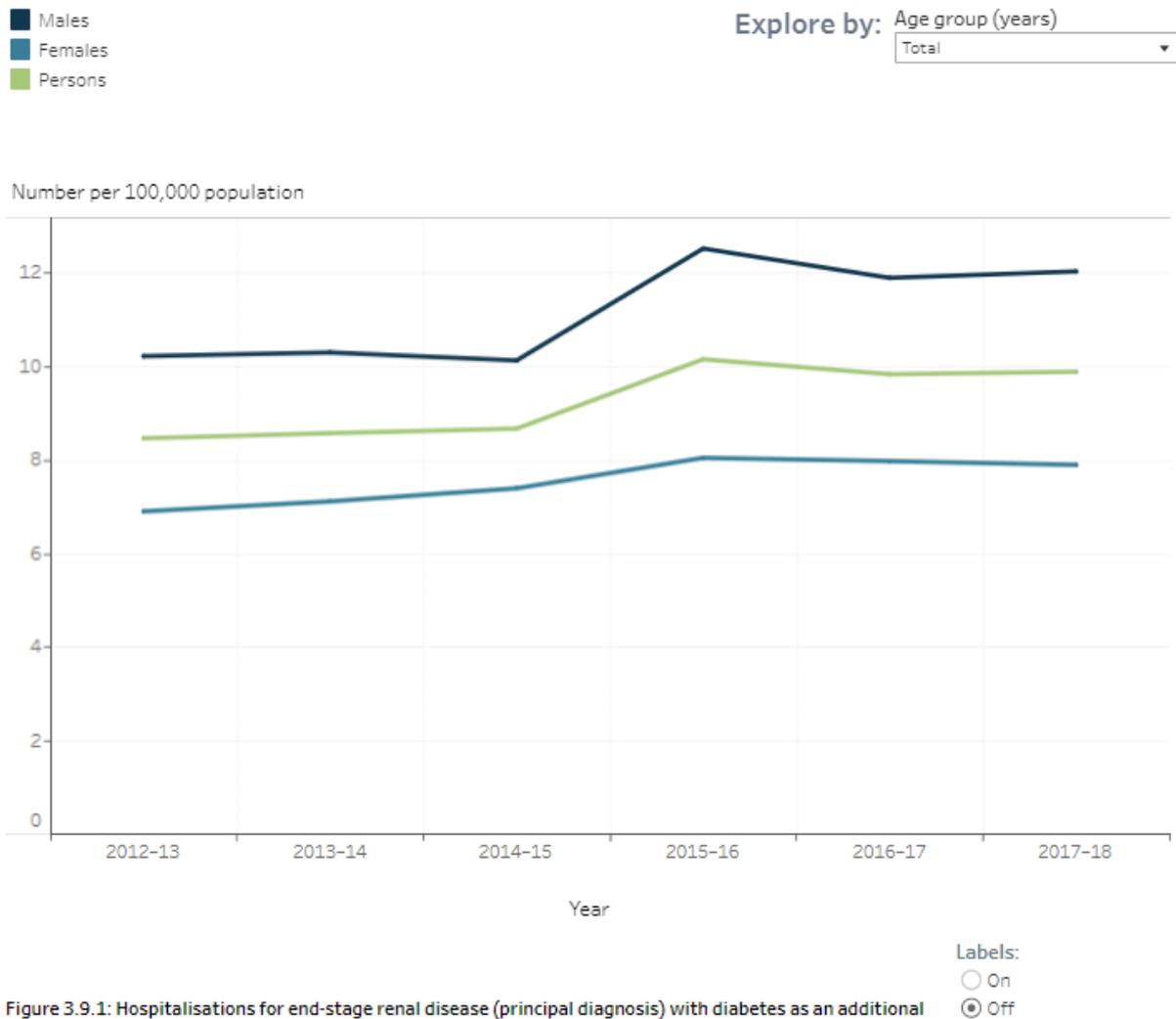
Among the states and territories, rates were highest in the Northern Territory (74 per 100,000 population) and lowest in Tasmania (4 per 100,000 population). Other states had rates ranging from 6 to 14 per 100,000 population (Figure 3.9.2).

### Aboriginal and Torres Strait Islander people

There were approximately 517 hospitalisations with a principal diagnosis of end-stage renal disease and an additional diagnosis of diabetes among Aboriginal and Torres Strait Islander people in 2017–18, a rate of 63 per 100,000 population. The age-standardised hospitalisation rate was 12 times as high among Indigenous Australians as non-Indigenous Australians (97 and 8 per 100,000 population, respectively). The disparity between the Indigenous and non-Indigenous rates was greater among females (17 times as high) than males (9 times as high) (Figure 3.9.2).

### Explore the data

### 3.9 Hospitalisations for end-stage renal disease (principal diagnosis) with diabetes as an additional diagnosis, by age and sex, 2012-13 to 2017-18 and by selected population group, 2017-18



**Figure 3.9.1: Hospitalisations for end-stage renal disease (principal diagnosis) with diabetes as an additional diagnosis, by age and sex, 2012-13 to 2017-18**

Note: Total age-standardised to the 2001 Australian Standard Population.

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

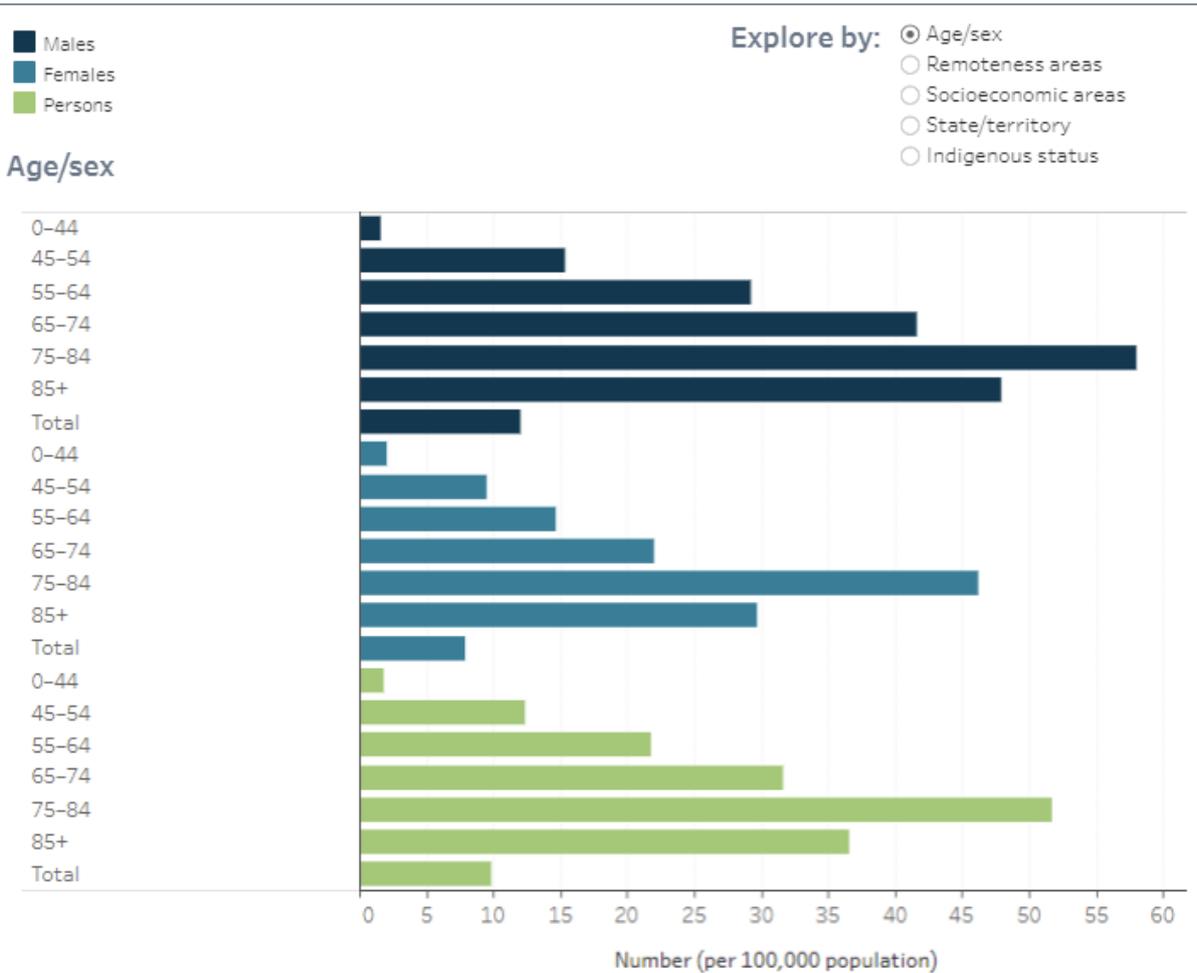


Figure 3.9.2: Hospitalisations for end-stage renal disease (principal diagnosis) with diabetes as an additional diagnosis, by selected population groups, 2017-18

Notes:

1. Age-standardised to the 2001 Australian Standard Population.
2. Crude rates reported for age groups.

Source: AIHW analysis of the National Hospital Morbidity Database  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

### Indicator 3.9 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations for chronic kidney disease - stage 5 (ICD-10-AM: N18.5) as a principal diagnosis, with an additional diagnosis of diabetes (ICD-10-AM: E10, E11, E13, E14, O24)	AIHW NHMD
<b>Denominator</b>	Estimated Australian resident population.	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

## **Indicator 3.10 Hospitalisation for coronary heart disease or stroke as the principal diagnosis with diabetes as an additional diagnosis**

### **Overview**

In 2017–18, there were around 60,300 hospitalisations with a principal diagnosis of coronary heart disease (CHD) or stroke and an additional diagnosis of diabetes—243 hospitalisations per 100,000 population.

### **Trends**

Age standardised rates increased from 180 per 100,000 population in 2012–13 to 211 per 100,000 population in 2015–16, and remained steady between 2016–17 and 2017–18 (211 and 206 per 100,000 population) (Figure 3.10.1).

### **Age and sex**

The Hospitalisation rate was 2.3 times as high among males as females (293 and 127 hospitalisations per 100,000 population, respectively). This finding was consistent across all age groups. The age-specific rate peaked among those aged 75–84 (1,400 per 100,000 population) (Figure 3.10.1).

### **Population groups**

Rates were almost twice as high both among those living in *Remote and very remote* areas as *Major cities* (388 and 197 per 100,000, respectively), and those living in the lowest compared with the highest socioeconomic areas (278 and 141 per 100,000, respectively) (Figure 3.10.2).

### **State and territory**

Among the states and territories, rates were highest in the Northern Territory (503 per 100,000 population) and lowest in the Australian Capital Territory (125 per 100,000 population) (Figure 3.10.2).

### **Aboriginal and Torres Strait Islander people**

There were approximately 3,300 hospitalisations with a principal diagnosis of CHD or stroke and an additional diagnosis of diabetes among Aboriginal and Torres Strait Islander people in 2017–18, a rate of 399 per 100,000 population. The age-standardised hospitalisation rate for this cohort was substantially higher among Indigenous Australians compared with non-Indigenous Australians (725 and 193 per 100,000 population, respectively). The rate was almost 6 times as high among Indigenous females compared with non-Indigenous females, and almost 3 times as high in Indigenous males compared to non-Indigenous males (Figure 3.10.2).

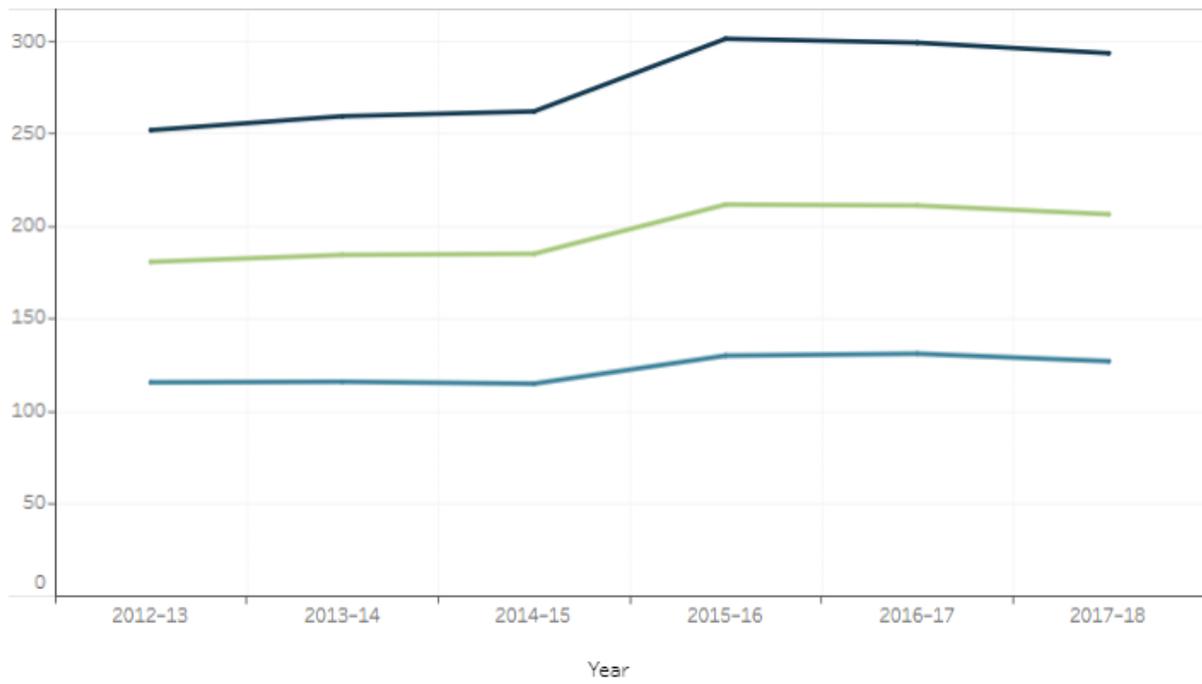
### **Explore the data**

**3.10 Hospitalisations for coronary heart disease or stroke (principal diagnosis) with diabetes as an additional diagnosis, by age group and sex, 2012–13 to 2017–18 and by selected population group, 2017–18**

- Males
- Females
- Persons

Explore by: Age group (years)  
 Total ▼

Number per 100,000 population



**Figure 3.10.1: Hospitalisations for coronary heart disease or stroke (principal diagnosis) with diabetes as an additional diagnosis, by age group and sex, 2012-13 to 2017-18**

Notes:

1. Age-standardised to the 2001 Australian Standard Population.
2. Crude rates for age groups

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

- On
- Off

- Males
- Females
- Persons

- Explore by:
- Age groups
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory

### State/territory

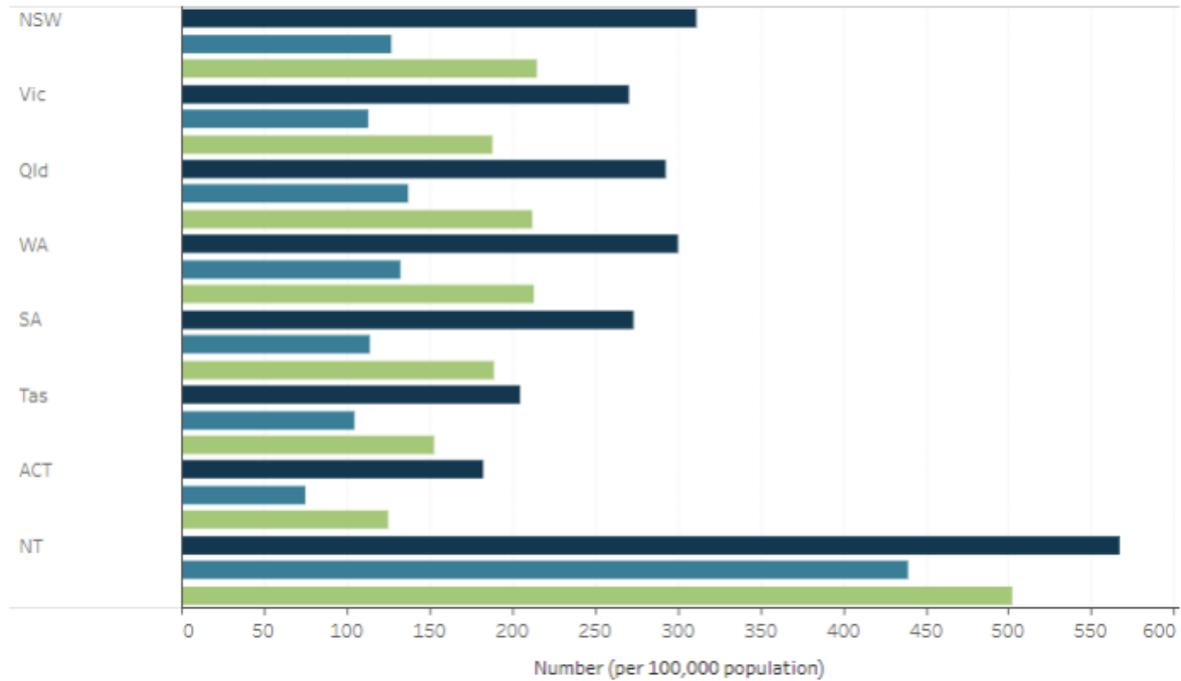


Figure 3.10.2: Hospitalisations for coronary heart disease or stroke (principal diagnosis) with diabetes as an additional diagnosis, by selected population groups, 2017-18

Notes:

1. Age-standardised to the 2001 Australian Standard Population.
2. Crude rates for age groups.

Source: AIHW analysis of the National Hospital Morbidity Database  
<https://www.aihw.gov.au>

- Labels:
- On
  - Off

### Indicator 3.10 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations for coronary heart disease or stroke (ICD-10-AM: I20-I25, I60-I64) as a principal diagnosis, with diabetes as an additional diagnosis (ICD-10-AM: E10, E11, E13, E14, O24).	AIHW NHMD
<b>Denominator</b>	Estimated Australian resident population.	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

## **Indicator 3.11 Hospitalisation for ophthalmic conditions with type 2 diabetes as a principal diagnosis**

### **Overview**

In 2017–18, there were around 2,200 hospitalisations for ophthalmic conditions (e.g. diabetic retinopathy) with type 2 diabetes as a principal diagnosis—11 hospitalisations per 100,000 population.

### **Trends**

Age-standardised rates have remained steady since 2012–13 (fluctuating between 10 and 12 per 100,000) (Figure 3.11.1).

### **Age and sex**

In 2017–18, the hospitalisation rate peaked in the 75–84 age group (44 per 100,000 population) and was higher among men than women in each age group from 45–54 to 75–84. Rates were higher in women from 85+ years (Figure 3.11.1).

### **Population groups**

There was no difference in hospitalisation by remoteness or socioeconomic areas.

### **State and territory**

Among the states and territories in 2017–18, rates were highest in Western Australia (18 per 100,000 population) and lowest in New South Wales (4 per 100,000 population) (Figure 3.11.2). Due to small numbers, rates were not published for the Northern Territory, the Australian Capital Territory or for women in Tasmania.

### **Aboriginal and Torres Strait Islander people**

There were 108 hospitalisations for ophthalmic conditions with type 2 diabetes as a principal diagnosis among Aboriginal and Torres Strait Islander people in 2017–18, a rate of 22 per 100,000 population. The age-standardised rate of hospitalisations among this cohort was 2.8 times as high among Indigenous Australians as non-Indigenous Australians (28 and 10 per 100,000, respectively).

### **Explore the data**

### 3.11 Hospitalisation for ophthalmic conditions with type 2 diabetes as a principal diagnosis among adults, by age group and sex, 2012-13 to 2017-18 and by selected population group, 2017-18

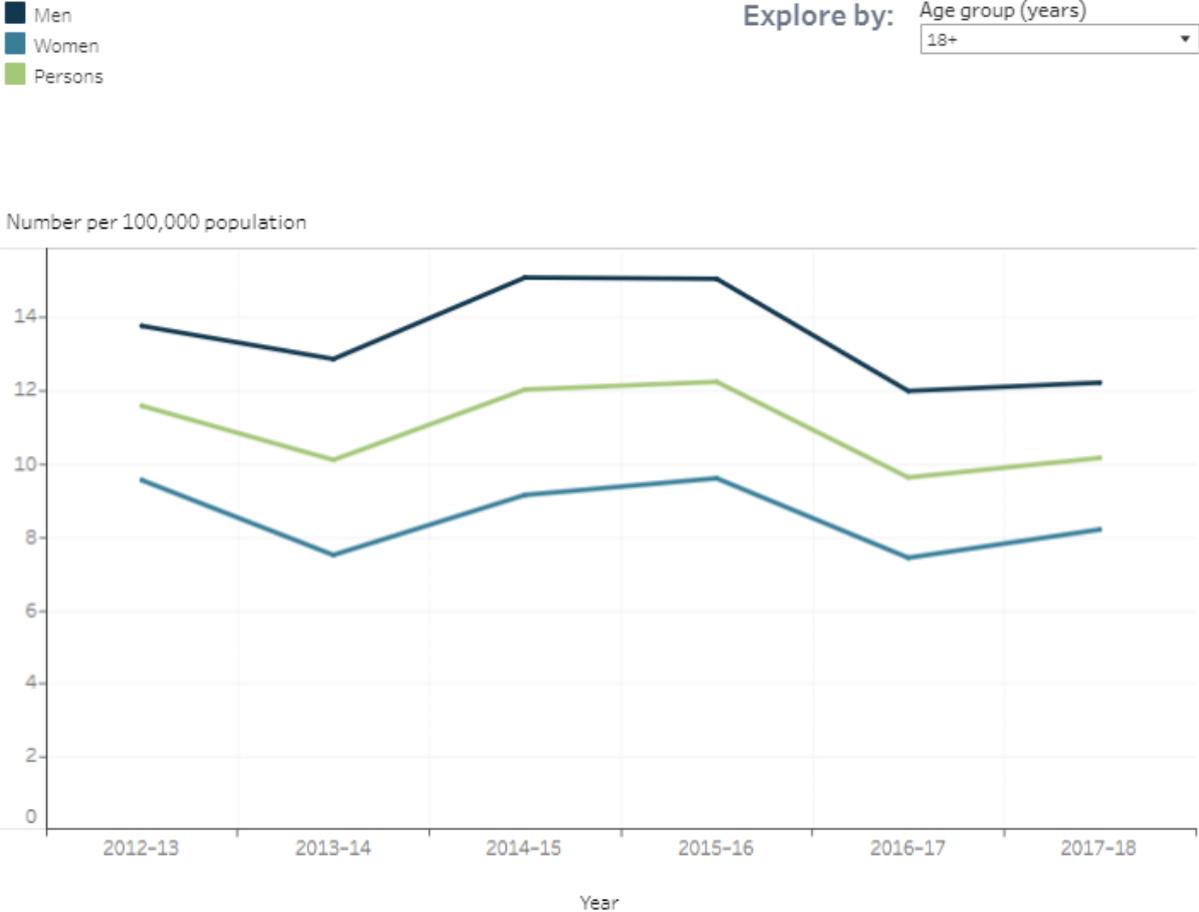


Figure 3.11.1: Hospitalisation for ophthalmic conditions with type 2 diabetes as a principal diagnosis among adults, by age group and sex, 2012-13 to 2017-18

Notes:  
 1. Age-standardised to the 2001 Australian Standard Population.  
 2. Crude rates for age groups  
 Source: AIHW analysis of the National Hospital Morbidity Database  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

← Undo → Redo ⏪ Revert 🔄 Refresh ⏸ Pause 📊 📌 📄 🖋️ 🗑️ 📄 📄 📄

- Men
- Women
- Persons

- Explore by:
- Age groups
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory

### Age groups

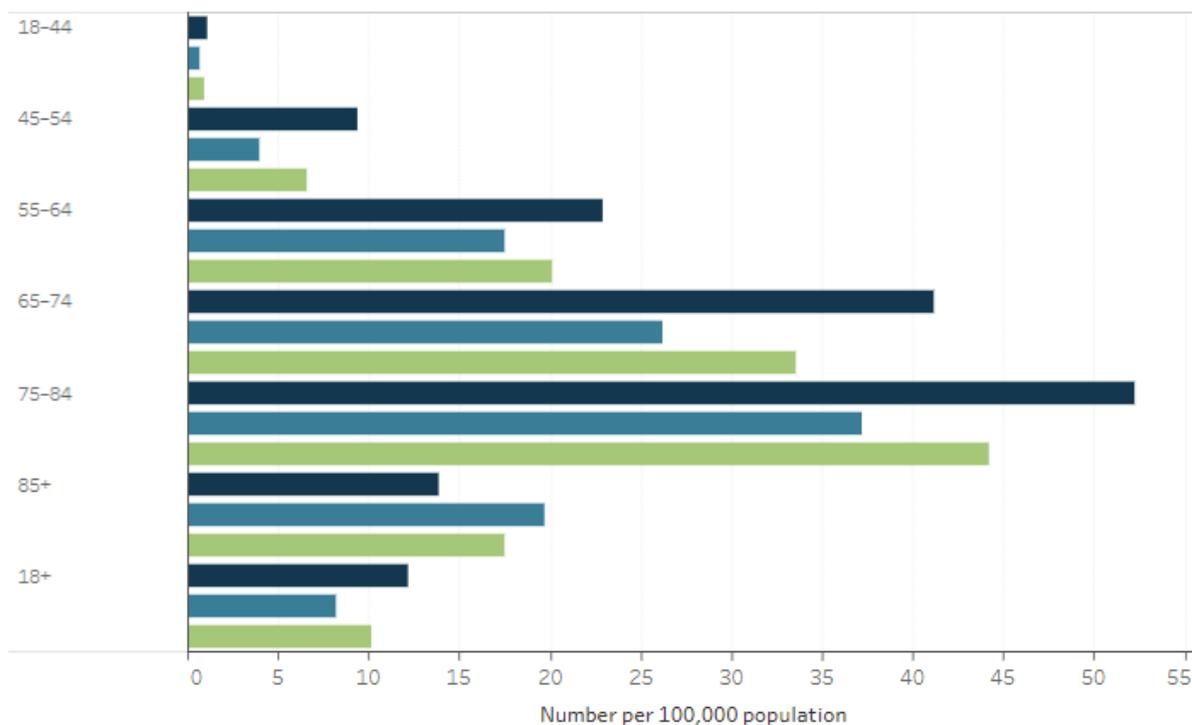


Figure 3.11.2: Hospitalisation for ophthalmic conditions with type 2 diabetes as a principal diagnosis among adults, by selected population groups, 2017-18

Notes:

1. Age-standardised to the 2001 Australian Standard Population.
2. Crude rates for age groups.
3. n.p. not published due to small numbers.

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 3.11 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations for type 2 diabetes related ophthalmic complications as a principal diagnosis (ICD-10-AM: E11.3).	AIHW NHMD
<b>Denominator</b>	Estimated Australian resident population.	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

## **Indicator 3.12 Hospitalisation for lower limb amputation with type 2 diabetes as a principal or additional diagnosis**

### **Overview**

In 2017–18, there were around 5,400 hospitalisations where a lower limb amputation was performed with type 2 diabetes as a principal or additional diagnosis among Australian adults, equating to a rate of 28 hospitalisations per 100,000 population.

### **Trends**

The age-standardised hospitalisation rate for lower limb amputation with type 2 diabetes as a principal or additional diagnosis increased slightly between 2012–13 and 2017–18 (from 21 to 25 per 100,000 population) (Figure 3.12.1).

### **Age and sex**

In 2017–18, the rate was 3.6 times as high among men as women after adjusting for age (40 and 11 hospitalisations per 100,000 population, respectively). This was consistent across age groups (Figure 3.12.1).

### **Population groups**

The rate increased with the level of remoteness in 2017–18, and was 3 times as high among those living in *Remote and very remote* areas as those living in *Major cities* (65 and 22 per 100,000 population, respectively). Hospitalisation rates also increased along with the level of socioeconomic disadvantage—2.7 times as high among those living in the most disadvantaged areas as those living in the most advantaged areas (Figure 3.12.2).

### **State and territory**

Hospitalisation rates were highest in the Northern Territory (63 per 100,000 population) and lowest in Tasmania (19 per 100,000 population). Other states and territories had rates ranging from 21 to 32 per 100,000 population (Figure 3.12.2).

### **Aboriginal and Torres Strait Islander people**

In 2017–18, there were 415 hospitalisations for lower limb amputation with type 2 diabetes as a principal or additional diagnosis among Aboriginal and Torres Strait Islander people, equating to 84 hospitalisations per 100,000. After adjusting for age, rates for Indigenous Australians were 4.7 times as high as for non-Indigenous Australians (107 and 23 per 100,000, respectively). The rate was 8 times as high among Indigenous women and 3.5 times as high among Indigenous men when compared to their non-Indigenous counterparts (Figure 3.12.2).

### **About the data**

Hospitalisation data presented for this indicator provides counts on the total number of in-hospital episodes for amputations, but cannot determine the number of individuals undergoing

amputation, the number of repeat amputations, nor establish the link between the amputation and diabetes.

### Explore the data

### 3.12 Hospitalisation for lower limb amputation with type 2 diabetes as a principal diagnosis or additional diagnosis, by age group and sex, 2012-13 to 2017-18 and by selected population group, 2017

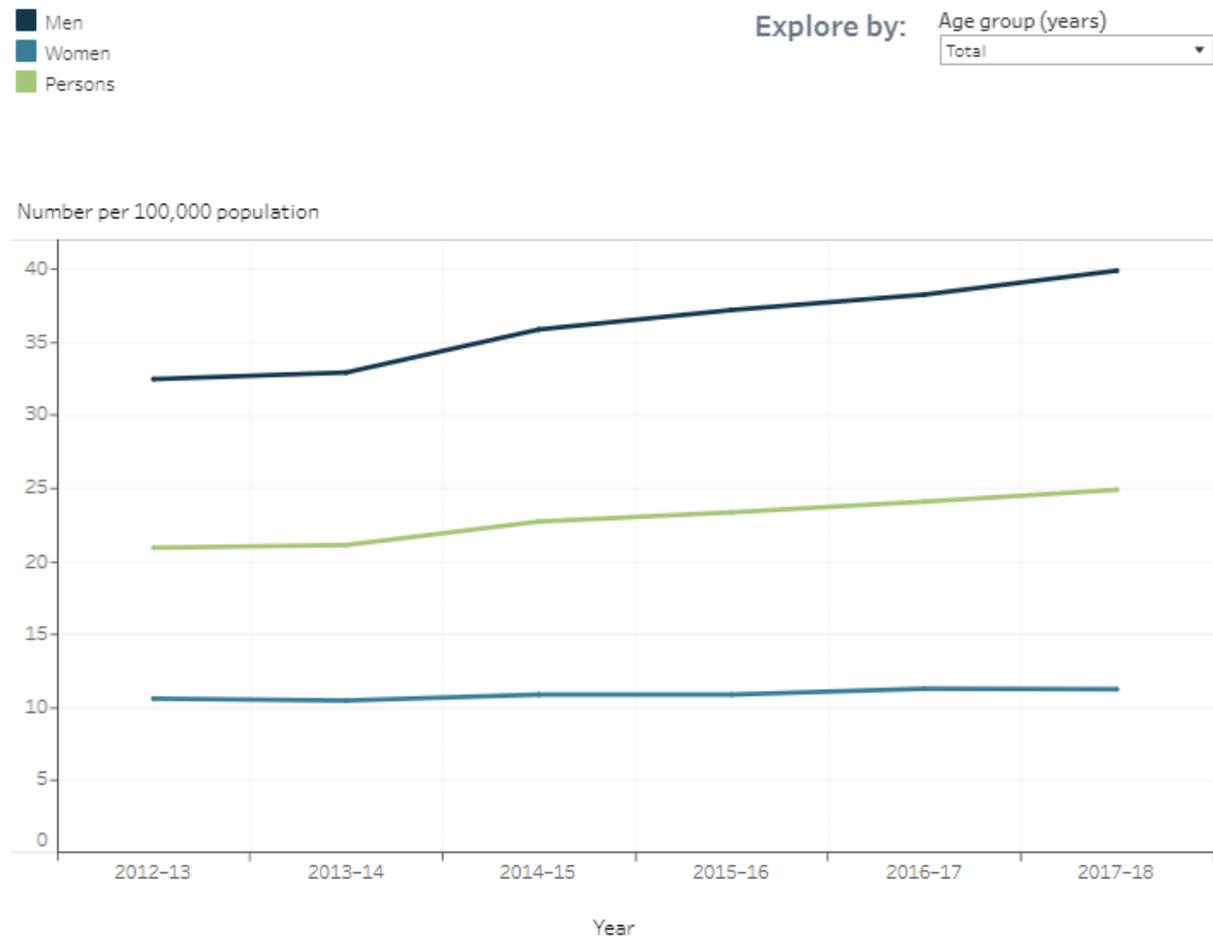


Figure 3.12.1: Hospitalisation for lower limb amputation with type 2 diabetes as a principal or additional diagnosis among adults, by age and sex, 2012-13 to 2017-18

Notes:

1. Age-standardised to the 2001 Australian Standard Population.

2. Crude rates for age groups

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

On

Off

- Men
- Women
- Persons

- Explore by:
- Age groups
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory

### Age groups

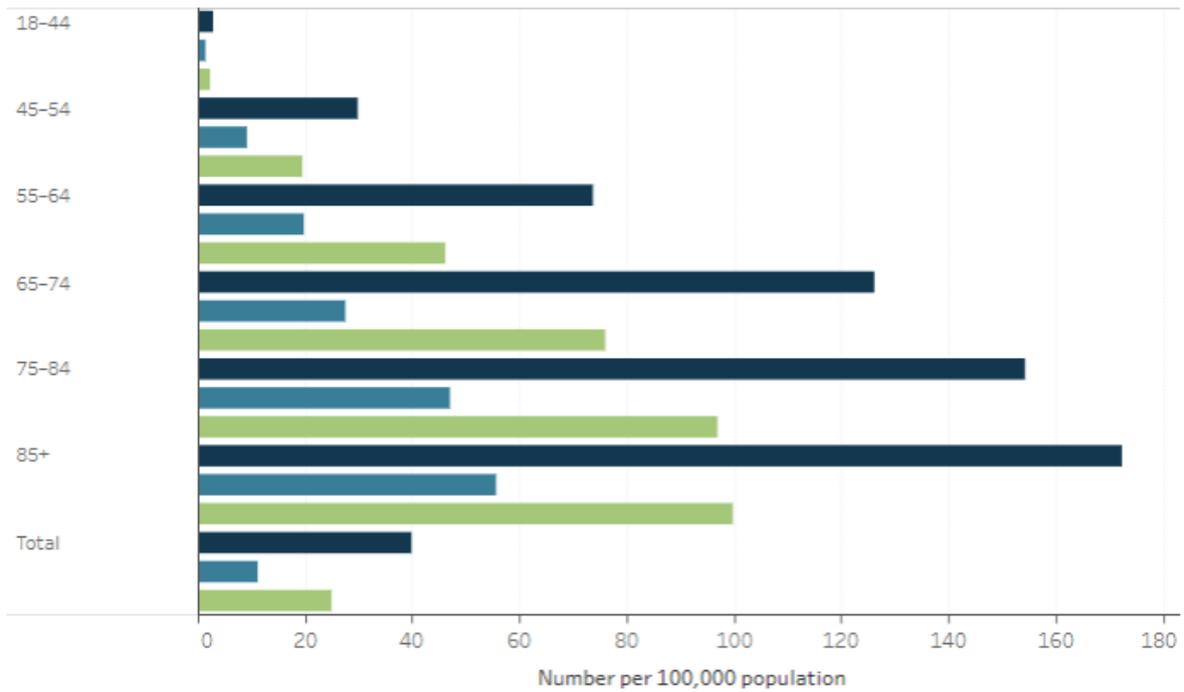


Figure 3.12.2: Hospitalisation for lower limb amputation with type 2 diabetes as a principal or additional diagnosis among adults, by selected population groups, 2017-18

Notes:

1. Age-standardised to the 2001 Australian Standard Population.
2. Crude rates for age groups.

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 3.12 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations for lower limb amputation (ACHI Block 1533, procedure codes: 44370-00, 44373-00, 44367-00, 44367-01, 44367-02), with type 2 diabetes (ICD-10-AM: E11) as a principal diagnosis.	AIHW NHMD
<b>Denominator</b>	Estimated Australian resident population.	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

## Indicator 3.13 Hospitalisation for other complications with type 2 diabetes as a principal diagnosis

### Overview

In 2017–18, there were around 30,400 hospitalisations among Australian adults for other complications (e.g. kidney or circulatory complications) with type 2 diabetes as a principal diagnosis—158 hospitalisations per 100,000 population.

### Trends

Age-standardised rates have increased steadily from 119 per 100,000 population in 2012–13 to 140 per 100,000 population in 2017–18.

### Age and sex

In 2017–18, the hospitalisation rate for other complications with type 2 diabetes as a principal diagnosis was more than twice as high among men as women (195 and 91 per 100,000 population, respectively), after adjusting for age. This difference was consistent across all age groups (Figure 3.13.1).

### Population groups

In 2017–18, rates increased along with the level of remoteness, being 2.7 times as high among those living in *Remote and very remote* areas as *Major cities* (347 and 130 per 100,000, respectively). Rates also increased with the level of socioeconomic disadvantage, being 2.8 times as high among those living in the lowest socioeconomic areas as the highest socioeconomic areas (211 and 75 per 100,000 population, respectively) (Figure 3.13.2).

### State and territory

Hospitalisation rates for other complications with type 2 diabetes as a principal diagnosis in 2017–18 were highest in the Northern Territory (279 per 100,000 population) and lowest in the Australian Capital Territory (112 per 100,000 population). Other states had rates ranging from 117 to 158 per 100,000 population (Figure 3.13.2).

### Aboriginal and Torres Strait Islander

There were around 2,200 hospitalisations for other complications among Aboriginal and Torres Strait Islander adults with type 2 diabetes as a principal diagnosis, equating to 454 hospitalisations per 100,000. The age-standardised hospitalisation rate among Indigenous Australians was almost 5 times that of non-Indigenous Australians (623 and 128 per 100,000, respectively). The disparity in rates between the Indigenous and non-Indigenous populations was greater in women than men (7 and 4 times as high compared to their non-Indigenous counterparts, respectively) (Figure 3.13.2).

### Explore the data

### 3.13 Hospitalisation for other complications with type 2 diabetes as a principal diagnosis, by age and sex, 2012-13 to 2017-18

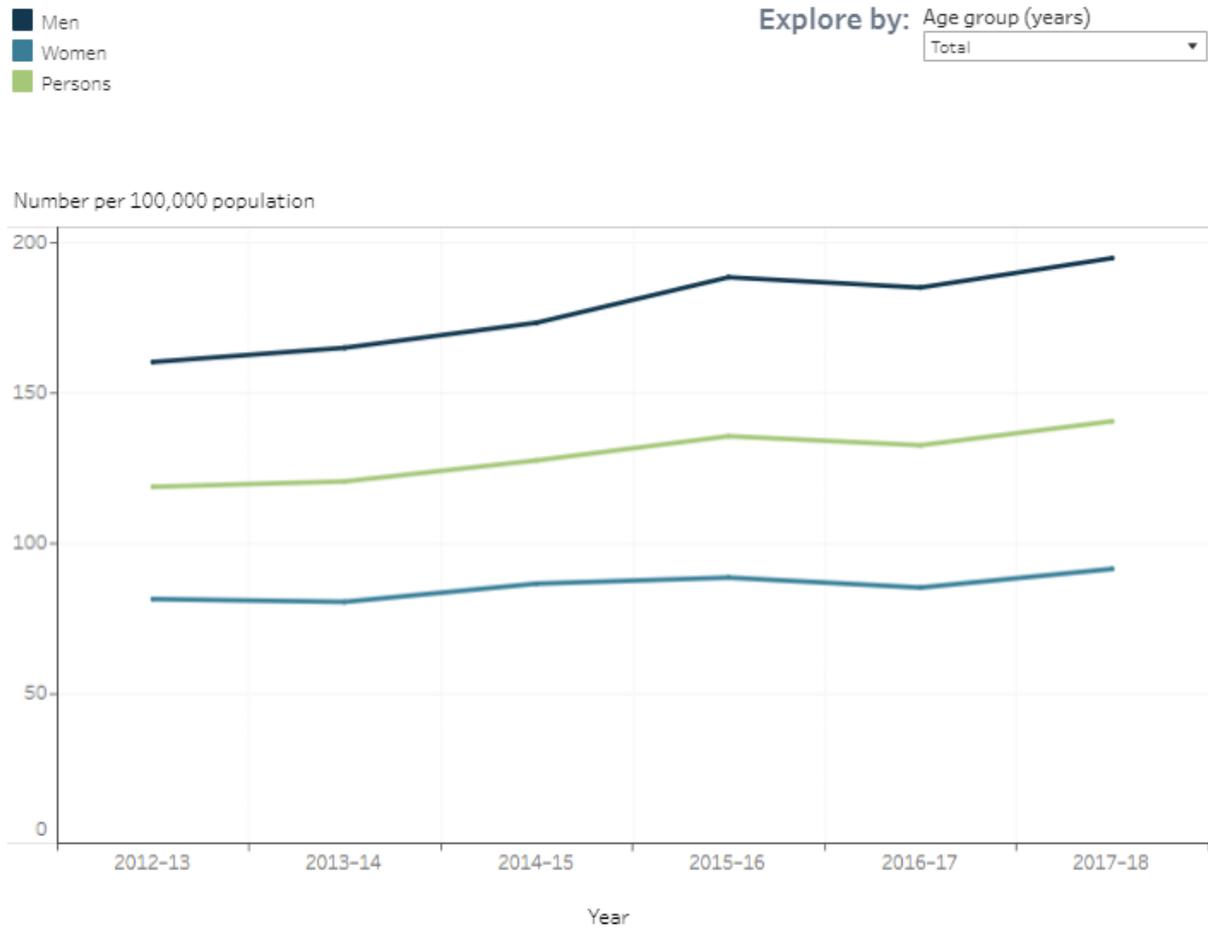


Figure 3.13.1: Hospitalisation for other complications with type 2 diabetes as a principal diagnosis among adults, by age and sex, 2012-13 to 2017-18

Notes:

1. Age-standardised to the 2001 Australian Standard Population.

2. Crude rates for age groups

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

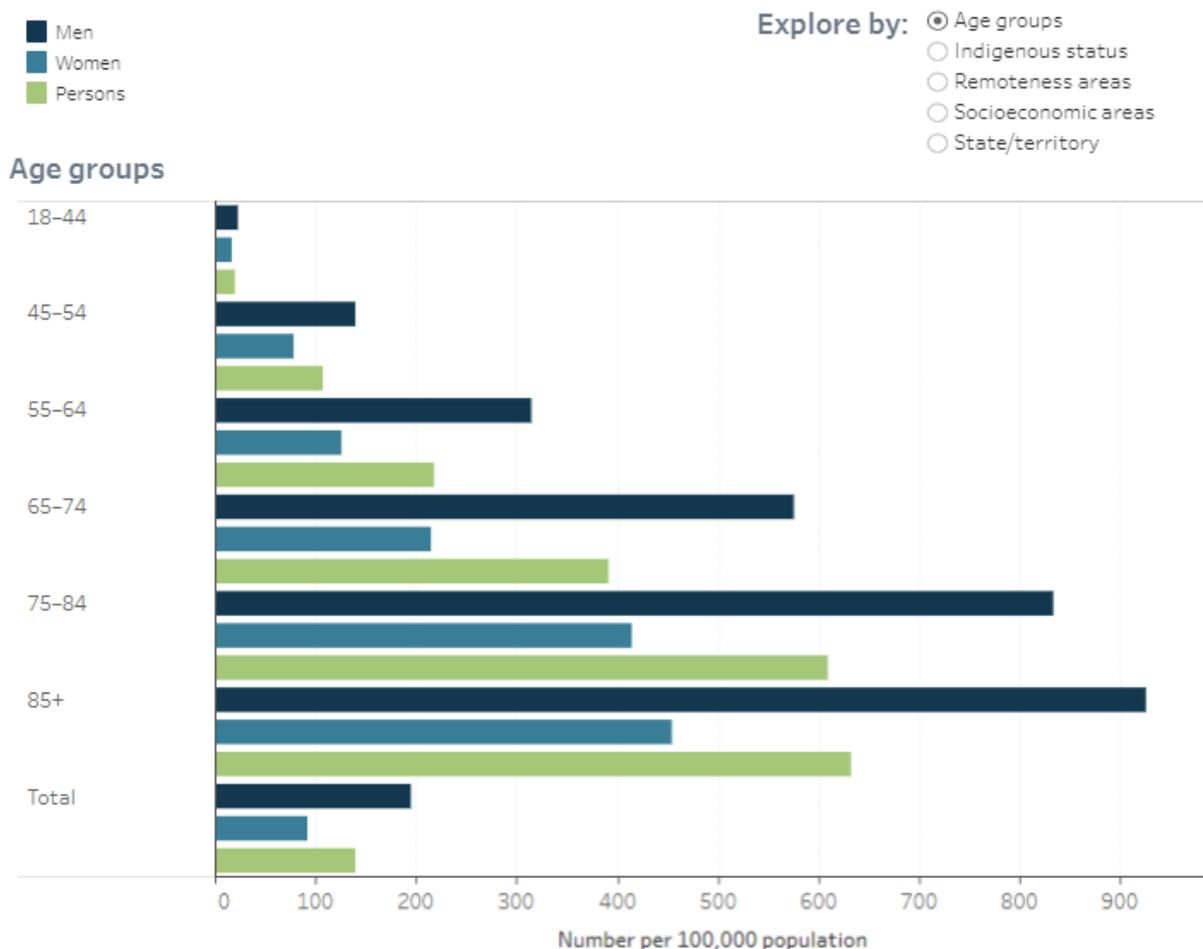


Figure 3.13.2: Hospitalisation for other complications with type 2 diabetes as a principal diagnosis among adults, by selected population groups, 2017-18

Notes:

1. Age-standardised to the 2001 Australian Standard Population.

2. Crude rates for age groups.

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 3.13 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations for 'other complications' (circulatory complications (ICD-10-AM: E11.5), renal complications (ICD-10-AM: E11.2), other specified complications (ICD-10-AM: E11.0, E11.1, E11.4, E11.6), multiple complications (ICD-10-AM: E11.7) and other unspecified complications (ICD-10-AM: E11.8) as a principal diagnosis.	AIHW NHMD
<b>Denominator</b>	Estimated Australian resident population.	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

## Indicator 3.14 Deaths from diabetes

### Overview

In 2018, diabetes contributed to around 16,700 deaths (as an underlying and/or associated cause)—67 deaths per 100,000 population.

### Trends

After adjusting for age, death rates remained relatively stable from 1997–2018, fluctuating between 53 and 62 cases per 100,000 population (Figure 3.14.1).

### Age and sex

Age-standardised diabetes-related death rates increased with age for both males and females. Overall, the age-standardised death rate was 1.7 times as high in males as females (68 and 41 deaths per 100,000 population, respectively) (Figure 3.14.1).

### Population groups

In 2018, diabetes-related death rates increased along with the levels of remoteness and socioeconomic disadvantage. The rate was twice as high among those living in *Remote* and *Very remote* areas as those living in *Major cities* (103 and 49 per 100,000 population, respectively) and more than twice as high among those living in the lowest socioeconomic areas as those living in the highest socioeconomic areas of Australia (77 and 33 deaths per 100,000 population, respectively) (Figure 3.14.2).

### State and territory

Among the states and territories, rates in 2018 were highest in the Northern Territory and lowest in Western Australia (133 and 24 deaths per 100,000 population, respectively). Other states had rates ranging from 49 to 67 deaths per 100,000 population (Figure 3.14.2).

### Aboriginal and Torres Strait Islander

There were around 629 diabetes-related deaths among Aboriginal and Torres Strait Islander people in 2018, a rate of 86 deaths per 100,000 population. Age-standardised rates were 4 times as high for Indigenous as non-Indigenous Australians (210 and 52 deaths per 100,000 population respectively) (Figure 3.14.2).

### About the data

Diabetes is rarely listed as the underlying cause of death. A more complete picture of mortality is obtained by examining both diabetes as the underlying cause and associated cause of death. However, deaths from diabetes are known to be under-reported in national mortality statistics, as diabetes is often omitted from death certificates as a cause of death (Harding et al, 2014).

Deaths registered in 2016 and earlier are based on the final version of cause of death data. Deaths registered in 2017 and 2018 are based on the preliminary version; revised and preliminary versions are subject to further revision by the Australian Bureau of Statistics.

### Explore the data

### 3.14 Deaths from diabetes (underlying or associated cause), by age group and sex, 1997 to 2018 and by selected population group, 2018

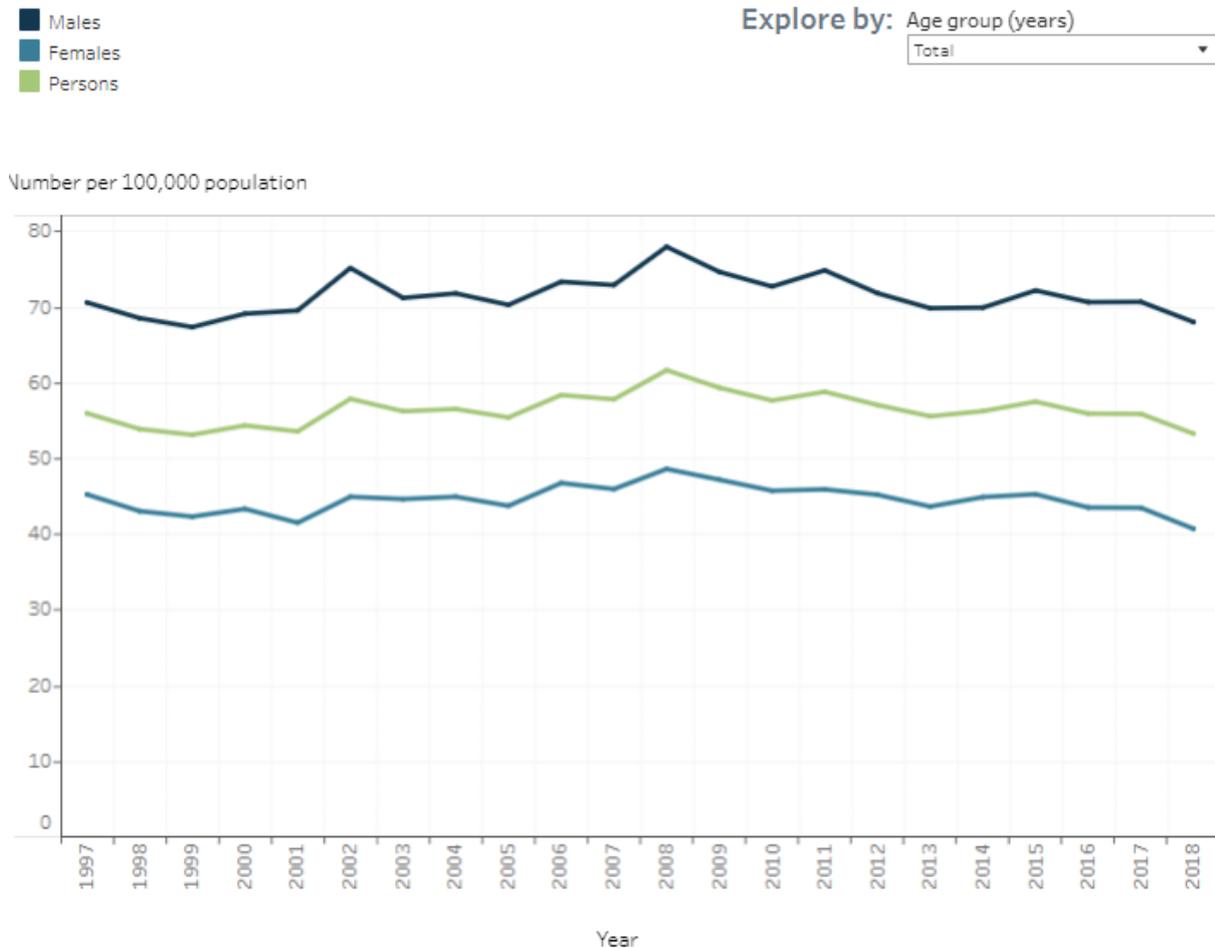


Figure 3.14.1: Deaths from diabetes (underlying or associated cause), by age and sex, 1997 to 2018

Notes:

1. Age-standardised to the 2001 Australian Standard Population.

2. Age groups reported using crude rates.

Source: AIHW analysis of the National Mortality Database

<https://www.aihw.gov.au>

Labels:

- On
- Off

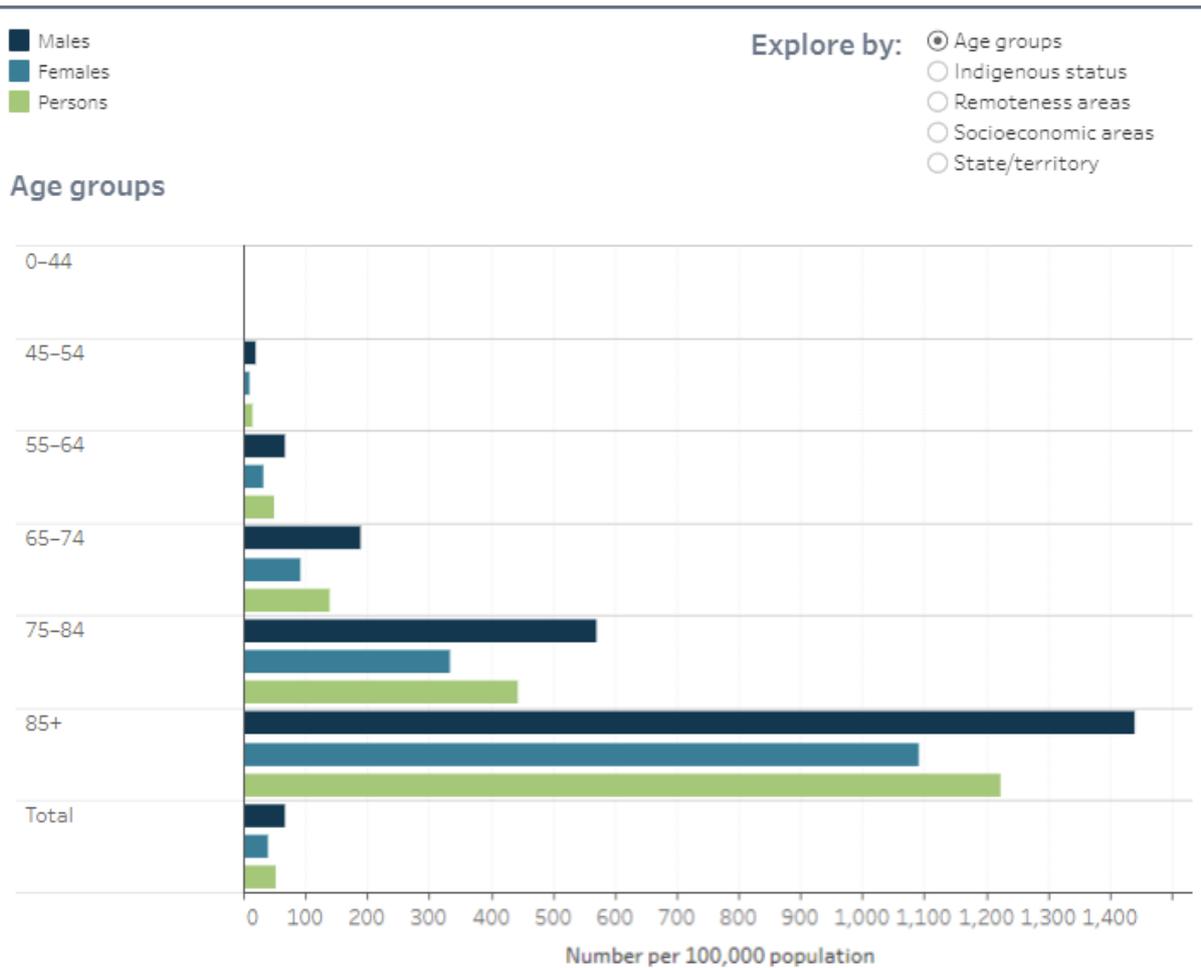


Figure 3.14.2: Deaths from diabetes (underlying or associated cause), by selected population groups, 2018

Notes:

- 1. Age-standardised to the 2001 Australian Standard Population.
- 2. Age groups reported using crude rates.

Source: AIHW analysis of the National Mortality Database

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 3.14 data specifications

	Definition	Data source
<b>Numerator</b>	Number of deaths with diabetes listed as an underlying or associated cause of death (ICD-10: E10, E11, E13, E14, O24).	AIHW National Mortality Database (NMD)
<b>Denominator</b>	Estimated Australian resident population.	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

### Reference

Harding JL, Shaw JE, Peeters A, Guiver T, Davidson S, Magliano DJ. 2014. Mortality trends among people with type 1 and type 2 diabetes in Australia: 1997–2010. *Diabetes Care* 37.

## Indicator 3.15 Death rates for coronary heart disease and stroke among people with diabetes

### Considerations

- Data for this indicator are not available for update—baseline results reported.
- Linked National Diabetes Services Scheme and National Death Index data was used to look at the causes of death for people with diabetes between 2009 and 2014. As data linkage is required for reporting, updated data for this indicator is not available.

### Overview

In 2014, there were around 11,800 deaths from coronary heart disease (CHD) and stroke among people with type 1 or type 2 diabetes, equating to a rate of 330 per 100,000 population.

### Age and sex

The death rate for CHD and stroke among males with type 1 or type 2 diabetes was 1.5 times as high as the rate among their female counterparts (394 and 260 deaths per 100,000 population, respectively). The death rate increased with age and was consistently higher in males than females in each age group (Figure 3.15).

### Population groups

The rate increased with rising levels of remoteness and socioeconomic disadvantage. The death rate was 1.7 times as high among those living in *Remote* and *Very remote* areas as those living in *Major cities*, and 1.4 times as high among those living in the lowest socioeconomic areas as those in the highest socioeconomic areas (Figure 3.15).

### Explore the data

### 3.15 Death rates for coronary heart disease and stroke among people with type 1 or type 2 diabetes, by selected population group, 2014

Age groups

Explore by:  Age groups  
 Remoteness areas  
 Socioeconomic areas  
 State/territory

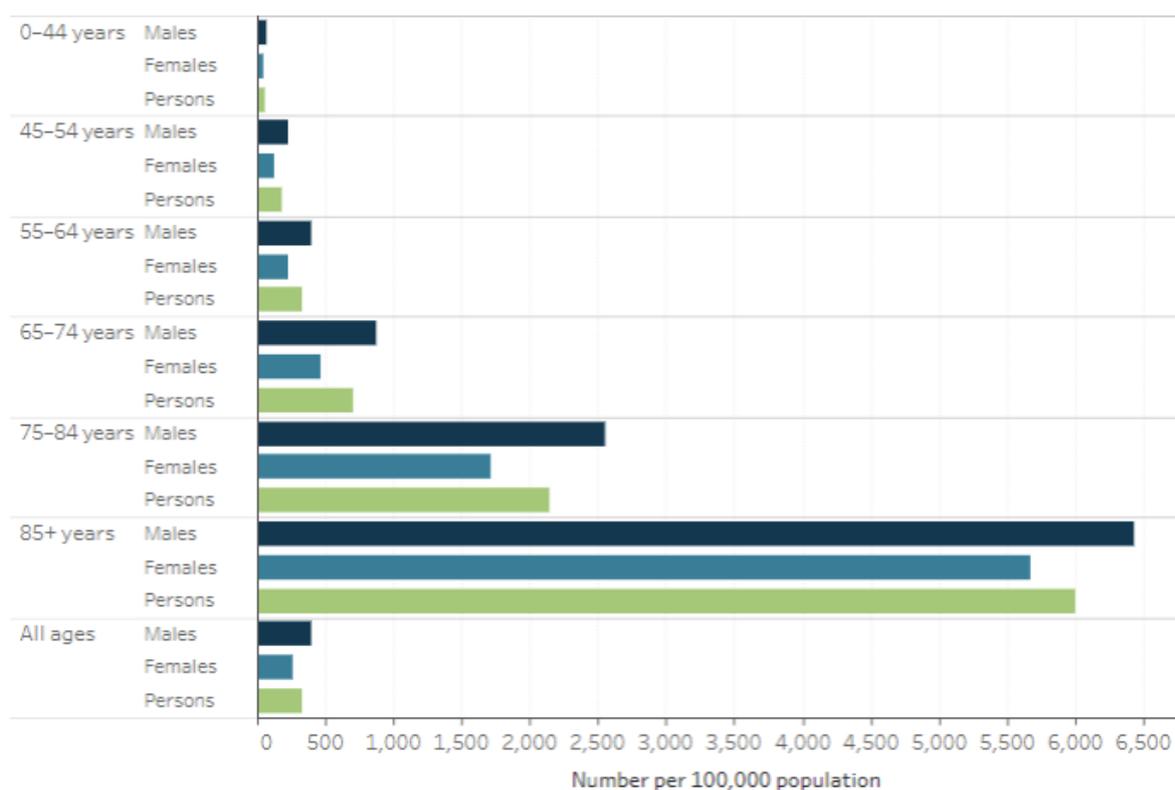


Figure 3.15: Death rates for coronary heart disease and stroke among people with type 1 or type 2 diabetes, by selected population group, 2014

Notes:

1. Age-standardised to the 2001 Australian Standard Population.

2. Crude rates for age groups.

Source: NDSS-NDI linked dataset, 2012-2014 and AIHW NMD

<https://www.aihw.gov.au>

Labels:

On

Off

#### Indicator 3.15 data specifications

	Definition	Data source
<b>Numerator</b>	Number of deaths from stroke (ICD-10: I60-I64) or CHD (ICD-10: I20-I25) as an underlying cause, among people living with diabetes (ICD-10: E10-E11).	National Diabetes Services Scheme (NDSS)-National Death Index linked dataset, 2012-2014
<b>Denominator</b>	Number of people living with diabetes.	NDSS

## **Indicator 3.16 People with diabetes who achieve the target level for weight / Body Mass Index**

### **Overview**

In 2017–18, 13% of adults with self-reported diabetes met the target level of having a Body Mass Index (BMI) of less than 25, based on measured data from the National Health Survey (NHS).

### **Trends**

There was no difference in the proportion of adults with self-reported diabetes who met the target level for weight between 2007–08 and 2017–18 (14% and 13%, respectively) (Figure 3.16.1).

### **Age and sex**

In 2017–18, the proportion of adults with diabetes who met the target for weight was lowest among those aged 45–54 (8%) and highest among those aged 75 and over (21%) (Figure 3.16.1). Among adults with diabetes, a lower percentage of men (9%) than women (17%) met the target for weight.

### **Population groups**

There was no difference in the proportion of adults with self-reported diabetes who met the target level for weight either by remoteness or socioeconomic areas in 2017–18 (Figure 3.16.2). Due to small numbers, age-standardised proportions were not derived.

### **State and territory**

Among the states and territories, there were no differences in the proportions of adults with self-reported diabetes who met the target level for weight in 2017–18 (Figure 3.16.2). Due to small numbers, age-standardised proportions were not derived.

### **Aboriginal and Torres Strait Islander people**

In 2018–19, 11% of Indigenous adults with self-reported diabetes met the target for body weight, based on measured data from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS). There was no difference in the proportion meeting the target for weight between Indigenous men and women. Based on estimates from the 2018–19 NATSIHS and 2017–18 NHS, the age-standardised proportion of Indigenous adults meeting the target level for weight was similar to non-Indigenous adults (10% compared with 12%, respectively) (Figure 3.16.2).

### **Explore the data**

### 3.16 People aged 18+ with diabetes who achieve the target level for weight, by age group and sex, 2007-08 to 2017-18 and by selected population group, 2017-18

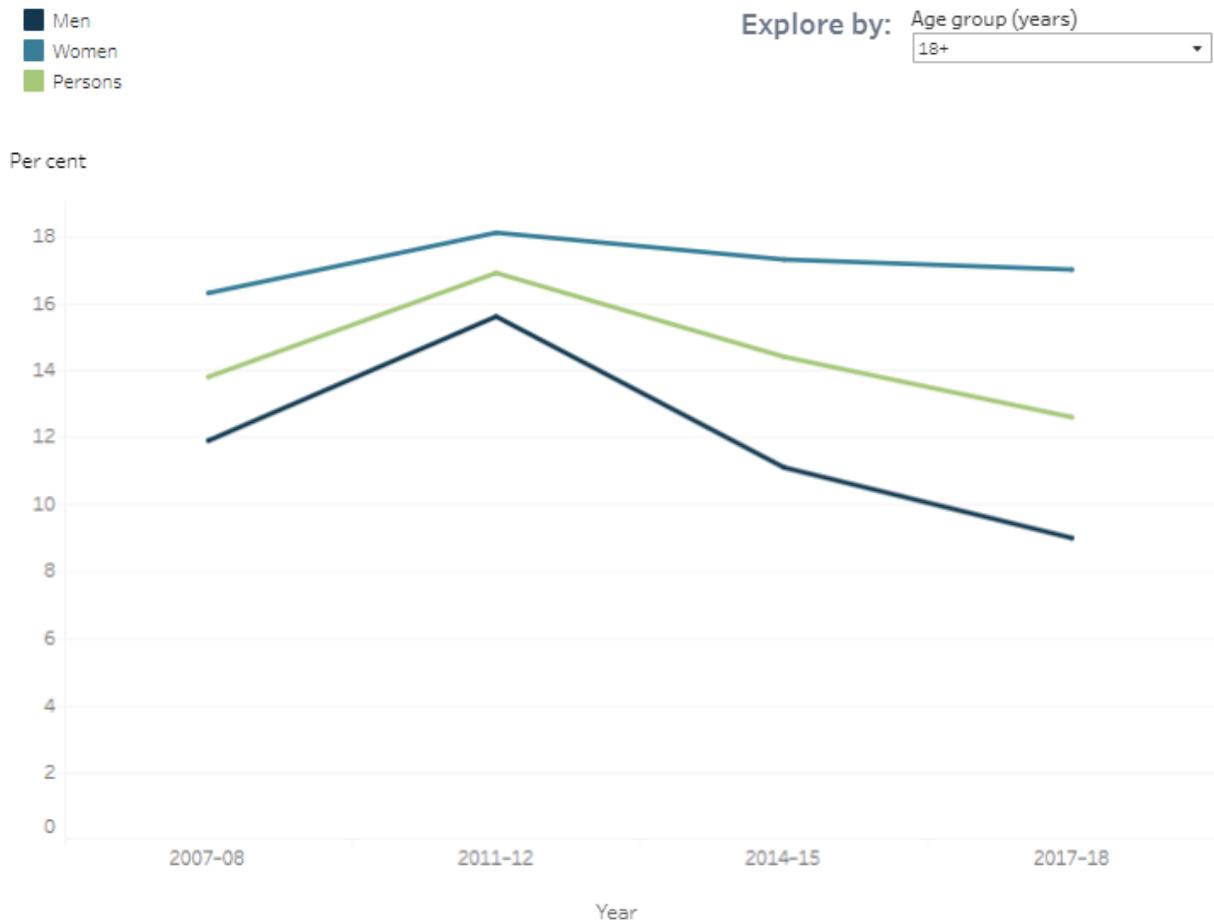


Figure 3.16.1: People aged 18+ with diabetes who achieve the target level for weight, by age group and sex, 2007-08 to 2017-18

Notes:

1. Based on self-reported data.

2. Total 18+ age-standardised to the 2001 Australian Standard Population.

Sources: ABS 2009; ABS 2013; ABS 2016; ABS 2019a

<https://www.aihw.gov.au>

Labels:

On

Off

## Age/sex—All Australians

- Explore by:
- Age/sex—All Australians
  - Age/sex—Indigenous Australians
  - Indigenous status
  - Remoteness areas
  - Socioeconomic areas
  - State/territory

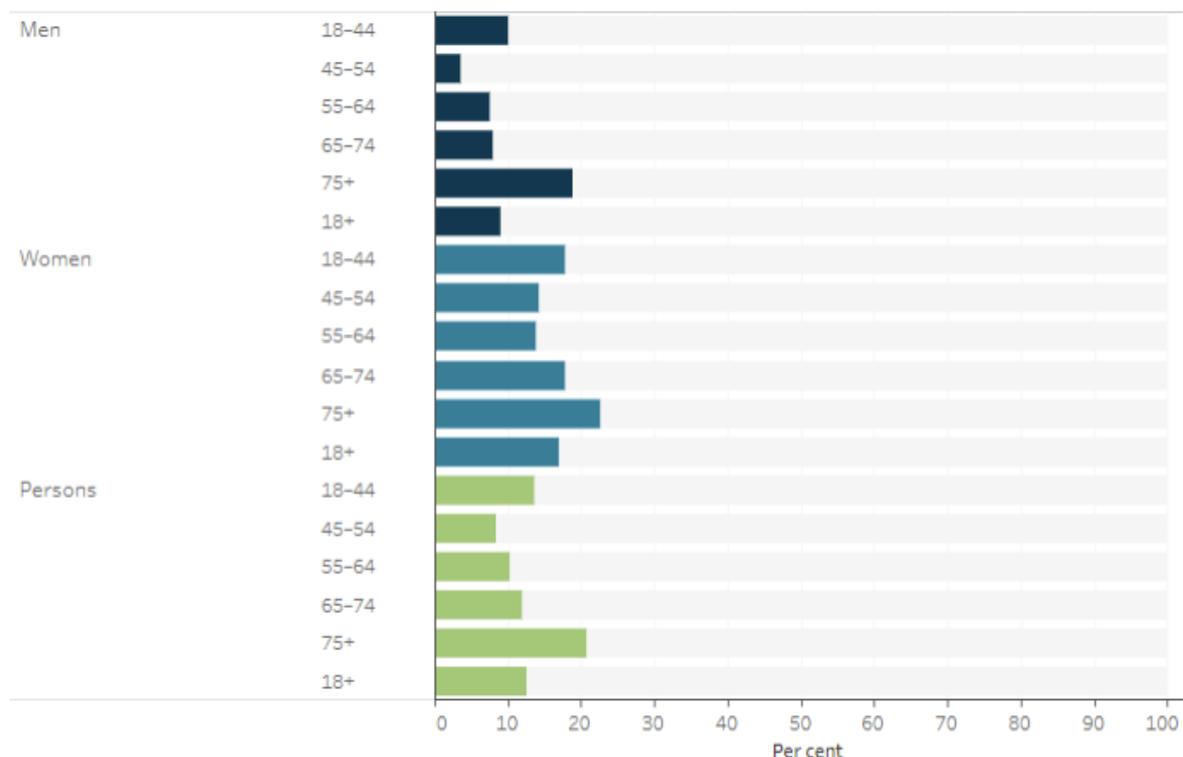


Figure 3.16.2: People aged 18+ with diabetes who achieve the target level for weight, by selected population group, 2017-18

Notes:

1. Based on self-reported data.

2. Indigenous status: Indigenous data for 2018-19; non-Indigenous data for 2017-18.

Sources: ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 3.16 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of adults (18+) with self-reported diabetes and a BMI < 25. Included people with type 1 diabetes, type 2 diabetes, and type unknown.	ABS 2019a; ABS 2019b; ABS 2016; ABS 2013; ABS 2009\
<b>Denominator</b>	Estimated adults (18+ years) with self-reported diabetes. Included people with type 1 diabetes, type 2 diabetes, and type unknown.	ABS 2019a; ABS 2019b; ABS 2016; ABS 2013; ABS 2009

References Expand

Australian Bureau of Statistics (ABS) 2009. Microdata: National Health Survey, 2007–08. ABS cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2013. Microdata: Australian Health Survey, National Health Survey, 2011–12. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017–18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## **Indicator 3.17 People with diabetes who have attended a diabetes educator**

### **Consideration**

Data for this indicator are not available for update—baseline results reported.

### **Overview**

In 2014–15, 24% of Australian adults with diabetes had attended a diabetes educator in the past 12 months, based on self-reported data from the National Health Survey.

### **Trends**

Between 2007–08 and 2011–12, the age-standardised proportion of adults with self-reported diabetes who had attended a diabetes educator decreased from 31% to 19%, before increasing to 28% in 2014–15 (Figure 3.17.1).

### **Age and sex**

After adjusting for age, the proportion of men and women with diabetes who had attended a diabetes educator was similar (28%).

The proportion of adults with diabetes who had attended a diabetes educator was similar across the age groups (Figure 3.17.1).

### **Population groups**

The proportion of adults with self-reported diabetes who attended a diabetes educator was higher in *Outer regional/Remote* areas (38%) compared with *Major cities* (20%) and *Inner regional* areas (26%). Age standardised proportions were similar across socioeconomic areas (Figure 3.17.2).

Explore the data

3.17 People with diabetes who attended a diabetes educator, by age group and sex, 2007-08 to 2014-15 and by selected population group, 2014-15

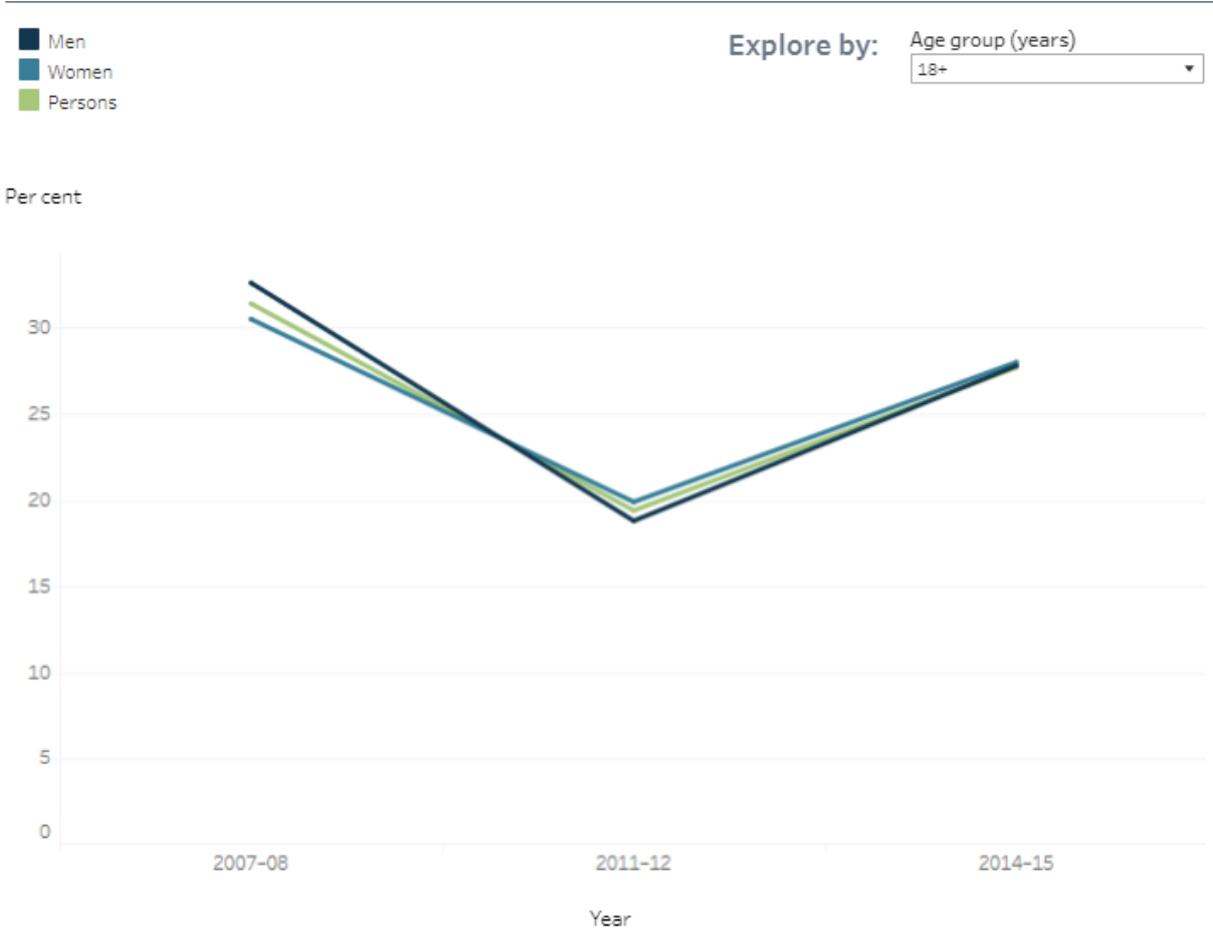


Figure 3.17.1: People aged 18+ with diabetes who attended a diabetes educator, by age group and sex, 2007-08 to 2014-15

Notes:  
1. Based on self-reported data.  
2. Age-standardised to the 2001 Australian Standard Population.  
Sources: ABS 2009; ABS 2013; ABS 2016  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

Age/sex &  
Age/sex—All  
Australians

Explore by:  Age/sex—All Australians  
 Remoteness areas  
 Socioeconomic areas  
 State/territory

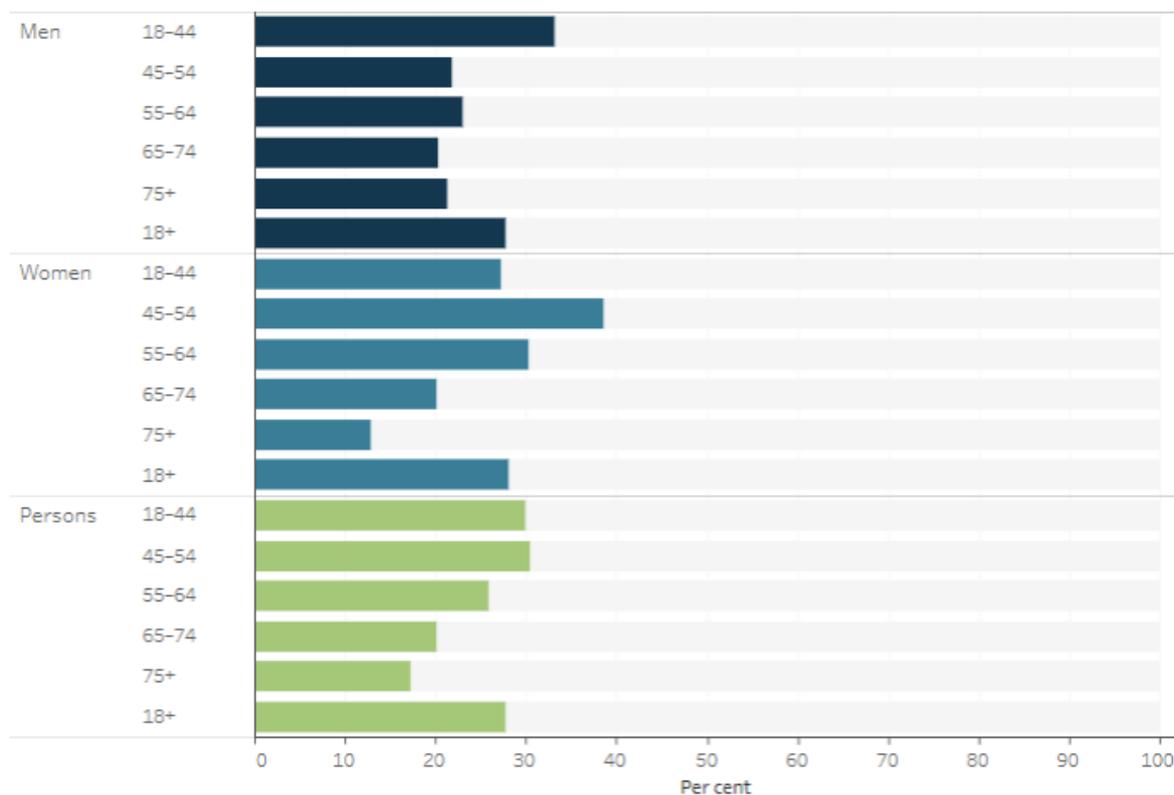


Figure 3.17.2: People aged 18+ with diabetes who attended a diabetes educator, by selected population group, 2014-15

Notes:

1. Based on self-reported data.

2. 18+ age-standardised to the 2001 Australian Standard Population.

Source: ABS 2016

<https://www.aihw.gov.au>

Labels:

- On  
 Off

### Indicator 3.17 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of adults (18+) with self-reported diabetes who reported attending a 'diabetes educator' in the previous 12 months.	ABS 2016; ABS 2013; ABS 2009
<b>Denominator</b>	Estimated adults (18+ years) with self-reported diabetes.	ABS 2016; ABS 2013; ABS 2009

### References

Australian Bureau of Statistics (ABS) 2009. Microdata: National Health Survey, 2007-08. ABS cat. no. 4324.0.55.001. Findings based on Expanded Confidentialised Unit Record File analysis. Canberra: ABS.

ABS 2013. Microdata: Australian Health Survey, National Health Survey, 2011-12. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## **Indicator 3.18 Quality of life of people with diabetes**

### **Considerations**

There is currently a lack reliable national data relating to quality of life among people living with diabetes. Information about quality of life is collected in the [Australian Diabetes, Obesity and Lifestyle Study](#). Further, recent National Survey data have not included specific quality of life questions, but rather broad general health questions. Additional data development is required to populate this indicator.

## Goal 4: Reduce the impact of pre-existing & gestational diabetes in pregnancy

Goal 4 of the Strategy focusses on reducing the impact of pre-existing and gestational diabetes in pregnancy.

Two indicators, not related to potential measures of progress, were identified in the [Implementation Plan](#) for Goal 4.

[4.1 Proportion of pregnant women being tested for gestational diabetes](#)

[4.2 Incidence of gestational diabetes](#)

### Indicator 4.1 Proportion of pregnant women being tested for gestational diabetes

#### Considerations

There are currently no accessible, national data that directly provide a measure of the proportion of pregnant women who are tested for gestational diabetes, as births and testing data are not linked. The use of Medicare Benefits Schedule (MBS) data and birth records data provide a proxy measure for this indicator.

#### Overview

Of women who gave birth in 2018, it was estimated that 61% were tested for gestational diabetes during their pregnancy (Figure 4.1.1).

#### Trends

The proportion of women giving birth who were tested for gestational diabetes has increased gradually each year from 55% in 2014 (Figure 4.1.1).

#### Age

The proportion of mothers tested for gestational diabetes increased with maternal age from 52% of those aged 20 and under to between 61–63% from age 25 and over (Figure 4.1.2).

#### About the data

The estimated rate of testing reported here is a proxy measure based on Medicare Benefits Schedule (MBS) data for the number of tests for gestational diabetes in a given year, divided by the number of women giving birth in that year, which were obtained from the National Perinatal Data Collection. Additional work is required to provide a more reliable measure that captures testing among pregnant women and can be used to assess progress against this indicator.

#### Explore the data

#### 4.1: Proportion of pregnant women being tested for gestational diabetes, by age group, 2014 to 2018

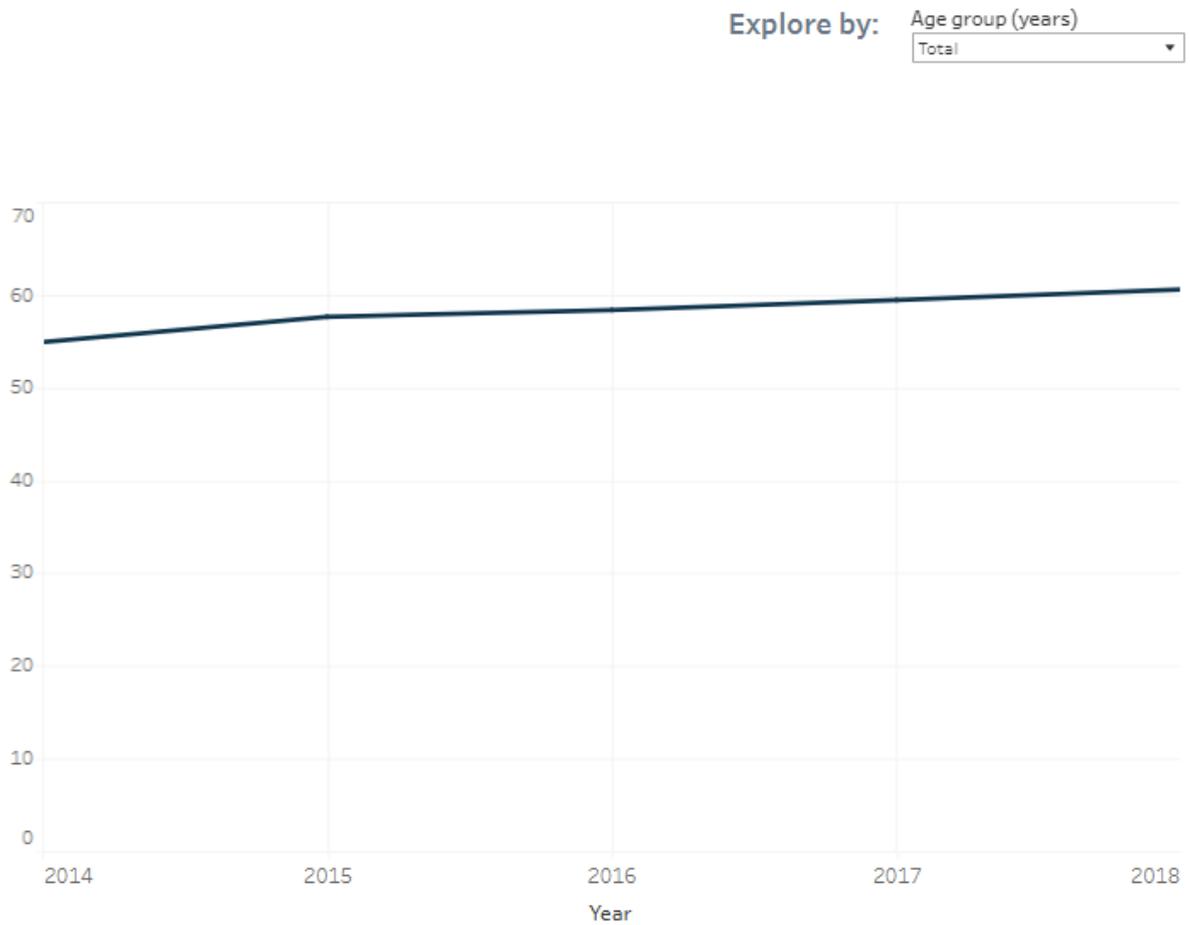


Figure 4.1.1: Proportion of pregnant women being tested for gestational diabetes, by age group, 2014 to 2018

Note: This is a proxy measure as MBS and birth records were not linked.

Source: AIHW MBS Data Collection and AIHW National Perinatal Data Collection (NPDC)

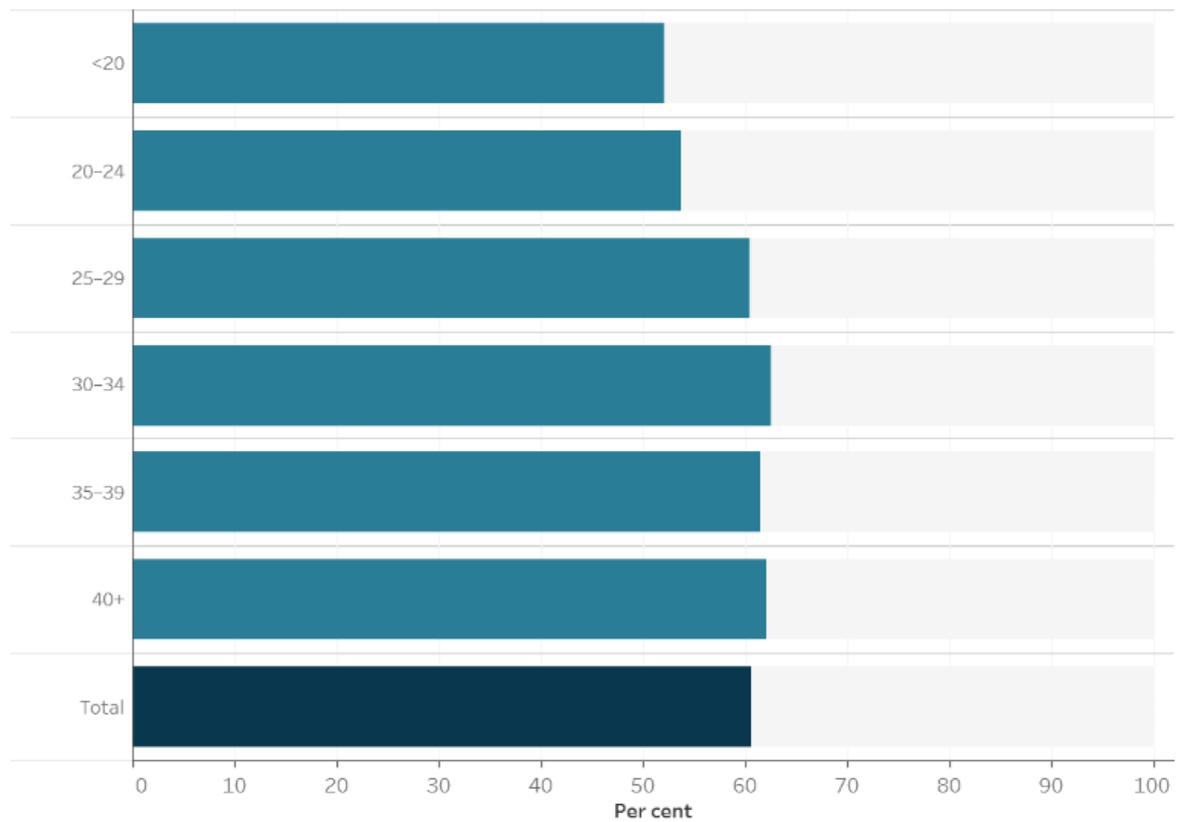
<https://www.aihw.gov.au>

Labels:

On

Off

Age group (years)



**Figure 4.1.2: Proportion of pregnant women being tested for gestational diabetes, by age group, 2018**

*Note:* This is a proxy measure as MBS and birth records were not linked.

*Source:* AIHW MBS Data Collection and AIHW National Perinatal Data Collection (NPDC)

<https://www.aihw.gov.au>

Labels:

- On
- Off

#### Indicator 4.1 data specifications

	Definition	Data source
<b>Numerator</b>	Number of records (patient level) for gestational diabetes testing identified on the Medicare Benefits Schedule (MBS) item numbers: 66545, 66548).	AIHW analysis of MBS Data Collection
<b>Denominator</b>	Number of women giving birth.	AIHW National Perinatal Data Collection

## Indicator 4.2 Incidence of gestational diabetes

### Overview

In 2017–18, around 43,100 (14%) mothers aged 15–49 who gave birth in hospital were diagnosed with gestational diabetes.

### Trends

The age-standardised incidence rate for gestational diabetes more than tripled from 5.2% in 2000–01 to 16% in 2017–18, with steep increases recorded from 2012–13 (Figure 4.2.1). Caution should be taken when comparing rates over time however, as a number of factors are likely to have affected the incidence of gestational diabetes in Australia in recent years. These include the introduction of new diagnostic guidelines and increasing risk factors in the population (see trends discussion in [Incidence of gestational diabetes in Australia](#) for more information).

### Age

In 2017–18, rates increased with age, peaking in the 45–49 age group at 31% (Figure 4.2.1).

### Population groups

In 2017–18, the incidence of gestational diabetes increased with the level of socioeconomic disadvantage. Mothers aged 15–49 who gave birth and were living in the lowest socioeconomic areas were 1.6 times as likely to be diagnosed with gestational diabetes as mothers living in the highest socioeconomic areas (21% and 13%, respectively) (Figure 4.2.2).

### State and territory

There was some variation in the incidence of gestational diabetes between states and territories in 2017–18 with the highest rate in the Australian Capital Territory (20%) and the lowest rate in Western Australia (12%) (Figure 4.2.2).

### Aboriginal and Torres Strait Islander people

In 2017–18, over 1,700 (13%) Aboriginal and Torres Strait Islander mothers who gave birth, were diagnosed with gestational diabetes. After adjusting for differences in the age structure of the populations, the incidence rate among Indigenous mothers was similar to the rate for non-Indigenous mothers (17% and 16%, respectively) (Figure 4.2.2).

### About the data

The number of hospitalisations with any diagnosis of gestational diabetes, and a diagnosis relating to a birth event code, was used to calculate the incidence of gestational diabetes in the population. A single birth event code is entered for each woman, regardless of the number of times she is hospitalised during the same pregnancy or the number of babies born.

### Explore the data

#### 4.2: Incidence of gestational diabetes by selected population groups, 2000–01 to 2017–18

Explore by: Age group (years)

Total 15-49

Per cent

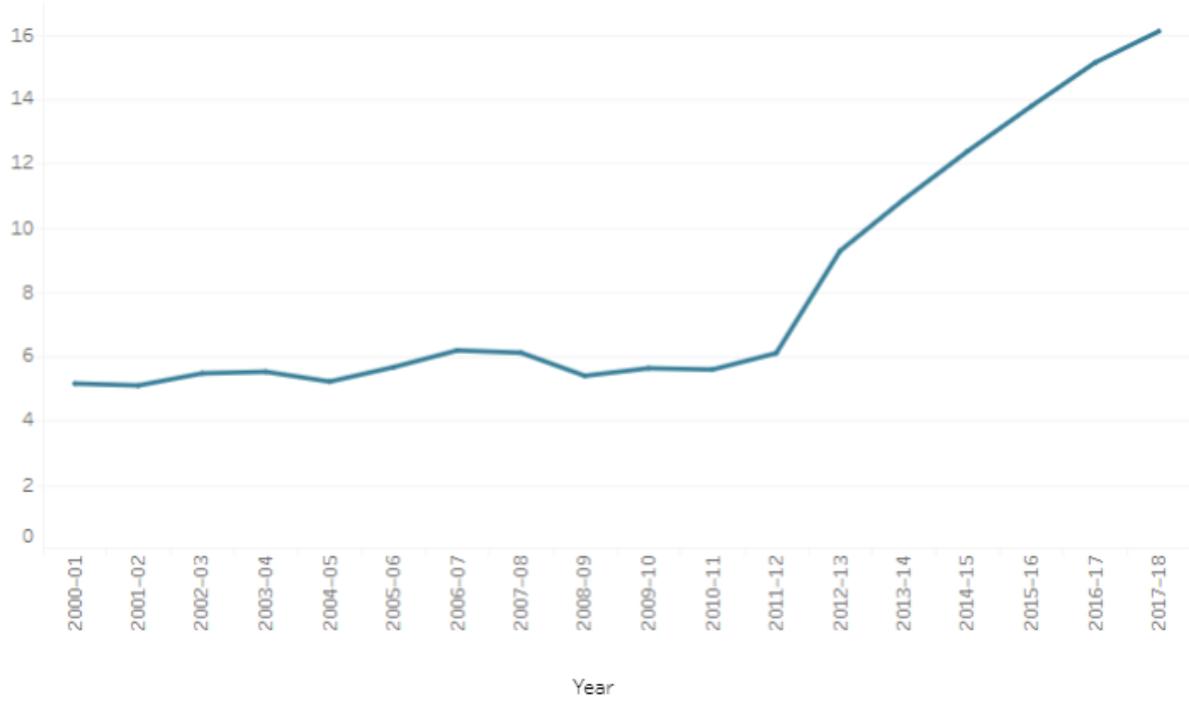


Figure 4.2.1: Incidence of gestational diabetes, 2000-01 to 2017-18

Notes

1. Age-standardised to the 2001 Australian resident female population aged 15-49.
  2. Population—females aged 15-49 giving birth in Australian hospitals.
  3. Recent changes to the diagnostic criteria for gestational diabetes may influence the number of cases reported within a given year. Refer to the 'Changing trends' discussion in the AIHW's Gestational diabetes report for more information. <https://www.aihw.gov.au/reports/diabetes/incidence-of-gestational-diabetes-in-australia/contents/changing-trends>
- Source: AIHW analysis of the National Hospital Morbidity Database

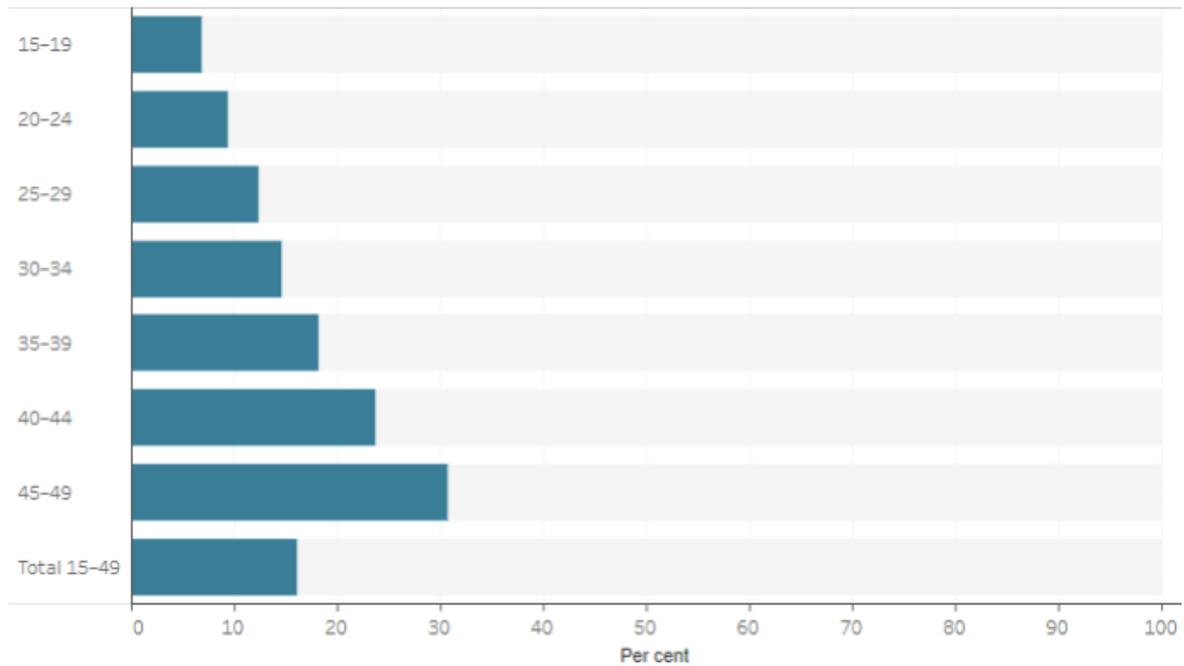
Labels:

- On  
 Off

## Age groups

Explore by:

- Age groups
- Indigenous status
- Remoteness areas
- Socioeconomic areas
- State/territory



**Figure 4.2.2: Incidence of gestational diabetes, by selected population group, 2017-18**

Notes:

1. Age-standardised to the 2001 Australian Female Standard Population aged 15-49 years.
2. Age groups are reported using crude rates.
3. Population—females aged 15-49 giving birth in Australian hospitals.

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 4.2 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations with birth outcome (ICD-10-AM code: Z37) and a co-existing diagnosis of gestational diabetes (ICD-10-AM code: O24.4).	AIHW NHMD
<b>Denominator</b>	Number of hospital separations with birth outcome (ICD-10-AM code: Z37).	AIHW NHMD

# Goal 5: Reduce the impact of diabetes among Aboriginal and Torres Strait Islander peoples

Goal 5 of the Strategy focusses on reducing the impact of diabetes among Aboriginal and Torres Strait Islander people. A number of indicators were identified in the [Implementation Plan](#) to measure the progress of Goal 5, some of which were included in Goals 1-4, where indicators have been disaggregated by Indigenous status.

**This section for Goal 5, reports on twenty-one indicators specific to Aboriginal and Torres Strait Islander people.**

**Aboriginal and Torres Strait Islander people with diabetes complications:**

[5.1 Hospitalisation for diabetes by type of diabetes](#)

[5.2 Ratio of separations for Aboriginal and Torres Strait Islander people, to non-Indigenous Australians, diabetes](#)

[5.3 Hospitalisation for principal diagnosis of diabetes by additional diagnosis of hospitalisation](#)

[5.4 Age-standardised death rate for diabetes by Indigenous status](#)

[5.5 Avoidable and preventable deaths from diabetes](#)

**Aboriginal and Torres Strait Islander people who receive regular testing for complications:**

[5.6 Indigenous regular clients with type 2 diabetes who had a blood pressure test](#)

[5.7 Indigenous regular clients with type 2 diabetes who had a kidney function test](#)

[5.8 Indigenous regular clients with type 2 diabetes who had a kidney function test with results within specified levels](#)

**Rates of smoking and alcohol consumption among pregnant Aboriginal and Torres Strait Islander women with diabetes:**

[5.9 Women who smoked during pregnancy](#)

**Aboriginal and Torres Strait Islander children participating in evidence-based early childhood education programs:**

[5.10 Indigenous children attending preschool](#)

**Other indicators not related to potential measures of progress:**

[5.11 Risk factor status of women who attended an antenatal visit before 13 weeks of pregnancy](#)

[5.12 Risk factor status of women who attended an antenatal visit in the third trimester of pregnancy](#)

[5.13 Indigenous regular clients with type 2 diabetes receiving recommended care from Indigenous primary health care services](#)

[5.14 Indigenous regular clients of Indigenous primary health care services who had type 2 diabetes and a general practitioner management plan or team care arrangements](#)

[5.15 Indigenous regular clients with type 2 diabetes who are immunised against influenza](#)

[5.16 Types of lifestyle issues discussed with health professional](#)

[5.17 Health actions taken by people with diabetes](#)

[5.18 People without diabetes tested for high sugar levels/risk of diabetes](#)

[5.19 Selected health issues of Indigenous mothers](#)

[5.20 Use of antenatal care by selected health issues](#)

[5.21 Diabetes problems managed by general practitioner](#)

## **Indicator 5.1 Hospitalisation for diabetes by type of diabetes**

### **On this page**

[5.1.1 Type 1 diabetes](#)

[5.1.2 Type 2 diabetes](#)

[5.1.3 Diabetes during pregnancy](#)

### **Considerations**

Symptoms of type 1 and type 2 diabetes are similar, particularly in young adults, and the diagnosed diabetes type, and subsequently coded diabetes type, are not always correct (Stone et al. 2010).

### **5.1.1 Type 1 diabetes**

#### **Overview**

In 2017–18, there were around 3,000 hospitalisations with a principal and/or additional diagnosis of type 1 diabetes among Indigenous Australians—361 hospitalisations per 100,000 population.

## **Trends**

Between 2015–16 and 2017–18, the age-standardised rate of hospitalisations for type 1 diabetes in this cohort increased from 362 to 446 hospitalisations per 100,000 population (Figure 5.1.1.1).

## **Age and sex**

In 2017–18, the age-standardised hospitalisation rate was higher among Indigenous males than females (525 and 381 hospitalisations per 100,000 population, respectively). Age-specific hospitalisation rates peaked in those aged 55–64 (905 hospitalisations per 100,000 population) (Figure 5.1.1.1).

## **Population groups**

Hospitalisation rates for type 1 diabetes as a principal and/or additional diagnosis among Indigenous Australians in 2017–18 were around 3 times as high among Indigenous Australians living in *Major cities* and *Regional* areas as those living in *Remote and very remote* areas (482, 528 and 175 hospitalisations per 100,000 population, respectively).

## **State and territory**

Among the states and territories, rates were highest in Victoria (575 per 100,000 population) and lowest in the Northern Territory (147 per 100,000 population). Other states had rates ranging from 322 to 562 per 100,000 population (Figure 5.1.1.2).

## **Explore the data**

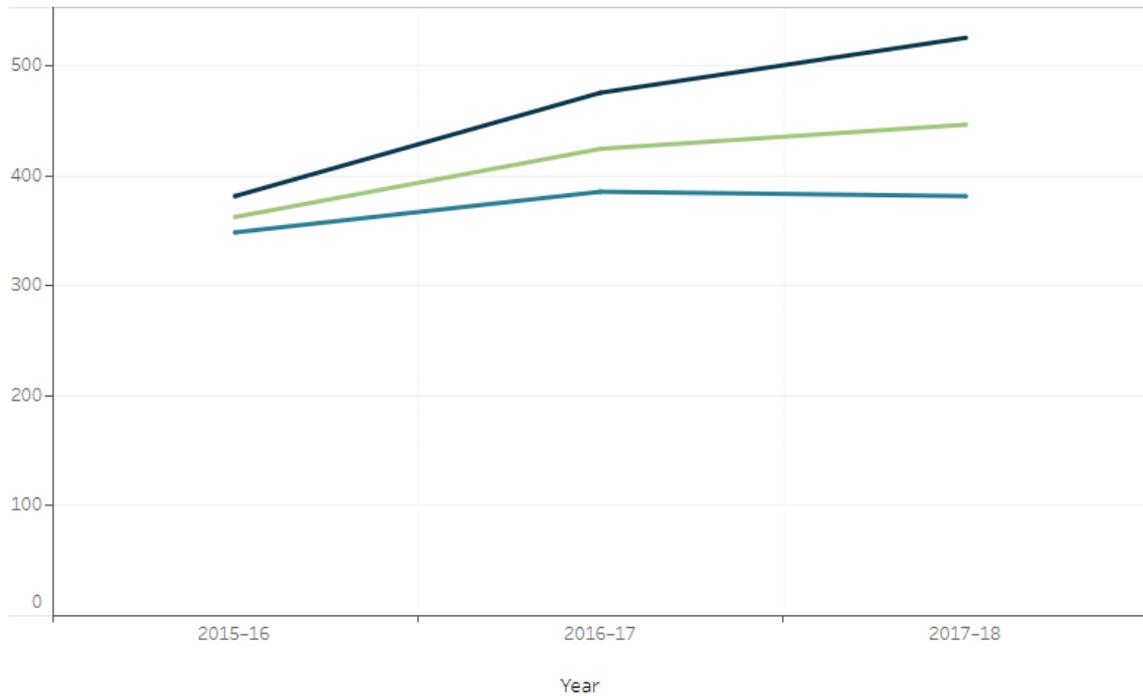
### 5.1.1 Hospitalisation for type 1 diabetes among Indigenous Australians, by diagnosis type, age and sex, 2015-16 to 2017-18 and by selected population groups, 2017-18

■ Males
 ■ Females
 ■ Persons

Explore by:
 Diagnosis type
Population group

Principal and/or additional
All ages

Number per 100,000 population



**Figure 5.1.1.1: Hospitalisation for type 1 diabetes among Indigenous Australians, by diagnosis type, age and sex, 2015-16 to 2017-18**

Notes:

1. All ages rate age-standardised to the 2001 Australian Standard Population.
2. Crude rates reported for individual age groups.

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

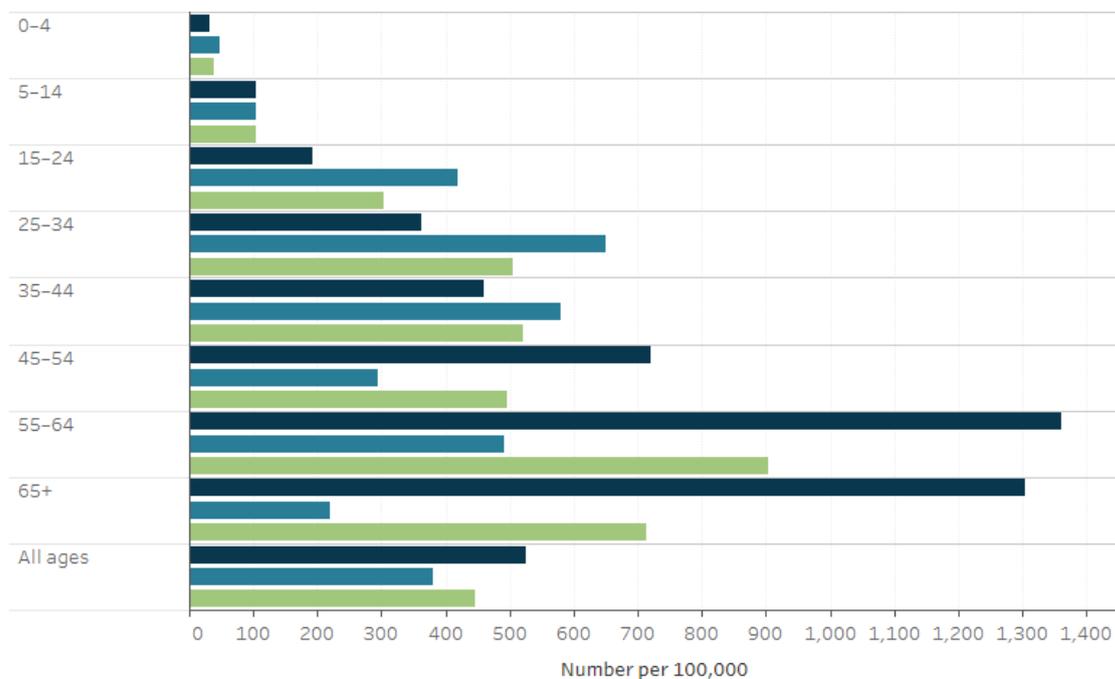
Labels:  
 On  
 Off

■ Males
 ■ Females
 ■ Persons

Explore by: **Diagnosis type** Principal and/or additional

Age groups
  Remoteness areas
  State/territory

### Age groups



**Figure 5.1.1.2: Hospitalisation for type 1 diabetes among Indigenous Australians by diagnosis type and selected population group, 2017-18**

*Notes:*

1. Age-standardised to the 2001 Australian Standard Population.
2. Crude rates reported for individual age groups.

Source: AIHW analysis of the National Hospital Morbidity Database  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

### Indicator 5.1.1 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations (principal, additional and principal and/or additional diagnosis) for type 1 diabetes (ICD-10-AM: E10) among Indigenous Australians.	AIHW National Hospital Morbidity Database (NHMD)
<b>Denominator</b>	Estimated Indigenous Australian resident population	AIHW Population Database (sourced from ABS Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

## 5.1.2 Type 2 diabetes

### Overview

In 2017–18, there were around 69,200 hospitalisations with a principal and/or additional diagnosis of type 2 diabetes among Indigenous Australians—8,400 hospitalisations per 100,000 population.

### Trends

Between 2015–16 and 2017–18, the age-standardised rate of hospitalisations increased from 12,100 to 14,300 hospitalisations per 100,000 population.

### Age and sex

In 2017–18, after adjusting for age, the hospitalisation rate was higher among Indigenous females compared to Indigenous males (15,500 and 13,100 per 100,000 population, respectively) (Figure 5.1.2.1). Type 2 diabetes hospitalisation rates increased with age, peaking in those aged 65 and over (45,800 hospitalisations per 100,000 population) (Figure 3.8.1.1).

### Population groups

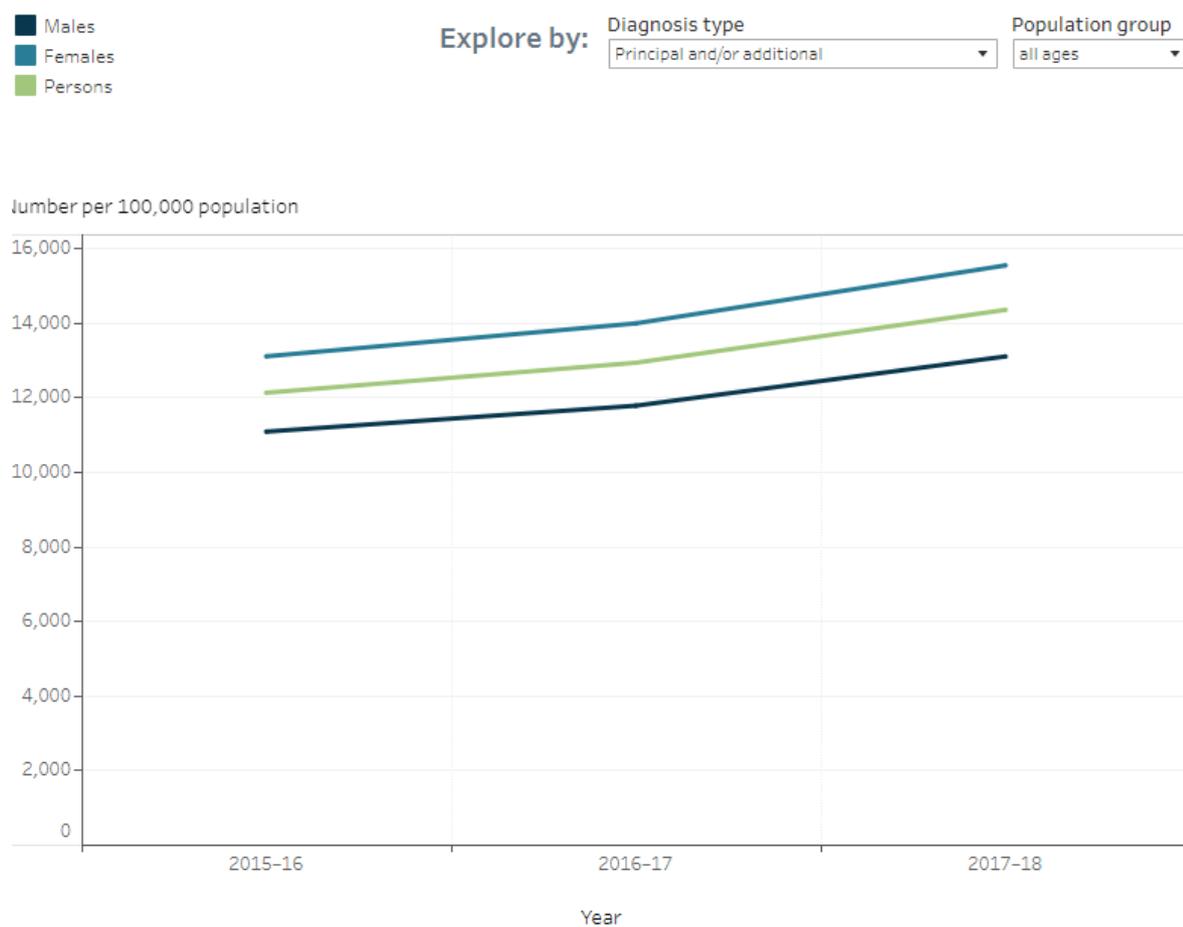
Hospitalisations for type 2 diabetes in 2017–18 were 3.3 times as high among Indigenous Australians living in *Remote* and *Very remote* areas as those living in *Major cities* (30,800 compared with 9,200 per 100,000 population).

### State and territory

In 2017–18, rates were highest in Western Australia (35,000 per 100,000 population) and lowest in Tasmania (4,100 per 100,000 population). Other states had rates ranging from 6,200 to 21,800 per 100,000 population (Figure 5.1.2.2).

### Explore the data

### 5.1.2 Hospitalisation for type 2 diabetes among Indigenous Australians, by diagnosis type, age and sex, 2015-16 to 2017-18 and by selected population groups, 2017-18



**Figure 5.1.2.1: Hospitalisation for type 2 diabetes among Indigenous Australians, by diagnosis type, age and sex, 2015-16 to 2017-18**

Notes:

1. All ages rate age-standardised to the 2001 Australian Standard Population.
2. Crude rates reported for individual age groups.

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

On

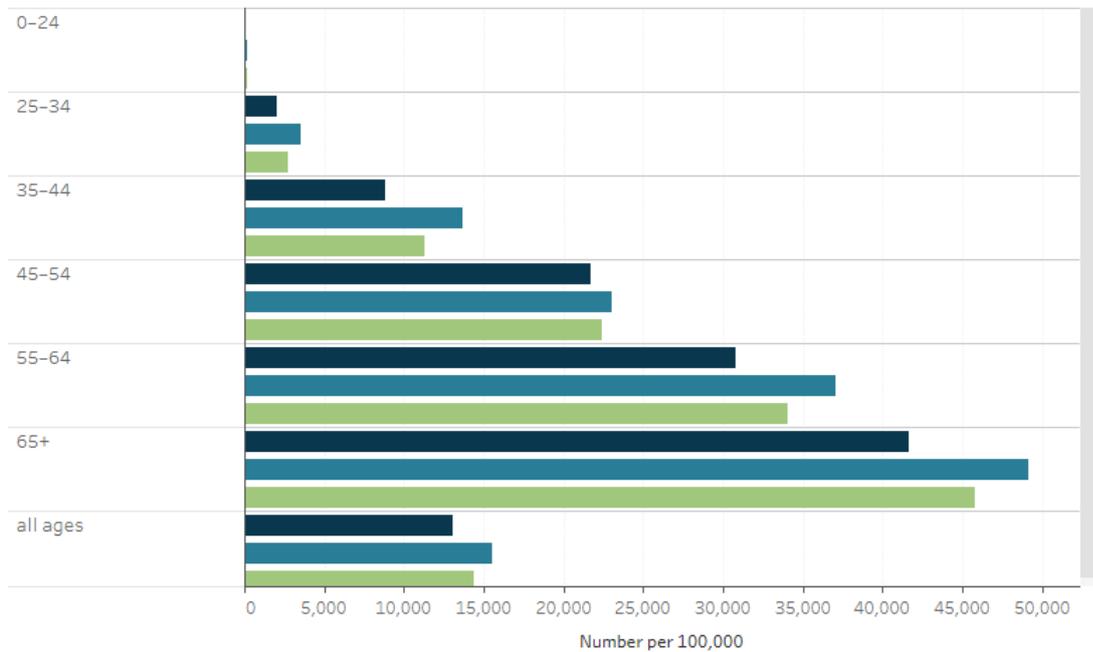
Off

- Males
- Females
- Persons

Explore by: Diagnosis type  
Principal and/or additional

- Category
- Age groups
  - Remoteness areas
  - State/territory

### Age groups



**Figure 5.1.2.2: Hospitalisation for type 2 diabetes among Indigenous Australians by diagnosis type and selected population group, 2017-18**

Notes:

1. Age-standardised to the 2001 Australian Standard Population.
2. Crude rates reported for individual age groups.

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

- On
- Off

	Definition	Data source
<b>Numerator</b>	Number of hospital separations (principal, additional and principal and/or additional diagnosis) for type 2 diabetes (ICD-10-AM: E11) among Indigenous Australians.	AIHW NHMD
<b>Denominator</b>	Estimated Australian Indigenous resident population	AIHW Population Database (sourced from ABS Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

### 5.1.3 Diabetes during pregnancy

#### Overview

In 2017-18, there were almost 3,800 hospitalisations with a principal and/or additional diagnosis of diabetes during pregnancy (pre-existing and gestational diabetes), equating to a rate of 24,800 per 100,000 Indigenous females aged 10-44.

## **Trends**

Between 2015–16 and 2016–17, the age-standardised rate of hospitalisations increased slightly from 26,600 to 28,700 hospitalisations per 100,000 females, before decreasing to 26,900 per 100,000 females (Figure 5.1.3.1).

## **Age**

The hospitalisation rates for diabetes during pregnancy as a principal and/or additional diagnosis were highest among Indigenous women aged 35–39 (50,100 per 100,000 females) (Figure 5.1.3.1).

## **Population groups**

Hospitalisation rates increased substantially along with the level of remoteness. The rate was over 2 times as high among those living in *Remote and very remote* areas (44,100 per 100,000 females) as those living in *Major cities* (20,600 per 100,000 females).

## **State and territory**

Rates were highest in the Northern Territory (42,300 per 100,000 population) and lowest in Tasmania (15,500 per 100,000 population). Other states had rates ranging from 16,100 to 31,300 per 100,000 population (Figure 5.1.3.2).

## **Explore the data**

### 5.1.3 Hospitalisation for diabetes during pregnancy among Indigenous females, by diagnosis type and age, 2015-16 to 2017-18 and by selected population groups, 2017-18

Explore by: Diagnosis type:  Population group:

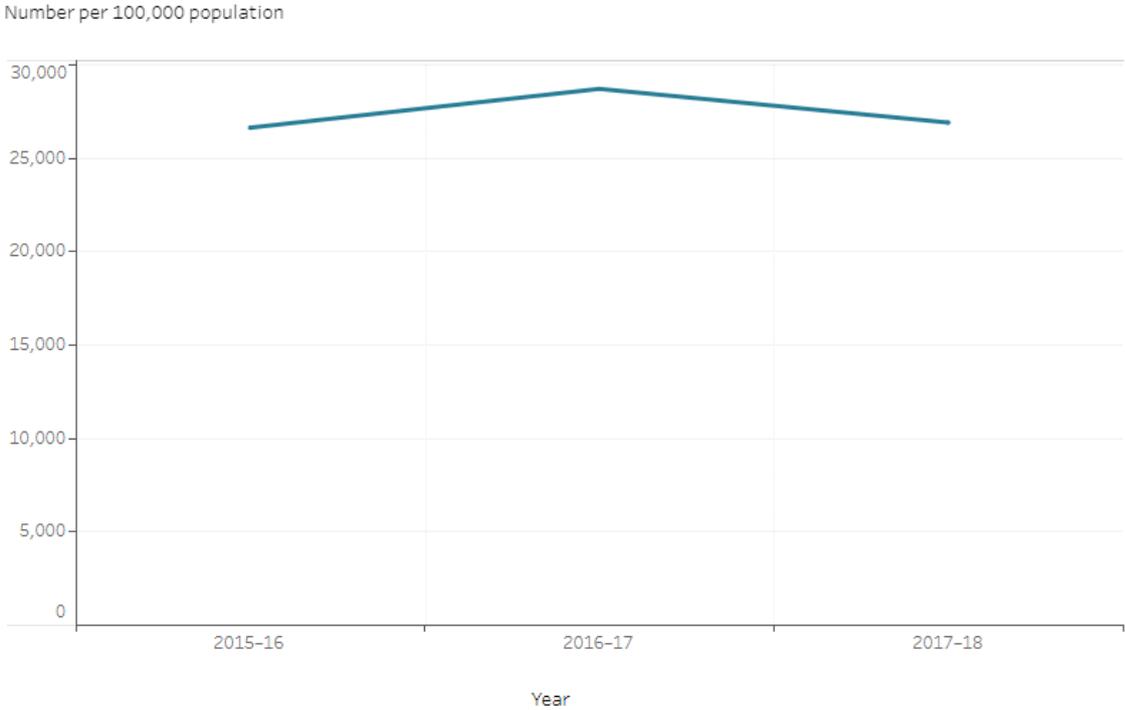


Figure 5.1.3.1: Hospitalisation for diabetes during pregnancy among Indigenous females, by diagnosis type and age, 2015-16 to 2017-18

Notes:

- 1. All ages rate age-standardised to the 2001 Australian Standard Population.
- 2. Crude rates reported for individual age groups.

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

- On
- Off

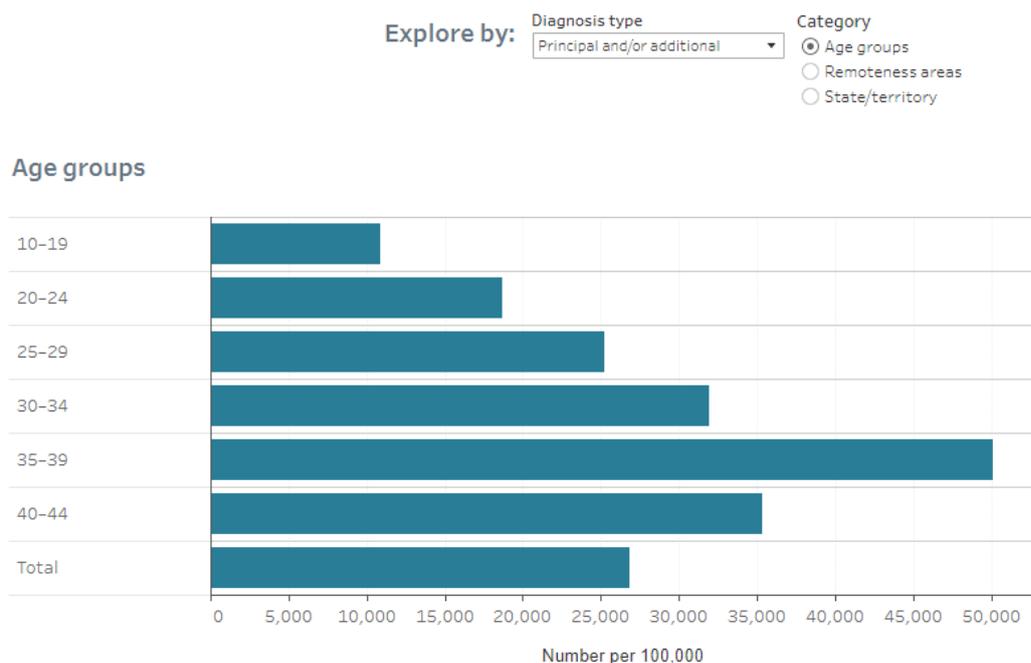


Figure 5.1.3.2: Hospitalisation for diabetes during pregnancy among Indigenous females by diagnosis type and selected population group, 2017-18

Notes:

1. Age-standardised to the 2001 Australian Standard Population.

2. Crude rates reported for individual age groups.

Source: AIHW analysis of the National Hospital Morbidity Database

<https://www.aihw.gov.au>

Labels:

On

Off

### Indicator 5.1.3 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations (principal, additional and principal and/or additional diagnosis) for diabetes during pregnancy (ICD-10-AM: O24) among Indigenous Australians.	AIHW NHMD
<b>Denominator</b>	Number of hospitalisations for pregnancy outcomes (ICD-10 AM: Z37, O03 O04, O05, O06, O80, O81, O82, O83, O84, P95 and P964) for Indigenous Australians.	AIHW NHMD

### Reference

Stone MA, Camosso-Stefinovic J, Wilkinson J, Lusignan SD, Hattersley AT & Khunti K 2010. Incorrect and incomplete coding and classification of diabetes: a systematic review. *Diabetic Medicine* 27:491-7.

## **Indicator 5.2 Ratio of separations for Aboriginal and Torres Strait Islander people, to non-Indigenous Australians, diabetes**

### **Overview**

In 2017–18, the ratio of hospitalisations for diabetes, as a principal and/or additional diagnosis, was higher among Indigenous Australians compared with non-Indigenous Australians in all age groups.

### **Trends**

Between 2015–16 and 2017–18, the ratio of hospitalisations for diabetes increased slightly from 3.4 to 3.9 times as high.

### **Age and sex**

In 2017–18, the ratio peaked in those aged 45–54 (6.6 times as high) and was consistently higher among females than males in all age groups (Figure 5.2.1).

### **Population groups**

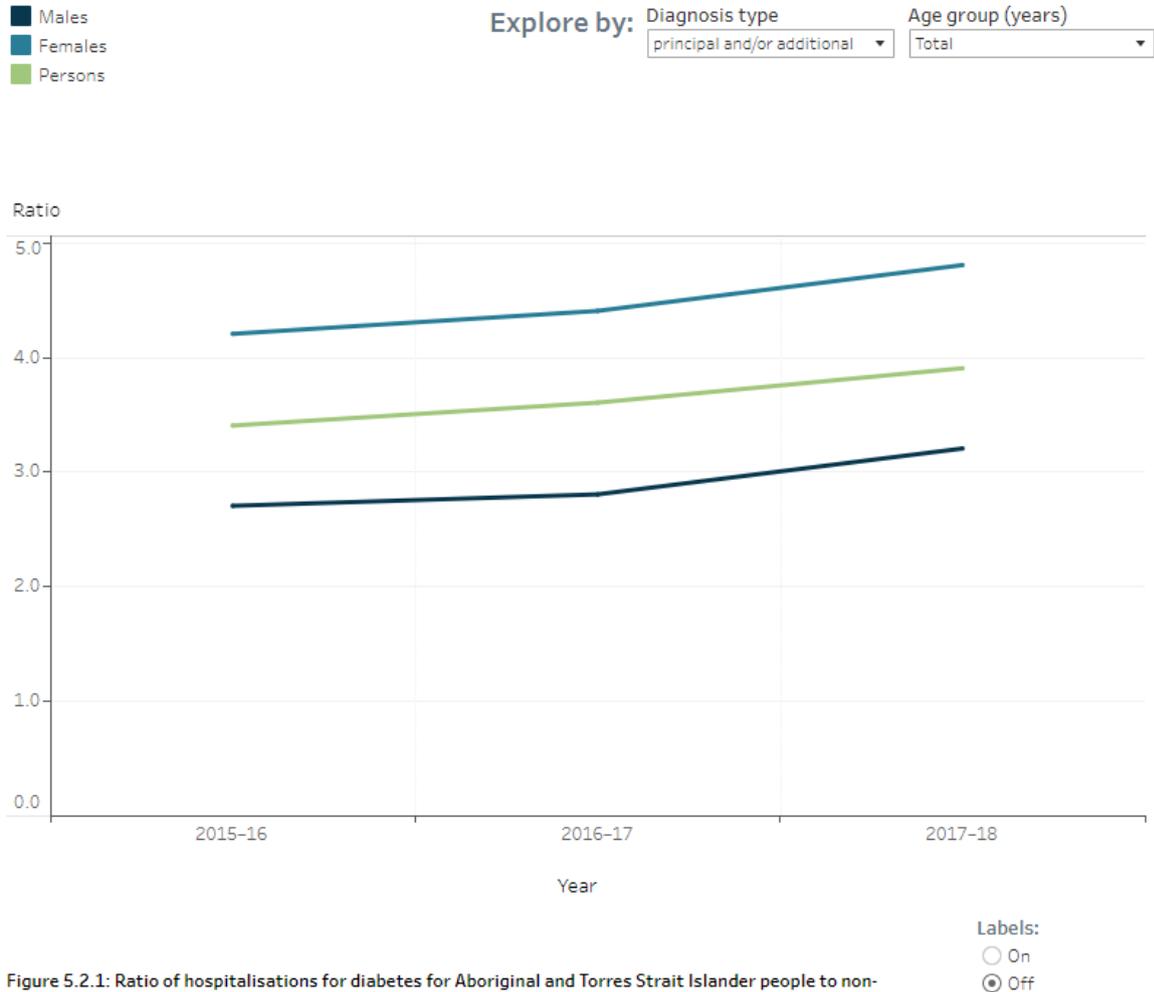
The ratio of diabetes-related hospitalisations for Indigenous Australians compared to non-Indigenous Australians in 2017–18 increased with remoteness, from 2.6 times as high in *Major cities* to 9.2 times as high in *Remote* and *Very remote* areas.

### **State and territory**

There was some variation in the ratio by state and territory in 2017–18, with the greatest difference in the rate of hospitalisations for diabetes recorded in Western Australia (9.2 times as high) and the smallest in Tasmania (1.4 times as high) (Figure 5.2.2).

### **Explore the data**

**5.2 Ratio of hospitalisations for diabetes for Aboriginal and Torres Strait Islander people to non-Indigenous Australians, by diagnosis type, age group and sex, 2015–16 to 2017–18 and by selected population group, 2017–18**



**Figure 5.2.1: Ratio of hospitalisations for diabetes for Aboriginal and Torres Strait Islander people to non-Indigenous Australians, by diagnosis type, age group and sex, 2015–16 to 2017–18**  
 Note: Total age-standardised to the 2001 Australian Standard Population.  
 Source: AIHW analysis of the National Hospital Morbidity Database  
<https://www.aihw.gov.au>

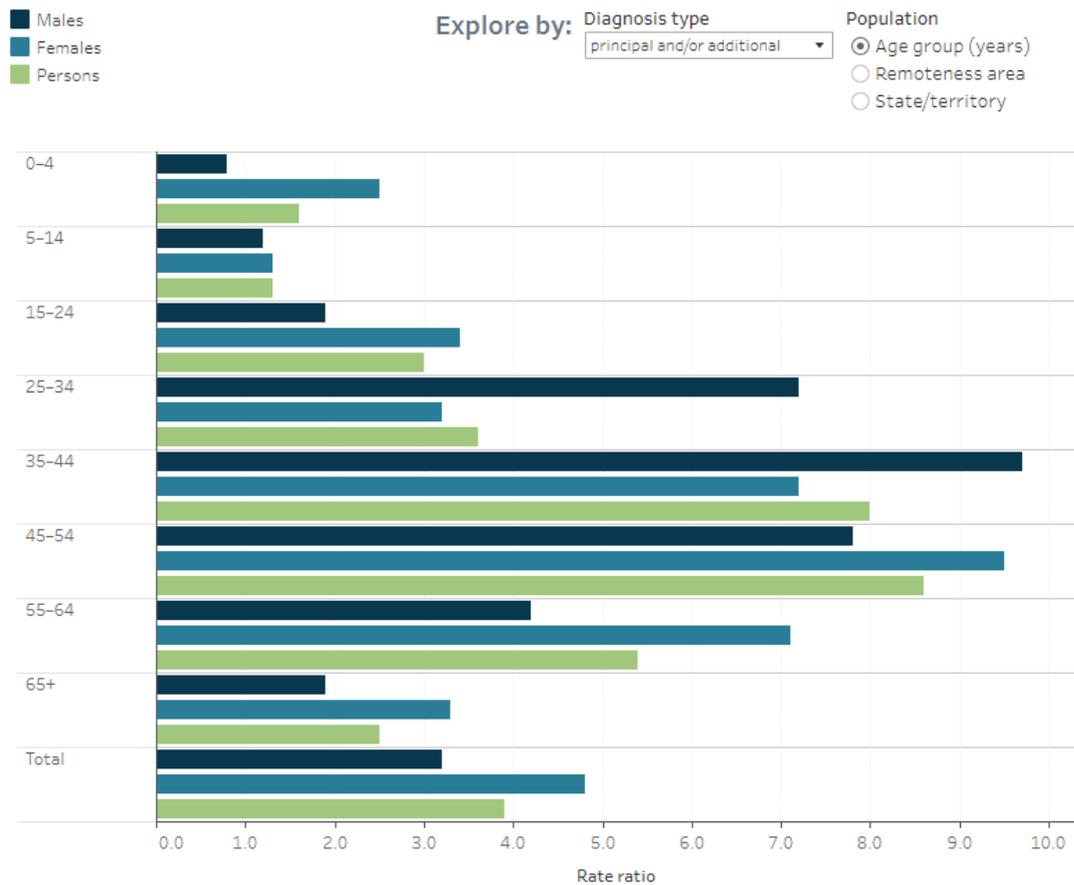


Figure 5.2.2 Ratio of hospitalisations for diabetes for Aboriginal and Torres Strait Islander people to non-Indigenous Australians, by diagnosis type and selected population group, 2017-18

Note: Total age-standardised to the 2001 Australian Standard Population.

Source: AIHW analysis of the National Mortality Database

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 5.2 data specifications

	Definition	Data source
<b>Numerator</b>	Number of hospital separations with a principal or additional diagnosis of diabetes (ICD-10-AM codes in: E10, E11, E13, E14 or O24) among Indigenous or non-Indigenous Australians.	AIHW NHMD
<b>Denominator</b>	Estimated Australian Indigenous resident population or estimated non-Indigenous Australian resident population.	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)
<b>Ratio</b>	Age-standardised rate of hospital separations with a principal and/or additional diagnosis of diabetes (ICD-10-AM codes in: E10, E11, E13, E14 or O24) among Indigenous Australians to non-Indigenous Australians	

## **Indicator 5.3 Hospitalisation for principal diagnosis of diabetes by additional diagnosis of hospitalisation**

### **Overview**

Over the period 2016–18, the most common additional diagnosis for hospitalisations of Aboriginal and Torres Strait Islander people with a principal diagnosis of all diabetes types were related to *Factors influencing health status and contact with health services*. These include care or services for an ongoing condition, such as dialysis, and a problem or situation that influences a person's health status (e.g. problems related to lifestyle).

### **Common additional diagnosis for diabetes hospitalisations**

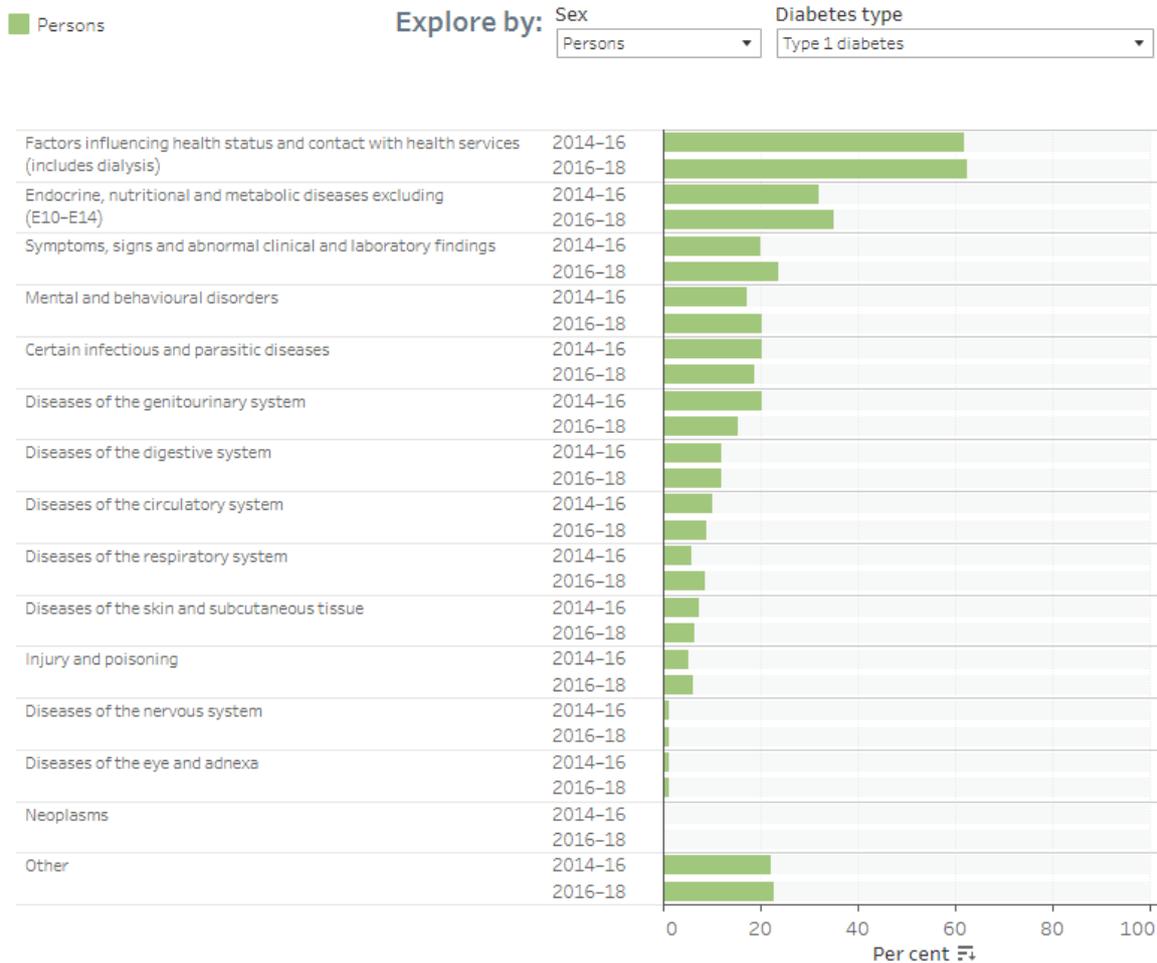
Diseases of the genitourinary system, and certain infections and parasitic diseases were identified in over a third of hospitalisations with a principal diagnosis of type 2 diabetes. Endocrine, nutritional and metabolic disease was the most commonly identified additional diagnosis associated with a principal diagnosis of type 1 diabetes (Figure 5.3).

### **About the data**

AIHW analysis of the National Hospital Morbidity Database (NHMD) is used for this indicator. Due to small numbers, data for adjacent years are combined (2014–15/2015–16 and 2016–17/2017–18).

### **Explore the data**

### 5.3 Hospitalisations of Indigenous persons for a principal diagnosis of diabetes, by additional diagnosis of hospitalisation, 2014–16 and 2016–18



**Figure 5.3: Hospitalisations of Indigenous persons for a principal diagnosis of diabetes, by additional diagnosis of hospitalisation, 2014–16 and 2016–18**  
*Note:* A single hospital separation can have multiple additional diagnoses.  
*Source:* AIHW analysis of the National Hospital Morbidity Database  
<https://www.aihw.gov.au>

#### Indicator 5.3 data specifications

	Definition	Data source
<b>Numerator</b>	Number of additional diagnoses by principal diagnosis of diabetes among Indigenous Australians (ICD-10-AM: E10, E11, E13, O24).	AIHW NHMD
<b>Denominator</b>	Number of Indigenous Australians with a principal diagnosis of diabetes (ICD-10-AM: E10, E11, E13, O24).	AIHW NHMD

## **Indicator 5.4 Age-standardised death rate for diabetes by Indigenous status**

### **Overview**

In 2018, the age-standardised death rate for diabetes (underlying and/or associated cause) was 4.0 times as high among Indigenous Australians as non-Indigenous Australians (210 and 52 deaths per 100,000 population, respectively).

### **Trends**

Between 2012 and 2018, the difference in deaths rates remained relatively stable, fluctuating between 3.5 and 4.0 times as high among Indigenous Australians as non-Indigenous Australians (Figure 5.4.1).

### **Age and sex**

The disparity in rates between the Indigenous and non-Indigenous populations was greater among females (5.3 times as high) than males (3.2 times as high). The death rate for diabetes increased with age for both Indigenous Australians and non-Indigenous Australians, and was higher among Indigenous than non-Indigenous Australians in each age group (Figure 5.4.1).

### **State and territory**

The difference between Indigenous and non-Indigenous death rates for diabetes was greatest in Western Australia and the Northern Territory where the rate was 7.9 and 7.5 times as high, respectively. The disparity was lowest in New South Wales where the diabetes-related death rate among Indigenous Australians was 2.4 times as high as non-Indigenous Australians (Figure 5.4.2).

### **About the data**

Diabetes is rarely listed as the underlying cause of death. A more complete picture of mortality is obtained by examining both diabetes as the underlying cause and as an associated cause of death. However, deaths from diabetes are known to be under-reported in national mortality statistics, as diabetes is often omitted from death certificates as a cause of death (Harding et al, 2014).

### **Explore the data**

**5.4 Deaths from diabetes (underlying or associated cause) by Indigenous status, age and sex, 2012 to 2018 and by selected population group, 2018**

■ Indigenous  
■ Non-Indigenous

Explore by: Sex: Persons Age group (years): All ages

Number per 100,000 population

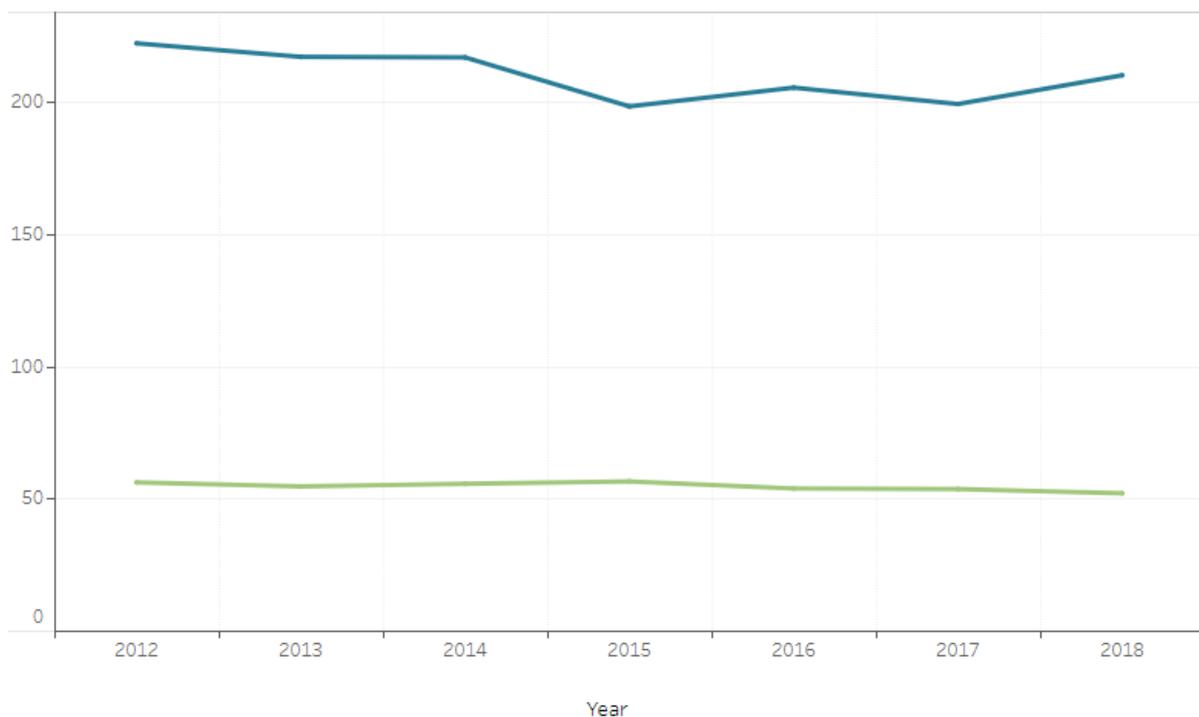


Figure 5.4.1: Deaths from diabetes (underlying or associated cause) by Indigenous status, age and sex, 2012 to 2018

Note:

Total 'All ages' age-standardised to the 2001 Australian Standard Population.

Source: AIHW analysis of the National Mortality Database

<https://www.aihw.gov.au>

Labels:

- On
- Off

## Age group—Persons

Explore by: Sex

Persons

Population group

Age group

Sex

State/territory

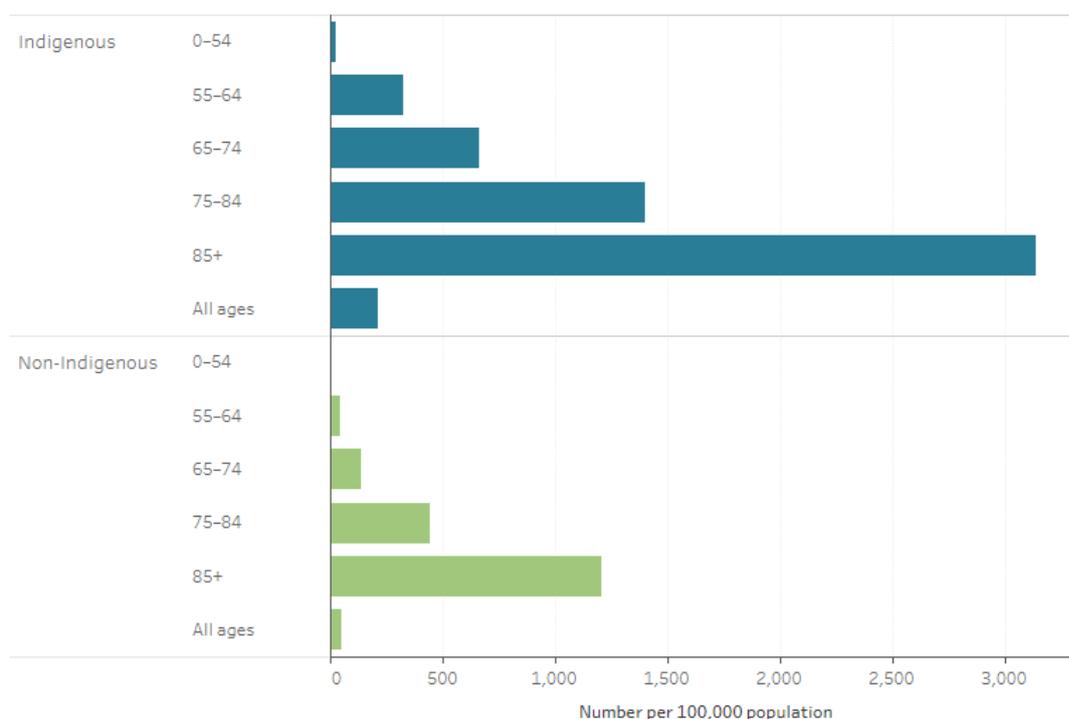


Figure 5.4.2: Deaths from diabetes (underlying or associated cause) by Indigenous status and selected population groups, 2018

Notes:

1. Age-standardised to the 2001 Australian Standard Population.

2. Crude rates reported for individual age groups.

Source: AIHW analysis of the National Mortality Database

<https://www.aihw.gov.au>

Labels:

On

Off

### Indicator 5.4 data specifications

	Definition	Data source
<b>Numerator</b>	Number of Indigenous diabetes related deaths (underlying and/or associated cause, ICD-10; E10-E14, O24).	AIHW National Mortality Database (NMD)
<b>Denominator</b>	Estimated Australian Indigenous and non-Indigenous resident populations.	AIHW Population Database (sourced from ABS Australian Demographic Statistics and Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

### Reference

Harding JL, Shaw JE, Peeters A, Guiver T, Davidson S, Magliano DJ. 2014. Mortality trends among people with type 1 and type 2 diabetes in Australia: 1997–2010. *Diabetes Care* 37.

## **Indicator 5.5 Avoidable and preventable deaths from diabetes**

### **Consideration**

Avoidable and preventable deaths refer to deaths from conditions which, given timely and effective medical care, are considered preventable.

### **Overview**

In the period 2014–2018, the age-standardised rate of avoidable and preventable deaths from diabetes was 44 per 100,000 population among Indigenous Australians.

### **Age and sex**

After adjusting for age, the rate was similar among males and females (46 per 100,000 population and 42 per 100,000 population, respectively). The rate of avoidable and preventable deaths from diabetes increased with age for both Indigenous males and females (Figure 5.5).

### **State and territory**

There was variation in the rate of avoidable and preventable deaths from diabetes by state and territory. The Northern Territory had the highest rate (108 per 100,000 population), which was over 5 times as high as the rate in New South Wales (21 per 100,000 population) (Figure 5.5).

### **Explore the data**

## 5.5 Avoidable and preventable deaths from diabetes, Indigenous Australians, by age group and state and territory, 2014–2018

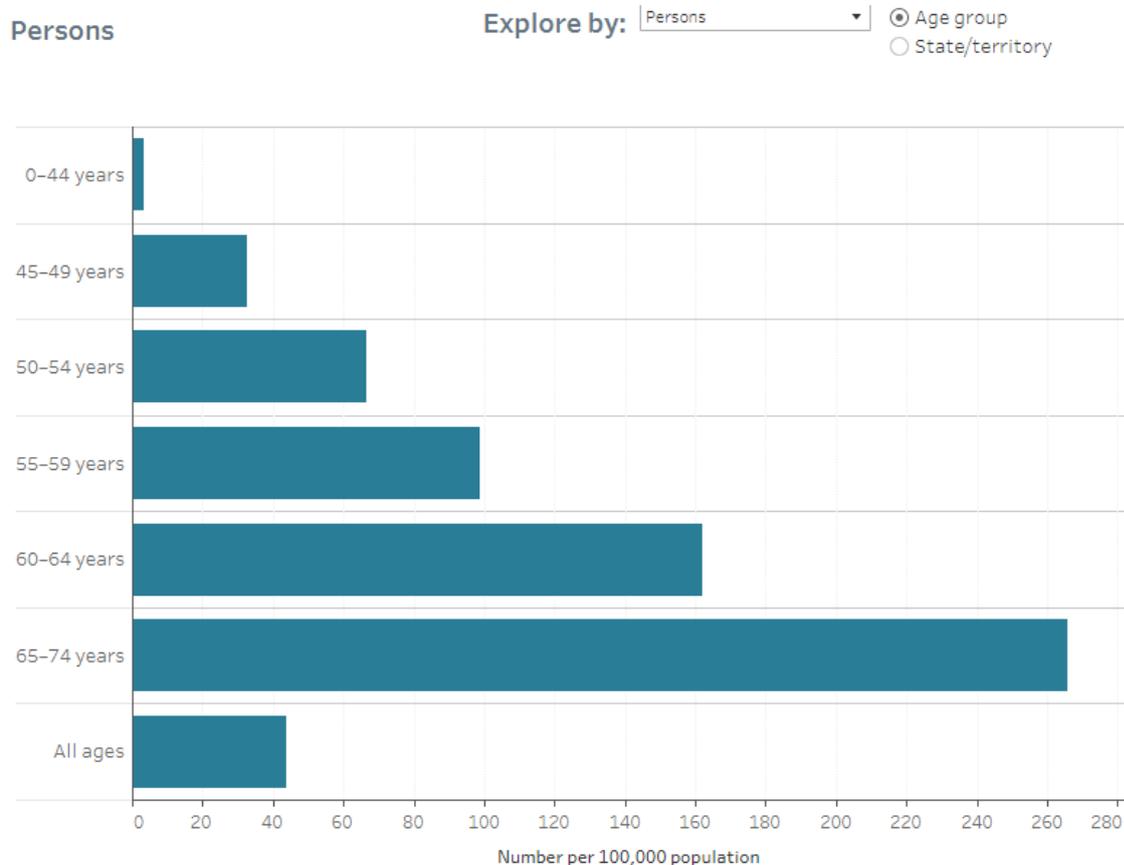


Figure 5.5: Avoidable and preventable deaths from diabetes, Indigenous Australians, by selected population groups, 2014–2018

Notes:

1. Age-standardised to the 2001 Australian Standard Population.

2. Includes data from NSW, QLD, WA, SA and NT only.

Source: AIHW analysis of the National Mortality Database

<https://www.aihw.gov.au>

Labels:

On

Off

### Indicator 5.5 data specifications

	Definition	Data source
<b>Numerator</b>	Number of Indigenous deaths from diabetes (underlying cause only, ICD-10: E10-E14) among those aged (0–74 years).	AIHW NMD
<b>Denominator</b>	Estimated Australian Indigenous resident population (0–74 years).	AIHW Population Database (sourced from ABS Estimates and Projections, Aboriginal and Torres Strait Islander Australians)

## **Indicator 5.6 Indigenous regular clients with type 2 diabetes who had a blood pressure test**

### **Overview**

At June 2019, the majority (67%) of regular clients of Indigenous primary health care services with type 2 diabetes had a blood pressure result recorded within the previous 6 months.

### **Trends**

The proportion of Indigenous regular clients with type 2 diabetes having a blood pressure result recorded in the previous 6 months increased slightly from June 2017 (64%), June 2018 (66%) to June 2019 (67%) (Figure 5.6.1).

### **Age and sex**

The proportion was similar among Indigenous males and females (66% and 67%, respectively) and lowest in those under 15 years overall (57%) (Figure 5.6.1).

### **Population groups**

In June 2019, the proportion of Indigenous regular clients with a recorded blood pressure test varied inconsistently across the different remoteness areas from 70% in both *Major cities* and *Remote* areas to 63% in *Very remote* areas (Figure 5.6.2).

### **State and territory**

By state and territory, the proportion of Indigenous regular clients with type 2 diabetes who had a recorded blood pressure result within the previous 6 months, ranged from 71% in Queensland to 62% in the Northern Territory (Figure 5.6.2).

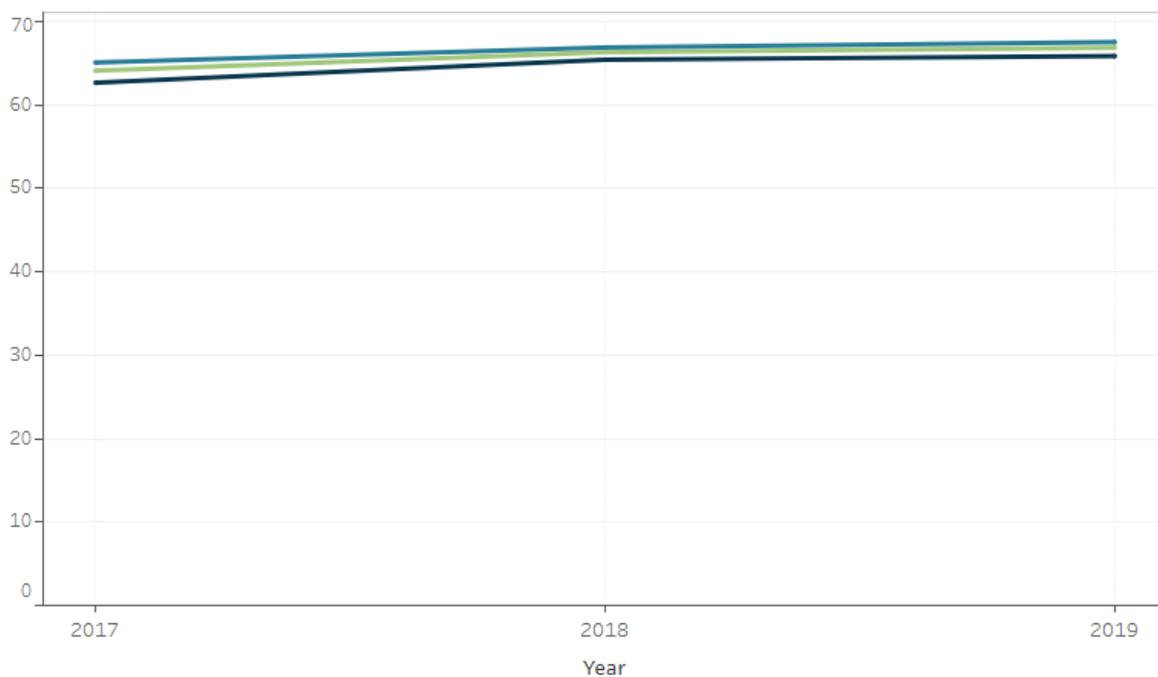
### **Explore the data**

**5.6 Percentage of Indigenous regular clients with type 2 diabetes who had a blood pressure result recorded in the previous 6 months, by age group, June 2017 to June 2019 and by selected population group, June 2019**

- Males
- Females
- Persons

Explore by: Age group (years)  
 Total ▼

Per cent



Labels:  
 On  
 Off

**Figure 5.6.1: Indigenous regular clients with type 2 diabetes who had a blood pressure result recorded in the previous 6 months, by age group, June 2017 to June 2019**

*Note:* Regular client refers to those who visited a particular primary health care provider 3 or more times in the last 2 years.

Source: AIHW nKPI data collection

<https://www.aihw.gov.au>

Sex/age

Explore by:  Sex/age  
 Remoteness areas  
 State/territory

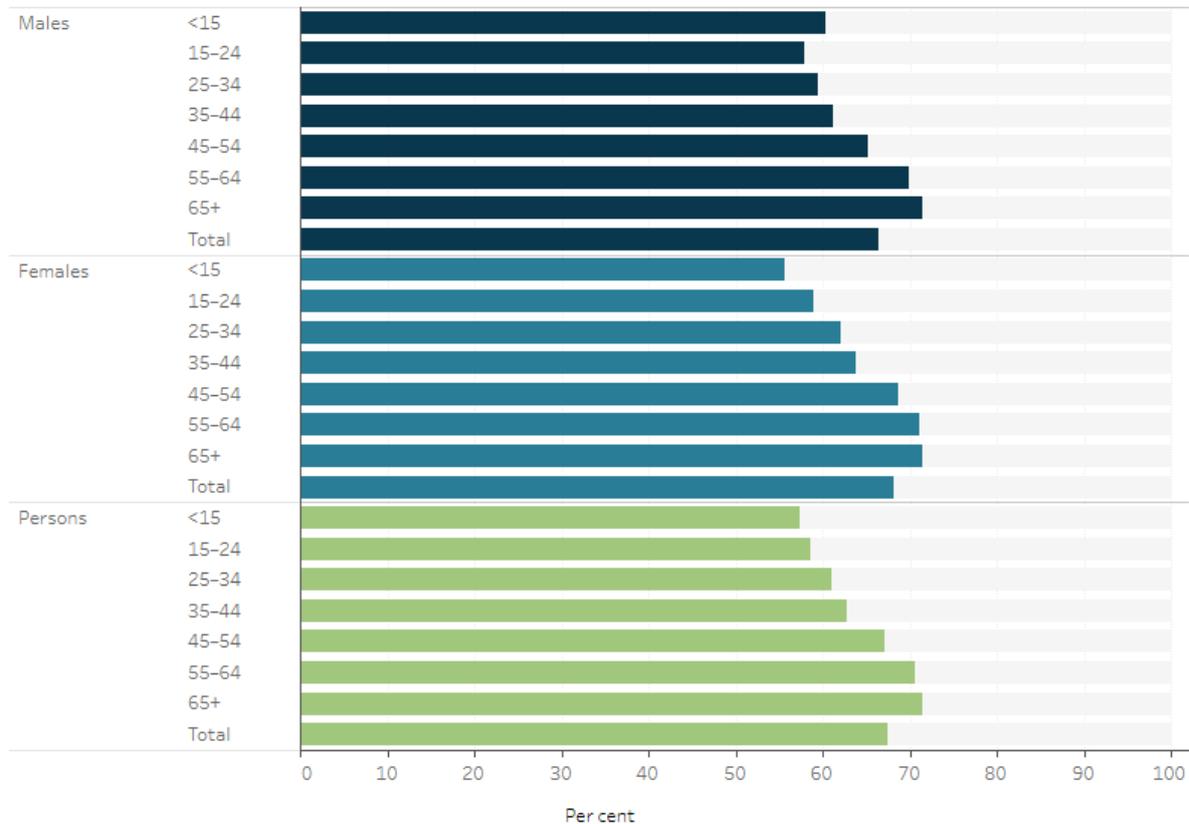


Figure 5.6.2: Indigenous regular clients with type 2 diabetes who had a blood pressure result recorded in the previous 6 months, by selected population group, June 2019

Note: Regular client refers to those who visited a particular primary health care provider 3 or more times in the last 2 years.

Source: AIHW nKPI data collection

<https://www.aihw.gov.au>

Labels:

On  
 Off

## Indicator 5.7 Indigenous regular clients with type 2 diabetes who had a kidney function test

### Overview

At June 2019, 64% of regular clients of Indigenous primary health care services with type 2 diabetes had a kidney function test recorded within the previous 12 months.

### Trends

The proportion of regular clients of Indigenous primary health care services with type 2 diabetes had a kidney function test increased slightly from 62% in June 2018 to 64% in June 2019 (Figure 5.7.1).

### **Age and sex**

Proportions were similar among males and females in June 2019, with the exception of 15–24 year olds for whom the proportion was higher in females (60%) than males (54%) (Figure 5.7.1).

### **Population groups**

The proportion with a kidney function test recorded in the previous 12 months varied inconsistently across the different remoteness areas from 59% in *Inner regional* areas to 66% in both *Major cities* and *Remote* areas (Figure 5.7.2).

### **State and territory**

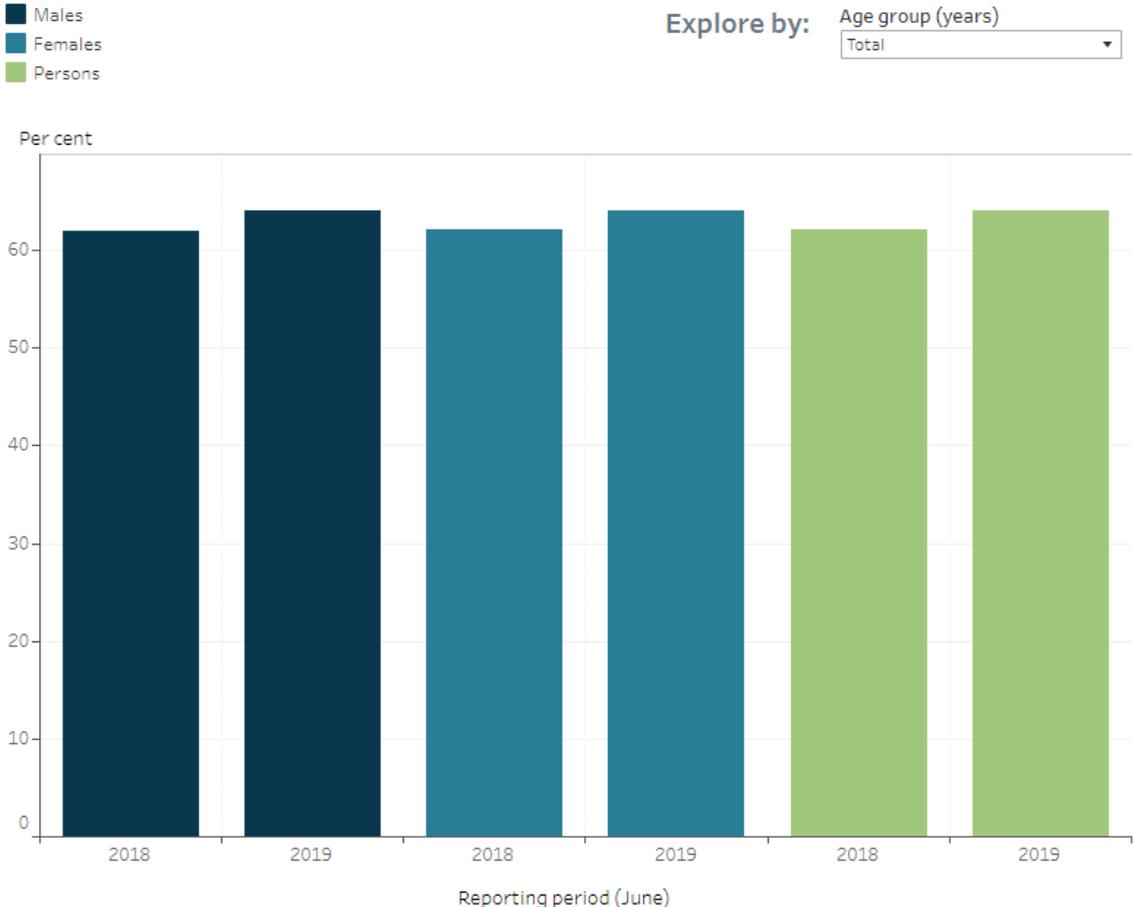
There was some variation across by state and territory, with the highest proportion in Western Australia (69%) and the lowest in Victoria/Tasmania (59%) (Figure 5.7.2).

### **About the data**

Kidney function test recorded (type 2 diabetes) has had ongoing data quality issues since June 2017. Because of this, results for this indicator are not presented for June 2017.

### **Explore the data**

**5.7 Percentage of Indigenous regular clients with type 2 diabetes who had a kidney function test within the previous 12 months, by age group, June 2018 and June 2019 and by selected population group, June 2019**



**Figure 5.7.1: Indigenous regular clients with type 2 diabetes who had a kidney function test within the previous 12 months, by age group, June 2018 and June 2019**

Note: Regular client refers to those who visited a particular primary health care provider 3 or more times in the last 2 years.

Source: AIHW nKPI data collection

<https://www.aihw.gov.au>

Labels:

On

Off

## Sex/age

Explore by:  Sex/age  
 Remoteness areas  
 State/territory

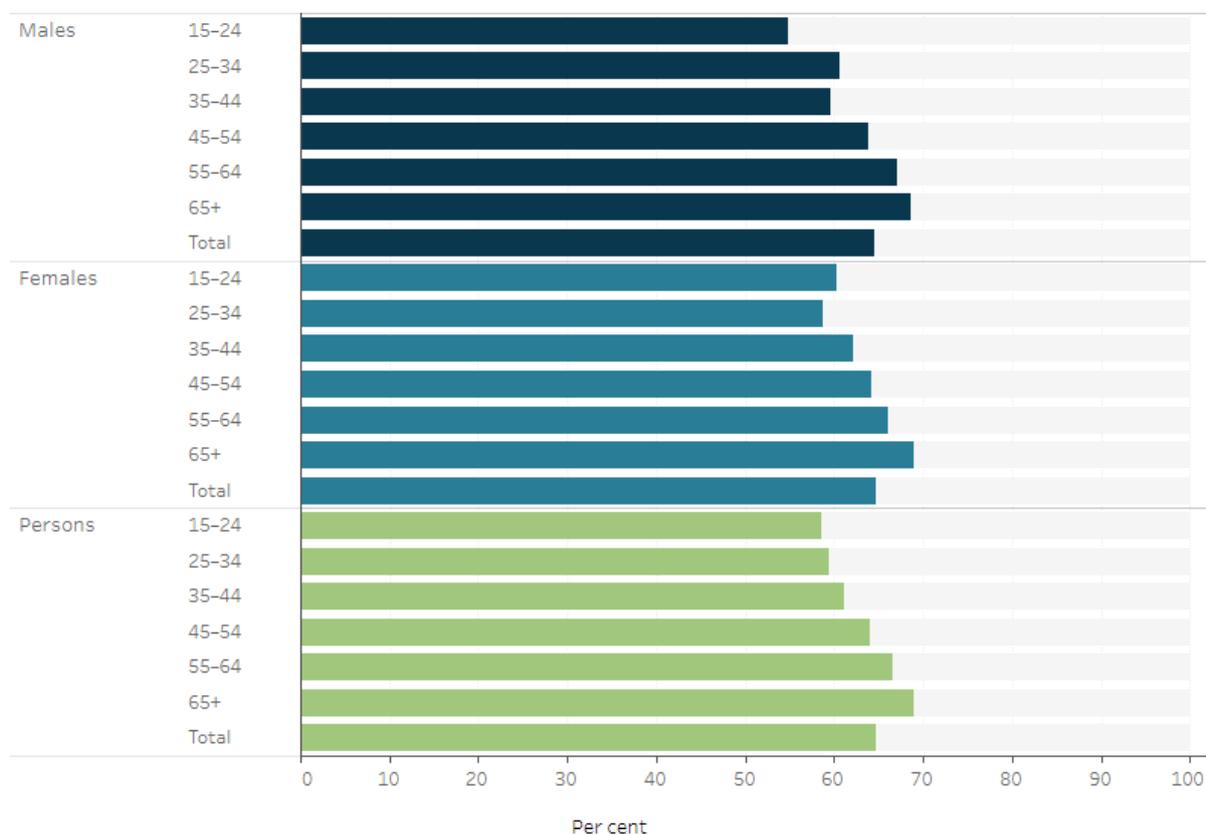


Figure 5.7.2: Indigenous regular clients with type 2 diabetes who had a kidney function test in the previous 6 months, by selected population group, June 2019

Note: Regular client refers to those who visited a particular primary health care provider 3 or more times in the last 2 years.

Source: AIHW nKPI data collection

<https://www.aihw.gov.au>

Labels:

- On  
 Off

### Indicator 5.7 data specifications

	Definition	Data source
<b>Numerator</b>	Number of regular clients who were Indigenous, aged 15 years and over, are recorded as having type 2 diabetes and have had an eGFR AND/OR an ACR or other micro albumin test result recorded within the previous 12 months.	AIHW nKPI Data Collection
<b>Denominator</b>	Total number of regular clients who were Indigenous, aged 15 years and over and are recorded as having Type 2 diabetes.	AIHW nKPI Data Collection

## **Indicator 5.8 Indigenous regular clients with type 2 diabetes who had a kidney function test with results within specified levels**

### **Overview**

As at June 2019, 81% of Indigenous regular clients of Indigenous primary health care services aged 15 and over with type 2 diabetes, had a kidney function test result within specified levels (Estimated Glomerular Filtration Rate (eGFR) test result  $\geq 60$  mL/min/1.73 m<sup>2</sup>) in the previous 12 months.

### **Trends**

The proportion of Indigenous regular clients of Indigenous primary health care services aged 15 and over with type 2 diabetes who had a kidney function test result within specified levels remained unchanged between June 2018 and June 2019 (Figure 5.8.1).

### **Age and sex**

The proportion of Indigenous males and females aged 15 and over with type 2 diabetes who had a kidney function test result within specified levels were similar. Proportions within the specified range declined with increasing age (Figure 5.8.1).

### **Population groups**

There was little difference in the proportion whose results were within specified levels by remoteness area (Figure 5.8.2).

### **State and territory**

Across the states and territories, there was little difference in the proportion whose results were within specified levels (Figure 5.8.2).

### **About the data**

Kidney function test recorded (type 2 diabetes) has had ongoing data quality issues since June 2017. Because of this, results for this indicator are not presented for June 2017. In addition, kidney function test recorded and result (type 2 diabetes and CVD) data were excluded from June 2018 national reporting for organisations using Medical Director Insights v1.5.

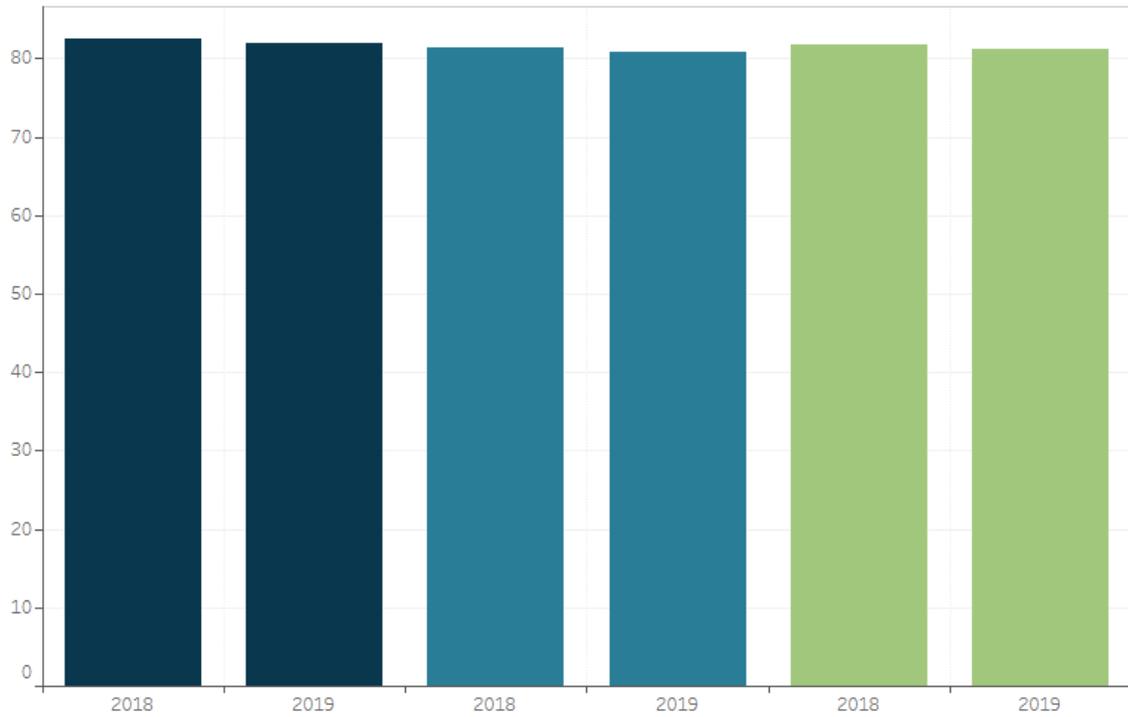
### **Explore the data**

**5.8 Percentage of Indigenous regular clients with type 2 diabetes who have had an eGFR recorded within the previous 12 months within specified levels, by age group, June 2018 and June 2019 and by selected population group, June 2019**

- Males
- Females
- Persons

Explore by: eGFR test result (mL/min/1.73 m<sup>2</sup>) Age group (years)  
 ≥60 Total

Per cent



**Figure 5.8.1: Indigenous regular clients with type 2 diabetes who have had an eGFR recorded within the previous 12 months within specified levels, by age group, June 2018 and June 2019**

*Note:* Regular client refers to those who visited a particular primary health care provider 3 or more times in the last 2 years.

Source: AIHW nKPI data collection

<https://www.aihw.gov.au>

Labels:

- On
- Off

Sex/age

Explore by: eGFR test result (mL/min/1.73 m<sup>2</sup>)

≥60

- Sex/age
- Remoteness areas
- State/territory

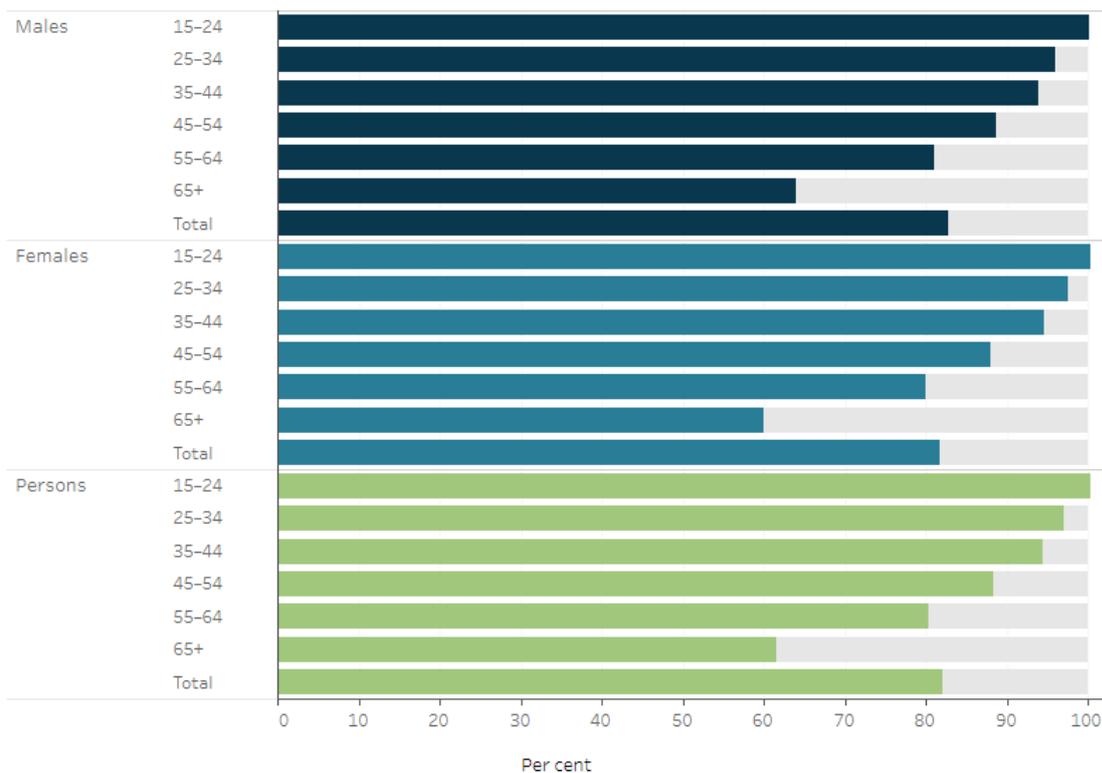


Figure 5.8.2: Indigenous regular clients with type 2 diabetes who had an eGFR recorded within the previous 12 months, with a result within specified levels by sex, age selected population group, June 2019

Note: Regular client refers to those who visited a particular primary health care provider 3 or more times in the last 2 years.

Source: AIHW nKPI data collection

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 5.8 data specifications

	Definition	Data source
<b>Numerator</b>	Number of Indigenous regular clients (15+ years) who were recorded as having type 2 diabetes and who had an eGFR ≥ 60mL/min/1.73 m <sup>2</sup> recorded within the previous 12 months.	AIHW nKPI Data Collection
<b>Denominator</b>	Number of Indigenous regular clients (15+) who were recorded as having type 2 diabetes and who had an eGFR result recorded within the previous 12 months.	AIHW nKPI Data Collection

## Indicator 5.9 Women who smoked during pregnancy

### Overview

In 2018, 44% of Indigenous mothers smoked at any time during their pregnancy. A higher proportion of Indigenous mothers had smoked tobacco during their pregnancy than non-Indigenous mothers (age-standardised percentages 45% and 11%, respectively).

### Trends

Since 2010, the age-standardised proportion of Indigenous mothers who smoked at any time during their pregnancy, decreased slightly from 48% to 45% in 2018. Between 2010 and 2018, the age-standardised proportion of non-Indigenous mothers who smoked at any time during their pregnancy also decreased slightly from 15% to 11% (Fig 5.9.1).

### Population groups

In 2018, proportions who smoked at any time during their pregnancy were highest among Indigenous mothers living in *Remote* and *Very remote* areas—60% of mothers in *Very remote* and 50% in *Remote* areas, compared with 38% of those living in *Major cities* (Figure 5.9.2).

### Explore the data

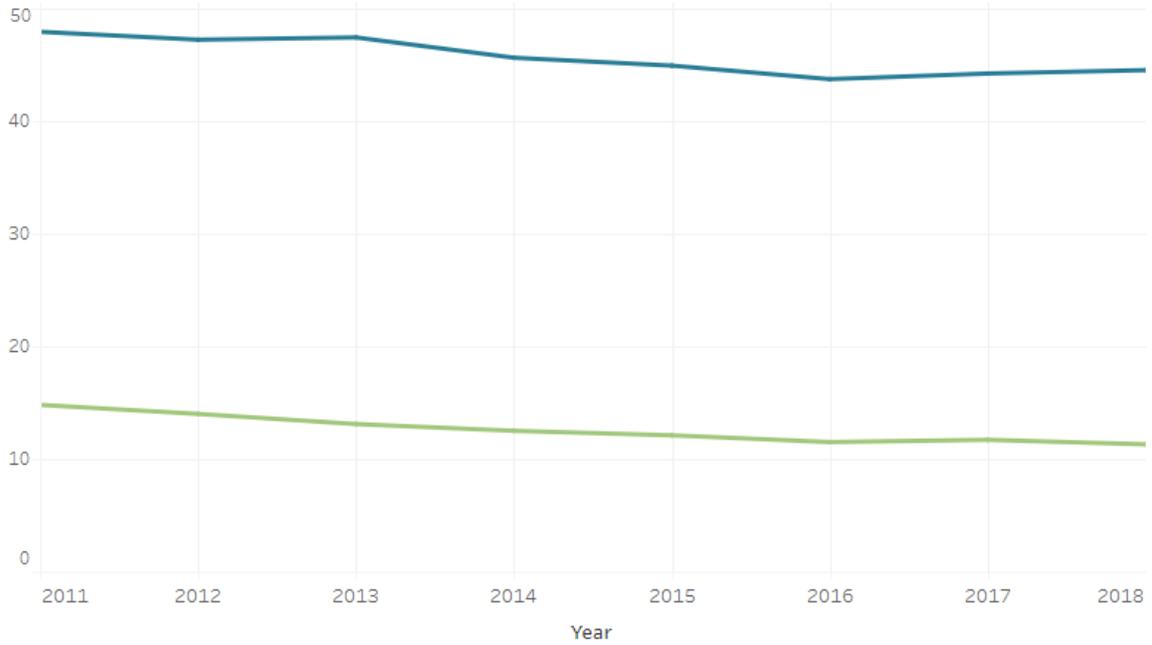
**5.9 Women who smoked during pregnancy, by Indigenous status, maternal age and stage of pregnancy, 2011–2018 and by selected population group, 2018**

■ Indigenous  
■ Non-Indigenous

Explore by: Stage of pregnancy  
 After 20 weeks of pregnancy  
 At any time during pregnancy  
 During first 20 weeks of pregnancy

Maternal age group  
Total

Per cent



Indicator 5.9.1: Women who smoked during pregnancy, by Indigenous status, maternal age and stage of pregnancy, 2011-2018

Notes:

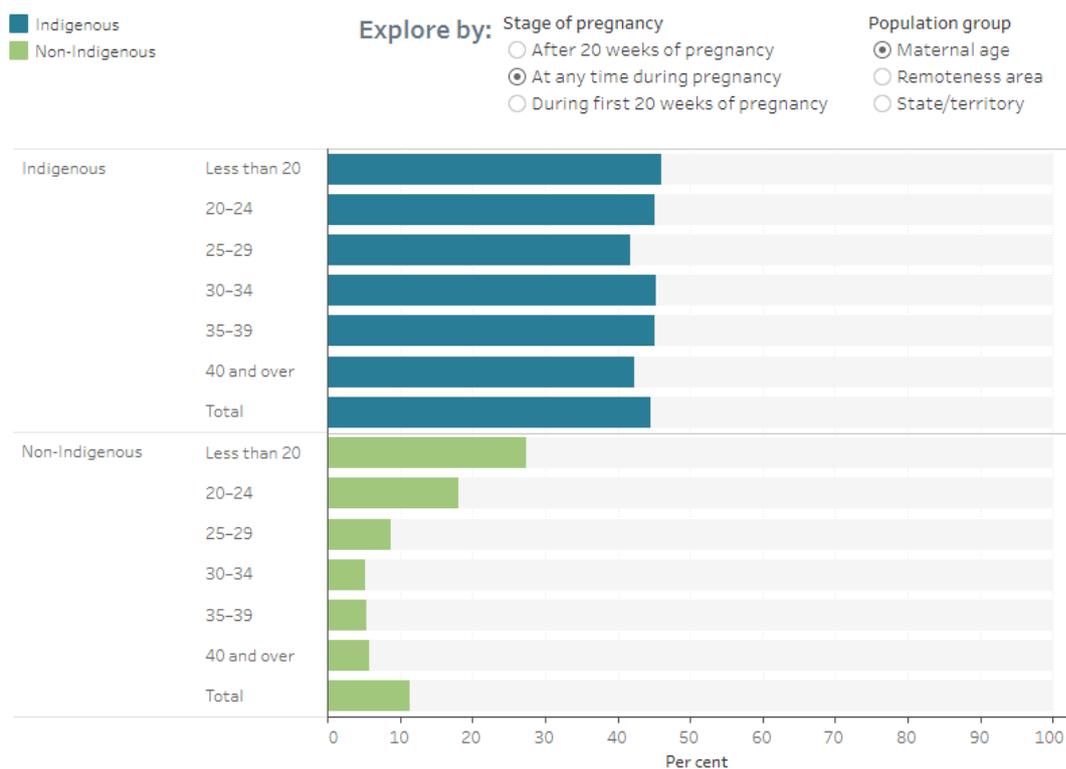
1. Mother's tobacco smoking status during pregnancy is self-reported.
2. Total age-standardised to the June 2001 Australian female estimated resident population age 15-44 years.
3. Total includes not stated smoking status.

Source: AIHW analysis of the National Perinatal Data Collection

<https://www.aihw.gov.au>

Labels:

- On  
 Off



Indicator 5.9.2: Women who smoked during pregnancy, by Indigenous status, stage of pregnancy and selected population groups, 2018

Notes:

1. Mother's tobacco smoking status during pregnancy is self-reported.
2. Age-standardised to the June 2001 Australian female estimated resident population age 15-44 years.
3. Crude rates reported for age groups.
4. Total includes not stated smoking status.
5. Blank=not published due to small numbers.

Source: AIHW analysis of the National Perinatal Data Collection

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 5.9 data specifications

	Definition	Data source
<b>Numerator</b>	Number of Indigenous mothers who reported that they smoked during pregnancy.	AIHW National Perinatal Data Collection (NPDC)
<b>Denominator</b>	Number of Indigenous mothers.	AIHW NPDC

## Indicator 5.10 Indigenous children attending preschool

### Overview

In 2019, almost all (95%) Indigenous children enrolled in a preschool program, had attended for at least one hour within the reference week. A slightly higher proportion (98%) of non-Indigenous children attended for at least one hour within the reference week (Figure 5.10.1).

### Trends

Between 2016 and 2019, preschool attendance rates increased slightly among both Indigenous children (from 94% to 95%) and non-Indigenous children (from 96% to 98%) (Figure 5.10.1).

### **Population groups**

In 2019, preschool attendance was around 97% among Indigenous children in *Major cities* and *Inner regional* areas but below 90% in both *Remote* and *Very remote* areas (Figure 5.10.2).

### **State and territory**

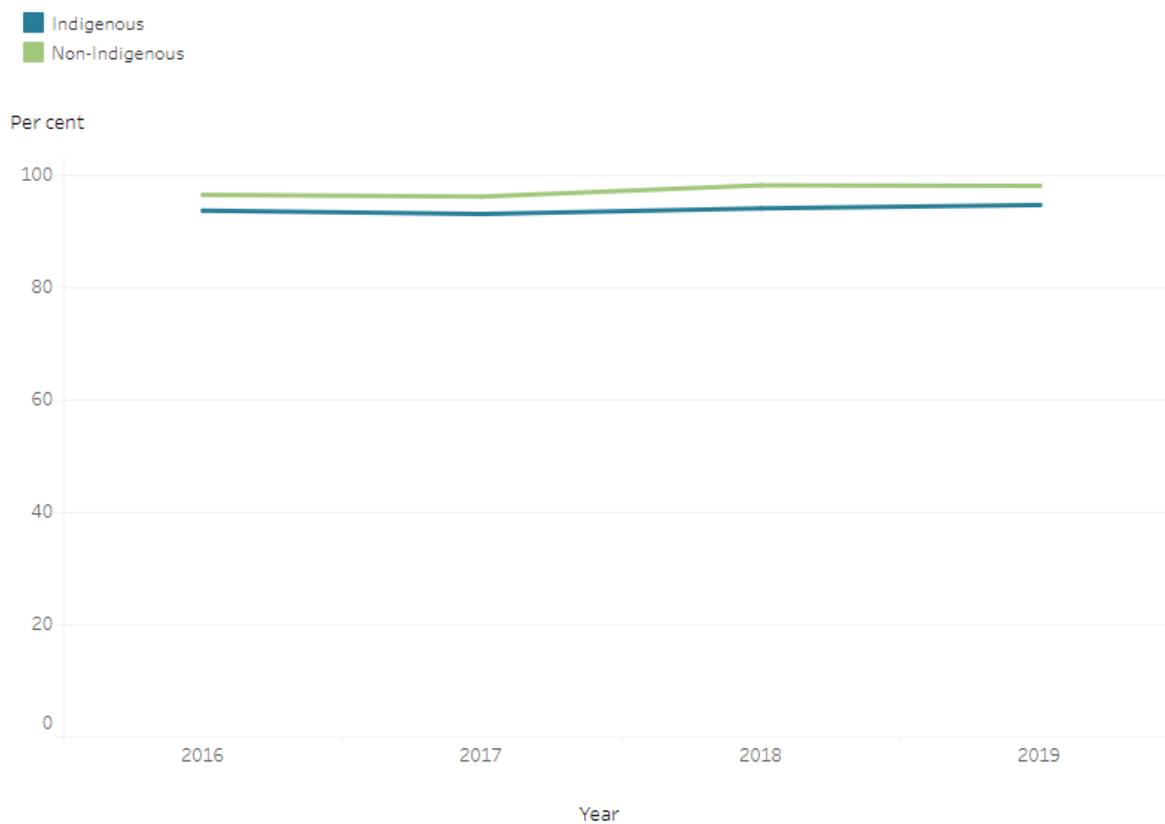
In 2019, preschool attendance was at least 90% in all states and territories, except the Northern Territory and Western Australia, where attendance was 74% and 89%, respectively (Figure 5.10.2).

### **About the data**

While rates of attendance are high among those who are enrolled, additional data are required to determine what proportion of Indigenous children are not enrolled in a preschool program in the year before full time schooling.

### **Explore the data**

**5.10 Percentage of enrolled children who attended a preschool program in the year before full time schooling, Indigenous status, 2016–2019 and by selected population group, 2019**



**Figure 5.10.1: Percentage of enrolled children who attended a preschool program in the year before full time schooling, by Indigenous status, 2016-2019**

*Notes:*

1. Attended a preschool program is defined as attending for at least one hour within the reference week.
2. Only includes children enrolled in a preschool program in the year before full time schooling.
3. Adjusted for state specific school age and preschool age entry provisions.

Sources: ABS 2016; ABS 2017; ABS 2018; ABS 2019

<https://www.aihw.gov.au>

**Labels:**

On

Off

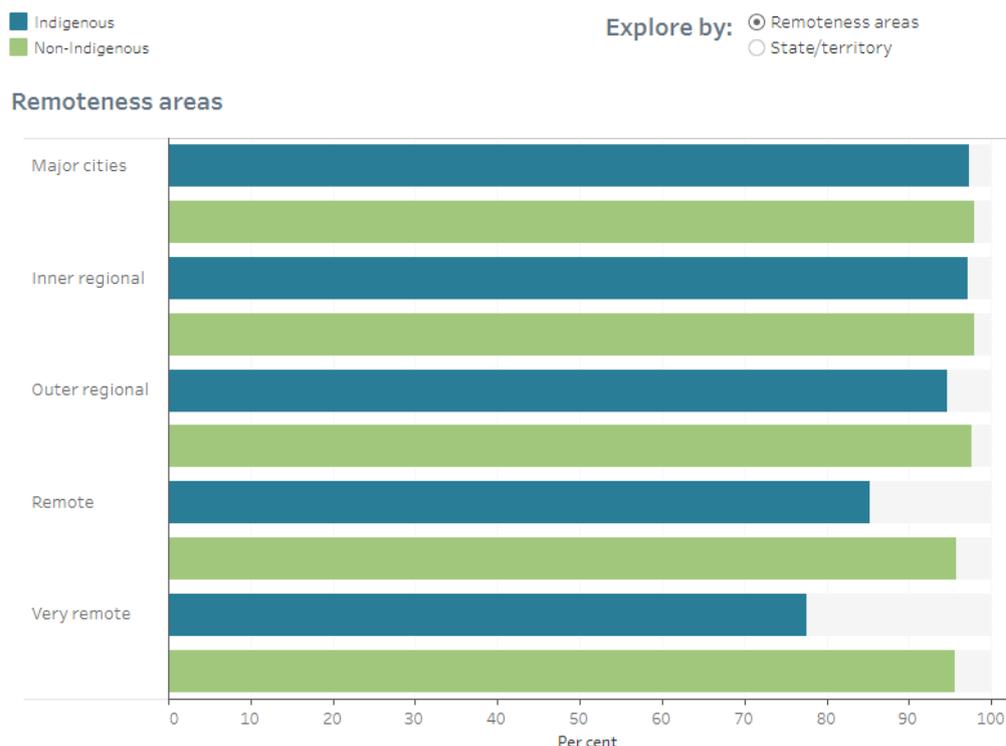


Figure 5.10.2: Percentage of enrolled children who attended a preschool program in the year before full time schooling, by selected population groups, 2019

Notes:

1. Attended a preschool program is defined as attending for at least one hour within the reference week.
2. Only includes children enrolled in a preschool program in the year before full time schooling.
3. Adjusted for state specific school age and preschool age entry provisions.
4. Refers to the area and state the child lives in (not the centre location).

Source: ABS 2016; ABS 2017; ABS 2018; ABS 2019

<https://www.aihw.gov.au>

Labels:

- On
- Off

## Indicator 5.10 data specifications

	Definition	Data source
<b>Numerator</b>	Number of Indigenous children who were enrolled in, and attended, a preschool program in the year before full-time schooling.	ABS 2019; ABS 2018; ABS 2017; ABS 2016
<b>Denominator</b>	Number of Indigenous children in the year before full time schooling.	ABS 2019; ABS 2018; ABS 2017; ABS 2016

## References

Australian Bureau of Statistics (ABS) 2016. Microdata: Preschool Education, Australia, 2017, TableBuilder. ABS cat. no. 4240.0.55.003 Canberra: ABS. Findings based on AIHW analysis of ABS TableBuilder data.

Australian Bureau of Statistics (ABS) 2017. Microdata: Preschool Education, Australia, 2017, TableBuilder. ABS cat. no. 4240.0.55.003 Canberra: ABS. Findings based on AIHW analysis of ABS TableBuilder data.

Australian Bureau of Statistics (ABS) 2018. Microdata: Preschool Education, Australia, 2017, TableBuilder. ABS cat. no. 4240.0.55.003 Canberra: ABS. Findings based on AIHW analysis of ABS TableBuilder data.

Australian Bureau of Statistics (ABS) 2019. Microdata: Preschool Education, Australia, 2017, TableBuilder. ABS cat. no. 4240.0.55.003 Canberra: ABS. Findings based on AIHW analysis of ABS TableBuilder data.

## **Indicator 5.11 Risk factor status of women who attended an antenatal visit before 13 weeks of pregnancy**

### **Considerations**

- Data for this indicator are not available for update—baseline results reported.
- Smoking and alcohol consumption data will be available from the National Perinatal Data Collection in the future.

### **Smoking status**

In 2010–11, based on self-reported data, over half of women (54%) who gave birth to an Indigenous baby and attended an antenatal visit in the first trimester of pregnancy, reported that they smoked tobacco during pregnancy.

### **Alcohol consumption and illicit drug use**

One in four women (26%) reported that they drank alcohol and around 1 in 6 (17%) reported that they used illicit drugs during pregnancy (Figure 5.11).

### **Population groups**

While a higher proportion of mothers in *Very remote* areas reported smoking during pregnancy, the proportion reporting alcohol or illicit drug use was lower in *Very remote* areas compared to those living in less remote areas (Figure 5.11).

### **Explore the data**

**5.11 Risk factor status of women who gave birth to an Indigenous baby (attending an antenatal visit before 13 weeks of pregnancy), by selected population group, 2010–2011**

## Age group

Explore by:  Age group  
 Remoteness area  
 State/territory

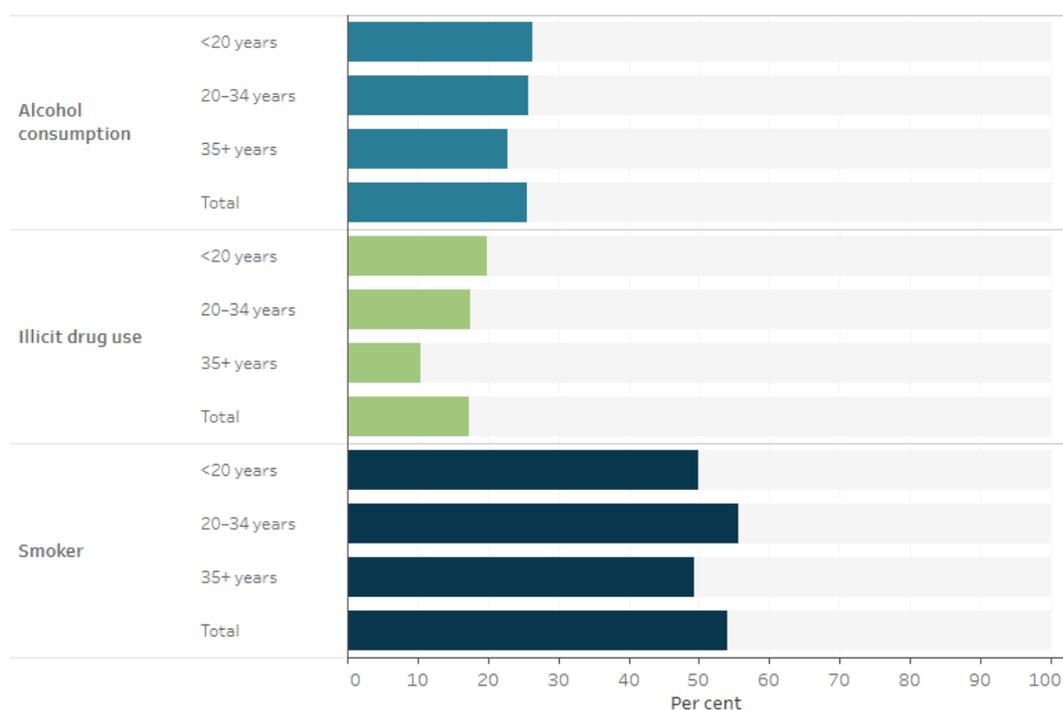


Figure 5.11: Risk factor status of women who gave birth to an Indigenous baby (attending an antenatal visit before 13 weeks of pregnancy), by selected population group (2010-2011)

Notes:

1. Women who were regular clients of the Healthy for Life (HfL) service.
2. Smoker includes daily smokers, weekly smokers and irregular smokers (people who smoke tobacco less than weekly)
3. Consumed alcohol during pregnancy
4. Illicit drug user includes daily, weekly and irregular users (a person who uses less than weekly).

Source: AIHW Healthy for Life (HfL) Data Collection

<https://www.aihw.gov.au>

Labels:

- On  
 Off

### Indicator 5.11 data specifications

	Definition	Data source
<b>Numerator</b>	Number of women who gave birth to an Indigenous baby and attended an antenatal visit within the first 13 weeks of pregnancy who reported they a) smoked tobacco b) consumed alcohol, c) used illicit drugs during pregnancy.	AIHW Healthy for Life data collection.
<b>Denominator</b>	Number of women who gave birth to an Indigenous baby who attended an antenatal visit within the first 13 weeks of pregnancy.	AIHW Healthy for Life data collection.

## **Indicator 5.12 Risk factor status of women who attended an antenatal visit in the third trimester of pregnancy**

### **Consideration**

Data for this indicator are not available for update—baseline results reported.

### **Smoking status**

In 2010–11, based on self-reported data, 55% of women who gave birth to an Indigenous baby and attended an antenatal visit in the third trimester, smoked during pregnancy.

### **Alcohol consumption and illicit drug use**

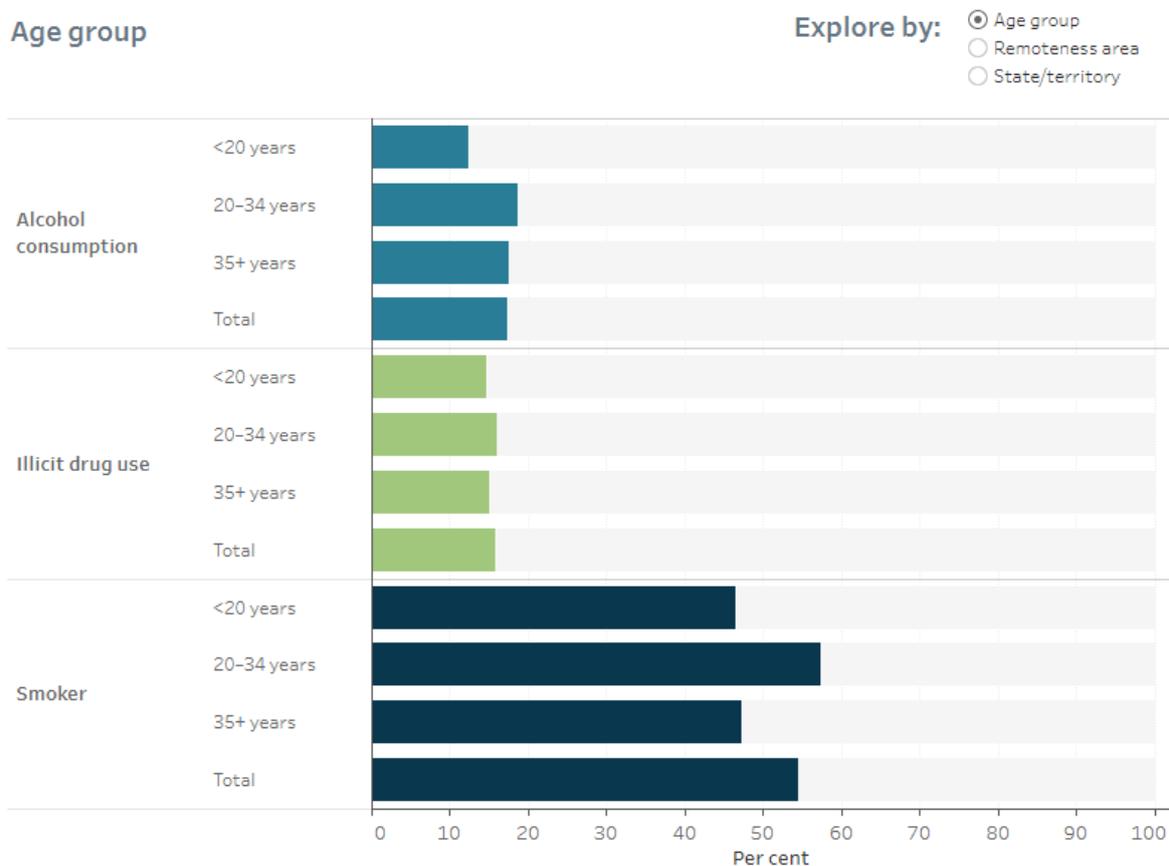
Around 1 in 6 reported that they consumed alcohol during pregnancy and 16% reported the use of illicit drugs.

### **Population groups**

Use of illicit drugs and alcohol was more commonly reported by those living in *Major cities* than more remote areas (Figure 5.12).

### **Explore the data**

## 5.12 Risk factor status of women who gave birth to an Indigenous baby (attending an antenatal visit in the third trimester of pregnancy), by selected population group, 2010–2011



Indicator 5.12: Risk factor status of women who gave birth to an Indigenous baby (attending an antenatal visit in the third trimester of pregnancy), by selected population group, 2010–2011

Notes:

1. Women who were regular clients of the Healthy for Life (HfL) service.
2. Smoker includes daily smokers, weekly smokers and irregular smokers (people who smoke tobacco less than weekly).
3. Consumed alcohol during pregnancy.
4. Illicit drug user includes daily, weekly and irregular users (a person who uses less than weekly).

Source: AIHW Healthy for Life (HfL) Data Collection

<https://www.aihw.gov.au>

Labels:

- On  
 Off

### Indicator 5.12 data specifications

	Definition	Data source
<b>Numerator</b>	Number of women who gave birth to an Indigenous baby and attended an antenatal visit in the 3rd trimester of pregnancy who reported that they a) smoked tobacco, b) consumed alcohol, c) used illicit drugs.	AIHW Healthy for Life data collection.
<b>Denominator</b>	Number of women who gave birth to an Indigenous baby who attended an antenatal visit in the 3 <sup>rd</sup> trimester of pregnancy.	AIHW Healthy for Life data collection.

## **Indicator 5.13 Indigenous regular clients with type 2 diabetes receiving recommended care from Indigenous primary health care services**

### **Overview**

As at June 2019, over half (52%) of Indigenous regular clients (having attended a particular primary health care organisation at least 3 times in the previous 2 years) aged 15 and over with type 2 diabetes, had an HbA1c test result recorded in the previous 6 months. Among this cohort, 67% had a blood pressure result recorded in the previous 6 months and 64% had a kidney function test result recorded within the previous 12 months.

### **Trends**

In June 2017, 49% of Indigenous regular clients aged 15 and over with type 2 diabetes had an HbA1c test result recorded while 64% had a blood pressure result recorded in the previous 6 months. Whilst data for the recording of kidney function test results is not available for June 2017, in June 2018, 46% had a kidney function test recorded within the previous 12 months. The proportion of Indigenous regular clients aged 15 and over with type 2 diabetes having an HbA1c test result and a blood pressure result recorded in the previous 6 months increased between June 2017 and June 2019 (Figure 5.13.1).

### **Population groups**

In June 2019, the proportion of Indigenous regular clients with type 2 diabetes with a recorded HbA1c test, blood pressure test and kidney function test fluctuated across the remoteness areas though was highest among those living in *Major cities* and *Remote areas* (Figure 5.13.2).

### **State and territory**

The proportion of Indigenous regular clients aged 15 and over with type 2 diabetes receiving recommended care as at June 2019 varied by state and territory. The proportion having an HbA1c test result recorded in the previous 6 months ranged from 49% in New South Wales/Australian Capital Territory to 56% in Western Australia. The proportion having a blood pressure result recorded in the previous 6 months ranged from 62% in the Northern Territory to 71% in Queensland. The proportion with a kidney function test recorded in the previous 12 months ranged from 59% in Victoria/Tasmania to 69% in Western Australia (Figure 5.13.2).

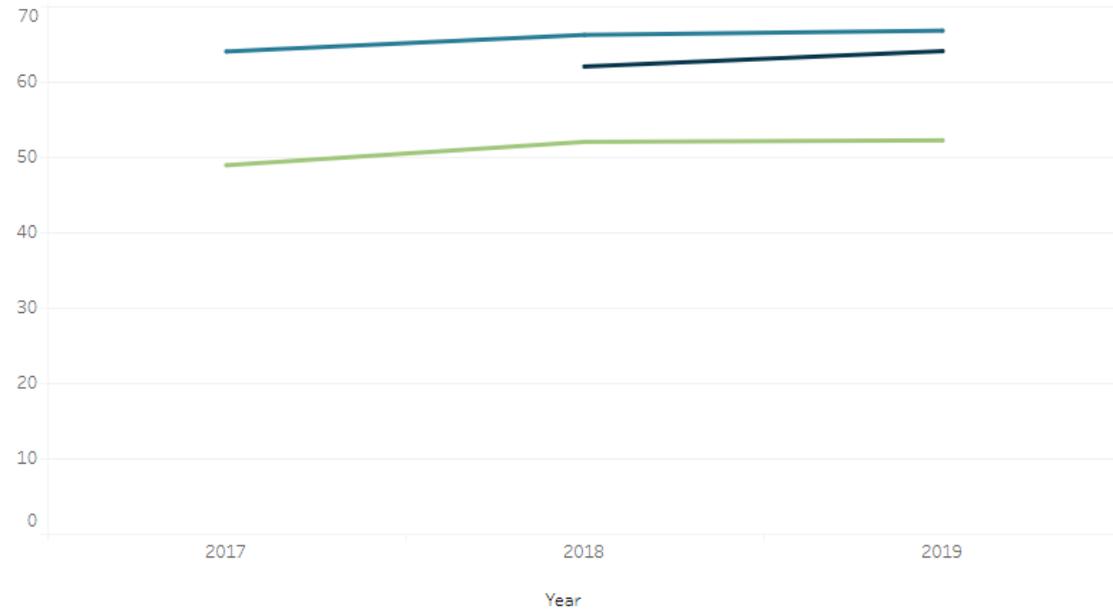
### **Explore the data**

#### **5.13 Indigenous regular clients with type 2 diabetes receiving recommended care from Indigenous primary health care services, June 2017 to June 2019**

Care type

- Blood pressure result recorded
- HbA1c recorded
- Kidney function result recorded

Per cent



**Figure 5.13.1: Indigenous regular clients with type 2 diabetes receiving recommended care from Indigenous primary health care services, June 2017 to June 2019**

Notes:

1. A regular client is a client who has visited a particular primary health care provider 3 or more times in the last 2 years.
2. HbA1c result and blood pressure result recorded in the previous 6 months.
3. Kidney function result recorded in the previous 12 months for Indigenous regular clients aged 15 years and over only.

Source: AIHW nKPI Data Collection

<https://www.aihw.gov.au>

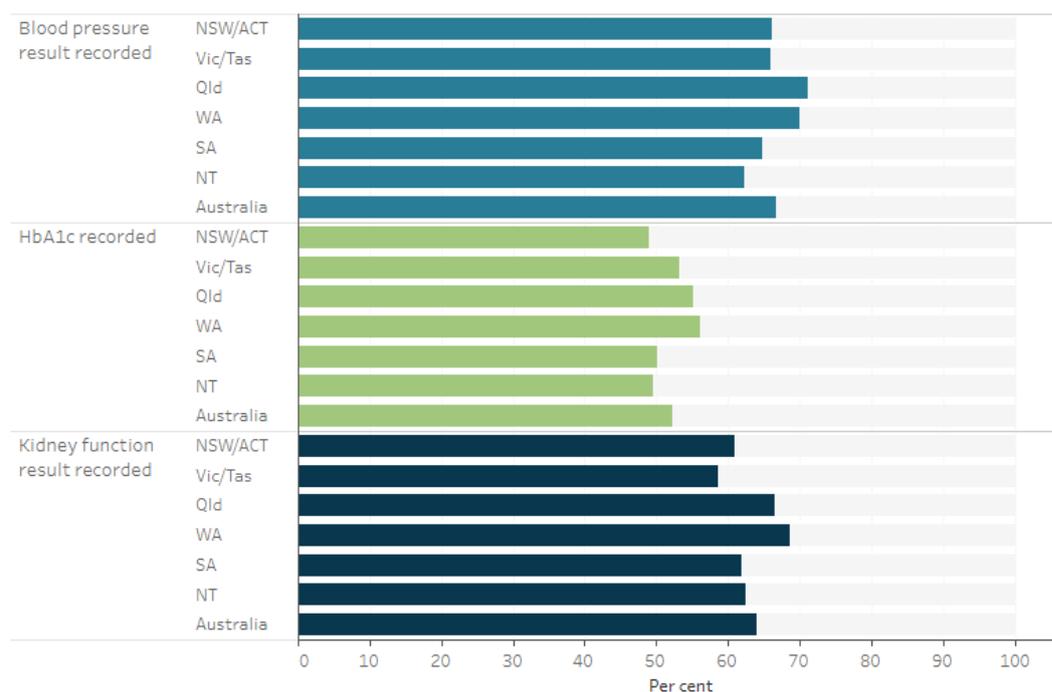
Labels:

On

Off

State/territory

Explore by:  Remoteness area  
 State/territory



**Figure 5.13.2**  
**Indigenous regular clients with type 2 diabetes receiving recommended care from Indigenous primary health care services, by selected population group, June 2019**

Notes:

1. A regular client is a client who has visited a particular primary health care provider 3 or more times in the last 2 years.
2. HbA1c result and blood pressure result recorded in the previous 6 months.
3. Kidney function result recorded in the previous 12 months for Indigenous regular clients aged 15 years and over only.

Source: AIHW nKPI Data Collection

<https://www.aihw.gov.au>

Labels:

- On  
 Off

### Indicator 5.13 data specifications

	Definition	Data source
<b>Numerator</b>	Number of regular clients who were Indigenous, with type 2 diabetes who received recommended care.	AIHW nKPI Data Collection
<b>Denominator</b>	Number of regular clients who were Indigenous and had type 2 diabetes.	AIHW nKPI Data Collection

## **Indicator 5.14 Indigenous regular clients of Indigenous primary health care services who had type 2 diabetes and a general practitioner management plan or team care arrangements**

### **Overview**

As at June 2019, over half (56%) of Aboriginal and Torres Strait Islander regular clients with type 2 diabetes had claimed a General Practitioner (GP) Management Plan in the previous 2 years, while 53% had claimed a Team Care Arrangement.

### **Trends**

The proportion of Indigenous regular clients claiming either a General Practitioner (GP) Management Plan or Team Care Arrangement in the previous 2 years increased slightly from June 2017 to June 2018 (54% to 56% for GP Management Plans and 51% to 53% for Team Care Arrangements) though remained unchanged from June 2018 to June 2019 (Figure 5.14.1).

### **Age and sex**

Service access generally increased with age and was similar for males and females (Figures 5.14.1).

### **Population groups**

The proportion of regular clients claiming either a GP Management Plan or Team Care Arrangement in the previous 24 months was 1.2 times as high in *Major cities* (63% and 59%, respectively) as *Very remote areas* (53% and 50%, respectively).

### **State and territory**

Among the states and territories, Queensland had the highest proportion of claims for GP Management Plans (64%) and Team Care Arrangements (61%). South Australia had the lowest proportion of claims for both GP Management Plans (47%) and Team Care Arrangements (45%) (Figure 5.14.2).

### **Explore the data**

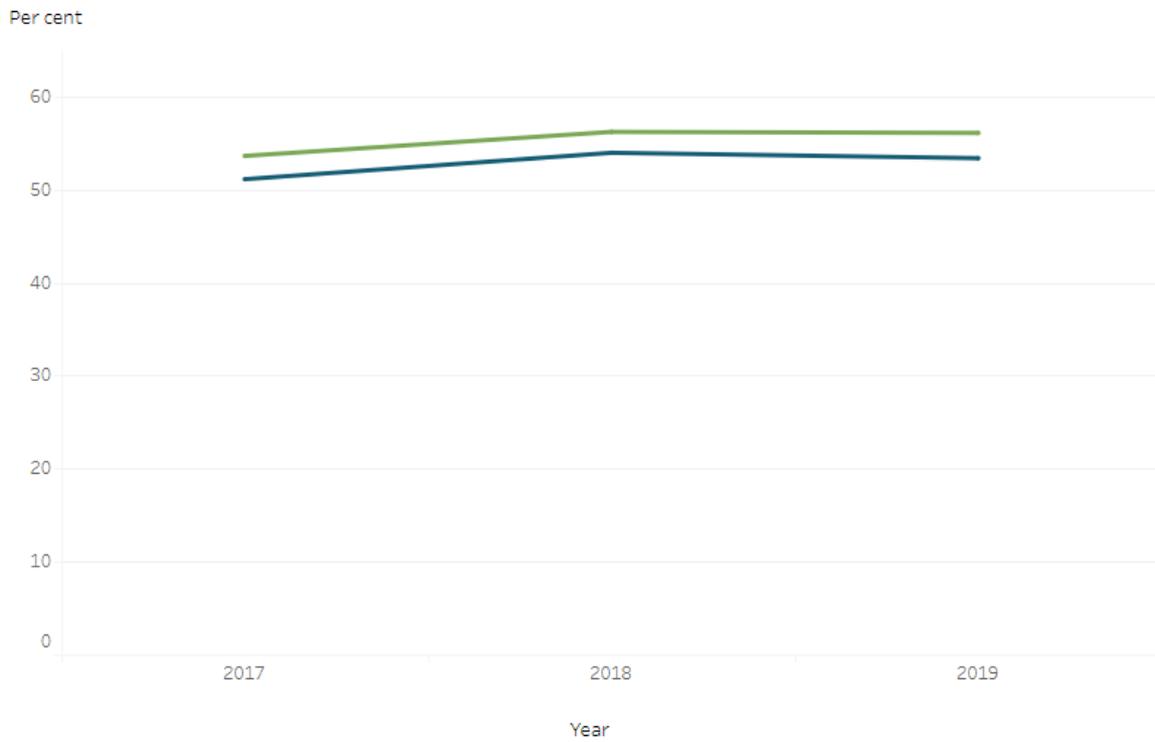
**5.14 Indigenous regular clients who had type 2 diabetes and a general practitioner management plan or team care arrangements, by age group, June 2017 to June 2019 and by selected population group, June 2019**

Care type

- GP Management Plan
- Team Care Arrangement

Explore by: Age group (years)

Total ▼



**Figure 5.14.1: Indigenous regular clients who had type 2 diabetes and a general practitioner management plan or team care arrangements, by age group, June 2017 to June 2019**

Note: A regular client is a client who has visited a particular primary health care provider 3 or more times in the last 2 years.

Source: AIHW nKPI Data Collection

<https://www.aihw.gov.au>

Labels:

- On
- Off

## Age groups/ GP Management Plan

Explore by: Care type  
 GP Management Plan  
 Team Care Arrangement  
 Population group  
 Age groups  
 Remoteness areas  
 State/territory

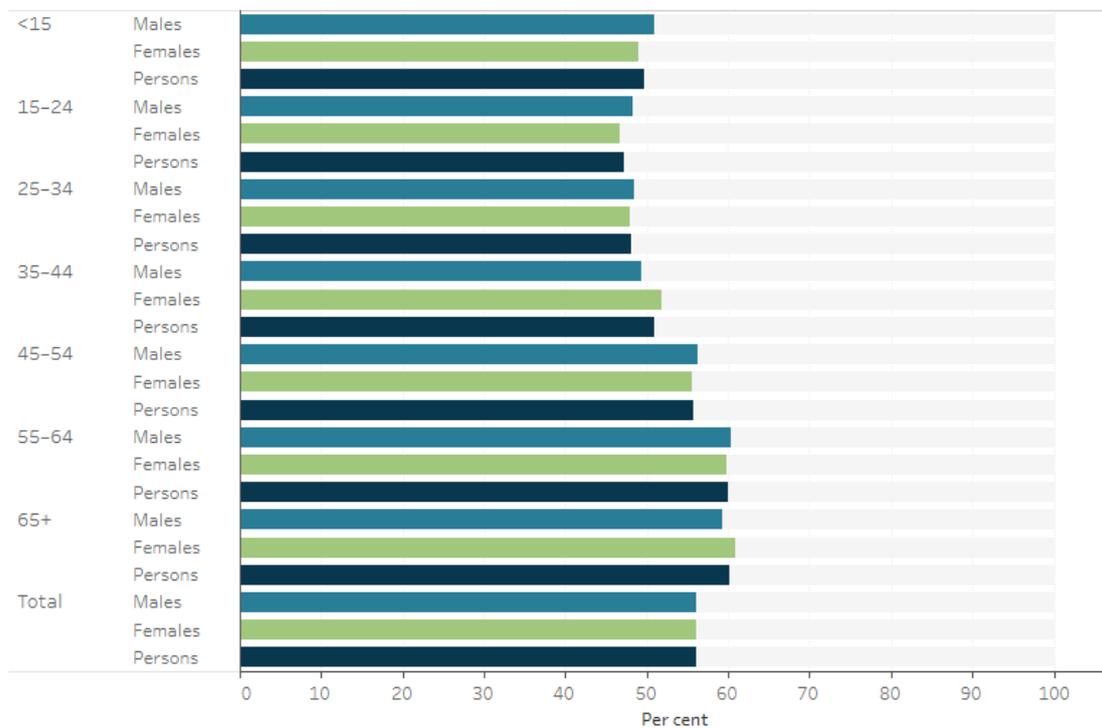


Figure 5.14.2: Indigenous regular clients who had type 2 diabetes and a general practitioner management plan or team care arrangements, by selected population group, June 2019

Note: A regular client is a client who has visited a particular primary health care provider 3 or more times in the last 2 years.

Source: AIHW nKPI Data Collection

<https://www.aihw.gov.au>

Labels:

- On  
 Off

### Indicator 5.14 data specifications

	Definition	Data source
<b>Numerator</b>	Number of regular clients who were Indigenous, had type 2 diabetes and for whom an MBS General Practitioner Management Plan or MBS Team Care Arrangement was claimed within the previous 24 months.	AIHW nKPI Data Collection
<b>Denominator</b>	Number of regular clients who were Indigenous and had type 2 diabetes.	AIHW nKPI Data Collection

## **Indicator 5.15 Indigenous regular clients with type 2 diabetes who are immunised against influenza**

### **Overview**

As at June 2019, 36% of Indigenous regular clients of Indigenous primary health care services, aged 15–49 years with type 2 diabetes, were immunised against influenza.

### **Trends**

The proportion of Indigenous regular clients with type 2 diabetes who are immunised against influenza has increased steadily from 31% in June 2017, 34% in June 2018 to 36% in June 2019 (Figure 5.15.1).

### **Age and sex**

The proportion of immunised females was consistently higher than the proportion of males across each age group (Figure 5.15.1).

### **Population groups**

There was some variation in immunisation rates among Indigenous regular clients aged 15–49 with type 2 diabetes by remoteness area with 41% of those living in *Very remote* areas being immunised whereas only 27% of those living in *Inner regional* areas and 31% of those living in *Major cities* were immunised (Figure 5.15.2).

### **State and territory**

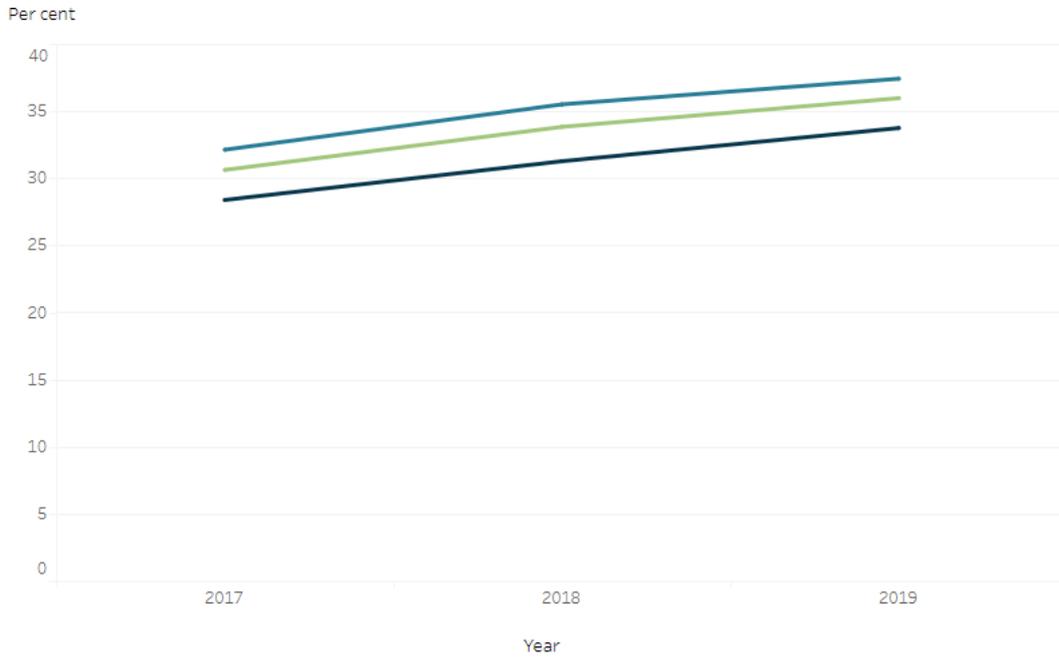
Across the states and territories, immunisation rates were highest in South Australia and the Northern Territory (both 42%) and lowest in New South Wales/Australian Capital Territory (26%) (Figure 5.15.2).

### **Explore the data**

**5.15 Indigenous regular clients with type 2 diabetes who are immunised against influenza, by age and sex, June 2017 to June 2019 and by selected population group, June 2019**

- Males
- Females
- Persons

Explore by: Age group (years)  
 Total 15-49

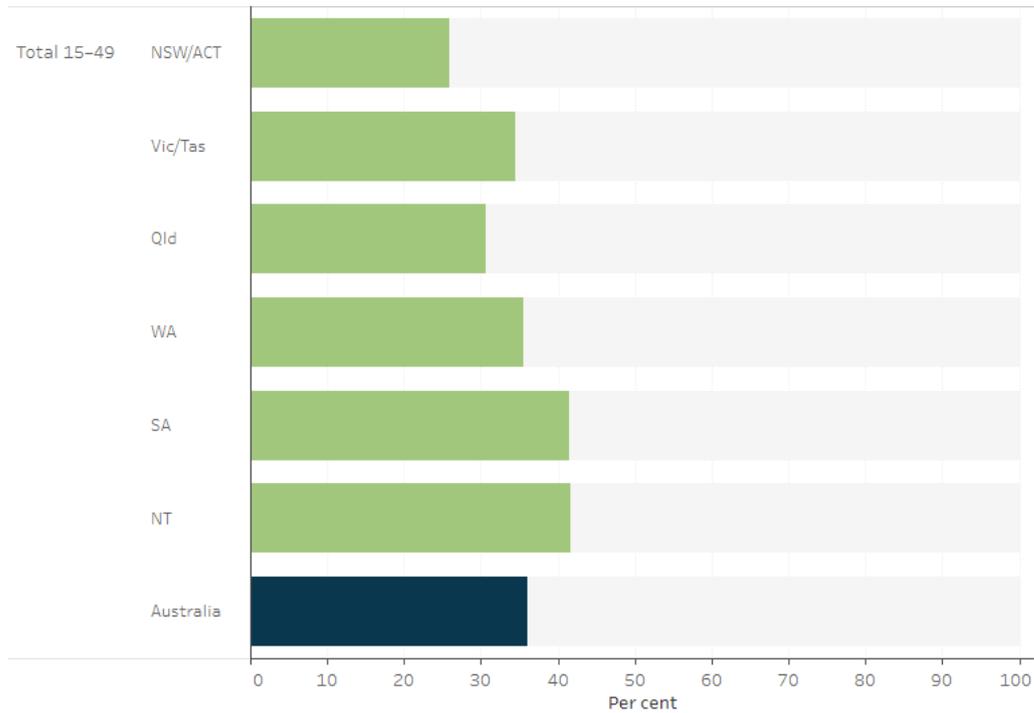


**Figure 5.15.1: Indigenous regular clients with type 2 diabetes who are immunised against influenza, by age and sex, June 2017 to June 2019**  
 Note: A regular client is a client who has visited a particular primary health care provider 3 or more times in the last 2 years.  
 Source: AIHW nKPI Data Collection  
<https://www.aihw.gov.au>

- Labels:
- On
  - Off

State/territory

Explore by:  Age groups  
 Remoteness areas  
 State/territory



**Figure 5.15.2: Indigenous regular clients with type 2 diabetes who are immunised against influenza, June 2019**  
 Note: A regular client is a client who has visited a particular primary health care provider 3 or more times in the last 2 years.  
 Source: AIHW nKPI Data Collection  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

### Indicator 5.15 data specifications

	Definition	Data source
<b>Numerator</b>	Number of Indigenous regular clients (15–49 years), who were recorded as having type 2 diabetes and were immunised against influenza.	AIHW nKPI Data Collection
<b>Denominator</b>	Number of Indigenous regular clients (15–49 years), who were recorded as having type 2 diabetes.	AIHW nKPI Data Collection

### Indicator 5.16 Types of lifestyle issues discussed with health professional

#### About the data

The 2018–19 ABS National Aboriginal and Torres Strait Islander Health Survey included questions on the following lifestyle issues discussed with a health professional:

- reducing or quitting smoking;
- drinking alcohol in moderation;

- reaching a healthy weight;
- increasing physical activity; and
- eating healthy food or improving diet.

Due to small numbers, age-standardised proportions were not derived for socioeconomic areas and state and territories.

Due to question changes in the 2018–19 survey, the data for this indicator are not comparable to that of the previous ABS 2012–13 Australian Aboriginal and Torres Strait Islander Health Survey.

### **Drinking alcohol in moderation**

In 2018–19, based on self-reported data, around 6.6% of Indigenous adults aged 18 years and over discussed drinking alcohol in moderation with a health professional. The age-standardised proportion of men who discussed drinking in moderation was more than double the proportion of women (9.1% and 4.4%, respectively). There was no difference by age groups or remoteness areas (Figure 5.16).

### **Eating healthy food or improving diet**

Almost one in five (18%) Indigenous adults discussed eating healthy food or improving their diet with a health professional. There was no difference by age groups or remoteness areas (Figure 5.16).

### **Increasing physical activity**

Around 13% of Indigenous adults discussed increasing their level of physical activity. There was no difference by sex or age groups (Figure 5.16.1). After adjusting for age, the proportion of Indigenous adults who discussed increasing their level of physical activity was higher in *Major cities* (16%) compared with *Outer regional and remote areas* (11%) (Figure 5.16).

### **Reaching a healthy weight**

One in five (20%) of Indigenous adults discussed reaching a healthy weight with a health professional. The proportion increased with age to 45–54 years (28%). The age-standardised proportion of Indigenous women who discussed their weight was higher than the proportion of men (24% and 17%, respectively). After adjusting for age, the proportion of adults who discussed reaching a healthy weight was lower in *Outer regional/Remote areas* (17%) compared with *Major cities* (24%) and *Inner regional areas* (24%) (Figure 5.16).

### **Reducing or quitting smoking**

In 2018–19, 16% of Indigenous adults discussed reducing or quitting smoking with a health professional. The rate was highest in those aged 45–54 and 55–64 (23%). There was no difference by remoteness areas (Figure 5.16).

### **Explore the data**

## **5.16 Type of lifestyle issues discussed with health professional by Indigenous Australians, by age group and sex, 2018–19**

## Age groups

### Explore by:

- Drinking alcohol in moderation
- Eating healthy food or improving diet
- Increasing physical activity
- Reaching a healthy weight
- Reducing or quitting smoking
- Age groups
- Remoteness areas
- Socioeconomic areas
- State/territory

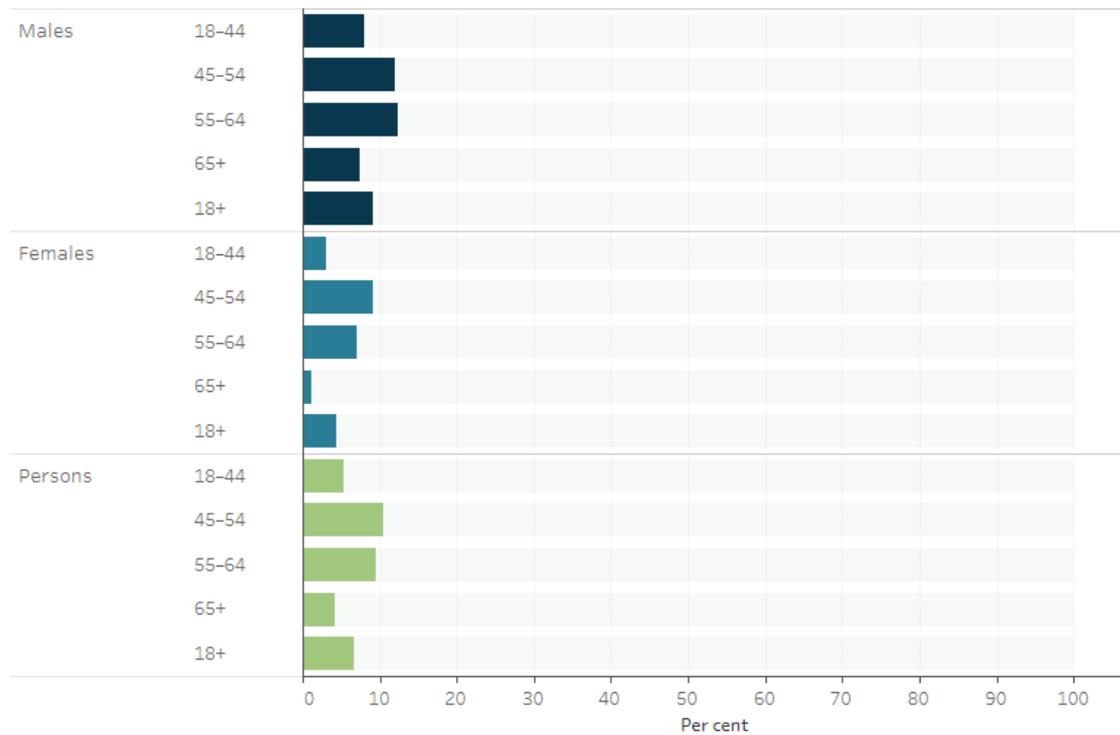


Figure 5.16: Types of lifestyle issues discussed with health professional by Indigenous Australians, by selected population group, 2018-19

#### Notes:

1. Age standardised to the 2001 Australian Standard Population.
2. Crude rates reported for individual age-groups, socioeconomic areas and state/territory.

Source: ABS 2019

<https://www.aihw.gov.au>

#### Labels:

- On
- Off

### Indicator 5.16 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of Indigenous adults (18+ years) who reported discussing lifestyle issues with a health professional.	ABS 2019
<b>Denominator</b>	Estimated Australian Indigenous population (18+ years).	ABS 2019

### Reference

ABS (Australian Bureau of Statistics) 2019. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018-19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## **Indicator 5.17 Health actions taken by Aboriginal and Torres Strait Islander people with diabetes**

### **Considerations**

- These estimates are based on relatively small numbers and are associated with large sampling error.
- Due to small numbers, age-standardised proportions were not derived.

### **Blood glucose checked in the previous 12 months**

In 2018–19, around 92% of Indigenous Australians aged 15 and over with diabetes or high sugar levels reported that they had their blood glucose levels checked in the previous 12 months, based on self-reported data from the National Aboriginal and Torres Strait Islander Health Survey. The crude proportion remained relatively similar between 2012–13 and 2018–19, (95% compared with 92%) (Figure 5.17.1).

### **Currently using insulin**

In 2018–19, 26% of Indigenous Australians aged 15 and over with diabetes or high sugar levels were currently using insulin. The proportion was similar in males and females (25% and 26%, respectively). The crude proportion in 2018–19 was similar to that reported in 2012–13 (26% and 29%, respectively) (Figure 5.17.1).

### **Feet checked in previous 12 months**

Around 3 in 4 (75%) Indigenous Australians aged 15 and over living with diabetes or high sugar levels, reported that they had their feet checked in the previous 12 months in 2018–19. The crude proportion increased slightly from 69% in 2012–13 to 75% in 2018–19 (Figure 5.17.1).

### **HbA1c test in the previous 12 months**

In 2018–19, around 73% of Indigenous Australians living with diabetes or high sugar levels reported that they had an HbA1c test in the previous 12 months. The crude proportion increased slightly from 68% in 2012–13 to 73% in 2018–19 (Figure 5.17.1).

### **Taken medication for diabetes in the last 2 weeks**

In 2018–19, it was estimated that 67% of Indigenous Australians living with diabetes or high sugar levels reported that they had taken medicine in the last 2 weeks. The crude proportion remained relatively similar between 2012–13 and 2018–19 (66% compared with 67%) (Figure 5.17.1).

### **About the data**

Results presented for this indicator include health actions taken by people with diabetes or high sugar levels. Due to small numbers, age-standardised proportions were not derived.

Explore the data

5.17 Health actions taken by Indigenous Australians with diabetes, by age group and sex, 2012-13 and 2018-19 and by selected population group, 2018-19

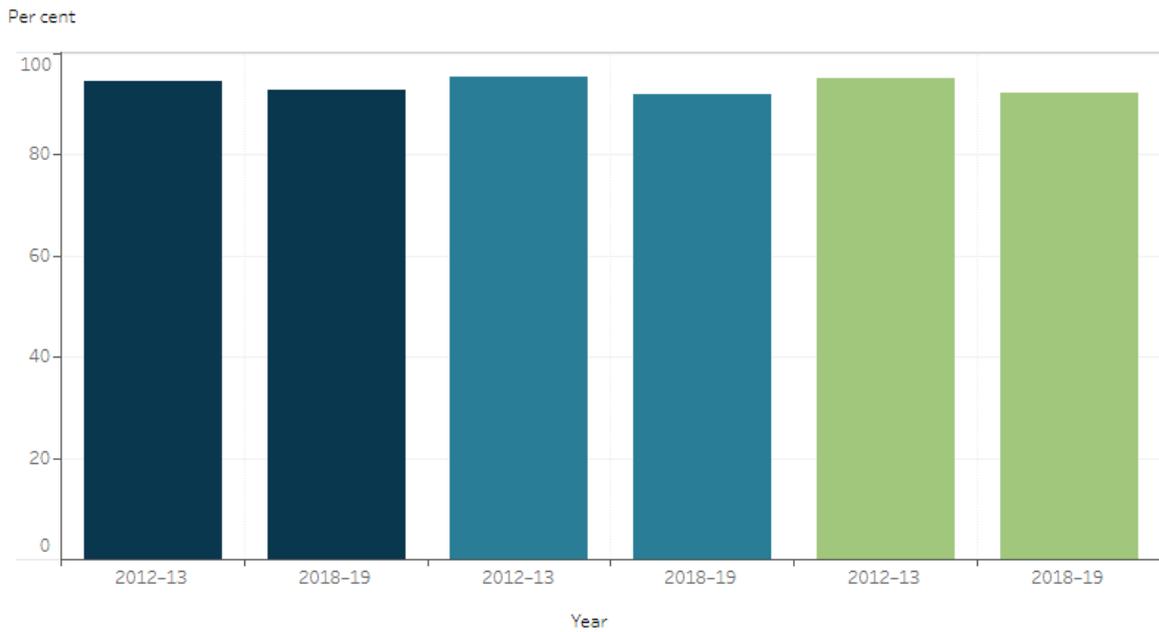
Males  
 Females  
 Persons

**Explore by:** Health actions taken

- Blood glucose checked in previous 12 months
- Currently using insulin
- Feet checked in previous 12 months
- HbA1c checked in previous 12 months
- Taken medication for diabetes in the last 2 weeks

Age group (years):

Blood glucose checked in previous 12 months



Labels:  
 On  
 Off

Figure 5.17.1: Health actions taken by Indigenous Australians with diabetes, by age group and sex, 2012-13 and 2018-19

Sources: ABS 2015; ABS 2019  
<https://www.aihw.gov.au>

- Explore by:
- Blood glucose checked in previous 12 months
  - Age groups
  - Currently using insulin
  - Remoteness areas
  - Feet checked in previous 12 months
  - Socioeconomic areas
  - HbA1c checked in previous 12 months
  - State/territory
  - Taken medication for diabetes in the last 2 weeks

### Blood glucose checked in previous 12 months—Age groups

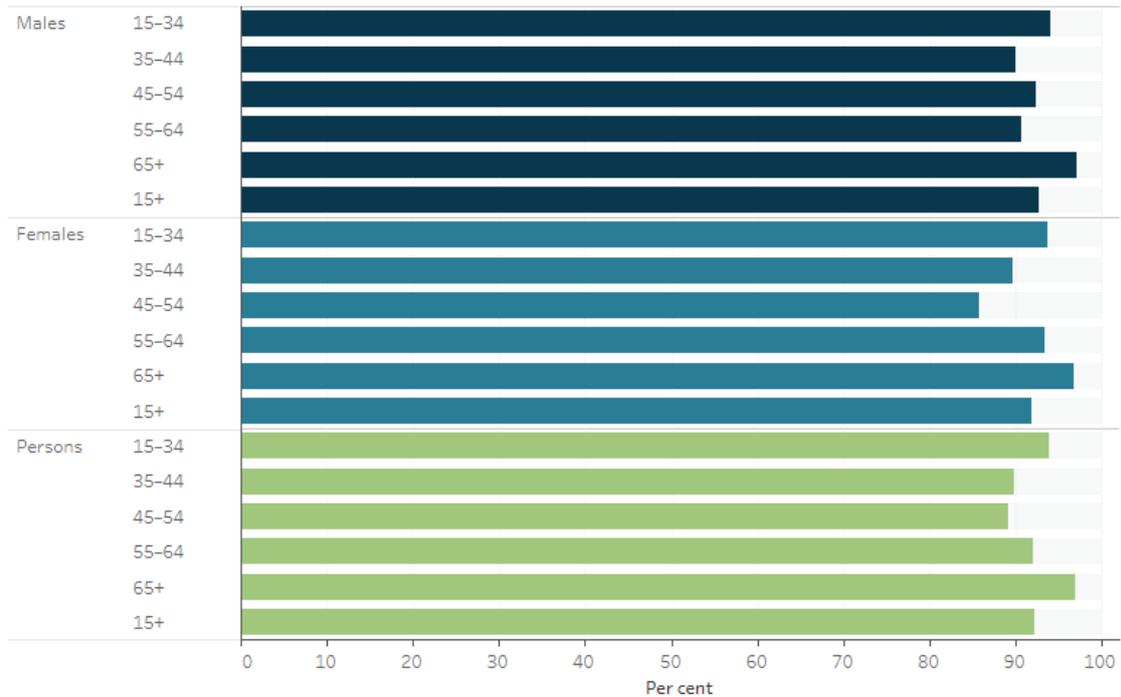


Figure 5.17.2: Health actions taken by Indigenous Australians with diabetes, by selected population group, 2018-19

Sources: ABS 2015; ABS 2019  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

#### Indicator 5.17 data specifications

	Definition	Data source
<b>Numerator</b>	<p>Estimated number of Indigenous Australians (15+ years) with self-reported diabetes or high sugar levels who reported taking health actions to manage their condition.</p> <p>Included people with type 1 diabetes, type 2 diabetes, and type unknown diabetes.</p>	ABS 2019; ABS 2015
<b>Denominator</b>	<p>Estimated Australian Indigenous population (15+ years) with self-reported diabetes or high sugar levels.</p> <p>Included people with type 1 diabetes, type 2 diabetes, and type unknown diabetes.</p>	ABS 2019; ABS 2015

## References

Australian Bureau of Statistics (ABS) 2015. Microdata: Australian Aboriginal and Torres Strait Islander Health Survey, Core Content - Risk Factors and Selected Health Conditions, 2012–13. ABS cat. no. 4715.0.30.003. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## Indicator 5.18 People without diabetes tested for high sugar levels/ risk of diabetes

### Overview

In 2018–19, based on self-reported data from the National Aboriginal and Torres Strait Islander Health Survey, an estimated 47% of Indigenous adults aged 18 and over without diabetes, reported that they were tested for high sugar levels in the previous 3 years.

### Age and sex

The proportion increased with age, from 29% of those aged 18–24 to 66% of those aged over 65 (Figure 5.18). The age-standardised proportion of Indigenous women tested for diabetes was higher than that of men (58% and 48%, respectively) and this difference was observed for those aged 18–44. (Figure 5.18).

### Population groups

There were no differences by remoteness areas or socioeconomic areas (Figure 5.18).

### State and territory

There were no differences by state and territory (Figure 5.18).

### Explore the data

**5.18 Indigenous people without diabetes tested for high blood glucose in the last 3 years, by age group and sex, by selected population group, 2018–19**

## Age groups

Explore by:  Age groups  
 Remoteness areas  
 Socioeconomic areas  
 State/territory

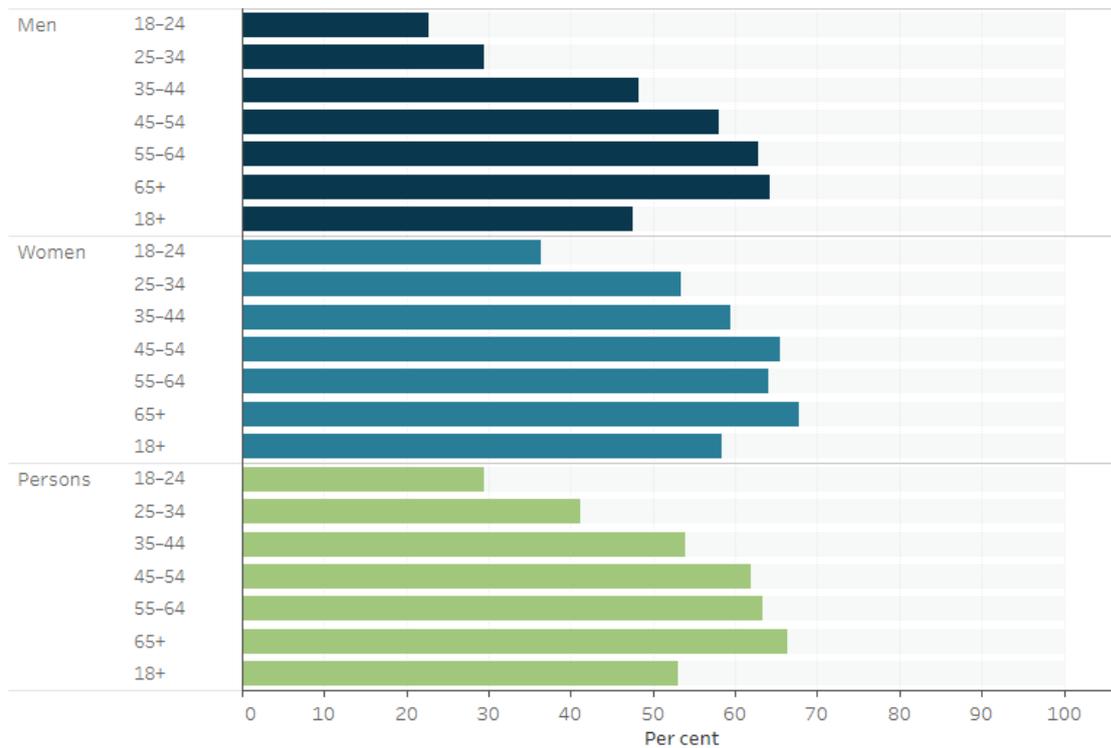


Figure 5.18: Indigenous people without diabetes tested for high blood glucose in the last 3 years, by age group and sex and by selected population group, 2018-19

Notes:

1. Age-standardised to the 2001 Australian Standard Population.

2. Crude rates reported for individual age groups.

Source: ABS 2019

<https://www.aihw.gov.au>

Labels:

On

Off

## Indicator 5.18 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of Indigenous adults (18+ years) without diabetes or high blood sugar (self-reported) who were tested for high blood sugar/ risk of diabetes in the previous 3 years.	ABS 2019
<b>Denominator</b>	Estimated number of Indigenous adults (18+ years) without diabetes or high blood sugar (self-reported).	ABS 2019

## References

Australian Bureau of Statistics (ABS) 2019. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018-19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## **Indicator 5.19 Selected health issues of Indigenous mothers**

### **Considerations**

Data for this indicator are not available for update—baseline results reported.

In 2014–15, the National Aboriginal and Torres Strait Islander Social Survey collected self-reported information relating to health issues experienced by Indigenous mothers during pregnancy. Mothers with children aged 0–3 years were asked about:

- incidence of high blood pressure during pregnancy
- folate use before and/or during pregnancy
- incidence of diabetes or high blood sugar during pregnancy
- medication or supplement use during pregnancy
- whether they sought advice regarding their pregnancy.

### **Overview**

In 2014–15, more than half of Indigenous mothers reported that they had consumed folate before or during their pregnancy (58%). Around 9% had diabetes or high blood sugar, 18% reported that they had high blood pressure, 47% reported using medication or supplements and 39% sought advice or information (Figure 5.19).

### **Explore the data**

#### **5.19 Selected health issues of Indigenous mothers, 2014–15**

State/territory;  
Consumed folate before or  
during pregnancy

Explore Health issue  
by:  Consumed folate before or during pregnancy  
 Diabetes or high blood sugar  
 High blood pressure  
 Medication / supplement use  
 Sought advice or information

Population group  
 State/territory  
 Remoteness areas

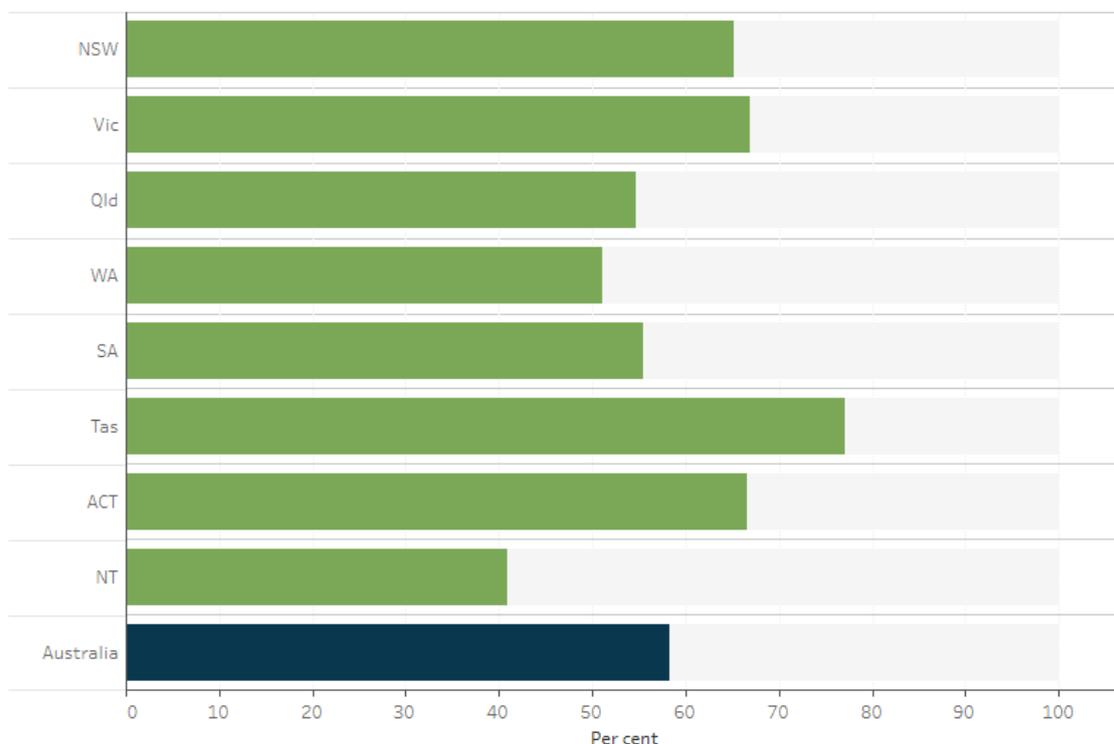


Figure 5.19: Selected health issues of Indigenous mothers, 2014-15

Source: ABS 2016  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

### Indicator 5.19 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of women who gave birth to an Indigenous baby who, during pregnancy, had a) high blood sugar, b) high blood pressure, c) consumed folate (before or during pregnancy) d) took supplements e) sought advice.	ABS 2016
<b>Denominator</b>	Estimated number of women who gave birth to an Indigenous baby.	ABS 2016

### Reference

Australian Bureau of Statistics (ABS) 2016. Microdata: National Aboriginal and Torres Strait Islander Social Survey, 2014-15. ABS cat. no. 4720.0.55.002. Findings based on Detailed Microdata analysis. Canberra: ABS.

# Indicator 5.20 Use of antenatal care by selected health issues

## Considerations

Data for this indicator are not available for update—baseline results reported.

## Overview

In 2014–15, almost all Indigenous mothers in the National Aboriginal and Torres Strait Islander Social Survey reported accessing antenatal care while pregnant (Figure 5.20). While the proportion of Indigenous mothers with health issues who accessed antenatal care was slightly higher than the proportion without health issues, these differences were not statistically significant.

## Explore the data

### 5.20 Proportion of Indigenous mothers who accessed antenatal care by selected health issues 2014–15

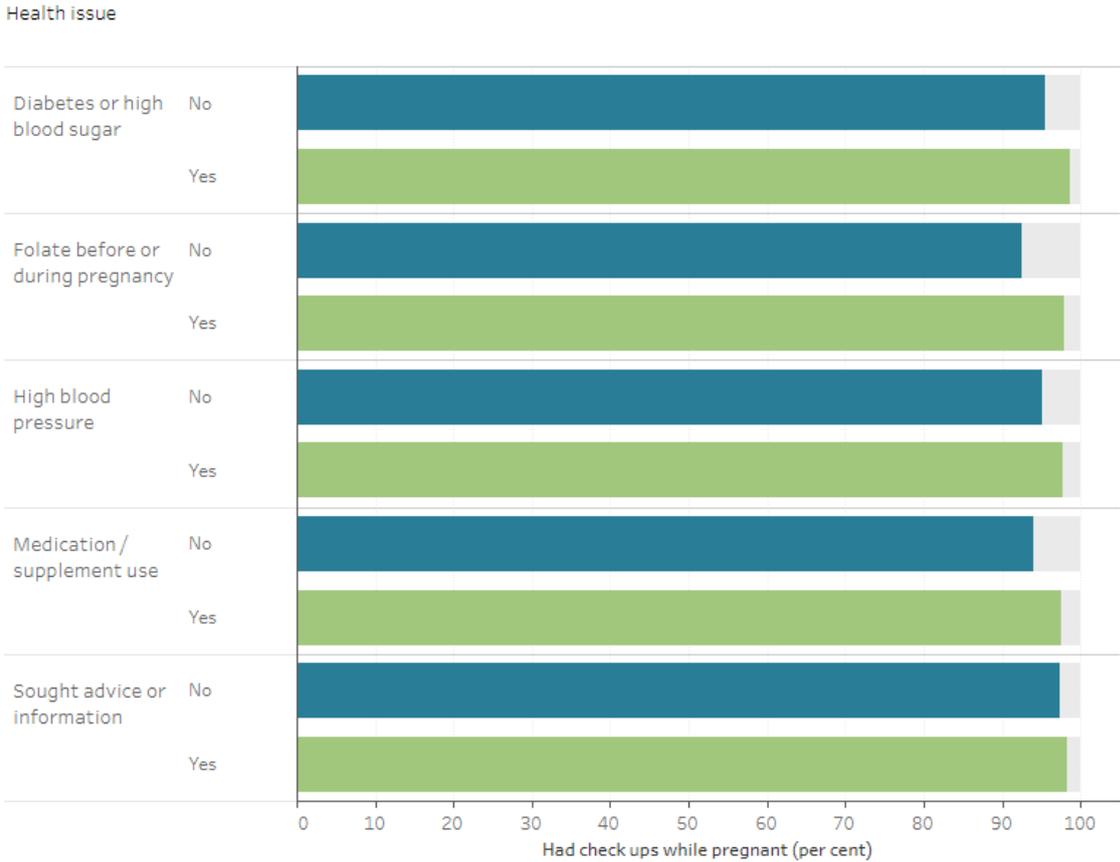


Figure 5.20: Proportion of Indigenous mothers who accessed antenatal care by selected health issues, 2014–15

Source: ABS 2016  
<https://www.aihw.gov.au>

Labels:  
 On  
 Off

## Indicator 5.20 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of women who gave birth to an Indigenous baby who had a) high blood sugar, b) high blood pressure, c) consumed folate (before or during pregnancy) d) took supplements e) sought advice, by use of antenatal care.	ABS 2016
<b>Denominator</b>	Estimated number of women who gave birth to an Indigenous baby, by use of antenatal care.	ABS 2016

## Reference

Australian Bureau of Statistics (ABS) 2016. Microdata: National Aboriginal and Torres Strait Islander Social Survey, 2014–15. ABS cat. no. 4720.0.55.002. Findings based on Detailed Microdata analysis. Canberra: ABS.

## Indicator 5.21 Diabetes problems managed by general practitioner

### Considerations

Data for this indicator are not available for update—baseline results reported.

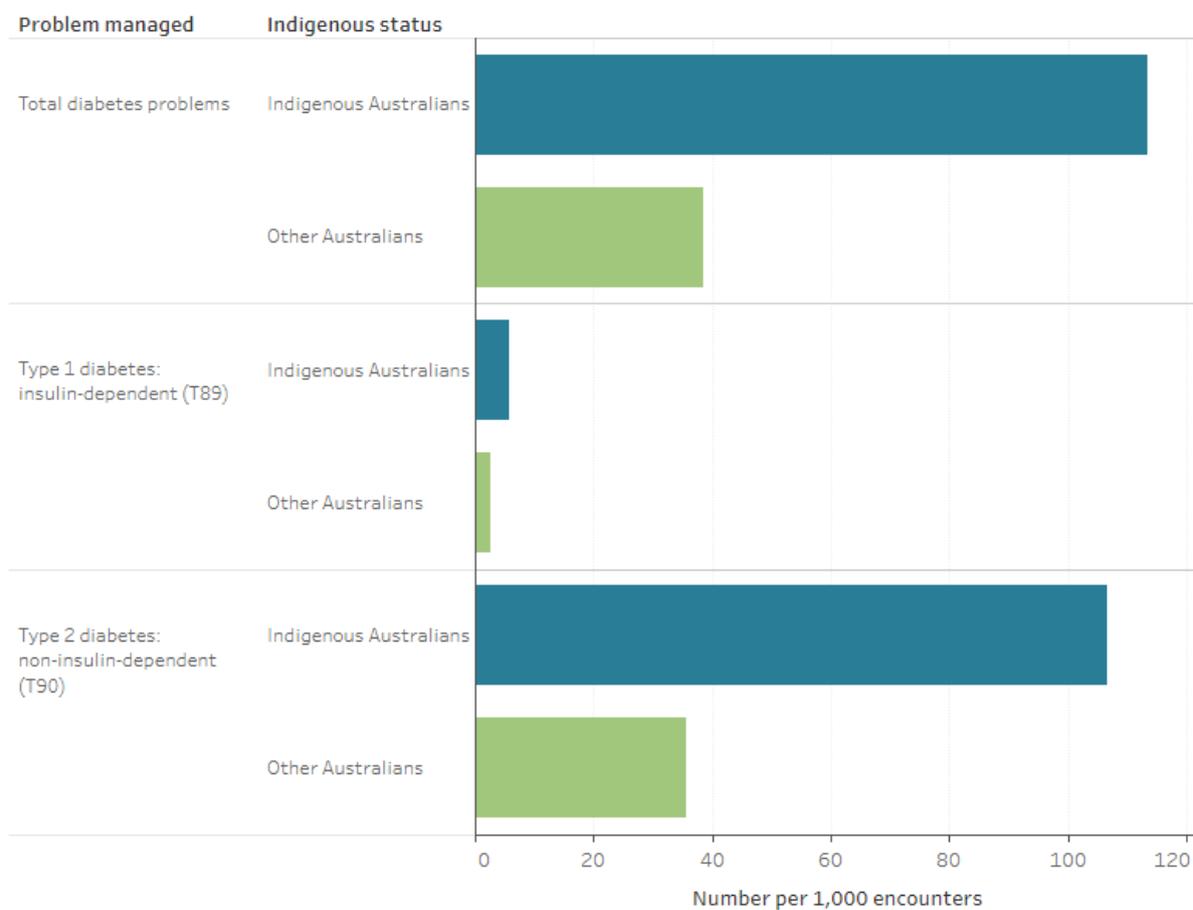
### Overview

Data from the Bettering the Evaluation and Care of Health (BEACH) study indicate that, in the period from April 2010 to March 2015, 5.5% of problems managed by GPs among Indigenous patients, were diabetes related. The majority of diabetes-related problems managed were for non-insulin dependent type 2 diabetes (92%).

The rate of diabetes problems managed by GPs was 3 times as high among Indigenous Australians as among other Australians. The disparity was greater for non-insulin dependent type 2 diabetes than insulin dependent type 1 diabetes (3 and 2.3 times, respectively) (Figure 5.21).

### Explore the data

#### 5.21 Rate of diabetes problems managed by general practitioners, by Indigenous status and diabetes type, 2010–2015



**Figure 5.21: Rate of diabetes problems managed by general practitioners, by Indigenous status and diabetes type, 2010–2015** Labels:  On  Off  
 Note: Age-standardised to the 2001 Australian Standard Population.  
 Source: BEACH Survey (2010–2015).  
<https://www.aihw.gov.au>

### Indicator 5.21 data specifications

	Definition	Data source
<b>Numerator</b>	Number of diabetes problems managed by General Practitioners, by Indigenous status.	BEACH Survey (2010–2015)
<b>Denominator</b>	Number of General Practitioner managed problems, by Indigenous status of patient.	BEACH Survey (2010–2015)

# Goal 6: Reduce the impact of diabetes among other priority groups

Goal 6 of the Strategy focusses on the impact of diabetes among other priority groups. This includes culturally and linguistically diverse people, older Australians, people living in rural and remote areas, and people with mental health issues. A number of indicators were identified in the [implementation plan](#) to measure the progress of Goal 6, some of which were included in Goals 1-4. Where possible, these indicators have been included under the relevant goals for the following measures of progress in the [Australian National Diabetes Strategy 2016–2020](#): People developing or with type 2 diabetes among priority groups; People with diabetes among priority groups with above-target HbA1c, cholesterol, albuminuria and blood pressure; People among priority groups who are overweight, obese or have other modifiable risk factors.

**Two indicators are reported in this section specifically for Goal 6.**

**People developing or with type 2 diabetes among priority groups:**

## [6.1 People with diabetes by mental health status](#)

**People among priority groups who are overweight, obese or have other modifiable risk factors:**

## [6.2 Overweight or obesity by mental health status](#)

### Indicator 6.1 Prevalence of diabetes by mental health status

#### Considerations

- Due to significant data gaps, this report does not include data for culturally and linguistically diverse people and includes only very limited information relating to those with mental health problems. Further data development is required to examine outcomes within these priority groups.
- NHS estimates of people with mental or behavioural conditions are based on self-reported data and will differ from those obtained from a diagnostic tool such as that used in the 2007 National Survey of Mental Health and Wellbeing (ABS 2008). Refer to AIHW's [Mental health](#) snapshot published in [Australia's health 2020](#) for more information.

#### Overview

In 2017–18, an estimated 7.4% of adults who had a mental or behavioural condition also had self-reported diabetes, according to the National Health Survey (NHS). Among those who did not have a mental or behavioural condition, the age-standardised prevalence of diabetes was 5.1% (Figure 6.1.1).

#### Age and sex

After adjusting for age, 9.2% of men who had a mental or behavioural condition had diabetes in 2017–18. A lower proportion of men with no mental or behavioural condition had diabetes

(5.9%). Similarly, 6.2% of women with a mental or behavioural condition had diabetes compared with 4.4% of women with no mental or behavioural condition.

While the prevalence of diabetes increased with age for both mental health groups, prevalence was higher among those with a mental or behavioural condition than those with no mental or behavioural condition across all age groups (Figure 6.1.2).

### **Population groups**

In 2017–18, the prevalence of diabetes increased along with the level of disadvantage both for those with and without a self-reported mental or behavioural condition. In the lowest socioeconomic areas, 10.9% of adults with a mental or behavioural condition had diabetes compared with 5.2% in the highest socioeconomic areas. Among those with no mental or behavioural condition, the prevalence of diabetes was 7.3% in the lowest socioeconomic areas and 3.7% in the highest socioeconomic areas (Figure 6.1.2).

In *Major cities*, 7.0% of adults with a mental or behavioural condition had diabetes. Among those with no mental or behavioural condition, 5.2% of adults had diabetes. However, there were no differences by mental health status between remoteness areas (Figure 6.1.2).

### **State and territory**

Across the states and territories, the prevalence of diabetes among adults with a self-reported mental or behavioural condition ranged from 5.9% in Western Australia to 19.0% in the Northern Territory. Among those with no mental or behavioural condition, the prevalence of diabetes ranged from 4.1% in the Australian Capital Territory to 6.4% in the Northern Territory (Figure 6.1.2).

### **Aboriginal and Torres Strait Islander people**

In 2018–19, 14.6% of Indigenous adults with self-reported mental or behavioural condition had diabetes, according to the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS). Among those with no self-reported mental or behavioural condition, the prevalence of diabetes was 12.3%. Based on estimates from the 2018–19 NATSIHS and 2017–18 NHS, Indigenous adults with self-reported mental or behavioural condition were 2.6 times as likely to have diabetes as non-Indigenous adults with a self-reported mental or behavioural condition (19.4% compared with 7.4%, respectively, after adjusting for age) (Figure 6.1.2).

### **Explore the data**

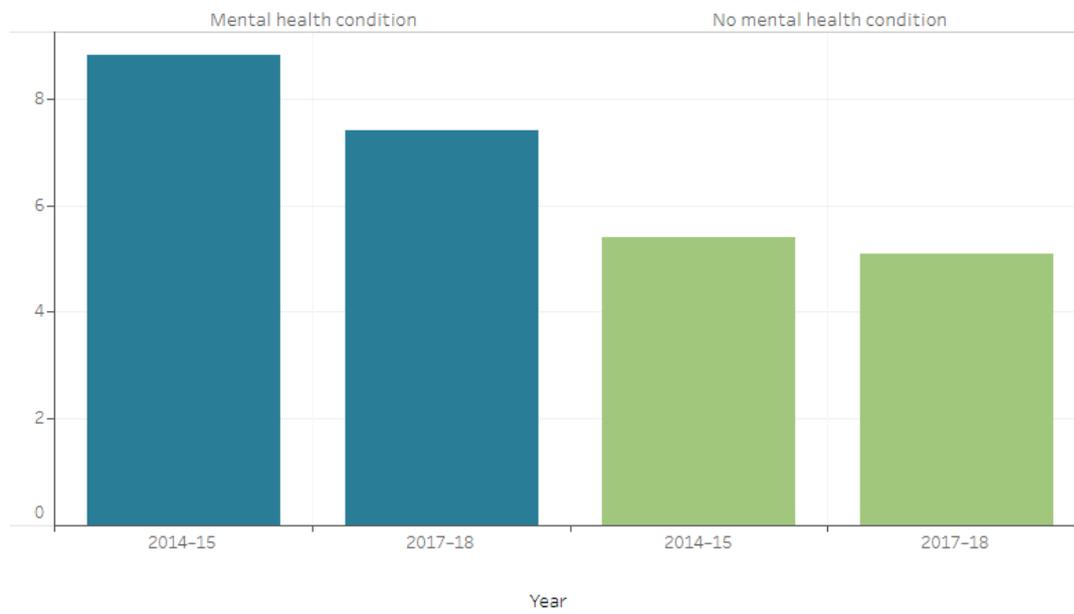
#### **6.1 Prevalence of diabetes by mental health status, by age group, 2014–15 and 2017–18 and by selected population groups, 2017–18**

- Mental health condition
- No mental health condition

Explore by: Age group (years)

18+ ▼

Per cent



**Figure 6.1.1: Prevalence of diabetes among adults by mental health status, by age group, 2014-15 and 2017-18**

Notes:

1. Based on self-reported data.
2. Total 18+ age-standardised to the 2001 Australian Standard Population.

Sources: ABS 2016; ABS 2019a

<https://www.aihw.gov.au>

Labels:

- On
- Off

## Indigenous Status: Mental health condition

Explore by:  Mental health condition  No mental health condition

Age groups  Indigenous Australians  Indigenous Status  Remoteness areas  Socioeconomic areas  State/territory

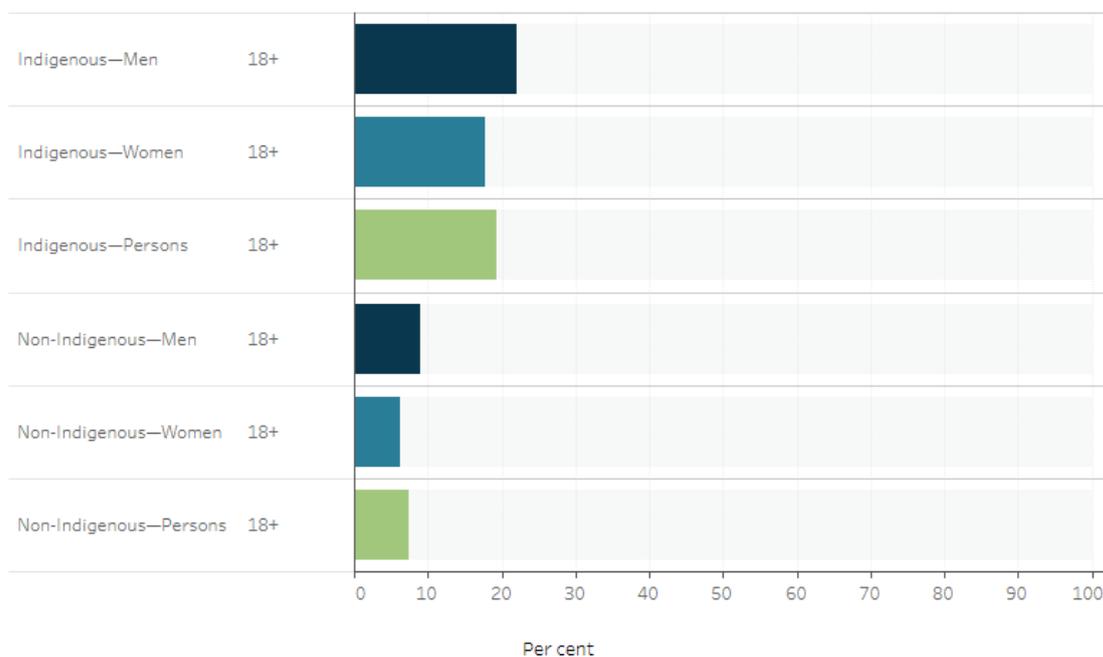


Figure 6.1.2: Prevalence of diabetes among adults by mental health status, by selected population group, 2017-18

Notes:

1. Based on self-reported data.
2. Age-standardised to the 2001 Australian Standard Population.
3. Crude rates reported for age groups and Indigenous Australians.

Sources: ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

Labels:

- On  Off

### Indicator 6.1 data specifications

	Definition	Data source
<b>Numerator</b>	<p>Estimated number of adults (18+ years) with self-reported diabetes, by self-reported mental health status.</p> <p>Diabetes estimates included people with type 1 type 2 diabetes, and type unknown. Mental or behavioural condition estimates included organic mental conditions, alcohol and drug conditions, mood conditions and other mental and behavioural conditions</p>	ABS 2019a; ABS 2019b; ABS 2016
<b>Denominator</b>	<p>Estimated Australian population (18+ years), by mental health status.</p> <p>Diabetes estimates included people with type 1 type 2 diabetes, and type unknown. Mental</p>	ABS 2019a; ABS 2019b; ABS 2016

	or behavioural condition estimates included organic mental conditions, alcohol and drug conditions, mood conditions and other mental and behavioural conditions	
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#### References Expand

ABS (Australian Bureau of Statistics) 2008. [National Survey of Mental Health and Wellbeing: summary of results, 2007](#). ABS cat. no. 4326.0. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017–18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## Indicator 6.2 Prevalence of overweight or obesity by mental health status

### Considerations

- Due to significant data gaps, this report does not include data for culturally and linguistically diverse people and includes only very limited information relating to those with mental health problems. Further data development is required to examine outcomes within these priority groups.
- NHS estimates of people with mental or behavioural conditions are based on self-reported data and will differ from those obtained from a diagnostic tool such as that used in the 2007 National Survey of Mental Health and Wellbeing (ABS 2008). Refer to AIHW's [Mental health](#) snapshot published in [Australia's health 2020](#) for more information.

### Overview

In 2017–18, based on self-reported data in the National Health Survey (NHS), the age-standardised prevalence of overweight or obesity among Australian adults aged 18 years and over with a self-reported mental or behavioural condition was slightly higher than adults with no mental or behavioural condition (69% and 66%, respectively).

### Age and sex

The age-standardised prevalence of overweight or obesity was similar for men with and without a self-reported mental or behavioural condition. Among women, the age-standardised prevalence of overweight or obesity was higher among those with a self-reported mental or behavioural condition compared to those without a mental or behavioural condition (65% and 57%, respectively) (Figures 6.2.1 and 6.2.2).

### Population groups

After adjusting for age, the prevalence of overweight or obesity, both for those with and without a self-reported mental or behavioural condition, was similar across socioeconomic and remoteness areas (Figure 6.2.2).

### **State and territory**

Across the states and territories, the prevalence of overweight or obesity among adults with a self-reported mental or behavioural condition ranged from 64% in the Australian Capital Territory to 75% in the Northern Territory. Among those with no mental or behavioural condition, the prevalence of overweight or obesity was similar by state and territory, ranging from 64% to 69%.

### **Aboriginal and Torres Strait Islander people**

In 2018–19, based on self-reported data from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), 80% of Indigenous adults with a mental or behavioural condition were overweight or obese. Among those with no self-reported mental or behavioural condition, the prevalence of overweight or obesity was 75%.

Based on estimates from the 2018–19 NATSIHS and 2017–18 NHS, a higher proportion of Indigenous adults with a mental or behavioural condition were overweight or obese than non-Indigenous adults (80% compared with 69%, respectively) (Figure 6.2.2).

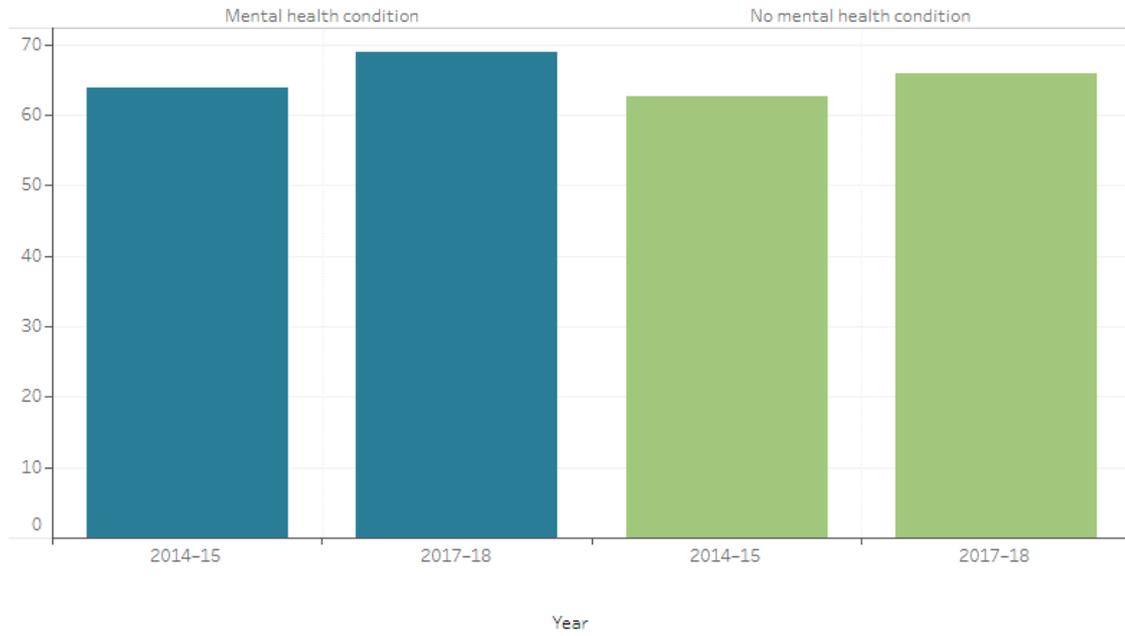
### **Explore the data**

#### **6.2 Prevalence of overweight or obesity among adults by mental health status, by age group, 2014–15 and 2017–18 and by selected population groups, 2017–18**

- Mental health condition
- No mental health condition

Explore by: Age group (years) 18+

Per cent



**Figure 6.2.1: Prevalence of overweight or obesity among adults by mental health status, by age group, 2014-15 and 2017-18**

Note: Total 18+ age-standardised to the 2001 Australian Standard Population.

Sources: ABS 2016; ABS 2019a

<https://www.aihw.gov.au>

Labels:

- On
- Off

## Age group: Mental health condition

Explore by:

- Mental health condition
- No mental health condition
- Age group
- Indigenous Australians
- Indigenous Status
- Remoteness area
- Socioeconomic areas
- State/Territory

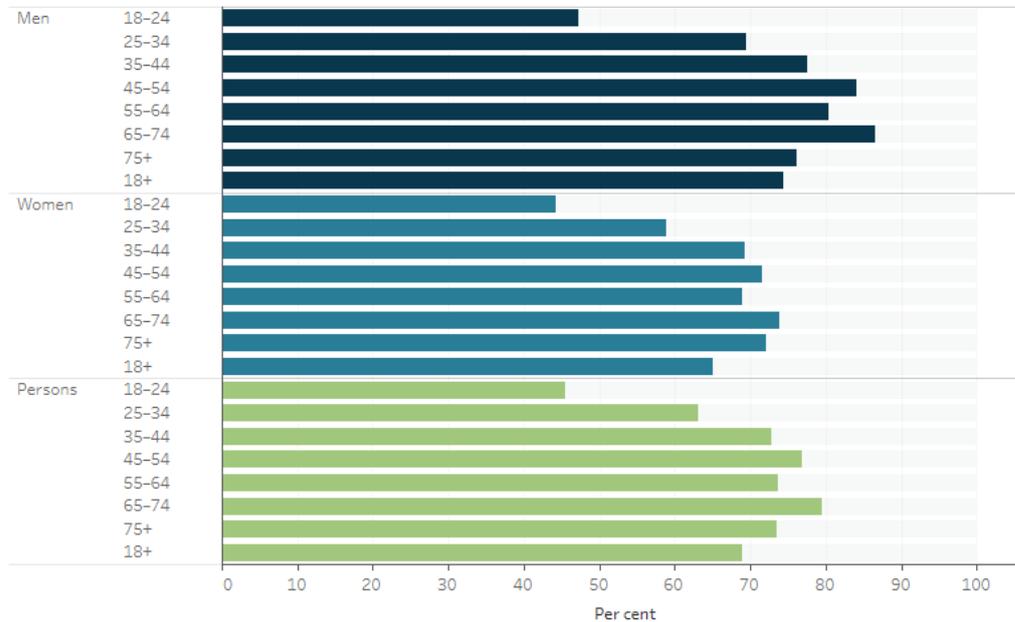


Figure 6.2.2: Prevalence of overweight or obesity among adults by mental health status, by selected population group, 2017-18

Notes:

1. Age-standardised to the 2001 Australian Standard Population.
2. Crude rates reported for individual age groups.

Sources: ABS 2019a; ABS 2019b

<https://www.aihw.gov.au>

Labels:

- On
- Off

### Indicator 6.2 data specifications

	Definition	Data source
<b>Numerator</b>	Estimated number of adults (18+ years) who were overweight or obese (BMI $\geq 25$ ), by mental health status.  Mental or behavioural condition estimates included organic mental conditions, alcohol and drug conditions, mood conditions and other mental and behavioural conditions	ABS 2019a; ABS 2019b; ABS 2016
<b>Denominator</b>	Estimated Australian population (18+ years), by mental health status.  Mental or behavioural condition estimates included organic mental conditions, alcohol and drug conditions, mood conditions and other mental and behavioural conditions	ABS 2019a; ABS 2019b; ABS 2016

## References

ABS (Australian Bureau of Statistics) 2008. [National Survey of Mental Health and Wellbeing: summary of results, 2007](#). ABS cat. no. 4326.0. Canberra: ABS.

ABS 2016. Microdata: National Health Survey, 2014–15. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019a. Microdata: National Health Survey, 2017–18. ABS cat. no. 4324.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

ABS 2019b. Microdata: National Aboriginal and Torres Strait Islander Health, Australia, 2018–19. ABS cat. no. 4715.0.55.001. Findings based on Detailed Microdata analysis. Canberra: ABS.

## Goal 7: Strengthen prevention & care through research, evidence & data

Goal 7 of the Strategy focusses on strengthening prevention and care through research, evidence and data. The potential measures of progress outlined in the [Australian National Diabetes Strategy: 2016–2020](#) for Goal 7 include the development of a national research agenda, and regular reporting from national datasets and surveys on diabetes parameters such as burden of disease and health system usage. Whilst no potential indicators were identified in the [Implementation Plan](#) for the potential measures of progress for Goal 7, the following update provides information on work being conducted in this space, including both current and future funded projects.

### Goal 7 Update

#### Strengthening prevention through research

Research to strengthen the evidence base for prevention, early detection, management and care of all forms of diabetes remains a priority for Australia.

- Between 2016 and 2019, the National Health and Medical Research Council provided nearly \$220 million in grants for diabetes research, including \$128 million in grants for type 2 diabetes research, \$43 million in grants for type 1 diabetes research and \$10 million in grants for gestational diabetes research.
- Since its commencement in 2015, the Medical Research Future Fund (MRFF) has provided a total of \$37 million to 14 organisations for diabetes related research.
- As part of the MRFF investment, \$25 million will be provided over five years from 2019–20 to 2024–25 to the Type 1 Diabetes Clinical Research Network to fund research into developing and improving new treatments, controls and practices for type 1 diabetes. The Australian Government is also providing \$6 million funding over four years from 2019–20 to 2022–23 to support the administration of the Type 1 Diabetes Clinical Research Network.
- Up to \$47 million of funding over four years from 2019–20 to 2022–23 for the 2020 Targeted Translation Research Accelerator Grant Opportunity to support the development of novel preventive, diagnostic and therapeutic approaches and products for diabetes and cardiovascular disease.
- The Australian Government is providing \$932,000 over two years from 2019–20 to 2020–21 to update the 2012 *Absolute Cardiovascular Disease Risk Assessment Guidelines* to reflect current best practice evidence. Revision of these guidelines will ensure health professionals have the latest data to better detect cardiovascular disease and manage patients with the condition.
- The Australian Government will also provide \$3.2 million funding over three years from 2019–20 to 2021–22 for the Second National Eye Health Survey, which will obtain current data on the prevalence of vision loss, blindness and eye disease in the Australian population.
- The Australian Government is providing \$450,000 funding over three years from 2019–20 to 2021–22 to explore new models and messaging to effectively engage women with previous gestational diabetes in follow-up screening for type 2 diabetes.

The Australian Government is funding the following research projects for diabetes prevention among Aboriginal and Torres Strait Islander people:

- \$3.87 million over three years from 2019–20 and 2021–22 for the Indigenous Youth Diabetes Models of Care project, which will develop, pilot, evaluate and implement culturally appropriate models of care for Aboriginal and Torres Strait Islander youth with type 2 diabetes.
- \$6 million over two years from 2019–20 and 2020–21 for the Aboriginal and Torres Strait Islander Diabetic Foot Complication Project, which aims to reduce diabetes foot-related complications and amputations for Indigenous people.

### **Improving and expanding data linkage and facilitating ease of access**

Since the publication of the [Australian National Diabetes Strategy 2016-2020](#), Australia has made significant progress in data collection and improving data connectivity related to diabetes parameters.

Increased uptake of My Health Record has improved connectivity between different providers of health care. As at March 2020, 91% of pharmacies, 91% of general practitioners and 94% of public hospital beds were registered with My Health Record and there were 22.7 million total My Health Records, representing an increase of 220,000 records since July 2019.

# Abbreviations

**ABS:** Australian Bureau of Statistics

**ACT:** Australian Capital Territory

**AHMAC:** Australian Health Ministers' Advisory Council

**BEACH:** Bettering the Evaluation and Care of Health

**BMI:** Body Mass Index

**CHD:** Coronary heart disease

**CI:** Confidence interval

**CVD:** Cardiovascular disease

**eGFR:** estimated Glomerular Filtration Rate

**ERP:** Estimated residence population

**ESKD:** End-stage kidney disease

**GP:** General practitioner

**HbA1c:** Glycosylated haemoglobin

**ICD-10:** International Statistical Classification of Diseases and Related Health Problems 10th Revision

**ICD-10-AM:** International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification

**MBS:** Medicare Benefits Schedule

**MRFF:** Medical Research Future Fund

**NATSIHS:** National Aboriginal and Torres Strait Islander Health Survey

**NDI:** National Death Index

**NDR:** National (insulin-treated) Diabetes Register

**NDSS:** National Diabetes Services Scheme

**NHMD:** National Hospital Morbidity Database

**NHMRC:** National Health and Medical Research Council

**NHS:** National Health Survey

**nKPI:** National Key Performance Indicators

**NMD:** National Mortality Database

**NPDC:** National Perinatal Data Collection

**NSW:** New South Wales

**NT:** Northern Territory

**PIP:** Practice Incentives Program

**PIP QI:** Practice Incentives Program Quality Improvement

**Qld:** Queensland

**RACGP:** Royal Australian College of General Practitioners

**SA:** South Australia

**Tas:** Tasmania

**Vic:** Victoria

**WA:** Western Australia

# Glossary

**Aboriginal or Torres Strait Islander:** a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander. See also [Indigenous](#).

**additional diagnosis:** a condition or complaint that either coexists with the principal diagnosis or arises during the hospitalisation. An additional diagnosis is reported if the condition affects patient management.

**age-specific rate:** A rate for a specific age group. The numerator and the denominator relate to the same age group.

**age-standardisation:** A way to remove the influence of age when comparing populations with different age structures. This is usually necessary because the rates of many diseases vary strongly (usually increasing) with age. The age structures of the different populations are converted to the same 'standard' structure, and then the disease rates that would have occurred with that structure are calculated and compared.

**antenatal:** The period covering conception up to the time of birth. Synonymous with prenatal.

**associated cause(s) of death:** all causes listed on the death certificate other than the underlying cause of death. They include the immediate cause, any intervening causes and conditions that contributed to the death but were not related to the disease or condition causing the death. See also [cause of death](#).

**biomedical data:** biomedical or **measured data**—in the form of markers found during blood and urine testing—is the most accurate way to measure the prevalence of chronic diseases such as diabetes and chronic kidney disease. In the 2011–12 Australian Bureau of Statistics Australian Health Survey:

- to detect biomedical signs of diabetes two tests were undertaken: a measure of fasting plasma glucose (FPG) and a measure of glycated haemoglobin (HbA1c).
- to identify signs of chronic kidney disease two tests were undertaken to determine kidney function (estimated glomerular filtration rate (eGFR) and kidney damage (albumin creatinine ratio (ACR)).

**blood cholesterol:** Fatty substance produced by the liver and carried by the blood to supply the rest of the body. Its natural function is to supply material for cell walls and for steroid hormones, but if levels in the blood become too high this can lead to atherosclerosis (a disease in which plaque builds up inside the arteries) and heart disease.

**blood glucose:** Also referred to as blood sugar, is the amount of glucose in your blood. Glucose is the principal sugar produced by the body from the food you eat, mainly carbohydrates, but also from proteins and fats. The body also releases stored glucose from the liver and muscles.

**blood pressure:** The force exerted by the blood on the walls of the arteries as it is pumped around the body by the heart. It is written, for example, as 134/70 mmHg, where the upper number is the systolic pressure (the maximum force against the arteries as the heart muscle contracts to pump the blood out) and the lower number is the diastolic pressure (the minimum

force against the arteries as the heart relaxes and fills again with blood). Levels of blood pressure can vary greatly from person to person and from moment to moment in the same person.

**body mass index (BMI):** The most commonly used method of assessing whether a person is normal weight, underweight, overweight or obese (see [obesity](#)). It is calculated by dividing the person's weight (in kilograms) by their height (in metres) squared—that is,  $\text{kg} \div \text{m}^2$ . For both men and women, underweight is a BMI below 18.5, acceptable weight is from 18.5 to less than 25, overweight but not obese is from 25 to less than 30, and obese is 30 and over. Sometimes overweight and obese are combined—defined as a BMI of 25 and over.

**burden of disease and injury:** A term referring to the quantified impact of a disease or injury on an individual or population, using the [disability-adjusted life year \(DALY\)](#) measure.

**cardiovascular disease:** Any disease of the circulatory system, namely the heart (cardio) or blood vessels (vascular). Includes angina, heart attack, stroke and peripheral vascular disease. Also known as circulatory disease.

**cause of death:** the causes of death entered on the Medical Certificate of Cause of Death are all diseases, morbid conditions or injuries that either resulted in or contributed to death, and the circumstances of the accident or violence that produced any such injuries. Causes of death are commonly reported by the underlying cause of death. See also associated cause(s) of death.

**cholesterol:** See **blood cholesterol**.

**chronic kidney disease (CKD):** A term that refers to all conditions of the kidney, lasting at least 3 months, where a person has had evidence of kidney damage and/or reduced kidney function, regardless of the specific cause.

**chronic diseases/conditions:** A diverse group of diseases/conditions, such as heart disease, cancer and arthritis, which tend to be long lasting and persistent in their symptoms or development. Although these features also apply to some communicable diseases (infectious diseases), the term is usually confined to non-communicable diseases.

**confidence interval (CI):** a statistical term describing a range (interval) of values within which we can be 'confident' that the true value lies, usually because it has a 95% or higher chance of doing so.

**coronary heart disease:** A disease due to blockages in the heart's own (coronary) arteries, expressed as angina or a heart attack. Also known as ischaemic heart disease.

**DALY:** See [disability-adjusted life year](#).

**diabetes (diabetes mellitus):** A chronic condition where the body cannot properly use its main energy source—the sugar glucose. This is due to a relative or absolute deficiency in insulin, a hormone produced by the pancreas that helps glucose enter the body's cells from the bloodstream and be processed by them. Diabetes is marked by an abnormal build-up of glucose in the blood; it can have serious short- and long-term effects. For the main types of diabetes, see [type 1 diabetes](#), [type 2 diabetes](#), [gestational diabetes](#) and [diabetes 'other'](#).

**diabetes 'other':** Other types of diabetes are relatively uncommon, and are most typically related to certain conditions or syndromes that result in defects in insulin secretion, insulin action, or both. For some people with other types of diabetes, adequate glycaemic control can be achieved through diet and exercise or use of other medications. Some however, may also require insulin to manage their blood glucose.

**disability-adjusted life year (DALY):** A year (1 year) of healthy life lost, either through premature death or equivalently through living with disability due to illness or injury. It is the basic unit used in burden of disease and injury estimates.

**end-stage kidney disease (ESKD):** The most severe form of chronic kidney disease (CKD), also known as Stage 5 CKD or kidney failure. Also known as **end-stage renal disease**.

**estimated glomerular filtration rate (eGFR):** estimated Glomerular Filtration Rate. eGFR is calculated from blood test results based on the level of creatinine (a waste product) in your blood. Levels consistently below 60mL/min/1.73m<sup>2</sup> indicate chronic kidney disease.

**estimated resident population (ERP):** The official Australian Bureau of Statistics estimate of the Australian population. The ERP is derived from the 5-yearly Census counts and is updated quarterly between each Census. It is based on the usual residence of the person. Rates are calculated per 1,000 or 100,000 mid-year (30 June) ERP.

**gestational diabetes:** A form of **diabetes** that is first diagnosed during pregnancy (gestation). It may disappear after pregnancy but signals a high risk of diabetes occurring later on in life. See **diabetes** ([diabetes mellitus](#)).

**Glycosylated haemoglobin (HbA1c):** can be used to assess the average blood glucose over the preceding 6–8 weeks and is considered the gold standard for assessing glycaemic control. Targets for HbA1c in people with diabetes should be individualised, but a general target of less than or equal to 7.0% is recommended for people with type 2 diabetes. See also [blood glucose](#).

**hospitalisation:** Synonymous with **admission** and **separation**; that is, an episode of hospital care that starts with the formal admission process and ends with the formal separation process. An episode of care can be completed by the patient's being discharged, being transferred to another hospital or care facility, or dying, or by a portion of a hospital stay starting or ending in a change of type of care (for example, from acute to rehabilitation).

**incidence:** refers to the number of new cases of an illness, disease, or event occurring during a given period.

**Indigenous:** a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander. **See also Aboriginal or Torres Strait Islander.**

**Indigenous regular clients:** A regular client is defined as a person who has attended a particular primary health care organisation at least 3 times in the previous 2 years. Starting from the June 2018 collection, the definition of a regular client excludes deceased patients. For more information see: [Interpreting nKPI data](#)

**insulin:** Hormone produced by the pancreas which regulates the body's energy sources, most notably the sugar glucose. It is an injectable agent that helps lower blood glucose levels by moving glucose into cells to be used as energy.

### **National (insulin-treated) diabetes register (NDR)**

#### **non-Indigenous Australians:**

**obesity:** Marked degree of overweight, defined for population studies as a body mass index of 30 or over. See also **overweight**.

**overweight:** Defined for the purpose of population studies as a [body mass index](#) of 25 or over. See also **obesity**.

**prevalence:** is the number or proportion of cases or instances of a disease or illness present in a population at a given time. The prevalence of disease is related to both the incidence of the disease and how long people live after developing it (survival).

**principal diagnosis:** the diagnosis established after study to be chiefly responsible for occasioning the patients hospitalisation.

**rate:** A rate is one number (the numerator) divided by another number (the denominator). The numerator is commonly the number of events in a specified time. The denominator is the population 'at risk' of the event. Rates (crude, age-specific and age-standardised) are generally multiplied by a number such as 100,000 to create whole numbers.

**remoteness:** a system which classifies geographical locations into groups (*Major cities, Inner regional, Outer regional, Remote, Very remote*) according to distance from major population centres and services. In these analysis, remoteness is based on Accessibility/Remoteness Index of Australia (ARIA) and defined as Remoteness Areas by the Australian Statistical Geographical Standard (ASGS) (in each Census year). Remoteness is a geographical concept and does not take account of accessibility which is influenced by factors such as the socioeconomic status or mobility of a population.

**self-reported:** self-reported data rely on survey participants being aware of, and accurately reporting, their health status and health conditions, which is not as accurate as data based on clinical records or measured data. As some people may not be aware that they have the condition estimates based on self-reported data, especially for conditions such as diabetes and chronic kidney disease, may underestimate the prevalence of these diseases. People also underestimate their weight yet overestimate their height, which are used to calculate body mass index for the assessment of overweight and obesity. Measured data are, therefore, more reliable in such instances.

**separation (from hospital):** The formal process where a hospital records the completion of an episode of treatment and/or care for an **admitted patient**—in this report, described by the term **hospitalisation**.

**socioeconomic groups:** is an indication of how 'well off' a person or group is. Socioeconomic groups are reported using the Australian Bureau of Statistics' Socio-Economic Indexes for Areas (SEIFA), whereby areas are classified on the basis of social and economic information (such as low

income, low educational attainment, high levels of public sector housing, high unemployment and jobs in relatively unskilled occupations) collected in the Census of Population and Housing. Socio-Economic Indexes for Areas, are divided into 5 groups, from the most disadvantaged (worst off) to the least disadvantaged (best off). Note, that this index refers to the average disadvantage of all people living in an area, not to the level of disadvantage of a specific individual.

**Socio-Economic Indexes for Areas (SEIFA):** A set of indexes, created from Census data, that aim to represent the **socioeconomic position** of Australian communities and identify areas of advantage and disadvantage. The index value reflects the overall or average level of disadvantage of the population of an area; it does not show how individuals living in the same area differ from each other in their socioeconomic group. This report uses the [Index of Relative Socio-Economic Disadvantage](#).

**stroke:** An event that occurs when an artery supplying blood to the brain suddenly becomes blocked or bleeds. A stroke often causes paralysis of parts of the body normally controlled by that area of the brain, or speech problems and other symptoms. It is a major form of **cerebrovascular disease**.

**type 1 diabetes:** A form of **diabetes** mostly arising among children or younger adults and marked by a complete lack of insulin. Insulin replacement is needed for survival. See **diabetes** ([diabetes mellitus](#)).

**type 2 diabetes:** The most common form of **diabetes**, occurring mostly in people aged 40 and over, and marked by reduced or less effective insulin.

**underlying cause of death:** the disease or injury that initiated the sequence of events leading directly to death; that is the primary or main cause. For each death, only a single underlying cause is selected from among all the conditions reported on a death certificate.

### Technical information

Refer to the [Data specifications](#) table for indicator-specific information on the methods used in this report.

Refer to the [Glossary](#) for specific disease-related definitions used in this report.

### Age-standardisation

Age-standardisation is a method used to eliminate the effect of differences in population age structures when comparing rates for different periods of time and/or different population groups. In this report, direct age standardisation has been used where possible. For estimates reported from the ABS National Health Survey (NHS) and National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), crude per cent were presented where variability were too large to age standardise. Where age standardised rate were presented, the standard population used to calculate the rates is the Australian estimated resident population as at 30 June 2001. For indicators 3.8.3, 4.2, 5.1.3 and 5.9 the standard population used was the Australian female estimated resident population.

## Assessing trends for the summary dashboard

Changes over time were assessed using 95% confidence intervals. Where we have undertaken the analysis from data sources such as the NHS, National Hospital Morbidity Database (NHMD) and National Mortality Database (NMD), confidence intervals have been calculated to assess the change over time. Where we have used data from other data sources such as the National Key Performance Indicators (nKPIs) data collection, confidence intervals were not provided. If data was only available for 2 time points or less, change in the data over time were not able to be assessed.

## Significance testing for survey data

To assess whether differences between estimates are incompatible with a null hypothesis that the survey estimates are normally distributed and that there is no difference between the groups being compared, 95% confidence intervals were used. A difference between estimates was considered statistically significant if the 95% confidence intervals around the estimates did not overlap.

Where the 95% confidence intervals overlap slightly, a 95% confidence interval for the difference between estimates was calculated. If the 95% confidence interval for the difference between estimates included 0, then the difference was not statistically significant.

## Populations used in this web report

When reporting data from the National (insulin-treated) Diabetes Register (NDR), NDSS, NHMD and NMD, the estimated resident populations derived from the ABS Census of Population and Housing are used. The estimated resident populations used for the majority of indicators are based on the 2016 Census.

Where rate is calculated for a calendar year, the population used is the estimated resident population as reported as 30 June of that year. Where a rate is calculated for a financial year (for example with the NHMD data), the population used is at 31 December.

## Reporting data by remoteness

Data were analysed using the Australian Statistical Geography Standard (ASGS).

Where possible, comparisons of remote areas in this web report use 5 of the 6 ASGS remoteness areas. The six remoteness areas are: *Major cities*, *Inner regional*, *Outer regional*, *Remote*, *Very remote* and *Migratory*.

When reporting data from the NDR, NDSS, NHMD, NMD and NPDC, *Remote* and *Very remote* areas have been combined, and *Migratory* is excluded.

In the case of the ABS Australian Health Survey and National Health Survey, data for *Outer regional* and *Remote* areas have been combined and data were not collected for *Very remote* areas. In the case of the ABS National Aboriginal and Torres Strait Islander Health Survey, data for *Outer regional*, *Remote* and *Very remote* areas have been combined.

See data tables for information about the ASGS used for the analysis of each indicator.

## **Reporting data by socioeconomic areas**

Socioeconomic classifications in this report are based on the ABS Index of Relative Socio-economic Disadvantage (IRSD). Geographic areas are assigned a score based on social and economic characteristics of that area, such as income, educational attainment, public sector housing, unemployment, and jobs in low skill occupations.

When reporting data from the NDR, NDSS, NHMD, NMD and NPDC, socioeconomic areas are classified according to population-based quintiles using the IRSD based on Statistical Area Level 2 of usual residence.

In the case of the ABS Australian Health Survey, National Health Survey, Australian National Aboriginal and Torres Strait Islander Health Survey and National Aboriginal and Torres Strait Islander Health Survey, socioeconomic areas are classified according to area-based quintiles using the IRSD based on usual residence.

See data tables for information about the socioeconomic classifications used for the analysis of each indicator.

## **Data sources**

The main data sources used for this update include:

### **ABS Australian Health Survey (AHS) and National Health Survey (NHS)**

The NHS is conducted by the Australian Bureau of Statistics (ABS) to obtain national information on the health status of Australians, their use of health services and facilities, and health-related aspects of their lifestyle. The most recent NHS was conducted in 2017–18, with previous surveys conducted in 2014–15, 2011–12 (as part of the AHS), 2007–08, 2004–05, 2001, 1995, 1989–90, 1983 and 1977–78. This web report presents results from the 2017–18, 2014–15, 2011–12, 2007–08, 2004–05 and 2001 NHS and the 2011–12 AHS.

### **ABS Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS) and National Aboriginal and Torres Strait Islander Health Survey Health Survey (NATSIHS)**

The AATSIHS and NATSIHS is conducted by the ABS to obtain information from Aboriginal and Torres Strait Islander people of all ages in non-remote and remote areas of Australia, including discrete Indigenous communities. In this web report, the ABS 2012–13 AATSIHS and 2018–19 (NATSIHS) was used for estimates of Indigenous disease and risk factor prevalence.

### **ABS National Aboriginal and Torres Strait Islander Social Survey (NATSISS)**

The NATSISS is a six-yearly multidimensional social survey which provides broad, self-reported information across key areas of social interest for Aboriginal and Torres Strait Islander people, primarily at the national level and by remoteness. This web report presents results from the 2014–15 NATSISS.

## **Australian and New Zealand Dialysis and Transplant Registry (ANZDATA)**

The ANZDATA collects information to monitor dialysis and transplant treatments from all renal units in Australia and New Zealand on all patients receiving kidney replacement therapy where the intention to treat is long-term. Cases of acute kidney injury are excluded. The registry is coordinated within the Queen Elizabeth Hospital in Adelaide and compiles data on incidence and prevalence of treated-ESKD, complications, comorbidities and patient deaths. All relevant hospitals and related dialysis units participate.

For more information see the [ANZDATA](#) website.

## **National (insulin-treated) Diabetes Register (NDR)**

The NDR collects information about people who began using insulin as part of their treatment for diabetes since 1999.

The register includes most people diagnosed with type 1 diabetes since this time, as well as those with type 2 diabetes, gestational diabetes, and other less common forms of diabetes who use insulin to manage their condition. The AIHW maintains the NDR, which is derived from 2 primary data sources:

- **The National Diabetes Services Scheme (NDSS)**

Established in 1987, the NDSS is an initiative of the Australian Government, administered with the assistance of Diabetes Australia. People with a diagnosis of diabetes by a health professional can register with the scheme. Once registered, they can access diabetes self-management information, services, and subsidised products—such as pens and needles to administer insulin, blood glucose test strips, insulin pump consumables, and continuous glucose monitoring products.

- **Australasian Paediatric Endocrine Group (APEG) state-based registers**

The APEG is a professional body that represents health professionals involved in managing and researching disorders of the endocrine system, including diabetes in children and adolescents. The APEG maintains clinic-based state and territory diabetes registers of children.

For more information see the [NDR data quality statement](#).

## **National Hospital Morbidity Database (NHMD)**

The NHMD is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals.

The data supplied are based on the National minimum data set for Admitted patient care and include demographic, administrative and length of stay data, as well as data on the diagnoses of the patients, the procedures they underwent in hospital and external causes of injury and poisoning.

In this report, the International Statistical Classification of Diseases and Related Health Conditions, 10<sup>th</sup> revision, Australian Modification (ICD-10-AM) was used to define diagnosis codes. Diagnosis codes were defined using the following editions of ICD-10-AM:

- NHMD 2017–18: 10<sup>th</sup> edition of ICD-10-AM
- NHMD 2016–17: 9<sup>th</sup> edition of ICD-10-AM
- NHMD 2015–16: 9<sup>th</sup> edition of ICD-10-AM
- NHMD 2014–15: 8<sup>th</sup> edition of ICD-10-AM
- NHMD 2013–14: 8<sup>th</sup> edition of ICD-10-AM
- NHMD 2012–13: 7<sup>th</sup> edition of ICD-10-AM

### **National Key Performance Indicators for Aboriginal and Torres Strait Islander primary health care**

The Indigenous primary health care key performance indicators (nKPIs) database contains service-level information from Aboriginal and Torres Strait Islander primary health organisations funded by the Australian Government. The AIHW maintains this database and uses it to produce public national reports, released annually, public online data visualisations and individual service-level reports for each 6-monthly reporting cycle provided back to each organisation. The collection includes Indigenous regular clients (those who attended a service 3 times in 2 years). Data are collected against 24 indicators covering maternal and child health; chronic disease risk factor monitoring and management; and health preventative activities.

For more information see the [nKPI data quality statement](#).

### **National Mortality Database (NMD)**

The NMD comprises information about causes of death and other characteristics of the person, such as sex, age at death, area of usual residence and Indigenous status. The cause of death data are provided to the AIHW by the Registries of Births, Deaths and Marriages and the National Coronial Information System (managed by the Victorian Department of Justice) and include cause of death coded by the ABS. The data are maintained by the AIHW in the NMD.

In this update, deaths registered in 2015 and earlier are based on the final version of cause of death data; deaths registered in 2016 are based on revised version; and deaths registered in 2017 and 2018 are based on preliminary version. In the NDSS-NDI linked dataset, deaths registered in 2014 are based on the revised version. Revised and preliminary versions are subject to further revision by the ABS.

For data by Indigenous status, the level of identification of Indigenous status is considered sufficient to enable analysis in 5 jurisdictions—New South Wales, Victoria, Queensland, Western Australia and the Northern Territory.

The data quality statements underpinning the AIHW NMD can be found on the following ABS internet pages:

- [ABS quality declaration summary for Deaths, Australia](#) (ABS cat. no. 3302.0)
- [ABS quality declaration summary for Causes of death, Australia](#) (ABS cat. no. 3303.0).

For more information on the AIHW NMD and deaths data, see the [Deaths data webpage](#).

### **National Perinatal Data Collection (NPDC)**

The NPDC is a national population-based cross-sectional collection of data on pregnancy and childbirth. The data are based on births reported to the perinatal data collection in each state and territory in Australia. Midwives and other birth attendants, using information obtained from mothers and from hospital or other records, complete notification forms for each birth. A standard de-identified extract is provided to the AIHW on an annual basis to form the NPDC.

### **Medicare Benefits Schedule (MBS)**

The Medicare program provides access to a range of medical and hospital services for all Australian residents, including services under MBS and PBS. The MBS is a listing of the Medicare services subsidised by the Australian Government. For more information on what is covered by the MBS refer to its website [www.mbsonline.gov.au](http://www.mbsonline.gov.au). MBS claims data contain information about patients, providers and services. Data does not include services to public patients in hospitals, services covered by the Department of Veteran's Affairs Treatment Account and services covered by other publicly funded programs.