Incidence of insulin-treated diabetes, 2018

An estimated 1 in 20 (4.9% or 1.2 million) Australians had diabetes in 2017–18. This estimate is based on self-reported data from the Australian Bureau of Statistics 2017–18 National Health Survey, so it is likely that there are many more Australians who have diabetes but have not been diagnosed.

Many people with diabetes rely on insulin to manage their condition. This fact sheet presents highlights from the *Incidence of insulin-treated diabetes in Australia* web report. The full report presents the latest data on new cases of type 1 diabetes and insulin-treated type 2 diabetes for 2018 from the National (insulin-treated) Diabetes Register (NDR).

Quick facts

In 2018, **31,300** people began using insulin to treat their diabetes.

Of these:

- **17,000** (54%) people had type 2 diabetes
- **10,800** (34%) females had gestational diabetes
- **2,800** (9.0%) people were newly diagnosed with type 1 diabetes
- **600** (2.0%) people had other forms of diabetes
- for **143** people, the diabetes type was unknown

What is diabetes?

Diabetes is a chronic condition marked by high levels of glucose (sugar) in the blood. It is caused either by the inability of the body to produce insulin (a hormone made by the pancreas to control blood glucose levels) or by the body not being able to use insulin effectively, or both.

There are 3 main types of diabetes: type 1, type 2 and gestational. All people with type 1 diabetes, and a proportion of people with type 2 and gestational diabetes, will require insulin replacement therapy.

Type 1 diabetes

In 2018, just over 2,800 people were diagnosed with type 1 diabetes—12 cases per 100,000 population, or around 1 in every 8,000 Australians. The incidence rate was higher in males (14 per 100,000 population) than in females (10 per 100,000). Six in 10 (60%, or 1,700) people diagnosed with type 1 diabetes were aged under 25, with the highest incidence rate among those aged 10–19 (29 cases per 100,000 males and 26 cases per 100,000 females) (Figure 1).

There were 129 new cases of type 1 diabetes among Aboriginal and Torres Strait Islander people (16 per 100,000 population). After adjusting for differences in the age structures between the populations, the incidence rate was similar among Indigenous Australians and non-Indigenous Australians (12 and 11 cases per 100,000, respectively).

Incidence rates were lower in *Remote and very remote* areas (9 cases per 100,000 population) than other areas (12–14 cases per 100,000 population). Rates across socioeconomic areas varied at 11 to 14 cases per 100,000 population.

Figure 1: Incidence of type 1 diabetes, by age at diagnosis and sex, 2018
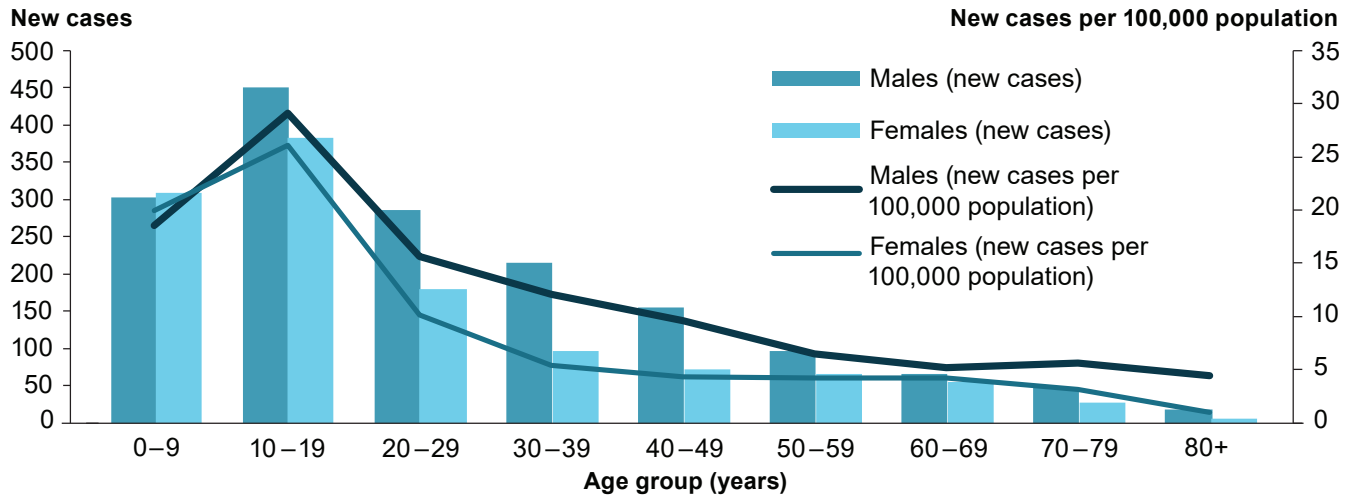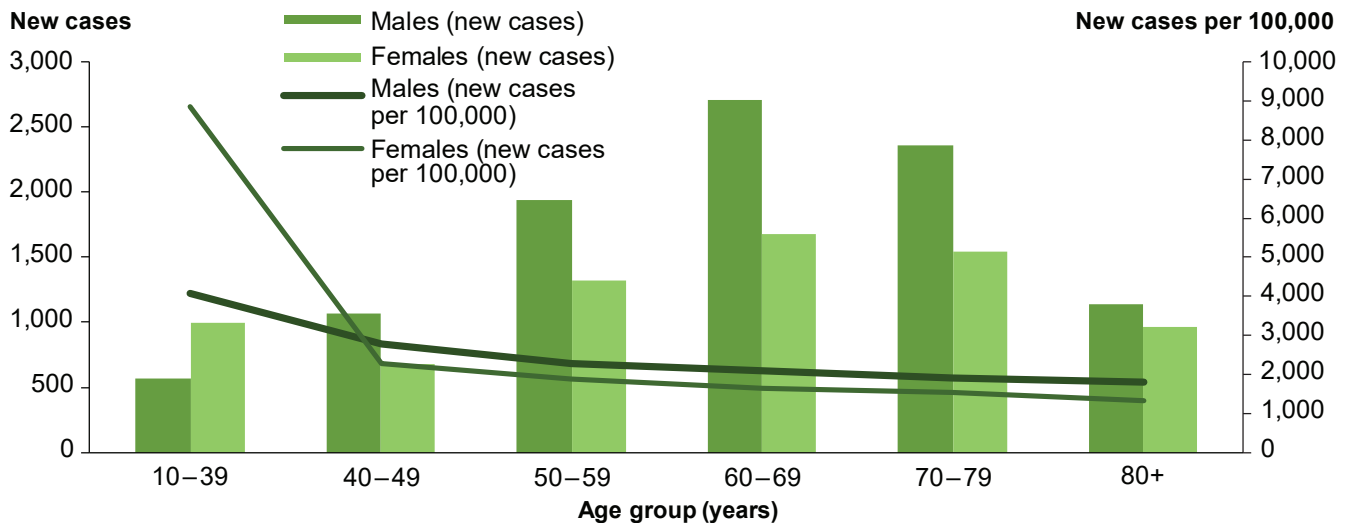

Insulin-treated type 2 diabetes

In 2018, nearly 17,000 people began using insulin to manage type 2 diabetes for the first time—4,200 cases per 100,000 people with type 2 diabetes not previously using insulin, or around 1 in every 24.

The incidence rate was 1.7 times higher in females (5,400) than in males (3,200 per 100,000 people with type 2 diabetes not previously using insulin) (Figure 2)—and twice as high among those living in *Major cities* compared with those in *Remote and very remote* areas (4,300 and 2,100 cases per 100,000 people with type 2 diabetes not previously using insulin, respectively). Incidence rates across socioeconomic areas varied at 4,000 to 4,500 cases per 100,000 people with type 2 diabetes not previously using insulin.

Figure 2: Incidence of insulin-treated type 2 diabetes, by age at first insulin use and sex, 2018

Notes
1. The incidence rates of insulin-treated type 2 diabetes shown in Figure 2 were derived using the diabetes type 2 population (including all NDSS registrants with type 2 diabetes who have never used insulin) as the denominator.
2. Due to small numbers and concerns about the data quality, age-specific rates for 0–9 years are not presented in Figure 2.
3. The high rate in females aged 10–39 may be due in part to misclassification of gestational diabetes.

How long before people with type 2 diabetes start using insulin?

Many people with type 2 diabetes will eventually start using insulin to manage their diabetes. Between 2012 and 2018, the median time from diagnosis to insulin use has remained at 7–8 years. In 2018, around 1 in 5 (21%) people with type 2 diabetes began using insulin immediately or less than a year after diagnosis.

In 2018, the median time to first insulin use peaked among those aged 40–54 (10 years) and then fell for older age groups. The median time for those aged 75 and over was 1 year.

For more information, see the *Incidence of insulin-treated diabetes in Australia 2018* web report and the *NDR data quality statement*.