

# Oral health and dental care in Australia

Web report | Last updated: 21 Nov 2023 | Topic: Dental & oral health | Media release

# **About**

This report presents key data, information and trends over time, via a suite of interactive data visualisations, describing the oral health status of Australians and their use of dental care services. It is added to and updated as data becomes available. Poor oral health mainly tooth decay, gum disease and tooth loss - may result in a person experiencing pain, discomfort and feelings of embarrassment. Around 1 in 3 adults have reported feeling uncomfortable about their dental appearance.

This report was last updated on 21 November 2023. Refer to Notes for further explanation.

Cat. no: DEN 231

## Findings from this report:

- In 2021–22, around 1 in 2 (49%) Australians aged 15 years and over saw a dental professional in the last 12 months
- In 2021–22, 5–9 year olds had the highest rate of potentially preventable hospitalisations due to dental conditions
- In 2021–22, the median charge, benefit and gap for a preventative dental clean was \$61, \$40 and \$19, respectively.
- Overall, \$11.1 billion was spent on dental services in 2020–21

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# **Summary**

Oral health and dental care is an Australia's health topic

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Good oral health is fundamental to overall health and wellbeing (COAG 2015). Without it, a person's general quality of life and the ability to eat, speak and socialise is compromised resulting in pain, discomfort and embarrassment.

Data on Australians' oral health status and their use of dental services are limited as no comprehensive national data sources are available. The most complete information about Australians' oral health status and their use of dental services is available via national population surveys.

#### **Oral health status**

Oral health refers to the condition of a person's teeth and gums, as well as the health of the muscles and bones in their mouth. Poor oral health – mainly tooth decay, gum disease and tooth loss – affects many Australian children and adults.

A key indicator of the oral health status of a population is the dental caries experience, that is, having a dmft (for the primary dentition) or DMFT (for the permanent dentition) score greater than zero. The dmft or DMFT score counts the number of teeth that are decayed, missing or filled because of caries. Refer to Key terms in <u>Healthy teeth</u>.

Untreated tooth decay reflects both the prevalence of dental decay in the population and access to dental care for treatment.

Table 1: Oral health status of Australian children and adults

	Average number of decayed, missing or filled teeth	Proportion with untreated decay
Children aged 5–10 years <sup>(a)</sup>	1.5	27%
Children aged 6-14 years <sup>(b)</sup>	0.5	11%
Adults aged 15 years and over <sup>(c)</sup>	11.2	32%

- (a) Data are for 2012–14 and reports caries experience in the primary dentition.
- (b) Data are for 2012–14 and reports caries experience in the permanent dentition.
- (c) Data are for 2017–18 and reports caries experience in the permanent dentition.

Sources: Ha et. al. 2016; Do and Luzzi 2019.

For more information on the oral health status of Australians refer to chapters on Healthy teeth and Healthy mouths.

# **Dental services**

Dental professionals provide preventive, diagnostic and restorative dental services. They can include dentists, dental prosthetists, dental hygienists, oral health therapists and dental therapists (Dental Board of Australia 2018). All dental professionals must be registered to practise in Australia. There were around 24,600 registered dental practitioners in Australia in 2020.

Dental services are funded, and can be accessed, in a number of ways – privately or through public dental clinics or the Department of Veterans Affairs (based on eligibility). For those who purchased services privately, some may have had all or part of the costs of the service subsidised. In 2021–22:

- 44.8 million dental services were subsidised by private health insurance providers (APRA 2022) for more information refer to chapter on <u>Private health insurance</u>.
- 4.7 million services were subsidised under the Australian Government's Child Dental Benefits Schedule (Services Australia 2023) which supports provision of basic dental services to eligible children aged 2–17. For more information refer to the section on <a href="#">Child Dental Benefits Schedule</a>.

#### **Dental visits**

A dental visit can provide an opportunity for the provision of preventive dental care to maintain existing oral health, as well as treatment services that may reverse disease or rehabilitate the teeth and gums after damage occurs.

The National Child Oral Health Study 2012-14 (Brennan et al. 2016) found that for children aged 5-14, it was estimated that:

- Most (57%) had made their first dental visit before the age of 5
- The majority (87%) first visited a dental professional for a check-up (rather than for a problem)
- The majority (81%) had last visited a dental professional in the 12 months prior to the survey and most (57%) had last visited a private dental service
- 1 in 9 (11%) had never visited a dental provider
- The proportion of children who last visited a dental professional for a check-up (which reflects a favourable visiting pattern) varied by household income. Nearly 9 in 10 children (88%) living in households with high income last visited the dentist for a check-up, compared with 7 in 10 children (71%) from households with low income.

The Patient Experience Survey 2021–22 (ABS 2022) found that for people aged 15 and over, it is estimated that:

- Nearly half (49%) visited a dental professional in the last 12 months
- Of those who needed to and saw a dental professional, the majority (57%) visited more than once in the last 12 months
- Around 1 in 10 (9.9%) people who saw a dental professional received public dental care
- Around 1 in 3 (33%) who needed to see a dental professional delayed seeing or did not see one at least once in the previous 12 months and around 1 in 6 (16%) reported that cost was a reason for delaying or not seeing a dental professional.

For more information about dental visits refer to chapter on <u>Dental care</u>.

As well as visits to dental professionals, there were close to 78,800 hospitalisations for dental conditions that potentially could have been prevented with earlier treatment in 2021–22. The rate of potentially preventable hospitalisations for dental conditions was highest in those aged 5–9 years (10.8 per 1,000 population). For more information refer to chapter on <u>Hospitalisations</u>.

#### **Spending**

In 2020–21, around \$11.1 billion was spent on dental services in Australia. The majority of this cost (around \$6.5 billion, or 59%) was paid by patients directly, with individuals spending on average \$253 on dental services over the 12-month period, not including premiums paid for private health insurance (AIHW 2022). Private health insurance providers financed around \$2.2 billion (20%) of total expenditure for dental services (AIHW 2022). For more information refer to chapter on Costs.

#### Impact of COVID-19 on dental services

The COVID-19 pandemic has had an impact on both patients and dental professionals in terms of the number of services, type of services and the way in which services are delivered.

Early in the pandemic, the Australian Health Protection Principal Committee (AHPPC) issued advice to National Cabinet that recommended dental practices implement restrictions whereby dental professionals should only perform dental treatments that do not generate aerosols, or where treatment generating aerosols is limited and that all routine examinations and treatments should be deferred. These types of restrictions have been implemented and eased at various times over the course of the pandemic.

Events that may have impacted on service use over the period March 2020 to October 2021 across Australia, include:

- March 2020 national lockdown introduced
- June 2020 second wave of COVID-19 cases in Victoria
- August 2020 Lockdown in Victoria
- October 2020 Victorian lockdown eased
- December 2020 outbreak of cases in Sydney's Northern Beaches

- January to March 2021 brief snap lockdowns in some states and territories to contain COVID-19 spread
- July to October 2021 a series of extensive lockdowns and/or extended lockdowns in New South Wales, Victoria, and Australian Capital Territory.

In 2020-21, around 1 in 8 (12%) adults aged 15 years and over delayed seeing or did not see a dental professional at least once in the last 12 months due to COVID-19. For more information, refer to chapter on Patient experience.

# Where do I go for more information?

For more information on the oral health status of Australians and their use of dental care services see National Oral Health Plan 2015-2024: performance monitoring report.

Visit <u>Dental & oral health</u> for more on this topic.

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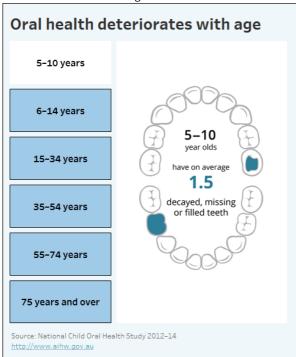


# Introduction

Good oral health is fundamental to overall health and wellbeing (COAG 2015). Without it, a person's general quality of life and the ability to eat, speak and socialise is compromised, resulting in pain, discomfort and embarrassment.

Oral health refers to the condition of a person's teeth and gums, as well as the health of the muscles and bones in their mouth (AHMAC 2017). Poor oral health – mainly tooth decay, gum disease and tooth loss – affects many Australian children and adults, and contributed 4.5% of all the burden that non-fatal burden diseases placed on the community in 2022. Oral health generally deteriorates over a person's lifetime (Infographic 1).

Data visualisation indicating how oral health deteriorates with age.



## What contributes to poor oral health?

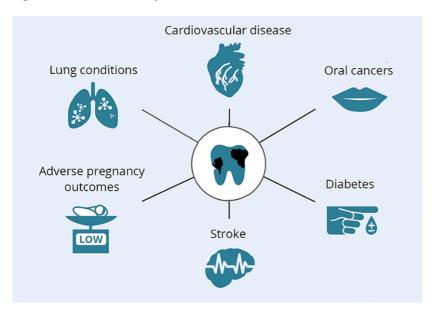
Many factors contribute to poor oral health (NACDH 2012), including:

- consumption of sugar, tobacco and alcohol
- a lack of good oral hygiene and regular dental check-ups
- a lack of fluoridation in some water supplies
- access and availability of services, including:
  - o affordability of private dental care
  - long waiting periods for public dental care.

### What is the impact of poor oral health?

The most common oral diseases affect the teeth (tooth decay, called 'caries') and gums (periodontal disease). Oral disease can destroy the tissues in the mouth, leading to lasting physical and psychological disability (NACDH 2012). Tooth loss can reduce the functionality of the mouth, making chewing and swallowing more challenging, which in turn can compromise nutrition. Poor nutrition can impair general health and exacerbate existing health conditions (NACDH 2012). Poor oral health is also associated with a number of chronic diseases, including stroke and cardiovascular disease (DHSV 2011) (Figure 1).

Figure 1: Links between poor oral health and chronic diseases



Poor oral health can also affect a person's wellbeing. Dental disease can impair a person's appearance and speech, eroding their self-esteem, which in turn can lead to restricted participation at school, the workplace, home and other social settings (NACDH 2012).

#### Some groups are at greater risk of poor oral health

The National Oral Health Plan identifies four priority population groups that have poorer oral health than the general population and also experience barriers to accessing oral health care – either in the private or public sector. State and territory governments are the current providers of most public dental services, and access is largely targeted towards people on low incomes or holders of concession cards. Eligibility requirements can vary between states and territories (AIHW 2018).

The four priority population groups identified in the plan are:

**People who are socially disadvantaged or on low incomes:** This group has historically been identified as those on a low income and/or receiving some form of government income assistance, but now extends to include people experiencing other forms of disadvantage including refugees, homeless people, some people from culturally and linguistically diverse backgrounds, and people in institutions or correctional facilities (COAG 2015). Poorer oral health results from infrequent dental care. Barriers include cost, appropriateness of service delivery and lower levels of health literacy, including oral health (COAG 2015).

**Aboriginal and Torres Strait Islander Australians:** Indigenous Australians are more likely than other Australians to have multiple caries and untreated dental disease, and less likely to have received preventive dental care (AHMAC 2017). The oral health status of Indigenous Australians, like all Australians, is influenced by many factors (see <a href="What contributes to poor oral health?">What contributes to poor oral health?</a>) and a tendency towards unfavourable dental visiting patterns, broadly associated with accessibility, cost and a lack of cultural awareness by some service providers (COAG 2015; NACDH 2012).

**People living in regional and remote areas:** Overall, this group has poorer oral health than those in *Major cities* (COAG 2015), and oral health status generally declines as remoteness increases. Rural Australians have access to fewer dental practitioners than their city counterparts, which, coupled with longer travel times and limited transport options to services, affects the oral health care that they can receive (COAG 2015; Bishop & Laverty 2015). People living in *Remote* and *Very remote* areas are also more likely to smoke and drink at risky levels. They have reduced access to fluoridated drinking water and face increased costs of healthy food choices and oral hygiene products. These risk factors contribute to this population's overall poorer oral health (COAG 2015).

**People with additional and/or specialised health care needs:** This group includes people living with mental illness, people with physical, intellectual and developmental disabilities, people with complex medical needs and frail older people. These people can be vulnerable to oral disease; for example, some medications for chronic diseases can cause a dry mouth, which increases the risk of tooth decay (Queensland Health 2008). A number of factors make accessing dental care more difficult for this group, including:

- a shortage of dental health professional with skills in special-needs dentistry
- difficulties in physically accessing appropriate dental treatment facilities
- the cost of treatment. People with additional and/or specialised health care needs often have their earning capacity eroded by ill health (COAG 2015).

#### Why does oral health vary across Australia?

People in some states and territories have generally poorer oral health than others. For example, the National Child Oral Health Study found that the prevalence of caries in the deciduous teeth of children was significantly higher in Northern Territory and Queensland than in all other states and territories (Do & Spencer 2016). Oral health status is influenced by a complex interaction of factors, as outlined above. These factors should be considered when looking at results by state and territory. For example:

- all people living in the Northern Territory were located in Outer regional, Remote or Very remote areas, whereas the majority of the Victorian population were located in *Major cities* in 2016 (ABS 2017)
- the Northern Territory has Australia's highest proportion of Aboriginal and Torres Strait Islander people (26% of its population) which is much higher than the next highest state, Tasmania (5.4% of its population) (ABS 2022)
- Tasmania has the highest proportion of people living in the lowest socioeconomic areas (37%) (refer to Technical notes for explanation of SEIFA) (ABS 2018).

The variations observed in oral health status between state and territory populations may also be partly explained by differences in individual state and territory oral health care funding, service models and eligibility requirements, which can result in varied patterns of dental visiting among residents (AIHW 2018). Oral health campaigns and policies can also make an impact. For example, water fluoridation coverage in Queensland has reduced since the Queensland Government transferred the decision whether to fluoridate water supplies from state to local governments in 2012, despite evidence that access to fluoridated drinking water has been shown to reduce tooth decay (Queensland Health 2015; NHMRC 2017).

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# **Healthy teeth**

Healthy teeth are an integral part of good oral health and enable people to eat, speak and socialise without pain, discomfort or embarrassment.

#### Key terms

- **Deciduous teeth:** Primary or 'baby' teeth that erupt (that is, become visible in the mouth) during infancy. A child usually has 20 deciduous teeth.
- Permanent teeth: Secondary or 'adult' teeth that start to erupt at around 6 years of age. A person usually has 32 permanent teeth
- **Dental caries:** A disease process that can lead to cavities (small holes) in the tooth structure that compromise both the structure and the health of the tooth, commonly known as tooth decay.
- **The dmft and DMFT score:** A score that counts the number of teeth that are decayed (d), missing due to caries (m) or filled because of caries (f)— 'dmft' refers to deciduous teeth, 'DMFT' refers to permanent teeth.
- **Dental caries experience:** When a person has a dmft or DMFT score that is greater than zero, this is known as having dental caries experience.

# How healthy are children's teeth?

Data in this section were sourced from the National Child Oral Health Study 2012–14 (Do & Spencer 2016). This nationally representative population-based survey involved data from almost 25,000 children aged 5–14 from across Australia. Information was collected via a parental questionnaire and a detailed dental examination by trained dental professionals.

In 2011, oral diseases accounted for 8.1% and 4.1% of the non-fatal burden of disease among Australia children aged 5–9 and 10–14, respectively. Almost all (99%) non-fatal burden is due to dental caries making it the most prevalent oral disease in Australian children (AIHW 2019).

# How many teeth are affected by decay?

The average number of teeth affected by decay gives an indication of the severity of disease.

Australian children aged 5-10 had an average of 1.5 decayed, missing and filled deciduous teeth

Dental caries experience for deciduous teeth of 5-10 year olds varied between states and territories. Interactive 1 shows that dmft:

- was highest in Northern Territory children with an average of 2.4 affected teeth per person, followed by Queensland children (2.1)
- was lowest for children in the Australian Capital Territory (1.0).

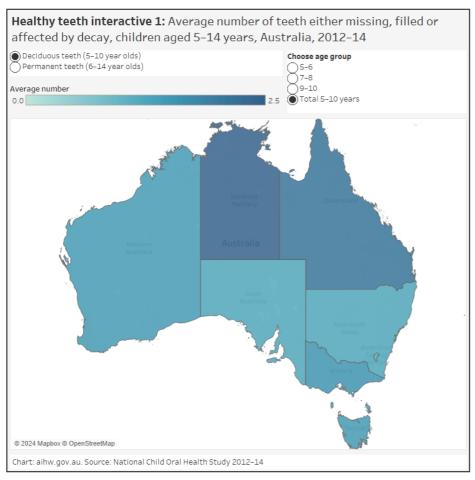
Australian children aged 6-14 had an average of 0.5 decayed, missing and filled permanent teeth

Dental caries experience for permanent teeth in 6-14 year olds varied between states and territories. Interactive 1 shows that DMFT:

- was highest in Northern Territory and Queensland children with an average of 0.8 affected teeth per person
- was lowest for children in the Australian Capital Territory (0.2).

Healthy teeth - Interactive 1

This figure shows the average number of decayed, missing or filled teeth (DMFT) for children by age group. State and territory data is presented for 2012–14. On average, children aged 6-14 years in the Australian Capital Territory had 0.2 decayed, missing or filled teeth.



See <u>Data tables: Healthy teeth</u> for data tables.

## How does tooth decay vary for different populations?

Oral health is determined by a complex interaction of factors, including social, economic, environmental and cultural factors, as described in the <u>Introduction</u>. Some populations face greater challenges in accessing oral health care and experience the greatest burden of poor oral health. A key indicator of the oral health status of a population is the dental caries experience (Interactive 2).

Children aged 5–10 with dental caries in their deciduous teeth were more likely to have last visited the dentist for a dental problem (68%) than for a check-up (36%)

Around 4 in 10 (42%) children aged 5–10 had experienced dental caries in their deciduous teeth. The proportion was:

- 1.5 times as high for Indigenous children (61%) as non-Indigenous children (41%)
- higher for those from low-income households (50%) than those from medium-income households (40%) and high-income households (33%)
- 1.4 times as high for those living in Remote and very remote areas as those living in Major cities.

Indigenous children (44%) aged 5–10 were more likely to have had at least one deciduous tooth with untreated decay than non-Indigenous children (26%)

Around 1 in 4 (27%) children aged 5–10 had at least one deciduous tooth with untreated decay. The proportion was:

- lower for children from high-income households (18%) than those from medium-income households (25%) and low-income households (36%)
- higher for those living in Remote and very remote locations (38%) than those living in all other locations
- almost twice as high for those whose reason for their last dental visit was for a dental problem (42%) than for those who went for a check-up (22%).

Children aged 6–14 with dental caries in their permanent teeth were more likely to have last visited the dentist for a dental problem (32%) than for a check-up (22%)

Around 1 in 4 (24%) children aged 6-14 had experienced dental caries in their permanent teeth. The proportion was:

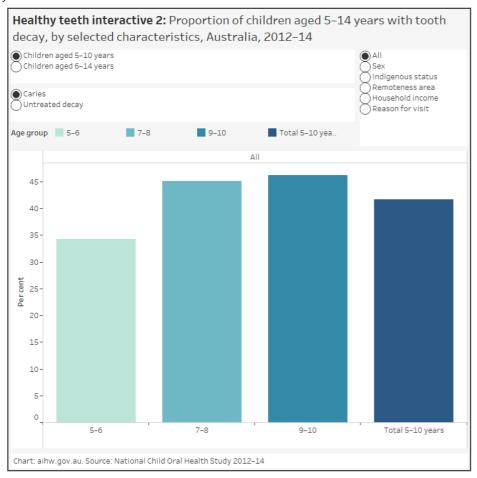
- higher for Indigenous children (36%) than non-Indigenous children (23%)
- higher for those from low-income households (28%) than those from medium-income (22%) and high-income (19%) households
- higher for those living in Remote and very remote areas (28%) than those living in Major cities (22%).

Indigenous children (23%) aged 6–14 were more likely to have had at least one permanent tooth with untreated decay than non-Indigenous children (10%)

Around 1 in 10 (11%) children aged 6-14 had at least one permanent tooth with untreated decay. The proportion was:

- higher for those from low-income households (15%) than those from medium-income (9.2%) and high-income (6.6%) households
- twice as high for those living in Remote and very remote areas (22%) than those living in Major cities (9.9%)
- higher for those who last visited the dentist for a dental problem (15%) than those who last visited the dentist for a check-up (9.3%). Healthy teeth Interactive 2

This figure shows the proportion of children aged 5–10 and 6–14 years with caries or untreated tooth decay, by selected characteristics. National data is presented for 2012–14. In Australia, 41.7% of children aged 5-10 years and 23.5% of children aged 6-14 years had dental caries.



See <u>Data tables: Healthy teeth</u> for data tables.

#### How does tooth decay vary across states and territories?

Levels of dental caries in Australian children varies across states and territories. This is partly related to differences in dental programs and policies implemented in each jurisdiction, and varying sociodemographic and socioeconomic profiles (Interactive 3).

Just over half (53%) of children aged 5–10 in the Northern Territory had dental caries in their deciduous teeth, and around 4 in 10 (40%) have at least one deciduous tooth with untreated decay

Around 4 in 10 (42%) Australian children aged 5–10 had dental caries in their deciduous teeth, and around 1 in 4 (27%) had at least one deciduous tooth with untreated decay.

The proportion of children with dental caries was lowest in the Australian Capital Territory (32%), while the proportion of children with untreated decay was lowest in South Australia (17%).

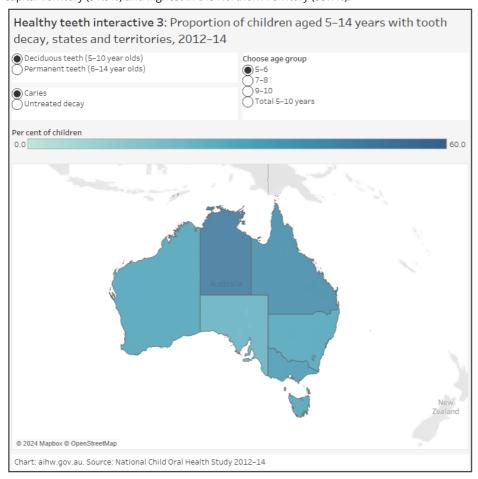
Around one-third (33%) of Northern Territory children aged 6–14 had dental caries experience in their permanent teeth, and around 1 in 5 (20%) had at least one permanent tooth with untreated decay

Around 1 in 4 (24%) Australian children aged 6–14 had dental caries in their permanent teeth, and around 1 in 10 (11%) had at least one permanent tooth with untreated decay.

The proportion of children with dental caries was lowest in the Australian Capital Territory (13%), while the proportion of children with untreated decay was lowest in South Australia (3.5%).

Healthy teeth - Interactive 3

This figure shows the proportion of children with caries or untreated tooth decay, by selected characteristics. State and territory data is presented for 2012–14. For children aged 5-10 years, the proportion of children with dental caries was lowest in the Australian Capital Territory (31.9%) and highest in the Northern Territory (53.1%).



See Data tables: Healthy teeth for data tables.

## How healthy are adult's teeth?

Data in this section were sourced from the National Survey of Adult Oral Health 2004–06 (Slade et al. 2007; AIHW 2008a–h) and the National Study of Adult Oral Health 2017–18 (Do & Luzzi, 2019). Each of these population-based surveys collected data from around 15,000 adults aged 15 years and over across Australia. Information was collected via interview and around one-third of participants underwent a dental examination.

In 2017–18, the survey found that most Australian adults have some experience of dental decay—fewer than 1 in 9 (11%) adults had no experience of dental decay in their permanent teeth.

## How many teeth are affected by decay?

Australian adults aged 15 years and over had an average of 11.2 decayed, missing and filled teeth in 2017-18

The number of decayed, missing and filled teeth (DMFT) reflects a person's lifetime experience of dental caries in their permanent teeth. The DMFT index is a cumulative score (that is, it measures all evidence of decayed, missing and filled teeth over a person's life) and is therefore strongly associated with age.

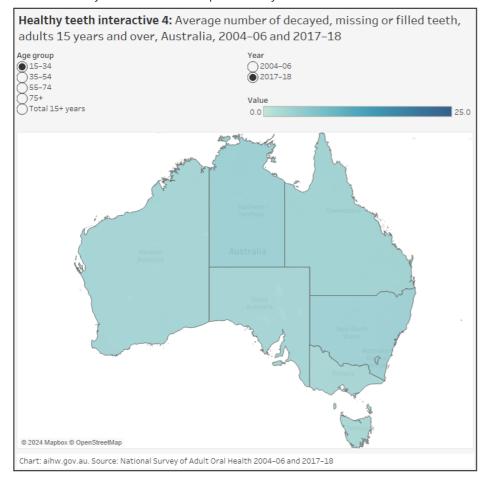
The average number of teeth affected by dental caries per person in Australia increased with age, from an average of 4.1 in 15–34 year olds to 10.3 in 35–54 year olds, 19.4 in 55–74 year olds and 24.4 in people aged 75 and older in 2017–18

In 2017-18, the average DMFT per person was:

- lowest in the Australian Capital Territory (9.7) and the Northern Territory (9.7)
- ranged from an average of 3.3 affected teeth in 15–34 year olds to 24.9 affected teeth in those aged 75 years and over in the Australian Capital Territory
- ranged from an average of 5.2 affected teeth in 15–34 year olds to 21.7 affected teeth in those aged 75 years and over in the Northern Territory.

Healthy teeth - Interactive 4

This figure shows the average number of decayed, missing or filled teeth, for adults aged 15 years and over. State and territory data is presented for 2004–2006 and 2017–2018. On average, adults aged 15 years and over had 9.7 decayed, missing or filled teeth in the Northern Territory and the Australian Capital Territory in 2017–2018.



See <u>Data tables: Healthy teeth</u> for data tables.

## Whose teeth are affected by tooth decay?

In addition to age, DMFT scores also reflect different exposures to risk factors and protective factors a person has during their life (Interactive 5).

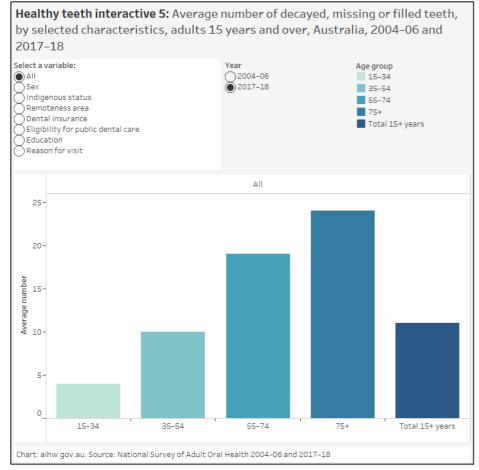
On average, females aged 15 and over had slightly more teeth with caries experience than males, 12.0 and 10.4 respectively in 2017–18

#### In 2017-18:

- Adults who completed Year 10 or less of schooling had a higher average number of decayed, missing and filled teeth (15.6) compared with those who had completed additional schooling (9.7). For those who had completed Year 10 or less, the number of teeth affected increased with age from an average of 3.7 teeth in 15-34 year olds, 12.2 teeth in 35-54 year olds, 19.7 in 55-74 year olds and 24.5 in people aged 75 and over.
- Adults who were eligible for public dental care had a higher average number of decayed, missing and filled teeth (15.7) compared with those who were ineligible for public dental care (9.3). For those eligible for public dental care, the number of teeth affected increased with age, from an average of 4.5 in 15–34 year olds to 12.6 in 35–54 year olds, 20.0 in 55–74 year olds and 24.5 in those aged 75 and over.
- Adults who usually visit a dentist for a check-up had a lower average number of decayed, missing or filled teeth (10.1) compared with those who usually visit the dentist for a dental problem (13.2).

Healthy teeth - Interactive 5

This figure shows the average number of decayed, missing or filled teeth, for adults aged 15 years and over, by selected characteristics. National data is presented for 2004–06 and 2017–2018. In Australia, adults aged 15 years and over had an average of 11.2 decayed, missing or filled teeth for in 2017–18.



See Data tables: Healthy teeth for data tables.

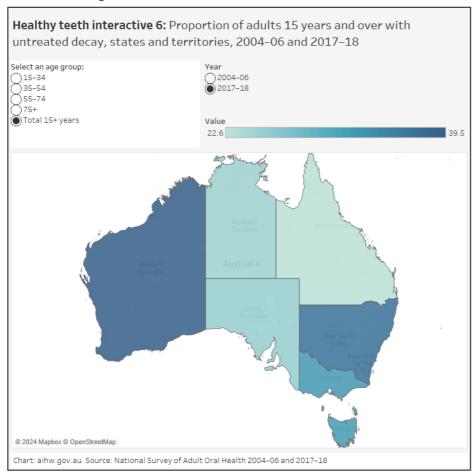
## How does untreated tooth decay vary across states and territories?

Untreated tooth decay reflects both the prevalence of dental decay in the population and access to dental care for treatment (Interactive 6).

The percentage of adults with untreated dental decay was highest in Western Australia (40%) in 2017-18

Around 1 in 3 (32%) adults aged 15 and over with their own teeth have at least one tooth with untreated dental decay. Healthy teeth – Interactive 6

This figure shows the proportion of adults aged 15 years and over with untreated decay. State and territory data is presented for 2004–06 and 2017–2018. In 2017–2018, Queensland had the lowest proportion of adults with untreated decay (22.6%) and Western Australia had the highest (39.5%).



See <u>Data tables: Healthy teeth</u> for data tables.

#### Who has untreated tooth decay?

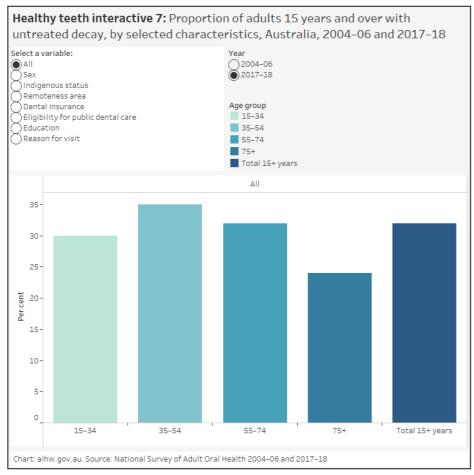
The prevalence of untreated tooth decay is more closely related to socioeconomic and sociodemographic factors than to age (Interactive 7).

Adults aged 15 and over who usually visited the dentist for a problem were nearly twice as likely as those who usually visited for a check-up to have at least one tooth with untreated dental decay (44% compared with 24%) in 2017–18

- More adults eligible for public dental care (35%) had at least one tooth with untreated dental decay than those ineligible for public dental care (31%).
- Fewer adults with private dental insurance (24%) had at least one tooth with untreated dental decay than those without dental insurance (39%).

Healthy teeth – Interactive 7

This figure shows the proportion of adults aged 15 years and over with untreated decay, by selected characteristics National data is presented for 2004–06 and 2017–2018. In Australia, 32.1% of adults aged 15 years and over had untreated decay in 2017–2018.



See <u>Data tables: Healthy teeth</u> for data tables.

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# **Healthy mouths**

Maintaining a healthy mouth relies upon practising good oral hygiene. Regular toothbrushing removes and controls the build-up of plaque, and helps to prevent tooth decay, gum disease and tooth loss. In Australia, it is recommended that people brush their teeth twice a day using fluoride toothpaste (DoH 2018).

#### **Key terms**

- Plaque: A biofilm containing bacteria and food debris that adheres to the tooth surface.
- Plaque index: A measure of plaque from 0–3, devised by Loe & Silness (1964), where:
  - 0 = no plaque
  - 1 = mild accumulation of plaque
  - 2 = moderate accumulation of plaque
  - 3 = abundant accumulation of plaque.
- Gingivitis: Redness, swelling or bleeding of the gums caused by inflammation.
- Gingival index: A measure of gingivitis from 0–3, devised by Loe & Silness (1963), where:
  - 0 = normal
  - 1 = mild inflammation (no bleeding on probing)
  - 2 = moderate inflammation (bleeding on probing)
  - 3 = severe inflammation (tendency to spontaneous bleeding).
- **Periodontitis:** Inflammation of the gums and other tissues that attach to and anchor teeth to the jaws, caused by a bacterial infection.
- Exfoliation: The process of shedding deciduous teeth and their replacement by permanent teeth.
- **Dentate:** Having one or more natural teeth.
- Edentulous: A state of complete loss of all natural teeth.
- Inadequate dentition: Fewer than 21 natural teeth.

# **Oral hygiene status**

An accumulation of dental plaque, typically due to poor oral hygiene practices such as not brushing your teeth properly or regularly, can increase the risk of tooth decay. Data presented in this section were sourced from the National Child Oral Health Study 2012–14 (Do & Spencer 2016).

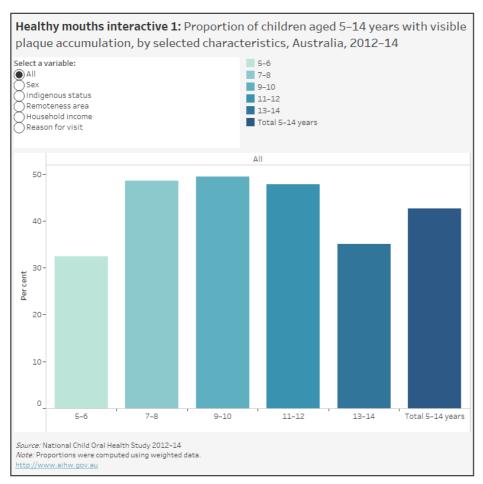
Around 4 in 10 (43%) of children aged 5–14 years had a moderate accumulation of plaque

The proportion of children aged 5–14 years with a moderate accumulation of plaque was:

- higher for boys (48%) than girls (37%)
- higher for Indigenous children (60%) than non-Indigenous children (42%)
- lower for children from high income households (35%) than from low income households (49%)
- lower for children from Major cities (39%) than from Remote and very remote (63%) areas
- lower for children who last visited the dentist for a check-up (40%) than those who visited for a dental problem (50%).

# Healthy mouths - Interactive 1

This figure shows the proportion of children aged 5–14 years with visible plaque accumulation, by selected characteristics. National data is presented for 2012–14. In Australia, 42.6% of children aged 5-14 years of age had visible plaque accumulation in 2012–14.



See Data tables: Healthy mouths for data tables.

#### **Gingivitis**

Gingivitis, or early stage gum disease, is usually caused by a build-up of plaque on teeth and along the gum line. The bacteria in plaque produce toxins that can irritate the gums causing inflammation. Data presented in this section were sourced from the National Child Oral Health Study 2012–14 (Do & Spencer 2016), the National Survey of Adult Oral Health 2004–06 (Slade et al. 2007) and the National Study of Adult Oral Health 2017–18 (Do & Luzzi, 2019).

#### Around 1 in 5 (22%) children aged 5-14 years had gingivitis in 2012-14

In 2012-14, the proportion of children aged 5–14 years with gingivitis was:

- lower for girls (20%) than boys (24%)
- higher for Indigenous children (34%) than non-Indigenous children (21%)
- higher in children from low-income households (26%) than from high-income households (17%)
- higher for children from Remote and very remote (38%) than from Major cities (20%)
- lower for children who last visited the dentist for a check-up (21%) than those who visited for a dental problem (25%).

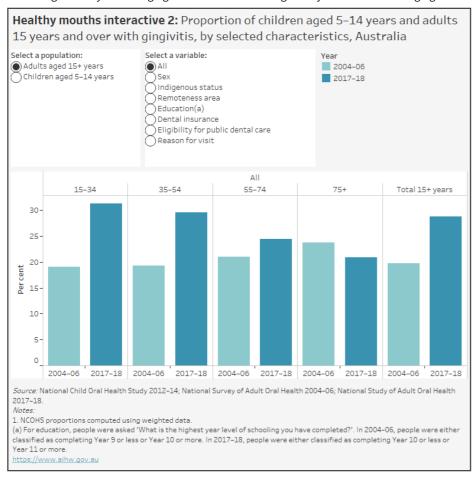
#### Around 3 in 10 (29%) adults aged 15 years and over had gingivitis

In 2017-18, the proportion of adults aged 15 years and over with gingivitis was:

- higher for males (35%) than females (23%)
- higher for people without dental insurance (31%) than those with dental insurance (25%)
- higher for people eligible for public dental care (30%) than those ineligible for public dental care (28%).

Healthy mouths - Interactive 2

This figure shows the proportion of children aged 5–14 years and adults aged 15 years and over with gingivitis, by selected characteristics. National data is presented for children for 2012–14 and for adults for 2004–06 and 2017–18. In2012–14, 21.8% of children aged 5-14 years had gingivitis. 28.8% of adults aged 15 years and over had gingivitis in 2017–18.



See Data tables: Healthy mouths for data tables.

#### **Periodontitis**

If left untreated, gingivitis can develop into a more serious form of gum disease known as periodontitis. Periodontitis, or advanced stage gum disease, damages the soft tissue and bone supporting the teeth which can cause the teeth to become loose, which in turn can lead to tooth loss. Data presented in this section were sourced from the National Survey of Adult Oral Health 2004–06 (Slade et al. 2007) and the National Study of Adult Oral Health 2017–18 (Do & Luzzi, 2019).

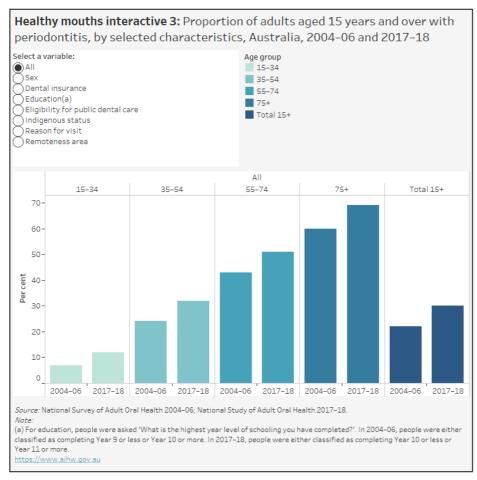
The proportion of adults with moderate or severe periodontitis increased with age, ranging from 12% in 15–34 year olds, 33% in 35–54 year olds, 51% in 55–74 year olds and 69% in those aged 75 years and over in 2017–18

In 2017-18, the proportion of adults aged 15 years and over with moderate or severe periodontitis was:

- higher for males (35%) than females (26%)
- nearly twice as high for those people who had completed Year 10 or less of schooling (45%) than those who had completed Year 11 or more of schooling (26%)
- almost 1.5 times as high for people who last visited the dentist for a problem (37%) than those who last visited for a check-up (26%)
- higher for those people eligible for public dental care (43%) than those people ineligible for public dental care (26%).

## Healthy mouths - Interactive 3

This figure shows the proportion of adults aged 15 years and over with periodontitis, by selected characteristics. National data is presented for 2004–06 and 2017–18. In Australia, 30.1% of adults aged 15 years and over had periodontitis in 2017–18.



See Data tables: Healthy mouths for data tables.

#### **Tooth retention and loss**

Tooth loss can affect both oral function and appearance, and therefore negatively impact on quality of life. Limited oral function is also associated with deteriorating diet and compromised nutrition, which can adversely impact on overall health (NACDH 2012).

#### Children with missing teeth

The data presented were sourced from the National Child Oral Health Study 2012–14 (Do & Spencer 2016) and reflect teeth lost due to dental decay only, and therefore do not include teeth lost due to exfoliation or dental trauma (for example, as a result of injury).

# Around 1 in 20 children aged 5–10 years have at least one deciduous tooth missing due to dental caries

Children aged 5–10 years with at least one deciduous tooth missing due to dental caries were more likely to be:

- Indigenous Australians (9.7%) than non-Indigenous Australians (5.3%)
- from Remote and very remote areas (9.6%) than from Major cities (4.9%)
- from low-income households (9.3%) than from medium-income households (4.3%) and high-income households (2.9%)
- those who last visited the dentist for a dental problem (17%) than those who last visited for a check-up (3.5%).

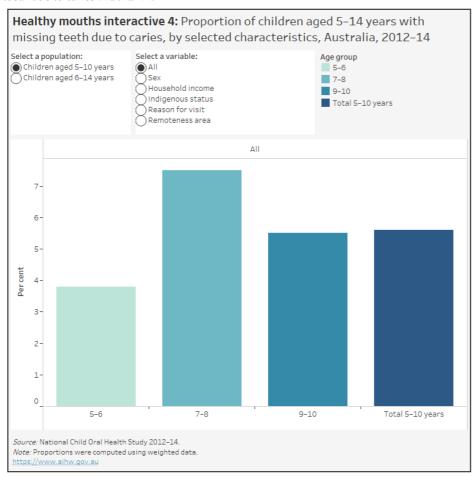
#### Around 1 in 100 children aged 6-14 years have as least one permanent tooth missing due to dental caries

Children aged 6-14 years with at least one permanent tooth missing due to dental caries were more likely to be:

- female (1.0%) than male (0.5%)
- Indigenous Australians (1.4%) than non-Indigenous Australians (0.7%)
- those who last visited the dentist for a dental problem (1.4%) than those who last visited for a check-up (0.6%)

Healthy mouths - Interactive 4

This figure shows the proportion of children aged 5–10 and 6–14 years with missing teeth due to caries, by selected characteristics. National data is presented for 2012–14. In Australia, 5.6% of children aged 5-10 years and 0.8% of children aged 6-14 years had missing teeth due to caries in 2012–14.



See Data tables: Healthy mouths for data tables.

# Adults with missing teeth

The data presented in this section were sourced from the National Survey of Adult Oral Health 2004–06 (Slade et al. 2007) and the National Study of Adult Oral Health 2017–18 (Do & Luzzi, 2019). Adults who have no natural teeth are classified as edentulous, whereas those who have at least one natural tooth are classified as dentate. Only dentate adults were assessed for inadequate dentition (fewer than 21 teeth).

Dentate adults aged 15 years and over had an average of 4.4 teeth missing due to dental decay and periodontal disease in 2017–18

In 2017-18:

- The average number of missing teeth increased with age, ranging from 0.6 teeth in 15–34 year olds, 3.6 teeth in 35–54 year olds, 8.8 teeth in 55–74 year olds to 13.2 teeth in those aged 75 years and over.
- On average, adults who completed Year 10 or less of schooling had more than twice as many missing teeth as those who completed Year 11 or more of schooling, 7.7 and 3.3 respectively.
- The average number of missing teeth for adults eligible for public dental care (7.6) was more than double that of those ineligible for public dental care (3.0).

The proportion of adults with in adequate dentition (fewer than 21 teeth) increased with age, ranging from 0.7% in 15–34 year olds to 46% in those aged 75 years and over in 2017–18

In 2017-18:

• On average, 1 in 10 (10%) adults aged 15 years and over had inadequate dentition.

- Adults eligible for public dental care (24%) were around five times as likely to have inadequate dentition than those ineligible for public dental care (4.7%).
- Adults who completed Year 10 or less of schooling (21%) were around four times as likely to have inadequate dentition than those
  who completed Year 110 or more of schooling (5.9%).
- Adults who had inadequate dentition were more likely to have last visited the dentist for a dental problem (18%) rather than for a check-up (6%).

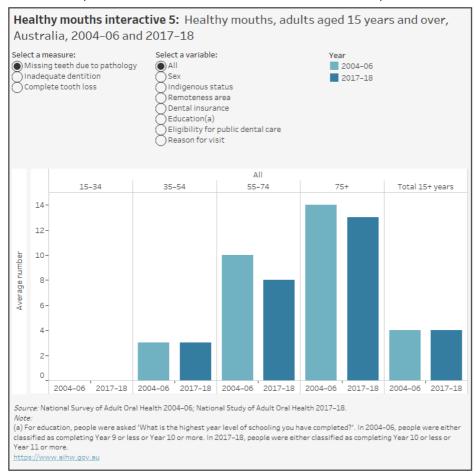
The proportion of adults with complete tooth loss increased with age, ranging from 1.1% in 35–54 year olds, 8.1% in 55–74 year olds to 21% in those aged 75 years and over. There were no 15–34 year olds with complete tooth loss in 2017–18:

#### In 2017-18:

- On average, 1 in 25 (4.0%) adults aged 15 years and over had complete tooth loss.
- Adults eligible for public dental care (11%) were around nine times as likely to suffer complete tooth loss than those ineligible for public dental care (1.2%).
- Adults who completed Year 10 or less of schooling (9.4%) were around five times as likely to suffer complete tooth loss than those who completed Year 11 or more of schooling (1.8%).
- Adults without dental insurance (6.5%) were more likely to suffer complete tooth loss than those with dental insurance (1.7%).

#### Healthy mouths - Interactive 5

This figure shows the proportion of adults aged 15 years and over with missing teeth, inadequate dentition or complete tooth loss. National data is presented for 2004–06 and 2017–18. Fewer, adults had complete tooth loss in 2017–18 (4.0%) than in 2004–06 (6.4%).



See Data tables: Healthy mouths for data tables.

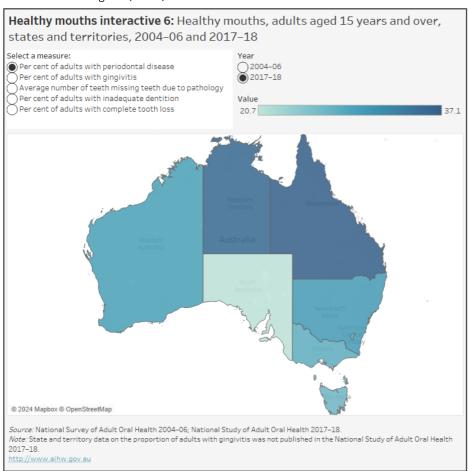
# **Healthy mouths across Australia**

In this section measures of oral health status in adults aged 15 years and over, such as periodontal disease and tooth retention and loss, are compared across states and territories. Data presented were sourced from the National Survey of Adult Oral Health 2004–06 (Slade et al. 2007; AIHW 2008a–2008h) and the National Study of Adult Oral Health 2017–18 (Do & Luzzi, 2019).

The proportion of adults aged 15 years and over with periodontal disease varied between states and territories with nearly twice as many adults with periodontal disease in Queensland (37%) than in South Australia (21%) in 2017–18

Explore the data for Healthy mouths by state and territory further: Healthy mouths – Interactive 6

This figure shows various measures of dental health for adults aged 15 years and over. State and territory data is presented for 2004–06 and 2017–18. In 2017–18, the Australian Capital Territory had the lowest proportion of adults with inadequate dentition (6.4%) and Tasmania had the highest (15.0%).



See <u>Data tables: Healthy mouths</u> for data tables.

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# **Healthy lives**

As described in the Introduction, oral health can impact an individual's general health and wellbeing. Good oral functioning enables comfortable participation in everyday activities.

### **Key terms**

- Dentate: Having one or more natural teeth.
- Edentulous: A state of complete loss of all natural teeth.
- Incidence: The number of new cases (of an illness or injury) occurring during a given period.
- **Burden of disease (and injury):** The quantified impact of a disease or injury on a population, using the disability-adjusted life years (DALY) measure. Referred to as the 'burden' of the disease or injury in this report.
- **DALY (disability-adjusted life years):** Measure (in years) of healthy life lost, either through premature death defined as dying before the expected life span at the age of death (YLL) or, equivalently, through living with ill health due to illness or injury (YLD).
- Fatal burden: The burden from dying 'prematurely' as measured by years of life lost. Often used synonymously with YLL, and also referred to as 'life lost'.
- YLL (years of life lost): Years of life lost due to premature death, defined as dying before the ideal life span at the age of death. YLL represent fatal burden.
- **Non-fatal burden:** The burden from living with ill health as measured by years lived with disability. Often used synonymously with YLD, and also referred to as 'health lost'.
- YLD (years lived with disability): A measure of the years of what could have been healthy but were instead spent in states of less than full health. YLD represent non-fatal burden.
- International Classification of Diseases (ICD): The World Health Organization's internationally accepted classification of diseases and related health conditions. The tenth revision, Australian modification (ICD-10-AM) is currently in use in Australian hospitals for admitted patients.
- **Relative survival:** The ratio of observed survival of a group of persons diagnosed with cancer to expected survival of those in the corresponding general population after a specified interval following diagnosis (such as, 5 or 10 years).

#### Social impacts of poor oral health

Measures of social impact give insight into the effect of oral conditions on day-to-day living from the individual's perspective. Experience of social impact reflects not only the level of oral disease experienced, but also whether that disease had been treated in a timely fashion. The following data were sourced from the National Study of Adult Oral Health 2017–18 in which people are asked about their experience of toothache, how they feel about their dental appearance and whether or not they avoid eating certain foods (Brennan et al 2019).

# **Experience of toothache**

Around 1 in 5 (20%) dentate adults aged 15 years and over had experienced toothache in the previous 12 months.

The proportion of adults aged 15 years and over who experienced toothache in the previous 12 months was:

- higher for Indigenous Australians (35%) than non-Indigenous Australians (20%)
- higher for those eligible for public dental care (26%) than those ineligible for public dental care (18%)
- higher for those who usually visit the dentist for a problem (34%) than those who usually visit for a check-up (12%)
- lower for people with dental insurance (15%) than those without dental insurance (26%).

#### Uncomfortable with dental appearance

Around 1 in 3 (35%) dentate adults aged 15 years and over had felt uncomfortable about their dental appearance in the previous 12 months.

The proportion of adults aged 15 years and over who had felt uncomfortable about their dental appearance in the previous 12 months was:

- lower for males (32%) than females (38%)
- higher for Indigenous Australians (45%) than non-Indigenous Australians (35%)
- higher for dentate adults (36%) than edentulous adults (29%)
- higher for those who usually visit the dentist for a problem (49%) than those who usually visit for a check-up (28%)
- higher for those eligible for public dental care (40%) than those ineligible for public dental care (33%)
- lower for people with dental insurance (30%) than those without dental insurance (41%).

#### Food avoidance

Around 1 in 4 (24%) dentate adults aged 15 years and over had avoided eating certain foods in the previous 12 months due to problems with their teeth.

The proportion of adults aged 15 years and over who had avoided eating certain foods in the previous 12 months due to problems with their teeth was:

- lower for males (20%) than females (27%)
- higher for edentulous adults (43%) than dentate adults (23%)
- higher for Indigenous Australians (36%) than non-Indigenous Australians (23%)
- higher for those eligible for public dental care (33%) than those ineligible for public dental care (20%)
- lower for people with dental insurance (17%) than those without dental insurance (31%)
- higher for those with Year 10 or less schooling (29%) than those with Year 11 or more (21%).

#### Perception of fair or poor oral health

Around 1 in 4 (24%) dentate adults aged 15 years and over rated their oral health as fair or poor.

The proportion of adults aged 15 years and over who rated their oral health as fair or poor was:

- lower for females (23%) than males (25%)
- higher for Indigenous Australians (29%) than non-Indigenous Australians (24%)
- higher for those eligible for public dental care (32%) than those ineligible for public dental care (21%)
- lower for people with dental insurance (16%) than those without dental insurance (33%)
- higher for those with Year 10 or less schooling (30%) than those with Year 11 or more (22%)
- higher for those who usually visit the dentist for a problem (44%) than those who usually visit for a check-up (13%).

# Social impact trends

The proportion of dentate adults aged 15 years and over reporting their oral health as fair or poor increased from 16% in 2004–06 to 24% in 2017–18. The proportion of dentate adults aged 15 years and over reporting their oral health as fair or poor increased from 16% in 2004–06 to 24% in 2017–18.

A similar trend was observed over the same time period for:

• those aged 55–64, with the proportion of people rating their oral health as fair or poor increasing from 18% in 2004–06 to 32% in 2017–18.

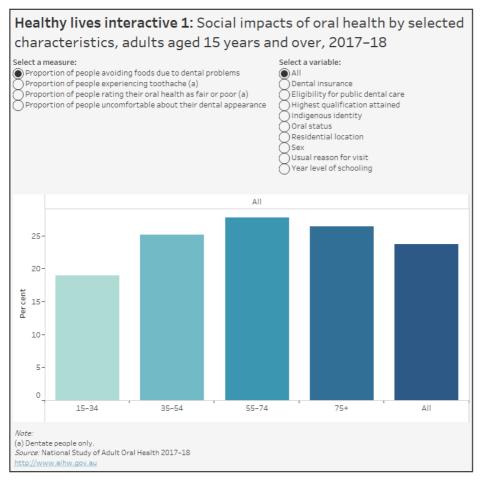
Explore the data further in Healthy lives interactives 1 & 2:

Healthy lives – Interactive 1

This figure shows the social impacts of oral health for adults aged 15 years and over, by selected characteristics. National data is presented for 2017–18. In Australia, 23.7% of adults aged 15 years and over avoided foods due to dental problems in 2017–18.

Healthy lives – Interactive 2

This figure shows the proportion of people rating their oral health as fair or poor, for dentate adults aged 15 years and over. National data is presented for 2004–06 and 2017–18. In Australia, 23.9% of adults aged 15 years and over rated their oral health as fair or poor in 2017–18.



See <u>Data tables: Healthy lives</u> for data tables.

#### **Burden of disease**

Oral disorders cause very few deaths, yet are highly prevalent in the Australian community. <u>The Australian Burden of Disease Study</u> 2022 (AIHW 2022) estimated the burden of dental caries and pulpitis, periodontal disease and severe tooth loss (having fewer than 10 teeth).

In 2022, oral disorders made up 2.3% of total health burden and 4.5% of all non-fatal burden.

Oral disorders did not contribute to fatal burden for children aged 5–14, but dental caries was among the top 10 causes of non-fatal burden for both boys and girls (AIHW 2022).

Changes in non-fatal burden (YLD) rates are influenced by changes in the prevalence and/or the severity of the disease. After adjusting for ageing of the population, the age-standardised rate of oral disorders remained stable between 2003 and 2022. However, the rate of periodontal disease increased by 40% between 2003 and 2022 (AIHW 2022).

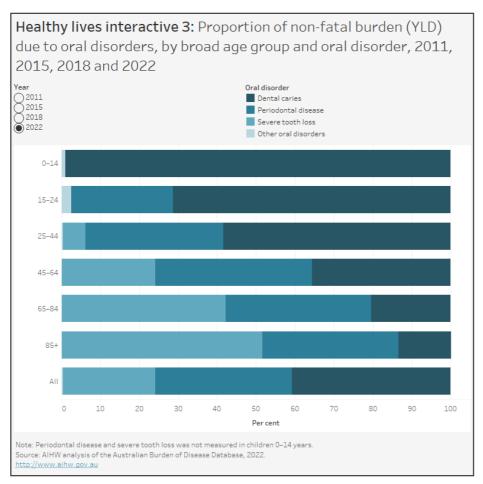
The data presented in Interactive 3 reflects the progression of untreated dental disease across the life stages. In 2022:

- The relative proportion of non-fatal burden due to dental caries decreased with age from 99% in children aged 0–14 years to 14% in those aged 85 and over.
- Half of non-fatal burden due to oral disorders in people aged 85 years and over was due to severe tooth loss (52%), followed by periodontal disease (35%).

Explore the data further in Healthy lives interactive 3:

Healthy lives – Interactive 3

This figure shows the proportion of non-fatal burden (YLD) due to oral disorders, by age group and oral disorder. National data is presented for 2011, 2015, 2018 and 2022. In Australia, 24% of non-fatal burden (YLD) due to oral disorders was attributed to severe tooth loss in 2018.



See <u>Data tables: Healthy lives</u> for data tables.

#### **Oral cancers**

Cancer was the leading cause of total disease burden in Australia in 2018 (AIHW 2021b). Treatment can be more effective when cancer is detected at an earlier stage, and dental practitioners play an important role in this. Cancer of the lip, tongue, mouth, salivary glands and oropharynx are those cancers that are detectable in an oral examination by a dental practitioner. Detection of cancer at an earlier stage is one of the factors associated with better cancer survival, along with other factors such as the effectiveness of treatment.

In Australia, the 5-year relative survival rate in 2014–2018 for all selected oral cancers was 76%, compared to 70% for all cancers combined

- Between 1988–1992 and 2014–2018 the 5-year relative survival for selected oral cancers increased from 69% to 76%.
- In 2014-2018, the 5-year relative survival for selected oral cancers varied from 63% for cancer of the mouth to 94% for cancer of the lip.
- In 2018, there were 3,716 cases of selected oral cancers, including 1,091 cases of cancer of the tongue making it the most common oral cancer in this group.
- In 2018, there were 713 deaths from selected oral cancers, including 256 deaths from cancer of the tongue.

Explore the data using the interactives below:

Healthy lives - Interactive 4

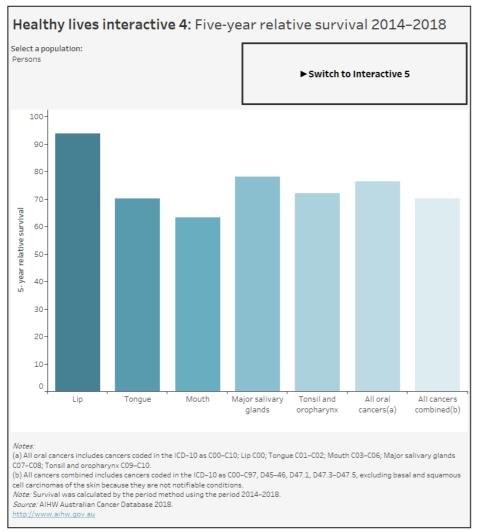
This figure shows the five-year relative survival for selected oral cancers, by sex and cancer site. National data is presented for 2014–2018. In Australia, all selected oral cancers had a relative five-year survival rate of 76.4% in 2014–2018.

Healthy lives - Interactive 5

This figure shows the age-standardised five-year relative survival trend for selected oral cancers, by sex. National data is presented for 1989–1993 to 2014–2018. Between 1989–1993 and 2014–2018 the five-year relative survival for selected oral cancers increased from 69.5% to 76.4%.

#### Healthy lives - Interactive 6

This figure shows the incidence, mortality and age-standardised rate of each for selected oral cancers, by sex and cancer site. National data is presented for 2018. In Australia, there were 3,716 cases of oral cancer in 2018.



See Data tables: Healthy lives for data tables.

For more information on cancer survival explore our **Cancer data** in **Australia**.

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# **Preventative strategies**

The goal of Australia's National Oral Health Plan 2015–2024 (COAG Health Council 2015) is to improve the oral health status and reduce the burden of poor oral health across the Australian population. The Plan outlines national strategic directions at both the population and individual level, across six Foundation Areas, the first being oral health promotion. Key strategies of this Foundation Area include:

- extending access to the preventive effects of fluoride
- broadening the availability of evidence-based oral health promotion programs
- strengthening and embedding nutrition and oral health policies in key settings, for example early childhood education.

#### **Key terms**

- Fluoride: A naturally occurring trace mineral that helps to prevent tooth decay.
- Water fluoridation: The process of adjusting the amount of fluoride in drinking water.
- Fissure sealants: Materials applied to the pits and fissure surfaces of teeth to create a thin barrier, which protect the sealed surfaces from caries.

## **Toothbrushing**

Brushing your teeth twice per day with a fluoridated toothpaste can be effective in preventing tooth decay. Tooth brushing with a fluoridated toothpaste mechanically removes and controls the build-up of plaque, and applies fluoride to the teeth.

#### Children

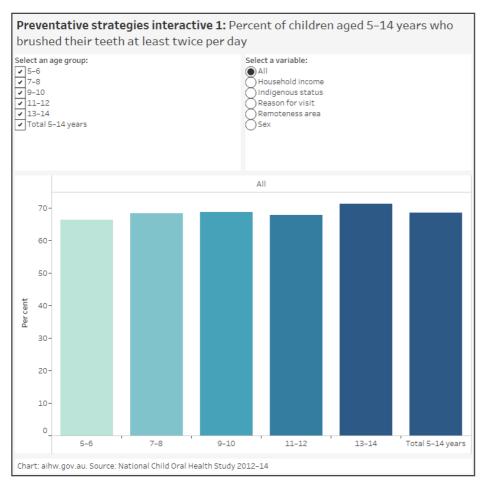
The data presented in this section were sourced from the National Child Oral Health Study 2012–14 (Do & Spencer 2016).

Around two-thirds of children (69%) aged 5–14 years brushed their teeth at least twice a day with toothpaste

- Girls (71%) were more likely to have brushed their teeth at least twice a day with toothpaste than boys (66%).
- Indigenous children (54%) were less likely to brush their teeth twice a day with toothpaste than non-Indigenous children (70%).
- Children who last visited the dentist for a dental problem (65%) were less likely to brush their teeth twice a day with toothpaste than those who last visited for a check-up (73%).
- Children from high-income households (78%) were more likely to brush their teeth than children from low-income households (59%)

Preventative strategies - Interactive 1

This figure shows the percent of children aged 5–14 years who brushed their teeth at least twice per day, by selected characteristics. National data is presented for 2012–14. In Australia, 68.5% of children aged 5-14 years brushed their teeth at least twice per day in 2012–14.



See <u>Data tables: Preventative strategies</u> for data tables.

# Adults

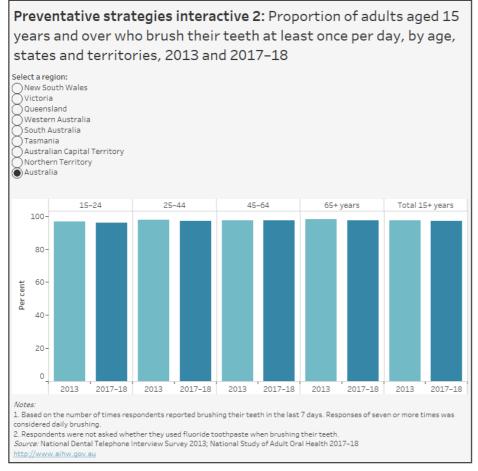
The data presented in this section were sourced from the National Study of Adult Oral Health 2017–18 (ARCPOH unpublished).

In 2017–18, almost all (97%) adults aged 15 years and over brushed their teeth at least once per day

• Fewer adults aged 15 years and over brushed their teeth at least once per day in South Australia (95%) than any other state or territory.

Preventative strategies – Interactive 2

This figure shows the proportion of adults aged 15 years and over who brush their teeth at least once per day, by age group. National, state and territory data is presented for 2013 and 2017–18. In Australia, 97% of adults aged 15 years and over brushed their teeth at least once per day in 2017–18.



See Data tables: Preventative strategies for data tables.

#### Water fluoridation

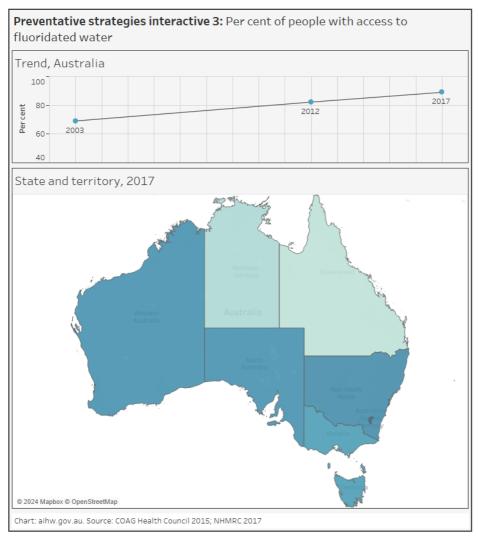
Community water fluoridation is a safe strategy to improve oral health by reducing the risk of dental caries. The Australian Government National Health and Medical Research Council found that water fluoridation reduces tooth decay by 26% to 44% in children and adolescents, and by 27% in adults (NHMRC 2017).

## Around 89% of the Australian population have access to fluoridated drinking water

- The proportion of the Australian population with access to fluoridated drinking water has increased over time from 69% in 2003, to 89% in 2017.
- Around 76% of the Queensland population has access to fluoridated water, whereas around 100% of the Australian Capital Territory's population has access to fluoridated water.

Preventative strategies – Interactive 3

This figure shows the per cent of people with access to fluoridated water. National, state and territory data is presented for 2003, 2012 and 2017. In Australia, 82.2% of people had access to fluoridated water in 2012 and 89.0% in 2017.



See <u>Data tables: Preventative strategies</u> for data tables.

## Fissure sealants in children

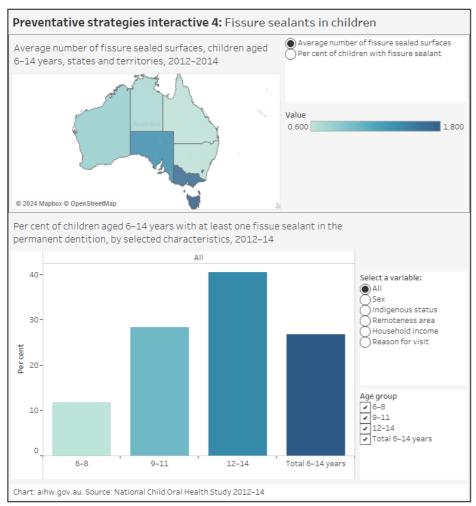
Due to their structure, the permanent teeth at the back of the mouth (molar teeth) can be difficult to keep clean. These molar teeth have many grooves (fissures) and pits on their surfaces that are susceptible to developing caries. Fissure sealants may be applied to teeth to create a thin barrier that protects the sealed surfaces from caries (Do & Spencer 2016). The data presented in this section were sourced from the National Child Oral Health Study 2012–14 (Do & Spencer 2016).

# Around a quarter (27%) of children aged 6–14 years had at least one fissure sealant in their permanent teeth

- The proportion of children with at least one fissure sealant in their permanent teeth increased with age, ranging from 12% in 6–8 year olds, 28% in 9–11 year olds to 40% in 12–14 year olds.
- The proportion of children with at least one fissure sealed tooth varied across states and territories, ranging from 42% in Tasmania to 17% in New South Wales. Children in Tasmania had an average of 1.8 fissure sealed tooth surfaces per child.

Preventative strategies - Interactive 4

This figure shows the average number of fissure sealed surfaces in children aged 6–14 years. State and territory data is presented for in 2012–2014. This figure also shows the per cent of children aged 6–14 years with at least one fissure sealant in the permanent dentition, by selected characteristics. National data is presented for 2012–14. In Australia, 26.8% of children aged 6-14 years had at least one fissure sealant in the permanent dentition in 2012–14.



See Data tables: Preventative strategies for data tables.

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# **Dental** care

A dental visit can provide an opportunity for the provision of preventive dental care to maintain existing oral health, as well as treatment services that may reverse disease or rehabilitate the teeth and gums after damage occurs.

Dental services are funded, and can be accessed, in a number of ways – privately or through public dental clinics or DVA (based on eligibility). For those who purchased services privately, some may have had all or part of the costs of the service subsidised.

In 2021-22:

- 44.8 million dental services were subsidised by private health insurance providers (APRA 2022) for more information refer to chapter on <u>Private health insurance</u>
- 4.7 million services were subsidised under the Australian Government's Child Dental Benefits Schedule (DoHAC, 2023a) refer to the section included below for more information on the Child Dental Benefits Schedule.

Data on dental services provided in Australia are limited, especially in relation to services provided in the private sector, as no comprehensive national data sources are available. The most complete information about Australians' use of dental services is available via national population surveys.

#### **Key terms**

- Favourable dental visiting pattern: Visiting a dentist once or more a year (usually for a check-up) and having a usual dental provider.
- **Unfavourable dental visiting pattern:** Visiting less than once every two years (usually for a problem), or visiting once every two years (usually for a problem) and without a regular dental provider.
- Intermediate dental visiting pattern: Visiting classified as neither favourable or unfavourable.

### **National Study of Adult Oral Health**

The National Study of Adult Oral Health 2017–18 (Chrisopoulos, Luzzi & Ellershaw, 2019) is a population-based survey which collected data from around 15,000 adults aged 15 years and over across Australia. Information was collected via interview and around one-third of participants underwent a dental examination. Data presented in this section was sourced from this survey.

In 2017-18, more than half (56%) of adults aged 15 years and over saw a dentist in the last 12 months

In 2017–18, the proportion of adults aged 15 years and over who had seen a dentist in the last 12 months was:

- higher for people who live in a capital city (59%) than for people who live in other places (52%)
- higher for people who had dental insurance (70%) than for people who didn't (43%)
- higher for people who usually visit for a check-up (70%) than for those who usually visit for a problem (36%)

Explore the data further in Dental care interactive 1 below.

In 2017–18, 11% of adults aged 15 years and over last saw a dentist 5 or more years ago

In 2017–18, the proportion of adults aged 15 years and over who last saw a dentist 5 or more years ago was:

- higher for those eligible for public dental care (15%) than those ineligible for public dental care (10%)
- higher for people who had completed year 10 or less (15%) than for people who completed year 11 or more (9.8%)

Explore the data further in Dental care interactive 2 below.

In 2017–18, more than half (58%) of adults aged 15 years and over reported that they usually visit a dental professional at least once a year

In 2017–18, the proportion of adults aged 15 years and over who usually visit a dental professional at least once a year was:

- higher for people who usually visit for a check-up (76%) than those who usually visit for a problem (24%)
- higher for people with dental insurance (72%) than for those without dental insurance (41%)
- higher for people who live in a capital city (61%) than for people who live in other places (51%)

Explore the data further in Dental care interactive 3 below.

In 2017–18, more than three quarters (79%) of adults aged 15 years and over have a dentist which they usually attend

#### Also in 2017-18:

- 82% of adults aged 15 years and over attended a private dental practice
- 90% of adults aged 15 years and over paid for their last dental visit
- 22% of adults aged 15 years and over reported unfavourable attendance patterns
- 65% of adults aged 15 years and over usually visit a dentist for a check-up

Explore the data further in Dental care interactive 4 below.

Dental care - Interactive 1

This figure shows the proportion of adults aged 15 years and over who visited a dentist in the last 12 months, by selected characteristics. National data is presented for 2017–18. In 2017–18, 56.4% of adults aged 15 years and over saw a dentist in the last 12 months.

Dental care - Interactive 2

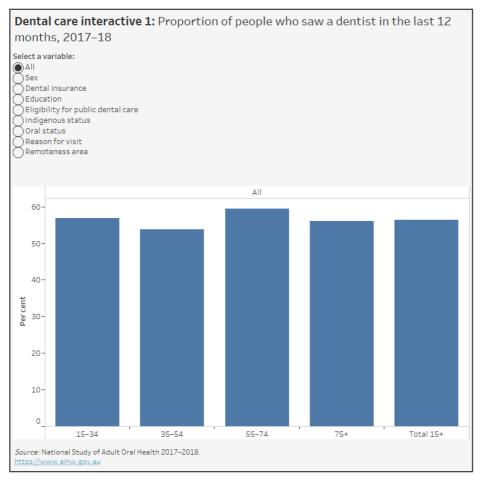
This figure shows the proportion of adults aged 15 years and over whose last dental visit was 5 or more years ago, by selected characteristics. National data is presented for 2017–18. In 2017–18, 11.4% of people had their last dental visit 5 or more years ago.

Dental care - Interactive 3

This figure shows the proportion of adults aged 15 years and over who usually visit a dental professional at least once a year, by selected characteristics. National data is presented for 2017–18. In 2017–18, 57.5% of adults aged 15 years and over usually visited a dental professional at least once a year.

Dental care - Interactive 4

This figure shows dental visiting patterns in the Australian population, by age groups. National data is presented for 2017–18. In 2017–18, 89.4% of adults aged 15 years and over paid for their last dental visit and 78.5% of adults aged 15 years and over have a dentist which they usually visit.



See Data tables: Dental care for data tables.

#### National Child Oral Health Study 2012-14

The data presented in this section were sourced from the National Child Oral Health Study (NCOHS) 2012–14 (Do & Spencer 2016). The NCOHS is a population-based survey which provides information on the oral health of children aged 5–14 years, who reside in all Australian states and territories. Information is collected using interviews and standardised dental examinations.

#### **Dental visiting patterns**

Visiting a dental provider for a check-up is considered more likely to be associated with better oral health outcomes than visiting for a dental problem. Conversely, an irregular dental visiting pattern is associated with poorer oral health outcomes.

In 2012-14, around 9 in 10 (87%) children aged 5-14 years first visited a dental provider for a check-up

In 2012–14, the proportion of children aged 5–14 years who first visited a dental practitioner for a check-up was:

- higher for non-Indigenous children (87%) than for Indigenous children (77%)
- lower for those from low income households (79%) than for those from medium income households (89%) and high income households (92%)
- lower for children whose parents had school-level education (81%) than for children of parents with vocational training (88%) and tertiary education (90%).

In 2012-14, around 8 in 10 (80%) children aged 5-14 years last visited a dental provider for a check-up

In 2012–14, the proportion of children aged 5–14 years who last visited a dental practitioner for a check-up was:

- higher for non-Indigenous children (81%) than for Indigenous children (68%)
- lower for those from low income households (71%) than for those from medium income households (81%) and high income households (88%)

• lower for children whose parents had school-level education (74%) than for children of parents with vocational training (80%) and tertiary education (84%).

### In 2012–14, around 1 in 5 (21%) children aged 5–14 years had an irregular dental visiting pattern

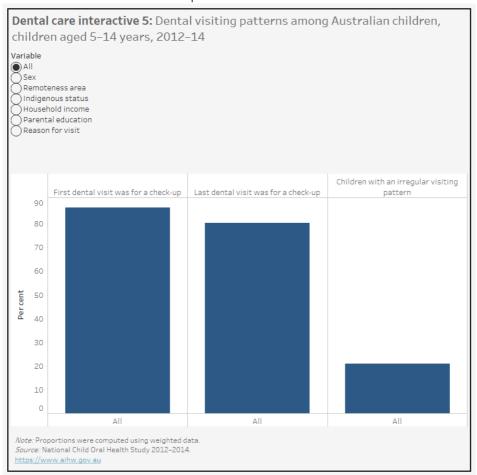
In 2012–14, the proportion of children aged 5–14 years with an irregular visiting pattern was:

- lower for non-Indigenous children (20%) than for Indigenous children (31%)
- higher for those from low income households (32%) than for those from medium income households (19%) and high income households (13%)
- higher for children whose parents had school-level education (30%) than for children of parents with vocational training (20%) and tertiary education (84%).

Explore the data further in Dental care interactive 5 here:

#### Dental care - Interactive 5

This figure shows dental attendance patterns among Australian children aged <u>5</u>–14 years, by selected characteristics. National data is presented for 2012–14. In 2012–14, 86.7% of Australian children aged <u>5</u>–14 years had their first dental visit for a check-up and 80.2% had their last dental visit for a check-up.



See Data tables: Dental care for data tables.

### **Recent dental visiting**

Making a recent dental visit is indicative of access to the dental care system. In Australia, the dental care system is predominantly based in private practice on a fee-for-service basis.

In 2012–14, around 4 in 5 (81%) children aged 5–14 years made a dental visit within the last 12 months

In 2012–14, the proportion of children aged 5–14 years who made a dental visit within the last 12 months was:

• higher for non-Indigenous children (82%) than for Indigenous children (75%)

- lower for those from low income households (76%) than for those from medium income households (82%) and high income households (84%)
- lower for children whose parents had school-level education (76%) than for children of parents with vocational training (81%) and tertiary education (84%).

In 2012-14, around 3 in 5 (57%) children aged 5-14 years had their most recent dental visit at a private practice

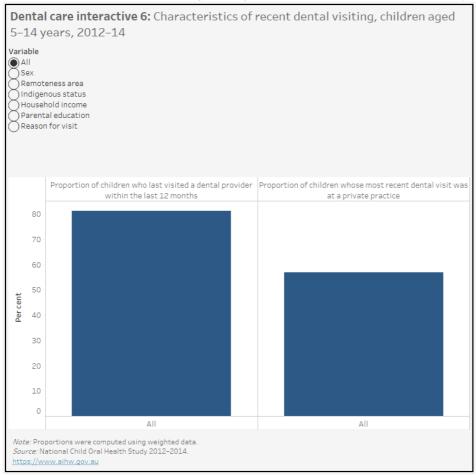
In 2012–14, the proportion of children aged 5–14 years who had their most recent dental visit at a private practice was:

- higher for non-Indigenous children (58%) than for Indigenous children (23%)
- higher for children who resided in *Major cities* (62%) than for those who resided in *Inner regional* (51%), *Outer regional* (39%) and *Remote or very remote* (28%) areas
- higher for those children whose last dental visit was for a check-up (60%) than those who last visited for a problem (46%).

Explore the data further in Dental care interactive 6 here:

Dental care - Interactive 6

This figure shows the proportion of Australian children aged 5–14 years who last visited a dental provider within the last 12 months and whose most recent dental visit was at a private practice, by selected characteristics. National data is presented for 2012–14. In 2012–14, 56.8% of Australian children aged 5–14 years had their most recent dental visit at a private practice.



See Data tables: Dental care for data tables.

#### **National Health Survey**

The Australia-wide 2020-2021 National Health Survey (ABS 2022) conducted by the Australian Bureau of Statistics (ABS), collected a range of information about the health of Australians including their use of health services such as consultations with dentists or other dental professionals. The data presented in this section were sourced from this survey.

# Box 1: National Health Survey 2020-21

Data for 2020–21 are based on information self-reported by the participants of the Australian Bureau of Statistics (ABS) 2020–21 National Health Survey (NHS).

Previous versions of the NHS have primarily been administered by trained ABS interviewers and were conducted face-to-face. The 2020–21 NHS was conducted during the COVID-19 pandemic. To maintain the safety of survey respondents and ABS Interviewers, the survey was collected via online, self-completed forms.

Non-response is usually reduced through interviewer follow-up of households who have not responded. As this was not possible during lockdown periods, there were lower response rates than previous NHS cycles, which impacted sample representativeness for some sub-populations.

Additionally, the impact of COVID-19 and lockdowns might also have had direct or indirect impacts on people's usual behaviour over the 2020–21 period, and the module used to collect information on physical activity was changed as part of the NHS 2020–21.

Due to these changes, comparisons to previous National Health Survey data over time are not recommended.

Further information can be found at: <u>ABS National health survey - first results methodology | 2020-21 - external site opens in new window</u>

## Box 2: National Health Survey 2020-21 definitions

#### Alcohol consumption

The National Health and Medical Research Council (NHMRC) released Australian <u>guidelines - external site opens in new window</u> to reduce health risks from drinking alcohol in December 2020. Guideline 1 recommends that 'to reduce the risk of harm from alcohol-related disease or injury, healthy men and women should drink no more than 10 standard drinks a week and no more than 4 standard drinks on any one day'. In the National Health Survey 2020-2021, exceeding the guidelines is interpreted as consuming more than 10 standard drinks in the week prior to survey, or consuming 5 or more standard drinks on any day in the last year at least monthly, or exceeding both components.

#### Smoker status

Smoker status refers to the frequency of smoking of tobacco, including manufactured (packet) cigarettes, roll-your-own cigarettes, cigars and pipes. In the National Health Survey 2020-21, respondents were categorised as:

- Current smoker a respondent who smoked cigarettes, cigars or pipes
- Ex-smoker a respondent who does not smoke currently, but previously smoked daily, or has smoked at least 100 cigarettes, or smoked pipes or cigars at least 20 times in their lifetime
- Never smoked a respondent who has never regularly smoked daily, and has smoked less than 100 cigarettes, or smoked less than 20 pipes or cigars in their lifetime.

## In 2020–21, 1 in 2 (48%) Australians had consulted a dentist or dental professional in the last 12 months

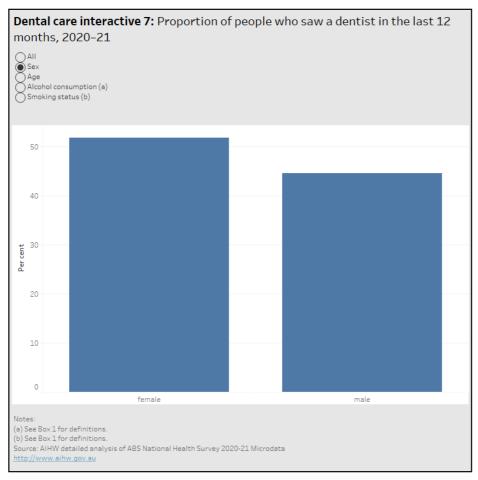
In 2020–21, according to self-reported data, the proportion of people who had consulted a dentist or dental professional in the last 12 months was:

- higher for females (52%) than males (45%)
- similar for those who exceeded lifetime risk alcohol consumption guidelines (49%) than those who did not exceed guidelines (47%)
- lower for current smokers (39%) than those who have never smoked (48%).

## Explore the data further here:

#### <u>Dental care – Interactive 7</u>

This figure shows the proportion of people who saw a dentist in the last 12 months, by selected characteristics. National, state and territory data is presented for 2020–21. In 2020–21, 51.7% of females and 44.6% of males saw a dentist in the last 12 months.



See <u>Data tables: Dental care</u> for data tables.

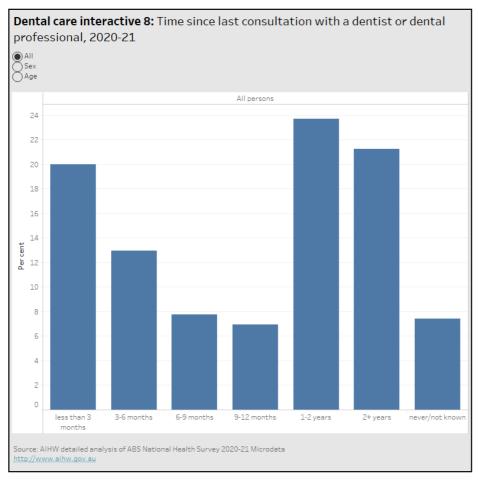
In 2020–21, around 1 in 5 (21%) Australians had last consulted a dentist or dental professional more than 2 years ago

- Around 1 in 6 (16%) children aged 2–14 years have either never consulted a dentist or dental professional or the time since they last consulted a dentist or dental professional was not known.
- Around 3 in 10 (30%) of adults aged 25–34 years last consulted a dentist or dental professional more than 2 years ago.

Explore the data further here:

Dental care – Interactive 8

This figure shows the time since last consultation with a dentist or dental professional, by sex and age. National data is presented for 2020–21. In 2020–21, 21.2% of people had seen a dentist or dental professional more than 2 years ago.



See Data tables: Dental care for data tables.

### **National Dental Telephone Interview Survey**

Data in this section were sourced from the 2013 National Dental Telephone Interview Survey (NDTIS) (AIHW 2016) and the NDTIS component of the National Study of Adult Oral Health (NSAOH) 2017–18 (ARCPOH unpublished).

#### **Dental services**

The average number of dental visits made by dentate people aged 5 years and over, who made a dental visit in the last 12 months, remained similar across the two survey periods, 2.41 in 2013 and 2.28 in 2017–18

- On average, each person had a scale and clean, around 2 in 3 had a filling and around 1 in 4 had an extraction. This was similar across both survey periods.
- In 2017–18, around 1 in 3 children aged 5–14 years had a filling.
- In 2017–18, around 1 in 4 males and 1 in 5 females had a tooth extracted.
- There was a slight decline in the average number of fillings received by adults aged 15 years and over between 1994 and 2017–18, from 0.90 to 0.65 respectively. A similar trend was observed in children aged 5–14 years with the average number of fillings declining from 0.56 in 1994 to 0.33 in 2017–18.

## Reason for last visit

Across both survey periods, nearly 2 in 3 (64%) dentate people aged 5 years and over last visited the dentist for a check-up

- In 2017–18, the proportion of dentate people aged 5 years and over who last visited the dentist for a check-up decreased with age from 81% of 5–14 year olds to 53% of those aged 65 years and over. This was similar to the trend observed in 2013.
- In 2017–18, more people with dental insurance last visited the dentist for a check-up (72%) than those without dental insurance (53%). This was similar to the trend observed in 2013.

- In 2017–18, fewer people whose annual household income was less than \$30,000 last visited the dentist for a check-up (49%) than those whose annual household income was more than \$30,000. This was similar to the trend observed in 2013.
- The proportion of dentate adults aged 15 years and over whose last visit was for a check-up increased from 48% in 1994 to 61% in 2017–18.

### Practice type at last visit

In 2017–18, 85% of dentate people aged 5 years and over, who made a dental visit in the previous 12 months, last visited a private dental practice

- In 2017–18, around 1 in 6 (16%) children aged 5–14 last visited a school dental service, and around 7 in 10 (70%) last visited a private dental practice. This was similar to the trend observed in 2013.
- More people whose household income was less than \$30,000 last visited a public dental service (26%) than those whose annual household income was more than \$30,000. This was similar to the trend observed in 2013.
- More people with dental insurance last visited a private dental practice (95%) than those without dental insurance (69%). This was similar to the trend observed in 2013.
- The proportion of dentate children aged 5–14 year who last visited a public dental practice tripled over the period 1994 to 2017–18, from 5% to 14%.

## **Visiting patterns**

Around 1 in 2 (44%) of dentate people aged 18 years and over had a favourable dental visiting pattern across both survey periods

- In 2017–18, more females (46%) aged 18 years and over had favourable dental visiting patterns than males (41%). This was similar to the trend observed in 2013.
- In 2017–18, more dentate adults aged 18 years and over ineligible for public dental care (47%) had favourable dental visiting patterns than those eligible for public dental care (33%). This was similar to the trend observed in 2013.
- Around 4 in 10 (37%) of dentate adults aged 18 years and over without dental insurance had unfavourable dental visiting patterns compared with around 1 in 10 (11%) of those with dental insurance. This was similar to the trend observed in 2013.
- The proportion of dentate adults aged 18 years and over who had favourable dental visiting patterns increased from 36% in 1999 to 44% in 2017–18.

Explore the National Dental Telephone Interview Survey data further in the three interactives here: Dental care – Interactive 9

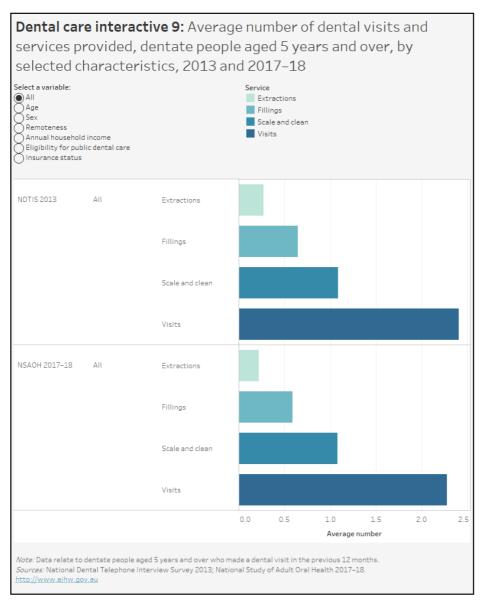
This figure shows the average number of dental visits and services provided for people aged 5 years and over, by selected characteristics. National data is presented for 2013 and 2017–18. In 2017-18, people aged 5 years and over made an average of 2.28 visits.

#### Dental care - Interactive 10

This figure shows the reason for last visit, practice type at last visit and visiting patterns, by selected characteristics. National data is presented for 2013 and 2017-18. In 2017-18, dental visiting varied by household income; people from low income households (<\$30,000) were more likely to visit for a problem (50.9%) whereas people from high income households (>\$140,000) were more likely to visit for a check-up (75.4%).

#### Dental care - Interactive 11

This figure shows the dental practitioner visiting trends for adults aged 18 years. National data is presented for 1999 to 2017-18. Between 1999 and 2017-18, the proportion of adults with favourable visiting patterns fluctuated but increased overall from 36.3% in 1999 to 43.6% in 2017-18.



See Data tables: Dental care for data tables.

## **Child Dental Benefits Schedule**

The Child Dental Benefits Schedule (CDBS) commenced on 1 January 2014 and provides access to benefits for basic dental services to around 3 million eligible children (DoHAC, 2023b). Basic dental services include examinations, x-rays, cleaning, fissure sealing, fillings, root canals and extractions. A child is eligible if they are aged between 0–17 years at any point in the calendar year, eligible for Medicare, and receive an eligible Australian Government payment. Eligible children have access to a benefit cap of \$1,052 over a two calendar year period (DoHAC, 2023b). The payment of benefits under the CDBS is administered through Services Australia.

In 2021, around 1 in 2 (46%) children aged 0–17 years were eligible to receive services under the CDBS.

The proportion of children aged 0–17 years eligible to receive services under the CDBS ranged from 58% in Tasmania to 29% in the Australian Capital Territory.

Nationally, just over one-third of eligible children utilised the CDBS between 2018 and 2021.

Utilisation of the CDBS by eligible children differs across the jurisidctions, with those in the Northern Territory, Western Australia and the Australian Capital Territory demonstrating lower utilisation rates than the national average.

In 2022, the Australian Government paid benefits of \$252.3 million in respect of 4.2 million dental services across Australia,

#### averaging \$60 in benefits per service.

#### In 2022:

- the average benefits paid per service ranged from \$41 for a diagnostic service to \$144 for a restorative service
- more diagnostic services (around 1.7 million) were provided than restorative services (around 399,000)
- the number of diagnostic examination services ranged from 2,109 per 100,000 population in the Northern Territory to 5,693 per 100,000 population in South Australia.

The COVID-19 pandemic has impacted every aspect of the Australian health system, including the provision of dental care services (refer to <u>Impact of COVID-19 on dental services</u> for more detail).

• In New South Wales, the number of Child Dental Benefits Schedule services fell to its lowest in April 2020 when COVID-19 restrictions were in place.

Explore the Child Dental Benefits Schedule data in the Dental care interactives below:

Dental care - Interactive 12

This figure shows the proportion of children eligible for services provided under the Child Dental Benefits Schedule in 2021. It also shows the proportion of eligible children utilising the Child Dental Benefits Schedule for each year between 2018 and 2021. National, state and territory data is presented.

Dental care - Interactive 13

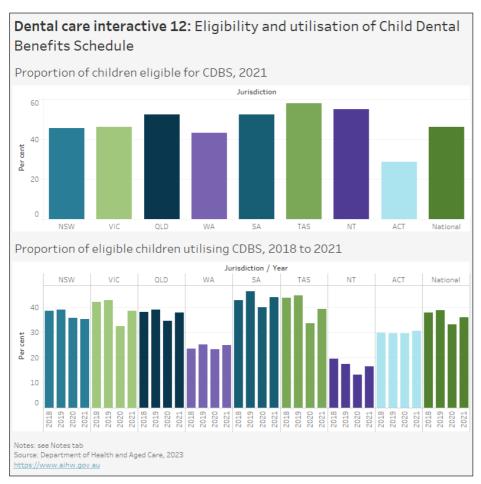
This figure shows the average benefit paid per service under the Child Dental Benefits Schedule (CDBS), by type of service and subgroup. National data is presented for 2014–2022. In 2022, the average benefit paid per service under the CDBS was \$60.

Dental care - Interactive 14

This figure shows the services and benefits per 100,000 population under the Child Dental Benefits Schedule, by type of service and sub-group. National, state and territory data is presented for 2014–2022.

Dental care - Interactive 15

This figure shows the impact of COVID-19 on the provision of Child Dental Benefits Schedule services. State and territory data is presented for 2018-2022.



See Data tables: Dental care for data tables.

#### **Public Dental Waiting Times**

The AIHW compiles, on an annual basis, data on waiting times for adults who were placed on selected public dental waiting lists to enable monitoring of those waiting times. These data requirements are defined in the Public Dental Waiting Times (PDWT) National Minimum Data Set (NMDS) specification.

In 2018, the AIHW reported data at a state and territory level for the first 4 years (2013–14 to 2016–17) of the data collection (AIHW 2018). However, due to concerns about the comparability of the data and availability of data for some jurisdictions, the report presents the data for each jurisdiction separately, with no national data tables or comparisons between jurisdictions.

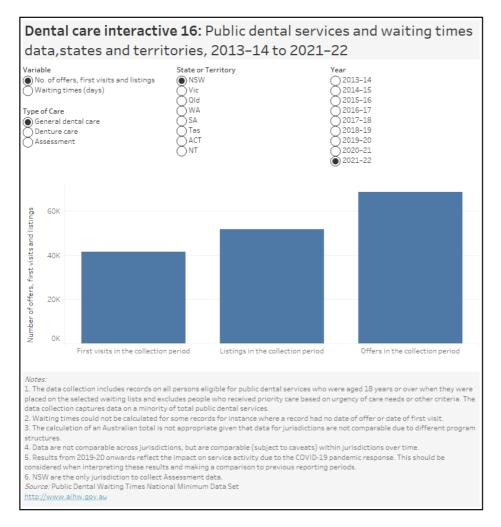
The report also examines the factors underlying the lack of comparability and availability of data – which is primarily related to the different organisation and administration of public dental waiting lists across jurisdictions.

Data from this report, and additional data for 2017–18 through to 2021–22, are presented in Dental care interactive 15 below. The data show that some people wait a considerable time before receiving care (or an offer of care).

Explore the data using the Dental care interactive 16 below.

### Dental care - Interactive 16

This figure shows the public dental services and waiting times data, by type of care. State and territory data is presented for 2013–14 to 2021–22.



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# Hospitalisations

Data in this chapter are sourced from the National Hospital Morbidity Database (NHMD), and provide information on hospitalisations associated with dental conditions. The NHMD is a collection of records from admitted patient data collection systems in Australian hospitals.

Dental services are classified according to the Australian Classification of Health Interventions (ACHI). ACHI is the Australian national standard for procedure and intervention coding in Australian hospitals.

Procedures data, that is, the count of procedures classified under ACHI Chapter 06 Dental services is presented in the Dental procedures section below. This data captures all procedures classified as a dental service, including that captured by the two measures described immediately below.

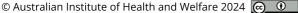
A further two measures of dental services provided in hospitals are also reported in this chapter:

- potentially preventable hospitalisations (PPHs) related to dental conditions.
- hospitalisations for dental procedures requiring general anaesthetic.

There is some overlap between these two indicators. Many PPHs will require a general anaesthetic. However, not all dental care provided under general anaesthetic is for potentially preventable care.

### Key terms

- Potentially preventable hospitalisations: dental conditions: hospitalisations for dental conditions that may not be preventable, but theoretically would not result in hospitalisation if adequate and timely care (usually non-hospital) was
- Procedure: A procedure is defined as a clinical intervention that is surgical in nature, carries a procedural risk, carries an anaesthetic risk, requires specialised training, and/or requires special facilities or equipment only available in an acute care setting. Procedures therefore encompass surgical procedures and also non-surgical investigative and therapeutic procedures.
- Separations: The total number of episodes of care for admitted patients, which can be the total hospital stays (from admission to discharge, transfer or death) or portions of hospital stays beginning or ending in a change of type care (for example, from acute to rehabilitation) that cease during a reference period. METEOR identifier: 270407.
- Separation rate: The total number of episodes of care for admitted patients divided by the total number of persons in the population under study. Often presented as a rate per 1,000 or 10,000 members of a population. Rates may be crude or standardised.







# Hospitalisations

Data presented within this section shows the number of procedures performed in both public and private Australian hospitals classified under ACHI Chapter 06 Dental services. Users can view the number of procedures in more detail by working down from the broad chapter level to more specific categories as illustrated below.

- ACHI Chapter—06 Dental services
  - o ACHI Sub-Chapter—0450-0490
    - ACHI Block number—Blocks 0450-0490

The procedures data is further disaggregated by age and sex of the patient.

#### In 2021–22, there were over 421,000 dental procedures performed in hospital

In 2021–22, the number of dental procedures performed was:

- higher for children aged 0–14 years than any other age group, around 226,000 procedures
- higher for males aged 0-14 years than for females aged 0-14 years, around 118,000 compared to around 107,000
- lower for adults aged 65+ years than any other age group, around 20,000 procedures

Explore the data further in Hospitalisations interactive 1.

This figure shows the number of dental procedures performed in hospital classified under ACHI Procedure Chapter 06 Dental Services between 2017–18 and 2021–22, by year, sex and age group. In 2021–22, there were 421,348 procedures performed that were classified under Procedure Chapter 06 Dental Services.



## In 2021–22, around 198,000 dental procedures performed in hospital were classified as oral surgery

# In 2021-22:

- children aged 0–14 years were more likely to receive a restorative dental procedure than any other type of dental procedure.
- Around 95,000 restorative dental procedures were performed on children aged 0-14 years, with males receiving around 51,000 procedures and females receiving around 45,000 procedures.
- $\bullet \ \ \text{Adults aged 15-24 years received more oral surgery than any other age group, around 76,000 procedures.}$

Explore the data further in Hospitalisations interactive 2.

This figure shows the number of dental procedures performed in hospital classified under ACHI Procedure Sub-Chapter between 2017–18 and 2021–22, by year, sex and age group. In 2021–22, there were 198,038 procedures performed that were classified under Procedure Sub-chapter 0457-0461 Oral surgery.



In 2021–22, the most common dental procedure performed was for the surgical removal of a tooth, with around 152,000 procedures performed

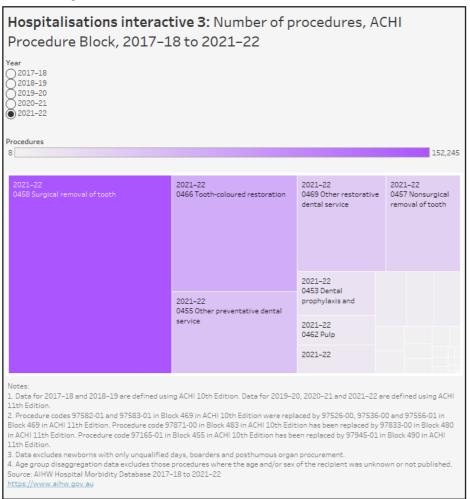
#### In 2021-22:

• The second most common dental procedure performed was for tooth-coloured restoration, with around 69,000 procedures performed.

• More tooth-coloured restoration procedures were performed on children aged 0-14 years than any other age group, around 55,000 procedures.

Explore the data further in Hospitalisations interactive 3.

This figure shows the number of dental procedures performed in hospital classified under ACHI Procedure Block between 2017–18 and 2021-22, by year, sex and age group. In 2021-22, there were 152,245 procedures performed that were classified under Procedure Block 0458 Surgical removal of tooth.



See Data tables: Hospitalisations for data tables.

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# Hospitalisations

Reducing the rates of potentially preventable hospitalisations (PPHs) due to dental conditions is one of the Key Performance Indicators of the National Oral Health Plan 2015–2024 (COAG Health Council 2015). Hospital separation rates for PPHs provide important information about the extent to which timely and adequate non-hospital dental care has been provided. The rate of PPHs for dental conditions is influenced by a number of factors including:

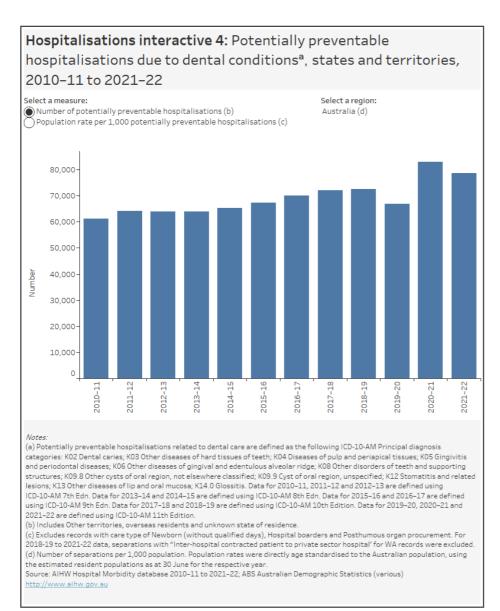
- adequacy of preventive and primary care services
- prevalence of severe dental disease in the community
- availability and accessibility of appropriate community and hospital-based services (COAG Health Council 2015).

In Australia, the age-standardised rate of potentially preventable hospitalisations due to dental conditions (per 1,000 population) remained relatively stable between 2010–11 and 2021–22, ranging from 2.6 to 3.2 per 1,000 population

- In 2021–22, the age-standardised rate of potentially preventable hospitalisations due to dental conditions (per 1,000 population) was highest in South Australia (4.2 per 1,000 population) and lowest in Victoria and the Northern Territory (both 2.5 per 1,000 population).
- In 2021–22, about 78,800 hospitalisations for dental conditions could potentially have been prevented with earlier treatment.

Explore the number or rate of potentially preventable hospitalisations due to dental conditions across Australia between 2010–11 and 2021–22 using the Hospitalisations interactive 4 below.

This figure shows the number and rate per 1,000 population of potentially preventable hospitalisations due to dental conditions, by selected characteristics. National data is presented by year, for 2016–17 through to 2021–22. In Australia, there were 3.1 per 1,000 population potentially preventable hospitalisations due to dental conditions in 2021–22.

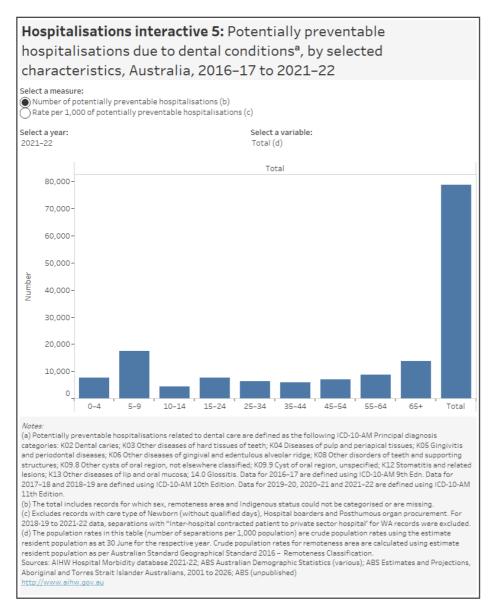


In 2021–22, the rate of potentially preventable hospitalisations due to dental conditions (per 1,000 population) was higher for Indigenous Australians (4.8 per 1,000 population) than for Other Australians (2.9 per 1,000 population)

- In 2021–22, the rate of potentially preventable hospitalisations due to dental conditions (per 1,000 population) was highest in those aged 5–9 years (10.8 per 1,000 population).
- In 2021–22, the rate of potentially preventable hospitalisations due to dental conditions (per 1,000 population) generally increased as remoteness increased, ranging from 2.9 per 1,000 population in *Major cities* to 4.0 per 1,000 population in *Very remote* areas.

Explore the number or rate of potentially preventable hospitalisations due to dental conditions by selected characteristics using the Hospitalisations interactive 5 below.

This figure shows the number and population rate per 1,000 of potentially preventable hospitalisations due to dental conditions. National, state and territory data is presented for 2010–11 to 2021–22. In Australia, there were 78,761 potentially preventable hospitalisations due to dental conditions in 2021–22.



The COVID-19 pandemic has impacted every aspect of the Australian health system, including the provision of dental care services (refer to <u>Impact of COVID-19 on dental services</u> for more detail).

The rate of potentially preventable hospitalisations due to dental conditions has fluctuated over time, from a low of 2.6 separations per 1,000 population in 2019–20, a year affected by COVID-19, to a high of 3.2 separations per 1,000 population in 2020-21.

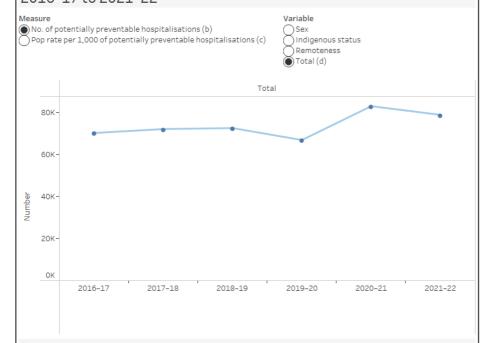
In 2021–22, the rate of potentially preventable hospitalisations due to dental conditions was 3.1 separations per 1,000 population

Between 2016–17 and 2021–22, the rate of potentially preventable hospitalisations due to dental conditions was consistently higher for:

- · females than males
- Indigenous Australians than Other Australians
- those living in *Very remote* areas than those living in *Major cities*.

Explore the trend of potentially preventable hospitalisations due to dental conditions using the Hospitalisations interactive 6 below. This figure shows the number and age-standardised rate of hospital separations for potentially preventable hospitalisations due to dental conditions, by selected characteristics. The rate of potentially preventable hospitalisations fluctuated over the period from 2016-17 to 2021-22, from a low of 2.6 per 1,000 population in 2019-20 to a high of 3.2 per 1,000 population in 2020-21.

Hospitalisations interactive 6: Number and age-standardised rate of hospital separations for potentially preventable hospitalisations due to dental conditionsa, by sex, remoteness, indigenous status, 2016-17 to 2021-22



(a) Potentially preventable hospitalisations related to dental care are defined as the following ICD-10-AM Principal diagnosis categories: K02 Dental caries; K03 Other diseases of hard tissues of teeth; K04 Diseases of pulp and periapical tissues; K05 Gingivitis and periodontal diseases; K06 Other diseases of gingival and edentulous alveolar ridge; K08 Other disorders of teeth and supporting structures; K09.8 Other cysts of oral region, not elsewhere classified; K09.9 Cyst of oral region, unspecified; K12 Stomatitis and related lesions; K13 Other diseases of lip and oral mucosa; 14.0 Glossitis. Data for 2016-17 are defined using ICD-10-AM 9th Edn. Data for 2017-18 and 2018-19 are defined using ICD-10-AM 10th Edition. Data for 2019-20, 2020-21 and 2021-22 are defined using ICD-10-AM 11th Edition

(b) The total includes records for which sex, remoteness area and Indigenous status could not be categorised or are missing (c) Excludes records with care type of Newborn (without qualified days), Hospital boarders and Posthumous organ procurement. For 2018-19 to 2021-22 data, separations with "Inter-hospital contracted patient to private sector hospital' for WA records were excluded. (d) The population rates in this table (number of separations per 1,000 population) are age standardised population rates using the estimate resident population as at 30 June for the respective year. Population rates for remoteness area are calculated using estimate resident population as per Australian Standard Geographical Standard 2016 – Remoteness Classification.

Sources: AIHW Hospital Morbidity database 2016–17 to 2021-22; ABS Australian Demographic Statistics (various); ABS Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 2001 to 2026; ABS (unpublished).

See <u>Data tables: Hospitalisations</u> for data tables.

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# Hospitalisations

Some Australians receive dental care under general anaesthesia, usually due to the severity of the disease or other medical, physical or behavioural complications. Dental care under general anaesthetic carries an additional risk and is resource intensive.

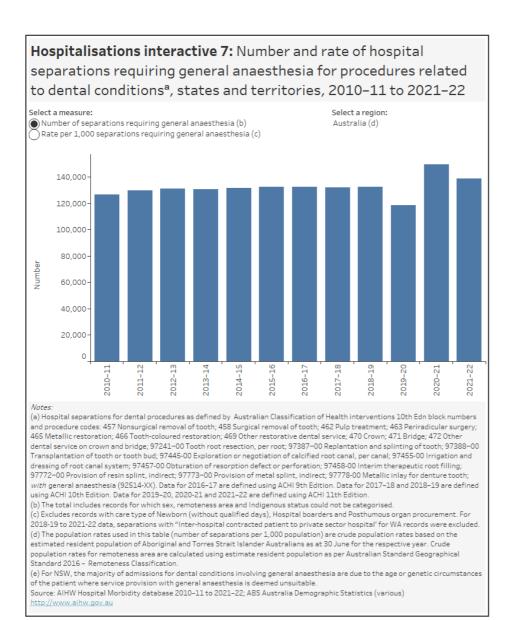
In Australia, the age-standardised rate of hospital separations for dental conditions requiring general anaesthetic has remained relatively stable between 2010–11 and 2021–22, ranging from a low of 4.9 per 1,000 population in 2019–20, a year affected by COVID-19, to a high of 6.1 per 1,000 population in 2020–21. The rate in all other years remained relatively stable ranging from 5.5 per 1,000 population to 5.9 per 1,000 population.

In 2021–22, the rate of hospital separations for dental conditions requiring general anaesthetic was 5.7 per 1,000 population

- In 2021–22, the age-standardised rate of hospital separations for dental conditions requiring general anaesthetic (per 1,000 population) was highest in Western Australia (7.9 per 1,000 population) and lowest in the Northern Territory (2.9 per 1,000 population).
- In 2021–22, there were around 139,000 separations requiring general anaesthetic for procedures related to dental conditions.

Explore the number or rate of hospital separations for dental procedures requiring general anaesthetic across Australia between 2010–11 and 2021–22 using the Hospitalisations interactive 7 below.

This figure shows the number and rate of hospital separations requiring general anaesthesia for procedures related to dental conditions. National, state and territory data is presented for 2010–11 to 2021–22. In Australia, there were 138,932 hospital separations requiring general anaesthesia for procedures related to dental conditions in 2021–22.

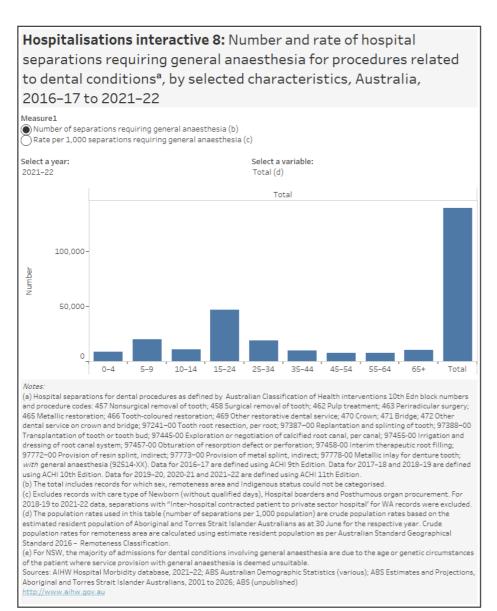


In 2021–22, the rate of hospital separations for dental procedures requiring general anaesthetic (per 1,000 population) was highest in those aged 15–24 years (15.0 per 1,000 population)

- In 2021–22, the rate of hospital separations for dental procedures requiring general anaesthetic (per 1,000 population) was lower in males (5.0 per 1,000 population) than females (5.8 per 1,000 population).
- In 2021–22, the rate of hospital separations for dental procedures requiring general anaesthetic (per 1,000 population) was lower in *Very remote* areas (4.3 per 1,000 population) than any other area.

Explore the number or rate of hospital separations for dental procedures requiring general anaesthetic by selected characteristics using the Hospitalisations interactive 8 below.

This figure shows the number and rate of hospital separations requiring general anaesthesia for procedures related to dental conditions, by selected characteristics. National data is presented for each year, for 2016–17 through to 2021–22. In Australia, there were 5.4 per 1,000 population hospital separations requiring general anaesthesia for procedures related to dental conditions in 2021–22.



The COVID-19 pandemic has impacted every aspect of the Australian health system, including the provision of dental care services (refer to <u>Impact of COVID-19 on dental services</u> for more detail).

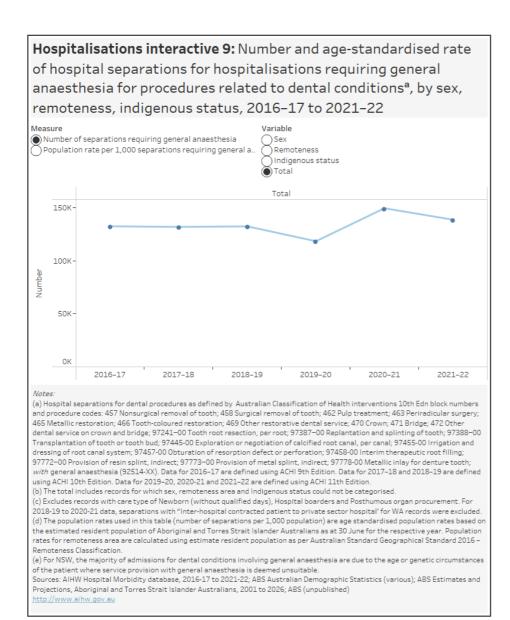
The rate of hospital separations for dental procedures requiring general anaesthetic has fluctuated over time, from a low of 4.9 separations per 1,000 population in 2019–20, a year affected by COVID-19, to a high of 6.1 separations per 1,000 population in 2020-

In 2021–22, the rate of hospitalisations for dental procedures requiring general anaesthetic was 5.7 per 1,000 population

Between 2016–17 and 2021–22, the rate of hospital separations for dental procedures requiring general anaesthetic was consistently higher for:

- · females than males
- Other Australians than Indigenous Australians
- those living in *Major cities* than those living in *Very remote* areas.

Explore the trend of potentially preventable hospitalisations due to dental conditions using the Hospitalisations interactive 9 below. This figure shows the number and rate of hospital separations requiring general anaesthesia for procedures related to dental conditions, by sex, remoteness and indigenous status. National data is presented for each year, for 2016–17 through to 2021–22. The rate of hospital separations requiring general anaesthesia fluctuated over the period from 2016-17 to 2021-22, from a low of 4.9 per 1,000 population in 2019–20 to a high of 6.1 per 1,000 population in 2020-21.



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ABS 2019. Australian Demographic Statistics, December 2018. ABS cat no. 3101.0. Canberra: ABS

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# **Prescribing**

The Commonwealth government subsidises the cost of prescription medicines through two separate schemes, the Pharmaceutical Benefits Scheme (PBS) and the Repatriation Pharmaceutical Benefits Scheme (RPBS) for eligible war veterans and their dependants. Medicines available under the PBS/RPBS and conditions of prescribing are listed in the Schedule of Pharmaceutical Benefits.

Most of the listed medicines are prescribed by doctors, but other health professionals such as dentists are also eligible to prescribe. Dentists are not able to prescribe general PBS items but have a separate Dental Schedule from which they can prescribe dental care medicines for their patients (Department of Health 2022a).

The following <u>PBS/RPBS data</u> relate to dental prescriptions, categorised by the Anatomical Therapeutic Chemical (ATC) Classification System as listed in the PBS Schedule.

It is important to highlight that some medications (such as codeine with paracetamol and ibuprofen) were also available over the counter before 2017. Therefore data for these medicines will be incomplete as over the counter sales are not captured in the PBS/RPBS data. Also, people may be prescribed medications for dental conditions by other health professionals (e.g. GPs) that are not captured under the Dental Schedule.

## **Key terms**

- Pharmaceutical Benefits Scheme (PBS): A national, government-funded scheme that subsidises the cost of a wide range of pharmaceutical drugs for all Australians to help them afford standard medications. The Schedule of Pharmaceutical Benefits lists all the medicinal products available under the PBS and explains the uses for which they can be subsidised.
- **Repatriation Pharmaceutical Benefits Scheme (RPBS):** An Australian government scheme, subsidised by the Department of Veterans' Affairs (DVA), that provides a range of pharmaceuticals and wound dressings at a concessional rate for the treatment of eligible veterans, war widows and widowers and their dependants.
- **Dental prescriptions:** Dental care medicines listed on the Dental Schedule of Pharmaceutical Benefits that have been prescribed by dentists for their patients and supplied by pharmacies.
- ATC: The Anatomical Therapeutic Chemical (ATC) Classification System is used for the classification of active ingredients of drugs according to the organ or system on which they act and their therapeutic, pharmacological and chemical properties.
- The 15 most dispensed dental prescriptions are categorised by ATC as follows:
  - **J01:** Antibacterials for systemic use: amoxicillin, amoxicillin with clavulanic acid, cephalexin, clindamycin, erythromycin, metronidazole and phenoxymethylpenicillin.
  - M01: Antiinflammatory and antirheumatic products: diclofenac, ibuprofen, naproxen.
  - **A01:** Stomatological Preparations: amphotericin B.
  - **N02:** Analgesics: codeine with paracetamol, oxycodone, tramadol.
  - **N05:** Psycholeptics: diazepam.

## Number of dental prescriptions dispensed

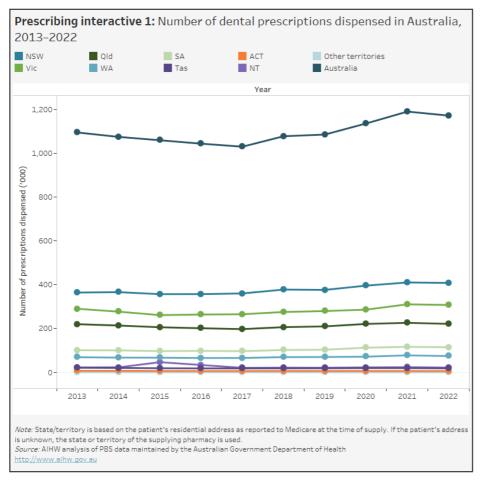
Over 1 million dental prescriptions were dispensed in Australia each year (2013–2022)

- Around 1.2 million dental prescriptions were dispensed in 2022.
- The number of dental prescriptions dispensed in Australia each year remains relatively stable, ranging from a low of about 1.0 million in 2017, to a high of about 1.2 million in 2021.

Explore the data using the Prescribing interactive 1 below.

Prescribing – Interactive 1

This figure shows the number of dental prescriptions dispensed in Australia. National, state and territory data is presented for 2013 to 2021. In Australia, there were 1,191,071 dental prescriptions dispensed in 2021.



## Most commonly dispensed dental prescriptions

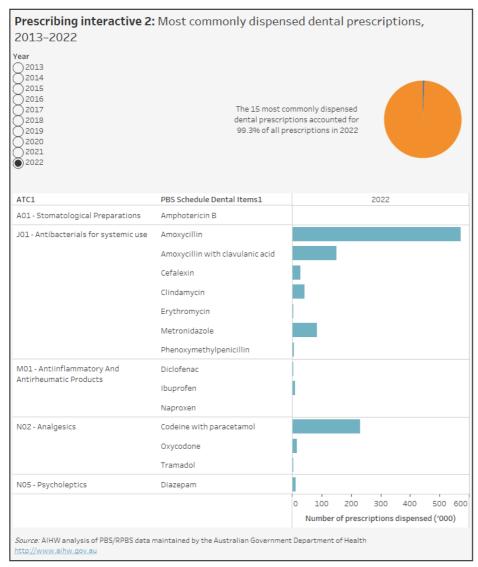
The 15 most commonly dispensed medicines accounted for 99% of all dental prescriptions dispensed in 2022

- Amoxycillin was the most commonly dispensed medicine during the period 2013–2022, accounting for around half of all dental items dispensed each year.
- Amoxycillin was dispensed just under 572,000 times in Australia in 2022.
- The second most commonly dispensed medicine during the period 2013–2022 was codeine with paracetamol, accounting for around one-fifth of dental items dispensed in 2021.
- Codeine with paracetamol was dispensed around 230,000 times in Australia in 2022.

Explore the data using the Prescribing interactive 2 below.

Prescribing – Interactive 2

This figure shows the fifteen most commonly dispensed dental prescriptions. National data is presented for 2013 to 2021. In Australia, the most commonly dispensed dental prescription was Amoxycillin, accounting for 48% of all dental items dispensed in 2021.



The number of dental prescriptions dispensed for oxycodone has increased approximately five-fold over the last 10 years, from around 3,200 in 2013 to 15,900 in 2022

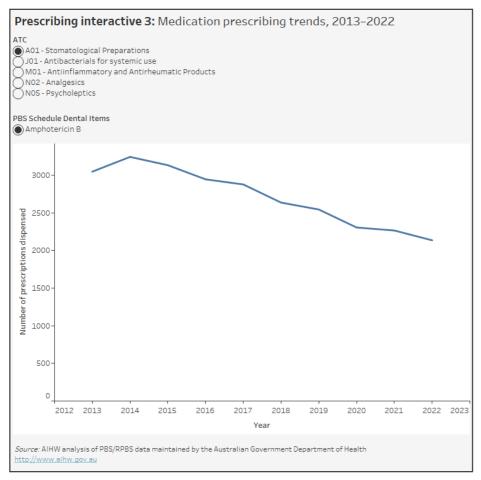
Between 2013 and 2022, the number of dental prescriptions dispensed has:

- doubled for amoxycillin with clavulanic acid, from around 74,500 in 2013 to around 150,000 in 2022
- steadily decreased for erythromycin, from around 15,600 in 2013 to around 4,200 in 2022
- steadily increased for diazepam from around 7,100 in 2013 to 12,600 in 2022.

Explore the data using the Prescribing interactive 3 below.

Prescribing – Interactive 3

This figure shows the characteristics of patients dispensed dental prescriptions, by sex, age and patient category. National data is presented for 2013 to 2022. In 2022, 50% of patients dispensed dental prescriptions were female.



This figure shows the number and rate of hospital separations requiring general anaesthesia for procedures related to dental conditions, by sex, remoteness and indigenous status. National data is presented for each year, for 2016–17 through to 2021–22. The rate of hospital separations requiring general anaesthesia fluctuated over the period from 2016-17 to 2021-22, from a low of 4.9 per 1,000 population in 2019–20 to a high of 6.1 per 1,000 population in 2020-21.

Visualisation not available for printing

## Characteristics of patients dispensed dental prescriptions

Most dental prescriptions were dispensed to females (2013–2022)

• In 2022, more dental prescriptions were dispensed to females (around 590,000 or 50%) than males (around 532,000 or 45%). The sex was missing for around 50,700 or 4.3% of dental prescriptions dispensed.

Around one-third of all dental prescriptions were dispensed to patients aged 45-64 years (2013-2022)

In 2022, the number of dental prescriptions dispensed to patients was:

- highest for those aged 45–64 years (around 393,000 or 34%)
- lowest for those aged 0-4 years (around 3,000 or 0.3%).

PBS patients fall into two broad categories: general and concessional. Concessional patients include Pensioner Concession Card holders, Commonwealth Seniors Health Card holders, Health Care Cared holders and DVA Pension Card holders. General patients do not hold any of the aforementioned cards. RPBS (or repatriation) patients hold DVA White, Gold or Orange Cards (Department of Health 2022b).

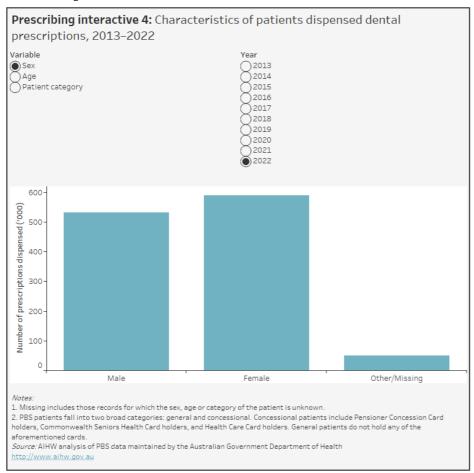
The majority of dental prescriptions were dispensed to general patients (2013–2022) rather than concessional or repatriation

#### patients

• In 2022, around 410,000 (35%) dental prescriptions were dispensed to concessional patients and around 754,000 (64%) dental prescriptions were dispensed to general patients.

Explore the data using the Prescribing interactive 4 below. Prescribing – Interactive 4

This figure shows the impact of COVID-19 restrictions on the number of dental prescriptions dispensed in Australia. Data is presented for 2017 through to 2022.



See <u>Data tables: Prescribing</u> for data tables.

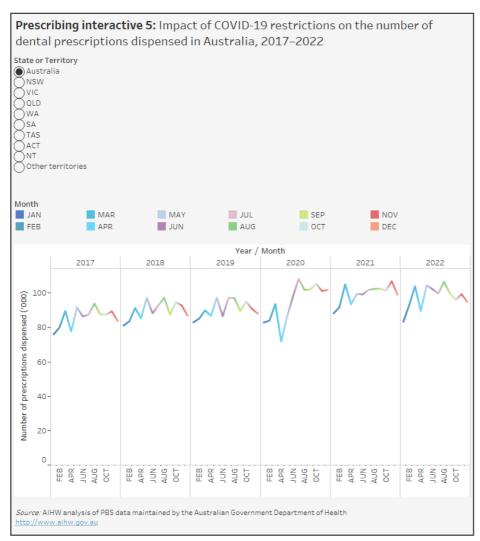
## Impact of COVID-19 restrictions on dental prescribing

The COVID-19 pandemic has impacted every aspect of the Australian health system, including the provision of dental care services (refer to <u>Impact of COVID-19 on dental services</u> for more detail).

## COVID-19 pandemic restrictions had an impact on the number of dental prescriptions dispensed

- Around 72,000 dental prescriptions were dispensed in April 2020, as compared to the April average of around 83,000 between 2013-2019.
- In July 2020, once COVID-19 restrictions eased, the number of dental prescriptions dispensed increased to just over 108,000, the highest in any month since 2017 and in 2021 and 2022.
- In 2022, the number of dental prescriptions dispensed returned to levels slightly above that before the COVID-19 pandemic.

Explore the data using the Prescribing interactive 5 below.



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# **Patient experience**

Data presented in this section were sourced from the Australian Bureau of Statistics (ABS) Patient Experience Survey (ABS Patient Experience Survey, various). Patient experience surveys obtain patients' views and observations on aspects of health care services they have received. This includes their views on the accessibility of services and the physical environment, and aspects of the patient-clinician interaction.

This kind of information can be very useful for health services and others who are interested in driving continuous improvement in health services. Australia's National Oral Health Plan 2015–2024 (COAG 2015) is underpinned by four guiding principles, including that services be accessible to all who need them, with respect for individuals needs and views.

#### Key terms

- **Dental professional:** Includes dentists, dental hygienists and dental specialists such as periodontists, orthodontists and oral and maxillofacial surgeons.
- Index of Relative Socio-economic Disadvantage: This is one of four Socio-Economic Indexes for Areas (SEIFAs) complied by the ABS following each Census of Population and Housing. This index summarises attributes such as low income, low educational attainment, unemployment, jobs in relatively unskilled occupations and dwellings without motor vehicles. The first (or lowest) quintile refers to the most disadvantaged areas, while the fifth (or highest) quintile refers to the least disadvantaged areas.
- Long term health condition: A condition that has lasted or is likely to last six months or more.
- Self-assessed health: A person's impression of their own health against a five-point scale from excellent through to poor.

#### Use of dental services

In 2021–22, around 1 in 2 (49%) Australians aged 15 years and over reported seeing a dental professional in the last 12 months

• The proportion of adults aged 15 years and over who saw a dental professional in the last 12 months remained relatively stable throughout the period 2011–12 to 2021–22, at around half of all adults.

In 2021-22:

- more females (53%) than males (46%) saw a dental professional
- people who self-assessed their health as fair/poor (46%) were less likely to have seen a dental professional than those who self-assessed their health as excellent/very good/good (50%)
- people living in areas of least socio-economic disadvantage (59%) were more likely to have seen a dental professional than those living in areas of most disadvantage (38%)
- people living in *Major cities* (51%) were more likely to have seen a dental professional than those living in *Inner regional* (45%) areas or *Outer regional, Remote and very remote* areas (43%).

Explore the data using the Patient experience interactive 1 below.

Patient experience - Interactive 1

This figure shows the use of dental services in the last 12 months, by selected characteristics. National data is presented for 2021–22. This figure also shows the use of dental services in the last 12 months, by year. National data is presented for 2011–12 to 2021–22. In 2021–22, 49.4% of people used dental services in the last 12 months.

See <u>Data tables</u>: <u>Patient experience</u> for data tables

## **Need for dental services**

Each year, around 6 in 10 Australians aged 15 years and over reported needing to see a dental professional in the last 12 months (2011–12 to 2021–22)

In 2021–22, 60% of Australians aged 15 years and over reported that they needed to see a dental professional in the last 12 months. Most people who needed to, saw a dental professional (83%), with nearly half of those seeing a dental professional 2 or more times (45%).

Explore the data using the Patient experience interactive 2 below.

Patient experience – Interactive 2

This figure shows the need for dental services in the last 12 months. National data is presented for 2011–12 to 2021–22. In Australia, 59.6% of people needed to see a dental professional in 2021–22. Of those who needed to see a dental professional, 83% saw a dental professional in 2021–22.

See Data tables: Patient experience for data tables.

In 2021–22, females (64%) were more likely than males (55%) to have reported needing to see a dental professional in the last 12 months

#### In 2021-22:

- people aged 55-64 years (64%) were more likely to have needed to see a dental professional than any other age group
- people living in *Major cities* (61%) were more likely to have needed to see a dental professional than those living in *Inner regional* (57%) and *Outer regional, Remote and very remote* areas (55%)
- people living in areas of least disadvantage (68%) were more likely to have needed to see a dental professional than those living in areas of most disadvantage (52%)
- people with long-term health conditions (63%) were more likely to have needed to see a dental professional than those without long-term health conditions (56%).

Explore the data using the Patient experience interactive 3 below.

Patient experience - Interactive 3

This figure shows the proportion of adults aged 15 years and over who either needed or did not need to see a dental professional in the last 12 months, by selected characteristics. National data is presented for 2017–18 to 2021–22. In 2021–22, 55.1% of males and 64% of females needed to see a dental professional in the last 12 months.

See <u>Data tables: Patient experience</u> for data tables.

In 2021–22, people living in areas of most disadvantage (22%) were more likely to report that they needed to see a dental professional but did not than those living in areas of least disadvantage (10%)

#### In 2021-22:

- people aged 25-34 years (24%) were more likely to have needed to but not seen a dental professional than any other age group
- people living in *Major cities* (84%) were more likely to have needed to and have seen a dental professional than those living in *Inner regional* (80%) and *Outer regional*, *Remote and very remote* (77%) areas.
- people who self-assessed their health as excellent/very good/good (84%) were more likely to have needed to and seen a dental professional than those who self-assessed their health as fair/poor (77%).

Explore the data using the Patient experience interactive 4 below.

Patient experience - Interactive 4

This figure shows the proportion of adults aged 15 years and over who needed to and either saw or did not see a dental professional in the last 12 months, by selected characteristics. National data is presented for 2017–18 to 2021–22. In 2021–22, 83% of people who needed to saw a dental professional in the last 12 months.

See <u>Data tables: Patient experience</u> for data tables.

## **Experience of dental services**

In 2021–22, around 9 in 10 (90%) adults aged 15 years and over thought their dental professional always showed respect

Adults aged 15 years and over were asked about their experience with dental professionals who they had seen in the last 12 months. In 2021–22:

- around 9 in 10 (90%) thought their dental professional always spent enough time with them
- most thought their dental professional always listened carefully (87%)
- around 1 in 10 (10%) received public dental care

• around 1 in 6 (16%) delayed or did not see a dental professional when needed due to cost.

Explore the data using the Patient experience interactive 5 below.

Patient experience - Interactive 5

This figure shows the experiences of adults aged 15 years and over who needed to and saw a dental professional in the last 12 months, by selected characteristics. National data is presented for 2017–18 to 2021–22. In 2021–22, 34% of females and 31% of males at least once delayed seeing or did not see a dental professional when needed.

See <u>Data tables: Patient experience</u> for data tables.

## Impact of COVID-19 on dental visiting

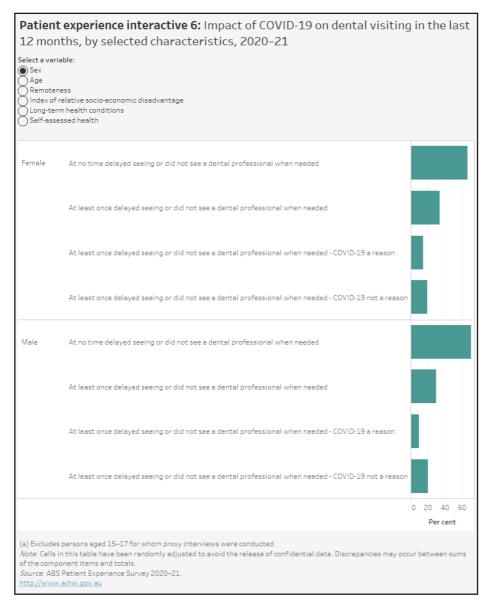
The COVID-19 pandemic has impacted every aspect of the Australian health system, including the provision of dental care services (refer to <a href="Impact of COVID-19">Impact of COVID-19</a> on dental services for more detail).

In 2020–21, around 1 in 8 (12%) adults aged 15 years and over delayed seeing or did not see a dental professional at least once in the last 12 months due to COVID-19

In 2020–21, the proportion of adults aged 15 years and over who delayed seeing or did not see a dental professional in the last 12 months due to COVID-19 was:

- higher for females (14%) than males (9.4%)
- higher for those people living in *Major cities* (13%) than those living in *Inner regional* (9.8%) or *Outer regional*, *remote or very remote* areas (7.4%)
- higher for those who self-assessed their health as fair/poor (15%) than those who self-assessed their health as excellent/very good/good (12%)
- higher for those people with a long-term health condition (14%) than those without a long-term health condition (11%). Patient experience Interactive 6

This figure shows the impact of COVID-19 on dental visiting in the last 12 months, by selected characteristics. National data for 2020-21 is presented. In 2020-21, 12.2 of adults aged 15 years and over at least once delayed seeing or did not see a dental professional due to COVID-19.



See <u>Data tables: Patient experience</u> for data tables.

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#### Costs

Many Australians face financial barriers in accessing dental services (COAG 2015). Overall, individuals directly fund a significant proportion of total expenditure on dental services, 59% in 2020–21 (AIHW 2022).

#### **Key terms**

- Household: from ABS Explanatory Notes
- **Constant prices:** Constant price expenditure adjusts current prices for the effects of inflation—that is, it aims to remove the effects of changes in prices over time. Constant prices are used to present dental expenditure estimates in the Expenditure section, unless otherwise indicated. Constant price estimates are based on 2021–22 prices.
- **Dental services:** Services that registered dental practitioners provide. These include oral and maxillofacial surgery items, orthodontic, pedodontic and periodontic services, cleft lip and palate services, dental assessment and other dental items listed in the MBS. The term covers dental services funded by health funds, state and territory governments and also individuals' out-of-pocket payments.

#### **Expenditure**

Dental services expenditure data presented in this section are derived from the AIHW Health Expenditure Database. It is important to note that the COVID-19 pandemic affected every aspect of the health system in 2019–20 and in the years following.

Overall, \$11.1 billion was spent on dental services in 2020-21

- Recurrent expenditure on dental services in Australia is estimated to be \$11.1 billion for 2020-21, up from \$8.8 billion in 2010-11.
- Between 2010-11 and 2020-21 total expenditure on dental services increased at an average annual growth rate of 2.4%.
- Total expenditure on dental services increased from \$9.7 billion in 2019-20 to \$11.1 billion in 2020-21.

#### In 2020–21, per capita expenditure on dental services was \$432

- Per capita expenditure on dental services steadily increased overall from \$395 in 2010–11 to \$432 in 2020–21.
- Total expenditure on dental services per capita decreased from \$432 in 2018–19 to \$382 in 2019–20 and increased again to \$432 in 2020–21.

# **Government expenditure**

- Australian Government expenditure on dental services fluctuated over the decade to 2020-21, from a high of \$1.8 billion in 2011–12 to a low of \$1.2 billion in 2019-2020 with expenditure remaining relatively stable between 2014-15 and 2020-21 at around \$1.3 billion. Across the period, expenditure declined at an average annual rate of 1.6%.
- Overall, state and territory government expenditure on dental services grew at an average annual rate of 0.7%. Expenditure fluctuated over the decade; ranging from lowest expenses of \$711 million in 2012–13 to highest expenses of \$946 million in 2020–21.
- Between 2010–11 and 2020–21, Australian Government per capita expenditure on dental services fluctuated between \$49 in 2019-2020 and \$82 in 2011-2012, declining overall at an average annual rate of 3.0%.
- State/territory and local government per capita expenditure fluctuated during the period 2010–11 to 2020–21, ranging from \$31 in 2012–13 to \$40 in 2010–11. Across the period, expenditure declined at an average annual rate of 0.8%.

#### Non-government expenditure

- Non-government expenditure on dental services increased steadily overall, from \$6.3 billion in 2010–11 to \$8.8 billion in 2020–21. This represented an average annual growth rate of 3.4%.
- Total non-government expenditure on dental services decreased from \$7.6 billion in 2019–20 to \$8.8 billion in 2020–21.
- Expenditure on dental services by individuals accounted for the majority of non-government expenditure, increasing from \$5.0 billion in 2010–11 to \$6.5 billion in 2020–21 at an average annual growth rate of 2.6%.

- Health insurance funds expenditure on dental services increased at an average annual growth rate of 6.2%, from \$1.2 billion in 2010–11 to \$2.2 billion in 2020–21.
- Per capita expenditure on dental services by the non-government sector increased from \$284 in 2010–11 to \$343 in 2020–21. Across the period, per capita expenditure grew at an average annual rate of 1.9%.

Explore the data using Costs interactives 1 and 2 below.

Costs - Interactive 1

This figure shows the total dental expenditure, by sources of funds. National data is presented for 2010–11 to 2020–21. In Australia, the total dental expenditure from all sources was around \$11 billion in 2020–21.

Costs - Interactive 2

This figure shows the expenditure on dental services per capita, by source of funds. National data is presented for 2010–11 to 2020–21. In Australia, the total dental expenditure per capita was \$432 in 2020–21. See <u>Data tables: Costs</u> for data tables.

#### Household expenditure

Data presented in this section was sourced from the 2003–04, 2009–10 and 2015–16 Australian Bureau of Statistics (ABS) Household Expenditure Survey (HES) (ABS 2006; ABS 2011; ABS 2017). The ABS HES collects information on household expenditure patterns using variables such as income levels, sources, employment, family kinship, age and geographic location, to help provide a better understanding on living standards and economic wellbeing of Australians.

#### On average, Australians spent \$7.62 per week on dental fees in 2015–16

- In 2015–16, Australians spent an average of \$7.62 per week on dental fees, compared to \$5.74 in 2003–04 and \$7.23 in 2009–10.
- Residents of the Australian Capital Territory spent an average of \$13.73 per week on dental fees in 2015–16, more than any other jurisdiction.
- In 2015–16, South Australian residents spent an average of \$5.88 per week on dental fees, less than any other jurisdiction.

Explore the data using the Costs interactive 3 below.

Costs – Interactive 3

This figure shows the average weekly household expenditure on dental fees. National, state and territory data is presented for 2003–04, 2009–10 and 2015–16. In Australia, the average weekly household expenditure on dental fees was \$7.62 in 2015–16. See <u>Data tables</u>: Costs for data tables.

#### **Barriers**

Data in this section were sourced from the National Study of Adult Oral Health 2017–18. Respondents were asked a range of questions relating to the cost of dental care.

#### People who avoided or delayed visiting a dentist due to cost

Around 4 in 10 (39%) of people aged 15 years and over avoided or delayed visiting a dentist due to cost

- Females had higher rates of avoidance due to cost than males, 43% compared to 35%.
- Indigenous Australians (49%) had higher rates of avoidance due to cost than non-Indigenous Australians (39%).
- People with insurance had lower rates of avoidance due to cost than those without insurance, 26% and 52% respectively.
- People who usually visit the dentist for a problem (58%) were more than twice as likely than those who usually visit for a check-up (27%) to avoid or delay visiting a dentist due to cost.

## People who reported that cost prevented recommended dental treatment

Around 1 in 4 (23%) dentate adults aged 15 years and over who visited a dentist in the last 12 months reported that cost prevented recommended dental treatment

- Adults aged 35-54 years were the most likely to not receive recommended dental treatment due to cost, 29%
- People without insurance (30%) were more likely to report that cost prevented recommended dental treatment than those with insurance (18%).

• People who usually visit the dentist for a problem (44%) reported higher rates of cost preventing recommended dental treatment than those who usually visit for a check-up (16%).

#### People who stated they would have a lot of difficulty paying for a basic preventive visit

Around one-quarter (24%) of adults aged 15 years and over stated they would have difficulty paying a \$200 dental bill

- The proportion of females (28%) reporting difficulty paying for a basic preventive visit was greater than the proportion of males (20%).
- Indigenous Australians (40%) were more likely than non-Indigenous Australians (24%) to report difficulty paying a \$200 dental bill.
- A lower proportion of people with a degree or higher (15%) reported they would have difficulty paying for a basic preventive visit than those with other or no qualifications (27%).
- More than twice as many people without insurance (33%) stated they would have difficulty paying for a basic preventive visit than those with insurance (15%).
- Around twice as many people eligible for public dental care (39%) stated they would have difficulty paying for a basic preventive visit than those ineligible for public dental care (18%).

#### **Cost trends**

The proportion of dentate adults aged 15 years and over who avoided or delayed dental care due to cost increased from 31% in 2004–06 to 39% in 2017–18

 Adults aged 25–34 were more likely to avoid or delay dental care in both 2004–06 and 2017–18 than any other age group, 43% and 50% respectively.

The proportion of dentate adults aged 15 years and over who reported the cost of dental care was a large financial burden was similar in 2004–06 and 2017–18, 14% and 13% respectively

• There was a significant decrease in the proportion of dentate adults aged 35–44 who reported the cost of dental care was a large financial burden between 2004–06 and 2017–18, 16% and 12% respectively.

Explore the data using the Costs interactives 4 and 5 below.

Costs – Interactive 4

This figure shows the financial barriers to dental care by selected characteristics. Measures include the proportion of people who avoided or delayed dental care due to cost, the proportion of people who reported cost prevented recommended dental treatment and the proportion of people who would have difficulty paying a \$200 dental bill. National data is presented for 2017–18. In 2017–18, 38.8% of people avoided or delayed dental care due to cost.

Costs - Interactive 5

This figure shows the financial barriers to dental care trends for adults aged 15 years and over, by age. Measures include the proportion of adults who avoided or delayed dental care due to cost and the proportion of adults who reported the cost of dental care was a large financial burden. National data is presented for 2004–06 and 2017–18. In 2017–18, the cost of dental visits caused a large financial burden for 12.5% of adults.

See Data tables: Costs for data tables.

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# Disease expenditure

## Area of spending

The areas of spending in disease expenditure analysis include:

- hospital services: \$87.9 billion (public and private admitted patient services, public hospital emergency departments and public hospital outpatient clinics)
- primary health care services: \$39.7 billion (general practitioner services, allied health services, pharmaceuticals and dental)
- referred medical services: \$12.8 billion (include specialist services, medical imaging and pathology (AIHW 2022).

In 2019-20, total dental expenditure was \$9.5 billion, 6.8% of the total \$140 billion allocated disease expenditure (AIHW 2022).

Explore the data further in <u>Disease expenditure table 1:</u>

#### **Key terms**

- **Dental caries:** A disease process that can lead to cavities (small holes) in the tooth structure that compromise both the structure and the health of the tooth, commonly known as tooth decay.
- **Periodontal disease:** Inflammation of the gums and other tissues that attach to and anchor teeth to the jaws, caused by a bacterial infection

#### Disease expenditure

Dental disease expenditure data presented in this section are derived from the AIHW Health Expenditure Database. Expenditure is estimated by Australian Burden of Disease Study (ABDS) condition, age group and sex for:

- Public hospital admitted patients
- Public hospital emergency departments
- · Public hospital outpatients
- Private hospital services
- Primary health care (general practitioners services, allied health and other services, pharmaceutical benefits scheme and dental expenditure)
- Referred medical service (specialist services, pathology and medical imaging).

All sources of funding, including patient co-payments, are included in expenditure estimates. Dental expenditure is not currently able to be reported by age and sex, except when provided through the MBS or as part of a public or private hospital admission (AIHW 2022).

The total expenditure on *oral disorders* was \$7.8 billion in 2019-20, accounting for 5.54% of spending in all areas of expenditure (hospitals, primary health care, referred medical services).

In 2019-20:

- Dental expenditure, within the primary health care broad area of expenditure, accounts for most of the spending on *oral disorders*, \$7.0 billion.
- *Oral disorders* spent in areas other than dental expenditure (\$0.8 billion) expenditure was highest for age groups 15-19 years (\$80.2 million), 20-24 years (\$76.7 million) and 5-9 years (\$55.3 million).
- Expenditure was \$4.5 billion for dental caries, \$2.5 billion for other oral disorders, and \$756 million for periodontal disease
- *Dental caries* (\$4.5 billion) had the second highest expenditure among ABDS-listed conditions (excluding all 'other' conditions within groups) behind *falls* (\$4.7 billion)

Explore the data using the interactives below.

Disease expenditure interactive 1

This figure shows the oral disorders expenditure by area of expenditure, sex and age. National data is presented for 2019–20.

Disease expenditure interactive 2

This figure shows the health expenditure by burden of disease condition and sex. National data is presented for 2019–20. See <u>Data tables</u>: <u>Disease expenditure</u> for data tables

#### **Expenditure in hospitals**

Hospital services include public and private admitted patient services, public hospital emergency departments and public hospital outpatient clinics.

- Expenditure in hospitals on oral disorders was \$639 million in 2019-20, accounting for 0.73% of total hospital expenditure.
- In 2019-20, \$438 million was spent in hospitals on *other oral disorders*. This spending included \$208 million in private hospital services.

#### **Expenditure in primary health care**

Primary health care services include general practitioner services, allied health services, pharmaceuticals and dental.

- Expenditure in primary health care on *oral disorders* was \$7.1 billion in 2019-20. As a disease group, *Oral disorders* accounted for the highest proportion of total spending on primary health care (17.9%) more than any other disease group.
- In 2019-20, \$4.3 billion dollars was spent on *dental caries* in primary health care. The vast majority of this spending was in dental primary care services (\$4.25 billion).

#### **Expenditure in referred medical services**

Referred medical services include specialist services, medical imaging and pathology.

- Expenditure in referred medical services on *oral disorders* was \$26 million in 2019-20, accounting for 0.2% of total expenditure in referred medical services.
- In 2019-20, \$24 million was spent on referred medical services for *other oral disorders*. Medical imaging accounted for \$10 million of this spending.

Explore the data using the interactive below.

Disease expenditure interactive 3

This figure shows the expenditure on oral disorders by area of expenditure and sex. National data is presented for 2019–20. See <u>Data tables</u>: <u>Disease expenditure</u> for data tables

#### Health system spending per case of disease

Total spending across the health system on a particular disease or condition group is one measure of the financial burden due to disease and ill health. However, this does not give an indication of the relative number of people experiencing disease, or the amount spent on treating a single case. Total health spending for a condition may be high because treatments are expensive, or because the number of cases in the community is high (AIHW 2022a).

The expenditure estimates used to derive the spending per case estimates come from <u>Disease expenditure in Australia 2018-19</u> along with the Australian Burden of Disease Study prevalence estimates for 2018, and include spending on public and private hospitals, PBS pharmaceuticals, MBS services, and dental. This does not include some spending through private providers or the aged care system (AIHW 2022a).

In 2018-19:

- The average health system spending per case for all oral disorders was \$315.
- Health system spending per case due to dental caries was higher for males (\$41) than females (\$38).
- Health system spending per case due to periodontal disease was higher for females (\$12) than males (\$9).
- The average health system spending per case for lip and oral cavity cancer was \$23,618
- · Health system spending per case for lip and oral cavity cancer was \$23,707 for females and \$21,755 for males.

Explore the data using the interactive below.

Disease expenditure interactive 4

This figure shows the estimates of health system spending per case, by condition and sex. National data is presented for 2018–19. See <u>Data tables</u>: <u>Disease expenditure</u> for data tables

# Health system spending for certain risk factors

Health risk factors are attributes, characteristics or exposures that increase the likelihood of a person developing a disease or health disorder. In many cases, individuals can modify risk factors such as tobacco smoking or alcohol use and they are distinct from other types of risk factors, such as genetic pre-dispositions. Expenditure due to modifiable risk factors in this report refers to health system spending on a burden of disease condition that can be attributed to people having a particular risk factor e.g. history of smoking (AIHW 2022a).

In 2018-19:

- \$31.2 million (42%) of health system spending on lip and oral cavity cancer could be attributed to tobacco use as a risk factor.
- \$20.2 million (27%) of health system spending on lip and oral cavity cancer could be attributed to alcohol use as a risk factor.

Explore data further in <u>Disease expenditure table 2</u>

#### References

Australian Institute of Health and Welfare (2022) Disease expenditure in Australia 2019-20, AIHW, Australian Government, accessed 25 January 2023.

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# Private health insurance

In Australia, individuals or families can purchase private health insurance to cover all or part of the cost of health care not covered by Medicare.

Private health insurance cover is generally divided into hospital cover, general treatment cover and ambulance cover. General treatment cover provides insurance against costs of treatment by ancillary health service providers, including dentists. The extent of cover depends on the type of policy purchased.

#### Key terms

- Dentate: Having one or more natural teeth.
- Edentulous: A state of complete loss of all natural teeth.
- **Constant prices:** Constant price expenditure adjusts current prices for the effects of inflation over time. Constant price expenditure is in 2020–21 prices.

# Private health insurance cover for dental expenses

Data in this section were sourced from the National Dental Telephone Interview Survey (NDTIS) 2013 (AIHW 2016) and the NDTIS component of the National Study of Adult Oral Health 2017–18 (ARCPOH unpublished). This section reports the proportion of Australians who held private health insurance cover for dental expenses at the time of the surveys.

In both survey periods, around 1 in 2 people aged 5 years and over had some level of private health insurance cover for dental expenses

In 2017–18, the proportion of people aged 5 years and over with some level of private health insurance cover for dental expenses was:

- higher for children aged 5–14 (55%) than adults aged 65 years and over (46%)
- higher for dentate people (53%) than edentulous people (22%).

These trends were similar to those observed in 2013.

Explore the data using the Private health insurance interactive 1 below.

Private health insurance – Interactive 1:

This figure shows the proportion of people aged 5 years and over with private health insurance cover for dental expenses, by dental status. National data is presented for 2013. In Australia, 49.7% of people aged 5 years and over had private health insurance cover for dental expenses in 2013.

See <u>Data tables</u>: <u>Private health insurance</u> for data tables

In 2017–18, more dentate people living in *Major cities* (56%) had some level of private health insurance cover for dental expense than those living in any other area

In 2017–18, the proportion of dentate people aged 5 years and over with some level of private health insurance cover for dental expenses:

- was similar for males (51%) and females (54%)
- higher for those ineligible for public dental care (61%) than those eligible for public dental care (32%)
- increased as annual household income increased, from 30% for those earning less than \$30,000 per year to 83% for those earning over \$140,000 per year.

These trends were similar to those observed in 2013.

Explore the data using the Private health insurance interactive 2 below.

Private health insurance – Interactive 2

This figure shows the proportion of people aged 5 years and over with private health insurance cover for dental expenses, by selected characteristics. National data is presented for 2013 and 2017-18. In Australia, 51.1% of males and 54.3% of females aged 5 years and over had private health insurance cover for dental expenses in 2017-18.

See <u>Data tables</u>: <u>Private health insurance</u> for data tables.

In 2017–18, around 3 in 4 (76%) adults aged 18 years and over reported that their insurance paid some of the dental expenses of their last visit

Also in 2017-18:

- Around 1 in 8 (12%) adults aged 18 years and over reported that their insurance paid all the dental expenses of their last visit.
- Around 1 in 11 (8.8%) adults aged 18 years and over reported they paid all their own dental expenses of their last visit.

In 2017–18, around 1 in 5 (19%) of insured adults aged 18 years and over who paid all their own dental expenses reported that dental care caused a large financial burden

Also in 2017-18:

- Around 1 in 10 (9.7%) insured adults aged 18 years and over whose dental expenses were paid for by the Government reported that dental care caused a large financial burden.
- Around 1 in 10 (9.6%) insured adults aged 18 years and over whose insurance paid some of the dental expenses reported that dental care caused a large financial burden.

Explore the data using the Private health insurance interactive 3 below.

Private health insurance – Interactive 3

This figure shows the use of private health insurance cover for dental expenses for adults aged 18 years and over, by source of payment. National data is presented for 2013 and 2017-18. In 2017-18, 75.7% of adults reported that both their health insurance paid some and they paid some of their dental expenses.

See <u>Data tables</u>: <u>Private health insurance</u> for data tables.

#### Health expenditure by private health insurance funds

In 2020–21, 12.6 million Australians (49%) were covered by a general treatment policy (excluding ambulance only cover) (APRA 2022) and dental services accounted for \$2.2 billion (12%) of expenditure by private health insurance funds (AIHW 2022).

Net benefits paid by private health insurance funds for dental services increased from \$1.9 billion in 2019–20 to \$2.2 billion in 2020–21

Explore the data using the Private health insurance interactive 4 below.

Private health insurance - Interactive 4

This figure shows the expenditure by private health insurance funds on dental services. National data is presented for 2017–18 to 2020–21. In 2020–21, private health insurance funds paid around \$2.2 billion in net benefits.

See <u>Data tables</u>: Private health insurance for data tables.

#### Private health insurers data

The General Treatment Dental (GT-Dental) data collection contains de-identified unit record information relating to patients and general treatment dental services for which the private health insurer paid a benefit. This information is reported to the Commonwealth Department of Health and Aged Care by private health insurers (Department of Health and Aged Care, 2023).

In 2021–22, across Australia the median charge, benefit and gap for a diagnostic comprehensive oral examination was \$60, \$45 and \$14, respectively

In 2021-22, across Australia:

- the median charge, benefit and gap for a preventative service involving the removal of plaque and/or stain was \$61, \$40 and \$19, respectively
- the median charge, benefit and gap for a restorative service involving the adhesive restoration of one surface of an anterior tooth was \$150, \$74 and \$74, respectively
- the median charge, benefit and gap for the removal of a tooth or part(s) thereof was \$180, \$87 and \$95, respectively

• the median charge, benefit and gap for a full crown was \$1600, \$650 and \$903, respectively

Explore the data using Private health insurance interactive 5 below:

Private health insurance - Interactive 5

This figure shows the charge to patient, the benefit paid and the gap for private dental services in Australia, by median (50th percentile) and 90th percentiles, by service type and by procedure type. National, state and territory data is presented for 2010–11 to 2021–22. In 2021–22, the median charge in Australia for a comprehensive oral examination was \$60.

See Data tables: Private health insurance for data tables.

In 2021–22, the charge for a diagnostic comprehensive oral examination ranged from \$30 to \$115, the benefit ranged from \$17 to \$75 and the gap ranged from \$0 to \$75 across Australia

In 2021–22, across Australia:

- the charge for a preventative service involving the removal of plaque and/or stain ranged from \$23 to \$129, the benefit ranged from \$14 to \$80 and the gap ranged from \$0 to \$88
- the charge for a restorative service involving the adhesive restoration of one surface of an anterior tooth ranged from \$50 to \$290, the benefit ranged from \$25 to \$156 and the gap ranged from \$0 to \$221
- the charge for the removal of a tooth or part(s) thereof ranged from \$67 to \$420, the benefit ranged from \$28 to \$207 and the gap ranged from \$0 to \$337
- the charge for a full crown ranged from \$800 to \$2,750, the benefit ranged from \$63 to \$1,375 and the gap ranged from \$62 to \$2,200.

Explore the data using Private health insurance interactive 6 below:

Private health insurance - Interactive 6

This figure shows the range (percentiles) of charge to patient, the benefit paid and the gap for private dental services, by category and procedure. National data is presented for 2010–11 to 2021–22. In 2021–22, the charge for a diagnostic comprehensive oral examination ranged from \$30 to \$115, the benefit ranged from \$17 to \$75 and the gap ranged from \$0 to \$75 across Australia. See <u>Data tables: Private health insurance</u> for data tables

In 2021–22, more dental services for which the private health insurer paid a benefit were provided to females (around 18.4 million) than males (around 15.0 million)

In 2021-22:

- most dental services for which the private health insurer paid a benefit were provided to those aged 55–59 years, around 2.5 million services
- around 1.4 million services were provided to females aged 35–39 years compared with around 1.1 million services provided to males of the same age.

Explore the data using Private health insurance interactive 7 below:

Private health insurance – Interactive 7

This figure shows the number of private dental services, by age group and sex. National, state and territory data is presented for 2010–11 to 2021–22. In 2021–22, more dental services for which the private health insurer paid a benefit were provided to females (around 18.4 million) than males (around 15 million).

See <u>Data tables</u>: Private health insurance for data tables.

#### References

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Department of Health and Aged care 2023. <u>GT-Dental data specification – Insurer to department – 2022–23 | Australian Government</u> <u>Department of Health and Aged Care - external site opens in new window.</u> Viewed 1 February 2023

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# **Dental workforce**

All dental practitioners must be registered with the Australian Health Practitioner Regulation Agency (AHPRA) to practise in Australia. There is a range of different types of registration to match different levels of training and experience. Most dental practitioners have general registration. General registration divisions include dentists, dental prosthetists, dental hygienists, oral health therapists and dental therapists. Dentists may also qualify and be eligible for specialist registration. There are 13 approved dental specialities in Australia (Dental Board of Australia 2018).

Data presented in this section were sourced from the National Health Workforce Dataset (NHWDS).

#### Key terms

**Full-time equivalent (FTE) rate:** The FTE rate (number of FTE dental practitioners per 100,000 population) is a measure of supply. By defining supply in terms of the FTE rate, meaningful comparisons of supply can be made across geographic areas and over time.

#### Size and distribution of the dental workforce

Data on the size and distribution of the dental workforce is required to understand the current dental workforce and its capacity to meet the community's needs for prevention and treatment of oral disease.

The number of all registered dental practitioners in Australia has increased from 20,469 in 2013 to 24,626 in 2020

- The number of registered dentists in Australia has increased from 15,479 in 2013 to 18,383 in 2020.
- Around 9 in 10 of all dental practitioners registered in 2020 were employed in their field.
- The proportion of dentists employed in their field has remained relatively stable, ranging from 89% in 2013 to 91.4% in 2019 with a slight reduction to 91.1% in 2020.

Explore the data using the Dental workforce interactive 1 below.

Dental workforce - Interactive 1:

This figure shows the number and per cent of dental practitioners registered and employed, by practitioner type. National data is presented for 2013 to 2020. In 2020, there were 18,383 dentists registered in Australia.

See <u>Data tables: Dental workforce</u> for data tables.

In 2020, the number of FTE dentists in Australia was 57.9 per 100,000 population, which is a slight reduction from 58.7 per 100,000 population in 2019.

#### In 2020:

- Across jurisdictions, the Australian Capital Territory had the highest FTE rate of dentists (67.4), Tasmania had the highest FTE rate of dental prosthetists (7.8), South Australia had the highest FTE rate of dental hygienists (11.9) and oral health therapists (10.5) and Western Australia had the highest FTE rate of dental therapists (6.7).
- Across remoteness areas, *Major cities* had the highest FTE rate of dentists (63.8), dental hygienists (4.9) and oral health therapists (7.4). *Inner regional* areas had the highest FTE rate of dental prosthetists (5.4) and *Remote and very remote areas* had the highest FTE rate of dental therapists (3.7).
- The FTE rate of dentists ranged from 32.9 in the Northern Territory to 67.4 in the Australian Capital Territory.
- The FTE rate of dentists ranged from 26.3 in Remote and very remote areas to 63.8 in Major cities.

#### Over time:

- The FTE rate of dentists in Australia ranged from 55.5 in 2013 to 58.7 in 2019 with a reduction to 57.9 in 2020.
- The FTE rate of oral health therapists in Australia has steadily increased from 3.2 in 2013 to 6.9 in 2020.

Explore the data using the Dental workforce interactive 2 below.

Dental workforce - Interactive 2:

This figure shows the full time equivalent dental practitioners per 100,000 population, by practitioner type and remoteness. National, state and territory data is presented for 2013 to 2020. In 2020, the number of full time equivalent dentists was 57.9 per 100,000 population in Australia.

See <u>Data tables: Dental workforce</u> for data tables.

*Major cities* had the highest FTE rate of dentists employed in the private sector (52.1 per 100,000 population) whilst *Remote and very remote* areas had the highest FTE rate of dentists employed in the public sector (9.5) in 2020.

In 2020, the Australian Capital Territory had the highest FTE rate of dentists employed in the private sector (54.5) and Victoria had the lowest FTE rate of dentists employed in the public sector (4.1) whilst the Northern Territory had the lowest FTE rate of dentists employed in the private sector (20.7) and the highest FTE rate of dentists employed in the public sector (9.8).

Explore the data using the Dental workforce interactive 3 below.

Dental workforce - Interactive 3:

This figure shows the full time equivalent dentists per 100,000 population employed in the public and private sectors. National, state and territory data is presented for 2013 to 2020. In Australia, the FTE rate of dentists employed in the public sector was 5.4 per 100,000 population as compared to 46.9 per 100,000 dentists employed in the private sector in 2020.

#### **Characteristics of employed dentists**

See <u>Data tables: Dental workforce</u> for data tables.

Data presented in this section focuses on the characteristics of dentists employed in Australia.

In 2020, around 4 in 10 (44%) employed dentists were female

In 2020:

- Around 5 in 10 employed dentists worked part-time (49.8%).
- 1 in 5 were aged 30 years and less (19%).
- Around 1 in 4 employed dentists obtained their initial qualification in countries other than Australia and New Zealand (25%).

Explore the data using the Dental workforce interactive 4 below.

Dental workforce - Interactive 4:

This figure shows the proportion of employed dentists, by selected characteristics. National data is presented for 2013 to 2020. In 2020, 49.8% of employed dentists were part-time and 43.2% were female.

See <u>Data tables</u>: <u>Dental workforce</u> for data tables.

#### In 2020, dentists employed in Australia predominantly worked in private practices

- In 2020, the majority of dentists worked in group private practices (9,111) or solo private practices (4,373) accounting for 83% of all employed dentists in Australia. This trend was similar across all jurisdictions except for NT where 56% were private clinics and 21% were public clinics.
- In 2020, 787 (4.9%) dentists worked in public clinics in Australia.

Explore the data using the Dental workforce interactive 5 below.

Dental workforce - Interactive 5:

This figure shows the number of dentists, by main employment setting. National, state and territory data is presented for 2020. In Australia, 9,111 dentists were employed in group private practice.

See <u>Data tables: Dental workforce</u> for data tables.

#### **Dental specialists**

There are 13 approved dental specialties in Australia. All specialists must hold a qualification in the specialty and meet all the requirements for general registration as a dentist (Dental Board of Australia 2018).

In 2020, around 1 in 10 (9.8%) employed dentists were specialists

In 2020:

- The largest group of dental specialists in Australia were orthodontists (560) equivalent to 35.2% of all dental specialists.
- Around 3 in 4 (70.4%) dental specialists in Australia were male.

Explore the data using the Dental workforce interactive 6 below.

Dental workforce - Interactive 6:

This figure shows the number of dental specialists employed, by sex and area of specialty. National data is presented for 2020. In 2020, the largest group of dental specialists in Australia were orthodontists (560).

See <u>Data tables</u>: <u>Dental workforce</u> for data tables.

#### References

Dental Board of Australia 2018. Melbourne: Australian Health Practitioner Regulation Agency - external site opens in new window. Viewed 18 December 2018.

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# **Priority populations**

The goal of Australia's National Oral Health Plan 2015–2024 - external site opens in new window (NOHP) is 'to improve health and wellbeing across the Australian population by improving oral health status and reducing the burden of poor oral health' (CoAG 2015).

The NOHP outlines guiding principles that underpin Australia's oral health system and provides national strategic direction including targeted strategies in six foundation areas and across four priority populations.

The priority populations highlight the groups that experience the most significant barriers to accessing oral health care and the greatest burden of oral disease (Table 1).

Table 1: Australia's National Oral Health Plan 2015–2024 priority populations

#### **Priority populations**

- 1. People who are socially disadvantaged or on low incomes
- 2. Aboriginal and Torres Strait Islander people
- 3. People living in regional and remote Australia
- 4. People with additional and/or specialised health care needs

#### References

CoAG (Council of Australian Governments) Health Council 2015. Healthy mouths, healthy lives: Australia's National Oral Health Plan 2015-2024. Adelaide: South Australian Dental Service.

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# **Priority populations**

This group has historically been identified as those on a low income and/or receiving some form of government income assistance, but now extends to include people experiencing other forms of disadvantage including refugees, homeless people, some people from culturally and linguistically diverse backgrounds, and people in institutions or correctional facilities (COAG 2015). Poorer oral health results from infrequent dental care. Barriers include cost, appropriateness of service delivery and lower levels of health literacy, including oral health (COAG 2015).

#### From the scientific literature

Immigrants experience oral health care inequity: findings from Australia's National Study of Adult Oral Health (Jamieson et al, 2022)

The data used was collected from 15,727 participants using the Australia's national Study of Oral Health (NSAOH) 2017-2018. The study aimed to assess the equity in access to services and patterns of use of oral health services among the Australian-born and overseasborn populations. The study also looked at whether there were any additional differences based on the main language spoken at home.

In 2017–18, people who spoke a language other than English were more likely to go to a public dental service (23%) than those who spoke English (17%).

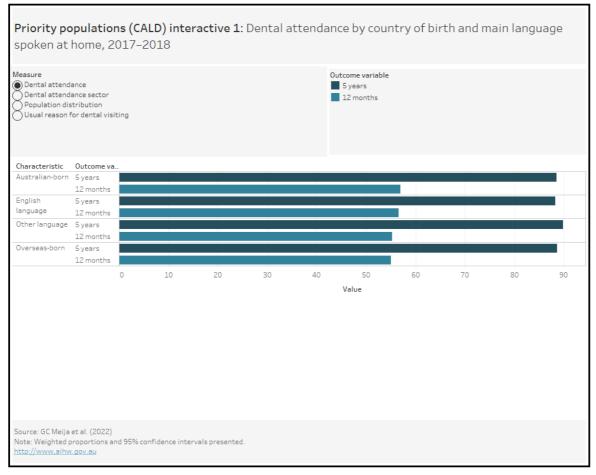
#### In 2017-18:

- A similar proportion of those people who mainly speak English at home visited a dental practitioner in the last 12 months as those who mainly spoke another language, 57% and 55% respectively.
- Around 1 in 10 (11%) people either born in Australia or born overseas had not visited a dental practitioner in the last 5 years.
- Most people (63%) usually visited a dental practitioner for a check-up rather than for a problem irrespective of main language spoken at home.

Explore the data using the priority population interactive 1 below.

Priority populations (People who are socially disadvantaged or on low incomes) – Interactive 1

The figure shows dental attendance by country of birth and main language spoken at home. In 2017-2018, 57% of those people born in Australia and 55% of those people born overseas visited a dental practitioner in the last 12 months.



See <u>Data tables: People who are socially disadvantaged or on low incomes</u> for data tables.

In 2017–18, those born in Australia who mainly spoke a language other than English at home were most likely to have a dental visit in the last 12 months (69%)

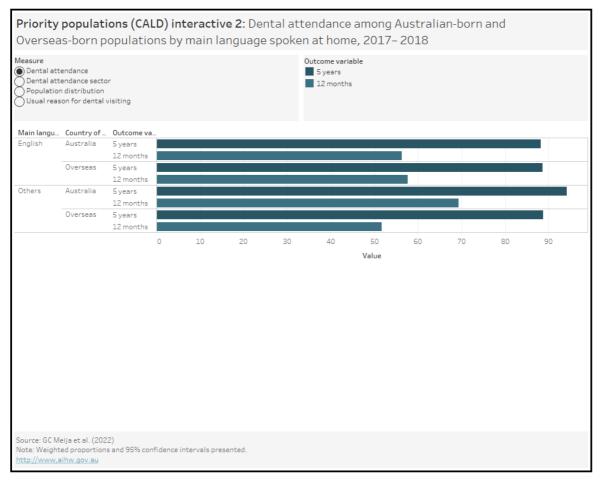
# In 2017-18:

- More people who were born in Australia who mainly spoke a language other than English at home had visited a dental practitioner in the last 12 months than those born in Australia who mainly spoke English at home, 69% and 56% respectively.
- 1 in 4 (24%) people born overseas who mainly spoke a language other than English at home visited a public dental service compared to 1 in 6 (16%) people born overseas who mainly spoke English at home.
- More people who were born in Australia who mainly spoke a language other than English at home usually visited a dental practitioner for a check-up (77%) than those born in Australia who mainly spoke English at home (63%).

Explore the data using the priority population interactive 2 below.

Priority populations (People who are socially disadvantaged or on low incomes) – Interactive 2

This figure shows dental attendance among Australian-born and Overseas-born populations by main language spoken at home. In 2017–18, around 7 in 10 (69%) of those people born in Australia who speak mainly speak a language other than English at home has visited a dental practitioner in the last 12 months.



See <u>Data tables: People who are socially disadvantaged or on low incomes</u> for data tables.

In 2017–18, people who were born overseas and mainly spoke a language other than English at home were most likely to have needed dental care but avoided due to costs (42%)

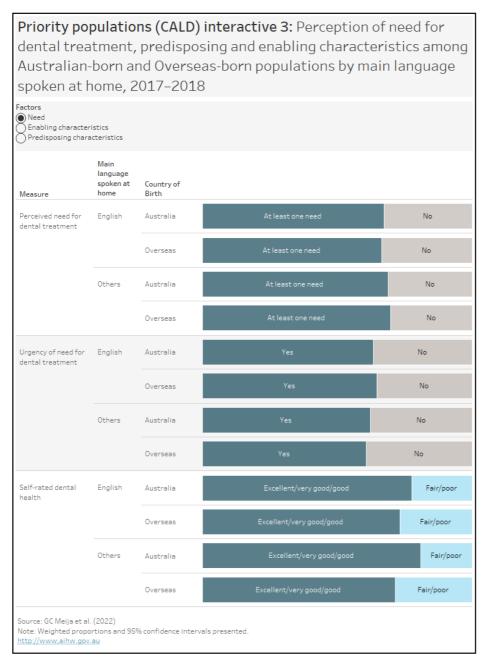
# In 2017-18:

- A greater proportion of those people born overseas who mainly spoke a language other than English at home avoided or delayed visiting a dental practitioner due to cost (49%) than those born overseas who mainly spoke English at home (38%).
- Cost prevented recommended dental treatment for around 1 in 3 (32%) people born overseas who mainly spoke a language other than English at home compared to around 1 in 5 (21%) people born in Australian who mainly spoke English at home.

Explore the data using the priority population interactive 3 below.

Priority populations (People who are socially disadvantaged or on low incomes) – Interactive  ${\bf 3}$ 

This figure shows the perception of need for dental treatment, enabling and predisposing characteristics among Australian-born and Overseas-born populations by main language spoken at home. Around 7 in 10 (69%) of people born overseas who mainly speak a language other than English at home reported having at least one dental need.



See <u>Data tables: People who are socially disadvantaged or on low incomes</u> for data tables.

#### The health of Australia's prisoners 2018

People in contact with the criminal justice system often come from socioeconomically disadvantaged backgrounds (AIHW 2019).

People in prison have higher rates of tobacco smoking and high-risk alcohol consumption than the general population (AIHW 2015) which are behaviours that are known to increase the risk of oral disease (AIHW 2020).

The health of Australia's prisoners 2018 presents the results of the 5<sup>th</sup> National Prisoner Health Data Collection (NPHDC) in Australia. The NPHDC is the main source of national data about the health of people in prison in Australia. Data for the NPHDC were collected in 2-week periods in all states and territories, except New South Wales.

During the 2-week NPHDC data collection period, one-quarter (25%) of prison discharges said they had been diagnosed with a dental condition at some stage in their lives.

Similar to general practice in the community, prison clinics provide primary health care to people in custody. A visit to the prison clinic may be initiated by the patient (person in custody) or by clinic staff. During the 2-week NPHDC data collection period just over one-quarter (28%) of clinic visits were initiated by the patient. Patients were more likely to initiate clinic visits for dental conditions (70%) whilst clinicians were more likely to initiate clinic visits for pathology (83%).

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# **Priority populations**

Many Aboriginal and Torres Strait Islander people experience poor oral health such as multiple caries and untreated dental disease, and are less likely to have received preventive dental care (AHMAC 2017). The oral health status of Indigenous Australians, like all Australians, is influenced by many factors (see <a href="What contributes to poor oral health?">What contributes to poor oral health?</a>) and a tendency towards unfavourable (refer to Key terms below) dental visiting patterns, broadly associated with accessibility, cost and a lack of cultural awareness by some service providers (COAG 2015; NACDH 2012).

#### **Key terms**

- **Deciduous teeth:** Primary or 'baby' teeth that erupt (that is, become visible in the mouth) during infancy. A child usually has 20 deciduous teeth.
- **Permanent teeth:** Secondary or 'adult' teeth that start to erupt at around 6 years of age. A person usually has 32 permanent teeth.
- **Dental caries:** A disease process that can lead to cavities (small holes) in the tooth structure that compromise both the structure and the health of the tooth, commonly known as tooth decay.
- The dmfs and DMFS score: A score that counts the number of tooth surfaces that are decayed (d), missing due to caries (m) or filled because of caries (f)— 'dmfs' refers to deciduous teeth, 'DMFS' refers to permanent teeth. Each tooth was divided into five surfaces and each surface decayed or filled was counted, but each missing tooth was counted as three surfaces. Untreated decay was defined as a cavity in the surface enamel caused by the caries process, a missing surface if the tooth had been extracted because of decay and a filled surface when the filling had been placed due to decay.
- Favourable dental visiting pattern: Visiting a dentist once or more a year (usually for a check-up) and having a usual dental provider.
- **Unfavourable dental visiting pattern:** Visiting less than once every two years (usually for a problem), or visiting once every two years (usually for a problem) and without a regular dental provider.
- Intermediate dental visiting pattern: Visiting classified as neither favourable or unfavourable.

## Aboriginal and Torres Strait Islander Health Performance Framework 2020 web report

Since 2006, Aboriginal and Torres Strait Islander Health Performance Framework (HPF) reports have provided information about Indigenous Australians' health outcomes, key drivers of health and the performance of the health system. The HPF was designed, in consultation with Aboriginal and Torres Strait Islander stakeholder groups, to promote accountability, inform policy and research, and foster informed debate about Indigenous Australians' health.

The <u>Aboriginal and Torres Strait Islander Health Performance Framework 2020 web report - external site opens in new window</u> reports on 68 measures across three domains (tiers). Measure <u>1.11 Oral health - external site opens in new window</u> in *Tier 1—Health status and outcomes* describes the oral health of Aboriginal and Torres Strait Islander people. Data from the 2018–19 National Aboriginal and Torres Strait Islander Health Survey shows that:

- 58% of Aboriginal and Torres Strait Islander children aged 0-14 had seen a dentist in the last 12 months
- an estimated 19% of Indigenous Australians reported that they did not go to a dentist when they needed to in the previous 12 months. Reasons included: cost (42%), too busy (24%), disliking service or professional, or feeling embarrassed or afraid (22%) and waiting time too long or not available at time required (15%)
- 6% of Indigenous Australians aged 15 and over were reported to have complete tooth loss and 45% had lost at least one tooth.

# Oral health outreach services for Aboriginal and Torres Strait Islander children in the Northern Territory, July 2012 to December 2022

Oral health is an important component of overall health and quality of life. Poor oral health can affect adults and children alike, causing pain, embarrassment, and even social marginalisation. For children, the effects can be long term, and carry through to adulthood.

Aboriginal and Torres Strait Islander (First Nations) children are more likely than non-Indigenous children to experience tooth decay. Several factors contribute towards the poorer oral health of First Nations children, including social disadvantage and lack of access to appropriate diet and dental services.

Since 2007, the Australian Government has helped fund oral health services for First Nations children aged under 16 in the Northern Territory. The Northern Territory Remote Aboriginal Investment Oral Health Program (NTRAI OHP) complements the Northern Territory Government Child Oral Health Program, by providing preventive (application of full-mouth fluoride varnish and fissure sealants) and clinical (tooth extractions, diagnostics, restorations and examinations) services.

The <u>Oral health outreach services for Aboriginal and Torres Strait Islander children in the Northern Territory, July 2012 to December 2022</u> presents data from the NTRAI OHP (AIHW 2023).

How many First Nations children received services in the NTRAI OHP?

In 2022, full-mouth fluoride varnish services, fissure sealant applications and clinical service visits were provided to First Nations children in the Northern Territory under the NTRAI OHP. Of those children:

- 5,338 children received 6,603 full-mouth fluoride varnish services, an increase of 181 services from 2021
- 1,236 children received fissure sealant applications to 5,498 teeth during 1,346 services, an increase of 237 teeth from 2021
- 4,774 children received clinical services during 7,505 visits—such as dental assessments, fillings, extractions, or preventive services—more than twice as many visits as in 2021. This excludes 1,073 visits where only full-mouth fluoride varnish and/or fissure sealant services were provided.

## Australian Indigenous children's oral health status and use of dental care services

Data in the following sections were sourced from the National Child Oral Health Study 2012–14 (NCOHS) (Do & Spencer 2016). The NCOHS is a population-based survey which provides information on the oral health of children aged 5–14 years, who reside in all Australian states and territories. Information is collected using interviews and standardised dental examinations. A total of 26,224 children from across Australia participated in the study. The most complete information about Australians' oral health status and their use of dental services is available via national population surveys, although these are conducted infrequently, only around once every 10 years.

#### Oral health status of Australian Indigenous children

In 2012–14, Australian Indigenous children aged 5–8 years had an average number of 6.3 decayed, missing or filled tooth surfaces (dmfs) in the primary dentition

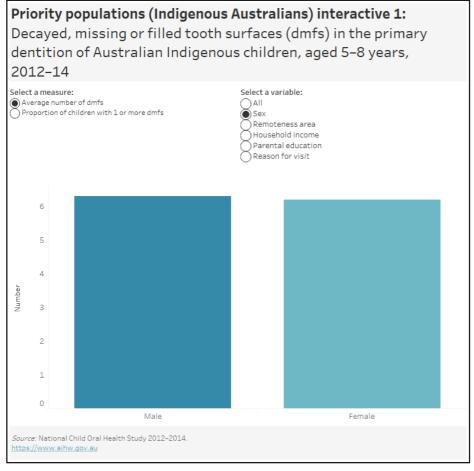
- The average number of decayed, missing or filled surfaces among Indigenous children increased as household income decreased, ranging from 0.8 dmfs in high income households, 3.1 dmfs in medium income households and 8.1 dmfs in low income households.
- Indigenous children of parents with school-level education had an average of 9.1 dmfs, whereas children of parents with vocational education had an average of 3.3 dmfs and children of parents with tertiary education had an average of 3.2 dmfs.
- Indigenous children who last visited the dentist for a dental problem had an average number of 13.0 dmfs, whereas those who last visited for a check-up had an average of 4.6 dmfs.

Around 6 in 10 (59%) of Australian Indigenous children aged 5–8 years had at least one tooth surface with caries experience in the primary dentition

- 57% of male and 62% of female Indigenous children had at least one tooth surface with caries experience in the primary dentition.
- The majority (80%) of Indigenous children who last visited the dentist for a dental problem had at least one tooth surface with caries experience in the primary dentition.

Explore the data using the Priority populations (Indigenous Australians) interactive 1 below. Priority populations (Indigenous Australians) – Interactive 1

This figure shows the average number decayed, missing or filled tooth surfaces (dmfs) in the primary dentition, among Australian Indigenous children aged 5–8 years, by selected characteristics. This figure also shows the proportion of Australian Indigenous children aged 5–8 years with 1 or more dmfs. National data is presented for 2012–14. In 2012–14, Australian Indigenous children aged 5–8 years had 6.3 dmfs and 59.4% had 1 or more dmfs.



In 2012–14, Australian Indigenous children aged 9–14 years had an average of 1.8 decayed, missing or filled tooth surfaces (DMFS) in the permanent dentition

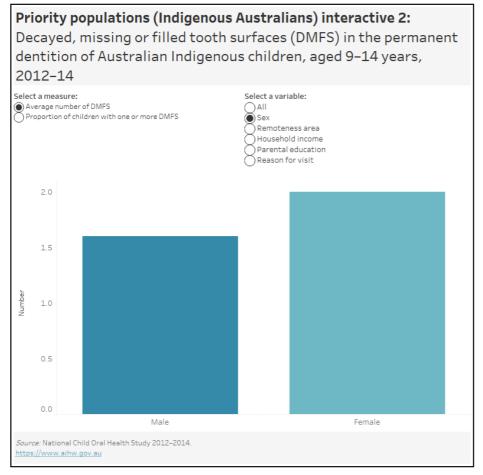
- Indigenous children of parents with school-level education had an average of 2.1 DMFS, whereas children of parents with vocational education had an average of 1.1 DMFS and children of parents with tertiary education had an average of 1.2 DMFS.
- Indigenous children who last visited the dentist for a dental problem had an average of 2.1 DMFS, whereas those who last visited for a check-up had an average of 1.6 DMFS.
- The average number of DMFS increased with remoteness area, ranging from 1.3 DMFS in *Major cities*, 1.7 DMFS in *Inner regional* areas, 2.4 DMFS in *Outer regional* areas and 2.5 DMFS in *Remote and very remote* areas.

Nearly half (46%) of all Australian Indigenous children aged 9–14 years had at least one tooth surface with caries experience in the permanent dentition

- 48% of Indigenous children who last visited the dentist for a dental problem and 43% who last visited for a check-up had at least one tooth surface with caries experience in the permanent dentition.
- The proportion of Indigenous children with at least one tooth surface with caries experience increased with remoteness area, ranging from 39% in *Major cities*, 48% in *Inner regional* and *Outer regional* areas to 59% in *Remote and very remote* areas.

Explore the data using the Priority populations (Indigenous Australians) interactive 2 below. Priority populations (Indigenous Australians) – Interactive 2

This figure shows the average number decayed, missing or filled tooth surfaces (DMFS) in the permanent dentition among Australian Indigenous children aged 9–14 years, by selected characteristics. This figure also shows the proportion of Australian Indigenous children aged 9–14 years with 1 or more DMFS. National data is presented for 2012–14. In 2012–14, Australian Indigenous children aged 9–14 years had 1.8 DMFS and 46.2% had 1 or more DMFS.



#### Indigenous Australian children's dental care

In 2012–14, around 8 in 10 (78%) Australian Indigenous children aged 5–14 years made their first dental visit for a check-up

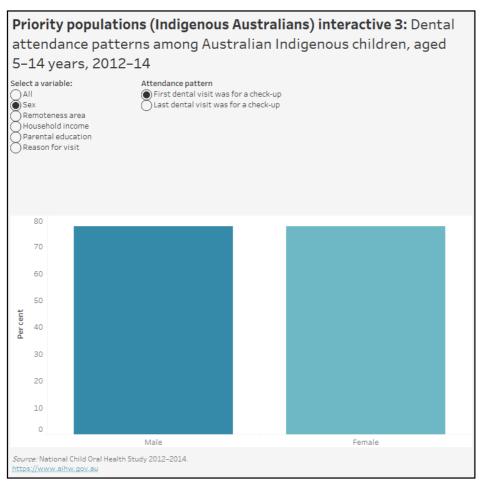
• Around 3 in 4 (75%) Indigenous children of parents with school-level education made their first dental visit for a check-up, as compared to 79% of children of parents with vocational education and 82% of children of parents with tertiary education.

In 2012–14, around 7 in 10 (69%) Australian Indigenous children aged 5–14 years made their most recent dental visit for a check-up

• 64% of Indigenous children from low income households made their most recent dental visit for a check-up, compared with 77% from medium income households and 72% from high income households.

Explore the data using the Priority populations (Indigenous Australians) interactive 3 below. Priority populations (Indigenous Australians) – Interactive 3

This figure shows dental attendance patterns among Australian Indigenous children aged 5–14 years, by selected characteristics. National data is presented for 2012–14. In 2012–14, for Australian Indigenous children aged 5–14 years, 77.6% had their first dental visit for a check-up and 68.8% had their last dental visit for a check-up.

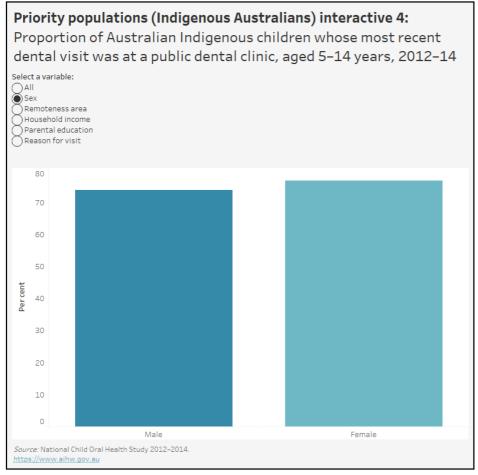


In 2012-14, around 3 in 4 (75%) of Australian Indigenous children aged 5-14 years attended their last dental visit at a public clinic

- More Indigenous children from low income households (88%) attended their last dental visit at a public clinic than those from medium income households (60%) and those from high income households (49%).
- More Indigenous children of parents with school-level education (83%) attended their last dental visit at a public clinic than children of parents with vocational education (74%) and children of parents with tertiary education (62%).

Explore the data using the Priority populations (Indigenous Australians) interactive 4 below. Priority populations (Indigenous Australians) – Interactive 4

This figure shows the percentage of Australian Indigenous children aged 5–14 years whose most recent dental visit was at a public dental clinic, by selected characteristics. National data is presented for 2012–14. In 2012–14, 75.4% of Australian Indigenous children aged 5–14 years had their most recent dental visit at a public dental clinic.

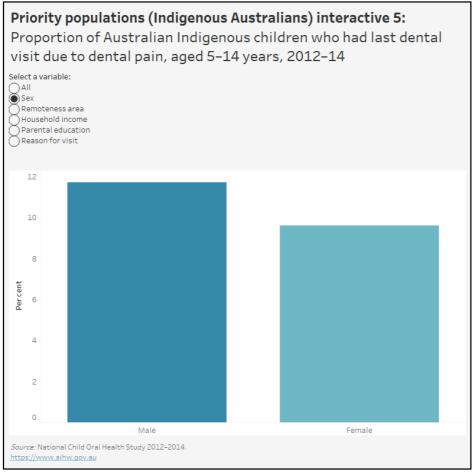


In 2012-14, around 1 in 10 (10%) Australian Indigenous children aged 5-14 years attended their last dental visit due to dental pain

- 15% of Indigenous children of parents with school-level education attended their last dental visit due to dental pain, compared to 8.1% of children of parents with vocational education and 6.3% of children of parents with tertiary education.
- Around one-third (34%) of Indigenous children whose reason for their last dental visit was for a dental problem attended their last dental visit due to dental pain.

Explore the data using the Priority populations (Indigenous Australians) interactive 5 below. Priority populations (Indigenous Australians) – Interactive 5

This figure shows the percentage of Australian Indigenous children aged 5–14 years who had their last dental visit due to dental pain, by selected characteristics. National data is presented for 2012–14. In 2012–14, 10.6% of Australian Indigenous children aged 5–14 years had their last dental visit due to pain.

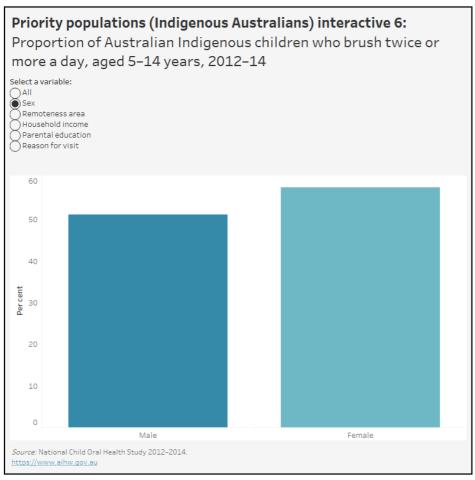


In 2012-14, just over half (54%) of all Australian Indigenous children aged 5-14 years brushed their teeth twice or more a day

- Slightly more female (58%) than male (51%) Indigenous children brushed their teeth twice or more a day.
- Around half (49%) of all Indigenous children from low income households brushed their teeth twice or more a day, compared with around two-thirds from medium income households (66%) and high income households (65%).
- Fewer Indigenous children from *Remote and very remote* areas (48%) brushed their teeth twice or more a day than those from *Major cities* (56%), *Inner regional* (55%) and *Outer regional* (58%) areas.
- More Indigenous children whose reason for last dental visit was for a check-up (61%) brushed their teeth twice or more a day than those whose reason for last dental visit was for a dental problem (45%).

Explore the data using the Priority populations (Indigenous Australians) interactive 6 below. Priority populations (Indigenous Australians) – Interactive 6

This figure shows the percentage of Australian Indigenous children aged 5–14 years who brush their teeth twice or more a day, by selected characteristics. National data is presented for 2012–14. In 2012–14, 54.4% of Australian Indigenous children aged 5–14 years brush their teeth twice or more a day.



#### From the scientific literature

Oral health changes among Indigenous and non-Indigenous Australians: findings from two national oral health surveys (Jamieson et al, 2021)

This study aimed to ascertain if the oral health of Indigenous Australians improved relative to non-Indigenous Australians between the 2004-06 and 2017-18 National Surveys of Adult Oral Health (NSAOH) (Jamieson et al, 2021). Both surveys were population-based cross-sectional surveys of Australian adults aged 15 years or more.

In 2004-06, 229 Indigenous and 13,882 non-Indigenous Australians provided self-report data, and 87 and 5,418 of these had dental examinations, respectively. In 2017-18, 334 Indigenous and 15,392 non-Indigenous Australians provided self-report data, and 84 and 4,937 of these had dental examinations, respectively.

There are some limitations to this study. There were no specific sampling strategies across either survey to ensure Indigenous Australian numbers matched population estimates. As such, estimates for Indigenous Australians might not be representative of the broader Indigenous population.

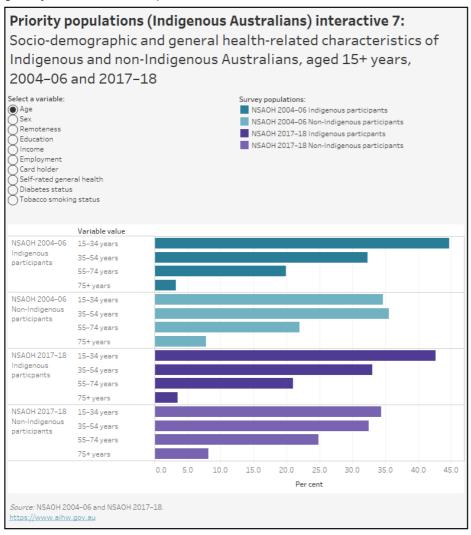
Also, there were some differences seen in the characteristics of the respondent populations which may affect the results. While the average age of Indigenous participants was the same across both surveys (40 years), there were differences seen in other characteristics, for example:

- $\bullet \ \ \text{In 2004-06, 41\% of Indigenous Australians currently smoked to bacco compared to 20\% in 2017-18}$
- In 2004-06, 12% of Indigenous Australians rated their health as fair/poor compared to 27% in 2017-18

However, given that the same methodology was used across both surveys, findings are comparable in that respect.

Explore the data further in Priority populations (Indigenous Australians) interactive 7 below. Priority Populations (Indigenous Australians) – Interactive 7

This figure shows the socio-demographic and general health-related characteristics of Indigenous and non-Indigenous Australians, aged 15 years and over. Data is presented for 2004–06 and 2017–18.



See <u>Data tables: Priority populations</u> for data tables.

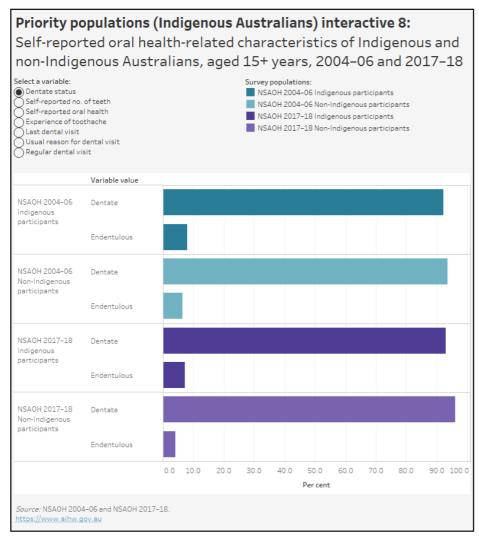
There were some improvements in the clinical oral health outcomes of Indigenous Australians, such as the severity and prevalence of periodontal disease between the 2004-06 and 2017-18 surveys, but other measures suggested their oral health status had declined overall

Self-reported oral health-related characteristics of Indigenous survey populations

- In 2004–06, 1 in 10 (10%) Indigenous Australians reported having fewer than 21 teeth. In 2017–18, 1 in 8 (13%) Indigenous Australians reported having fewer than 21 teeth.
- Indigenous Australians reported that they experienced toothache very often or often in 2004–06 and 2017–18, at a rate of 10% and 15% respectively,
- In 2004–06 and 2017–18, Indigenous Australians reported that they usually visit the dentist for a problem, at a rate of 57% and 51% respectively.

Explore the data further in Priority populations (Indigenous Australians) interactive 8 below. Priority Populations (Indigenous Australians) – Interactive 9

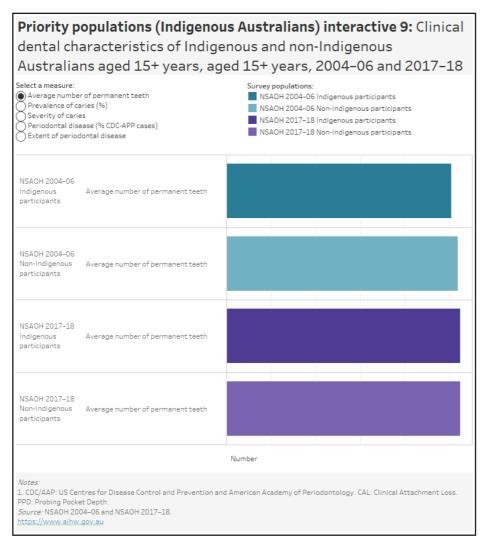
This figure shows the clinical dental characteristics of Indigenous and non-Indigenous Australians aged 15 years and over. Data is presented for 2004–06 and 2017–18.



#### Clinical dental characteristics for Indigenous Australians between the 2 surveys

- The proportion of Indigenous Australians with moderate or severe periodontal disease decreased from 26% in 2004–06 to 11% in 2017–18
- The proportion of Indigenous Australians missing teeth due to caries increased across the two surveys from 92% in 2004–06 to 98% in 2017–18.

Explore the data further in Priority populations (Indigenous Australians) interactive 9 below.



#### References

AHMAC (Australian Health Ministers Advisory Council) 2017. Aboriginal and Torres Strait Islander Health Performance Framework 2017 Report. Canberra: AHMAC.

Australian Institute of Health and Welfare and National Indigenous Australians Agency 2020. <u>Aboriginal and Torres Strait Islander Health Performance Framework 2020 - external site opens in new window</u>. Canberra: AIHW.

Australian Institute of Health and Welfare (2023) <u>Oral health outreach services for Aboriginal and Torres Strait Islander children in the Northern Territory: July 2012 to December 2022</u>, AIHW, Australian Government, accessed 06 November 2023.

COAG (Council of Australian Governments) Health Council 2015. Healthy Mouths, Healthy Lives: Australia's National Oral Health Plan 2015–2024. Adelaide: South Australian Dental Service.

Jamieson L, Do L, Kapellas K, Chrisopoulos S, Luzzi L, Brennan D, Ju X. Oral health changes among Indigenous and non-Indigenous Australians: findings from two national oral health surveys. Aust Dent J. 2021 Mar;66 Suppl 1:S48-S55. doi: 10.1111/adj.12849. Epub 2021 May 11. PMID: 33899961.

NACDH (National Advisory Council on Dental Health) 2012. Report of the National Advisory Council on Dental Health 2012. Canberra: Department of Health and Ageing.



# **Priority populations**

Overall, people living in regional and remote areas of Australia have poorer oral health than those living in *Major cities* (COAG 2015), and oral health status generally declines as remoteness increases. People living in rural areas have access to fewer dental practitioners than their city counterparts, which, coupled with longer travel times and limited transport options to services, affects the oral health care that they can receive (COAG 2015; Bishop & Laverty 2015).

People living in *Remote* and *Very remote* areas are also more likely to smoke and drink at risky levels. They have reduced access to fluoridated drinking water and face increased costs of healthy food choices and oral hygiene products. These risk factors contribute to this population's overall poorer oral health (COAG 2015).

# **Royal Flying Doctor Service**

The Royal Flying Doctor Service (RFDS) provides a comprehensive range of primary healthcare services throughout Australia. After recognising that a large proportion of people living in remote and rural Australia do not have access to a regular dental service, the RFDS established their dental service designed to support communities in country Australia. These services are provided using 'fly-in fly-out', mobile and outreach delivery models and are funded by the Commonwealth of Australia, state governments, private investments or the use of donor funds (Gardiner et al 2020).

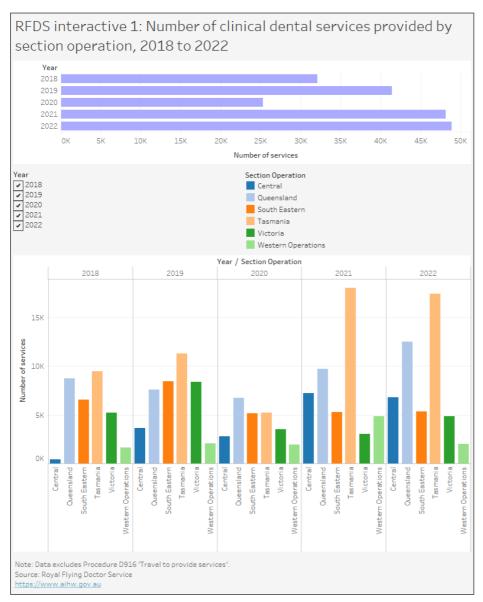
The RFDS are committed to providing primary healthcare services to those in need, and, using 'access to a primary healthcare service within a 60-minute drive time' as one measure of reasonable access, identified that close to 119,000 people did not have access to general dental services (RFDS 2022). This included around 11,500 people in the West Pilbara region, around 10,300 in the Alice Springs region and around 9,500 in the Daly-Tiwi-West Arnhem region (RFDS 2022).

The following data has been sourced from the RFDS administrative patient dataset (unpublished) and covers the period 2018 to 2022. Due to differences in reporting periods and analysis methodology, figures presented here may not match those presented by the RFDS.

The RFDS provided over 25,000 clinical dental services each year between 2018 and 2022 to individuals in regional and remote areas across Australia. The number of clinical dental services provided ranged from around 25,300 in 2020, a year affected by the COVID-19 pandemic, to around 48,900 in 2022.

Explore the data further in RFDS interactive 1.

This figure shows the number of clinical dental services provided by the Royal Flying Doctor Service (RFDS) by section operation (location) from 2018 to 2022. In 2022, the total number of clinical dental services provided was 48,856, with 17,429 of these being provided in Tasmania.



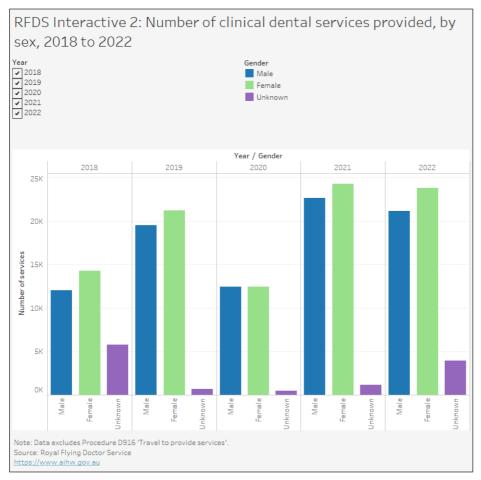
Each year between 2018 and 2022, more clinical dental services were provided to females than males.

Of the nearly 48,900 clinical dental services the RFDS provided in 2022, around:

- 21,100 clinical dental services were provided to males
- 23,800 clinical dental services were provided to females
- 4,000 clinical dental services were provided to those whose sex was not reported.

Explore the data further in RFDS interactive 2.

This figure shows the number of clinical dental services provided by the Royal Flying Doctor Service (RFDS) by sex from 2018 to 2022. Females received more services than males during this period. In 2022, females received 23,750 clinical dental services provided by the RFDS.

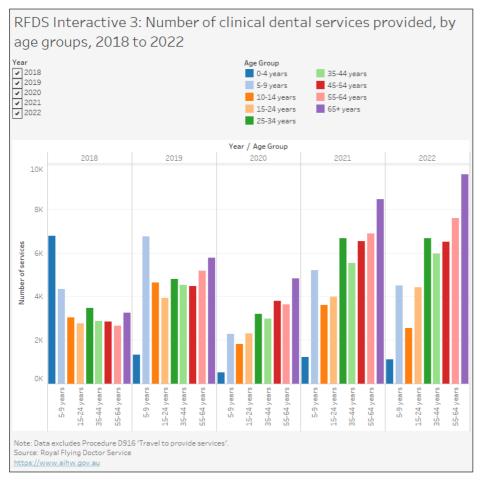


Oral health generally deteriorates with age (refer to <u>Introduction</u>). As such, older people may require more clinical dental services, perhaps receiving a diagnostic, preventive and restorative service, during their dental visits than what younger people require, perhaps receiving a preventive service only. For example, data from the National Study of Adult Oral Health 2017–18 (unpublished) shows that, on average, around 2 in 3 adults aged 65 years and over needed a filling compared to around 1 in 3 children aged 5–14 years (refer to *Dental care interactive 9*).

The RFDS provide clinical dental services to people of all ages. The data presented in RFDS interactive 3 reflects the number of clinical dental services provided rather than the number of people who received clinical dental services. In 2020, 2021 and 2022, more clinical dental services were provided to those aged 65 years and over than any other age group. Across these same years, fewer clinical dental services were provided to children aged 0-4 years than any other age group.

Explore the data further in RFDS interactive 3.

This figure shows the number of clinical dental services provided by the Royal Flying Doctor Service (RFDS) by age group from 2018 to 2022. In 2022, children aged 5-9 years received 4,500 clinical dental services and adults aged 65 years and over received 9,601 clinical dental services provided by the RFDS.



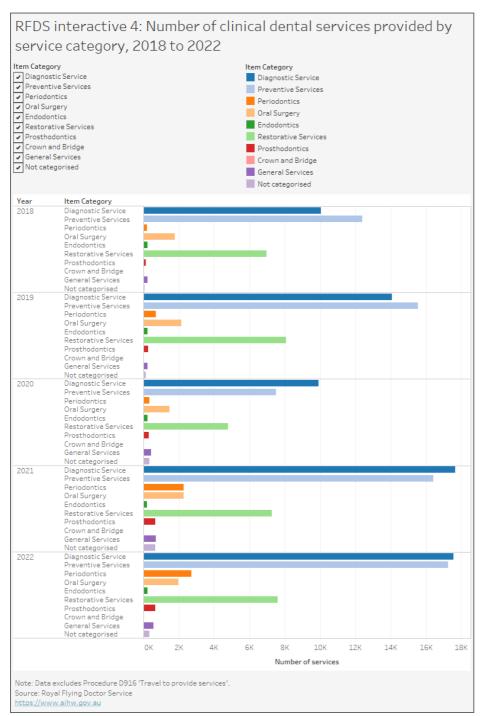
Between 2018 and 2022, the leading service categories were diagnostic services and preventive services followed by restorative services.

In 2022, the RFDS provided around:

- 17,500 diagnostic services
- 17,300 preventive services
- 7,600 restorative services.

Explore the data further in RFDS interactive 4.

This figure shows the number of clinical dental services provided by the Royal Flying Doctor Service (RFDS) by service category from 2018 to 2022. Diagnostic, preventative and restorative services were most commonly provided. In 2022, 17539 clinical dental services were provided by the RFDS.



#### References

Bishop LM & Laverty MJ 2015. Filling the gap: Disparities in oral health access and outcomes between metropolitan and remote and rural Australia. Canberra: Royal Flying Doctor Service of Australia.

Bishop L, Gardiner F, Spring B, Gale L, Schofield Z and Quinlan F, 2022. <u>Best for the Bush: rural and remote health base line 2022 - external site opens in new window</u>. Royal Flying Doctor Service of Australia. Viewed: 5 October 2023

COAG (Council of Australian Governments) Health Council 2015. Healthy Mouths, Healthy Lives: Australia's National Oral Health Plan 2015–2024. Adelaide: South Australian Dental Service.

Gardiner, FW, Richardson, A, Gale, L, et al. Rural and remote dental care: Patient characteristics and health care provision. Aust J Rural Health. 2020; 28: 292–300. doi.org/10.1111/ajr.12631 - external site opens in new window

Royal Flying Doctor Service (n.d.). <u>Oral Health - external site opens in new window</u>. Viewed: 21 September 2023.





# **Priority populations**

This group includes people living with mental illness, people with physical, intellectual and developmental disabilities, people with complex medical needs and frail older people. These people can be vulnerable to oral disease; for example, some medications for chronic diseases can cause a dry mouth, which increases the risk of tooth decay (Queensland Health 2008). A number of factors make accessing dental care more difficult for this group, including:

- a shortage of dental health professionals with skills in special-needs dentistry
- · difficulties in physically accessing appropriate dental treatment facilities
- the cost of treatment. People with additional and/or specialised health care needs often have their earning capacity eroded by ill health (COAG 2015).

# People with disability

Around 1 in 6 (18%) people in Australia—or about 4.4 million—have disability (AIHW 2022). Some people with disability experience difficulties accessing and using health services. Barriers can include longer than desired waiting times, the cost of services, the accessibility of buildings and direct or indirect discrimination by health professionals. Some people with disability may also experience issues caused by a lack of communication between the health professionals treating them (AIHW 2022).

This chapter highlights dental-related findings presented in the <u>People with disability in Australia</u> report, with the data derived from the Australian Bureau of Statistics' 2018 Survey of Disability, Ageing and Carers (SDAC) (ABS 2019).

# Measuring and defining disability

There are many different concepts and measures of disability, making comparisons across different data sources challenging. The AIHW promotes measures based on the International Classification of Functioning, Disability and Health (WHO 2001), which underpins the disability categories used here.

The SDAC is the most detailed and comprehensive source of disability prevalence in Australia. To identify disability, the SDAC asks participants if they have at least one of a list of limitations, restrictions or impairments, which has lasted, or is likely to last, for at least 6 months and that restricts everyday activities.

The limitations are grouped into 10 activities associated with daily living, and a further two life areas in which people may experience restriction or difficulty as a result of disability – school and employment.

The level of disability is defined by whether a person needs help, has difficulty, or uses aids or equipment with 3 core activities – self-care, mobility, and communication – and is grouped for mild, moderate, severe, and profound limitation. People who 'always' or 'sometimes' need help with one or more core activities, have difficulty understanding or being understood by family or friends, or can communicate more easily using sign language or other non-spoken forms of communication are referred to in this section as 'people with severe or profound disability'.

# **Key terms**

- Dental caries: A disease process that can lead to cavities (small holes) in the tooth structure that compromise both the structure and the health of the tooth, commonly known as tooth decay.
- Dental services: Services that registered dental practitioners provide. These include oral and maxillofacial surgery items, orthodontic, pedodontic and periodontic services, cleft lip and palate services, dental assessment and other dental items listed in the MBS. The term covers dental services funded by health funds, state and territory governments and also individuals' out-of-pocket payments.

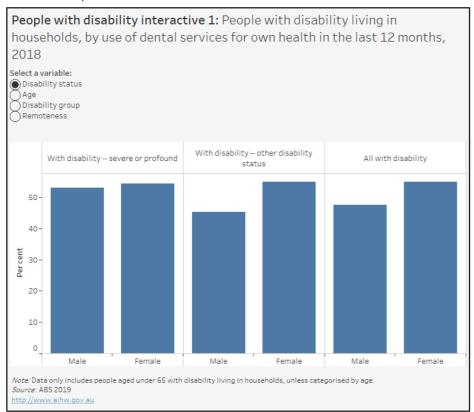
#### Use of dental services

Around 1 in 2 (51% or 1.2 million) people with disability aged under 65 living in households saw a dental professional for their own health in the last 12 months. This rate is highest among females (55% or 648,000), those in the age group 0-24 (64% or 414,500), those with an intellectual disability (57% or 305,500), and those living in major cities (53% or 855,200).

Explore the data using the interactive below.

People with disability interactive 1.

This figure shows the use of dental services by people with disability in the last 12 months, by sex and selected characteristics. National data is presented for 2018.



See <u>Data tables: Priority populations</u> for data tables.

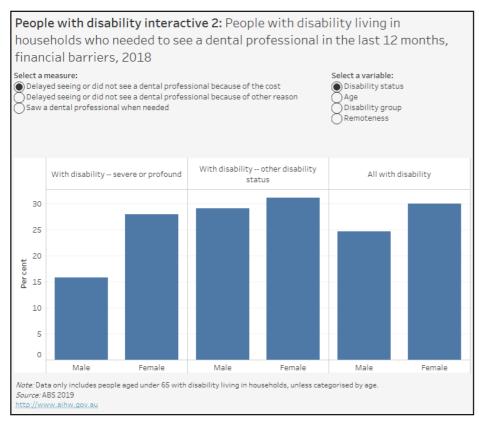
# **Cost barrier**

Around 1 in 4 (27.5% or 449,400) people aged under 65 with disability living in households who needed to see a dental professional in the last 12 months delayed seeing or did not see a dental professional because of cost. This rate is highest among females (30% or 253,400), those aged 25-64 (34% or 394,600), those living in outer regional and remote areas (30% or 45,800), and those with a head injury, stroke or acquired brain injury (33.5% or 37,200) or other disability (34% or 228,200).

Explore the data using the interactive below.

People with disability interactive 2

This figure shows the financial barriers to dental care for people with disability, by sex and selected characteristics. National data is presented for 2018.



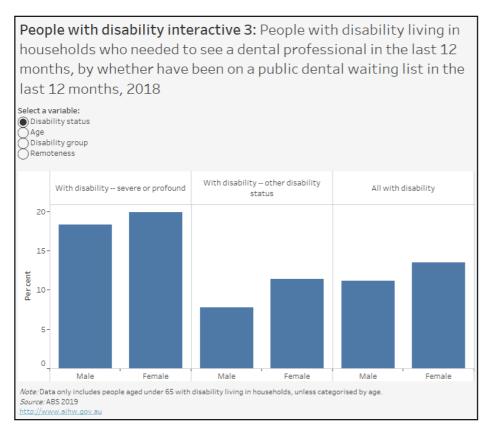
# **Public dental waiting list**

Around 1 in 8 (12.5% or 201,500) people aged under 65 with disability living in households who needed to see a dental professional in the last 12 months have been on a public waiting list for dental care. This rate is highest among those with severe or profound disability (19.5% or 91,900), those in age group 25-64 (13% or 152,600), those with head injury, stroke or acquired brain injury (21.5% or 23,600), and those living in outer regional and remote areas (14.7% or 22,000).

Explore the data using the interactive below.

People with disability interactive 3

This figure shows the percentage of people with disability that have been on a public dental waiting list in the last 12 months, by sex and selected characteristics. National data is presented for 2018.

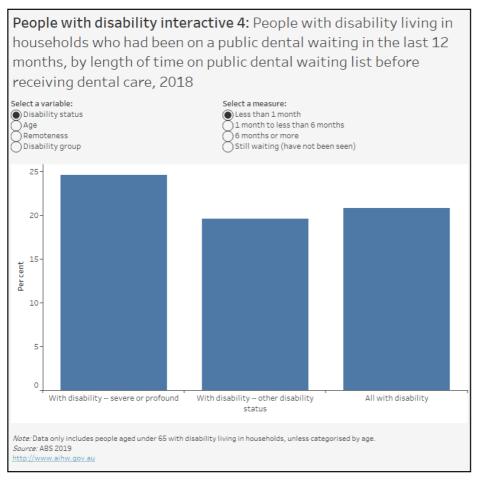


Around 3 in 10 (30% or 61,000) people aged under 65 with disability living in households who had been on a public dental waiting list in the last 12 months have not received dental care. This rate is highest among females (31% or 35,300), those in the age group 25-64 (34% or 51,800), and those with sensory and speech disability (32% or 17,000).

Explore the data using the interactive below.

People with disability interactive 4

This figure shows the length of time on a public waiting list before receiving dental care for people with disability in the last 12 months, by selected characteristics. National data is presented for 2018.



#### **Older Australians**

Older people make up a considerable proportion of Australia's population—at 30 June 2020, over 1 in 6 people were aged 65 and over. The <u>Older Australians</u> report explores aspects of health and wellbeing of older people, including their <u>oral health</u> and their use of <u>dental services</u>.

There are many programs and services available to support the health of older Australians. Older people's access to these services may vary according to where they live, their access to transport, their health and cultural background, as well as socioeconomic factors.

Oral health generally deteriorates over a person's lifetime, and oral disease can impact on people's health and wellbeing more broadly.

In 2017–18, older Australians aged 65 and over had an average of 13.7 missing teeth. Most (59%) suffered periodontitis and around one-quarter (27%) avoided eating some foods due to problems with their teeth, mouth or dentures.

According to the 2017–18 National Survey of Adult and Oral Health, almost 3 in 5 older people saw a dentist in the last 12 months.

The cost of dental services is often reported as a barrier to accessing services. In 2017-18, of people aged 75 and over:

- 22% avoided or delayed dental care due to cost.
- 18% reported they would have difficulty paying a \$200 dental bill.
- 9.8% reported cost prevented dental treatment.

# References

ABS (Australian Bureau of Statistics) 2019. <u>Disability, Ageing and Carers, Australia: Summary of findings, 2018 - external site opens in new window</u>. Canberra: ABS. Viewed 1 September 2022.

Australian Institute of Health and Welfare (2022) <u>People with disability in Australia</u>, AIHW, Australian Government, accessed 1 September 2022.

WHO (World Health Organization) (2001) International Classification of Functioning, Disability and Health - external site opens in new window, WHO, accessed 1 September 2022.

Australian Institute of Health and Welfare (2021) Older Australians, AlHW, Australian Government, accessed 07 February 2022.





# **Populations of interest**

Specific groups within our population can experience significant barriers to accessing oral health care and other forms of disadvantage making them vulnerable to oral disease. Other groups may receive dental services under discrete programs e.g. Veterans. Data pertaining to these specific groups will be presented here as it becomes available.

#### **Veterans**

The Department of Veterans' Affairs (DVA) funds a broad range of dental treatment to clients (eligible veterans and their dependants) through the DVA dental program.

Program eligibility is based on Veteran Card type:

- Gold Card holders are entitled for treatment of all dental conditions where there is a clinical need; and
- White Card holders are only eligible for treatment of their accepted dental condition or the dental consequences of cancer treatment.

A comprehensive suite of dental services is provided under the program, including:

- preventive treatment such as examinations and cleaning
- · simple treatment such as fillings and extractions
- complex treatment such as crowns, bridges, implants and dentures
- emergency treatment following unforeseen injuries.

The program operates nationally, and any registered dental practitioner can provide dental services to eligible clients.

The Australian Dental Association (ADA) publishes the Australian Schedule of Dental Services and Glossary - external site opens in New Window (the ADA Schedule) which categorises, lists and defines the range of services that constitute current standard clinical practice. The range of DVA funded dental services conforms to the ADA Schedule. DVA funds a number of ADA dental items across all nine ADA service categories. This covers diagnostic, preventative, periodontics, oral surgery, endodontics, restorative, prosthodontic, orthodontic and miscellaneous services.

# **DVA** dental program utilisation

In each year between 2015–16 and 2021–22, around 6 in 10 eligible male Gold Card holders received dental services.

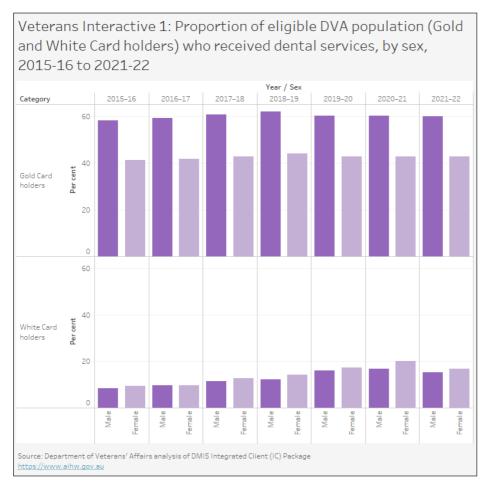
In each year between 2015–16 and 2021–22, around 4 in 10 eligible female Gold Card holders received dental services.

Between 2015-16 and 2021-22:

- the proportion of eligible male White Card holders receiving dental services varied from 8.5% in 2015–16 to 17% in 2020–21
- the proportion of eligible female White Card holders receiving dental services varied from 9.4% in 2015–16 to 20% in 2020–21.

Explore the data further in Veterans interactive 1.

This figure shows the proportion of eligible Department of Veterans' Affairs (DVA) clients who received dental services funded by DVA from 2015-–16 to 2021–22. In 2021-22, 60.1% of eligible male Gold card holders received dental services.



See <u>Data tables: Populations of interest</u> for data tables.

Eligible Gold and White Card holders may receive one or more services (e.g. a diagnostic service and a preventative service) per visit.

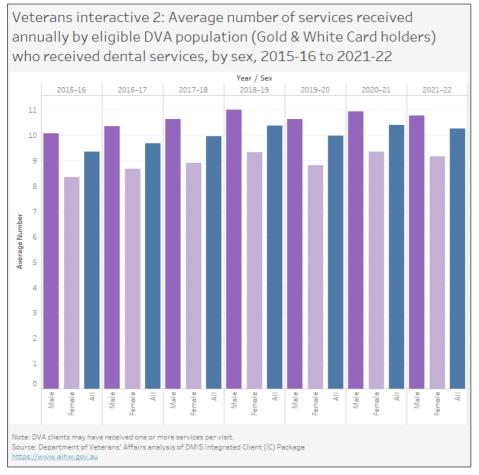
In each year between 2015–16 and 2021–22, eligible Gold and White Card holders who received dental services received an average of 10 dental services.

In each year between 2015–16 and 2021–22:

- eligible male Gold and White Card holders that received dental services received an average of 10.6 dental services
- eligible female Gold and White Card holders that received dental services received an average of 8.9 dental services.

Explore the data further in Veterans interactive 2.

This figure shows the average number of Department of Veterans' Affairs (DVA) funded dental services received annually by eligible DVA clients from 2015–16 to 2021–22. In 2021-22, male DVA clients received an average 10.8 services and female clients received an average 9.2 services.



See <u>Data tables: Populations of interest</u> for data tables.

In 2021-22, most Gold and White Card holders who received dental services received a diagnostic service (96%).

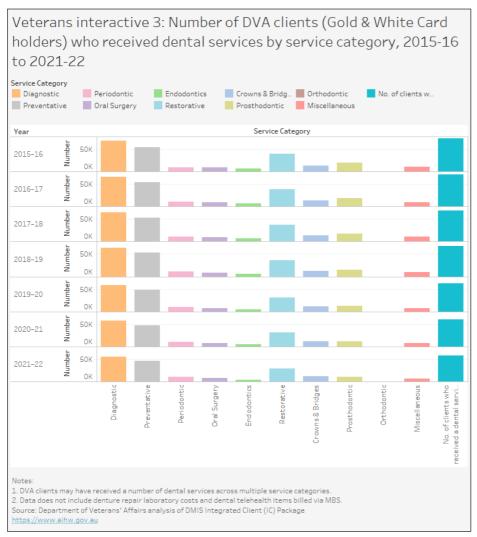
In 2021–22, for those Gold and White Card holders who received dental services:

- around 4 in 5 (79%) received a preventative service
- half (50%) received a restorative service
- very few (less than 1%) received an orthodontic service.

This trend was apparent in each year between 2015–16 and 2021–22.

Explore the data further in Veterans interactive 3.

This figure shows the number of eligible Department of Veterans' Affairs (DVA) clients who received DVA-funded dental services by service category from 2015–16 to 2021–22. In 2021-22, 95.5% received a diagnostic service, 79.3% received a preventative service and 49.6% received a restorative service.



See Data tables: Populations of interest for data tables.

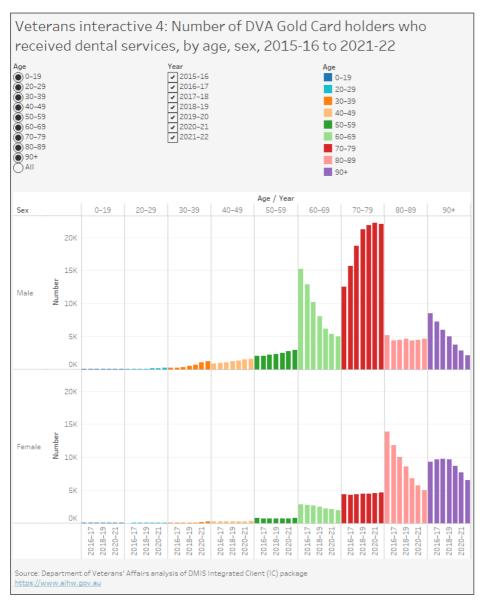
Between 2015–16 and 2021–22, more eligible male Gold Card holders than eligible female Gold Card holders received dental services – around 296,000 services compared to around 180,000 services.

#### Between 2015-16 and 2021-22:

- more eligible male and female Gold Card holders aged 70-79 years received dental services than any other age group
- fewer male and female eligible Gold Card holders aged 0-19 years received dental services than any other age group
- the number of eligible male Gold Card holders aged 60–69 years who received dental services declined from around 15,200 in 2015–16 to around 5,000 in 2021–22. This decline was also observed for those aged 90+ years, from around 8,500 to 2,200 in 2021–22
- the number of eligible male Gold Card holders aged 70–79 years who received dental services increased from around 12,500 in 2015–16 to around 22,000 in 2021–22
- the number of eligible female Gold Card holders aged 80–89 years who received dental services declined from around 13,900 in 2015–16 to 5,000 in 2021–22

Explore the data further in Veterans interactive 4.

This figure shows the number of eligible Department of Veterans' Affairs (DVA) clients with gold card entitlements who received a DVA funded dental service by age and sex from 2015–16 to 2021–22. In 2021-22, male DVA clients aged 70 to 79 years received 21,992 dental services dental services funded by DVA.



See <u>Data tables: Populations of interest</u> for data tables.

# Access to dental practitioners

Under the DVA dental program:

- eligible clients can see the dental practitioner of their choice
- suitably qualified dentists may seek prior approval to deliver treatments in lieu of a dental specialist in rural and remote areas where a dental specialist in not available.

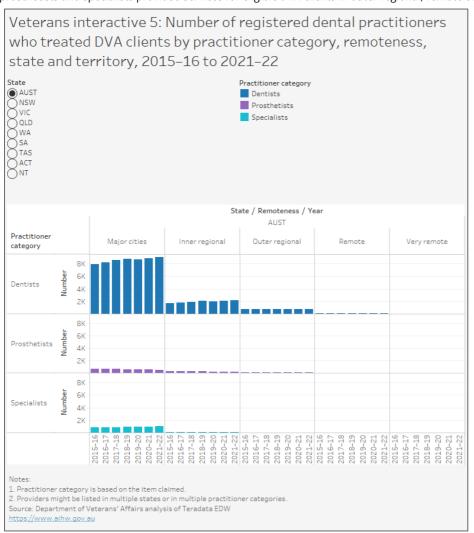
Across Australia, most dental practitioners who provide services to DVA clients are located in Major cities.

Across Australia, between 2015-16 and 2021-22:

- more dentists provided services to DVA clients than either prosthetists or specialists
- the number of dentists in *Major cities* providing services to DVA clients increased from around 7,900 in 2015–16 to around 9,100 in 2021–22
- the number of prosthetists in *Major cities* providing services to DVA clients decreased slightly from 660 in 2015–16 to around 510 in 2021–22
- the number of specialists in *Major cities* providing services to DVA clients increased slightly from around 800 in 2015–16 to around 990 in 2021–22.

Explore the data further in Veterans interactive 5.

This figure shows the number of registered dental practitioners who treated eligible DVA clients by practitioner category, remoteness, state and territory from 2015–16 to 2021–22. In 2021-22, 9,081 dentists in major cities treated DVA clients. Very few dentists, prosthetists and specialists provided services for eligible DVA clients in outer regional, remote or very remote locations.



See <u>Data tables: Populations of interest</u> for data tables.





# **Data sources**

# **National Child Oral Health Study**

The National Child Oral Health Study (NCOHS) provides a descriptive 'snapshot' of oral health in the child population of Australia. Data are collected from children aged 5–14 years, residing in all Australian states and territories. Information is collected using interviews and standardised dental examinations.

The study identified individual, family, community and dental system factors associated with oral health outcomes of Australian children and compares the oral health status of children across different aspects of the dental services system.

The NCOHS was last conducted in 2012–14. The National Oral Health Plan 2015–2024 calls for a population-based epidemiological study of the oral health of children to be conducted every 10 years.

## **National Survey of Adult Oral Health**

The National Survey of Adult Oral Health (NSAOH) provides a descriptive 'snapshot' of oral health in the adult population of Australia.

The survey describes levels of oral disease, perceptions of oral health and patterns of dental care. Data are collected from a representative cross-section of people aged 15 years and over, residing in all states and territories of Australia. Information is collected using interviews and standardised dental examinations.

The National Oral Health Plan 2015–2024 calls for a population-based epidemiological study of the oral health of adults to be conducted every 10 years. The NSAOH was conducted in 2004–06 and again in 2017–18.

## **National Dental Telephone Interview Survey**

The National Dental Telephone Interview Survey (NDTIS) is a telephone survey of a random sample of the Australian population aged 5 years and over. The survey collects oral health and dental care data, monitors the extent of social inequalities within the dental sector, and investigates the underlying reasons behind dental behaviours and the consequences of these behaviours.

Data collected included measures of self-reported oral health status, use of and access to dental services, social impact of oral health, financial burden of dental care and private health insurance that covered dental expenses. There is no clinical component to the survey.

The survey is conducted every 2–3 years. Surveys were conducted in 1994, 1996, 1999, 2002, 2005, 2008, 2010 and 2013. The National Study of Adult Oral Health 2017–18 collected data on measures normally included in the NDTIS. The NDTIS has been conducted in 2021, however, the results of this survey are not yet available.

Further information about the National Dental Telephone Interview Survey 2013 - external site opens in new window.

#### **Australian Cancer Database**

The Australian Cancer Database contains information on all Australians diagnosed with cancer (excluding basal cell and squamous cell carcinomas of the skin) since 1982. Data are collected by state and territory cancer registries from a number of sources and are supplied annually to the AIHW. The AIHW compiles and maintains the Australian Cancer Database, in partnership with the Australasian Association of Cancer Registries, which includes representatives from each state and territory cancer registry.

Further information about the Australian Cancer Database.

#### **Australian Burden of Disease Study Database**

The Australian Burden of Disease Study Database includes national and Indigenous burden of disease estimates for 2003, 2011, 2018 and 2022 including Years of life lost (YLL), Years lived with disability (YLD) and Disability-adjusted life years (DALY) for around 200 diseases included in the Australian Burden of Disease Study 2022. Subnational estimates (state/territory, remoteness and socioeconomic group) are available for 2022. National and Indigenous estimates of attributable burden due to the selected risk factors included in the study are available for 2003, 2011, 2018 and 2022. Data are available by 5 year age group and sex.

Further information about this data collection is available at: <u>Australian Burden of Disease Study Database</u>

#### **National Health Survey**

The 2020-21 national Health Survey (NHS) was conducted from a sample of approximately 11,000 households across Australia. Trained interviewers conducted personal interviews with selected residents in sampled households. There was no clinical component to the survey.

The 2020-21 NHS collected information about:

- demographics and socioeconomic characteristics
- the health status of the population, including long-term health conditions experienced;
- health-related aspects of people's lifestyles, such as smoking, fruit and vegetable consumption, and physical activity; and
- health service usage such as consultations with health practitioners and actions people have taken recently for their health.

Further information about this data collection is available at: National Health Survey - external site opens in new window

# **Public Dental Waiting Times National Minimum Data Set**

The PDWT NMDS enables reporting on the length of time that patients wait for public dental care in Australia, and the characteristics of patients who receive care or who were listed for care in a reference period.

The scope of the collection is to capture some basic data about adults aged 18 years and over who are placed on general dental care, denture care or assessment public dental waiting lists in a specific collection year, or who were placed on a waiting list at any time and were offered or received care in the collection year. The waiting time periods calculated are the time between the date a person is placed on a waiting list and the date they are offered dental care, and the time between the date a person is placed on a waiting list and the date they receive dental care.

Further information about the Public Dental Waiting Times National Minimum Data Set - external site opens in new window.

Data Quality Statement: Public Dental Waiting Times Database, 2019-20 - external site opens in new window.

#### **Child Dental Benefits Schedule data**

The Child Dental Benefits Schedule (CDBS) provides individual benefits for a range of basic dental services to eligible children aged 2–17 years. Services can be provided in a public or private setting. Benefits are not available for orthodontic or cosmetic dental work and cannot be paid for any services provided in a hospital.

Further information about the Child Dental Benefits Schedule - external site opens in new window.

Payment of benefits under the Child Dental Benefits Schedule is administered by the Department of Human Services. Although the Child Dental Benefits Schedule is not part of Medicare, statistics are captured through the Medicare Benefits Schedule, and are available under Category 10 – Dental Benefit Schedule of the Medicare Group Reports - external site opens in new window.

# **National Hospital Morbidity Database**

The National Hospital Morbidity Database (NHMD) is a collection of records from admitted patient data collection systems in Australian hospitals. The data supplied in the NHMD are based on the National Minimum Data Set (NMDS) for Admitted patient care. The AlHW compiles the database from data supplied by the state and territory health authorities. It contains demographic, administrative and length of stay data, and data on the diagnoses of the patients, and the procedures they underwent in hospital. Principal diagnoses were recorded using the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM). Dental services are classified according to ACHI (Australian Classification of Health Interventions). ACHI is the Australian national standard for procedure and intervention coding in Australian hospitals.

Further information about the National Hospitals Data Collection.

## Pharmaceutical Benefits Scheme (PBS) data collection

The Commonwealth government subsidises the cost of prescription medicines through two schemes, the Pharmaceutical Benefits Scheme (PBS) and the Repatriation Pharmaceutical Benefits Scheme (RPBS) for eligible war veterans and their dependants.

People fall into two broad categories: general and concessional. Concessional beneficiaries include Pensioner Concession Card holders, Commonwealth Seniors Health Card holders, Health Care Card holders and DVA Pension Card holders. General patients do not hold any of the aforementioned cards. RPBS (or repatriation) patients hold DVA White, Gold or Orange Cards.

The Department of Human Services (DHS) processes all prescriptions dispensed under the PBS and RPBS and provides this data to the Department of Health. The PBS/RPBS data maintained by Health has been used to produce this report. Information collected includes the medication prescribed, the prescribing practitioner and characteristics of the person who is provided with the prescription. The figures reported relate to the number of prescriptions for PBS Schedule Dental Items processed by DHS in the reporting period

PBS/RPBS data does not include the following:

- private prescriptions, i.e. the medicine is not listed in the PBS Schedule of Pharmaceutical Benefits
- · over the counter medicines
- medicines supplied to public hospital inpatients.

Further information about the Pharmaceutical Benefits Scheme data collection.

# **Patient Experience Survey**

The Patient Experience Survey is conducted annually by the Australian Bureau of Statistics (ABS) and collects national data on access and barriers to a range of health care services, including dental professionals.

The survey includes data from people aged 15 years and over that accessed health services in the last 12 months, as well as from those who did not, and enables analysis of health service information in relation to particular population groups. Data are also collected on aspects of communication between patients and health professionals.

The 2021–22 Patient Experience Survey collected information from around 23,949 people across Australia.

Further information about the Patient Experience Survey - external site opens in new window

#### **Health Expenditure Database**

Health expenditure data, collected and reported annually through AlHW's *Health expenditure Australia* report series (e.g. <u>Health expenditure Australia 2020–21</u>) includes estimates of expenditure on dental services—private and public—for state, territory and Australian governments.

The AIHW compiles its health expenditure database from a wide range of government and non-government sources. The data are mainly administrative in nature, though some survey information is included. Since 2008–09, the main source of government expenditure data has been the Government Health Expenditure National Minimum Data Set. This data set was developed with advice of the Health Expenditure Advisory Committee, and reporting is mandatory for all state and territory governments.

Total health expenditure excludes some types of health-related expenditure, including health-related Australian Defence Force expenditure, some local government expenditure and some non-government organisation expenditure.

Further information about the Health Expenditure Database

# **Disease Expenditure Database**

The Disease Expenditure Database contains estimates of spending by Australia Burden of Disease Study condition, age group, and sex for admitted patient, emergency department, and outpatient hospital services, out-of-hospital medical services, and prescription pharmaceuticals.

Estimates in the Disease Expenditure Database have been derived by combining information from the:

- National Hospital Morbidity Database (NHMD)
- National Public Hospitals Establishments Database (NPHED)
- National Non-admitted Patient Emergency Department Care Database (NNAPEDC)
- National Non-admitted Patient Databases (aggregate, NAPAGG, and unit record, NAPUR)
- National Hospital Costs Data Collection (NHCDC)
- Private Hospital Data Bureau (PHDB) collection
- Bettering the Evaluation and Care of Health (BEACH) survey
- Medicare Benefits Schedule (MBS)
- Pharmaceutical Benefits Scheme (PBS)
- Health Expenditure Database.

It is not technically appropriate or feasible to allocate all spending on health goods and services by disease. For example, neither administration expenditure nor capital expenditure can be meaningfully attributed to any particular condition due to their nature. The calculated expenditure includes payments from all sources of funds, such as the Australian and State and Territory Governments, Private Health Insurance, and out of pocket payments by patients.

Further information about the Disease Expenditure Database

# **Household Expenditure Survey**

The Household Expenditure Survey (HES) is conducted by the Australian Bureau of Statistics (ABS) every six years. The survey collects detailed information about the expenditure, income and household characteristics from usual residents of private dwellings in urban and rural areas of Australia, covering about 98% of the people living in Australia. Average weekly expenditure on over 600 goods and services can be obtained from the survey.

The 2015-16 HES collected information from around 10,000 households over the period July 2015 to June 2016.

Further information about the Household Expenditure Survey - external site opens in new window.

#### **General Treatment Dental data collection**

The General Treatment Dental (GT-Dental) data collection contains de-identified unit record information relating to patients and general treatment dental services for which the private health insurer paid a benefit, from 2009-10 to present. De-identified information includes patient demographics, type of dental service, charges and benefits. This information is provided by dental service providers to private health insurers then from private health insurers to the Commonwealth Department of Health on a monthly basis.

Further information about the General Treatment Dental (GT-dental) data collection - external site opens in new window

# **National Health Workforce Data Set (NHWDS)**

The National Health Workforce Data Set combines data from the National Registration and Accreditation Scheme with data collected from the Dental Workforce Survey conducted at the time of a practitioner's annual registration or renewal. The Australian Health Practitioner Regulation Agency collects these data.

The data set includes information on the size and characteristics of the dental workforce (dentists, dental hygienists, dental therapists, dental prosthetists and oral health therapists) as well as:

- the type of work done by, and work setting of, dental practitioners
- the number of hours worked in clinical or non-clinical roles
- the numbers of years worked, and the years they intend to remain in, the dental practitioner workforce
- · those registered dental practitioners who are not currently undertaking clinical work or who are not employed.

Further information about the National Health Workforce Data Set - external site opens in new window.

# Survey of Disability, Ageing and Caring

The 2018 Survey of Disability, Ageing and Caring (SDAC) was conducted by the Australian Bureau of Statistics throughout Australia during the period July 2018 to March 2019. The aims of the 2018 SDAC are to:

- measure the prevalence of disability in Australia
- measure the need for support of older people and those with disability
- provide a demographic and socio-economic profile of people with disability, older people and carers compared with the general population
- estimate the number of and provide information about people who provide care to people with disability, long-term health conditions and older people.

Further information about the Survey of Disability, Ageing and Caring - external site opens in new window





# **Technical notes**

# Socio-Economic Indexes for Areas (SEIFA), Australia, 2016

Socio-Economic Indexes for Areas (SEIFA) is a product developed by the ABS that ranks areas in Australia according to relative socioeconomic advantage and disadvantage. The indexes are based on information from the five-yearly Census.

SEIFA 2016 is the latest version of this product and consists of four indexes: The Index of Relative Socio-economic Disadvantage (IRSD); The Index of Relative Socio-economic Advantage and Disadvantage (IRSAD); The Index of Education and Occupation (IEO); The Index of Economic Resources (IER).

Each index is a summary of a different subset of Census variables and focuses on a different aspect of socio-economic advantage and disadvantage.

Further explanation of Socio-Economic Indexes for Areas (SEIFA) 2016 - external site opens in new window.





# **Notes**

## **Amendments**

#### 21 November 2023

• A correction has been made to dental care interactive 14 (presented in previous versions as Dental care interactive 13) to correct the 'CDBS Benefits' chart. This chart was previously displaying incorrect values due to a filter not being applied properly.

#### 23 March 2021

- A correction to a transcription error has been made to the interactive data visualisation: Dental care Interactive 10.
- A correction has been made to Healthy mouths Interactive 5: the y-axis label was amended to reflect the correct units (Average number) for the *Missing teeth due to pathology* measure. The y-axis was previously incorrectly labelled as Per cent.

# **Updates**

#### **21 November 2023**

The Oral health and dental care in Australia 21 November 2023 revision includes:

- A update to the hospitalisations data in the Summary chapter
- An update of the Dental care chapter
  - o update of the Child Dental Benefits Schedule section
- An update of the Hospitalisations chapter
  - Addition of the Dental procedures section
  - Update of the Potentially Preventable Hospitalisations (PPH) section
  - Update of the Dental procedures requiring general anaesthetic section
- An update of the Prescribing chapter
- An update of the Priority Populations chapters
  - Aboriginal and Torres Strait Islander Australians
    - An update of the NTRAI OHP section
  - People living in regional and remote areas
    - An expansion of the Royal Flying Doctor Service section
- Addition of the Populations of interest chapter
  - Addition of Veterans section

#### 17 March 2023

The Oral health and dental care in Australia 17 March 2023 revision includes:

- An update of the Summary chapter
- An update to the Healthy lives chapter
  - o Burden of disease
  - o Oral cancers
- An update to the Dental care chapter
  - o National Health Survey 2020-21
  - Public Dental Waiting Times
- An update of the Hospitalisations chapter
- · An update of the Prescribing chapter
- An update of the Patient experience chapter
- An update to the Costs chapter
  - Expenditure
- Addition of the Disease expenditure chapter
- An update to the Private health insurance chapter
  - Health expenditure by private health insurance funds
  - Private health insurers data

- An update of the Dental workforce chapter
- Additions and updates to the Priority populations chapters
  - o People who are socially disadvantaged or on low incomes
    - Addition of the Culturally and Linguistically Diverse (CALD) people section
  - o Aboriginal and Torres Strait Islander Australians
    - An update of the NTRAI OHP section
  - o People with additional and/or specialised health care needs
    - Expanded section on People with disability in Australia

#### 17 Mar 2022

The Oral health and dental care in Australia 17 March 2022 revision includes:

- addition of the Summary chapter
- an update to the Healthy lives chapter
  - Burden of disease
  - Oral cancers
- an update and additions to the Dental care chapter
  - National Child Oral Health Study 2012-14
  - o Child Dental Benefits Schedule
  - Public Dental Waiting Times
- an update to the Hospitalisations chapter
- an update to the Prescribing chapter
- an update to the Patient experience chapter
- an update to the Costs chapter
  - Expenditure
- an update to the Private health insurance chapter
- an update and additions to the Aboriginal and Torres Strait Islander Australians chapter
- an addition to the People with additional and/or specialised health care needs chapter
- addition of content to Report editions chapter

# 23 Mar 2021

The Oral health and dental care in Australia 23 March 2021 revision included:

- an update to the Healthy teeth chapter
- an update to the Healthy mouths chapter
- an update and additions to the Dental care chapter
- an update to the Patient experience chapter
- an update of the Health expenditure by private health insurance funds section in the Private health insurance chapter
- an update to the Dental workforce chapter
- the addition of the Priority populations chapter.

## 31 Jul 2020

The Oral health and dental care in Australia 31 July 2020 revision included:

- an update to the Healthy lives chapter
- an update to the Toothbrushing section in the Preventative strategies chapter
- an update to the Child Dental Benefits Schedule and the Public Dental Waiting Times sections in the Dental Care chapter
- an update of the Hospitalisations chapter
- an update of the Prescribing chapter
- an update to the Expenditure and Financial barriers sections in the Costs chapter
- an update of the Health expenditure by private health insurance funds section in the Private health insurance chapter
- addition of Private health insurers data section in the Private health insurance chapter.

#### 20 Mar 2019

The Oral health and dental care in Australia 20 March 2019 revision included:

- an update to the Public Dental Waiting Times section in the Dental care chapter
- addition of Prescribing chapter

- addition of Patient Experience chapter
- addition of Costs chapter
- addition of Private health insurance chapter
- addition of Workforce chapter.





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XLSX 70Kb

Data tables: Healthy teeth Data XLSX 86Kb **Data tables: Healthy mouths** Data XLSX 90Kb **Data tables: Healthy lives** Data XLSX 73Kb **Data tables: Preventative strategies** Data XLSX 55Kb **Data tables: Dental care** Data XLSX 325Kb **Data tables: Hospitalisations** Data XLSX 202Kb **Data tables: Prescribing** Data XLSX 114Kb **Data tables: Patient experience** Data XLSX 177Kb **Data tables: Costs** Data

# Data tables: Disease expenditure

Data

XLSX 77Kb





# **Archived content**

Previous versions of this report and accompanying data tables can be accessed below.

#### Oral health and dental care in Australia - released 19 November 2018

Oral health and dental care in Australia - (19 November 2018) (481KB PDF)

Oral health and dental care in Australia - (19 November 2018) (286KB XLXS)

#### Oral health and dental care in Australia - released 20 March 2019

Oral health and dental care in Australia - (20 March 2019) (559KB PDF)

Oral health and dental care in Australia - (20 March 2019) (425KB XLXS)

## Oral health and dental care in Australia - released 31 July 2020

Oral health and dental care in Ausralia - (31 July 2020) (755KB PDF)

Oral health and dental care in Ausralia - (31 July 2020) (810KB XLXS)

#### Oral health and dental care in Australia - released 19 March 2021

Oral health and dental care in Australia - (19 March 2021) (638KB PDF)

Oral health and dental care in Australia - (19 March 2021) (945KB XLXS)

# Oral health and dental care in Australia - released 17 March 2022

Oral health and dental care in Australia - (17 March 2022) (8800KB PDF)

Oral health and dental care in Australia - (17 March 2022) (1200KB XLXS)

## Oral health and dental care in Australia - released 17 March 2023

Oral health and dental care in Australia - (17 March 2023) (9943KB PDF)

Oral health and dental care in Australia - (17 March 2023) (1337KB XLXS)





# **Report editions**

See <u>Archived content</u> for additional previous versions of this report.

# This release

Oral health and dental care in Australia | 21 Nov 2023

# **Previous releases**

• Oral health and dental care in Australia 2015 | Web report | 28 Jan 2016





# **Related material**

# **Latest related reports**

- National Oral Health Plan 2015–2024: performance monitoring report | Web report | 03 Dec 2020
- National Oral Health Plan 2015–2024: performance monitoring report: in brief | Publication | 03 Dec 2020

# **Related topics**

• Dental & oral health

