

# National Oral Health Plan 2015-2024: performance monitoring report

Web report | Last updated: 03 Dec 2020 | Topic: Dental & oral health

# About

This report presents data against an agreed set of Key Performance Indicators (KPIs) used to monitor performance of the strategies in Australia's National Oral Health Plan 2015-2024. Information is presented for 26 KPIs grouped into seven broad topic areas - oral health status, impacts of oral disease, risk behaviours, preventive strategies, access to services, workforce and quality.

A companion In brief publication has been produced. It provides an overview of key statistics and related information found in these web pages.

### Cat. no: DEN 232

# Findings from this report:

- The proportion of adults with untreated tooth decay increased between 2004-06 and 2017-18
- Around three times as many children aged 10-14 years experienced toothache in 2017-18 than in 2013
- 9 in 10 Australians can access fluoridated drinking water
- In 2017-18, around 1 in 8 teenagers aged 14-17 consumed selected sugar sweetened beverages on a daily basis

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# Summary

This report on <u>Australia's National Oral Health Plan 2015-2024</u> (NOHP) Key Performance Indicator (KPIs) presents the most recent data available for 26 core indicators for the reporting period July 2016 - June 2018, or as close as possible to this period.

The data were collected from a number of sources including national population surveys of oral health and state and territory public dental service data collections. It should be noted that:

- National population surveys of oral health are conducted infrequently, around every 10 years. This means that there are no new data available for some indicators. In these cases, the most recent data available are re-presented here for completeness.
- Public dental services are operated by state and territory governments, and the data presented here are submitted by states and territories sourced from their own public dental data systems. Because eligibility for services and the organisation of services varies across the jurisdictions, the data are not considered to be comparable across jurisdictions and data have not been aggregated to the national level.

A summary of the Key Performance Indicators trends is presented in Table 1.

### Table 1: Australia's National Oral Health Plan 2015-2024: trends

Favourable Unfavourable	No change No data/insufficient data		
NOHP Key Performance Indicators	Comparison to baseline report		
1. Caries experience in children	•• No new data available for children		
2. Untreated caries prevalence	<ul> <li>No new data available for children</li> <li>X</li> <li>Unfavourable increase for adults</li> </ul>		
3. Periodontitis prevalence	X Unfavourable increase		
<u>4. Edentulism prevalence</u>	Favourable decrease		
5. Inadequate dentition prevalence	✔ Favourable decrease		
6. Mean number of missing teeth	No Change		
7. People experiencing toothache	X Unfavourable increase		
8. Food avoidance due to dental problems	X Unfavourable increase		
9. People feeling uncomfortable with appearance of mouth and teeth	X Unfavourable increase		
10. Oral cancer relative survival rate	Favourable increase		

Legend:

	1		
11. Access to optimally fluoridated drinking water	•• No new national data available		
<u>12. Adults who smoke daily</u>	No Change		
13. Free sugar consumption	<ul> <li>No baseline data available</li> <li>Proxy data presented in this report</li> </ul>		
<u>14. People who have received an oral health check-up in the previous two years</u>	<ul> <li>No Change for children</li> <li>X</li> <li>Unfavourable decrease for adults</li> </ul>		
15. Daily brushing with fluoride toothpaste	<ul> <li>No Change for children</li> <li>No Change for adults</li> </ul>		
<u>16. People who report avoiding or delaying visiting a dental</u> practitioner in the last 12 months	✓ Favourable decrease		
<u>17. Children accessing oral health care through a government funded oral health program</u>	Favourable increase *interpret with caution		
18. Adults accessing oral health care in the public sector	Favourable increase *interpret with caution		
19. Potentially preventable dental hospitalisations	X Unfavourable increase		
20. Private dental practices and services accredited to National Safety and Quality Health Service standards	<ul> <li>No baseline data available</li> <li>Recent data shows a Favourable increase</li> </ul>		
21. Newly registered dental practitioners, by division	<ul> <li>No baseline data available</li> <li>X</li> <li>Recent data shows an Unfavourable decrease</li> </ul>		
22. Registered clinically active dental practitioners	∼ No Change		
23. Non-oral health vocational education and training sector enrolments successfully completing oral health units of competency	∼ No Change		
24. Students enrolled in dental and oral health courses who have a rural background	X Unfavourable decrease		

	2		
25. Patient experience visiting a dental professional	No Change		
	2		
26. Adult daily alcohol consumption	No Change		

# 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.

COAG (Council of Australian Governments) Health Council 2019. Healthy mouths, healthy lives: Australia's National Oral Health Plan 2015-2024. Performance monitoring report: baseline report 2017. Victoria: Dental Health Services Victoria.



# Background

The goal of <u>Australia's National Oral Health Plan 2015-2024</u> (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.

Achievement of the foundation area goals will contribute to improving the oral health of the majority of Australians (Table 1).

## Table 1: Australia's National Oral Health Plan 2015-2024 foundation areas

Foundation area	Goal	
1. Oral health promotion	All Australians have access to oral health promoting environments and to appropriate evidence-based information and programs that support them to make informed decisions about their oral health	
2. Accessible oral health services	All Australians have access to appropriate oral health care in a clinically appropriate timeframe	
3. Systems alignment and integration	Social, health and education systems work together to support health mouths and healthy lives	
4. Safety and quality	Oral health services are provided in accordance with the Australia Safety and Quality Goals for Health care	
5. Workforce development	The workforce for oral health is of an appropriate size and is appropriately trained and distributed	
6. Research and evaluation	Appropriate and timely data is available at both the population and service level for planning, monitoring and evaluation	

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 2).

# Table 2: 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		

In order to monitor progress of the strategies of the NOHP, a set of 26 core Key Performance Indicators (KPIs) were developed; it is intended that they will be reported against every two years for the life of the plan.

In 2019, the Australian Health Ministers Advisory Council (AHMAC) endorsed a <u>report</u> (COAG 2019) that provided the baseline data for the 26 core KPIs, and included some further explanation of each of the KPIs and the rationale for their inclusion.

This report is the next in the series and presents the most up-to-date data currently available for each of the 26 core KPIs.

The 26 core KPIs have been grouped into seven broad topic areas (Table 3).

## Table 3: Australia's National Oral Health Plan 2015-2024 KPI topic areas

KPI topic areas		
1. Our oral health—a national perspective		
2. How oral disease impacts our wellbeing		
3. Preventive strategies to reduce the risk of oral disease		

4. Behaviours that increase the risk of oral disease

5. Access to oral health services

6. Safety and quality of oral health services

7. The oral health workforce

### **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.

COAG (Council of Australian Governments) Health Council 2019. Healthy mouths, healthy lives: Australia's National Oral Health Plan 2015-2024. Performance monitoring report: baseline report 2017. Victoria: Dental Health Services Victoria

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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.



KPI 1: Average number of decayed, missing and filled primary and permanent teeth per child, in children aged 6 and 12 years

The dmft and DMFT score counts the number of teeth that are decayed (d), missing due to caries (m) or filled because of caries (f)–'dmft' refers to primary teeth, 'DMFT' refers to permanent teeth. When a person has a dmft or DMFT score that is greater than zero, this is known as having caries experience.

In Australia, national survey data shows that children aged 6 years have an average of 1.4 dmft, while children aged 12 years have an average of 0.7 DMFT.

The dmft score varied across Australia for children aged 6 years, from 2.0 dmft in Queensland to 0.7 dmft in South Australia. Similarly, the DMFT score for children aged 12 years varied from 1.1 DMFT in Queensland to 0.3 DMFT in the Australian Capital Territory.

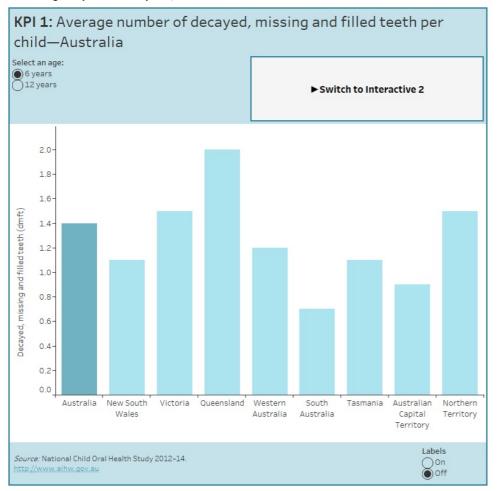
Explore the data using the interactive below:

KPI 1 Interactive 1: Average number of decayed, missing and filled teeth per child-Australia

This figure shows the average number of decayed, missing and filled teeth per child in 2012-14. National, state and territory averages are presented for children aged 6 years and 12 years. In Australia, national survey data shows that children aged 6 years have an average of 1.4 decayed, missing and filled primary teeth, while children aged 12 years have an average of 0.7 decayed, missing and filled permanent teeth.

KPI 1 Interactive 2: Average number of decayed, missing and filled teeth per child-Public dental clients

This figure shows the average number of decayed, missing and filled teeth per child, for public dental clients, by state and territory, for children aged 6 years and 12 years, between 2014-15 and 2017-18.



Data tables available for download.

More information about the health of children's teeth.

## **KPI 1 definition**

	Mean number of decayed, missing and filled primary and permanent teeth per child, in children aged 6 and 12 years			
Definition	Numerator Total number of decayed, missing and filled primary teeth for children aged 6 years (dmft) and permanent teeth for children aged 12 years (DMFT) examined in the reporting period			
	<b>Denominator</b> Total number of children aged 6 and 12 years examined in the reporting period			
Desirable rate	Low			
	Public dental State/territory public dental service data for children presenting to public dental clinics			
Data sources	NCOHS National Child Oral Health Study*			
	*National population estimates presented in COHS have been derived from weighted data			
	Age group Includes all teeth that are decayed, missing and filled due to caries, captured for children aged 6 and 12 years examined in the reporting period. Age is calculated from the date of birth in years (rounded down) as at the date of examination of the child when the decayed, missing and filled teeth score is captured.			
	Decayed teeth			
	<ul> <li>(dt + DT)<sup>(1)</sup></li> <li>Caries is recorded as present when a lesion in a pit or fissure, or on a smooth tooth surface, has an unmistakable cavity, undermined enamel, or a detectably softened floor or wall. A tooth which is restored</li> </ul>			
	or sealed but also decayed should be included in the number of decayed teeth.			
	dt: Number of decayed deciduous/primary teeth DT: Number of decayed permanent teeth			
Inclusions	Missing teeth (mt + MT) <sup>(1)</sup> Missing teeth applies to permanent or primary teeth that have been extracted because of caries. For missing primary teeth, this score should be used only if the child is at an age when normal exfoliation would not be a sufficient explanation for absence of teeth.			
	mt: Number of missing deciduous/primary teeth MT: Number of missing permanent teeth			
	Filled teeth			
	<ul> <li>(ft + FT)<sup>(1)</sup></li> <li>Filled teeth apply to the number of primary or permanent teeth where one or more restorations are present and there is no caries anywhere on the filled tooth. A tooth may have more than one restoration, but is counted as one filled tooth.</li> </ul>			
	ft: Number of filled deciduous/primary teeth FT: Number of filled permanent teeth			
	Missing teeth <sup>(1)</sup> Teeth missing for reasons other than caries (congenitally missing, unerupted, extracted for orthodontic reasons, periodontal disease or trauma) are excluded from the count of missing teeth.			
Exclusions	<b>Filled teeth</b> <sup>(1)</sup> Teeth with fissure sealants and not restorations or teeth restored for reasons other than caries (trauma or fixed dental prosthesis abutment) are excluded from the count of filled teeth.			
	<b>Duplicate cases</b> Each child should be included in the data only once—uniquely and not duplicated. If a child has received more than one examination and dmft/DMFT data collection in the reporting period, only the most recent record is to be counted.			

1. Adapted from World Health Organisation (WHO) Oral health surveys - basic methods, 5th edition, 2013.



KPI 2: Proportion of children, adolescents, adults and older adults with one or more teeth with untreated decay

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

Around 1 in 4 (26%) children aged 5-14 years have at least one tooth with untreated decay. More children aged 7-8 had at least one tooth with untreated decay than any other age group (31%).

The proportion of adults with at least one tooth with untreated decay has increased over time. In 2017-18, around 1 in 3 (33%) adults aged 15-64 years and around 1 in 4 (27%) adults aged 65 years and over had at least one tooth with untreated decay compared to 1 in 4 (26%) and 1 in 5 (22%) in 2004-06.

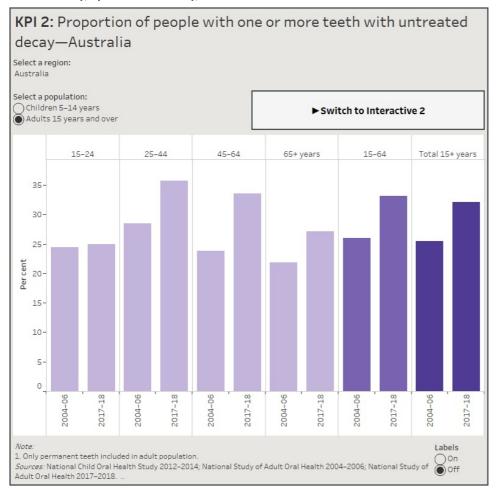
Explore the data using the interactive below:

KPI 2 Interactive 1: Proportion of people with one or more teeth with untreated decay-Australia

This figure shows the proportion of children aged 5-14 years and adults aged 15 years and over with one or more teeth with untreated decay. National, state and territory data is presented for 2004-06, 2012-14 and 2017-18. In Australia, 26% of children aged 5-14 years had one or more teeth with untreated decay in 2012-14. In Australia, 32% of adults aged 15 years and over had one or more teeth with untreated decay in 2017-18.

KPI 2 Interactive 2: Proportion of people with one or more teeth with untreated decay-Public dental clients

This figure shows the proportion of public dental clients aged 5-14 years, 15-64 years and 65 years and over with one or more teeth with untreated decay, by state and territory, between 2014-15 and 2017-18.



Data tables available for download.

More information about <u>untreated caries</u>.

## **KPI 2 definition**

Definition	Proportion of children, adolescents, adults and older adults with one or more teeth with untreated decay
	Numerator Total number of children (aged 5-14 years), adults (aged 15-64 years) and older adults (aged 65+ years) examined in the reporting period with one or more teeth with untreated decay
	Denominator Total number of dentate children (aged 5-14 years), adults (aged 15-64 years) and older adults (aged 65+ years) examined in the reporting period
Desirable rate	Low
Data sources	Public dental State/territory public dental service data for children and adults presenting to public dental clinics
	NCOHS National Child Oral Health Study*
	NSAOH National Study of Adult Oral Health* *National population estimates presented in COHS and NSAOH have been derived from weighted data
Inclusions	Age group Includes all decayed teeth data captured for individuals aged 5+ years examined in the reporting period. Age is calculated from the date of birth in years (rounded down) as at the date of examination of the client when the untreated decayed teeth score is captured.
	Dentition Includes both primary and permanent teeth
	Decayed teeth (dt + DT) <sup>(1)</sup>
	Caries is recorded as present when a lesion in a pit or fissure, or on a smooth tooth surface, has an unmistakable cavity, undermined enamel, or a detectably softened floor or wall. A tooth which is restored or sealed but also decayed should be included in the number of decayed teeth. dt: Number of decayed deciduous/primary teeth DT: Number of decayed permanent teeth
Exclusions	Edentulous clients Individuals with no natural teeth present (both deciduous/primary and permanent) are to be excluded from the denominator count
	<b>Duplicate cases</b> Each individual should be included in the data only <b>once</b> —uniquely and not duplicated. If a participant has received more than one examination and dt/DT data collection in the reporting period, only the most recent record is to be counted.

1. Adapted from World Health Organisation (WHO) Oral Health Surveys: basic methods, 5th edition, 2013



KPI 3: Proportion of adults with moderate or severe periodontitis

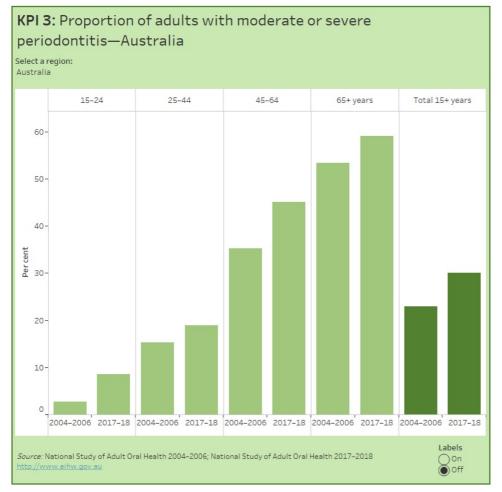
Periodontitis, or advanced stage gum disease, damages the soft tissue and bone supporting the teeth which can cause the teeth to become loose, which in turn can lead to tooth loss.

In 2017-18, around one-third (30%) of adults aged 15 years and over had moderate or severe periodontitis, an increase from around onequarter (23%) in 2004-06.

In 2017-18, the proportion of adults with periodontitis increased with age from 8.6% in those aged 15-24 to 59% in those aged 65 years and over.

KPI 3: Proportion of adults with moderate or severe periodontitis-Australia

This figure shows the proportion of adults aged 15 years and over with moderate or severe periodontitis. National, state and territory data is presented for 2004-06 and 2017-18. In Australia, 30% of adults aged 15 years and over had moderate or severe periodontitis in 2017-18.



Data tables available for download.

More information about periodontitis.

### **KPI 3 definition**

### **KPI 3 Periodontitis prevalence**

For KPI 3 three relevant data sources (NSAOH, NDTIS and public dental services) have been identified. Separate definition tables and data capturing rules have been provided for each data source identified.

Definition	Proportion of adults with moderate or severe periodontitis Numerator
	Total number of individuals (aged 15+ years) examined in the reporting period with a moderate or severe periodontitis
	Denominator
	Total number of dentate individuals (aged 15+ years) examined in the reporting period
Desirable rate	Low
Data sources	NSAOH
	National Study of Adult Oral Health*
	*National population estimates presented in NSAOH have been derived from weighted data
Inclusions	Age group Includes all periodontal status data captured for individuals aged 15+ years examined in the reporting period. Age is calculated from the date of birth in years (rounded down) as at the date of examination of the client when the periodontal status is captured. Data to be presented in age groups 15-24, 25-44, 45-64, 65+ and 15+ years.
	Sites Measurements are made with a periodontal probe at the mesio-buccal, mid-buccal, and disto-buccal aspects of all teeth present, except for third molars.
	Moderate or severe periodontitis <sup>(1)</sup>
	Presence of two or more sites (not on the same tooth) for all teeth examined where either:
	(a) The gum has lost its attachment to the tooth for 4mm or more (distance from cemento-enamel junction to the
	bottom of the periodontal crevice/pocket), OR
	(b) The periodontal pocket (distance from free gingival margin to the bottom of the periodontal crevice/pocket) is 5mm or more.
Exclusions	Edentulous individuals
	Individuals with no natural teeth present are to be excluded from the denominator count

# KPI 3-Rule to capture the periodontitis prevalence through NDTIS

Definition	Proportion of adults with moderate or severe periodontitis
	Numerator Total number of individuals (aged 15+ years) interviewed in the reporting period who provided self-reported responses indicating the person to have moderate or severe periodontitis
	Denominator
	Total number of dentate individuals (aged 15+ years) interviewed in the reporting period
Desirable rate	Low
Data sources	NDTIS National Dental Telephone Interview Survey* *National population estimates presented in NDTIS have been derived from weighted data
Inclusions	Age group Includes all periodontal status data captured for individuals aged 15+ years interviewed in the reporting period. Age is calculated from the date of birth in years (rounded down) as at the date of the interview of the client when the responses to periodontal status questions are captured. Data to be presented in age groups 15-24, 25-44, 45- 64, 65+ and 15+ years.
	Survey response (NDTIS) Response combinations to the following series of periodontal status questions in NDTIS represent a validated instrument <sup>(2)</sup> for predicting periodontal disease: - Do you think you might have gum disease?
	- Overall, how would you rate the health of your teeth and gums?
	- Have you ever had treatment for gum disease such as scaling and root planning, sometimes called 'deep cleaning'?
	- Have you ever had any teeth become loose on their own, without an injury?
	- During the last three months, have you noticed a tooth that doesn't look right?

#### KPI 3-Rule to capture the CPI in State/Territory public dental services

	Proportion of adults with moderate or severe periodontitis				
Definition	Numerator Total number of individuals (aged 15+ years) examined in the reporting period with a moderate or severe periodontitis using the Community Periodontal Index (CPI)				
	<b>Denominator</b> Total number of d	entate individu	als (aged 15+ years	) examined in the	e reporting period
Desirable rate	Low				
Data sources	Public dental State/territory public dental service data for adults presenting to public dental clinics				
Inclusions	Age group         Includes all periodontal status data captured for individuals aged 15+ years examined in the reporting period. Age is calculated from the date of birth in years (rounded down) as at the date of examination of the client when the periodontal status is captured. Data to be presented in age groups 15-24, 25-44, 45-64, 65+ and 15+ years.         Sites <sup>(3)</sup> (under CPI)         The mouth is divided into sextants defined by tooth numbers: 18-14, 13-23, 24-28, 38-34, 33-43, and 44-48. A sextant should be examined only if there are two or more teeth present and not indicated for extraction. The index teeth to be examined are:				
	17 16	11 31	26 27 36 37	Note for s and 47 are	ubjects under the age of 20 years: 17, 27, 37 excluded
	<ul> <li>The two molars in each posterior sextant are paired for recording, and if one is missing, there is no replacement. If no index teeth or tooth is present in a sextant qualifying for examination, all the remaining teeth in that sextant are examined and the highest score is recorded as the score for the sextant. In this case, distal surfaces of third molars should not be scored.</li> <li>Coding<sup>(3)</sup> (under CPI)</li> <li>The highest score for the following codes is recorded for teeth examined in each sextant:</li> <li>0: Healthy</li> <li>1: Bleeding observed, directly or by using mouth mirror, after probing</li> <li>2: Calculus detected during probing, but pocket 3mm or under</li> <li>3: Pocket 4 - 5 mm</li> <li>4: Pocket 6 mm or more</li> <li>X: Excluded sextant (less than two teeth present)</li> </ul>				
	Moderate or severe periodontitis Presence of two or more sextants with a CPI score = 3 or 4				
Exclusions	Edentulous Individuals Individuals with no natural teeth present are to be excluded from the denominator count.				

- 1. From definition developed jointly by the US Centers for Disease Control and Prevention (CDC) and the American Academy of Periodontology (AAP) adopted for NSAOH.
- 2. Slade GD. Interim analysis of validity of periodontitis screening questions in the Australian population. J Periodontol 2007;78:1463-1470.
- 3. Adapted from World Health Organisation (WHO) Oral health surveys basic methods, 4th edition, 1997.



KPI 4: Proportion of adults aged 45 years or older who have lost all of their natural teeth

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). Adults who have no natural teeth are classified as edentulous.

Around 1 in 10 (9.0%) adults aged 45 years and over and around 1 in 5 (19%) adults aged 65 years and over had lost all of their natural teeth in 2013. This proportion decreased slightly in 2017-18 to around 1 in 12 (8.1%) adults aged 45 years and over and around 1 in 7 (15%) adults aged 65 years and over.

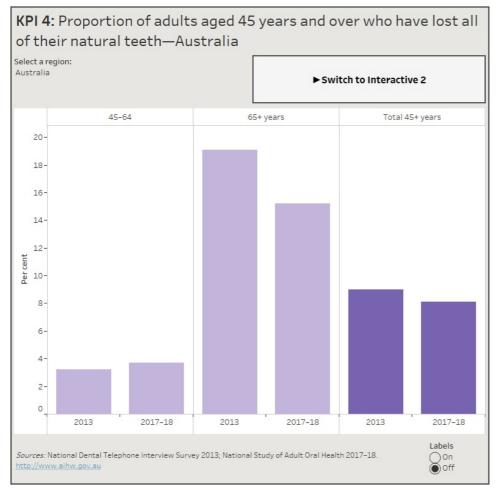
Explore the data using the interactive below:

KPI 4 Interactive 1: Proportion of adults aged 45 years and over who have lost all of their natural teeth-Australia

This figure shows the proportion of adults aged 45 years and over who have lost all of their natural teeth. National, state and territory data is presented for 2013 and 2017-18. In Australia, 8.1% of adults aged 45 years and over had lost all of their natural teeth in 2017-18.

KPI 4 Interactive 2: Proportion of adults aged 45 years and over who have lost all of their natural teeth-Public dental clients

This figure shows the proportion of public dental clients aged 45 years and over who have lost all of their natural teeth, by state and territory, between 2014-15 and 2017-18.



Data tables available for download.

More information about edentulism.

### **References:**

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

# **KPI 4 definition**

KPI 4 Edentulism prevalence

Definition	Proportion of adults aged 45 years or older who have lost all of their natural teeth				
	Numerator				
	Total number of adults (aged 45+ years) surveyed/examined in the reporting period who have lost all of their natural teeth				
	Denominator Total number of adults (aged 45+ years) examined in the reporting period				
Desirable rate	Low				
Data sources	Public dental State/territory public dental service data for adults presenting to public dental clinics				
	NDTIS National Dental Telephone Interview Survey*				
	NSAOH National Study of Adult Oral Health* *National population estimates presented in NDTIS and NSAOH have been derived from weighted data				
Inclusions	Age group Includes data captured for individuals aged 45+ years surveyed/examined in the reporting period. Age is calculated from the date of birth in years (rounded down) as at the date of survey/examination of the client when the dentate status is captured. Data to be presented in age groups 45-64, 65+ and 45+ years.				
	Survey response (NDTIS) Respondents that answer 'NO' to question 'Do you have any of your own natural teeth?'				
	<b>Examination (NSAOH &amp; public dental)</b> Individuals examined through dental charting with no indication of the presence of any natural teeth present. Includes individuals assessed radiographically in public dental service data whose only natural teeth are fully unerupted.				
Exclusions	Dentate individuals Individuals with one or more completely or partially erupted natural teeth are to be excluded from the numerator count.				



KPI 5: Proportion of adults aged 18 years and older who have less than 21 natural teeth

Tooth loss can result in an inadequate dentition, that is, fewer than 21 teeth. A person with an inadequate dentition is unlikely to have enough teeth that have a partner tooth on the opposite jaw to be able to chew properly.

In 2017-18, around 1 in 7 (15%) adults aged 18 years and over had fewer than 21 natural teeth, compared to around 1 in 6 (16%) in 2013. The proportion of adults with fewer than 21 natural teeth increases with age, from 0.7% in 15-24 year olds to 46% in those aged 65 years and over.

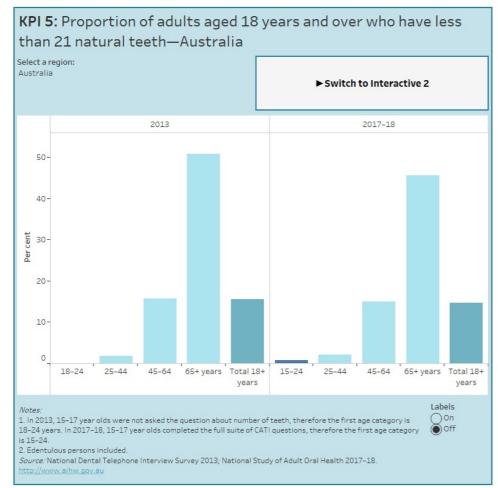
Explore the data using the interactive below:

KPI 5 Interactive 1: Proportion of adults aged 18 years and over who have less than 21 natural teeth-Australia

This figure shows the proportion of adults aged 18 years and over who have less than 21 natural teeth. National, state and territory data is presented for 2013 and 2017-18. In Australia, 15% of adults aged 18 years and over had less than 21 natural teeth in 2017-18.

KPI 5 Interactive 2: Proportion of adults aged 18 years and over who have less than 21 natural teeth-Public dental clients

This figure shows the proportion of public dental clients aged 18 years and over who have less than 21 natural teeth, by state and territory, between 2014-15 and 2017-18.



Data tables available for download.

More information about inadequate dentition.

### KPI 5 definition

Definition	Proportion of adults aged 18 years and older who have less than 21 natural teeth
	Numerator
	Total number of adults (aged 18+ years) surveyed/examined in the reporting period who have less than 21 natural teeth
	Denominator Total number of adults (aged 18+ years) surveyed/examined in the reporting period
Desirable rate	Low
Data sources	Public dental State/territory public dental service data for adults presenting to public dental clinics
	NDTIS National Dental Telephone Interview Survey*
	NSAOH National Study of Adult Oral Health* *National population estimates presented in NDTIS and NSAOH have been derived from weighted data
Inclusions	Age group Includes data captured for individuals aged 18+ years surveyed/examined in the reporting period. Age is calculated from the date of birth in years (rounded down) as at the date of survey/examination of the client when the dentate status is captured. Data to be presented in age groups 18-24, 25-44, 45-64, 65+ and 15+ years.
	<ul> <li>Survey response (NDTIS)</li> <li>Participants that indicate the total number of teeth in the upper and lower jaw to be less than 21 from responses to questions:</li> <li>'There are 16 teeth, including wisdom teeth, in the upper jaw. How many teeth do you have remaining in your UPPER jaw (implants are regarded as missing)?'</li> <li>'There are 16 teeth, including wisdom teeth, in the lower jaw. How many teeth do you have remaining in your LOWER jaw (implants are regarded as missing)?'</li> </ul>
	<b>Examination (NSAOH &amp; public dental)</b> Individuals examined through dental charting indicating the number of erupted or partially erupted deciduous or permanent teeth present is less than 21.
Exclusions	<b>Unerupted teeth</b> Fully unerupted teeth are to be excluded from the number of teeth count in the numerator.



KPI 6: Mean number of missing teeth per person in those aged 18 years or older

Losing teeth is undesirable and is generally the result of disease, such as tooth decay and periodontal disease, or injury, such as mouth trauma. Some teeth may be extracted because extensive disease precludes other treatment.

The average number of missing teeth in adults aged 18 years and over has remained relatively stable from 6.5 in 2013 to 6.4 in 2017-18.

In 2017-18, the average number of missing teeth increased with age, from 2.5 for adults aged 15-24 years to 13.7 for adults aged 65 years and over.

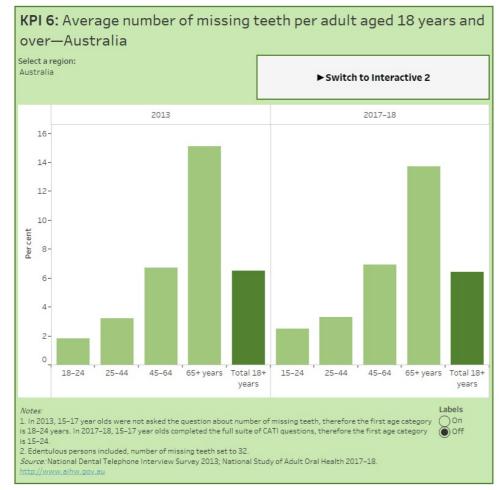
Explore the data using the interactive below:

KPI 6 Interactive 1: Average number of missing teeth per adult aged 18 years and over-Australia

This figure shows the average number of missing teeth per adult aged 18 years and over. National, state and territory data is presented for 2013 and 2017-18. In Australia, adults aged 18 years and over had an average of 6.4 missing teeth in 2017-18.

KPI 6 Interactive 2: Average number of missing teeth per adult aged 18 years and over-Public dental clients

This figure shows the average number of missing teeth per adult for public dental clients aged 18 years and over, by state and territory, between 2014-15 and 2017-18.



Data tables available for download.

More information about missing teeth.

## **KPI 6 definition**

Definition	Mean number of missing teeth per person in those aged 18 years or older
	Numerator
	Total number of missing teeth for persons (aged 18+ years) surveyed/examined in the reporting period
	Denominator Total number of persons (aged 18+ years) surveyed/examined in the reporting period
Desirable rate	Low
Data sources	Public dental State/territory public dental service data for adults presenting to public dental clinics
	NDTIS National Dental Telephone Interview Survey*
	NSAOH National Study of Adult Oral Health* *National population estimates presented in NDTIS and NSAOH have been derived from weighted data
Inclusions	Age group Includes data captured for individuals aged 18+ years surveyed/examined in the reporting period. Age is calculated from the date of birth in years (rounded down) as at the date of survey/examination of the client when the dentate status is captured.
	<ul> <li>Survey response (NDTIS)</li> <li>The total number of teeth in the upper and lower jaw to be determined from responses to questions: <ul> <li>There are 16 teeth, including wisdom teeth, in the upper jaw. How many teeth do you have remaining in your UPPER jaw (implants are regarded as missing)?'</li> <li>There are 16 teeth, including wisdom teeth, in the lower jaw. How many teeth do you have remaining in your LOWER jaw (implants are regarded as missing)?'</li> </ul> </li> </ul>
	<b>Examination (NSAOH &amp; public dental)</b> Individuals examined through dental charting identifying the number of permanent teeth missing for any reasons (extracted, unerputed, agenesis, trauma leading to avulsion, for orthodontic reasons etc.)
Exclusions	None



KPI 19: Rate (per 1,000 population) of potentially preventable hospitalisations for dental conditions in children under 10 years of age

Hospital separation rates for potentially preventable hospitalisations provide important information about the extent to which timely and adequate non-hospital dental care has been provided. The rate of potentially preventable hospitalisations for dental conditions is influenced by a number of factors including:

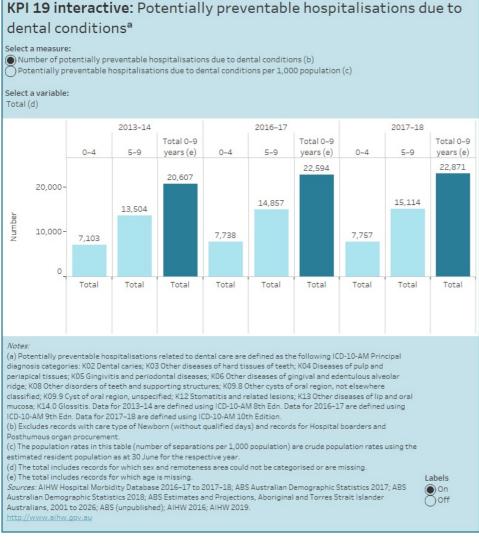
- adequacy of preventive and primary care services
- prevalence of severe dental disease in the community
- availability and accessibility of appropriate community and hospital-based services (COAG 2015).

In 2017-18, about 22,900 hospitalisations for dental conditions of children aged 0-9 years may have been prevented with earlier treatment. This represents a rate of 7.2 per 1,000 population, which is a slight increase from 6.9 per 1,000 population in 2013-14. In 2017-18, the rate was highest for children aged 5-9 years at 9.5 per 1,000 population

Explore the data using the interactive below:

KPI 19 interactive: Potentially preventable hospitalisations due to dental conditions

This figure shows the number and rate per 1,000 population of potentially preventable hospitalisations due to dental conditions in Australia in 2013-14, 2016-17 and 2018-19. Data are presented for children aged 0-4, 5-9 and 0-9 years, by selected variables. In 2017-18, 22,871 children aged 0-9 years were hospitalised for dental conditions which may have been prevented with earlier treatment.



#### Data tables available for download.

More information about potentially preventable hospitalisations.

ABS 2014. Estimates and projections, Aboriginal and Torres Strait Islander Australians, 2001 to 2026. ABS cat no. 3238.0. Projection series B. Canberra: ABS.

ABS 2017. Australian demographic statistics, December 2016. ABS cat no. 3101.0. Canberra: ABS.

ABS 2018. Australian demographic statistics, December 2017. ABS cat no. 3101.0. Canberra: ABS

AIHW: Chrisopoulos S, Harford JE & Ellershaw A 2016. Oral health and dental care in Australia: key facts and figures 2015. Cat. no. DEN 229. Canberra: AIHW.

Australian Institute of Health and Welfare 2019. Oral health and dental care in Australia. Cat. no. DEN 231. Canberra: AIHW. Viewed 30 October 2019, <u>https://www.aihw.gov.au/reports/dental-oral-health/oral-health-and-dental-care-in-australia</u>

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.

#### **KPI 19 definition**

KPI 19 Potentially preventable dental hospitalisations

Definition	Rate (per 1,000 population) of potentially preventable hospitalisations for dental conditions in children under 10 years of age
	Numerator
	Total number of hospital separations for potentially preventable hospitalisations due to dental conditions in the
	reporting period for children aged 0-9 years
	reporting period for cititaten aged 0-9 years
	Denominator
	Total number of children (aged 0-9 years) in the estimated resident Australian population x 1,000
Desirable rate	Low
Data sources	NHMD
	AIHW National Hospital Morbidity Database
	ABS ERP
	Australian Bureau of Statistics (ABS) Estimates of Resident Population (ERP)
Inclusions	Principal diagnosis categories <sup>(1)</sup>
	Potentially preventable hospitalisations for dental conditions are based on the principal diagnosis and include:
	K02: Dental caries
	K03: Other diseases of hard tissues and teeth
	K04: Diseases of pulp and periapical tissues
	K05: Gingivitis and periodontal diseases
	K06: Other disorders 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
	K14.0: Glossitis.
Exclusions	Care types
	Excludes records with care type of Newborn (without qualified days) and records for Hospital boarders and
	Posthumous Organ Procurement.

1. Diagnosis coding based on the International Statistical Classification of Diseases and Related Health Problems, 10<sup>th</sup> edition, Australian modification (ICD-10-AM)



# How oral disease impacts our wellbeing

Oral disease can impact on an individual's ability to eat, speak and socialise resulting in pain, discomfort and embarrassment. 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.



# How oral disease impacts our wellbeing

KPI 7: Proportion of people who have experienced toothache in the past 12 months

Toothache can result from tooth decay, a cracked tooth, loose or broken fillings, receding gums or dental abscesses and can cause pain that ranges from mild to severe. Pain from toothache can disrupt daily activities such as eating, and is often the first symptom of oral disease.

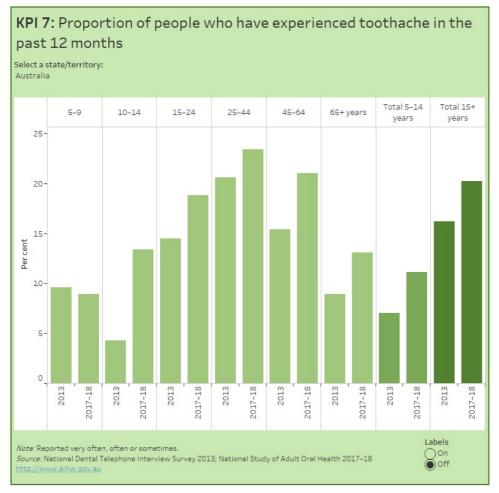
In 2017-18, around 1 in 9 (11%) children aged 5-14 years and around 1 in 5 (20%) adults aged 15 years and over had experienced toothache in the previous 12 months. Adults aged 25-44 were most likely to have experienced toothache in the previous 12 months (23%).

There has been an increase in the proportion of people who experienced toothache in the previous 12 months across all age groups except children aged 5-9 between 2013 and 2017-18. Notably, the proportion of children aged 10-14 years who experienced toothache in the previous 12 months increased from 4.3% in 2013 to 13% in 2017-18.

Explore the data using the interactive below:

KPI 7: Proportion of people who have experienced toothache in the past 12 months

This figure shows the proportion of people who have experienced toothache in the previous 12 months, by age group. National, state and territory data is presented for 2013 and 2017-18. In Australia, 11% of children aged 5-14 years and 20% of adults aged 15 years and over had experienced toothache in the previous 12 months in 2017-18.



# <u>Data tables</u> available for download.

More information about <u>toothache</u>.

## KPI 7 definition

KPI 7 People experiencing toothache

Definition	Proportion of people who have experienced toothache in the past 12 months
	Numerator
	Total number of people surveyed in the reporting period who have experienced toothache within the past 12
	months
	Denominator
	Total number of dentate people surveyed in the reporting period
Desirable rate	Low
Data sources	NDTIS
	National Dental Telephone Interview Survey*
	NSAOH
	National Study of Adult Oral Health*
	*National population estimates presented in NDTIS and NSAOH have been derived from weighted data
Inclusions	Survey response adult (aged 15+ years)
	Respondents that provide any of the following responses to question 'During the last 12 months how often have you
	had toothache?': Very often
	Often
	Sometimes
	Survey response child (aged 5-14 years)
	Respondents that provide any of the following responses to question 'During the last 12 months how often has
	[child] had toothache caused by decayed teeth - NOT
	teething problems. Was it?':
	Very often
	Often Sometimes
Exclusions	Edentulous individuals
	Individuals with no natural teeth present are to be excluded from the denominator count.



# How oral disease impacts our wellbeing

**KPI 8:** Proportion of people who have avoided eating some foods because of problems with their teeth, mouth or dentures during the last 12 months

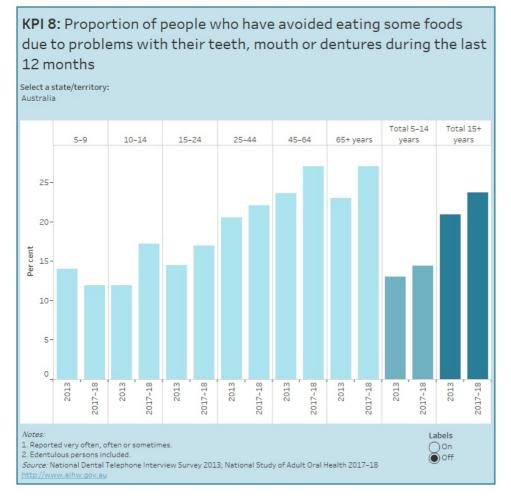
People may avoid eating some foods due to dental problems such as tooth sensitivity, inadequate dentition or being reliant on the use of dentures to chew. This in turn can impact on their diet and overall health and wellbeing.

In 2013, around 1 in 8 (13%) children aged 5-14 years and around 1 in 5 (21%) adults aged 15 years and over had avoided eating some foods in the previous 12 months due to problems with their teeth. In 2017-18, around 1 in 7 (14%) children aged 5-14 years and around 1 in 4 (24%) adults aged 15 years and over had avoided eating some foods in the previous 12 months due to problems with their teeth.

Explore the data using the interactive below:

<u>KPI 8: Proportion of people who have avoided eating some foods due to problems with their teeth, mouth or dentures during the last 12</u> <u>months</u>

This figure shows the proportion of people who have avoided eating some foods due to problems with their teeth, mouth or dentures during the last 12 months, by age groups. National, state and territory data is presented for 2013 and 2017-18. In Australia, 24% of adults aged 15 years and over had avoided earing some foods due to problems with their teeth, mouth or dentures in 2017-18.



#### Data tables available for download.

More information about <u>food avoidance</u>.

### **KPI 8 definition**

KPI 8 Food avoidance due to dental problems

Definition	Proportion of people who have avoided eating some foods because of problems with their teeth, mouth or dentures during the last 12 months
	Numerator Total number of people surveyed in the reporting period who have avoided eating some foods because of problems with their teeth, mouth or dentures during the last 12 months
	<b>Denominator</b> Total number of people surveyed in the reporting period
Desirable rate	Low
Data sources	NDTIS National Dental Telephone Interview Survey*
	NSAOH National Study of Adult Oral Health* *National population estimates presented in NDTIS and NSAOH have been derived from weighted data
Inclusions	Survey response adult (aged 15+ years) Respondents that provide any of the following responses to question 'How often have you had to avoid eating some foods because of problems with your teeth, mouth or dentures during the last 12 months?': Very often Often Sometimes
	Survey response child (aged 5-14 years) Respondents that provide any of the following responses to question 'How often has [child] had to avoid eating some foods because of problems with his/her teeth or mouth during the last 12 months. Was it?': Very often Often Sometimes
Exclusions	None



# How oral disease impacts our wellbeing

**KPI 9:** Proportion of people who report feeling uncomfortable with the appearance of their teeth, mouth or dentures in the past 12 months

Poor oral health, such as broken or missing teeth, can damage a person's self-esteem and overall wellbeing by affecting the way they look, speak, eat and socialise.

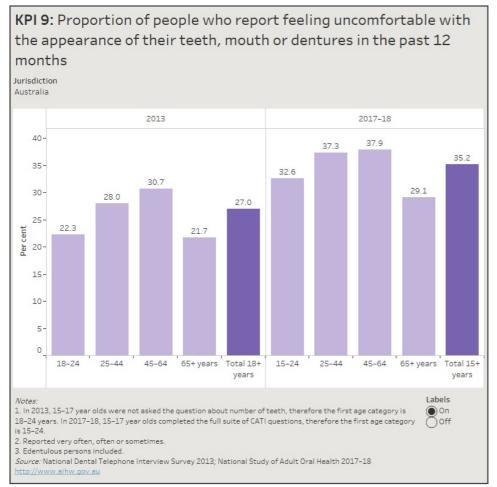
In 2017-18, around one-third (35%) of adults aged 15 years and over reported feeling uncomfortable with the appearance of their teeth, mouth or dentures in the previous 12 months.

In 2013 and 2017-18, more adults aged 45-64 years felt uncomfortable with their appearance than any other age group, 31% and 38% respectively.

Explore the data using the interactive below:

KPI 9: Proportion of people who report feeling uncomfortable with the appearance of their teeth, mouth or dentures in the past 12 months

This figure shows the proportion of people who reported feeling uncomfortable with the appearance of their teeth, mouth or dentures in the past 12 months, by age groups. National, state and territory data is presented for 2013 and 2017-18. In Australia, 35% of adults aged 15 years and over reported feeling uncomfortable with the appearance of their teeth, mouth or dentures in 2017-18.



Data tables available for download.

More information about feeling uncomfortable with appearance of mouth and teeth.

#### **KPI 9 definition**

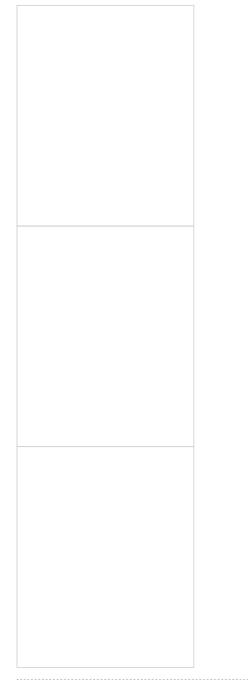
KPI 9 People feeling uncomfortable with appearance of mouth and teeth

Definition	Proportion of people who report feeling uncomfortable with the appearance of their teeth, mouth or dentures in the past 12 months
	Numerator Total number of people surveyed in the reporting period who report feeling uncomfortable with the appearance of their teeth, mouth or dentures within the past 12 months
	<b>Denominator</b> Total number of people surveyed in the reporting period
Desirable rate	Low
Data sources	NDTIS National Dental Telephone Interview Survey*
	NSAOH National Study of Adult Oral Health* *National population estimates presented in NDTIS and NSAOH have been derived from weighted data
Inclusions	Survey response adult (aged 15+ years) Respondents that provide any of the following responses to the question 'How often has (name inserted) felt uncomfortable about the appearance of their teeth, mouth or dentures during the last 12 months?': Very often Often Sometimes
	Survey response child (aged 5-14 years) Respondents that provide any of the following responses to the question 'During the last twelve months, because of their teeth, lips, mouth or jaws, how often has your child acted shy or embarrassed?': Very often Often Sometimes
Exclusions	None



# Preventive strategies to reduce the risk of oral disease

Preventing oral disease is fundamental to improving the oral health of Australians. Preventive strategies, such as daily toothbrushing, aim to reduce the likelihood of an individual developing oral disease or interrupt or slow the progress of existing oral disease. Oral health promotion initiatives at both the individual level and population level are an important part of disease prevention.







# Preventive strategies to reduce the risk of oral disease

KPI 10: The relative 5 year survival rates for people diagnosed with oral cancer

Cancer was the leading cause of total disease burden in Australia in 2015 (AIHW 2019). Treatment can be more effective when cancer is detected early, 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. Early detection is one of the factors associated with better cancer survival.

High 5-year relative survival is used as a proxy measure of early detection because population-level data on the stage at diagnosis of oral cancers are not currently available.

The 5-year relative survival rate in 2011-2015 for all selected oral cancers was 75%, compared to 69% for all cancers combined. In 2015, there were 3,407 cases of selected oral cancers, including 935 cases of lip cancer making it the most common oral cancer in this group.

Explore the data using the interactives below:

#### KPI 10 Interactive 1: Five-year relative survival 2011-2015

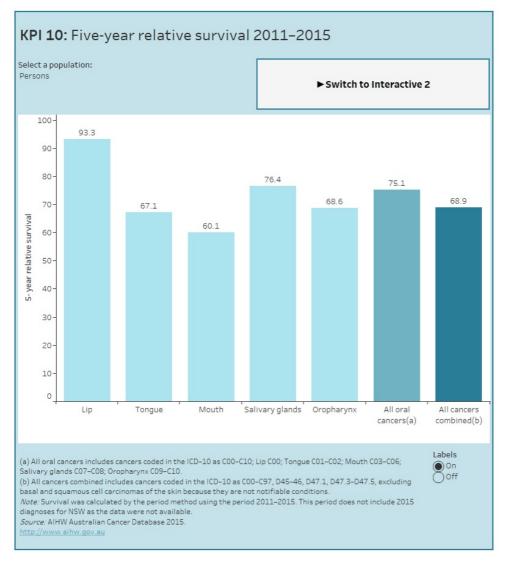
This figure shows the five-year relative survival for oral cancers for the period 2011-2015, by sex. The five-year relative survival rate in 2011-2015 for all selected oral cancers was 75%.

#### KPI 10 Interactive 2: Age-standardised 5-year relative survival trend

This figure shows the age-standardised 5-year relative survival trend for all selected oral cancers and for all cancers combined, between 1986-1990 and 2011-2015. Between 1986-1990 and 2011-2015, the age-standardised 5-year relative survival rate for all selected oral cancers increased from 66% to 73%.

#### KPI 10 Interactive 3: Oral cancer incidence and mortality, 2015

This figure shows the 2015 incidence and mortality of selected oral cancers in Australia. Both the number and age-standardised rate per 100,000 population data is presented, by sex and cancer site. In 2015, there were 3407 cases of selected oral cancers in Australia.



# Data tables available for download.

More information about oral cancers.

#### **References:**

Australian Institute of Health and Welfare 2019. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2015. Cat. no. BOD 22. Canberra: AIHW.

### **KPI 10 definition**

KPI 10 Oral cancer relative survival rate	
Definition	The relative five year survival rates for people diagnosed with oral cancer
	Numerator Observed survival representing the proportion of individuals diagnosed with oral cancer alive after 5 years
	<b>Denominator</b> Expected survival representing the proportion of people in the general population alive after 5 years. This is calculated from life tables of the entire Australian population, assumed to be cancer free
Desirable rate	High

Data sources	<ul> <li>ACD (AIHW)         The Australian Cancer Database (ACD) administered by the Australian Institute of Health and Welfare (AIHW) sourced from State/Territory cancer registries     </li> <li>NDI (AIHW)         The National Death Index (NDI) database housed at AIHW sourcing registration of deaths provided by the Registries of Births, Deaths and Marriages in each State/Territory     </li> <li>ABS         Australian Bureau of Statistics estimated resident population data     </li> </ul>
Inclusions	Cancer type <sup>(1)</sup> C00: Malignant neoplasm of lip         C01: Malignant neoplasm of base of tongue         C02: Malignant neoplasm of other and unspecified parts of tongue         C03: Malignant neoplasm of gum         C04: Malignant neoplasm of floor of mouth         C05: Malignant neoplasm of palate         C06: Malignant neoplasm of other and unspecified parts of mouth         C07: Malignant neoplasm of parotid gland         C08: Malignant neoplasm of other and unspecified major salivary glands         C09: Malignant neoplasm of tonsil         C10: Malignant neoplasm of oropharynx
Exclusions	None

1. Australian Consortium for Classification Development (ACCD). The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australia Modification (ICD-10-AM). Adelaide: Independent Hospital Pricing Authority.

Problems, Tenth Revision, Australia Modificati	on (ICD-10-AM). Adelaide: Independent Hospital Pricing Au
$\ensuremath{\mathbb{C}}$ Australian Institute of Health and Welfare 2024	



# Preventive strategies to reduce the risk of oral disease

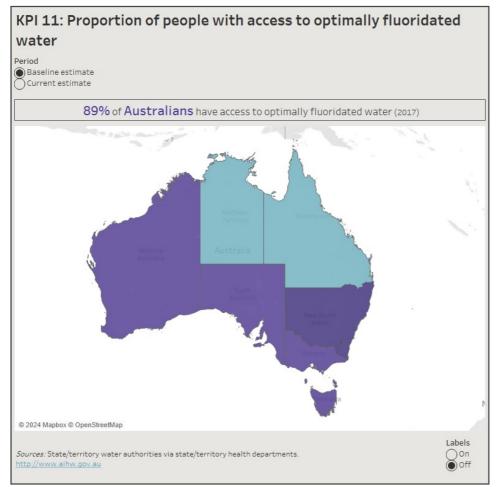
KPI 11: Proportion of people with access to optimally fluoridated drinking water

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

In 2017, the NHMRC estimated that around 89% of Australians have access to fluoridated drinking water. The proportion of people with access to fluoridated drinking water varies across Australia, from 99% in the Australian Capital Territory to 72% in Queensland.

Explore the data using the interactive below: KPI 11: Proportion of people with access to optimally fluoridated water

This figure shows the proportion of people with access to optimally fluoridated water in 2017. The national, state and territory baseline report estimates and the most current estimates are presented. In 2017, 89% of Australians had access to optimally fluoridated water.



Data tables available for download.

More information about water fluoridation.

#### **References:**

NHMRC (National Health and Medical Research Council) 2017. <u>NHMRC Public Statement 2017 - Water Fluoridation and Human Health in</u> <u>Australia</u>. Canberra: NHMRC.

## KPI 11 definition

KPI 11 Access to optimally fluoridated drinking water

Definition	Proportion of people with access to optimally fluoridated drinking water
	Numerator Total number of people residing in areas with optimally fluoridated drinking water in the reticulated water supply
	Denominator Total number of people in the estimated resident Australian population
Desirable rate	High
Data sources	Health departments         State/Territory health departments sourcing data from State/Territory water authorities         ABS         Australian Bureau of Statistics census of population and housing (for total population by state/territory)
Inclusions	Optimally fluoridated Total population in all areas where drinking water supply is either treated with fluoride or naturally fluoridated to the identified optimal level for the area to be included in the numerator (note—the optimal level will vary between areas based on climate). Postcodes
	Total population in areas without reticulated water supply to be included in the denominator.
Exclusions	None



# Preventive strategies to reduce the risk of oral disease

KPI 15: Proportion of the population brushing daily with fluoride toothpaste

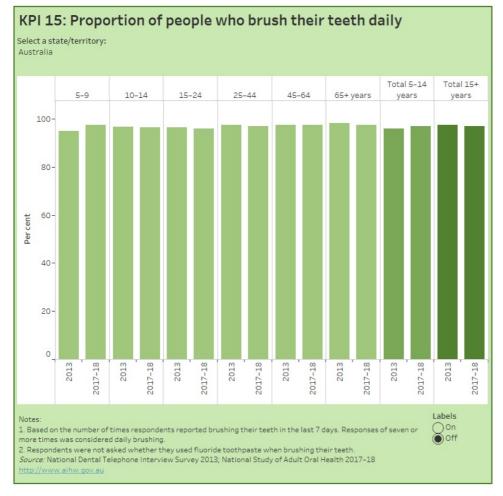
Brushing your teeth (ideally, twice per day) with a fluoridated toothpaste is effective in preventing tooth decay. Tooth brushing with a fluoridated toothpaste mechanically removes and controls the build-up of plaque, and applies fluoride to the teeth.

The available data presented here is not fully matched to the KPI that is specific to the use of fluoride toothpaste.

In 2013, almost all children aged 5-14 years (96%) and adults aged 15 years and over (98%) reported brushing their teeth daily. These proportions remained relatively stable over time with 97% of children aged 5-14 and adults aged 15 years and over reporting brushing their teeth daily in 2017-18.

Explore the data using the interactive below: KPI 15: Proportion of people who brush their teeth daily

This figure shows the proportion of people who brush their teeth daily. National, state and territory data is presented by age groups for 2013 and 2017-18. The majority (97%) of people report brushing their teeth daily in 2017-18.



Data tables available for download.

More information about toothbrushing.

# **KPI 15 definition**

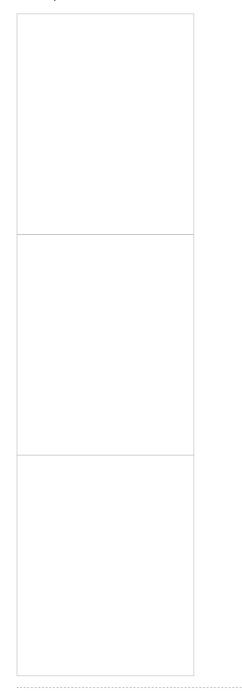
KPI 15 Daily brushing with fluoride toothpaste

Definition	Proportion of the population brushing daily with fluoride toothpaste
	Numerator
	Total number of people surveyed in the reporting period who self-report brushing at least once per day with a fluoride toothpaste
	<b>Denominator</b> Total number of people surveyed in the reporting period
Desirable rate	High
Data sources	NDTIS National Dental Telephone Interview Survey*
	NSAOH National Study of Adult Oral Health* *National population estimates presented in NDTIS and NSAOH have been derived from weighted data
Inclusions	Survey response         Respondents that provide any of the following responses to both brushing questions:         - 'In a usual day, how often do you [did your child] brush your [his/her] teeth?':         Once a day         Twice a day         More than twice a day         AND         - 'What kind of toothpaste do [does your child] you use to brush your [his/her] teeth?'
	<i>Fluoride toothpaste</i> For baseline data, will need to source respondents that provide response of 7 or more times to the question 'How often during the last 7 days did you clean your teeth?'
Exclusions	Non fluoride toothpaste Individuals that brush daily with a non-fluoride toothpaste or use no toothpaste are excluded from the numerator count.
	Edentulous individuals Individuals with no natural teeth present are excluded from the measure.



# Behaviours that increase the risk of oral disease

A person's health is influenced by many factors, and these are collectively known as determinants of health. Determinants that increase the likelihood of a person developing a disease or health disorder are commonly referred to as risk factors. There are different groups of risk factors. Behavioural risk factors are those that individuals have the most ability to modify, such as tobacco smoking and alcohol consumption.





## Behaviours that increase the risk of oral disease

KPI 12: Proportion of people aged 18 years and older who smoke every day

Tobacco smoking is the single most important preventable cause of ill health and death in Australia. People who smoke are at higher risk of gum disease, tooth loss and oral cancer (DHSV 2011).

In 2017-18, 14% of adults aged 18 years and over smoked daily. Adults aged 45-54 were more likely to smoke daily than adults aged 18-24, 17% compared to 14%.

After adjusting for age, the proportion of daily smokers has remained stable between 2014-15 and 2017-18, at 15% and 14% respectively.

Explore the data using the interactive below:

KPI 12 Interactive 1: Proportion of adults aged 18 years and over who smoke every day

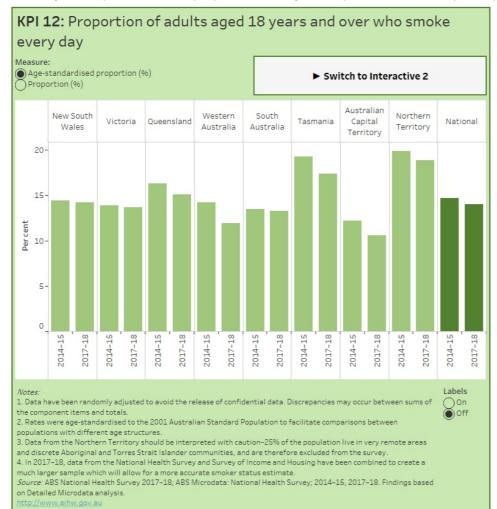
This figure shows the proportion of adults aged 18 years and over who smoke every day. National, state and territory data is presented for 2014-15 and 2017-18. In Australia, the age-standardised proportion of adults aged 18 years and over who smoke every day was 14% in 2017-18.

#### KPI 12 Interactive 2: Proportion of adults aged 18 years and over who smoke every day

This figure shows the age-standardised proportion of adults aged 18 years and over who smoke every day in Australia, by sex, in 2014-15 and 2017-18. In 2017-18, more males (17%) than females (11%) smoked every day.

KPI 12 Interactive 3: Proportion of adults aged 18 years and over who smoke every day

This figure shows the proportion of adults aged 18 years and over who smoke every day in Australia, by age groups and sex. In 2017-18, more females aged 45-54 years smoked every day than females aged 18-24 years, 15% and 10% respectively.



Data tables available for download.

#### More information about smoking.

#### **References:**

ABS 2018. National Health Survey: first results, 2017-18. ABS cat. No. 4364.0.55.001. Canberra: ABS

ABS Microdata: National Health Survey; 2014-15, 2017-18. Findings based on detailed micr odata analysis. Canberra: ABS

DHSV (Dental Health Services Victoria) 2011. Links between oral health and general health - the case for action: Dental Health Services Victoria.

### **KPI 12 definition**

KPI 12 Adults who smoke daily

Definition	Proportion of people aged 18 years and older who smoke every day
	Numerator
	Estimated total number of adults (aged 18+ years) in the Australian population who smoke one or more cigarettes, roll-your-own cigarettes, cigars or pipes every day
	Denominator
	Total persons aged 18 years and over
	Note, rates are age standardised to the 2001 Australian standard population for comparisons over time.
Desirable rate	Low
Data sources	National Health Survey (ABS)
	The Australian Bureau of Statistics National Health Survey (NHS) is the primary source of smoking data. It is designed to collect a range of information about the health of Australians and be representative of the estimated resident population living in private dwellings in non- <i>Very remote</i> areas of Australia.
	For the 2017-18 NHS cycle, the smoking questionnaire module was used in both the NHS and the 2017-18 Survey of Income and Housing (SIH) to produce a larger sample size for more accurate smoker status estimates. The pooled dataset is known as the National Health Survey and Survey of Income and Housing (NHIH) and will contain data items common to both NHS and SIH such as age, sex, country of birth and those from the smoking module.
Inclusions	<b>Daily smoking</b> Respondents to the NHS that self-report smoking a tobacco product at least once per day. Survey data in the NHS is extrapolated to the Australian population living in private dwellings in non- <i>Very remote</i> areas of Australia using age and sex benchmarks to estimate the total number of adults who smoke every day.
	Smoking sproducts         Numerator includes tobacco smokers using the following tobacco products:         Manufactured cigarettes         Roll-your-own cigarettes         Cigars         Pipes
Exclusions	Other products Chewing tobacco and smoking non-tobacco products are excluded from the numerator. Electronic cigarettes are
	also excluded in the ABS definition. However, it is unclear whether respondents have included use of these products when answering questions relating to tobacco use.



# Behaviours that increase the risk of oral disease

KPI 13: Proportion of people who regularly consume sugar sweetened beverages and/or confectionary

A healthy diet is an important factor in maintaining health and wellbeing. The Australian Dietary Guidelines, developed by the National Health and Medical Research Council, recommend limiting intake of foods containing added sugars (NHMRC 2013). The consumption of free sugars is a significant risk factor for dental caries (COAG 2019).

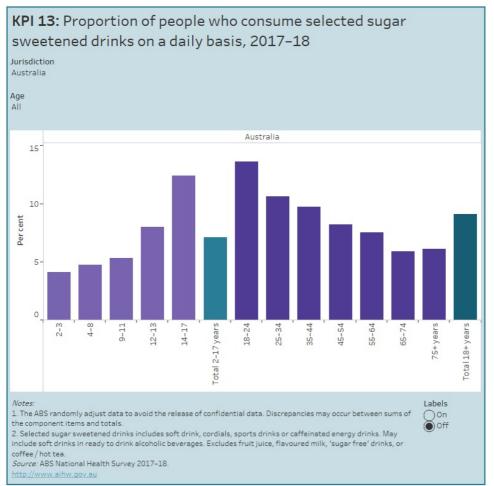
The available data presented here is not fully matched to the KPI that specifies consumption of sugar sweetened beverages and/or confectionary. Data presented below are self-reported from the 2017-18 National Health Survey and relate to the consumption of selected sugar sweetened drinks only (ABS 2018).

In 2017-18, around 1 in 14 (7.1%) of children aged 2-17 years and around 1 in 11 (9.1%) adults aged 18 years and over consumed selected sugar sweetened drinks on a daily basis. Rates of daily consumption of selected sugar sweetened drinks ranged from 14% for adults aged 18-24 to 5.9% for adults aged 65-74 (ABS 2018).

Explore the data using the interactive below:

KPI 13: Proportion of people who consume selected sugar sweetened drinks on a daily basis, 2017-18

This figure shows the proportion of people who consume selected sugar sweetened drinks on a daily basis. National, state and territory data is presented by age groups for 2017-18. In Australia, around 1 in 11 adults aged 18 years and over consumed selected sugar sweetened drinks on a daily basis.



Data tables available for download.

More information about food and nutrition.

### **References:**

ABS 2018. National Health Survey: first results, 2017-18. ABS cat. No. 4364.0.55.001. Canberra: ABS

COAG (Council of Australian Governments) Health Council 2019. Healthy mouths, healthy lives: Australia's National Oral Health Plan 2015-2024. Performance monitoring report: baseline report 2017. Victoria: Dental Health Services Victoria. NHMRC (National Health and Medical Research Council) 2013. Australian Dietary Guidelines. Canberra: National Health and Medical Research Council.

### KPI 13 definition

KPI 13 Free sugar consumption

Definition	Proportion of people who regularly consume sugar sweetened beverages and/or confectionary Numerator Total number of people surveyed in the reporting period who self report consumption of sugar sweetened beverages and/or confectionary 6 or more times per week Denominator Total number of people surveyed in the reporting period
Desirable rate	Low
Data sources	NDTIS(1) National Dental Telephone Interview Survey* NSAOH National Study of Adult Oral Health* *National population estimates presented in NDTIS and NSAOH have been derived from weighted data
Inclusions	Survey response         Participants that provide the following response to either food intake questions:         'How often on average to do you [or child] eat lollies, confectionary or chocolate?'         'How often on average do you [or child] have fizzy drinks, fruit juice, or soft drinks like cordial, excluding diet or sugar-free drinks?'         6 or more times per week
Exclusions	None

1. Survey questions in NDTIS still under review



# Behaviours that increase the risk of oral disease

KPI 26: Proportion of people aged 18 years and older who consume more than two standard drinks per day on average

The consumption of alcohol is widespread within Australia and entwined with many social and cultural activities. However, harmful levels of consumption (consuming more than two standard drinks per day on average) are a major health issue, associated with increased risk of disease including oral cancers (DHSV 2011).

In 2017-18, 16% of adults aged 18 years and over consumed more than two standard drinks per day. Older adults aged 45-54 (19%) and 55-64 (19%) were more likely to consume more than two standard drinks per day than younger adults aged 18-24 (11%).

After adjusting for age, the proportion of adults at risk of long-term harm from alcohol has remained stable between 2014-15 and 2017-18, at 17% and 16% respectively.

Explore the data using the interactive below:

KPI 26: Proportion of people who exceed the guidelines for the consumption of alcohol

This figure shows the proportion of adults aged 18 years and over who exceeded the guidelines for the consumption of alcohol. National, state and territory data is presented for 2014-15 and 2017-18. In Australia, 16% of adults aged 18 years and over exceeded the guidelines for the consumption of alcohol in 2017-18.

#### KPI 26: Proportion of people who exceed the guidelines for the consumption of alcohol

This figure shows the age-standardised proportion of people who exceeded the guidelines for the consumption of alcohol in Australia, by sex. In 2017-18, 24% of males and 8.9% of females exceeded the guidelines for the consumption of alcohol.

KPI 26: Proportion of people who exceed the guidelines for the consumption of alcohol

This figure shows the proportion of people who exceeded the guidelines for the consumption of alcohol in Australia by age groups and sex. In 2017-18, fewer adults aged 18-24 exceeded the guidelines for the consumption of alcohol than any other age group.



(a) National Health and Medical Research Council (NHMRC) 2009 Guideline 1 for the consumption of alcohol which recommends no more than 2 standard drinks per day to reduce the lifetime risk of harm from alcohol-related disease or injury.

(b) Data have been randomly adjusted to avoid the release of confidential data. Discrepancies may occur between sums of component items and totals.

(c) Rates were age-standardised to the 2001 Australia Standard Population to facilitate comparisons between populations with different age structures.

(d) Data from the Northern Territory should be interpreted with caution – 25% of the population live in very remote areas and discrete Aboriginal and Torres Strait Islander communities, and are therefore excluded from the survey.

Source: ABS National Health Survey 2017–18; ABS Microdata: National Health Survey; 2014–15, 2017–18. Findings based on Detailed Microdata analysis. http://www.aihw.gov.au

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Labels

Data tables available for download.

More information about <u>alcohol consumption</u>.

### **References:**

ABS 2018. National Health Survey: first results, 2017-18. ABS cat. No. 4364.0.55.001. Canberra: ABS

ABS Microdata: National Health Survey; 2014-15, 2017-18. Findings based on detailed microdata analysis. Canberra: ABS

DHSV (Dental Health Services Victoria) 2011. Links between oral health and general health - the case for action: Dental Health Services.

#### **KPI 26 definition**

KPI 26 Adult alcohol consumption

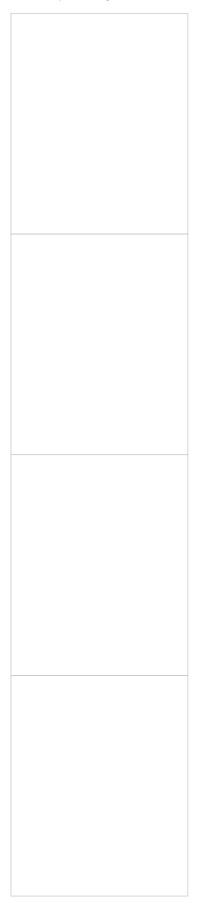
Definition	Proportion of people aged 18 years and older who consume more than two standard drinks per day on average
	Numerator
	Estimated total number of adults (aged 18+ years) in the Australian population who exceed the 2009 National Health and Medical Research Council (NHMRC) guideline <sup>1</sup> of drinking no more than two standard drinks per day to reduce the lifetime risk of harm from alcohol-related disease or injury.
	Denominator
	Total persons 18 years and over.
	Note, rates are age standardised to the 2001 Australian standard population for comparisons over time.
Desirable rate	Low
Data sources	National Health Survey (ABS)
	The Australian Bureau of Statistics National Health Survey (NHS) is the primary source of alcohol consumption data. It is designed to collect a range of information about the health of Australians and be representative of the estimated resident population living in private dwellings in non- <i>Very remote</i> areas of Australia.
Inclusions	Proportion of adults at risk of long-term harm from alcohol (consuming more than two standard drinks per day on average)
	Respondents to NHS that self-report an average intake of more than 2 standard drinks of alcohol per day. The number of standard drinks per day is derived from information about the types and quantities of alcoholic drinks consumed on the three most recent days, of the week prior to interview, in conjunction with the total number of days alcohol was consumed. Survey data in the NHS is extrapolated to the Australian population living in private dwellings in non- <i>Very remote</i> areas of Australia using age and sex benchmarks to estimate the total number of adults who drink more than two standard drinks per day.
Exclusions	None

1. National Health and Medical Research Council (NHMRC), 2009. Australian guidelines to reduce health risks from drinking alcohol, Canberra: NHMRC.



# Access to oral health services

Being able to access oral health services when needed is central to the performance of the oral health system. Understanding who is accessing oral health services and how they are accessing them is critical for evaluating whether targeted programs and strategies are effectively reducing access barriers and improving dental visiting patterns.





### Access to oral health services

KPI 14: Proportion of people who have received an oral health check-up from a dental practitioner in the previous two years

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.

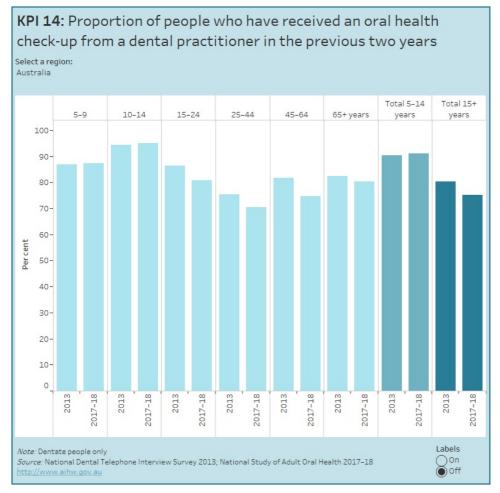
In 2017-18, around 9 in 10 (91%) children aged 5-14 years and 3 in 4 (75%) adults aged 15 years and over had received an oral health checkup from a dental practitioner in the previous two years.

In 2013, adults aged 25-44 were least likely to have received an oral health check-up in the previous two years than any other age group (75%). In 2017-18, even fewer (71%) adults in this age-group had received an oral health check-up in the previous two years.

Explore the data using the interactive below:

KPI 14: Proportion of people who have received an oral health check-up from a dental practitioner in the previous two years

This figure shows the proportion of people who have received an oral health check-up from a dental practitioner in the previous two years. National, state and territory data is presented by age groups for 2013 and 2017-18. In 2017-18, 3 in 4 (75%) adults had received an oral health check-up in the previous two years.



#### Data tables available for download.

More information about <u>dental visiting patterns</u>.

#### **KPI 14 definition**

KPI 14 People who have received an oral health check-up from a dental practitioner in the previous two years

Definition	Proportion of dentate people who have received an oral health check-up from a dental practitioner in the previous two years
	Numerator
	Total number of people surveyed in the reporting period who self-report receiving an oral health check-up from a dental practitioner within the previous two years
	Denominator
	Total number of people surveyed in the reporting period
Desirable rate	High
Data sources	NDTIS
	National Dental Telephone Interview Survey*
	NSAOH
	National Study of Adult Oral Health*
	*National population estimates presented in NDTIS and NSAOH have been derived from weighted data
Inclusions	Survey response adult
	Respondents that answer 'YES' to question 'Have you had any visits for a dental check-up within the previous 2
	years?' For baseline data, will need to source respondents that provide any of the following responses to question 'How
	long ago did you LAST see a dental professional about your teeth, dentures or gums?'
	Less than 12 months
	1 year to less than 2 years
	Survey response child
	Respondents that answer 'YES' to question 'Did the child have any visit for a dental check-up within the previous 2 years?'
	For baseline data, will need to source respondents that provide any of the following responses to question 'How
	long ago did [child] LAST see a dental professional about his/her teeth or gums?'
	Less than 12 months
	1 year to less than 2 years
Exclusions	Non check-up visits
	Individuals that have only had dental visits for treatment of a problem or planned routine treatment (not including a check-up) within the last 2 years are excluded from the numerator count.
	Edentulous individuals
	Individuals with no natural teeth present are excluded from the measure.



## Access to oral health services

KPI 16: Proportion of people who report avoiding or delaying visiting a dental practitioner in the last 12 months

People may avoid or delay visiting a dental practitioner for a variety of reasons, including cost, fear or because of difficulties accessing services.

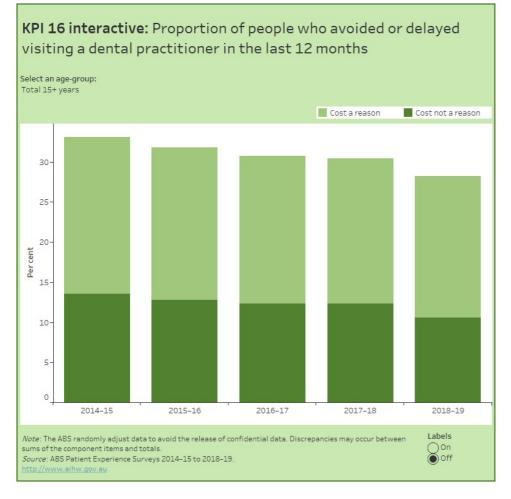
In 2018-19, around 3 in 10 adults (28%) aged 15 years and over avoided or delayed visiting a dental practitioner. Nearly 1 in 6 (18%) avoided or delayed visiting a dental practitioner due to cost. The proportion of adults avoiding or delaying visiting a dental practitioner has decreased over time from 33% in 2014-15, with those avoiding or delaying due to cost also decreasing from 20%.

In 2018-19, more adults aged 25-34 years avoided or delayed visiting a dental practitioner than any other age group (37%).

Explore the data using the interactive below:

KPI 16 interactive: Proportion of people who avoided or delayed visiting a dental practitioner in the last 12 months

This figure shows the proportion of people who avoided or delayed visiting a dental practitioner in the last 12 months, and whether or not cost was a reason. Data is presented by age groups for the period 2014-15 to 2018-19. In 2018-19, 28% of people aged 15 years and over avoided or delayed visiting a dental practitioner.



#### Data tables available for download.

More information about <u>dental visiting patterns</u>.

#### **KPI 16 definition**

KPI 16 People who report avoiding or delaying visiting a dental practitioner in the last 12 months

Definition	Proportion of people who report avoiding or delaying visiting a dental practitioner in the last 12 months Numerator Total number of people surveyed in the reporting period who self-report avoiding or delaying visiting a dental practitioner in the last 12 months Denominator Total number of people surveyed in the reporting period
Desirable rate	Low
Data sources	ABS Australian Bureau of Statistics Patient Experience Survey (PES)* *National population estimates presented in the PES have been derived from weighted data
Inclusions	Survey response Respondents that answer 'YES' to the question on whether in the last 12 months they at least once delayed seeing or did not see a dental professional when needed (for cost or other reasons)
Exclusions	None



## Access to oral health services

KPI 17: Proportion of children accessing oral health care through a Government funded oral health program

A range of government funded public dental programs have been established in an attempt to redress financial barriers to receiving oral health care, particularly for priority populations.

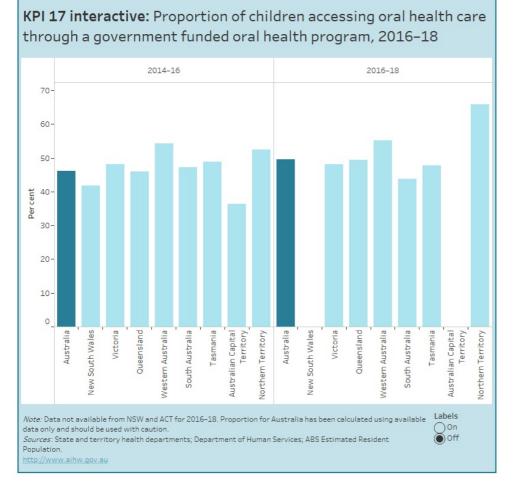
This indicator measures the total number of children accessing government-funded oral health care, either through state and territory funded public dental services or the Australian Government funded Child Dental Benefits Schedule, as a proportion of the total child population.

Based on the available data, around 1 in 2 (50%) children aged 2-17 years accessed oral health care through a government funded oral health program during 2016-2018. This is a slight increase on the proportion of children accessing oral health care through a government funded oral health program during 2014-2016 at 46%. It should be noted that not all states and territories were able to provide data for the 2016-2018 period so the national estimate should be interpreted with caution.

Explore the data using the interactive below:

KPI 17 interactive: Proportion of children accessing oral health care through a government funded oral health program, 2016-18

This figure shows the proportion of children accessing oral health care through a government funded oral health program. National, state and territory data is presented for 2014-16 and 2016-18. In Australia, around 1 in 2 (50%) children accessed oral healthcare through a government funded oral health program in 2016-18.



Data tables available for download.

More information about <u>dental visiting patterns</u>.

#### **KPI 17 definition**

Definition	Proportion of children accessing oral health care through a Government funded oral health program
	Numerator Total number of children (aged 2-17 years) accessing oral health care over the two year reporting period through a Government funded oral health program (State/Territory or Commonwealth)
	<b>Denominator</b> Total number of children in the population (aged 2-17 years)
Desirable rate	High
Data sources	Public dental State/territory public dental service data for children accessing public dental services and child eligibility criteria
	Services Australia Data on the number of children claimed through Medicare under the CDBS
	ABS Australian Bureau of Statistics estimated resident population data as at 30 June for respective report period (for children aged 2-17 years)
Inclusions	Age group Includes all children aged 2 to 17 years inclusive who were provided care within the reporting period. Age is calculated from the date of birth in years (rounded down) as at the date of care provision. Child is counted if age at the time of care is between 2-17 years inclusive within the two year reporting period.
	<ul> <li>State/ Territory &amp; NPA Funded Public Oral Health Care Access</li> <li>Includes all children who were provided oral health care within the two year reporting period through public oral health services funded through the State/Territory and/or the NPA excluding children where part or all of the care has been funded through the CDBS. Oral health care includes:         <ul> <li>(a) Any services provided through public dental clinics</li> </ul> </li> </ul>
	<ul><li>(b) Any services provided through outreach (eg: preventive, screening) programs</li><li>(c) Services under State/Territory funded voucher schemes provided through the private sector</li><li>A child is only counted once in the reporting period if access to the service occurred on multiple occasions or through more than one clinic.</li></ul>
	Commonwealth Funded Oral Health Care Access Represents the number of children funded through Medicare under the CDBS within the two year reporting period. Care includes eligible CDBS services provided through public or private dental services. A child is only counted once in the reporting period no matter how many funded claims are made.
	Total Child Oral Health Care Access Equals the sum of the total number of children accessing: State/Territory/NPA funded public oral health services
	Commonwealth funded (public or private) oral health care Noted limitation - Double counting cannot be eliminated for the same child that has been provided with State/Territory/NPA funded care only through public oral health services and CDBS through private practice.
Exclusions	CDBS public oral health data Children in public oral health service data where part or all of care has been funded through the CDBS are to be excluded from total child access data (children will be captured in Medicare data). However, the number of children funded through the CDBS and provided care through public oral health services is to be separately included in the public oral health data for this KPI to measure CDBS access through public oral health services. This represents children with one or more CDBS (88xxx) items recorded within the reporting period (recognising these children may have also had care funded under State/Territory/NPA funding).
	Other funded public oral health care access Children provided care through public dental services entirely self-funded (e.g. under private practice arrangements) or entirely funded through other non-State/Territory/Commonwealth sources are to be excluded



## Access to oral health services

KPI 18: Proportion of adults 18 years and older eligible for public dental services who access public dental care

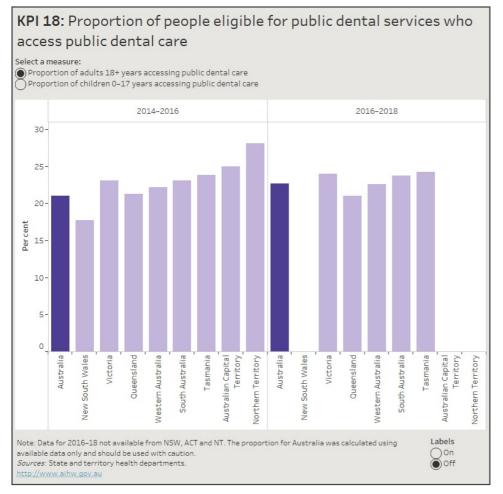
Publicly funded dental services play a role in helping eligible Australians who might find it difficult to access dental care in the private sector to receive such care, either free of charge or at a subsidised cost. Public dental services are operated by states and territories, with eligibility for services and the organisation of services varying greatly across the jurisdictions.

Based on the available data, around 1 in 5 adults aged 18 years and over accessed public dental care during 2014-2016 (21%) and 1 in 4 (23%) in 2016-2018. It should be noted that not all states and territories were able to provide data for the 2016-2018 period so the national estimate should be interpreted with caution.

Explore the data using the interactive below:

#### KPI 18: Proportion of people eligible for public dental services who access public dental care

This figure shows the proportion of adults aged 18 years and over and children aged 0-17 years eligible for public dental services who access public dental care. National, state and territory data is presented for 2014-16 and 2016-18. In Australia, around 1 in 4 (23%) of adults aged 18 years and over accessed public dental care in 2016-18.



#### Data tables available for download.

More information about dental visiting patterns.

#### **KPI 18 definition**

KPI 18 Adults accessing oral health care in the public sector, by jurisdiction

Definition	Proportion of adults 18 years and older eligible for public dental services who access public dental care
	Numerator Total number of adults (aged 18+ years) eligible for State/Territory provided public dental services who access care over a two year period through the State/Territory public dental services
	Denominator Total number of adults (aged 18+ years) eligible* for State/Territory provided public dental services as at the end of the two year period *This varies across jurisdictions where State/Territory eligibility criteria will be applied in the denominator count
Desirable rate	High
Data sources	Public dental State/territory public dental service data for adults accessing public dental services including eligibility criteria
	Department Social Services For data on the number of adult concession card holders
Inclusions	Public oral health care access Includes all State/Territory public oral health service eligible adults provided oral health care within the two year reporting period through the public oral health sector. This includes State/Territory eligible individuals whose care is funded either by State/Territory and/or Commonwealth.
	Oral health care Includes: (a) Any services provided through public dental clinics (b) Any services provided through outreach (eg: preventive, screening) programs (c) Services under State/Territory funded voucher schemes provided through the private sector An individual is only counted once in the reporting period if access to the service occurred on multiple occasions or through more than one clinic.
	Age group Includes individuals aged 18+ years accessing care in the two year reporting period. Age is calculated from the date of birth in years (rounded down) as at the date of care provision. The individual is counted if age at the time of care over the two year reporting period is 18 years or older.
Exclusions	Non eligible public oral health care access Individuals not eligible for State/Territory public dental services that are provided care through public dental services are to be excluded. This includes (but not limited to): (a) Non eligible individuals funded via the CDBS (b) Non eligible individuals treated under private practice arrangements (c) Students treating other students as part of clinical training.



# Safety and quality of oral health services

Information about the safety and quality of oral health services can be very useful for service providers and others who are interested in driving continuous improvement in oral health services.

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# Safety and quality of oral health services

**KPI 20:** Number of private dental practices and services that are accredited to the National Safety and Quality Health Service (NSQHS) standards

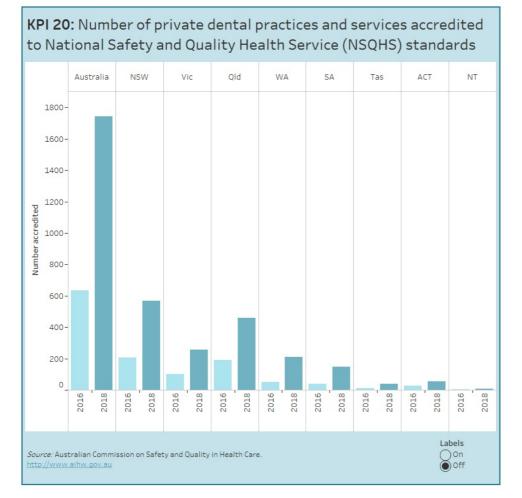
The National Safety and Quality Health Service Standards aim to protect the public from harm and to improve the quality of health service provision. Accreditation against these standards is mandatory for public dental services but remains voluntary for private dental practices.

In 2016, 633 private dental practices and services were accredited to the National Safety and Quality Health Service (NSQHS) standards. This number increased to 1,745 in 2018.

Explore the data using the interactive below:

KPI 20: Number of private dental practices and services accredited to National Safety and Quality Health Service (NSQHS) standards

This figure shows the number of private dental practices and services accredited to National Safety and Quality Health Service (NSQHS) standards. National, state and territory data is presented for 2016 and 2018. In 2018, there were 1,745 private dental practices and services accredited to National Safety and Quality Health Service (NSQHS) standards.



Data tables available for download.

More information about dental practices and services

**KPI 20 definition** 

KPI 20 Private dental practices and services accredited to national safety and quality standards

Definition	Number of private dental practices and services that are accredited to the National Safety and Quality Health Service (NSQHS) standards
	<b>Count</b> Total number of private dental practices and services that are accredited to the National Safety and Quality Health Service (NSQHS) standards
Desirable rate	High
Data sources	ACSQHC The Australian Commission on Safety and Quality in Health Care (ACSQHC) collates data from nine accreditation service agencies who deliver National Safety and Quality Health Service (NSQHS) Standards accreditation.
Inclusions	Accreditation Includes the number of practices renewing accreditation and number becoming accredited for the first time during the report period.
Exclusions	Public dental clinics These are excluded from the measure given accreditation to the NSQHS standards is mandatory for all public dental clinics.
	Non-renewal Private dental practices whose accreditation status period has expired and not been renewed are excluded from the count.



# Safety and quality of oral health services

KPI 25: Proportion of adults who report a positive experience in visiting a dental professional

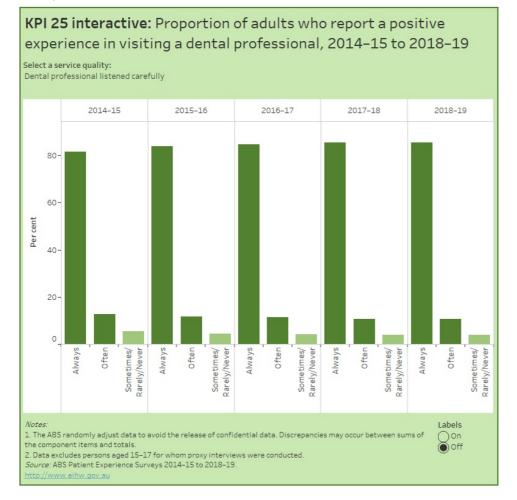
Patient experience surveys obtain patients' views and observations on aspects of health care services they have received. This includes their views on the accessibility of services and the physical environment, and aspects of the patient-clinician interaction.

Adults aged 15 years and over were asked about their experience with dental professionals who they had seen in the last 12 months. The majority of patients reported a positive experience. In 2018-19, 96% of patients reported that their dental professional always or often listened carefully, and 97% of patients reported that their dental professional always or often showed respect and spent enough time with them. This is very similar to the proportion of patients who reported a positive experience in 2014-15.

Explore the data using the interactive below:

KPI 25 interactive: Proportion of adults who report a positive experience in visiting a dental professional, 2014-15 to 2018-19

This figure shows the proportion of adults who reported a positive experience in visiting a dental professional, between 2014-15 and 2018-19. In 2018-19, 89% of dental professionals always spent enough time with the patient, 88% always showed respect and 86% always listened carefully.



Data tables available for download.

More information about patient experiences.

#### **KPI 25 definition**

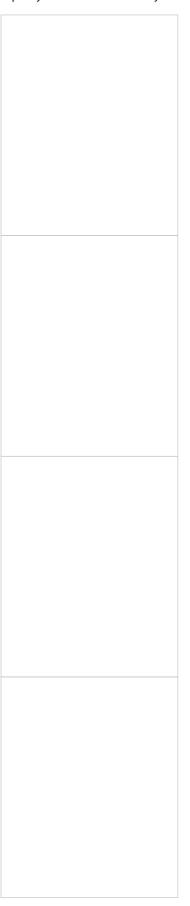
KPI 25 Patient experience visiting a dental professional

Definition	Proportion of adults who report a positive experience in visiting a dental professional
	Numerator
	Total number of adults surveyed in the reporting period who reported visiting a dental professional with a positive patient experience
	Denominator
	Total number of adults surveyed in the reporting period who reported visiting a dental professional
Desirable rate	High
Data sources	ABS
	Australian Bureau of Statistics Patient Experience Survey (PES)
	*National population estimates presented in the PES have been derived from weighted data
Inclusions	Age group
	PES captures data only for individuals aged 15+ years surveyed in the reporting period
	Survey response
	Survey participants that provide any of the following responses to the the experience of dental service questions:
	Thinking about all the dental professionals you have seen in the last 12 months:
	how often did they listen carefully to you?
	how often did they show respect for what you had to say?
	how often did they spend enough time with you?
	Always
	Often
Exclusions	None



# The oral health workforce

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





# The oral health workforce

KPI 21: The proportion of newly registered dental practitioners, by dental practitioner division

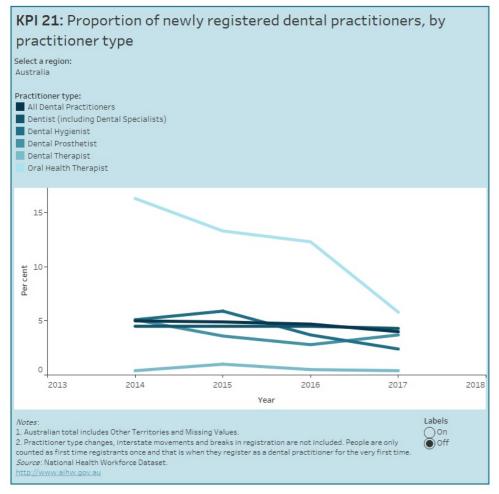
The aim of this indicator is to monitor trends in dental practitioner initial registrations to assist in future oral health workforce planning strategies.

The proportion of newly registered dental practitioners has declined slightly over time, from 5.0% in 2014 to 4.0% in 2017. The dental practitioner division which showed the greatest decline was that of Oral Health Therapists, dropping around 10 percentage points from 16% in 2014 to 5.8% in 2017.

Explore the data using the interactive below:

KPI 21: Proportion of newly registered dental practitioners, by practitioner type

This figure shows the proportion of newly registered dental practitioners, by practitioner type. National, state and territory data is presented for 2013 and 2017. In 2017, 4% of all dental practitioners were newly registered.



Data tables available for download.

More information about the <u>dental workforce</u>.

#### **KPI 21 definition**

KPI 21 Newly registered dental practitioners, by division

Definition	The proportion of new registered dental practitioners, by dental practitioner division (type)
	<ul> <li>Numerator</li> <li>Total number of first time registrants to the Dental Board of Australia (DBA), in conjunction with the Australian Health Practitioner Regulation Agency (AHPRA), to practice in the dental profession</li> <li>Denominator</li> <li>Total number registered with the Dental Board of Australia (DBA), in conjunction with the Australian Health Practitioner Regulation Agency (AHPRA), to practice in the dental profession</li> </ul>
Desirable rate	High
Data sources	Department of Health Australian Government Department of Health—Health workforce data. This combines National Registration and Accreditation Scheme (NRAS) data with the Dental Workforce Survey conducted at the time of annual registration or renewal of registration administered by the Australian Health Practitioner Regulation Agency (AHPRA).
Inclusions	Registration type         Measure includes registration types:         General         General and specialist         Limited         Specialist         Non-practicing         Practitioner type         Measure includes practitioner types:         Dentist (including dental specialists)         Oral health therapists         Dental hygienists         Dental type changes         Practitioner type changes         Practitioner type registration changes (e.g. from oral health therapist to dentist) are included in the numerator         Interstate movements         Practitioner movements interstate are included in the first time registrants count (numerator) by state/territory.         However, national data references the original date of registration that occurred in any state/territory (state/territory first time registrant count therefore does not sum to the national data).         Breaks in registration         Previous registrations that have lapsed but are renewed after a period (e.g. practitioner returning after working overseas), will be included in the first time registrants count. The first time registrants count references the most recent registration date excluding the earlier registration period.
Exclusions	Practitioner type         Measure excludes non registered members of the oral health workforce:         Dental assistants         Dental technicians



# The oral health workforce

KPI 22: Full time equivalent (FTE) rates of registered clinically active dental practitioners per 100,000 population

One of the foundation area goals of the National Oral Health Plan 2015-2024 is to build more equity in the distribution of the oral health workforce to improve accessibility to oral health care.

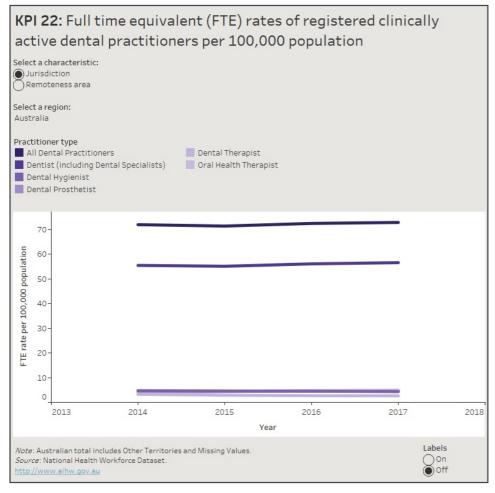
The FTE rate of dental practitioners in Australia has remained relatively stable, ranging from 71.4 in 2015 to 72.9 in 2017.

In 2017, *Major cities* had the highest FTE rate of dental practitioners (82.3) compared with 61.2 in *Inner regional*, 53.7 in *Outer regional*, 43.2 in *Remote* and 25.8 in *Very remote* areas.

Explore the data using the interactive below:

KPI 22: Full time equivalent (FTE) rates of registered clinically active dental practitioners per 100,000 population

This figure shows the full time equivalent (FTE) rates of registered clinically active dental practitioners per 100,000 population, by practitioner type. National, state, territory and remoteness data is presented for the period 2014 to 2017. The FTE rate of dental practitioners in Very remote areas was 25.8 per 100,000 population in 2017.



Data tables available for download.

More information about the <u>dental workforce</u>.

#### **KPI 22 definition**

KPI 22 Registered clinically active dental practitioners

Definition	Full time equivalent (FTE) rates of registered clinically active dental practitioners per 100,000 population
	Numerator Full time equivalent (FTE) number of dental practitioners registered with the Dental Board of Australia (DBA), in conjunction with the Australian Health Practitioner Regulation Agency (AHPRA), to practice in the dental profession whose principal role in their main job was clinician
	<b>FTE</b> = The total number of self-reported weekly hours worked by employed dental practitioners in dentistry/oral health jobs divided by the standard working week hours (38 hours)
	<b>Denominator</b> The total number of people in the estimated resident Australian population X 100,000
Desirable rate	High
Data sources	Department of Health Australian Government Department of Health—Health workforce data. This combines National Registration and Accreditation Scheme (NRAS) data with the Dental Workforce Survey conducted at the time of annual registration or renewal of registration administered by the Australian Health Practitioner Regulation Agency (AHPRA).
	ABS Australian Bureau of Statistics estimated resident population data as at 30 June for respective report period.
Inclusions	Registration type         Numerator includes all registration types:         General         General and specialist         Limited         Specialist         Non-practicing (only where clinically active at time of Dental Workforce Survey)
	Practitioner type         Numerator includes practitioner types:         Dentist (including dental specialists)         Oral health therapists         Dental hygienists         Dental therapists         Dental prosthetists
	Remoteness category <sup>(1)</sup> Reporting by geographic distribution of the dental workforce will apply the remoteness area categories from the Australian Statistical Geography Standard (ASGS). Using postcode of principal practice (if unavailable, remoteness area of residence is used), a dental practitioner is allocated to one of the following: Major city Inner regional Outer regional Remote/very remote/migratory (combined due to small numbers)
Exclusions	Practitioner type         Numerator excludes non registered members of the oral health workforce:         Dental assistants         Dental technicians
	<b>Principal role</b> Practitioners whose principal role in their main job was not a clinician (e.g. administrator, teacher, educator or researcher) are excluded.

1. Australian Bureau of Statistics (ABS) 2013a - Australian Statistical Geography Standard (ASGS): Volume 5-remoteness structure, July 2011



# The oral health workforce

**KPI 23:** Proportion of non-oral health vocational education and training sector enrolments successfully completing oral health units of competency

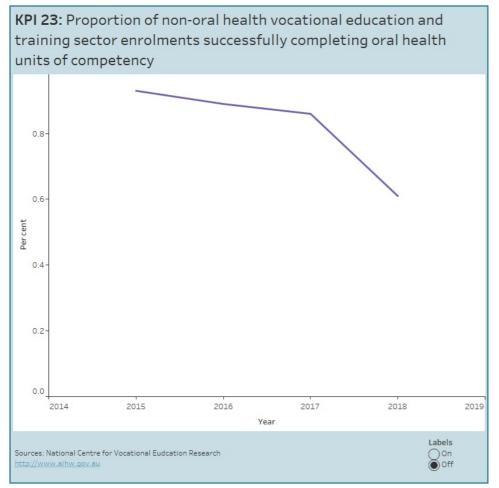
A key strategy of the National Oral Health Plan 2015-2024 is to increase the oral health competency of the broader health workforce by including oral health units in vocational education sector training courses.

The proportion of non-oral health vocational education and training (VET) sector enrolments successfully completing oral health units of competency in 2018 was 0.6%. The proportion of non-oral health VET sector enrolments successfully completing oral health units of competency has remained under 1.0% since 2015.

Explore the data using the interactive below:

KPI 23: Proportion of non-oral health vocational education and training sector enrolments successfully completing oral health units of competency

This figure shows the proportion of non-oral health vocational education and training sector enrolments successfully completing oral health units of competency, between 2015 and 2018. In 2018, 0.61% of non-oral health vocational education and training sector enrolments successfully completed oral health units of competency.



Data tables available for download.

More information about the <u>dental workforce</u>.

### **KPI 23 definition**

KPI 23 Non-oral health vocational education and training sector enrolments successfully completing oral health units of competency

Definition	<ul> <li>Proportion of non-oral health vocational education and training sector enrolments successfully completing oral health units of competency</li> <li>Numerator</li> <li>Total number of vocational Education and Training (VET) sector enrolments successfully completing an oral health unit of competency in qualifications where the oral health unit is available, excluding VET sector enrolments for oral health qualifications</li> <li>Denominator</li> <li>Total number of vocational Education and Training (VET) sector course enrolments for non-oral health qualifications where an oral health unit of competency is available</li> </ul>
Desirable rate	High
Data sources	NCVER National Centre for Vocational Education Research VOCSTATS database

Inclusions	Oral health unit of competency <sup>(1)</sup>
-	CHCOHC401A CHCOHC402A
	HLTOHC002
	Inform and encourage clients and groups to understand and achieve good oral health
	CHCOHC402A HLTOHC002
	Support clients and groups to learn practical aspects of oral health care
	CHCOHC406A/B HLTOHC003
	Provide or assist with oral hygiene
	CHCOHC407A/B HLTOHC004
	Apply and manage use of basic oral health products
	HLTAHW423B
	Provide information and strategies in oral health
	HLTDA407C/D HLTDEN004
	Implement an individualised oral hygiene program
	HLTDA413A/B HLTDEN010
	Implement an oral hygiene program for older people
	HLTDA414A/B HLTDA407C HLTDEN011
	Implement an oral health promotion program
	HLTOHC001 CHCOHC404A
	Recognise and respond to oral health issues
	HLTOHC004
	Provide or assist with oral hygiene
	CHCOCH303A/B HLTOHC005
	Use basic oral health screening tools
	HLTOHC408A/B HLTOHC006
	Apply fluoride varnish
	Successful completion Oral health subjects/units: result inclusions for successful completion: Competency achieved Assessed—pass Non-assessable enrolment—satisfactorily completed

Exclusions	Oral health qualifications
	HLT31802 HLT31807
	HLT31812
	Certificate III in Dental Assisting
	HLT32712
	HLT32707
	HLT35115
	Certificate III in Dental Laboratory Assisting
	HLT43007
	HLT43012
	HLT45015
	Certificate IV in Dental Assisting
	HLT50507
	HLT50512
	Diploma of Dental Technology
	HLT60407
	HLT60412
	Advanced Diploma of Dental Prosthetics
	40633SA
	Advanced Diploma of Oral Health (Dental Hygiene)

1. From VOCSTATS database. Note oral health units of competency may vary over time requiring updates to definition. http://www.training.gov.au https://www.ncver.edu.au/data/data/vocstats/vocstats



# The oral health workforce

KPI 24: Proportion of students enrolled in dental and oral health courses who have a rural background

Rural Australians have access to fewer dental practitioners than their city counterparts (COAG 2015; Bishop & Laverty 2015). This indicator is a measure of the proportion of students enrolled in dental and oral health courses who have a rural background, as this is known to be a key determinant in the likelihood of them pursuing a career in the rural workforce (COAG 2019).

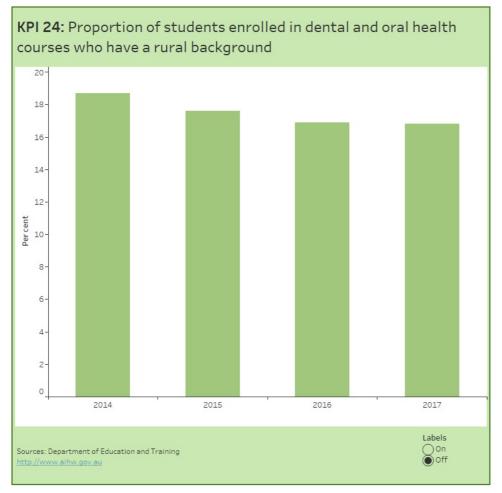
In 2017, around 1 in 6 (17%) of students enrolled in dental and oral health courses had a rural background, which is a slight decrease from 1 in 5 (19%) in 2014.

It should be noted that this indicator was calculated taking into consideration only those students who were studying a dental and oral health course that would eventually qualify them to register with the Australian Health Practitioner Registration Agency (AHPRA) as a dental practitioner.

Explore the data using the interactive below:

KPI 24: Proportion of students enrolled in dental and oral health courses who have a rural background

This figure shows the proportion of students enrolled in dental and oral health courses who have a rural background, between 2014 and 2017. In 2017, 17% of students enrolled in dental and oral health courses had a rural background.



#### Data tables available for download.

More information about the dental workforce.

#### 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.

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. COAG (Council of Australian Governments) Health Council 2019. Healthy mouths, healthy lives: Australia's National Oral Health Plan 2015-2024. Performance monitoring report: baseline report 2017. Victoria: Dental Health Services Victoria.

### **KPI 24 definition**

Definition	Proportion of students enrolled in dental and oral health courses who have a rural background
	Numerator Total number of students enrolled in dental and oral health courses who have a rural background
	<b>Denominator</b> Total number of students enrolled in dental and oral health courses
Desirable rate	High
Data sources	DET Department of Education and Training university statistics section for tertiary education institutions data
Inclusions	Practitioner type         Measure includes dental and oral health courses for the following practitioner types:         Dentist (including dental specialists)         Oral health therapists         Dental hygienists         Dental therapists         Dental therapists         Dental prosthetists         Rural background <sup>(1)</sup> From self reported permanent home residence. The remoteness area categories from the Australian Statistical         Geography Standard (ASGS) are applied to the student permanent home residence. Rural background is identified for students from areas categorised as:         Inner regional         Outer regional         Remote         Very remote
Exclusions	Other oral health qualifications         Students enrolled in oral health courses for the following qualifications are excluded:         Dental assistants         Dental technicians         Dental course types         Dentists enrolled in advanced skill oral health courses are excluded:         Graduate diploma         Research         Permanent home residence <sup>(1)</sup>
	Students with permanent home residence classified as Major City or Overseas Country are excluded from the numerator

1. Australian Bureau of Statistics (ABS) 2013a. Australian Statistical Geography Standard (ASGS): Volume 5–remoteness structure, July 2011



# **Technical notes**

### Data sources

#### ABS Census and population data

Throughout this report, population data were used to derive rates of, for example, cancer incidence and mortality. The population data were sourced from the ABS using the most up-to-date estimates available at the time of analysis.

To derive its estimates of the resident populations, the ABS uses the 5-yearly Census of Population and Housing data and adjusts it as described here:

- all respondents in the Census are placed in their state or territory, Statistical Local Area and postcode of usual residence; overseas visitors are excluded.
- an adjustment is made for people missed in the Census.
- Australians temporarily overseas on Census night are added to the usual residence Census count.

Estimated resident populations are then updated each year from the Census data, using indicators of population change, such as births, deaths and net migration. More information is available from the <u>ABS website</u>.

### Australian Cancer Database

All forms of cancer, except basal and squamous cell carcinomas of the skin, are notifiable diseases in each Australian state and territory. This means there is legislation in each jurisdiction that requires hospitals, pathology laboratories and various other institutions to report all cases of cancer to their central cancer registry. An agreed subset of the data collected by these cancer registries is supplied annually to the AIHW, where it is compiled into the ACD. The ACD currently contains data on all cases of cancer diagnosed from 1982 to 2015 for all states and territories with the exception of 2015 New South Wales data.

Cancer reporting and registration is a dynamic process, and records in the state and territory cancer registries may be modified if new information is received. As a result, the number of cancer cases reported by the AIHW for any particular year may change slightly over time and may not always align with state and territory reporting for that same year.

The Data Quality Statement for the ACD 2014 can be found at METEOR website.

Further information about the Australian Cancer Database.

#### Australian Commission on Safety and Quality in Health Care

The Australian Commission on Safety and Quality in Health Care (ACSQHC) collates data from eight accreditation service agencies who deliver National Safety and Quality Health Service (NSQHS) Standards accreditation.

The NSQHS Standards were developed by the ACSQHC in collaboration with the Australian Government, states and territories, private sector providers, clinical experts, patients and carers. The primary aims of the NSQHS Standards are to protect the public from harm and to improve the quality of health service provision. The eight NSQHS Standards provide a nationally consistent statement about the level of care consumers can expect from health services.

Further information about the National Safety and Quality Health Service Standards.

#### Australian Vocational Education and Training Statistical Collections

The National Centre for Vocational Education Research (NCVER) collects data about the Australian vocational education and training (VET) sector through a number of statistical collections:

- Students and courses collection
- Apprentice and trainees collection
- VET in Schools collection
- VET funding collection.

VOCSTATS is a product which allows users to extract data via an interactive web interface using databases containing data from various NCVER collections.

Further information about Vocational Education and Training Statistical Collections.

### 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.

Payment of benefits under the Child Dental Benefits Schedule is administered by Services Australia. 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 <u>Medicare Group Reports</u>.

### Higher Education Student Data Collection

The Australian Government Department of Education is responsible for the collection and dissemination of statistics relating to the provision of higher education at all Higher Education Institutions that have been approved under the *Higher Education Support Act 2003*. The department manages a comprehensive set of statistics referred to as the Higher Education Statistics Collection. Data included in the Higher Education Student Data Collection includes:

- course information including level, field of education and special course flag
- numbers and characteristics of students undertaking course, including
- location of permanent home residence
- completion of units of study and courses.

Further information about the Higher Education Student Data Collection.

#### 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 Death Index

The NDI is a database, housed at the AIHW, that contains records of all deaths occurring in Australia since 1980. The data are obtained from the registrars of births, deaths and marriages in each state and territory. The NDI is designed to facilitate the conduct of epidemiological studies and its use is strictly confined to medical research. Cancer incidence records from the ACD were linked to the NDI and used to calculate the survival and prevalence data presented in this report.

The Data Quality Statement for the NDI can be found at METEOR website.

### 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.

Further information about the National Dental Telephone Interview Survey 2013.

#### National Health Survey

In the 2017-18 National Health Survey, about 16,400 private dwellings across Australia were surveyed, with a total of approximately 21,300 people. All urban and rural areas in all states and territories were included but, non-private dwellings, *Very remote* areas and discrete Aboriginal and Torres Strait Islander communities were excluded. Within each randomly selected dwelling 1 adult (18 or over) and 1 child (0-17) were interviewed. Adults were personally interviewed by an ABS interviewer. An adult, nominated by the household, was interviewed about one child in the household; some children aged 15-17 may have been personally interviewed with parental consent.

The survey collected a wide variety of data on areas such as body mass index, physical measurements (for example, measured waist circumference, weight, height), blood pressure, breastfeeding, smoking, fruit and vegetable intakes, dietary behaviours, alcohol consumption, exercise and sedentary behaviour. The key results provide information on the prevalence of long-term health conditions, health risk factors and demographic and socioeconomic characteristics.

Further information about the National Health Survey.

#### 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

#### 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 AIHW 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).

Further information about the National Hospitals Data Collection.

#### References

ACCD (Australian Consortium for Classification Development). The International Statistical Classification of Diseases and Related Health Problems, 10<sup>th</sup> Revision, Australian Modification (ICD-10-AM). Tabular list of interventions, and alphabetic index of interventions. Adelaide: Independent Hospital Pricing Authority.

### 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 last conducted in 2017-18. In total 15,731 persons aged 15 years and over participated in the interview, with 5,022 receiving a dental examination.

#### 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 2017-18 Patient Experience Survey collected information from around 28,200 people across Australia.

Further information about the Patient Experience Survey

#### State and territory public dental data collections

Public dental services are operated by state and territory governments, with eligibility for services and the organisation of services varying greatly across the jurisdictions. As such, there are no comprehensive national data sources available. Each state and territory submitted data from their own public dental collections.

Further information about public dental services in each state and territory:

- <u>New South Wales</u>
- <u>Victoria</u>
- Queensland
- Western Australia
- South Australia
- <u>Tasmania</u>
- Australian Capital Territory
- <u>Northern Territory</u>



# Data



**Related material** 

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