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Australian Institute of Health and Welfare

# **Oral health and dental care in Australia** Key facts and figures 2015





Authoritative information and statistics to promote better health and wellbeing

# Oral health and dental care in Australia

#### Key facts and figures

2015

Australian Institute of Health and Welfare Canberra Cat. no. DEN 229

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ISBN 978-1-74249-883-6 (PDF) ISBN 978-1-74249-884-3 (Print)

#### Suggested citation

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.

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Published by the Australian Institute of Health and Welfare This publication is printed in accordance with ISO 14001 (Environmental Management Systems) and ISO 9001 (Quality Management Systems). The paper is sourced from sustainably managed certified forests.



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## Acknowledgments

The authors wish to acknowledge all those who contributed to the data collections used in this report. Authors in the AIHW's Expenditure and Workforce Unit contributed the sections on expenditure and workforce and provided comment and advice on the overall report.

This research was supported by the Department of Health.

## **Abbreviations**

AHPRA	Australian Health Practitioner Regulation Agency
AIHW	Australian Institute of Health and Welfare
CDHS	Child Dental Health Survey
CI	confidence interval
dmft	the count of deciduous teeth that are decayed (d), missing due to caries (m) and filled due to caries (f)
DMFT	the count of permanent teeth that are decayed (D), missing due to caries (M) and filled due to caries (F)
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, tenth revision, Australian modification
NDTIS	National Dental Telephone Interview Survey
NRAS	National Registration and Accreditation Scheme
NSAOH	National Survey of Adult Oral Health
PPH	potentially preventable hospitalisation
SDS	school dental service
States and te	rritories
NSW	New South Wales

NSW	New South Wales
Vic	Victoria
Qld	Queensland
WA	Western Australia
SA	South Australia
Tas	Tasmania
ACT	Australian Capital Territory
NT	Northern Territory

## **Symbols**

- nil or rounded to zero
- .. not applicable
- n.a. not available

# Summary

This report presents the most recent key information on the oral health and dental care of the Australian population.

## Oral health

In 2010, 55% of 6-year-olds had experienced decay in their baby (deciduous) teeth and 48% of 12-year-olds had experienced decay in their permanent teeth. These data do not include data for New South Wales or Victoria.

In 2013, 16% of adults with natural teeth had experienced toothache in the previous 12 months and 27% reported feeling uncomfortable about their dental appearance. Adults who were uninsured (20%), and those who were eligible for public dental care (20%), were more likely to have experienced toothache than other adults.

In 2013, approximately 19% of adults aged 65 and over had no natural teeth. The proportions were similar for females (21%) and males (17%). Of those aged 65 and over with natural teeth, nearly half (42%) wore dentures.

## Use of dental services

In 2013, 64% of people aged 5 and over had visited a dental practitioner in the previous year. Almost half (44%) of adults aged 18 and over had regular dental check-ups with the same dental provider (a favourable visiting pattern). The rate of potentially preventable hospitalisations due to dental conditions was lowest for *Major cities* (2.6 per 1,000 people) and highest for *Very remote* (4.0 per 1,000 people).

## Paying for dental services

In 2013, half (50%) of people aged 5 and over had some level of private health insurance with dental cover. More people living in *Major cities* (53%) had insurance than in *Inner regional* (45%) and *Outer regional* areas (44%). People living in lower income households were less likely to have dental insurance than those in higher income households.

In 2013, most (77%) adults with some level of health insurance that covered dental made co-contributions towards the cost of dental visits. One (1) in 10 insured adults (10%) paid all their own expenses. Of these, approximately 19% reported that this caused a large financial burden.

Total expenditure on dental services (except those in hospitals) in Australia was \$8,706 million in 2012–13, an increase from \$5,945 million (adjusted for inflation) in 2002–03. The largest source of funds for this overall dental expenditure was individuals, paying directly out of pocket for 58% of total dental costs.

## Dental workforce

Overall, in 2013, there were approximately 56 dentists, 5 dental prosthetists, 5 dental hygienists, 3 dental therapists and 3 oral health therapists employed per 100,000 people. The majority of dentists (90%) were general dentists and the remainder were specialists. Across remoteness areas, *Major cities* had the highest number per 100,000 population of practising dentists (63.1) and *Remote/Very remote* areas had the lowest (25.7).

# 1. Introduction

This report summarises the latest key findings on the state of oral health of the Australian population and key trends in dental care. Data were sourced from surveys managed by the Australian Research Centre for Population Oral Health and from data sets maintained by the Australian Institute of Health and Welfare (AIHW). Topics in this report are described below. Some data have been previously reported, but are included here so that a comprehensive picture is presented that uses the latest available data. Data sources used in this report are described in detail at Appendix A.

## **Oral health**

This report presents data on the dental caries (tooth decay) experience and periodontal (gum) health of children attending public school dental services derived from Child Dental Health Survey (CDHS) data. The most recent year for which data are available is 2010. This publication also reports on the oral health of adults from the National Survey of Adult Oral Health (NSAOH) 2004–06 and the National Dental Telephone Interview Survey (NDTIS). Results from the NSAOH have been published previously. The most recent year for which data from the NDTIS are available is 2013, and these data are published for the first time in this release.

#### **Dental caries**

Deciduous caries experience (dmft) is recorded as the number of deciduous ('baby') teeth that are either decayed (d), missing (m) because of dental caries or filled (f) because of dental caries. It is based on the World Health Organization protocol (WHO 1997), with additional guidelines from Palmer et al. (1984). These results have been updated from the CDHS 2010.

Permanent caries experience (DMFT) is recorded as the number of permanent teeth that are either decayed (D), missing (M) because of dental caries, or filled (F) because of dental caries, and is also based on the WHO protocol (WHO 1997). These results have been updated from the CDHS 2010.

#### Periodontal disease

Periodontal status is based on the definition used by the Centers for Disease Control and Prevention, which defines periodontal disease using a combination of deep periodontal pockets, clinical attachment loss and the number of sites affected (Page & Eke 2007). These results are from the NSAOH 2004–06.

#### Tooth loss

About 90% of all tooth loss can be attributed to dental caries and periodontal disease (AHMAC 2001). Tooth loss occurs primarily because of a treatment decision to extract one or more teeth. Teeth are usually extracted because of extensive disease precluding other treatments, the preference of the patient and the recommendation of the dentist (Slade et al. 2007). Measures of tooth loss include prevalence of complete tooth loss (edentulism) and the average number of missing teeth. These results are from the NSAOH 2004–06.

#### Health impacts

Dental problems may result in the experience of pain, avoidance of certain foods and a feeling of discomfort about appearance. The social impacts of these experiences may include withdrawal behaviours or a reduced ability to participate in certain activities. These results have been updated from the NDTIS 2013.

#### Use of dental services

Many factors influence how often people use dental services. The reason a person seeks dental care influences the type of care they are likely to receive and the level of untreated problems they may have at any time. People who visit a dental professional for a routine check-up are most likely to benefit from early detection and treatment and receive preventive services. Those who seek care for a dental problem may receive less comprehensive treatment and are less likely to receive preventive services. Generally, people who seek regular and routine care report low levels of extractions and relatively low levels of fillings (Ellershaw & Spencer 2011).

Comparisons of the use of dental services — including time since last visit, usual visiting pattern and type of practice last visited — are presented by age, sex, insurance status and annual household income. These results have been updated from the NDTIS 2013.

## **Hospital separations**

Potentially preventable hospitalisations (PPHs) are those conditions where hospitalisation is thought to have been avoidable if timely and adequate non-hospital care had been provided. PPHs therefore have potential as indicators of the quality or effectiveness of non-hospital care. A high rate of PPHs may indicate an increased prevalence of the conditions in the community, poorer functioning of the non-hospital care system or an appropriate use of the hospital system to respond to greater need (AIHW 2012).

Hospitalisations where the principal diagnosis was a dental-related condition are considered dental PPHs for this report. The rate of these PPHs for adults and children is reported in this publication. These results have been updated to 2012–13.

### **Financial barriers**

Financial burden is often cited as a reason why people do not seek regular dental care or comply with recommended treatment (AIHW 2014). Financial burden reflects the direct and indirect cost of dental services to the individual, the disposable income of a household and the number of people dependent on that income. Respondents to the NDTIS were asked a range of questions relating to the financial burden of dental care. These questions included whether they had avoided or delayed dental care due to cost, whether cost had prevented dental treatment recommended by a dental professional, whether dental visits in the previous 12 months had been a large financial burden, and what level of difficulty they would experience in paying a \$200 dental bill. The cost of a basic preventive dental-care package was originally selected as the threshold for measuring the level of difficulty in paying a dental bill. In 2012, the Australian Dental Association Dental Fees Survey reported that the mean cost for a dental visit comprising a dental examination, two bitewing X-rays

and a scale and clean service was approximately \$200. These results have been updated to the NDTIS 2013.

#### Private health insurance

In Australia, coverage of dental costs by private health insurance is based on individuals or families purchasing a health insurance policy, which covers all or part of the cost of visiting a private dentist. This report provides information on the proportion of Australian adults who were covered by private health insurance that included cover for dental care in the 2013 NDTIS, and their use of dental services. These results have been updated to the NDTIS 2013.

### Expenditure

Expenditure on dental services is reported from the AIHW health expenditure database 2012–13. It includes expenditure on a range of services provided by registered dental practitioners as well as oral and maxillofacial surgery items, orthodontic, pedodontic and periodontic services, cleft lip and palate services; dental assessment and treatment; and other dental items listed in the Medicare Benefits Schedule. Hospital costs are not included.

### **Dental workforce**

The dental workforce – consisting of registered dentists, dental therapists, dental hygienists, oral health therapists and dental prosthetists – plays a vital role in maintaining and improving the oral health of Australians by providing preventive and restorative dental services. This report provides an overview of the characteristics of the dental workforce. These results have been updated to the National Health Workforce Data Set 2013.

## 2 Oral health

#### 2.1 Caries experience of children

Caries experience describes the number of teeth that have been affected by tooth decay. Children are affected by decay if teeth are decayed (d), missing (m) due to caries or filled (f) because of caries. Decay can occur in either their deciduous teeth (dmft) or their permanent teeth (DMFT). The combined caries experience (dmft + DMFT) indicates the total amount of disease seen in children attending a school dental service (SDS).

In 2010, the proportion of children with caries experience (dmft + DMFT > 0) - in either their deciduous or permanent teeth – varied from 48.2% for children aged 5 to 68.7% for children aged 9 (Table 2.1). (These data do not include data from New South Wales or Victoria.)

Table 2.1: Prevalence of deciduous and permanent caries experience (dmft + DMFT >0) by age, children attending a school dental service, 2010 (per cent)

		Age (years)						
	5	6	7	8	9	10	11	12
dmft + DMFT >0	48.2	56.6	60.3	66.5	68.7	66.1	57.4	57.0

Notes

1. The 95% confidence intervals for these estimates are available in Appendix Table C2.1.

2. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

3. Data from Victoria were not available.

Source: Child Dental Health Survey 2010.

The average number of deciduous teeth with decay experience for children attending an SDS varied between 1.78 for children aged 10 and 2.63 for children aged 8. Decay experience was lowest for children aged 10, as fewer deciduous teeth remain at this age.

Children aged 5 and 6 had higher rates of untreated decay than older children (1.83 and 1.74 teeth, respectively), while numbers of filled teeth were highest for children aged 8 and 9 (1.29 and 1.28 teeth, respectively) (Table 2.2).

Table 2.2: Number of deciduous teeth with caries experience by age, children attending a
school dental service, 2010 (average)

Decayed teeth (d)	Missing teeth (m)	Filled teeth (f)	dmft
1.83	0.15	0.34	2.32
1.74	0.22	0.62	2.58
1.37	0.21	0.95	2.53
1.15	0.19	1.29	2.63
1.02	0.14	1.28	2.43
0.67	0.08	1.03	1.78
	1.83 1.74 1.37 1.15 1.02	1.83         0.15           1.74         0.22           1.37         0.21           1.15         0.19           1.02         0.14	1.83         0.15         0.34           1.74         0.22         0.62           1.37         0.21         0.95           1.15         0.19         1.29           1.02         0.14         1.28

Notes

1. Total dmft may not equal the sum of parts due to rounding.

2. The 95% confidence intervals for these estimates are available in Appendix Table C2.2.

3. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

4. Data from Victoria were not available.

Source: Child Dental Health Survey 2010.

The proportion of children with decay experience in their deciduous teeth varied from 47.7% for children aged 5 to 62.4% for children aged 8 (Table 2.3).

Table 2.3: Prevalence of deciduous caries experience (d	lmft >0) by age, children attending a school
dental service, 2010 (per cent)	

	Age (years)					
	5	6	7	8	9	10
dmft >0	47.7	55.1	57.5	62.4	63.0	54.2

Notes

1. The 95% confidence intervals for these estimates are available in Appendix Table C2.3.

2. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

3. Data from Victoria were not available.

Source: Child Dental Health Survey 2010.

Decay experience in permanent teeth was associated with age, varying from 0.13 for children aged 6 to 2.63 for children aged 15 (Table 2.4). This reflects both the higher number of permanent teeth in older children and the longer time they have been exposed to the risk of decay.

The average number of teeth with untreated decay ranged from 0.11 in children aged 6 to 1.41 for those aged 15, while the average number of filled teeth ranged from 0.01 in children aged 6 to 1.16 in children aged 15.

DMF	Filled teeth (F)	Missing teeth (M)	Decayed teeth (D)	Age (years)
0.13	0.01	_	0.11	6
0.20	0.04	_	0.22	7
0.43	0.13	0.01	0.28	8
0.6	0.26	0.02	0.38	9
0.73	0.30	0.02	0.41	10
0.9	0.43	0.02	0.50	11
1.34	0.54	0.06	0.74	12
1.60	0.72	0.05	0.89	13
2.3	1.00	0.08	1.28	14
2.63	1.16	0.06	1.41	15

Table 2.4: Number of permanent teeth with caries experience by age, children attending a school dental service, 2010 (average)

Notes

1. Total DMFT may not equal the sum of parts due to rounding.

2. The 95% confidence intervals for these estimates are available in Appendix Table C2.4.

3. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

4. Data from Victoria were not available.

Source: Child Dental Health Survey 2010.

The proportion of children with decay experience in their permanent teeth was also associated with age, ranging from 7.0% for children aged 6 to 64.1% for children aged 14 (Table 2.5). The association between caries prevalence and age reflects the length of time teeth have been exposed to factors putting them at risk of decay.

#### Table 2.5: Prevalence of permanent caries experience (DMFT >0) by age, children attending a school dental service, 2010 (%)

Age (years)	DMFT >0
6	7.0
7	14.9
8	21.7
9	30.7
10	32.9
11	38.6
12	48.3
13	51.9
14	64.1

Notes

1. Missing teeth scores were based on missing teeth because of pathology recorded at clinical examination.

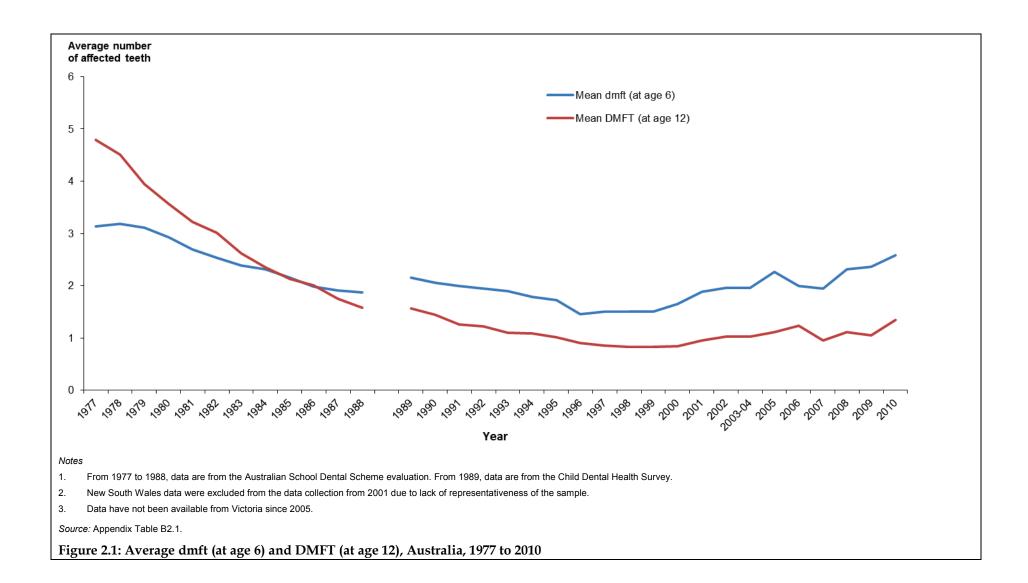
2. The 95% confidence intervals for these estimates are available in Appendix Table C2.5.

3. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

4. Data from Victoria were not available.

Source: Child Dental Health Survey 2010.

Deciduous decay experience in children aged 6 attending an SDS decreased from 3.19 in 1978 to 1.45 in 1996, followed by a gradual increase to 2.58 in 2010. The overall caries experience of children aged 12 followed a similar pattern, decreasing from 4.79 in 1977 to 0.84 in 2000, and then increasing, with some fluctuation, to 1.34 in 2010 (Figure 2.1; Appendix Table B2.1).



### 2.2 Caries experience of adults

In 2004–2006 (the latest period for which data are available), average DMFT scores for adults were higher for older age groups, ranging from 3.17 for the 15–24 age group to 23.70 for those aged 65 and over. For people aged 15–64, filled teeth contributed the most to the DMFT score. For those aged 65 and over, missing teeth contributed the most to the DMFT score (Table 2.6).

Age (years)	Decayed (D)	Missing (M)	Filled (F)	DMFT
		• • •	( )	
15–24	0.62	0.60	1.96	3.17
25–44	0.74	1.55	6.05	8.33
45–64	0.50	7.27	12.07	19.84
65+	0.44	12.85	10.40	23.70
All people aged 15 and over	0.61	4.55	7.69	12.85

Table 2.6: Number of permanent teeth with caries experience by age, dentate people aged 15 and over, 2004–2006 (average)

Notes

1. Missing teeth scores were based on missing teeth because of pathology recorded at clinical examination.

2. Total DMFT may not equal the sum of parts due to rounding.

3. The 95% confidence intervals for these estimates are available in Appendix Table C2.6.

Source: National Survey of Adult Oral Health 2004-2006.

In 2004–2006, males had a higher number of teeth with untreated decay than females (0.70 and 0.51, respectively). Females had more teeth that had been treated with a filling (8.14 and 7.24, respectively) (Table 2.7).

People living in *Inner regional* areas had the highest DMFT, at 14.75 teeth. Filled teeth contributed the most to DMFT in all remoteness areas, contributing the most to DMFT in *Major cities*, at 61.8%. *Inner regional* areas had the highest average number of teeth missing due to decay.

Uninsured people had a higher number of teeth with untreated decay and teeth missing due to decay, with a lower number of filled teeth. The pattern of more teeth that have been filled, but fewer teeth with untreated decay or missing teeth for insured people, is consistent with their receiving more timely dental care.

Total DMFT was associated with household income. The three lowest household income groups all had a higher average DMFT score than the four highest household income groups. The number of teeth missing due to decay was highest in the lowest household income group, and lowest for higher household income groups. These estimates are not age standardised.

	Decayed (D)	Missing (M)	Filled (F)	DMFT
Sex				
Male	0.70	4.47	7.24	12.42
Female	0.51	4.64	8.14	13.29
Remoteness area				
Major cities	0.54	4.16	7.61	12.31
Inner regional	0.78	5.80	8.17	14.75
Outer regional	0.68	4.98	7.40	13.06
Remote/Very remote	0.97	3.68	6.40	11.07
Insurance status				
Insured	0.38	4.17	8.99	13.54
Uninsured	0.81	5.04	6.79	12.64
Eligibility for public dental care				
Eligible	0.86	7.58	7.39	15.83
Ineligible	0.52	3.51	7.81	11.84
Annual household income (\$)				
<12,000	1.06	11.02	7.66	19.74
12,000-<20,000	0.89	9.59	7.98	18.45
20,000-<30,000	0.55	7.21	8.36	16.11
30,000-<40,000	0.79	5.17	8.45	14.41
40,000-<60,000	0.68	3.97	8.22	12.87
60,000-<80,000	0.50	2.82	7.56	10.89
80,000-<100,000	0.41	3.07	8.11	11.59
100,000+	0.43	2.64	7.77	10.84

Table 2.7: Number of permanent teeth with caries experience by selected characteristics, dentate people aged 15 and over, 2004–2006 (average)

Notes

1. Total DMFT may not equal the sum of parts due to rounding.

2. The 95% confidence intervals for these estimates are available in Appendix Table C2.7.

3. These estimates are not age standardised.

Source: National Survey of Adult Oral Health 2004-2006.

The proportion of people with untreated decay was highest for adults aged 25–44 (28.5%) and lowest for people aged 65 and over (21.8%) (Table 2.8).

#### Table 2.8: Prevalence of untreated decay, dentate people aged 15 and over, 2004–2006 (%)

		Age (years)				
	15–24	25–44	45–64	65+	All people	
Untreated decay	24.4	28.5	23.8	21.8	25.5	

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.8.

Source: National Survey of Adult Oral Health 2004-2006.

A higher proportion of males had untreated decay (28.2%) than females (22.7%) (Table 2.9).

The proportion of people with untreated decay ranged from 23.5% in *Major cities* to 37.6% in *Remote/Very remote* areas.

Table 2.9: Prevalence of untreated decay by sex and remoteness area, dentate people aged 15 and over, 2004–2006 (%)

	Se	x	Remoteness area			
	Male	Female	Major cities	Inner regional	Outer regional	Remote/ Very remote
Untreated decay	28.2	22.7	23.5	29.8	30.4	37.6

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.9.

Source: National Survey of Adult Oral Health 2004–2006.

A higher proportion of uninsured people (31.1%) had untreated decay than insured people (19.4%). Similarly, a higher proportion of people eligible for public dental care had untreated decay (32.9%) than those who were ineligible (22.9%) (Table 2.10).

## Table 2.10: Prevalence of untreated decay by insurance status and eligibility for public dental care, dentate people aged 15 and over, 2004–2006 (%)

	Insurance sta	itus	Public dental care	eligibility
	Insured	Uninsured	Eligible	Ineligible
Untreated decay	19.4	31.1	32.9	22.9

*Note:* The 95% confidence intervals for these estimates are available in Appendix Table C2.10.

Source: National Survey of Adult Oral Health 2004–2006.

Overall, the proportion of people with untreated decay was higher at lower levels of household income. The highest proportion was for people living in households earning less than \$12,000 per year (35.4%), while the lowest was for people living in households earning \$100,000 or more per year (16.5%) (Table 2.11).

## Table 2.11: Prevalence of untreated decay by annual household income, dentate people aged 15 and over, 2004–2006 (%)

		Annual household income (\$)							
	<12,000	12,000– <20,000	20,000– <30,000	30,000– <40,000	40,000– <60,000	60,000– <80,000	80,000– <100,000	100,000+	
Untreated decay	35.4	35.1	23.6	28.9	31.0	22.3	22.2	16.5	

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.11.

Source: National Survey of Adult Oral Health 2004-2006.

Between 1987–88 and 2004–06, the average decay experience in adults decreased from 14.94 teeth to 12.85 teeth. The decrease in the average number of teeth with caries experience was due to the decline in the average number of teeth with untreated decay (from 1.47 to 0.61 teeth) and the average number of missing teeth due to caries (from 5.70 to 4.55) (Table 2.12).

Year	Decayed (D)	Missing (M)	Filled (F)	DMFT
1987–88	1.47	5.70	7.77	14.94
2004–06	0.61	4.55	7.69	12.85

Table 2.12: Number of permanent teeth with caries experience, dentate people aged 15 and over, 1987–88 and 2004–2006 (average)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.12.

Sources: National Oral Health Survey, Australia 1987-88; National Survey of Adult Oral Health 2004-2006.

#### 2.3 Periodontal disease

Periodontal disease (or periodontitis) is the inflammation of tissues surrounding the tooth. It affects the gums, ligaments and the bones, and is caused by bacterial infection. This inflammation can cause pockets or gaps to develop between the tooth and its surrounding gum and the loss of ligaments and bone that support the tooth. In severe forms of periodontal disease, there can be extensive loss of the bone that supports the tooth, resulting in the tooth becoming loose and even being lost.

In 2004–2006, the prevalence of moderate or severe periodontal disease was higher at older ages and varied from 2.7% for those aged 15–24 to 53.4% at age 65 and over (Table 2.13).

Table 2.13: Prevalence of moderate or severe periodontal disease by age, dentate people aged 15
and over, 2004–2006 (%)

_	15–24	25–44	45–64	65+	All people
Periodontal disease	2.7	15.3	35.3	53.4	22.9

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.13.

Source: National Survey of Adult Oral Health 2004-2006.

Males were one-and-a-half times more likely than females to have moderate or severe periodontal disease (26.8% compared with 19.0%) (Table 2.14).

People in *Major cities* had the lowest occurrence of periodontal disease (22.1%) while those from *Remote/Very remote* areas had the highest (36.3%).

## Table 2.14: Prevalence of periodontal disease by sex and remoteness, dentate people aged 15 and over, 2004–2006 (%)

	Sex			Remoter	ness area	
_	Male	Female	Major cities	Inner regional	Outer regional	Remote/ Very remote
Periodontal disease	26.8	19.0	22.1	23.0	28.5	36.3

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.14.

Source: National Survey of Adult Oral Health 2004-2006.

A lower proportion of insured (19.4%) than uninsured (27.0%) people had periodontal disease. Similarly, those eligible for public dental care had higher rates of periodontal disease (33.6%) than those ineligible for public care (19.5%) (Table 2.15).

Table 2.15: Prevalence of periodontal disease by insurance status and eligibility for public dental care, dentate people aged 15 and over, 2004–2006 (%)

	Insurance sta	atus	Public dental care	eligibility
	Insured	Uninsured	Eligible	Ineligible
Periodontal disease	19.4	27.0	33.6	19.5

*Note:* The 95% confidence intervals for these estimates are available in Appendix Table C2.15.

Source: National Survey of Adult Oral Health 2004–2006.

The proportion of people with periodontal disease was lower for higher household income groups. It varied from 42.3% for people in households earning less than \$12,000 per year to 14.3% for people in households earning \$100,000 or more per year (Table 2.16).

Table 2.16: Prevalence of periodontal disease by annual household income, dentate people aged 15 and over, 2004–2006 (%)

		Annual household income (\$)						
	<12,000	12,000– <20,000	20,000– <30,000	30,000– <40,000	40,000– <60,000	60,000– <80,000	80,000– <100,000	100,000+
Periodontal disease	42.3	41.0	31.8	26.8	24.8	19.8	15.2	14.3

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.16.

Source: National Survey of Adult Oral Health 2004–2006.

#### 2.4 Tooth retention and loss

In 2013, the proportion of people aged 15 and over who had no natural teeth (edentulous) was 4.4%. There was no statistically significant difference in the rates of edentulism between males and females (3.9% and 4.9%, respectively). The proportion who were edentulous was negligible for the 25–44 age group (0.1%) and highest for the 65 and over group (19.1%) (Table 2.17).

Table 2.17: Prevalence of edentulism by age and sex, people aged 15 and over, 2013 (%)

	Age (years)					
	15–24	25–44	45–64	65+	All people	
Male	_	_	3.2	17.4	3.9	
Female	_	0.2	3.1	20.5	4.9	
All people aged 15 and over	_	0.1	3.2	19.1	4.4	

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.17.

Source: National Dental Telephone Interview Survey 2013.

The proportion of dentate people aged 15 and over who wore dentures was 12.2%, ranging from 1.5% for those aged 15–24 to 41.7% for those aged 65 and over (Table 2.18).

	Age (years)				
	15–24	25–44	45–64	65+	All people
Male	1.4	3.9	12.0	39.4	11.5
Female	1.6	2.8	13.7	43.9	13.0
All people aged 15 and over	1.5	3.3	12.9	41.7	12.2

### Table 2.18: Prevalence of denture wearing by sex and age, dentate people aged 15 and over, 2013 (%)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.18.

Source: National Dental Telephone Interview Survey 2013.

Overall, females had more missing teeth than males (5.4 and 4.8 teeth, respectively). Across age groups, the average number of missing teeth varied from 1.8 teeth for people aged 15–24 to 10.8 teeth for those aged 65 and over (Table 2.19).

Across remoteness areas, people in *Inner regional* areas had more missing teeth than those in *Major cities* (6.2 and 4.8 missing teeth, respectively). Those aged 45–64 in *Inner regional* areas had more missing teeth (7.0 teeth) than those in *Major cities* (5.3 teeth). There were no other statistically significant differences.

The number of missing teeth was also associated with insurance status, with uninsured adults having more missing teeth than those with insurance (5.6 and 4.7 teeth, respectively). Differences by insurance status were also seen for adults aged 45–64 and 65 and over (Table 2.19).

People eligible for public dental care had more missing teeth, on average, than those ineligible for public dental care (8.1 and 4.0 teeth, respectively). Across age groups, differences between those eligible and not eligible for public dental care were statistically significant only for those aged 45 and over (Table 2.19).

There was an almost linear relationship between the number of missing teeth and annual household income. Lower household income was associated with a higher number of missing teeth, ranging from 8.6 teeth for individuals in a household earning less than \$30,000 per year to 3.2 teeth in those earning more than \$140,000 per year. The gradient by income was most evident in the two older age groups (45–54 years and 65+ years) (Table 2.19).

Across remoteness areas, people with insurance living in *Inner regional* areas had more tooth loss overall than insured people living in *Major cities* and *Outer regional* areas (5.6, 4.5 and 4.4 missing teeth, respectively). For people without insurance, those living in *Inner regional* areas had more missing teeth than those living in *Major cities* (6.8 and 5.2 teeth, respectively) (Table 2.20).

Across annual household income categories, there were generally no statistical differences in the number of missing teeth between people with and without insurance. An exception to this was those with household incomes of \$30,000 to less than \$60,000 per year, where those insured had more missing teeth than those without insurance (4.7 and 6.1 teeth, respectively) (Table 2.20).

	15–24	25–44	45–64	65+	All people
Sex					
Male	1.5	2.9	5.5	10.6	4.8
Female	2.3	3.4	6.0	11.0	5.4
Remoteness area					
Major cities	2.0	3.1	5.3	10.4	4.8
Inner regional	1.6	3.2	7.0	11.8	6.2
Outer regional	1.2	3.5	6.2	10.4	5.8
Remote/Very remote	2.3	3.2	6.7	12.7	5.4
Insurance status					
Insured	2.1	3.3	4.9	8.9	4.7
Uninsured	1.7	3.0	7.1	12.8	5.0
Eligibility for public dental care					
Eligible	1.8	3.8	8.8	11.8	8.4
Ineligible	1.9	3.0	5.2	8.6	4.0
Annual household income (\$)					
<30,000	1.6	4.0	8.6	12.3	8.0
30,000-<60,000	1.7	2.9	6.2	9.6	5.3
60,000-<90,000	1.9	2.9	5.6	8.4	4.3
90,000-<140,000	1.4	3.3	4.9	6.0	3.9
140,000+	1.9	3.1	4.0	4.9	3.2
All people aged 15 and over	1.8	3.2	5.8	10.8	5.4

Table 2.19: Number of missing teeth by age group and selected other characteristics, dentate people aged 15 and over, 2013 (average)

Notes

1. The number of missing teeth was derived from the self-reported number of natural teeth at the time of the interview and includes all missing teeth, regardless of reason.

2. The 95% confidence intervals for these estimates are available in Appendix Table C2.19.

Source: National Dental Telephone Interview Survey 2013.

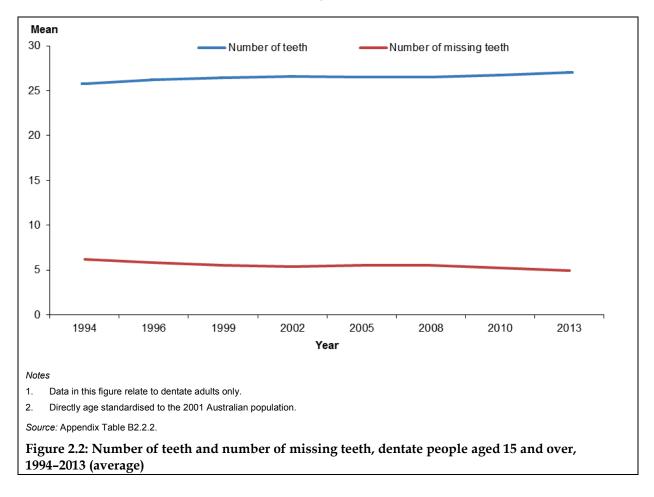
		Annual h	ousehold inc	ome (\$)		
Insurance status	<30,000	30,000– <60,000	60,000– <90,000	90,000– <140,000	140,000+	All people
Insured						
Major cities	7.7	5.9	4.8	3.9	3.2	4.5
Inner regional	8.1	7.3	4.3	4.7	3.8	5.6
Outer regional	7.0	4.7	3.8	4.4	3.4	4.4
Remote/Very remote	9.8	5.6	4.4	5.4	3.3	4.6
All insured	7.7	6.1	4.6	4.1	3.3	4.7
Uninsured						
Major cities	8.5	4.0	3.9	3.6	3.1	5.2
Inner regional	10.3	5.9	4.8	3.1	4.9	6.6
Outer regional	10.6	6.0	4.2	4.6	1.6	6.8
Remote/Very remote	8.1	7.4	3.7	4.4	2.9	6.6
All uninsured	9.1	4.7	4.1	3.6	3.2	5.6
All people						
Major cities	8.3	4.8	4.4	3.8	3.2	4.8
Inner regional	9.7	6.4	4.6	4.1	4.0	6.1
Outer regional	9.9	5.4	4.0	4.5	2.8	5.7
Remote/Very remote	8.4	6.9	4.1	5.2	3.2	5.5
All people aged 15 and over	8.6	5.3	4.3	3.9	3.2	5.1

Table 2.20: Number of missing teeth by annual household income and selected other characteristics, dentate people aged 15 and over, 2013 (average)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.20.

Source: National Dental Telephone Interview Survey 2013.

Between 1994 and 2013, the average number of missing teeth among dentate people aged 15 and over decreased from 6.2 to 5.1 teeth per person. The number of remaining teeth increased from 25.8 in 1994 to 27.0 in 2013 (Figure 2.2; Appendix Table B2.2.2).



#### International comparisons in tooth loss

Australian adults were less likely than New Zealanders to have lost all of their teeth (5.5% compared with 9.4%); however, similar proportions of Australians and Canadians had no remaining natural teeth (4.4% compared with 6.4%, respectively) (Table 2.21). While more up-to-date estimates are available for Australia, these have not been used for international comparisons to ensure comparable time periods.

	Australia <sup>(a)</sup>	New Zealand <sup>(b)</sup>	Age group (years)	Australia <sup>(a)</sup>	Canada <sup>(c)</sup>
All people aged 18 and over	5.5	9.4	All people aged 20–79	4.4	6.4
18–24 years	_	0.1	20–39 years	0.1	(d)
25–34 years	_	_			
35–44 years	0.3	1.7	40–59 years	3.1	4.4
45–54 years	3.0	3.2			
55–64 years	8.5	14.6	60–79 years	15.2	21.7
65–74 years	15.1	29.6			

39.6

Table 2.21: Prevalence of complete tooth loss among adults in Australia, New Zealand and Canada
(%)

(a) 2010.

(b) 2009.

75 years and over

(c) 2007–09

(d) Estimate not provided in Canadian report because of extreme sampling variability or small sample size.

27.9

Note: The 95% confidence intervals for these estimates are in Appendix Table C2.21.

Sources: Canadian data sourced from Statistics Canada; New Zealand data sourced from New Zealand Ministry of Health.

### 2.5 Social impact

Measures of social impact give insight into the effect of oral conditions on day-to-day living from the individual's perspective. Experience of social impact reflects not only the level of oral disease experienced, but also whether that disease had been treated in a timely fashion. The following data are from the NDTIS in which people are asked about their experience of toothache, how they feel about their dental appearance and whether or not they avoid eating certain foods.

#### Toothache

In 2013, about 1 in 7 (16.2%) dentate people aged 15 and over reported that they had experienced toothache in the previous 12 months. This ranged from 8.9% of those aged 65 and over to 20.6% of those aged 25–44.

Experience of toothache was more prevalent for uninsured people than for insured people (20.2% and 12.3%, respectively), and for those who were eligible for public dental care than for those who were not (20.4% and 14.7%, respectively).

Toothache experience was also associated with household income, with a higher proportion of people in the lower income categories experiencing toothache in the previous 12 months than in the higher income categories. There was a two-fold difference in toothache between

the two lowest income categories (less than 30,000, and 30,000 to less than 60,000) and the two highest (90,000 to less than 140,000, and 140,000+) (23.8% and 18.5% compared with 12.1% and 9.1%, respectively).

There were no statistical differences in toothache experience by sex, age group and remoteness areas (Table 2.22).

		Age (years)			
	15–24	25–44	45–64	65+	All people
Sex					
Male	14.5	18.4	14.4	8.3	15.0
Female	14.5	22.9	16.4	9.5	17.4
Remoteness area					
Major cities	14.3	20.8	14.6	9.4	16.2
Inner regional	18.1	18.4	16.2	4.7	15.0
Outer regional	7.4	21.3	19.3	13.3	17.2
Remote/Very remote	8.0	26.4	15.6	26.1	21.7
Insurance status					
Insured	11.8	15.1	11.7	7.7	12.3
Uninsured	16.2	25.8	20.6	9.7	20.2
Eligibility for public dental care					
Eligible	20.0	33.6	28.1	9.3	20.4
Ineligible	12.8	18.1	12.8	8.0	14.7
Annual household income (\$)					
<30,000	33.0	37.1	30.6	10.5	23.8
30,000-<60,000	18.0	25.7	18.2	6.0	18.5
60,000–<90,000	11.0	25.3	13.9	9.3	18.1
90,000–<140,000	7.6	14.5	11.8	2.1	12.1
140,000+	11.1	9.3	7.6	5.9	9.1
All people aged 15 and over	14.5	20.6	15.4	8.9	16.2

## Table 2.22: Prevalence of toothache experience in the previous 12 months by selected characteristics, dentate people aged 15 and over, 2013 (%)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.22.

Source: National Dental Telephone Interview Survey 2013.

#### **Dental appearance**

Approximately one-quarter (27.0%) of all people over the age of 15 reported that they had felt uncomfortable about their dental appearance in the previous 12 months, ranging from 21.7% for those aged 65 and over to 30.7% for those aged 45–64 (Table 2.23).

Females were more likely to be uncomfortable about their appearance than males (30.9% compared with 22.6%). Both males and females aged 65 and over were less likely to report feeling uncomfortable about their dental appearance than those aged 45–64.

Among dentate adults, those aged 45–64 were more likely to feel uncomfortable with their dental appearance (30.6%) than those aged 15–24 (22.3%) and 65 and over (22.4%). A similar pattern held for edentulous adults. Those aged 45–64 were more likely to feel uncomfortable about their dental appearance than those aged 65 and over (33.6% and 18.6%, respectively).

There were no statistically significant differences in discomfort about dental appearance across remoteness areas.

Uninsured people were more likely than insured people to be uncomfortable with their dental appearance (30.9% compared with 23.3%) as were people eligible for dental care than those who were ineligible (32.8% compared with 24.7%).

People living in lower income households were more likely to report feeling uncomfortable about their dental appearance than those living in higher income households. The difference across household incomes was most evident in the two middle age groups where there was at least a two-fold difference between the lowest and highest income groups (46.3% compared with 17.9%, respectively, for age group 25–44; 44.5% compared with 15.7%, respectively, for age group 45–64) (Table 2.23).

	Age (years)				
	15–24	25–44	45–64	65+	All people
Sex					
Male	19.1	24.0	25.9	16.5	22.6
Female	25.6	31.6	35.0	25.9	30.9
Dentate status					
Dentate	22.3	28.0	30.6	22.4	27.2
Edentulous	_	37.7	33.6	18.6	22.2
Remoteness area					
Major cities	19.5	29.6	29.8	21.0	26.9
Inner regional	32.9	21.7	32.3	22.9	27.3
Outer regional	30.6	24.7	34.3	21.8	28.0
Remote/Very remote	11.7	21.4	33.5	37.2	27.0
Insurance status					
Insured	22.1	23.5	23.9	22.2	23.3
Uninsured	23.3	31.9	39.7	21.2	30.9
Eligibility for public dental care					
Eligible	28.8	44.9	47.0	22.4	32.8
Ineligible	20.3	24.8	26.9	20.0	24.7
Annual household income (\$)					
<30,000	27.9	46.3	44.5	23.1	33.1
30,000-<60,000	14.7	30.4	36.1	22.1	29.0
60,000-<90,000	30.2	29.1	33.1	24.7	30.2
90,000-<140,000	19.5	25.0	25.2	21.2	24.5
140,000+	23.1	17.9	15.7	24.7	18.0
All people aged 15 and over	22.3	28.0	30.7	21.7	27.0

Table 2.23: Prevalence of feeling uncomfortable about dental appearance in the previous 12 months by selected characteristics, people aged 15 and over, 2013 (%)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.23.

Source: National Dental Telephone Interview Survey 2013.

#### Avoiding certain foods

Approximately 20.9% of adults reported avoiding eating certain foods due to problems with their teeth, ranging from 14.5% of people aged 15–24 to 23.6% of those aged 45–64 (Table 2.24).

Dentate people were less likely to avoid eating certain foods because of problems with their teeth than edentulous adults (20.3% and 34.3%, respectively). Dentate people aged 15–24 had the lowest rates of avoiding certain foods (14.5%) compared with older age groups (ranging from 20.5% for those aged 25–44 to 22.8% for those aged 45–64).

The proportion who avoided food was higher for women than for men (23.8% compared with 17.9%), for uninsured people than for insured people (24.8% compared with 17.0%) and for people eligible for public dental care than for those who were ineligible (28.5% compared with 17.9%).

Avoiding certain foods because of dental problems was more frequent in the two lowest household income groups (32.2% and 23.8%, respectively) than in the two highest household income groups (16.7% and 11.1%, respectively) (Table 2.24).

		Age (years)	)		
	15–24	25–44	45–64	65+	All people
Sex					
Male	12.0	18.2	19.8	19.7	17.9
Female	17.2	22.8	27.2	25.8	23.8
Dentate status					
Dentate	14.5	20.5	22.8	21.2	20.3
Edentulous	—	43.4	47.8	30.3	34.3
Remoteness area					
Major cities	14.2	20.8	22.0	23.8	20.5
Inner regional	15.3	16.2	26.2	18.9	20.2
Outer regional	17.7	24.6	28.3	28.9	25.8
Remote/Very remote	10.0	24.6	22.5	8.6	20.5
Insurance status					
Insured	12.8	17.6	17.2	18.8	17.0
Uninsured	17.0	22.5	32.1	26.5	24.8
Eligibility for public dental care					
Eligible	17.0	31.4	41.5	25.3	28.5
Ineligible	13.8	18.4	19.6	16.2	17.9
Annual household income (\$)					
<30,000	25.1	34.3	45.3	26.4	32.2
30,000-<60,000	18.3	24.0	29.2	19.2	23.8
60,000-<90,000	12.1	22.3	19.9	19.4	19.8
90,000-<140,000	13.2	19.3	15.2	11.9	16.7
140,000+	11.0	11.6	10.4	16.0	11.1
All people aged 15 and over	14.5	20.5	23.6	23.0	20.9

Table 2.24: Prevalence of avoiding certain foods in the previous 12 months by selected characteristics, people aged 15 and over, 2013 (%)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C2.24.

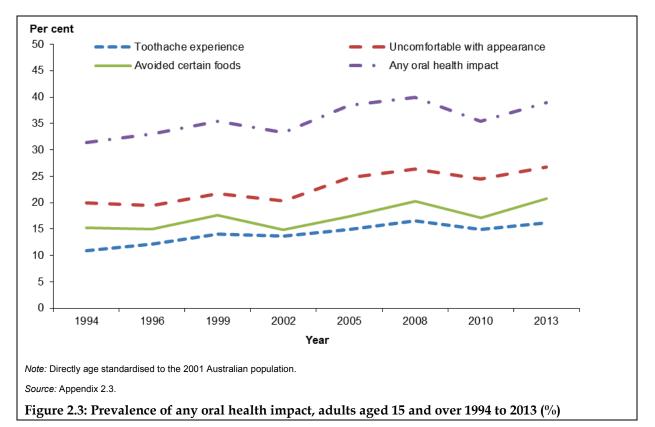
Source: National Dental Telephone Interview Survey 2013.

Between 1994 and 2013, there was an overall increase in the proportion of people aged 15 and over who reported any oral health impact. The proportion ranged between 31.4% in 1994 to 39.9% in 2008 (Figure 2.3; Appendix 2.3).

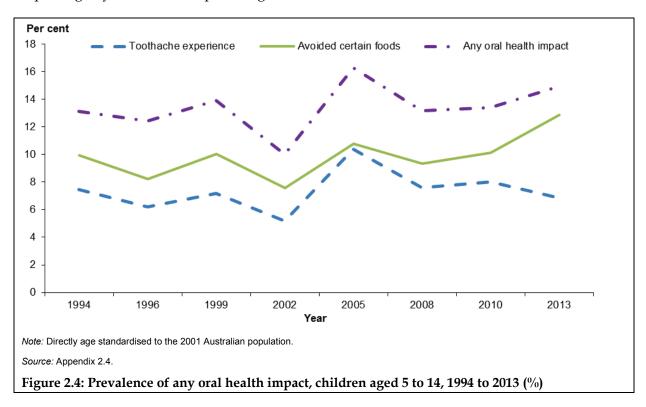
The highest percentage point increase over the period from 1994 to 2013 was in the proportion of people who were uncomfortable about their dental appearance, increasing 6.7 percentage points (from 20.0% to 26.7%).

The prevalence of people avoiding certain foods because of problems with their teeth increased by 3.1 percentage points over the same period (from 20.2% to 17.1%).

The proportion of people who reported experiencing a toothache over the previous 12 months increased from 10.9% to 16.2% over the same period (a 5.3 percentage point difference).



The proportion of children aged 5 to 14 reporting any oral health impact was lower than that for adults for every year reported (Figure 2.4; Appendix 2.4). Overall, the proportion reporting any oral health impact ranged from 10.0% in 2002 to 16.3% in 2005.



## 3 Use of dental services

#### 3.1 Time since last dental visit

In 2013, approximately two-thirds (64.4%) of people aged 5 and over had made a dental visit in the previous 12 months. More females had visited within the previous year than males (67.5% and 61.2%, respectively) (Table 3.1).

Almost 4 in 5 (78.8%) children aged 5–14 had made a dental visit in the previous 12 months, with 90.6% having visited within the previous 2 years.

In contrast, over half (55.2%) of all adults aged 25–44 had made a dental visit in the previous 12 months, with three-quarters (75.3%) having visited in the previous 2 years.

	Time since last visit						
	<12 months	1–<2 years	2–<5 years	5+ years or never			
Sex							
Male	61.2	17.2	11.5	10.0			
Female	67.5	17.4	9.6	5.5			
Age (years)							
5–14	78.8	11.8	2.7	6.8			
15–24	66.6	19.7	9.4	4.3			
25–44	55.2	20.1	15.1	9.7			
45–64	63.8	18.0	9.9	8.3			
65+	70.1	12.4	10.4	7.1			
All people aged 5 and over	64.4	17.3	10.6	7.8			

Table 3.1: Time since last dental visit by age and sex, dentate people aged 5 and over, 2013 (%)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C3.1.

Source: National Dental Telephone Interview Survey 2013.

The proportion of dentate people aged 15 and over who made a dental visit within the previous 12 months was higher for those living in *Major cities* (64.1%) than for those living in *Inner regional* and *Outer regional* areas (57.7% and 56.3%, respectively) (Table 3.2).

Almost three-quarters of dentate adults with insurance (73.7%) made a dental visit within the previous year, compared with around half of those without insurance (51.0%) (Table 3.2).

There was no statistically significant difference in time since last dental visit between dentate adults eligible for public dental care (61.5%) and those who were not eligible (62.3%) (Table 3.2).

Across annual household income categories, those in the lowest two household income categories (less than \$30,000, and \$30,000 to less than \$60,000; 57.1% and 56.8%, respectively) had statistically significantly lower rates of visiting in the previous 12 months than those in the two highest income categories (\$90,000 to \$140,000, and \$140,000 plus; 66.9% and 67.9%, respectively) (Table 3.2).

	Time since last visit						
	<12 months	1–<2 years	2–<5 years	5+ years or neve			
Sex							
Male	58.3	18.0	13.1	10.7			
Female	65.8	18.4	10.6	5.2			
Remoteness area							
Major cities	64.1	17.2	11.0	7.7			
Inner regional	57.7	19.9	13.8	8.9			
Outer regional	56.3	20.6	15.5	7.7			
Remote/Very remote	54.6	28.4	7.1	10.0			
Insurance status							
Insured	73.7	15.0	7.5	3.7			
Uninsured	51.0	21.2	15.5	12.3			
Eligibility for public dental care							
Eligible	61.5	18.2	12.1	8.			
Ineligible	62.3	18.2	11.7	7.8			
Annual household income (\$)							
<30,000	57.1	18.0	14.2	10.7			
30,000–<60,000	56.8	20.1	13.7	9.4			
60,000–<90,000	59.8	18.9	11.5	9.8			
90,000–<140,000	66.9	17.0	10.5	5.0			
140,000+	67.9	17.1	9.1	5.9			
All people aged 15 and over	62.1	18.2	11.8	7.9			

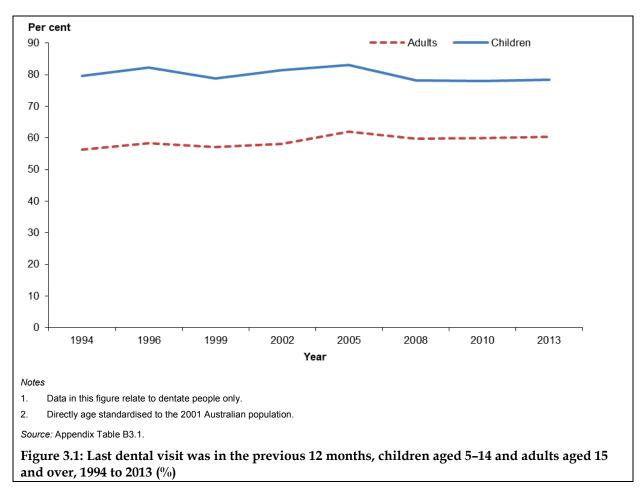
Table 3.2: Time since last dental visit by selected characteristics, dentate people aged 15 and over,2013 (%)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C3.2.

Source: National Dental Telephone Interview Survey 2013.

#### Trends in time since last dental visit

The proportion of people aged 15 and over who made a dental visit in the previous 12 months was higher in 2013 than in 1994 (60.3% and 56.4%, respectively). The proportion of children aged 5–14 making a dental visit in the previous 12 months remained largely unchanged between 1994 and 2013, ranging from around 78% to around 83% (Figure 3.1; Appendix Table B).



#### International comparisons in time since last dental visit

Across age groups, Australians were, on average, more likely to have made a dental visit in the previous 12 months than New Zealanders. However, Australians were less likely than Canadians in all three age groups to have made a dental visit in the previous 12 months (Table 3.3). While more up-to-date estimates are available for Australia, these have not been used for international comparisons to ensure comparable time periods.

Age group (years)	Australia <sup>(a)</sup>	New Zealand <sup>(b)</sup>	Age group (years)	Australia <sup>(a)</sup>	Canada <sup>(c,d)</sup>
18–24	55.7	36.9	20–39	54.9	67.9
25–34	58.7	44.6			
35–44	56.6	43.3	40–59	61.1	78.5
45–54	59.9	55.7			
55–64	62.6	55.7	60–79	60.2	79.3
65–74	59.1	47.7			
75 and over	54.7	40.3			
All persons aged					
18 and over	60.7	47.1			

Table 3.3: Proportions of adults who made a dental visit in the previous 12 months, Australia, New	
Zealand and Canada (%)	

(a) 2010.

(b) 2009.

(c) 2007–09.

(d) In Canada, participants were asked: 'When was the last time you saw a dental professional?'.

Note: The 95% confidence intervals for these estimates are in Appendix Table C3.3.

Sources: Canadian data sourced from Statistics Canada; New Zealand data sourced from New Zealand Ministry of Health.

### 3.2 Reason for last dental visit

In 2013, among those who made a dental visit in the previous two years, younger people were more likely to attend for a check-up than adults. More than 4 in 5 people aged under 25 reported that their last dental visit was for a check-up (80.2% for those aged 5–14 and 75.8% for those aged 15–24). In contrast, people aged 45 and over had the lowest rates of visiting for a check-up (54.4% for those aged 45–64, and 53.2% for those aged 65 and over).

People living in *Major cities* had higher rates of visiting for a check-up (65.1%) than those living in *Inner regional* areas (58.6%).

People with insurance (69.5%) were more likely to report their last visit was for a check-up than those without insurance (56.0%).

Fewer people who were eligible for public dental care (54.6%) reported that their last visit was for a check-up than those who were not eligible for public dental care (66.6%).

Across household income groups, the proportion of individuals who last visited a dentist for a check-up ranged from 48.4% for those in the \$30,000 or less income group to 74.4% for those in the \$140,000 and over income group (Table 3.4).

-	Reason for I	ast visit
	Check-up	Problem
Sex		
Male	62.5	37.5
Female	64.5	35.5
Age (years)		
5–14	80.2	19.8
15–24	75.8	24.2
25–44	61.3	38.7
45–64	54.4	45.6
65+	53.2	46.8
Remoteness area		
Major cities	65.1	34.9
Inner regional	58.6	41.4
Outer regional	62.0	38.0
Remote/Very remote	57.4	42.6
Insurance status		
Insured	69.5	30.5
Uninsured	56.0	44.0
Eligibility for public dental care		
Eligible	54.6	45.4
Ineligible	66.6	33.4
Annual household income (\$)		
<30,000	48.4	51.6
30,000-<60,000	61.2	38.8
60,000-<90,000	61.8	38.2
90,000–<140,000	68.7	31.3
140,000+	74.4	25.6
All people aged 5 and over	63.5	36.5

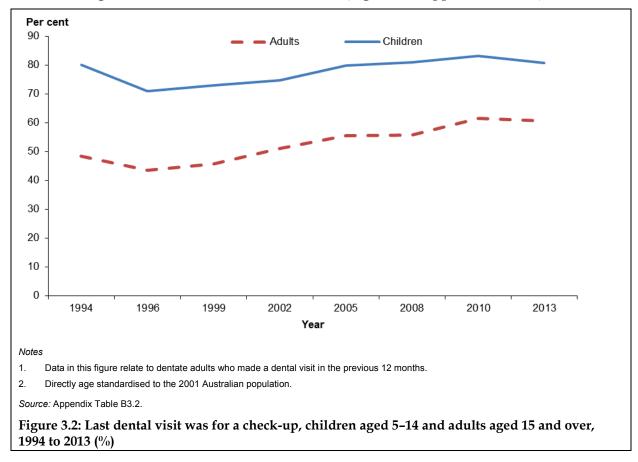
Table 3.4: Reason for last dental visit by selected characteristics, proportion of dentate people aged 5 and over, 2013 (%)

Notes

1. Dentate people aged 5 and over who made a dental visit in the previous 2 years.

2. The 95% confidence intervals for these estimates are in Appendix Table C3.4.

The proportion of adults aged 15 and over whose last visit was for a check-up increased from 48.3% in 1994 to 60.5% in 2013. After declining from 80.0% in 1994 to 70.8% in 1996, the proportion of children aged 5–14 who visited for a check-up steadily increased until it reached a high of 83.1% in 2010 and 80.7% in 2013 (Figure 3.2; Appendix Table B).



#### International comparisons of reason for last dental visit

Australian adults in all age groups other than the youngest (18–24 years) and the oldest (75 years and over) were more likely than their New Zealand counterparts to have last visited a dentist for a check-up. The difference across age groups ranged from 14.7 percentage points in the 25–34 year and 35–44 year age groups to 3.7 percentage points in the 18–24 year age group (Table 3.5).

Age group (years)	Australia <sup>(a)</sup>	New Zealand <sup>(b)</sup>
18–24	76.1	76.9
25–34	61.5	46.9
35–44	59.7	46.1
45–54	54.8	44.0
55–64	50.4	40.5
65–74	51.5	39.6
75 and over	57.5	43.2
All people aged 18 and over	59.7	47.9

Table 3.5: Proportion of adults who last visited for a check-up,
Australia and New Zealand (%)

(a) 2010.(b) 2009

(b) 2009

Note: The 95% confidence intervals for these estimates are available in Appendix Table C3.5.

Source: New Zealand data sourced from New Zealand Ministry of Health.

## 3.3 Type of practice visited at last dental visit

The majority of dental services in Australia are private dental practices. There are only a limited range of public dental practices and these primarily provide services to specific target populations. The data reflect this. In 2013, most people aged 5 and over (84.4%) reported that their last dental visit was to a private dental practice, compared with 9.5% to a public dental service and 4.2% to an SDS (Table 3.6).

Just over 1 in 5 (21.4%) children aged 5–14 attended an SDS for their last dental visit and nearly two-thirds (63.6%) attended a private practice.

Among adults, people aged 65 and over were more likely to have visited a public dental service than those aged 25–44 or 45–54 (14.0% compared with 7.5% and 5.6%, respectively).

Across remoteness areas, use of an SDS was lower in *Major cities* (3.2%) than in *Inner regional* and *Outer regional* areas (6.3% and 8.1%, respectively). The proportion of people using public dental services was lower in *Major cities* (8.3%) than in *Remote/Very remote* regions (24.2%) (Table 3.6).

People with insurance were more likely to report visiting a private practice (93.2%) and less likely to access public care (3.1%) or an SDS (2.6%) than those without insurance (71.4%, 18.8% and 6.7%, respectively).

People who were eligible for public dental care were less likely to report accessing private care (70.3%) and more likely to report accessing public care (24.3%) at their last visit than those who were not eligible for public dental care (89.0% and 4.6%, respectively) (Table 3.6).

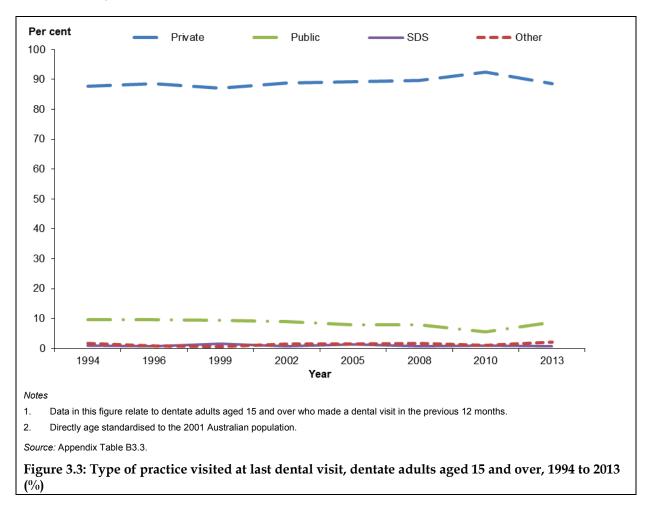
Across annual household income groups, those in the lowest two income groups had higher rates of public dental service visits than those in the two highest income groups. Almost one-

third of dentate people in the \$30,000 and under income group (30.0%) and one-tenth of those in the \$30,000 to less than \$60,000 income group (11.3%) visited a public dental service at their last visit, compared with 2.7% and 2.3% for those in the two highest income categories. SDS use was relatively even across all income groups (Table 3.6).

	Туре о	of practice visited at las	t dental visit	
	Private	Public	SDS	Other
Sex				
Male	83.5	9.9	3.9	2.7
Female	85.1	9.2	4.5	1.1
Age (years)				
5–14	63.6	13.8	21.4	1.1
15–24	82.7	11.2	3.9	2.2
25–44	89.2	7.5	_	3.3
45–64	93.0	5.6	_	1.4
65+	85.3	14.0	_	0.6
Remoteness area				
Major cities	86.6	8.3	3.2	1.9
Inner regional	80.3	12.2	6.3	1.2
Outer regional	76.9	11.6	8.1	3.3
Remote/Very remote	66.1	24.2	7.6	2.2
Insurance status				
Insured	93.2	3.1	2.6	1.1
Uninsured	71.4	18.8	6.7	3.1
Eligibility for public dental care				
Eligible	70.3	24.3	4.5	0.9
Ineligible	89.0	4.6	4.1	2.2
Annual household income (\$)				
<30,000	65.2	30.0	3.5	1.4
30,000-<60,000	82.3	11.3	5.3	1.1
60,000–<90,000	85.8	6.7	5.8	1.7
90,000-<140,000	90.3	2.7	5.0	2.0
140,000+	92.1	2.3	3.6	2.1
All people aged 5 and over	84.4	9.5	4.2	1.9

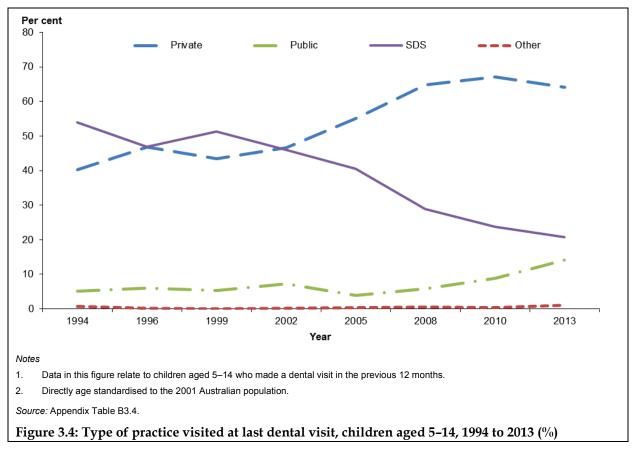
Table 3.6: Type of practice visited at last dental visit by selected characteristics, proportion of dentate people aged 5 and over who visited in last 12 months, 2013 (%)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C3.6.



The proportion of adults who visited a private dental practice remained stable between 1994 and 2013 (Figure 3.3).

The proportions of children aged 5–14 who visited a public dental service increased from 5.2% in 1994 to 14.1% in 2013. The proportion who visited an SDS more than halved over the period (from 53.9% to 20.7%). These complementary changes mainly occurred between 2002 and 2010 (Figure 3.4; Appendix Table B3.4).



## 3.4 Dental visiting patterns for adults

The measure 'visiting patterns' is derived from characteristics of people's dental attendance; people were asked about this in the NDTIS. Favourable attendance is visiting a dentist once or more per year (usually for a check-up) and having a usual dental provider. Unfavourable attendance is visiting less than once every 2 years (and usually for a problem), or visiting once every 2 years (usually for a problem) and without a regular dental provider. The remaining combinations are classified as intermediate visiting patterns (Ellershaw & Spencer 2011).

Overall, in 2013, almost half (44.1%) of all dentate adults over the age of 18 had favourable visiting patterns and nearly one-quarter (23.5%) had unfavourable visiting patterns. Females were more likely to have favourable visiting patterns (49.6%) than males (38.4%) (Table 3.7).

Dentate adults aged 25–44 had the lowest rate of favourable attendance (37.5%). For the remaining age groups, there was no statistically significant difference, with rates ranging from 47.7% to 49.3%. The group aged 18–24 had a lower rate of unfavourable visiting (14.7%) than the 25–44 and 45–54 age groups (27.0% and 23.9%, respectively).

Across remoteness areas, dentate adults in *Major cities* had higher rates of favourable attendance (46.8%) and lower rates of unfavourable attendance (21.7%) than dentate adults in *Inner regional* areas (38.6% and 27.5%, respectively) and *Outer regional* areas (36.8% and 29.8%, respectively) (Table 3.7).

Almost two-thirds (60.9%) of insured dentate adults had favourable visiting patterns, compared with just under one-third (26.5%) of those without insurance (Table 3.7).

Just over one-third (34.7%) of eligible dentate adults had favourable visiting patterns, compared with almost one-half (47.3%) of ineligible dentate adults (Table 3.7).

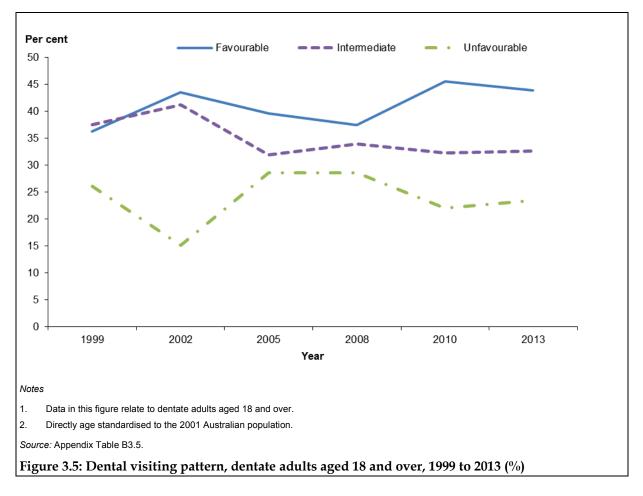
Visiting patterns varied by annual household income. Just over one-quarter (27.4%) of adults in the lowest income group had favourable visiting patterns, compared with more than one-half (57.1%) of those in the highest income group. Conversely, lower income groups had higher rates of unfavourable visiting than higher income groups, ranging from 35.1% for the \$30,000 or less household income group to 12.4% for the \$140,000 and over income group.

	Dental visiting pattern					
	Favourable	Intermediate	Unfavourable			
Sex						
Male	38.4	34.4	27.3			
Female	49.6	30.6	19.8			
Age (years)						
18–24	49.3	35.9	14.7			
25–44	37.5	35.5	27.0			
45–64	47.7	28.4	23.9			
65+	48.4	30.4	21.2			
Remoteness area						
Major cities	46.8	31.6	21.7			
Inner regional	38.6	34.0	27.5			
Outer regional	36.8	33.3	29.8			
Remote/Very remote	31.4	39.5	29.1			
Insurance status						
Insured	60.9	26.7	12.4			
Uninsured	26.5	38.0	35.6			
Eligibility for public dental care						
Eligible	34.7	34.6	30.7			
Ineligible	47.3	31.7	21.0			
Annual household income (\$)						
<30,000	27.4	37.5	35.1			
30,000-<60,000	38.6	32.7	28.7			
60,000-<90,000	42.4	33.1	24.5			
90,000-<140,000	52.1	28.7	19.2			
140,000+	57.1	30.5	12.4			
All people aged 18 and over	44.1	32.5	23.5			

Table 3.7: Dental visiting pattern by selected characteristics, proportion of dentate people aged 18 and over, 2013 (%)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C3.7.

Between 1999 and 2013, there was an overall increase in the proportion of adults aged 18 and over who had favourable visiting patterns, increasing from 36.3% to 43.9%. Despite some year-to-year fluctuation, the overall rate of unfavourable visiting patterns has remained relatively steady, ranging between 22.1% and 28.6% for all years other than 2002 (Figure 3.5; Appendix Table B).



### 3.5 Dental services received

In 2013, dentate people aged 5 and over who visited a dentist in the last 12 months made, on average, 2.41 visits. On average, they received 1.09 scale and clean services, 0.65 fillings and 0.27 extractions. There was no statistically significant difference in the average number of services between males and females (Table 3.8).

Across age groups, adults aged 25–44 had a lower average number of dental visits (2.12) than those aged 15–24 (2.80) and those aged 65 and over (2.58). Adults aged 65 and over had, on average, more fillings (0.80) than those aged 5–14 (0.42) and those aged 15–24 (0.48). Children aged 5–14 had, on average, fewer scale and clean services (0.92) than older age groups (between 1.09 and 1.18).

Across remoteness areas, people in *Major cities* made, on average, more dental visits (2.50) than people in *Outer regional* areas (1.98) and *Remote/Very remote* areas (1.97). Residents of *Major cities* also had more scale and clean services (1.15) than those of *Inner regional* (0.96) and *Outer regional* (0.88) areas.

There was no statistically significant difference between people with and without insurance in the average number of visits they made in the previous 12 months, or in the number of extractions or fillings that they had. However, people with insurance had a higher number of scale and clean services (1.19) than uninsured individuals (0.94) (Table 3.8).

There was no statistically significant difference in the number of visits between people who were eligible for public dental care and people who were not. However, people who were eligible for public dental care received more fillings (0.77 compared with 0.61) and fewer scale and clean services (1.01 compared with 1.11) than those who were not eligible.

The average number of dental visits made in the past 12 months by dentate people aged 5 and over ranged from 2.28 to 2.67 visits across annual household income groups, although there was no statistically significant difference.

People in the two highest income categories had, on average, fewer extractions (0.16 and 0.17, respectively) and fewer fillings (0.62 and 0.47, respectively) than those in the lowest income group (0.47 extractions and 0.91 fillings). Those in the \$30,000 or less income group and the \$60,000 to less than \$90,000 group had fewer scale and clean services (0.99) than individuals in the highest income group (1.19) (Table 3.8).

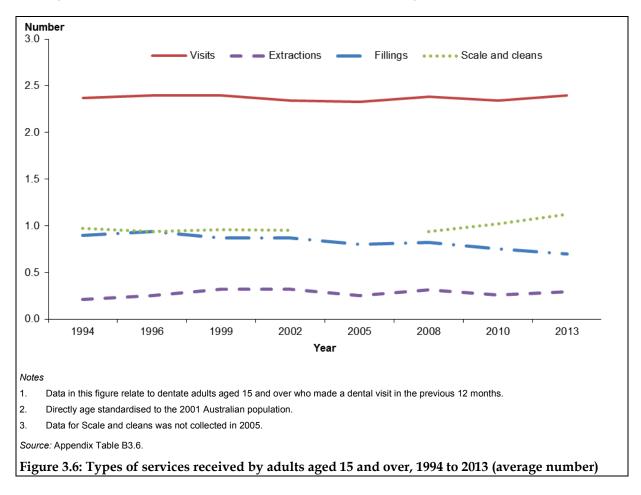
	Visits	Extractions	Fillings	Scale and cleans
Sex				
Male	2.30	0.28	0.66	1.07
Female	2.51	0.27	0.64	1.10
Age (years)				
5–14	2.39	0.20	0.42	0.92
15–24	2.80	0.24	0.48	1.09
25–44	2.12	0.31	0.70	1.09
45–64	2.42	0.29	0.78	1.14
65+	2.58	0.32	0.80	1.18
Remoteness area				
Major cities	2.50	0.27	0.62	1.15
Inner regional	2.30	0.30	0.78	0.96
Outer regional	1.98	0.23	0.61	0.88
Remote/Very remote	1.97	0.51	0.71	0.94
Insurance status				
Insured	2.47	0.23	0.66	1.19
Uninsured	2.35	0.34	0.64	0.94
Eligibility for public dental care				
Eligible	2.49	0.36	0.77	1.01
Ineligible	2.39	0.25	0.61	1.11
Annual household income (\$)				
<30,000	2.67	0.47	0.91	0.99
30,000-<60,000	2.37	0.26	0.68	1.09
60,000-<90,000	2.34	0.31	0.69	0.99
90,000-<140,000	2.47	0.16	0.62	1.10
140,000+	2.28	0.17	0.47	1.19
All people aged 5 and over	2.41	0.27	0.65	1.09

Table 3.8: Dental services received in the previous 12 months by selected characteristics, dentate people aged 5 and over who visited in the previous 12 months, 2013 (average number)

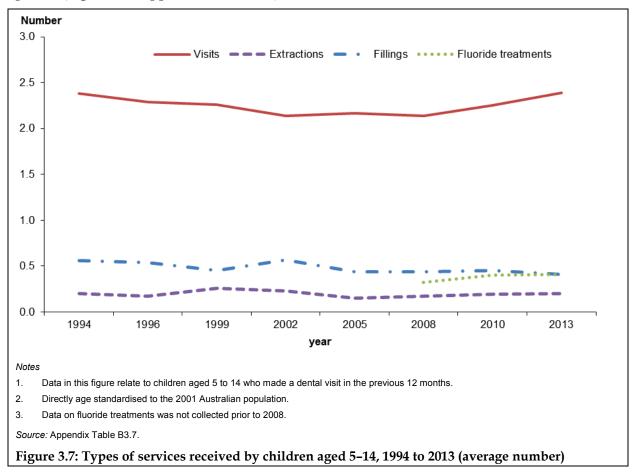
Note: The 95% confidence intervals for these estimates are available in Appendix Table C3.8.

Adults aged 15 and over who made a dental visit in the previous 12 months, made an average number of 2.3 to 2.4 visits over this time.

A small decline, year by year, in the average number of fillings resulted in an overall decrease from 0.90 in 1994 to 0.70 in 2013. There was an overall increase in the average number of scale and clean services received, from 0.97 to 1.12 over the entire period. The average number of extractions fluctuated over the period (Figure 3.6).



Among children aged 5–14 who made a recent dental visit, the average number of visits remained stable at between 2.14 and 2.39 over the period 1994 to 2013. There were no clear changes in individual service types (extractions, fillings or fluoride treatment) over this time period (Figure 3.7; Appendix Table B3.7).



#### 3.6 Fissure sealants in children

A common and effective preventive practice to halt the development of active decay in permanent teeth is to seal or cover the pits and fissures of teeth (normally molars) with a resin or glass-ionomer (cement) material. This prevents the future build-up of plaque and bacteria in the more decay-susceptible tooth grooves.

In 2010, children with permanent tooth decay experience (DMFT >0) were more likely to have a fissure sealant than children with no permanent decay experience at every age (Table 3.9).

Table 3.9: Children with fissure-sealed teeth by DMFT status and age, children attending a school dental service, 2010 (%)

	Age (years)										
	5	6	7	8	9	10	11	12	13	14	
DMFT = 0	0.4	1.8	8.5	19.4	23.3	27.0	24.2	24.0	24.9	27.0	
DMFT >0	2.9	3.3	13.5	23.3	21.3	26.2	27.2	26.1	33.3	35.0	

Notes

1. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

2. Data from Victoria were not available.

3. The 95% confidence intervals for these estimates are available in Appendix Table C3.9.

Source: Child Dental Health Survey 2010.

The average number of fissure-sealed teeth in children attending an SDS ranged from 0.01 teeth in children aged 5 to 1.05 teeth in children aged 14 (Table 3.10).

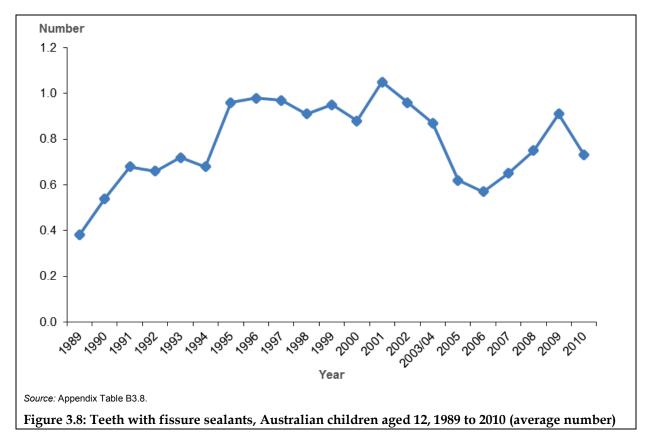
## Table 3.10: Fissure-sealed teeth by age, children attending a school dental service, 2010 (average number)

	Age (years)									
	5	6	7	8	9	10	11	12	13	14
Average	0.01	0.05	0.27	0.58	0.67	0.76	0.69	0.73	0.93	1.05

Note: The 95% confidence intervals for these estimates are available in Appendix Table C3.10.

Source: Child Dental Health Survey 2010.

Figure 3.8 shows the mean number of fissure-sealed teeth among children aged 12 in Australia from 1989 to 2010. The average number of teeth with fissure sealants fluctuated around 0.8 teeth over this time period.



## 4 Hospitalisations

Two measures of dental services provided in hospitals are reported:

- Potentially preventable hospital separations (PPHs) are one of the key performance indicators for the National Oral Health Plan 2004-2013 and provide important information about the extent to which timely and adequate dental care has been provided.
- A small proportion of Australians receive dental care under general anaesthetic. This is
  usually the result of severe disease, behavioural problems in children or
  medical/physical complications. Provision of dental care under general anaesthetic
  carries a small risk and is resource intensive, both for patients and the community.
  Understanding the extent of use of general anaesthetic for dental services and changes
  over time can inform the development of appropriate service provision and reorient
  primary dental services so that the demand for treatment under a general anaesthetic
  might be reduced (Jamieson & Roberts-Thomson 2006).

There is some overlap between these two indicators. Many PPHs will require a general anaesthetic. However, not all dental care provided under general anaesthetic is for potentially preventable care. There are also, potentially, hospital admissions for dental care that are not included in either of these categories. These would include admissions that are not potentially preventable and that are not performed under general anaesthetic.

### 4.1 Potentially preventable hospital separations

PPHs are those conditions where hospitalisation is thought to have been avoidable if timely and adequate non-hospital care had been provided. PPHs therefore have potential as indicators of the quality or effectiveness of non-hospital care. A high rate of PPHs may indicate an increased prevalence of the conditions in the community, poorer functioning of the non-hospital care system or an appropriate use of the hospital system to respond to greater need (AIHW 2012). Separation rates, or rates of completed episodes of care for dental-related PPHs, therefore provide an indicator of potential inadequacy of dental care in the community.

In 2013–14, the total number of PPHs related to dental conditions was 63,456, or 2.7 separations per 1,000 population. The age-standardised separation rate in 2013–14 ranged from 2.1 separations per 1,000 population in the Australian Capital Territory to 3.8 in Western Australia (Table 4.1).

The number of PPHs increased from 57,955 in 2007–08 to 63,589 in 2012–13 and then decreased to 63,456 in 2013–14. The overall increase in the number of separations for PPHs was in line with population growth, as the age-standardised separation rate remained steady at 2.7/2.8 per 1,000 population (Table 4.1).

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total <sup>(b)</sup>
				Num	ıber <sup>(c)</sup>				
2007–08	16,274	15,868	11,488	7,160	5,047	929	635	531	57,955
2008–09	15,799	16,356	11,836	7,765	5,025	874	726	773	59,174
2009–10	15,757	16,583	12,592	7,919	5,002	1,105	610	663	60,251
2010–11	16,102	15,937	12,173	8,461	5,350	1,099	725	707	60,590
2011–12	16,420	16,699	12,769	8,949	5,801	1,108	770	763	63,327
2012–13	16,869	14,892	13,020	9,550	6,090	1,570	761	787	63,589
2013–14	16,735	15,652	12,548	9,514	5,836	1,599	773	773	63,456
				Separat	ion rate <sup>(d)</sup>				
2007–08	2.4	3.1	2.7	3.4	3.2	1.9	2.0	2.2	2.8
2008–09	2.3	3.1	2.7	3.6	3.2	1.8	2.2	3.2	2.8
2009–10	2.3	3.1	2.9	3.6	3.2	2.3	1.8	2.8	2.8
2010–11	2.3	2.9	2.7	3.7	3.3	2.3	2.1	2.9	2.7
2011–12	2.3	3.0	2.7	3.8	3.5	2.2	2.2	3.0	2.8
2012–13	2.3	2.7	2.8	3.9	3.7	3.1	2.1	3.0	2.8
2013–14	2.3	2.8	2.7	3.8	3.5	3.2	2.1	3.0	2.7

Table 4.1: Hospital separations for potentially preventable hospitalisations due to dental conditions<sup>(a)</sup>, state or territory of usual residence, 2007–08 to 2013–14

(a) Potentially preventable hospitalisations related to dental care are defined as the following ICD-10-AM 6th edn (see NCCH 2008) Principal diagnosis categories: K02 Dental caries; K03 Other diseases of hard tissues of teeth; K04 Diseases of pulp and periapical tissues; K05 Gingivitis and periodontal diseases; K06 Other diseases of gingival and edentulous alveolar ridge; K08 Other disorders of teeth and supporting structures; K09.8 Other cysts of oral region, not elsewhere classified; K09.9 Cyst of oral region, unspecified; K12 Stomatitis and related lesions; K13 Other diseases of lip and oral mucosa. Data for 2013–14 are defined using ICD-10-AM 8th edn.

(b) Includes Other territories.

(c) Excludes records with care type of Newborn (without qualified days), Hospital boarders and Posthumous organ procurement.

(d) Number of separations per 1,000 population. Separation rates were directly age standardised to the Australian population, using the estimated resident populations as at 30 June for the respective year.

Sources: AIHW Hospital Morbidity database 2007-08, 2013-14.

Across remoteness areas, the rate of PPHs due to dental conditions was lowest for *Major cities* (2.6) and highest for *Very remote* areas (4.0). Between 2007–08 and 2013–14, the number of PPHs in *Major cities* increased from 37,119 to 41,917 although the rate remained constant (at 2.6 separations per 1,000 people). For the remaining remoteness areas, the number of PPHs fluctuated slightly over the same period (Table 4.2).

Year	Major cities	Inner regional	Outer regional	Remote	Very remote	Total <sup>(b)</sup>
			Number	.(c)		
2007–08	37,119	12,803	6,157	1,163	713	57,955
2008–09	38,228	12,632	6,231	1,177	877	59,174
2009–10	38,376	13,520	6,437	1,144	736	60,251
2010–11	38,534	13,502	6,443	1,240	814	60,590
2011–12	40,744	13,963	6,445	1,240	871	63,327
2012–13	41,730	13,275	6,256	1,261	892	63,589
2013–14	41,917	13,272	6,172	1,183	835	63,456
			Separation	rate <sup>(d)</sup>		
2007–08	2.6	3.3	3.1	3.6	3.4	2.8
2008–09	2.6	3.2	3.1	3.6	4.0	2.8
2009–10	2.6	3.3	3.2	3.5	3.4	2.8
2010–11	2.5	3.3	3.1	3.8	3.8	2.7
2011–12	2.6	3.4	3.1	3.8	4.0	2.8
2012–13	2.7	3.2	3.0	3.8	4.0	2.8
2013–14	2.6	3.1	3.0	3.6	3.7	2.7

Table 4.2: Hospital separations for potentially preventable hospitalisations due to dental conditions<sup>(a)</sup>, remoteness area of usual residence, 2007–08 to 2013–14

(a) Potentially preventable hospitalisations related to dental care are defined as the following ICD-10-AM 6th edn Principal diagnosis categories: K02 Dental caries; K03 Other diseases of hard tissues of teeth; K04 Diseases of pulp and periapical tissues; K05 Gingivitis and periodontal diseases; K06 Other diseases of gingival and edentulous alveolar ridge; K08 Other disorders of teeth and supporting structures; K09.8 Other cysts of oral region, not elsewhere classified; K09.9 Cyst of oral region, unspecified; K12 Stomatitis and related lesions; K13 Other diseases of lip and oral mucosa. Data for 2013–14 are defined using ICD-10-AM 8th edn.

(b) Includes unknown remoteness area.

(c) Excludes records with care type of Newborn (without qualified days), Hospital boarders and Posthumous organ procurement.

(d) Number of separations per 1,000 population. Separation rates were directly age standardised to the Australian population using the estimated resident populations as at 30 June for the respective year.

Source: AIHW Hospital Morbidity database 2007-08 to 2013-14.

In 2013–14, children aged 5–9 had the highest number of PPHs due to dental conditions (13,504 separations or 9.3 separations per 1,000 children aged 5–9) (Table 4.3). Children aged 10–14 had the lowest number of separations for PPHs due to dental conditions (3,423, 2.4 separations per 1,000 children aged 10–14), although adults aged 25–44 had the lowest hospital separation rate overall (1.7 separations per 1,000 people).

				A	ge (years)					
Sex	0–4	5–9	10–14	15–24	25–34	35–44	45–54	55–64	65+	Total
				I	Number <sup>(b)</sup>					
Male	3,810	6,849	1,694	2,827	2,816	2,738	3,007	3,168	3,753	30,662
Female	3,293	6,655	1,729	3,697	2,861	2,801	3,697	3,746	4,315	32,794
Total	7,103	13,504	3,423	6,524	5,677	5,539	6,704	6,914	8,068	63,456
				Sepa	aration rate	c)				
Male	4.9	9.2	2.4	1.8	1.7	1.7	2.0	2.4	2.4	2.7
Female	4.5	9.4	2.5	2.4	1.7	1.7	2.4	2.8	2.4	2.8
Total	4.7	9.3	2.4	2.1	1.7	1.7	2.2	2.6	2.4	2.7

Table 4.3: Number and rate of hospital separations for potentially preventable hospitalisations due to dental conditions<sup>(a)</sup>, by sex and age group, 2013–14

(a) Potentially preventable hospitalisations related to dental care are defined as the following ICD-10-AM 6th edn Principal diagnosis categories: K02 Dental caries; K03 Other diseases of hard tissues of teeth; K04 Diseases of pulp and periapical tissues; K05 Gingivitis and periodontal diseases; K06 Other diseases of gingival and edentulous alveolar ridge; K08 Other disorders of teeth and supporting structures; K09.8 Other cysts of oral region, not elsewhere classified; K09.9 Cyst of oral region, unspecified; K12 Stomatitis and related lesions; K13 Other diseases of lip and oral mucosa. Data for 2013–14 are defined using ICD-10-AM 8th edn.

(b) Excludes records with care type of Newborn (without qualified days) and records for Hospital boarders and Posthumous organ procurement.

(c) The separation rates in this table (number of separations per 1,000 population) are crude age-specific population rates based on the 2013 estimated resident population.

Source: AIHW Hospital Morbidity database 2013-14.

Between 2007–08 and 2013–14, the greatest increase in the number of PPHs due to dental conditions was for the 65 and over age group, increasing from 5,866 to 8,068 - a 38% increase. The only age group where there was a decrease was the 35–44 group, from 5,819 to 5,539 - a 5% decrease (Table 4.4).

				Ag	e (years)					
Year	0–4	5–9	10–14	15–24	25–34	35–44	45–54	55–64	65+	Total
				Ν	umber <sup>(b)</sup>					
2007–08	7,740	11,533	3,227	6,024	5,304	5,819	6,487	5,985	5,866	57,985
2008–09	7,765	11,724	3,349	6,307	5,332	5,614	6,466	6,345	6,273	59,175
2009–10	7,648	12,236	3,256	6,160	5,344	5,667	6,703	6,566	6,664	60,244
2011–12	7,787	13,503	3,458	6,465	5,630	5,711	6,815	6,571	7,383	63,323
2010–11	7,768	12,694	3,394	6,018	5,399	5,726	6,678	6,388	6,518	60,583
2012–13	7,421	13,511	3,463	6,850	5,889	5,691	6,558	6,517	7,689	63,589
2013–14	7,103	13,504	3,423	6,524	5,677	5,539	6,704	6,914	8,068	63,456
				Sepa	ration rate <sup>(c)</sup>					
2007–08	5.8	8.7	2.3	2.1	1.8	1.9	2.3	2.6	2.1	2.8
2008–09	5.6	8.8	2.4	2.1	1.8	1.8	2.2	2.7	2.2	2.8
2009–10	5.4	9.1	2.3	2.0	1.8	1.8	2.2	2.7	2.3	2.8
2010–11	5.3	9.3	2.5	2.0	1.7	1.8	2.2	2.6	2.2	2.7
2011–12	5.3	9.7	2.5	2.1	1.8	1.8	2.2	2.6	2.4	2.8
2012–13	5.0	9.5	2.5	2.2	1.8	1.8	2.1	2.5	2.4	2.8
2013–14	4.7	9.3	2.4	2.1	1.7	1.7	2.2	2.6	2.4	2.7

Table 4.4: Number and rate of hospital separations for potentially preventable hospitalisations due to dental conditions<sup>(a)</sup>, by age group, all people, 2007–08 to 2013–14

(a) Potentially preventable hospitalisations related to dental care are defined as the following ICD-10-AM 6th edn Principal diagnosis categories: K02 Dental caries; K03 Other diseases of hard tissues of teeth; K04 Diseases of pulp and periapical tissues; K05 Gingivitis and periodontal diseases; K06 Other diseases of gingival and edentulous alveolar ridge; K08 Other disorders of teeth and supporting structures; K09.8 Other cysts of oral region, not elsewhere classified; K09.9 Cyst of oral region, unspecified; K12 Stomatitis and related lesions; K13 Other diseases of lip and oral mucosa. Data for 2013–14 are defined using ICD-10-AM 8th edn.

(b) Excludes records with care type of Newborn (without qualified days) and records for Hospital boarders and Posthumous organ procurement.

(c) The separation rates in this table (number of separations per 1,000 population) are crude age-specific population rates based on the estimated resident population as at 30 June for the respective year. The separation rate for the total column is directly age standardised to the Australian population, using the estimated resident populations as at 30 June for the respective year.

Source: AIHW Hospital Morbidity database 2007-08 to 2013-14.

For the Aboriginal and Torres Strait Islander population, the separation rate for PPHs due to dental conditions varied, with no clear trend between 2010–11 (4.3 per 1,000 population) and 2011–12 (4.2) (Table 4.5).

Table 4.5: Number and rate of hospital separations for potentially preventable hospitalisations due to dental conditions<sup>(a)</sup>, by age group, Aboriginal and Torres Strait Islander people<sup>(b)</sup>, 2010–11 to 2013–14

				Ag	e (years)					
Year	0–4	5–9	10–14	15–24	25–34	35–44	45–54	55–64	65+	Total
				N	umber <sup>(c)</sup>					
2010–11	757	876	202	255	266	210	134	66	38	2,804
2011–12	816	976	206	295	268	240	153	78	31	3,063
2012–13	745	1019	215	278	288	253	162	72	29	3,061
2013–14	706	939	194	287	306	230	156	66	37	2,921
				Sepa	ration rate <sup>(d)</sup>	I				
2010–11	9.1	11.1	2.6	2.0	3.0	2.6	2.2	1.9	1.8	4.3
2011–12	9.8	12.3	2.6	2.2	2.9	2.9	2.4	2.1	1.4	4.6
2012–13	9.0	12.7	2.7	2.0	3.1	3.1	2.5	1.9	1.2	4.5
2013–14	8.5	11.5	2.5	2.0	3.1	2.8	2.3	1.6	1.5	4.2

(a) Potentially preventable hospitalisations related to dental care are defined as the following ICD-10-AM 6th edn Principal diagnosis categories: K02 Dental caries; K03 Other diseases of hard tissues of teeth; K04 Diseases of pulp and periapical tissues; K05 Gingivitis and periodontal diseases; K06 Other diseases of gingival and edentulous alveolar ridge; K08 Other disorders of teeth and supporting structures; K09.8 Other cysts of oral region, not elsewhere classified; K09.9 Cyst of oral region, unspecified; K12 Stomatitis and related lesions; K13 Other diseases of lip and oral mucosa. Data for 2013–14 are defined using ICD-10-AM 8th edn.

(b) In 2011–12, it was estimated that 88% of Indigenous patients were correctly identified in Australian public hospitals (AIHW 2013). The overall quality of the data provided for Indigenous status in 2012–13 needs some improvement, and varied between states and territories.

(c) Excludes records with care type of Newborn (without qualified days) and records for Hospital boarders and Posthumous organ procurement.

(d) The separation rates used in this table (number of separations per 1,000 population) are crude population rates based on the estimated resident population of Aboriginal and Torres Strait Islander Australians as at 30 June for the respective year.

Sources: AIHW Hospital Morbidity database 2010–11 to 2013–14; Australian Bureau of Statistics, Projected Aboriginal and Torres Strait Islander population, series B, June 2013.

# 4.2 Hospital separations for oral health procedures involving general anaesthetic

In 2013–14, the total number of hospital separations for dental procedures requiring a general anaesthetic was 130,792, or 5.9 separations per 1,000 population. Across age groups, people aged 15–24 had the highest number of separations (52,670, or 16.9 per 1,000 people aged 15–24), and those aged 65 and over had the lowest (5,744, or 1.7 per 1,000 people aged 65 and over) (Table 4.6).

Between 2007–08 and 2013–14, there was a 7% increase in the total number of separations (from 122,422 to 130,792); however, this increase was broadly consistent with population growth, as the number of separations per 1,000 population remained at 5.9.

				Ag	je (years)					
Year	0–4	5–9	10–14	15–24	25–34	35–44	45–54	55–64	65+	Total
				Ν	lumber <sup>(b)</sup>					
2007–08	7,565	11,810	7,587	50,773	19,127	9,443	6,811	5,030	4,276	122,422
2008–09	7,815	12,038	7,405	48,599	18,964	9,642	6,820	4,843	4,228	120,354
2009–10	7,761	12,720	7,850	52,280	19,786	9,802	7,167	5,422	4,721	127,509
2010–11	7,679	13,054	7,847	51,216	19,077	9,505	7,115	5,458	4,803	125,754
2011–12	7,890	14,234	8,161	51,364	19,491	9,641	7,098	5,545	5,288	128,712
2012–13	7,932	14,788	8,208	52,434	19,990	9,393	7,079	5,595	5,680	131,099
2013–14	7,716	14,880	8,375	52,670	19,279	9,351	6,957	5,820	5,744	130,792
				Sepa	ration rate	(c)				
2007–08	5.7	8.9	5.5	17.5	6.6	3.1	2.4	2.2	1.6	5.8
2008–09	5.7	9.0	5.4	16.3	6.4	3.1	2.3	2.0	1.5	5.9
2009–10	5.4	9.4	5.7	17.2	6.5	3.1	2.4	2.2	1.6	5.9
2010–11	5.3	9.6	5.7	16.7	6.1	3.0	2.4	2.2	1.6	5.8
2011–12	5.4	10.3	5.9	16.8	6.1	3.0	2.3	2.2	1.7	5.9
2012–13	5.3	10.4	5.9	17	6.1	2.9	2.3	2.2	1.8	5.7
2013–14	5.1	10.2	6.0	16.9	5.7	2.9	2.3	2.2	1.7	5.9

Table 4.6: Number and rate of hospital separations for hospitalisations requiring general anaesthesia for procedures related to dental conditions<sup>(a)</sup>, by age group, Australia, 2007–08 to 2013–14

(a) Hospital separations for any of the dental conditions listed that required a general anaesthesia. Dental conditions are as defined by following Australian Classification of Health interventions 6th edn block numbers and procedure codes: 457 Nonsurgical removal of tooth; 458 Surgical removal of tooth; 462 Pulp treatment; 463 Periradicular surgery; 465 Metallic restoration; 466 Tooth-coloured restoration; 468 Inlay, onlay, indirect; 469 Other restorative dental service; 470 Crown; 471 Bridge; 472 Other dental service on crown and bridge; 97241–00 Tooth root resection, per root; 97387–00 Replantation and splinting of tooth; 97388–00 Transplantation of tooth bud; 97445-00 Exploration or negotiation of calcified root canal, per canal; 97455-00 Irrigation and dressing of root canal system; 97457-00 Obturation of resorption defect or perforation; 97488-00 Interim therapeutic root filling; 97772–00 Provision of resin splint, indirect; 97778-00 Metallic inlay for denture tooth. Data for 2013–14 are defined using ICD-10-AM 8th edn.

(b) Excludes records with care type of Newborn (without qualified days) and records for Hospital boarders and Posthumous organ procurement.

(c) The separation rates used in this table (number of separations per 1,000 population) are crude population rates based on the estimated resident population as at 30 June for the respective year. The separation rate for the total column is directly age-standardised to the Australian population using the estimated resident populations as at 30 June for the respective year.

Source: AIHW Hospital Morbidity database, 2007-08 to 2013-14.

For the Aboriginal and Torres Strait Islander population, the total number of hospital separations for dental procedures requiring a general anaesthetic was 3,157 in 2013–14, or 4.5 per 1,000 Aboriginal and Torres Strait Islander population. Children aged 5–9 had the highest number of separations (923, or 11.3 per 1,000 children aged 5–9), followed by those aged 0–4 (679, or 8.1 per 1,000 children aged 0–4). Adults aged 65 and over had the lowest number of separations for dental procedures requiring a general anaesthetic (20, or 0.8 per 1,000 Aboriginal and Torres Strait Islander people aged 65 and over) (Table 4.7).

				Ag	je (years)					
Year	0–4	5–9	10–14	15–24	25–34	35–44	45–54	55–64	65+	Tota
				N	umber <sup>(b)</sup>					
2010-11	687	805	186	453	294	174	97	46	17	2,759
2011-12 <sup>(c)</sup>	758	955	227	553	317	195	100	55	14	3,174
2012-13	700	984	232	552	345	180	102	33	16	3,144
2013-14	679	923	208	574	376	188	136	53	20	3,157
				Sepa	ration rate	d)				
2010-11	8.2	10.2	2.4	3.5	3.3	2.1	1.6	1.3	0.8	4.2
2011-12 <sup>(c)</sup>	9.1	12	2.9	4.1	3.5	2.4	1.6	1.5	0.6	4.7
2012-13	8.4	12.2	3	4	3.7	2.2	1.6	0.8	0.7	4.6
2013-14	8.1	11.3	2.7	4	3.8	2.3	2	1.3	0.8	4.5

Table 4.7: Number and rate of hospital separations for hospitalisations requiring general anaesthesia for procedures related to dental conditions<sup>(a)</sup>, by sex and age group, Aboriginal and Torres Strait Islander people, 2010–10 to 2013–14

(a) Hospital separations requiring general anaesthesia for dental conditions as defined by following Australian Classification of Health interventions 6th edn block numbers and procedure codes: 457 Nonsurgical removal of tooth; 458 Surgical removal of tooth; 462 Pulp treatment; 463 Periradicular surgery; 465 Metallic restoration; 466 Tooth-coloured restoration; 468 Inlay, onlay, indirect; 469 Other restorative dental service; 470 Crown; 471 Bridge; 472 Other dental service on crown and bridge; 97241–00 Tooth root resection, per root; 97387–00 Replantation and splinting of tooth; 97388–00 Transplantation of tooth or tooth bud; 97445-00 Exploration or negotiation of calcified root canal, per canal; 97455-00 Irrigation and dressing of root canal system; 97457-00 Obturation of resorption defect or perforation; 97458-00 Interim therapeutic root filling; 97772–00 Provision of resin splint, indirect; 97773–00 Provision of metal splint, indirect; 97778-00 Metallic inlay for denture tooth. Data for 2013–14 are defined using ICD-10-AM 8th edn.

(b) Excludes records with care type of Newborn (without qualified days) and records for Hospital boarders and Posthumous organ procurement.

(c) In 2011–12, it was estimated that 88% of Indigenous patients were correctly identified in Australian public hospitals (AIHW 2013). The overall quality of the data provided for Indigenous status in 2012–13 needs some improvement, and varied between states and territories.

(d) The separation rates used in this table (number of separations per 1,000 population) are crude population rates based on the estimated resident population of Aboriginal and Torres Strait Islander Australians as at 30 June for the respective year.

Sources: AIHW Hospital Morbidity database, 2010–11 to 2013–14; Australian Bureau of Statistics, Projected Aboriginal and Torres Strait Islander population, series B, June 2013.

## 5 Financial barriers

Respondents to the 2013 National Dental Telephone Interview Survey were asked a range of questions relating to the financial burden of dental care. These questions included whether they had avoided or delayed visiting a dentist due to cost, whether cost had prevented them from receiving the recommended treatment, whether dental visiting in the previous year had caused a large financial burden, and whether they would have a lot of difficulty paying for a basic preventive dental care package. In the case of children, an appropriate adult was asked to answer the relevant question on their behalf.

In 2013, the overall proportion of people aged 5 and over who avoided or delayed visiting a dentist due to cost was 31.7%, ranging from 10.7% for children aged 5–14 to 44.9% for adults aged 25–44. Both males and females showed the same pattern of avoidance due to cost by age group. Overall, females had higher rates of avoidance due to cost than males (34.1% compared with 29.4%) (Table 5.1).

There were no statistically significant differences in avoidance due to cost across geographic remoteness regions, ranging from 31.4% in *Major cities* to 33.5% in *Outer regional* areas (Table 5.1).

People with insurance had lower rates of avoidance due to cost than those without insurance (20.2% and 43.7%, respectively). Across age groups, people with insurance reported lower rates of avoidance due to cost (ranging from 6.3% to 30.2%) than people without insurance (ranging from 15.5% to 57.5%) (Table 5.1).

Overall, people who were eligible for public dental care were more likely to report avoiding visiting a dentist due to cost (37.9%) than those who were not eligible (29.4%). People aged 25–44 and 45–64 eligible for public dental care reported higher rates of avoidance due to cost than those who were not eligible (62.8% and 59.5%, respectively for those age 25–44; 41.0% and 30.9%, respectively, for those aged 45–64) (Table 5.1).

Those in lower household income groups had higher rates of avoiding or delaying a visit to a dentist due to cost than those in higher income groups (ranging from 40.9% and 42.1% for those in the lowest two income groups to 16.8% for those in the highest income group) (Table 5.1).

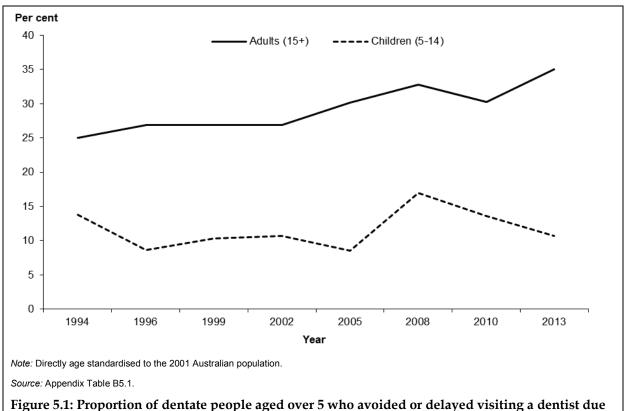
Across all income groups, those aged 25–44 and 45–64 were more likely to avoid or delay seeing a dentist, although this pattern was most prevalent in the lower income groups (Table 5.1).

		A	ge (years)			
	5–14	15–24	25–44	45–64	65+	All people
Sex						
Male	11.3	20.0	42.7	32.9	20.1	29.4
Female	10.1	26.3	47.1	38.7	26.6	34.
Remoteness area						
Major cities	10.1	22.0	44.5	34.8	23.5	31.
Inner regional	14.5	26.8	47.5	36.5	18.7	31.
Outer regional	5.8	26.0	42.9	41.2	35.1	33.
Remote/Very remote	4.7	21.9	43.7	36.5	28.8	32.
Insurance status						
Insured	6.3	13.4	30.2	22.2	15.0	20.
Uninsured	15.5	32.6	57.5	54.6	31.9	43.
Eligibility for public dental care						
Eligible	12.5	29.2	62.8	59.5	25.5	37.
Ineligible	10.0	21.2	41.0	30.9	18.8	29.
Annual household income (\$)						
<30,000	14.1	30.0	56.3	63.4	28.9	40.
30,000–<60,000	15.0	34.6	62.5	47.0	23.2	42.
60,000-<90,000	12.0	23.3	49.2	33.8	13.5	33.
90,000-<140,000	6.2	20.4	37.1	28.4	11.8	26.
140,000+	5.3	12.4	25.8	15.4	6.5	16.
All people aged 5 and over	10.7	23.1	44.9	35.8	23.5	31.

Table 5.1: Proportion of people who avoided or delayed visiting a dentist due to cost, by selected characteristics, dentate people aged 5 and over, 2013 (%)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C5.1.

Between 1994 and 2013, there was an overall increase in the proportion of adults aged 15 and over avoiding or delaying visiting a dentist due to cost, from 25.0% to 35.0%. For children aged 5–14, there was no overall change, although there was some year-to-year variation (Figure 5.1; Appendix Table B5.1).



to cost, 1994 to 2013 (%)

In 2013, nearly 20% of people aged 5 and over who visited a dentist in the previous 12 months indicated that cost prevented them from receiving the recommended dental treatment (Table 5.2).

Cost was less likely to prevent recommended care for children aged 5–14 (6.0%) than for adults. Adults aged 25–44 and 45–64 had the highest rates of not receiving recommended dental treatment due to cost (27.9% and 26.2%, respectively).

There was no statistically significant difference in affordability across remoteness areas, ranging from 18.4% in *Outer regional* areas to 29.3% in *Remote/Very remote* areas.

People without insurance reported higher rates of not receiving recommended treatment due to cost than people with insurance (25.1% and 15.6%, respectively).

People who were eligible for public dental care were more likely than ineligible people to have cost prevent recommended care (23.3% compared with 18.2%).

Across household income groups, the overall proportion of people not receiving recommended dental treatment due to cost was highest for the two lowest household income groups (27.6% and 24.5%, respectively) and lowest for the two highest groups (17.0% and 11.4%, respectively).

		Δ	ge (years)			
—	5–14	15–24	25–44	45–64	65+	All people
Sex						
Male	5.5	15.5	28.7	23.9	11.7	18.
Female	6.5	11.1	27.2	28.3	15.7	20.2
Remoteness area						
Major cities	5.4	11.0	27.0	26.2	14.2	19.
Inner regional	9.7	22.1	28.2	27.3	11.4	20.
Outer regional	4.0	15.4	31.7	22.0	11.6	18.
Remote/Very remote	0.1	13.1	36.1	42.0	60.8	29.
Insurance status						
Insured	4.7	9.0	20.5	20.4	14.5	15.
Uninsured	7.7	16.7	37.8	38.2	13.5	25.
Eligibility for public dental care						
Eligible	9.2	19.3	39.9	42.2	15.5	23.
Ineligible	5.2	11.6	25.3	23.5	10.2	18.
Annual household income (\$)						
<30,000	16.7	23.8	42.1	38.5	19.4	27.
30,000–<60,000	7.9	10.2	42.2	35.3	12.7	24.
60,000–<90,000	5.3	15.7	32.4	24.8	10.9	20.
90,000–<140,000	3.5	9.3	23.5	24.6	2.5	17.
140,000+	2.9	9.6	15.3	13.8	29.9	11.
All people aged 5 and over	6.0	13.3	27.9	26.2	13.9	19.

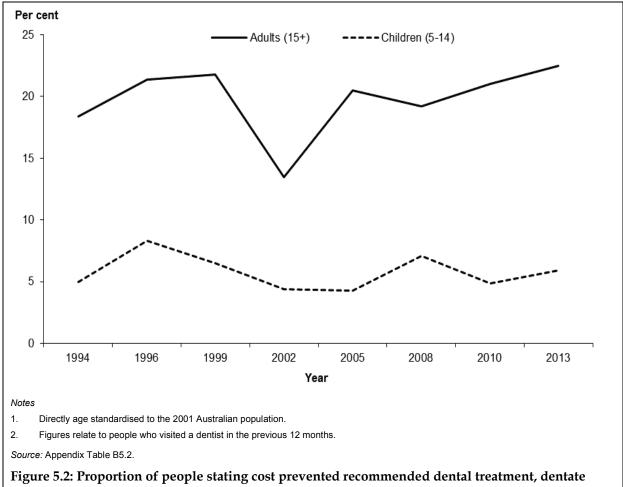
Table 5.2: Proportion of people reporting that cost prevented recommended dental treatment, by selected characteristics, dentate people aged 5 and over, 2013 (%)

Notes

1. Data in this table relate to people who made a dental visit in the previous 12 months.

2. The 95% confidence intervals for these estimates are available in Appendix Table C5.2.

For the period 1994 to 2013, the proportion of adults aged 15 and over who visited a dentist in the previous 12 months and reported that cost prevented the recommended treatment fluctuated between 13.5% in 2002 and 22.5% in 2013. For children aged 5–14, there was no overall change, fluctuating between 4.3% in 2005 and 8.3% in 1996 (Figure 5.2).



people, 1994 to 2013 (%)

In 2013, 11.7% of dentate people who made a dental visit in the previous 12 months indicated that their dental visits placed a large financial burden on them, ranging from 7.9% for adults aged 65 and over to 15.9% for adults age 45–64 (Table 5.3).

Across remoteness regions, people in *Remote/Very remote* areas (5.3%) were less likely to report a financial burden due to dental visiting in the previous year than people living in *Major cities* (12.2%) and *Inner regional* areas (11.6%).

People with insurance were less likely to report a financial burden (10.2%) than those without insurance (14.2%).

The proportion of people reporting that dental visiting was a large burden was higher for people in the lowest two household income groups (15.3% and 14.5%, respectively) than those in the highest income group (6.6%).

		A	ge (years)			
-	5–14	15–24	25–44	45–64	65+	All people
Sex						
Male	6.8	9.4	14.1	12.1	3.2	10.0
Female	11.4	7.0	12.3	19.4	11.7	13.2
Remoteness area						
Major cities	10.2	9.1	13.1	15.9	8.8	12.2
Inner regional	8.3	6.2	17.7	16.0	6.3	11.6
Outer regional	4.6	4.2	12.8	14.9	5.9	9.6
Remote/Very remote	0.5	1.2	2.0	26.1	_	5.3
Insurance status						
Insured	7.2	8.0	11.7	12.7	7.2	10.2
Uninsured	11.5	9.3	15.3	22.9	9.1	14.2
Eligibility for public dental care						
Eligible	9.6	12.2	21.7	18.7	8.0	12.7
Ineligible	8.9	7.1	11.1	15.4	7.8	11.2
Annual household income (\$)						
<30,000	16.4	17.5	19.5	23.0	8.9	15.3
30,000-<60,000	11.9	10.6	20.8	19.3	6.1	14.5
60,000-<90,000	7.3	7.7	17.4	17.6	11.0	13.6
90,000-<140,000	9.0	8.2	9.9	11.9	0.4	9.8
140,000+	5.6	4.7	7.5	7.7	12.2	6.6
All people aged 5 and over	9.1	8.2	13.1	15.9	7.9	11.7

Table 5.3: Proportion of people stating dental visits were a large financial burden, by selected characteristics, dentate people aged 5 and over, 2013 (%)

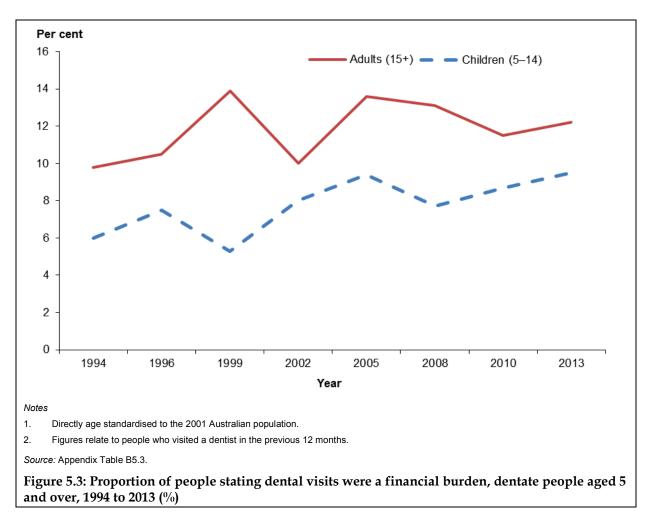
Notes

1. Data in this table relate to people who made a dental visit in the previous 12 months.

2. The 95% confidence intervals for these estimates are available in Appendix Table C5.3.

Source: National Dental Telephone Interview Survey 2013.

For the period 1994 to 2013, the proportion of adults aged 15 and over who visited a dentist in the previous 12 months and reported that doing so placed a large financial burden fluctuated between 9.8% in 1994 and 13.9% in 1999. There was no overall statistically significant increase over the time period. For children aged 5–14, there was no overall change, fluctuating between 5.3% in 1999 and 9.5% in 2013 (Figure 5.3; Appendix Table B5.3).



The cost of a basic preventive dental care package was originally selected as the threshold for measuring the level of difficulty in paying a dental bill. In 2013, the Australian Dental Association Dental Fees Survey reported that the mean cost for a dental visit comprising a dental examination, two bitewing X-rays and a scale and clean service was \$206.

When adults aged 18 and over were asked if they would have a lot of difficulty paying a \$200 dental bill, 28.3% indicated that they would. A higher proportion of adults aged 18–24 (37.9%) reported that they would have a lot of difficulty paying a \$200 dental bill than older adults (Table 5.4).

The proportion reporting a lot of difficulty in paying a \$200 dental bill was lower for males than females (22.9% compared with 33.7%). It was also lower for adults with private health insurance that included cover for dental expenses than for those adults without insurance (16.8% compared with 39.5%) and for those ineligible for public dental care than for those who were eligible (22.1% compared with 45.7%). (There may be some overlap between these various groups.)

Difficulty in paying a \$200 dental bill was also associated with household income. The proportion indicating that they would have a lot of difficulty ranged from 53.9% for the \$30,000 or less income group to 9.9% for those in the \$140,000 and over income group.

		A	lge (years)		
	18–24	25–44	45–64	65+	All people
Sex					
Male	30.5	22.8	19.8	22.9	22.9
Female	45.7	33.8	32.9	25.6	33.
Remoteness area					
Major cities	39.2	27.3	25.7	23.7	27.
Inner regional	35.3	35.0	27.5	21.7	29.
Outer regional	39.7	29.1	28.1	30.9	30.
Remote/Very remote	10.6	13.6	26.6	35.1	20.
Insurance status					
Insured	32.6	15.4	16	11.8	16.
Uninsured	43.1	38.9	40.3	36.6	39.
Eligibility for public dental care					
Eligible	50.6	57.3	64.6	28.3	45.
Ineligible	34.1	22.3	18.6	15.1	22.
Annual household income (\$)					
<30,000	67.3	63.7	65.4	39.4	53.
30,000-<60,000	38.9	43.1	40.2	12.1	35.
60,000–<90,000	26.6	29.1	24.7	2.9	24.
90,000-<140,000	37.3	14.8	7.3	3.4	13.
140,000+	27.2	6.5	5.9	6.5	9.
All people aged 18 and over	37.9	28.3	26.4	24.3	28.

Table 5.4: Proportion of people who stated they would have a lot of difficulty paying for a basic preventive visit, by selected characteristics, dentate people aged 18 and over, 2013 (%)

Notes

1. The cost of a basic preventive visit in 2012 was approximately \$200.

2. The item 'Difficulty paying a \$200 dental bill' was collected only for adults aged 18 and over.

3. The 95% confidence intervals for these estimates are available in Appendix Table C5.4.

## 6 Private health insurance

In Australia, the private health insurance system is based on individuals or families purchasing insurance that covers all or part of the cost of private health care, including (for some types of insurance) visiting a private dentist. This section reports the proportion of Australians who held private health insurance cover for dental expenses at the time of the survey.

Half (49.7%) of all people over the age of 5 reported having some level of private health insurance cover for dental expenses. Adults aged 45–64 had the highest rate of coverage (57.0%) and those aged 15–24 had the lowest rate (43.7%). About half of dentate adults (50.5%) aged 15 and over reported having insurance for dental expenses, with rates ranging from 43.7% in the 15–24 age group to 58.1% for those aged 45–64. Edentulous adults had much lower rates of insurance for dental expenses, with 23.6% of adults aged 45–64 and 25.3% aged 65 and over having some level of cover (Table 6.1).

	Dentate s		
Age (years)	Dentate	Edentulous	All persons
5–14	52.0	_	52.0
15–24	43.7	_	43.7
25–44	46.8	_	46.7
45–64	58.1	23.6	57.0
65+	51.2	25.3	46.2
All people aged 5 and over	50.7	24.7	49.7

## Table 6.1: Proportion of people with insurance by age and dentate status, people aged 5 and over, 2013 (%)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C6.1.

Source: National Dental Telephone Interview Survey 2013.

The proportion of people with some insurance was higher in *Major cities* (53.1%) than in *Inner regional* and *Outer regional* areas (44.6% and 43.8%, respectively) (Table 6.2).

People eligible for public dental care had lower rates of insurance than those who were not eligible (30.6 and 57.9%, respectively).

Over two-thirds of people in the annual household income groups over \$90,000 had some level of insurance, compared with around one-third of adults in the bottom two income groups (23.4% and 38.7%, respectively).

		Δ	ge (years)			
_	5–14	15–24	25–44	45–64	65+	All people
Sex						
Male	53.5	43.2	44.2	56.7	50.4	49.5
Female	50.4	44.3	49.3	59.4	51.8	51.8
Remoteness area						
Major cities	55.7	46.4	47.2	62.6	54.3	53.1
Inner regional	42.1	36.9	44.3	48.5	46.5	44.6
Outer regional	44.7	35.3	44.3	47.5	41.8	43.8
Remote/Very remote	60.9	52.2	60.2	51.9	53.1	57.1
Eligibility for public dental care						
Eligible	26.2	21.6	21.3	22.5	45.1	30.6
Ineligible	60.3	51.2	52.2	65.4	65.8	57.9
Annual household income (\$)						
<30,000	11.5	14.1	17.5	22.8	31.9	23.4
30,000-<60,000	32.8	27.0	25.1	44.6	66.9	38.7
60,000–<90,000	45.6	44.9	40.7	59.7	78.0	50.2
90,000-<140,000	66.1	57.7	68.3	69.4	75.1	67.1
140,000+	83.5	71.7	72.5	85.6	74.9	77.9
All people aged 5 and over	52.0	43.7	46.8	58.1	51.2	50.7

Table 6.2: Proportion of people with private health insurance cover for dental care by selected characteristics, dentate people aged 5 and over, 2013 (%)

Note: The 95% confidence intervals for these estimates are available in Appendix Table C6.2.

## 7 Use of private health insurance

In 2013, the majority of adults with some form of private health insurance that included cover for dental care reported that their insurance paid some (77.3%) or all (8.5%) of the dental costs of their last visit. Only 10.4% of insured adults paid all their own dental expenses (Table 7.1).

Table 7.1: Proportion of people with insurance who reported that health insurance paid all or some
of the cost of their care by source of payment, people aged 18 and over, 2013 (%)

	Paid all own expenses	Insurance paid some/patient paid some	Insurance paid all/patient paid none	Govt paid some/patient or insurance paid some	Govt paid all/ patient paid none	Other payment option	
Per cent	10.4	77.3	8.5	1.5	1.5	0.8	

Note: The 95% confidence intervals for these estimates are available in Appendix Table C7.1.

Source: National Dental Telephone Interview Survey 2013.

Almost one-fifth (18.6%) of insured adults who were required to pay all their own dental expenses indicated that dental care caused a large financial burden. This compared with 4.1% of those for whom insurance paid all expenses, and 10.3% of those who co-contributed (along with their insurer) to the cost of their dental care (Table 7.2).

## Table 7.2: Proportion of people who reported that dental care caused a large financial burden by source of payment, insured people aged 18 and over, 2013 (%)

	Paid all own expenses	Insurance paid some	Insurance paid all	Govt paid some/patient or insurance paid some	Govt paid all/patient paid none payn	Other nent option	All insured people
Per cent	18.6	10.3	4.1	14.4	8.9	8.4	10.4

Note: The 95% confidence intervals for these estimates are available in Appendix Table C7.2.

# 8 Expenditure

Recurrent expenditure on dental services in Australia was \$8,706 million in 2012–13, up from \$5,945 million, adjusted for inflation, in 2002–03. Dental services, in this context, cover a range of services provided by registered dental practitioners, including oral maxillofacial surgery items; orthodontic, pedodontic and periodontic services; cleft lip and palate services; dental assessment and treatment; and other dental items listed in the Medicare Benefits Schedule. Hospital costs – including for potentially preventable hospitalisation due to dental conditions, and hospitalisation for oral health procedures involving general anaesthetic – are not included. In the AIHW health expenditure database, these costs are included in hospital costs.

Total expenditure on dental services increased every year from 2002–03 to 2012–13. Between 2011–12 and 2012–13, expenditure by the Australian and state and territory governments decreased while expenditure by the non-government sector, including individuals and health insurance funds, increased.

In 2012–13, individuals were the largest source of funds for total dental expenditure, paying directly out of pocket for 58.2% of dental costs. A further 16.0% was paid via health insurance funds. Australian Government premium rebates accounted for 7.0% of dental expenditure. Other government contributions to dental expenditure accounted for 18.3% of total expenditure -10.8% from Australian Government direct outlay and 7.5% from state and territory governments (Table 8.2).

In 2012–13, per capita expenditure on dental services was \$380, an increase from \$303 in 2002–03, adjusted for inflation. Most of this (\$284 in 2012–13) was spending by the non-government sector. This was an increase from \$248 in 2002–03, adjusted for inflation. Over the period, Australian Government per capita expenditure also increased (from \$25 to \$68), while state and territory per capita expenditure remained relatively stable at around \$29 (Figure 8.1).

			Goveri	nment							
		Australian Go	overnment								
Year	Department of Veterans' Affairs	Department of Health and other	Premium rebates	Total	State/territory and local	Total	Health insurance funds	Individuals	Other	Total	Total expenditure
2002–03	96	11	392	499	583	1,082	954	3,893	16	4,863	5,945
2003–04	90	11	390	492	602	1,093	967	4,088	11	5,066	6,160
2004–05	90	12	396	498	633	1,131	932	4,245	11	5,188	6,319
2005–06	102	13	416	531	626	1,157	948	4,292	12	5,252	6,409
2006–07	116	12	417	545	601	1,146	978	4,364	11	5,353	6,499
2007–08	117	124	460	701	629	1,330	1,007	4,287	11	5,305	6,636
2008–09	108	458	447	1,013	711	1,725	1,086	4,308	24	5,418	7,142
2009–10	110	671	517	1,297	672	1,969	1,093	4,383	33	5,509	7,478
2010–11	107	818	536	1,461	738	2,199	1,140	4,636	36	5,811	8,010
2011–12	106	971	617	1,694	739	2,433	1,200	4,809	35	6,044	8,477
2012–13	100	843	606	1,550	657	2,207	1,396	5,066	37	6,500	8,706

Table 8.1: Total dental expenditure, by sources of funds, constant prices, 2002-03 to 2012-13 (\$ million)

Notes

1. Column/row totals may not sum to total because of rounding of estimates.

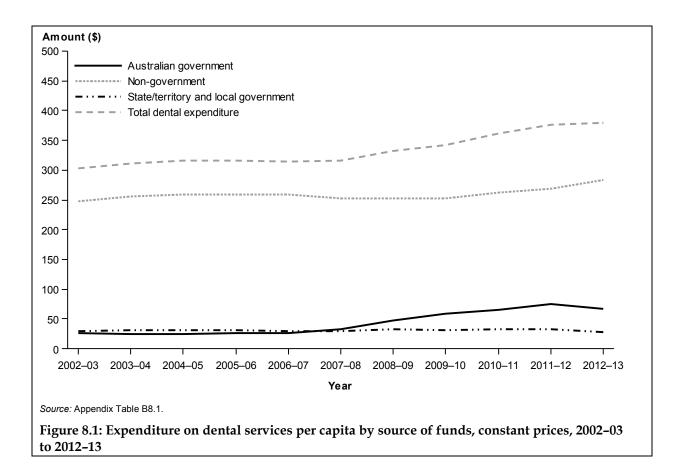
2. Constant prices adjust current prices for the effects of inflation. Constant prices estimates indicate what expenditure would have been had 2012–13 prices applied in all years.

Source: AIHW health expenditure database.

			Goveri	nment				Non-goverr	nment		
		Australian G	overnment								
Year	Department of Veterans' Affairs	Department of Health and other	Premium rebates	Total	State/territory and local	Total	Health insurance funds	Individuals	Other	Total	Total expenditure
2002–03	1.6	0.2	6.6	8.4	9.8	18.2	16.0	65.5	0.3	81.8	100.0
2003–04	1.5	0.2	6.3	8.0	9.8	17.7	15.7	66.4	0.2	82.2	100.0
2004–05	1.4	0.2	6.3	7.9	10.0	17.9	14.7	67.2	0.2	82.1	100.0
2005–06	1.6	0.2	6.5	8.3	9.8	18.1	14.8	67.0	0.2	81.9	100.0
2006–07	1.8	0.2	6.4	8.4	9.2	17.6	15.0	67.1	0.2	82.4	100.0
2007–08	1.8	1.9	6.9	10.6	9.5	20.0	15.2	64.6	0.2	79.9	100.0
2008–09	1.5	6.4	6.3	14.2	10.0	24.2	15.2	60.3	0.3	75.9	100.0
2009–10	1.5	9.0	6.9	17.3	9.0	26.3	14.6	58.6	0.4	73.7	100.0
2010–11	1.3	10.2	6.7	18.2	9.2	27.5	14.2	57.9	0.4	72.5	100.0
2011–12	1.3	11.5	7.3	20.0	8.7	28.7	14.2	56.7	0.4	71.3	100.0
2012–13	1.1	9.7	7.0	17.8	7.5	25.4	16.0	58.2	0.4	74.7	100.0

Table 8.2: Contribution of government and non-government funding sources to total dental expenditure, 2008–09 to 2012–13 (%)

Source: AIHW health expenditure database.



# 9 Dental workforce

## 9.1 Size and distribution of the dental workforce

In 2013, there were 15,479 dentists registered of whom 88% where employed in their field. There were 1,195 dental prosthetists, 1,759 dental hygienists, 943 oral health therapists and 1,093 dental therapists registered. In each of the professions, 85% or over were employed in their field (Table 9.1).

	Registered	Employed
Practitioner type	(no.)	(%)
Dentists	15,479	88
Dental prosthetists	1,195	94
Dental hygienists	1,759	85
Oral health therapists	943	88
Dental therapists	1,093	88

# Table 9.1: Dental practitioners registered and employed, 2013

Source: AIHW National health workforce data set 2013.

In 2013, the number of employed dental practitioners per 100,000 population was 56.0 dentists, 5.0 dental prosthetists, 4.9 dental hygienists, 3.2 oral health therapists and 3.2 dental therapists (Table 9.2).

Across jurisdictions, the number of dentists per 100,000 population ranged from 37.7 in Tasmania to 65.9 in the Australian Capital Territory (Table 9.2).

Practitioner type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Dentists	58.5	52.5	58.3	54.0	58.6	37.7	65.9	38.7	56.0
Dental prosthetists	5.1	5.8	5.2	3.3	3.1	8.3	4.1	1.1	5.0
Dental hygienists	3.6	3.8	4.3	8.4	11.0	2.8	9.5	5.0	4.9
Oral health therapists	2.5	3.0	4.9	1.2	5.2	1.6	4.0	2.0	3.2
Dental therapists	2.0	1.9	3.3	8.2	3.8	7.4	2.7	5.9	3.2

Table 9.2: Full-time equivalent dental practitioners per 100,000 population, 2013

Note: Column/row totals may not sum to total because of rounding of estimates.

Source: AIHW National health workforce data set 2013.

Across remoteness areas, *Major cities* had the highest number per 100,000 population of dentists (63.1), dental hygienists (5.8) and oral health therapists (3.4).

The number of practising dental prosthetists was highest in Inner regional areas (6.0).

*Remote/Very remote* regions had the lowest rates of all practitioners – except for dental therapists, who had the highest rate in *Remote/Very Remote* (5.1) (Table 9.3).

Practitioner type	Major cities	Inner regional	Outer regional	Remote/ Very remote
Dentists	63.1	41.1	38.2	25.7
Dental prosthetists	5.0	6.0	3.3	0.9
Dental hygienists	5.8	2.8	3.3	2.5
Oral health therapists	3.4	2.8	2.9	0.7
Dental therapists	2.9	3.8	4.4	5.1

Table 9.3: Full-time equivalent dental practitioners employed per 100,000 population, by remoteness area, 2013

Note: Column/row totals may not sum to total because of rounding of estimates.

Source: AIHW National health workforce data set 2013.

Approximately 85% of dentists worked in the private sector in their main practice, ranging from 91% in the Australian Capital Territory to 70% in the Northern Territory (Table 9.4).

Table 9.4: Full time equivalent dentists employed per 100,000 population in the public and private sectors, states and territories, 2013

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Public	7.6	7.9	10.3	8.6	11.0	6.5	6.1	11.7	8.6
Private	50.8	44.6	48.0	45.4	47.6	31.2	59.9	27.0	47.4
Total	58.5	52.5	58.3	54.0	58.6	37.7	65.9	38.7	56.0

Note: Column/row totals may not sum to total because of rounding of estimates.

Source: AIHW National health workforce data set 2013.

## 9.2 Characteristics of employed dentists

In 2013, there were 13,555 dentists employed in Australia; 38% of these were women and 23% were aged over 50. On average, dentists worked 36 hours a week and just over one-third worked part time. The majority received their initial qualification in Australia (Table 9.5).

	2011	2012	2013
Number	12,599	13,266	13,555
Average weekly hours worked	37.3	37.0	36.3
Full-time equivalent number	12,377.7	12,927.4	12,937.7
Full-time equivalent rate	55.4	56.9	55.9
Part time (%)	30.8	31.7	34.4
Full-time equivalent rate of Major cities	62.8	64.3	63.1
Full time equivalent rate of Inner regional areas	41.3	42.2	41.1
Full-time equivalent rate of Outer regional areas	34.4	36.1	38.1
Full-time equivalent rate of <i>Remote/Very remote</i> areas	22.6	21.5	21.4
Aged 30 and under (%)	19.9	19.6	21.0
Aged 55 and over (%)	22.8	23.4	23.2
Women (%)	35.2	36.5	38.0
Indigenous (%)	0.2	0.2	0.3
Initial qualification Australia (%)	n.a.	69.1	64.6
Initial qualification New Zealand (%)	n.a.	4.5	4.0
Initial qualification Other countries (%)	n.a.	22.8	23.0

Table 9.5: Selected characteristics of employed dentists by sector, 2011 to 2013

Source: AIHW National health workforce data set 2013.

Dentists predominantly worked in group private practices (52.5%) (Table 9.6).

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Solo private practice	1,425	848	581	354	237	45	54	9	3,553
Group private practice	2,162	1,748	1,534	770	575	115	163	43	7,111
Locum private practice	44	14	25	29	6	3	1	2	124
Aboriginal health service	25	11	16	5	1	—	1	5	64
Health promotion service	5	1	—	_	1	_	—	_	7
Other community health-care service	13	15	9	5	4	_	_	_	46
Hospital	283	143	158	38	68	6	4	6	708
Other residential health-care facility	_	4	1	2	_	_	_	_	7
Tertiary educational facility	55	36	68	35	33	1	_	_	228
Public clinic (including school dental clinic)	120	262	198	125	66	26	11	12	820
Other educational facility	2	1	3	1	_	_	—	_	7
Correctional service	7	4	2	2	1	_	—	_	16
Defence forces	33	16	39	11	8	—	14	9	130
Other government department or agency	4	7	4	5	4	1	1	2	28
Other	72	14	15	5	15	1	_	1	123
Unknown/not stated	223	126	125	45	41	6	12	5	583
Total	4,473	3,250	2,778	1,432	1,060	204	261	94	13,555

Table 9.6: Number of dentists by main employment setting, states and territories, 2013

Note: Column/row totals may not sum to total because of rounding of estimates.

Source: AIHW National health workforce data set 2013.

## 9.3 Dental specialists

Around 10% of employed dentists were specialists. Nearly 4 in 5 specialists (77.0%) were men. The largest group were orthodontists (535 people, 38%) (Table 9.7).

Area of specialty	Men	Women	Persons
Oral pathology	4	_	4
Special needs dentistry	5	8	13
Dental-maxillofacial radiology	6	2	8
Forensic odontology	7	3	10
Public health dentistry	7	2	9
Oral medicine	18	10	28
Oral surgery	22	4	26
Paediatric dentistry	36	58	94
Endodontics	111	29	140
Periodontics	142	49	191
Prosthodontics	144	29	173
Oral and maxillofacial surgery	158	14	172
Orthodontics	420	115	535
Total	1,080	323	1,403

Table 9.7: Dental specialists: number employed by area of specialty, 2013

Source: AIHW National health workforce data set 2013.

# Appendix A: Data collections used in this report

## **Child Dental Health Survey**

## Purpose

The Child Dental Health Survey (CDHS) provides time-series data on the oral health status of Australian children attending school dental services (SDS). The aims of the survey are to:

- examine changes over time in oral health status among children
- examine the distribution of oral health status by geographic location and demographic factors.

The CDHS has been collected annually since 1977. Data were not available for New South Wales for 2001 to 2006 and 2008 to 2010, and for Victoria from 2005.

## Data collection and weighting

The CDHS is an ongoing national surveillance program which monitors the dental health of children enrolled in school and community dental services operated by the health departments or authorities of Australia's state and territory governments. In all jurisdictions, children from both public and private schools are eligible for SDS care. The care typically provided includes dental examinations, preventive services and restorative treatment as required. However, there are some variations among state and territory programs with respect to priority age groups and the nature of services. For example, in some states, caries risk assessment is used to determine recall interval and preventive treatment, while other states do not use caries risk assessment. Hence, there are variations in the extent of enrolments in each SDS, with some jurisdictions serving more than 80% of primary school children and others serving smaller proportions.

In the 2010 collection, data for Victoria were not included as they were not provided by the Victorian Department of Health and Human Services. New South Wales was excluded from the data collection due to a lack of representativeness of the sample. Children are seen in the New South Wales public dental service only if they have been identified as having treatment needs, such as having decay. This means that the oral health of these children does not represent the oral health of the entire child population of New South Wales, many of whom do not have treatment needs.

Data are collected from a random sample of children attending these services in Western Australia and Queensland. Data from the remaining states and territories, excluding Victoria and New South Wales, are collected in full enumeration. The weighting methodology reflected the sample design that was implemented in each state and territory. Data sourced from the annual CDHS were weighted by individual age at the regional level, with regions based on the 2006 Australian Standard Geographical Classification. Where sample size was adequate, regions within a capital city were defined as the Australian Bureau of Statistics' Statistical Subdivisions, and regions outside capital city areas were defined as Statistical Divisions. Where children received more than one examination during the calendar year, only the first record of the year is included in the survey. The higher probability of being selected associated with multiple visits was accounted for in the weighting procedure.

A data quality statement for the CDHS collection is available at <a href="http://meteor.aihw.gov.au/content/index.phtml/itemId/586149">http://meteor.aihw.gov.au/content/index.phtml/itemId/586149</a>>.

## National Survey of Adult Oral Health

## Purpose

The purpose of this collection was to provide a descriptive 'snapshot' of oral health in the adult population of Australia. The findings are intended to provide up-to-date evidence that could contribute to the development of oral health policies and programs in Australia.

## **Data collection**

The National Survey of Adult Oral Health was conducted in 2004–2006. Information was collected using telephone interviews and standardised dental examinations that were conducted among a sample of residents aged 15 years and older.

Self-reported information about oral health and characteristics associated with it was obtained though telephone interviews.

Information about clinical oral status was collected during standardised dental examinations conducted by dentists who undertook training in the survey procedures. Examinations were limited to people who reported having some of their own natural teeth at the time of the interview. Examining dentists followed a standardised protocol to record levels of tooth loss, dental decay experience, tooth wear and – for participants with no medical contraindications to periodontal probing – signs of gum disease.

## Sampling procedure and weighting

A three-stage stratified clustered sampling design was used to select people from the target population of Australian residents aged 15 and older. Details of sampling procedure are published in *Australia's dental generations* (Slade, Spencer et al. 2007).

Data were weighted to compensate for individuals' different probabilities of selection and survey participation rates. For the telephone interview survey, weights were adjusted to ensure that survey estimates were consistent with the 2005 Australian Bureau of Statistics estimated resident population data. For the oral examination survey, which was restricted to dentate people aged 15 and over, estimates of the dentate population were derived from the telephone interview survey and used to derive examination weights.

## Health expenditure data

Health expenditure data, collected and reported annually through AIHW's *Health expenditure Australia*, includes estimates of expenditure on dental services – private and public – for state and territory governments and the Australian Government.

The AIHW compiles its health expenditure database from a wide range of government and non-government sources. The data are mainly administrative in nature, though some survey information is included. Since 2008–09, the main source of government expenditure data has

been the Government Health Expenditure National Minimum Data Set. This data set was developed with the advice of the Health Expenditure Advisory Committee, and reporting is mandatory for all state and territory governments.

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

A data quality statement for this health expenditure database collection is available at <a href="http://meteor.aihw.gov.au/content/index.phtml/itemId/589638">http://meteor.aihw.gov.au/content/index.phtml/itemId/589638</a>>.

## National Dental Telephone Interview Survey

### Purpose

The purposes of the National Dental Telephone Interview Survey (NDTIS) are to:

- collect basic features of oral health and dental care within the Australian population
- provide information on the broader parameters of oral health and access to services
- monitor the extent of social inequalities within the dental sector
- investigate the underlying reasons behind dental behaviours, and the consequences of these behaviours.

### **Data collection**

Data reported in this publication are from the 2013 NDTIS, conducted between May 2013 and March 2014. Data were collected from a random sample of people across Australia via telephone interview. The AIHW Dental Statistics and Research Unit was responsible for the selection and management of the data collection phase. Experienced interviewers conducted telephone interviews using computer-assisted telephone interview software. 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.

#### Sampling procedure and weighting

The 2013 NDTIS involved a random sample of Australian residents aged 5 and over in all states and territories. In contrast to previous NDTIS surveys, the 2013 sample was sourced from an overlapping dual sampling frame design. The first sampling frame was created from the electronic product 'Australia on Disc 2012 Residential' supplied by United Directory Systems. This product is an electronic listing of people/households listed in the White Pages across Australia and is updated annually. Both landline and mobile telephone numbers were provided on records where applicable.

A stratified two-stage sample design was used to select a sample of people from this sampling frame. Records listed on the frame were stratified by state/territory and region where region was defined as Greater Capital City/Rest of State. A systematic sample of records was selected from each stratum using specified sampling fractions. Once telephone contact was made with a selected household, one person aged 18 and over was selected, using the birthdates of adults usually resident in the household. On completion of the adult

questionnaire, if the household contained children aged 5–17, one child was randomly selected to participate in the survey.

To include households that were not listed in the White Pages, a second sampling frame was used that consisted of 20,000 randomly generated mobile telephone numbers. This sampling frame was supplied by Sampleworx and the mobile telephone numbers were created by appending randomly generated suffix numbers to all known Australian mobile prefix numbers. As the mobile numbers did not contain address information, the sampling frame could not be stratified by geographic region. A random sample of mobile numbers was selected from the frame and contacted to establish the main user of the mobile phone. Providing this person was aged 18 or over, they were asked to participate in the survey. On completion of the adult questionnaire, if the adult's household contained children aged 5–17, one child was randomly selected to participate in the survey.

The NDTIS sample consisted of 6,931 people participating from the electronic White Pages sampling frame and 1,025 people participating from the randomly generated mobile number sampling frame. In total, a sample of 7,956 people aged 5 and over participated in the survey.

Data were weighted to account for the overlapping dual frame sample design. People selected from the Mobile sampling frame who were listed in the White Pages had a higher chance of being selected in the survey than people who were not listed in the White Pages. A person's initial weight was calculated as the inverse of their probability of selection in the survey, which was based on the combined probability of the person's being selected from either sampling frame. To ensure the weighted sample distribution closely reflected the Australian population distribution for a range of sociodemographic characteristics, initial weights were fed into a SAS® Raking macro (Izrael et al. 2009). This macro adjusted the weights iteratively until the weighted sample distributions reflected the 2011 Census distributions. Sociodemographic characteristics used in the raking process were highest qualification attained by age, country of birth, dwelling ownership and household size. Phone ownership was also used in the raking process to ensure appropriate representation of people who were not contactable by the electronic White Pages listing. The raked weights were then further adjusted to ensure consistency with the Australian Bureau of Statistics 2013 age by sex Estimated Residential Population counts for each geographic region.

A data quality statement for this collection is available at <a href="http://meteor.aihw.gov.au/content/index.phtml/itemId/629709">http://meteor.aihw.gov.au/content/index.phtml/itemId/629709</a>>.

## National Health Workforce Data Set

## Purpose

The AIHW National Health Workforce Data Set contains information on the demographics, employment characteristics, primary work location and work activity of all health practitioners in Australia who renewed their registration with their respective health profession board with the National Registration and Accreditation Scheme (NRAS).

The NRAS began on 1 July 2010 and was established by state and territory governments by introducing consistent legislation in all jurisdictions. The Australian Health Practitioner Regulation Agency (AHPRA) administers the NRAS.

The AIHW National Health Workforce Data Set provides information on the following types of dental practitioners:

- dentists
- dental hygienists
- dental prosthetists
- dental therapists
- oral health therapists

## **Data collection**

The AIHW National Health Workforce Data Set is a combination of registration and survey data collected through the practitioner registration renewal process.

#### **Registration data**

Dentists, dental hygienists, dental prosthetists, dental therapists and oral health therapists must be registered to practise in Australia. This requirement applies to those who trained both in Australia and overseas.

Practitioners can renew their registration through the NRAS, either online via the AHPRA website or using a paper form provided by the AHPRA. For initial registration, practitioners must use a paper form and provide supplementary supporting documentation. Limited and provisional registrations also complete paper forms.

Whether for initial registration or renewal, this information is referred to as 'registration data'. Data collected include demographic information such as age, sex, country of birth, details of health qualification(s) and registration status. This is the compulsory component of the registration process.

The majority of health professionals are due to renew their registration on 30 November each year. Provisional and limited registrants renew on the anniversary of their last registration/renewal.

Registration details on the AIHW National Health Workforce Data Set 2013 were collected either from the compulsory registration renewal form or new registrations. Copies of registration forms for new registrants are available on the relevant board websites, which can be accessed from the AHPRA website <a href="http://www.ahpra.gov.au/">http://www.ahpra.gov.au/</a>>.

#### Survey data

When practitioners renew their registration online, they are asked to complete a nonmandatory online survey customised for each profession. The survey asks about the person's work in the week before the survey, including their role and the location of their work. It also asks about where people obtained their qualification(s), and about their Indigenous status. Copies of the survey forms are available at <http://www.aihw.gov.au/workforce>.

#### **Database creation**

The AHPRA stores both online registration data and survey information in separate databases. It sends the two data sets (in de-identified form) to the AIHW. The AIHW processes the data and the final data set is known as the National Health Workforce Data Set.

Processing involves combining survey and registration data, imputing for non-response and deriving estimates.

#### Survey responses

The response rates for each of the profession surveys are listed in Table A1.

Table A1: National Health Workforce Data Set survey response rates, states and territories, 2013

Practitioner type	NSW	Vic	Qld	WA	SA	Tas	АСТ	NT	Australia <sup>(a)</sup>
Dentists	91.4	90.1	89.2	89.2	88.8	89.9	94.1	92.4	90.0
Dental hygienists	93.0	94.0	95.5	95.8	94.2	100.0	94.3	85.7	94.4
Dental prosthetists	93.3	86.6	91.0	94.3	94.3	100.0	93.3	100.0	91.3
Dental therapists	97.8	95.9	98.0	95.9	97.9	98.0	100.0	100.0	97.1
Oral health therapists	79.8	81.1	91.9	38.6	73.6	70.0	88.2	100.0	81.4

(a) Includes health workers who did not state or adequately describe their state or territory, and those who were overseas.

Source: AIHW National Health Workforce Data Set survey 2013.

## **Estimation procedures**

The AIHW uses registration data together with survey data to derive estimates for the total health practitioner workforce for items in the survey. Not all practitioners who receive a survey respond, because it is not mandatory to do so. In deriving the estimates, two sources of non-response to the survey are accounted for:

- item non-response occurs as some respondents return partially completed surveys. Some survey records were so incomplete that it was decided to omit them from the reported survey data
- survey non-response occurs because not all registered medical practitioners who receive a questionnaire respond.

Imputation methods are used to account for item non-response and survey non-response.

#### Imputation: estimation for item non-response

If possible, a reasonable assumption is made about missing information based on responses to other survey questions.

Missing values remaining after this process are considered for their suitability for further imputation based on the level of non-response to that item.

The known probabilities of particular responses occurring are used to assign a response to each record.

#### Imputation: estimation for population non-response

In 2013, the methodology for population non-response was changed from a weighting-based methodology to a hot deck based imputation

Imputations were made using survey data from records that have similar registration details grouped by registration type, specialty category, sex, age group, remoteness area and state, in that order.

Because the data were imputed and not weighted, some data may be affected in different ways from those previously published. For example, because a practitioner's location of main job is most likely to be the same as their registration address, this has been used for the location estimation of non-respondents. Using this estimate rather than weighting will improve the accuracy of estimates for small geographic areas, as previously weighted data would scale up data for individuals across the state/territory and the registration information for records would not be taken into account.

For variables not used in the imputation, it is assumed that respondents and nonrespondents have similar characteristics. To the extent assumption is incorrect, the estimates will have some bias.

The data include employed health practitioners who did not state or adequately describe their location, as well as employed health practitioners who were overseas. The national estimates include these groups.

A data quality statement for the AIHW National Workforce Data Set collection is available at <a href="http://meteor.aihw.gov.au/content/index.phtml/itemId/596359">http://meteor.aihw.gov.au/content/index.phtml/itemId/596359</a>>.

## National Hospital Morbidity Database

The National Hospital Morbidity Database is a collection of records from admitted patient data collection systems in Australian hospitals. The data supplied in this database are based on the National Minimum Data Set 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 as well as data on the diagnoses of the patients and the procedures they underwent in hospital.

Dental services are classified according to the Australian Classification of Health Interventions, which is the Australian national standard for procedure and intervention coding in Australian hospitals. Principal diagnoses were recorded using the *International statistical classification of diseases and related health problems, tenth revision, Australian modification* (ICD-10-AM).

More information about the National Hospital Morbidity Database collection is available at <a href="http://www.aihw.gov.au/hospitals-data/national-hospital-morbidity-database/">http://www.aihw.gov.au/hospitals-data/national-hospital-morbidity-database/</a>.

# **Appendix B: Data tables for figures**

	Baby teeth a	t age 6	Permanent teeth at age 12				
Year	Average dmft	95% confidence intervals	Average DMFT	95% confidence intervals			
1977	3.13		4.79				
1978	3.19		4.51				
1979	3.11		3.94				
1980	2.93		3.56				
1981	2.70		3.22				
1982	2.54		3.01				
1983	2.39		2.62				
1984	2.31		2.35				
1985	2.15		2.13				
1986	1.98		2.01				
1987	1.91		1.75				
1988	1.87		1.58	• ·			
1989	2.15	2.09, 2.21	1.56	1.52, 1.60			
1990	2.06	2.00, 2.12	1.44	1.39, 1.49			
1991	2.00	1.93, 2.07	1.26	1.21, 1.31			
1992	1.95	1.87, 2.03	1.22	1.17, 1.27			
1993	1.90	1.83, 1.97	1.10	1.05, 1.15			
1994	1.79	1.70, 1.88	1.09	1.02, 1.16			
1995	1.73	1.65, 1.81	1.01	0.96, 1.06			
1996	1.45	1.39, 1.51	0.90	0.86, 0.94			
1997	1.50	1.44, 1.56	0.86	0.82, 0.90			
1998	1.51	1.45, 1.57	0.83	0.80, 0.86			
1999	1.51	1.48, 1.54	0.83	0.81, 0.85			
2000	1.65	1.62, 1.68	0.84	0.82, 0.86			
2001	1.89	1.83, 1.95	0.95	0.92, 0.98			
2002	1.96	1.90, 2.02	1.02	0.99, 1.05			
2003–4	1.96	1.93, 1.99	1.03	1.01, 1.05			
2005	2.27	2.21, 2.33	1.11	1.08, 1.14			
2006	2.00	1.95, 2.05	1.24	1.20, 1.28			
2007	1.95	1.81, 2.09	0.95	0.85, 1.05			
2008	2.31	2.24, 2.37	1.11	1.07, 1.14			
2009	2.36	2.29, 2.42	1.05	1.01, 1.08			
2010	2.58	2.45, 2.74	1.34	1.24, 1.45			

Table B2.1: Average dmft (at age 6) and DMFT (at age 12) and associated 95% confidence intervals, Australia, 1977 to 2010

Notes

1. From 1977 to 1988, data are from the Australian School Dental Scheme evaluation. From 1989, data are from the Child Dental Health Survey.

2. NSW data were excluded from the data collection from 2001 due to lack of representativeness of the sample. Data have not been available from Victoria since 2005.

Source: Child Dental Health Survey 1977 to 2010.

	1994	1996	1999	2002	2005	2008	2010	2013
Number of teeth	25.8	26.2	26.5	26.6	26.5	26.5	26.8	27.0
(average)	20.0	20.2	20.0	20.0	20.0	20.0	20.0	21.0
95% CI*	25.6, 26.0	26.0, 26.4	26.2, 26.7	26.3, 26.8	26.4, 26.6	26.3, 26.7	26.6, 26.9	26.9, 27.2
Number of missing teeth (average)	6.2	5.8	5.5	5.4	5.5	5.5	5.2	5.0
95% CI	6.0, 6.5	5.6, 6.0	5.3, 5.8	5.2, 5.7	5.4, 5.6	5.4, 5.7	5.1, 5.4	4.8, 5.1

Table B2.2: Number of teeth and number of missing teeth, dentate people aged 15 and over, 1994 to 2013

\* CI = confidence interval.

Note: Directly age standardised to the 2001 Australian population.

Sources: National Dental Telephone Interview Surveys, 1994 to 2013.

Table B2.3: Prevalence of any oral health impact, peo	ople age 15 and over, 1994 to 2013
---	------------------------------------

	1994	1996	1999	2002	2005	2008	2010	2013
	1994	1330	1333			2000	2010	2015
				Per	cent			
Toothache experience	10.9	12.2	14.1	13.7	14.9	16.6	14.9	16.2
Uncomfortable with appearance	20.0	19.4	21.7	20.3	24.8	26.3	24.5	26.7
Avoided certain foods	15.2	15.0	17.7	14.8	17.3	20.2	17.1	20.8
Any oral health impact	31.4	33.0	35.5	33.3	38.4	39.9	35.4	38.9
			9	5% confide	nce intervals	6		
Toothache experience	9.9, 12.0	11.0, 13.4	12.8, 15.5	12.4, 15.1	14.1, 15.7	15.2, 18.0	13.7, 16.2	14.8, 17.6
Uncomfortable with appearance	18.7, 21.3	18.1, 20.8	20.2, 23.2	18.9, 21.8	23.8, 25.7	24.8, 27.9	22.9, 26.1	25.0, 28.5
Avoided certain foods	14.1, 16.4	13.8, 16.2	16.4, 19.0	13.6, 16.1	16.5, 18.1	18.9, 21.6	15.9, 18.4	19.4, 22.2
Any oral health impact	30.0, 32.9	31.4, 34.6	33.8, 37.1	31.7, 35.0	37.3, 39.4	38.2, 41.4	33.9, 37.1	37.2, 40.6

Note: Directly age standardised to the 2001 Australian population.

	1994	1996	1999	2002	2005	2008	2010	2013
				Per o	ent			
Toothache experience	7.4	6.2	7.2	5.2	10.4	7.6	8.0	6.8
Avoided certain foods	9.9	8.2	10.0	7.6	10.8	9.3	10.1	12.9
Any oral health impact	13.1	12.4	13.9	10.0	16.3	13.2	13.4	14.9
			95	5% confider	nce intervals	;		
Toothache experience	5.5, 9.9	4.4, 8.6	5.1, 10.0	3.7, 7.2	8.5, 12.6	5.5, 10.3	6.6, 9.7	4.7, 9.8
Avoided certain foods	7.8, 12.6	6.3, 10.6	7.7, 13.0	5.5, 10.2	8.9, 13.0	7.1, 12.2	8.6, 11.9	10.2, 16.1
Any oral health impact	10.7, 16.1	9.9, 15.5	11.1, 17.4	7.8, 12.8	14.0, 18.9	10.4, 16.4	11.6, 15.4	12.1, 18.3

Table B2.4: Prevalence of any oral health impact, children aged 5 to 14, 1994 to 2013

Sources: National Dental Telephone Interview Surveys, 1994 to 2013.

## Table B3.1: Last dental visit was in the previous 12 months, children aged 5-14 and adults aged 15 and over, 1994 to 2013

	1994	1996	1999	2002	2005	2008	2010	2013
				Per	cent			
Children (5–14 years)	79.6	82.3	78.9	81.5	83.0	78.3	78.0	78.4
Adults (15+ years)	56.4	58.3	57.2	58.1	62.1	59.8	60.1	60.3
	95% confidence intervals							
Children (5–14 years)	76.0, 82.8	79.1, 85.2	74.7, 82.6	77.7, 84.7	80.4, 85.3	74.4, 81.8	75.4,80.4	74.7, 81.7
Adults (15+ years)	54.7, 58.0	56.5, 60.0	55.3, 59.1	56.2, 59.9	61.0, 63.2	58.1, 61.6	60.1, 63.4	60.3, 63.8

Note: Directly age standardised to the 2001 Australian population.

						•		
	1994	1996	1999	2002	2005	2008	2010	2013
				Per	cent			
Children (5–14 years)								
Check-up	80.0	70.8	73.0	74.6	79.7	80.9	83.1	80.7
Problem	20.0	29.2	27.0	25.4	20.3	19.1	16.9	19.3
Adults (15+ years)								
Check-up	48.3	43.4	45.7	51.1	55.5	55.7	61.4	60.5
Problem	51.7	56.6	54.3	48.9	44.5	44.3	38.6	39.5
	95% confidence intervals							
Children (5–14 years)								
Check-up	76.4, 83.1	66.6, 74.7	68.5, 77.0	70.3, 78.6	76.7, 82.4	76.9, 84.3	80.6,85.3	76.8, 84.1
Problem	16.9, 23.6	25.3, 33.4	23.0, 31.5	21.4, 29.7	17.6, 23.3	15.7, 23.1	14.7, 19.4	15.9, 23.2
Adults (15+ years)								
Check-up	46.0, 50.5	41.1, 45.8	43.3, 48.2	48.6, 53.6	54.3, 56.7	53.8, 57.7	59.6, 63.2	58.5, 62.4
Problem	49.5, 54.0	54.2, 58.9	51.8, 56.7	46.4, 51.4	43.3, 45.7	42.3, 46.2	36.8, 40.4	37.6, 41.5

Table B3.2: Reason for last dental visit, children aged 5-14 and adults aged 15 and over, 1994 to 2013

Sources: National Dental Telephone Interview Surveys, 1994 to 2013.

Type of practice	1994	1996	1999	2002	2005	2008	2010	2013
				Per ce	nt			
Private	87.8	88.7	87.2	88.9	89.3	89.6	92.5	88.5
Public	9.6	9.7	9.5	9.0	7.9	7.9	5.5	8.7
SDS	1.0	0.8	1.5	0.7	1.3	0.8	0.9	0.7
Other	1.6	0.8	0.6	1.4	1.5	1.7	1.1	2.1
			95%	% confidenc	e intervals			
Private	86.3, 89.1	87.1, 90.1	85.5, 88.8	87.4, 90.2	88.4, 90.2	88.0, 90.9	91.4, 93.5	86.9, 89.9
Public	8.4, 10.9	8.3, 11.2	8.2, 11.0	7.8, 10.3	7.1, 8.7	6.8, 9.3	4.7, 6.5	7.5, 10.1
SDS	0.8, 1.4	0.6,1.2	1.1, 2.2	0.4, 1.1	1.0, 1.7	0.5, 1.2	0.7, 1.2	0.4,1.1
Other	1.1, 2.3	0.5, 1.3	0.3, 1.0	1.0, 2.1	1.2, 1.9	1.1, 2.6	0.7, 1.6	1.5, 3.0

Table B3.3: Type of practice visited at last dental visit, dentate adults aged 15 and over who visited in last 12 months, 1994 to 2013

Note: Directly age standardised to the 2001 Australian population.

Type of practice	1994	1996	1999	2002	2005	2008	2010	2013
				Per	cent			
Private	40.2	46.8	43.4	46.6	55.2	64.8	67.2	64.1
Public	5.2	6.1	5.3	7.3	3.9	5.8	8.8	14.1
SDS	53.9	46.9	51.4	46.0	40.6	28.9	23.7	20.7
Other	0.7	0.2	_	0.1	0.3	0.6	0.3	1.1
			9	95% confide	nce intervals	6		
Private	36.1, 44.5	42.5, 51.2	38.5, 48.4	41.9, 51.3	51.5, 58.9	59.9, 69.4	64.1, 70.1	59.4, 68.4
Public	3.4, 7.8	4.2, 8.7	3.3, 8.4	5.0, 10.6	2.7, 5.6	3.8, 8.6	7.1, 10.9	10.8, 18.2
SDS	49.7, 58.0	42.6, 51.2	46.4, 56.3	41.5, 50.6	37.0, 44.3	24.6, 33.6	21.1, 26.5	17.3, 24.6
Other	0.2, 2.4	0.0, 0.7	_	0.0, 0.9	0.1, 0.8	0.2, 1.6	0.1, 0.8	0.5, 2.5

Table B3.4: Type of practice visited at last dental visit, children aged 5 to 14 who visited in last 12 months, 1994 to 2013

Sources: National Dental Telephone Interview Surveys, 1994 to 2013.

#### Table B3.5: Dental visiting pattern, dentate adults aged 18 and over, 1999 to 2013

Visiting pattern	1999	2002	2005	2008	2010	2013
			Per co	ent		
Favourable	36.3	43.5	39.6	37.5	45.6	43.9
Intermediate	37.5	41.2	31.9	33.9	32.3	32.6
Unfavourable	26.1	15.2	28.6	28.6	22.1	23.5
			95% confiden	ce intervals		
Favourable	34.5, 38.2	41.6, 45.5	38.5, 40.7	35.8, 39.2	43.8, 47.4	42.2, 45.7
Intermediate	35.7, 39.4	39.3, 43.2	30.8, 32.9	32.2, 35.6	30.6, 34.0	30.8, 34.4
Unfavourable	24.5, 27.8	13.9, 16.7	27.5, 29.6	27.0, 30.3	20.6, 23.6	21.9, 25.1

Note: Directly age standardised to the 2001 Australian population.

<b>1994</b> 2.37 0.21	<b>1996</b> 2.40 0.25	<b>1999</b> 2.40	2002 Per 2.34	2005 cent 2.33	2008	<b>2010</b> 2.34	2013	
0.21					2 38	2.24		
0.21			2.34	2.33	2.38	0.04		
	0.25				2.00	2.34	2.40	
		0.32	0.32	0.25	0.31	0.26	0.29	
0.90	0.94	0.87	0.87	0.80	0.82	0.75	0.70	
0.97	0.94	0.96	0.95		0.94	1.02	1.12	
95% confidence intervals								
2.27, 2.48	2.27, 2.52	2.27, 2.53	2.25, 2.43	2.28, 2.38	2.29, 2.47	2.27, 2.42	2.30, 2.49	
0.17, 0.24	0.21, 0.28	0.27, 0.37	0.27, 0.36	0.23, 0.28	0.27, 0.36	0.22, 0.30	0.25, 0.33	
0.84, 0.97	0.88, 1.01	0.80, 0.94	0.79, 0.94	0.75, 0.84	0.75, 0.89	0.69, 0.82	0.65, 0.75	
0.92, 1.02	0.90, 0.98	0.92, 1.01	0.91, 0.99	0.00, 0.00	0.90, 0.97	0.99, 1.05	1.08, 1.15	
	2.27, 2.48 0.17, 0.24 0.84, 0.97	2.27, 2.48       2.27, 2.52         0.17, 0.24       0.21, 0.28         0.84, 0.97       0.88, 1.01	2.27, 2.48 2.27, 2.52 2.27, 2.53 0.17, 0.24 0.21, 0.28 0.27, 0.37 0.84, 0.97 0.88, 1.01 0.80, 0.94	<b>95% confide</b> 2.27, 2.48 2.27, 2.52 2.27, 2.53 2.25, 2.43 0.17, 0.24 0.21, 0.28 0.27, 0.37 0.27, 0.36 0.84, 0.97 0.88, 1.01 0.80, 0.94 0.79, 0.94	<b>95% confidence intervals</b> 2.27, 2.48 2.27, 2.52 2.27, 2.53 2.25, 2.43 2.28, 2.38 0.17, 0.24 0.21, 0.28 0.27, 0.37 0.27, 0.36 0.23, 0.28 0.84, 0.97 0.88, 1.01 0.80, 0.94 0.79, 0.94 0.75, 0.84	95% confidence intervals           2.27, 2.48         2.27, 2.52         2.27, 2.53         2.25, 2.43         2.28, 2.38         2.29, 2.47           0.17, 0.24         0.21, 0.28         0.27, 0.37         0.27, 0.36         0.23, 0.28         0.27, 0.36           0.84, 0.97         0.88, 1.01         0.80, 0.94         0.79, 0.94         0.75, 0.84         0.75, 0.89	95% confidence intervals           2.27, 2.48         2.27, 2.52         2.27, 2.53         2.25, 2.43         2.28, 2.38         2.29, 2.47         2.27, 2.42           0.17, 0.24         0.21, 0.28         0.27, 0.37         0.27, 0.36         0.23, 0.28         0.27, 0.36         0.22, 0.30           0.84, 0.97         0.88, 1.01         0.80, 0.94         0.79, 0.94         0.75, 0.84         0.75, 0.89         0.69, 0.82	

Table B3.6: Types of services received by dentate adults aged 15 and over, 1994 to 2013

Sources: National Dental Telephone Interview Surveys, 1994 to 2013.

Table B3.7: Types	of services r	eceived by child	lren aged 5 to 14,	1994 to 2013
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Type of service	1994	1996	1999	2002	2005	2008	2010	2013
				Per c	ent			
Visits	2.38	2.29	2.26	2.14	2.17	2.14	2.25	2.39
Extractions	0.20	0.17	0.26	0.23	0.15	0.17	0.19	0.2
Fillings	0.56	0.54	0.45	0.57	0.44	0.44	0.45	0.41
Fluoride treatments						0.32	0.40	0.41
			9	5% confiden	ice intervals	;		
Visits	2.15, 2.60	2.10, 2.49	2.03, 2.50	1.92, 2.35	2.04, 2.30	1.95, 2.34	2.12, 2.37	2.15, 2.63
Extractions	0.14, 0.26	0.10, 0.24	0.18, 0.34	0.12, 0.35	0.11, 0.18	0.11, 0.22	0.15, 0.23	0.14, 0.26
Fillings	0.47, 0.65	0.44, 0.65	0.35, 0.55	0.47, 0.68	0.37, 0.50	0.35, 0.53	0.38, 0.52	0.28, 0.54
Fluoride treatments						0.26, 0.38	0.36, 0.45	0.34, 0.48

Note: Directly age standardised to the 2001 Australian population.

	Number of fissure sealants							
Year	Average	95% confidence interval						
1989	0.38	0.37, 0.41						
1990	0.54	0.52, 0.57						
1991	0.68	0.66, 0.72						
1992	0.66	0.64, 0.70						
1993	0.72	0.70, 0.76						
1994	0.68	0.65, 0.74						
1995	0.96	0.93, 1.01						
1996	0.98	0.96, 1.02						
1997	0.97	0.95, 1.01						
1998	0.91	0.89, 0.95						
1999	0.95	0.94, 0.97						
2000	0.88	0.87, 0.90						
2001	1.05	1.03, 1.09						
2002	0.96	0.94, 0.99						
2003–4	0.87	0.86, 0.89						
2005	0.62	0.61, 0.65						
2006	0.57	0.56, 0.60						
2007	0.65	0.57, 0.72						
2008	0.75	0.72, 0.79						
2009	0.91	0.87, 0.94						
2010	0.73	0.68, 0.79						

Table B3.8: Average number of teeth with fissure sealants,Australian children aged 12, 1989 to 2010

Notes

1. New South Wales data were excluded from the data collection from 2001 due to lack of representativeness of the sample.

2. Data have not been available from Victoria since 2005.

Source: Child Dental Health Surveys, 1989 to 2010.

# Table B5.1: Proportion of people who avoided or delayed visiting a dentist due to cost, dentate people, 1994 to 2013 (%)

	1994	1996	1999	2002	2005	2008	2010	2013
				Per	cent			
Adults (15+ years)	25.0	26.9	26.9	26.9	30.2	32.8	30.3	35.0
Children (5–14 years)	13.8	8.6	10.3	10.7	8.5	17.0	13.6	10.7
			9	5% confide	nce interval	S		
Adults (15+ years)	23.6, 26.5	25.3, 28.5	25.2, 28.5	25.3, 28.6	29.2, 31.2	31.1, 34.5	28.7, 31.9	33.3, 36.7
Children (5–14 years)	11.2, 16.9	6.6, 11.2	7.8, 13.5	8.3, 13.8	6.8, 10.5	13.8, 20.7	11.7, 15.8	8.4, 13.4

Note: Directly age standardised to the 2001 Australian population.

	1994	1996	1999	2002	2005	2008	2010	2013
				Per c	ent			
Adults (15+ years)	18.4	21.4	21.8	13.5	20.5	19.2	21.0	22.5
Children (5–14 years)	5.0	8.3	6.5	4.4	4.3	7.1	4.9	5.9
			95	5% confiden	ce intervals			
Adults (15+ years)	17.1, 19.7	19.9, 22.9	20.3, 23.3	12.3, 14.9	19.6, 21.5	17.5, 21.1	19.2, 22.8	20.7, 24.5
Children (5–14 years)	3.5, 7.1	6.2, 11.0	4.6, 9.0	2.9, 6.6	3.1, 6.0	5.0, 10.0	3.7, 6.4	4.2, 8.3

Table B5.2: Proportion of people stating cost prevented recommended dental treatment, dentate people, 1994 to 2013 (%)

Notes

1. Directly age standardised to the 2001 Australian population.

2. Data in this table relate to people who made a dental visit in the previous 12 months.

Sources: National Dental Telephone Interview Surveys, 1994 to 2013.

## Table B5.3: Proportion of people stating dental visits were a financial burden, dentate people aged 5 and over, 1994 to 2013 (%)

	1994	1996	1999	2002	2005	2008	2010	2013
				Per o	cent			
Adults (15+ years)	9.8	10.5	13.9	10.0	13.6	13.1	11.5	12.2
Children (5–14 years)	6.0	7.5	5.3	8.0	9.4	7.7	8.7	9.5
			95	5% confider	nce intervals	i		
Adults (15+ years)	8.5, 11.2	9.1, 12.0	12.2, 15.8	8.7, 11.5	12.7, 14.6	11.6, 14.7	10.3, 12.9	10.8, 13.8
Children (5–14 years)	4.1, 8.8	5.4, 10.4	3.5, 8.1	5.6, 11.3	7.6, 11.7	5.5, 10.6	7.2, 10.5	7.0, 12.8

Note: Directly age standardised to the 2001 Australian population.

	Australian Government	State/territory and local government	Non-government	Total
		Per person exper	diture (\$)	
2002–03	25.4	29.8	248.1	303.3
2003–04	24.8	30.4	255.5	310.7
2004–05	24.9	31.6	258.8	315.2
2005–06	26.1	30.8	258.6	315.5
2006–07	26.4	29.1	259.5	315.1
2007–08	33.3	29.9	252.4	315.7
2008–09	47.2	33.1	252.3	332.6
2009–10	59.3	30.7	252.0	342.0
2010–11	65.9	33.3	262.1	361.3
2011–12	75.2	32.8	268.4	376.4
2012–13	67.6	28.7	283.5	379.8

Table B8.1: Expenditure on dental services per person, by source of funds constant prices, 2002–03 to 2012–13

Source: AIHW health expenditure database.

# Appendix C: Confidence intervals for estimates in tables

Table C2.1: Prevalence of deciduous and permanent caries experience (dmft + DMFT >0) by age, children attending a school dental service, 2010 (95% confidence intervals)

	Age (years							
	5	6	7	8	9	10	11	12
dmft + DMFT >0	46.1, 50.2	54.4, 58.7	58.0, 62.6	64.0, 69.0	66.0, 71.3	63.9, 68.2	55.2, 59.5	53.8, 60.1

Notes

1. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

2. Data from Victoria were not available.

Source: Child Dental Health Survey 2010.

## Table C2.2: Number of deciduous teeth with caries experience by age, children attending a school dental service, 2010 (95% confidence intervals)

Age (years)	Decayed teeth (d)	Missing teeth (m)	Filled teeth (f)	dmft
5	1.71, 1.95	0.10, 0.19	0.31, 0.38	2.19, 2.46
6	1.63, 1.86	0.18, 0.25	0.58, 0.67	2.45, 2.71
7	1.28, 1.45	0.18, 0.24	0.88, 1.03	2.41, 2.66
8	1.07, 1.23	0.17, 0.22	1.20, 1.37	2.50, 2.76
9	0.95, 1.09	0.11, 0.16	1.20, 1.36	2.31, 2.55
10	0.62, 0.72	0.07, 0.09	0.97, 1.09	1.68, 1.87

\* CI = confidence interval.

Notes

1. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

2. Data from Victoria were not available.

Source: Child Dental Health Survey 2010.

# Table C2.3: Prevalence of deciduous caries experience (dmft >0) by age, children attending a school dental service, 2010 (95% confidence intervals)

		Age (years)						
	5	6	7	8	9	10		
dmft >0	45.7, 49.7	52.9, 57.3	55.2, 59.8	59.9, 64.9	60.4, 65.5	52.4, 56.7		

Notes

1. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

Data from Victoria were not available.

Source: Child Dental Health Survey 2010.

DMFT	Filled (F)	Missing (M)	Decayed (D)	Age (years)
0.11, 0.15	0.01, 0.02	_	0.09, 0.13	6
0.24, 0.29	0.04, 0.05	_	0.19, 0.24	7
0.39, 0.46	0.12, 0.15	0.01, 0.02	0.25, 0.31	8
0.61, 0.72	0.23, 0.29	0.01, 0.04	0.35, 0.42	9
0.68, 0.78	0.27, 0.33	0.01, 0.02	0.37, 0.45	10
0.89, 1.01	0.39, 0.47	0.02, 0.03	0.45, 0.54	11
1.24, 1.45	0.50, 0.59	0.04, 0.07	0.66, 0.82	12
1.50, 1.82	0.64, 0.79	0.04, 0.07	0.77, 1.02	13
2.18, 2.55	0.92, 1.09	0.05, 0.10	1.12, 1.45	14
2.41, 2.86	1.04, 1.28	0.05, 0.08	1.22, 1.59	15

Table C2.4: Number of permanent teeth with caries experience by age, children attending a school dental service, 2010 (95% confidence intervals)

Notes

1. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

2. Data from Victoria were not available.

Source: Child Dental Health Survey 2010.

Age (years)	DMFT >0
6	5.8, 8.4
7	13.7, 16.2
8	20.0, 23.4
9	28.7, 32.9
10	31.2, 34.8
11	36.6, 40.6
12	45.1, 51.4
13	48.7, 55.0
14	60.8, 67.3

#### Table C2.5: Prevalence of permanent caries experience (DMFT >0) by age, children attending a school dental service, 2010 (%) (95% confidence intervals)

Notes

1. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

2. Data from Victoria were not available.

Source: Child Dental Health Survey 2010.

Age (years)	Decayed (D)	Missing (M)	Filled (F)	DMFT
15–24	0.42, 0.82	0.37, 0.82	1.42, 2.50	2.43, 3.91
25–44	0.60, 0.87	1.35, 1.74	5.70, 6.40	7.89, 8.78
45–64	0.41, 0.60	6.91, 7.64	11.71, 12.42	19.50, 20.18
65+	0.35, 0.53	12.25, 13.45	9.87, 10.94	23.32, 24.08
All people aged 15 and over	0.54, 0.68	4.31, 4.80	7.40, 7.99	12.41, 13.30

Table C2.6: Number of permanent teeth with caries experience by age, dentate people aged 15 and over, 2004–2006 (95% confidence intervals)

Source: National Survey of Adult Oral Health 2004–2006.

## Table C2.7: Number of permanent teeth with caries experience by selected characteristics, dentate people aged 15 and over, 2004–2006 (95% confidence intervals)

	0 , (		,		
	Decayed (D)	Missing (M)	Filled (F)	DMFT	
Sex					
Male	0.60, 0.81	4.14, 4.80	6.80, 7.69	11.76, 13.08	
Female	0.43, 0.59	4.32, 4.95	7.77, 8.52	12.72, 13.86	
Remoteness area					
Major cities	0.47, 0.62	3.87, 4.45	7.25, 7.97	11.77, 12.85	
Inner regional	0.57, 0.99	5.30, 6.31	7.54, 8.80	13.91, 15.60	
Outer regional	0.48, 0.88	4.10, 5.86	6.58, 8.22	11.63, 14.49	
Remote/Very remote	0.69, 1.25	2.37, 4.99	5.75, 7.08	9.55, 12.58	
Insurance status					
Insured	0.31, 0.45	3.85, 4.49	8.54, 9.45	12.91, 14.18	
Uninsured	0.69, 0.93	4.68, 5.40	6.45, 7.13	12.08, 13.21	
Eligibility for public dental care					
Eligible	0.71, 1.01	6.99, 8.17	6.93, 7.86	15.01, 16.65	
Ineligible	0.45, 0.59	3.28, 3.74	7.45, 8.16	11.35, 12.33	
Annual household income (\$)					
<12,000	0.52, 1.60	9.72, 12.32	6.70, 8.63	18.33, 21.15	
12,000-<20,000	0.67, 1.10	8.65, 10.52	7.33, 8.64	17.37, 19.53	
20,000-<30,000	0.40, 0.70	6.38, 8.03	7.57, 9.14	14.83, 17.40	
30,000-<40,000	0.53, 1.05	4.47, 5.88	7.72, 9.19	13.36, 15.47	
40,000-<60,000	0.55, 0.80	3.55, 4.40	7.61, 8.84	12.01, 13.74	
60,000–<80,000	0.36, 0.65	2.46, 3.19	6.86, 8.27	9.93, 11.84	
80,000-<100,000	0.27, 0.55	2.48, 3.66	7.27, 8.95	10.42, 12.76	
100,000+	0.23, 0.62	2.28, 3.01	7.00, 8.55	9.88, 11.80	

Source: National Survey of Adult Oral Health 2004–2006.

## Table C2.8: Prevalence of untreated decay, dentate people aged 15 and over, 2004–2006 (%) (95% confidence intervals)

	15–24	25–44	45–64	65+	All people
With untreated decay	18.8, 30.0	25.3, 31.6	21.4, 26.3	18.6, 24.9	23.6, 27.3

Source: National Survey of Adult Oral Health 2004-2006.

## Table C2.9: Prevalence of untreated decay, dentate people aged 15 and over, 2004–2006 (%) (95% confidence intervals)

	Sex	Sex			ess area	
_	Male	Female	Major cities	Inner regional	Outer regional	Remote/ Very remote
With untreated decay	25.4, 31.0	20.4, 24.9	21.3, 25.8	25.4, 34.2	25.0, 35.7	33.2, 42.0

Source: National Survey of Adult Oral Health 2004-2006.

## Table C2.10: Prevalence of people with untreated decay by insurance status and eligibility for public dental care, dentate people aged 15 and over, 2004–2006 (%) (95% confidence intervals)

	Insurance st	atus	Public dental care eligibility		
	Insured	Uninsured	Eligible	Ineligible	
With untreated decay	16.8, 22.0	28.5, 33.8	29.2, 36.7	20.9, 25.1	

Source: National Survey of Adult Oral Health 2004-2006.

# Table C2.11: Prevalence of untreated decay by annual household income, dentate people aged 15 and over, 2004–2006 (%) (95% confidence intervals)

	Annual household income (\$)							
_	<12,000	12,000– <20,000	20,000– <30,000	30,000– <40,000	40,000– <60,000	60,000- <80,000	80,000– <100,000	100,000+
With untreated decay	28.1, 42.6	30.1, 40.2	18.8, 28.5	23.1, 34.7	26.8, 35.1	18.2, 26.5	15.8, 28.7	11.6, 21.3

Source: National Survey of Adult Oral Health 2004–2006.

# Table C2.12: Number of permanent teeth with caries experience, dentate people aged 15 and over, 1987–88 and 2004–2006 (average) (95% confidence intervals)

	Decayed (D)	Missing (M)	Filled (F)	DMFT
1987–88	1.38, 1.56	5.46, 5.94	7.53, 8.01	14.65, 15.24
2004–06	0.54, 0.68	4.31, 4.80	7.40, 7.99	12.41, 13.30

Source: National Survey of Adult Oral Health 2004-2006.

Table C2.13: Prevalence of moderate or severe periodontal disease by age, dentate people aged 15
and over, 2004–2006 (%) (95% confidence intervals)

	15–24	25–44	45–64	65+	All people
Periodontal disease	0.7, 4.7	12.7, 17.9	32.3, 28.4	49.1, 57.8	21.2, 24.6

Source: National Survey of Adult Oral Health 2004-2006.

## Table C2.14: Prevalence of periodontal disease by sex and remoteness, dentate people aged 15 and over, 2004–2006 (%) (95% confidence intervals)

	Sex		Remoteness area			
-	Male	Female	Major cities	Inner regional	Outer regional	Remote/ Very remote
Periodontal disease	24.0, 29.5	17.1, 20.9	20.1, 24.1	19.5, 26.5	21.6, 35.4	27.7, 45.0

Source: National Survey of Adult Oral Health 2004-2006.

Table C2.15: Prevalence of periodontal disease by insurance status and eligibility for public dental care, dentate people aged 15 and over, 2004–2006 (%) (95% confidence intervals)

	Insurance status		Public dental care eligibility		
	Insured	Uninsured	Eligible	Ineligible	
Periodontal disease	17.2, 21.6	24.6, 29.4	29.7, 37.5	17.9, 21.1	

Source: National Survey of Adult Oral Health 2004–2006.

## Table C2.16: Prevalence of periodontal disease by annual household income, dentate people aged 15 and over, 2004–2006 (%) (95% confidence intervals)

	Annual household income (\$)							
	<12,000	12,000– <20,000	20,000– <30,000	30,000– <40,000	40,000– <60,000	60,000– <80,000	80,000– <100,000	100,000+
Periodontal disease	34.3, 50.3	34.9, 47.1	26.2, 37.5	21.8, 31.8	21.0, 28.6	15.8, 23.7	10.7, 19.7	10.6, 18.0

Source: National Survey of Adult Oral Health 2004-2006.

# Table C2.17: Prevalence of edentulism by age and sex, people aged 15 and over, 2013 (%) (95% confidence intervals)

Sex	15–24	25–44	45–64	65+	All people
Male	—	_	1.8, 4.7	13.1, 21.6	3.0, 4.8
Female	—	0.0, 0.5	2.1, 4.2	17.0, 24.0	4.1, 5.7
All people aged 15 and over	_	0.0, 0.3	2.3, 4.1	16.3, 21.8	3.8, 5.0

Source: National Survey of Adult Oral Health 2004–2006.

	Age (years)					
Sex	15–24	25–44	45–64	65+	All people	
Male	0.0, 3.3	1.7, 6.0	9.3, 14.6	33.6, 45.2	9.9, 13.1	
Female	0.0, 3.3	0.9, 4.7	11.2, 16.2	39.0, 48.8	11.5, 14.5	
All people aged 15 and over	0.2, 2.8	1.9, 4.8	11.0, 14.7	38.0, 45.5	11.1, 13.4	

Table C2.18: Prevalence of denture wearing by age, dentate people aged 15 and over, 2013 (%) (95% confidence intervals)

Source: National Dental Telephone Interview Survey 2013.

# Table C2.19: Number of missing teeth by selected characteristics, dentate people aged 15 and over, 2013 (average) (95% confidence intervals)

		Age (year	s)		
	15–24	25–44	45–64	65+	All people
Sex					
Male	1.1, 1.8	2.5, 3.2	5.1, 6.0	9.6, 11.7	4.5, 5.1
Female	1.9, 2.6	3.2, 3.6	5.6, 6.5	10.2, 11.8	5.2, 5.7
Remoteness area					
Major cities	1.7, 2.2	2.9, 3.4	5.0, 5.7	9.6, 11.3	4.5, 5.0
Inner regional	1.0, 2.1	2.8, 3.5	6.3, 7.8	10.5, 13.1	5.7, 6.7
Outer regional	0.5, 1.9	2.9, 4.1	5.3, 7.1	8.5, 12.4	4.9, 6.2
Remote/Very remote	1.5, 3.1	2.5, 3.8	4.5, 9.0	10.5, 14.9	4.2, 6.5
Insurance status					
Insured	1.7, 2.6	3.1, 3.5	4.6, 5.2	8.2, 9.6	4.5, 5.0
Uninsured	1.4, 2.0	2.7, 3.3	6.5, 7.7	11.7, 13.9	5.2, 5.9
Eligibility for public dental care					
Eligible	1.4, 2.3	3.1, 4.5	7.8, 9.9	11.0, 12.6	7.5, 8.6
Ineligible	1.6, 2.1	2.8, 3.2	4.9, 5.5	7.4, 9.7	3.9, 4.2
Annual household income (\$)					
<30,000	0.9, 2.3	3.3, 4.6	7.6, 9.6	11.2, 13.4	7.9, 9.3
30,000-<60,000	1.1, 2.3	2.5, 3.3	5.5, 7.0	8.4, 10.7	4.8, 5.7
60,000-<90,000	1.1, 2.6	2.5, 3.2	4.9, 6.3	6.7, 10.2	3.9, 4.7
90,000-<140,000	0.7, 2.0	3.0, 3.7	4.4, 5.5	4.3, 7.6	3.6, 4.2
140,000+	1.3, 2.5	2.7, 3.4	3.6, 4.4	2.4, 7.4	3.0, 3.5
All people aged 15 and over	1.6, 2.1	3.0, 3.4	5.5, 6.1	10.2, 11.5	4.9, 5.3

		Annual h	ousehold inco	me (\$)		
Insurance status/ Remoteness location	<30,000	30,000– <60,000	60,000– <90,000	90,000– <140,000	140,000+	All people
Insured						
Major cities	6.4, 8.9	5.0, 6.8	4.1, 5.4	3.5, 4.3	2.9, 3.5	4.2, 4.8
Inner regional	6.1, 10.1	5.8, 8.9	3.6, 5.0	3.7, 5.6	3.1, 4.4	5.0, 6.2
Outer regional	4.9, 9.0	3.4, 5.9	2.8, 4.8	3.6, 5.1	2.6, 4.2	3.9, 4.9
Remote/Very remote	5.5, 14.1	2.9, 8.3	0.7, 8.1	3.2, 7.6	2.4, 4.1	3.5, 5.8
All insured	6.8, 8.7	5.4, 6.8	4.1, 5.1	3.7, 4.5	3.0, 3.5	4.4, 4.9
Uninsured						
Major cities	7.3, 9.6	3.4, 4.7	3.1, 4.7	2.9, 4.3	2.4, 3.8	4.7, 5.6
Inner regional	8.7, 11.8	4.3, 7.4	3.5, 6.0	2.2, 4.0	3.3, 6.5	5.8, 7.4
Outer regional	8.2, 13.0	3.9, 8.1	2.7, 5.6	3.5, 5.7	0.1, 3.2	5.6, 8.0
Remote/Very remote	2.3, 13.8	3.2, 11.6	1.1, 6.2	3.2, 5.6	1.7, 4.1	4.2, 9.1
All uninsured	8.2, 9.9	4.1, 5.3	3.5, 4.7	3.1, 4.1	2.5, 3.8	5.3, 6.0
All people						
Major cities	7.4, 9.1	4.3, 5.3	3.9, 4.9	3.5, 4.2	2.9, 3.5	4.6, 5.0
Inner regional	8.5, 11.0	5.3, 7.6	3.8, 5.3	3.4, 4.8	3.4, 4.7	5.6, 6.6
Outer regional	7.9, 11.9	4.1, 6.8	3.1, 4.8	3.8, 5.1	1.8, 3.7	5.0, 6.5
Remote/Very remote	3.5, 13.3	3.7, 10.0	1.7, 6.5	3.4, 7.0	2.5, 4.0	4.3, 6.8
All people aged 15 and over	7.9, 9.3	4.8, 5.7	3.9, 4.7	3.6, 4.2	3.0, 3.5	4.9, 5.3

Table C2.20: Number of missing teeth by annual household income, insurance status and region, dentate people aged 15 and over, 2013 (average) (95% confidence intervals)

Source: National Dental Telephone Interview Survey 2013.

# Table C2.21: Prevalence of complete tooth loss among adults in Australia, New Zealand and Canada (%) (95% confidence intervals)

	Australia	New Zealand		Australia	Canada
All persons aged 18 and over			All persons aged 20–79	3.8, 5.1	4.9, 8.3
18–24 years		—, 0.8	20–39 years	0.0, 0.5	
25–34 years		—, 0.1			
35–44 years	0.0, 0.7	0.4, 4.3	40–59 years	2.3, 4.0	3.0, 6.3
45–54 years	1.8, 4.3	1.8, 5.2			
55–64 years	6.5, 10.5	10.6, 18.7	60–79 years	13.0, 17.7	15.7, 29.1
65–74 years	11.9, 18.4	23.2, 36.1			
75 years and over	22.2, 33.5	32.8, 46.5			

Sources: Health Canada (2010); National Dental Telephone Interview Survey 2013; New Zealand Ministry of Health (2010).

	Age (years)				
	15–24	25–44	45–64	65+	All people
Sex					
Male	9.8, 19.1	14.4, 22.4	11.5, 17.3	4.8, 11.7	13.0, 17.0
Female	10.2, 18.8	18.9, 26.8	13.6, 19.3	6.0, 13.1	15.4, 19.3
Remoteness area					
Major cities	10.5, 18.1	17.4, 24.3	12.1, 17.0	6.3, 12.5	14.5, 17.9
Inner regional	10.7, 25.4	13.1, 23.8	11.8, 20.6	1.7, 7.7	12.4, 17.7
Outer regional	0.0, 16.1	13.6, 28.9	12.3, 26.3	3.3, 23.2	13.0, 21.4
Remote/Very remote	0.0, 21.6	6.9, 45.9	1.2, 29.9	0.0, 63.9	9.7, 33.7
Insurance status					
Insured	7.5, 16.0	11.7, 18.4	9.5, 14.0	4.6, 10.8	10.7, 13.9
Uninsured	11.7, 20.8	21.4, 30.3	16.9, 24.4	5.9, 13.5	17.9, 22.5
Eligibility for public dental care					
Eligible	13.1, 26.9	25.5, 41.7	22.0, 34.2	6.3, 12.4	17.5, 23.3
Ineligible	9.2, 16.4	15.2, 21.0	10.7, 14.9	3.8, 12.3	13.2, 16.3
Annual household income (\$)					
<30,000	19.0, 47.0	25.5, 48.8	23.6, 37.7	6.3, 14.6	19.8, 27.8
30,000-<60,000	9.5, 26.4	18.6, 32.9	12.9, 23.5	2.4, 9.6	15.1, 21.8
60,000-<90,000	2.5, 19.6	18.4, 32.1	9.5, 18.2	2.3, 16.2	14.4, 21.7
90,000–<140,000	3.2, 11.9	9.6, 19.5	8.2, 15.4	0.0, 5.0	9.4, 14.8
140,000+	5.1, 17.1	5.9, 12.7	4.5, 10.7	0.0, 15.8	6.8, 11.4
All people aged 15 and over	11.3, 17.7	17.8, 23.4	13.4, 17.5	6.4, 11.4	14.8, 17.6

Table C2.22: Prevalence of toothache experience in the previous 12 months by selected characteristics, dentate people aged 15 and over, 2013 (%) (95% confidence intervals)

	Age (years)				
	15–24	25–44	45–64	65+	All people
Sex					
Male	12.2, 25.9	19.2, 28.7	22.1, 29.7	12.2, 20.7	20.2, 25.1
Female	18.3, 33.0	27.3, 35.9	31.5, 38.4	22.0, 29.8	28.7, 33.2
Dentate status					
Dentate	17.3, 27.3	24.8, 31.2	28.0, 33.2	19.2, 25.7	25.5, 29.0
Edentulous	_	0.0, 89.6	18.5, 48.7	12.1, 25.0	16.0, 28.3
Remoteness area					
Major cities	13.8, 25.2	25.7, 33.6	26.5, 33.0	17.3, 24.6	24.8, 29.0
Inner regional	20.6, 45.2	16.0, 27.5	27.0, 37.6	17.3, 28.4	24.1, 30.5
Outer regional	7.2, 54.1	16.5, 32.9	26.7, 42.0	13.8, 29.9	23.2, 32.8
Remote/Very remote	0.0, 33.9	6.7, 36.1	17.5, 49.5	8.0, 66.3	16.6, 37.3
Insurance status					
Insured	14.3, 30.0	19.3, 27.7	20.9, 26.9	18.0, 26.4	21.2, 25.4
Uninsured	16.1, 30.6	27.1, 36.7	35.3, 44.1	17.3, 25.2	28.3, 33.5
Eligibility for public dental care					
Eligible	17.6, 39.9	36.3, 53.6	40.5, 53.5	18.9, 25.8	29.7, 36.0
Ineligible	14.7, 25.9	21.4, 28.2	24.2, 29.7	14.8, 25.4	22.8, 26.7
Annual household income (\$)					
<30,000	10.0, 45.8	34.3, 58.4	37.4, 51.7	18.8, 27.4	29.2, 37.0
30,000-<60,000	5.1, 24.4	22.9, 38.0	29.9, 42.3	16.4, 27.8	25.2, 32.8
60,000–<90,000	12.7, 47.6	21.8, 36.5	26.8, 39.5	13.3, 36.0	25.8, 34.7
90,000-<140,000	8.3, 30.8	18.5, 31.6	20.0, 30.4	7.3, 35.1	20.5, 28.5
140,000+	11.0, 35.1	12.1, 23.7	10.8, 20.5	0.4, 48.9	14.2, 21.7
All people aged 15 and over	17.3, 27.3	24.8, 31.2	28.1, 33.3	18.8, 24.6	25.4, 28.7

Table C2.23: Prevalence of feeling uncomfortable about dental appearance in the previous 12 months by selected characteristics, people aged 15 and over, 2013 (%) (95% confidence intervals)

	Age (years)				
	15–24	25–44	45–64	65+	All people
Sex					
Male	7.8, 16.2	14.1, 22.4	16.6, 23.1	15.1, 24.3	15.8, 20.0
Female	12.4, 22.0	19.2, 26.3	24.0, 30.5	21.8, 29.7	21.9, 25.7
Dentate status					
Dentate	11.3, 17.7	17.7, 23.2	20.5, 25.1	17.9, 24.5	18.8, 21.7
Edentulous	_	0.0, 94.2	33.6, 61.9	23.1, 37.6	27.8, 40.8
Remoteness area					
Major cities	10.3, 18.1	17.4, 24.1	19.2, 24.9	19.9, 27.8	18.8, 22.3
Inner regional	8.6, 21.9	11.7, 20.8	21.5, 31.0	13.9, 23.8	17.5, 22.8
Outer regional	6.6, 28.8	16.3, 33.0	21.0, 35.5	19.4, 38.5	21.4, 30.2
Remote/Very remote	0.0, 24.0	5.9, 43.3	7.4, 37.6	0.1, 17.1	10.0, 30.9
Insurance status					
Insured	8.3, 17.3	14.2, 21.1	14.8, 19.7	14.8, 22.7	15.3, 18.7
Uninsured	12.2, 21.8	18.4, 26.7	28.0, 36.2	22.1, 30.9	22.6, 27.1
Eligibility for public dental care					
Eligible	10.0, 24.0	23.9, 38.9	35.2, 47.9	21.6, 29.0	25.7, 31.3
Ineligible	10.2, 17.4	15.5, 21.3	17.3, 21.9	11.9, 20.6	16.3, 19.5
Annual household income (\$)					
<30,000	12.8, 37.4	23.9, 44.6	38.3, 52.3	21.7, 31.1	28.5, 35.8
30,000-<60,000	10.1, 26.6	17.0, 31.0	23.3, 35.0	13.9, 24.6	20.4, 27.2
60,000–<90,000	4.1, 20.1	15.6, 29.0	15.3, 24.5	10.0, 28.8	16.2, 23.4
90,000–<140,000	5.8, 20.7	14.1, 24.4	11.1, 19.4	2.2, 21.7	13.6, 19.7
140,000+	4.5, 17.5	6.9, 16.3	7.1, 13.7	0.0, 33.6	8.4, 13.9
All people aged 15 and over	11.3, 17.7	17.8, 23.2	21.3, 25.9	20.0, 26.0	19.5, 22.3

Table C2.24: Prevalence of avoiding certain foods in the previous 12 months by selected characteristics, people aged 15 and over, 2013 (%) (95% confidence intervals)

	Time since last visit					
	<12 months	1-<2 years	2–<5 years	5+ years or never		
Sex						
Male	58.8, 63.6	15.5, 19.2	10.0, 13.2	8.6, 11.7		
Female	65.3, 69.5	15.8, 19.2	8.3, 11.1	4.5, 6.7		
Age (years)						
5–14	75.1, 82.1	9.3, 14.8	1.7, 4.2	4.9, 9.4		
15–24	62.3, 70.7	16.4, 23.3	7.1, 12.5	2.6, 6.9		
25–44	51.9, 58.5	17.5, 22.9	12.9, 17.6	7.9, 11.8		
45–64	61.1, 66.4	16.0, 20.2	8.3, 11.8	6.7, 10.2		
65+	66.3, 73.7	10.1, 15.0	8.2, 13.3	5.0, 9.9		
All people aged 5 and over	62.8, 65.9	16.1, 18.6	9.6, 11.6	6.9, 8.8		

Table C3.1: Time since last dental visit by age and sex, dentate people aged 5 and over, 2013 (%) (95% confidence intervals)

	Time since last visit				
	<12 months	1-<2 years	2-<5 years	5+ years or never	
Sex					
Male	55.7, 60.9	16.0, 20.1	11.4, 14.9	9.0, 12.5	
Female	63.5, 68.0	16.6, 20.3	9.1, 12.3	4.2, 6.4	
Remoteness area					
Major cities	61.9, 66.2	15.6, 19.0	9.7, 12.5	6.5, 9.1	
Inner regional	54.1, 61.2	17.1, 23.0	11.4, 16.8	6.6, 10.9	
Outer regional	51.1, 61.3	16.9, 24.8	11.9, 19.8	5.4, 11.0	
Remote/Very remote	43.1, 65.6	19.7, 39.0	4.3, 11.3	5.8, 16.6	
Insurance status					
Insured	71.7, 75.7	13.4, 16.8	6.4, 8.9	3.0, 4.6	
Uninsured	48.2, 53.7	19.1, 23.5	13.6, 17.6	10.5, 14.3	
Eligibility for public dental care					
Eligible	58.1, 64.7	15.7, 21.1	10.1, 14.4	6.4, 10.4	
Ineligible	60.3, 64.4	16.6, 19.8	10.3, 13.1	6.7, 9.2	
Annual household income (\$)					
<30,000	52.8, 61.3	15.1, 21.3	11.4, 17.6	8.1, 14.0	
30,000-<60,000	52.7, 60.9	16.9, 23.8	11.0, 17.0	7.0, 12.4	
60,000-<90,000	55.4, 63.9	15.8, 22.6	9.1, 14.6	7.4, 12.9	
90,000-<140,000	63.1, 70.5	14.2, 20.3	8.4, 13.1	4.0, 7.8	
140,000+	63.6, 71.9	14.1, 20.6	6.7, 12.4	4.0, 8.4	
All people aged 15 and over	60.3, 63.8	16.9, 19.6	10.7, 13.0	6.9, 9.0	

Table C3.2: Time since last dental visit by selected characteristics, dentate people aged 15 and over, 2013 (%) (95% confidence intervals)

Source: National Dental Telephone Interview Survey 2013.

# Table C3.3: Proportions of adults who made a dental visit in the previous 12 months, Australia, New Zealand and Canada (%) (95% confidence intervals)

	Australia	New Zealand		Australia	Canada
All persons aged 18 and over	50.5, 60.8	27.7, 46.1	All persons aged 20–79		
18–24 years	53.5, 63.7	37.0, 52.3	20–39 years	51.6, 58.2	64.1, 71.5
25–34 years	52.7, 60.4	38.0, 48.6			
35–44 years	56.5, 63.3	50.2, 61.3	40–59 years	58.7, 63.5	75.0, 81.6
45–54 years	59.3, 65.8	49.7, 91.7			
55–64 years	54.5, 63.5	41.9, 53.6	60–79 years	57.0, 63.2	72.9, 81.3
65–74 years	48.4, 60.8	34.1, 46.5			
75 years and over	50.5, 60.8	27.7, 46.1			

Sources: Health Canada 2010; National Dental Telephone Interview Survey 2013; New Zealand Ministry of Health 2010.

	Reason for last visit				
	Check-up	Problen			
Sex					
Male	59.8, 65.0	35.0, 40.2			
Female	62.3, 66.8	33.2, 37.			
Age (years)					
5–14	76.4, 83.6	16.4, 23.			
15–24	71.4, 79.6	20.4, 28.			
25–44	57.5, 65.0	35.0, 42.			
45–64	51.5, 57.3	42.7, 48.			
65+	49.1, 57.2	42.8, 50.			
Remoteness area					
Major cities	63.0, 67.2	32.8, 37.			
Inner regional	55.0, 62.1	37.9, 45.			
Outer regional	56.9, 66.9	33.1, 43.			
Remote/Very remote	45.0, 69.0	31.0, 55.			
Insurance status					
Insured	67.4, 71.5	28.5, 32.			
Uninsured	53.1, 58.8	41.2, 46.			
Eligibility for public dental care					
Eligible	51.0, 58.0	42.0, 49.			
Ineligible	64.7, 68.5	31.5, 35.			
Annual household income (\$)					
<30,000	43.7, 53.0	47.0, 56.			
30,000–<60,000	57.1, 65.2	34.8, 42.			
60,000–<90,000	57.4, 66.0	34.0, 42.			
90,000–<140,000	65.1, 72.1	27.9, 34.			
140,000+	70.7, 77.9	22.1, 29.			
All people aged 5 and over	61.8, 65.2	34.8, 38.			

Table C3.4: Reason for last dental visit by selected characteristics, proportion of dentate people aged 5 and over, 2013 (%) (95% confidence intervals)

Table C3.5: Proportion of adults who last visited for a check-up, Australia and New Zealand (%) (95% confidence intervals)

	Australia	New Zealand
All people aged		
18 and over	50.5, 60.8	27.7, 46.1
18–24 years	53.5, 63.7	37.0, 52.3
25–34 years	52.7, 60.4	38.0, 48.6
35–44 years	56.5, 63.3	50.2, 61.3
45–54 years	59.3, 65.8	49.7, 91.7
55–64 years	54.5, 63.5	41.9, 53.6
65–74 years	48.4, 60.8	34.1, 46.5
75 years and over	50.5, 60.8	27.7, 46.1

Sources: National Dental Telephone Interview Survey 2013; New Zealand Ministry of Health 2010.

	Type of practice visited at last dental visit						
	Private	Public	SDS	Other			
Sex							
Male	81.2, 85.6	8.2, 11.9	3.1, 5.0	1.8, 4.0			
Female	83.0, 87.1	7.7, 11.0	3.4, 5.9	0.7, 2.0			
Age (years)							
5–14	58.8, 68.1	10.5, 17.9	17.8, 25.6	0.5, 2.6			
15–24	78.3, 86.4	8.2, 15.0	2.4, 6.1	1.0, 5.1			
25–44	86.0, 91.7	5.4, 10.4	0.0, 0.1	2.0, 5.3			
45–64	90.9, 94.6	4.2, 7.4	0.0, 0.7	0.7, 2.6			
65+	81.5, 88.5	10.9, 17.8	0.0, 0.3	0.2, 1.6			
Remoteness area							
Major cities	84.7, 88.2	7.0, 9.8	2.4, 4.3	1.3, 2.8			
Inner regional	76.6, 83.5	9.6, 15.4	4.6, 8.7	0.5, 2.7			
Outer regional	71.7, 81.5	8.3, 16.0	6.0, 10.9	1.4, 7.7			
Remote/Very remote	49.4, 79.5	11.8, 43.1	4.0, 13.9	0.6, 7.3			
Insurance status							
Insured	92.0, 94.3	2.4, 4.1	2.0, 3.3	0.7, 1.8			
Uninsured	68.2, 74.4	16.3, 21.6	5.2, 8.6	2.0, 4.6			
Eligibility for public dental care							
Eligible	66.5, 73.9	21.0, 28.0	3.2, 6.3	0.4, 2.2			
Ineligible	87.4, 90.5	3.7, 5.8	3.3, 5.2	1.6, 3.1			
Annual household income (\$)							
<30,000	59.6, 70.4	24.9, 35.6	2.1, 5.6	0.4, 4.4			
30,000–<60,000	78.3, 85.7	8.7, 14.6	3.4, 8.2	0.4, 2.9			
60,000-<90,000	81.9, 89.0	4.6, 9.7	3.8, 8.8	0.7, 3.9			
90,000-<140,000	87.6, 92.5	1.6, 4.5	3.6, 7.0	1.1, 3.6			
140,000+	89.5, 94.0	1.4, 3.7	2.3, 5.4	1.1, 3.9			
All people aged 5 and over	82.8, 85.8	8.4, 10.8	3.5, 5.1	1.4, 2.6			

Table C3.6: Type of practice visited at last dental visit by selected characteristics, proportion of dentate people aged 5 and over who visited in last 12 months, 2013 (%) (95% confidence intervals)

	Dental visiting pattern						
	Favourable	Intermediate	Unfavourable				
Sex							
Male	35.8, 41.0	31.8, 37.0	24.9, 29.8				
Female	47.2, 52.0	28.4, 33.0	17.8, 21.9				
Age (years)							
18–24	43.9, 54.8	30.9, 41.3	11.1, 19.3				
25–44	34.3, 40.7	32.4, 38.9	24.1, 30.1				
45–64	45.0, 50.4	26.0, 30.9	21.6, 26.4				
65+	44.6, 52.3	26.9, 34.1	17.9, 24.9				
Remoteness area							
Major cities	44.5, 49.0	29.4, 33.8	19.8, 23.7				
Inner regional	35.2, 42.0	30.6, 37.4	24.2, 31.0				
Outer regional	31.8, 42.2	28.5, 38.6	25.1, 35.1				
Remote/Very remote	20.4, 45.1	28.4, 51.8	20.0, 40.3				
Insurance status							
Insured	58.6, 63.2	24.7, 28.9	10.9, 14.0				
Uninsured	24.1, 29.0	35.2, 40.8	32.9, 38.4				
Eligibility for public dental care							
Eligible	31.6, 37.9	31.3, 38.1	27.4, 34.1				
Ineligible	45.2, 49.4	29.7, 33.8	19.3, 22.9				
Annual household income (\$)							
<30,000	23.9, 31.1	33.2, 42.0	30.8, 39.6				
30,000-<60,000	34.8, 42.6	28.7, 37.0	24.8, 32.9				
60,000-<90,000	38.1, 46.8	28.9, 37.6	20.9, 28.6				
90,000-<140,000	48.0, 56.2	25.1, 32.6	16.1, 22.7				
140,000+	52.6, 61.5	26.5, 34.8	9.7, 15.7				
All people aged 18 and over	42.3, 45.9	30.7, 34.2	21.9, 25.1				

Table C3.7: Dental visiting pattern by selected characteristics, proportion of dentate people aged 18 and over, 2013 (%) (95% confidence intervals)

	Number of visits	Extractions	Fillings	Scale and cleans
Sex				
Male	2.18, 2.42	0.23, 0.33	0.60, 0.73	1.02, 1.12
Female	2.38, 2.65	0.22, 0.32	0.58, 0.71	1.06, 1.14
Age (years)				
5–14	2.14, 2.63	0.14, 0.26	0.31, 0.53	0.83, 1.01
15–24	2.47, 3.12	0.14, 0.33	0.36, 0.60	1.01, 1.17
25–44	1.97, 2.27	0.24, 0.38	0.60, 0.80	1.02, 1.15
45–64	2.27, 2.56	0.22, 0.36	0.70, 0.85	1.09, 1.19
65+	2.37, 2.79	0.20, 0.44	0.69, 0.91	1.10, 1.25
Remoteness area				
Major cities	2.38, 2.62	0.22, 0.31	0.57, 0.68	1.11, 1.19
Inner regional	2.17, 2.44	0.22, 0.38	0.68, 0.89	0.90, 1.02
Outer regional	1.85, 2.12	0.14, 0.32	0.49, 0.73	0.81, 0.95
Remote/Very remote	1.65, 2.29	0.20, 0.82	0.45, 0.97	0.74, 1.14
Insurance status				
Insured	2.36, 2.59	0.18, 0.28	0.61, 0.72	1.16, 1.23
Uninsured	2.20, 2.50	0.28, 0.40	0.56, 0.72	0.88, 0.99
Eligibility for public dental care				
Eligible	2.30, 2.67	0.28, 0.43	0.66, 0.88	0.93, 1.08
Ineligible	2.29, 2.50	0.20, 0.29	0.56, 0.66	1.08, 1.15
Annual household income (\$)				
<30,000	2.39, 2.96	0.34, 0.59	0.74, 1.08	0.88, 1.10
30,000-<60,000	2.14, 2.60	0.19, 0.32	0.58, 0.78	1.02, 1.16
60,000-<90,000	2.15, 2.53	0.21, 0.41	0.57, 0.80	0.92, 1.07
90,000-<140,000	2.27, 2.67	0.11, 0.20	0.53, 0.71	1.04, 1.16
140,000+	2.11, 2.44	0.09, 0.24	0.38, 0.55	1.12, 1.26
All people aged 5 and over	2.32, 2.50	0.24, 0.31	0.61, 0.70	1.05, 1.12

Table C3.8: Dental services received in last 12 months by selected characteristics, dentate people aged 5 and over who visited in previous 12 months, 2013 (average number) (95% confidence intervals)

	Age (years)										
	6	7	8	9	10	11	12	13	14	15	
DMFT = 0	2.7, 2.9	8.0, 8.4	18.1, 18.6	23.0, 23.5	24.7, 25.3	23.2, 23.8	26.2, 26.9	28.4, 29.1	25.6, 26.3	2.7, 2.9	
DMFT >0	6.4, 7.7	16.3, 17.5	26.2, 27.4	27.7, 28.7	30.6, 31.5	33.6, 34.5	39.8, 40.7	39.3, 40.0	40.5, 41.2	6.4, 7.7	

Table C3.9: Children with fissure-sealed teeth by DMFT status and age, children attending a school dental service, 2010 (%) (95% confidence intervals)

Notes

1. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

2. Data from Victoria were not available.

Source: Child Dental Health Survey 2010.

#### Table C3.10: Fissure-sealed teeth by age, children attending a school dental service, 2010 (average number) (95% confidence intervals)

	Age (years)										
_	6	7	8	9	10	11	12	13	14		
Average	0.07, 0.09	0.25, 0.29	0.56, 0.61	0.67, 0.72	0.74, 0.80	0.69, 0.75	0.87, 0.94	1.02, 1.12	1.01, 1.11		

Notes

1. New South Wales was excluded from the data collection due to a lack of representativeness of the sample.

2. Data from Victoria were not available.

Source: Child Dental Health Survey 2010.

			Age (years)			
-	5–14	15–24	25–44	45–64	65+	All people
Sex						
Male	7.8, 14.7	14.9, 25.1	37.8, 47.6	28.9, 36.8	14.9, 25.4	27.1, 31.7
Female	6.2, 14.1	20.7, 31.9	42.7, 51.5	35.2, 42.3	22.0, 31.2	32.0, 36.2
Remoteness area						
Major cities	6.9, 13.4	17.5, 26.6	40.5, 48.5	31.5, 38.2	19.0, 28.0	29.5, 33.4
Inner regional	8.4, 20.6	18.2, 35.4	40.2, 54.8	31.4, 41.7	12.9, 24.5	28.6, 34.9
Outer regional	1.7, 10.0	11.9, 40.0	33.6, 52.2	33.2, 49.2	23.1, 47.0	29.0, 38.1
Remote/Very remote	0.0, 10.9	2.1, 41.7	24.4, 63.0	19.8, 53.3	5.4, 52.3	22.3, 42.1
Dental insurance status						
Insured	3.5, 9.0	8.6, 18.3	26.0, 34.4	19.4, 25.1	11.0, 19.0	18.4, 22.0
Uninsured	10.9, 20.0	26.7, 38.5	52.6, 62.5	50.2, 59.1	26.3, 37.6	41.2, 46.2
Eligibility for public dental care						
Eligible	7.3, 17.7	20.5, 37.9	54.7, 70.8	53.1, 65.9	21.4, 29.6	34.8, 41.0
Ineligible	7.0, 13.0	17.0, 25.3	37.4, 44.6	28.1, 33.7	12.1, 25.6	27.6, 31.2
Annual household income (\$)						
<30,000	5.4, 22.9	16.8, 43.3	44.4, 68.2	56.7, 70.2	23.2, 34.5	36.8, 45.0
30,000-<60,000	7.9, 22.2	24.3, 44.9	54.5, 70.4	40.7, 53.4	16.5, 30.0	38.2, 45.9
60,000–<90,000	6.2, 17.7	13.0, 33.6	41.8, 56.6	27.9, 39.8	4.3, 22.7	29.5, 37.1
90,000-<140,000	3.0, 9.4	11.7, 29.0	30.8, 43.4	22.8, 34.0	1.0, 22.5	23.0, 29.6
140,000+	1.5, 9.0	6.1, 18.6	19.4, 32.3	10.7, 20.1	0.0, 19.0	13.8, 19.8
All people aged 5 and over	8.1, 13.3	19.3, 26.9	41.6, 48.2	33.2, 38.5	20.0, 27.0	30.2, 33.3

Table C5.1: Proportion of people who avoided or delayed visiting a dentist due to cost, by selected characteristics, dentate people aged 5 and over, 2013 (%) (95% confidence intervals)

_			Age (years)			
_	5–14	15–24	25–44	45–64	65+	All people
Sex						
Male	2.7, 8.3	9.2, 21.7	22.2, 35.2	19.5, 28.2	6.8, 16.7	16.3, 21.3
Female	3.3, 9.7	6.2, 15.9	22.3, 32.0	24.2, 32.3	11.6, 19.7	18.1, 22.3
Remoteness area						
Major cities	2.9, 7.9	6.6, 15.3	22.3, 31.7	22.5, 29.8	10.3, 18.1	17.1, 21.1
Inner regional	3.7, 15.7	11.9, 32.3	19.9, 36.5	21.1, 33.5	6.0, 16.8	17.2, 23.9
Outer regional	1.1, 6.9	0.0, 33.8	19.1, 44.4	13.7, 30.3	5.0, 18.3	13.6, 23.2
Remote/Very remote	0.0, 0.3	0.0, 33.3	11.4, 60.8	18.8, 65.2	17.4, 100.0	15.7, 43.0
Dental insurance status						
Insured	2.1, 7.3	4.4, 13.6	16.1, 24.8	17.3, 23.6	10.3, 18.8	13.8, 17.4
Uninsured	4.2, 11.2	10.6, 22.9	30.6, 44.9	32.2, 44.2	8.8, 18.2	22.2, 28.1
Eligibility for public dental care						
Eligible	3.4, 15.0	9.9, 28.7	29.1, 50.7	33.2, 51.2	11.5, 19.4	20.0, 26.6
Ineligible	3.0, 7.4	7.3, 15.9	21.0, 29.5	20.5, 26.5	5.3, 15.1	16.3, 20.0
Annual household income (\$)						
<30,000	4.4, 29.1	3.0, 44.6	25.0, 59.3	28.5, 48.6	13.5, 25.4	22.5, 32.7
30,000-<60,000	0.9, 15.0	1.4, 19.0	30.6, 53.7	27.5, 43.1	7.5, 17.8	20.4, 28.7
60,000-<90,000	1.3, 9.3	4.2, 27.3	22.4, 42.5	18.0, 31.6	0.6, 21.2	16.5, 25.0
90,000-<140,000	1.2, 5.7	2.9, 15.7	16.4, 30.6	18.6, 30.6	0.0, 5.6	13.8, 20.2
140,000+	0.0, 5.8	2.9, 16.3	8.8, 21.7	8.9, 18.6	3.1, 56.6	8.5, 14.2
All people aged 5 and over	3.9, 8.1	9.3, 17.2	23.9, 31.8	23.2, 29.2	10.8, 17.0	17.9, 21.1

Table C5.2: Proportion of people reporting that cost prevented recommended dental treatment, by selected characteristics, dentate people aged 5 and over, 2013 (%) (95% confidence intervals)

_			Age (years)			
	5–14	15–24	25–44	45–64	65+	All people
Sex						
Male	3.9, 9.8	5.1, 13.8	8.7, 19.5	8.7, 15.4	1.1, 5.3	8.1, 11.9
Female	6.5, 16.3	3.4, 10.6	9.0, 15.7	15.8, 22.9	8.1, 15.2	11.5, 14.9
Remoteness area						
Major cities	6.4, 14.0	5.5, 12.8	9.4, 16.8	12.9, 19.0	6.0, 11.7	10.5, 13.8
Inner regional	2.8, 13.9	2.2, 10.2	10.7, 24.8	10.7, 21.4	2.4, 10.2	9.1, 14. <sup>-</sup>
Outer regional	1.5, 7.7	0.7, 7.7	4.2, 21.4	7.4, 22.4	0.2, 11.6	6.3, 12.9
Remote/Very remote	0.0, 1.4	0.0, 2.8	0.2, 3.8	7.8, 44.4	_	1.7, 8.8
Dental insurance status						
Insured	4.1, 10.3	4.8, 11.2	8.1, 15.3	10.0, 15.4	4.3, 10.1	8.7, 11.
Uninsured	6.4, 16.6	4.2, 14.4	9.9, 20.8	17.7, 28.0	5.7, 12.6	11.9, 16.
Eligibility for public dental care						
Eligible	3.0, 16.2	4.6, 19.9	12.9, 30.5	12.6, 24.8	5.5, 10.5	10.3, 15.
Ineligible	5.7, 12.0	4.2, 10.0	7.9, 14.3	12.7, 18.1	3.4, 12.2	9.7, 12.
Annual household income (\$)						
<30,000	2.5, 30.4	2.4, 32.6	7.0, 32.0	15.0, 31.1	5.4, 12.3	11.6, 19.
30,000-<60,000	2.0, 21.8	2.2, 19.0	11.2, 30.3	12.7, 25.9	2.9, 9.3	10.9, 18.
60,000-<90,000	2.6, 11.9	2.1, 13.3	8.5, 26.2	11.3, 23.9	1.6, 20.4	10.0, 17.
90,000-<140,000	3.7, 14.3	3.8, 12.6	4.7, 15.0	7.1, 16.6	0.0, 1.2	7.2, 12.
140,000+	1.7, 9.4	1.3, 8.1	2.7, 12.2	4.5, 10.9	0.0, 34.4	4.6, 8.
All people aged 5 and over	6.2, 11.9	5.4, 11.0	10.1, 16.2	13.5, 18.4	5.7, 10.1	10.4, 13.

Table C5.3: Proportion of people stating dental visits were a large financial burden, by selected characteristics, dentate people aged 5 and over, 2013 (%) (95% confidence intervals)

Source: NDTIS 2013.

Table C5.4: Proportion of people who would have a lot of difficulty paying for a basic preventive visit, by selected characteristics, dentate people aged 18 and over, 2013 (%) (95% confidence intervals)

_	Age (years)					
	15–24	25–44	45–64	65+	All people	
Sex						
Male	23.4, 37.6	18.4, 27.1	16.3, 23.2	17.0, 28.7	20.4, 25.3	
Female	38.1, 53.2	29.6, 38.0	29.4, 36.4	21.0, 30.2	31.3, 36.0	
Remoteness area						
Major cities	32.8, 45.6	23.7, 30.9	22.6, 28.9	19.0, 28.4	25.8, 30.0	
Inner regional	24.3, 46.4	27.6, 42.3	22.5, 32.6	15.9, 27.5	26.1, 33.1	
Outer regional	19.3, 60.2	20.6, 37.7	20.7, 35.5	18.3, 43.5	25.0, 35.5	
Remote/Very remote	0.0, 23.1	4.0, 23.3	8.2, 45.0	0.5, 69.7	10.4, 29.5	
Dental insurance status						
Insured	24.7, 40.5	12.3, 18.5	13.4, 18.6	8.1, 15.5	15.0, 18.7	
Uninsured	35.4, 50.7	34.1, 43.7	35.9, 44.8	30.6, 42.6	36.8, 42.3	
Eligibility for public dental care						
Eligible	39.4, 61.9	49.2, 65.4	58.4, 70.8	23.9, 32.7	42.2, 49.1	
Ineligible	28.1, 40.0	19.2, 25.3	16.1, 21.1	8.4, 21.8	20.2, 23.9	
Annual household income (\$)						
<30,000	48.9, 85.7	52.5, 74.9	58.7, 72.0	33.2, 45.5	49.6, 58.2	
30,000-<60,000	26.2, 51.6	35.0, 51.2	33.8, 46.6	6.7, 17.6	31.3, 39.5	
60,000-<90,000	14.0, 39.2	22.4, 35.8	18.9, 30.5	0.0, 6.2	20.9, 28.8	
90,000-<140,000	24.0, 50.5	10.3, 19.4	4.2, 10.5	0.0, 9.9	10.8, 16.7	
140,000+	16.7, 37.8	3.5, 9.5	2.8, 9.0	0.0, 19.1	7.2, 12.6	
All people aged 18 and over	32.6,43.2	25.3,31.3	23.9,28.9	20.6,28.0	26.6,30.0	

Notes

1. The cost of a basic preventive visit in 2012 was approximately \$200.

2. The item 'Difficulty paying a \$ dental bill' was collected only for adults aged 18 and over.

	Dentate status		
Age (years)	Dentate	Edentulous	All persons
5–14	47.8, 56.2		47.8, 56.2
15–24	39.3, 48.1		39.3, 48.1
25–44	43.5, 50.1		43.4, 50.0
45–64	55.3, 60.8	11.6, 35.7	54.3, 59.6
65+	47.3, 55.0	18.4, 32.2	42.8, 49.7
All people aged 5 and over	49.0, 52.3	18.7, 30.6	48.1, 51.3

Table C6.1: Proportion of people with dental insurance by age and dentate status, people aged 5 and over, 2013 (%) (95% confidence intervals)

Source: National Dental Telephone Interview Survey 2013.

#### Table C6.2: Proportion of people with dental insurance by selected characteristics, dentate people aged 15 and over, 2013 (%) (95% confidence intervals)

			Age (years)			
-	5–14	15–24	25–44	45–64	65+	All people
Sex						
Male	47.7, 59.4	36.8, 49.5	39.3, 49.0	52.6, 60.8	44.4, 56.5	47.1, 51.9
Female	44.3, 56.6	38.2, 50.4	44.9, 53.8	55.8, 63.0	46.8, 56.8	49.6, 54.1
Remoteness area						
Major cities	50.2, 61.2	41.0, 51.9	43.2, 51.2	59.2, 66.1	49.3, 59.2	51.1, 55.2
Inner regional	33.7, 50.5	28.2, 45.7	37.3, 51.4	43.2, 53.8	39.2, 53.9	41.4, 47.7
Outer regional	33.9, 55.5	21.6, 49.1	35.0, 53.7	39.7, 55.3	30.4, 53.2	39.2, 48.4
Remote/Very remote	43.1, 78.7	23.1, 81.4	40.3, 80.1	34.3, 69.4	22.3, 83.8	46.5, 67.6
Eligibility for public dental care						
Eligible	18.6, 33.9	14.5, 28.7	14.9, 27.7	17.4, 27.5	40.5, 49.6	27.9, 33.4
Ineligible	55.5, 65.1	46.0, 56.3	48.5, 55.8	62.5, 68.3	58.5, 73.0	56.0, 59.8
Annual household income (\$)						
<30,000	4.1, 19.0	4.4, 23.8	10.0, 25.0	17.3, 28.3	26.7, 37.0	20.4, 26.5
30,000-<60,000	23.5, 42.1	17.3, 36.8	18.7, 31.4	38.4, 50.8	59.9, 73.9	35.2, 42.3
60,000-<90,000	35.7, 55.5	33.4, 56.5	33.6, 47.8	53.3, 66.0	68.0, 88.1	46.2, 54.2
90,000–<140,000	58.7, 73.6	47.1, 68.2	62.4, 74.1	63.6, 75.2	60.7, 89.6	63.7, 70.5
140,000+	77.2, 89.8	62.5, 81.0	65.3, 79.7	81.4, 89.9	47.3, 100.0	74.3, 81.4
All people aged 15 and over	47.8, 56.2	39.3, 48.1	43.5, 50.1	55.3, 60.8	47.3, 55.0	49.0, 52.3

# Table C7.1: Proportion of people with dental insurance who reported that health insurance paid all or some of the cost of their care by source of payment, people aged 18 and over, 2013 (%) (95% confidence intervals)

Paid all own expenses	Insurance paid some/patient paid some	Insurance paid all/patient paid none	Govt paid some/ patient or insurance paid some	Govt paid all/ patient paid none	Other payment option
9.0, 12.1	75.2, 79.3	7.3, 10.0	1.0, 2.2	1.0, 2.2	0.4, 1.3

Source: National Dental Telephone Interview Survey 2013.

#### Table C7.2: Proportion of people who reported that dental care caused a large financial burden by source of payment, insured people aged 18 and over, 2013 (%) (95% confidence intervals)

		Govt paid all/	ovt paid some/ patient or	Insurance paid	Insurance paid	
All insured people	Other payment option	patient paid none	insurance paid some	all/patient paid none	some/patient paid some	Paid all own expenses
8.7, 12.1	0.0, 24.3	0.0, 19.5	1.2, 27.5	0.7, 7.4	8.3, 12.2	11.1, 26.1

## Glossary

**Care type:** the overall nature of a clinical service provided to an admitted patient during an episode of care (admitted care), or the type of service provided by the hospital for boarders or posthumous organ procurement (other care).

**Caries:** bacterial disease that causes the demineralisation and decay of teeth and can involve inflammation of the central dental pulp.

**Constant prices:** expenditures reported for a particular year, adjusted for inflation. Constant price estimates indicate what expenditure would have been had 2012–13 prices applied in all years. Hence, expenditures in different years can be compared on a dollar-for-dollar basis.

**Decay:** decay of the teeth caused by caries (*see* **caries**), and progressing to cavities in the enamel or cementum and the dentine.

Deciduous dentition: primary (baby teeth).

**Dental appearance:** self-reported perception of dental appearance related to frequency of feeling uncomfortable with one's dental appearance ('never' or 'hardly ever' compared with 'very often', 'often' or 'sometimes').

**Dentate:** having at least one natural tooth.

Dentition: the set of teeth. A complete dentition comprises 32 adult teeth.

dmft: deciduous decayed, missing (due to decay and filled teeth).

DMFT: permanent decayed, missing (due to decay and filled teeth).

Edentulism/edentulous: complete tooth loss; loss of all natural teeth.

**Eligible for public dental care:** describes people who hold Australian Government concession cards (generally by virtue of their household income) who may be eligible for free or subsidised dental care provided by state and territory governments. Eligibility criteria vary across states and territories.

**Fissure sealant:** a special varnish that seals pits and fissures in teeth to prevent cavities from developing.

Gingivitis: inflammation of the gums.

**Gum treatment**: treatment for disease of the gums and other tissues that attach teeth to the jaws, also referred to as periodontal treatment.

**Oral health:** health of the mouth, tongue and oral cavity; the absence of active disease in the mouth.

Permanent dentition: adult teeth.

**Potentially preventable hospitalisations:** those conditions where hospitalisation is thought to be avoidable if timely and adequate non-hospital care is provided.

**Prevalence:** the proportion of people with a defined disease or characteristic within a defined population.

**Preventive services**: measures taken to prevent dental diseases; may include fluoride treatment, scale and clean services, dental sealants and so on.

**Principal diagnosis:** the diagnosis established after study to be chiefly responsible for occasioning an episode of admitted patient care.

**Private dental services:** dental care provided by private practitioners to adults and children, usually self-funded by the recipient.

**Public dental services:** state- or territory-funded dental care available to adults with low income or other forms of social disadvantage.

**Recurrent expenditure:** expenditure incurred by organisations on a recurring basis for the provision of health goods and services. This excludes capital expenditure. For all years, recurrent expenditure includes capital consumption.

**Remoteness area:** an area categorised according to the Accessibility/Remoteness Index of Australia (where the remoteness index value of a point is based on the physical road distance to the nearest town or service). These area categories are *Major cities, Inner regional, Outer regional, Remote* and *Very remote*.

**Separation:** a completed episode of care for an admitted patient, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute to rehabilitation).

**Separation rate:** the total number of completed episodes of care for admitted patients divided by the total number of people in the population under study. It is often presented as a rate per 1,000 or 10,000 members of a population.

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This report is the latest in the Oral health and dental care in Australia: key facts and figures suite of printed publications and web products. It presents the most recent key information on the oral health and dental care of the Australian population. Between 1994 and 2013, there was an overall increase in the proportion of people who were uncomfortable about their dental appearance, from 20% to nearly 27%. The proportion who reported experiencing a toothache over the previous 12 months increased from around 11% to 16% over the same period.