Australian Government
Australian Institute of Health and Welfare

THE UNIVERSITY of ADELAIDE

Oral health and dental care in Australia

Key facts and figures trends 2014

Oral health and dental care in Australia

Key facts and figures trends 2014

The Australian Institute of Health and Welfare is a major national agency which provides reliable, regular and relevant information and statistics on Australia's health and welfare. The Institute's mission is *authoritative information and statistics to promote better health and wellbeing.*

A complete list of the Institute's publications is available from the Institute's website <www.aihw.gov.au>.

ISBN 978-1-74249-610-8

Suggested citation

AIHW 2014. Oral health and dental care in Australia: key facts and figures trends 2014. Cat. no. DEN 228. Canberra: AIHW.

Any enquiries about or comments on this publication should be directed to:
Digital and Media Communications Unit
Australian Institute of Health and Welfare
GPO Box 570
Canberra ACT 2601
Tel: (02) 6244 1032
Email: info@aihw.gov.au
Published by the Australian Institute of Health and Welfare

Please note that there is the potential for minor revisions of data in this report. Please check the online version at <www.aihw.gov.au> for any amendments.

Contents

Acknowledgments

The authors wish to acknowledge all those who contributed to the data collections used in this report.

Mr Sergio Chrisopoulos and Dr Jane Harford from the AIHW Dental Statistics and Research Unit, Australian Research Centre for Population Oral Health (ARCPOH) at the University of Adelaide provided some of the data tables and analysis.

The Australian Government Department of Health funded this report.

Abbreviations

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
ARCPOH	Australian Research Centre for Population Oral Health
CDHS	Child Dental Health Survey
dmft	decayed, missing, filled (deciduous) teeth
DMFT	decayed, missing, filled (permanent) teeth
DSRU	Dental Statistics and Research Unit (AIHW)
FTE	full-time equivalent
NDTIS	National Dental Telephone Interview Survey
NSAOH	National Survey of Adult Oral Health
PPH	potentially preventable hospitalisation
WHO	World Health Organization

Summary

This report highlights key trends in the oral health and dental care of the Australian population using the most recently available data. It is the latest in the *Oral health and dental care in Australia: key facts and figures* suite of printed publications and web products.

Oral health

The major measures of oral health in Australia suggest that there have been improvements over the long term. In recent years, however, there is some indication that the positive trends have either plateaued or have begun to head in a negative direction. For example:

- From 1977 to 1995, data from examination of school-aged children in school dental services suggests there was a steady drop in the average number of children's baby teeth affected by decay. There has, however, been a gradual rise from 1996.
- Between 1987–88 and 2004–06, national surveys reported a decrease in the average number of teeth affected by decay (caries experience) in adults.
- From 1994 to 2010, the proportion of people aged 15 and over reporting any adverse oral health impact generally rose from survey to survey, with exceptions in 2002 and 2010. The proportion ranged between 31.4% (1994) and 39.9% (2008).

Dental care

In contrast to the recent negative trends in oral health, the trends in dental visiting patterns have generally been more positive.

The proportion of people aged 15 and over who made a dental visit in the previous 12 months increased from 56% in 1994 to 62% in 2010.

The proportion of adults with a favourable visiting pattern generally rose from 36% in 1999 to 46% in 2010.

Despite this, cost of dental care remains a barrier for some. According to the National Dental Telephone Interview Survey, from 1994 to 2010, there was an increase in the proportion of adults avoiding visits to a dentist due to costs, from about 25% to 30%.

There has been a recent growth in the supply of dental practitioners that may have an influence on the availability of dental care across the population. Between 2011 and 2012, the number of dental practitioners employed increased from around 18, 700 to nearly 19,600. Over this period, the full-time equivalent rate of dentists per 100,000 population rose from around 55 to 57 dentists.

1 Introduction

Oral health is an integral aspect of general health. Poor oral health is likely to exist when general health is poor, and vice versa (AHMAC 2001). Oral health is a standard of health of the oral and related tissues that enables an individual to eat, speak and socialise without active disease, discomfort or embarrassment (UK Department of Health 1994).

This report highlights important trends in oral health and dental care in Australia and summarises the latest key findings. Data were sourced from surveys that the Australian Research Centre for Population Oral Health (ARCPOH) manages and administrative data sets that the Australian Institute of Health and Welfare (AIHW) maintain.

This report complements AIHW's webpages available at <Dental and oral health (AIHW)> and is the latest in the *Oral health and dental care in Australia: key facts and figures* suite of printed publications and web products. The topics covered in this report are described below.

Chapter 2 presents data on children and adults, including decay experience in both in baby and permanent teeth, gum disease (periodontal disease), missing teeth and the social impacts of poor oral health such as toothache, avoiding certain foods and feeling uncomfortable about appearance.

Chapter 3 covers dental care. This includes who visited dental practitioners, why and how often they visited, the types of practices visited and the services received. Hospitalisation for dental care is included, as well as potentially preventable hospitalisations (PPHs). PPHs are those conditions where hospitalisation is thought to have been avoidable if timely and adequate non-hospital care had been provided and may be indicators of the quality or effectiveness of non-hospital care.

Total expenditure on dental services in Australia is investigated, as well as who funds the expenditure—governments, individuals or private health insurance. Financial burden is often cited as a reason why people do not seek regular dental care or comply with recommended treatment (AHMAC 2001), so cost as a barrier to seeking dental care is also explored.

Chapter 4 covers the dental workforce, consisting of registered dentists, dental therapists, dental hygienists, oral health therapists and dental prosthetists. The dental workforce plays a vital role in the maintenance and improvement of the oral health of Australians through the provision of preventive and restorative dental services. The characteristics of the dental workforce and the number of specialist dentists are outlined.

Chapter 5 describes the data sources used in this report including their limitations and general data quality.

2 Healthy teeth

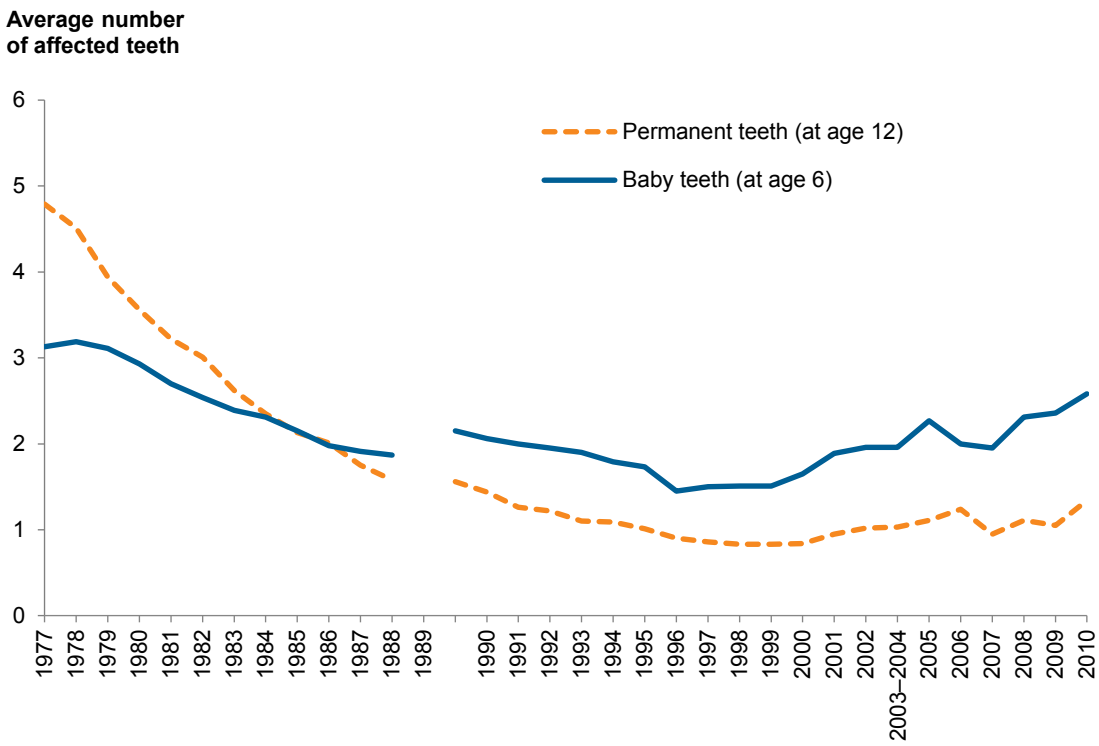
Deciduous caries experience (dmft) is recorded as the number of deciduous (baby) teeth that are either decayed (d), missing (m) because of dental caries or filled (f) because of dental caries. It is based on the World Health Organization protocol (WHO 1997) with further guidelines from Palmer et al.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

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).

2.1 Children

From 1977 to 2010, data from examinations of school-aged children in school dental services suggests there was a drop overall in the average number of children's baby teeth affected by decay. There has, however, been a gradual rise from 1996.

The trend has been similar for permanent teeth at age 12, with a gradual increase from the late 1990s (Figure 2.1). The rise in average dmft (decayed, missing or filled baby teeth) or DMFT (decayed, missing or filled permanent teeth) with age is an indicator of the accumulation of the number of teeth affected by decay as children age. It should be noted that data were not available for New South Wales for 2001 to 2006 and 2008 to 2010 and for Victoria from 2005.



Note: From 1977 to 1988, data are from the Australian School Dental Scheme evaluation. From 1989 data are from the Child Dental Health Survey. Data for 2003 and 2004 are combined. Data were not available for New South Wales for 2001 to 2006 and 2008 to 2010 and for Victoria from 2005.

Source: Child Dental Health Survey, 1977 to 2010.

Figure 2.1: Trends in decayed, missing or filled teeth in children, 1977 to 2010

Table 2.1: Tooth decay and children, 2010—key facts

Baby teeth

- In 2010, the proportion of children who visited a school dental service that had decayed, missing or filled baby teeth varied from about 48% for those aged 5 to 63% for those aged 9.
- Children aged 5 had an average of 2.32 decayed, missing or filled baby teeth, those aged 8 had 2.63, and those aged 10 had 1.78. The smaller number of affected teeth in children aged 10 was related to their having fewer baby teeth.

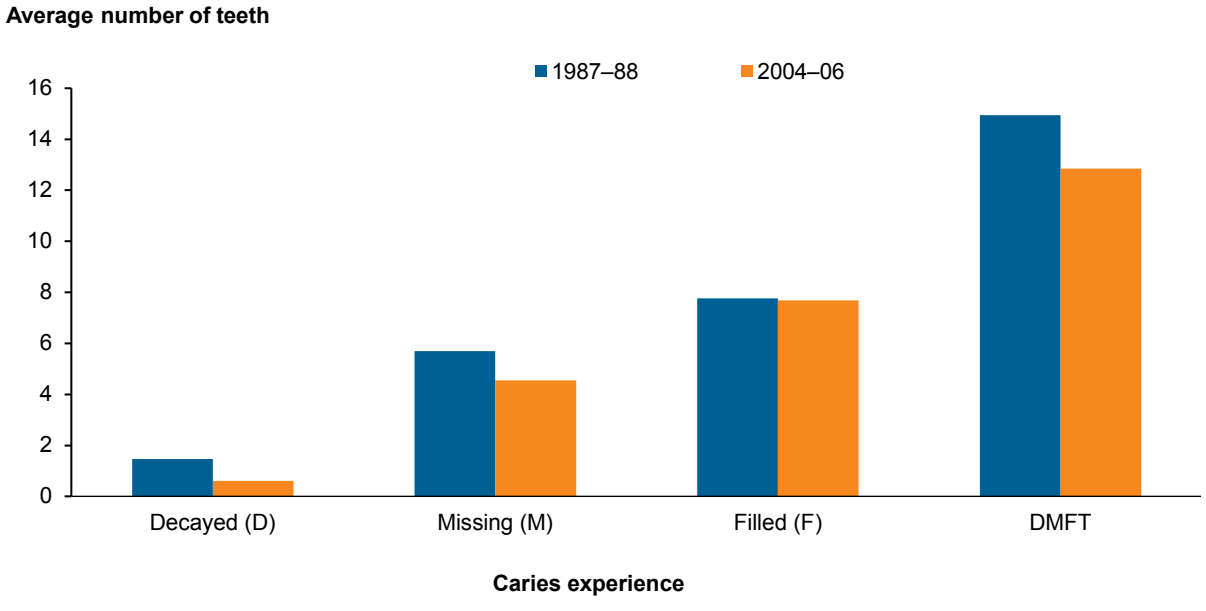
Permanent teeth

- In 2010, nearly half of children aged 12 had experienced decay in their permanent teeth. The general increase in affected teeth with age is related to both the number of permanent teeth older children have, and the increased time that their teeth have been at risk of decay.
- Children aged 6 had an average of 0.13 decayed, missing or filled permanent teeth, while those aged 10 had 0.73 and those aged 15 had 2.63. The lower number for children aged 6 is related to them having fewer permanent teeth.

Source: Child Dental Health Survey 2010.

2.2 Adults

Between 1987–88 and 2004–06, national surveys reported a fall in the average number of teeth affected by decay (caries experience) in adults. The decrease, from nearly 15 teeth to around 13 teeth, was a result of falls in both the average number of teeth with untreated decay, and the average number of teeth missing as a result of decay (Figure 2.2).



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

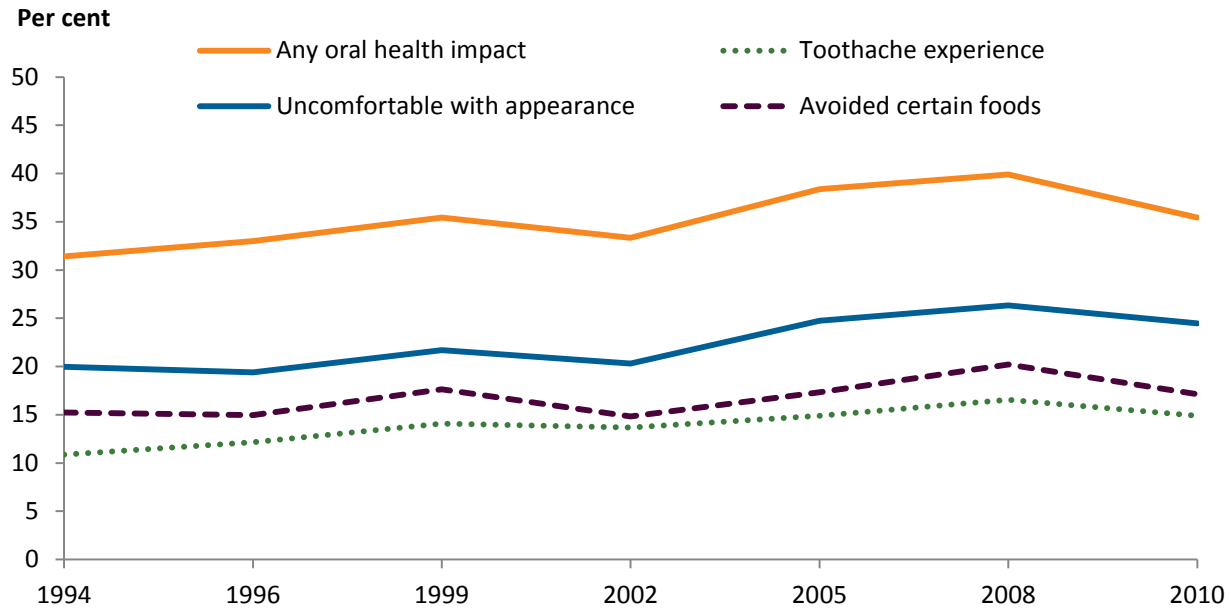
Figure 2.2: Average number of permanent teeth with caries experience, dentate people aged 15 and over, 1987–1988 and 2004–2006

From 1994 to 2010, the proportion of people aged 15 and over reporting any oral health impact generally rose from survey to survey, with exceptions in 2002 and 2010. The proportion ranged between 31.4% (1994) and 39.9% (2008).

The highest percentage point increase over the period was in the proportion of people uncomfortable with their appearance (a 4.5 percentage point rise), most of this increase being in the 8 years since 2002.

The proportion that experienced toothache increased by 4 percentage points.

The proportion of people avoiding certain foods did not show a significant change over the period (Figure 2.3).



Note: To account for any changes in population age structure over time results have been directly age-standardised to the 2001 Australian population.
Source: National Dental Telephone Interview Survey, 1994 to 2010.

Figure 2.3: Dentate people aged 15 and over reporting any oral health impact, 1994–2010 (per cent) aged 15 and over, 1987–1988 and 2004–2006

Tooth decay

Table 2.2: Tooth decay and adults—key facts

Men and women

- In 2004–2006, 3 in 10 adults aged 25–44 had untreated tooth decay.
- More men had untreated decay than women, 28.2% compared to 22.7%.
- Men had a higher average number of decayed teeth than women, 0.70 compared to 0.51.
- Women had more filled teeth than men, an average of 8.14 compared to 7.24.

Geography

- In 2004–2006, people living in *Inner regional* areas had the highest average DMFT at 14.75.
- Fillings contributed the most to DMFT scores in all *remote*ness areas.
- People in *Inner regional* areas had the highest average number of teeth missing due to decay.
- The proportion of people with untreated decay varied from 23.5% in *Major cities* to 37.6% in *Remote/Very remote* areas.

Income, insurance and concession cardholders

- In 2004–2006, the proportion of people with untreated decay was higher for those with household income of less than $12,000 per year, and lower where household income was $100,000 or more.
- A higher proportion of uninsured people (31.1%) than insured people (19.4%) had untreated decay. Insured people had a higher overall DMFT due mostly to a higher number of fillings.
- About 1 in 3 cardholder adults had untreated decay (32.9%), compared to less than 1 in 4 non-cardholders (22.9%). (People who hold an Australian Government concession card, generally by virtue of their household income—'cardholders'—may be eligible for free or subsidised dental care that state and territory governments provide.)

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

Gum disease

Table 2.3: Gum disease and adults—key facts

Age

- In 2004–2006, people were at higher risk of gum disease if they were older—2.7% of people aged 15–24 had gum disease, compared to 53.4% aged 65 and over.

Men and women

- More than one-quarter of men suffered gum disease (26.8%), compared to less than one-fifth of women (19.0%).

Geography

- People living in more *remote* areas had higher rates of gum disease—36.3% had gum disease in *Remote/Very remote* areas compared to 22.1% living in *Major cities*.

Income, insurance and concession cardholders

- People on lower household incomes generally were more likely to have gum disease than those on higher incomes, varying from 42.3% for those in households earning less than $12,000 per year to 14.3% for those in households earning $100,000 or more.
- A lower proportion of insured (19.4%) than uninsured (27.0%) people had gum disease.
- Cardholders had higher rates of periodontal disease (33.6%) than non-cardholders (19.5%).

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

Note: Gum disease (periodontal disease or periodontitis) is the inflammation of tissues surrounding the tooth. It affects the gum, ligaments and bone, and is caused by bacterial infection. This inflammation can develop into 'pockets' or gaps between the tooth and its surrounding gum and the loss of ligaments and bone that support the tooth. In severe cases, there can be extensive loss of bone that supports the tooth, resulting in the tooth becoming loose and even causing tooth loss.

Missing teeth

Table 2.4: Missing teeth and adults—key facts

KEY FACTS

International comparisons

- In Australia, the average number of missing teeth decreased from 6.2 to 5.2 teeth per person from 1994 to 2002.
- Australian adults aged 18 and over were less likely than those in New Zealand to have lost all of their teeth—5.5% of Australians (in 2010) compared to 9.4% of New Zealanders (in 2009).
- For adults aged 20 and over, rates of complete tooth loss were closer to those for Canadian adults—4.4% of Australians (in 2010) compared to 6.4% of Canadians (2007–09).

Age

- In 2010, the proportion of people aged 45–64 without any natural teeth was 5.5%, compared to 21.1% for those aged 65 and over.
- The average number of missing teeth varied from 2.2 teeth for people aged 15–24 to 11.9 teeth for those aged 65 and over.
- The proportion of people (still with some natural teeth) who wore dentures ranged from 0.9% for those aged 15–24 to 47.4% for those aged 65 and over.

Men and women

- On average, women had more missing teeth than men (5.7 and 4.8 teeth, respectively), and a higher proportion of women had lost all their teeth (6.4% compared to 4.1%).

Income, insurance and concession cardholders

- In 2010, adults in the lowest 4 household income categories (<$40,000 per year) had between 6.7 and 10.3 missing teeth, while those in higher household income groups (>$40,000 per year) had from 3.6 to 5.6 missing teeth.
- Adults without insurance had more missing teeth than those with some level of insurance (6.2 compared to 4.7 missing teeth, respectively). In *Major cities* adults without dental insurance had more missing teeth than those with insurance (5.8 and 4.4 teeth, respectively).
- Cardholders had more missing teeth, on average, than non-cardholders (8.5 and 4.3 teeth, respectively). Across age groups, the differences were only significant for people aged 45 and over.

Sources: National Dental Telephone Interview Survey, 1994 to 2010, NZMH 2010 and OCDOC 2013.

Note: About 90% of all tooth loss can be attributed to dental caries (tooth decay) and periodontal disease (gum disease) (AHMAC 2001). Tooth loss occurs primarily because of a treatment decision to extract 1 or more teeth. Teeth are usually extracted because of extensive disease precluding other treatments, the preference of a patient and the recommendation of a dentist (Slade et al. 2007). Measures of tooth loss include prevalence of complete tooth loss (edentulism) and the average number of missing teeth.

Other oral health impacts

Table 2.5: Impacts of poor oral health in the previous 12 months, 2010—key facts

Experience of toothache

- In 2010, about 1 in 7 people (15.0%) aged 15 and over reported that they had experienced toothache (17.1% of those aged 25–44) compared to 10.1% of those aged 65 and over.
- Nearly 1 in 5 cardholders reported toothache (18.8%), compared to about 1 in 7 non-cardholders (13.9%).
- A higher proportion of those without insurance experienced toothache compared to those with insurance (19.4% and 11.7%, respectively).
- There were no statistically significant differences in toothache experience based on sex, geography or income.

Uncomfortable about dental appearance

- In 2010, for people with their natural teeth, those reporting feeling uncomfortable about their dental appearance ranged from 18.7% for those aged 15–24 to 28.8% for those aged 45–64.
- Among adults without any natural teeth (edentulous), those aged 65 and over were less likely to be uncomfortable with their dental appearance (11.3%) than those aged 25–44 (75.2%).
- Females were more likely to be uncomfortable about their dental appearance than males (27.8% compared with 21.8%).
- There were no differences across remoteness areas.
- Adults in higher income households ($100,000 and over) were less likely to be uncomfortable with their dental appearance than those in lower income households.
- Uninsured persons were more likely than insured persons to be uncomfortable with their dental appearance (30.1% compared with 21.0%).
- Cardholders were more likely to report feeling uncomfortable (28.9%) than non-cardholders (23.6%).

Avoided certain foods because of problems with their teeth

- In 2010, the proportion of people who reported avoiding certain foods because of problems with their teeth ranged from 12.2% for people aged 15–24 to 20.9% for those aged 45–64.
- Adults with some natural teeth were less likely to avoid certain foods than those with no natural teeth (16.5% and 30.6%, respectively).
- Adults aged 15–24 with some natural teeth had significantly lower rates of avoiding certain foods than the 2 age groups 45–64 and 65 and over (12.2%, 19.7% and 19.3%, respectively).
- Women were more likely to avoid food than men (21.6% compared with 12.9%).
- Avoiding certain foods was more frequent in the 3 lowest-income household groups (<$40,000 per annum) compared with the 3 highest-income household groups (>$40,000 per year) (34.5%, 26.7% and 28.9% compared with 16.8%, 13.5% and 10.4%).
- Avoiding certain foods was more frequent for uninsured persons than for insured persons (22.2% compared with 13.5%).
- Avoiding certain foods was more frequent for persons eligible for public dental care compared with ineligible persons (26.6% compared with 14.0%).

Source: National Dental Telephone Interview Survey 2010.

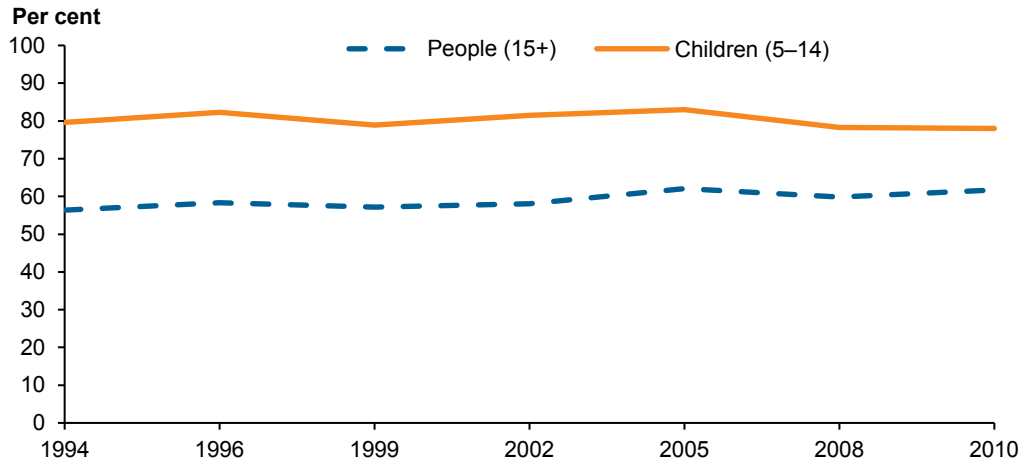
3 Dental care

There are 2 main reasons a person may visit a dental professional—for routine check-ups and for an established dental problem. Generally, people who seek regular and routine care report lower rates of extractions and relatively low rates of fillings (Ellershaw & Spencer 2011).

3.1 Visiting a dental practitioner

The proportion of people aged 15 and over who made a dental visit in the previous 12 months increased from 56% in 1994 to 62% in 2010.

The proportion of children aged 5–14 who made a visit in the previous 12 months was steady over this time at around 80% (Figure 3.1).

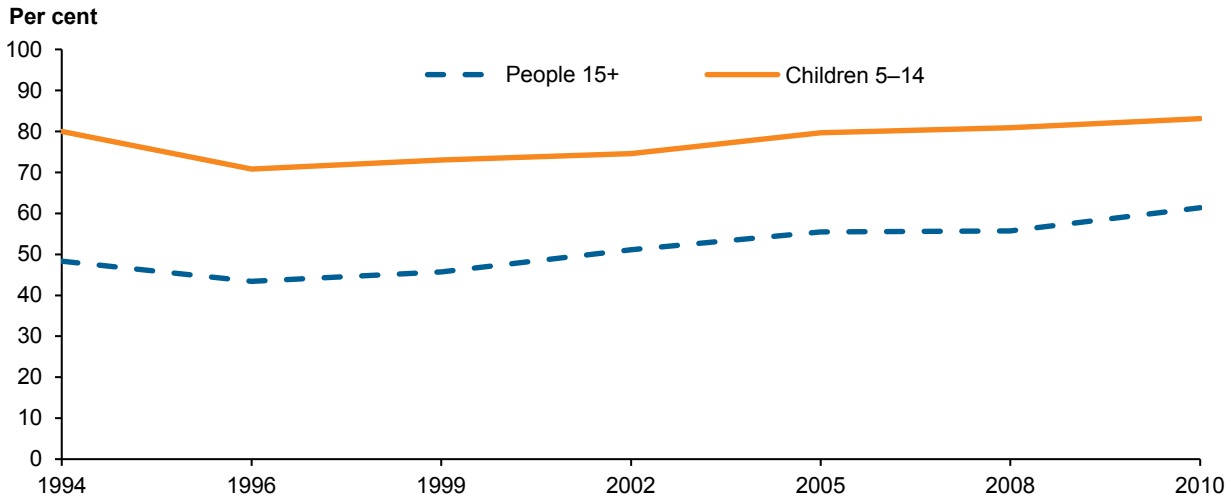


Note: To account for any changes in population age structure over time results have been directly age-standardised to the 2001 Australian population.
Source: National Dental Telephone Interview Survey, 1994 to 2010.

Figure 3.1: Last dental visit was in the previous 12 months, dentate children aged 5–14 and dentate people aged 15 years and over, 1994–2010 (per cent)

The proportion of people aged 15 and over who last visited for a check-up rose from 48.3% in 1994 to 61.4% in 2010.

After declining from 80.9% 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 (Figure 3.2).



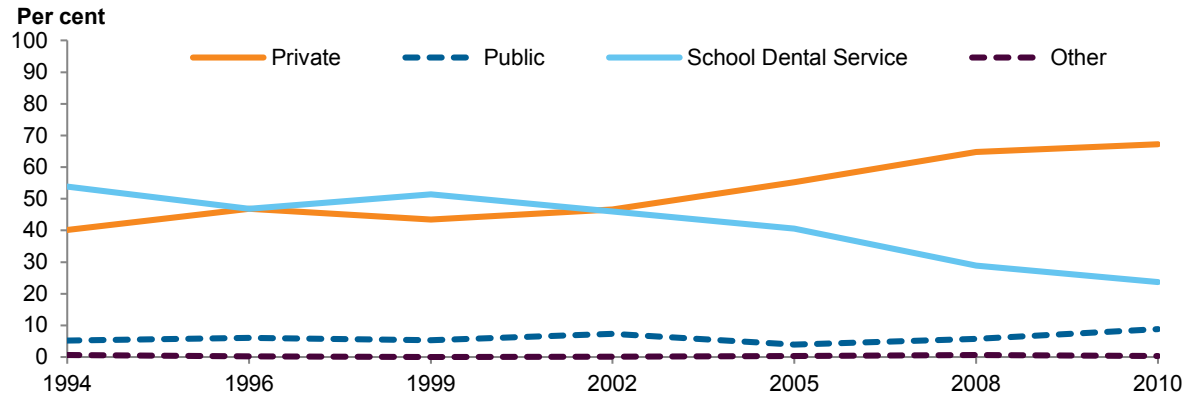
Notes

1. Data in this figure relate to a dental visit in the previous 12 months.
2. To account for any changes in population age structure over time results have been directly age-standardised to the 2001 Australian population.

Source: National Dental Telephone Interview Survey, 1994 to 2010.

Figure 3.2: Last dental visit was for a check-up, dentate children aged 5–14 years and dentate adults aged 15 years and over, 1994–2010 (per cent)

Of those who made a dental visit in the previous 12 months, the proportion of children aged 5–14 who visited a public dental service remained low from 1994 to 2010. From 2002, the proportion who visited a private practice rose, with a complementary drop in those visiting a school dental service (Figure 3.3).



Notes

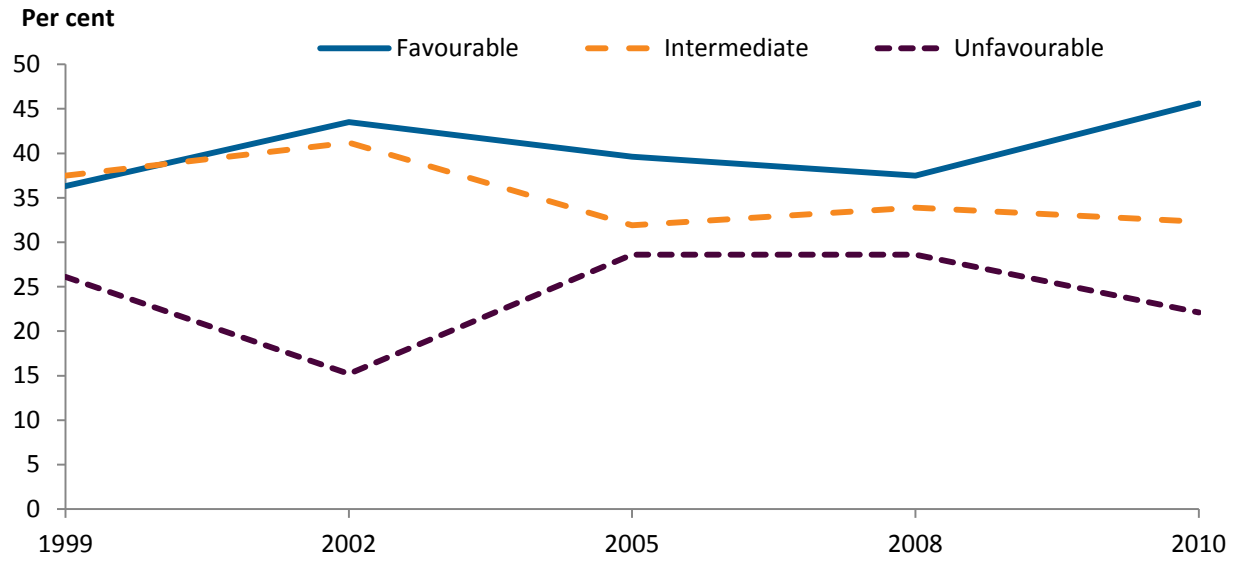
1. School dental service describes the school or community dental service that the health department or authority in each Australian state and territory operates.
2. Children from both public and private schools are eligible for dental care through a school dental service.
3. Other includes: armed forces dental service, clinics that private health insurance companies operate, dental technicians and other (not elsewhere classified).
4. Data in this figure relate to a dental visit in the previous 12 months.
5. To account for any changes in population age structure over time results have been directly age-standardised to the 2001 Australian population.

Source: National Dental Telephone Interview Survey, 1994 to 2010.

Figure 3.3: Type of practice visited at last dental visit, children aged 5–14 years, 1994–2010 (per cent)

A 'favourable' dental visiting pattern is where adults have a usual dental care provider that they visit at least once a year for the purpose of a check-up. An 'unfavourable' pattern, is visiting the dentist infrequently and usually for a dental problem (Ellershaw & Spencer 2011).

The proportion of adults with a favourable visiting pattern increased from 36% in 1999 to 46% in 2010; however, there was a decrease from 44% in 2002 to 38% in 2008 (Figure 3.4).



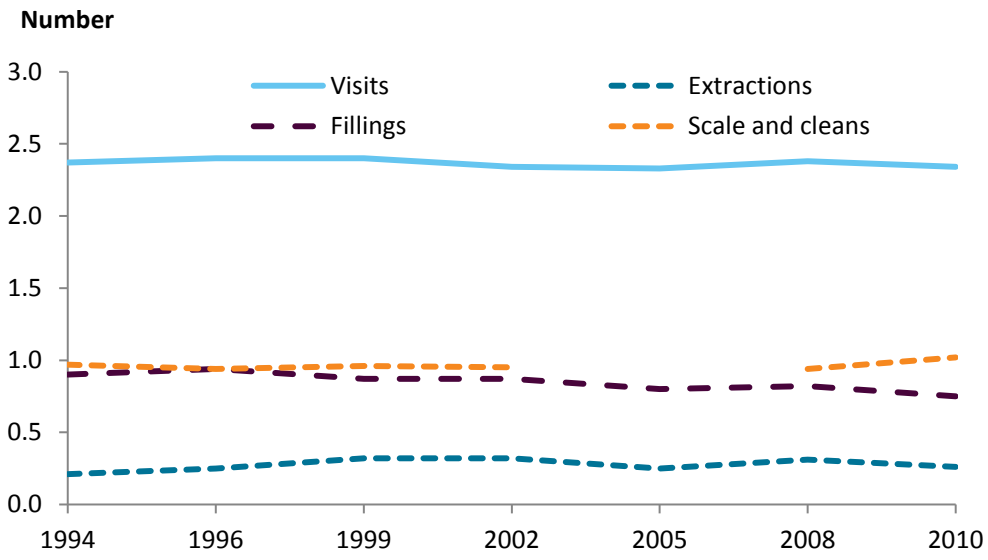
Note: Data in this figure relate to dentate people aged 15 years and over. To account for any changes in population age structure over time results have been directly age-standardised to the 2001 Australian population.

Source: National Dental Telephone Interview Survey, 1994 to 2010.

Figure 3.4: Dental visiting patterns, dentate people aged 15 years and over, 1999–2010 (per cent)

Between 1994 and 2010, for adults who visited the dentist in the past 12 months:

- the average number of visits was around 2.4
- there was a drop in the average number of fillings received (0.9 to 0.75)
- there was around 1 scale and clean service
- the average number of extractions had an inconsistent trend but was lower in 1994 (0.21) than in 1999 (0.32) (Figure 3.5).

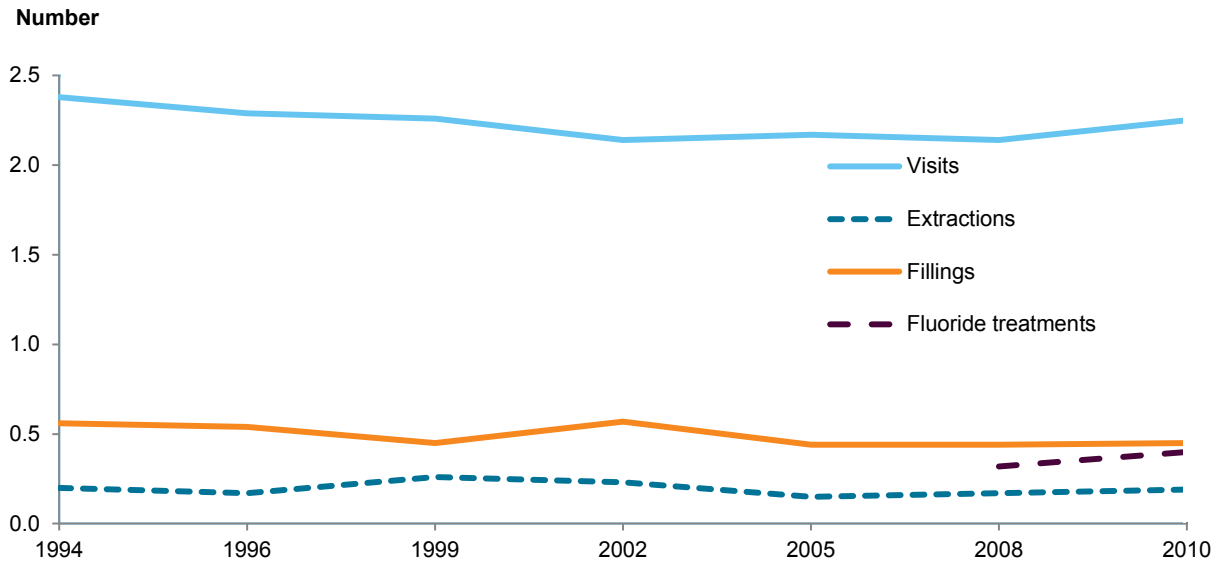


Note: Data on number of scale and clean treatments received were not collected in 2005. Data in this figure relate to dentate people aged 15 years and over who made a dental visit in the previous 12 months. To account for any changes in population age structure over time results have been directly age-standardised to the 2001 Australian population.

Source: National Dental Telephone Interview Survey, 1994 to 2010.

Figure 3.5: Types of services received by people aged 15 and over, 1994–2010 (average)

Between 1994 and 2010, the average number of visits for children generally declined from survey to survey but the overall change was not statistically significant. There were no clear changes in service types (extractions, fillings and fluoride treatment) over the period (Figure 3.6).



Note: Data on fluoride treatments received were not collected prior to 2008. Data in this figure relate to children aged 5 to 14 years who made a dental visit in the previous 12 months. To account for any changes in population age structure over time results have been directly agestandardised to the 2001 Australian population.

Source: National Dental Telephone Interview Survey, 1994 to 2010.

Figure 3.6: Types of services received by children aged 5–14, 1994–2010 (average)

Who visits a dental practitioner?

Table 3.1: Who visits a dental practitioner?—key facts

Age

- In 2010, 2 in 3 people aged 5 and older visited a dental practitioner in the past year.
- Almost 4 in 5 children aged 5–14 visited a dental practitioner in the previous 12 months (78%), and 9 in 10 visited within the previous 2 years (91%).
- Almost 60% of adults aged 25–44 had visited a dental practitioner in the previous 12 months and 78% had visited in the previous 2 years.
- Australians were more likely to have visited the dentist in the past 12 months than New Zealand residents. However, in 2007–09, Canadians were 30% more likely to have visited than Australians, across all age groups from 20 to 79.

Men and women

- In 2010, a higher proportion of females visited within the previous year than males (67% and 61%, respectively).

Geography

- Adults living in *Major cities* were most likely to have visited a dental practitioner in the previous year (64%). Only half of those living in *Remote/Very remote* areas (51%) had visited in the previous year.

Income

- In 2010, people living in lower income households went to the dentist less often than those in higher income households.
- Half of those with a household income of less than $12,000 per year had visited the dentist in the previous year (50%), compared to two-thirds of those with a household income of at least $100,000 (67%).
- Around one-third of the lower income group hadn't visited the dentist at all in the past 2 years (34%), compared to less than one-fifth (16%) of the higher income group.

Insurance

- In 2010, almost three-quarters of those with dental insurance (72%) visited a dentist within the previous year, compared to about half of those uninsured (50%).

Concession cardholders

- Just over half of dentate adults (those who had some natural teeth) who were cardholders (57%) had visited the dentist in the previous year. Almost two-thirds of non-cardholders (63%) had visited.

Source: National Dental Telephone Interview Survey 2009, 2010, NZMH 2010 and OCDOC 2013.

Reasons for visiting

Table 3.2: Reasons for visiting a dental practitioner, 2010—key facts

Age

- In 2010, more than 4 in 5 people aged under 25 reported that their last dental visit was for a check-up (from 80% for those aged 15–24 to 83% for children aged 5–14).
- Almost half of adults aged 45–64 attended because of a problem (47%).
- Australian adults aged 25 to 74 were more likely to have last visited a dentist for a check-up than their New Zealand counterparts. Across these age groups, the increased likelihood of visiting for a check-up ranged from 24% to 30%.

Geography

- People living in *Major cities* had higher rates of visiting for a check-up (67%) than those in *Outer regional* areas (57%).

Income

- In 2010, nearly three-quarters of those with a household income of $100,000 or over had last visited for a check-up (72%).
- Only half of people in the $20,000–$30,000 and $30,000–$40,000 household income groups had visited for a check-up (51% for both).
- Nearly two-thirds of people in the lowest income group had last visited for a check-up (62%).

Insurance

- More people who had insurance (70%) reported that their last visit was for a check-up, than those without insurance (57%).

Concession cardholders

- A smaller proportion of cardholders visited for a check-up (56%) than non-cardholders (67%).

Sources: National Dental Telephone Interview Survey 2010 and NZMH 2010.

Types of practices visited

Table 3.3: Types of dental practice visited, 2010—key facts

Private or public

- In 2010, almost 9 in 10 (88%) people reported that their last dental visit was to a private dental practice, compared with about 1 in 20 to a public dental service (6%) or a school dental service (5%).

Age

- Just under one-quarter of children aged 5–14 (23%) attended a school dental service for their last dental visit and over two-thirds (68%) attended a private practice.

Geography

- Use of a school dental service was highest in *Remote/Very remote* areas (25%) and lowest in *Major cities* (3%). The use of public dental services was lower in *Major cities* (5%) and higher in *Inner regional* areas (9%).

Income

- In 2010, with the exception of the lowest income group (<$12,000 per year), households with up to $40,000 per year used a public dental service at higher rates than those on higher incomes.
- Over a quarter of dentate people in the $12,000–<$20,000 household income bracket (28%) visited a public dental service at their last visit. This compares to only 1% of those with a household income of $100,000 and over.
- Use of school dental services was relatively even across all income groups.

Insurance

- A higher proportion of insured people accessed private care at their last visit than uninsured people (95% and 77%, respectively).

Concession cardholders

- Nearly three-quarters of cardholders (74%) accessed private care at their last visit. Over 9 in 10 non-cardholders (92%) accessed private care.

Note: In all jurisdictions children from both public and private schools are eligible for dental care through a school dental service.
Source: National Dental Telephone Interview Survey 2010.

Visiting patterns

Table 3.4: Favourable dental visiting patterns, 2010—key facts

Age

- In 2010, dentate adults aged 65 and over had higher rates of favourable attendance than those aged 25–44 (51% and 42%, respectively).
- Higher rates of unfavourable attendance were reported for people aged 25–44 than those aged 18–24 (23% and 16%, respectively).

Men and women

- A higher proportion of women had favourable visiting patterns (50%) than men (41%).

Geography

- Dentate adults who lived in *Major cities* had higher rates of favourable attendance (49%) than those in *Remote/Very remote* areas (31%).

Income

- In 2010, under one-third of adults in the lowest income group (28%) had favourable visiting patterns, compared to over half of those in the highest group (56%).

Insurance

- Almost two-thirds of dentate adults who were insured (61%) had favourable visiting patterns, compared to under one-third (27%) of those without dental insurance.

Concession cardholders

- Just over one-third of adult cardholders had favourable visiting patterns (36%), compared to almost one-half of non-cardholders (48%).

Note: Favourable attendance relates to visiting a dentist once or more per year, usually for a check-up, and having a usual dental provider. Unfavourable attendance relates to visiting less than once every 2 years and usually visiting for a problem, or visiting once every 2 years usually for a problem and without a regular dental provider.

Source: National Dental Telephone Interview Survey 2010.

Services received

Table 3.4: Services at the dentist, 2010—key facts

Services

- In 2010, dentate people aged 5 and over who visited a dental practitioner in the last 12 months made, on average, 2.34 visits.
- On average each person had a scale and clean, 2 in 3 people had a filling and 1 in 4 had an extraction.

Geography

- There were no significant differences in the average number of dental visits across regions, number of extractions or the number of fillings received in the past 12 months.

Income

- There were no significant differences between household income groups in the average number of extractions.

Insurance

- There was no significant difference in the average number of visits in the previous 12 months between insured and uninsured people, although insured people had fewer extractions and fillings, and more scale and clean services.

Concession cardholders

- There was no significant difference in overall number of visits between cardholders and non-cardholders. Cardholders had more extractions and fillings, and had less scale and clean services, than non-cardholders.

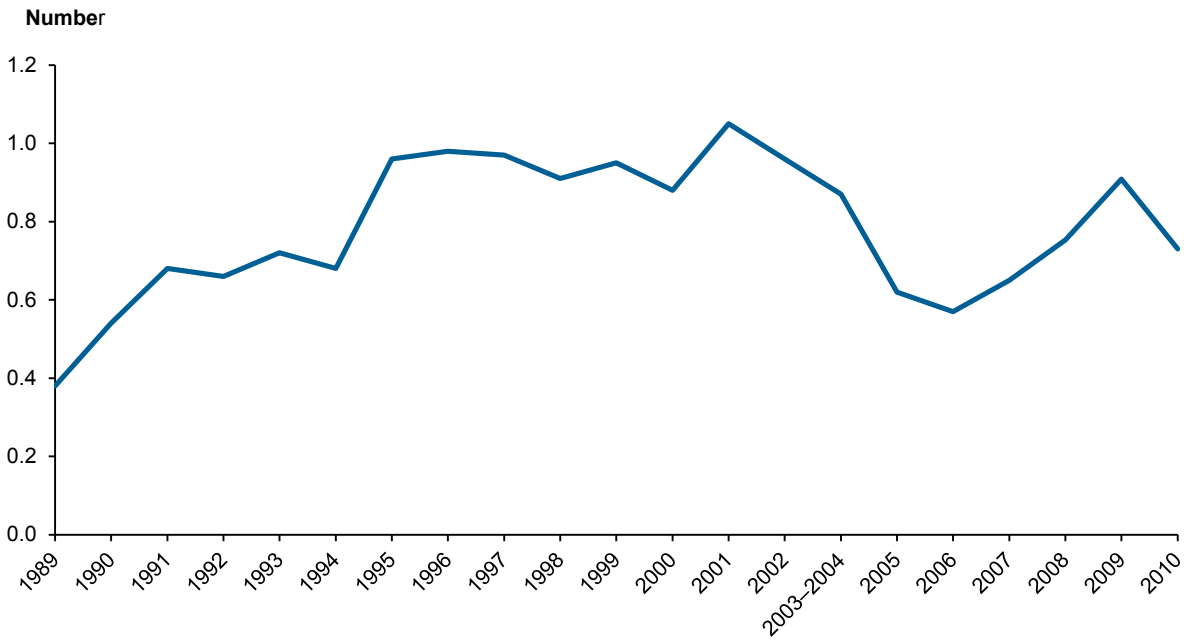
Source: National Dental Telephone Interview Survey 2010.

3.2 Preventing tooth decay in children

A common and effective way to stop the development of active tooth decay in permanent teeth is fissure sealing. A resin or glass-ionomer (cement) material is applied to fill the pits and grooves of permanent teeth (usually molars), sealing them to prevent build-up of bacteria and plaque.

The Child Dental Health Survey in 2010 showed children aged 5–14 with some decay in their permanent teeth were more likely to have a fissure sealant than children of the same age who had no decay. This may reflect a tendency towards using fissure sealants as a preventive measure on children more likely to develop decay.

Overall, the average number of fissure-sealed teeth among children aged 12 rose from 0.38 teeth in 1989 to 0.73 in 2010 with a peak of 1.05 in 2001 (Figure 3.7).



Source: Child Dental Health Survey, 1989 to 2010.

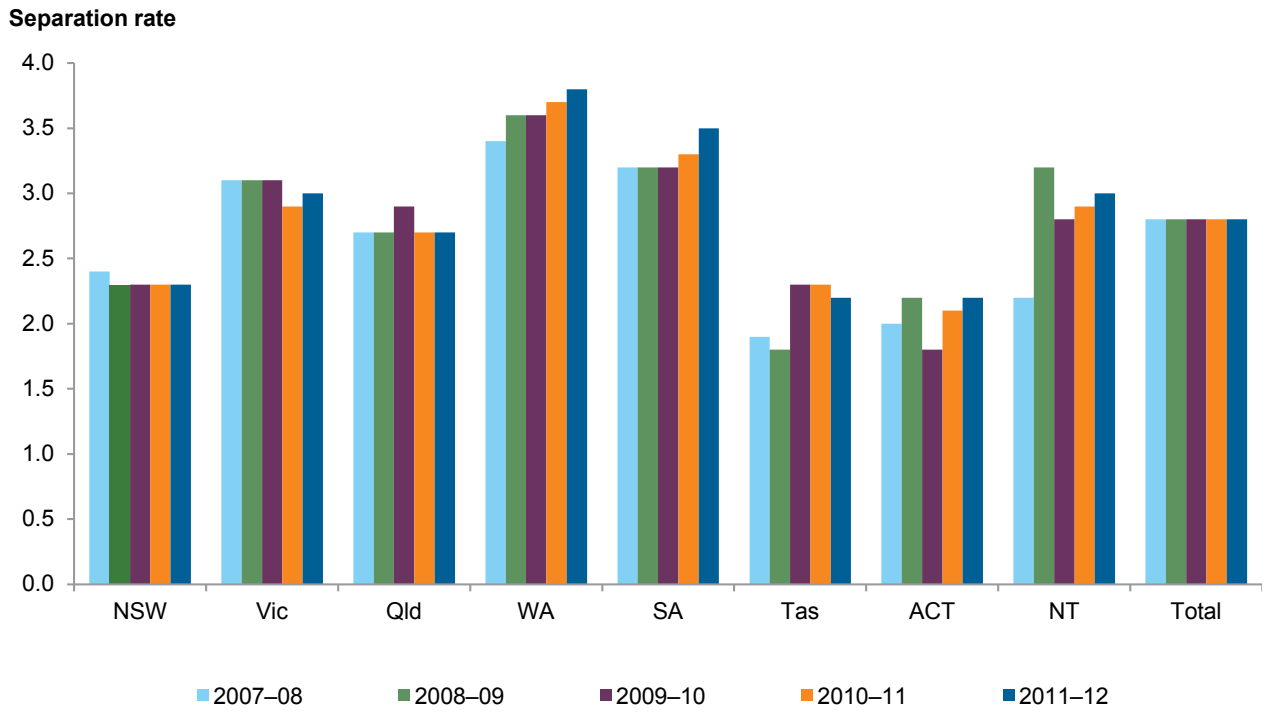
Figure 3.7: Teeth with fissure sealants, Australian children aged 12, 1989–2010 (average)

3.3 Hospitalisation

Avoiding hospital

Early intervention can help keep people with oral disease out of hospital. Potentially preventable hospitalisation (PPHs) separation rates (rates of completed episodes of care) for oral health conditions can be an indication of inadequate access to dental care. PPHs are hospital separations where the principal diagnosis of the hospitalisation is thought to be avoidable. 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, alternatively, an appropriate use of the hospital system to respond to greater need (AIHW 2013a).

Between 2007–08 and 2011–12 the total number of PPHs due to dental conditions rose from 57,955 to 63,327. This was in line with population growth and the age-standardised separation rate remained steady at 2.8 per 1,000 population (Figure 3.8). PPHs are most common in people aged under 15 (Figure 3.9).

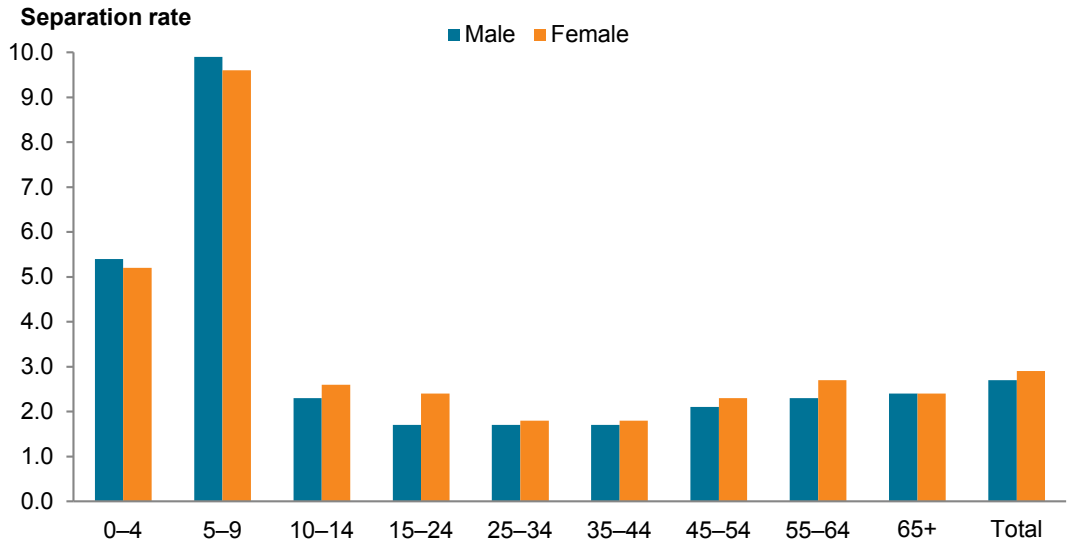


Notes

1. Potentially avoidable 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.
2. Excludes multiple diagnoses for the same separation within the same group and records with care type of Newborn (without qualified days), Hospital boarders and Posthumous organ procurement.
3. Number of separations per 1,000 population. Separation rates were directly age-standardised using the estimated resident populations as at 30 June for the respective year.
4. Total includes other territories and excludes overseas residents and unknown state of residence.

Source: AIHW 2009, 2010, 2011, 2012 and AIHW Hospital Morbidity database 2011–12, unpublished.

Figure 3.8: Hospital separations for potentially preventable hospitalisations due to dental conditions, state or territory of usual residence 2011–12



Notes

1. Potentially avoidable 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.
2. Excludes multiple diagnoses for the same separation within the same group and records with care type of Newborn (without qualified days) and records for Hospital boarders and Posthumous organ procurement.
3. The separation rate (number of separations per 1,000 population) is a crude population rate based on the 2011 estimated resident population.

Source: AIHW Hospital Morbidity database 2011–12, unpublished.

Figure 3.9: Hospital separation rate for potentially preventable hospitalisations due to dental conditions, by sex and age group, 2011–12

Table 3.5: Potentially preventable hospitalisations, 2011–2012—key facts

KEY FACTS

Potentially preventable hospitalisations due to dental conditions

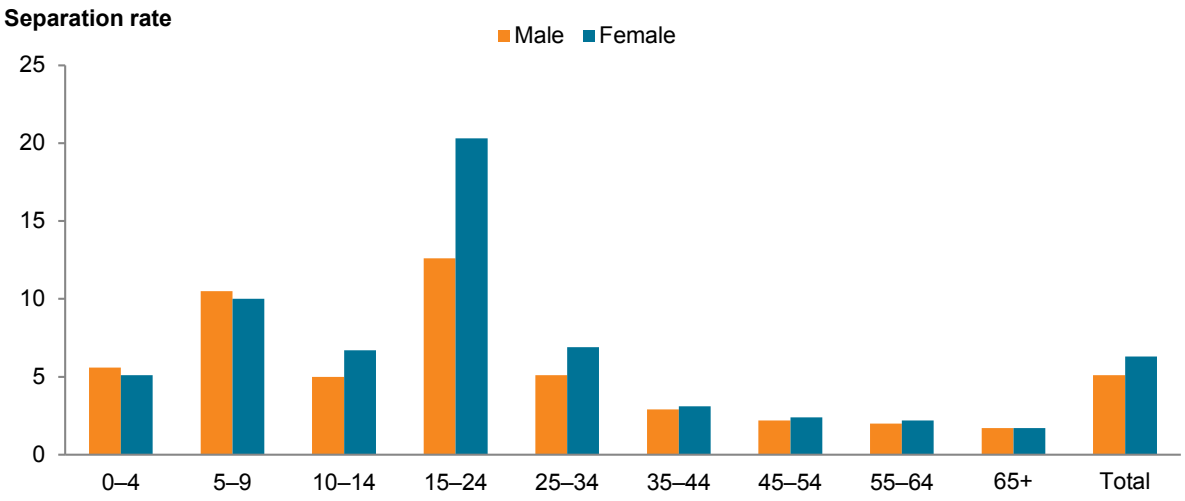
- In 2011– 2012, the total number of PPHs related to dental conditions was 63,327 or 2.8 separations per 1,000 population.
- Tasmania and the Australian Capital Territory had the lowest age-standardised separation rate at 2.2 separations per 1,000 population.
- Western Australia had the highest at 3.8 separations per 1,000 population.
- The rate of PPHs was lowest for *Major cities* (2.7) and highest for *Very remote* (4.3).
- Children aged 5–9 had the highest number of separations (13,503 separations or 9.8 separations per 1,000 children aged 5–9).
- Children aged 0–4 had the next highest number (7,791, or 5.3 per 1,000 children aged 0–4) (Figure 3.9).

Sources: AIHW 2013a and AIHW Hospital Morbidity database 2011–12 unpublished.

Procedures involving general anaesthetics

Hospitalisation for dental procedures requiring a general anaesthetic includes restorative dental work, bridges, replantation and splinting.

In the general population, these procedures are most common in people aged 15–24, with a rate of 16.3 per 1,000 persons (Figure 3.10). For Aboriginal and Torres Strait Islander people, the procedure rate is highest in the younger years (Figure 3.11). The rate in those aged 5–9 (14.9 per 1,000 persons) is almost as high as those aged 15–24 in the non-Indigenous population. This suggests that there is a greater tendency toward more intensive treatments at younger ages for the Indigenous population. This may be due to differing management approaches, more severe issues in the population or lack of access to dental services.

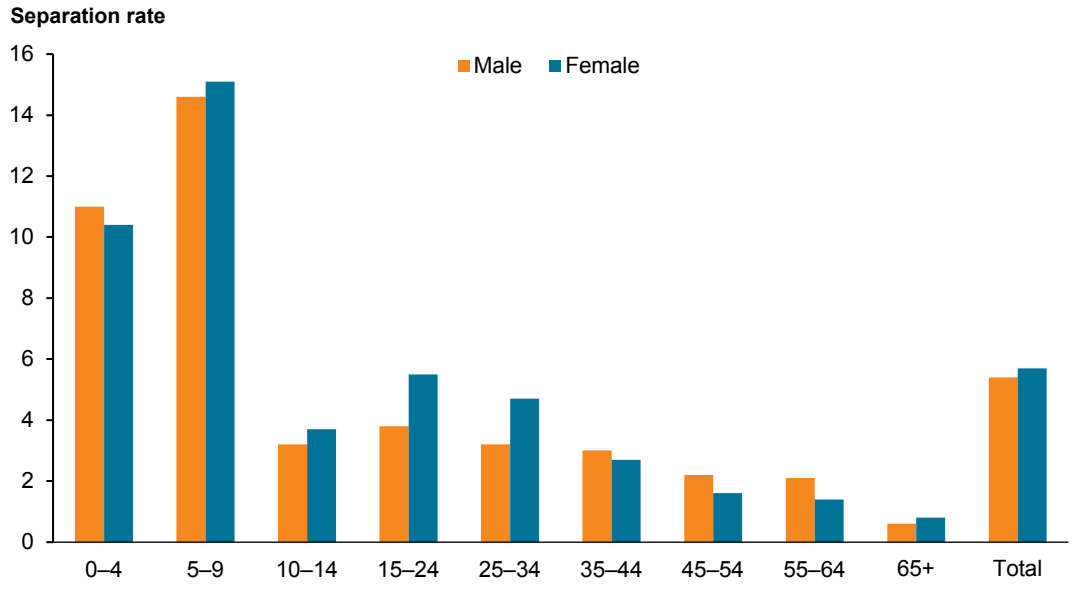


Notes

1. Hospital separations requiring general anaesthesia for dental conditions as defined by following Australian Classification of Health interventions (ACHI) 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; 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.
2. Excludes records with care type of Newborn (without qualified days) and records for Hospital boarders and Posthumous organ procurement.
3. The separation rate used in this table (number of separations per 1,000 population) is a crude population rate based on the 2011 estimated resident population.

Source: AIHW Hospital Morbidity database 2011–12, unpublished.

Figure 3.10: Rate of hospital separations for hospitalisations requiring general anaesthesia for procedures related to dental conditions, by sex and age group, 2011–12



Notes

1. Hospital separations requiring general anaesthesia for dental conditions as defined by following Australian Classification of Health interventions (ACHI) 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; 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.
2. Excludes records with care type of Newborn (without qualified days) and records for Hospital boarders and Posthumous organ procurement.
3. The separation rate used in this table (number of separations per 1,000 population) is a crude population rate based on the 2011 projected Aboriginal and Torres Strait Islander population.

Source: AIHW Hospital Morbidity database 2011–12, unpublished; Australian Bureau of Statistics, Projected Aboriginal and Torres Strait Islander population, series B, June 2011.

Figure 3.11: Hospital separation rate for hospitalisations requiring general anaesthesia for procedures related to dental conditions, by sex and age group, Aboriginal and Torres Strait Islander peoples, 2011–12

Table 3.6: Hospitalisation for dental procedures involving general anaesthetics, 2011– 2012—key facts

KEY FACTS

All Australians

- In 2011–12, the total number of hospital separations for dental procedures requiring a general anaesthetic was 128,712, or 5.7 separations per 1,000 population.
- People aged 15–24 had the highest number of separations (51,364, or 16.3 per 1,000 persons).
- Those aged 65 and over had the lowest number of separations (5,288, or 1.7 per 1,000 persons) (Figure 3.10).

Aboriginal and Torres Strait Islander people

- For the Aboriginal and Torres Strait Islander population, the total number of hospital separations for dental procedures requiring a general anaesthetic was 3,174 in 2011–12, or 5.5 per 1,000 Aboriginal and Torres Strait Islander population.
- Children aged 5–9 had the highest number of separations (955, or 14.9 per 1,000 children aged 5–9), followed by those aged 0–4 (758, or 10.7 per 1,000 Aboriginal and Torres Strait Islander children aged 0–4).
- Adults aged 65 and over had the lowest number of separations (14 or 0.7 per 1,000 Aboriginal and Torres Strait Islander persons aged 65 and over) (Figure 3.11).

Source: AIHW Hospital Morbidity database 2011–12, unpublished.

3.4 Costs

Total expenditure on dental services in Australia was $8,336 million in 2011–12, an increase of $2,203 million from $6,133 million (constant prices) in 2005–06 (Table 3.7).

Table 3.7: Total expenditure ($ million) on dental services, constant prices, by source of funds, 2005–06 to 2011–12

	Source of funds						
Year	Federal government direct outlay	State and local government	Federal government premium rebates	Health insurance funds	Individuals	Other	Total
2005–06	110	600	398	907	4,107	11	6,133
2006–07	125	583	404	949	4,234	10	6,306
2007–08	235	614	448	983	4,182	10	6,473
2008–09	558	690	440	1,069	4,271	23	7,052
2009–10	768	652	509	1,076	4,737	32	7,775
2010–11	910	716	528	1,122	4,566	35	7,878
2011–12	1,060	718	528	1,261	4,736	34	8,336

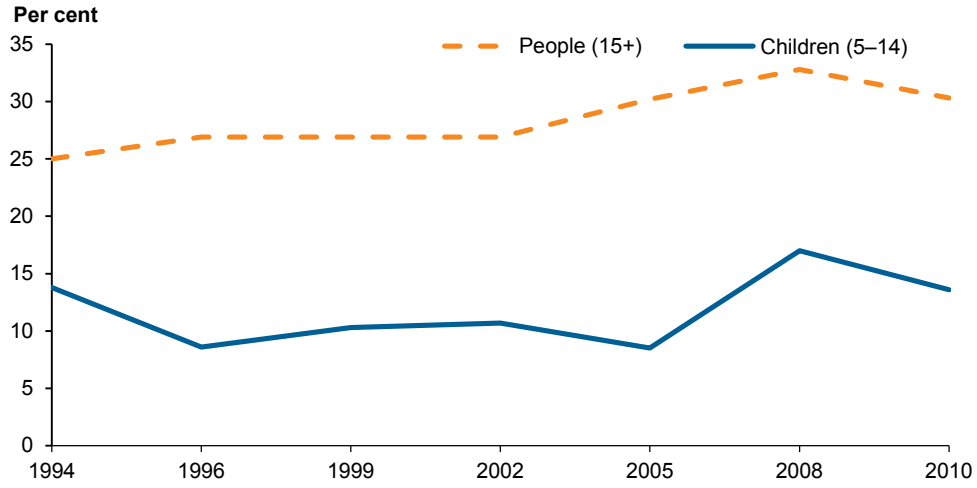
Note: Rows may not sum to total because of rounding of estimates.
Source: AIHW health expenditure data cubes.

Cost as a barrier to seeking dental care

Respondents to the National Dental Telephone Survey 2010 were asked a range of questions relating to the financial burden of dental care, including whether they had avoided or delayed dental care due to cost, whether cost had prevented dental treatment that a dental professional recommended and whether dental visits in the previous 12 months had been a large financial burden. In the case of children, an appropriate adult was asked to answer the relevant questions on their behalf.

Whether or not people have private health insurance that covers all or part of the cost of dental care may influence the affordability of care.

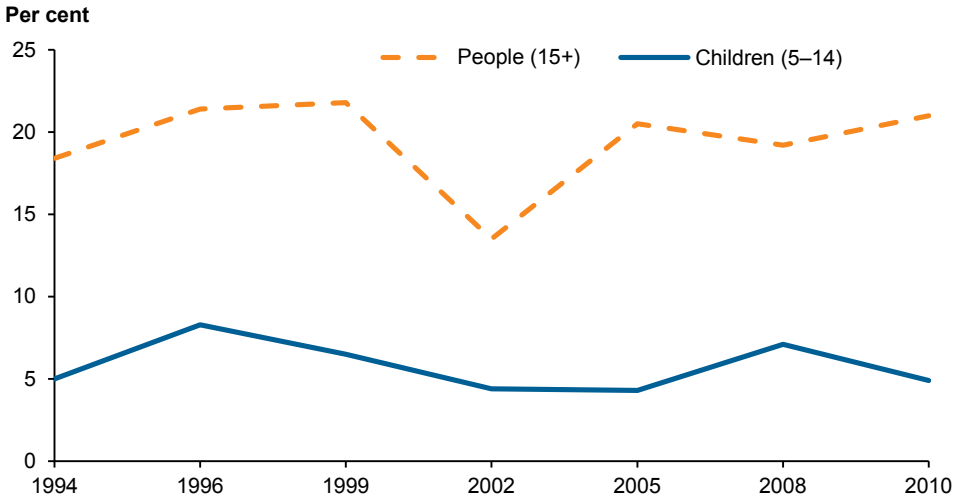
According to the National Dental Telephone Interview Survey, from 1994 to 2010, there was an increase in the proportion of adults avoiding visits to a dentist due to costs, from about 25% to 30%, though this difference was not statistically significant. For children, the overall trend was unchanged at around 14%, but varied between 8.5% and 17.0% over this period (Figure 3.12).



Source: National Dental Telephone Interview Survey 2010.

Figure 3.12: People avoiding dental visiting due to cost, 1994–2010

For the period 1994 to 2010, the proportion of adults who avoided treatment because of cost remained fairly stable at around 20%. For children, there was little change overall from 5.0% in 1994 to 4.9% in 2010, though the proportion varied between 4.3% and 8.3% over the period (Figure 3.13).



Source: National Dental Telephone Interview Survey 2010.

Figure 3.13: Cost prevented recommended treatment, 1994–2010

Table 3.8: Costs of dental care—key facts

Cost

- In 2011–12, the largest source of funds for dental expenditure was individuals, paying directly out of pocket for 56.8% of total dental costs.
- In 2010, National Dental Telephone Interview Survey data indicated that more than one-quarter of people aged 5 or older (28.0%) avoided or delayed visiting a dentist due to cost. This ranged from almost 14% of children aged 5–14 to 37% for adults aged 25–44.
- In 2010, about one-quarter of adults aged 25–64 avoided their recommended treatment because of cost. Cost prevented only 5.4% of children aged 5–14 from having their recommended treatment.

Sources: AIHW 2013b and National Dental Telephone Interview Survey 2010.

Table 3.9: Dental insurance—key facts

Expenditure

- Health insurance funds provided 15.1% of the funds for dental expenditure, the second highest proportion after individuals paying directly out of pocket.
- Australian Government premium rebates accounted for 6.3%, and other government contributions funded 21.3% of total expenditure (12.7% Australian Government direct outlay and 8.6% from state and local governments).

Age and geography

- In 2010, over half of all people aged 5 and over (53.8%) had some level of dental insurance.
- Adults aged 45–64 had significantly higher rates of dental insurance, and those aged 65 and over had significantly lower rates of insurance than other age groups.
- Dentate adults (having some natural teeth) who lived in *Major cities* were more likely to have dental insurance than dentate adults who lived in *Inner regional* or *Outer regional* areas.
- Over three-quarters of dentate adults in the highest household income group ($100,000 and over per year) (76.3%) had some level of dental insurance.

Income

- Less than one-third of adults in the bottom 3 household income groups (<$30,000 per year) (ranging from 27.3% to 29.8%) had dental insurance.

Paying for dental care

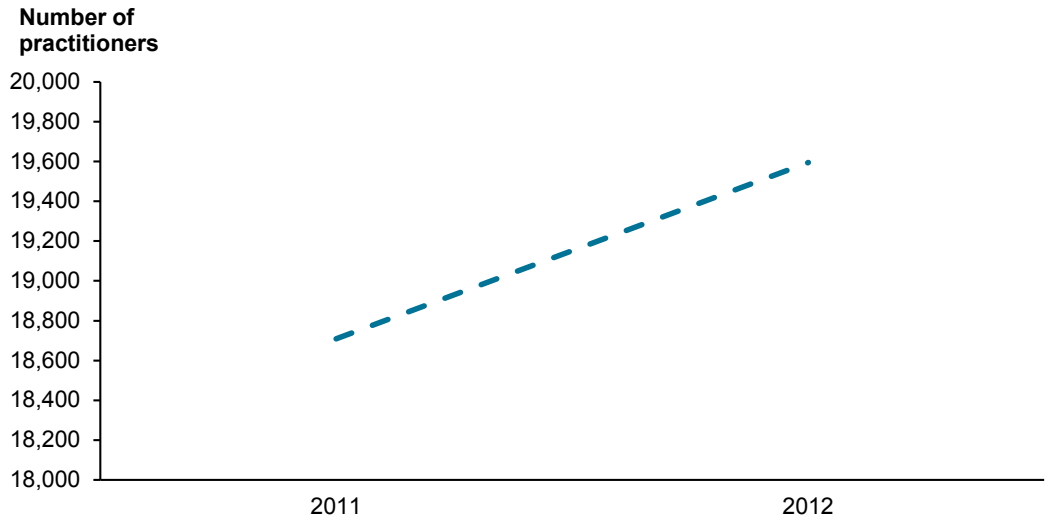
- The majority of adults with insurance reported that their insurance paid some (78.7%) or all (7.8%) of the dental costs of their last visit.
- Only 9.4% of insured adults paid all their own dental expenses.
- Almost one-fifth of insured adults (17.3%) who were required to cover their own dental expenses said it caused a large financial burden.

Sources: AIHW 2013b and National Dental Telephone Interview Survey 2010.

4 Dental workforce

4.1 Trends in the dental workforce

Between 2011 and 2012, the number of dental practitioners employed increased from around 18, 700 to nearly 19,600 (Figure 4.1). This may have an influence on the availability of dental care within the population. In the same time period the full-time equivalent (FTE) rate of dentists rose from around 55 to 57 dentists per 100,000 population. There was a fall in the number of employed oral health therapists, while the numbers of dental hygienists therapists increased. However, changes in the numbers of oral health therapists, dental hygienists and dental therapists may in part be due to the change of methods used to assign a primary practitioner type to those practitioners holding more than 1 division of general registration (i.e. those registered in more than 1 dental profession) (AIHW 2014a).



Note: For 2012, employed dental practitioner data exclude those with provisional registrations.
Source: AIHW 2014a.

Figure 4.1: Number of employed dental practitioners, 2011 and 2012

4.2 Who makes up the dental workforce?

Table 4.1: Dental workforce 2012—key facts

KEY FACTS

- In 2012, there were about 57 dentists, 4 dental therapists, 5 dental hygienists, 3 oral health therapists and 5 dental prosthetists employed per 100,000 people.
- On average, dentists worked 37.0 hours per week.
- Dentists working in a clinical practice were younger (43.1 years compared to 51.2) and worked more hours per week than those in non-clinical roles (37.1 hours compared to 34.3).
- One in 3 practising dentists was female (36.5%).
- Most dentists were employed in *Major cities* (79.7% of all employed dentists), while only 0.9% were in *Remote/Very remote* areas (0.9%).
- *Major cities* had the highest rates of dentists and dental hygienists, while *Remote/Very remote* areas had the lowest rates of all dental practitioners, except dental therapists.

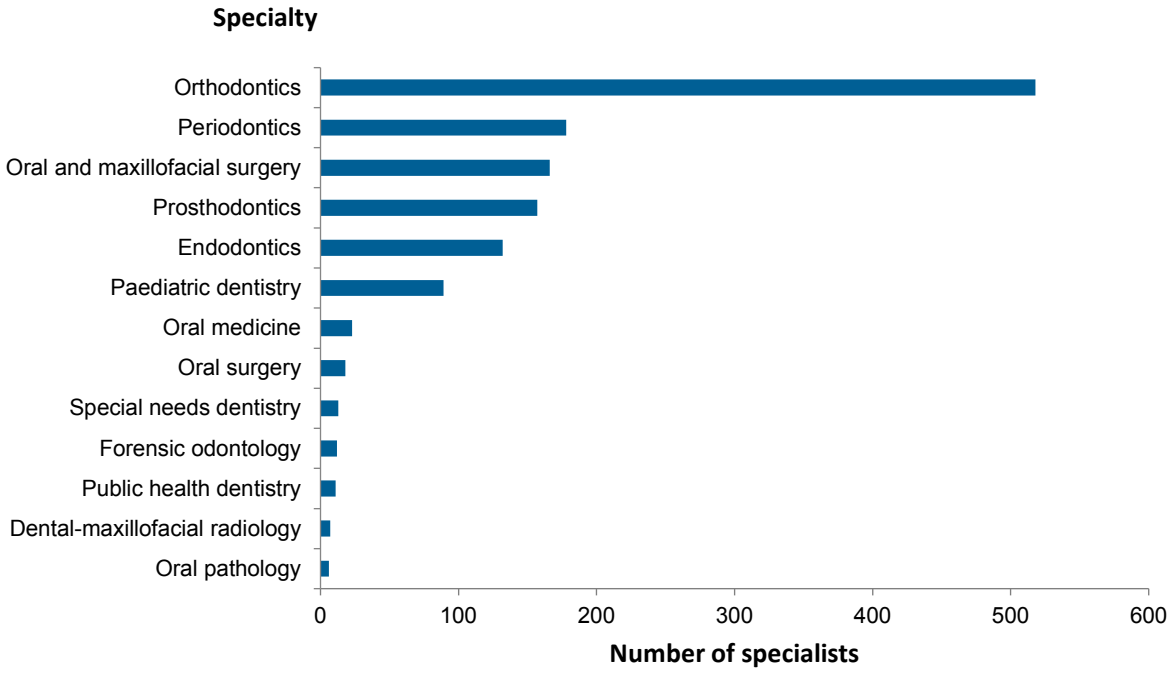
Comparison with other health practitioners

- Medical practitioners, working as clinicians, worked more hours per week (average 42.9), were a little older (an average age of 45.7) and a fairly similar proportion were women (37.7%).
- The supply of medical practitioners, in terms of FTE employed, was generally greater in *Major cities* than in *Remote/Very remote* areas. The supply of general practitioners was highest, however, in *Remote/Very remote* areas, while overall these areas had the lowest supply of medical practitioners in total.
- Nurses and midwives worked on average 33.4 hours per week, had an average age of 44.6 and 89.8% were women. The geographic supply of nurses and midwives was fairly even, ranging from 1,071.3 FTE per 100,000 population in *Outer regional* areas to 1,302.8 in *Very remote* areas.

Dental specialists

- The largest group of dentists with speciality qualifications was orthodontists (518 or 39.0%) (Figure 4.2).
- The majority of dental specialists were employed in *Major cities* (89.1%).
- The jurisdiction with the highest FTE rate per 100,000 population for dental specialists was the Australian Capital Territory (10.3), and the lowest was the Northern Territory with an FTE rate of 2.2 (Figure 4.3).

Sources: AIHW 2013c, 2014a, 2014b.



Source: National Health Workforce Data Set: dental practitioners 2012.

Figure 4.2: Employed dentists not working in the area of general dental practice, by specialty, 2012

Notes

1. Derived from state and territory of main job where available; otherwise, state and territory of principal practice is used as a proxy. If principal practice details are unavailable, state and territory of residence is used. Records with no information on all 3 locations are coded to 'Not stated'.
2. 'Australia' includes dental specialists who did not state or adequately describe their location and those who were overseas.
3. FTE rate is per 100,000 population.

Source: National Health Workforce Data Set: dental practitioners 2012.

Figure 4.3: Employed dental specialists not working in the area of general dental practice, by state and territory, 2012

Appendix: National dental data sources

Dental and oral health information published on the AIHW website is from a range of collections. These include the National Survey of Adult Oral Health (NSAOH), the National Dental Telephone Interview Survey (NDTIS) and the Child Dental Health Survey (CDHS). The AIHW Dental Statistics and Research Unit (DSRU), located in the Australian Research Centre for Population Oral Health (ARCPOH) at the University of Adelaide, conducts these surveys. The AIHW DSRU is a collaborative arrangement between the AIHW and the University of Adelaide for collection, analysis and reporting of population oral health data.

National Survey of Adult Oral Health

The NSAOH provides a descriptive 'snapshot' of oral health in the adult population of Australia.

Data are collected from people aged 15 years or more, residing in all Australian states and territories. Information is collected using interviews and standardised dental examinations.

The survey aims to describe levels of oral disease, perceptions of oral health and patterns of dental care within a representative cross-section of adults in all states and territories of Australia. A further aim is to evaluate trends in oral health since the first national oral examination survey, conducted in 1987–88.

The NSAOH was last conducted in 2004–06. The National Oral Health Plan, see <National Oral Health Plan 2004–2013>, calls for an adult survey to be conducted every 10 years.

National Dental Telephone Interview Survey

The NDTIS is a telephone survey of a random sample of the Australian population aged 5 years and over. Respondents include users and non-users of dental services and people eligible and not eligible for public-funded dental care.

The survey collects basic features of oral health and dental care within the Australian population, including access to services. There is no clinical component to the survey.

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

- collect oral health and dental care data within the Australian population
- monitor the extent of social inequalities within the dental sector
- investigate the underlying reasons behind dental behaviours, and the consequences of these behaviours.

The survey is conducted every 2–3 years. Surveys were conducted in 1994, 1996, 1999, 2002, 2005, 2008, 2010 and 2013.

A data quality statement for this collection is available at: <National Dental Telephone Interview Survey 2010>.

Child Dental Health Survey

The CDHS is an annual data collection which monitors the dental health of children aged 4–15 enrolled in school and community dental services that the health departments or authorities of state and territory governments operate. Dental therapists and dentists collect the data for the CDHS at the time of conducting routine clinical examinations.

The objective of the CDHS is to collect data to examine the distribution of oral health status by geographic location and demographic factors, as well as the identification of high-risk groups. The survey examines changes in oral health status among children over time.

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.

A data quality statement for this collection is available at: <Child Dental Health Survey 2010>.

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.

A data quality statement for this collection is available at: <Health expenditure database 2011–12>.

Hospital data

The National Hospital Morbidity Database (NHMD) is a collection of records from admitted patient data collection systems in Australian hospitals. The data supplied in the NHMD are based on the National Minimum Data Set (NMDS) for Admitted patient care. The AIHW compiles the database from data supplied by the state and territory health authorities. It contains demographic, administrative and length of stay data, and data on the diagnoses of the patients, and the procedures they underwent in hospital. Dental services are classified according to ACHI (Australian Classification of Health Interventions). ACHI is the Australian national standard for procedure and intervention coding in Australian hospitals.

The National Outpatient Care Database (NOCD) is a collection of records for outpatient clinic occasions of service in public hospitals. The data supplied are based on the NMDS for Outpatient care. The AIHW also compiles this database from data supplied by the state and territory health authorities. It contains demographic data, data about clinic type (which includes dental clinics), number of occasions of service and number of group sessions.

The National Public Hospital Establishments Database (NPHED) is a collection of records on non-admitted patient occasions of service. The NPHED is based on the NMDS for public hospital establishments. The NPHED includes a range of non-admitted patient care services that are not in scope for the NOCD.

Data quality statement summaries for these collections are available at: <Appendix A: Database quality statement summaries (Australian hospital statistics 2011–12)>.

Dental practitioner workforce data

The National Health Workforce Data Set combines data from through the National Registration and Accreditation Scheme with data collected from the Dental Workforce Survey conducted at the time of a practitioner's annual registration or renewal. The Australian Health Practitioner Regulation Agency collects these data. The data set includes information on the size and characteristics of the dental workforce (dentists, dental hygienists, dental therapists, dental prosthetists and oral health therapists) as well as:

- the type of work done by, and work setting of, dental practitioners
- the number of hours worked in clinical or non-clinical roles
- the numbers of years worked, and the years they intend to remain in, the dental practitioner workforce.
- those registered dental practitioners who are not currently undertaking clinical work or who are not employed.

The AIHW reports these data annually in health workforce publications.

A data quality statement for this collection is available at: <National Health Workforce Data Set: dental practitioners 2012; Data Quality Statement>.

Glossary

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

Clinician: A clinician is a dental practitioner who spends the majority of his or her time working in the area of clinical practice—that is, the diagnosis, care and treatment and including recommended preventive action, of patients or clients.

Current prices: The term 'current prices' refers to expenditures reported for a particular year, unadjusted for inflation. Changes in current price expenditures reflect changes in both price and volume.

Decay: Decay of the teeth caused by 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 their dental appearance ('never' or 'hardly ever' compared with 'very often', 'often' or 'sometimes').

Dental disease: Dental decay or cavity resulting from dental caries.

Dental hygienist: Registered health practitioner who educates the community in the principles of preventive dentistry and motivates individuals to take responsibility for their own oral health; performs a restricted range of clinical services and works under the direction of a dentist, who is responsible for patient diagnosis and prescribes the treatment to be carried out by the hygienist.

Dental prosthetist: Registered health practitioner who is responsible for construction and fitting of dentures and sporting mouthguards; maintains, repairs and relines dentures either by direct consultation with a patient or by referral from a dentist.

Dental therapist: Registered health practitioner who undertakes promotion of oral health and dental health education; performs a restricted range of clinical services, predominantly on school-aged children.

Dentate: Having at least one natural tooth.

Dentist: Registered health practitioner who provides a range of preventive, diagnostic and restorative dental services.

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.

Employed: An employed dental practitioner is one who either:

- worked for a total of 1 hour or more in the week before the survey in a job or business for pay, commission, payment in kind or profit, mainly or only in a particular state or territory
- usually worked, but was away on leave (with some pay) for less than 3 months, on strike or locked out, or rostered off.

Endodontics: The study, treatment and prevention of diseases of the pulp of teeth; a major part of treatment is root canal treatment.

Favourable pattern of dental visiting: Dental behaviour related to making regular dental visits for a check-up; deemed favourable because timely dental care may be less invasive.

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

Food avoidance: People who reported avoiding some foods 'very often', 'often' or 'sometimes' in the previous 12 months.

Frequent visiting pattern: Making a dental visit usually 2 or more times per year.

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.

Insurance status: Dental care is not covered under Medicare, therefore people seeking cover can elect to carry private dental insurance.

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

Orthodontics: The branch of dentistry that is concerned with the growth and development of the face and jaws and the treatment of irregularities of the teeth.

Periodontics: The branch of dentistry that is concerned with the tissues that support and attach the teeth and the treatment and prevention of periodontal disease.

Periodontitis: Inflammation of the gums and deeper tissues in the tooth socket. Periodontal status is based on the definition used by the Centers for Disease Control and Prevention (CDC). The CDC defines periodontal disease using a combination of deep periodontal pockets, clinical attachment loss and the number of sites affected (Page & Eke 2007).

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: Refers to measures taken to prevent dental diseases; may include fluoride treatment, scale and clean services, dental sealants etc.

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.

Prosthodontics: The branch of dentistry that is concerned with the provision of dentures, bridges and implant-retained prostheses.

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: A classification of the remoteness of a location using the Australian Standard Geographical Classification Remoteness Structure (2006), based on 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 categories are: *Major cities, Inner regional, Outer regional, Remote, Very remote* and *Migratory.*

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. Often presented as a number per 1,000 or 10,000 members of a population.

Unfavourable pattern of dental visiting: Dental behaviour related to making irregular dental visits, usually in response to a dental problem; deemed unfavourable because problems that could have been treated in an effective and efficient manner may have deteriorated so that restorative treatments will be more extensive or may no longer be a viable option.

References

AHMAC (Australian Health Ministers' Advisory Council) 2001. Oral health of Australians: National planning for oral health improvement. Adelaide: South Australian Department of Human Services, on behalf of the Australian Health Ministers' Conference.

AIHW (Australian Institute of Health and Welfare) 2009. Australian hospital statistics 2007–08. Health services series no. 33. Cat. no. HSE 71. Canberra: AIHW.

AIHW 2010. Australian hospital statistics 2008–09. Health services series no. 34. Cat. no. HSE 84. Canberra: AIHW.

AIHW 2011. Australian hospital statistics 2009–10. Health services series no. 40. Cat. no. HSE 107. Canberra: AIHW.

AIHW 2012. Australian hospital statistics 2010–11. Health services series no. 43. Cat. no. HSE 117. Canberra: AIHW.

AIHW 2013a. Australian hospital statistics 2011–12. Health services series no. 50. Cat. no. HSE 134. Canberra: AIHW.

AIHW 2013b. Health expenditure Australia 2011–12. Health and welfare expenditure series no. 50. Cat. no. HWE 59. Canberra: AIHW.

AIHW 2013c. Nursing and midwifery workforce 2012. National health workforce series no. 6. Cat. no. HWL 52. Canberra: AIHW.

AIHW 2014a. Dental workforce 2012. National health workforce series no. 7. Cat. no. HWL 53. Canberra: AIHW.

AIHW 2014b. Medical workforce 2012. National health workforce series no. 8. Cat. no. HWL 54. Canberra: AIHW.

Ellershaw AC & Spencer AJ 2011. Dental attendance patterns and oral health status. Dental statistics and research series no. 57. Cat. no. DEN 208. Canberra: AIHW.

NCCH (National Centre for Classification in Health) 2008. The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM), Australian Classification of Health Interventions (ACHI) and Australian Coding Standards (ACS), 6th edition. Sydney: University of Sydney.

NZMH (New Zealand Ministry of Health) 2010. Our Oral Health: Key findings of the 2009 New Zealand Oral Health Survey. Wellington: Ministry of Health.

OCDOC (Office of the Chief Dental Officer of Canada) (2013). Ontario: Health Canada. Viewed 17 June 2013, <http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/fnihb-dgspni/ocdobdc/project-eng.php#t2>.

Page RC & Eke PI 2007. Case definitions for use in population-based surveillance of periodontitis. Journal of Periodontology 78:1387–99.

Palmer JD, Anderson RJ &Downer MC 1984. Guidelines for prevalence estimates of dental caries. Community Dental Health 1:55–66.

Slade GD, Spencer AJ & Roberts-Thomson KF (eds) 2007. Australia's dental generations: the National Survey of Adult Oral Health 2004–06. Dental statistics and research series no. 34. Cat. no. DEN 165. Canberra: AIHW.

UK (United Kingdom) Department of Health 1994. An oral health strategy for England. London: Department of Health.

WHO (World Health Organization) 1997. Oral health surveys—basic methods, 4th edition. Geneva: WHO.

List of tables

List of figures

Related publications

This report and other dental and oral health publications can be downloaded free from the AIHW website <http://www.aihw.gov.au/dental-and-oral-health-publications/>. The website also includes information on ordering printed copies. Oral and dental health webpages can also be viewed and downloaded free from the AIHW website <http://www.aihw.gov.au/dental-and-oral-health/>. Related publications can also be downloaded from the Australian Research Centre for Population Oral Health (ARCPOH) website <http://www.adelaide.edu.au/arcpoh/publications/>.

The following AIHW publications may also be of interest:

AIHW 2013a. Australian hospital statistics 2011–12. Health services series no. 50. Cat. no. HSE 134. Canberra: AIHW.

AIHW 2013b. Health expenditure Australia 2011–12. Health and welfare expenditure series no. 50. Cat. no. HWE 59. Canberra: AIHW.

AIHW 2014a. Dental workforce 2012. National health workforce series no. 7. Cat. no. HWL 53. Canberra: AIHW.

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 highlights the key trends, which suggest there have been improvements over the long term but there is some cause for concern in recent years. In adults, there was a decrease in the average number of teeth affected by decay from nearly 15 in 1987–88 to around 13 in 2004–06. From 1994 to 2010, however, the proportion reporting any adverse oral health impact generally increased and ranged from 31.4% in 1994 to a peak of 39.9% in 2008.