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Oral health and use of dental services 2008

Findings from the National Dental Telephone Interview Survey 2008

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The University of Adelaide

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Abbreviations

ABS	Australian Bureau of Statistics
ADA	Australian Dental Association
AEC	Australian Electoral Commission
AIHW	Australian Institute of Health and Welfare
ASGC	Australian Standard Geographical Classification
CATI	computer-assisted telephone interviewing
CDHP	Commonwealth Dental Health Program
CI	confidence interval
DSRU	Dental Statistics and Research Unit
ERP	estimated resident population
EWP	Electronic White Pages
NDTIS	National Dental Telephone Interview Survey

Symbols

..	not applicable
n.p.	not published
<	less than
+	and over

Summary

This report presents findings from the 2008 National Dental Telephone Interview Survey. A random sample of Australians from all states and territories were interviewed. Variations in recent dental visiting and self-reported oral health status of Australian adults aged 18 years and over are presented. Comparisons are made between age groups on the bases of: holding an Australian Government Concession card (cardholders vs. non-cardholders); usual reason for making a dental visit (check-up vs. problem); experience of financial barriers to using dental care; and remoteness area of residence.

Overall, 6% of adults were edentulous (had lost all their teeth), while 94% of adults had one or more natural teeth. Edentulism (the loss of all natural teeth) was more prevalent in older persons. After controlling for age, people from low-income households and cardholders experienced higher levels of edentulism. Among dentate persons (those with teeth), cardholders and persons from low-income households were more likely to experience higher levels of tooth loss and report that they were wearing a denture.

Among those who were dentate, cardholders were more likely to have experienced toothache (22% compared with 15%), felt uncomfortable with their dental appearance (33% compared with 26%), and avoided certain foods during the previous 12 months because of problems with their teeth, mouth or dentures (30% compared with 17%). Over 35% of people with complete tooth loss had avoided certain foods during the previous 12 months, compared with 22% of people who retained some of their own natural teeth.

Nearly 60% of dentate adults had made a dental visit within the previous 12 months while only 16% of edentulous adults had done so. Among dentate adults who visited in the previous 12 months, approximately 55% went for a dental check-up and 44% for a dental problem at their most recent dental visit. Cardholders were less likely to visit for a check-up (46% compared with 58%). Furthermore, cardholders who visited a public practice at their last dental visit were far less likely to have visited for a check-up (29%) than for a problem.

Although eligible for public-funded dental care, only 25% of cardholders visited a public clinic at their most recent dental visit. Cardholders were more likely to have received an extraction during the previous 12 months and had more teeth extracted (0.45 compared with 0.29). Adults who last visited for a dental problem had more extractions (0.55 compared with 0.15) and more fillings (1.26 compared with 0.48).

Among cardholders who last visited a public clinic, 25% waited between 1 and 2 years for that dental appointment and 32% waited 2 or more years.

Affordability and financial hardship encountered in purchasing dental services influenced the use of private dental services by Australian adults. Cardholders were more likely to have avoided or delayed visiting because of cost, to have had cost prevent them from having recommended treatment, and to have had a lot of difficulty in paying a \$150 dental bill.

Dentate adults with affordability and hardship difficulties were less likely to have made a dental visit in the previous 12 months, and were more likely to usually visit for a dental problem. They were also more likely to receive either a filling or an extraction upon visiting.

1 Introduction

The purpose of this report is to examine the dental visiting patterns and oral health status of Australian adults (aged 18 years and older) from the 2008 National Dental Telephone Interview Survey (NDTIS).

NDTIS was conducted from March to October 2008 by the Dental Statistics and Research Unit (DSRU), a collaborating unit of the Australian Institute of Health and Welfare. Information collected during the telephone interview included dental visiting behaviour, dental services received, indicators of oral health status and barriers to accessing dental care. The survey was funded by the Australian Government Department of Health and Ageing.

1.1 Background

A background paper released by the National Health Strategy (1992, *Improving Dental Health in Australia, Background Paper No. 9*) documented major concerns on the social inequalities in oral health and the receipt of dental services among the Australian population. The report's main theme was the need to improve access to dental care for low-income persons. In addition, the report stressed the need for improved data collection on oral health, including a national dental survey and specific monitoring of an expanded dental program.

Subsequently, the 1992–1993 Research Database on Dental Care in Australia was undertaken at The University of Adelaide for the (now) Australian Government Department of Health and Ageing. It aimed to provide appropriate information for the introduction of the Commonwealth Dental Health Program (CDHP) in 1994.

With the introduction of the CDHP, the DSRU was commissioned to undertake part of the evaluation of the program. Building on experience gained in developing the 1992–1993 Research Database on Dental Care in Australia, the DSRU implemented the NDTIS. The NDTIS was conducted in 1994, 1995 and 1996 as part of the evaluation project for the CDHP. When the CDHP finished at the end of 1996, the then Commonwealth Department of Health and Aged Care funded the DSRU to continue research on 'adult access to dental care'. The fourth NDTIS was then conducted in 1999. The fifth NDTIS was conducted in 2002 and a sixth NDTIS was conducted in 2004–2006 as the computer-assisted telephone interviewing (CATI) component of the National Survey of Adult Oral Health 2004–06 (NSAOH). The 2008 NDTIS forms part of the continued research in this area.

1.2 Methods

The 2008 NDTIS interviewed a random sample of Australian residents aged 5 years and older in all states and territories. The data items included in the 2008 survey were based on those used in previous surveys in this series. Some additional questions were included in the 2008 questionnaire and a copy of the questionnaire is provided in Appendix A.

The 2008 NDTIS sample was selected using a stratified random sample from the Electronic White Pages (EWP). Full details of sample selection are described in Appendix B.

Approximately 10 days prior to telephone contact being made, selected households were mailed a primary approach letter which explained the purpose of the survey. Once telephone contact was made with a selected dwelling, a second stage of selection involved randomly selecting one person aged 5 years or older from the dwelling. When a person contacted the DSRU to decline participation in the survey, they were recorded as a refusal outcome and their telephone number was removed from the list of numbers to be contacted. Proxy interviews were used for children aged less than 18 years and where the selected person was unable to communicate. Interviews were also conducted in Italian, Greek, Spanish and Vietnamese where appropriate. Full details of telephone interview protocols are described in Appendix B.

Due to differential response rates by age and sex within strata, the initial weights were adjusted to ensure that the age-sex distribution of the sample reflected the Australian population age-sex distribution. Within each of the 15 strata, sub-strata were defined by age group (5-year age categories from 5–9 years through to 80–84 years, plus 85 years and older) and sex. Each sub-stratum was linked to the estimated resident population (ERP) for that sub-stratum (the ERPs were obtained from Australian Bureau of Statistics) (ABS 2008). Full details of weighting methods are described in Appendix B.

The estimates provided in this report are subject to sampling error due to a sample of the Australian population being selected rather than a complete enumeration of the population. To enable survey estimates to be compared and inferences to be made about characteristics of the population, 95% confidence intervals (CIs) have been provided for each survey estimate in the report. The 95% CIs for tables are provided in separate tables in Appendix C. The 95% CIs for figures are shown as two-tailed lines on the bar charts. Two estimates are significantly different if the 95% CIs do not overlap. Full details of methods used to derive 95% confidence intervals are described in Appendix B.

An overall participation rate of 59.4% was achieved in the 2008 survey. A total of 13,733 unique telephone numbers were called, resulting in 7,598 completed interviews. Participation rates ranged from 50.9% in Melbourne to 69.7% in non-metropolitan South Australia. A complete summary of response rates is available in Appendix B.

After data cleaning, 11 participants were excluded from the survey. The remaining 7,587 participants included 6,602 adults aged 18 years and over and 985 children aged 5 to 17 years. This report presents findings based on the 6,602 adults interviewed in the survey.

Comparisons are made between males and females, age groups, on the basis of holding a Australian Government Concession card (cardholders vs. non-cardholders) (see Box 1), participants' usual reason for making a dental visit (check-up vs. problem), experience of financial barriers to using dental care, and remoteness area of residence.

Box 1. Why are results reported by 'Cardholder status'?

Cardholder status is used to determine eligibility for free or subsidised dental care provided by state and territory governments. Cardholders are persons who hold an Australian Government Government concession card (Health Care Card or Pensioner Concession Card) by virtue of their household income.

While the Indigenous status of the respondents was collected during this survey, the quality of these data was not sufficient to enable their analysis and reporting in a way which would contribute to our understanding of the oral health and dental visiting patterns of Indigenous Australians.

Where attention is drawn to differences between population groups, these differences are statistically significant at the 5% level, unless stated otherwise.

2 Oral health

Overall, 94.1% of adults had one or more natural teeth. Dentate adults (those with teeth) reported a mean of 5.4 missing teeth, 12.6% reported an inadequate dentition (fewer than 21 teeth) and 15.4% reported that they owned a denture.

Older adults had higher rates of edentulism (with no natural teeth) and dentate older adults had more missing teeth than their younger counterparts. Women, Australian Government concession cardholders, adults with lower annual household incomes and those living in *Inner regional* and *Outer regional* areas were more likely to be edentulous (had lost all their teeth). Among older adults, cardholders were more likely than non-cardholders to have an inadequate dentition.

Almost 20% of dentate adults reported that they had experienced toothache (16.9%) or had avoided some foods (19.8%) because of problems with their teeth, mouth or dentures 'very often', 'often' or 'sometimes' in the previous 12 months. Almost 30% reported feeling uncomfortable with their dental appearance.

2.1 Introduction

Tooth loss occurs primarily because of a treatment decision to extract one or more teeth rather than use other treatment options (Roberts-Thomson & Do 2007). Teeth are extracted because of extensive disease precluding other treatments, the preference of a patient and the recommendation of a dentist (Roberts-Thomson & Do 2007). The following sections report on a number of measures to summarise the extent of tooth loss among Australian adults and to compare variations in tooth loss by selected population groupings. These measures include prevalence of complete tooth loss, the mean number of missing teeth, and prevalence of an inadequate dentition.

2.2 Edentulism

The loss of all teeth is a fundamental indicator of dental impairment. Complete tooth loss (edentulism) is a consequence of extensive dental disease and usually indicates the failure of all preventive and restorative efforts. Edentulism is relevant in the Australian population as a 'permanent' scar reflecting factors that have affected oral health in the past. Despite most wearing dentures, people with no natural teeth have poorer self-reported oral health (Slade & Spencer 1994).

Table 2.1 compares the percentage of Australian adults who were edentulous by sex, annual household income and cardholder status. Overall 5.9% of adults were edentulous, while 94.1% of adults had one or more natural teeth. Edentulism was associated with age, with older adults far more likely to be edentulous than younger adults. Over 30% of adults aged 75 years and older, and 20% of adults aged 65–74 years, were edentulous. In comparison, there were no edentulous adults aged 45 years or less and only 2.2% of those aged 45–54 years were edentulous.

The increase in edentulism with age is due to both an accumulation of disease experience and its treatment over time, and to the historical legacy of when extraction, rather than restoration, was a more common treatment. Improvements in restorative care and conservative treatment have resulted in a rapid decline in edentulism (Slade & Sanders 2007) and it is now rarely seen in younger age groups. The prevalence of edentulism was higher among females (7.0%) than males (4.7%).

There was an inverse relationship between annual household income and edentulism. That is, the lower the income, the greater the prevalence of edentulism. A higher proportion (22.7%) of people in the lowest income group was edentulous, than in the five highest income groups combined. In the 55–64 years age group, there was a large difference between the lower and higher income groups. A similar pattern was evident for those aged 65–74 years and 75 years and older.

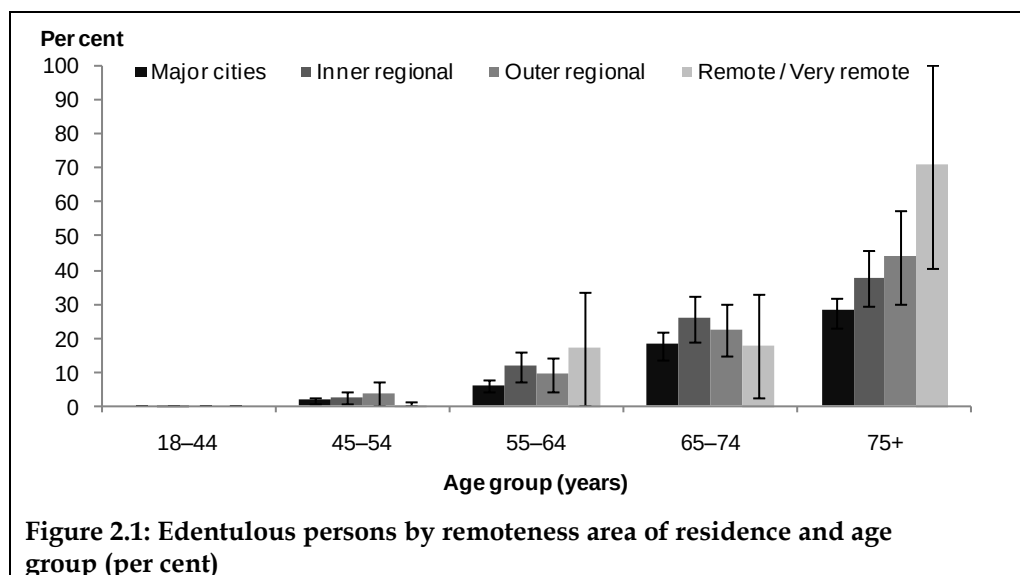
Overall, cardholders were almost eight times more likely than non-cardholders to be edentulous (16.6% compared with 2.1%). For those aged 55–64 years, cardholders were three times more likely to be edentulous than non-cardholders (16.4% compared with 4.9%) and for those aged 65–74 years the effect was twofold (23.5% compared with 10.8%).

Table 2.1: Edentulous persons by sex, annual household income, cardholder status and age group (per cent)

	Age group (years)					Total
	18–44	45–54	55–64	65–74	75+	
Sex						
Male	0.0	2.2	5.7	17.2	28.1	4.7
Female	0.0	1.6	9.9	23.3	34.1	7.0
Annual household income						
Less than \$20,000	0.0	3.6	21.0	27.9	39.5	22.7
\$20,000–<\$30,000	0.0	0.0	11.9	23.5	29.9	15.3
\$30,000–<\$40,000	0.0	2.2	8.3	15.4	30.6	7.0
\$40,000–<\$60,000	0.0	3.5	6.2	18.3	16.0	3.6
\$60,000–<\$80,000	0.0	3.6	3.9	12.6	17.4	2.1
\$80,000–<\$110,000	0.0	0.5	3.3	0.0	0.0	0.4
\$110,000 or more	0.0	0.5	2.1	0.0	0.0	0.3
Cardholder status						
Cardholder	0.0	1.9	16.4	23.5	33.9	16.6
Non-cardholder	0.0	1.9	4.9	10.8	23.0	2.1
All persons	0.0	1.9	7.8	20.3	31.6	5.9

Note: 95% confidence intervals for these estimates are in Table C1.

Figure 2.1 compares the percentage of Australian adults who were edentulous by remoteness area of residence and age. The rate of edentulism was lower in *Major cities* (4.8%) than in *Inner regional* (8.9%) or *Outer regional* (8.1%) areas of Australia. This finding was consistent across age groups.



2.3 Mean number of missing teeth

Dentate Australian adults had a mean of 5.4 missing teeth. Survey results show that cardholders and low-income earners not only experience higher edentulism rates but, among those still dentate, the mean number of missing teeth was also greater.

Table 2.2 compares the mean number of missing teeth among dentate persons by sex, annual household income, and cardholder status.

Among dentate persons, those aged 65 years and older reported a mean of 12.6 missing teeth, representing over one-third of the natural dentition. Tooth loss was much less evident among the 45–64 years age group, with a mean of 6.4 missing teeth, and even less evident among the 25–44 years age group (3.2). As was noted for edentulism, this indicates the effects of the accumulation of disease, treatment preference and, to some extent, the past tendency in dental practice to favour extraction over preservation of teeth.

As was observed for edentulism, there was an inverse relationship between the number of missing teeth and annual household income. With the exception of the 18–24 years age group, the mean number of missing teeth generally increased as income decreased. Among dentate persons aged 45–64 years, those from households with an annual income of less than \$20,000 had a mean of 11.1 missing teeth, compared with 4.3 for those with an annual income of over \$110,000.

Cardholders reported twice as many missing teeth (9.1) as non-cardholders (4.3), although differences by cardholder status were only evident among the older age groups.

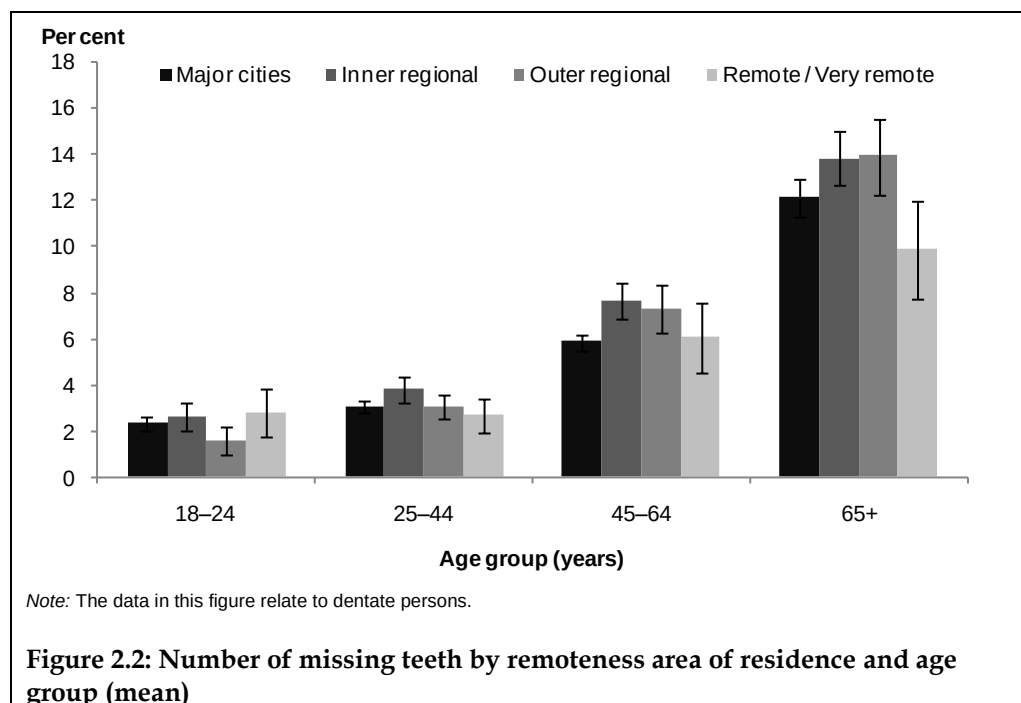
Table 2.2: Number of missing teeth by sex, annual household income, cardholder status and age group (mean)

	Age group (years)				Total
	18–24	25–44	45–64	65+	
Sex					
Male	1.9	2.8	6.2	12.2	5.0
Female	2.7	3.5	6.6	12.9	5.7
Annual household income					
Less than \$20,000	2.0	4.6	11.1	14.4	10.8
\$20,000–<\$30,000	1.6	4.2	8.5	13.4	9.5
\$30,000–<\$40,000	1.9	3.7	7.6	12.6	6.4
\$40,000–<\$60,000	2.4	3.9	6.9	9.8	5.4
\$60,000–<\$80,000	2.5	3.0	5.8	9.9	4.3
\$80,000–<\$110,000	2.0	2.7	5.1	8.0	3.5
\$110,000 or more	2.2	2.6	4.3	9.0	3.3
Cardholder status					
Cardholder	2.4	4.0	9.6	13.5	9.1
Non-cardholder	2.3	3.0	5.8	10.0	4.3
All persons	2.3	3.2	6.4	12.6	5.4

Notes

1. The data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C2.

Figure 2.2 compares the mean number of missing teeth among dentate persons by remoteness area of residence and age group. On average, residents of *Remote* areas had fewer missing teeth (3.8) than residents of *Inner regional* (6.6) and *Outer regional* (5.9) areas, with these differences being statistically significant.



2.4 Inadequate dentition

The concept of an inadequate dentition has been reported variously as adults with fewer than 20 remaining teeth or fewer than 21 remaining teeth, based on measures of impaired nutrition, chewing function and oral health related quality of life (Roberts-Thomson & Do 2007; Kelly et al. 2000). In this report, the threshold of fewer than 21 remaining teeth has been selected as designating an inadequate dentition.

Table 2.3 compares the distribution of the number of remaining teeth among dentate adults by age group, sex, annual household income and cardholder status. Overall, 12.6% of dentate persons reported an inadequate dentition and 41.7% reported they had 29 or more teeth.

Consistent with previous indicators of tooth loss, there was an inverse relationship between the number of remaining teeth and age. Younger age groups were more likely to have retained a greater number of teeth than older age groups. For instance, almost half (47.4%) of those aged 65 years and older reported having an inadequate dentition compared with less than 3% for those aged 44 years or less. The high percentage of those aged 65 years and older with fewer than 21 remaining teeth represents a potential problem as consequently they are more likely to suffer functional and social problems.

Males and females were equally as likely to report an inadequate dentition (12.6%), but a higher percentage of males reported having 29 to 32 teeth remaining than females (47.9% compared with 35.7%).

A higher proportion of respondents in the lowest income group reported having an inadequate dentition (40.5%) compared with the highest (2.4%) and second highest (3.9%) income groups. Conversely, the percentage of persons with 29 to 32 teeth was highest among the top two income groups (47.7% and 51.8%) and lowest among the bottom two income groups (24.9% and 27.6%).

A similar result was observed when examining the data by eligibility for public dental care. Cardholders were four times more likely than non-cardholders to have fewer than 21 remaining teeth (31.1% compared with 7.1%).

Table 2.3: Number of teeth by age group, sex, annual household income and cardholder status (per cent)

	Number of teeth			
	1–20	21–24	25–28	29–32
Age group (years)				
18–24	0.5	3.0	37.2	59.3
25–44	2.5	5.8	41.0	50.7
45–64	15.8	11.5	38.7	34.0
65 or older	47.4	13.9	23.8	14.8
Sex				
Male	12.6	6.7	32.9	47.9
Female	12.6	10.0	41.8	35.7
Annual household income				
Less than \$20,000	40.5	11.9	22.8	24.9
\$20,000–<\$30,000	31.6	13.4	27.3	27.6
\$30,000–<\$40,000	17.6	10.9	35.5	36.1
\$40,000–<\$60,000	12.1	8.6	41.9	37.4
\$60,000–<\$80,000	7.3	7.8	41.2	43.7
\$80,000–<\$110,000	3.9	6.2	42.2	47.7
\$110,000 or more	2.4	5.9	39.9	51.8
Cardholder status				
Cardholder	31.1	11.0	29.2	28.7
Non-cardholder	7.1	7.6	39.8	45.4
All persons	12.6	8.4	37.4	41.7

Notes

1. The data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C3.

Table 2.4 compares the distribution of the number of remaining teeth among dentate adults by remoteness area of residence. There was considerable variation across remoteness areas in the number of teeth retained. This variation was partly a consequence of the differing age profiles of both regional and remote areas compared with that of *Major cities* (for example, in 2008, 42.5% of persons living in *Inner regional* areas were aged 45 and over, compared with 36.8% of persons living in *Major cities*) and of the fact that the number of remaining teeth is lower at older ages. Residents of *Remote* areas (4.0%) and *Major cities* (10.6%) had a lower prevalence of inadequate dentition than residents of *Inner regional* (18.5%) and *Outer regional* (16.5%) areas.

Table 2.4: Number of teeth by remoteness area of residence (per cent)

Remoteness area of residence	Number of teeth			
	1–20	21–24	25–28	29–32
Major cities	10.6	8.1	38.1	43.2
Inner regional	18.5	10.0	36.8	34.7
Outer regional	16.5	6.8	32.7	44.0
Remote / Very remote	4.0	9.8	38.5	47.7
All persons	12.6	8.4	37.4	41.7

Notes

1. The data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C4.

2.5 Social impact on individuals

The social impact of dental problems on individuals was assessed by asking respondents to report how often during the previous 12 months they had: experienced toothache, avoided certain foods due to problems with their teeth, mouth or dentures, and felt uncomfortable about the appearance of their teeth, mouth or dentures. Categories of response were 'very often', 'often', 'sometimes', 'hardly ever' or 'never'. The percentage of persons who reported either 'very often', 'often' or 'sometimes' is reported in the following tables. Separate results are presented for dentate and edentulous persons.

Table 2.5 compares the percentage of adults reporting each dental problem by age group, sex and dentate status.

Almost a fifth of dentate adults reported they had experienced toothache (16.9%) or avoided some foods (19.8%) because of problems with their teeth, mouth or dentures 'very often', 'often' or 'sometimes' in the previous 12 months. Over a quarter reported feeling uncomfortable with their dental appearance (27.4%).

Approximately one in five dentate persons aged 18–44 years had experienced toothache either 'very often', 'often' or 'sometimes' in the previous 12 months. Toothache experience was significantly lower among those aged 65 years or older (7.4%).

Among dentate adults, feeling uncomfortable with their dental appearance was reported most often (27.4%), with prevalence highest among those aged 45–64 years (30.8%).

Avoiding certain foods in the previous 12 months was also common (19.8%) with prevalence again peaking for adults aged 45–64 years (23.4%).

The most common social impact reported by edentulous adults was the avoidance of certain foods (35.5%) and prevalence was highest among edentulous adults aged 45–64 years (39.8%). Just over 20% of edentulous adults reported feeling uncomfortable with their dental appearance, similar to the prevalence for dentate adults.

Among dentate persons, females were more likely to report feeling uncomfortable with their dental appearance (30.7% compared with 24.0%) and avoiding food due to dental problems (23.5% compared with 16.1%). These differences in prevalence were not apparent for edentulous persons.

Table 2.5: Persons experiencing dental problems by age, sex and dentate status (per cent)

	Dentate			Edentulous	
	Toothache ^(a)	Appearance ^(b)	Avoid food ^(c)	Appearance ^(b)	Avoid food ^(c)
Age group (years)					
18–24	20.0	24.2	14.1	..	..
25–44	19.8	28.7	19.6	n.p.	n.p.
45–64	16.1	30.8	23.4	31.3	39.8
65 or older	7.4	18.8	17.9	18.1	34.0
Sex					
Male	15.2	24.0	16.1	19.9	35.7
Female	18.6	30.7	23.5	22.5	35.3
All persons	16.9	27.4	19.8	21.5	35.5

(a) Percentage of persons reporting that they had experienced toothache 'very often', 'often' or 'sometimes' during the previous 12 months.

(b) Percentage of persons reporting that they had felt uncomfortable about their dental appearance 'very often', 'often' or 'sometimes' during the previous 12 months.

(c) Percentage of persons reporting that they had avoided certain foods 'very often', 'often' or 'sometimes' during the previous 12 months.

Note: 95% confidence intervals for these estimates are in Table C5.

Table 2.6 compares the percentage of adults reporting each dental problem by annual household income, cardholder status and dentate status.

Among dentate persons, those from households with an annual income of less than \$20,000 were more likely to report experiencing toothache (26.3%), feeling uncomfortable with their dental appearance (38.3%) and avoiding some foods (37.7%) than persons from high-income households.

Among edentulous persons, although the prevalence of these problems was low for persons from high-income households, there was no clear pattern across income groups.

Amongst dentate adults, cardholders were significantly more likely than non-cardholders to have experienced toothache (22.3% compared with 15.3%), to have felt uncomfortable with their dental appearance (32.6% compared with 25.9%) and to have avoided certain foods (29.7% compared with 16.9%) in the previous 12 months.

Table 2.6: Persons experiencing dental problems by annual household income, cardholder status and dentate status (per cent)

	Dentate			Edentulous	
	Toothache ^(a)	Appearance ^(b)	Avoid food ^(c)	Appearance ^(b)	Avoid food ^(c)
Annual household income					
Less than \$20,000	26.3	38.3	37.7	22.1	37.8
\$20,000–<\$30,000	16.5	28.4	25.2	16.6	32.8
\$30,000–<\$40,000	18.7	30.5	24.4	30.0	31.3
\$40,000–<\$60,000	19.2	27.7	21.0	39.7	41.0
\$60,000–<\$80,000	16.9	27.4	17.8	17.1	38.0
\$80,000–<\$110,000	14.8	27.0	14.1	0.0	9.6
\$110,000 or more	12.4	20.7	13.5	6.1	6.1
Cardholder status					
Cardholder	22.3	32.6	29.7	22.3	37.1
Non-cardholder	15.3	25.9	16.9	19.9	31.4
All persons	16.9	27.4	19.8	21.5	35.5

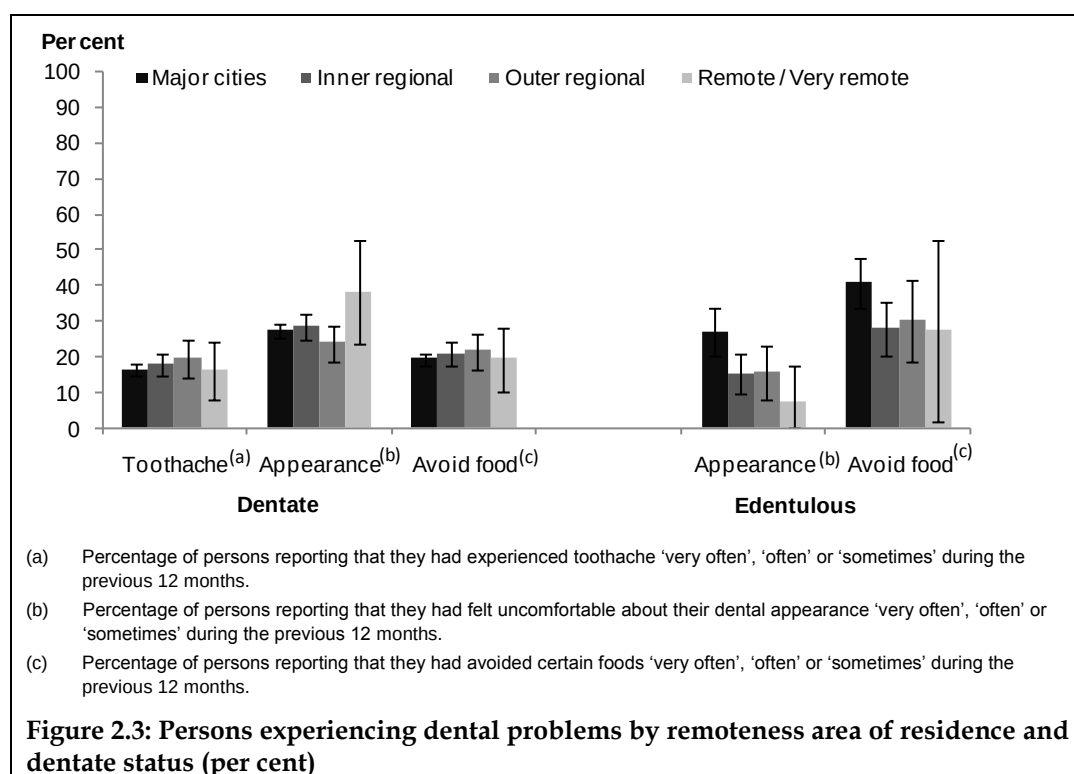
(a) Percentage of persons reporting that they had experienced toothache 'very often', 'often' or 'sometimes' during the previous 12 months.

(b) Percentage of persons reporting that they had felt uncomfortable about their dental appearance 'very often', 'often' or 'sometimes' during the previous 12 months.

(c) Percentage of persons reporting that they had avoided certain foods 'very often', 'often' or 'sometimes' during the previous 12 months.

Note: 95% confidence intervals for these estimates are in Table C6.

Figure 2.3 compares the percentage of adults reporting each dental problem by remoteness area of residence and dentate status. Among dentate persons, differences in the prevalence of these dental problems across remoteness area were generally small. However, for edentulous persons, being uncomfortable with their dental appearance and avoiding certain foods were more common among those living in *Major cities* than residents of other remoteness areas (26.8% compared with 40.7%).



3 Dental visiting

Overall 60.0% of adults had made a dental visit in the previous 12 months and 55.7% of these visits were for the purpose of a check-up. Adults aged 24–44 were least likely to have visited in the past 12 months while 18–24 years olds were most likely to visit for a check-up.

Amongst dentate adults, patterns of visiting were related to age, annual household income, and cardholder status. Cardholders reported higher rates of visiting for a problem and greater likelihood of receiving an extraction or a filling than non-cardholders. Adults living in households with lower annual household income reported longer times since last dental visit and higher rates of visiting for a problem.

3.1 Introduction

The decision to seek dental care is based on an individual's assessment of factors such as money, time, pain, and inconvenience of travel. When seeking access to publicly funded dental care, the following factors will determine whether, and how quickly, individuals will be able to access public dental care: providers' accessibility, queuing procedures or a dentist's participation in publicly subsidised dental care. External factors such as lack of public clinics, isolation or perceived inadequacy of the available provider may restrict access.

Access to dental care in either private or public dental services is examined in this chapter using the following measures:

- level of contact as measured by time since last dental visit
- intention behind the use of dental care as measured by the reason for the last dental visit
- type of practice visited
- nature of the dental services received
- waiting time for dental care.

These measures are reported for a range of selected demographic characteristics. Specific comparisons are made between the services provided to patients whose last dental visit was for a problem and those who visited for a check-up. Comparisons are also made between dental care provided by public dental services and dental care provided through private clinics.

3.2 Time since last dental visit

The time since the last visit to a dental professional is a key indicator of access to dental care. Those who have made a dental visit within the previous 12 months are likely to benefit from regular dental care. Conversely, those who haven't visited within the last five years can be regarded as effectively being out of the dental system (Spencer & Harford 2007). The time since last dental visit is presented separately for dentate and edentulous persons.

Dentate persons

Table 3.1 compares the time since last making a visit to a dental professional by age group and sex. Nearly 60% of dentate persons had made a dental visit in the previous 12 months and 78% had visited within the previous 2 years. Overall, one in ten dentate adults had not visited a dental professional for 5 years or more.

There was some variation across age groups, with fewer adults aged 25–44 years visiting within the previous 12 months (54.2%) than other age groups.

Females (63.6%) were more likely than males (54.8%) to have visited a dentist within the previous 12 months. A higher percentage of males (13.1%) than females (7.8%) had not made a dental visit within the previous 5 years.

Table 3.1: Time since last dental visit by age group and sex (per cent)

	Time since last dental visit			
	<12 months	1–<2 years	2–<5 years	5+ years
Age group (years)				
18–24	60.0	18.3	11.3	10.4
25–44	54.2	19.8	13.1	13.0
45–64	63.6	17.2	11.0	8.2
65 or older	62.5	17.6	11.5	8.3
Sex				
Male	54.8	18.0	14.1	13.1
Female	63.6	18.9	9.8	7.8
All persons	59.2	18.4	11.9	10.4

Notes

1. The data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C7.

Table 3.2 compares the time since last making a visit to a dental professional by annual household income and cardholder status. People from high-income households were more likely than those from low-income households to have made a recent dental visit. For example, 12.9% of people from households with an annual income of less than \$20,000 reported they had not visited a dentist within the previous 5 years, compared with only 6.1% of those from households earning an annual income of \$110,000 or more.

Variations in visiting patterns among cardholders and non-cardholders were relatively small, with fewer cardholders visiting a dentist within the previous 12 months (56.5% compared with 60.1%) and more cardholders not visiting within the last 5 years (13.0 compared with 9.6%).

Table 3.2: Time since last dental visit by income and cardholder status (per cent)

	Time since last dental visit			
	<12 months	1–<2 years	2–<5 years	5+ years
Annual household income				
Less than \$20,000	55.8	17.4	14.0	12.9
\$20,000–<\$30,000	52.3	21.2	12.6	13.9
\$30,000–<\$40,000	58.6	16.9	9.3	15.2
\$40,000–<\$60,000	59.1	19.6	11.4	9.9
\$60,000–<\$80,000	56.0	16.5	13.4	14.1
\$80,000–<\$110,000	60.4	19.2	12.6	7.9
\$110,000 or more	64.8	18.3	10.9	6.1
Cardholder status				
Cardholder	56.5	17.9	12.7	13.0
Non-cardholder	60.1	18.6	11.7	9.6
All persons	59.2	18.4	11.9	10.4

Notes

1. The data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C8.

Table 3.3 compares the time since last making a visit to a dental professional by remoteness area of residence. Dentate adults from *Major cities* reported the highest prevalence of visiting within the previous 12 months (61.1%) and those from *Remote/Very remote* areas reported the lowest prevalence (51.6%).

Table 3.3: Time since last dental visit by remoteness area of residence (per cent)

	Time since last dental visit			
	<12 months	1–<2 years	2–<5 years	5+ years
Residential location				
Major cities	61.1	18.4	11.3	9.2
Inner regional	54.9	18.7	12.6	13.9
Outer regional	55.0	17.0	15.9	12.0
Remote / Very remote	51.6	22.4	11.7	14.3
All persons	59.2	18.4	11.9	10.4

Notes

1. The data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C9.

Edentulous persons

Table 3.4 compares the time since edentulous adults made their last dental visit by age group, sex, annual household income and cardholder status. Edentulous persons access dental care less regularly than dentate persons. Even though edentulism reduces self-reported oral health, it typically reduces the need for, and urgency of, subsequent dental services.

Only 16.4% of edentulous persons had made a dental visit in the previous 12 months compared with 59.2% of dentate persons. Almost half (49.1%) of edentulous persons had not made a dental visit in the previous 5 years. Despite some variation in visiting behaviour within population groups, no significant differences were observed by age group, sex, annual household income or cardholder status.

Table 3.4: Time since last dental visit by age group, sex, annual household income and cardholder status (per cent)

	Time since last dental visit			
	<12 months	1–<2 years	2–<5 years	5+ years
Age group				
Younger than 65 years	24.1	13.8	23.1	39.0
65 years or older	13.8	7.8	26.0	52.5
Sex				
Male	15.3	11.0	29.8	43.9
Female	17.1	8.2	22.4	52.4
Annual household income				
Less than \$20,000	16.8	7.6	25.1	50.4
\$20,000–<\$30,000	15.6	10.3	27.8	46.3
\$30,000 or more	19.0	13.7	23.9	43.4
Cardholder status				
Cardholder	14.7	9.2	25.2	50.9
Non-cardholder	21.4	9.8	25.9	42.9
All persons	16.4	9.3	25.3	49.1

Notes

1. The data in this table relate to edentulous persons.
2. 95% confidence intervals for these estimates are in Table C10.

3.3 Reason for last dental visit

An individual's reason for seeking dental care influences the type of care they are likely to receive and the level of untreated problems they may have at any time. Individuals who visit for a dental check-up are more likely to benefit from early detection and treatment of oral disease and receive ongoing preventive care. Conversely, those who only seek care when they experience a dental problem may be less likely to receive preventive services and more likely to have an extraction (Ellershaw & Spencer 2011). The following tables are reported for dentate persons only and emphasise comparisons between the cardholder and non-cardholder populations.

Table 3.5 compares the percentage of persons whose last dental visit was for the purpose of a check-up by age group, sex, and cardholder status. Overall, 55.7% of adults who made a dental visit in the previous 12 months last visited for a check-up.

Non-cardholders (58.4%) were more likely than cardholders (45.9%) to report that their last dental visit was for the purpose of a check-up. Despite this finding, differences by cardholder status were not apparent for young adults but were particularly evident for adults aged 25–44 years (60% compared with 34.7%).

A higher percentage of females than males reported their last dental visit was a check-up, irrespective of cardholder status, but differences were not statistically significant.

Table 3.5: Persons whose last dental visit was for a check-up by age group, sex, and cardholder status (per cent)

	Cardholder	Non-cardholder	Total
Age group (years)			
18–24	71.4	73.6	73.1
25–44	34.7	60.4	57.3
45–64	37.6	51.4	49.5
65 or older	46.8	54.6	49.3
Sex			
Male	43.1	55.7	53.2
Female	47.8	60.9	57.7
All persons	45.9	58.4	55.7

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C11.

Table 3.6 compares the percentage of persons whose last dental visit was for the purpose of a check-up by annual household income and cardholder status. As annual household income increased, the likelihood of a person's last dental visit being for the purpose of a check-up also increased.

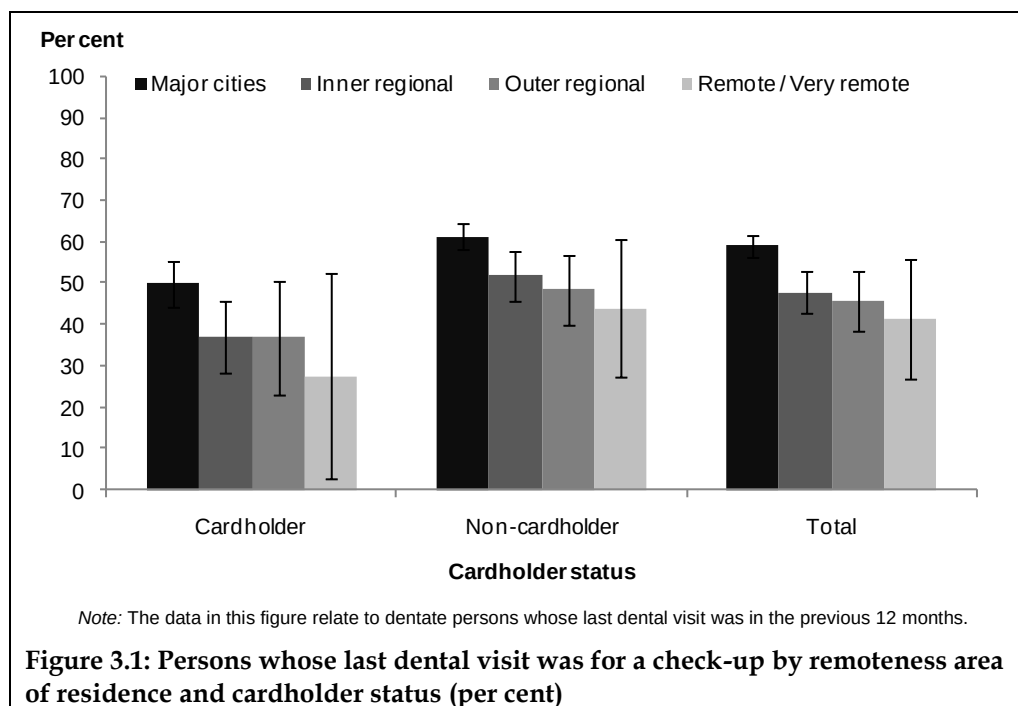
Table 3.6: Persons whose last dental visit was for a check-up by annual household income and cardholder status (per cent)

	Cardholder	Non-cardholder	Total
Annual household income			
Less than \$20,000	37.9	53.2	40.9
\$20,000–<\$30,000	42.1	51.7	45.4
\$30,000–<\$40,000	43.2	44.9	44.3
\$40,000–<\$60,000	48.5	51.5	51.1
\$60,000–<\$80,000	57.0	56.4	56.5
\$80,000–<\$110,000	67.6	64.1	64.2
\$110,000 or more	56.9	62.1	62.0
All persons	45.9	58.4	55.7

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C12.

Figure 3.1 compares the percentage of persons whose last dental visit was for the purpose of a check-up, by remoteness area of residence and cardholder status. Residents of Major cities were more likely than those living in other areas to report that their last dental visit was for a check-up. This pattern was consistent among both cardholder and non-cardholder populations. Those living in Remote areas were the least likely to report last visiting for a check-up—only 27.5% of cardholders and 43.9% of non-cardholders.



3.4 Type of practice visited at last dental visit

In the survey, respondents were asked where they made their last dental visit. Categories of response were classified into either a private clinic, public clinic or other type of practice. The third category, 'other', included defence force clinics and visits to a dental technician.

Table 3.7 compares the type of dental clinic visited for those who made a dental visit in the previous 12 months by age and sex.

Approximately 90% of Australian adults who visited a dentist in the previous 12 months visited a private practice. The proportion was highest among those aged 45–64 years (93.7%) and lowest among those aged 65 years and older (85.5%). Visiting a public clinic was more common among young adults (11.8%) and those aged 65 years and older (13.2%).

Males and females were equally likely to report visiting a private clinic at their most recent dental visit.

Table 3.7: Type of practice visited at last dental visit by age group and sex (per cent)

	Type of practice visited at last dental visit (%)		
	Private	Public	Other
Age group (years)			
18–24	87.0	11.8	1.2
25–44	91.0	5.9	3.1
45–64	93.7	5.5	0.8
65 or older	85.5	13.2	1.2
Sex			
Male	90.1	7.1	2.7
Female	91.0	8.1	0.9
All persons	90.6	7.7	1.7

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C13.

Table 3.8 compares the type of dental practice visited for those who made a dental visit in the previous 12 months by household income and cardholder status. People from households with a higher annual income were more likely to visit a private practice at their last dental visit than those from lower income households. Prevalence of visiting a public practice was highest for persons from households with an annual income of less than \$20,000 (31.3%), and from households with \$20,000–\$30,000 (16.7%), although the majority still visited a private clinic.

Overall, 71.6% of cardholders last visited a private clinic and 25.2% last visited a public clinic. Despite cardholders being eligible for public-funded dental care, a higher percentage of them purchased care at their own expense from private practice than received subsidised dental care from the public sector. This could be the result of a number of factors, for example, continuity of care with their private dental practitioner, or discouragement due to the long waiting lists in the public sector (Carter & Stewart 2002).

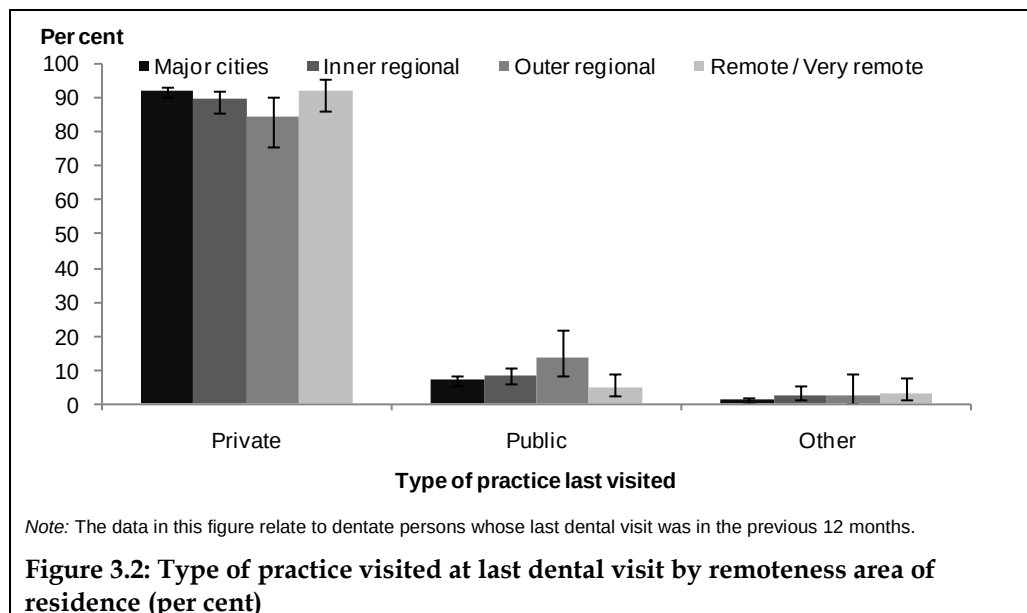
Table 3.8: Type of practice visited at last dental visit by income and cardholder status (per cent)

	Type of practice visited at last dental visit (%)		
	Private	Public	Other
Annual household income			
Less than \$20,000	62.4	31.3	6.4
\$20,000–<\$30,000	83.3	16.7	0.0
\$30,000–<\$40,000	91.2	7.9	0.9
\$40,000–<\$60,000	93.6	3.9	2.6
\$60,000–<\$80,000	94.7	3.0	2.4
\$80,000–<\$110,000	97.5	2.2	0.3
\$110,000 or more	96.4	2.4	1.2
Cardholder status			
Cardholder	71.6	25.2	3.3
Non-cardholder	96.0	2.7	1.3
All persons	90.6	7.7	1.7

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C14.

Figure 3.2 compares the type of dental practice visited for those who made a dental visit in the previous 12 months by residential location. Residents of *Outer regional* areas were more likely to visit a public clinic (13.7%), with prevalence nearly twice the national average (7.7%).



4 Dental care received

Overall, adults who made a dental visit in the previous 12 months made an average of 2.36 visits. Each person who visited received on average 0.32 extractions, 0.83 fillings and 0.94 scale and clean services over the previous 12 months. Lower annual household income was associated with a greater likelihood of receiving an extraction. Adults who visited for a problem were more likely to receive an extraction or a filling. Differences between cardholders and non-cardholders in services received decreased when the differences in the reason for making a visit were taken into account.

4.1 Introduction

Dentate persons who had made a dental visit within the previous 12 months were asked how many visits they had made during this period and the number of routine services they had received. Routine services included scale and clean services, fillings and extractions. Ideally, dental care is sought regularly to maximise opportunities for prevention or, if disease has occurred, to moderate the underlying experience of disease. Early intervention enables treatments that restore form and function of the teeth and surrounding structures, usually in the form of fillings. When early intervention is not received, complex and expensive fillings may be substituted with extractions.

4.2 Mean number of dental visits and routine services

Table 4.1 compares the mean number of dental visits and mean number of routine dental services received in the previous 12 months by age group and sex. Adults who had made a dental visit within the previous 12 months had a mean of 2.4 times during this period. Those aged 45–64 years visited more often than other age groups, with a mean of 2.5 visits.

The mean number of extractions received within the previous 12 months was highest among persons aged 18–24 years (0.42), although some of these extractions were for the removal of wisdom teeth and for orthodontic reasons.

Adults who visited in the previous 12 months were more likely to receive a filling than an extraction, with a mean of 0.83 fillings compared with 0.32 extractions during the 12-month period. Young adults received fewer fillings (0.62) than other age groups. Overall, a scale and clean service was the most common service received.

Males made almost as many visits (2.34) to the dentist in the previous 12 months as females (2.38). Males reported more extractions and fillings and fewer scale and clean services than females, but these differences were not statistically significant.

Table 4.1: Number of dental visits and routine services received by age group and sex (mean)

	Visits	Extraction(s)	Filling(s)	Scale and clean
Age group (years)				
18–24	2.35	0.42	0.62	0.83
25–44	2.26	0.34	0.84	0.94
45–64	2.47	0.29	0.88	0.98
65 or older	2.39	0.28	0.88	1.00
Sex				
Male	2.34	0.34	0.89	0.89
Female	2.38	0.31	0.77	0.99
All persons	2.36	0.32	0.83	0.94

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C15.

Table 4.2 compares the mean number of dental visits and mean number of routine dental services received in the previous 12 months by annual household income and cardholder status.

There was no clear relationship between annual household income and the number of dental visits made within the previous 12 months. Although adults in the lowest income group reported the highest number of visits (2.51), visiting frequency fluctuated across income groups. However, a clear pattern emerged between dental services received and annual household income. Adults from low-income households had more extractions and fillings than those from high-income households, but fewer scale and clean services.

Cardholders made slightly more visits on average than did non-cardholders. At these visits, cardholders received more extractions and more fillings than non-cardholders. Conversely, cardholders received fewer scale and clean services than non-cardholders.

Table 4.2: Number of dental visits and routine services received by annual household income and cardholder status (mean)

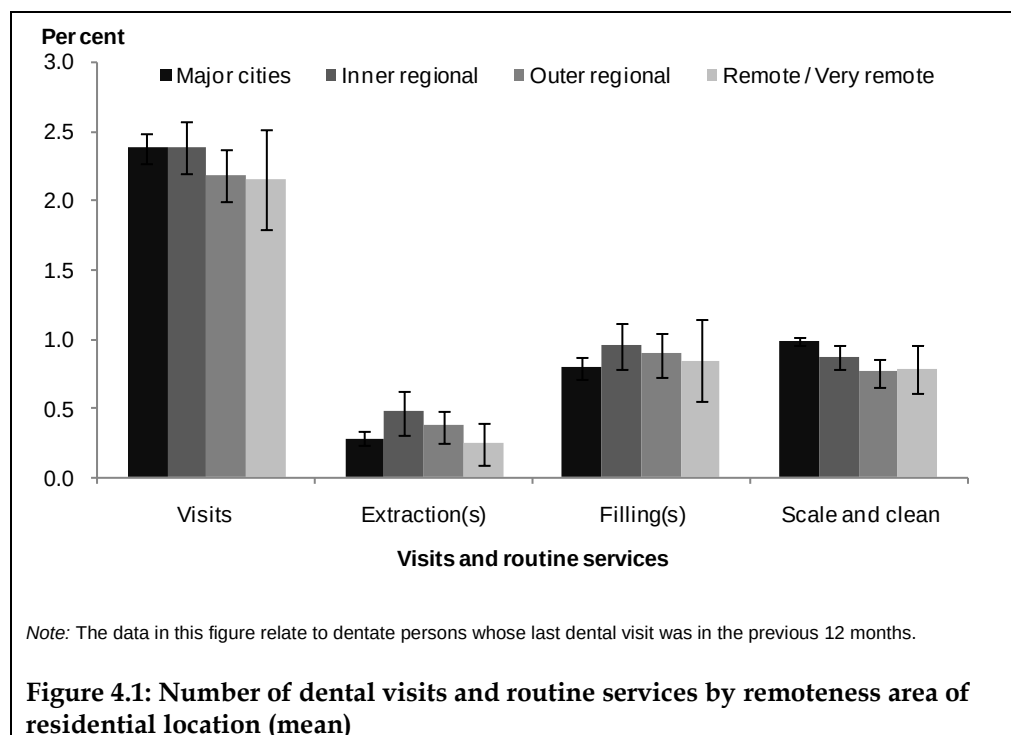
	Visits	Extraction(s)	Filling(s)	Scale and clean
Annual household income				
Less than \$20,000	2.51	0.52	1.06	0.72
\$20,000–<\$30,000	2.18	0.51	0.96	0.87
\$30,000–<\$40,000	2.32	0.34	0.99	0.86
\$40,000–<\$60,000	2.47	0.40	0.90	0.89
\$60,000–<\$80,000	2.27	0.27	0.85	0.98
\$80,000–<\$110,000	2.44	0.26	0.66	0.99
\$110,000 or more	2.32	0.25	0.73	1.11
Cardholder status				
Cardholder	2.47	0.45	1.00	0.84
Non-cardholder	2.33	0.29	0.78	0.97
All persons	2.36	0.32	0.83	0.94

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C16.

Figure 4.1 compares the mean number of dental visits and mean number of routine dental services received in the previous 12 months by remoteness area of residential location.

Persons from *Major cities* and *Inner regional* areas made more dental visits than those from *Outer regional* and *Remote* areas, although differences were not statistically significant. Residents of *Major cities* tended to have fewer extractions and fillings and more scale and clean services than people from Inner and *Outer regional* areas.



4.3 Percentage receiving routine dental services

Table 4.3 compares the percentage of persons who received a routine dental service within the previous 12 months by age group and sex. The percentage of persons who visited in the previous 12 months is also provided as a reference point.

The most common treatment received in the previous 12 months was a scale and clean, with 73.5% of adults reporting this preventive treatment. Overall, 42.8% of adults reported receiving at least one filling in the previous 12 months, with fewer young adults (32.8%) receiving this treatment than other age groups. Fewer adults received an extraction (17.1%) than a filling (42.8%), and young adults reporting the lowest prevalence of extractions (13.9%).

Table 4.3: Persons receiving routine dental services by age group and sex (per cent)

	Visits ^(a)	Extraction(s)	Filling(s)	Scale and clean
Age group (years)				
18–24	60.0	13.9	32.8	67.0
25–44	54.2	18.6	41.4	74.6
45–64	63.6	16.6	46.9	74.5
65 or older	62.5	17.9	46.1	74.3
Sex				
Male	54.8	18.2	44.5	71.0
Female	63.6	16.2	41.3	75.5
All persons	59.2	17.1	42.8	73.5

(a) Percentage of dentate persons whose last dental visit was in the previous 12 months.

Notes

1. Unless otherwise noted, the data in this table relate to dentate persons who visited in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C17.

Table 4.4 compares the proportion of persons who received a routine dental service within the previous 12 months by annual household income and cardholder status. Across income groups, there was a general decline in the proportion of persons who had received an extraction as household income increased. Those in the lowest income group were 2.6 times more likely to have received an extraction than adults in the highest income group. The opposite trend was observed when examining the proportion of persons who had received a scale and clean service. No income gradient was observed for those receiving a filling. Cardholders were more likely to have received an extraction (22.7% compared with 15.6%) and less likely to have received a scale and clean than non-cardholders (65.6% compared with 75.7%).

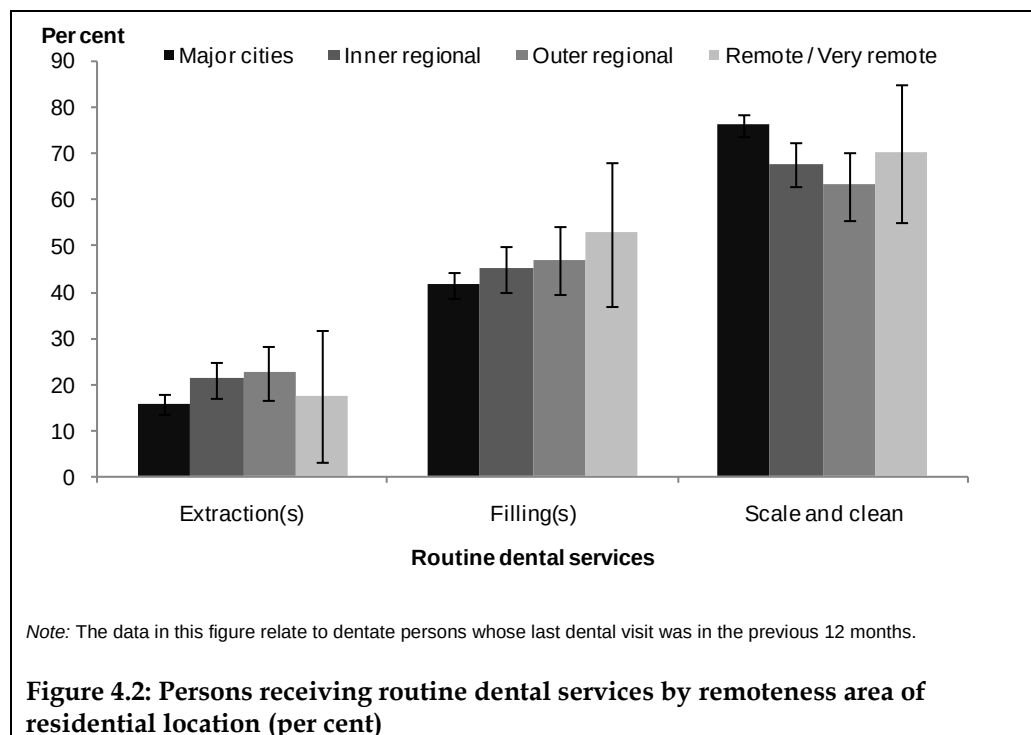
Table 4.4: Persons receiving routine dental services by annual household income and cardholder status (per cent)

	Extraction(s)	Filling(s)	Scale and clean
Annual household income			
Less than \$20,000	29.9	42.8	56.4
\$20,000–<\$30,000	23.9	46.6	70.5
\$30,000–<\$40,000	19.9	44.5	71.2
\$40,000–<\$60,000	19.9	43.9	69.3
\$60,000–<\$80,000	15.0	47.0	75.8
\$80,000–<\$110,000	14.8	39.5	77.3
\$110,000 or more	11.7	41.4	85.2
Cardholder status			
Cardholder	22.7	44.6	65.6
Non-cardholder	15.6	42.3	75.7
All persons	17.1	42.8	73.5

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C18.

Figure 4.2 compares the proportion of persons who received a routine dental service within the previous 12 months by remoteness area of residential location. Extractions were more common among persons living in *Inner regional* and *Outer regional* areas, although differences by remoteness area were not statistically significant. Residents of *Major cities* were more likely to have received a scale and clean service than residents of other areas.



4.4 Mean number of dental services received by reason for last visit

The following tables provide a comparison of the number of visits made, and number of routine services received, in the previous 12 months. Specific comparisons of dental service use are provided by reason for last dental visit.

Table 4.5 compares the mean number of dental visits, and mean number of routine dental services received during this period, by age, sex and the reason for the last dental visit.

Those who last attended for a dental problem made more dental visits in the previous 12 months than those who attended for a check-up (2.85 compared with 1.98). Furthermore, adults visiting for a problem had almost four times the average number of teeth removed (0.55 compared with 0.15), and more than twice the number of fillings (1.26 compared with 0.48) per person as those whose last visit was for a check-up.

Among those visiting for a problem, young adults aged 18–24 years reported more visits, having more extractions and more fillings than older age groups. Young adults who last visited for a check-up also reported more extractions than older age groups. Differences by age group, however, were not statistically significant.

Variation among males and females in the mean number of visits and services received was generally small, once the reason for their last dental visit was taken into account.

Table 4.5: Number of visits and routine dental services by age, sex, and reason for last visit (mean)

	Visits		Extraction(s)		Filling(s)		Scale and clean	
	Check-up	Problem	Check-up	Problem	Check-up	Problem	Check-up	Problem
Age group (years)								
18–24	2.00	3.30	0.31	0.74	0.33	1.41	0.87	0.73
25–44	1.98	2.63	0.08	0.68	0.51	1.27	1.16	0.64
45–64	1.96	2.97	0.13	0.44	0.49	1.27	1.19	0.76
65 or older	2.00	2.77	0.14	0.41	0.61	1.13	1.24	0.77
Sex								
Male	1.85	2.91	0.14	0.57	0.49	1.34	1.10	0.66
Female	2.08	2.79	0.15	0.52	0.48	1.18	1.14	0.77
All persons	1.98	2.85	0.15	0.55	0.48	1.26	1.12	0.72

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C19.

Table 4.6 compares the mean number of dental visits and mean number of routine dental services received during this period by annual household income, cardholder status and the reason for the last dental visit.

Adults last visiting for a problem made more dental visits, received more extractions and fillings and fewer scale and clean services in the previous 12 months than those last visiting for a check-up, irrespective of their household's annual income.

Among those who last visited for a problem, adults from lower income households had more extractions and fewer scale and clean services than those from higher income groups.

Cardholders had more extractions and more fillings in the previous 12 months than non-cardholders, regardless of the reason for their last dental visit. These differences were not, however, statistically significant.

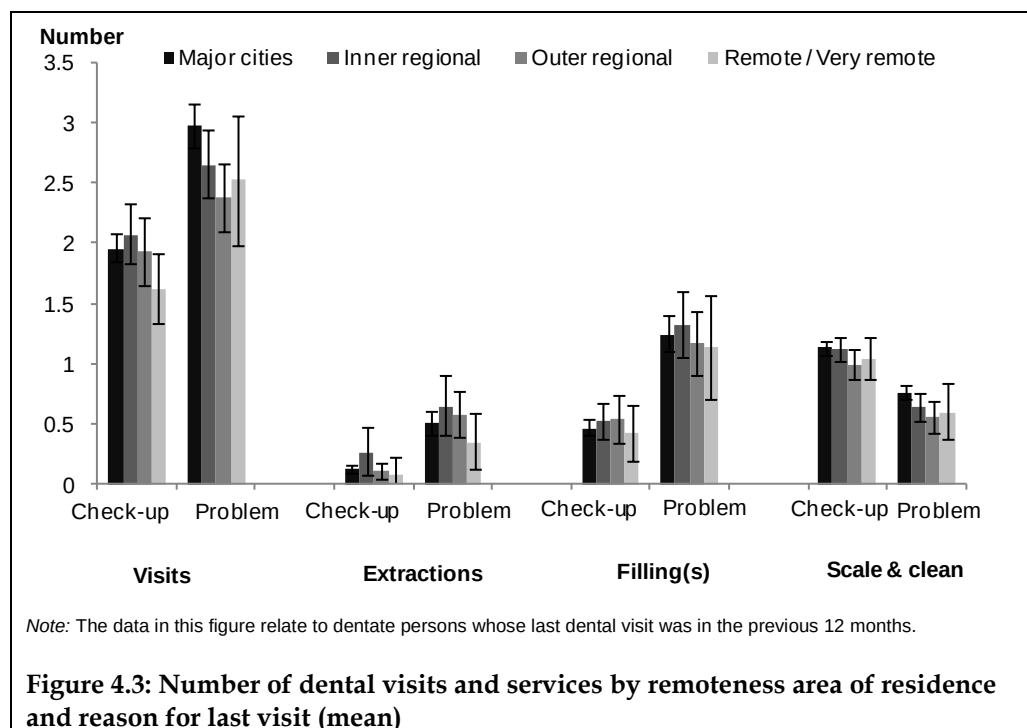
Table 4.6: Number of dental visits and services by income, cardholder status, and reason for last visit (mean)

	Visits		Extraction(s)		Filling(s)		Scale and clean	
	Check-up	Problem	Check-up	Problem	Check-up	Problem	Check-up	Problem
Annual household income								
Less than \$20,000	2.15	2.75	0.10	0.80	0.66	1.33	1.04	0.49
\$20,000–<\$30,000	1.71	2.56	0.22	0.75	0.48	1.35	1.11	0.67
\$30,000–<\$40,000	1.84	2.70	0.05	0.57	0.33	1.52	1.07	0.69
\$40,000–<\$60,000	1.96	3.01	0.20	0.61	0.50	1.32	1.13	0.64
\$60,000–<\$80,000	1.84	2.84	0.08	0.51	0.60	1.16	1.16	0.75
\$80,000–<\$110,000	1.96	3.29	0.13	0.50	0.41	1.12	1.10	0.79
\$110,000 or more	2.10	2.69	0.20	0.32	0.43	1.23	1.24	0.88
Cardholder status								
Cardholder	2.09	2.80	0.20	0.67	0.62	1.31	1.10	0.61
Non-cardholder	1.95	2.87	0.13	0.50	0.45	1.24	1.13	0.76
All persons	1.98	2.85	0.15	0.55	0.48	1.26	1.12	0.72

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C20.

Figure 4.3 compares the mean number of dental visits and routine dental services received during this period by remoteness area of residence and reason for the last dental visit. Patterns of visiting and services received were broadly consistent by remoteness area of residence with two exceptions. Amongst respondents who last visited for a problem, residents of *Outer regional* areas had fewer visits (2.39 compared with 2.98) and fewer scale and clean services than residents of *Major cities* (0.56 compared with 0.77).



4.5 Dental services received by reason for last visit

For dentate adults who visited in the previous 12 months, Table 4.7 compares the proportion of persons who received a routine dental service by age group and sex. Specific comparisons are made by reason for last dental visit.

Overall, persons who last visited for a problem were almost four times as likely to have received an extraction (29.1% compared with 7.6%) and twice as likely to have received a filling (59.1% compared with 29.7%) during the previous 12 months as those who last visited for a check-up. Conversely, those visiting for a problem were less likely to have received a scale and clean than those last visiting for a check-up (59.5% compared with 84.6%).

Among those last visiting for a problem, the percentage receiving a filling or scale and clean was very similar across age groups. However, extractions were more common in the 25–44 year age group (34.9%).

The percentage of people receiving each treatment was very similar among males and females, once the reason for their last dental visit was taken into account.

Table 4.7: Persons receiving dental services by age, sex and reason for last visit (per cent)

	Extraction(s)		Filling(s)		Scale and clean	
	Check-up	Problem	Check-up	Problem	Check-up	Problem
Age group (years)						
18–24	8.1	29.5	24.2	56.3	70.4	57.7
25–44	6.5	34.9	29.3	57.5	88.1	56.6
45–64	8.3	24.8	31.6	61.9	86.9	62.5
65 or older	8.5	27.2	34.6	57.2	89.6	59.4
Sex						
Male	7.6	30.3	31.5	59.2	83.4	56.9
Female	7.6	27.9	28.3	59.0	85.4	62.0
All persons	7.6	29.1	29.7	59.1	84.6	59.5

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C21.

Table 4.8 compares the proportion of persons who received routine dental services by annual household income, cardholder status and reason for last dental visit. Among those last visiting for a check-up, the proportion who received an extraction or filling was generally similar across income groups, with no clear pattern emerging. However, those in the lowest income group were less likely to have received a scale and clean than those in the highest income group (76.0% compared with 91.9%).

Among adults who last visited for a problem, those in the higher annual household income groups were less likely than those in lower income groups to have received an extraction in the previous 12 months. Prevalence peaked at 43.6% for the lowest income group and declined to 17.3% for the highest income group. Conversely, fillings were more common among higher income households, suggesting that those from lower income households were more likely to have a tooth extracted than restored. Furthermore, those from households earning less than \$20,000 per year were less likely to have had their teeth professionally cleaned than those from higher income households.

Similarly, among those who had visited for a problem, more cardholders received an extraction than non-cardholders (33.9% compared with 27.3%), but fewer cardholders received a filling (52.6% compared to 61.5%) or scale and clean service (50.9% compared with 62.7%). However, differences in the type of treatment received by cardholder status were only statistically significant for the scale and clean service.

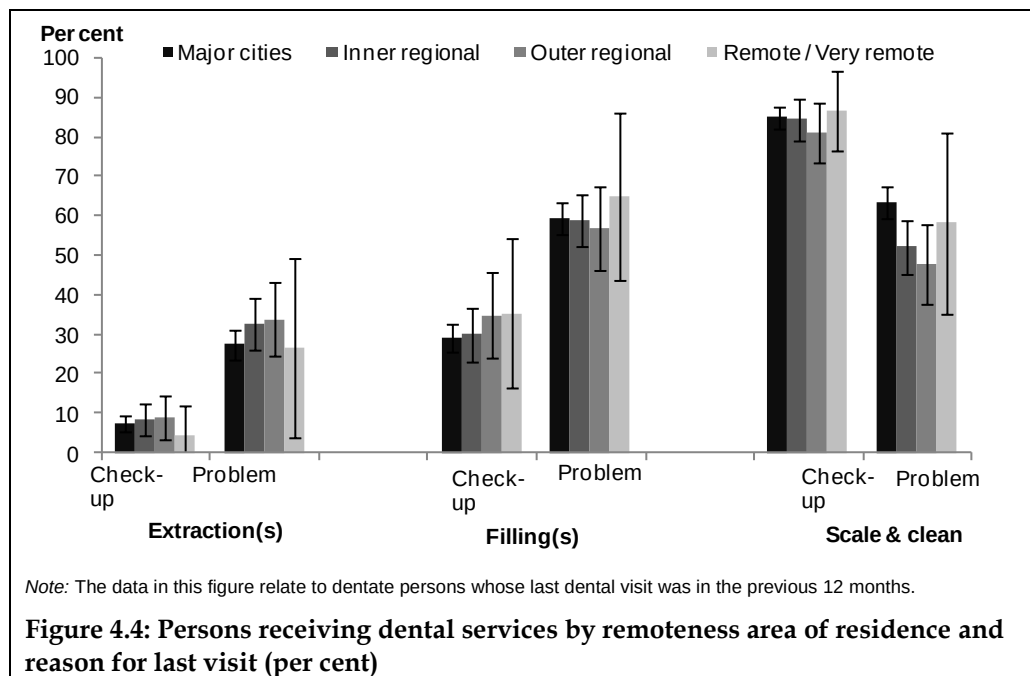
Table 4.8: Persons receiving dental services by annual household income, cardholder status and reason for last visit (per cent)

	Extraction(s)		Filling(s)		Scale and clean	
	Check-up	Problem	Check-up	Problem	Check-up	Problem
Annual household income						
Less than \$20,000	10.0	43.6	35.2	48.1	76.0	42.8
\$20,000–<\$30,000	10.2	35.4	32.9	58.0	85.7	57.9
\$30,000–<\$40,000	3.6	32.9	25.1	60.0	88.3	57.6
\$40,000–<\$60,000	8.6	31.6	30.0	58.3	84.5	53.4
\$60,000–<\$80,000	6.2	26.3	35.6	61.8	86.0	62.6
\$80,000–<\$110,000	7.9	27.0	27.3	61.2	84.8	63.8
\$110,000 or more	8.3	17.3	28.1	63.1	91.9	74.1
Cardholder status						
Cardholder	9.5	33.9	34.9	52.6	82.9	50.9
Non-cardholder	7.2	27.3	28.6	61.5	84.9	62.7
All persons	7.6	29.1	29.7	59.1	84.6	59.5

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C22.

Figure 4.4 compares the proportion of persons who received routine dental services by remoteness area of residence and reason for last dental visit. Variations in the proportion of persons receiving each treatment were generally small across regions and not statistically significant.



For dentate persons visiting in the previous 12 months, the following tables report the proportion of persons receiving dental services other than extractions, fillings, or scale and clean services. Additional dental services included: dental X-rays, new dentures, root canal treatment, gum treatment, orthodontic treatment, crown or bridge work, and any other non-routine dental treatment received in the previous 12 months. 'Other treatment' is defined as any other dental treatment not individually specified in the two following tables.

Table 4.9 compares the proportion of people who received additional dental services by age group and sex. Overall, 59.0% of dentate adults who visited a dentist in the previous 12 months received an additional dental service. The most common service received was an X-ray (50%). Orthodontic treatment was most common among 18–24 year olds (11.7%) and crown and bridge treatment among 45–64 year olds (12.1%). For those aged 65 years and older, 10.5% reported they had received a new denture and 10.9% had received a crown or bridge. Root canal treatment peaked in the 45–64 years age group (8.3%).

Table 4.9: Persons receiving additional dental services by age group and sex (per cent)

	Additional services ^(a)	Treatment						
		X-ray	New denture	Root canal	Gum treatment	Orthodontics	Crown/bridge	Other treatment ^(b)
Age group (years)								
18–24	59.6	50.9	0.1	4.5	1.7	11.7	5.1	2.1
25–44	56.9	50.7	0.5	6.2	4.0	1.1	8.7	5.1
45–64	62.2	54.0	4.1	8.3	5.8	0.7	12.1	6.4
65 or older	56.1	41.7	10.5	5.5	3.4	0.1	10.9	5.9
Sex								
Male	61.1	52.2	2.8	6.4	4.0	1.9	10.7	5.3
Female	57.3	49.3	3.5	6.8	4.4	2.7	8.8	5.2
All persons	59.0	50.6	3.1	6.6	4.2	2.4	9.7	5.2

(a) Percentage of persons receiving services other than extractions, fillings, or a scale and clean.

(b) Percentage of persons receiving services other than extractions, fillings, a scale and clean, or those services listed in this table.

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C23.

Table 4.10 compares the proportion of people receiving additional dental services by annual household income and cardholder status. There were only small variations in the proportion of adults receiving additional dental services by annual household income. Those from households with an annual income of less than \$30,000 were more likely to have received a new denture in the previous 12 months than those from higher income households. Differences by cardholder status were also small, although cardholders were more likely than non-cardholders to have received a new denture (7.7% compared with 1.9%) and less likely to have received a crown or bridge (6.5% compared with 10.6%).

Table 4.10: Persons receiving additional dental services by income and cardholder status (per cent)

	Additional treatment ^(a)	Treatment						
		X-ray	New denture	Root canal	Gum treatment	Orthodontics	Crown/bridge	Other treatment ^(b)
Annual household income								
Less than \$20,000	60.7	51.0	8.2	6.4	5.0	0.5	9.1	3.2
\$20,000–<\$30,000	55.0	44.0	7.5	5.1	2.3	0.9	7.7	6.4
\$30,000–<\$40,000	63.9	52.1	6.2	10.4	8.5	2.2	8.3	6.8
\$40,000–<\$60,000	60.9	53.4	4.3	7.0	4.9	0.7	10.6	4.5
\$60,000–<\$80,000	54.7	44.7	2.0	6.9	6.3	2.3	9.6	4.8
\$80,000–<\$110,000	60.6	52.7	1.1	7.5	3.8	1.3	10.1	7.5
\$110,000 or more	60.1	54.1	0.6	5.2	3.0	4.8	10.9	5.4
Cardholder status								
Cardholder	58.8	49.0	7.7	5.3	4.8	1.9	6.5	4.6
Non-cardholder	59.1	51.1	1.9	7.0	4.1	2.5	10.6	5.4
All persons	59.0	50.6	3.1	6.6	4.2	2.4	9.7	5.2

(a) Percentage of persons receiving services other than extractions, fillings, or a scale and clean.

(b) Percentage of persons receiving services other than extractions, fillings, a scale and clean, or those services listed in this table.

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C24.

4.6 Reason for an extraction

Dentate adults who had one or more extractions in the previous 12 months were asked to nominate the reason(s) for those extractions. Table 4.11 compares the proportion of persons reporting a particular reason for an extraction by cardholder status and type of practice visited at last dental visit.

The reasons provided by those who had an extraction varied substantially by cardholder status and type of practice visited. The most common reasons reported by cardholders who last visited a public clinic were that the tooth was decayed (47.0%) or the tooth was fractured or cracked (28.9%). For those cardholders who last visited a private clinic, the most common reasons reported were that the tooth was decayed (42.9 %) or the tooth was abscessed or infected (34.3%). Non-cardholders were most likely to report the removal of wisdom teeth (third molars) (39.9 %) or that the tooth was decayed (29.7%) as the reasons for an extraction.

Table 4.11: Reasons for extraction(s) by cardholder status and type of practice visited at last dental visit (per cent)

	Cardholder public visit	Cardholder private visit	Non-cardholder private visit
Reason for extraction ^(a)	%	%	%
Decayed tooth	47.0	42.9	29.7
Cracked or fractured tooth	28.9	29.3	23.7
Broken-down filling	24.4	11.8	13.2
Abscessed or infected tooth	23.7	34.3	23.5
Third molar extraction (wisdom teeth)	16.1	16.5	39.9
Loose tooth	8.6	6.9	9.0
Removed for crowding/orthodontics	0.0	4.4	5.7
Other reason	0.8	12.8	10.1

(a) More than one reason per individual could be nominated.

Notes

1. The data in this table relate to dentate persons who had had an extraction in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C25.

4.7 Dental services received by type of practice visited at last dental visit

Table 4.12 compares:

- the proportion of persons whose last dental visit in the previous 12 months was for a dental problem
- the proportion of persons who received an extraction in the previous 12 months
- the mean number of extractions among those who received an extraction
- the proportion of persons who received a filling in the previous 12 months
- the mean number of fillings among those who received a filling

by cardholder status and type of practice visited at last dental visit.

Cardholders who last attended a public clinic (71.3%) were 1.5 times more likely to have visited for a dental problem at their dental visit than cardholders who visited a private clinic (46.5%). Non-cardholders reported the lowest prevalence of problem visiting (41.9%).

The percentage of people who received a filling was slightly higher for cardholders who visited a public clinic (47.3%) than those who visited privately. Among those who received a filling, cardholders visiting a public clinic had slightly more fillings than those who visited privately.

Cardholders who went to a public clinic were considerably more likely to have received an extraction (33.8%) than cardholders who last visited privately (18.3%) and non-cardholders (15.7%). Among those who received an extraction, cardholders visiting a public clinic had slightly fewer teeth extracted on average than cardholders who visited privately.

Table 4.12: Persons attending for a dental problem and type of dental treatment received, by cardholder status, type of practice visited and reason (previous 12 months)

		% who last visited for a dental problem		Filling(s)		Extraction(s)	
			%	Mean ^(a)	%	Mean ^(b)	
All visits							
Cardholder public visit	71.3	47.3	2.29	33.8	1.65		
Cardholder private visit	46.5	43.7	2.11	18.3	2.06		
Non-cardholder private visit	41.9	42.9	1.84	15.7	1.84		
Problem							
Cardholder public visit		48.7	2.28	40.2	1.77		
Cardholder private visit		55.8	2.42	30.4	1.91		
Non-cardholder private		62.0	2.00	27.4	1.83		
Check-up							
Cardholder public visit		43.6	2.29	17.9	1.01		
Cardholder private visit		33.0	1.64	7.8	2.57		
Non-cardholder private visit		29.1	1.58	7.3	1.87		

(a) The mean for those who received a filling or fillings.

(b) The mean for those who had an extraction or extractions.

Notes

1. Unless otherwise noted, the data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C26.

For those dentate persons who made a dental visit in the previous 12 months, Table 4.12 presents a comparison of the type of dental treatment received by reason for last visit, cardholder status and type of practice visited at last dental visit.

Among those whose last dental visit was for a dental problem, extractions were more common among cardholders who visited a public clinic (40.2%) than cardholders who visited a private clinic (30.4%) and non-cardholders (27.4%). However, for those who received an extraction, cardholders visiting publicly received fewer extractions on average than those visiting privately.

Conversely, of those dentate adults who last visited for a dental problem, fillings were more common among non-cardholders (62.0%) than cardholders visiting privately (55.8%) and cardholders visiting publicly (48.7%).

Among those whose last dental visit was for a check-up, the proportion who received an extraction within the previous 12 months was highest for cardholders visiting publicly (17.9%), and was similar among cardholders visiting privately (7.8%) and non-cardholders (7.3%). Despite this, those in the cardholder public group had fewer extractions on average than those visiting privately.

Similarly, for those dentate adults who last visited for a check-up, fillings were more prevalent among cardholders who visited publicly (43.6%) than cardholders visiting privately (33.0%) and non-cardholders (29.1%). The cardholder public group also received more fillings on average than those visiting privately.

4.8 Waiting time

The length of time a person waits may affect whether they receive timely dental care that is focussed on prevention and early intervention. Long waiting periods can result in a prolonged period of preventable pain or experience a further deterioration of dental health. Prevention and early detection of disease is recommended by the dental profession to allow more effective and efficient dental care to be provided (Australian Dental Association 2010–2011).

In the survey, cardholders whose last dental visit was at a public clinic within the previous 12 months were asked to report the time elapsed from contacting the clinic to the actual dental visit, defined as the waiting time. A comparison of the waiting time distribution for persons visiting for a check-up or problem is presented in Table 4.13.

Overall, 1.0% of cardholders waited less than one month and a further 24.5% waited less than three months to visit a public dental practice. However, 25.0% of those who visited a public practice waited between 1–2 years and 32.1% waited more than 2 years.

Those who last visited for a check-up had longer waiting times than those who visited for a problem, although over one-in-two who visited for a problem waited 12 months or more.

Table 4.13: Waiting time for cardholders who visited a public practice by reason for last visit (per cent)

	Waiting time ^(a)					
	<1 month	1–<3 months	3–<6 months	6–<12 months	1–2 years	2+ years
Reason for last visit						
Check-up	0.0	23.2	0.9	12.4	25.3	38.1
Problem	1.4	24.9	7.7	11.3	24.9	29.8
All persons	1.0	24.5	5.9	11.6	25.0	32.1

(a) Time from first contacting the dental clinic to time of visit.

Notes

1. The data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C27.

5 Financial burden

Around one-third of dentate adults reported that they had avoided or delayed making a dental visit due to cost. Amongst those who visited, one-fifth reported that cost had prevented them from receiving the recommended dental treatment, and 13% of those who visited reported that dental visits in the previous 12 months were a large financial burden. Females and cardholders were more likely to report affordability and hardship difficulties than males and non-cardholders.

Affordability of dental care was related to dental visiting and services received. Dentate adults with affordability and hardship difficulties were less likely to have visited in the previous 12 months. They were also more likely to usually visit for a dental problem as opposed to a check-up than persons without such financial difficulties. Among dentate adults who visited in the previous 12 months, those with affordability and hardship difficulties were twice as likely to have an extraction, and were also more likely to have had a filling than those without financial difficulties.

The financial burden of dental visits in the previous 12 months increased with the number of visits made.

5.1 Introduction

Financial burden is an often-cited reason why people do not seek regular dental care or comply with recommended treatment (AHMAC 2001). Financial burden reflects both the direct and indirect cost of dental services to the individual, the disposable income of a household and the number of persons dependent on that income.

Respondents 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 recommended by a dental professional
- whether dental visits in the previous 12 months had been a large financial burden, and
- the level of difficulty they would experience in paying a \$150 dental bill.

The cost of a basic preventive dental care package was originally selected as the threshold for measuring the level of difficulty with a dental bill. In 2004, the cost of a dental visit comprising a dental examination, two bitewing X-rays and a scale and clean service was \$150.

5.2 Affordability of dental care

Table 5.1 compares the measures of affordability of dental care by age group and sex. More than one in three (34.3%) dentate adults reported that they had avoided or delayed a dental visit because of the cost and one in five (20.2%) reported that cost had prevented dental treatment recommended by a dental professional at a visit during the previous 12 months.

Among those dentate persons who had made at least one dental visit in the previous 12 months, 13.7% reported that these dental visits had been a large financial burden. Almost 16.0% of dentate people reported they would have a lot of difficulty in paying a \$150 dental bill, while more than 25.0% reported paying \$150 would cause them a lot of difficulty.

Some age groups expressed more difficulty with the affordability of dental care. Those aged 25–44 years were most likely to report that they had avoided or delayed visiting a dental professional because of the cost (42.0%). They were also among the most likely groups to report cost had prevented dental treatment recommended by a dental professional at a visit during the previous 12 months (23.0%). Dentate people aged 65 years and more were most likely to report that they would have a lot of difficulty paying a \$150 dental bill.

Across all measures, the affordability of dental care was a more common concern among females than males. Differences were largest for those reporting that dental visits were a large financial burden in the previous 12 months (16.2% compared to 10.4%), and those reporting difficulty with a \$150 dental bill, with 31.2% females reporting they had would have a lot of difficulty compared with 20.3% males.

Table 5.1: Persons experiencing affordability and hardship in purchasing dental care by age and sex (per cent)

	Avoided or delayed visiting because of cost	Cost prevented recommended dental treatment ^(a)	Dental visits in previous 12 months were a large financial burden ^(a)	A lot of difficulty in paying \$150 dental bill
Age group (years)				
18–24	27.8	14.2	9.1	29.4
25–44	42.0	23.0	13.7	25.1
45–64	33.2	23.5	15.6	22.9
65 or older	21.8	11.2	12.1	31.4
Sex				
Male	30.8	18.6	10.4	20.3
Female	37.8	21.6	16.2	31.2
All persons	34.3	20.2	13.5	25.8

(a) Among dentate persons whose last dental visit was in the previous 12 months.

Notes

1. Unless otherwise noted the data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C28.

Table 5.2 compares the measures of affordability of dental care by annual household income and cardholder status. The main difference in the percentage of people reporting difficulty with the cost of dental care occurred between the lowest and highest income groups. A steep gradient was evident across all income groups in difficulty in paying a \$150 dental bill. Participants from the lowest income group were twice as likely as the highest income group to report that cost had prevented recommended dental treatment (32.3% compared with 15.0%) and to report dental visits in the previous 12 months had been a large financial burden (20.2% compared with 9.4%). Those from the lowest income group were also more likely to report that they had avoided or delayed seeking dental care due to cost (44.2% compared to 27.5%).

The percentage of dentate persons reporting they would have a lot of difficulty in paying a \$150 dental bill was associated with income. Among those from the lowest income group, 56.1% would have a lot of difficulty paying a \$150 dental bill compared with 11.5% of those from the highest income group.

Cardholders were more likely than non-card holders to report that they had avoided or delayed dental care due to the cost, and that cost had prevented recommended dental treatment. Similarly, cardholders were almost three times as likely to report that they would have a lot of difficulty in paying a \$150 dental bill.

The comparatively low percentage of cardholders who experienced a large financial burden in the previous 12 months could indicate that either public-funded care was accessed, or expenditure on dental care was curtailed to match the financial capacity to purchase care.

Table 5.2: Persons experiencing affordability and hardship in purchasing dental care by annual household income and cardholder status (per cent)

	Avoided or delayed visiting because of cost	Cost prevented recommended dental treatment ^(a)	Dental visits in previous 12 months were a large financial burden ^(a)	A lot of difficulty in paying \$150 dental bill
Annual household income				
Less than \$20,000	44.2	32.3	20.2	56.1
\$20,000–<\$30,000	40.9	25.5	17.5	48.9
\$30,000–<\$40,000	38.3	22.8	21.6	34.9
\$40,000–<\$60,000	41.6	24.5	18.3	27.7
\$60,000–<\$80,000	35.6	22.3	12.8	19.6
\$80,000 or more	27.5	15.0	9.4	11.5
Cardholder status				
Cardholder	38.8	26.4	17.3	48.8
Non-cardholder	33.0	18.5	12.4	18.9
All persons	34.3	20.2	13.5	25.8

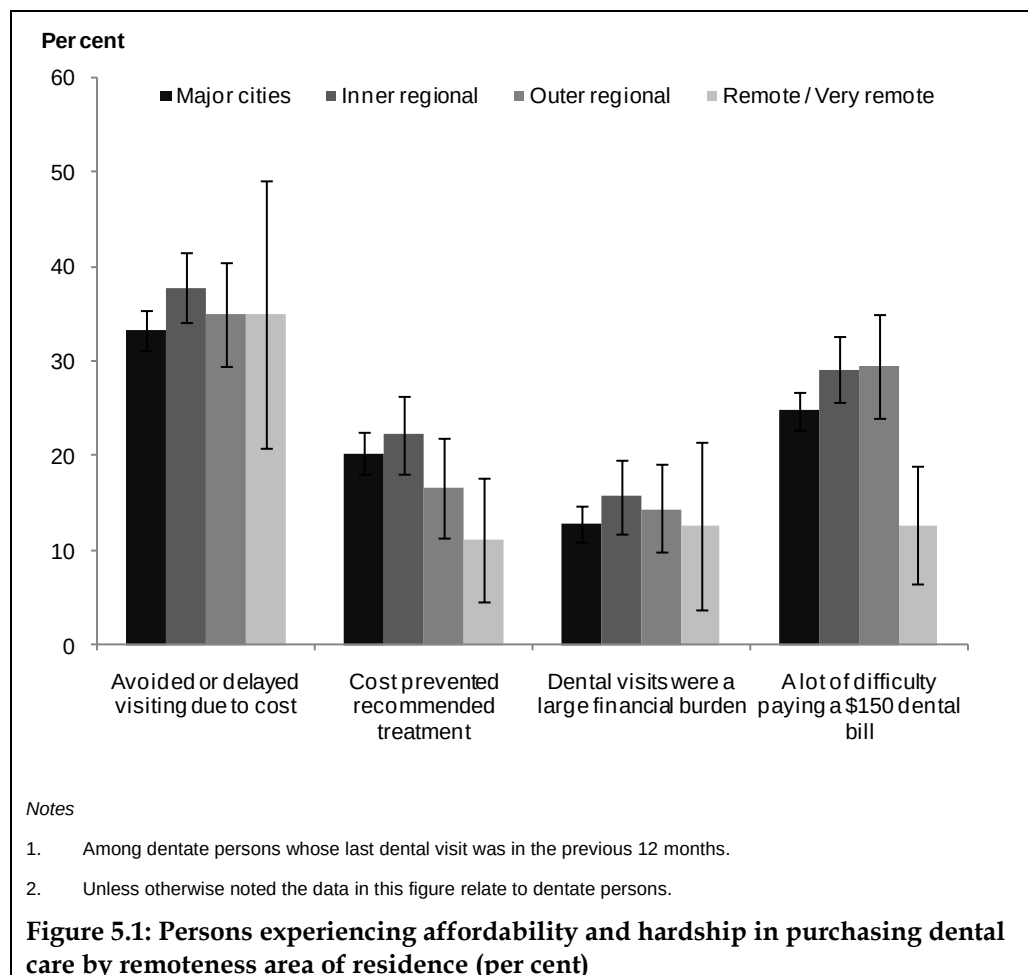
(a) Among dentate persons whose last dental visit was in the previous 12 months.

Notes

1. Unless otherwise noted the data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C29.

Figure 5.1 compares the measures of affordability of dental care by remoteness area of residence.

There was some variation by remoteness area in the proportion of people reporting difficulty with dental care affordability, but no consistent pattern emerged for all indicators. Residents of *Remote* and *Very remote* areas were less likely to report that the cost had prevented them from having recommended treatment, or would have a lot of difficulty paying a \$150 dental bill.



Tables 5.3 and 5.4 compare measures of affordability of dental care by age group, sex and cardholder status. Across all measures, affordability was a more common concern among cardholders than non-cardholders. In particular, cardholders were more likely than non-cardholders to report both that they had avoided or delayed making a dental visit because of the cost (38.8% compared to 33.0%), and that cost had prevented recommended dental treatment during the previous 12 months (26.4% compared to 18.5%). Similarly, cardholders were three times more likely to report they would have a lot of difficulty in paying a \$150 dental bill (34.7% compared to 10.1%).

Among those dentate persons who had made a dental visit in the previous 12 months, 17.3% of cardholders reported that dental visits had been a large financial burden, compared with 12.4% of non-cardholders. The comparatively low percentage of cardholders reporting a large financial burden in the previous 12 months could indicate either that public-funded care was accessed or spending on dental care was reduced to match the financial capacity to pay for care.

Some age groups reported more difficulty with the affordability of dental care. Those aged 25–44 years were more likely than other age groups to have avoided or delayed making a dental visit due to cost. This finding was particularly evident among cardholders in this age group (58.6%). Similarly, cardholders aged 25–44 years were the most likely group to report that cost had prevented dental treatment recommended at a visit during the previous 12 months (47.3%).

There was also a clear relationship between age and difficulty in paying a \$150 dental bill. People aged 65 years or older had the lowest prevalence of reporting that they would have a lot of difficulty paying a dental bill of this magnitude. In contrast, cardholders aged 25–44 years were the most likely group to report a lot of difficulty in paying a \$150 dental bill (63.7%). Prevalence was also high among cardholders aged 45–64 years.

Across all measures, a higher proportion of females than males reported difficulties with the affordability of dental care. This finding was consistent for cardholders and non-cardholders. Differences were largest among the cardholder population with 43.2% of females reporting they had avoided or delayed dental care due to the cost, compared with 32.9% of males.

Table 5.3: Persons experiencing difficulty with affordability and hardship in purchasing dental care by age group, sex and cardholder status (per cent)

	Avoided or delayed visiting because of cost		Cost prevented recommended dental treatment ^(a)		Dental visits in previous 12 months were a large financial burden ^(a)	
	Cardholder	Non-Cardholder	Cardholder	Non-Cardholder	Cardholder	Non-cardholder
Age group (years)						
18–24	30.4	27.2	16.9	13.4	6.8	9.8
25–44	58.6	39.5	47.3	19.6	25.4	12.1
45–64	47.4	30.5	38.2	21.2	23.5	14.4
65 or older	26.4	9.4	14.0	5.1	14.0	8.0
Sex						
Male	32.9	30.2	26.0	16.8	14.1	9.4
Female	43.2	35.9	26.6	20.0	19.6	15.1
All persons	38.8	33.0	26.4	18.5	17.3	12.4

(a) Among dentate persons whose last dental visit was in the previous 12 months.

Notes

1. Unless otherwise noted the data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C30.

Table 5.4: Persons who would have a lot of difficulty in paying a \$150 dental bill by age group, sex and cardholder status (per cent)

	\$150 dental bill	
	Cardholder	Non-cardholder
Age group (years)		
18–24	45.3	25.3
25–44	63.7	19.3
45–64	56.4	16.5
65 or older	38.0	13.7
Sex		
Male	42.8	14.8
Female	53.3	23.3
All persons	48.8	18.9

Notes

1. The data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C31.

Tables 5.5 and 5.6 compare the measures of affordability of dental care by annual household income and cardholder status. The main difference in the proportion of people reporting difficulty with the cost of dental care occurred between the lowest and highest income groups, with less clarity among other income groups.

In particular, for the measures presented in Table 5.5, differences between the lowest and highest income groups were most evident among cardholders. Those from the lowest income group were more than three times as likely as cardholders from the highest income group to report cost prevented recommended dental treatment, and that dental visits in the previous 12 months had been a large financial burden. Similarly, cardholders from the lowest income group were almost twice as likely to report that they had avoided or delayed dental care due to the cost.

The proportion of dentate persons reporting they would have a lot of difficulty in paying a \$150 dental bill was associated with income, irrespective of cardholder status. Among cardholders, 60.5% of those from the lowest income group would have a lot of difficulty paying a \$150 dental bill compared with 24.5% of those from the highest income group. Similarly, non-cardholders from the lowest income group were almost twice as likely to have a lot of difficulty paying a \$150 dental bill than the highest income group.

Table 5.5: Persons experiencing affordability and hardship in purchasing dental care by annual household income and cardholder status (per cent)

	Avoided or delayed visiting because of cost		Cost prevented recommended dental treatment ^(a)		Dental visits in previous 12 months were a large financial burden ^(a)	
	Cardholder	Non-cardholder	Cardholder	Non-cardholder	Cardholder	Non-cardholder
Annual household income						
Less than \$20,000	44.8	41.6	33.7	26.3	21.4	15.0
\$20,000–<\$30,000	39.4	44.8	29.1	18.8	17.7	17.3
\$30,000–<\$40,000	40.7	36.9	26.7	20.8	28.4	18.2
\$40,000–<\$60,000	26.9	43.8	21.3	25.1	15.8	18.8
\$60,000–<\$80,000	53.2	34.4	29.9	21.8	10.9	12.9
\$80,000 or more	24.9	27.6	10.3	15.1	6.3	9.4
All persons	38.8	33.0	26.4	18.5	17.3	12.4

(a) Among dentate persons whose last dental visit was in the previous 12 months.

Notes

1. Unless otherwise noted the data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C32.

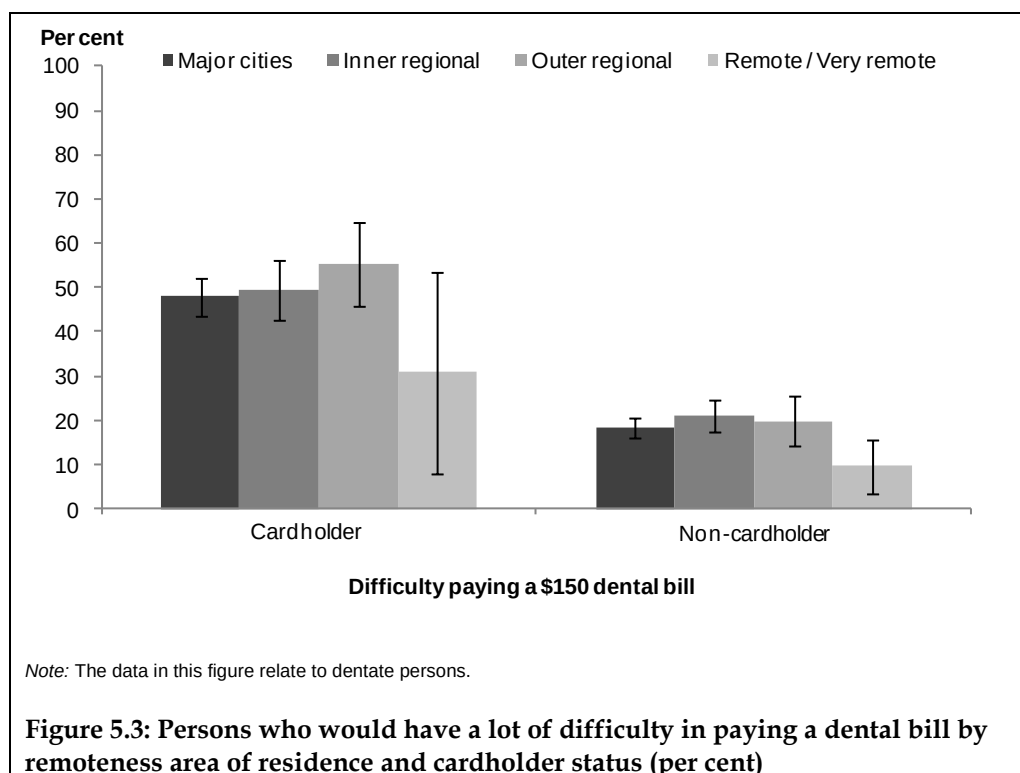
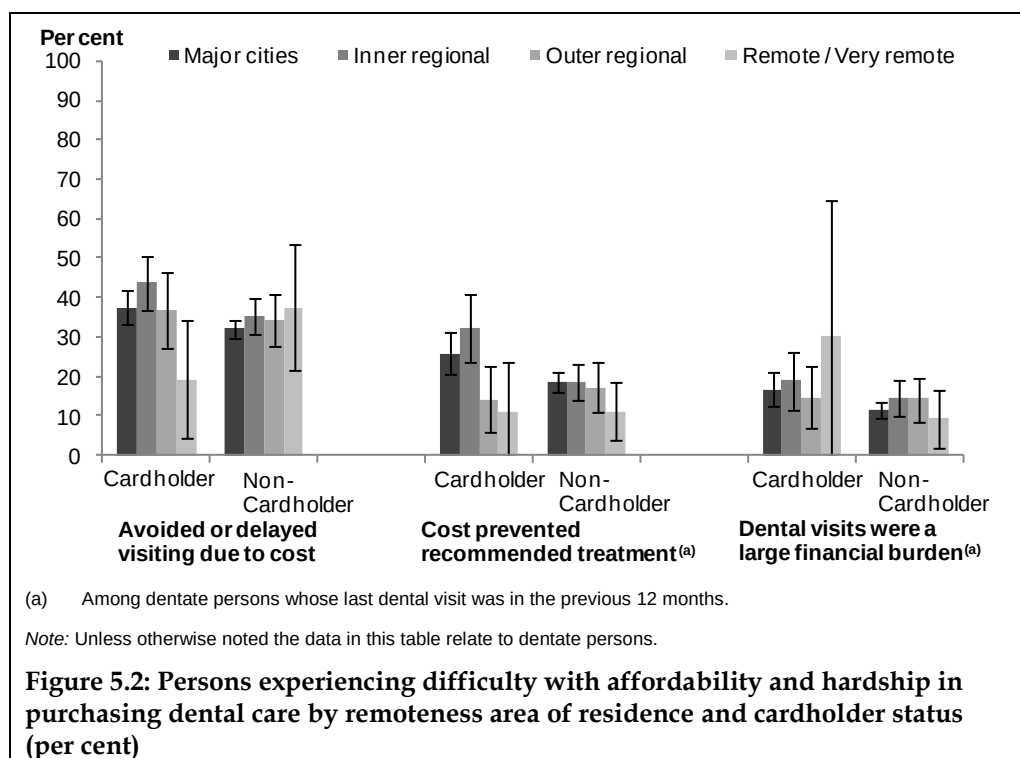
Table 5.6: Persons who would have a lot of difficulty in paying a dental bill by annual household income and cardholder status (per cent)

	\$150 dental bill	
	Cardholder	Non-cardholder
Annual household income		
Less than \$20,000	60.5	36.9
\$20,000–<\$30,000	52.5	39.4
\$30,000–<\$40,000	39.7	32.2
\$40,000–<\$60,000	29.1	27.5
\$60,000–<\$80,000	35.0	18.5
\$80,000 or more	24.5	11.2
All persons	48.8	18.9

Notes

1. The data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C33.

Figures 5.2 and 5.3 compare the measures of affordability of dental care by remoteness area of residence and cardholder status. There was some variation between remoteness areas in the proportion of people reporting difficulty with the affordability of dental care, but no consistent pattern emerged for all indicators.



5.3 Access to dental care by affordability and hardship

Affordability of dental care and hardship associated with its use are two potential barriers to accessing timely dental care. Patterns of dental visiting that are associated with poorer oral health are characterised by: visiting less than once a year, visiting usually for a problem, and without a usual dental care provider. The patterns of care with opposite characteristics (visiting usually at least once a year, usually visiting for a check-up, and a usual source of dental care) are associated with better oral health (Ellershaw & Spencer 2011).

The role that affordability and hardship play in oral health outcomes in the Australian population can be better understood by examining the associations between affordability and hardship, and visiting patterns.

Tables 5.7 and 5.8 compare the proportion of adults reporting difficulty with the affordability of dental care by dental visiting behaviour. Comparisons are provided for both the cardholder and non-cardholder populations.

People who had made a dental visit in the previous 12 months were less likely to report they had avoided or delayed dental care due to the cost than those who had not made a recent dental visit. Prevalence of avoiding or delaying dental care due to the cost was highest among those who had not visited a dentist within the last 5 years. These findings were consistent for both cardholders and non-cardholders.

Similarly, the percentage of people reporting they would have a lot of difficulty paying a \$150 dental bill was lower among those who had visited a dentist in the previous 12 months.

Affordability of dental care was strongly related to an individual's usual reason for making a dental visit. Those who usually visited for a problem were far more likely to report difficulty with the affordability of dental care than adults who usually visited for a check-up, irrespective of cardholder status. In particular, those who usually visited for a problem were far more likely to report they would have a lot of difficulty paying a \$150 dental bill, with prevalence highest among cardholders who usually visited for a problem (57.4%).

Reporting that cost had prevented treatment recommended by a dental professional was highest among those who had made three or more dental visits in the previous 12 months. This same group was far more likely to report that dental visits during this period had been a large financial burden. These findings were consistent for both cardholders and non-cardholders.

The percentage of people who would have a lot of difficulty paying a \$150 dental bill was highest for those who had not made a dental visit during the previous 12 months.

Table 5.7: Persons experiencing difficulty with affordability and hardship in purchasing dental care by dental visiting patterns and cardholder status (per cent)

	Avoided or delayed visiting because of cost		Cost prevented recommended dental treatment ^(a)		Dental visits in previous 12 months were a large financial burden ^(a)	
	Cardholder	Non-cardholder	Cardholder	Non-cardholder	Cardholder	Non-cardholder
Time since last visit						
Less than 12 months	32.2	25.5	26.4	18.5	17.3	12.4
1–<2 years	37.7	42.5	..	..	..	..
2–<5 years	53.1	43.7	..	..	..	..
5 years or more	54.9	47.9	..	..	..	..
Usual reason for visit						
Check-up	23.5	19.5	14.9	11.8	11.6	9.2
Problem	48.6	51.3	38.6	35.1	23.4	20.5
Number of dental visits in previous 12 months						
None	47.3	44.2	..	..	..	..
One	34.4	26.9	24.8	15.9	12.1	8.0
Two	24.8	18.4	24.2	14.2	12.5	7.5
Three or more	37.0	32.6	30.5	27.3	28.6	24.4
All persons	38.8	33.0	26.4	18.5	17.3	12.4

(a) Among dentate persons whose last dental visit was in the previous 12 months.

Notes

1. Unless otherwise noted the data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C34.

Table 5.8: Persons who would have a lot of difficulty in paying a \$150 dental bill by dental visiting patterns and cardholder status (per cent)

	\$150 dental bill	
	Cardholder	Non-cardholder
Time since last visit		
Less than 12 months	43.7	15.1
1–<2 years	52.4	25.9
2–<5 years	57.3	22.7
5 years or more	57.8	24.5
Usual reason for visit		
Check-up	35.5	14.2
Problem	57.4	25.2
Number of dental visits in previous 12 months		
None	55.4	24.6
One	43.5	16.0
Two	41.3	12.3
Three or more	46.5	17.2
All persons	48.8	18.9

Notes

1. The data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C35.

Table 5.9 compares the dental visiting patterns for selected affordability and hardship measures.

Dental visiting patterns varied significantly by whether a person reported difficulty with the affordability of dental care. Those who reported they had avoided or delayed visiting a dental professional due to cost in the previous 12 months were less likely to have visited recently than persons who did not (47.6% compared with 65.8%).

Among persons who had made a dental visit in the previous 12 months, those who reported that they had avoided or delayed visiting were nearly twice as likely to report a dental problem as the reason for their last dental visit than those who reported that they had not avoided or delayed visiting due to cost (66.1% compared to 36.3%). Similarly, those who reported that dental visits in the previous 12 months had been a large financial burden were 1.8 times more likely to have last visited for a problem than those without a large financial burden.

A person's usual reason for making a dental visit was also associated with whether they had experienced difficulties with the affordability of dental care. Those who reported that cost had prevented treatment recommended by a dental professional at a visit in the previous 12 months were more than twice as likely to report they usually visited for a problem as those for whom cost was not an obstacle (59.2% compared to 26.4%).

The affordability of dental care was also associated with the number of dental visits made in the previous 12 months. Those who reported that dental visits in the previous 12 months had been a large financial burden were twice as likely to have made three or more dental visits during this period as those who reported no such financial burden (53.8% compared to 24.6%).

Table 5.9: Dental visiting patterns by affordability and hardship associated with paying for dental care (per cent)

	Time since last visit (years)				Number of dental visits in previous 12 months				Usual reason for visit	
	Less than 1	1–<2	2–<5	5 or more	None	One	Two	Three or more	Check-up	Problem
Avoided or delayed due to cost										
Yes	47.6	22.2	15.9	15.1	53.3	18.5	11.6	16.6	31.3	68.7
No	65.9	16.4	9.8	7.9	34.1	24.1	24.7	17.1	64.7	35.3
Cost prevented recommended treatment^(a)										
Yes	..	..	..	..	..	33.0	27.3	39.7	40.8	59.2
No	..	..	..	..	..	38.5	35.8	25.7	73.6	26.4
Dental visits in previous 12 months were a large financial burden^{(a) (b)}										
Yes^(c)	..	..	..	..	..	24.6	21.6	53.8	47.5	52.5
No^(d)	..	..	..	..	..	39.3	36.1	24.6	69.9	30.1

(a) Among dentate persons whose last dental visit was in the previous 12 months.

(b) Includes responses of *A little/hardly any/none*

Notes

1. Unless otherwise noted the data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C36.

Table 5.10 compares the dental visiting patterns according to whether respondents reported that they would have difficulty in paying a \$150 dental bill.

The amount of difficulty a person would have if they had to pay a \$150 dental bill was associated with dental visiting patterns. Those who reported they would have a lot of difficulty paying a \$150 dental bill were significantly more likely to not have made a dental visit in the previous 12 months and to report they usually visit for a dental problem, than those who reported little or no difficulty in paying.

Table 5.10: Dental visiting patterns by amount of difficulty in paying a \$150 dental bill (per cent)

	Time since last visit (years)				Number of dental visits in previous 12 months				Usual reason for visit	
	Less than 1	1–<2	2–<5	5 or more	None	One	Two	Three or more	Check-up	Problem
Difficulty paying a \$150 dental bill										
A lot	49.1	22.7	14.5	13.7	50.9	18.9	14.3	15.9	36.7	63.3
Not a lot^(a)	62.8	16.9	11.1	9.2	37.2	23.2	22.3	17.3	59.0	41.0

(a) Includes responses of *A little/hardly any/none*

Notes

1. The data in this table relate to dentate persons.
2. 95% confidence intervals for these estimates are in Table C37.

5.4 Dental services received

Table 5.11 compares the dental services received in the previous 12 months for those who reported difficulty with affordability of dental care and those without such difficulty. The proportion of adults who last visited for a dental problem is also compared with financial difficulty.

Persons who reported difficulty with affordability were more likely to have visited for a problem in the previous 12 months, and consequently were more likely to have had fillings and extractions. Approximately one-half received fillings and one-quarter had teeth extracted.

Persons who reported that cost had prevented recommended treatment were more than twice as likely to have received an extraction as those who reported no such cost barrier (28.5% compared to 14.2%). Similarly, those who reported dental visits in the previous 12 months had been a large financial burden were more likely to have received a filling (and a greater number per person) or an extraction (and a greater number per person) than those who reported little or no financial burden.

The amount of difficulty a person would have to pay a \$150 dental bill was also associated with receiving an extraction during the previous 12 months. Those who reported they would have great difficulty paying a \$150 dental bill were more likely to have received an extraction than those who reported little or no such difficulty (23.7% compared to 15.4%).

Table 5.11: Dental services received by affordability and hardship associated with paying for dental care

	% of persons who last visited for a problem	Filling(s)		Extraction(s)	
		%	Mean ^(a)	%	Mean ^(b)
Avoided or delayed visiting because of cost					
Yes	66.1	52.1	2.27	27.8	1.98
No	36.3	39.3	1.77	13.2	1.82
Cost prevented recommended treatment					
Yes	67.7	54.4	2.26	28.5	1.91
No	38.4	39.8	1.82	14.2	1.88
Financial burden of dental visits in previous 12 months					
Yes	72.4	55.5	2.43	32.0	2.34
No	40.0	40.7	1.83	14.8	1.74
Difficulty in paying a \$150 dental bill					
A lot	56.1	46.8	2.27	23.7	1.75
Not a lot ^(c)	41.2	41.7	1.83	15.4	1.95
All persons	44.3	42.8	1.94	17.1	1.89

(a) The mean among those who received a filling or fillings.

(b) The mean among those who had an extraction or extractions.

(c) Includes responses of a *little/hardly any/none*

Notes

1. Unless otherwise noted the data in this table relate to dentate persons whose last dental visit was in the previous 12 months.
2. 95% confidence intervals for these estimates are in Table C38.

6 Variations in oral health and visiting among population groups

Results from the 2008 NDTIS indicated that there remain substantial variations in self-reported oral health and dental visiting patterns across population groups. This includes older adults, lower income groups, holders of Australian Government concession cards and people who live in more remote areas. These variations were largest by age, annual household income and cardholder status. Smaller differences by remoteness area of residence were evident for some measures of self-reported oral health, but not for dental visiting.

6.1 Variations by age

Variations by age persist for self-reported oral health. Older adults (aged 65 years and over) are more likely to be edentulous. Older dentate adults (aged 65 years and over) have more missing teeth and are more likely to have an inadequate dentition than their younger counterparts. While older dentate adults were less likely to experience toothache, they were no more likely than younger adults to be concerned about their dental appearance or to avoid food as a result of dental problems.

Edentulism usually results in minimal dental visiting, mainly for denture repairs and refits or new dentures. Being dentate with a history of extensive dental disease however usually implies a high level of need for ongoing dental care (Joshi et al 1996). While edentulous adults were less likely to visit in 2008, differences in oral health status amongst dentate adults did not translate into differences by age in the proportion visiting in the previous 12 months.

Despite having fewer teeth on average, there were no statistically significant differences in the mean number of visits made or the numbers of routine services received for older adults compared to those in the groups less than 65 years of age. The only differences in the mean number of services received by age were for 18–24 year olds, who received fewer fillings and scale and clean services than 45–64 year olds. However, a higher proportion of dentate adults aged 65 years and over received a new denture compared with other age groups. Dentate persons aged 45 years and over were more likely to receive a crown and bridge than adults aged 18–24 years. Young adults (aged 18–24 years) had the highest proportion receiving an orthodontic treatment.

The oldest adults (aged 65 years and over) were most likely to report that they would have a lot of difficulty paying a \$150 dental bill. However, they were less likely than all but the 18–24 year age group to report that they had avoided or delayed visiting because of cost, or that cost prevented recommended dental treatment. Although older adults indicated they were most likely to have a lot of difficulty paying a \$150 dental bill, they were generally less likely to experience financial barriers or hardship as a result of needing dental care.

6.2 Variations by household income

There was a gradient by income in rates of prevalence of edentulism and this persisted when age differences across income groups were taken into account. The gradient in number of missing teeth (the lowest income groups have the most missing teeth) is most evident in older age groups, where numbers of missing teeth are highest overall. These differences were also evident for measures of social impact. The lowest income group (less than \$20,000) had the highest rate of toothache, were the most uncomfortable with their appearance, and most likely to avoid foods for dental reasons.

While there was some evidence of a gradient in dental visiting in the previous 12 months, differences were not generally statistically significant; however, examining the reason for visit reveals a significant trend. Lower income groups are more likely to visit for a problem while higher income groups are more likely to visit for a check-up. This difference is reflected in the services received, with adults from lower income households receiving fewer scale and clean services than those from higher income households.

While there was a consistent gradient by income in reporting a lot of difficulty paying a \$150 dental bill, significant differences in other measures of affordability and hardship were evident only when comparing adults on incomes below \$60,000 per year to the highest income group (\$80,000 per year or more).

6.3 Variations by cardholder status

Cardholders were more likely to be edentulous and this was particularly evident for the 55–64 years and 65–74 years age groups. Dentate cardholders had more missing teeth than non-cardholders at older ages (55 years and over), were more likely to have an inadequate dentition and reported higher rates of all three social impacts. No significant differences were evident in the proportions visiting in the previous 12 months; however, cardholders were less likely to visit for a check-up. As a consequence they received more extractions and fewer scale and clean services. Amongst cardholders who visited a public dental clinic for a check-up in the previous 12 months, 38.1% waited one year or longer for their appointment. Cardholders were more than twice as likely to report that they would have difficulty paying a \$150 dental bill, but smaller differences were evident to other measures of affordability and hardship.

6.4 Variations by remoteness area

While edentulism increased with remoteness, it was only clearly so in the 75 years and older age group. There was no clear pattern in number of missing teeth across the remoteness areas. Dentate adults living in *Remote* or *Very remote* areas were least likely to report an inadequate dentition, followed by residents of *Major cities*. There were no clear differences in social impact by remoteness area. There were no clear patterns in the affordability and hardship measures according to remoteness areas.

6.5 Conclusion

Variations in use of dental services are evident in the data presented in this report. Overall, individuals who live in *Major cities*, or reside in households with higher incomes (including non-cardholders) make a dental visit more frequently and are more likely to visit for a check-up than a problem. They also reported fewer financial barriers to using dental care than people who live outside of *Major cities* or live in lower income households. Residents of *Major cities* or higher income households are also more likely to receive preventive services and less likely to have an extraction, regardless of their reason for visit. Visiting and treatment patterns potentially have long term effects on oral health; individuals who live outside of *Major cities* and in lower income households (including Cardholders) reported variously more missing teeth and higher prevalence of negative impacts of oral health problems. Overall, these differences between population groups are longstanding and persistent (Carter 1996, Carter & Stewart 2002, Carter & Stewart 2003, Carter et al. 1994, Slade et al. 2007).

Glossary

Affordability of dental care

Affordability difficulties encountered in purchasing dental services refers to those respondents who:

- have avoided or delayed visiting because of cost
- report that cost had prevented recommended dental treatment.

Card holders

Persons who had a government concession card that entitled them to free or subsidised public dental care.

Complete tooth loss

(See edentulism).

Dental disease

Diseases of the oral cavity, the most common of which are caries (dental decay) and periodontitis (gum disease).

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 check-up

Visit to dental professional for the purposes of a dental examination.

Dental impairment

Persons with complete tooth loss or few remaining natural teeth have more limited oral function.

Dental professional

Dentist, dental hygienist or dental therapist.

Dental treatment

Treatment services received during dental visits, such as fillings, extractions and scale and clean services.

Dentate

Having one or more natural teeth.

Dentition

The set of teeth (a complete dentition comprises 32 adult teeth).

Edentulism

Complete tooth loss; loss of all natural teeth. Edentulism is a consequence of extensive dental disease and usually indicates the failure of any and all preventive and restorative efforts.

Extraction

Removal of a natural tooth.

Gum treatment

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

Hardship

Hardship encountered in purchasing dental services refers to those respondents who reported that they:

- had a large financial burden caused by dental visits, or
- would have a lot of difficulty in paying a \$150 dental bill.

Inadequate dentition

Having fewer than 21 remaining teeth; based on measures of impaired nutrition, chewing function and oral health related quality of life.

Infrequent visiting pattern

Usually make a dental visit less frequently than every two years.

Natural teeth

Refers to a person's own teeth as opposed to artificial teeth (for example: denture, crown and bridge, or implant).

Non-cardholders

People who did not have a government concession card that entitled them to public dental care.

Oral health

Being orally healthy means that people can eat, speak and socialise without discomfort or embarrassment, and without active disease in their mouth which affects their overall well-being.

Orthodontic treatment

Treatment to fix malocclusion (improper bites) and crooked teeth and to set teeth in the right place; usually using braces and retainers.

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, etc.

Public dental services

State- or territory-funded dental care available to adults with low income or other forms of social disadvantage.

Private dental services

Dental care provided in private practice to adults and children, usually self-funded by the recipient.

P-value

The probability of obtaining a difference of this magnitude if it did not exist i.e. due to sampling error

Restoration

Treatment to repair a tooth damaged by decay or injury (usually a filling, also dental crown).

Restorative care

Treatment to restore function to a decayed or injured natural tooth; (usually fillings, also dental crowns).

Sociodemographic

Descriptive term for a person's position in society measured by attributes such as age, sex, income, cardholder status or residential area.

Appendix A: 2008 Survey questionnaire

This appendix provides the questions and response categories used in the 2008 National Dental Telephone Interview Survey. Unless otherwise specified, responses were 'Yes', 'No', and 'Don't know'. The response categories used are indicated by italicised text. This appendix does not include: the skip sequences used; inbuilt range and error checking; the numerical coding of responses; additional onscreen notes for interviewers; and lead-in statements to questions or question blocks.

1. Do you have any of your own natural teeth?
2. Have you been without natural teeth for more than 1 year?
3. How many years have you had no teeth?
Literal response
4. Do you have a denture or false teeth {REMOVABLE} for your UPPER jaw?
5. Do you have a denture or false teeth {REMOVABLE} for your LOWER jaw?
6. There are 16 teeth, including wisdom teeth, in the upper jaw. How many teeth do you have remaining in your UPPER jaw?
Literal response
7. There are also 16 teeth, including wisdom teeth, in the lower jaw. How many teeth do you have remaining in your LOWER jaw?
Literal response
8. Currently, which of the following treatments do you think that you need to have:
Any filling(s)?
Any extraction(s)?
Scaling and cleaning of your teeth?
Professional clean and polish?
X-rays?
Denture(s) made?
A dental check-up?
Gum treatment?
Dental crown or bridge?
Orthodontic treatment
Any other treatment?
9. Why do you think you need to have an extraction [tooth pulled out]?
Wisdom teeth?
Tooth decayed?
Tooth cracked or fractured?
Filling broken down / fallen out?
Tooth abscessed or infected?
Tooth loose?
Crowding [orthodontics]?
Any other reason?
Text field to record response: Any other reason?

10. How soon do you think you need this dental treatment?
 - In less than 1 week*
 - From 1 week to less than 1 month*
 - From 1 month to less than 3 months*
 - From 3 months to less than 6 months*
 - 6 months or more*
 - Don't know*
11. How long ago did you *LAST* see a dental professional about your teeth, dentures or gums?
 - Less than 12 months*
 - 1 to less than 2 years*
 - 2 to less than 5 years*
 - 5 to less than 10 years*
 - 10 years or more*
 - Never attended*
 - Don't know*
12. Was that dental visit for a check-up or for a dental problem?
13. Was that dental visit necessary for the relief of pain?
14. How many dental visits did you make in the last 12 months?
 - Literal response*
15. How many fillings did you receive in the last 12 months?
 - Literal response*
16. How many extractions did you receive in the last 12 months?
 - Literal response*
17. What problem caused you to have the tooth/teeth extracted?
 - Wisdom teeth*
 - Tooth decayed*
 - Tooth cracked or fractured*
 - The filling had broken down / fallen out*
 - Tooth abscessed or infected*
 - Tooth loose*
 - Crowding [orthodontics]*
 - Any other reason*
18. How many of the following treatments did you receive in the last 12 months?
Number of :
 - Scalings*
 - Professional clean and polish treatments?*
 - X-rays?*
 - Denture(s) made? (note: upper & lower denture = 2 treatments)*
 - Dental check-ups?*
 - Sessions of gum treatment?*
 - Teeth crowned or capped?*
 - Bridges?*
 - Teeth that had root canal treatment?*

19. Which of the following treatments did you receive in the last 12 months:
Orthodontic treatment?
Any other treatment?
20. Treatment in previous 12 months for people with no natural teeth:
 How many of the following treatments did you receive in the last 12 months:
Denture(s) made? (note: upper & lower denture = 2 treatments)
Sessions of gum treatment?
Any other treatment?
21. Where did you make your last dental visit? Was it at a:
Private dental practice (including specialist)
Government dental clinic (including dental hospital)
School dental service
Dental technician
Clinic operated by health insurance fund
Armed Services / Defence Force clinic
Other site
Don't know
22. Do you currently have a pension or allowance from the Government; or have a Pensioner Concession Card, a Health Care Card or a Department of Veterans Affairs card; or do you receive a pension or allowance from the Government?
23. Which card(s) are you covered by?
Pensioner Concession Card
Health Care Card
Commonwealth Seniors Health Card
Department of Veterans Affairs treatment gold card
Department of Veterans Affairs treatment white card
Other card
Don't know
24. Did you have a Pensioner Concession Card or a Health Care Card when you last visited a dentist [1 year/1–2 years ago]?
25. Did the Government or an insurance fund pay any part of the expenses for your last dental visit?
Paid all own expenses
Health insurance paid some / patient paid some
Health insurance paid all / patient paid none
Government paid some / patient (or health insurance) paid some
Government paid all / patient paid none
Other payment arrangement
Don't know
26. Are you currently on a waiting list for public dental care?
27. How many years/months have you been on the waiting list?
Literal response in months
28. For your last dental visit, were you on a waiting list before you were given an appointment [at the government dental clinic]?
29. How long did you have to wait before being given an appointment?
Literal response in months and weeks

30. Which is your usual reason for visiting a dental professional – for check-ups or when you have a dental problem?
Check-ups
Dental problem
Don't know
31. Do you usually visit for the relief of pain?
32. How often, on average, would you seek care from a dental professional?
Two or more times a year
Once a year
Once in 2 years
Less often than that
Don't know
33. During the last 12 months how often have you had toothache? Was it:
Very often
Often
Sometimes
Hardly ever
Never during the last 12 months
Don't know
34. How often have you felt uncomfortable about the appearance of your teeth, mouth or dentures during the last 12 months?
Very often
Often
Sometimes
Hardly ever
Never during the last 12 months
Don't know
35. How often have you had to avoid eating some foods because of problems with your teeth, mouth or dentures during the last 12 months?
Very often
Often
Sometimes
Hardly ever
Never during the last 12 months
Don't know
36. During the last 12 months, have you broken or chipped a natural tooth due to injury?
37. During the last MONTH, have you had pain in the face, jaw, temple, in front of the ear or in the ear?
38. Have you been told by a doctor that you have diabetes?
39. Which of the following best describes your smoking status (includes cigarettes, cigars and pipes)?
I currently smoke
I don't smoke now, but I used to
I've never smoked
Don't know / Refusal

40. During the last 12 months, have you avoided or delayed visiting a dental professional because of the cost?
41. Has the cost prevented you from having any dental treatment that was recommended by a dental professional at a visit during the last 12 months?
42. Did you take up an alternative lower cost option for the treatment that was recommended?
43. In the last 12 months, how much of a financial burden have dental visits been for you?
Would you say:
None
Hardly any
A little
A large burden
Don't know
44. At most times of the year, how much difficulty would you have paying a \$100 dental bill OUT OF YOUR OWN POCKET? Would you say:
None
Hardly any
A little
A lot of difficulty
Don't know
45. And (at most times of the year) how much difficulty would you have paying a \$150 dental bill OUT OF YOUR OWN POCKET? Would you say:
None
Hardly any
A little
A lot of difficulty
Don't know
46. Do you have private insurance cover for dental expenses?
47. What is the name of the health insurance company that you have dental insurance with?
48. Would you say that your dental insurance covers General dental only, or does it include Major dental cover?
General = Basic [covers check-ups, fillings and simple extractions]
Major = Higher level cover [includes crowns, root canal treatment, wisdom tooth extractions]
Don't know / Refusal
49. Do you have an appointment set for a check-up?
50. Do you expect to receive an appointment or reminder notice for a check-up?
51. Is there a dentist you usually go to for dental care?
52. How would you rate your own GENERAL health? Would you say that it is:
Excellent
Very good
Good
Fair
Poor
Don't know

53. And how would you rate your DENTAL health? Would you say that it is:
Excellent
Very good
Good
Fair
Poor
Don't know
54. How often during the last 7 days did you clean your teeth?
Literal response
55. Would you feel afraid or distressed when going to the dentist? Would you say:
Not at all
A little afraid or distressed
Moderately afraid or distressed
Very afraid or distressed
Extremely afraid or distressed
56. What sex are you?
Male
Female
Refusal
57. Could you tell me your age please?
Literal response
58. Are you of Aboriginal or Torres Strait Islander origin?
No
Yes, Aboriginal
Yes, Torres Strait Islander
Yes, Torres Strait Islander & Aboriginal
Don't know / Refusal
59. In which country were you born?
Australia
England
New Zealand
Italy
Vietnam
China
Greece
Germany
The Philippines
India
Don't know / Refusal
OR Literal response
60. How long have you been living in Australia?
Literal response
61. Were either of your parents born overseas?
Yes, mother only
Yes, father only
Yes, both
No, both Australian-born
Don't know / Refusal

62. Do you speak a language other than English at home?
63. What language do you mainly speak at home?
- English*
 - Italian*
 - Greek*
 - Chinese (Cantonese)*
 - Chinese (Mandarin)*
 - Arabic/Lebanese*
 - Vietnamese*
 - Spanish*
 - Tagalog (Filipino)*
 - Don't know / Refusal*
 - OR Literal response*
64. Are you studying at school or any other educational institution either full-time or part-time?
- Full-time*
 - Part-time*
 - Not at school/TAFE/Uni*
 - Don't know*
65. What kind of educational institution do you attend?
- Secondary school*
 - TAFE*
 - University or other higher education institution*
 - Other*
 - Don't know*
66. What is the highest Year level of schooling you have completed?
- Primary school [Year 7 or less]*
 - Year 8*
 - Year 9*
 - Year 10*
 - Year 11*
 - Year 12*
 - Don't know / Refusal*
67. Have you completed a trade certificate, university degree or any other educational qualification since leaving school?
68. What is the highest qualification / level of education you have completed since leaving school?
- Postgraduate degree level*
 - Graduate diploma / graduate certificate level*
 - Bachelor degree level*
 - Advanced diploma / diploma level*
 - Certificate level*
 - Other*
 - Don't know / Refusal*

69. How would you describe your current employment status?

Full-time (35+ hours)

Part-time

Not employed

Don't know / Refusal

Are you currently:

Retired

Home duties

Unemployed and looking for work

Student

Not employed, and not looking for work

Don't know / Refusal

70. What is your usual/current occupation?

Judge, Manager, Administrator, Farmer

Professional, e.g. Doctor, Dentist, Engineer, Scientist, Teacher

Para Professional, e.g. Technical Officer, Nurse, Ambulance, Sport, Army

Tradesperson, e.g. Electrician, Builder, Carpenter, Plumber, Printer, Cook

Advanced Clerical, e.g. PA, Secretary;

Intermediate Clerical, e.g. Receptionist, Accounts, Payroll, Bank Clerk

Elementary Clerical, e.g. Filing

Intermediate Salesperson, e.g. Sales rep, Teller, Waiter, Services, Teacher's Aide, Child Care

Low Salesperson, e.g. Sales Assistant, Checkout, Security Officer, Services, Vet Nurse, Assistant

Skilled Labourer, e.g. Plant Operator, Driver

Unskilled Labourer

Other

Don't know / Not applicable

Literal response

71. Could you please indicate the category of your total household income?

Per year

Per fortnight

Per week

Up to \$12,000

Up to \$460

Up to \$230

From 12 to \$20,000

\$461 to \$770

\$231 to \$385

From 20 to \$30,000

\$771 to \$1154

\$386 to \$577

From 30 to \$40,000

\$1155 to \$1538

\$578 to \$769

From 40 to \$50,000

\$1539 to \$1923

\$770 to \$961

From 50 to \$60,000

\$1924 to \$2307

\$962 to \$1153

From 60 to \$70,000

\$2308 to \$2692

\$1154 to \$1346

From 70 to \$80,000

\$2693 to \$3077

\$1347 to \$1538

From 80 to \$90,000

\$3,077 to \$3,462

\$1,538 to \$1,731

From 90 to \$100,000

\$3,462 to \$3,846

\$1,731 to \$1,923

From 100 to \$110,000

\$3,846 to \$4,230

\$1,923 to \$2,115

More than \$110,000

More than \$4230

More than \$2115

Don't know

Refusal

72. Is your current dwelling:
Rented accommodation
Being paid off
Owned outright
Rent-free accommodation
Other
Don't know / Refusal
73. Can you please tell me the postcode where you live [or suburb]?
Literal response
74. How many people live in this household (including babies and pre-schoolers)?
Literal response
75. Please record age of each person in the household?
Literal response

Appendix B: Data collection, analysis and reporting

B.1 Sample selection and data collection

The 2008 NDTIS sample was selected using a two-stage stratified design. In the first stage of selection a random sample of dwellings was selected from the Electronic White Pages (EWP). To be able to access the latest version of the EWP, the AIHW DSRU requested the Australian Electoral Commission (AEC) to extract a sample from the electoral roll database. Electoral roll records do not contain telephone numbers, so the records were matched against the Sensis *MacroMatch* database (which uses the same source data as other Sensis products such as the Electronic White Pages and White Pages Online) to append a residential telephone number. Note that only publicly listed telephone numbers (that is, those that would be listed in the White Pages and related products) can be appended under this process. The most complete matches were used as the sample frame for the 2008 National Dental Telephone Interview Survey (NDTIS).

The remaining records were stratified by state and region (metropolitan/non-metropolitan)¹ and a random sample of dwellings was selected within each stratum. To allow for non-response and non-contacts, the number of dwellings selected in each stratum was over-sampled to ensure an adequate sample size. Once telephone contact was made with a selected dwelling, the second stage of selection involved randomly selecting one person aged 5 years or older from the dwelling.

A six workstation telephone interview laboratory was established by the DSRU within the School of Dentistry at The University of Adelaide. A team of interviewers were trained in the survey methods and the use of computer assisted telephone interview (CATI) methodology where interviewers read questions directly from the computer screen and entered responses into a database. The computer program used to capture data was WinCati 4.2 (Sawtooth Technologies, Inc.).

The survey questionnaire and interview procedures were pilot tested on randomly selected Adelaide households, and modifications were made prior to the commencement of formal data collection. Approximately 10 days prior to dialling sampled telephone numbers, a primary approach letter explaining the purpose of the survey and encouraging participation was mailed to each sampled household. A toll free telephone number was provided to allow those who received a primary approach letter to discuss the survey with DSRU staff. Messages left on answering machines included the toll free number to enable people to contact DSRU staff if they wished. When a person contacted the DSRU to decline participation in the survey, they were recorded as a refusal outcome (Table B1) and their telephone number was removed from the list of numbers to be contacted.

¹ Metropolitan stratum is defined as the Capital City Statistical Division (code 05). Non-metropolitan stratum is defined as all other Statistical Divisions (code > 05). The product used to allocate individuals to the two stratum is from the ABS Catalogue 2905.0.55.001 ABS Postal Area Concordances, Aug 2006. The Statistical Division from Postal Area (SD from POA) concordance allows the conversion of population data from Postal Areas (POA) to Statistical Division (SDs) – File is called CP2006SD_2006POA.txt

When sampled telephone numbers were dialled, each attempt was recorded. When interviewers achieved contact with a person at a telephone number, they went through the following procedure to establish that the household was within scope and to randomly select a target person.

1. Telephone numbers that did not serve residential dwellings – business numbers, hospitals or nursing homes (where the telephone was not within a private room), caravan parks and hotels – were excluded from the survey.
2. If only one person resided at the dwelling they were selected as the target person to be interviewed.
3. At other dwellings the person answering the telephone was asked to name the resident aged 5 years or older who was due to have the next birthday, as well as the resident aged 5 years or older who had the last birthday. The computer program then randomly selected the former or latter as the target person (based on 50% probability to select one or the other).

Target persons were invited to participate in an interview that could follow one of three schedules. Schedule 1 interviews consisted of 68 questions (several with multiple response categories) and were administered to people aged 15 years or older who were able and willing to answer questions. Schedule 2 interviews consisted of approximately 50 questions that were asked if the selected person was aged between 5 and 14 years and were answered by a parent or guardian on behalf of the selected child. Schedule 3 interviews consisted of approximately 50 questions administered to selected persons aged 15 years or older but answered by a nominated adult on behalf of the selected person. This occurred in instances where the selected person was unable to communicate (e.g. due to illness or language barriers) or was away from the household for more than six weeks. Interviews were also conducted in Italian, Greek, Spanish and Vietnamese where appropriate.

Each sampled telephone number was initially called up to six times. Where no answer was obtained after six calls, the number was designated as a non-contact. If telephone contact was made with a household and the person to be interviewed was established, then up to six additional calls were made in an attempt to complete an interview with the selected person. Those who refused to participate are designated as refusals in Table 1.1. Queries and concerns from respondents were referred to the shift supervisor. Interviews were conducted between February and October 2008.

B.2 Weighting of data

Weights were calculated to reflect a person's probability of selection in the survey. A person was selected in the survey if their dwelling was initially selected from the sampling frame, and if they were the target person selected to be interviewed from the dwelling.

The probability of a dwelling being selected from the sampling frame was determined by the stratum the dwelling was assigned to and the proportion of dwellings selected in that stratum. The probability of a person being selected as the target person to be interviewed was determined by the number of people aged 5 years and older usually resident in the dwelling. The initial weight was calculated as the inverse of a person's probability of being selected.

Due to differential response rates by age and sex within strata, the initial weights were adjusted to ensure that the age-sex distribution of the sample reflected the Australian population age-sex distribution. Within each of the 15 strata, sub-strata were defined by age

group (5-year age categories from 5–9 years through to 80–84 years, plus 85 years and older) and sex. Each sub-stratum was linked to the estimated resident population (ERP) for that sub-stratum (the ERPs were obtained from Australian Bureau of Statistics (ABS 2008).

The weight for each respondent was calculated using the following formula:

$$w_{i,j,h,a,s} = \frac{N_{h,a,s}}{\sum_{i \in h,a,s} (\frac{M_h}{m_h}) * (r_{h,j})} * (\frac{M_h}{m_h}) * (r_{h,j})$$

where:

i = person

j = dwelling

h = stratum defined as state by region (metropolitan/non-metropolitan)

a = age group (5-year categories from 5–9, 10–14, ..., 85 years and older)

s = sex (male, female)

$N_{h,a,s}$ = ERP for stratum h , age group a , sex s

M_h = number of dwellings listed on the sampling frame in stratum h

m_h = number of dwellings selected from the sampling frame in stratum h

$r_{h,j}$ = number of persons aged 5 years and older usually resident in dwelling j

The estimates provided in this report are subject to sampling error due to a sample of the Australian population being selected rather than a complete enumeration of the population. To enable survey estimates to be compared and inferences to be made about characteristics of the population, 95% confidence intervals (CIs) have been provided for each survey estimate in the report. The CIs were calculated using SAS Callable SUDAAN software that caters for the two-stage sample design when calculating standard errors. The 95% CIs are provided in a separate table below the table of corresponding survey estimates. Two estimates are significantly different if the 95% CIs do not overlap.

B.3 Response levels

Table B.1 provides details of the number of dwellings contacted by telephone, the final outcome of this contact and the participation rate for each stratum. The participation rate was calculated as the number of completed interviews (participants) divided by the number of dwellings telephoned that were in-scope of the survey. In-scope dwellings were defined as dwellings that were telephoned but householders could not be contacted (non-contacts), dwellings that were contacted but declined to participate (refusals) and dwellings that agreed to participate (participants). Dwellings with telephone numbers that were out of service or out of scope of the survey (business numbers) were excluded from the calculation of participation rates.

An overall participation rate of 59.4% was achieved in the 2008 survey. A total of 13,733 unique telephone numbers were called, resulting in 7,598 completed interviews. Participation rates ranged from 50.9% in Melbourne to 69.7% in non-metropolitan South Australia.

After data cleaning, 11 participants were excluded from the survey. The remaining 7,587 participants included 6,602 adults aged 18 years and over and 985 children aged 5 to 17 years. This report presents findings based on the 6,602 adults interviewed in the survey.

Table B1: Participation in the 2008 National Dental Telephone Interview Survey

Stratum	Total sampled	Out of service	Out of scope	Non-contact	Refusal	Participants	Per cent participation
Sydney	1,742	39	74	108	618	903	55.4
Balance of New South Wales	1,207	60	30	62	374	681	61.0
Melbourne	1,981	82	94	147	740	918	50.9
Balance of Victoria	834	20	18	36	281	479	60.2
Brisbane	1,034	45	29	54	340	566	59.0
Balance of Queensland	1,149	44	23	65	375	642	59.3
Perth	927	25	23	53	316	510	58.0
Balance of Western Australia	607	12	16	42	199	338	58.4
Adelaide	728	23	11	30	210	454	65.4
Balance of South Australia	482	4	6	26	117	329	69.7
Hobart	482	12	9	25	127	309	67.0
Balance of Tasmania	498	30	8	36	132	292	63.5
Australian Capital Territory	967	45	24	77	220	601	66.9
Darwin	592	52	20	43	174	303	58.3
Balance of Northern Territory	503	43	19	48	120	273	61.9
Total	13,733	536	404	852	4,343	7,598	59.4

B.4 Methods used to derive population estimates

Estimates of population means and population percentages were derived using the SAS callable SUDAAN procedures 'proc descriptor' and 'proc crosstab'. These procedures produce population estimates and their corresponding 95% confidence intervals. The variances used to calculate these confidence intervals are derived using the implicit Taylor linearization method, which incorporates the complex sample design used in the 2008 National Dental Telephone Interview Survey. To generate population estimates using these SAS callable SUDAAN procedures, the stratification variables were specified as state and region, a weight variable was specified which reflected a person's weight in the survey as calculated by the formulae provided in section 1.2 and the estimation method was specified as 'with replacement'.

B.5 Criteria for determining statistical significance

As with any survey where data are collected from only some of the people in the population, percentages and means presented in this report are estimates of the true population values. These estimates have some degree of uncertainty, which is expressed in this report using 95% confidence intervals (95% CIs). The 95% CI signifies the likely lower and upper limits of the range of values within which the true population percentage would fall. In this context 'likely' means that there is a 95% probability that the true population value lies between the lower and upper limits.

In this report, 95% CIs were used as a guideline to identify differences between population subgroups that are statistically significant. When there was no overlap between the 95% CIs for two groups, the difference between the groups was deemed to be statistically significant. This criterion for judging statistical significance is more conservative than the alternative method of calculating P-values. In fact, when 95% CIs do not overlap, it means that a test of statistical significance for the difference between the groups would yield a P-value of less than 0.05 (the conventional threshold used in many reports). A P-value of less than 0.05 indicates that the likelihood that a difference of the magnitude observed between the population subgroups would occur by chance is less than 5%.

Where attention is drawn to differences between population groups these differences are statistically significant at the 5% level unless stated otherwise.

Appendix C: Confidence intervals for tables

Table C1: 95% confidence intervals to estimates in Table 2.1: Edentulous persons by sex, annual household income, cardholder status and age group (per cent)

	Age group (years)					Total
	18–44	45–54	55–64	65–74	75+	
Sex						
Male	0.0,0.0	1.0,3.4	3.6,7.7	13.0,21.4	22.1,34.0	4.0,5.5
Female	0.0,0.0	0.5,2.6	7.1,12.7	18.7,27.9	28.5,39.7	6.1,7.9
Annual household income						
Less than \$20,000	0.0,0.0	0.0,8.5	13.3,28.8	21.2,34.6	32.9,46.0	19.4,25.9
\$20,000–<\$30,000	0.0,0.0	0.0,0.0	5.8,18.0	17.4,29.5	22.0,37.7	12.4,18.2
\$30,000–<\$40,000	0.0,0.0	0.0,6.3	2.3,14.2	8.0,22.8	15.4,45.7	4.5,9.5
\$40,000–<\$60,000	0.0,0.0	0.8,6.2	2.8,9.6	8.0,28.7	3.2,28.9	2.4,4.8
\$60,000–<\$80,000	0.0,0.1	0.9,6.3	0.9,6.9	2.5,22.6	0.0,43.6	1.1,3.2
\$80,000–<\$110,000	0.0,0.0	0.0,1.4	0.4,6.1	0.0,0.0	0.0,0.0	0.1,0.8
\$110,000 or more	0.0,0.0	0.0,1.1	0.0,4.4	0.0,0.0	0.0,0.0	0.1,0.6
Cardholder status						
Cardholder	0.0,0.0	0.0,4.2	11.3,21.5	19.6,27.4	29.1,38.8	14.7,18.4
Non-cardholder	0.0,0.0	1.0,2.8	3.4,6.4	6.8,14.8	15.3,30.7	1.7,2.4
All persons	0.0,0.0	1.1,2.7	6.1,9.5	17.2,23.5	27.5,35.7	5.3,6.5

Table C2: 95% confidence intervals to estimates in Table 2.2: Number of missing teeth by sex, annual household income, cardholder status and age group (mean)

	Age group (years)				Total
	18–24	25–44	45–64	65+	
Sex					
Male	1.5,2.3	2.5,3.1	5.7,6.7	11.4,13.1	4.7,5.3
Female	2.4,3.0	3.2,3.8	6.2,7.0	12.0,13.8	5.4,6.0
Annual household income					
Less than \$20,000	0.9,3.0	2.8,6.5	9.4,12.7	13.3,15.5	9.9,11.8
\$20,000–<\$30,000	0.2,3.1	3.1,5.2	7.2,9.7	12.1,14.6	8.6,10.3
\$30,000–<\$40,000	0.8,3.0	2.8,4.6	6.4,8.8	10.9,14.2	5.7,7.2
\$40,000–<\$60,000	1.7,3.0	3.2,4.5	6.2,7.6	8.3,11.3	4.9,5.8
\$60,000–<\$80,000	1.3,3.7	2.6,3.4	5.1,6.6	7.8,12.0	3.9,4.7
\$80,000–<\$110,000	1.5,2.6	2.4,3.1	4.5,5.6	6.3,9.6	3.2,3.8
\$110,000 or more	1.7,2.7	2.3,3.0	3.9,4.7	5.9,12.0	3.0,3.5
Cardholder status					
Cardholder	1.9,2.9	3.3,4.8	8.7,10.5	12.7,14.3	8.6,9.7
Non-cardholder	2.0,2.5	2.8,3.3	5.5,6.1	9.1,11.0	4.1,4.4
All persons	2.3	3.2	6.4	12.6	5.4

Table C3: 95% confidence intervals to estimates in Table 2.3: Number of teeth by age group, sex, annual household income and cardholder status (per cent)

	Number of teeth			
	1–20	21–24	25–28	29–32
Age group (years)				
18–24	0.1,2.2	1.8,5.1	32.2,42.5	54.0,64.5
25–44	1.6,3.9	4.4,7.7	37.7,44.4	47.3,54.2
45–64	14.0,17.6	10.0,13.2	36.2,41.2	31.6,36.5
65 or older	44.0,50.9	11.7,16.4	21.0,26.8	12.4,17.7
Sex				
Male	11.2,14.1	5.6,8.1	30.3,35.5	45.1,50.6
Female	11.3,14.0	8.7,11.4	39.4,44.2	33.3,38.2
Annual household income				
Less than \$20,000	35.5,45.6	9.2,15.1	18.8,27.4	20.0,30.4
\$20,000–<\$30,000	27.2,36.5	10.1,17.7	22.7,32.5	22.6,33.2
\$30,000–<\$40,000	13.8,22.2	6.9,16.6	29.2,42.4	29.6,43.2
\$40,000–<\$60,000	9.7,15.0	6.5,11.3	37.4,46.5	33.1,42.0
\$60,000–<\$80,000	5.4,9.8	6.0,10.3	36.4,46.1	38.8,48.7
\$80,000–<\$110,000	2.7,5.7	4.6,8.4	37.6,46.8	43.0,52.4
\$110,000 or more	1.6,3.5	4.1,8.3	35.8,44.2	47.4,56.2
Cardholder status				
Cardholder	28.3,34.1	9.2,13.2	26.1,32.5	25.3,32.3
Non-cardholder	6.3,8.1	6.6,8.7	37.7,41.9	43.3,47.6
All persons	11.6,13.6	7.5,9.4	35.7,39.2	39.8,43.5

Table C4: 95% confidence intervals to estimates on Table 2.4: Number of teeth by remoteness area of residence (per cent)

	Number of teeth			
	1–20	21–24	25–28	29–32
Residential location				
Major cities	9.6,11.8	7.0,9.3	35.9,40.3	40.9,45.5
Inner regional	16.0,21.3	8.0,12.4	33.1,40.7	31.1,38.6
Outer regional	13.3,20.3	5.0,9.2	27.9,37.8	38.2,49.9
Remote / Very remote	2.1,7.5	5.5,16.9	25.4,53.5	34.5,61.2
All persons	11.6,13.6	7.5,9.4	35.7,39.2	39.8,43.5

Table C5: 95% confidence intervals to estimates on Table 2.5: Persons experiencing dental problems by age, sex and dentate status (per cent)

	Dentate			Edentulous	
	Toothache	Appearance	Avoid food	Appearance	Avoid food
Age group (years)					
18–24	15.6,24.4	19.5,28.9	10.3,17.9	..	...
25–44	17.1,22.5	25.5,31.8	16.9,22.2	n.p.	n.p.
45–64	14.1,18.1	28.4,33.2	21.2,25.6	21.8,40.8	29.8,49.8
65 or older	5.7,9.1	16.0,21.6	15.3,20.5	13.4,22.8	28.3,39.7
Sex					
Male	13.1,17.2	21.6,26.5	14.2,18.1	12.9,26.8	28.0,43.4
Female	16.6,20.6	28.4,32.9	21.5,25.5	17.1,27.9	28.9,41.7
All persons	15.5,18.3	25.8,29.1	18.4,21.3	17.2,25.8	30.5,40.4

Table C6: 95% confidence intervals to estimates on Table 2.6: Persons experiencing dental problems by annual household income, cardholder status and dentate status (per cent)

	Dentate			Edentulous	
	Toothache	Appearance	Avoid food	Appearance	Avoid food
Annual household income					
Less than \$20,000	21.0,31.7	32.8,43.8	32.3,43.1	15.8,28.5	30.1,45.4
\$20,000–<\$30,000	12.0,20.9	23.4,33.4	20.4,29.9	8.2,24.9	23.1,42.6
\$30,000–<\$40,000	13.1,24.3	23.8,37.3	18.6,30.3	11.6,48.3	15.0,47.6
\$40,000–<\$60,000	15.3,23.1	23.6,31.9	17.3,24.7	22.4,57.0	24.3,57.8
\$60,000–<\$80,000	13.1,20.7	23.0,31.8	14.2,21.3	0.0,36.3	13.0,63.1
\$80,000–<\$110,000	11.6,18.1	22.9,31.2	11.0,17.1	0.0,0.0	0.0,25.7
\$110,000 or more	9.5,15.4	17.1,24.3	10.7,16.4	0.0,18.3	0.0,18.3
Cardholder status					
Cardholder	19.1,25.5	29.2,36.0	26.4,33.0	17.2,27.3	31.3,43.0
Non-cardholder	13.7,16.9	24.0,27.8	15.3,18.4	11.9,27.8	22.5,40.3
All persons	15.5,18.3	25.8,29.1	18.4,21.3	17.2,25.8	30.5,40.4

Table C7: 95% confidence intervals to estimates on Table 3.1: Time since last dental visit by age group and sex (per cent)

	Time since last dental visit			
	<12 months	1–<2 years	2–<5 years	5+ years
Age group (years)				
18–24	54.7,65.1	14.7,22.6	8.3,15.3	7.4,14.4
25–44	50.8,57.5	17.2,22.6	11.1,15.4	10.8,15.4
45–64	61.1,66.0	15.4,19.2	9.5,12.7	6.7,9.9
65 or older	59.1,65.8	15.2,20.4	9.4,14.0	6.7,10.4
Sex				
Male	52.1,57.4	16.1,20.1	12.4,16.1	11.3,15.1
Female	61.3,66.0	17.0,20.9	8.5,11.2	6.5,9.2
All persons	57.4,61.0	17.1,19.9	10.8,13.2	9.3,11.6

Table C8: 95% confidence intervals to estimates on Table 3.2: Time since last dental visit by income and cardholder status (per cent)

	Time since last dental visit			
	<12 months	1–<2 years	2–<5 years	5+ years
Annual household income				
Less than \$20,000	50.7,60.8	14.1,21.3	10.8,17.8	9.9,16.6
\$20,000–<\$30,000	46.9,57.7	17.1,26.0	9.6,16.4	10.2,18.6
\$30,000–<\$40,000	51.8,65.1	12.7,22.1	6.5,13.2	10.2,22.1
\$40,000–<\$60,000	54.6,63.5	16.1,23.6	8.9,14.4	7.6,12.8
\$60,000–<\$80,000	51.1,60.9	13.2,20.5	10.5,17.0	10.5,18.5
\$80,000–<\$110,000	55.7,64.9	15.8,23.1	9.7,16.2	5.5,11.0
\$110,000 or more	60.4,68.8	15.0,22.0	8.4,13.9	4.4,8.4
Cardholder status				
Cardholder	53.1,59.8	15.5,20.5	10.6,15.1	10.7,15.7
Non-cardholder	58.0,62.2	17.0,20.3	10.4,13.1	8.3,11.0
All persons	57.4,61.0	17.1,19.9	10.8,13.2	9.3,11.6

Table C9: 95% confidence intervals to estimates on Table 3.3: Time since last dental visit by remoteness area of residence (per cent)

	Time since last dental visit			
	<12 months	1–<2 years	2–<5 years	5+ years
Residential location				
Major cities	58.9,63.3	16.8,20.2	10.0,12.8	7.8,10.7
Inner regional	51.1,58.6	15.9,21.9	10.4,15.1	11.3,16.9
Outer regional	49.5,60.4	13.6,21.0	12.0,20.8	8.9,16.2
Remote / Very remote	38.5,64.6	11.2,39.5	5.9,21.9	8.1,24.1
All persons	57.4,61.0	17.1,19.9	10.8,13.2	9.3,11.6

Table C10: 95% confidence intervals to estimates on Table 3.4: Time since last dental visit by age group, sex, annual household income and cardholder status (per cent)

	Time since last dental visit			
	<12 months	1–<2 years	2–<5 years	5+ years
Age group				
Younger than 65 years	16.0,34.8	8.2,22.3	15.8,32.4	29.7,49.1
65 years or older	10.4,18.1	5.4,11.1	21.2,31.5	46.7,58.2
Sex				
Male	10.5,21.8	6.9,17.1	23.1,37.4	36.3,51.9
Female	12.6,22.7	5.5,11.9	17.3,28.4	45.9,58.8
Annual household income				
Less than \$20,000	11.6,23.7	4.4,12.8	18.9,32.7	42.7,58.1
\$20,000–<\$30,000	9.5,24.4	6.3,16.3	19.5,38.0	36.7,56.2
\$30,000 or more	12.2,28.5	8.1,22.3	16.7,32.9	33.3,54.1
Cardholder status				
Cardholder	10.9,19.7	6.5,12.8	20.4,30.8	44.9,56.7
Non-cardholder	14.8,30.1	5.3,17.3	18.5,35.1	33.7,52.6
All persons	12.9,20.5	6.9,12.4	21.1,29.9	44.1,54.1

Table C11: 95% confidence intervals to estimates on Table 3.5: Persons whose last dental visit was for a check-up by age group, sex and cardholder status (per cent)

	Cardholder	Non-cardholder	Total
Age group (years)			
18–24	57.9,85.0	67.2,80.0	67.3,78.9
25–44	22.2,47.1	55.6,65.2	52.7,61.9
45–64	30.0,45.2	48.0,54.7	46.4,52.5
65 or older	41.4,52.1	47.8,61.4	45.1,53.5
Sex			
Male	35.8,50.5	51.6,59.7	49.6,56.8
Female	42.2,53.5	57.6,64.3	54.8,60.6
All persons	41.4,50.4	55.8,61.0	53.4,57.9

Table C12: 95% confidence intervals to estimates on Table 3.6: Persons whose last dental visit was for a check-up by annual household income and cardholder status (per cent)

	Cardholder	Non-cardholder	Total
Annual household income			
Less than \$20,000	30.5,45.2	33.2,73.2	33.8,47.9
\$20,000–<\$30,000	34.0,50.1	38.5,64.9	38.3,52.5
\$30,000–<\$40,000	30.8,55.6	33.6,56.2	35.7,52.9
\$40,000–<\$60,000	33.5,63.5	45.2,57.9	45.2,56.9
\$60,000–<\$80,000	33.0,81.0	50.2,62.6	50.5,62.5
\$80,000–<\$110,000	41.0,94.1	58.7,69.5	58.9,69.5
\$110,000 or more	22.6,91.3	56.9,67.3	56.9,67.1
All persons	41.4,50.4	55.8,61.0	53.4,57.9

Table C13: 95% confidence intervals to estimates on Table 3.7: Type of practice visited at last dental visit by age group and sex (per cent)

	Type of practice visited at last dental visit (%)		
	Private	Public	Other
Age group (years)			
18–24	81.8,90.9	8.2,16.7	0.3,5.2
25–44	87.8,93.5	4.0,8.7	1.8,5.3
45–64	91.9,95.2	4.1,7.3	0.4,1.6
65 or older	82.3,88.3	10.6,16.4	0.6,2.6
Sex			
Male	87.7,92.2	5.5,9.2	1.6,4.5
Female	89.1,92.6	6.6,10.0	0.5,1.9
All persons	89.1,91.9	6.5,9.0	1.1,2.6

Table C14: 95% confidence intervals to estimates on Table 3.8: Type of practice visited at last dental visit by income and cardholder status (per cent)

	Type of practice visited at last dental visit (%)		
	Private	Public	Other
Annual household income			
Less than \$20,000	54.9,69.3	25.0,38.4	3.0,12.9
\$20,000–<\$30,000	76.8,88.3	11.7,23.2	0.0,0.3
\$30,000–<\$40,000	85.9,94.6	4.6,13.2	0.4,2.5
\$40,000–<\$60,000	89.3,96.2	1.9,7.5	1.1,6.0
\$60,000–<\$80,000	90.2,97.2	1.4,6.3	0.8,6.6
\$80,000–<\$110,000	95.0,98.8	1.0,4.8	0.1,0.8
\$110,000 or more	93.3,98.1	1.1,5.5	0.4,3.0
Cardholder status			
Cardholder	67.1,75.6	21.3,29.4	1.7,6.4
Non-cardholder	94.7,97.0	1.9,3.8	0.8,2.1
All persons	89.1,91.9	6.5,9.0	1.1,2.6

Table C15: 95% confidence intervals to estimates on Table 4.1: Number of dental visits and routine services received by age group and sex (mean)

	Visits	Extraction(s)	Filling(s)	Scale and clean
Age group (years)				
18–24	2.12,2.58	0.26,0.59	0.48,0.77	0.74,0.92
25–44	2.09,2.43	0.25,0.43	0.70,0.98	0.87,1.00
45–64	2.34,2.59	0.22,0.35	0.79,0.97	0.93,1.02
65 or older	2.20,2.58	0.20,0.35	0.75,1.01	0.92,1.08
Sex				
Male	2.21,2.48	0.27,0.42	0.78,1.00	0.84,0.94
Female	2.27,2.49	0.25,0.37	0.69,0.85	0.94,1.03
All persons	2.28,2.45	0.28,0.37	0.76,0.89	0.91,0.98

Table C16: 95% confidence intervals to estimates on Table 4.2: Number of dental visits and routine services received by annual household income and cardholder status (mean)

	Visits	Extraction(s)	Filling(s)	Scale and clean
Annual household income				
Less than \$20,000	2.20,2.81	0.34,0.70	0.75,1.37	0.62,0.82
\$20,000–<\$30,000	1.99,2.37	0.29,0.73	0.75,1.16	0.78,0.96
\$30,000–<\$40,000	2.01,2.63	0.15,0.53	0.62,1.36	0.76,0.95
\$40,000–<\$60,000	2.23,2.72	0.24,0.56	0.72,1.09	0.81,0.98
\$60,000–<\$80,000	2.10,2.45	0.18,0.35	0.70,1.00	0.89,1.07
\$80,000–<\$110,000	2.20,2.68	0.18,0.35	0.55,0.78	0.91,1.07
\$110,000 or more	2.14,2.51	0.15,0.35	0.61,0.86	1.04,1.17
Cardholder status				
Cardholder	2.29,2.66	0.33,0.58	0.83,1.17	0.77,0.91
Non-cardholder	2.23,2.43	0.24,0.33	0.71,0.85	0.94,1.01
All persons	2.28,2.45	0.28,0.37	0.76,0.89	0.91,0.98

Table C17: 95% confidence intervals to estimates on Table 4.3: Persons receiving routine dental services by age group and sex (per cent)

	Visits	Extraction(s)	Filling(s)	Scale and clean
Age group (years)				
18–24	54.7,65.1	9.5,18.3	26.4,39.2	60.6,73.4
25–44	50.8,57.5	15.0,22.2	36.8,45.9	70.6,78.7
45–64	61.1,66.0	14.3,18.9	43.8,50.0	71.8,77.2
65 or older	59.1,65.8	14.6,21.2	41.9,50.3	70.7,78.0
Sex				
Male	52.1,57.4	15.5,20.9	40.9,48.1	67.8,74.3
Female	61.3,66.0	14.0,18.4	38.4,44.2	73.0,78.1
All persons	57.4,61.0	15.4,18.9	40.5,45.0	71.4,75.5

Table C18: 95% confidence intervals to estimates on Table 4.4: Persons receiving routine dental services by annual household income and cardholder status (per cent)

	Extraction(s)	Filling(s)	Scale and clean
Annual household income			
Less than \$20,000	23.3,36.5	35.7,50.0	49.0,63.7
\$20,000–<\$30,000	17.6,30.3	39.6,53.6	64.0,77.1
\$30,000–<\$40,000	12.4,27.4	36.0,53.0	64.0,78.5
\$40,000–<\$60,000	15.0,24.7	38.1,49.7	63.7,74.8
\$60,000–<\$80,000	10.8,19.1	40.9,53.1	70.8,80.9
\$80,000–<\$110,000	10.6,18.9	33.9,45.0	72.4,82.2
\$110,000 or more	8.4,15.1	36.0,46.8	81.3,89.0
Cardholder status			
Cardholder	19.0,26.4	40.1,49.0	61.3,70.0
Non-cardholder	13.6,17.5	39.6,44.9	73.4,78.0
All persons	15.4,18.9	40.5,45.0	71.4,75.5

Table C19: 95% confidence intervals to estimates on Table 4.5: Number of visits and routine dental services by age, sex and reason for last visit (mean)

	Visits		Extraction(s)		Filling(s)		Scale and clean	
	Check-up	Problem	Check-up	Problem	Check-up	Problem	Check-up	Problem
Age group (years)								
18–24	1.77,2.22	2.78,3.83	0.13,0.49	0.40,1.08	0.23,0.44	1.00,1.83	0.76,0.97	0.55,0.91
25–44	1.77,2.18	2.35,2.92	0.04,0.12	0.49,0.88	0.39,0.64	1.00,1.54	1.08,1.24	0.56,0.72
45–64	1.85,2.07	2.76,3.17	0.07,0.18	0.34,0.55	0.40,0.57	1.12,1.41	1.13,1.26	0.70,0.82
65 or older	1.74,2.26	2.50,3.05	0.04,0.24	0.31,0.51	0.43,0.79	0.95,1.32	1.17,1.32	0.63,0.90
Sex								
Male	1.72,1.98	2.68,3.14	0.07,0.21	0.44,0.71	0.40,0.59	1.15,1.54	1.03,1.17	0.60,0.72
Female	1.94,2.22	2.61,2.97	0.10,0.21	0.41,0.63	0.39,0.56	1.04,1.32	1.09,1.20	0.70,0.84
All persons	1.88,2.08	2.70,3.00	0.10,0.19	0.46,0.63	0.42,0.54	1.14,1.38	1.08,1.17	0.67,0.76

Table C20: 95% confidence intervals to estimates on Table 4.6: Number of dental visits and services by income, cardholder status and reason for last visit (mean)

	Visits		Extraction(s)		Filling(s)		Scale and clean	
	Check-up	Problem	Check-up	Problem	Check-up	Problem	Check-up	Problem
Annual household income								
Less than \$20,000	1.65,2.64	2.37,3.14	0.04,0.17	0.52,1.09	0.34,0.98	0.86,1.79	0.86,1.22	0.38,0.60
\$20,000–<\$30,000	1.55,1.88	2.27,2.85	0.01,0.43	0.40,1.10	0.34,0.62	1.01,1.69	0.96,1.25	0.56,0.78
\$30,000–<\$40,000	1.59,2.09	2.19,3.20	0.01,0.10	0.24,0.89	0.18,0.49	0.91,2.12	0.96,1.17	0.55,0.83
\$40,000–<\$60,000	1.74,2.19	2.58,3.44	0.06,0.34	0.33,0.88	0.36,0.64	0.99,1.65	1.03,1.24	0.53,0.76
\$60,000–<\$80,000	1.70,1.98	2.50,3.17	0.03,0.13	0.33,0.69	0.41,0.80	0.93,1.39	1.04,1.28	0.64,0.86
\$80,000–<\$110,000	1.74,2.19	2.80,3.78	0.05,0.21	0.31,0.70	0.28,0.54	0.92,1.31	1.00,1.19	0.67,0.92
\$110,000 or more	1.86,2.34	2.40,2.97	0.07,0.33	0.17,0.48	0.31,0.56	0.98,1.47	1.16,1.33	0.78,0.99
Cardholder status								
Cardholder	1.84,2.34	2.54,3.06	0.07,0.32	0.47,0.88	0.46,0.78	1.04,1.58	1.00,1.21	0.52,0.71
Non-cardholder	1.85,2.06	2.69,3.04	0.09,0.18	0.41,0.59	0.39,0.52	1.11,1.37	1.08,1.18	0.70,0.81
All persons	1.88,2.08	2.70,3.00	0.10,0.19	0.46,0.63	0.42,0.54	1.14,1.38	1.08,1.17	0.67,0.76

Table C21: 95% confidence intervals to estimates on Table 4.7: Persons receiving dental services by age, sex and reason for last visit (per cent)

	Extraction(s)		Filling(s)		Scale and clean	
	Check-up	Problem	Check-up	Problem	Check-up	Problem
Age group (years)						
18–24	4.1,12.2	18.4,40.7	17.0,31.4	44.0,68.6	63.1,77.8	45.3,70.0
25–44	3.5,9.5	28.1,41.6	23.6,35.1	50.5,64.5	84.1,92.1	49.6,63.6
45–64	5.8,10.7	21.1,28.5	27.4,35.8	57.7,66.0	83.8,89.9	58.3,66.7
65 or older	4.7,12.2	22.0,32.3	28.9,40.3	51.3,63.0	85.8,93.3	53.6,65.1
Sex						
Male	5.1,10.1	25.7,35.0	26.5,36.6	54.3,64.1	79.6,87.3	52.0,61.9
Female	5.5,9.7	23.9,32.0	24.9,31.7	54.7,63.4	82.6,88.3	57.6,66.3
All persons	6.0,9.2	26.0,32.2	26.8,32.7	55.8,62.4	82.2,86.9	56.2,62.8

Table C22: 95% confidence intervals to estimates on Table 4.8: Persons receiving dental services by annual household income, cardholder status and reason for last visit (per cent)

	Extraction(s)		Filling(s)		Scale and clean	
	Check-up	Problem	Check-up	Problem	Check-up	Problem
Annual household income						
Less than \$20,000	3.5,16.5	34.2,53.1	24.4,46.0	38.6,57.6	64.5,87.5	33.5,52.1
\$20,000–<\$30,000	4.9,15.4	25.8,45.0	23.0,42.8	48.4,67.6	76.5,95.0	48.8,67.0
\$30,000–<\$40,000	0.0,7.4	21.3,44.4	13.9,36.3	49.0,70.9	81.3,95.3	46.7,68.5
\$40,000–<\$60,000	4.3,12.9	23.2,40.0	23.2,36.9	49.4,67.2	78.6,90.5	44.4,62.3
\$60,000–<\$80,000	2.5,9.9	18.7,34.0	27.4,43.7	53.6,70.0	80.1,91.9	54.4,70.9
\$80,000–<\$110,000	3.6,12.2	19.0,35.0	20.9,33.8	52.8,69.6	79.3,90.2	55.0,72.5
\$110,000 or more	4.7,12.0	10.9,23.7	21.1,35.1	55.1,71.1	88.3,95.6	66.5,81.7
Cardholder status						
Cardholder	5.7,13.2	28.2,39.6	28.5,41.4	46.6,58.7	77.4,88.3	44.9,57.0
Non-cardholder	5.4,9.0	23.7,30.9	25.3,31.9	57.6,65.3	82.3,87.5	58.8,66.6
All persons	6.0,9.2	26.0,32.2	26.8,32.7	55.8,62.4	82.2,86.9	56.2,62.8

Table C23: 95% confidence intervals to estimates on Table 4.9: Persons receiving additional dental services by age group and sex (per cent)

	Additional services	Treatment						
		X-ray	New denture	Root canal	Gum treatment	Ortho-dontics	Crown/bridge	Other treatment
Age group (years)								
18–24	52.8,66.3	44.1,57.7	0.0,0.3	1.7,7.2	0.0,3.5	7.8,15.7	2.1,8.0	0.6,3.7
25–44	52.3,61.5	46.0,55.3	0.0,1.0	4.2,8.3	2.1,5.9	0.2,2.0	6.1,11.3	2.8,7.5
45–64	59.2,65.1	50.9,57.1	2.7,5.4	6.6,9.9	4.3,7.3	0.2,1.1	10.1,14.1	4.9,7.8
65 or older	51.8,60.3	37.6,45.8	7.9,13.1	3.8,7.2	1.9,4.8	0.0,0.3	8.4,13.3	3.8,8.0
Sex								
Male	57.6,64.6	48.6,55.8	1.8,3.7	4.8,8.0	2.5,5.4	1.0,2.8	8.6,12.8	3.6,7.0
Female	54.4,60.3	46.3,52.2	2.6,4.4	5.4,8.2	3.2,5.6	1.7,3.7	7.2,10.4	3.8,6.6
All persons	56.8,61.3	48.3,52.9	2.5,3.8	5.5,7.6	3.3,5.1	1.7,3.0	8.4,11.0	4.2,6.3

Table C24: 95% confidence intervals to estimates on Table 4.10: Persons receiving additional dental services by income and cardholder status (per cent)

	Additional treatment	Treatment						
		X-ray	New denture	Root canal	Gum treatment	Orthodontics	Crown/bridge	Other treatment
Annual household income								
Less than \$20,000	53.9,67.6	43.8,58.2	4.8,11.6	3.2,9.6	2.2,7.8	0.0,1.2	4.4,13.8	1.5,4.9
\$20,000–<\$30,000	47.9,62.1	37.0,51.0	4.9,10.1	2.6,7.7	0.8,3.9	0.0,2.2	4.3,11.2	3.2,9.6
\$30,000–<\$40,000	55.7,72.1	43.6,60.7	2.7,9.6	5.1,15.7	2.5,14.6	0.0,5.1	4.6,12.0	2.2,11.3
\$40,000–<\$60,000	55.3,66.6	47.6,59.2	2.2,6.5	4.2,9.8	2.5,7.2	0.0,1.7	6.9,14.3	2.0,7.0
\$60,000–<\$80,000	48.6,60.9	38.7,50.8	0.4,3.6	3.9,9.9	3.1,9.5	0.6,4.0	6.1,13.1	1.6,8.0
\$80,000–<\$110,000	54.9,66.2	47.0,58.5	0.1,2.2	4.5,10.5	1.6,6.1	0.2,2.4	6.9,13.3	4.2,10.9
\$110,000 or more	54.8,65.4	48.7,59.5	0.1,1.0	3.3,7.1	1.6,4.5	2.6,7.0	7.8,14.1	3.0,7.8
Cardholder status								
Cardholder	54.4,63.2	44.5,53.5	5.6,9.8	3.6,6.9	2.8,6.8	0.5,3.3	4.7,8.2	3.0,6.2
Non-cardholder	56.5,61.8	48.4,53.7	1.3,2.4	5.7,8.2	3.0,5.1	1.7,3.3	9.0,12.2	4.1,6.7
All persons	56.8,61.3	48.3,52.9	2.5,3.8	5.5,7.6	3.3,5.1	1.7,3.0	8.4,11.0	4.2,6.3

Table C25: 95% confidence intervals to estimates on Table 4.11: Reasons for extraction(s) by cardholder status and type of practice visited at last dental visit (per cent)

	Cardholder public visit	Cardholder private visit	Non-cardholder private visit
Reason for extraction			
Decayed tooth	31.0,63.0	31.9,53.8	23.4,35.9
Cracked or fractured tooth	15.5,42.3	19.2,39.5	17.9,29.5
Broken down filling	12.2,36.6	6.3,17.2	9.2,17.2
Abscessed or infected tooth	12.3,35.1	23.5,45.1	17.1,29.9
Third molar extraction (wisdom teeth)	4.9,27.2	6.8,26.1	33.0,46.9
Loose tooth	2.4,14.9	2.5,11.4	4.6,13.4
Removed for crowding/orthodontics	0.0,0.0	0.0,10.4	2.7,8.7
Other reason	0.0,2.3	5.5,20.0	6.5,13.8

Table C26: 95% confidence intervals to estimates on Table 4.12: Persons attending for a dental problem and type of dental treatment received, by cardholder status, type of practice visited

	% who last visited for a dental problem	Filling(s)		Extraction(s)	
		%	Mean ^(a)	%	Mean ^(b)
Cardholder public visit	63.1,79.4	37.9,56.6	1.79,2.79	25.0,42.6	1.25,2.05
Cardholder private visit	41.5,51.6	38.5,48.6	1.80,2.41	14.6,22.0	1.54,2.58
Non-cardholder private visit	39.3,44.6	40.2,45.6	1.72,1.96	13.7,17.7	1.64,2.04
Problem					
Cardholder public visit		37.3,60.2	1.76,2.81	29.2,51.2	1.31,2.23
Cardholder private visit		48.9,62.7	1.98,2.86	24.1,36.6	1.40,2.42
Non-cardholder private visit		58.2,65.9	1.84,2.17	23.7,31.2	1.60,2.06
Check-up					
Cardholder public visit		27.4,59.7	1.09,3.49	4.7,31.2	0.98,1.04
Cardholder private visit		25.9,40.1	1.35,1.93	4.2,11.4	1.09,4.05
Non-cardholder private visit		25.8,32.5	1.43,1.74	5.4,9.1	1.44,2.29

Table C27: 95% confidence intervals to estimates on Table 4.13: Waiting time for cardholders who visited a public practice by reason for last visit (per cent)

	Waiting time					
	<1 month	1–<3 months	3–<6 months	6–<12 months	1–2 years	2+ years
Reason for last visit						
Check-up	0.0,0.0	8.9,48.5	0.2,4.0	5.3,26.6	13.3,42.8	20.9,58.9
Problem	0.4,4.9	14.8,38.8	3.0,18.4	4.7,24.7	12.8,42.7	18.6,44.1
All persons	0.3,3.6	15.6,36.2	2.4,13.8	6.0,21.3	15.1,38.5	22.1,43.9

Table C28: 95% confidence intervals to estimates on Table 5.1: Persons experiencing affordability and hardship in purchasing dental care by age and sex (per cent)

	Avoided or delayed visiting because of cost	Cost prevented recommended dental treatment	Dental visits in previous 12 months were a large financial burden	A lot of difficulty in paying \$150 dental bill
Age group (years)				
18–24	23.0,32.6	9.3,19.1	5.4,12.9	24.4,34.3
25–44	38.6,45.3	19.1,26.8	10.6,16.9	22.1,28.0
45–64	30.7,35.7	20.8,26.2	13.3,18.0	20.7,25.1
65 or older	18.9,24.6	8.5,13.8	9.4,14.8	28.1,34.8
Sex				
Male	28.2,33.3	15.8,21.4	8.2,12.5	18.1,22.6
Female	35.4,40.2	19.1,24.1	13.9,18.4	28.9,33.5
All persons	32.6,36.1	18.3,22.1	11.9,15.1	24.2,27.4

Table C29: 95% confidence intervals to estimates on Table 5.2: Persons experiencing affordability and hardship in purchasing dental care by annual household income and cardholder status (per cent)

	Avoided or delayed visiting because of cost	Cost prevented recommended dental treatment	Dental visits in previous 12 months were a large financial burden	A lot of difficulty in paying \$150 dental bill
Annual household income				
Less than \$20,000	39.0,49.3	25.0,39.6	14.2,26.2	51.0,61.2
\$20,000–<\$30,000	35.5,46.3	19.1,31.9	12.3,22.8	43.5,54.3
\$30,000–<\$40,000	31.5,45.1	15.0,30.6	14.2,29.0	28.0,41.7
\$40,000–<\$60,000	37.0,46.2	19.3,29.7	13.3,23.3	23.5,32.0
\$60,000–<\$80,000	30.9,40.4	17.1,27.5	8.8,16.9	15.5,23.6
\$80,000 or more	24.6,30.5	12.4,17.6	7.3,11.5	9.4,13.7
Cardholder status				
Cardholder	35.4,42.1	22.1,30.6	13.9,20.7	45.4,52.2
Non-cardholder	30.9,35.0	16.4,20.5	10.7,14.2	17.2,20.6
All persons	32.6,36.1	18.3,22.1	11.9,15.1	24.2,27.4

Table C30: 95% confidence intervals to estimates on Table 5.3: Persons experiencing difficulty with affordability and hardship in purchasing dental care by age group, sex and cardholder status (per cent)

	Avoided or delayed visiting because of cost		Cost prevented recommended dental treatment		Dental visits in previous 12 months were a large financial burden	
	Cardholder	Non-cardholder	Cardholder	Non-cardholder	Cardholder	Non-cardholder
Age group (years)						
18–24	18.5,42.4	22.0,32.3	3.9,29.9	8.3,18.5	0.0,14.0	5.5,14.2
25–44	49.5,67.6	35.9,43.1	33.9,60.7	15.8,23.4	13.8,37.0	8.9,15.3
45–64	41.4,53.5	27.8,33.2	30.3,46.0	18.3,24.0	16.5,30.4	11.9,16.8
65 or older	22.8,30.0	5.7,13.1	10.4,17.6	2.4,7.9	10.4,17.6	4.4,11.5
Sex						
Male	27.9,37.8	27.3,33.2	19.2,32.8	13.8,19.8	9.0,19.2	7.1,11.8
Female	38.7,47.6	33.1,38.7	21.1,32.1	17.2,22.8	15.0,24.1	12.5,17.6
All persons	35.4,42.1	30.9,35.0	22.1,30.6	16.4,20.5	13.9,20.7	10.7,14.2

Table C31: 95% confidence intervals to estimates on Table 5.4: Persons who would have a lot of difficulty in paying a \$150 dental bill by age group, sex and cardholder status (per cent)

	\$150 dental bill	
	Cardholder	Non-cardholder
Age group (years)		
18–24	32.6,58.0	20.1,30.4
25–44	54.9,72.5	16.3,22.2
45–64	50.6,62.3	14.3,18.7
65 or older	33.9,42.1	9.3,18.0
Sex		
Male	37.5,48.1	12.4,17.1
Female	48.9,57.7	20.8,25.8
All persons	45.4,52.2	17.2,20.6

Table C32: 95% confidence intervals for estimate on Table 5.5: Persons experiencing affordability and hardship in purchasing dental care by annual household income and cardholder status (per cent)

	Avoided or delayed visiting because of cost		Cost prevented recommended dental treatment		Dental visits in previous 12 months were a large financial burden	
	Cardholder	Non-cardholder	Cardholder	Non-cardholder	Cardholder	Non-cardholder
Annual household income						
Less than \$20,000	39.4,50.2	27.2,55.9	26.0,41.5	6.6,45.9	15.1,27.8	0.0,31.5
\$20,000–<\$30,000	33.3,45.6	34.0,55.6	20.9,37.3	9.7,27.8	11.6,23.8	7.3,27.3
\$30,000–<\$40,000	30.4,51.0	28.0,45.8	13.1,40.3	11.4,30.3	15.0,41.7	9.6,26.8
\$40,000–<\$60,000	15.7,38.1	38.8,48.7	7.6,35.0	19.4,30.7	3.2,28.4	13.3,24.2
\$60,000–<\$80,000	33.0,73.4	29.5,39.2	6.3,53.6	16.5,27.1	0.0,22.9	8.7,17.2
\$80,000 or more	6.6,43.2	24.6,30.6	0.0,20.9	12.4,17.8	0.0,15.6	7.3,11.6
All persons	35.4,42.1	30.9,35.0	22.1,30.6	16.4,20.5	13.9,20.7	10.7,14.2

Table C33: 95% confidence intervals to estimates on Table 5.6: Persons who would have a lot of difficulty in paying a dental bill by annual household income and cardholder status (per cent)

	\$150 dental bill	
	Cardholder	Non-cardholder
Annual household income		
Less than \$20,000	55.4,65.7	22.4,51.3
\$20,000–<\$30,000	46.4,58.7	29.0,49.8
\$30,000–<\$40,000	29.1,50.2	23.5,40.9
\$40,000–<\$60,000	16.4,41.8	23.0,32.1
\$60,000–<\$80,000	15.4,54.7	14.4,22.6
\$80,000 or more	8.3,40.8	9.0,13.4
All persons	45.4,52.2	17.2,20.6

Table C34: 95% confidence intervals to estimates on Table 5.7: Persons experiencing difficulty with affordability and hardship in purchasing dental care by dental visiting patterns and cardholder status (per cent)

	Avoided or delayed visiting because of cost		Cost prevented recommended dental treatment		Dental visits in previous 12 months were a large financial burden	
	Cardholder	Non-cardholder	Cardholder	Non-cardholder	Cardholder	Non-cardholder
Time since last visit						
Less than 12 months	27.9,36.4	23.1,27.9	22.1,30.6	16.4,20.5	13.9,20.7	10.7,14.2
1–<2 years	30.4,45.1	37.5,47.6	..	..	..	..
2–<5 years	43.7,62.4	37.6,49.9	..	..	..	..
5 years or more	44.8,65.0	40.5,55.4	..	..	..	..
Usual reason for visit						
Check-up	18.9,28.2	17.3,21.8	9.8,20.0	9.8,13.8	7.9,15.4	7.3,11.0
Problem	44.2,53.1	48.0,54.6	32.0,45.3	30.4,39.8	17.7,29.1	16.6,24.4
Number of dental visits in previous 12 months						
None	42.1,52.5	40.7,47.7	..	..	..	..
One	27.5,41.3	22.9,31.0	18.2,31.4	12.7,19.0	7.4,16.8	5.4,10.6
Two	17.6,32.0	14.8,22.0	16.0,32.4	11.0,17.3	7.1,17.8	5.2,9.8
Three or more	29.1,44.9	27.9,37.3	22.9,38.1	23.0,31.7	21.2,35.9	20.3,28.5
All persons	35.4,42.1	30.9,35.0	22.1,30.6	16.4,20.5	13.9,20.8	10.7,14.2

Table C35: 95% confidence intervals to estimates on Table 5.8: Persons who would have a lot of difficulty in paying a \$150 dental bill by dental visiting patterns and cardholder status (per cent)

	\$150 dental bill	
	Cardholder	Non-cardholder
Time since last visit		
Less than 12 months	39.1,48.3	13.1,17.0
1–<2 years	44.9,60.0	21.3,30.5
2–<5 years	47.8,66.9	17.7,27.7
5 years or more	47.6,67.9	17.8,31.3
Usual reason for visit		
Check-up	30.2,40.9	12.2,16.1
Problem	53.0,61.8	22.3,28.2
Number of dental visits in previous 12 months		
None	50.3,60.6	21.6,27.7
One	36.3,50.7	12.5,19.5
Two	32.6,50.1	9.3,15.3
Three or more	38.4,54.6	13.4,21.0
All persons	45.4,52.2	17.2,20.6

Table C36: 95% confidence intervals to estimates on Table 5.9: Dental visiting patterns by affordability and hardship associated with paying for dental care (per cent)

	Time since last visit (years)				Number of dental visits in previous 12 months				Usual reason for visit	
	Less than 1	1-<2	2-<5	5 or more	None	One	Two	Three or more	Check-up	Problem
Avoided or delayed due to cost										
Yes	43.5, 49.9	19.6, 25.1	13.7, 18.4	12.8, 17.8	50.1, 56.5	16.1, 21.1	9.7, 13.8	14.4, 19.1	28.4, 34.4	62.6, 66.7
No	63.8, 67.9	14.9, 18.0	8.6, 11.1	6.8, 9.2	32.1, 36.2	22.3,2 6.0	22.9, 26.7	15.6, 18.7	65.6, 71.6	33.3, 37.4
Cost prevented recommended treatment										
Yes	..	..	..	..	..	28.3, 38.0	22.8, 32.3	34.8, 44.8	35.8, 46.0	54.0, 64.2
No	..	..	..	..	..	36.0, 41.0	33.3, 38.3	23.6, 28.0	71.3, 75.7	24.3, 28.7
Dental visits in previous 12 months were a large financial burden^(b)										
Yes	..	..	..	..	..	19.4, 30.7	17.0, 27.0	47.6, 59.9	22.5, 33.3	66.7, 77.5
No	..	..	..	..	..	36.9, 41.8	33.7, 38.5	22.6, 26.8	57.6, 62.4	37.6, 42.4

Table C37: 95% confidence intervals to estimates on Table 5.10: Dental visiting patterns by amount of difficulty in paying a \$150 dental bill (per cent)

	Time since last visit (years)				Number of dental visits in previous 12 months				Usual reason for visit	
	Less than 1	1-<2	2-<5	5 or more	None	One	Two	Three or more	Check-up	Problem
Difficulty paying a \$150 dental bill										
A lot	45.4, 52.8	19.8, 26.0	12.3, 17.0	11.2, 16.6	47.2, 54.6	16.1, 22.0	11.9, 17.1	13.5, 18.7	33.2, 40.3	50.8, 61.2
Not a lot	60.8, 64.8	15.4, 18.5	9.8, 12.5	8.0, 10.6	35.2, 39.2	21.6, 25.0	20.6, 24.0	15.9, 18.9	59.7, 66.8	39.0, 43.1

Table C38: 95% confidence intervals to estimates on Table 5.11: Dental services received by affordability and hardship associated with paying for dental care

	% of persons who last visited for a problem	Filling(s)		Extraction(s)		
		%	Mean	%	Mean	
Avoided or delayed visiting because of cost						
Yes	61.7,70.5	47.6,56.7	2.02,2.51	23.7,31.9	1.69,2.27	
No	33.8,38.8	36.7,41.9	1.66,1.89	11.4,14.9	1.58,2.06	
Cost prevented recommended treatment						
Yes	62.7,72.6	49.2,59.6	1.99,2.53	23.9,33.1	1.56,2.25	
No	36.0,40.9	37.3,42.3	1.71,1.94	12.5,16.0	1.66,2.09	
Financial burden of dental visits in previous 12 months						
A large	67.0,77.8	49.4,61.7	2.11,2.75	26.3,37.7	1.94,2.74	
None / hardly any / a little	37.6,42.4	38.3,43.2	1.72,1.95	13.0,16.6	1.54,1.94	
Difficulty in paying a \$150 dental bill						
A lot	50.9,61.3	41.5,52.0	1.96,2.59	19.4,28.1	1.44,2.06	
None / hardly any / a little	38.7,43.7	39.2,44.3	1.72,1.94	13.5,17.2	1.72,2.17	
All persons	42.1,46.6	40.5,45.0	1.82,2.05	15.4,18.9	1.70,2.07	

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