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Oral health of health cardholders attending for dental care in the private and public sectors

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Abbreviations

ABS	Australian Bureau of Statistics
AHMAC	Australian Health Ministers' Advisory Council
AIHW	Australian Institute of Health and Welfare
CATI	Computer-assisted telephone interview
CEJ	Cemento-enamel junction
DMFT	Decayed, missing and filled (permanent) teeth
DSRU	Dental Statistics and Research Unit
EWP	Electronic white pages
NHANES	National Health and Nutrition Examination Survey
NHS	National Health Strategy
NSAOH	National Survey of Adult Oral Health

Symbols

%	per cent
n	number

Summary

Oral health of cardholders: number of teeth

Among persons visiting for a check-up, there was little variation in the number of teeth between those who attended in the private sector compared with those who attended publicly. However, among persons visiting for a dental problem the number of teeth was higher for those who attended privately compared with publicly in the 65 years or older age group.

Oral health of cardholders: dental caries

Among persons visiting for a check-up, no significant differences were observed in caries experience between those who attended privately compared with those in the public sector. However, among persons visiting for a dental problem, those attending privately compared with publicly had lower numbers of decayed teeth overall, lower numbers of missing teeth in the 65 years or older age group, and higher numbers of filled teeth in the 65 years or older age group and for all age groups combined.

Oral health of cardholders: periodontal disease

Periodontal disease, as assessed by the presence of 4+ mm periodontal pockets, did not vary significantly between persons who attended privately compared with publicly for those visiting for either a check-up or a dental problem.

Dental services provided to cardholders

The percentage of persons receiving fillings did not vary significantly between those who attended privately compared with publicly for those visiting for either a check-up or a dental problem. However, the percentage of persons who received extractions tended to be higher for those who attended publicly compared with privately, but this was only significant among those aged 35–44 years who visited for a check-up.

Conclusions

Where differences were observed by place of last dental visit, the differences consistently involved disadvantage in terms of either oral health status or service patterns for those who visited the public sector compared to the private sector. However, the majority of comparisons involved estimates with overlapping confidence intervals, which were not considered to be statistically significant. This may be indicative of a general level of disadvantage that may be common to cardholders regardless of the place of their last dental visit.

1 Introduction

Among people on low incomes, health cardholders are thought to be particularly at risk of oral disease (AIHW Dental Statistics and Research Unit 1993). Patients eligible for public dental care are primarily holders of government entitlement cards, such as aged pensioners and the unemployed.

In 1992 the National Health Strategy identified inequalities in oral health and access to dental services as a major public health issue in Australia (National Health Strategy 1992). In October 1999 the Australian Health Ministers' Advisory Council (AHMAC) recommended that a report be prepared on 'The burden, trends and distribution of oral health problems in Australia and the trends in clinical approaches to dealing with those problems'. The report concluded that oral diseases and disorders remain prevalent and are a substantial burden on the Australian population (AHMAC 2001). Australia's National Oral Health Plan was subsequently developed, with the purpose of improving oral health status and reducing the burden of oral disease (National Advisory Committee on Oral Health 2004).

Public dental services

All Australian states and territories provide public dental services, largely by publicly employed dentists in government clinics at minimal or no cost to the patient. The clinics are generally located in capital cities and major regional centres where they are often associated with district hospitals or health centres. These clinics provide access to a restricted level of care and generally do not include all aspects of dental treatment. Government-funded dental care is not accessible to many people in the community due to limited resources. There are a large number of people waiting for general dental care at public dental services. While waiting times for emergency dental care are short, waiting times for general dental care can be lengthy (for example, estimated to be between 10 and 54 months in 2000). The time that people spend waiting for general dental care indicates that there is inadequate provision of services to meet the expectations of even the minority of people who seek care from public dental services (AHMAC 2001).

Information on adult public dental patients

Earlier reports on adult public dental patients in Australia documented their oral health status (Brennan, Spencer & Slade 2000; 2001); subsequent reports (Brennan & Spencer 2004a; 2004b) indicated a deterioration in this status. However, the previous were based on data collected from public patients through their attendance at public dental clinics. The information available was captured by the public dentist attending to the patient's clinical problems. The 2004–06 National Survey of Adult Oral Health (NSAOH) provided the opportunity to compare the oral health of persons on the basis of their most recent dental visit (private or public) using standardised dental examiners through a national population-based oral health survey.

2 Methods

This chapter outlines the methodology used in the 2004–2006 NSAOH in terms of sampling and data collection, analysis and weighting, and variables collected. Further details of the methods used have been published elsewhere (Slade et al. 2007).

Sampling and data collection

The 2004–06 NSAOH involved a three-stage, stratified clustered sampling design to select a sample of Australians aged 15 years or older from households with listed telephone numbers in an electronic white pages (EWP) database (Slade et al. 2007). From this sampling frame 15 strata were selected, with population proportional to size selection. The strata comprised metropolitan and non-metropolitan areas of seven states/territories and the single stratum of the Australian Capital Territory. Postcode comprised the primary sampling unit, with household being the secondary sampling unit. Postcodes represented the geographic clustering in the design and were selected with probability proportional to size, where size was defined as the number of households listed in the EWP database in each postcode. The second stage of sampling selected a systematic sample of households listed in the EWP database for each sampled postcode. Following elimination of non-residential phone numbers identified during initial contact by telephone interviewers, households per metropolitan stratum and 40 households per non-metropolitan stratum were selected. Each household in the sample was approached to participate in a computer assisted telephone interview (CATI). The final stage of sampling entailed the random selection of one person aged 15 years or older per household, followed by an oral epidemiological examination and a mailed questionnaire.

Approximately 10 days prior to telephoning each sampled household, a primary approach letter explaining the purpose of the survey was mailed to the address that accompanied each sampled telephone number. On each occasion when interviewers dialled a sampled telephone number, a record was made on the computer system. In the CATI, interviewers read questions from a computer screen and recorded answers directly onto the computer. The interview comprised 79 questions, with skip sequences built into the CATI computer system so that questions flowed without intervention from the interviewers. Each sampled telephone number was called up to six times at varying times of day and evening, and on different days of the week. Where there was no answer after six calls, the number was abandoned and recorded as a 'non-contact'. When a sampled person was identified up to six additional calls were made in an attempt to contact them. If the target person did not speak English an attempt was made to conduct a proxy interview with a resident of the household who spoke English, and in some instances interviews were conducted in foreign languages. People who reported having some or all of their own natural teeth were invited to attend an examination, after which they were sent a mailed self-complete questionnaire.

The examination was conducted under standardised clinical conditions by one of 30 trained and calibrated dentists. Two light sources were used throughout: an intra-oral battery-operated mirror light and a standard dental clinical halogen light. No radiographs were taken. All teeth present were assessed and categorised using visual criteria (no sharp explorer was used). The presence of cavitated carious lesions, restorations because of decay and teeth missing because of decay were recorded. An electronic copy of the details of the examination protocol can be viewed at: http://www.arcpoh.adelaide.edu.au/project/distribution/nsaoh_pdf%20files/NSAOH_ExamProtocol_v8.pdf.

Analysis and weighting

Analysis was restricted to dentate persons aged 15 years or older, who were health cardholders and had made a dental visit within the last year. Data were weighted by state/territory, metropolitan/non-metropolitan location, age and sex. To account for design effects associated with the complex sample design, data were analysed using survey procedures that adjusted for strata and primary sampling units (StataCorp 1999).

Comparison of private and public sector patients was made by evaluating whether the 95% confidence intervals around the estimates of oral health and service provision were overlapping. All point estimates and their 95% confidence intervals are listed in Appendix A.

Data items

In the first stage of data collection respondents supplied information during a CATI on variables such as self-reported health status, use of dental services including self-reported receipt of services, demographics and socioeconomic status. The explanatory variables consisted of place of last visit, reason for last visit and age. At the examination clinical oral status was collected from dentate people by dentists trained in standard survey procedures (Slade et al. 2007), with number of teeth, caries experience and periodontal status comprising the dependent variables in this analysis. Further information, such as psychosocial variables, was collected later through a mailed questionnaire but not used in this analysis. The research was approved by the Human Research Ethics Committee of The University of Adelaide.

Number of teeth

For people aged less than 45 years, examiners distinguished between missing teeth that had been extracted due to decay or periodontal disease and teeth that were absent for any other reason (that is, congenitally missing, unerupted or extracted for orthodontics, trauma or impaction). For people aged 45 years or older, no such distinction was made, so that an extracted or otherwise absent tooth was recorded as missing. Dental implants, root fragments and deciduous teeth were coded separately and not counted as missing or absent teeth.

Caries experience

All teeth present were subdivided into five tooth surfaces: mesial, buccal, distal, lingual, and either occlusal (for premolars or molars) or incisal (for incisors and canines). Each coronal surface was assessed and categorised using visual criteria (no explorer was used) and one of the following codes was assigned.

- decay: cavitation of enamel or dentinal involvement or both are present
- recurrent caries: visible caries that is contiguous with a restoration
- filled unsatisfactorily: a filling placed for any reason in a surface that requires replacement but that has none of the above conditions
- filling to treat decay: a filling placed to treat decay in a surface that had none of the above conditions
- filling for reasons other than decay: a filling placed in a surface that has none of the above conditions (incisors and canines only)
- fissure sealant: placed in a surface where none of the above conditions were found
- sound: when none of the above conditions was found.

In this report overall caries experience is reported using the DMFT index and the components of decayed, missing and filled teeth respectively. These measures are reported as the mean number of teeth affected.

Periodontal status

The assessment of periodontal tissue destruction was based on methods used in the US National Health and Nutrition Examination Survey (NHANES 2005). Assessments were made of probing pocket depth and gingival recession, both recorded in millimetres using a periodontal probe that had 2 mm markings. Measurements were made at the mesio-buccal, mid-buccal and disto-buccal aspects of all teeth present, except for third molars. All fractional millimetre measurements were rounded down to the nearest whole millimetre before calling the number. For recession, the cemento-enamel junction (CEJ) was identified or its position was estimated (for example, if a filling obscured its position), and the distance from the CEJ to the free gingival margin was recorded in millimetres. When the CEJ was subgingival the number called was negative; otherwise it was positive. For probing pocket depth, the distance from the free gingival margin to the bottom of the periodontal crevice/pocket was called.

For the purpose of this report periodontal status was reported using the presence or absence of periodontal pockets of 4 mm or more in depth. This is consistent with periodontal measures previously reported for NSAOH (Slade et al. 2007), where the depth of the pocket in millimetres measured using a periodontal probe was taken as an indication of the severity of the destructive process of periodontal disease.

Service provision

During the interview persons who had made a recent dental visit in the last year were asked about whether they had received specific dental services at that visit. For the purpose of this report the provision of fillings and extractions were each classified as either received or not received over the reference period of the last year.

Visit type

During the interview persons were asked about the period of time since their last dental visit and details in relation to that last visit. For the purpose of this report the place of last dental visit was classified as either private sector or public sector, and the reason for the last dental visit was classified as either a check-up visit or a visit for a dental problem.

Eligibility for public dental care

Most people who receive state or territory public dental care are deemed to be eligible for those services based on a means test administered by Centrelink, an agency of the Australian Government's Family Assistance Office. The means test assesses individuals based on their household income, assets, family composition and other criteria that indicate disadvantage. For this survey eligibility for public dental care was based on responses to three questions in the interview. People were first asked '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?' Those who responded 'yes' were then read a series of six concession card types and asked to indicate if they were covered by each one. People were classified as eligible for public dental care if they responded 'yes' to the first question and reported that they were covered either by a pensioner concession card, health care card or both. They were classified as ineligible if they responded 'no' to the first question, or if they responded 'yes' to the first question but 'no' to both questions regarding pensioner concession card and health care card. Twenty-one interviewees replied 'don't know' to the first question and they were excluded from estimates for the two subgroups.

3 Response

This chapter outlines the response details of the study both for the overall study and among health cardholders that had made a dental visit within the last year.

Overall response

In the NSAOH a total of n=14,123 adults responded to the CATI (49% response rate) and n=5,505 were examined (44% of interviewed people who were invited to the examination).

Response among health cardholders that had made a dental visit within the last year

Unweighted cell numbers by type of visit and place of last dental visit are presented in Table 1 for health cardholders that had made a dental visit within the last year. A total of n=397 persons last made a check-up visit and n=538 persons last visited for a dental problem. In general there were higher numbers of persons in the older age groups regardless of type of last dental visit.

For persons who had last visited for a check-up the majority had made a visit in the private sector. As a result, there were relatively small cell sizes for those who last made a public sector visit for a check-up, particularly in the younger age groups. A similar distribution of responses was observed for those who last visited for a dental problem. However, the overall sample yield was higher and the distribution less skewed by place of last visit; this resulted in higher cell numbers for younger persons who last visited the public sector for a dental problem compared with those who last visited for a check-up. All subsequent findings are presented using weighted estimates, but the smaller cell sizes for younger persons, particularly those who last visited in the public sector for a check-up visit, will limit the precision of these estimates. This may be manifested in wider confidence intervals around the estimates.

Table 1: Response (unweighted cell numbers) by type of visit, and place of visit and age, for health cardholders that had made a dental visit within the last year

	Check-up visits			Visits for dental problems		
	Private	Public	All	Private	Public	All
Age group years	n	n	n	n	n	n
15–34	31	7	38	24	25	49
35–44	35	10	45	34	32	66
45–64	104	24	128	99	82	181
65+	154	32	186	171	71	242
All	324	73	397	328	210	538

4 Oral health status of patients

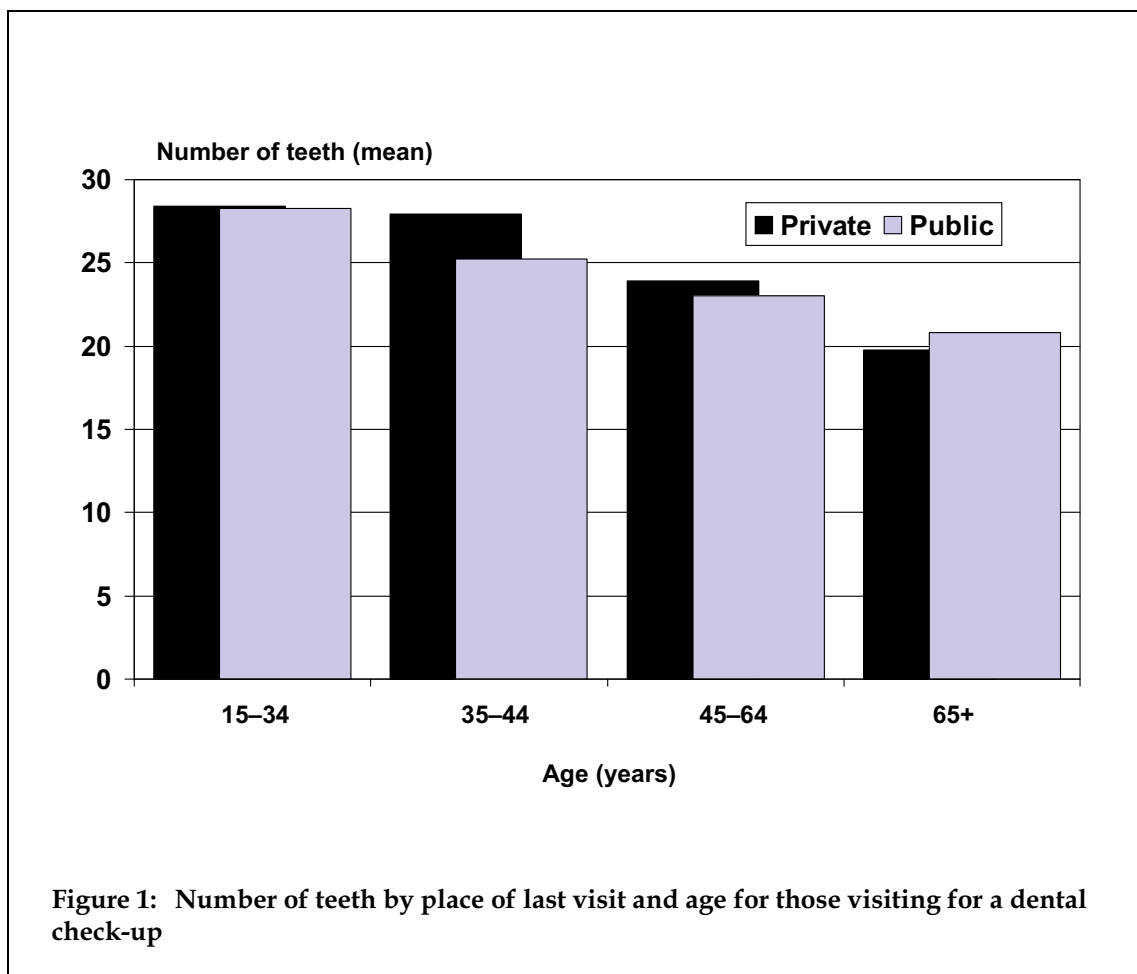
In this chapter findings are presented on oral health status by number of teeth, caries experience and periodontal status. These findings are presented by age and place of last visit and by reason for last visit.

Number of teeth

In this section findings are presented on number of teeth for both check-up visits and visits made for dental problems.

Check-up visits

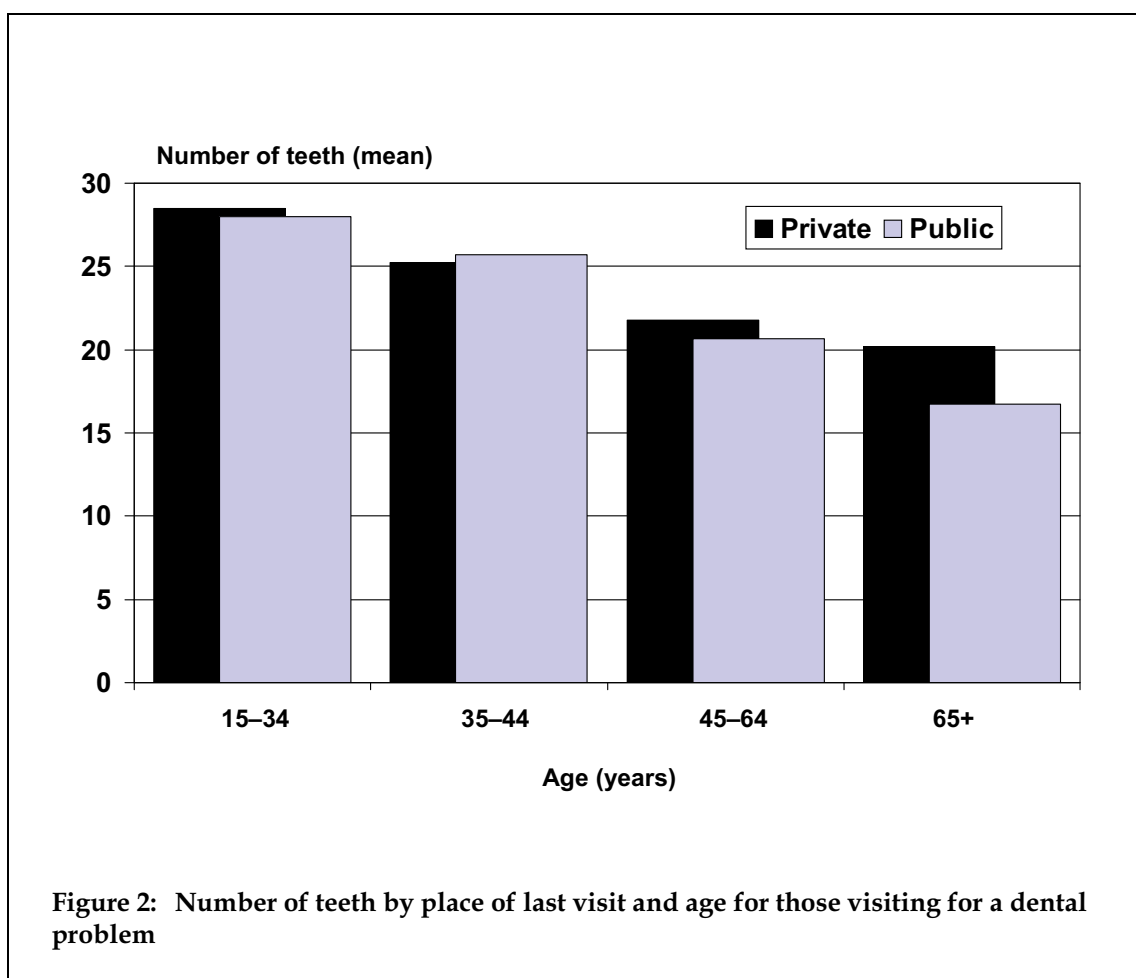
Numbers of teeth by age and place of last visit are presented in Figure 1 for those who last visited for a check-up. The number of teeth tended to decrease across successively older age groups, being highest among the youngest age group and lowest among the oldest age group, for both private and public sector patients.



There was little variation in the number of teeth by place of last dental visit within any of the age groups.

Visits for a dental problem

Numbers of teeth by age and place of last visit are presented in Figure 2 for those who last visited for a dental problem. The number of teeth showed a similar pattern by age as observed for those who last visited for a check-up, being highest among the youngest age group and lowest among the oldest age group, for both private and public sector patients.



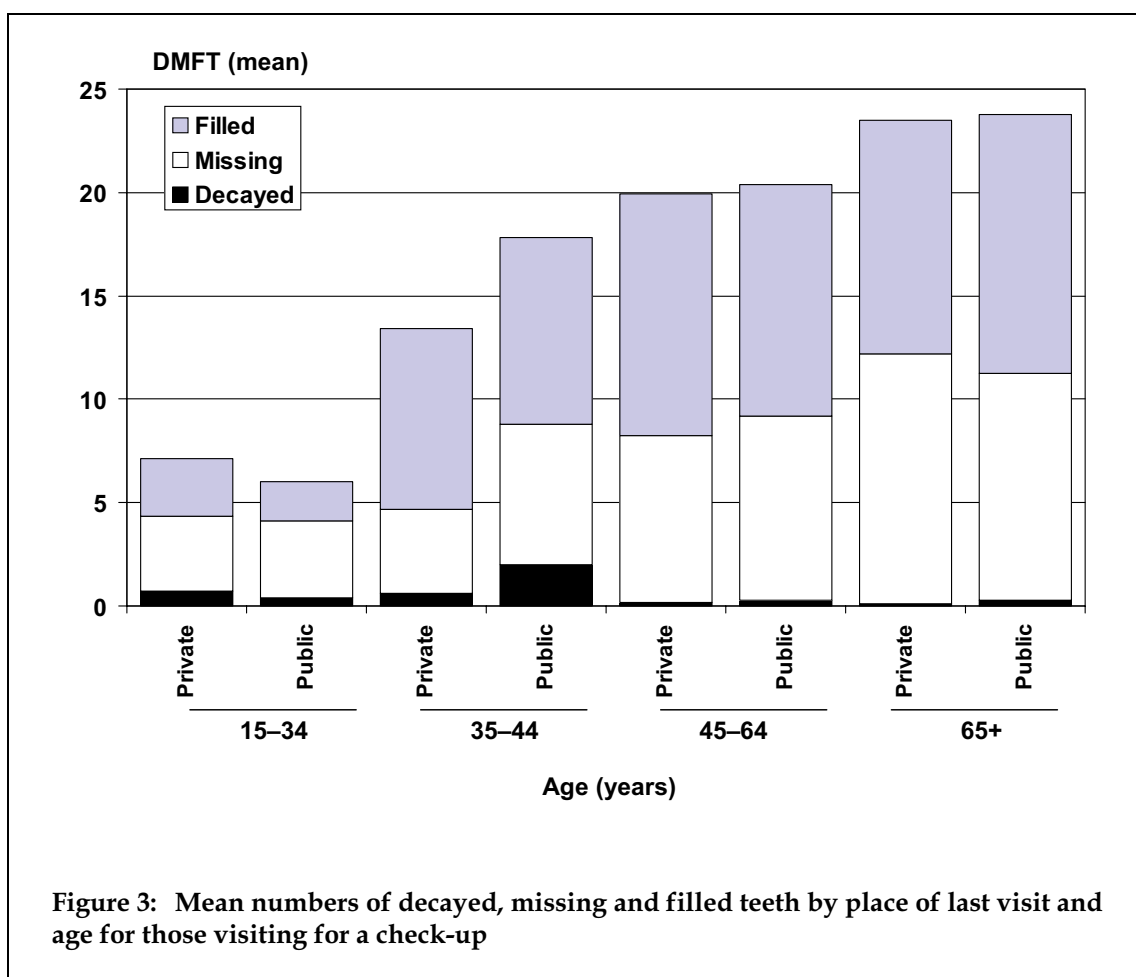
Comparison of the number of teeth by place of last visit showed that persons who last visited either privately or publicly had similar numbers of teeth within each of the three youngest age groups (for those aged 15-34 to 45-64 years). However, in the oldest age group the number of teeth varied by place of last dental visit, being higher among those who last made a private dental visit compared with those who last made a public dental visit.

Caries experience

In this section findings are presented on the mean number of decayed, missing and filled teeth as well as the overall DMFT index for both check-up visits and visits made for a dental problem.

Check-up visits

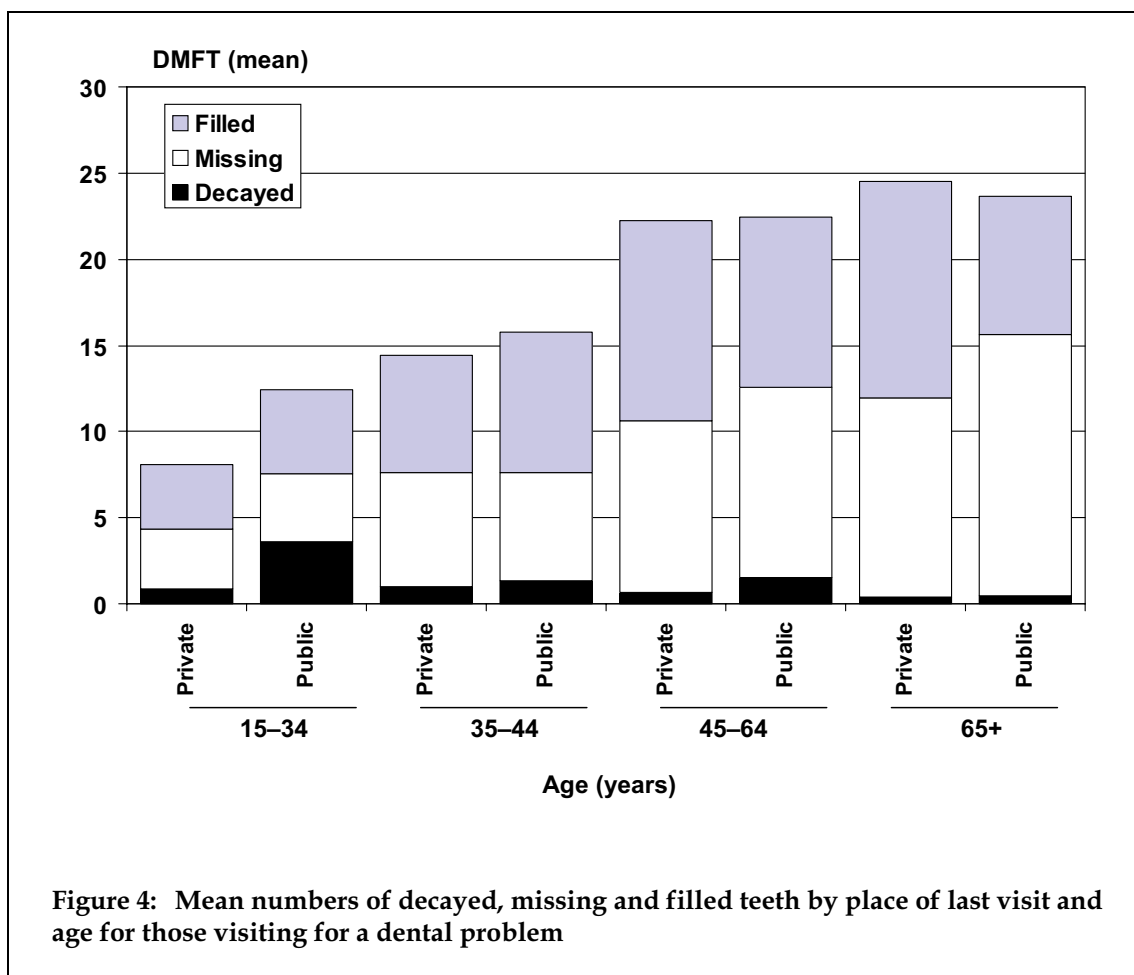
The mean number of decayed, missing and filled teeth is presented by age and place of last dental visit in Figure 3 for those who last visited for a check-up. Decayed teeth were a small component of overall caries experience and showed little variation by age. In contrast, missing teeth and filled teeth were major components of caries experience and varied across age groups. Missing teeth and the overall DMFT index score tended to increase across successively older age groups, while numbers of filled teeth tended to increase across age groups up to that of 45–64 years.



While numbers of decayed teeth and overall DMFT appeared to vary by place of last visit within the 35–44 years age group, the large confidence intervals around the estimates indicated that these differences were not statistically significant. The numbers of both missing and filled teeth showed little evidence of variation by place of last dental visit within any of the age groups.

Visits for a dental problem

The mean number of decayed, missing and filled teeth is presented by age and place of last dental visit in Figure 4 for those who last visited for a dental problem. The number of decayed teeth tended to be higher among younger compared with older persons. In contrast, the number of missing teeth and overall DMFT tended to increase across successively older age groups, while the number of filled teeth tended to increase across age groups up to that of 45–64 years.



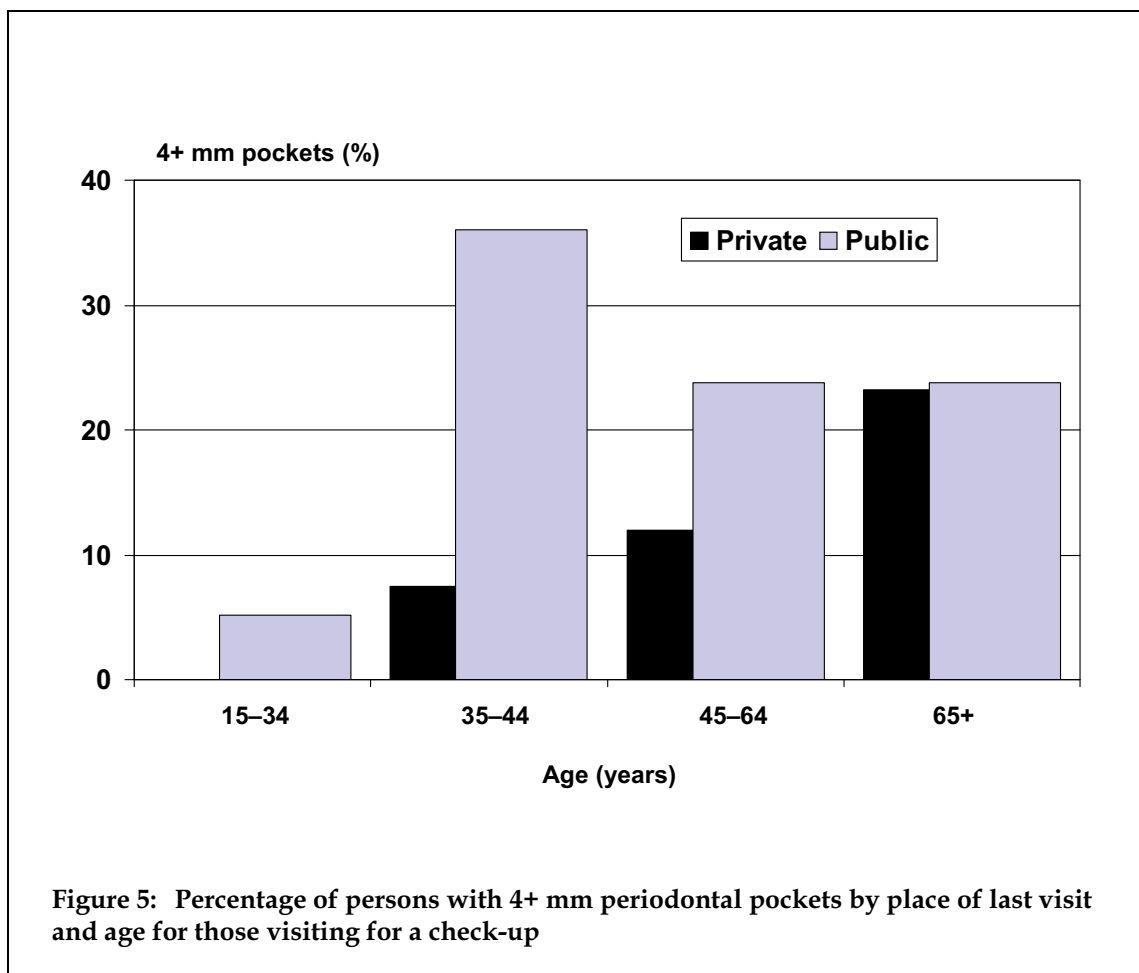
While the overall number of decayed teeth was higher for those who last visited in the public sector compared with the private sector, the age-specific estimates overlapped in their confidence intervals within each age group. Numbers of missing teeth were higher for those who last visited in the public sector compared to those who last visited in the private sector within the age group 65 years or older. The numbers of filled teeth were lower for those who last visited in the public sector compared with the private sector within the same age group. Mean DMFT did not vary by place of last dental visit within any of the age groups.

Periodontal disease

In this section findings are presented on the prevalence of periodontal pockets of 4 mm or more for both check-up visits and visits made for a dental problem.

Check-up visits

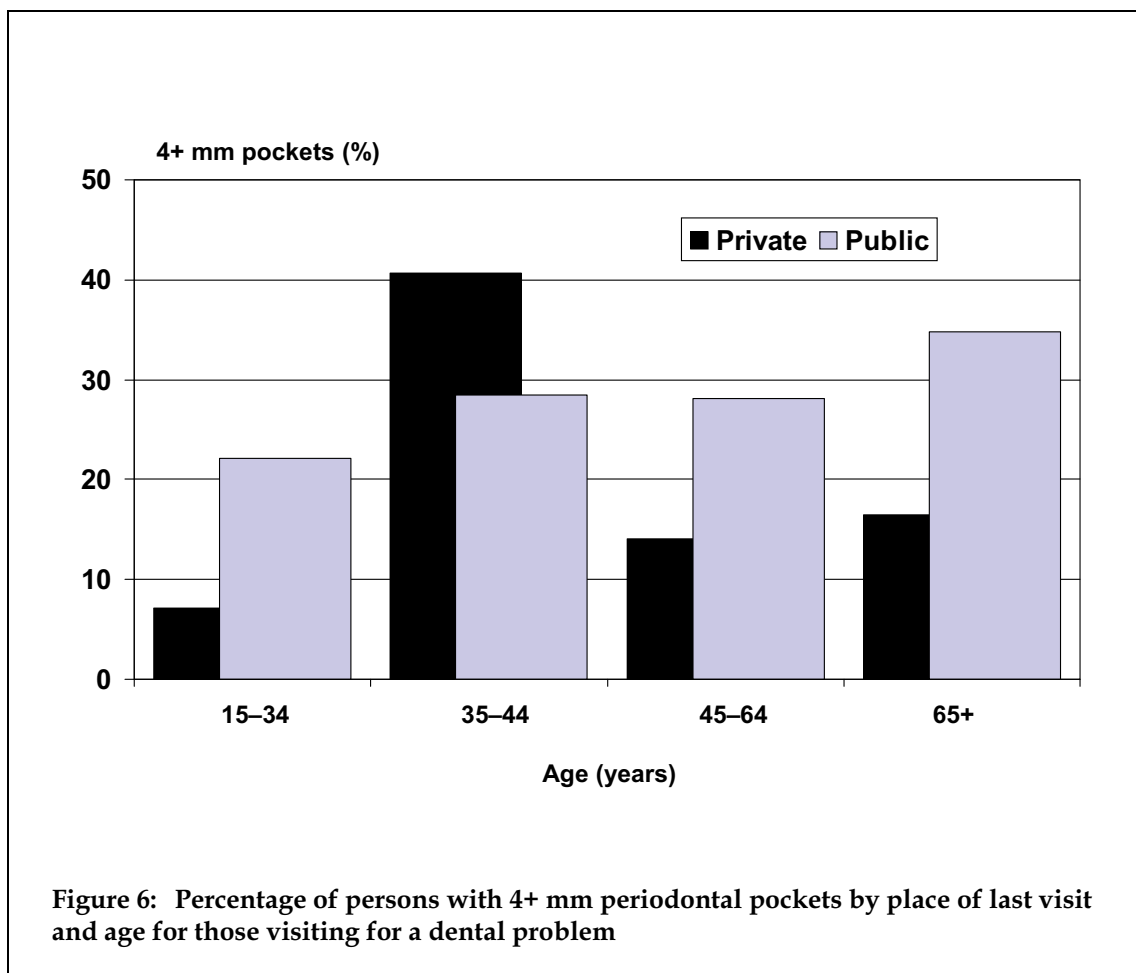
The percentage of persons with periodontal pockets of 4 mm or more is presented by age and place of last dental visit in Figure 5 for those who last visited for a check-up. In general, there was a trend for the percentage of persons with periodontal pockets of 4 mm or more to increase across successively older age groups. The exception was for persons who last made a public sector visit in the 35–44 years age group. However, the confidence intervals around this estimate were large, reflecting the relatively low numbers of persons in this cell.



With the exception of the oldest age group, the percentage of persons with periodontal pockets of 4 mm or more who last made a public sector dental visit tended to be higher compared with those who last made a private sector visit, but the confidence intervals around these estimates overlapped.

Visits for a dental problem

The percentage of persons with periodontal pockets of 4 mm or more is presented by age and place of last dental visit in Figure 6 for those who last visited for a dental problem. There was no systematic variation in the prevalence of periodontal pockets of 4 mm or more by age.



The percentage of persons with periodontal pockets of 4 mm or more tended to be higher for those who last made a dental visit in the public sector compared with the private sector with the exception of those aged 35-44 years. However, the confidence intervals around the estimates by place of last dental visit overlapped for all age groups.

5 Service provision

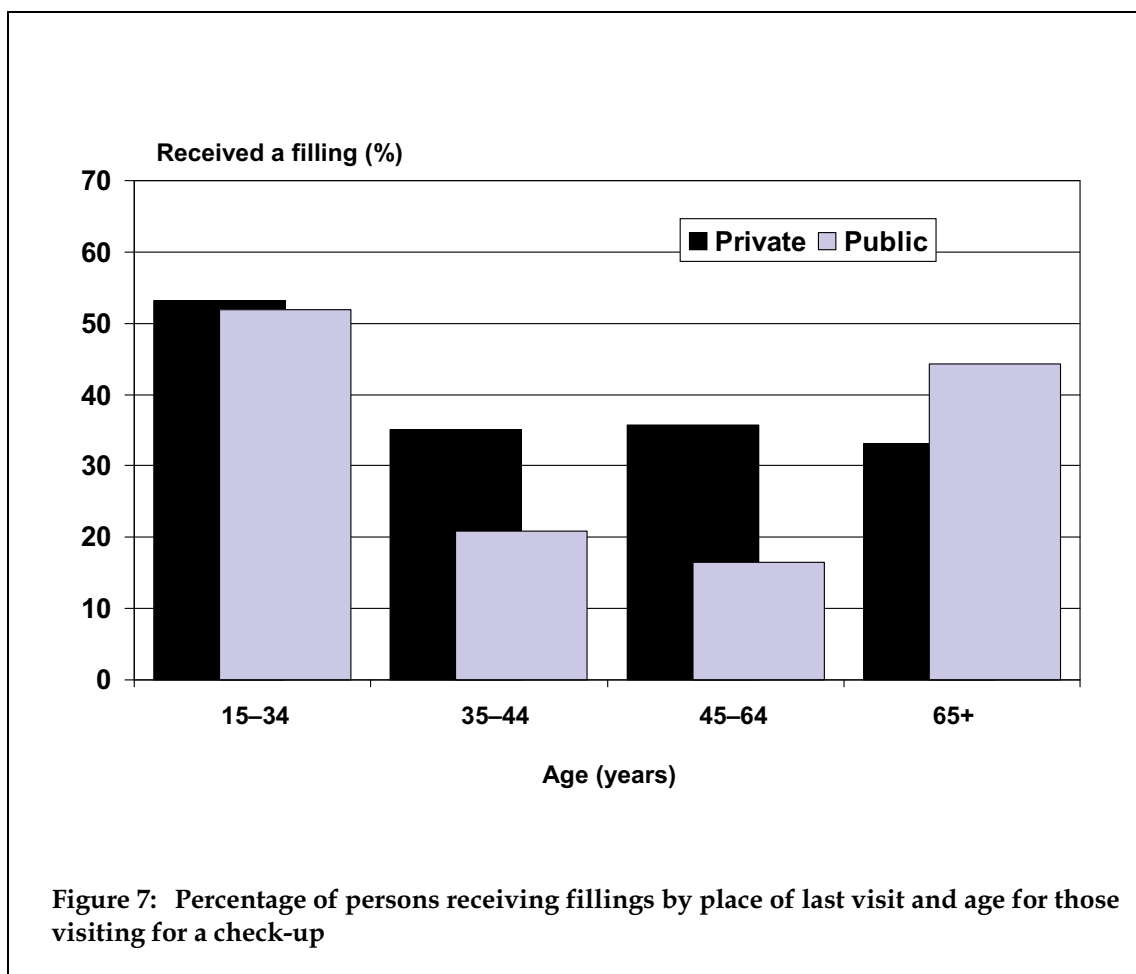
In this chapter findings are presented on service provision in terms of receipt of fillings and extractions. These findings are presented by age of patient and place of last visit, and by reason for last visit.

Fillings

In this section findings are presented on the prevalence of receipt of fillings for both check-up visits and visits made for a dental problem.

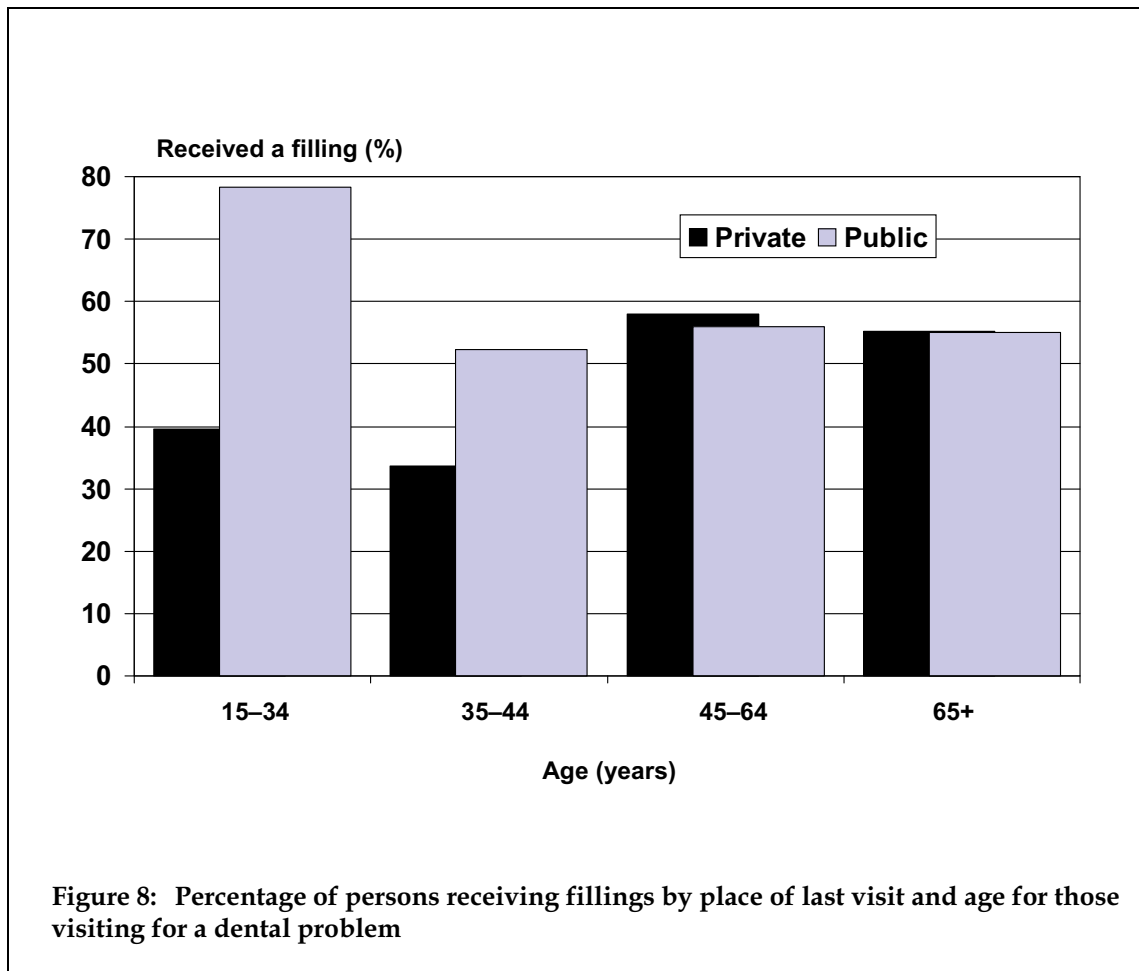
Check-up visits

The percentage of persons who received fillings is presented by age and place of last dental visit in Figure 7 for those who last visited for a check-up. While the percentage of persons receiving a filling was highest for those aged 15–34 years who last visited either the private or public sector, there were no clear age-specific trends. All age-specific comparisons by place of last visit showed overlapping confidence intervals.



Visits for a dental problem

The percentage of persons who received fillings is presented by age and place of last dental visit in Figure 8 for those who last visited for a dental problem. Among those who last made a dental visit in the private sector, the highest percentage of persons receiving a filling were observed in the two older age groups, while for those who last visited in the public sector, the highest percentage of persons receiving a filling was observed in the youngest age group.



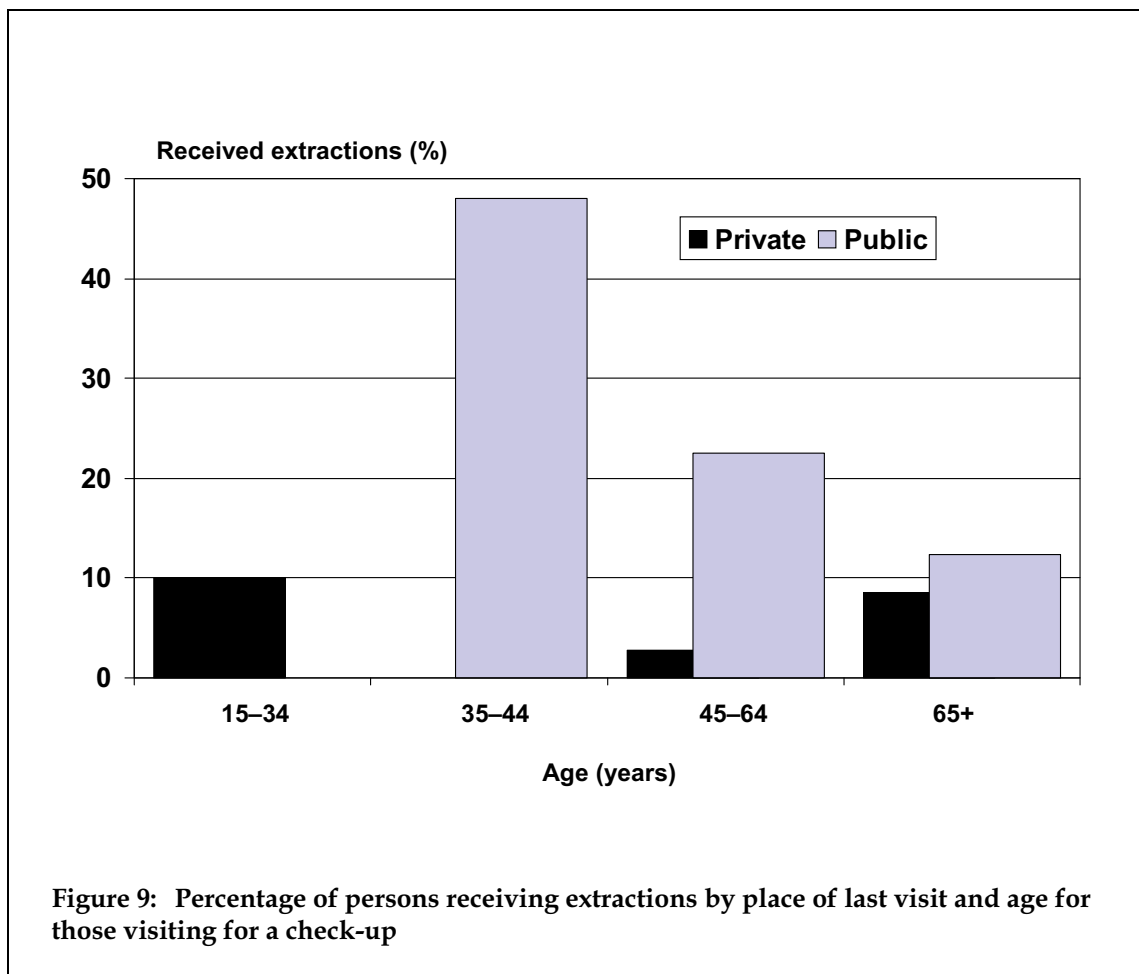
While a higher percentage of persons who last made a visit to the public sector received fillings compared with those who last visited the private sector in the two younger age groups, the confidence intervals for these age specific-estimates overlapped.

Extractions

In this section findings are presented on the prevalence of receipt of extractions for both check-up visits and visits made for a dental problem.

Check-up visits

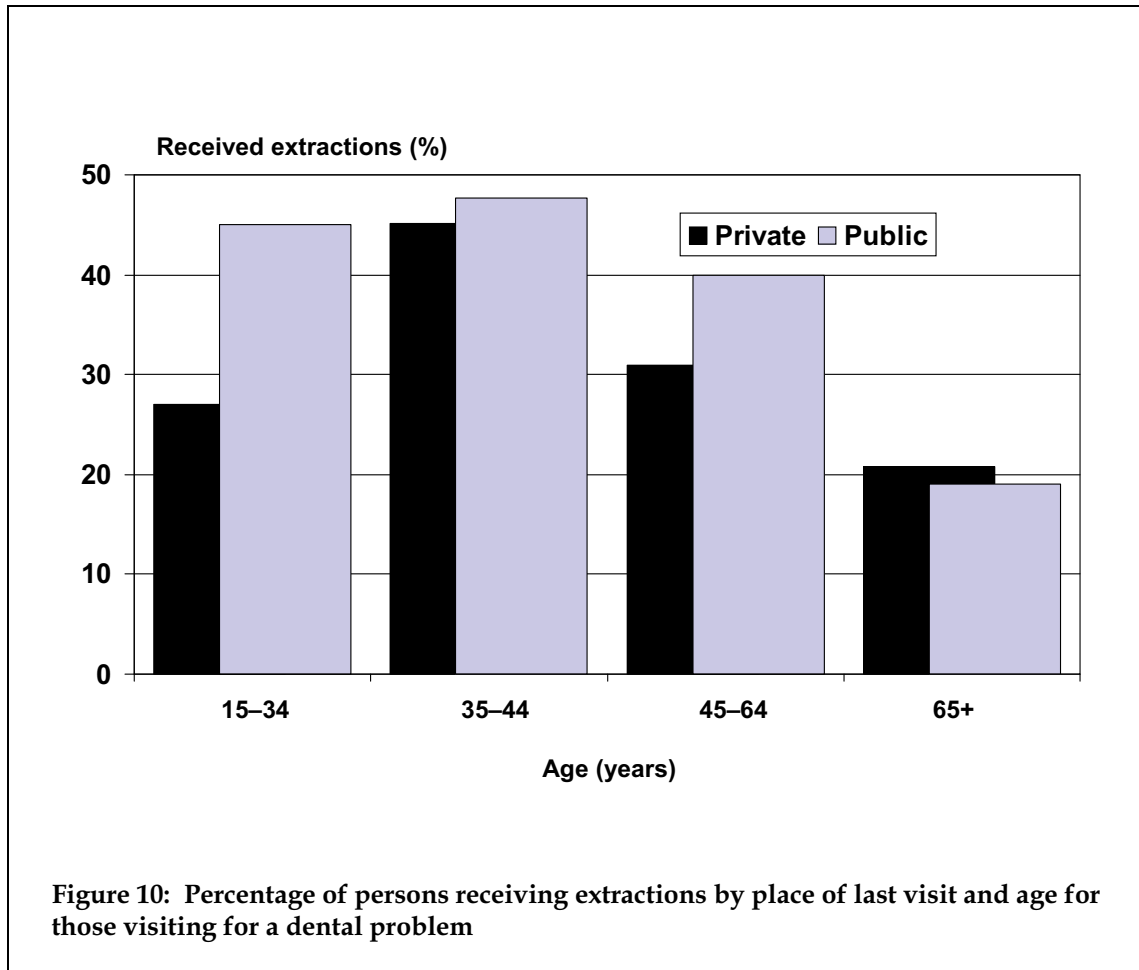
The percentage of persons who received extractions is presented by age and place of last dental visit in Figure 9 for those who last visited for a check-up. No age-specific trends in the percentage receiving extractions were evident.



With the exception of the youngest age group, there was a trend for a higher percentage of those persons who last made a visit in the public sector to have received an extraction compared with those who last visited in the private sector, but the only difference where the confidence intervals around the estimates did not overlap was among those aged 35-44 years.

Visits for a dental problem

The percentage of persons who received extractions is presented by age and place of last dental visit in Figure 10 for those who last visited for a dental problem. Receipt of extractions tended to be highest among those persons aged 35–44 years and lowest among those persons aged 65 years or older.



While a higher percentage of persons received extractions among those who last made a visit to the public sector compared with the private sector in the three younger age groups, the confidence intervals around these age-specific estimates overlapped in each case.

6 Discussion

This chapter looks first at limitations and interpretational issues associated with the use of monitoring surveys. Then, the main oral health findings are discussed and conclusions are presented.

Interpretational issues

Analysis of response patterns and comparisons with census data revealed that participants differed from non-participants in some characteristics that influence oral health (Mejia et al. 2007). Participants showed higher percentages who were Australian-born (76.7%), spoke English at home (86.9%) and were employed (64.5%) compared with census data (69.0%, 80.0% and 55.9% respectively). There were also higher percentages of non-Indigenous participants (98.5%) and participants with Year 12 schooling level (47.6%) compared with census data (94.3% and 37.7% respectively). However, some of these differences could reflect the higher levels of 'not stated' responses in census data and differences in coding of some categories for some variables that were compared. When NSAOH estimates of oral health were adjusted to reflect census distributions of employment, language spoken at home and level of schooling, there were generally small changes, suggesting that bias was of a small magnitude. The survey probably underestimated some aspects of oral disease and overestimated the frequency of favourable dental attendance, although the degree of variation was found to be 3% or less for most oral health indicators. The accuracy of survey examiners was assessed by comparison with the survey's principal examiner. The observed levels of agreement for most oral health indicators were equivalent to benchmarks reported for national oral health surveys conducted in the United Kingdom and the United States (Slade et al. 2007).

Main findings

This section outlines the main findings in terms of number of teeth, caries experience, periodontal status and service provision.

Number of teeth

Tooth loss is considered to be the dental equivalent of mortality, reflecting the end stage of disease as well as other factors such as the attitudes of patients and providers, the availability and accessibility of care, and prevailing dental treatment philosophies (Weintraub & Burt 1985). Among the oral health factors associated with extraction, diagnosis of periodontal disease has been accepted as a major cause of tooth loss among adults (Weintraub & Burt 1985), while a history of previous tooth loss has been associated with further extractions (Eklund & Burt 1994; Holst et al. 1992). However, caries remains the major cause of tooth loss due to the higher prevalence of this condition (Brennan, Spencer & Szuster 2001). Oral health trends in the population have indicated a decline in tooth loss over recent decades, with the percentage of persons with no natural teeth among those aged 65 years or older

decreasing from 66.6% in 1979 (ABS 1979) to 40.0% in 1994 (Carter et al. 1994) and 33.4% in 1999 (Carter et al. 2001).

In general, cardholders that visited privately had similar numbers of teeth present compared with those that visited the public sector, with the exception being higher numbers of teeth among persons aged 65 years or older who last visited privately compared with the public sector.

Caries experience

Dental caries is caused by acid-producing bacteria that live in the mouth. It can progress from demineralisation of the tooth or root, through development of cavities, to infection of the tooth pulp, abscess formation, fracture of the tooth, and tooth loss (AIHW 2003).

No differences in caries experience were evident by place of last visit among cardholders who last visited for a check-up. However, among cardholders who last visited for a dental problem, those who visited the public sector had more decayed teeth overall, and those aged 65 years or older had more missing teeth but fewer filled teeth, compared with those who last visited in the private sector.

Periodontal status

Periodontal diseases involve inflammation of the periodontal tissues, which can be associated with recession of the gums or formation of periodontal pockets in the gums (AIHW 2003). These periodontal pockets can lead to advanced destruction of tooth support, resulting in tooth mobility, formation of gum abscesses and tooth loss.

Among cardholders there was no significant difference in the prevalence of periodontal pockets of 4 mm or more by place of last visit either for those who last visited for a check-up or for those who last visited for a dental problem.

Service provision

Previous reports have found that socioeconomically disadvantaged persons face barriers to accessing dental care in the private sector. They suffer further oral health disadvantage from a pattern of services received at public clinics that has more emphasis on extraction of teeth and less emphasis on preventive and maintenance care (Brennan, Luzzi & Roberts-Thomson 2008).

The receipt of fillings did not vary significantly by place of last visit among cardholders who last made a visit either for a check-up or for a dental problem. Extractions did not vary by place of last visit among those who visited for a dental problem; however, among those who visited for a check-up, a higher percentage of cardholders who visited in the public sector received extractions in the 35–44 years age group compared those who visited privately.

Conclusions

In this study the focus was on comparing the oral health and receipt of services of cardholders who visited either privately or publicly. This comparison was stratified by reason for visit as it is likely that persons visiting for check-ups may have different oral health status and receive different services compared with those who visit because of dental problems.

Where differences were observed by place of last dental visit, the differences consistently involved disadvantage in terms of either oral health status or service patterns for those who visited the public sector compared with the private sector. However, the majority of comparisons involved estimates with overlapping confidence intervals, which were not considered to be statistically significant. This may be indicative of the general level of disadvantage that may be common to cardholders regardless of the place of their last dental visit.

Appendix A: Data tables

Number of teeth: check-up visits

Table A1: Number of teeth by place of last visit and age for those visiting for a check-up

	Private sector		Public sector	
	Mean	[95% CI]	Mean	[95% CI]
Age group years				
15–34	28.4	[27.5, 29.3]	28.3	[27.9, 28.6]
35–44	27.9	[27.3, 28.4]	25.2	[22.9, 27.5]
45–64	23.9	[22.4, 25.4]	23.0	[21.6, 24.5]
65+	19.8	[18.4, 21.2]	20.8	[18.1, 23.5]
All	23.9	[22.9, 25.0]	23.6	[22.3, 25.0]

Number of teeth: dental problem visits

Table A2: Number of teeth by place of last visit and age for those visiting for a dental problem

	Private sector		Public sector	
	Mean	[95% CI]	Mean	[95% CI]
Age group years				
15–34	28.5	[27.6, 29.4]	28.0	[26.8, 29.2]
35–44	25.2	[22.7, 27.6]	25.7	[22.9, 28.5]
45–64	21.8	[20.2, 23.5]	20.7	[19.1, 22.2]
65+	20.2	[18.9, 21.6]	16.7	[15.0, 18.4]
All	22.5	[21.5, 23.4]	22.7	[21.4, 24.1]

Caries experience: check-up visits

Table A3: Number of decayed teeth by place of last visit and age for those visiting for a check-up

	Private sector		Public sector	
	Mean	[95% CI]	Mean	[95% CI]
Age group years				
15–34	0.75	[0.00, 1.65]	0.40	[0.00, 0.97]
35–44	0.60	[0.16, 1.05]	2.04	[0.00, 5.42]
45–64	0.14	[0.03, 0.24]	0.26	[0.01, 0.51]
65+	0.10	[0.03, 0.17]	0.26	[0.00, 0.62]
All	0.34	[0.09, 0.59]	0.53	[0.00, 1.07]

Table A4: Number of missing teeth by place of last visit and age for those visiting for a check-up

	Private sector		Public sector	
	Mean	[95% CI]	Mean	[95% CI]
Age group years				
15–34	3.6	[3.4, 4.1]	3.7	[3.4, 4.1]
35–44	4.1	[3.6, 4.7]	6.8	[4.5, 9.1]
45–64	8.1	[6.6, 9.6]	8.9	[7.4, 10.3]
65+	12.1	[10.7, 13.5]	11.0	[8.3, 13.7]
All	8.0	[7.0, 9.0]	8.3	[6.9, 9.6]

Table A5: Number of filled teeth by place of last visit and age for those visiting for a check-up

	Private sector		Public sector	
	Mean	[95% CI]	Mean	[95% CI]
Age group years				
15–34	2.8	[1.6, 4.0]	1.9	[0.0, 3.9]
35–44	8.7	[7.2, 10.1]	9.0	[6.5, 11.4]
45–64	11.7	[10.1, 13.3]	11.2	[8.5, 13.9]
65+	11.3	[10.1, 12.6]	12.5	[10.2, 14.9]
All	8.9	[7.6, 10.1]	9.4	[7.4, 11.5]

Table A6: Number of DMF teeth by place of last visit and age for those visiting for a check-up

	Private sector		Public sector	
	Mean	[95% CI]	Mean	[95% CI]
Age group years				
15–34	4.0	[2.0, 6.0]	4.7	[2.6, 6.8]
35–44	10.7	[8.6, 12.8]	14.2	[8.3, 20.2]
45–64	19.9	[18.5, 21.2]	20.4	[17.7, 23.0]
65+	23.5	[22.5, 24.6]	23.8	[22.4, 25.3]
All	16.1	[13.9, 18.2]	17.5	[14.6, 20.3]

Caries experience: dental problem visits

Table A7: Number of decayed teeth by place of last visit and age for those visiting for a dental problem

	Private sector		Public sector	
	Mean	[95% CI]	Mean	[95% CI]
Age group years				
15–34	0.87	[0.00, 1.75]	3.61	[1.61, 5.61]
35–44	1.02	[0.53, 1.50]	1.37	[0.00, 2.72]
45–64	0.65	[0.33, 1.00]	1.54	[0.76, 2.33]
65+	0.38	[0.10, 0.66]	0.47	[0.21, 0.73]
All	0.60	[0.36, 0.83]	1.76	[1.01, 2.51]

Table A8: Number of missing teeth by place of last visit and age for those visiting for a dental problem

	Private sector		Public sector	
	Mean	[95% CI]	Mean	[95% CI]
Age group years				
15–34	3.5	[2.5, 4.4]	4.0	[2.7, 5.2]
35–44	6.6	[4.3, 8.8]	6.3	[3.5, 9.1]
45–64	10.0	[8.3, 11.6]	11.0	[9.4, 12.6]
65+	11.6	[10.3, 12.9]	15.2	[13.4, 16.9]
All	9.4	[8.4, 10.3]	9.1	[7.8, 10.4]

Table A9: Number of filled teeth by place of last visit and age for those visiting for a dental problem

	Private sector		Public sector	
	Mean	[95% CI]	Mean	[95% CI]
Age group years				
15–34	3.8	[2.1, 5.5]	4.9	[2.4, 7.4]
35–44	6.8	[4.0, 9.7]	8.2	[6.0, 10.3]
45–64	11.6	[10.0, 13.2]	9.9	[8.1, 11.7]
65+	12.5	[11.4, 13.7]	8.0	[6.3, 9.7]
All	10.3	[9.2, 11.4]	7.9	[6.8, 9.0]

Table A10: Number of DMF teeth by place of last visit and age for those visiting for a dental problem

	Private sector		Public sector	
	Mean	[95% CI]	Mean	[95% CI]
Age group years				
15–34	5.8	[3.6, 8.0]	10.2	[5.5, 15.0]
35–44	12.7	[10.6, 14.9]	14.4	[11.4, 17.4]
45–64	22.2	[21.0, 23.5]	22.4	[21.0, 23.9]
65+	24.5	[23.8, 25.3]	23.7	[22.7, 24.7]
All	19.7	[18.3, 21.1]	18.0	[16.0, 19.9]

Periodontal status: check-up visits

Table A11: Prevalence of periodontal pockets 4+ mm by place of last visit and age for those visiting for a check-up (%)

	Private sector		Public sector	
	%	[95% CI]	%	[95% CI]
Age group years				
15–34	0.0	[0.0, 0.0]	5.3	[0.0, 15.8]
35–44	7.5	[0.0, 18.6]	36.0	[0.0, 73.3]
45–64	12.0	[5.9, 18.2]	28.4	[8.8, 48.1]
65+	23.2	[13.0, 33.4]	23.8	[5.5, 42.2]
All	11.8	[7.3, 16.4]	22.0	[10.7, 33.3]

Periodontal status: dental problem visits

Table A12: Prevalence of periodontal pockets 4+ mm by place of last visit and age for those visiting for a dental problem (%)

	Private sector		Public sector	
	%	[95% CI]	%	[95% CI]
Age group years				
15–34	7.2	[0.0, 16.2]	22.1	[0.0, 47.0]
35–44	40.7	[15.1, 66.3]	28.5	[5.1, 52.0]
45–64	14.1	[6.5, 21.7]	28.1	[16.8, 39.4]
65+	16.5	[7.9, 25.1]	34.8	[18.8, 50.8]
All	18.0	[11.4, 24.6]	27.8	[18.0, 37.5]

Services: check-up visits

Table A13: Prevalence of fillings by place of last visit and age for those visiting for a check-up (%)

	Private sector		Public sector	
	%	[95% CI]	%	[95% CI]
Age group years				
15–34	53.2	[27.1, 79.4]	51.9	[10.7, 93.0]
35–44	35.1	[10.7, 59.6]	20.9	[0.0, 48.1]
45–64	35.8	[23.1, 48.5]	16.5	[2.3, 30.7]
65+	33.2	[24.0, 42.3]	44.3	[22.0, 66.6]
All	39.3	[29.7, 49.0]	34.0	[19.3, 48.6]

Table A14: Prevalence of extractions by place of last visit and age for those visiting for a check-up (%)

	Private sector		Public sector	
	%	[95% CI]	%	[95% CI]
Age group years				
15–34	10.0	[0.0, 24.1]	0.0	[0.0, 0.0]
35–44	0.0	[0.0, 0.0]	48.0	[9.6, 86.4]
45–64	2.8	[0.0, 5.6]	22.5	[2.0, 43.0]
65+	8.6	[3.5, 13.7]	12.3	[0.0, 24.8]
All	6.7	[2.4, 11.0]	17.8	[6.9, 28.8]

Services: dental problem visits

Table A15: Prevalence of fillings by place of last visit and age for those visiting for a dental problem (%)

	Private sector		Public sector	
	%	[95% CI]	%	[95% CI]
Age group years				
15–34	39.5	[15.2, 63.9]	78.3	[59.9, 96.7]
35–44	33.7	[14.2, 53.1]	52.3	[26.7, 77.9]
45–64	58.0	[45.2, 70.8]	56.0	[40.3, 71.8]
65+	55.3	[45.3, 65.2]	55.0	[40.2, 69.9]
All	50.8	[42.8, 58.8]	60.2	[49.6, 70.7]

Table A16: Prevalence of extractions by place of last visit and age for those visiting for a dental problem (%)

	Private sector		Public sector	
	%	[95% CI]	%	[95% CI]
Age group years				
15–34	27.0	[2.8, 51.2]	45.0	[16.1, 73.8]
35–44	45.2	[20.4, 70.1]	47.7	[23.4, 71.9]
45–64	30.9	[19.3, 42.5]	40.0	[26.9, 53.0]
65+	20.8	[12.3, 29.3]	19.1	[7.8, 30.4]
All	27.2	[20.0, 34.4]	38.6	[28.4, 48.8]

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