

Adult access to dental care

Rural and remote dwellers

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THE UNIVERSITY OF ADELAIDE

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Abbreviations

ADA – Australian Dental Association

AIHW – Australian Institute of Health and Welfare

ANOVA – analysis of variance

CPITN – Community Periodontal Index of Treatment Need

dmft – decayed, missing and filled deciduous teeth

DF – decayed and filled permanent roots

DMFT – decayed, missing and filled permanent teeth

MIS – Management Information System

OMR – optical mark read

Explanatory notes

Definition of location used in this report

This report is based on findings derived from three survey sources, the Prospective Adult Dental Programs Survey, the National Dental Telephone Interview Surveys, and Dental Satisfaction Surveys. The residential postcode of survey respondents was used in conjunction with the Rural and Remote areas classification scheme of the Commonwealth Department of Human Services and Health to categorise respondents as urban, rural or remote dwellers.

Eligibility

Persons who were eligible for public-funded dental care were those who were covered by a Pensioner Concession Card, a Health Benefits Card, a Health Care Card, or a Commonwealth Seniors Health Card.

Cell numbers

Totals include cases for which data for the explanatory variables may have been missing and therefore row (column) counts may not sum to the total row (column) count.

Standard errors and relative standard errors

Estimates from the National Dental Telephone Interview Surveys which have a relative standard error greater than 25% have been identified in the tables. The relative standard error is the standard error of the estimate divided by the estimate itself, expressed as a percentage. In addition to highlighting high relative standard errors, if a percentage estimate had a standard error of greater than 10%, that has also been indicated. This has been done because estimates involving large percentages may have an acceptable relative standard error but still be highly variable as indicated by a high standard error.

Scope of the report

The findings of this report cover both population estimates (such as the percentage of persons with dental insurance), and estimates based on users of dental services. Estimates for users of dental services have been restricted to either dentate adults whose last visit was less than 12 months ago (including indicators such as reason for last dental visit) or patients who attended for public-funded dental care during the survey period (including indicators such as oral health status at the beginning of a course of care and services received during this public-funded course of care). Estimates based on users of dental services are by definition restricted to those persons who were able to access dental care and therefore may not necessarily be representative of those who did not access dental care during the survey period.

Executive Summary

This report examines oral health and access issues relating to Australian adults living in rural and remote locations. Findings at the population level are presented from the series of National Dental Telephone Interview Surveys, and the associated Dental Satisfaction Surveys conducted in 1994, 1995 and 1996. These data include adults who have a government concession card (who may be eligible for public-funded dental care), and those who do not. The findings are not restricted by time since last dental visit, and include adults who have not made a recent dental visit. Population estimates are presented on oral health status, access to services, social impact and economic factors, and dental satisfaction.

Findings are also presented for Australian adults who reported that they possessed or were covered by a government concession card which would allow them to access public-funded dental care. The same indicators which were used for the general population were also reported in the chapter which is specifically related to card-holders.

Also presented are findings related to patients receiving public-funded dental care. These data were obtained from the Prospective Adult Dental Programs Survey in 1995–96. Public-funded dental care may include care provided at public dental clinics as well as care provided by private practitioners to eligible patients that is paid for by public funds. Estimates are presented on the type of care received, oral health status, and services provided.

Population

A higher percentage of adults from rural locations are edentulous (have no natural teeth) than adults from remote or urban locations (e.g. 50.0% cf. 43.2% and 36.6% among persons aged 65 or more, and 16.2% cf. 9.4% and 9.3% overall). Among those who were dentate, a higher percentage of persons from rural locations reported wearing a denture than remote or urban dwellers (24.6% cf. 18.9% and 19.4%).

Dentate adults from remote locations were less likely to have made a dental visit in the previous 12 months than persons from rural or urban locations (45.8% cf. 53.2% and 57.6%), and were more likely to have had a period of 5 years or more elapse since their last dental visit (15.7% cf. 12.5% and 9.4%). The group most likely to have last visited because of a problem (rather than for a check-up) were persons from rural locations (60.4%), followed by remote locations (58.5%), and then urban locations (54.7%). Persons from remote locations were the most likely to report that they usually visit for a dental problem (60.2%), followed by persons from rural locations (57.6%), then urban locations (47.3%). Urban dwellers had a higher mean number of dental visits, and scale and clean services in the previous 12 months than rural or remote dwellers (2.48 cf. 2.23 and 2.18 visits; and 1.00 cf. 0.78 and 0.80 scale and clean services). Persons from remote locations had more extractions (0.31 cf. 0.22 and 0.25) and fewer fillings (0.84 cf. 0.97 and 0.99) than persons from urban or rural locations.

A slightly lower percentage of dentate remote dwellers reported experience of toothache in the previous 12 months, compared with rural and urban dwellers (10.0% cf. 11.3% and 12.4%). The level of dental insurance was similar for persons from urban and remote locations (40.5% cf. 41.9%), but was lower for persons from rural locations (34.2%). A similar

percentage of urban, rural, and remote dwellers reported that dental visits were a large financial burden (10.7%, 9.7% and 8.7%), or that they would have a lot of difficulty paying a \$100 dental bill (14.2%, 14.1% and 14.9%).

Dental satisfaction scores for remote dwellers were significantly lower (analysis of variance) than their urban and rural counterparts on all four measurement scales. On a scale of 1 to 5, overall satisfaction scores ranged from 3.97 for remote dwellers to 4.24 and 4.26 for urban and rural dwellers. Rural dwellers recorded significantly lower scores than urban dwellers (4.15 cf. 4.23) on the content scale (communication, explanation of treatment and options). These are large differences given the nature of satisfaction scores. Lower mean satisfaction scores were recorded by younger age groups (4.06 for 18–24-year-olds cf. 4.47 for the 65+ age group), males (4.20 cf. 4.27 for females), those who usually visited for a dental problem rather than for a check-up (4.11 cf. 4.31), those experiencing financial hardship (4.02 cf. 4.27 for little burden), and uninsured persons (4.13 cf. 4.36 for insured). Within these groups, differences by location persisted, with the lowest satisfaction scores occurring among remote dwellers. Among those who reported that they would have a lot of difficulty with a \$100 dental bill, rural dwellers recorded the lowest satisfaction scores (range 3.61 to 3.81), with urban scores substantially higher (3.88 to 4.02). Residents of remote locations appeared to be at some disadvantage in accessing dental care that they find satisfactory.

Across the population measures presented, persons from rural and remote locations were found to generally have less favourable results than persons from urban locations. On no measure were persons from rural or remote locations found to have a substantial advantage over persons from urban locations. Persons from rural locations were more likely to: be edentulous, wear a denture, usually visit for a dental problem, and be uninsured, than persons from urban locations. Persons from remote locations were more likely to: not have visited a dentist recently, usually visit for a dental problem, have more extractions and fewer fillings, and report lower satisfaction than persons from urban locations.

Card-holders

Adult card-holders from rural locations experienced higher rates of edentulism than card-holders from urban or remote locations (31.3% cf. 24.2% and 19.9%), but among dentate persons only a slightly higher percentage reported wearing a denture (34.8% cf. 31.3% and 31.7%).

Among dentate card-holders the percentage of persons for whom a period of two years or more had elapsed since their last dental visit was 45.7% in remote locations, compared with 25.8% in urban locations, and 32.4% in rural locations. Dentate card-holders from rural locations were more likely than persons from urban or remote locations to report that the reason for their last dental visit was a dental problem (68.1% cf. 63.3% and 62.1%). Dentate card-holders from urban locations were the least likely to usually visit a dentist for a problem (55.9%), followed by rural locations (64.9%), and then remote locations (69.0%). Among dentate card-holders who had made a dental visit in the previous 12 months, those from urban locations had made more visits, and had received more clean and scale services in the previous year than those from rural or remote locations (2.65 cf. 2.10 and 1.87 visits; and 0.87 cf. 0.63 and 0.61 scale and clean services). Those from remote locations received more

extractions (0.60 cf. 0.37 and 0.39) and fewer fillings (0.49 cf. 1.09 and 0.98) than those from urban or rural locations.

Card-holders from remote locations were the least likely to report experience of toothache in the previous 12 months (6.3%), then persons from rural locations (12.4%), and then those from urban locations (16.0%). Urban dwellers were the most likely to have dental insurance, which declined for rural locations and further again for card-holders in remote locations (20.8% cf. 16.0% cf. 13.5%). While there was only slight variation in the percentage of card-holders who reported that dental visits in the last 12 months were a large financial burden, much higher percentages of card-holders from remote locations reported that they would have a lot of difficulty in paying a \$100 dental bill than either rural or urban dwellers (45.7% cf. 30.9% and 33.3%).

Significantly lower (ANOVA) dental satisfaction scores were recorded by card-holders than non-card-holders; however, differences by location did not occur, with scores of 4.10 cf. 4.12 for urban and rural card-holders. Although overall satisfaction scores of residents of remote locations were well below the population mean of 4.24, card-holders recorded higher scores than non-card-holders, 4.14 cf. 3.92.

Among card-holders, persons from rural and remote locations were found to generally have less favourable results than persons from urban locations. Only with regard to lower experience of toothache did card-holders from rural or remote locations have what may be considered a more favourable result, but even then this result could be considered to reflect a survivor effect, with only the healthiest teeth being retained by persons from these locations. Card-holders from rural locations were more likely to: be edentulous, wear a denture, have fewer dental visits, usually visit for a dental problem, and not be insured than card-holders from urban locations. Compared with those from urban locations, card-holders from remote locations were more likely to: have not visited a dentist recently, usually visit for a dental problem, have fewer visits, more extractions, fewer fillings, not be insured, and have a lot of difficulty in paying a \$100 dental bill.

Public-funded dental patients

Type of care varied by location with patients from urban locations having higher percentages of emergency care (61.1%) compared to rural (39.5%) and remote (38.6%) locations.

Urban compared to rural and remote patients had slightly higher numbers of missing teeth among the dentate (5.56 cf. 4.51 and 4.22), and had higher numbers of decayed and filled roots (0.79 cf. 0.29 and 0.24). Rural compared to urban and remote patients had the highest percentage of edentulism (10.9% cf. 7.3% and 2.9%) and the highest overall number of filled teeth (7.43 cf. 6.48 and 3.35), but had the lowest percentage with periodontal pockets of 6+ mm (4.4% cf. 13.1% and 25.3%). Patients from remote compared to urban and rural locations had the highest overall number of decayed teeth (3.94 cf. 1.90 and 2.08) and the lowest number of filled teeth (3.35 cf. 6.48 and 7.43).

To control for potential confounding factors, multiple logistic regressions of services received were performed by location, controlling for age, type of care, country of birth, language spoken, indigenous status, numbers of decayed teeth, numbers of missing teeth, numbers of decayed roots, and the presence of periodontal pockets. Differences in service provision by

location persisted in four service areas after controlling for these other factors. Compared to the reference category of urban location, patients at rural locations had lower odds of diagnostic services (odds ratio, 0.35) and higher odds of restorative services (1.84), while patients at remote locations had lower odds of preventive services (0.18) and higher odds of oral surgery (extraction) services (2.97).

After controlling for a range of sociodemographic characteristics and oral health variables, the pattern of service provision was less favourable for patients from rural and remote locations.

Differences in dental satisfaction scores between urban (3.84) and rural (3.86) card-holders whose last dental care was public-funded were not detected (but their scores were significantly lower [ANOVA] than the population mean of 4.24). Card-holder residents of remote locations who were recipients of public-funded care recorded high satisfaction scores on three of the four scales, with overall satisfaction scores of 4.28 cf. 3.94 for private own-expense care in remote locations. (It should be noted that satisfaction scores for remote location recipients of public-funded care were based on low numbers of respondents.)

1 Introduction

1.1 Trends in oral health and access issues

Oral health in Australia has shown considerable improvement over recent decades. For example, among children the number of deciduous decayed, missing and filled teeth (dmft) among 6-year-olds declined from 3.13 in 1977, to 2.16 in 1989, and to 1.90 in 1993; and the number of permanent decayed, missing and filled teeth (DMFT) among 12-year-olds declined from 4.79 in 1977, to 1.50 in 1989, and to 1.10 in 1993 (Spencer et al., 1994; Davies and Spencer, 1995).

Oral health has also improved among adults in Australia, with dramatic declines in edentulism. For example, the percentage of persons aged 65 years or more who had no natural teeth declined from 66% in 1979 (Australian Bureau of Statistics, 1980), to 50% in 1987–88 (Barnard, 1993), to 40% in 1994 (Carter et al., 1994).

In private general practice, rates of service per visit have changed between 1983–84 and 1993–94, reflecting changes in oral health and population demographics. Over this period there were increases in rates of diagnostic, preventive, endodontic (root canal), crown and bridge, general/miscellaneous, and orthodontic services, and decreases in rates per visit of prosthodontic (denture) services (Brennan, 1997).

Use of dental services has increased among adults in Australia. For example, among persons aged 65 years or more the percentage who visited in the previous 12 months increased from 21.5% in 1979 (Australian Bureau of Statistics, 1980), to 40.9% in 1993 (AIHW Dental Statistics and Research Unit, 1993).

However, considerable variation underlies the improvements in oral health. For example, in 1993 the percentage of 6-year-old children with no experience of dental caries in the deciduous dentition was 53.2%, while 55.8% of 12-year-olds had no experience of dental caries in the permanent dentition (Davies and Spencer, 1995). There is growing interest in identifying special groups within the population who may be at greater risk of oral disease.

1.2 Social inequality in relation to oral health and access issues

Social inequalities in health have been highlighted through reports of associations between mortality and factors such as occupation, income, ethnic group and social class (Marmot et al., 1987; Feinstein, 1993). Even in countries with universal-access policies for health care, large differentials in mortality and morbidity by social class have been reported (Davey Smith et al., 1990). 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).

Use of dental services in Australia has been associated with factors such as age, income, age of leaving school and occupation, while having extractions was also associated with occupation (Roberts-Thomson et al., 1995). Among people on low incomes, card-holders are thought to be particularly at risk of poorer oral health outcomes (AIHW Dental Statistics and Research Unit, 1993). Public patients have about twice the rate of extraction as patients in private general practice (Brennan et al., 1997). Such findings indicate sources of variation and social inequality in relation to oral health and access issues. Within the Australian population persons living in rural and remote locations comprise a special interest group who may be disadvantaged in terms of their health and access to services.

1.3 Health patterns by location in Australia

The study of geographic variations in health and health services may be particularly relevant in Australia where there are large distances between population centres, and a high percentage of the population living in capital cities. Distance has been proposed as a significant environmental factor influencing health in Australia, through the association of remoteness and distributional inequity in health services (Brownlea and Taylor, 1984). An imbalance in availability of general health care services between urban and rural locations has been noted, both currently and historically, with rural locations being characterised by fewer facilities and a shortage of health personnel (Humphreys, 1988).

Australians aged between 25 and 64 years living outside capital cities have been shown to experience higher mortality than capital city residents, particularly for avoidable deaths (AIHW, 1994). In terms of oral health, there are higher levels of edentulism (i.e. complete tooth loss) in non-capital locations (14.8%) compared to capital cities (9.2%) (Carter et al., 1994).

In general medical practice, differences by geographic location were consistent with a lower availability of specialists and a wider range of duties for general practitioners in country compared to metropolitan areas (Britt et al., 1993). In the United Kingdom, regional variations in dental care have been associated with supply of services, with extraction of teeth associated with fewer dentists per capita (Ashford, 1978). In Australia, the availability of dentists is considerably lower outside of major urban locations (AIHW Dental Statistics and Research Unit, 1993). Variation in dental service provision by location has been reported for Australian patients in both the public sector (Brennan et al., 1996) and in private general practice (Brennan et al., 1998). Such differences in dental service provision may reflect barriers to oral health, including those relating primarily to the individual, such as difficulty travelling to a dentist, lack of perceived need and financial limitations; barriers relating to the dental profession, such as inappropriate labour force resources or uneven geographic distribution; and barriers relating to society, such as inadequate oral health facilities (FDI, 1986), which may influence entry to and use of health services (Penchansky and Thomas, 1981).

1.4 Structure and themes

The next chapter deals with the data sources which form the basis of the findings presented here. The report then addresses the theme of variation in oral health and access to dental care associated with geographic location in Australia. To achieve this, measures of oral health and access are broken down by geographic location. These measures are structured into chapters dealing with successive subsets of people, starting with the population as a whole, then the subset of the population who are card-holders, and then the subset of these card-holders who have attended for public-funded dental care.

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2 Data sources

2.1 National Dental Telephone Interview Surveys

Purpose

The purpose of the National Dental Telephone Interview Surveys was to: collect information on basic features of oral health and dental care within the Australian population; provide information on the broader parameters of dental health and access to services; monitor the extent of social inequities associated with oral health and dental care within the community; and investigate the underlying reasons behind dental behaviours, and their consequences.

Data collection

The National Dental Telephone Interview Surveys selected random samples of Australians aged five years and over from all States and Territories. The surveys were conducted in the first quarter of each year. Interviews were conducted using computer assisted telephone interviewing techniques. Questions were read directly from the computer screen, and responses were entered directly onto the database. Question sequencing was fully automated, and the computer program would only allow valid responses to be entered.

A primary approach letter explaining the nature and purpose of the study was sent to each sampled household approximately ten days prior to the initial phone call. Up to six calls on differing days and times were attempted to make initial contact with the household (excluding engaged calls). After six consecutive calls with no answer the number was designated as 'non-response'. Once contact was made with a household, a person aged five years or more was chosen at random from the household. If this person was at home, they were interviewed (if possible), otherwise a call back time was arranged and up to a further six attempts were made to contact the sampled person. Proxy interviews were conducted for children and for people who were unable to answer questions over the phone – because of a hearing impairment, for example. Additional interviews were conducted in languages other than English (Greek, Italian, Vietnamese, Chinese, Polish and Spanish).

Response levels

Table 2.1 outlines the number of telephone numbers sampled for each survey; the number of telephone numbers which were 'in scope', that is where the number served as a residential number and was not, for example, disconnected or a business number; the number of participants; and the participation rate.

Table 2.1: Participation in the National Dental Telephone Interview Surveys

	1994	1995	1996
Number of sampled phone numbers	12,522	8,509	13,075
Number of phone numbers 'in scope'	11,149	7,305	11,605
Number of participants	7,987	5,101	8,292
% participation	71.6	69.8	71.5

Weighting of data

Data were weighted by household size (the number of persons aged 5 years or more) and by geographic sampling region to account for different sampling probabilities due to the sampling design. The data were also post-stratified and weighted by age and gender within geographic sampling regions to ensure that the weighted data reflect the age and gender distribution of the Australian population for each region as estimated by the Australian Bureau of Statistics.

2.2 Dental Satisfaction Surveys

The content and style of the Dental Satisfaction Surveys reflects a conceptual approach that defines satisfaction as the reaction to salient aspects of the context, content (process) and outcome (result) of the dental care experience.

Purpose

The primary aims of the Dental Satisfaction Surveys were to:

1. examine the differences in satisfaction between card-holders and non-card-holders who were participants in the 1994, 1995, and 1996 National Dental Telephone Interview Surveys; and
2. examine changes over time in the satisfaction among card-holders from the National Dental Telephone Interview Surveys.

Data collection

The statements used in the satisfaction survey were based on the content of existing satisfaction scales, with the items presented as statements pertaining to the personal experience of the respondents at their last dental visit or series of visits.

To investigate if there were other aspects of dental satisfaction not incorporated in the questionnaire, respondents were invited to make comments on aspects of their last dental visit with which they were satisfied or dissatisfied, and to make comments on any other issues. All discrete comments were coded into 23 major categories, based on the most frequently occurring types. The comment types were grouped into the conceptual categories of context, content, outcome, and other.

The participants in the 1994, 1995 and 1996 Dental Satisfaction Surveys were drawn from the group that had participated in the corresponding National Dental Telephone Interview Survey. The participants were informed at the time of their telephone interview that they had been chosen for a further questionnaire, and their address was checked against the details already held in the database. A questionnaire was mailed to the address within a week of the telephone interview. Participants with whom the telephone interview was conducted in a language other than English were excluded from the satisfaction survey.

Sampling rates

Sampled persons from the National Dental Telephone Interview Surveys were dentate, aged 18 years and older, and had made a dental visit within the previous 12 months. All card-holders and one in four non-card-holders were selected. The table below outlines the number of persons sampled and the response rate for each of the three surveys.

Table 2.2: Response rates to the Dental Satisfaction Surveys

	1994	1995	1996
Number selected	1,332	700	1,362
Response rate (%)	84.3	86.2	86.4

Weighting of data

All data were weighted by age, gender and location using the estimated resident population of each State and Territory. This weighting procedure meant that reported percentages were corrected for differences in the probability of selection to represent that portion of the population who were dentate, aged 18 and over, and had made a dental visit within the previous 12 months.

2.3 Prospective Adult Dental Programs Survey

Purpose

This survey obtained details of the oral health status and services received throughout a course of care within public-funded dental programs. The survey was conducted as an on going monitoring survey throughout the year.

Data collection

Data were collected by State and Territory dental services using manual forms or optical mark read (OMR) scan forms to record oral health data; and computer management information system (MIS) databases to record patient, visit, and service provision details. All data items can be collected on double-sided OMR forms where there is no access to computer MISs. The survey commenced in mid-1995.

Sampling rates

Sampling rates were determined to obtain 595 persons in each of six age groups, to provide 3,570 persons for the larger Australian States. Sample yields of this size enable prevalence estimates for five sub-groups within each age group with a relative standard error of less than 40%. These sampling rates were determined to provide appropriate sample yields based on patient flows and workloads specific to each State and Territory.

Sample yields and mode of collection

The table below outlines the yields obtained up to September 1996 and the mode of collection for each State and Territory.

Table 2.3: Response to the Adult Dental Programs Survey

		NSW	Vic	Qld	SA	WA	Tas	ACT	NT	All
1995–96	Mode	MIS	OMR +MIS	OMR	OMR +MIS	OMR +MIS	OMR	OMR +MIS	OMR	
	Yield	874	1,040	2,628	753	160	359	26	269	6,109

Sample yields obtained in each State/Territory were less than that required to provide specific breakdowns disaggregated within individual States/Territories. However, when aggregated at the national level the sample yield is in excess of that required (i.e. greater than 3,570) to provide acceptable precision at that level of disaggregation.

Weighting

The data were weighted using the estimated number of persons who made their last visit to either a public dental clinic, or public-funded, to a private practice, within the last 12 months, for persons aged 18 years or more from the 1996 National Dental Telephone Interview Survey. This was performed to weight the sample yields from each State and Territory in proportion to the number of public-funded visits for each State and Territory.

3 Population

This chapter presents findings related to the adult Australian population as a whole. It includes persons who have a government concession card (who may be eligible for public-funded dental care), and those who do not. It includes persons who have made private dental visits at their own expense, persons who have received public-funded dental care, and persons who have received care from a private practitioner that was paid for by public funds. Findings in this chapter are not restricted by time since last dental visit, and includes adults who have not made a recent dental visit.

Results are presented on oral health status, access to services, social impact and economic factors, and satisfaction with dental care received. The oral health outcomes presented are dentate status, and use of dentures. Access to services indicators presented are time since last dental visit, reason for last visit, mean number of dental visits and routine services (extractions, fillings, scale and clean), percentage receiving routine services, and usual reason for a dental visit. Social impact and economic factors presented are experience of toothache, dental insurance coverage, financial burden of dental visits, and difficulty in paying a \$100 dental bill.

3.1 Sample yield

Information on a total of 17,691 adults was obtained from the 1994, 1995 and 1996 National Dental Telephone Interview Surveys. Overall, 66.1% (11,689) of the adult sample were from an urban location, 27.4% (4,844) lived in a rural location, and 6.1% (1,085) in a remote location.

There was an older age distribution among rural dwellers than among those from urban or remote locations. Remote locations had the youngest age distribution, 62.5% aged 18–44 years, compared with 51.2% in urban locations, and 42.1% in rural locations. Only 11.8% of adults in remote locations were aged 65 years or more, compared with 19.4% in urban locations and 24.9% in rural locations.

Table 3.1: Age distribution of adults from the National Dental Telephone Interview Surveys by location (unweighted)

	Location			Total
	Urban	Rural	Remote	
Number	11689	4844	1085	17691
Age (%)				
18–24 years	11.9	8.6	10.9	10.9
25–44 years	39.3	33.5	51.6	38.5
45–64 years	29.3	33.0	25.7	30.1
65+ years	19.4	24.9	11.8	20.4

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

3.2 Oral health status

Table 3.2 shows the dentate status of the population by residential location and age group. Edentulism (having no natural teeth) increased across age groups, reflecting both the accumulation of disease experience and changing treatment philosophies over time. Nearly all 18–24-year-olds were dentate (had at least one natural tooth), and less than 2% of all 25–44-year-olds were edentulous.

Among the two oldest age groups, persons from rural locations were the most likely to be edentulous. More than one in five (21.5%) rural dwellers aged 45–64 years were edentulous compared with 14.8% of persons in remote locations, and 11.7% of urban dwellers. One in two persons in rural locations aged 65 years or more had no remaining natural teeth, compared with 36.6% in urban locations.

Table 3.2: Dentate status of population by location and age group

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
18–24 years	<i>n=1391</i>	<i>n=415</i>	<i>n=118</i>	<i>n=1937</i>
Dentate	99.9	99.8	100.0	99.9
Edentulous	*0.1	*0.2	0.0	*0.1
25–44 years	<i>n=4599</i>	<i>n=1622</i>	<i>n=560</i>	<i>n=6807</i>
Dentate	98.6	97.9	97.8	98.4
Edentulous	1.4	2.1	*2.2	1.6
45–64 years	<i>n=3429</i>	<i>n=1600</i>	<i>n=279</i>	<i>n=5331</i>
Dentate	88.3	78.5	85.2	85.8
Edentulous	11.7	21.5	*14.8	14.2
65+ years	<i>n=2270</i>	<i>n=1207</i>	<i>n=128</i>	<i>n=3616</i>
Dentate	63.4	50.0	56.8	59.7
Edentulous	36.6	50.0	43.2	40.3
Total	<i>n=11689</i>	<i>n=4844</i>	<i>n=1085</i>	<i>n=17691</i>
Dentate	90.7	83.8	90.6	89.1
Edentulous	9.3	16.2	9.4	10.9

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

The percentage of dentate adults wearing a denture by residential location and age group is presented in Table 3.3. As was the case for edentulism, the use of dentures increased with increasing age. Approximately one in ten dentate 25–44-year-olds wore a denture, increasing to approximately one in three among 45–64-year-olds, and 61.6% among persons aged 65 years or more.

Among the oldest two age groups, persons from rural or remote locations were more likely to wear a denture than persons from urban locations. For example, 33.4% of dentate urban dwellers aged 45–64 years wore a denture compared with approximately 40% of persons from rural or remote locations.

Table 3.3: Percentage of persons wearing a denture by location and age group – dentate adults

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
Age	<i>n=10313</i>	<i>n=3793</i>	<i>n=976</i>	<i>n=15144</i>
18–24 years	*1.5	*1.7	*3.0	*1.6
25–44 years	8.8	12.6	10.0	9.8
45–64 years	33.4	40.5	38.0	35.1
65+ years	60.0	66.6	68.2	61.6
Total	19.4	24.6	18.9	20.6

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

3.3 Access to services

Presented in Table 3.4 is the time since last visit by residential location and age group among dentate adults. Generally, for each age group, persons from urban locations had the highest percentage visiting within the last 12 months and the lowest percentage not visiting for 5 or more years, while persons from remote locations generally had the lowest percentage visiting within the last 12 months and the highest percentage with a time since last dental visit of 5 or more years. Among dentate adults aged 65 years or more, 64.6% of persons from urban locations had visited in the previous 12 months, compared with 52.4% from rural locations, and 43.5% from remote locations. Of this age group, 9.2% of persons from urban locations had a time since last dental visit of 5 or more years, compared with 18.7% from rural locations, and 19.3% from remote locations.

Table 3.4: Time since last dental visit by location and age group – dentate adults

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
18–24 years	<i>n=1383</i>	<i>n=411</i>	<i>n=116</i>	<i>n=1923</i>
<12 months	54.7	50.2	47.6	53.6
1–<2 years	18.1	18.8	*19.2	18.3
2–<5 years	17.4	18.5	*17.1	17.7
5+ years	9.8	12.5	*16.1	10.5
25–44 years	<i>n=4527</i>	<i>n=1578</i>	<i>n=548</i>	<i>n=6676</i>
<12 months	53.9	53.3	42.3	53.5
1–<2 years	20.5	20.0	21.0	20.4
2–<5 years	15.5	16.4	20.8	15.8
5+ years	10.0	10.3	15.8	10.2
45–64 years	<i>n=2993</i>	<i>n=1219</i>	<i>n=234</i>	<i>n=4466</i>
<12 months	63.0	54.7	54.8	61.0
1–<2 years	17.9	15.9	*15.0	17.4
2–<5 years	11.0	15.4	16.6	12.1
5+ years	8.1	14.0	*13.6	9.5
65+ years	<i>n=1372</i>	<i>n=569</i>	<i>n=74</i>	<i>n=2020</i>
<12 months	64.6	52.4	43.5	61.6
1–<2 years	15.3	13.4	*18.0	14.9
2–<5 years	11.0	15.5	*19.2	12.1
5+ years	9.2	18.7	*19.3	11.4
Total	<i>n=10275</i>	<i>n=3777</i>	<i>n=972</i>	<i>n=15085</i>
<12 months	57.6	53.2	45.8	56.3
1–<2 years	18.9	18.0	19.3	18.7
2–<5 years	14.2	16.3	19.2	14.8
5+ years	9.4	12.5	15.7	10.2

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

The reason for last dental visit was asked of persons whose last dental visit was in the previous 12 months, and Table 3.5 reports on the dentate respondents. There were no consistent patterns in the reason for last dental visit by residential location within age groups.

Persons in the 18–24-year-old age group were the least likely to report a problem as the reason for their last dental visit. Less than 50% of this age group reported a problem as the reason for their last dental visit, compared with more than 50% for all other age group and residential location combinations.

Persons aged 45–64 years from rural locations had the highest percentage who last visited for a problem (68.0%).

Table 3.5: Reason for last dental visit by location and age group – dentate adults whose last dental visit was less than 12 months ago

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
18–24 years	<i>n=703</i>	<i>n=203</i>	<i>n=54</i>	<i>n=961</i>
Problem	44.5	46.9	41.2	44.9
Check-up	55.5	53.1	58.8	55.1
25–44 years	<i>n=2445</i>	<i>n=819</i>	<i>n=273</i>	<i>n=3550</i>
Problem	54.2	59.2	60.3	55.6
Check-up	45.8	40.8	39.7	44.4
45–64 years	<i>n=1872</i>	<i>n=642</i>	<i>n=136</i>	<i>n=2663</i>
Problem	59.6	68.0	63.2	61.4
Check-up	40.4	32.0	36.8	38.6
65+ years	<i>n=869</i>	<i>n=294</i>	<i>n=38</i>	<i>n=1205</i>
Problem	58.5	61.5	†67.7	59.2
Check-up	41.5	38.5	*32.3	40.8
Total	<i>n=5889</i>	<i>n=1958</i>	<i>n=501</i>	<i>n=8279</i>
Problem	54.7	60.4	58.5	56.0
Check-up	45.3	39.6	41.5	44.0

* estimate has a relative standard error greater than 25%

† estimate has a standard error greater than 10%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

The data in Table 3.6 relate to dentate adults whose last dental visit was in the previous 12 months. Presented are the mean number of visits, extractions, fillings, and scale and clean services per person in the last 12 months by residential location and age group.

The lowest average number of visits was 1.81 visits reported by persons aged 18–24 years from remote locations; all other groups made at least 2 visits on average. For each age group, persons from urban locations made a greater number of visits on average than persons from rural or remote locations. Persons from remote locations generally made the fewest visits within each age group.

Dentate 18–24-year-olds had a higher number of extractions on average than other age groups. Within each age group, persons from urban locations generally had fewer extractions than persons from rural or remote locations, and persons from remote locations generally had the greatest number of extractions on average.

The 18–24-year-old age group received the lowest number of fillings on average. For each age group, and overall, dentate adults from remote locations received fewer fillings per person visiting in the previous 12 months compared with persons from urban or rural locations.

Dentate adults from urban locations received a greater number of scale and clean services than persons from rural or remote locations. Persons from urban locations received an average of 1.00 scale and clean services, compared with approximately 0.80 scale and clean services for persons in rural and remote locations.

Table 3.6: Mean number of dental visits and routine services in previous 12 months by location and age group – dentate adults whose last dental visit was less than 12 months ago

	Location			Total
	Urban	Rural	Remote	
Number of visits in last 12 months	<i>n=5873</i>	<i>n=1960</i>	<i>n=497</i>	<i>n=8360</i>
18–24 years	2.61	2.07	1.81	2.51
25–44 years	2.40	2.18	2.30	2.35
45–64 years	2.55	2.35	2.18	2.51
65+ years	2.39	2.33	2.10	2.37
<i>Total</i>	<i>2.48</i>	<i>2.23</i>	<i>2.18</i>	<i>2.42</i>
Number of extractions in last 12 months	<i>n=5883</i>	<i>n=1959</i>	<i>n=499</i>	<i>n=8372</i>
18–24 years	0.33	0.35	*0.50	0.34
25–44 years	0.20	0.26	0.30	0.22
45–64 years	0.21	0.19	*0.18	0.20
65+ years	0.21	0.23	*0.32	0.22
<i>Total</i>	<i>0.22</i>	<i>0.25</i>	<i>0.31</i>	<i>0.23</i>
Number of fillings in last 12 months	<i>n=5864</i>	<i>n=1955</i>	<i>n=499</i>	<i>n=8349</i>
18–24 years	0.71	0.65	*0.50	0.70
25–44 years	1.00	1.06	0.95	1.01
45–64 years	1.07	0.99	0.85	1.05
65+ years	1.00	1.03	*0.67	1.00
<i>Total</i>	<i>0.97</i>	<i>0.99</i>	<i>0.84</i>	<i>0.97</i>
Number of scale and cleans in last 12 months	<i>n=5845</i>	<i>n=1936</i>	<i>n=496</i>	<i>n=8308</i>
18–24 years	1.04	0.77	*0.67	0.99
25–44 years	0.97	0.77	0.83	0.92
45–64 years	1.03	0.83	0.86	0.99
65+ years	1.02	0.72	0.69	0.96
<i>Total</i>	<i>1.00</i>	<i>0.78</i>	<i>0.80</i>	<i>0.96</i>

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

Table 3.7 presents the percentage of dentate adults who had extractions, fillings, and scale and clean services among those whose last dental visit was in the previous 12 months.

A greater percentage of persons from rural locations had an extraction compared with urban locations. With the exception of 18–24-year-olds, a greater percentage of persons from remote locations had an extraction than did persons from rural or urban locations.

Persons aged 18–24 years were less likely to have received a filling than persons from other age groups. Generally, persons from remote locations were also less likely to have received a filling than were persons from urban or rural locations.

Urban dwellers were the most likely to have received a scale and clean service, just over three-quarters reporting so, compared with just under two-thirds of persons from rural or remote locations.

Table 3.7: Percentage of persons receiving routine dental services in previous 12 months by location and age group – dentate adults whose last dental visit was less than 12 months ago

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
Extractions	<i>n=5883</i>	<i>n=1959</i>	<i>n=499</i>	<i>n=8372</i>
18–24 years	15.3	19.6	*13.6	15.9
25–44 years	12.5	15.8	19.6	13.6
45–64 years	12.5	14.8	*17.3	13.0
65+ years	12.6	12.6	*20.3	12.7
<i>Total</i>	13.0	15.7	18.2	13.7
Fillings	<i>n=5864</i>	<i>n=1955</i>	<i>n=499</i>	<i>n=8349</i>
18–24 years	33.3	29.5	*20.2	32.4
25–44 years	49.2	51.4	51.5	49.7
45–64 years	54.2	54.2	46.8	54.1
65+ years	55.3	57.0	*37.4	55.3
<i>Total</i>	48.8	50.0	44.3	48.9
Scale and clean	<i>n=5845</i>	<i>n=1936</i>	<i>n=496</i>	<i>n=8308</i>
18–24 years	72.8	63.4	†44.7	70.7
25–44 years	77.5	65.9	69.4	74.7
45–64 years	76.4	67.5	69.8	74.5
65+ years	73.7	58.2	†59.7	70.8
<i>Total</i>	76.0	65.2	64.6	73.6

* estimate has a relative standard error greater than 25%

† estimate has a standard error greater than 10%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

All persons were asked whether their usual reason for making a dental visit was for a problem or for a check-up. Table 3.8 presents the results for dentate adults. Overall, approximately 50% of persons reported a problem as their usual reason for a visit, and 50% a check-up as their usual reason for a visit.

Within each location, the 18–24-year-old age group had the lowest percentage reporting a problem as the usual reason for a dental visit (less than 50%). For each age group, urban dwellers were less likely to report a problem as their usual reason than were persons from rural or remote locations. Overall, 47.3% of persons from urban locations reported a problem as their usual reason for visiting a dentist, compared with 57.6% of persons from rural locations, and 60.2% of persons from remote locations.

Table 3.8: Usual reason for a dental visit by location and age group – dentate adults

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
18–24 years	<i>n=1375</i>	<i>n=409</i>	<i>n=116</i>	<i>n=1913</i>
Problem	43.1	49.1	49.1	44.2
Check-up	56.9	50.9	50.9	55.8
25–44 years	<i>n=4507</i>	<i>n=1573</i>	<i>n=547</i>	<i>n=6650</i>
Problem	48.7	56.9	65.9	51.1
Check-up	51.3	43.1	34.1	48.9
45–64 years	<i>n=2972</i>	<i>n=1214</i>	<i>n=232</i>	<i>n=4437</i>
Problem	47.1	61.0	50.6	50.3
Check-up	52.9	39.0	49.4	49.7
65+ years	<i>n=1355</i>	<i>n=561</i>	<i>n=73</i>	<i>n=1994</i>
Problem	48.1	62.3	66.1	51.5
Check-up	51.9	37.7	33.9	48.5
Total	<i>n=10209</i>	<i>n=3757</i>	<i>n=968</i>	<i>n=14994</i>
Problem	47.3	57.6	60.2	49.8
Check-up	52.7	42.4	39.8	50.2

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

3.4 Social impact and economic factors

Dentate participants were asked about their experience of toothache during the previous 12 months. Table 3.9 presents the percentage of persons responding that they experienced toothache 'very often', 'often', or 'sometimes' during the last 12 months.

Generally, experience of toothache declined with increasing age. Toothache among 18–24-year-olds was 16.3% which declined to 7.2% among persons aged 65 years or more.

There was little difference between locations for the two youngest age groups. However, among 45–64-year-old persons toothache experience was higher in urban locations (10.0%) than in rural locations (6.5%), and lowest in remote locations (2.7%). Toothache experience was lowest (0.6%) for persons aged 65 years or more in remote locations.

Overall, persons from urban locations had the greatest experience of toothache (12.4%), followed by rural locations (11.3%), and then remote locations (10.0%).

Table 3.9: Experience of toothache^(a) in previous 12 months by location and age group – dentate adults

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
Age	<i>n</i>=10298	<i>n</i>=3788	<i>n</i>=974	<i>n</i>=15122
18–24 years	16.2	17.0	*16.4	16.3
25–44 years	13.5	12.8	12.0	13.3
45–64 years	10.0	6.5	*2.7	9.1
65+ years	6.9	9.1	*0.6	7.2
Total	12.4	11.3	10.0	12.1

(a) percentage of persons reporting 'very often', 'often', or 'sometimes' during the last 12 months

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

Dental insurance by residential location and age group is presented in Table 3.10. Dental insurance varied across age groups. Persons aged 45–64 years were the most highly insured (48.0%), followed by 25–44-year-olds (40.0%), then 18–24-year-olds (32.6%), and finally persons aged 65 years or more (27.5%). The same pattern was observed within each of the three residential locations.

Among 18–24-year-olds there was little difference by location. However, for the other three age groups, persons from rural locations were less likely to have dental insurance than were those from urban or remote locations.

Table 3.10: Percentage of persons with dental insurance by location and age group

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
Age	<i>n=11640</i>	<i>n=4827</i>	<i>n=1078</i>	<i>n=17617</i>
18–24 years	33.0	30.4	29.3	32.6
25–44 years	40.8	36.8	45.6	40.0
45–64 years	50.4	40.5	50.9	48.0
65+ years	30.1	20.5	*23.0	27.5
Total	40.5	34.2	41.9	39.1

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

Persons who made a dental visit during the previous 12 months were asked how much of a financial burden those visits were. The first half of Table 3.11 presents the percentage of dentate adults for whom those dental visits were a large financial burden. Financial burden increased with age among persons from remote locations, a trend not observed among urban and rural locations. In urban and rural locations, the age group with the lowest percentage reporting a large financial burden was the 65 years or more age group (7.6% and 4.4% respectively); this was the age group most likely to report a large burden among persons from remote locations (13.7%).

All persons were asked how much difficulty they would have in paying a \$100 dental bill, and the percentage reporting a lot of difficulty is presented in the second half of Table 3.11. The percentage reporting a lot of difficulty ranged from 12–17% across locations and age groups with only two exceptions among the remote group. Persons from remote locations aged 45–64 years had the lowest percentage reporting a lot of difficulty (8.7%), while persons aged 65 years or more had the highest percentage (30.7%).

Table 3.11: Affordability and hardship in purchasing dental care by location and age group – dentate adults

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
Dental visits in the last 12 months were a large financial burden^(a)	<i>n=5879</i>	<i>n=1956</i>	<i>n=501</i>	<i>n=8367</i>
18–24 years	10.6	*8.4	*6.2	10.2
25–44 years	10.7	11.3	*7.6	10.8
45–64 years	12.1	9.6	*11.3	11.6
65+ years	7.6	*4.4	*13.7	7.1
<i>Total</i>	<i>10.7</i>	<i>9.7</i>	<i>8.7</i>	<i>10.5</i>
A lot of difficulty in paying a \$100 dental bill	<i>n=10257</i>	<i>n=3785</i>	<i>n=974</i>	<i>n=15078</i>
18–24 years	16.9	16.4	*16.4	16.9
25–44 years	14.6	14.0	*14.7	14.5
45–64 years	12.1	13.3	*8.7	12.3
65+ years	13.3	14.1	*30.7	13.7
<i>Total</i>	<i>14.2</i>	<i>14.1</i>	<i>14.9</i>	<i>14.2</i>

(a) dentate adults whose last dental visit was less than 12 months ago

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

3.5 Satisfaction scores

This section presents findings related to patient satisfaction with dental care among persons who had made a dental visit within the previous 12 months.

Satisfaction with health care can be regarded as an intermediate outcome of the health care process which reflects the extent to which the care given meets the patients' needs and expectations and provides an acceptable standard of service. The dimensions of satisfaction with dental care incorporated in the Dental Satisfaction Surveys included the context (e.g. ease of making appointment, waiting time, dentist and clinic staff issues), content (e.g. communication, explanation of treatment and options, thoroughness of services), and outcome (e.g. service results and improvement in oral health).

Care which is less satisfactory to the consumer is likely to be less effective. Delay in seeking care, non-compliance with instructions and poor retention of instructions have been shown to be associated with dissatisfaction with outcome (Wilkin et al., 1993¹).

Satisfaction scores are presented on sociodemographic characteristics, dental visiting and financial burden of dental care reported by the respondents.

Of the 2,770 respondents, 1,862 were from urban locations (67.2%), 770 were from rural locations (27.8%), and 138 were from remote locations (5.0%).

There was a younger age distribution among respondents from remote locations, with 45.7% in the 25–44 age group compared to 32.7% (urban), and 33.9% (rural). The oldest age group was most prevalent in urban locations, 26.5% compared to rural (23.8%), and remote (18.8%) locations.

Table 3.12: Age distribution of respondents to the Dental Satisfaction Surveys by location (unweighted)

	Location			Total
	Urban	Rural	Remote	
Number	1862	770	138	2770
Age (%)				
18–24 years	8.7	7.8	7.2	8.4
25–44 years	32.7	33.9	45.7	33.7
45–64 years	32.1	34.5	28.3	32.6
65+ years	26.5	23.8	18.8	25.4

Source: 1994, 1995, 1996 Dental Satisfaction Surveys

¹ Wilkin D, Hallam L, Doggett M (1993). Measures of need and outcome for primary health care. New York: Oxford University Press.

Table 3.13 shows the mean satisfaction score by residential location. All groups recorded mean scores which indicate satisfaction with their most recent dental visit or series of visits, with scores ranging from 3.92 to 4.35 (measured on a scale of 1 = strongly dissatisfied to 5 = strongly satisfied; with 3 = mid-point).

It can be seen that the lowest mean scores occurred among those who reside in remote locations, while the scores for urban and rural dwellers were similar except for the content category, 4.23 urban cf. 4.15 rural. Statistical tests (analysis of variance (ANOVA)) showed that there were significant differences by location in the mean scores for all conceptual categories, with the scores of those who reside in remote locations being significantly lower than the other groups. There was also a significant difference in the content score between urban and rural residents.

The satisfaction scores for all respondents ranged from 4.21 in the content category to 4.29 for the context category. As may be expected, residents of remote locations appeared to be at some disadvantage in accessing dental care that they find satisfactory.

Table 3.13: Mean satisfaction score for conceptual categories by residential location – dentate persons aged 18+ whose last visit was within the previous 12 months

	Location			Total (mean)
	Urban (mean) <i>n=1862</i>	Rural (mean) <i>n=770</i>	Remote (mean) <i>n=138</i>	
All				<i>n=2770</i>
Context*	4.28	4.35	3.92	4.29
Content*†	4.23	4.15	3.94	4.21
Outcome*	4.22	4.27	4.04	4.23
Satisfaction*	4.24	4.26	3.97	4.24

* Sig. $p < 0.05$ one-way ANOVA (urban, rural, remote)

† Sig. $p < 0.05$ one-way ANOVA (urban, rural)

N.B. context = appointment/waiting time, dentist and clinic staff issues
 content = communication, explanation of treatment and options, thoroughness of services
 outcome = service results, improvement in oral health

Source: 1994, 1995, 1996 Dental Satisfaction Surveys

Table 3.14 shows the mean satisfaction score by residential location and age group. Statistical tests (ANOVA) showed that there were significant differences in the mean scores for all four measures of satisfaction by age group, with a gradient of scores across age groups. There was considerable variation in mean scores for the aspects of satisfaction with the most recent dental visit or series of visits. The highest mean score, 4.51, was close to the maximum attainable (scale of 1 to 5) while the lowest, 3.66, was above the mid-point or neutral area of the scale.

Younger age groups reported lower levels of satisfaction than the older groups, and in general those who reside in remote locations recorded the lowest mean scores, with similar scores for urban and rural dwellers. The only age group in which urban respondents had lower scores than those from rural and remote locations was the 18–24-year-olds, where numbers in the remote group are too low to regard the mean score as reliable. The lowest mean scores by location occurred in the 25–44-year-old age group, where the overall satisfaction score was 3.76 for remote dwellers, compared to 4.18 for rural and 4.17 for urban dwellers.

There were differences evident between urban and rural dwellers for the content category in the 25–44 and 65+ age groups, with rural dwellers recording lower mean scores.

Table 3.14: Mean satisfaction score for conceptual categories by residential location and age group – dentate persons aged 18+ whose last visit was within the previous 12 months

	Location			Total (mean)
	Urban (mean)	Rural (mean)	Remote (mean)	
Age group†				
18–24 years	<i>n=161</i>	<i>n=60</i>	<i>n=10</i>	<i>n=231</i>
Context	3.99	4.12	4.12	4.01
Content	4.11	4.15	4.13	4.12
Outcome	4.08	4.07	3.67	4.07
Satisfaction	4.05	4.13	4.09	4.06
25–44 years	<i>n=606</i>	<i>n=261</i>	<i>n=63</i>	<i>n=930</i>
Context	4.23	4.36	3.66	4.25
Content	4.16	4.01	3.66	4.12
Outcome	4.15	4.17	3.97	4.15
Satisfaction	4.17	4.18	3.76	4.17
45–64 years	<i>n=596</i>	<i>n=265</i>	<i>n=39</i>	<i>n=900</i>
Context	4.40	4.36	4.20	4.39
Content	4.28	4.31	4.21	4.29
Outcome	4.31	4.41	4.13	4.33
Satisfaction	4.33	4.35	4.15	4.34
65+ years	<i>n=491</i>	<i>n=183</i>	<i>n=26</i>	<i>n=700</i>
Context	4.51	4.44	4.27	4.50
Content	4.48	4.36	4.46	4.46
Outcome	4.43	4.50	4.44	4.44
Satisfaction	4.47	4.45	4.40	4.47
All	<i>n=1862</i>	<i>n=770</i>	<i>n=138</i>	<i>n=2770</i>
Context*	4.28	4.35	3.92	4.29
Content*	4.23	4.15	3.94	4.21
Outcome*	4.22	4.27	4.04	4.23
Satisfaction*	4.24	4.26	3.97	4.24

* Sig. $p < 0.05$ one-way ANOVA (urban, rural, remote)

† Sig. $p < 0.05$ one-way ANOVAs (age group by context, content, outcome and satisfaction)

N.B. context = appointment/waiting time, dentist and clinic staff issues
content = communication, explanation of treatment and options, thoroughness of services
outcome = service results, improvement in oral health

Source: 1994, 1995, 1996 Dental Satisfaction Surveys

Table 3.15 shows the mean satisfaction scores recorded by male and female participants. There were statistically significant differences (ANOVA) by gender in the total mean score for each conceptual category, with females reporting higher levels of satisfaction (overall satisfaction 4.27 cf. 4.20 for males). The differences between the groups by residential location were independent of gender; both males and females from remote locations recorded lower scores than their urban and rural counterparts.

The mean satisfaction scores ranged from 3.83 (context for males from remote locations) to 4.38 (context for females from rural locations). The greatest differences by location occurred in the context category, where the remote location scores were more than 0.30 lower than the group means (3.83 cf. 4.25 for males and 3.98 cf. 4.32 for females). The context category includes items on distance, travel and ease of making appointments, in relation to which patients from remote locations are likely to experience difficulties.

Table 3.15: Mean satisfaction score for conceptual categories by residential location and gender – dentate persons aged 18+ whose last visit was within the previous 12 months

	Location			Total (mean)
	Urban (mean)	Rural (mean)	Remote (mean)	
Gender†				
Male	<i>n=697</i>	<i>n=322</i>	<i>n=50</i>	<i>n=1069</i>
Context	4.24	4.32	3.83	4.25
Content	4.21	4.05	3.97	4.17
Outcome	4.19	4.19	3.94	4.19
Satisfaction	4.21	4.19	3.93	4.20
Female	<i>n=1165</i>	<i>n=448</i>	<i>n=88</i>	<i>n=1701</i>
Context	4.32	4.38	3.98	4.32
Content	4.25	4.26	3.93	4.24
Outcome	4.25	4.35	4.09	4.26
Satisfaction	4.27	4.33	3.99	4.27
All	<i>n=1862</i>	<i>n=770</i>	<i>n=138</i>	<i>n=2770</i>
Context*	4.28	4.35	3.92	4.29
Content*	4.23	4.15	3.94	4.21
Outcome*	4.22	4.27	4.04	4.23
Satisfaction*	4.24	4.26	3.97	4.24

* Sig. $p < 0.05$ one-way ANOVA (urban, rural, remote)

† Sig. $p < 0.05$ one-way ANOVAs (gender by context, content, outcome and satisfaction)

N.B. context = appointment/waiting time, dentist and clinic staff issues
 content = communication, explanation of treatment and options, thoroughness of services
 outcome = service results, improvement in oral health

Source: 1994, 1995, 1996 Dental Satisfaction Surveys

Table 3.16 shows that individuals who made their last dental visit in response to a problem had lower mean satisfaction scores for all conceptual categories. Statistical tests (ANOVA) revealed significant differences between check-up and problem in the group mean score for each conceptual category. Those persons from remote locations recorded lower satisfaction scores than other groups making problem-oriented dental visits; the scores ranged from 3.71 for context (appointment and dental staff aspects of the visit) to 3.98 for outcome of the visit.

Rural persons who last visited for a problem had lower scores than urban residents on the content sub-scale, 4.03 cf. 4.15, which relates to issues connected with communication and explanation of treatment needs and options.

Table 3.16: Mean satisfaction score for conceptual categories by residential location and reason for last visit – dentate persons aged 18+ whose last visit was within the previous 12 months

	Location			Total (mean)
	Urban (mean)	Rural (mean)	Remote (mean)	
Reason for last visit†				
Problem	<i>n=1045</i>	<i>n=468</i>	<i>n=93</i>	<i>n=1606</i>
Context	4.23	4.29	3.71	4.24
Content	4.15	4.03	3.85	4.11
Outcome	4.09	4.14	3.98	4.10
Satisfaction	4.16	4.17	3.87	4.15
Check-up	<i>n=816</i>	<i>n=301</i>	<i>n=45</i>	<i>n=1162</i>
Context	4.33	4.42	4.28	4.35
Content	4.32	4.33	4.10	4.32
Outcome	4.36	4.45	4.13	4.38
Satisfaction	4.33	4.38	4.14	4.34
All	<i>n=1862</i>	<i>n=770</i>	<i>n=138</i>	<i>n=2770</i>
Context*	4.28	4.35	3.92	4.29
Content*	4.23	4.15	3.94	4.21
Outcome*	4.22	4.27	4.04	4.23
Satisfaction*	4.24	4.26	3.97	4.24

* Sig. $p < 0.05$ one-way ANOVA (urban, rural, remote)

† Sig. $p < 0.05$ one-way ANOVAs (reason for visit by context, content, outcome and satisfaction)

N.B. context = appointment/waiting time, dentist and clinic staff issues
 content = communication, explanation of treatment and options, thoroughness of services
 outcome = service results, improvement in oral health

Source: 1994, 1995, 1996 Dental Satisfaction Surveys

Table 3.17 presenting mean satisfaction scores by usual reason for dental visit showed that patients who normally visit for a check-up recorded higher scores (ANOVA) than those who usually visit for problems, although persons from remote locations recorded low scores whatever their usual reason for visiting. Urban and rural dwellers who usually visit for a problem both recorded 4.11 (overall satisfaction) compared to 4.30 (urban) and 4.39 (rural) among those who usually visit for a check-up.

The greatest difference between urban and rural residents who usually visit in response to a problem occurred in the content category, 4.10 cf. 3.99.

Table 3.17: Mean satisfaction score for conceptual categories by residential location and usual reason for visit – dentate persons aged 18+ whose last visit was within the previous 12 months

	Location			Total (mean)
	Urban (mean)	Rural (mean)	Remote (mean)	
Usual visit†				
Problem	n=647	n=352	n=63	n=1062
Context	4.22	4.23	3.75	4.21
Content	4.10	3.99	3.96	4.06
Outcome	4.00	4.07	4.14	4.02
Satisfaction	4.11	4.11	3.98	4.11
Check-up	n=1208	n=416	n=75	n=1699
Context	4.32	4.44	4.09	4.34
Content	4.29	4.29	3.93	4.29
Outcome	4.32	4.44	3.94	4.34
Satisfaction	4.30	4.39	3.96	4.31
All	n=1862	n=770	n=138	n=2770
Context*	4.28	4.35	3.92	4.29
Content*	4.23	4.15	3.94	4.21
Outcome*	4.22	4.27	4.04	4.23
Satisfaction*	4.24	4.26	3.97	4.24

* Sig. $p < 0.05$ one-way ANOVA (urban, rural, remote)

† Sig. $p < 0.05$ one-way ANOVAs (usual visit by context, content, outcome and satisfaction)

N.B. context = appointment/waiting time, dentist and clinic staff issues
 content = communication, explanation of treatment and options, thoroughness of services
 outcome = service results, improvement in oral health

Source: 1994, 1995, 1996 Dental Satisfaction Surveys

Satisfaction scores for individuals who may experience financial barriers when accessing dental care are presented in Table 3.18. There were significant differences (ANOVA) by difficulty with a \$100 dental bill in scores for all satisfaction categories, with overall satisfaction 4.27 for those with little or no difficulty compared to 3.93 for a lot of difficulty with a \$100 dental bill.

Those persons who reported that they would have a lot of difficulty with a \$100 dental bill showed considerable difference by residential location—rural dwellers recorded the lowest scores (range 3.61 to 3.81), with urban substantially higher (3.88 to 4.02). Persons from remote locations recorded higher scores, for context, content and overall satisfaction; however, these scores are based on low numbers of respondents.

Urban and rural persons who reported that they would have little or no difficulty with a \$100 dental bill showed high levels of satisfaction (4.27 and 4.31 respectively), while persons from remote locations rated their most recent dental visit much lower, 3.95.

Table 3.18: Mean satisfaction score for conceptual categories by residential location and difficulty with a \$100 expense – dentate persons aged 18+ whose last visit was within the previous 12 months

	Location			Total (mean)
	Urban (mean)	Rural (mean)	Remote (mean)	
Difficulty with \$100 bill†				
A lot	n=279	n=126	n=23	n=428
Context	4.00	3.81	4.31	3.96
Content	4.02	3.63	4.24	3.93
Outcome	3.88	3.61	3.83	3.82
Satisfaction	3.97	3.75	4.16	3.93
None/hardly any/a little	n=1575	n=641	n=115	n=2331
Context*	4.31	4.40	3.89	4.32
Content*	4.25	4.21	3.92	4.24
Outcome*	4.26	4.34	4.05	4.27
Satisfaction*	4.27	4.31	3.95	4.27

* Sig. $p < 0.05$ one-way ANOVA (urban, rural, remote)

† Sig. $p < 0.05$ one-way ANOVAs (difficulty by context, content, outcome and satisfaction)

N.B. context = appointment/waiting time, dentist and clinic staff issues
 content = communication, explanation of treatment and options, thoroughness of services
 outcome = service results, improvement in oral health

Source: 1994, 1995, 1996 Dental Satisfaction Surveys

Table 3.19 shows that dentate adults who reported that they experienced a large financial burden due to their dental visits in the last 12 months had significantly lower (ANOVA) satisfaction scores for all conceptual categories. The greatest difference occurred in the outcome sub-scale, 3.87 cf. 4.27.

Those who reported 'a large burden' would not include card-holders who last received public-funded dental care unless they had made additional visits (during the previous 12 months) at their own expense. The low satisfaction scores reported by persons from remote locations experiencing hardship were particularly noticeable (e.g. context 3.42 cf. 4.21). These scores were based on low numbers of respondents (10) but consistently show that persons from remote locations have difficulties in accessing dental care that they regard as satisfactory.

There were noticeable differences by residential location among those who reported 'little or no burden', with overall satisfaction scores ranging from 3.98 for those persons from remote locations to 4.27 for urban persons and 4.28 for rural dwellers.

Table 3.19: Mean satisfaction score for conceptual categories by residential location and financial burden – dentate persons aged 18+ whose last visit was within the previous 12 months

	Location			Total (mean)
	Urban (mean)	Rural (mean)	Remote (mean)	
Financial burden†				
Large	<i>n=201</i>	<i>n=68</i>	<i>n=10</i>	<i>n=279</i>
Context	4.23	4.15	3.42	4.21
Content	3.97	4.04	3.78	3.98
Outcome	3.84	4.00	4.16	3.87
Satisfaction	4.02	4.04	3.80	4.02
None/hardly any/a little	<i>n=1653</i>	<i>n=697</i>	<i>n=128</i>	<i>n=2478</i>
Context	4.29	4.37	3.96	4.30
Content	4.26	4.16	3.95	4.23
Outcome	4.27	4.30	4.03	4.27
Satisfaction	4.27	4.28	3.98	4.27
All	<i>n=1862</i>	<i>n=770</i>	<i>n=138</i>	<i>n=2770</i>
Context*	4.28	4.35	3.92	4.29
Content*	4.23	4.15	3.94	4.21
Outcome*	4.22	4.27	4.04	4.23
Satisfaction*	4.24	4.26	3.97	4.24

* Sig. $p < 0.05$ one-way ANOVA (urban, rural, remote)

† Sig. $p < 0.05$ one-way ANOVAs (burden by context, content, outcome and satisfaction)

N.B. context = appointment/waiting time, dentist and clinic staff issues
 content = communication, explanation of treatment and options, thoroughness of services
 outcome = service results, improvement in oral health

Source: 1994, 1995, 1996 Dental Satisfaction Surveys

Table 3.20 presents satisfaction scores by residential location and dental insurance. Individuals who had dental insurance recorded significantly higher satisfaction scores for all categories. The largest difference by insurance status was among those persons from urban area, with overall satisfaction scores 4.38 for insured compared with 4.11 for uninsured.

Satisfaction scores of rural persons appeared to be affected less by insurance than urban persons, with the range of scores 4.32 for insured and 4.21 for uninsured.

Among the persons from remote locations insurance did not appear to affect satisfaction scores, with insured persons recording 3.99 and uninsured 3.94 for overall satisfaction.

Table 3.20: Mean satisfaction score for conceptual categories by residential location and dental insurance – dentate persons aged 18+ whose last visit was within the previous 12 months

	Location			Total (mean)
	Urban (mean)	Rural (mean)	Remote (mean)	
Dental insurance†				
No	n=992	n=461	n=79	n=1532
Context	4.15	4.29	4.00	4.19
Content	4.10	4.07	3.84	4.09
Outcome	4.08	4.24	3.93	4.11
Satisfaction	4.11	4.21	3.94	4.13
Yes	n=862	n=306	n=59	n=1227
Context	4.41	4.42	3.86	4.40
Content	4.37	4.25	4.02	4.34
Outcome	4.37	4.31	4.12	4.36
Satisfaction	4.38	4.32	3.99	4.36
All	n=1862	n=770	n=138	n=2770
Context*	4.28	4.35	3.92	4.29
Content*	4.23	4.15	3.94	4.21
Outcome*	4.22	4.27	4.04	4.23
Satisfaction*	4.24	4.26	3.97	4.24

* Sig. $p < 0.05$ one-way ANOVA (urban, rural, remote)

† Sig. $p < 0.05$ one-way ANOVAs (insurance status by context, content, outcome and satisfaction)

N.B. context = appointment/waiting time, dentist and clinic staff issues
 content = communication, explanation of treatment and options, thoroughness of services
 outcome = service results, improvement in oral health

Source: 1994, 1995, 1996 Dental Satisfaction Surveys

Table 3.21 presents the mean scores for each of the 31 individual items in the Dental Satisfaction Survey, sorted in ascending order for those respondents who live in remote locations. The column on the far right of the table shows the difference between scores for remote locations and the population mean for that item.

All individual items were rated according to the scale 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree. Mean scores of less than 3 indicate that there is overall dissatisfaction with that aspect of dental care, while scores between 3 and 4 indicate qualified satisfaction.

It can be seen that the persons from remote locations recorded scores lower than the mean for each item except 'feel financially protected', 'explained cost', and 'avoided unnecessary costs'. The difference in scores for the remaining 28 items ranges from 0.06 for 'cost affordable' to 0.56 for 'tended by preferred professional'.

Table 3.21 shows that more than half of the mean item scores for persons from remote locations were below 4.00, and only two items, 'friendly staff' and 'surgery well equipped' were above 4.40. Respondents from rural and urban locations rated the 31 items differently and had consistently higher item scores, with fewer items having mean scores below 4.00 (seven items for both rural and urban), and eight items (satisfied with care, confident of good dental care, explained treatment needed, tended by preferred professional, answered questions, same professional each visit, surgery well equipped, friendly staff) with scores of 4.40 or above.

Respondents from rural locations recorded lower mean scores than urban respondents for six items (good advice on dental care, explained options, thorough examination, explained treatment needed, answered questions, and explained procedures during treatment) of the seven that make up the content conceptual scale, which had a significantly lower mean satisfaction score for rural residents. These differences highlight issues that may be the result of lower availability of dentists in rural and remote locations.

Items for which the remote score is more than 0.35 lower than the population mean are marked with an asterisk (*), and include 'ease of arranging visit', 'explained procedures during treatment', 'prompt visit', 'distance to clinic', 'tended by preferred professional', 'satisfied with care', 'explained treatment needed', and 'same professional each visit'.

**Table 3.21: Mean satisfaction score for individual items by residential location
– dentate persons aged 18+ whose last visit was within the previous 12 months**

	Location			Total	Difference between total and remote
	Urban	Rural	Remote		
Financially protected (dental expenses)	2.81	3.07	3.12	2.88	-0.24
Explained cost before treatment	3.08	2.99	3.19	3.06	-0.13
Cost affordable	3.43	3.61	3.41	3.47	0.06
Attractive waiting room	3.59	3.69	3.45	3.61	0.16
Ease of arranging visit	4.02	4.12	3.62	4.04	0.42*
Avoided unnecessary treatment costs	3.49	3.47	3.67	3.49	-0.18
Travel to clinic convenient	4.13	4.18	3.69	4.14	0.45
Explained procedures during treatment	4.11	4.07	3.71	4.10	0.39*
Quality of care	3.94	4.06	3.76	3.96	0.20
Prompt visit	4.13	4.22	3.78	4.15	0.37*
Explained options	3.87	3.77	3.79	3.85	0.06
Distance to clinic	4.31	4.37	3.85	4.32	0.47*
Good advice on dental care	4.00	3.85	3.88	3.97	0.09
Waiting time at clinic	4.01	4.14	3.88	4.03	0.15
Thorough examination	4.16	4.06	3.94	4.14	0.20
Expected improvement	4.10	4.15	3.95	4.11	0.16
Tended by preferred professional	4.53	4.49	3.95	4.51	0.56*
Appropriate care	4.10	4.22	3.99	4.12	0.13
Impersonal professional	4.34	4.22	4.01	4.31	0.30
Satisfied with care	4.43	4.44	4.03	4.43	0.40*
Explained treatment needed	4.51	4.43	4.06	4.48	0.42*
No unexpected pain	4.11	4.23	4.07	4.14	0.07
Care improved dental health	4.39	4.39	4.09	4.38	0.29
No untreated problems	4.16	4.26	4.11	4.18	0.07
Problems fixed	4.25	4.26	4.13	4.25	0.12
Modern surgery	4.24	4.17	4.14	4.22	0.08
Same professional each visit	4.52	4.53	4.14	4.51	0.37*
Answered questions	4.53	4.44	4.20	4.50	0.30
Confident of good dental care	4.49	4.48	4.20	4.48	0.28
Surgery well equipped	4.57	4.57	4.42	4.56	0.14
Friendly staff	4.58	4.70	4.42	4.60	0.18

* Difference between mean and remote scores greater than 0.35

Source: 1994, 1995, 1996 Dental Satisfaction Surveys

3.6 Discussion

Adults from rural locations experienced a higher rate of edentulism than adults from remote or urban locations. Among those who were dentate, a higher percentage of persons from rural locations reported wearing a denture than remote or urban dwellers.

Dentate adults from remote locations were less likely to have made a dental visit in the previous 12 months than persons from rural or urban locations, and were more likely to have a time since last dental visit of 5 or more years. The group most likely to have last visited for a problem were persons from rural locations, followed by remote locations, and then urban locations. Persons from remote locations were the most likely to report that they usually visit for a dental problem, followed by persons from rural locations, then urban locations. Urban dwellers had a higher mean number of dental visits and scale and clean services in the previous 12 months than rural or remote dwellers. Persons from remote locations had more extractions and fewer fillings than persons from urban or rural locations.

Dentate remote dwellers had a slightly lower percentage than rural and urban dwellers reporting experience of toothache in the previous 12 months. The level of dental insurance was similar for persons from urban and remote locations, but was lower for persons from rural locations. Urban, rural, and remote dwellers reported a similar percentage for whom dental visits were a large financial burden, or who would have a lot of difficulty paying a \$100 dental bill.

Dental satisfaction scores for remote dwellers were significantly lower (ANOVA) than their urban and rural counterparts on all four measurement scales. On a scale of 1 to 5, overall satisfaction scores for remote dwellers were almost 0.30 lower than urban and rural dwellers, large differences given the nature of satisfaction scores. Rural dwellers recorded significantly lower scores than urban dwellers on the content scale (communication, explanation of treatment and options). Lower mean satisfaction scores were recorded by younger age groups, males, those who visited for a dental problem rather than for a check-up, those experiencing financial hardship, and uninsured persons. Within these groups, differences by location persisted, with the lowest satisfaction scores occurring among remote dwellers. Among those who reported that they would have a lot of difficulty with a \$100 dental bill, rural dwellers recorded the lowest satisfaction scores with urban substantially higher. Residents of remote locations appeared to be at some disadvantage in accessing dental care that they find satisfactory.

Across the population indicators presented, persons from rural and remote locations were found to generally have less favourable results than persons from urban locations. On no measure were persons from rural or remote locations found to have a substantial advantage over persons from urban locations. Persons from rural locations were more likely to: be edentulous, wear a denture, usually visit for a dental problem, and be uninsured than persons from urban locations. Persons from remote locations were more likely to: not have visited a dentist recently, usually visit for a dental problem, and have more extractions and fewer fillings than persons from urban locations.

4 Card-holders

This chapter presents findings related to Australian adults who reported that they possessed or were covered by a government concession card which would allow them to access public-funded dental care. It includes persons who have made private dental visits at their own expense, persons who have received public-funded dental care, and persons who received care from a private practitioner that was paid for by public funds. The findings are not restricted by time since last dental visit, and include adults who have not made a recent dental visit.

Tables 4.1 to 4.11 are of exactly the same structure as Tables 3.1 to 3.11; the indicators presented in this chapter are the same as those presented in Chapter 3. The only difference between the two sets of tables is that the data in this chapter has been restricted to card-holders only.

4.1 Sample yield

There was a total of 4,692 interviews of adult card-holders obtained from the 1994, 1995, and 1996 National Dental Telephone Interview Surveys. Among the adult card-holder sample, 60.5% (2,838) were from urban locations, 35.2% (1,652) from rural locations, and 4.0% (188) from remote locations.

The age distribution of adult card-holders was relatively similar for urban and rural locations—rural locations having just a slightly older age distribution. Remote locations had the youngest age distribution, 37.8% aged 18–44 years compared with approximately one-quarter in urban or rural locations.

Table 4.1: Age distribution of adult card-holders from the National Dental Telephone Interview Surveys by location (unweighted)

	Location			Total
	Urban	Rural	Remote	
Number	2838	1652	188	4692
Age (%)				
18–24 years	9.9	6.3	10.1	8.7
25–44 years	17.8	17.7	27.7	18.2
45–64 years	25.6	28.0	19.7	26.2
65+ years	46.7	48.0	42.6	46.9

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

4.2 Oral health status

Table 4.2 shows the dentate status of card-holders by residential location and age group. Edentulism (having no natural teeth) increased across age groups, reflecting both the accumulation of disease experience and changing treatment philosophies over time. Nearly all 18–24-year-old card-holders were dentate (had at least one natural tooth), and only 2.0% of all 25–44-year-old card-holders were edentulous.

For each age group, edentulism rates were approximately equal for persons in urban and remote locations. However, across all four age groups of card-holders, a greater percentage of rural dwellers were edentulous than urban or remote dwellers. Among 45–64-year-old card-holders approximately 23% of persons from urban or remote locations were edentulous, compared with 34.4% from rural locations.

Table 4.2: Dentate status of card-holders by location and age group

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
18–24 years	<i>n</i>=281	<i>n</i>=104	<i>n</i>=19	<i>n</i>=408
Dentate	100.0	99.4	100.0	99.9
Edentulous	0.0	*0.6	0.0	*0.1
25–44 years	<i>n</i>=506	<i>n</i>=293	<i>n</i>=52	<i>n</i>=854
Dentate	98.2	97.4	99.2	98.0
Edentulous	*1.8	*2.6	*0.8	*2.0
45–64 years	<i>n</i>=727	<i>n</i>=462	<i>n</i>=37	<i>n</i>=1229
Dentate	77.0	65.6	†77.2	73.5
Edentulous	23.0	34.4	*22.8	26.5
65+ years	<i>n</i>=1324	<i>n</i>=793	<i>n</i>=80	<i>n</i>=2201
Dentate	55.0	44.2	53.6	52.0
Edentulous	45.0	55.8	46.4	48.0
Total	<i>n</i>=2838	<i>n</i>=1652	<i>n</i>=188	<i>n</i>=4692
Dentate	75.8	68.7	80.1	73.8
Edentulous	24.2	31.3	19.9	26.2

* estimate has a relative standard error greater than 25%

† estimate has a standard error greater than 10%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

The percentage of dentate card-holders wearing a denture by residential location and age group is presented in Table 4.3. As was the case for edentulism, the use of dentures increased with increasing age. Denture use among dentate card-holders aged 45–64 years was highest in rural locations (50.8%). However, the highest percentage among persons aged 65 years or more was recorded for persons from remote locations (78.9%).

Table 4.3: Percentage of persons wearing a denture by location and age group – dentate card-holders

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
Age	<i>n</i>=2023	<i>n</i>=1033	<i>n</i>=141	<i>n</i>=3208
18–24 years	*1.2	*2.4	*4.9	*1.6
25–44 years	9.8	13.1	*14.2	10.9
45–64 years	41.2	50.8	*44.9	43.9
65+ years	62.0	69.3	78.9	64.2
Total	31.3	34.8	31.7	32.2

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

4.3 Access to services

Presented in Table 4.4 is the time since last dental visit among dentate card-holders. Overall, just over half of dentate card-holders reported that their last dental visit was in the previous 12 months. The group most likely to have made a dental visit in the last 12 months were 45–64-year-old persons from urban locations. With the exception of the 18–24-year-old age group (for which there were very few card-holders from remote locations), over 50% of those from remote locations reported a time since last dental visit of 2 or more years.

Table 4.4: Time since last dental visit by location and age group – dentate card-holders

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
18–24 years	n=281	n=102	n=19	n=406
<12 months	51.3	56.3	*51.4	52.3
1–<2 years	22.3	*13.5	*30.3	20.3
2–<5 years	14.8	*16.6	*3.2	15.3
5+ years	11.5	*13.5	*15.0	12.1
25–44 years	n=493	n=285	n=51	n=832
<12 months	49.6	53.1	*38.0	50.4
1–<2 years	21.7	19.9	*10.2	20.7
2–<5 years	14.6	17.3	*33.9	16.1
5+ years	14.1	9.7	*17.9	12.8
45–64 years	n=551	n=304	n=28	n=884
<12 months	61.7	49.4	*39.9	58.1
1–<2 years	16.6	19.0	*5.7	17.1
2–<5 years	12.6	14.4	*51.9	13.6
5+ years	9.2	17.1	*2.6	11.2
65+ years	n=688	n=335	n=43	n=1069
<12 months	56.6	42.6	*36.2	52.9
1–<2 years	17.1	15.5	*8.5	16.5
2–<5 years	13.9	18.4	*27.8	15.2
5+ years	12.4	23.5	*27.5	15.3
Total	n=2013	n=1026	n=141	n=3191
<12 months	54.9	50.1	40.7	53.3
1–<2 years	19.2	17.6	*13.5	18.6
2–<5 years	13.9	16.8	*28.3	15.1
5+ years	11.9	15.6	17.4	13.0

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

The reason for a person's last dental visit was asked of persons whose last visit was in the previous 12 months, and Table 4.5 reports on the dentate card-holders. Overall, approximately two-thirds of card-holders reported a problem as the reason for their last dental visit. Persons from urban and rural locations were relatively similar for each age group except for 45–64-year-olds where 61.7% of urban dwellers reported a problem as the reason for last visit compared with 75.8% from rural locations.

Table 4.5: Reason for last dental visit by location and age group – dentate card-holders whose last dental visit was less than 12 months ago

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
18–24 years	<i>n=134</i>	<i>n=59</i>	<i>n=8</i>	<i>n=201</i>
Problem	52.5	56.5	*61.0	53.8
Check-up	47.5	43.5	*39.0	46.2
25–44 years	<i>n=237</i>	<i>n=143</i>	<i>n=30</i>	<i>n=412</i>
Problem	71.6	70.9	*48.2	70.9
Check-up	28.4	29.1	†51.8	29.1
45–64 years	<i>n=316</i>	<i>n=148</i>	<i>n=14</i>	<i>n=478</i>
Problem	61.7	75.8	*68.3	65.0
Check-up	38.3	24.2	*31.7	35.0
65+ years	<i>n=386</i>	<i>n=143</i>	<i>n=17</i>	<i>n=548</i>
Problem	63.6	64.4	†84.5	64.0
Check-up	36.4	35.6	*15.5	36.0
Total	<i>n=1073</i>	<i>n=493</i>	<i>n=69</i>	<i>n=1639</i>
Problem	63.3	68.1	62.1	64.5
Check-up	36.7	31.9	*37.9	35.5

* estimate has a relative standard error greater than 25%

† estimate has a standard error greater than 10%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

The data for Table 4.6 relate to dentate card-holders whose last dental visit was in the previous 12 months. Presented are the mean number of visits, extractions, fillings, and scale and clean services per person in the last 12 months by residential location and age group. The average number of visits per person was highest among persons from urban locations (2.65 visits) and declined to 2.10 visits in rural locations, and to 1.87 visits in remote locations. Overall, persons from remote locations reported a greater number of extractions and a lower number of fillings on average than persons from urban or rural locations. Card-holders from urban locations had a greater number of scale and clean services per person (0.87) than did persons from rural or remote locations (0.63 and 0.61 respectively).

Table 4.6: Mean number of dental visits and routine services in previous 12 months by location and age group – dentate card-holders whose last dental visit was less than 12 months ago

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
Number of visits in last 12 months	n=1072	n=493	n=68	n=1637
18–24 years	2.89	1.94	1.34	2.60
25–44 years	3.11	2.08	2.00	2.75
45–64 years	2.46	2.16	*2.37	2.39
65+ years	2.29	2.19	2.02	2.27
<i>Total</i>	2.65	2.10	1.87	2.49
Number of extractions in last 12 months	n=1072	n=491	n=69	n=1636
18–24 years	*0.52	*0.62	*0.96	0.56
25–44 years	0.43	0.32	*0.47	0.39
45–64 years	*0.40	0.40	*0.27	0.40
65+ years	0.22	*0.32	*0.57	0.24
<i>Total</i>	0.37	0.39	*0.60	0.38
Number of fillings in last 12 months	n=1071	n=491	n=69	n=1635
18–24 years	0.66	*0.91	*0.12	0.71
25–44 years	1.48	1.23	*0.81	1.39
45–64 years	1.11	0.81	*0.85	1.04
65+ years	0.97	0.82	*0.18	0.93
<i>Total</i>	1.09	0.98	*0.49	1.05
Number of scale and cleans in last 12 months	n=1067	n=484	n=68	n=1623
18–24 years	1.02	0.57	*0.45	0.89
25–44 years	0.76	0.63	0.78	0.72
45–64 years	0.90	0.70	*0.79	0.85
65+ years	0.87	0.62	*0.39	0.82
<i>Total</i>	0.87	0.63	0.61	0.81

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

Table 4.7 presents the percentage of card-holders who had extractions, fillings, and scale and clean services among dentate card-holders whose last dental visit was in the previous 12 months. The percentage of dentate adult card-holders who reported having an extraction in the last 12 months was highest among persons from remote locations (29.4%) followed by rural locations (25.3%) and then urban locations (19.7%). The reverse trend was observed for the percentage receiving fillings or scale and clean services—remote locations having the lowest percentage and urban locations the highest.

Table 4.7: Percentage of persons receiving routine dental services in previous 12 months by location and age group – dentate card-holders whose last dental visit was less than 12 months ago

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
Extractions	<i>n=1072</i>	<i>n=491</i>	<i>n=69</i>	<i>n=1636</i>
18–24 years	20.9	36.7	*24.1	25.1
25–44 years	23.3	23.1	*31.1	23.3
45–64 years	22.4	29.5	*26.8	24.1
65+ years	13.5	*14.9	*34.9	14.0
<i>Total</i>	19.7	25.3	*29.4	21.2
Fillings	<i>n=1071</i>	<i>n=491</i>	<i>n=69</i>	<i>n=1635</i>
18–24 years	37.4	32.7	*3.6	35.1
25–44 years	66.5	55.1	*46.1	62.5
45–64 years	52.6	51.8	*52.3	52.4
65+ years	54.6	54.2	*18.0	53.9
<i>Total</i>	54.2	50.0	*29.4	52.7
Scale and clean	<i>n=1067</i>	<i>n=484</i>	<i>n=68</i>	<i>n=1623</i>
18–24 years	70.1	48.4	*14.6	62.9
25–44 years	63.5	52.9	77.3	60.7
45–64 years	71.4	59.6	*51.4	68.5
65+ years	68.7	49.4	*37.1	64.7
<i>Total</i>	68.3	53.0	48.2	64.2

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

All persons were asked whether their usual reason for making a dental visit was for a problem or for a check-up. Table 4.8 presents the results for dentate card-holders. Overall, approximately 60% of card-holders reported a problem as their usual reason for a dental visit, and 40% a check-up as their usual reason for a visit.

Card-holders from urban locations were the group least likely to report a problem as their usual reason for a dental visit. The percentage usually visiting for a problem for each age group, and overall, was lower in urban locations than in rural or remote locations.

Table 4.8: Usual reason for a dental visit by location and age group – dentate card-holders

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
18–24 years	<i>n=279</i>	<i>n=101</i>	<i>n=19</i>	<i>n=403</i>
Problem	49.2	57.7	*49.3	51.2
Check-up	50.8	42.3	*50.7	48.8
25–44 years	<i>n=494</i>	<i>n=283</i>	<i>n=51</i>	<i>n=831</i>
Problem	61.4	62.9	82.3	62.6
Check-up	38.6	37.1	*17.7	37.4
45–64 years	<i>n=546</i>	<i>n=301</i>	<i>n=28</i>	<i>n=876</i>
Problem	52.5	71.0	†58.2	57.6
Check-up	47.5	29.0	*41.8	42.4
65+ years	<i>n=679</i>	<i>n=328</i>	<i>n=42</i>	<i>n=1052</i>
Problem	57.5	66.7	70.7	59.9
Check-up	42.5	33.3	*29.3	40.1
Total	<i>n=1998</i>	<i>n=1013</i>	<i>n=140</i>	<i>n=3162</i>
Problem	55.9	64.9	69.0	58.6
Check-up	44.1	35.1	31.0	41.4

* estimate has a relative standard error greater than 25%

† estimate has a standard error greater than 10%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

4.4 Social impact and economic factors

Dentate participants were asked about their experience of toothache during the previous 12 months. Table 4.9 reports on the percentage of card-holders responding that they experienced toothache 'very often', 'often', or 'sometimes' during the last 12 months.

The percentage of dentate card-holders reporting experience of toothache was lowest among persons from remote locations across all four age groups. Persons from rural locations tended to report less experience of toothache than persons from urban locations.

Table 4.9: Experience of toothache^(a) in previous 12 months by location and age group – dentate card-holders

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
Age	<i>n=2020</i>	<i>n=1031</i>	<i>n=140</i>	<i>n=3202</i>
18–24 years	21.7	*15.0	*3.2	19.5
25–44 years	23.0	16.5	*11.7	20.6
45–64 years	13.3	6.9	*4.2	11.4
65+ years	8.0	10.8	*0.9	8.5
Total	16.0	12.4	*6.3	14.8

(a) percentage of persons reporting 'very often', 'often', or 'sometimes' during the last 12 months

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

Dental insurance among card-holders by residential location and age group is presented in Table 4.10. Across all age groups, approximately one in five card-holders reported that they had dental insurance. Urban card-holders were the most highly insured (20.8%), followed by card-holders from rural locations (16.0%), then persons from remote locations (13.5%).

Table 4.10: Percentage of card-holders with dental insurance by location and age group

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
Age	<i>n=2831</i>	<i>n=1647</i>	<i>n=186</i>	<i>n=4678</i>
18–24 years	25.3	*20.6	*7.9	23.9
25–44 years	14.7	12.5	*17.1	14.1
45–64 years	24.1	18.9	*11.7	22.3
65+ years	20.6	14.8	*13.8	18.8
Total	20.8	16.0	*13.5	19.3

* estimate has a relative standard error greater than 25%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

Persons who made a dental visit in the previous 12 months were asked how much of a financial burden those visits were. The first half of Table 4.11 presents the percentage of dentate card-holders for whom those dental visits were a large financial burden. Overall, persons from urban locations were the most likely to report a large financial burden (12.0%) followed by rural locations (10.4%), and then remote locations (9.9%).

All persons were asked how much difficulty they would have in paying a \$100 dental bill, and the percentage of dentate card-holders reporting a lot of difficulty is presented in the second half of Table 4.11. Overall, persons from remote locations had the greatest percentage reporting a lot of difficulty in paying a \$100 dental bill (45.7%), compared with urban and rural locations (33.3% and 30.9% respectively).

Table 4.11: Affordability and hardship in purchasing dental care by location and age group – dentate card-holders

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
Dental visits in the last 12 months were a large financial burden^(a)	<i>n=1073</i>	<i>n=490</i>	<i>n=70</i>	<i>n=1637</i>
18–24 years	*11.3	*9.0	0.0	*10.4
25–44 years	13.7	*17.7	*5.3	14.7
45–64 years	14.2	*6.9	*23.3	12.6
65+ years	9.1	*3.1	*22.0	8.1
<i>Total</i>	<i>12.0</i>	<i>10.4</i>	<i>*9.9</i>	<i>11.6</i>
A lot of difficulty in paying a \$100 dental bill	<i>n=2007</i>	<i>n=1027</i>	<i>n=141</i>	<i>n=3186</i>
18–24 years	36.6	25.0	*40.2	33.8
25–44 years	42.6	38.6	†58.0	42.0
45–64 years	34.3	34.9	*21.9	34.3
65+ years	21.5	20.2	43.4	21.6
<i>Total</i>	<i>33.3</i>	<i>30.9</i>	<i>45.7</i>	<i>33.0</i>

(a) dentate adults whose last dental visit was less than 12 months ago

* estimate has a relative standard error greater than 25%

† estimate has a standard error greater than 10%

Source: 1994, 1995, 1996 National Dental Telephone Interview Surveys

4.5 Satisfaction scores

Mean satisfaction scores are presented by residential location and card-holder status in Table 4.12. Card-holders had significantly lower mean scores (ANOVA) for all four measures of satisfaction. It was expected that a higher proportion of rural and remote dwellers would be card-holders, which could explain their lower satisfaction scores. However the differences which emerged indicated that the residents of remote locations had quite different sources of variation. While card-holders in urban and rural locations recorded lower scores than non-card-holders, the reverse was the case for remote residents, with non-card-holders less satisfied than card-holders, their overall scores being 3.92 and 4.14 respectively. Card-holders from remote locations recorded high scores of 4.20 and 4.26 for context and content respectively. Card-holders from urban and rural locations had very similar scores ranging between 4.07 and 4.13 for urban residents, and 4.07 and 4.12 for rural residents.

Table 4.12: Mean satisfaction score for conceptual categories by residential location and card-holder status – dentate persons aged 18+ whose last visit was within the previous 12 months

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
Card-holder†				
Yes	<i>n=803</i>	<i>n=382</i>	<i>n=51</i>	<i>n=1236</i>
Context	4.13	4.12	4.20	4.13
Content	4.09	4.11	4.26	4.09
Outcome	4.07	4.07	3.94	4.07
Satisfaction	4.10	4.12	4.14	4.11
No	<i>n=1058</i>	<i>n=388</i>	<i>n=87</i>	<i>n=1533</i>
Context	4.31	4.42	3.85	4.33
Content	4.26	4.16	3.86	4.23
Outcome	4.25	4.33	4.06	4.27
Satisfaction	4.27	4.30	3.92	4.27
All	<i>n=1862</i>	<i>n=770</i>	<i>n=138</i>	<i>n=2770</i>
Context*	4.28	4.35	3.92	4.29
Content*	4.23	4.15	3.94	4.21
Outcome*	4.22	4.27	4.04	4.23
Satisfaction*	4.24	4.26	3.97	4.24

* Sig. $p < 0.05$ one-way ANOVA (urban, rural, remote)

† Sig. $p < 0.05$ one-way ANOVAs (card-holder by context, content, outcome and satisfaction)

N.B. context = appointment/waiting time, dentist and clinic staff issues
 content = communication, explanation of treatment and options, thoroughness of services
 outcome = service results, improvement in oral health

Source: 1994, 1995, 1996 Dental Satisfaction Surveys

4.6 Discussion

Adult card-holders from rural locations experienced higher rates of edentulism than card-holders from urban or remote locations, but among dentate persons only a slightly higher percentage reported wearing a denture.

Among dentate card-holders the percentage of persons who had a time since last dental visit of two or more years was greatest for those from remote locations, compared with urban and rural locations. Dentate card-holders from rural locations were more likely than persons from urban or remote locations to report that the reason for their last dental visit was for a dental problem. Dentate card-holders from urban locations were the least likely to usually visit a dentist for a problem, followed by rural locations, and then remote locations. Among dentate card-holders who had made a dental visit in the previous 12 months, those from urban locations had made more visits and had received more clean and scale services in the previous year than those from rural or remote locations. Those from remote locations received more extractions and fewer fillings than those from urban or rural locations.

Card-holders from remote locations were the least likely to report experience of toothache in the previous 12 months, then persons from rural locations, and then those from urban locations. Urban dwellers were the most likely to have dental insurance, which declined for rural dwellers and further again for card-holders in remote locations. While there was only slight variation in the percentage of card-holders who reported that dental visits in the last 12 months were a large financial burden, much higher percentages of card-holders from remote locations reported that they would have a lot of difficulty in paying a \$100 dental bill than either rural or urban dwellers.

Significantly lower (ANOVA) dental satisfaction scores were recorded by card-holders than non-card-holders; however, differences by location did not occur, with similar overall scores for urban, rural and remote card-holders. Although overall satisfaction scores of residents of remote locations were well below the population mean, remote dwelling card-holders recorded higher scores than non-card-holders.

Among card-holders, persons from rural and remote locations were found to generally have less favourable results than persons from urban locations. Only with regard to lower experience of toothache did card-holders from rural or remote locations have what may be considered a more favourable result, but even this result could be considered to reflect a survivor with the healthiest teeth being retained by persons from these locations. Card-holders from rural locations were more likely to: be edentulous, wear a denture, have fewer dental visits, usually visit for a dental problem, and not be insured than card-holders from urban locations. Card-holders from remote locations were more likely to: have not visited a dentist recently, usually visit for a dental problem, have fewer visits, more extractions, fewer fillings, not be insured, and have a lot of difficulty in paying a \$100 dental bill than card-holders from urban locations.

5 Public-funded dental patients

This chapter presents findings related to patients receiving public-funded dental care. This may include care provided at public dental clinics as well as care provided by private practitioners to eligible patients which was paid for by public funds. Patients eligible for public dental care were primarily holders of government health cards.

Results are presented on the type of care received, oral health status, and services provided. Type of care is defined as emergency, general, screen and other, with emergency care relating to care provided for relief of pain. Oral health status refers to the health status recorded at the beginning of a course of dental care. The oral health measures recorded were dentate status, periodontal status, and coronal caries and root caries experience. Periodontal status was assessed using the Community Periodontal Index of Treatment Needs (CPITN), while coronal caries status is reported using the DMFT index.

Service provision refers to items of treatment received during a course of dental care. These items were classified into one of ten main areas of service following the ADA Schedule of Dental Services. The exceptions to this classification scheme were the placement of scale and clean items in the periodontic rather than preventive area, and temporary restorations along with other emergency service items were classified as a separate main area, labelled temporary. Service provision is presented as a percentage of persons receiving services, the percentage of total services, and the mean number of services per course of care.

5.1 Sample yield

A total of 4,556 patients were from urban locations (74.9%), 1,200 were from rural locations (19.7%) and 265 were from remote locations (4.4%).

There was a younger age distribution among patients from remote locations, with 20.2% in the 18–24 age group compared to 9.2% of rural dwellers and 10.0% of urban dwellers. The lowest percentage of patients aged 65 years or more were from remote locations (2.8%) compared to rural (22.7%) and urban locations (29.2%).

Table 5.1: Age distribution of public-funded dental patients by location (unweighted)

	Location			Total
	Urban	Rural	Remote	
Number	4556	1200	265	6083
Age (%)				
18–24 years	10.0	9.2	20.2	10.3
25–44 years	32.1	38.1	58.9	34.3
45–64 years	28.7	30.0	18.2	28.4
65+ years	29.2	22.7	2.8	26.8

Source: Prospective Adult Dental Programs Survey 1995–96

5.2 Type of care

Type of public-funded course of care is presented in Table 5.2 by location. In total, the majority of care consisted of emergency (57.5%) and general care (39.8%). The percentage of emergency care declined across successively older age groups from 67.2% among 18–24-year-olds to 52.4% among patients aged 65 years or more.

Overall, patients at urban locations had the highest percentage of emergency care (61.1%), compared to patients at rural (39.5%) and remote locations (38.6%). This pattern of emergency care by location occurred consistently across each age group. The percentage of patients receiving general care was highest at remote locations for all age groups less than 65 years of age.

Table 5.2: Type of public-funded course of care by location

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
18–24 years	<i>n=447</i>	<i>n=105</i>	<i>n=50</i>	<i>n=613</i>
Emergency	70.2	54.6	44.3	67.2
General	29.5	40.2	54.7	31.8
Screen	0.0	4.6	1.0	0.6
Other	0.3	0.6	0.0	0.4
25–44 years	<i>n=1429</i>	<i>n=435</i>	<i>n=144</i>	<i>n=2034</i>
Emergency	63.4	39.0	39.0	58.8
General	35.8	56.2	59.7	39.8
Screen	0.7	4.5	1.3	1.3
Other	0.2	0.3	0.0	0.2
45–64 years	<i>n=1280</i>	<i>n=340</i>	<i>n=45</i>	<i>n=1680</i>
Emergency	61.3	37.1	31.3	57.3
General	37.0	55.1	68.0	40.2
Screen	1.6	7.6	0.7	2.3
Other	0.2	0.2	0.0	0.2
65+ years	<i>n=1295</i>	<i>n=258</i>	<i>n=7</i>	<i>n=1574</i>
Emergency	54.5	35.7	50.9	52.4
General	40.7	54.5	44.7	42.3
Screen	4.4	9.1	4.4	4.9
Other	0.3	0.7	0.0	0.4
All	<i>n=4556</i>	<i>n=1197</i>	<i>n=263</i>	<i>n=6083</i>
Emergency	61.1	39.5	38.6	57.5
General	36.8	53.7	60.1	39.8
Screen	1.9	6.5	1.4	2.5
Other	0.2	0.4	0.0	0.3

Source: Prospective Adult Dental Programs Survey 1995–96

5.3 Oral health status

Dentate status of public-funded patients is presented in Table 5.3 by location and age of patients. The percentage of edentulous patients (i.e. those having no natural teeth) increased across successively older age groups from 0.4% among 18–24-year-olds to 19.8% among patients aged 65 years or more. Overall, the rate of edentulism was higher among rural patients (10.9%) compared to urban (7.3%) and remote patients (2.9%). This pattern by location occurred consistently across each age group.

Table 5.3: Dentate status of public-funded dental patients by location

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
18–24 years	<i>n=445</i>	<i>n=105</i>	<i>n=50</i>	<i>n=611</i>
Dentate	99.7	98.6	100.0	99.6
Edentulous	0.3	1.4	0.0	0.4
25–44 years	<i>n=1420</i>	<i>n=435</i>	<i>n=146</i>	<i>n=2028</i>
Dentate	99.1	97.6	100.0	98.8
Edentulous	0.9	2.4	0.0	1.2
45–64 years	<i>n=1273</i>	<i>n=342</i>	<i>n=45</i>	<i>n=1675</i>
Dentate	93.7	85.5	90.1	92.6
Edentulous	6.3	14.5	9.9	7.4
65+ years	<i>n=1303</i>	<i>n=259</i>	<i>n=7</i>	<i>n=1583</i>
Dentate	81.2	74.8	95.6	80.2
Edentulous	18.8	25.2	4.4	19.8
All	<i>n=4546</i>	<i>n=1200</i>	<i>n=265</i>	<i>n=6080</i>
Dentate	92.7	89.1	97.1	92.2
Edentulous	7.3	10.9	2.9	7.8

Source: Prospective Adult Dental Programs Survey 1995–96

In Table 5.4 periodontal status is presented as the worst sextant CPITN score by location and age. CPITN scores range from a best score of periodontal health to a worst score of periodontal pockets of 6+ mm. In total, periodontal status is worse among older patients, with the highest percentage of patients with periodontal pockets of 4–5 mm occurring among patients aged 45–64 and 65 years or older. Overall, patients from remote locations had the highest percentage with periodontal pockets of 6+ mm, and this pattern occurred in all age groups less than 65 years of age.

Table 5.4: Periodontal status (worst sextant CPITN score) of public-funded dental patients by location – dentate patients

	Location			Total
	Urban	Rural	Remote	
	%	%	%	%
18–24 years	<i>n=415</i>	<i>n=90</i>	<i>n=35</i>	<i>n=549</i>
Periodontal health	9.8	15.4	2.1	10.1
Bleeding	23.6	27.2	10.2	23.4
Calculus	46.2	51.4	70.7	47.9
Pockets 4–5 mm	17.9	6.0	12.7	16.4
Pockets 6+ mm	2.5	0.0	4.2	2.2
25–44 years	<i>n=1277</i>	<i>n=379</i>	<i>n=104</i>	<i>n=1779</i>
Periodontal health	5.9	13.8	0.7	7.0
Bleeding	9.0	15.8	10.1	10.0
Calculus	50.0	56.4	43.0	51.0
Pockets 4–5 mm	24.7	10.7	20.1	22.3
Pockets 6+ mm	10.4	3.2	26.1	9.7
45–64 years	<i>n=991</i>	<i>n=263</i>	<i>n=33</i>	<i>n=1300</i>
Periodontal health	3.5	14.9	4.3	5.1
Bleeding	8.3	17.3	0.0	9.2
Calculus	36.4	44.0	3.4	36.5
Pockets 4–5 mm	32.1	15.6	55.4	30.2
Pockets 6+ mm	19.8	8.3	37.0	18.9
65+ years	<i>n=813</i>	<i>n=167</i>	<i>n=4</i>	<i>n=991</i>
Periodontal health	5.0	17.2	28.1	6.7
Bleeding	11.8	19.0	0.0	12.6
Calculus	37.2	33.5	0.0	36.3
Pockets 4–5 mm	30.7	25.1	66.6	30.5
Pockets 6+ mm	15.4	5.2	5.3	13.9
All	<i>n=3589</i>	<i>n=950</i>	<i>n=188</i>	<i>n=4775</i>
Periodontal health	5.7	15.6	5.4	7.1
Bleeding	11.3	18.6	6.3	12.4
Calculus	42.9	47.8	32.7	43.4
Pockets 4–5 mm	26.8	13.7	30.4	25.0
Pockets 6+ mm	13.1	4.4	25.3	12.1

Source: Prospective Adult Dental Programs Survey 1995–96

Coronal caries experience is presented in Table 5.5 by location and age of patients. Overall, patients at remote locations had fewer filled teeth, and this pattern occurred for each age group. Numbers of missing teeth were higher for urban patients, but the pattern varied across different age groups. Numbers of decayed teeth peaked for patients aged 25–44 years at remote locations and patients aged 18–24 years at rural locations.

Table 5.5: Coronal caries experience of public-funded dental patients by location – dentate patients

	Location			Total (mean)
	Urban (mean)	Rural (mean)	Remote (mean)	
18–24 years	<i>n=417</i>	<i>n=96</i>	<i>n=44</i>	<i>n=566</i>
Decayed	2.97	3.82	2.95	3.07
Missing	0.70	0.52	0.28	0.68
Filled	3.59	4.42	3.32	3.68
DMFT	7.27	8.75	6.56	7.44
25–44 years	<i>n=1307</i>	<i>n=392</i>	<i>n=136</i>	<i>n=1857</i>
Decayed	2.59	2.50	4.88	2.65
Missing	2.78	2.73	3.88	2.80
Filled	6.45	8.77	3.42	6.73
DMFT	11.82	14.01	12.19	12.18
45–64 years	<i>n=1100</i>	<i>n=280</i>	<i>n=36</i>	<i>n=1427</i>
Decayed	1.43	1.78	2.91	1.48
Missing	7.17	6.27	6.37	7.04
Filled	7.51	7.65	3.88	7.51
DMFT	16.11	15.70	13.16	16.03
65+ years	<i>n=927</i>	<i>n=182</i>	<i>n=5</i>	<i>n=1123</i>
Decayed	1.10	0.76	0.80	1.07
Missing	9.88	9.22	22.01	9.84
Filled	6.56	6.65	0.52	6.54
DMFT	17.54	16.62	23.34	17.45
All	<i>n=3846</i>	<i>n=1003</i>	<i>n=237</i>	<i>n=5138</i>
Decayed	1.90	2.08	3.94	1.96
Missing	5.56	4.51	4.22	5.39
Filled	6.48	7.43	3.35	6.55
DMFT	13.94	14.02	11.51	13.91

Source: Prospective Adult Dental Programs Survey 1995–96

Root caries experience is presented in Table 5.6 by location and age of patients. Overall, root caries experience was higher for urban patients, which is reflected in higher numbers of both decayed and filled roots. Root caries experience (DF) is highest for urban patients in all age groups less than 65 years old, with patients from urban locations having both the highest number of decayed roots and the highest number of filled roots among patients aged 25–44 and 45–64 years.

Table 5.6: Root caries experience of public-funded dental patients by location – dentate patients

	Location			Total (mean)
	Urban (mean)	Rural (mean)	Remote (mean)	
18–24 years	<i>n=417</i>	<i>n=96</i>	<i>n=44</i>	<i>n=566</i>
Decayed	0.20	0.35	0.15	0.22
Filled	0.24	0.05	0.10	0.21
DF	0.44	0.40	0.24	0.42
25–44 years	<i>n=1307</i>	<i>n=392</i>	<i>n=136</i>	<i>n=1857</i>
Decayed	0.32	0.09	0.15	0.28
Filled	0.24	0.13	0.01	0.21
DF	0.55	0.22	0.17	0.49
45–64 years	<i>n=1100</i>	<i>n=280</i>	<i>n=36</i>	<i>n=1427</i>
Decayed	0.36	0.21	0.10	0.34
Filled	0.63	0.09	0.00	0.56
DF	1.00	0.30	0.10	0.90
65+ years	<i>n=927</i>	<i>n=182</i>	<i>n=5</i>	<i>n=1123</i>
Decayed	0.35	0.16	1.57	0.33
Filled	0.74	0.24	0.00	0.69
DF	1.09	0.40	1.57	1.01
All	<i>n=3846</i>	<i>n=1003</i>	<i>n=237</i>	<i>n=5138</i>
Decayed	0.32	0.17	0.21	0.30
Filled	0.48	0.12	0.03	0.42
DF	0.79	0.29	0.24	0.72

Source: Prospective Adult Dental Programs Survey 1995–96

5.4 Provision of services

Provision of diagnostic services is presented in Table 5.7 by location and age. A higher percentage of urban patients received diagnostic services (94.2%) compared to rural (78.6%) and remote patients (80.5%), with this pattern occurring for each age group except 25–44-year-olds where a high percentage of patients from remote locations received diagnostic services.

Diagnostic services comprised a higher percentage of services among urban patients (44.4%) compared to patients at rural (27.0%) and remote locations (33.5%), with this pattern occurring in each age group.

Mean numbers of diagnostic services were higher for urban patients (1.44) compared to patients from rural (1.10) and remote locations (1.04), with this pattern occurring in each age group.

Table 5.7: Provision of diagnostic services to public-funded dental patients by location – dentate patients

	Location			Total
	Urban	Rural	Remote	
18–24 years	<i>n=442</i>	<i>n=102</i>	<i>n=50</i>	<i>n=605</i>
Per cent of persons	96.5	79.1	71.2	93.4
Per cent of services	47.0	31.7	36.5	43.9
Mean services	1.39	1.10	0.96	1.34
25–44 years	<i>n=1390</i>	<i>n=408</i>	<i>n=145</i>	<i>n=1967</i>
Per cent of persons	95.0	81.0	96.9	93.0
Per cent of services	46.4	27.3	34.7	41.4
Mean services	1.54	1.28	1.26	1.50
45–64 years	<i>n=1153</i>	<i>n=288</i>	<i>n=42</i>	<i>n=1497</i>
Per cent of persons	94.6	77.5	69.6	92.1
Per cent of services	44.0	25.3	32.8	40.6
Mean services	1.40	0.99	0.89	1.34
65+ years	<i>n=982</i>	<i>n=191</i>	<i>n=5</i>	<i>n=1186</i>
Per cent of persons	91.7	75.9	18.5	89.7
Per cent of services	41.0	26.4	9.5	39.1
Mean services	1.35	0.88	0.27	1.31
All	<i>n=4067</i>	<i>n=1044</i>	<i>n=258</i>	<i>n=5428</i>
Per cent of persons	94.2	78.6	80.5	91.8
Per cent of services	44.4	27.0	33.5	40.8
Mean services	1.44	1.10	1.04	1.39

Source: Prospective Adult Dental Programs Survey 1995–96

Table 5.8 presents the provision of preventive services by location and age. A lower percentage of patients from remote locations received preventive services (8.0%) compared to patients from rural (17.5%) and urban locations (12.3%); this pattern occurred for each age group but was less marked in the 25–44 age group.

Preventive services comprised a lower percentage of services among patients from remote locations (2.7%) compared to patients from rural (5.8%) and urban locations (5.4%), with this pattern occurring for each age group.

Mean preventive services were lower for patients from remote locations (0.09) compared to patients from rural (0.27) and urban locations (0.18), with this pattern occurring for each age group.

Table 5.8: Provision of preventive services to public-funded dental patients by location – dentate patients

	Location			Total
	Urban	Rural	Remote	
18–24 years	<i>n=442</i>	<i>n=102</i>	<i>n=50</i>	<i>n=605</i>
Per cent of persons	13.6	12.8	8.9	13.4
Per cent of services	5.8	4.3	3.4	4.8
Mean services	0.17	0.15	0.09	0.16
25–44 years	<i>n=1390</i>	<i>n=408</i>	<i>n=145</i>	<i>n=1967</i>
Per cent of persons	11.5	18.5	11.2	12.5
Per cent of services	5.0	5.5	3.5	5.2
Mean services	0.17	0.26	0.13	0.18
45–64 years	<i>n=1153</i>	<i>n=288</i>	<i>n=42</i>	<i>n=1497</i>
Per cent of persons	11.1	17.1	0.8	11.7
Per cent of services	5.4	6.0	0.3	5.5
Mean services	0.17	0.24	0.01	0.18
65+ years	<i>n=982</i>	<i>n=191</i>	<i>n=5</i>	<i>n=1186</i>
Per cent of persons	13.4	14.3	4.8	13.4
Per cent of services	5.9	6.8	1.7	6.0
Mean services	0.19	0.23	0.05	0.20
All	<i>n=4067</i>	<i>n=1044</i>	<i>n=258</i>	<i>n=5428</i>
Per cent of persons	12.3	17.5	8.0	12.8
Per cent of services	5.4	5.8	2.7	5.5
Mean services	0.18	0.27	0.09	0.19

Source: Prospective Adult Dental Programs Survey 1995–96

Table 5.9 presents the provision of periodontic services by location and age. A higher percentage of patients from rural locations received periodontic services (24.1%) compared to patients from urban (16.0%) and remote locations (18.5%). This effect was most marked in the 25–44 age group where periodontic services were received by 28.9% of rural patients.

Periodontic services comprised a similar percentage of services across patients from urban (5.5%), rural (6.7%) and remote locations (6.6%). Periodontic services tended to comprise a higher percentage of services for remote dwellers among younger patients, but this declined across age groups to the point where they comprise a lower percentage of services among older patients.

Mean number of periodontic services were higher for patients from rural locations (0.27) compared to patients from urban (0.18) and remote locations (0.21), with mean numbers of periodontic services peaking at 0.33 among rural patients aged 25–44 years old.

Table 5.9: Provision of periodontic services to public-funded dental patients by location – dentate patients

	Location			Total
	Urban	Rural	Remote	
18–24 years	<i>n=442</i>	<i>n=102</i>	<i>n=50</i>	<i>n=605</i>
Per cent of persons	12.7	13.5	24.0	13.1
Per cent of services	4.4	3.9	9.1	4.6
Mean services	0.13	0.13	0.24	0.13
25–44 years	<i>n=1390</i>	<i>n=408</i>	<i>n=145</i>	<i>n=1967</i>
Per cent of persons	15.1	28.9	24.6	17.5
Per cent of services	5.2	7.1	7.6	5.8
Mean services	0.17	0.33	0.28	0.20
45–64 years	<i>n=1153</i>	<i>n=288</i>	<i>n=42</i>	<i>n=1497</i>
Per cent of persons	16.4	23.1	6.4	17.1
Per cent of services	5.9	6.7	3.2	6.3
Mean services	0.19	0.26	0.09	0.20
65+ years	<i>n=982</i>	<i>n=191</i>	<i>n=5</i>	<i>n=1186</i>
Per cent of persons	18.4	22.4	4.8	18.7
Per cent of services	5.9	6.9	1.7	6.1
Mean services	0.19	0.23	0.05	0.20
All	<i>n=4067</i>	<i>n=1044</i>	<i>n=258</i>	<i>n=5428</i>
Per cent of persons	16.0	24.1	18.5	17.2
Per cent of services	5.5	6.7	6.6	5.9
Mean services	0.18	0.27	0.21	0.19

Source: Prospective Adult Dental Programs Survey 1995–96

Provision of oral surgery (extraction) services is presented in Table 5.10 by location and age. A higher percentage of patients from remote locations had extractions (50.4%) compared to patients from rural (20.1%) and urban locations (21.8%), with this pattern occurring for age groups 25–44 years and older. In the 18–24 age group the highest percentage of patients having extractions were from rural locations (40.0%).

Extractions comprised a higher percentage of services for patients from remote locations (27.7%) compared to patients from rural (10.2%) and urban locations (11.4%), with this pattern occurring for age groups 25–44 years and older.

Mean numbers of extractions were higher for patients from remote locations (0.87) compared to patients from rural (0.41) and urban locations (0.36), with this pattern occurring for age groups 25–44 years and older.

Table 5.10: Provision of oral surgery (extraction) services to public-funded dental patients by location – dentate patients

	Location			Total
	Urban	Rural	Remote	
18–24 years	<i>n=442</i>	<i>n=102</i>	<i>n=50</i>	<i>n=605</i>
Per cent of persons	21.9	40.0	28.2	24.5
Per cent of services	11.8	16.7	12.7	12.6
Mean services	0.35	0.58	0.33	0.38
25–44 years	<i>n=1390</i>	<i>n=408</i>	<i>n=145</i>	<i>n=1967</i>
Per cent of persons	23.3	20.9	53.0	23.8
Per cent of services	11.3	10.3	24.4	11.2
Mean services	0.37	0.48	0.88	0.41
45–64 years	<i>n=1153</i>	<i>n=288</i>	<i>n=42</i>	<i>n=1497</i>
Per cent of persons	20.7	20.4	62.9	21.5
Per cent of services	11.9	11.4	48.1	12.2
Mean services	0.38	0.45	1.30	0.41
65+ years	<i>n=982</i>	<i>n=191</i>	<i>n=5</i>	<i>n=1186</i>
Per cent of persons	21.7	10.2	69.5	20.5
Per cent of services	10.8	4.5	24.0	9.2
Mean services	0.35	0.15	0.70	0.33
All	<i>n=4067</i>	<i>n=1044</i>	<i>n=258</i>	<i>n=5428</i>
Per cent of persons	21.8	20.1	50.4	22.1
Per cent of services	11.4	10.2	27.7	11.2
Mean services	0.36	0.41	0.87	0.38

Source: Prospective Adult Dental Programs Survey 1995–96

Table 5.11 presents provision of endodontic services by location and age. The percentage of patients who received endodontic services was low for patients from urban (3.2%), rural (4.8%) and remote locations (2.1%), with a trend towards higher percentages of patients receiving endodontic services among younger age groups for both urban and rural locations.

Endodontic services comprised a low percentage of services for patients from urban (2.1%), rural (3.2%), and remote locations (1.5%).

Mean numbers of endodontic services were higher for patients from rural locations (0.13) compared to patients from urban (0.07) and remote locations (0.05), with this trend occurring among patients aged less than 45 years.

Table 5.11: Provision of endodontic services to public-funded dental patients by location – dentate patients

	Location			Total
	Urban	Rural	Remote	
18–24 years	<i>n=442</i>	<i>n=102</i>	<i>n=50</i>	<i>n=605</i>
Per cent of persons	6.1	10.3	0.0	6.2
Per cent of services	3.9	4.9	0.0	3.9
Mean services	0.11	0.17	0.00	0.11
25–44 years	<i>n=1390</i>	<i>n=408</i>	<i>n=145</i>	<i>n=1967</i>
Per cent of persons	3.9	5.6	2.9	4.1
Per cent of services	2.3	4.0	1.9	2.7
Mean services	0.08	0.19	0.07	0.09
45–64 years	<i>n=1153</i>	<i>n=288</i>	<i>n=42</i>	<i>n=1497</i>
Per cent of persons	2.4	3.9	3.0	2.5
Per cent of services	1.7	1.9	2.2	1.8
Mean services	0.05	0.07	0.06	0.06
65+ years	<i>n=982</i>	<i>n=191</i>	<i>n=5</i>	<i>n=1186</i>
Per cent of persons	2.0	2.4	0.0	2.1
Per cent of services	1.8	2.0	0.0	1.9
Mean services	0.06	0.07	0.00	0.06
All	<i>n=4067</i>	<i>n=1044</i>	<i>n=258</i>	<i>n=5428</i>
Per cent of persons	3.2	4.8	2.1	3.4
Per cent of services	2.1	3.2	1.5	2.4
Mean services	0.07	0.13	0.05	0.08

Source: Prospective Adult Dental Programs Survey 1995–96

Provision of restorative services is presented in Table 5.12 by location and age. A higher percentage of patients from rural locations received restorative services (51.4%) compared to patients from urban (27.0%) and remote locations (26.1%), with this pattern occurring for each age group.

Restorative services comprised a higher percentage of services for patients from rural locations (33.7%) compared to patients from urban (20.4%) and remote locations (22.4%), with this pattern occurring for each age group less than 65 years old.

Mean numbers of restorative services were highest for patients from rural locations (1.38) compared to patients from urban (0.66) and remote locations (0.73), with this pattern occurring for each age group.

Table 5.12: Provision of restorative services to public-funded dental patients by location – dentate patients

	Location			Total
	Urban	Rural	Remote	
18–24 years	<i>n=442</i>	<i>n=102</i>	<i>n=50</i>	<i>n=605</i>
Per cent of persons	26.0	40.6	38.9	28.1
Per cent of services	19.6	34.0	27.6	22.7
Mean services	0.58	1.19	0.72	0.65
25–44 years	<i>n=1390</i>	<i>n=408</i>	<i>n=145</i>	<i>n=1967</i>
Per cent of persons	27.3	55.0	26.1	31.5
Per cent of services	22.4	36.0	24.9	25.8
Mean services	0.75	1.70	0.90	0.90
45–64 years	<i>n=1153</i>	<i>n=288</i>	<i>n=42</i>	<i>n=1497</i>
Per cent of persons	25.9	50.9	12.4	28.5
Per cent of services	18.8	33.3	11.5	20.6
Mean services	0.60	1.30	0.31	0.67
65+ years	<i>n=982</i>	<i>n=191</i>	<i>n=5</i>	<i>n=1186</i>
Per cent of persons	27.7	51.1	25.6	30.2
Per cent of services	19.6	27.2	26.6	20.9
Mean services	0.65	0.91	0.77	0.68
All	<i>n=4067</i>	<i>n=1044</i>	<i>n=258</i>	<i>n=5428</i>
Per cent of persons	27.0	51.4	26.1	30.1
Per cent of services	20.4	33.7	22.4	22.9
Mean services	0.66	1.38	0.73	0.75

Source: Prospective Adult Dental Programs Survey 1995–96

Table 5.13 presents provision of crown and bridge services by location and age. The percentage of persons who received crown and bridge services was low for patients from urban (2.1%), rural (3.2%), and remote locations (0.4%). The highest percentage of patients receiving crown and bridge services was for those from rural locations aged 25–44 years (4.1%).

Crown and bridge services comprised a low percentage of services for patients from urban (0.8%), rural (1.1%), and remote locations (0.1%).

Mean numbers of crown and bridge services were low for patients from urban (0.03), rural (0.04), and remote locations (0.00), with the highest rate occurring for patients from rural locations among patients aged 25–44 years (0.06).

Table 5.13: Provision of crown and bridge services to public-funded dental patients by location – dentate patients

	Location			Total
	Urban	Rural	Remote	
18–24 years	<i>n=442</i>	<i>n=102</i>	<i>n=50</i>	<i>n=605</i>
Per cent of persons	0.4	0.7	1.0	0.4
Per cent of services	0.2	0.2	0.4	0.2
Mean services	0.01	0.01	0.01	0.01
25–44 years	<i>n=1390</i>	<i>n=408</i>	<i>n=145</i>	<i>n=1967</i>
Per cent of persons	1.8	4.1	0.4	2.2
Per cent of services	0.6	1.4	0.1	0.9
Mean services	0.02	0.06	0.00	0.03
45–64 years	<i>n=1153</i>	<i>n=288</i>	<i>n=42</i>	<i>n=1497</i>
Per cent of persons	2.4	4.0	0.0	2.6
Per cent of services	1.0	1.0	0.0	1.1
Mean services	0.03	0.04	0.00	0.03
65+ years	<i>n=982</i>	<i>n=191</i>	<i>n=5</i>	<i>n=1186</i>
Per cent of persons	3.0	2.5	0.0	3.0
Per cent of services	1.0	0.7	0.0	1.0
Mean services	0.03	0.02	0.00	0.03
All	<i>n=4067</i>	<i>n=1044</i>	<i>n=258</i>	<i>n=5428</i>
Per cent of persons	2.1	3.2	0.4	2.3
Per cent of services	0.8	1.1	0.1	0.9
Mean services	0.03	0.04	0.00	0.03

Source: Prospective Adult Dental Programs Survey 1995–96

Table 5.14 presents provision of prosthodontic services by location and age. A higher percentage of patients from rural locations received prosthodontic services (10.3%) compared to patients from urban (7.1%) and remote locations (4.7%). The highest percentages of patients receiving prosthodontic services were recorded for those aged 65 years or more.

Prosthodontic services comprised a higher percentage of services for patients from rural (8.3%) compared to patients from urban (5.8%) and remote locations (2.5%), with the percentage peaking for those patients aged 65 years or more within each location.

Mean numbers of prosthodontic services were higher for patients from rural (0.33) compared to urban (0.18) and remote locations (0.08), with mean numbers of prosthodontic services peaking among patients aged 65 years or more within each location.

Table 5.14: Provision of prosthodontic services to public-funded dental patients by location – dentate patients

	Location			Total
	Urban	Rural	Remote	
18–24 years	<i>n=442</i>	<i>n=102</i>	<i>n=50</i>	<i>n=605</i>
Per cent of persons	1.3	1.3	1.0	1.3
Per cent of services	1.1	0.4	0.4	1.0
Mean services	0.03	0.01	0.01	0.03
25–44 years	<i>n=1390</i>	<i>n=408</i>	<i>n=145</i>	<i>n=1967</i>
Per cent of persons	2.3	7.1	4.3	3.1
Per cent of services	1.8	4.2	1.4	2.4
Mean services	0.06	0.20	0.05	0.08
45–64 years	<i>n=1153</i>	<i>n=288</i>	<i>n=42</i>	<i>n=1497</i>
Per cent of persons	8.6	12.1	1.6	8.8
Per cent of services	7.8	10.7	0.6	8.5
Mean services	0.25	0.42	0.02	0.26
65+ years	<i>n=982</i>	<i>n=191</i>	<i>n=5</i>	<i>n=1186</i>
Per cent of persons	15.0	22.0	39.3	15.8
Per cent of services	10.7	21.4	36.6	12.3
Mean services	0.35	0.71	1.06	0.39
All	<i>n=4067</i>	<i>n=1044</i>	<i>n=258</i>	<i>n=5428</i>
Per cent of persons	7.1	10.3	4.7	7.4
Per cent of services	5.8	8.3	2.5	6.3
Mean services	0.18	0.33	0.08	0.20

Source: Prospective Adult Dental Programs Survey 1995–96

Provision of temporary services is presented in Table 5.15 by location and age. The percentages of patients who received temporary services was similar for patients from urban (7.3%), rural (8.8%), and remote locations (3.8%). There was a trend for temporary services to be received by higher percentages of younger compared to older age groups of patients within each location.

Temporary services comprised a small percentage of services for patients from urban (2.7%), rural (2.4%), and remote locations (1.4%). Temporary services tended to comprise a higher percentage of services among younger compared to older age groups within each location.

Mean numbers of temporary services were lower for patients from remote (0.04) compared to rural (0.11) and urban locations (0.09), reflecting lower mean numbers of temporary services among patients aged 25–44 years and older from remote locations.

Table 5.15: Provision of temporary services to public-funded dental patients by location – dentate patients

	Location			Total
	Urban	Rural	Remote	
18–24 years	<i>n=442</i>	<i>n=102</i>	<i>n=50</i>	<i>n=605</i>
Per cent of persons	10.2	8.4	13.0	10.3
Per cent of services	4.6	3.4	5.3	4.7
Mean services	0.14	0.12	0.14	0.14
25–44 years	<i>n=1390</i>	<i>n=408</i>	<i>n=145</i>	<i>n=1967</i>
Per cent of persons	9.1	9.3	1.7	8.9
Per cent of services	3.4	2.6	0.6	3.2
Mean services	0.11	0.12	0.02	0.11
45–64 years	<i>n=1153</i>	<i>n=288</i>	<i>n=42</i>	<i>n=1497</i>
Per cent of persons	5.8	6.6	1.6	5.8
Per cent of services	2.3	2.1	0.6	2.3
Mean services	0.07	0.08	0.02	0.07
65+ years	<i>n=982</i>	<i>n=191</i>	<i>n=5</i>	<i>n=1186</i>
Per cent of persons	4.9	6.9	0.0	5.2
Per cent of services	1.7	2.1	0.0	1.8
Mean services	0.06	0.07	0.00	0.06
All	<i>n=4067</i>	<i>n=1044</i>	<i>n=258</i>	<i>n=5428</i>
Per cent of persons	7.3	8.8	3.8	7.4
Per cent of services	2.7	2.4	1.4	2.7
Mean services	0.09	0.11	0.04	0.09

Source: Prospective Adult Dental Programs Survey 1995–96

Provision of miscellaneous services is presented in Table 5.16 by location and age. A similar percentage of patients from urban (3.9%), rural (4.7%), and remote locations (3.2%) received miscellaneous services.

Miscellaneous services comprised a low percentage of services for patients from urban (1.5%), rural (1.6%), and remote locations (1.5%).

Mean numbers of miscellaneous services were similar for patients from urban (0.05), rural (0.06), and remote locations (0.04).

Table 5.16: Provision of miscellaneous services to public-funded dental patients by location – dentate patients

	Location			Total
	Urban	Rural	Remote	
18–24 years	<i>n=442</i>	<i>n=102</i>	<i>n=50</i>	<i>n=605</i>
Per cent of persons	4.2	2.1	8.1	4.3
Per cent of services	1.6	0.6	4.6	1.7
Mean services	0.05	0.02	0.12	0.05
25–44 years	<i>n=1390</i>	<i>n=408</i>	<i>n=145</i>	<i>n=1967</i>
Per cent of persons	4.3	5.3	2.6	4.4
Per cent of services	1.5	1.6	1.0	1.4
Mean services	0.05	0.08	0.04	0.05
45–64 years	<i>n=1153</i>	<i>n=288</i>	<i>n=42</i>	<i>n=1497</i>
Per cent of persons	2.7	6.0	1.6	3.1
Per cent of services	1.1	1.5	0.6	1.2
Mean services	0.04	0.06	0.02	0.04
65+ years	<i>n=982</i>	<i>n=191</i>	<i>n=5</i>	<i>n=1186</i>
Per cent of persons	4.5	3.8	0.0	4.4
Per cent of services	1.7	1.9	0.0	1.7
Mean services	0.06	0.06	0.00	0.06
All	<i>n=4067</i>	<i>n=1044</i>	<i>n=258</i>	<i>n=5428</i>
Per cent of persons	3.9	4.7	3.2	4.0
Per cent of services	1.5	1.6	1.5	1.4
Mean services	0.05	0.06	0.04	0.05

Source: Prospective Adult Dental Programs Survey 1995–96

5.5 Satisfaction scores

The majority of card-holders received their most recent dental care at private practices at their own expense. Table 5.17 presents the mean satisfaction scores by the funding of the last dental visit. Card-holders whose last visit was public-funded had significantly lower mean scores (ANOVA) for all four conceptual categories.

It can be seen that urban and rural card-holders whose last dental care was public-funded recorded very low satisfaction scores. Their mean satisfaction scores ranged from 3.78 (urban outcome) to 3.88 (urban content). However, card-holders from remote locations who last received care at a public dental service recorded high scores in the categories of context and content of the dental visit (although outcome was rated lower) resulting in an overall satisfaction of 4.28, well above the population mean for public-funded care (3.86) and the remote location private score (3.94). It must be recognised that these scores are based on low numbers of respondents, but the trends in satisfaction scores indicate that respondents from remote locations follow different patterns to the urban and rural populations.

Table 5.17: Mean satisfaction score for conceptual categories by residential location and funding of last dental visit – dentate persons aged 18+ whose last visit was within the previous 12 months

	Location			Total
	Urban	Rural	Remote	
Funding of last visit†				
Public-funded	n=323	n=161	n=29	n=513
Context	3.79	3.84	4.35	3.82
Content	3.88	3.81	4.46	3.87
Outcome	3.78	3.82	3.96	3.80
Satisfaction	3.84	3.86	4.28	3.86
Private – own expense	n=1539	n=609	n=109	n=2257
Context	4.32	4.40	3.89	4.33
Content	4.25	4.19	3.90	4.24
Outcome	4.25	4.32	4.04	4.26
Satisfaction	4.27	4.30	3.94	4.27
All	n=1862	n=770	n=138	n=2770
Context*	4.28	4.35	3.92	4.29
Content*	4.23	4.15	3.94	4.21
Outcome*	4.22	4.27	4.04	4.23
Satisfaction*	4.24	4.26	3.97	4.24

* Sig. $p < 0.05$ one-way ANOVA (urban, rural, remote)

† Sig. $p < 0.05$ one-way ANOVAs (funding of visit by context, content, outcome and satisfaction)

N.B. context = appointment/waiting time, dentist and clinic staff issues
 content = communication, explanation of treatment and options, thoroughness of services
 outcome = service results, improvement in oral health

Source: 1994, 1995, 1996 Dental Satisfaction Surveys

5.6 Discussion

Type of care varied by location with patients from urban locations having higher percentages of emergency care compared to rural and remote locations. However, this was not consistently reflected in the oral health profile by location.

Urban patients had slightly higher numbers of missing teeth among the dentate, and had higher numbers of decayed and filled roots. Rural patients had the highest percentage of edentulism and the highest overall number of filled teeth, but had the lowest percentages with periodontal pockets. Patients from remote locations had the highest overall number of decayed teeth and the lowest number of filled teeth.

Service patterns varied by location in six of ten service areas. Rural patients had the lowest overall percentage receiving diagnostic services but had the highest percentage receiving periodontic, restorative and prosthodontic services. Patients from remote locations had the lowest percentage receiving preventive services and the highest percentage receiving oral surgery (extraction). Some of these differences in service provision may reflect confounding by factors such as age.

To control for potential confounding factors multiple logistic regressions of services received were performed by location, controlling for age, type of care, country of birth, language spoken, indigenous status, numbers of decayed teeth, numbers of missing teeth, numbers of decayed roots, and the presence of periodontal pockets. Differences in service provision by location persisted in four service areas after controlling for these other factors. Compared to the reference category of urban location, patients at rural locations had lower odds of diagnostic services (odds ratio, 0.35) and higher odds of restorative services (1.84), while patients at remote locations had lower odds of preventive services (0.18) and higher odds of oral surgery (extraction) services (2.97).

After controlling for a range of sociodemographic characteristics and oral health variables, the pattern of service provision was less favourable for patients at rural and remote locations.

Differences in dental satisfaction scores between urban and rural card-holders whose last dental care was public-funded were not found, although scores were significantly lower (ANOVA) than the population mean. Residents of remote locations who were recipients of public-funded care recorded high satisfaction scores on three of the four scales, while those whose last visit was private own-expense recorded low satisfaction scores. (It should be noted that satisfaction scores for remote dwelling recipients of public-funded care were based on low numbers of respondents.)

6 Comments on dental care received

This chapter presents comments that were made in the 1994, 1995 and 1996 Dental Satisfaction Surveys. Comments which particularly reflect the concerns and expectations of individuals from rural and remote locations have been selected. These include comments relating to the distances to be travelled and the cost involved, the lack of services and facilities, and the expectation that teeth will be extracted.

The individuals' wording and use of spelling have been preserved.

Distance – dissatisfied

Card-holder whose last dental visit was to a public clinic

“As we have to travel 50kms to the nearest community health dentist we would like to see one a bit closer to our area.”

Card-holder whose last dental visit was to a private clinic

“I have to travel over 100kms to get satisfactory dental care.”

“I find it very difficult to get to the Dental Hospital from where I live especially now that I have a small baby.”

“Having to make separate visits for treatment when I felt could have been done in that session.” (*remote*)

“I also understand from him that 3 more fillings are required. To obtain public treatment I have to undertake a 2½ hr journey by car which will cost almost as much as the treatment I pay to the private dentist. So it's a ‘Catch 44’ situation.” (*remote*)

Non-card-holder whose last dental visit was to a private clinic

“Lack of options for country people. Due to long waiting periods for treatment from Public dentists believe it would impossible to arrange visits to coincide with trips to city (I live 2,400km from capital city).”

“We have to travel from the country (80 kilometres) and make arrangements to be away from work.”

“As there is only one dentist in the town where I live and he was at the time booked out for 2 months, I had to travel 250kms to the nearest dentist which also caused me to lose 1 days pay and also the cost of a bus fare to and return.”

“I think a dental programme to cover unemployed & pensioners through more local outlets is long overdue. Up to now one has to travel to capital city in state, not always convenient for the elderly.”

Lack of service – dissatisfied

Card-holder whose last dental visit was to a public clinic

“Equipment very old in a ‘makedo’ caravan. Real need for updating of whole dental care.”

“Equipment was so historic it was amusing to see it work.”

“Surely there could be a better system of treatment of dental problems for the pensioner who has always paid TAX. There are not enough Dental Practitioners in Country Areas & when we ring, we are treated like 2nd grade citizens because they can book clients in who can willingly pay full fees.”

“There are no dentists in this town on a permanent basis.”

Card-holder whose last dental visit was to a private clinic

“To my knowledge there are not any dental health programmes in my town. If there was then I might visit my dentist more often.”

“The dentist visits limited to every four or five weeks. I assume frequency depends upon the number of persons require treatments. He is a private dentist & there are no concessions for pensioners.” (*remote*)

“We do have a dental service in Pingelly. The dentist visits once a fortnight. However, due lack of support the service has not always been available, therefore, many local people have to go to Narrogin (large centre). Several dentists and good service.”

“We live in a country town and do not have facilities like Sydney, Canberra and Wagga or any big towns. Cities are well catered for.”

“Orbost: Need dentist to travel to hospitals that don't have them.”

“I know I need a lot of Dental work and it is frustrating that the nearest Public Dental Clinic is so far away, perhaps a mobile service would be good in regional areas such as ours.”

“Wangaratta has a population of 1,700 in city limits. 25,000 when country people are included. There is one dentist in this city which caters for pension card holders. There is a 3 year waiting list.”

“We live in a small country town and are only serviced by a private dentist on a very part-time basis. There are no emergency services or after hours services. We would have to travel at least an hour to the next major town if we required treatment on the days the dentist wasn't in town or in the case of an emergency.”

“I did find it uncomfortable having to wait 3 days for 1 appointment, but I could have seen a difficult dentist earlier if I wished. Sometimes waited ½ hour in the waiting room. It was a very busy dental surgery.”

“There is at least a 3 month wait to get into good dentists in Devonport, Tasmania. This town would benefit from having more dentists.”

“I need to see a dentist at the moment locally as I haven't the opportunity to go to Perth where I usually go but can't get in for a fortnight at the earliest.”

Non-card-holder whose last dental visit was to a private clinic

“Lack of modern treatment & equipment in country towns.”

“(patient aged 25, Katharine, NT) Surgeons specialised in this field should be more readily available and perhaps attend country areas where possible.”

“The ... dentist was one of 3 in a city with a population of 27,000. His room were quite old fashioned and dark and his equipment looks a bit out-dated. He has now left this city to practice elsewhere. Country people feel the lack of the latest technology and sophisticated techniques.”

“For many small country farms in WA there are no dental facilities – trips to major cities have to be made for attention becoming very expensive and I feel that better facilities should be available for country people who deserve better treatment than they are getting at present.”

“... I now live in Katherine & so can get to the Dentist easily. However I was previously unable to get to a dentist between July 94 and Oct 95 because I lived on an aboriginal Community (Lajomann) 570km from Katherine. One visit by Dentists was to have been made, but because of a vehicle rollover, they were unable to get to Lajamann ... therefore no access to dental care for any of us there.”

“I miss the SA dentist I used to attend. He filled my expectations in every way! I am looking to travel to a city for my next visit (Perth or Adelaide).”

Explanations – dissatisfied

Card-holder whose last dental visit was to a public clinic

“The dentist tried to tell me I had not been taking proper care of my teeth. He was quite rude to me. He did not fix the problem which was with my gums. I have recently found out that my gum problem is not because of lack of care but a vitamin C deficiency. The dentist did not explain this to me.”

Non-card-holder whose last dental visit was to a private clinic

“The dentist judged me (rightly) to be poor. He gave the overwhelming impression that as such I warranted neither a full explanation nor a choice of treatments.”

Other – satisfied

Card-holder whose last dental visit was to a public clinic

“If I was not a pension card holder which entitles me to free dental visits I would not have gone to the dentist because I could not pay the bill. The dental surgery in Portland that offers this free service is located at the hospital. I am very grateful for that service.”

Card-holder whose last dental visit was to a private clinic

“We are a bit isolated and the whole town agrees we are lucky to have such a competent & pleasant person to look after our dental work.”

“Although I am a pensioner I considered I was treated with much more respect than at some medical clinics I have attended. Appreciated not being treated as a second class citizen.”

Other – dissatisfied

Card-holder whose last dental visit was to a public clinic

“On one emergency visit due to an aching tooth I had to wait for most of the day before I could see the dentist.”

“Queensland gives free dental care to aged pensioners. It took over 2 years from my previous visit to the last one in late 1995 and I was advised to immediately list my name as the delay for routine checks was and is over 12 months.”

“The lack of dental inspections obviously aggravate the dental problems. Even though we have excellent teeth myself & husband, it's certainly pathetic the service we have received since being on pensions.”

Card-holder whose last dental visit was to a private clinic

“I am eligible to attend our local clinic but they have a waiting list that is ridiculously long & I have decided to provide for my own requirements as far as financial ability allows.”

“The waiting period for dental treatment is far too long for those who can not afford to pay for it.”

“This only relates to one visit under Govt dentist scheme as we are pensioners. General Govt dental clinics seem to have poorer grade staff and care. We changed from the Barossa area as we could not get help when needed & got much better attention from Murray Bridge which was actually through a private dentist clinic. Still however being a Govt patient seems to be a great disadvantage which ends up with not as good treatment as should be.”

Non-card-holder whose last dental visit was to a private clinic

“Concessions to country people who have no choice other than Private dental treatment would assist in affording more frequent check ups and care. Would like to visit dentist more frequently if able to afford it.”

“I believe I had one unnecessary visit when all that was done was simply an identification of filling that needing doing – I think it should have been done then. That visit was an inconvenience & needless cost to me!”

Dental care received – dissatisfied

Card-holder whose last dental visit was to a public clinic

“I was not checked to see if there were any more bad teeth to be seen to. I had to tell him what needed to be done.”

“Being on unemployment benefit I cannot afford dental cover, therefore get free dental treatment. If I could afford it I would have a plate put in, and also have my teeth cleaned. Free dental treatment only provides necessary treatment eg fillings or teeth removed.”

Card-holder whose last dental visit was to a private clinic

“Have only had two visits in twelve months, both emergencies.”

Dental care received – expectation of extractions

Card-holder whose last dental visit was to a private clinic

“Extraction & fillings done were both painless.”

“Wanted and needed extraction, got it.”

Non-card-holder whose last dental visit was to a private clinic

“Fortunately my teeth have survived and with cleaning regularly are still in my head. In the country I have observed dental care is at a minimum and ‘up em out’ was very much the philosophy.”

Cost – dissatisfied

Card-holder whose last dental visit was to a private clinic

“I have to have treatment for my gums by a specialist in Brisbane for Periodontitis even though I pay into a private health fund, I only will get back about \$400 on total costs, plus I have to provide accommodation in Brisbane for 1-5 days!”

“Was unable to determine whether discount was available for aged pensioner.”

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