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AUSTRALIAN INSTITUTE OF HEALTH & WELFARE

AIHW Dental Statistics and Research Unit

Oral Health and Access to Dental Care in Rural and Remote Areas of Australia

Research Report, September 1999

THE UNIVERSITY OF ADELAIDE

This report provides information on some aspects of oral health and use of dental services in rural and remote areas. Australians in rural and remote areas are at a disadvantage in accessing dental care due to the lack of availability of dentists and other oral health facilities, and the greater distances involved. Capital cities have almost double the rate of practising dentists per 100,000 population than the rest of Australia (51.2 cf. 28.7). A higher rate of problem-oriented dental visits and fewer people making a recent visit are the most striking differences in access to dental services in country areas. These differences leave residents of rural and remote areas in poorer health than their urban counterparts.

Data Collection

This report uses population level data collected in a series of National Dental Telephone Interview Surveys, and the associated Dental Satisfaction Surveys conducted in 1994, 1995 and 1996. Interviews were carried out with adults selected in a stratified random sample from capital cities and 'rest-of-State' from all States and Territories in each year.

Information was collected from 17,691 persons aged 18 years and over (response rate = 71.5%), and included questions on:

- use of dental services;
- self-reported oral health; and
- dental visiting characteristics.

Dental Satisfaction Surveys were mailed to a sub-set of respondents to the telephone surveys.

Oral health data relating to patients receiving public-funded dental care were collected in the Prospective Adult Dental Programs Survey in 1995–96, and includes care provided to eligible patients by public clinics and private practitioners.

Data were classified into urban, rural or remote locations based on the Rural, Remote and Metropolitan Area Classification 1994 (Department of Primary Industries and Energy and Department of Human Services and Health).

Dentate Status

Tooth loss and the wearing of dentures reflect the cumulative effects of past disease and treatment practices. Variations in tooth loss indicate differing historical treatment patterns between urban, rural and remote locations.

Table 1: Complete tooth loss (%) among adults aged 18+ years, 1994 to 1996

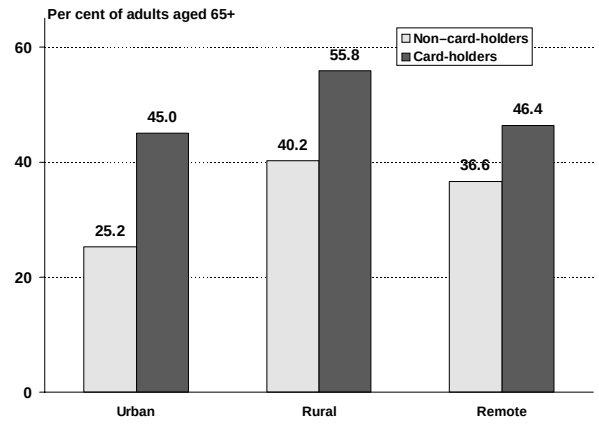
	Urban	Rural	Remote	Total
Age group	*%*	*%*	*%*	*%*
18–24 years	0.1	0.2	0.0	0.1
25–44 years	1.4	2.1	*2.2	1.8
45–64 years	11.7	21.5	*14.8	14.2
65+ years	36.6	50.0	43.2	40.3
Total	**9.3**	**16.2**	**9.4**	**10.9**

* estimate has a relative standard error greater than 25%

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

Complete tooth loss increased across age groups (Table 1). In total, less than 2% of adults aged below 45 years had lost all their natural teeth, however, this increased to more than one in five rural adults in the 45–64 age group.

Figure 1: Complete tooth loss among adults aged 65+ years, 1994 to 1996



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

Adults aged 65+ from rural locations had a higher rate of complete tooth loss than adults from remote or urban locations (Figure 1). Complete tooth loss was systematically higher among card-holders eligible for public dental services. Almost 56% of card-holders from rural areas and around 45% of urban and remote

card-holders reported having no natural teeth. Complete tooth loss was less prevalent among non–card-holders, however, large differences existed between the urban dwellers (25.2%) and rural and remote dwellers (40.2% and 36.6%).

Access to dental services

The time since last dental visit indicates the level of contact with dental services.

It can be seen from Table 2 that in all age groups, dentate adults (those with some natural teeth) in remote areas were less likely to have made a recent dental visit and more likely to have had a period of five or more years since their last dental visit (15.7%) than rural (12.5%) and urban (9.4%) dwellers. Differences between urban and rural residents were evident in the 45–64 and 65+ age groups. The proportion of rural adults who had not visited for five or more years increased to almost double the urban rate, while those making a recent visit remained static.

Table 2: Time since last dental visit (%) – dentate adults, 1994 to 1996

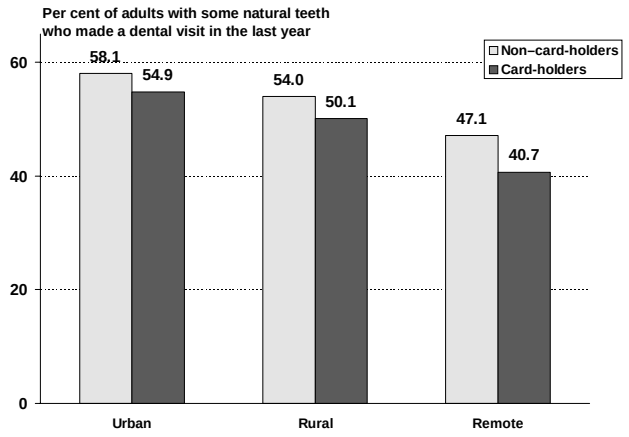
	Urban	Rural	Remote	Total
18–24 years				
<12 months	54.7	50.2	47.6	53.6
1–<5 years	35.5	37.3	36.3	35.9
5+ years	9.8	12.5	*16.1	10.5
25–44 years				
<12 months	53.9	53.3	42.3	53.5
1–<5 years	36.0	36.4	41.8	36.3
5+ years	10.0	10.3	15.8	10.2
45–64 years				
<12 months	63.0	54.7	54.8	61.0
1–<5 years	28.9	31.3	31.6	29.5
5+ years	8.1	14.0	*13.6	9.5
65+ years				
<12 months	64.6	52.4	43.5	61.6
1–<5 years	26.3	28.9	*37.2	27.0
5+ years	9.2	18.7	*19.3	11.4
Total				
<12 months	57.6	53.2	45.8	56.3
1–<5 years	33.0	34.3	38.5	33.5
5+ years	9.4	12.5	15.7	10.2

* estimate has a relative standard error greater than 25%

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

There were clear differences between the percentages of dentate residents of urban, rural and remote areas making a dental visit in the previous 12 months (Figure 2). Almost 60% of urban non–card-holders had made a recent dental visit, declining through rural dwellers (54.0%), to just over 47% of participants from remote areas. Card-holders showed greater disadvantage, particularly in remote areas, where just over 40% had made a dental visit in the last year, compared to almost 55% of urban card-holders.

Figure 2: Dental visit in the last year, 1994 to 1996

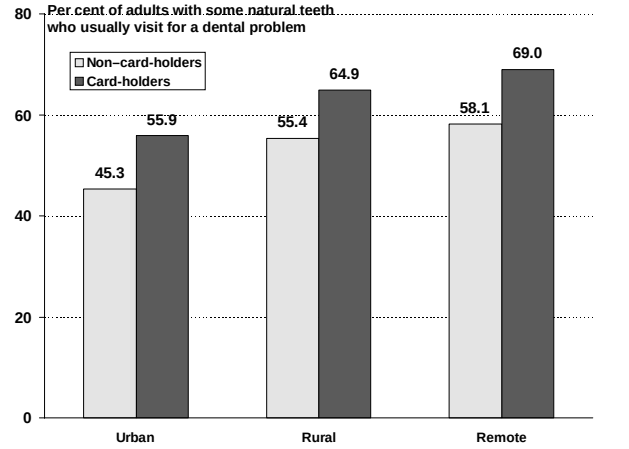


Source: National Dental Telephone Interview Survey, 1994, 1995, 1996

Usual reason for dental visit

The reason for seeking dental care influences the treatment likely to be received. Visiting for a problem rather than a check-up may reflect the ability to access dental services in terms of availability and affordability. The lack of oral health facilities and the scarcity of dentists, as well as the greater distances involved, present a barrier to regular dental care in rural and remote areas.

Figure 3: Usually visit for a dental problem, 1994 to 1996



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

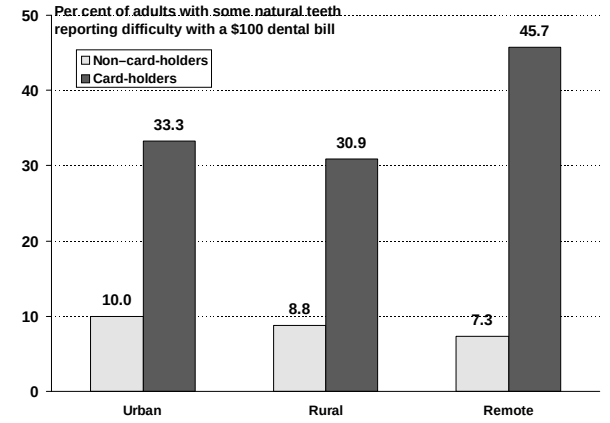
Over 55% of adult non–card-holders in rural and remote areas (Figure 3) reported that their usual reason for making a dental visit was because of a dental problem, considerably higher than urban non–card-holders (45%). Card-holders in rural and remote areas reported even higher levels of problem-oriented visiting, with 64.9% and 69.0% respectively, compared to 55.9% of urban card-holders.

Affordability

All respondents were asked how much difficulty they would have in paying a $100 dental bill. A similar percentage of urban, rural and remote non–card-holders reported that they would have a lot of difficulty paying a $100 dental bill (range 7-10.0%).

When comparing affordability (Figure 4) among card-holders and non–card-holders, it can be seen that there was a more than three-fold difference across all geographical locations. The greatest percentage reporting difficulty was among card-holders from remote locations (45.7% cf. 30.9% in rural and 33.3% in urban locations).

Figure 4: Difficulty with a $100 dental bill, 1994 to 1996

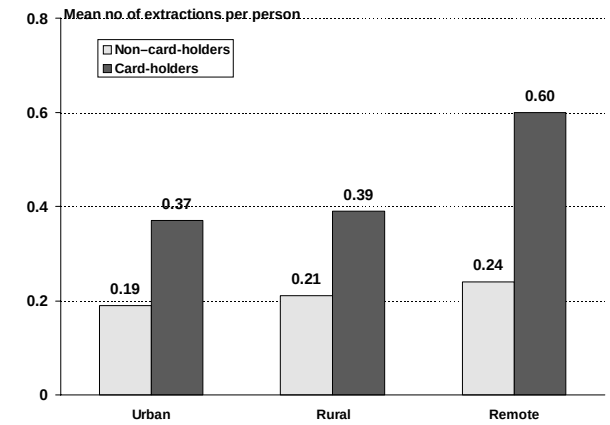


Source: National Dental Telephone Interview Survey 1994, 1995, 1996

Services received – extractions

Those respondents who had made a dental visit in the previous year were asked what treatment they had received. The loss of a tooth indicates the failure of all previous preventive and restorative treatment, and shows a progression of individuals toward complete tooth loss.

Figure 5: Extractions in the last year, 1994 to 1996



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

It can be seen in Figure 5 that residents of remote areas had more teeth extracted. Card-holders had received more extractions than non–card-holders, with the highest numbers reported by those from remote locations (0.60 per person cf. 0.39 and 0.37 in rural and urban areas).

Public-funded dental patients

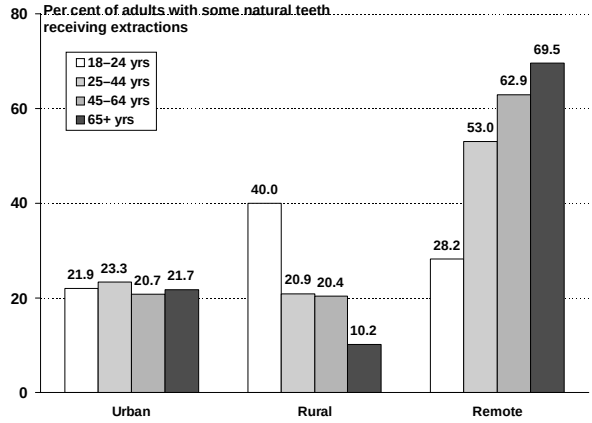
The next section presents findings related to patients receiving public-funded dental care. This may include care received at public dental clinics as well as care provided by private practitioners to eligible patients which was paid for by public funds.

Extractions – public-funded care

Figure 6 presents the percentages of public-funded dental patients who received oral surgery (extractions) by age and location. It can be seen that in the 18–24 year age group the highest percentage of patients who had extractions was from rural areas, while the proportion of patients who had extractions rose for older age groups in remote locations.

Overall, a higher percentage of patients from remote areas had extractions (50.4%) compared to patients from rural (20.1%) and urban (21.8%) areas.

Figure 6: Provision of oral surgery (extractions) to public-funded patients, 1995 to 1996



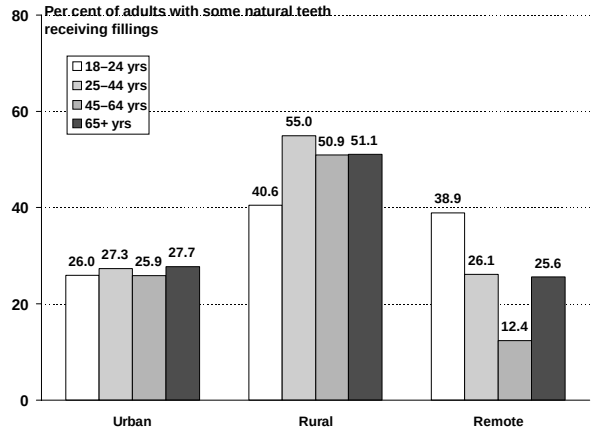
Source: Prospective Adult Dental Programs Survey, 1995–96

Fillings – public-funded care

Provision of restorative services (fillings) to public-funded dental patients by age and location is presented in Figure 7. It can be seen that a high percentage of patients from rural areas received restorative services.

There was considerable variation in the percentage of remote patients receiving fillings with the 18–24 year age group high compared to patients from urban areas. Overall, 51.4% of patients from rural areas had fillings compared to urban (27.0%) and remote (26.1%) patients.

Figure 7: Provision of restorations (fillings) to public-funded patients, 1995 to 1996



Source: Prospective Adult Dental Programs Survey, 1995–96

Dental Satisfaction

Satisfaction with health care reflects the extent to which the care given meets the patients' needs and expectations, with care which is less satisfactory to the consumer likely to be less effective.

Dental satisfaction scores (on a 1 to 5 scale) for adults of remote areas were significantly lower than their urban and rural counterparts on all sub-scales. The overall satisfaction score for remote residents was 3.97, while the rural and urban scores were 4.26 and 4.24 respectively. Rural adults recorded lower scores than urban dwellers on the communication and explanation subscale, 4.15 cf. 4.23, with remote lower again, 3.94. These are large differences given the nature of satisfaction scores.

Satisfaction comments

Respondents were invited to offer comments on aspects of their recent dental care. A selection of comments which particularly reflect the concerns and expectations of individuals from rural and remote locations has been included:

- *'There are no dentists in this town on a permanent basis.'*
- *'In the country I have observed dental care is at a minimum and 'pull 'em out' was very much the philosophy.'*
- *'Lack of options for country people. Due to long waiting periods for treatment from public dentists … impossible to arrange visits to coincide with trips to city (I live 2,400km from capital city).'*
- *'Lack of modern treatment and equipment in country towns.'*
- *'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 day's pay and also the cost of a return bus (fare).'*
- *'Surely there could be a better system of (dental) treatment for the pensioner who has always paid TAX. There are not enough dental practitioners in country areas and when we ring, we are treated like 2nd grade citizens because they can book clients in who can willingly pay full fees.'*

Summary

Residents of rural and remote areas of Australia reported:

- higher rates of complete tooth loss
- lower percentage of persons having made a dental visit in the previous 12 months
- problem-oriented dental visiting patterns; and
- more extractions in the previous 12 months.

Card-holders from rural and remote areas suffered greater disadvantage compared to those from urban locations with less favourable patterns of tooth loss and dental visiting.

Geographic inequalities in access to dental care exist in Australia.

Acknowledgements

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