

Public dental care is provided to financially disadvantaged adults in Australia. Persons eligible for public dental care generally are holders of government health cards, such as the unemployed, and aged pensioners. These card-holders represent a financially disadvantaged group of adults among the Australian population.

The National Health Strategy in 1992 identified the issue of inequality in oral health and access to dental care as a significant public health problem. Persons from low socioeconomic backgrounds were included as a priority group within the population in oral health goals and targets for Australia. This report looks at the oral health of patients attending for public-funded dental care in Australia with reference to decayed teeth and patterns by age, Indigenous status, birthplace and geographic location.

Decayed teeth among public patients

Experience of caries or dental decay can be measured as the number of untreated decayed teeth (D); missing teeth (M) extracted due to dental decay; and filled teeth (F) restored due to dental decay.

Number of decayed teeth

Table 1 shows the mean number of untreated decayed teeth among public patients and the total disease experience due to decay measured as the combined number of decayed, missing and filled teeth (i.e. DMFT = D+M+F).

The experience of dental decay among public patients accumulates across age groups from 7.44 decayed, missing and filled teeth among 18-24 year-olds to 17.45 decayed, missing and filled teeth among 65+ year-olds. The actual number of untreated decayed teeth shows the opposite pattern, being highest among 18-24 year-olds (3.07) and lowest among 65+ year-olds (1.07).

The pattern of lower numbers of untreated decayed teeth, but higher combined numbers of decayed, missing and filled teeth across older age groups reflects treatment by extractions or restorations resulting in decayed teeth being counted as missing

and filled teeth in greater numbers among older age groups.

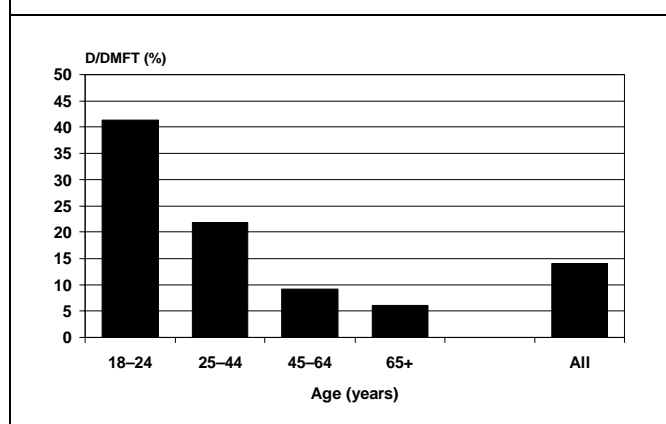
Table 1: Experience of dental decay among public patients

	Age distribution	Caries experience
18-24 years	11.4%	<i>n</i> =566
D		3.07
DMFT		7.44
25-44 years	37.3%	<i>n</i> =1857
D		2.65
DMFT		12.18
45-64 years	28.7%	<i>n</i> =1427
D		1.48
DMFT		16.03
65+ years	22.6%	<i>n</i> =1123
D		1.07
DMFT		17.45
All		<i>n</i> =5138
D		1.96
DMFT		13.91

Percent of decayed teeth

The number of decayed teeth can be divided by the total number of decayed, missing and filled teeth, and converted to a percentage to get a relative measure of the extent of total experience of decay which is untreated decay rather than missing or filled. This is presented in Figure 1, which shows the percentage of decayed teeth is highest among younger patients and lowest among older patients.

Figure 1: Experience of dental decay among public patients



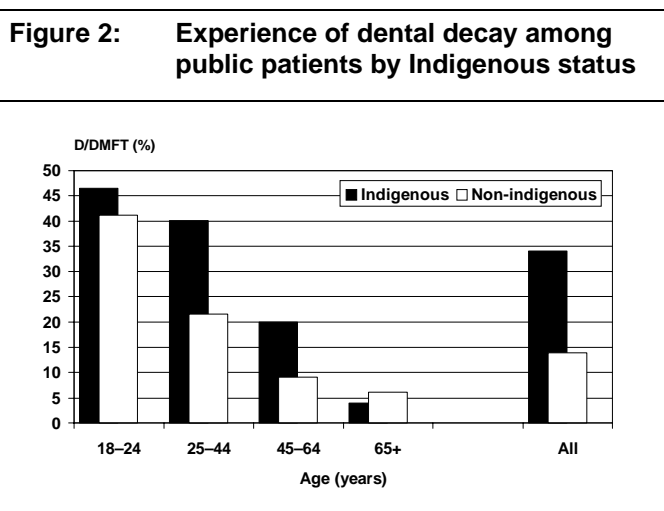
Since age is associated with the pattern of oral health status the remainder of this report controls for age in all comparisons. The focus is on comparing the number and percent of untreated decayed teeth between groups of public patients.

(a) Indigenous status

Table 2 shows that overall Indigenous patients had lower numbers of decayed, missing and filled teeth (10.47) than non-Indigenous patients (13.91). This partly reflects the fact that there were fewer older patients among the Indigenous group, but they also showed a consistent trend towards lower total experience of dental decay in all age groups. However, despite having lower total experience of dental decay, Indigenous patients had higher numbers of untreated decayed teeth overall (3.56) compared to non-Indigenous patients (1.94), a trend which was present in all age groups under 65 years.

	Indigenous status	
	Indigenous	Non-Indigenous
18–24 years	<i>n</i> =49	<i>n</i> =477
D	3.45	3.18
DMFT	7.42	7.74
25–44 years	<i>n</i> =135	<i>n</i> =1585
D	4.17	2.63
DMFT	10.40	12.17
45–64 years	<i>n</i> =49	<i>n</i> =1272
D	2.58	1.46
DMFT	12.89	15.98
65+ years	<i>n</i> =6	<i>n</i> =1049
D	0.50	1.07
DMFT	12.49	17.25
All	<i>n</i> =253	<i>n</i> =4522
D	3.56	1.94
DMFT	10.47	13.91

This trend towards more untreated decayed teeth among Indigenous patients is reflected in the percentage of untreated decay presented in Figure 2, which shows that Indigenous patients had a higher percentage of untreated decayed teeth overall (34.0%) compared to non-Indigenous patients (13.9%). This trend occurred in all age groups below 65 years. There were only small numbers of Indigenous patients in the 65+ years age group which makes the estimates for that age group difficult to interpret with any confidence.

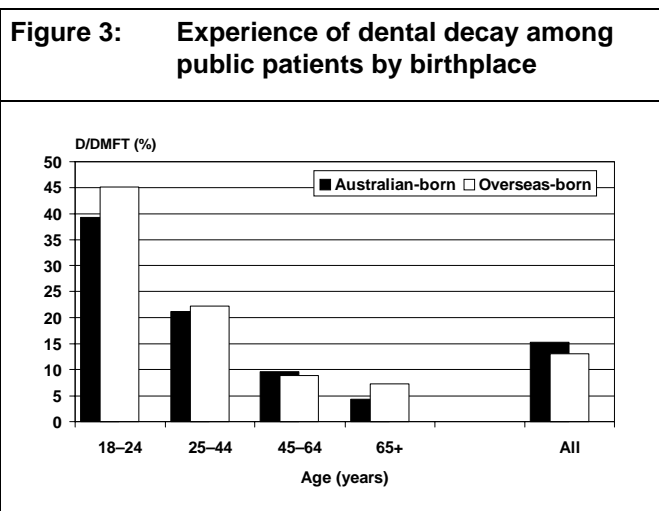


(b) Place of birth

Table 3 shows that overall there was little difference in total experience of decayed, missing and filled teeth between those born in Australia (13.98) and those born overseas (13.84). Numbers of untreated decayed teeth were slightly higher for Australian-born patients overall (2.14) compared to overseas-born patients (1.80). However, this pattern varied by age with Australian-born patients having higher numbers of untreated decayed teeth in the 25–44 and 45–64 year age groups, but fewer untreated decayed teeth in the 18–24 and 65+ year age groups compared to patients who were born overseas.

	Birthplace	
	Australia	Overseas
18–24 years	<i>n</i> =427	<i>n</i> =126
D	2.96	3.28
DMFT	7.54	7.25
25–44 years	<i>n</i> =1195	<i>n</i> =625
D	2.88	2.40
DMFT	13.57	10.82
45–64 years	<i>n</i> =685	<i>n</i> =696
D	1.63	1.39
DMFT	17.02	15.55
65+ years	<i>n</i> =594	<i>n</i> =491
D	0.77	1.26
DMFT	17.72	17.34
All	<i>n</i> =3029	<i>n</i> =1970
D	2.14	1.80
DMFT	13.98	13.84

Figure 3 shows little difference in the percentage of untreated decayed teeth overall, 15.3% among Australian-born patients and 13.0% among overseas-born patients. However, overseas-born patients tended to have a higher percentage of untreated decayed teeth in all age groups except those aged 45–64 years. The slightly higher overall percentage of untreated decayed teeth for Australian-born patients reflects their younger age distribution in comparison to overseas-born patients.



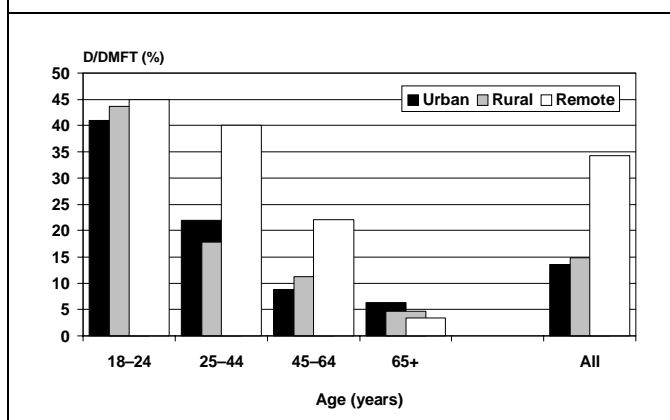
(c) Geographic location

Table 4 shows that the total experience of decayed, missing and filled teeth was lowest for patients in remote locations (11.51), followed by urban (13.94) and rural (14.02) locations. However, untreated decayed teeth were higher among patients from remote locations (3.94) compared to rural (2.08) and urban locations (1.90). This may reflect the fact that numbers of decayed teeth are generally higher among younger adults and patients from remote locations had a younger age distribution. The number of untreated decayed teeth was highest for patients from remote locations in the age group 25–44 years (4.88).

	Location		
	Urban	Rural	Remote
18–24 years	<i>n</i> =417	<i>n</i> =96	<i>n</i> =44
D	2.97	3.82	2.95
DMFT	7.27	8.75	6.56
25–44 years	<i>n</i> =1307	<i>n</i> =392	<i>n</i> =136
D	2.59	2.50	4.88
DMFT	11.82	14.01	12.19
45–64 years	<i>n</i> =1100	<i>n</i> =280	<i>n</i> =36
D	1.43	1.78	2.91
DMFT	16.11	15.70	13.16
65+ years	<i>n</i> =927	<i>n</i> =182	<i>n</i> =5
D	1.10	0.76	0.80
DMFT	17.54	16.62	23.34
All	<i>n</i> =3846	<i>n</i> =1003	<i>n</i> =237
D	1.90	2.08	3.94
DMFT	13.94	14.02	11.51

Figure 4 shows the percentage of untreated decayed teeth was higher for patients at remote (34.2%) compared to both rural (14.8%) and urban (13.6%) locations. This reflects the younger age distribution of patients at remote locations. However, the trend occurred for all age groups below 65 years, but was most pronounced in the 25–44 and 45–64 year age groups. The lower percentage of patients at remote locations with untreated decayed teeth in the 65+ years age group reflects small patient numbers and generally low levels of untreated decay in this age group.

Figure 4: Experience of dental decay among public patients by location



Adult Dental Programs Survey

The Adult Dental Programs Survey is a survey of patients attending for public-funded dental care in Australia. Random sampling of patients was performed using date of birth. Data were collected on oral health, patient characteristics, visit details and services provided.

Oral health was assessed by dentists during the initial visit of a course of care. Written instructions were used, but there was no formal calibration of dentists in diagnostic criteria.

Data were weighted using the estimated number of persons whose last dental visit was public-funded within the last year for persons aged 18 years or more from the National Dental Telephone Interview Survey. These weighted results are representative of the number of adults receiving public-funded dental care for each State/Territory.

Scope of data

Surveys of Indigenous persons may suffer from misclassification or under-reporting of Indigenous status. Due to the small numbers of Indigenous persons in the population, the survey estimates for Indigenous persons are likely to be based on small numbers of responses, which may reduce their level of precision. In this report a total of 253 patients were indigenous (5.3%). There were only small numbers of Indigenous patients aged 65 years or more (2.5%) compared to non-Indigenous patients (23.9%).

In total, 3,029 patients were Australian-born (60.6%) and 1,970 were born overseas. There was a younger age distribution among Australian-born patients, with 14.7% aged 18–24 years compared to 6.5% for those born overseas.

A total of 3,846 patients were from urban locations (75.6%), 1,003 were from rural locations (19.7%) and 237 were from remote locations (4.7%). There was a younger age distribution among patients from remote locations, with 19.9% in the 18–24 year age group compared to 10.1% of rural dwellers and 11.1% of urban dwellers.

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.

Summary and Conclusions

Age of patients

Patterns of oral health by age of patients included:

- higher numbers and percentages of untreated decayed teeth among younger age groups; but
- higher cumulative experience of dental decay (i.e. combined decayed, missing and filled teeth due to dental decay) among older age groups.

Indigenous status

Indigenous patients had:

- lower total experience of dental decay (i.e. combined numbers of decayed, missing and filled teeth); but
- higher numbers of untreated decayed teeth among those under 65 years of age; and
- higher percentages of their total experience of dental decay was untreated decayed teeth, rather than missing or filled teeth.

Place of birth

Patterns of oral health by place of birth showed:

- Australian-born patients tended to have higher total experience of dental decay (i.e. combined numbers of decayed, missing and filled teeth) but the difference was small for all ages combined; and
- there were no consistent patterns in the number or percentage of untreated decayed teeth by place of birth.

Geographic location

Patterns of oral health by location showed:

- patients from remote locations had low total experience of dental decay (i.e. combined numbers

of decayed, missing and filled teeth) among patients under 65 years of age; but

- patients from remote locations had high numbers of untreated decayed teeth, particularly among patients aged 25–44 years; and
- patients from remote locations had a high percentage of their dental decay experience in the form of untreated decayed teeth rather than missing or filled teeth.

Acknowledgements

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The Adult Dental Programs Survey was collected in collaboration with the dental authorities in the participating States/Territories of Australia.

Further information

Further information on adult access to dental care is available in the following publications:

Carter KD, Brennan DS, Stewart JF (1998). Adult access to dental care – migrants. AIHW Dental Statistics and Research Series No. 15. Adelaide: The University of Adelaide.

Brennan DS, Carter KD (1998). Adult access to dental care – Indigenous Australians. AIHW Dental Statistics and Research Series No. 16. Adelaide: The University of Adelaide.

Stewart JF, Carter KD, Brennan DS (1998). Adult access to dental care – rural and remote dwellers. AIHW Dental Statistics and Research Series No. 17. Adelaide: The University of Adelaide.

The AIHW Dental Statistics and Research Unit (DSRU) is a collaborative unit of the Australian Institute of Health and Welfare established in 1988 at The University of Adelaide. The DSRU aims to improve the oral health of Australians through the collection, analysis and reporting of dental statistics and research on dental health status, use of dental services, provision of dental services and the dental labour force.

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