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## Oral health of migrant public dental patients



THE UNIVERSITY  
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This research report provides information on the oral health of adult public dental patients during 2001-02. Persons eligible for public dental care generally are holders of government health cards, such as the unemployed and aged pensioners. These cardholders are a financially disadvantaged group of adults within the Australian population. There may also be variation within this group. In this report data are used to assess the oral health status of migrant public patients compared to other public dental patients.

This report describes the oral health of public dental patients by place of birth and language spoken at home, based on a total of 5,243 dental patients who were examined by the dental authorities in six states/territories of Australia, providing a representative sample of the public dental patients they treated during the 2001-02 period.

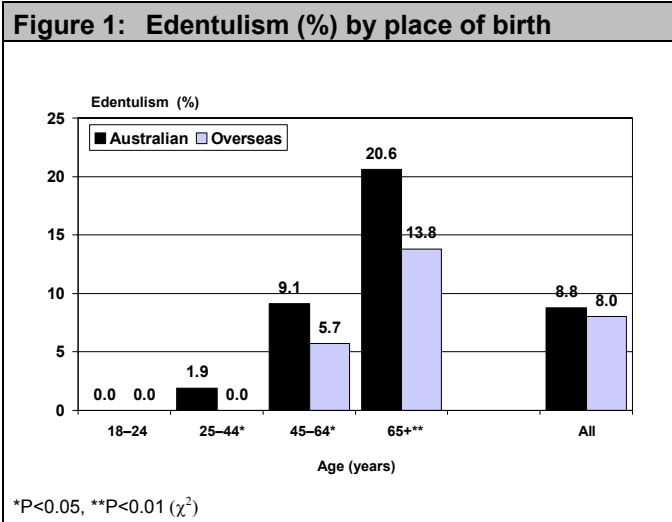
### Birthplace and language spoken

Table 1 presents the distribution of birthplace and language by age of patient. Australian-born patients had a younger age distribution compared to overseas-born patients, with 27.1% of Australian-born patients aged 65+ years compared to 43.8% for overseas-born patients. There were also lower percentages of patients who spoke English only who were aged 65+ years (30.9%) compared to patients who spoke languages other than English at home (40.2%).

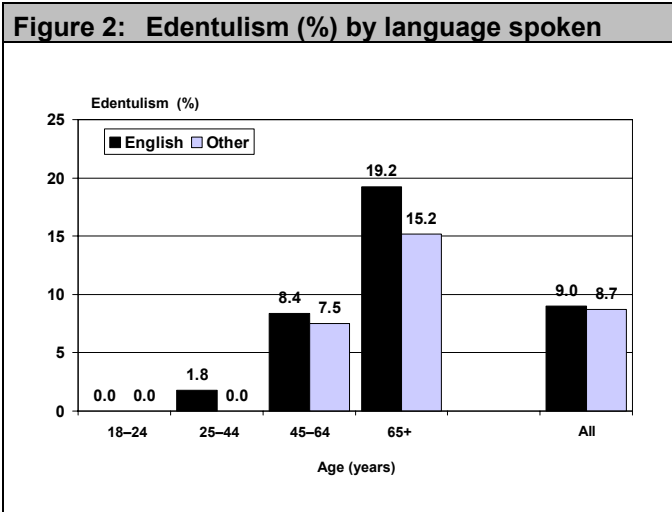
Age group	Birthplace		Language	
	Australia	Overseas	English	Other
18-24 years	8.9	3.3	7.6	4.3
25-44 years	36.1	18.6	32.8	20.9
45-64 years	27.9	34.3	28.7	34.7
65+ years	27.1	43.8	30.9	40.2

### Edentulism

Edentulism or the loss of all natural teeth tends to be more prevalent among older age groups, as shown in Figure 1. Australian-born patients had higher percentages of edentulism compared to overseas-born patients in the 25-44, 45-64 and 65+ year age groups. However, there was little overall difference in the percentage of Australian-born or overseas-born patients who were edentulous (8.8% cf. 8.0%) due to the older age distribution of overseas-born patients.



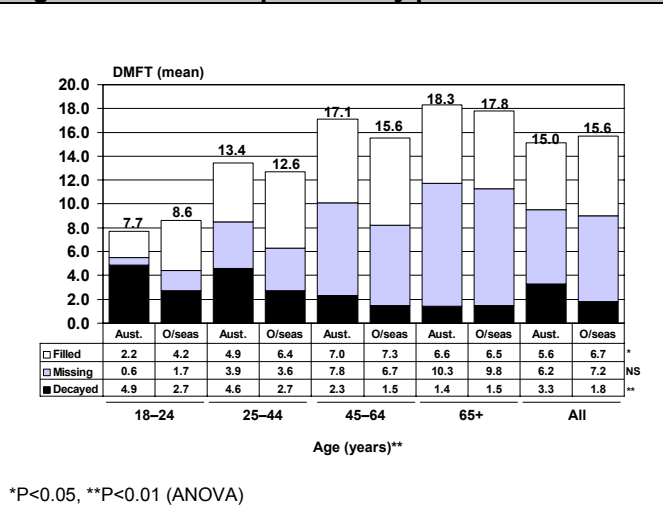
The percentage of edentulous patients by language showed smaller differences between English only and speakers of other languages (Figure 2) than were observed by place of birth.



## Caries experience

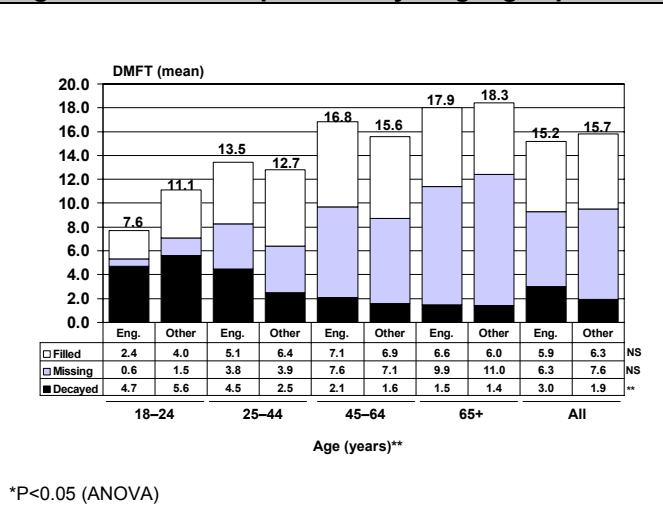
Caries experience varied by place of birth (Figure 3), with Australian-born patients having higher numbers of decayed teeth but lower numbers of filled teeth compared to patients born overseas.

**Figure 3: Caries experience by place of birth**



Patients who spoke English only had higher numbers of decayed teeth than patients who spoke a language other than English except among those aged 18-24 years (Figure 4).

**Figure 4: Caries experience by language spoken**



## Denture wearing

Table 2 shows that a majority of both Australian-born (65.3%) and overseas-born (55.5%) had no prostheses in the upper jaw. However, the distribution of denture wearing varied by birthplace, with a higher percentage of overseas-born compared to Australian-born patients wearing partial dentures (20.5% cf. 13.1%).

**Table 2: Denture wearing: by birthplace and age group (%) – upper jaw**

	Age group (years)				Total**
	18-24	25-44	45-64	65+	
<b>Australian-born</b>					
No prostheses	100.0	88.6	56.1	32.2	<b>65.3</b>
Full denture	0.0	4.3	26.3	44.6	<b>20.9</b>
Partial denture	0.0	6.8	15.9	22.9	<b>13.1</b>
Fixed bridge	0.0	0.3	1.2	0.4	<b>0.6</b>
Partial denture & fixed bridge	0.0	0.0	0.4	0.0	<b>0.1</b>
<b>Overseas-born</b>					
No prostheses	100.0	84.9	60.5	34.4	<b>55.5</b>
Full denture	0.0	3.1	16.5	33.7	<b>20.7</b>
Partial denture	0.0	9.1	19.9	27.9	<b>20.5</b>
Fixed bridge	0.0	3.0	1.5	2.9	<b>2.3</b>
Partial denture & fixed bridge	0.0	0.0	1.6	1.1	<b>1.0</b>

\*\*P<0.01: Australian-born vs overseas-born ( $\chi^2$ )

Table 3 shows that denture wearing was less common in the lower jaw than the upper jaw (Table 2). As for the upper jaw, the majority of patients had no prostheses in the lower jaw for both Australian-born (83.6%) and overseas-born patients (70.1%) but there was a higher percentage of partial dentures among patients who were overseas-born (19.4%) compared to Australian-born patients (10.4%).

**Table 3: Denture wearing: by birthplace and age group (%) – lower jaw**

	Age group (years)				Total**
	18-24	25-44	45-64	65+	
<b>Australian-born</b>					
No prostheses	100.0	96.4	83.8	60.6	<b>83.6</b>
Full denture	0.0	0.6	4.6	15.8	<b>5.8</b>
Partial denture	0.0	3.1	10.8	23.2	<b>10.4</b>
Fixed bridge	0.0	0.0	0.9	0.3	<b>0.3</b>
Partial denture & fixed bridge	0.0	0.0	0.0	0.0	<b>0.0</b>
<b>Overseas-born</b>					
No prostheses	100.0	92.8	74.6	53.7	<b>70.1</b>
Full denture	0.0	0.0	6.1	16.0	<b>8.9</b>
Partial denture	0.0	6.1	19.3	27.1	<b>19.4</b>
Fixed bridge	0.0	1.1	0.0	3.2	<b>1.6</b>
Partial denture & fixed bridge	0.0	0.0	0.0	0.0	<b>0.0</b>

\*\*P<0.01: Australian-born vs overseas-born ( $\chi^2$ )

Table 4 shows a similar pattern for denture wearing in the upper jaw by language spoken as was observed for birthplace. The majority of patients had no prostheses in the upper jaw for both patients who spoke English only (63.5%) and other languages (55.1%). Higher percentages of partial dentures were observed among speakers of other languages (20.2%) compared to patients who spoke English only (13.9%).

**Table 4: Denture wearing: by language spoken and age group (%) – upper jaw**

	Age group (years)				Total**
	18–24	25–44	45–64	65+	
<b>English only</b>					
No prostheses	100.0	88.0	56.5	33.1	<b>63.5</b>
Full denture	0.0	4.3	26.4	42.5	<b>21.8</b>
Partial denture	0.0	7.3	15.2	23.6	<b>13.9</b>
Fixed bridge	0.0	0.3	1.3	0.8	<b>0.7</b>
Partial denture & fixed bridge	0.0	0.0	0.6	0.0	<b>0.2</b>
<b>Other language</b>					
No prostheses	100.0	86.4	57.9	30.9	<b>55.1</b>
Full denture	0.0	3.7	17.2	36.3	<b>21.2</b>
Partial denture	0.0	6.0	22.3	28.2	<b>20.2</b>
Fixed bridge	0.0	4.0	1.2	2.9	<b>2.4</b>
Partial denture & fixed bridge	0.0	0.0	1.6	1.7	<b>1.2</b>

\*\*P<0.01: English only vs other languages ( $\chi^2$ )

Table 5 shows that the majority of patients had no prostheses in the lower jaw for English only (81.4%) and other language speakers (69.0%). There were higher percentages of partial dentures among other language speakers (19.4%) compared to English only speakers (11.8%).

**Table 5: Denture wearing: by language spoken and age group (%) – lower jaw**

	Age group (years)				Total**
	18–24	25–44	45–64	65+	
<b>English only</b>					
No prostheses	100.0	95.2	83.2	59.6	<b>81.4</b>
Full denture	0.0	0.5	5.1	16.4	<b>6.6</b>
Partial denture	0.0	4.2	11.0	23.8	<b>11.8</b>
Fixed bridge	0.0	0.0	0.7	0.2	<b>0.3</b>
Partial denture & fixed bridge	0.0	0.0	0.0	0.0	<b>0.0</b>
<b>Other language</b>					
No prostheses	100.0	94.8	71.1	49.1	<b>69.0</b>
Full denture	0.0	0.0	7.3	17.2	<b>9.2</b>
Partial denture	0.0	3.8	21.6	28.4	<b>19.4</b>
Fixed bridge	0.0	1.4	0.1	5.2	<b>2.3</b>
Partial denture & fixed bridge	0.0	0.0	0.0	0.0	<b>0.0</b>

\*\*P<0.01: English only vs other languages ( $\chi^2$ )

## Periodontal health

The percentage of patients with 6+ mm periodontal pockets was similar for both Australian-born (10.5%) and overseas-born (10.9%) patients (Figure 5). Among 25–44-year-olds higher percentages of Australian-born (9.0%) patients had 6+ mm periodontal pockets compared to overseas-born (4.0%) patients.

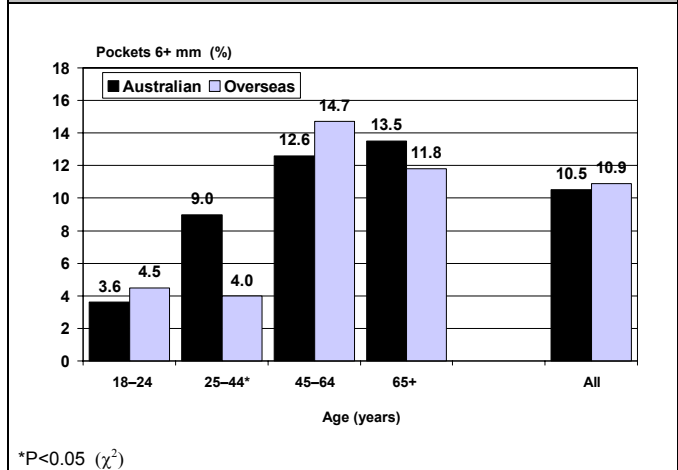
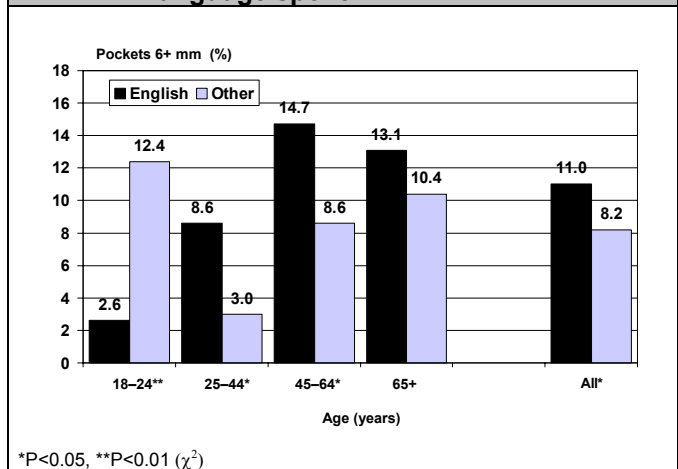
**Figure 5: Periodontal pockets 6+ mm (%) by place of birth**

Figure 6 shows that a higher percentage of patients who spoke English only had 6+ mm periodontal pockets (11.0%) compared to speakers of other languages (8.2%). This pattern was observed among 25–44 and 45–64-year-olds. Although this pattern was reversed among 18–24-year-olds, this age group comprised the smallest percentage of patients (see Table 1).

**Figure 6: Periodontal pockets 6+ mm (%) by language spoken**

## Discussion

Birthplace has often been used as an indicator of ethnicity, supplemented by information such as first language, English proficiency, and length of residence (Powles & Gifford 1990). In this study broad categories of birthplace and language were analysed, combined across states/territories. While there was little evidence of disadvantage to migrants in terms of oral health status by place of birth and language, further development is required at state/territory and other levels to identify specific ethnic groups at risk.

## Adult Dental Programs Survey

The Adult Dental Programs Survey is a random sample of patients attending for public-funded dental care. Oral health was assessed by dentists at the initial visit of a course of care using written instructions, but there was no formal calibration.

Caries experience was recorded using visual and tactile information alone (NIDR 1987). The Community Periodontal Index (WHO 1997) was recorded using a periodontal probe to measure pocket depth and detect subgingival calculus or bleeding.

Patients' declared birthplace was coded as 'Australia' or 'Overseas'. The language spoken at home was coded as 'English' if English was the only language spoken at home, and 'Other' if another language was spoken.

Data were weighted by the number of persons whose last dental visit was public-funded in the last year for 18+-year-olds from the National Dental Telephone Interview Survey to provide representative estimates for adults receiving public dental care by state/territory.

## Acknowledgements

This research was assisted by the Population Health Division of the Australian Government Department of Health and Ageing. The data were collected in collaboration with participating state/territory dental authorities.

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## Summary

A lower percentage of overseas-born patients were edentulous compared to Australian-born patients aged 25-44 years and older.

Overseas-born patients had lower numbers of decayed teeth and higher numbers of filled teeth than Australian-born patients. Patients speaking languages other than English had lower numbers of decayed teeth than English-only speakers.

Higher percentages of overseas-born patients had partial dentures compared to Australian-born patients. Higher percentages of patients who spoke languages other than English had partial dentures compared to English-only speakers.

A higher percentage of patients who spoke English only had 6+ mm periodontal pockets compared to patients speaking other languages.

## Scope of data

This report is based on data collected on 5,243 patients in 2001-02 by the dental authorities in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory.

Sample size estimates were based on measures of oral health status from the 1995-96 Adult Dental Programs Survey (Brennan & Spencer 1997) to achieve estimates of key outcomes with a precision of 20% relative standard error or less. The total sample yield exceeded the target, thereby providing a sufficient sample size to achieve the desired level of precision.

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 the population eligible for public dental services who did not access dental care during the survey period.

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