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## Oral health of public-funded dental patients

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**T**he National Health Strategy in 1992 identified the issue of inequality in oral health and access to dental care as a significant public health problem. Oral health goals and targets for Australia have identified persons from low socio-economic backgrounds as a priority group within the population.

Health card holders are the target population of adults eligible for public-funded dental care. These card holders represent a financially disadvantaged group of adults among the Australian population. A purpose of the Adult Dental Programs Survey is to monitor the oral health of these persons as they attend for public-funded dental care.

This Newsletter uses data from the Prospective Adult Dental Programs Survey to examine the oral health status of patients attending for public-funded dental care during the 1995-96 period.

### Adult Dental Programs Survey (Prospective) 1995-96

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The Adult Dental Programs Survey is a survey of patients attending for public-funded dental care. The Survey was commenced in 1995-96 to evaluate the Commonwealth Dental Health Program. Data are collected on oral health, patient characteristics, visit details, and services provided.

This Newsletter presents data from the Survey on oral health status by age, presenting measures of tooth loss (per cent edentulous), caries experience (DMFT), and periodontal conditions (CPITN). These measures are broken down by type of course of care (i.e., emergency or non-emergency) and geographic location (i.e., urban or rural).

The data were based on information which was available up to mid-1996.

### Data collection

Data were collected by State/Territory dental services using manual forms or optical mark read scan forms to record oral health status, and computer management information system databases to record patient, visit, and service provision details. Oral health measures were assessed by dentists during the initial visit of a course of care. Written instructions for indices (e.g., DMFT, CPITN) were used, but there was no formal calibration of dentists in diagnostic criteria.

### Sampling strategy

Sampling rates, based on date of birth, were determined for each State/Territory. Patients with these specific dates of birth were included in the Survey as they attended for care.

### Sample yields

Data were available from 5,272 courses of care, with 874 from New South Wales, 203 from Victoria, 2,628 from Queensland, 753 from South Australia, 160 from Western Australia, 359 from Tasmania, 26 from Australian Capital Territory, and 269 from Northern Territory. All data from New South Wales were from the United Dental Hospital of Sydney.

### Weighting

The data were weighted using the estimated number of persons whose last dental visit was public-funded at either a public dental clinic or private practice within the last 12 months for persons aged 18 years or more from the 1996 National Dental Telephone Interview Survey. Therefore, the weighted results are representative of the number of adults receiving public-funded dental care for each State/Territory.

### Edentulism

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The percentage of persons attending for public-funded dental care who were edentulous (i.e., having no natural teeth) is presented in Table A. As expected, the per cent edentulous was higher among older age groups of patients, ranging from under 10 per cent for those aged less than 55 years, to 14.0 per cent for 55-64 year olds, and 25.7 for those aged 65 years or more. Variation in edentulism by age was also evident by type of course of care and geographic location.

For adult patients aged 25 years or more the per cent edentulous was higher for non-emergency compared

to emergency courses of care. The per cent edentulous was higher for patients from rural compared to urban locations in all age groups older than 25 years.

**Table A: Per cent edentulous by age, type of course of care, and geographic location**

	Emerg.	Non-emerg.	Urban	Rural	All
18-24	0.7	0.5	0.6	0.6	0.6
25-34	0.4	1.8	0.5	2.1	1.1
35-44	0.4	7.3	2.3	4.9	3.9
45-54	1.4	11.0	3.3	14.9	6.4
55-64	7.4	18.8	11.3	18.8	14.0
65+	16.4	32.2	23.2	32.3	25.7

## Caries experience

Caries experience was recorded as the number of decayed, missing, and filled permanent teeth using the DMFT index.

### DMFT by age of patient

**Figure 1: DMFT by age**

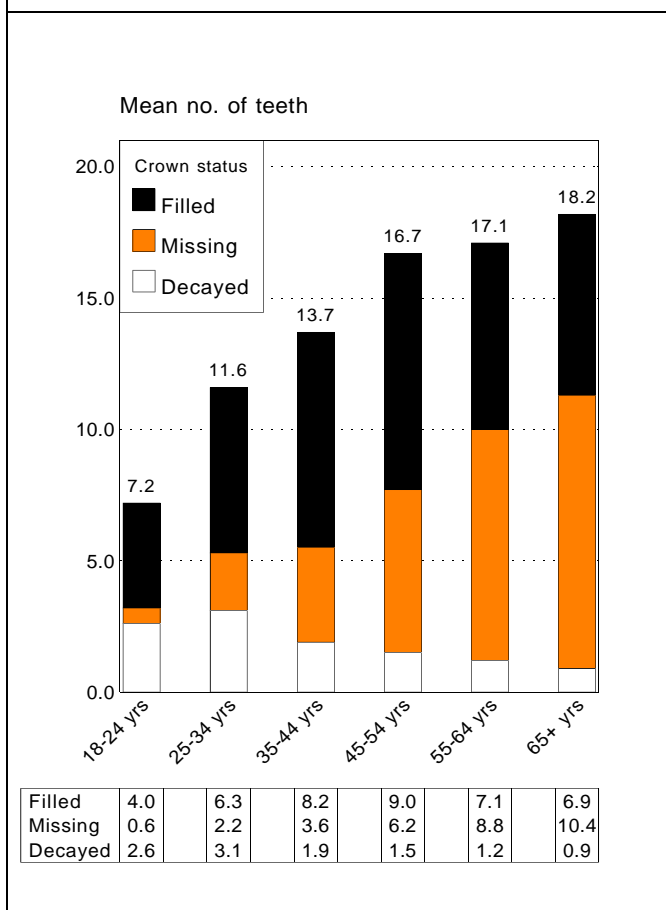


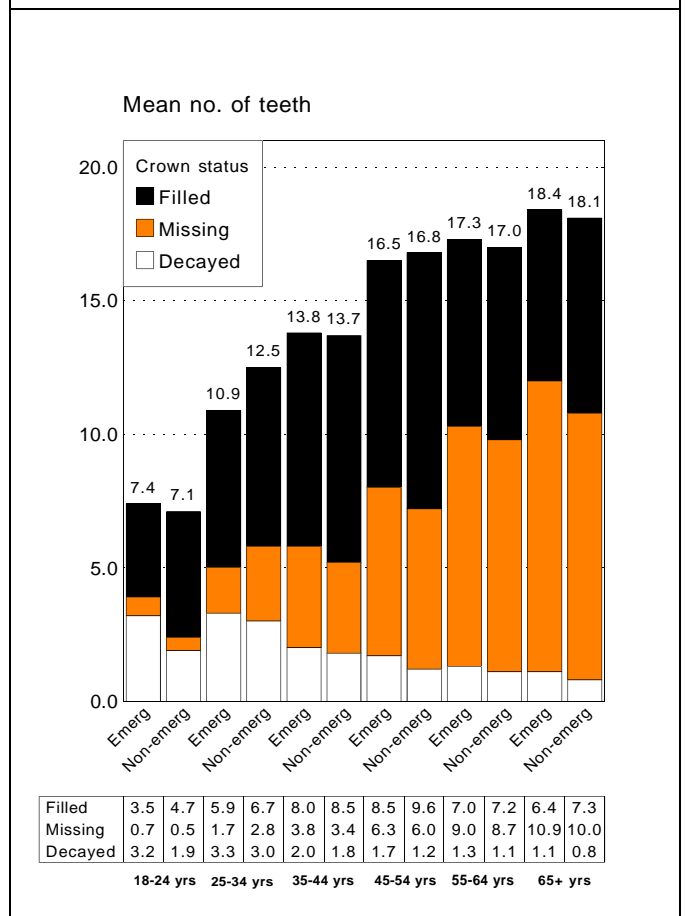
Figure 1 shows that mean DMFT increased across age groups from 7.2 in 18-24 year olds to 18.2 in patients aged 65 years or more. Decayed teeth were highest among younger age groups, ranging from 3.1 for 25-34 year olds to 0.9 for patients aged 65 years or more. Missing teeth increased across older age groups,

ranging from 0.6 for 18-24 year olds to 10.4 for those aged 65 years or more. Filled teeth increased across older age groups, up to those aged 45-54 years.

### DMFT by age and type of course of care

Figure 2 shows that mean DMFT was similar between emergency and non-emergency patients for all age groups, except 25-34 years. Decayed teeth were higher for emergency compared to non-emergency courses of care for all age groups, but was most pronounced for those aged 18-24 years. Filled teeth were lower for emergencies for all age groups.

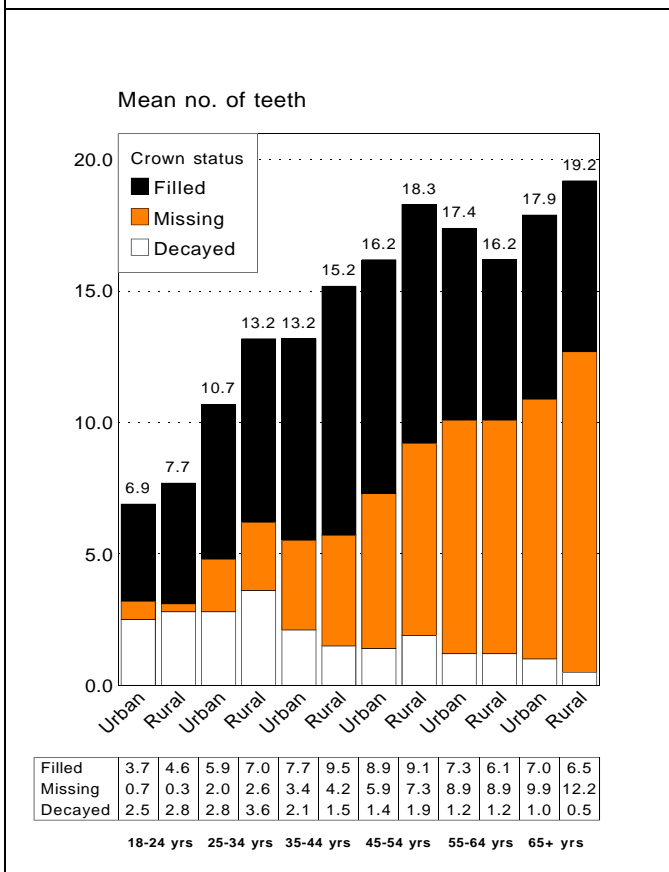
**Figure 2: DMFT by age and type of course of care**



### DMFT by age and geographic location

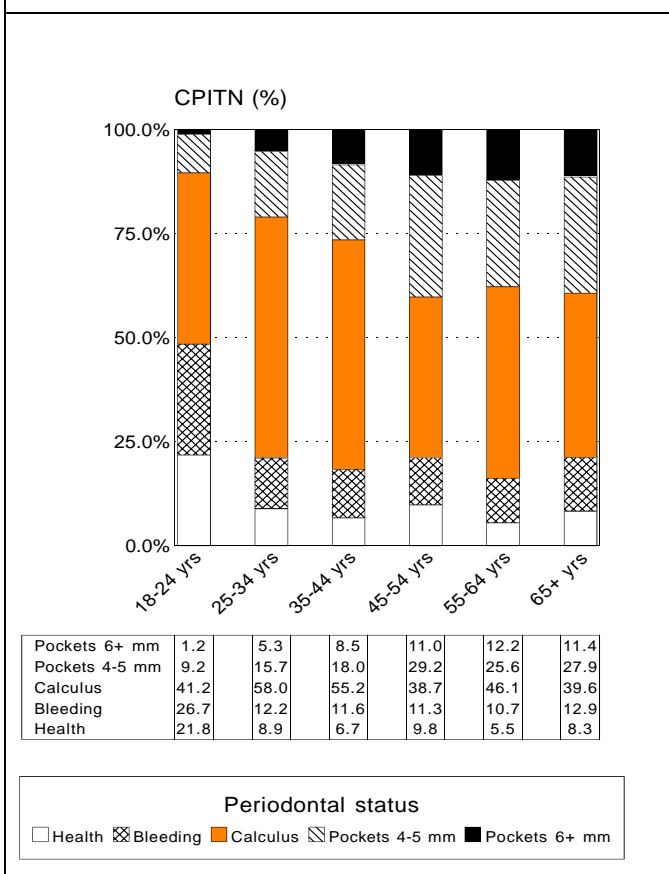
Figure 3 presents mean DMFT by age and geographic location. DMFT was higher for rural patients compared to urban patients for all age groups, except those aged 55-64 years. The higher DMFT for rural patients was most pronounced for the patient age groups 25-34, 35-44, and 45-54 years. Decayed teeth were highest for rural patients aged 25-34 years. Missing teeth were highest for rural patients aged 65 years or more. Filled teeth were highest for rural patients aged 35-44 years.

**Figure 3: DMFT by age and geographic location**



**Periodontal status**

**Figure 4: CPITN by age**



Periodontal status was recorded using the Community Periodontal Index of Treatment Need (CPITN), and is presented as the percentage of people categorised by their maximum sextant scores.

**CPITN by age**

Figure 4 shows that the CPITN category of periodontal health was highest among 18-24 year olds. Periodontal pockets (4 mm or more) were higher among older age groups. For example, among patients aged 45-54 years and older, over 25 per cent had 4-5 mm pockets and over 10 per cent had pockets of 6 mm or more. The observation that the prevalence of pockets no longer increases past the age of 45 years may be due to a “survivor effect” whereby relatively healthy teeth are retained in older age, and teeth with deep pockets are more likely to be extracted.

**CPITN by age and type of course of care**

**Figure 5: CPITN by age and type of course of care**

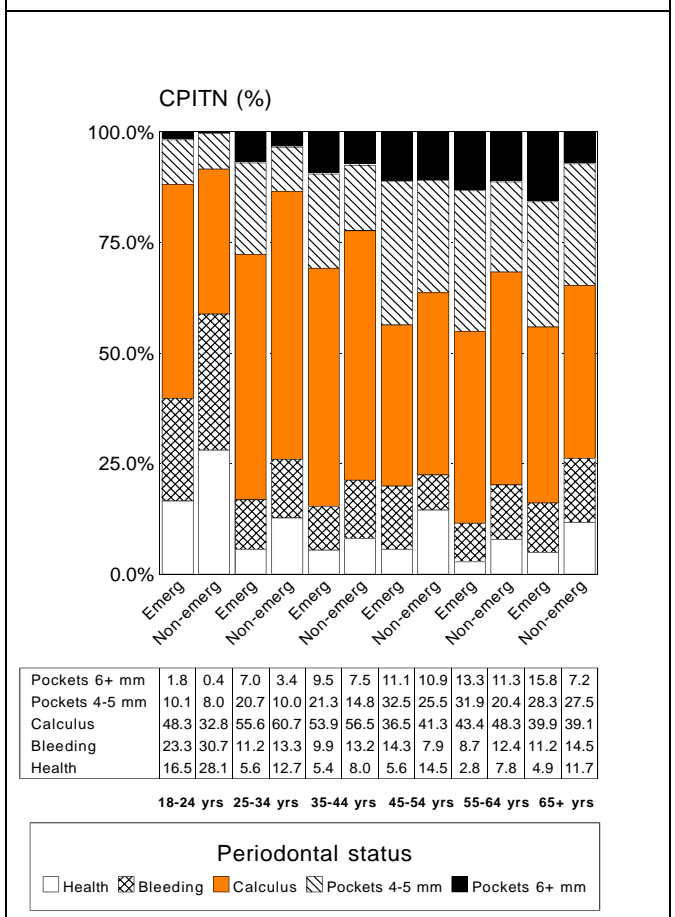
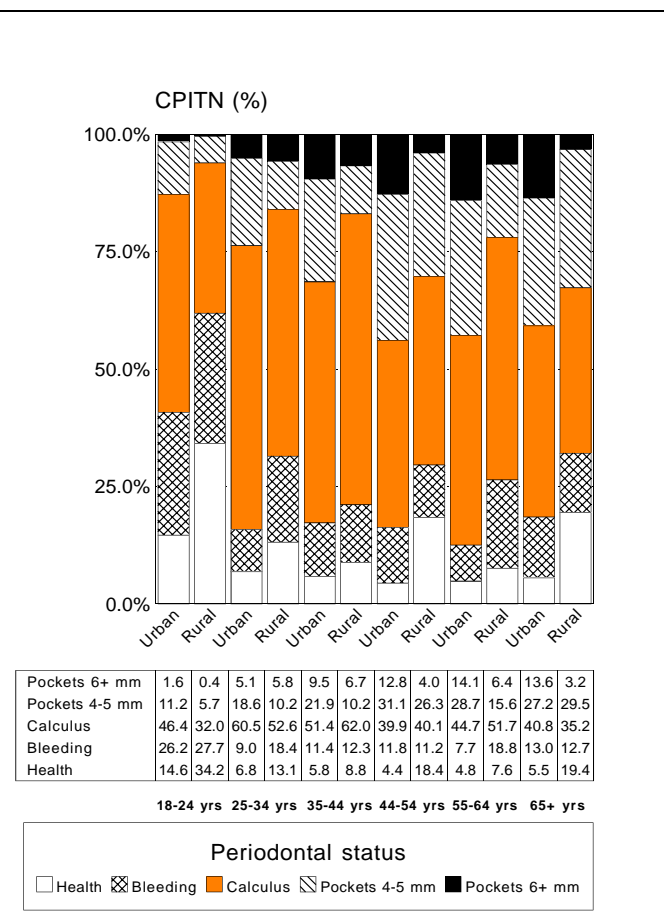


Figure 5 shows the CPITN category of periodontal health was higher, and the per cent of patients with periodontal pockets was lower, among non-emergency patients for all age groups. Periodontal pockets of 4-5 mm were highest for emergency patients aged 45-54 years, while pockets of 6 mm or more were highest for emergency patients aged 65 years or older.

### CPITN by age and geographic location

Figure 6 shows that the CPITN category of periodontal health was higher, and periodontal pockets were lower, at rural compared to urban locations for all age groups. This needs to be interpreted cautiously as tooth loss (edentulism and missing teeth) was higher in rural areas, creating a potential survivor bias.

**Figure 6: CPITN by age and geographic location**



health status by age, type of course of care, and geographic location. The utility of these findings can be enhanced through on-going monitoring to build a more comprehensive picture of patterns of both health and needs, and the tracking of changes over time.

### Summary

Patterns of oral health by age of patients included:

- higher levels of edentulism, caries experience, and periodontal pockets among older adults
- higher numbers of decayed teeth, but a higher percentage of periodontal health, among younger age groups

For emergency compared to non-emergency courses of care there were:

- higher numbers of decayed teeth
- a greater percentage of periodontal pockets

At rural compared to urban locations there were:

- higher levels of edentulism and missing teeth, but better periodontal health among the dentate
- higher levels of DMFT in young and middle-aged adults

### Acknowledgements

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The findings presented in this Newsletter provide a description of oral health status among patients attending public-funded dental care. These data document the level of previous disease and treatment, and provide some indication of the distribution of oral

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