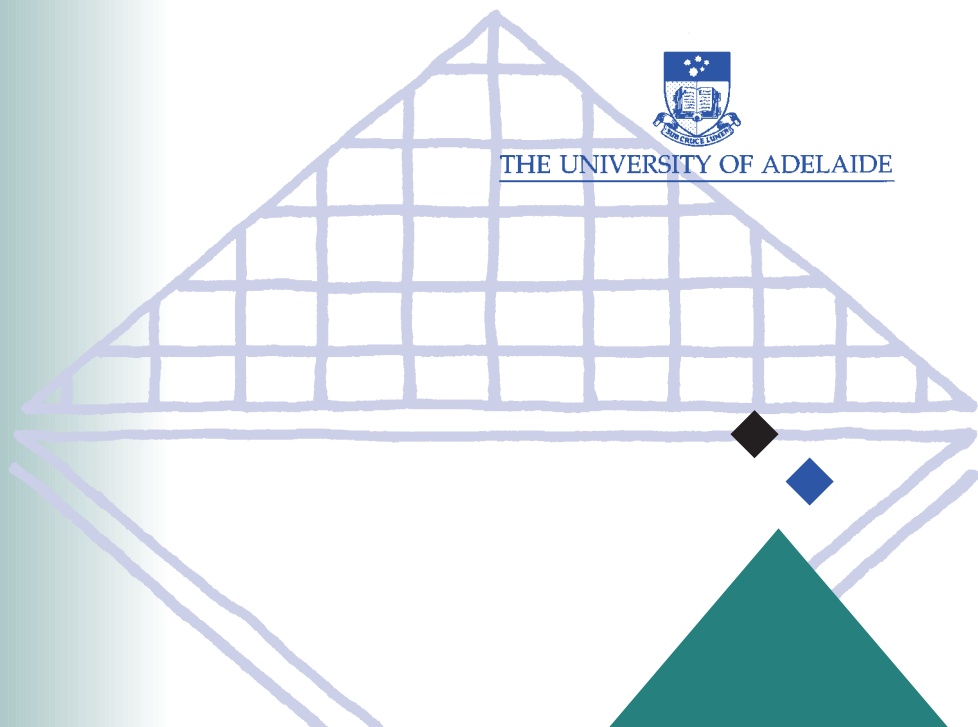


The child dental health survey Australia, 1994

MJ Davies
AJ Spencer



THE UNIVERSITY OF ADELAIDE



The Australian Institute of Health and Welfare (AIHW) is an independent federal statistics and research agency, responsible for developing information on Australia's health, and its health and welfare services. It comprises two major research divisions, five collaborative units, and a supporting Information, Management and Business division.

Health Division

Welfare Division

National Perinatal Statistics Unit

National Injury Surveillance Unit

Dental Statistics and Research Unit

National Reference Centre for Classification in Health

National Centre for Aboriginal and Torres Strait Islander Statistics

Information, Management and Business Division

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 the dental workforce, dental health status, dental practices and use of dental services. The Child Dental Health Survey is conducted in collaboration with dental authorities in each State and Territory of Australia.

DSRU Staff:	Director:	Professor John Spencer
	Research Officers:	Mr Fearnley Szuster
		Mr Michael Davies
		Mr David Brennan
		Mr Knute Carter
		Mrs Judy Stewart
	NHMRC Research Officer:	Dr Jane Chalmers
	Research Associates:	Dr Anna Puzio
		Dr Danae Kent
		Dr Gary Slade
	Consultants:	Dr Kaye Roberts-Thomson

Any comment or information relevant to the subject matter of this report would be welcome. Correspondence should be directed to:

The Director
AIHW Dental Statistics and Research Unit
The University of Adelaide
AUSTRALIA 5005

Fax: (08) 8303 4858
Tel: (08) 8303 4051
Email: aihw.dsru@dentistry.adelaide.edu.au

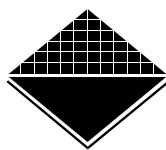
Board Chairperson
Professor Janice Reid

Director
Dr Richard Madden

**Dental Statistics and Research Series
Number 9**

**The Child Dental
Health Survey
Australia, 1994**

M J Davies
A J Spencer



THE UNIVERSITY OF ADELAIDE

AIHW CATALOGUE NO. DEN 30

© Commonwealth of Australia 1997

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced by any process without written permission from The University of Adelaide. Requests and inquiries concerning reproduction and rights should be directed to the Director, AIHW Dental Statistics and Research Unit, The University of Adelaide, Australia 5005.

This is the ninth national publication in the Australian Institute of Health and Welfare's Dental Statistics and Research Unit Series. A complete list of the Institute's publications is available from the Publications Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601.

National Library of Australia Cataloguing-in-Publication data

Davies, M.J., 1957 -
The child dental health survey, Australia, 1994.

ISBN 0 86396 608 X

1. Children - Dental care - Australia - Statistics. 2. Dental public health - Australia - Statistics.
3. Dental surveys - Australia. I. Spencer, A. John (Andrew John), 1950-.
II. Australian Institute of Health and Welfare. Dental Statistics and Research Unit.
III. University of Adelaide. IV. Title. (Series : Dental statistics and research ; no. 9).

362.19760994

ISSN 1321-0254

Suggested citation

Davies MJ, Spencer AJ (1997). *The Child Dental Health Survey, Australia 1994*. AIHW Dental Statistics and Research Unit Series No. 9, The University of Adelaide, Adelaide.

Acknowledgments

We wish to acknowledge the extensive time and effort contributed by the Australian Dental Therapist Association along with State and Territory Dental Boards and Health Authorities in the collection and provision of the data used in this report. We also wish to acknowledge Ms Lyn Tucker for preparing the manuscript.

CONTENTS

Purpose of the report.....	1
Description of Survey methods	1
Description of national findings.....	4
References:	8

Tables

Table 1: Number in sample and estimated resident population	9
Table 2: Birthplace	10
Table 3: Aboriginality.....	11
Table 4: Deciduous teeth: Age-specific caries experience.....	12
Table 5: Permanent teeth: Age-specific caries experience.....	13
Table 6: All teeth: Age-specific caries prevalence	14
Table 7: Fissure sealants: Age-specific prevalence.....	15
Table 8: Immediate treatment needs: Age-specific distribution	16
Table 9: Interstate comparison: Five-six year-old dmft.....	17
Table 10: Interstate comparison: 12 year-old DMFT.....	18
Table 11: All teeth: Age-standardised caries experience.....	19
Table 12: National summary	20

Figures

Figure 1: Percentage of children with dmft=0, DMFT=0 and d+D=4+	21
---	----

THE CHILD DENTAL HEALTH SURVEY – AUSTRALIA 1994

Purpose of the report

This report provides descriptive epidemiological and service provision data concerning children's dental health in Australia. Data for the report have been derived from the Child Dental Health Survey, which monitors dental health of children enrolled in School Dental Services. The tables and figure contained in this report describe the demographic composition of the sample, deciduous and permanent caries experience, extent of immediate treatment needs, and prevalence of fissure sealants. State/Territory comparisons follow the national tables. The remainder of this introduction presents a description of the Survey methods and discussion of the findings for the national tables.

Description of Survey methods

Source and sampling of subjects for the Child Dental Health Survey

Data for the report have been derived from the Child Dental Health Survey, which monitors dental health of children enrolled in School Dental Services operated by the health departments or authorities of the six State and two Territory governments. The School Dental Services provide dental care principally to primary school aged children. The care typically provided includes dental examinations, preventive services and restorative treatment as required. However, there are some variations among State and Territory programs with respect to priority age groups and the nature of services. As a consequence, there are variations in the extent of enrolment in School Dental Services, with some jurisdictions serving more than 80 per cent of primary school children, and others serving smaller percentages. (For this reason the tables exclude data from Victorian children aged 12 years and above, due to the small and selective nature of the sample. Consequently, the numbers of children involved reduce across age groups.)

Sampling

The data for the Child Dental Health Survey are derived from the routine examinations of children enrolled in School Dental Services. At the time of examination, children are sampled at random by selecting those born on specific days of the month. Some States adopt another systematic sample based, for example, on selecting every eighth case. Different sampling ratios, and consequently different days of birth, are used among the States and Territories according to the scheme presented on the following page. National data for the Child Dental Health Survey therefore constitute a stratified random sample of children from the School Dental Services. Children not enrolled with School Dental Services are not represented in the sample. The intention of stratification is to provide approximately equivalent numbers of children from each State or Territory, although differences in administration and local data requirements of the Services create some variation. This was apparent for Victoria for 1994, where due to sampling difficulties, the number of children aged 12 years and above included in the Survey were relatively small, resulting in high standard errors for prevalence estimates. The Victorian children sampled were not necessarily representative of all primary school children, with all 12 year-old children selected being recipients of Commonwealth Government health concession cards. As a consequence, any tables in this report that include

reference to age 12 years do not include data from Victoria. No data were received from Tasmania due to the destruction of all electronic and paper records for the 1994 sample.

State	Ratio	Days of birth	Comments for 1994 collection
NSW	1:16	3rd or 30th	January–December
Vic	1:8	Systematic	Insufficient data for children aged 12+ yrs
Qld	1:1 Townsville	1st to 31st	January–June
Qld	1:5 Rest of Qld	1st to 6th	January–June
SA	1:12 Metropolitan	13th, 30th, 31st	January–December
SA	1:5 Rest of SA	13th, 26th to 31st	January–December
WA	1:12.5	29th, 30th, 31st	January–December
Tas	1:2.5	Systematic	No data provided
NT	1:1.9 Darwin	1st to 16th	January–December
NT	1:1 Rest of NT	1st to 31st	January–December
ACT	1:1.9	1st to 16th	January–December

Data items

Data items in the Child Dental Health Survey are collected at the time of routine clinical examinations conducted by dental therapists and dentists. The recorded characteristics of sampled children consists of demographic information, including the child's age, sex and birthplace (both of child and mother). Birthplace and the Aboriginality of both patient and mother, are considered to be two items essential to a health monitoring survey (*Health Targets and Implementation Committee*, 1988). Birthplace categories have been derived from those employed by the Australian Bureau of Statistics, in order to ensure the comparability of data obtained from this Survey to other sources, such as the Census. Maternal birthplace was chosen as the preferred parental data item. However, birthplace data items are not yet recorded uniformly by each State or Territory. The data reported here have been obtained from Northern Territory, New South Wales and South Australia. Other States did not collect these data items in 1994. The analysis of variations in health status, with particular regard to variations by Aboriginality, have been pursued in other analyses and are not reported here. (See *Australia's Health*, 1992.) Service provision information includes the date of current and previous examination (if the child previously had been examined within the School Dental Service) and is dealt with in detail within State and Territory-specific reports.

The dental health status of sampled children covers four areas listed below:

- 1) Deciduous caries experience is recorded as the number of deciduous teeth which are decayed, missing because of dental caries, or filled because of dental caries, and is based on the coding scheme of Palmer *et al* (1984).
- 2) Permanent caries experience is recorded as the number of permanent teeth which are decayed, missing because of dental caries, or filled because of dental caries, and is based on the WHO protocol (WHO, 1987).

- 3) Immediate treatment needs are designated if, in the opinion of the examiner, the child has, or is likely to develop within four weeks, pain, infection or a life-threatening condition (WHO, 1987). This data item was introduced in most States and Territories in 1990.
- 4) Fissure sealants are recorded as the number of teeth, otherwise sound and not restored, which have a fissure sealant. This data item was introduced in most States and Territories in 1989.

Some data items are not collected uniformly among States and Territories. Consequently, some of the tables in this report refer only to specific States and Territories.

The diagnostic criteria employed are based on the clinical judgement of the examining dental therapist or dentist. They follow written criteria for the data items described above; however, there are no formal sessions of calibration or instruction in diagnosis undertaken for the purpose of the Survey, and there are no repeat examinations for the purpose of assessing inter- or intra-examiner reliability.

Data analysis

National data contained in this report consist of counts, means and percentages which have been weighted to represent the relevant State/Territory-specific population of children aged 5–15 years. The weighting procedure is necessary, since the national sample is stratified by State/Territory to provide equivalent numbers of cases in each jurisdiction. Unweighted estimates would be over-represented by children from less populous States/Territories and under-represented by those from more populous jurisdictions.

The method follows standard procedures for weighting stratified samples using external data sources (Foreman, 1991). State/Territory estimates (ABS, 1994) of the 1993 child population within individual ages are used to provide numerators for weights which are divided by the age-specific number of cases in the sample from respective States. Hence, observations from more populous States achieve relatively greater weight. However, the stratum-specific weights are further divided by the national estimated population and total sample size to achieve numerical equivalence between the weighted sample and the original number of processed records.

Indices are calculated from data collected over a 12 month period. Where children received more than one examination during this period, the information derived from examinations other than the first is excluded.

Administration of the Survey

The Child Dental Health Survey has been conducted since 1977. Between 1977 and 1988 it was managed centrally by the Commonwealth Department of Health. In 1989 responsibility for the national data collection was transferred to the Australian Institute of Health and Welfare's Dental Statistics and Research Unit at The University of Adelaide.

Description of national findings

Table 1: Number in sample and estimated resident population

There was a total of 66,582 children aged between 5 and 15 years inclusive reported for the 1994 calendar year. Children aged 4 years or less and those aged 16 years or more were excluded from this sample, as the small numbers of children receiving care in these age groups across Australia results in less reliability of computed statistics for those ages. Furthermore, children in those ages are outside the main target group of many of the School Dental Services, and it is likely that they have some special characteristics which make them less representative of their respective age groups within the Australian population.

The effects of the statistical weighting procedure can be appreciated from examining Table 1. The relatively large numbers of reported cases from New South Wales, Western Australia and the Northern Territory receive relatively lower weights compared with other States and Territories. Therefore the weighted cases, which are used for estimates listed in subsequent tables, represent smaller numbers of children from those three States. Consequently the national sample is representative of the populations of all States and Territories, rather than the number of reported cases.

Table 2: Birthplace

Information concerning birthplace was available for New South Wales and the Northern Territory, where 92.5 per cent of children and 80.4 per cent of mothers were born in Australia. For children, the predominant regions of birth for those not born in Australia were South East Asia, other Asia (e.g. India), and other English speaking countries (e.g. New Zealand). For mothers, the distribution of birthplace was wider than for children, and the predominant regions of birth for those not born in Australia were South East Asia, the Middle East (e.g. Egypt), and the United Kingdom and Eire, although none of these categories exceeded 5 per cent.

Table 3: Aboriginality

Information concerning Aboriginality was available for New South Wales and the Northern Territory. Among those receiving School Dental Service care 1.2 per cent of children and 1.3 per cent of mothers were of Aboriginal or Torres Strait Islander origin in New South Wales, while 36.4 per cent of children and 35.9 per cent of mothers were of Aboriginal or Torres Strait Islander origin in the Northern Territory.

Table 4: Deciduous teeth: age-specific caries experience

Total caries experience in the deciduous dentition is expressed as the mean dmft and varied from 1.56 to 2.01 among 5 to 9 year-olds, peaking at 2.13 for 8 year-olds. The noticeable decline among 9 and 10 year-olds is a natural consequence of exfoliation of deciduous teeth. There was a greater amount of variation in the mean number of decayed deciduous teeth, decreasing from 1.18 among 5 year-olds to 0.67 among 9 year-olds. As a consequence of both trends, the d/dmft ratio was highest among younger children, and declined to approximately 32 per cent by the age of 10. The percentage of children with no deciduous (dmft=0) caries mirrored the age variations in mean dmft by reducing across the age range 5 to 8 years.

The patterns suggest that children enter their school years with moderate caries experience in the deciduous dentition – a large proportion of it manifested as untreated decay. The d/dmft ratio decreased up to the age of 10, reflecting the effectiveness of the School Dental Services in restoring decayed teeth. It is noteworthy that the mean number of decayed teeth exceeded 0.60 through to 9 years, despite the relative constancy of mean dmft. This may suggest that much of the untreated decay occurred in previously filled teeth. However, there could be more complex interactions with tooth exfoliation and rates of caries progression which influence the pattern of deciduous caries.

Table 5: Permanent teeth: age-specific caries experience

The mean numbers of decayed permanent teeth and DMFT were smaller than the corresponding means for deciduous teeth across the range of 5 to 10 years. In addition, the means for permanent teeth continued to increase among older ages. It is noteworthy that over 67 per cent of children aged 10 years or less had no permanent tooth caries experience (DMFT=0), and even by the end of their primary school years, 57.5 per cent of 12 year-olds had no permanent caries experience.

It is necessary to be cautious in drawing inferences from age related trends – particularly among those aged over 12 years. In most States and Territories, access to School Dental Services for those older children tends to be restricted in comparison with access for younger children. Often the older children have special eligibility criteria, with the consequence that they may be less representative of the respective age groups within the Australian population than is the case for younger children reported in Table 5.

Table 6: All teeth: age-specific caries prevalence

This table combines components of caries experience from the deciduous and permanent dentitions to provide an indicator of the total burden of disease among children receiving care within School Dental Services.

Untreated decay (d+D of 1 or more) in the combined deciduous and permanent dentitions was present for between 26.5 and 41.0 per cent of children in the age range 5 to 12 years. The greatest likelihood of untreated decay was observed among 8 year-olds (where only 59.0 per cent had d+D=0), although the greatest intensity of decay occurred in the youngest ages. For example, 12.4 per cent of 5 year-olds had 4 or more teeth with untreated decay. Based on observations from previous tables, the greatest contribution among younger children came from deciduous teeth.

Missing teeth were relatively uncommon among children aged 5 to 12 years. Both the percentage of children with no fillings (f+F=0) or caries experience (dmft+DMFT=0) showed

no stable pattern across the age range contained in Table 6. The latter figure demonstrates among the key age range of 5 to 12 year-olds that one third or more of children have no caries experience in either dentition.

Table 7: Fissure sealants: age-specific prevalence

The mean number of fissure sealants was substantial among those aged 7 years or more, and through to 12 year-olds it exceeded the mean number of decayed permanent teeth (Table 5). Children with permanent caries experience (DMFT=1+) had a greater likelihood of sealants than children with no permanent caries experience (DMFT=0). For example, 27.1 per cent of 12 year-old children with DMFT=1+ had fissure sealants compared with 21.5 among those with DMFT=0. This should be interpreted as a tendency towards preferential provision of fissure sealants to children deemed to have a greater likelihood of dental caries.

Table 8: Immediate treatment needs: age-specific distribution

Immediate treatment (within a period of four weeks) was not recorded in Victoria or Western Australia in 1994. Consequently, the estimates may not be representative of all children aged 5 to 12 years. The percentage was greatest for younger children, and smallest (9.1 per cent) for 13 year-olds. There were correspondingly high levels of caries experience among children with immediate treatment needs. Age-specific means for dmft and DMFT tended to be approximately twice the national averages listed in previous tables. For example, 5 year-olds with immediate treatment needs had a mean dmft of 4.65 (compared with 1.56 in Table 4) and 46.0 per cent had d+D=4+ (compared with 12.4 per cent in Table 6).

It should be emphasised that the frequency of immediate treatment reflects both the accumulated amount of dental disease and the methods of targeting and delivering School Dental Services. For example, clinics which provide care for a relatively small proportion of a population, and which assign priority to treating those with symptoms, will almost certainly record higher percentages of immediate treatment needs than other clinics which have universal coverage of all children on a constant recall basis.

Perhaps the most important interpretation from Table 8 is that a sub-group of children with a substantial burden of dental caries can be identified within School Dental Services. Their state of poor dental health constitutes a useful contrast with the previous observation that approximately two thirds of 5 to 12 year-olds have no caries experience at all.

Table 9: Interstate comparison: 5–6 year-old dmft

Presented in this table are age-standardised indices of dental health in deciduous teeth, which is useful for School Dental Services since it represents, predominantly, the dental health status of children new to School Dental Services. There existed a 92 per cent difference between the lowest mean dmft (South Australia, mean=0.96) and highest mean dmft (Queensland, mean=2.04). There are historical differences in caries prevalence as well as marked variations in population density, demography and levels of water fluoridation between the two States which are significant. As well, there are differences in organisation and delivery of both School Dental Services between these two jurisdictions. All of these influential factors affected other State/Territory comparisons.

There are other notable characteristics of the statistics contained in Table 9. In general, the mean number of deciduous teeth with untreated decay was correlated with the mean dmft – a relationship which may not be surprising, but which need not necessarily exist. In addition,

the variation in percentage of children without caries experience ($dmft=0$), while representing the converse of mean $dmft$, shows less substantial variation (from 51.4 to 68.7 per cent) than the 1.9 times difference in mean $dmft$. In other words, while less than one half of 5 to 6 year-olds in all jurisdictions have caries experience, the amount of accumulated disease (mean $dmft$) was relatively variable across jurisdictions.

Table 10: Interstate comparison: 12 year-old DMFT

There was substantial variation in the mean DMFT scores between States, with the highest mean score being twice that of the lowest (1.37 in Queensland, 0.59 in South Australia). This was similar to the variation observed for deciduous teeth. In the case of permanent teeth there was again some correlation between mean DMFT and mean number of decayed teeth, although this was less consistent than the case for deciduous teeth. Consequently, there was quite large variation in the ratio of $D/DMFT$ (20.4 per cent in ACT to 47.8 per cent in New South Wales).

South Australia stands out with the lowest mean $dmft$ and lowest mean DMFT. In contrast, Queensland had the highest mean $dmft$ and highest mean DMFT.

Table 11: All teeth: Age-standardised caries experience

Age-standardised data were used for this table in order to bring together data from all ages in all jurisdictions. This is useful in the event that any age-specific statistics (for example, 5 to 6 year-olds) provide a somewhat unrepresentative picture of conditions in a specific State or Territory. The purpose of age-standardisation is to adjust among States for possible differences in the proportion of specific age groups, which is important because of the age-relatedness of most dental caries measures.

This table adds further dimensions to the extent of interstate variation in caries experience. For example, there were profound differences in the percentage of children with 4 or more decayed teeth ($d+D=4+$) despite relative consistency in the percentage of children with no caries experience ($dmft+DMFT=0$). The most populous States of New South Wales and Victoria had the largest levels of untreated decay ($d+D$). As noted from previous tables, that appears to have arisen from the relatively high levels of decayed teeth observable in deciduous teeth among children in their early school years. Consistent with Tables 9 and 10, the percentage of children with no caries experience ($dmft+DMFT=0$) was highest in the ACT (55.0%) and lowest in Queensland (41.0%).

Table 12: National summary

Age-standardised data were used for this table in order to bring together data from all ages in all jurisdictions.

In comparison with previous tables, the data in Table 12 reveal different profiles of caries experience among the States and Territories. Queensland had the highest levels of caries experience for deciduous teeth. Queensland also had the highest levels for permanent caries experience. This is reasonably consistent with Tables 9 and 10, where States with high standardised means had relatively high mean $dmft$ and DMFT values. It should be noted that the DMFT figure for Victoria is artificially low, due to the exclusion of children aged 12 years and over, and that data for Tasmania are absent.

Figure 1: Percentage of children with dmft=0, DMFT=0 and d+D=4+

This figure uses Australia-wide data to describe the combined dmft and DMFT indices and their components for individual (year of birth) ages. It should be noted that the rate of decline across ages in the percentage of children without caries experience in the deciduous dentition is attenuated by the pattern of exfoliation of deciduous teeth, which effectively reduces the number of teeth at risk of caries.

References:

- Australian Bureau of Statistics (1986). Census Table CA0029: Age by Aboriginal Origin by Sex [microfiche]. ABS: Canberra.
- Australian Bureau of Statistics (1994). Estimated Resident Population by Sex and Age, June 1993 and Preliminary 1994. Cat. No. 3201.0. ABS: Canberra.
- Australia's Health 1993 (1993). Australian Institute of Health and Welfare: Canberra
- Foreman EK (1991). Survey Sampling Principles. M Dekker; New York.
- Health Targets and Implementation Committee (1988). Health for All Australians. AGPS: Canberra.
- Palmer JD, Anderson, RJ and Downer MC (1984). Guidelines for prevalence estimates of dental caries. Community Dental Health; 1:55-66.
- World Health Organization (1987). Oral Health Surveys. Basic Methods. 3rd Ed. WHO; Geneva.

For further information contact:

Mr Michael Davies
AIHW Dental Statistics and Research Unit
The University of Adelaide
AUSTRALIA 5005

Phone: (08) 8303 4051 or 8303 4050
Fax: (08) 8303 4858

TABLE 1: NUMBER IN SAMPLE AND ESTIMATED RESIDENT POPULATION

Data for the Child Dental Health Survey are collected from a stratified random sample of children in all Australian States and Territories. Within each State or Territory, sampling involves selection of a constant proportion of children for whom date of birth is known by including only those children born on particular dates. Data presented here are weighted by the estimated resident population in each age and State/Territory stratum (Australian Bureau of Statistics, 1994) to permit the calculation of Australia-wide prevalence estimates. The number of weighted cases excludes cases outside the age range of 4 to 15 years inclusive.

State/Territory: **Australia**

Data for 1994

Date of report: 5th December 1996

State	Number of processed cases	Estimated resident population	Weighted cases
NSW	14197	927534.64	19407.84
Vic	8384	676989.34	10901.45
Qld	9691	482220.45	10081.22
SA	4226	218887.50	4578.20
WA	11616	269981.67	5650.25
NT	13237	31218.08	651.28
ACT	5231	48881.17	1022.20

TABLE 2: BIRTHPLACE

The region of birth of children and their mothers was determined from information gained at enrolment in the School Dental Service. The number and percentage of children in each group is provided in this table. These data relate only to New South Wales and the Northern Territory.

State/Territory: **NSW and NT**

Data for 1994

Date of report: 5th December 1996

REGION OF BIRTH	CHILDREN		MOTHERS	
	Frequency ¹	%	Frequency	%
Australia	18,252	92.5	15,696	80.4
United Kingdom and Eire	165	0.8	551	2.8
Other English speaking	188	1.0	416	2.1
Southern Europe	128	0.6	470	2.4
Other Europe	68	0.3	256	1.3
Middle East	114	0.6	583	3.0
South East Asia	349	1.8	660	3.4
Other Asia	292	1.5	525	2.7
Other	183	0.9	376	1.9
Total		100.0		100.0

¹ Data are weighted to reflect the sampling scheme by correcting for the over-representation in the sample of children with an unknown date of birth. Data relating to second or subsequent examinations of children within this reporting period are eliminated.

TABLE 3: ABORIGINALITY

Aboriginality of children and their mothers was determined from information gained at enrolment in the School Dental Service. The weighted number and percentage of Aboriginal and non-Aboriginal persons is provided in this table. These data relate only to New South Wales and the Northern Territory.

Data for 1994

Date of report: 5th December 1996

State/Territory: NSW

BIRTHPLACE	CHILDREN		MOTHERS	
	Frequency ¹	%	Frequency	%
Australia (non-Aboriginal)	18,851	98.8	18,646	98.7
Australia (Aboriginal or TSI)	238	1.2	238	1.3
Total		100.0		100.0

State/Territory: NT

BIRTHPLACE	CHILDREN		MOTHERS	
	Frequency ¹	%	Frequency	%
Australia (non-Aboriginal)	413	63.6	415	64.1
Australia (Aboriginal or TSI)	236	36.4	232	35.9
Total		100.0		100.0

¹Data are weighted to reflect the sampling scheme by correcting for the over-representation in the sample of children with an unknown date of birth. Data relating to second or subsequent examinations of children within this reporting period are eliminated.

TABLE 4: DECIDUOUS TEETH: AGE-SPECIFIC CARIES EXPERIENCE¹

This table uses Australia-wide data to describe the dmft index and its components for individual (year of birth) ages. Indices are calculated from data collected over a 12 month period. Data for Tasmania are not included.

State/Territory: **Australia**

Data for 1994

Date of report: 5th December 1996

Age (years)	Number of children in sample ²	decayed		dmft		d/dmft	Children with dmft=0
		mean	sd	mean	sd	%	%
4	4112	1.43	2.58	1.76	3.10	85.3	59.7
5	4072	1.18	2.29	1.56	2.78	77.0	59.1
6	4017	1.05	2.01	1.79	2.81	61.5	53.4
7	3978	0.86	1.66	1.95	2.75	48.2	48.9
8	3960	0.77	1.43	2.13	2.70	39.9	44.4
9	3861	0.67	1.31	2.01	2.59	35.6	44.4
10	3855	0.50	1.04	1.71	2.34	32.3	48.6

¹ dmft - decayed, missing or filled deciduous teeth.

² Data relating to second or subsequent examinations of children within this reporting period are eliminated. Weighted data are presented.

TABLE 5: PERMANENT TEETH: AGE-SPECIFIC CARIES EXPERIENCE¹

This table uses Australia-wide data to describe the DMFT index and its components for individual (year of birth) ages. Indices are calculated from data collected over a 12 month period. Data from Victoria for children aged 12 and above have been excluded due to high standard errors. Data for Tasmania are not included.

State/Territory: **Australia** (excluding Victoria and Tasmania)

Data for 1994

Date of report: 5th December 1996

Age (years)	Number of children in sample ²	DECAYED		DMFT		Children with	
		mean	sd	mean	sd	D/DMFT %	DMFT=0 %
5	4072	0.02	0.19	0.02	0.20	85.9	98.4
6	4017	0.08	0.40	0.11	0.81	86.0	94.4
7	3978	0.17	0.62	0.23	0.71	77.4	86.2
8	3960	0.23	0.68	0.37	0.92	64.2	80.0
9	3861	0.25	0.71	0.47	0.99	53.0	74.6
10	3855	0.27	0.75	0.65	1.23	41.5	67.8
11	3926	0.34	0.98	0.88	1.48	38.2	61.1
12	2869	0.42	1.21	1.09	1.90	35.4	57.5
13	3028	0.50	1.11	1.54	2.22	33.7	47.7
14	3079	0.70	1.70	2.00	2.79	31.0	40.6
15	3162	0.53	1.24	2.24	2.90	26.3	41.5

¹ Legend: D - decayed permanent teeth
DMFT - decayed, missing or filled permanent teeth
sd - standard deviation

² Data relating to second or subsequent examinations of children within this reporting period are eliminated. Weighted data are presented.

TABLE 6: ALL TEETH: AGE-SPECIFIC PREVALENCE¹

This table uses Australia-wide data to describe the combined dmft and DMFT indices and their components for individual (year of birth) ages. Indices are calculated from data collected over a 12 month period. Data from Victoria for children aged 12 and above have been excluded due to high standard errors. Data for Tasmania are not included.

State/Territory: **Australia**

Data for 1994

Date of report: 5th December 1996

Age (years)	Number of children in sample ²	% of children with d+D=					% of children with		
		0	1	2	3	4+	m+M=0	f+F=0	dmft+DMFT=0
5	4057	64.5	10.8	8.1	4.2	12.4	98.3	86.7	58.8
6	4007	62.3	12.9	8.4	5.4	11.1	97.2	75.9	52.0
7	3951	60.7	15.7	9.4	5.3	9.0	96.9	65.3	45.5
8	3940	59.0	17.1	9.9	5.9	8.1	95.2	55.7	39.8
9	3850	61.1	17.2	8.6	5.5	7.6	95.9	52.4	37.5
10	3833	63.6	18.2	8.8	4.0	5.5	96.5	50.0	37.0
11	3913	66.9	16.7	8.2	3.7	4.5	97.4	53.8	40.4
12	2861	73.5	14.1	5.9	2.6	3.9	98.2	60.1	47.5
13	3024	72.0	13.0	8.9	2.7	3.4	96.7	56.9	43.4
14	3073	71.7	12.0	7.9	1.7	6.7	96.6	51.2	38.9
15	3162	74.9	12.1	7.5	1.5	4.0	98.0	48.8	40.2

¹Legend:

- d - decayed deciduous teeth
- D - decayed permanent teeth
- m - deciduous teeth missing due to caries
- M - permanent teeth missing due to caries
- f - deciduous teeth restored due to caries
- F - permanent teeth restored due to caries
- dmft - decayed, missing or filled deciduous teeth
- DMFT - decayed, missing or filled permanent teeth

²Data relating to second or subsequent examinations of children within this reporting period are eliminated. Weighted data are presented.

TABLE 7: FISSURE SEALANTS: AGE-SPECIFIC PREVALENCE¹

This table uses Australia-wide data to describe the distribution of fissure sealants for individual (year of birth) ages, along with the caries experience of those who have fissure sealants and those who do not. Indices are calculated from data collected over a 12 month period. Data from Victoria for children aged 12 have been excluded due to high standard errors. Data for Tasmania are not included.

State/Territory: **Australia**

Data for 1994

Date of report: 5th December 1996

Age (years)	Number of children in sample ²	Number of sealants		CHILDREN WITH DMFT=0		CHILDREN WITH DMFT=1+	
		mean	sd	number of children	% with fissure sealants	number of children	% with fissure sealants
6	4000	0.08	0.85	3785	1.8	215	10.3
7	3946	0.31	1.26	3421	9.3	525	16.4
8	3937	0.63	1.68	3160	19.4	777	24.9
9	3848	0.76	1.54	2877	24.5	971	33.0
10	3829	0.85	1.58	2607	27.8	1222	33.5
11	3904	0.96	1.63	2389	29.9	1516	37.0
12	2858	0.68	1.51	1645	21.5	1212	27.1
13	3021	0.74	1.60	1441	23.6	1580	27.9
14	3073	1.01	2.08	1244	23.9	1829	34.7
15	3162	0.98	2.43	1313	20.2	1848	27.6

¹ Legend: DMFT - decayed, missing or filled permanent teeth
sd - standard deviation

² Data relating to second or subsequent examinations of children within this reporting period are eliminated.
Weighted data are presented.

TABLE 8: IMMEDIATE TREATMENT NEEDS: AGE-SPECIFIC DISTRIBUTION¹

This table, based on Australia-wide data, describes the number and proportion of children in immediate need of dental treatment. This classification is accorded to children who have, or who are likely to develop within four weeks, oral pain or infection. The dental caries experience of this group of children is also described. Indices are calculated from data collected over a 12 month period. These data do not include Western Australia, Victoria and Tasmania.

State/Territory: **Australia** (excluding Western Australia, Victoria and Tasmania)

Data for 1994

Date of report: 5th December 1996

CHILDREN IN NEED OF IMMEDIATE TREATMENT												
Age (years)	Number of children in sample ²	No.	% of all children	dmft		DMFT		% with d+D=				
				mean	sd	mean	sd	0	1	2	3	4+
5	2130	324	15.2	4.65	4.03	0.05	0.32	10.9	18.8	16.0	8.4	46.0
6	2123	294	13.9	3.95	3.41	0.25	0.78	16.5	19.0	11.8	12.5	40.2
7	2078	293	14.1	3.94	3.19	0.52	1.04	18.6	21.3	18.5	9.9	31.7
8	2082	300	14.4	3.86	2.98	0.62	1.10	18.6	25.8	16.2	12.8	26.6
9	1995	251	12.6	3.16	2.67	0.75	1.35	21.8	25.4	17.2	11.6	24.0
10	1991	234	11.7	2.65	2.65	1.21	1.72	24.1	25.6	18.2	10.1	22.0
11	2003	195	9.7	1.50	2.12	1.83	2.99	30.1	25.6	19.3	8.2	16.8
12	2023	187	9.2	0.58	1.18	2.66	3.49	28.3	22.5	15.2	9.2	24.8
13	2176	199	9.1	0.60	1.47	3.19	2.79	24.0	19.7	31.3	6.7	18.3
14	2197	229	10.4	0.11	0.31	3.73	3.87	31.9	20.8	16.0	2.2	29.1
15	2217	106	4.8	0.00	0.00	4.86	2.28	2.1	65.6	32.3	0.0	0.0

¹Legend: dmft - decayed, missing or filled deciduous teeth
DMFT - decayed, missing or filled permanent teeth
d - decayed deciduous teeth
D - decayed permanent teeth

²Data relating to second or subsequent examinations of children within this reporting period are eliminated. Weighted data are presented.

TABLE 9: INTERSTATE COMPARISON: FIVE-SIX YEAR-OLD dmft¹

This table presents the age-standardised dmft for 5 and 6 year-old children for each State and Territory in Australia. The table also presents the decayed component as a percentage of the dmft index, and the percentage of children with a dmft score of 0. Data for Tasmania are not included.

State/Territory: **Australia**

Data for 1994

Date of report: 5th December 1996

State	Number of children in sample ²	decayed		dmft		d/dmft	Children with dmft=0
		mean	sd	mean	sd	%	%
NSW	2785	1.40	2.47	1.91	2.94	74.3	52.0
Vic	2079	1.13	2.12	1.58	2.74	76.4	59.0
Qld	1418	1.12	2.16	2.04	3.16	59.5	51.4
SA	672	0.50	1.38	0.96	1.91	52.0	65.8
WA	888	0.69	1.54	1.23	2.31	59.9	61.6
NT	99	1.19	2.21	1.87	2.90	64.7	52.1
ACT	148	0.56	1.36	1.00	2.03	58.8	68.7
Australia	8089	1.11	2.16	1.67	2.80	68.8	56.2

¹ Legend: d - decayed deciduous teeth
dmft - decayed, missing or filled deciduous teeth
sd - standard deviation

² Data relating to second or subsequent examinations of children within this reporting period are eliminated. Weighted data are presented.

TABLE 10: INTERSTATE COMPARISON: 12 YEAR-OLD DMFT¹

This table presents the DMFT for 12 year-old children in each State and Territory in Australia. The table also presents the D component of the DMFT index, D as a percentage of DMFT, and the percentage of children with a DMFT score of 0. Data from Victoria have been excluded due to high standard errors. Data for Tasmania are not included.

State/Territory: **Australia**

Data for 1994

Date of report: 5th December 1996

State	Number of children in sample ²	Decayed		DMFT		D/DMFT	Children with DMFT=0
		mean	sd	mean	sd	%	%
NSW	1262	0.60	1.59	1.11	2.08	47.8	59.3
Qld	728	0.35	0.87	1.37	1.91	24.8	49.6
SA	334	0.14	0.51	0.59	1.10	23.9	66.9
WA	424	0.29	0.70	1.07	1.92	30.1	56.1
NT	44	0.37	0.97	0.81	1.42	44.6	62.2
ACT	77	0.15	0.56	0.69	1.21	20.4	67.2
Australia	2869	0.42	1.21	1.09	1.90	35.4	57.5

¹ Legend: D - decayed permanent teeth
DMFT - decayed, missing or filled permanent teeth
sd - standard deviation

² Data relating to second or subsequent examinations of children within this reporting period are eliminated. Weighted data are presented.

TABLE 11: ALL TEETH: AGE-STANDARDISED CARIES EXPERIENCE¹

This table presents measures of the distribution of decayed, missing and filled teeth for each State and Territory in Australia. Indicated are the percentages of children with d+D scores of 0, 1, 2, 3 and 4 or more. Also listed are the percentages of children with m+M of 0, f+F of 0 and dmft+DMFT of 0.

The number of children has been standardised using the Australian Estimated Populations for each State and Territory for ages between 5 and 12 years inclusive. Data from Victoria for children aged 12 and above have been excluded due to high standard errors. Data for Tasmania are not included.

State/Territory: **Australia**

Data for 1994

Date of report: 5th December 1996

State	Number of children in sample ²	% of children with d+D=					% of children with		
		0	1	2	3	4+	m+M=0	f+F=0	dmft+DMFT=0
NSW	10701	60.2	14.9	9.3	5.0	10.6	97.5	67.4	45.3
Vic	7257	57.8	16.2	9.8	6.0	10.2	94.3	65.0	43.5
Qld	5411	66.0	15.7	7.9	3.9	6.3	97.4	53.7	41.0
SA	2646	75.4	13.5	5.4	3.6	2.0	98.3	58.4	48.7
WA	3455	71.1	16.1	7.1	2.9	2.8	98.4	60.6	47.6
NT	384	65.4	15.0	8.3	4.0	7.3	96.4	65.5	45.9
ACT	596	76.3	12.7	5.7	2.5	2.8	98.7	65.3	55.0
Australia	30450	63.6	15.3	8.5	4.6	7.9	96.9	62.8	44.9

¹ Legend:

- d - decayed deciduous teeth
- D - decayed permanent teeth
- m - deciduous teeth missing due to caries
- M - permanent teeth missing due to caries
- f - deciduous teeth restored due to caries
- F - permanent teeth restored due to caries
- dmft - decayed, missing or filled deciduous teeth
- DMFT - decayed, missing or filled permanent teeth

² Data relating to second or subsequent examinations of children within this reporting period are eliminated. Weighted data are presented.

TABLE 12: NATIONAL SUMMARY¹

This table presents the age-standardised dmft and DMFT scores for each State and Territory in Australia.

The number of children has been standardised using the Australian Estimated Populations for each State and Territory for children aged between 5 and 12 years inclusive. Data from Victoria for children aged 12 and above have been excluded due to high standard errors. Data for Tasmania are not included.

State/Territory: **Australia**

Data for 1994

Date of report: 5th December 1996

State	Number of children in sample ²	dmft			DMFT			d+D=0 %
		mean	sd	dmft=0 %	mean	sd	DMFT=0 %	
NSW	10701	1.57	2.47	55.1	0.45	1.19	79.7	60.2
Vic	7257	1.79	2.66	51.7	0.46	1.06	77.3	57.8
Qld	5499	1.94	2.82	51.8	0.59	1.39	74.6	65.7
SA	2646	1.46	2.28	56.2	0.27	0.74	83.5	75.4
WA	3455	1.20	2.01	59.1	0.42	1.08	78.9	71.1
NT	384	1.51	2.40	55.3	0.34	0.91	82.0	65.4
ACT	596	1.11	1.96	62.7	0.26	0.75	85.1	76.3
Australia	30538	1.63	2.52	54.4	0.45	1.15	78.6	63.5

*Excludes children aged 12 years for Victoria.

¹ Legend: dmft - decayed, missing or filled deciduous teeth
 DMFT - decayed, missing or filled permanent teeth
 d+D - decayed deciduous teeth plus decayed permanent teeth

²Data relating to second or subsequent examinations of children within this reporting period are eliminated. Weighted data are presented.

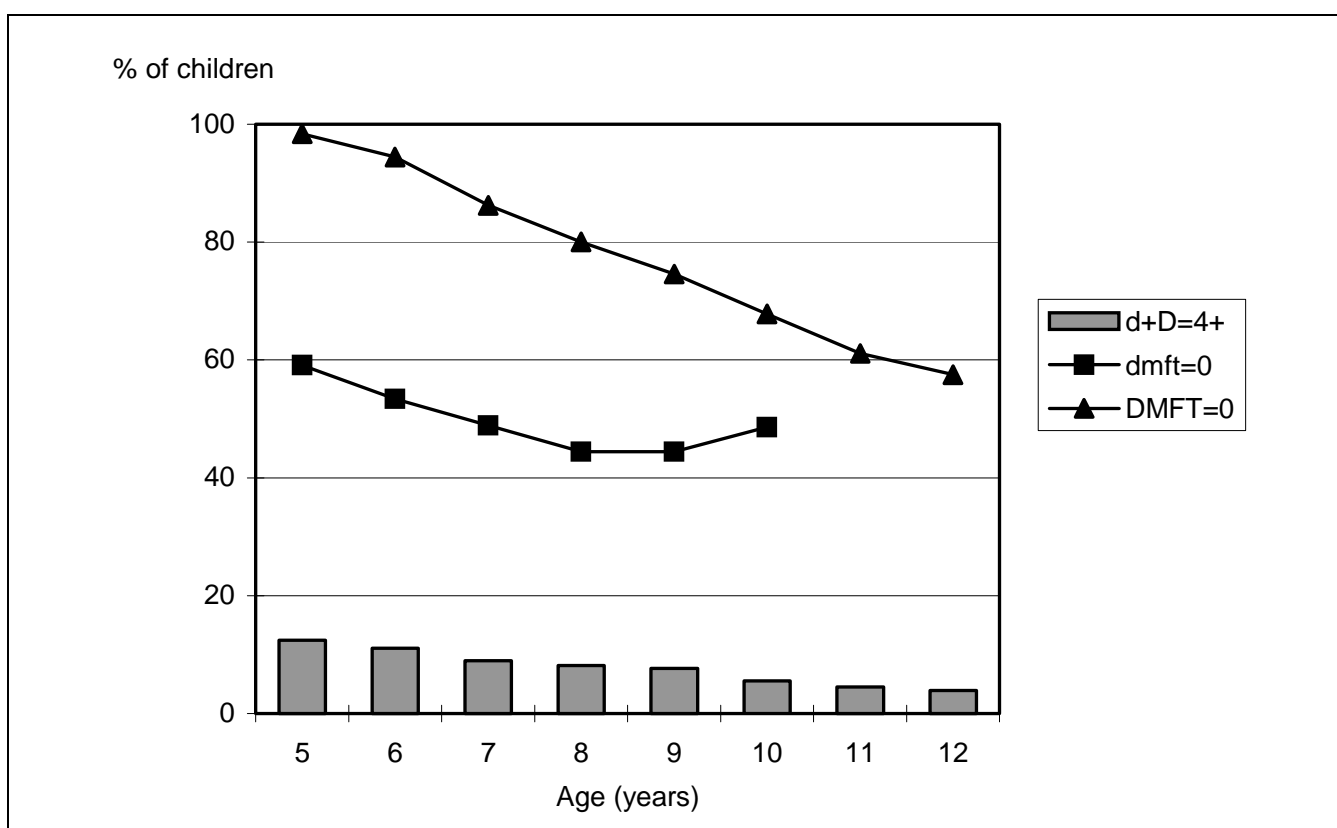
FIGURE 1: PERCENTAGE OF CHILDREN WITH dmft=0, DMFT=0 AND d+D=4+¹

This figure uses Australia-wide data to describe the combined dmft and DMFT indices and their components for individual (year of birth) ages. Indices are calculated from data collected over a 12 month period. Where children received more than one examination during this period, the information derived from examinations other than the first is excluded². It should be noted that the rate of decline across ages in the percentage of children with no caries experience in deciduous dentition is attenuated by the pattern of exfoliation of deciduous teeth, which effectively reduces the number of teeth at risk of caries.

State/Territory: **Australia**

Data for period January-December 1994

Date of report: 5th December 1996



¹Legend: d - decayed deciduous teeth
 D - decayed permanent teeth
 dmft - decayed, missing or filled deciduous teeth
 DMFT - decayed, missing or filled permanent teeth

²Data relating to second or subsequent examinations of children within this reporting period are eliminated. Weighted data are presented.