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**The Child Dental Health Survey  
Australian Capital Territory  
January-December 1994**

*by*

**AIHW Dental Statistics  
and Research Unit**

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**The AIHW Dental Statistics and Research Unit (DSRU) is an external unit of the Australian Institute of Health and Welfare and was established in 1988 at The University of Adelaide. The DSRU was funded to improve the range and quality of dental statistics and research on the dental workforce, dental health status, dental practices and use of dental services.**

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## THE CHILD DENTAL HEALTH SURVEY - AUSTRALIAN CAPITAL TERRITORY 1994

### Purpose of this report

This report is part of the annual series providing descriptive statistics concerning child dental health in the Australian Capital Territory. The report contains tables and figures.

Information listed in the tables includes: the age and sex of children in the sample, their deciduous and permanent caries experience, frequency of fissure sealants, immediate treatment needs and children's history of school dental service examinations. The figures combine and summarize information from four of the tables.

These data were collected during the 1994 calendar year from patients of the ACT School Dental Service by dental therapists and dentists. A random sampling procedure was used to select approximately one in two (1:2.5) patients. This was achieved by selecting those children whose birthday was between the 1st and 12th (inclusive) of any month. Provision was made for inclusion and numerical weighting of data from children whose date of birth was unknown.

The sampling scheme has been elaborated through the following over time of a cohort of children for a study concerned with evaluating the effectiveness of water fluoridation. The cohort was, however, sampled using the same procedures as for all children reported upon in this document.

The following sections briefly describe each table and provide a simple, summary statement highlighting differences between the 1994 and 1993 findings. However, no formal hypothesis tests have been undertaken, and descriptions of difference between years are intended as a guide to the reader, rather than an evaluation of trends.

### Table 1: Demographic composition of the sample

The great majority of children in the sample (97 per cent) were aged between 5 and 12 years inclusive, with approximately equivalent numbers in individual ages within this range. Twelve year-olds were less than half as likely as those aged 5-11 to be in the sample, while 4-year-olds and those aged 13+ were infrequent. Males and females were represented in approximately equal proportions.

This distribution of the sample is closely related to the main target groups of children served by the School Dental Service in the ACT and emphasizes the sample is representative of primary school aged children served by the School Dental Service, rather than all children in the ACT. The small numbers of children aged 4 and 13+ are likely to be less representative of ACT children in general, and their small numbers contribute to imprecision in some age-specific statistics contained in the following tables.

### *Changes since 1993*

There were 1,830 fewer cases sampled in 1994 than in 1993, although the distribution of cases across ages was similar between years.

### Table 3: Deciduous teeth: age-specific caries experience

There was little variation in the mean number of decayed (d) teeth among children aged 5 to 8 years (0.59 to 0.48) with the number of decayed teeth decreasing with age due both to restoration and exfoliation of deciduous teeth. However, the magnitude of variation in mean dmft in this age range was greater (0.84 to 1.54), and the mean number increased in older age groups to age 8 years before declining due to exfoliation.

The percentage of caries experience due to decay (d/dmft) showed an age-associated decline, more than halving from 71.8 per cent among 5 year-olds to 30.1 per cent among 10 year-olds. This is the strongest and most consistent age-associated effect for deciduous teeth. By comparison, the percentage of caries-free children (% dmft=0) showed a more modest reduction from 74.0 per cent among 5 year-olds to 49.4 per cent among 9 year-olds. The percentage of caries-free children therefore mirrors the mean dmft prevalence.

#### *Changes since 1993*

There were small but consistent declines in the number of decayed teeth between 1993 and 1994. However, the mean dmft and percent with dmft = 0 did not vary substantially across years. As a consequence, the d/dmft ratio also declined.

### Table 4: Permanent teeth: age-specific caries experience

The mean number of decayed permanent teeth was smaller than the mean number of decayed deciduous teeth and increased across the range of 7 to 12 years (0.06 to 0.15 teeth). The mean DMFT also increased quite consistently across those age groups (0.10 to 0.69), and this is natural in a cumulative index such as DMFT. The percentage of DMFT due to decay (D/DMFT) and the percentage of caries free children (DMFT=0) declined across age groups. Age-specific D/DMFT percentages were lower than d/dmft percentages between the ages of five and nine. However this phenomenon is due largely to the very low DMFT values which are the denominators in D/DMFT and which drive the percentage upwards. It is noteworthy that more than 67 per cent of children aged 12 or less were caries free (DMFT=0).

#### *Changes since 1993*

Declines in the mean number of decayed permanent teeth are small but consistent, as are reductions in mean DMFT.

### Table 5: All teeth: age-specific caries experience

Untreated caries in the combined deciduous and permanent dentitions (d+D=1, 2, 3 or 4+) existed for between 28 and 16 per cent of children in the age range 5 to 12 years. The greatest likelihood of untreated decay existed for 8 year-olds. However, the most extensive levels of untreated decay (d+D=4 or more) occurred in the younger age groups, with five per cent or more of children aged 6 years or less being affected to this extent. This age distribution suggests that the greatest contribution comes from the deciduous dentition.

More than 97 per cent of children had no deciduous or permanent teeth missing due to caries. Smaller percentages avoided fillings, and the percentage of children without fillings declined among older ages. There was a similar decline in the percentage of children with no caries experience in either deciduous or permanent dentition (dmft+DMFT=0), from 73.8 per cent at age five to 57.6 per cent at age 12. In other words, more than 40 per cent of children at any specific age had no dental caries experience.

*Changes since 1993*

The pattern of caries reflects an increase in the percent with  $dmft + DMFT = 0$ , and percent with  $D + D = 0$ .

**Table 6: Fissure sealants: age-specific prevalence**

Fissure sealants were prevalent in children aged 7 to 12 years, and at those ages the mean number of fissure sealants was equal or equivalent to the mean DMFT. There is clear evidence of preferential use of fissure sealants among those with caries experience: the prevalence of fissure sealants among children aged 8 to 12 years with some caries prevalence ( $DMFT=1+$ ) was between 10 and 30 percentage points greater than among those with no caries experience ( $DMFT=0$ ).

*Changes since 1993*

The mean number of fissure sealants was not substantially different across years, but the targeting of fissure sealants to children with caries experience appeared to continue, with a greater difference in the percentage of children with fissure sealants among those with DMFT of 1 or more, compared to those with  $DMFT=0$ .

**Table 7: Immediate treatment needs**

Immediate treatment needs for existing or imminent pain or infection were designated for fewer than one per cent of children in all age groups. The small number of children had very high deciduous caries experience. However, with these small numbers it is not possible to comment on changes since 1993.

**Table 8: School Dental Service examinations**

The left hand side of this table describes the percentage of children who are new patients (having had no previous dental examination) in the ACT School Dental service. As expected, the figure is highest for the youngest ages (6 years or less) with fewer than 6 per cent of those aged 8 years or more having had no previous examination. This pattern is expected, and indicates that most patients are enrolled during their early school years.

The right hand side of the table refers to children with previous examinations, and indicates their distribution according to time since last dental examination. More than 40 per cent of children in all key ages received examinations within 7 to 12 months of their previous examination, and slightly greater percentages occurred between 13 to 24 months. Very few children were re-examined within six months, or after two years.

*Changes since 1993*

There was no increase in the percentage of children who had their last exam between 13 and 24 months previously, and a corresponding reduction in the percentage of children with their last visit between 7 and 12 months previous to the current exam.

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

This figure presents data contained in tables 3, 4 and 5 to summarize the extent of dental health (represented by percentage with no caries experience) and the extent of more extensive untreated decay (represented by the percentage with d+D=4 or more).

**Figure 2: Time since last dental examination**

This figure draws on information from table 8, and selects 7- and 12-year-olds to demonstrate the variation in time since last examination.

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**TABLE 1: DEMOGRAPHIC COMPOSITION OF THE SAMPLE**

Data for the Child Dental Health Survey are collected from a stratified random sample of children in all Australian States and Territories. In Australian Capital Territory the sampling is 1:2.5. This ratio is achieved by systematically selecting every fifth record of data from all children examined in the School Dental Service. The following table describes the number of records processed from children in Australian Capital Territory.

State/Territory: **Australian Capital Territory**

Sampling Ratio: **1:2.5**

Data for period January-December 1994

Date of Report: 8th November 1995

Age (years)	UNWEIGHTED NUMBER OF RECORDS PROCESSED						WEIGHTED NUMBER OF CHILDREN IN SAMPLE <sup>1</sup>		
	TYPE OF SAMPLING								
	Known date of birth			Age only known			Males	Females	Persons
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
3	2	2	4	0	0	0	2	2	4
4	19	7	26	0	0	0	19	7	26
5	221	248	469	0	0	0	221	248	469
6	323	354	677	0	0	0	323	354	677
7	350	394	744	0	0	0	350	394	744
8	362	345	707	0	0	0	362	345	707
9	359	321	680	0	0	0	359	321	680
10	342	332	674	0	0	0	342	332	674
11	341	301	642	0	0	0	341	301	642
12	142	120	262	0	0	0	142	120	262
13	30	26	56	0	0	0	30	26	56
14	22	24	46	0	0	0	22	24	46
15	12	12	24	0	0	0	12	12	24
<b>Total</b>	<b>2525</b>	<b>2486</b>	<b>5011</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2525</b>	<b>2486</b>	<b>5011</b>

<sup>1</sup> Processed records are weighted to reflect the sampling scheme. Records from children with a known date of birth are weighted up, while records from children for whom age only is known are weighted down. The sum of the weighted records is equivalent to the number of children sampled for the survey. The number of cases have been rounded to the nearest integer.

**TABLE 2: COUNTRY OF BIRTH (INCLUDING ABORIGINALITY)**

**These data were not collected in Australian Capital Territory during the period January-December 1994.**



**TABLE 3: DECIDUOUS TEETH: AGE-SPECIFIC PREVALENCE<sup>1</sup>**

This table uses Statewide 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. Where children received more than one examination during this period, the information derived from examinations other than the first is excluded. Age-specific indices denoted with an asterisk (\*) are those in which the relative standard error exceeds 40 per cent, and population estimates of these indices are statistically unreliable.

State/Territory: **Australian Capital Territory**

Sampling ratio: **1:2.5**

Data for period **January-December 1994**

Date of report: **8th November 1995**

Age (years)	Number of children in sample	decayed		dmft		d/dmf	Children with dmft=0
		mean	sd	mean	sd	%	%
4	30	0.50	1.01	0.73	1.34	74.0	66.7
5	469	0.59	1.45	0.84	1.84	71.8	74.0
6	677	0.54	1.25	1.17	2.19	49.5	63.5
7	744	0.43	1.08	1.35	2.27	34.2	59.0
8	707	0.48	1.07	1.54	2.23	31.4	52.6
9	680	0.40	0.87	1.46	2.06	29.0	49.4
10	674	0.34	0.76	1.22	1.84	30.1	54.5

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

**TABLE 4: PERMANENT TEETH: AGE-SPECIFIC PREVALENCE<sup>1</sup>**

This table uses Statewide 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. Where children received more than one examination during this period, the information derived from examinations other than the first is excluded. Age-specific indices denoted with an asterisk (\*) are those in which the relative standard error exceeds 40 per cent, and population estimates of these indices are statistically unreliable.

State/Territory: **Australian Capital Territory**

Sampling ratio: **1:2.5**

Data for period **January-December 1994**

Date of report: **8th November 1995**

Age (years)	Number of children in sample	DECAYED		DMFT		D/DMFT	Children with
		mean	sd	mean	sd	%	DMFT=0 %
5	469	*	*	*	*	50.0	99.8
6	677	0.03	0.23	0.04	0.25	76.2	96.9
7	744	0.06	0.29	0.10	0.40	59.6	92.3
8	707	0.07	0.31	0.17	0.54	41.3	88.1
9	680	0.06	0.29	0.23	0.64	32.6	85.4
10	674	0.05	0.23	0.34	0.81	18.0	79.5
11	642	0.10	0.42	0.50	0.99	22.5	72.4
12	262	0.15	0.56	0.69	1.20	20.4	67.2
13	56	0.18	0.47	1.00	1.44	13.3	55.4
14	46	0.28	0.72	0.91	1.23	26.2	54.3
15	24	*	*	1.87	2.31	*	45.8

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

**TABLE 5: ALL TEETH: AGE-SPECIFIC PREVALENCE<sup>1</sup>**

This table uses Statewide 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 excluded. Age-specific indices denoted with an asterisk (\*) are those in which the relative standard error exceeds 40 per cent, and population estimates of these indices are statistically unreliable.

State/Territory: Australian Capital Territory

Sampling ratio: 1:2.5

Data for period January-December 1994

Date of report: 8th November 1995

Age (years)	Number of children in sample	% of children with d+D=					% of children with		
		0	1	2	3	≥4	m+M=0	f+F=0	dmft+DMFT=0
5	469	78.7	6.6	5.3	3.8	5.5	99.6	89.6	73.8
6	677	74.7	11.7	5.5	3.1	5.0	98.7	76.2	62.6
7	744	74.5	14.5	5.6	2.3	3.1	98.9	66.8	56.2
8	707	72.1	14.7	7.5	2.4	3.3	98.2	58.1	49.6
9	680	72.5	16.5	6.3	2.6	2.1	97.9	54.3	45.4
10	674	76.4	13.6	6.4	2.5	1.0	99.0	54.9	47.0
11	642	77.6	13.9	5.3	1.9	1.4	98.9	58.3	48.3
12	262	83.6	10.3	3.8	*	*	98.9	64.9	57.6
13	56	76.8	17.9	*	0.0	0.0	100	51.8	48.2
14	46	82.6	*	*	*	0.0	97.8	58.7	54.3
15	24	83.3	*	*	0.0	0.0	100	50.0	45.8

<sup>1</sup> 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

**TABLE 6: FISSURE SEALANTS: AGE-SPECIFIC PREVALENCE<sup>1</sup>**

This table uses Statewide 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. Where children received more than one examination during this period, the information derived from examinations other than the first is excluded. Age-specific indices denoted with an asterisk (\*) are those in which the relative standard error exceeds 40 per cent, and population estimates of these indices are statistically unreliable.

State/Territory: Australian Capital Territory

Sampling ratio: 1:2.5

Data for period January-December 1994

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Age (years)	Number of children in sample	Number of sealants		CHILDREN WITH DMFT=0		CHILDREN WITH DMFT=1+	
		mean	sd	number	% with F/S=1+	number	% with F/S=1+
6	677	0.06	0.46	656	1.7	21	14.3
7	744	0.48	1.18	687	13.5	57	45.6
8	707	0.72	1.36	623	21.7	84	52.4
9	680	0.95	1.50	581	29.1	99	57.6
10	674	1.08	1.55	536	33.8	138	52.9
11	642	1.21	1.67	465	36.3	177	57.6
12	262	1.19	1.69	176	36.4	86	47.7
13	56	1.38	2.13	31	32.3	25	48.0
14	46	1.15	1.74	25	24.0	21	57.1
15	24	0.87	1.57	11	*	13	38.5

<sup>1</sup> Legend: DMFT - decayed, missing or filled permanent teeth  
 F/S - number of fissure sealed teeth  
 sd - standard deviation

**TABLE 7: IMMEDIATE TREATMENT NEEDS: AGE-SPECIFIC DISTRIBUTION<sup>1</sup>**

This table, based on Statewide 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. Where children received more than one examination during this period, the information derived from examinations other than the first is excluded. Age-specific indices denoted with an asterisk (\*) are those in which the relative standard error exceeds 40 per cent, and population estimates of these indices are statistically unreliable.

State/Territory: **Australian Capital Territory**

Sampling ratio: 1:2.5

Data for period January-December 1994

Date of report: 8th November 1995

CHILDREN IN NEED OF IMMEDIATE TREATMENT												
Age (years)	Number of children in sample	No.	% of all children	dmft		DMFT		% with d+D=				
				mean	sd	mean	sd	0	1	2	3	4+
3	4	0	0.0	-	-	-	-	-	-	-	-	-
4	26	0	0.0	-	-	-	-	-	-	-	-	-
5	469	2	*	5.00	-	-	-	50.0	0.0	0.0	0.0	50.0
6	677	1	*	4.00	-	-	-	0.0	100	0.0	0.0	0.0
7	744	1	*	8.00	-	-	-	0.0	100	0.0	0.0	0.0
8	707	0	0.0	-	-	-	-	-	-	-	-	-
9	680	1	*	4.00	-	2.00	-	0.0	100	0.0	0.0	0.0
10	674	2	*	.50	-	-	-	50.0	50.0	0.0	0.0	0.0
11	642	2	*	5.00	-	1.00	-	50.0	0.0	0.0	0.0	50.0
12	262	1	*	-	-	-	-	100	0.0	0.0	0.0	0.0
13	56	1	*	-	-	1.00	-	100	0.0	0.0	0.0	0.0
14	46	0	0.0	-	-	-	-	-	-	-	-	-
15	24	0	0.0	-	-	-	-	-	-	-	-	-

<sup>1</sup> Legend: dmft - number of decayed, missing or filled deciduous teeth  
 DMFT - number of decayed, missing or filled permanent teeth  
 d - number of decayed deciduous teeth  
 D - number of decayed permanent teeth

**TABLE 8: SCHOOL DENTAL SERVICE EXAMINATIONS:  
AGE-SPECIFIC DISTRIBUTION**

This table describes the percentage distribution of children who have received initial and subsequent dental examinations in the School Dental Service. Data from all examinations of children who were examined during the report period are included in this table; percentage estimates denoted with an asterisk (\*) are those in which the relative standard error exceeds 40 per cent, and population estimates of these percentages are statistically unreliable.

State/Territory: **Australian Capital Territory**

Sampling ratio: **1:2.5**

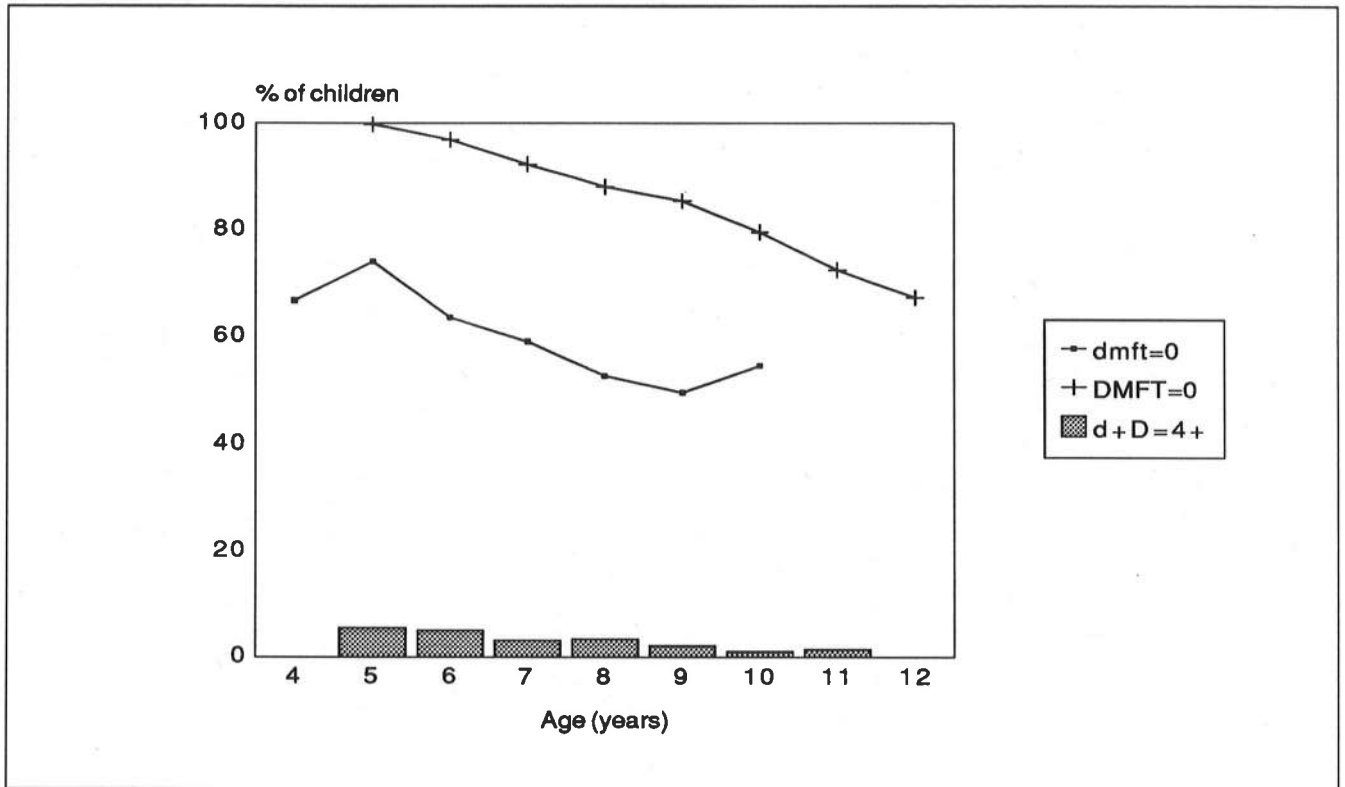
Data for period **January-December 1994**

Date of report: **8th November 1995**

Age (years)	Number of children examined	Previous examination in School Dental Service (%)			CHILDREN WITH PREVIOUS EXAMINATION Months since last examination <sup>1</sup> (%)			
		No	Yes	Unknown	0-6	7-12	13-24	25+
3	4	*	*	0.0	*	0.0	*	0.0
4	27	59.3	29.6	*	*	62.5	*	0.0
5	486	55.6	31.5	13.0	11.8	52.9	35.3	0.0
6	710	20.3	70.0	9.7	8.0	50.7	41.0	*
7	784	5.6	89.8	4.6	7.5	50.3	41.8	*
8	738	2.8	90.9	6.2	6.3	48.9	42.6	2.2
9	704	2.3	90.2	7.5	6.0	41.9	49.1	3.0
10	700	1.1	90.7	8.1	5.5	41.6	49.0	3.9
11	667	*	92.5	7.0	5.7	43.6	45.7	5.0
12	274	2.9	88.0	9.1	3.7	42.7	49.4	4.1
13	59	*	79.7	16.9	*	31.9	46.8	*
14	46	0.0	67.4	32.6	0.0	38.7	48.4	*
15	24	0.0	66.7	33.3	*	37.5	56.3	0.0

<sup>1</sup> Excludes those with no previous examination and where the date of previous examination is unknown.

**FIGURE 1: PERCENTAGE OF CHILDREN WITH dmft=0, DMFT=0 and d+D=0**



**FIGURE 2: TIME SINCE LAST DENTAL EXAMINATION**

