
**The Child Dental Health Survey
Tasmania
January - December 1992**

by

The AIHW Dental Statistics
and Research Unit

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.

DSRU Staff:

	Head:	Professor John Spencer
	Research Officers:	Mr Fearnley Szuster Mr Michael Davies Mr David Brennan
	Consultant Oral Epidemiologist:	Dr Gary Slade
	Technical Assistant:	Mrs Judy Stewart

THE CHILD DENTAL HEALTH SURVEY - TASMANIA 1992

Purpose of this report

This report is part of the annual series providing descriptive statistics concerning child dental health in Tasmania. 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. Two figures combine and summarize information from four of the tables.

These data were collected during the 1992 calendar year from patients of the Tasmania School Dental Service by dental therapists and dentists. A random sampling procedure was used to select slightly less than one in two (1:2.5) patients. This was achieved by selecting those children whose birthday fell on the first sixteen days of any month.

The following sections briefly describe each table and provide a simple, summary statement highlighting differences between the 1992 and 1991 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 age distribution of sampled children was wide, there being more than one thousand children in individual ages in the range 5 to 15 years (inclusive). The most frequently represented ages were in the range 6 to 12 years (accounting for 73 per cent of the sample), and this conforms with the predominant ages of the primary school population. Children aged 4 years or less and those aged 16 years or more were infrequent in this sample. The small numbers of children aged 4 and 16+ years results in less reliability of computed statistics for those ages. Furthermore, children in those ages are outside the main target group of the School Dental Service, and it is likely that they have some special characteristics which make them less representative of their respective age groups within the Tasmanian population.

Males and females were represented in approximately equal numbers in the full sample, and within individual ages the percentage of males fell within the range of 46 to 52 per cent.

Changes since 1991

There were approximately 249 fewer records processed in 1992, with no substantial change in the distribution of cases sampled.

Table 3: Deciduous teeth: age-specific prevalence

The mean dmft prevalence among children aged 5 to 9 years varied across a narrow range, from 1.56 to 1.96 teeth. Four year olds had the highest mean dmft, although as noted above, they probably comprise a special, less representative group within the School Dental Service. The deciduous caries experience of children aged 9 years or more naturally declines as teeth exfoliate. The range in the mean number of decayed deciduous teeth was less than that

observed for dmft, decreasing from 0.85 among five year olds to 0.53 among nine year olds. As a consequence, the d/dmft ratio exceeds 50 per cent among children aged 6 years or less, and declines to less than 30 per cent among those aged 10 years or more.

Changes since 1991

Changes in mean number of decayed or dmf teeth were insubstantial between 1991 and 1992. There were small decreases in the percentage of caries experience due to untreated decay (d/dmft).

Table 4: Permanent teeth: age-specific prevalence

The mean numbers of decayed permanent teeth and DMFT were smaller than the corresponding means for deciduous teeth across the range of 5 to 11 years. In addition, the mean number of decayed and DMF teeth increased in a fairly consistent manner across increasing age groups. As a consequence, the percentage of DMFT due to decay (D/DMFT) and the percentage of caries free children (DMFT=0) declined across age groups. It is noteworthy that more than 50 per cent or more of children aged 12 years or less were caries free (DMFT=0).

Among those aged 13 years or more, the age-associated increase in mean DMFT was greater. This pattern suggests either that new caries progression accelerates after the age of 12, or that these older children represent a cohort with a higher historical caries experience.

Changes since 1991

In a number of ages, the mean DMFT in 1992 was marginally smaller (approximately 0.1 teeth) than the corresponding mean for 1991. However, this was not systematic, across all ages. For example, the means for 11 year olds was slightly higher. Other statistics reported in Table 4 did not change substantially between the two years.

Table 5: All teeth: age-specific prevalence

Untreated decay in the combined deciduous and permanent dentitions (d+D=1, 2, 3 or 4+) existed for between 25 to 48 per cent of children in the age range 5 to 12 years. The greatest likelihood of untreated decay occurred for 8-year-olds. However, the most extensive levels of untreated decay (d+D=4 or more) occurred in children aged 4 years or less.

While more than 96 per cent of children aged over four years had no deciduous or permanent teeth missing due to caries, smaller percentages avoided fillings, and this was associated with age. There was a reasonably consistent decline in the percentage of children with no caries experience in either deciduous or permanent dentition (dmft+DMFT=0), from 57.5 per cent at age five to 36.9 per cent at age 10. The percentage fluctuated around 40 per cent among most older ages, reflecting the pattern of exfoliation of deciduous teeth. This statistic serves to demonstrate that more than one third of children at any of the key primary school ages have no experience of dental caries.

Changes since 1991

The distribution of untreated decay (d+D) did not vary between 1991 and 1992 by more than two per cent for most ages. Similarly, there were inconsequential changes in percentages of children with m+M=0 or dmft+DMFT=0 or f+F=0.

Table 6: Fissure sealants: age-specific prevalence

Fissure sealants were prevalent among children aged 7 years or more, and at those ages the mean number of fissure sealants exceeded the mean number of permanent teeth with caries experience (DMFT - Table 4). In all ages there was evidence of preferential use of fissure sealants among those with caries experience. For example, some 64 per cent of 12 year olds with permanent caries experience (DMFT=1+) had fissure sealants, compared with 52 per cent among those with a mean DMFT of zero.

Changes since 1991

There were no substantial differences in the prevalence of fissure sealants between 1991 and 1992.

Table 7: Immediate treatment needs

Immediate treatment needs were most infrequent, affecting less than one per cent or less of children in all key ages.

Table 8: School Dental Service examinations

The left hand side of this table describes the percentage of children who were new patients (having had no previous dental examination) in the Tasmania School Dental service. The figure was highest for the youngest ages (6 years or less) while fewer than five per cent of those aged 7 years or more 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 one half of children in most ages received examinations within 7 to 12 months of their previous examination. A re-examination interval of 13-24 months years occurred for most of the remaining children, although approximately 8 per cent (higher among younger ages) received a re-examination within six months. Very few children were re-examined after a period of two or more years, although the percentage tended to be higher (greater than 5 per cent) among the oldest children aged 16 years or more.

Changes since 1991

There were no substantial changes in the data items between 1991 and 1992.

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 6- and 12-year-olds to demonstrate the variation in time since last examination.

For further information contact: Mr Michael Davies or Dr Gary Slade
AIH Dental Statistics and Research Unit
The University of Adelaide
SOUTH AUSTRALIA 5005
Phone: (08) 303-5027
Fax: (08) 232-4062

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. The sampling procedure selects a constant proportion of children for whom date of birth is known by selecting only those children born on particular dates. Within Tasmania, the sampling ratio for children whose date of birth is known is 1:2.5.

State/Territory: Tasmania

Sampling ratio: 1:2.5

Data for period January-December 1992

Date of report: 1st November 1992

Age (years)	NUMBER OF RECORDS PROCESSED		
	Males	Females	Persons
4	74	72	146
5	447	405	852
6	743	697	1440
7	818	815	1633
8	829	769	1598
9	861	811	1672
10	826	788	1614
11	809	755	1564
12	543	523	1066
13	485	459	944
14	500	504	1004
15	410	434	844
16	59	62	121
17	24	40	64
18	9	8	17
Total	7441	7160	14601

TABLE 2: COUNTRY OF BIRTH (INCLUDING ABORIGINALITY)

These data were not collected in Tasmania during the period January-December 1992.

TABLE 3: DECIDUOUS TEETH: AGE-SPECIFIC PREVALENCE¹

This table uses State-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. 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: Tasmania

Sampling ratio: 1:2.5

Data for period January-December 1992

Date of report: 1st November 1993

Age (years)	Number of children in sample ²	decayed		dmft		d/dmf %	Children with dmft=0 %
		mean	sd	mean	sd		
3	20	*	*	1.00	1.78	95.2	65.0
4	146	1.12	2.42	1.67	2.92	58.7	60.3
5	852	0.85	1.67	1.56	2.60	55.8	57.7
6	1440	0.67	1.58	1.48	2.62	48.1	59.5
7	1633	0.64	1.32	1.73	2.56	38.7	52.7
8	1598	0.62	1.16	1.96	2.55	35.8	45.6
9	1672	0.53	1.02	1.90	2.40	31.3	44.7
10	1614	0.40	0.82	1.66	2.17	27.2	46.4

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.

TABLE 4: PERMANENT TEETH: AGE-SPECIFIC PREVALENCE¹

This table uses State-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. 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: Tasmania

Sampling ratio: 1:2.5

Data for period January-December 1992

Date of report: 1st November 1993

Age (years)	Number of children in sample ²	DECAYED		DMFT		D/DMFT	Children with
		mean	sd	mean	sd	%	DMFT=0 %
5	852	*	*	*	*	85.4	99.1
6	1440	0.06	0.30	0.06	0.34	93.7	95.6
7	1633	0.09	0.41	0.14	0.54	68.6	90.7
8	1598	0.16	0.50	0.32	0.78	57.1	81.4
9	1672	0.18	0.55	0.50	0.96	39.3	72.4
10	1614	0.19	0.58	0.59	1.08	34.1	69.50
11	1564	0.27	0.89	0.88	1.51	30.2	59.41
12	1066	0.26	0.65	0.98	1.47	29.8	56.82
13	944	0.42	0.94	1.50	1.98	28.0	45.23
14	1004	0.46	0.92	1.88	2.16	26.2	36.94
15	844	0.50	1.01	2.21	2.49	24.6	32.95
16	121	0.30	0.95	2.61	3.05	12.1	25.66

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.

TABLE 5: ALL TEETH: AGE-SPECIFIC PREVALENCE¹

This table uses State-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 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: Tasmania

Sampling ratio: 1:2.5

Data for period January-December 1992

Date of report: 1st November 1993

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
2	2	100	0.0	0.0	0.0	0.0	100.0	100	100.0
3	20	65.0	*	*	0.0	*	100.0	90.0	60.0
4	146	71.9	2.7	8.9	2.7	13.7	95.9	77.4	59.6
5	852	68.3	10.3	8.1	4.7	8.6	96.9	74.6	57.5
6	1440	69.7	13.3	7.8	3.5	5.8	97.8	71.7	58.3
7	1633	66.6	15.0	8.6	4.5	5.3	97.1	61.6	50.0
8	1598	61.6	19.1	9.9	4.6	4.8	96.9	54.2	41.4
9	1672	62.5	19.1	9.8	4.7	3.9	97.0	47.7	37.1
10	1614	66.0	19.1	8.4	4.5	2.0	98.4	46.5	36.9
11	1564	69.5	17.8	7.7	3.2	1.8	98.3	46.5	37.6
12	1066	75.4	15.7	6.1	1.5	1.3	98.9	56.1	46.0
13	944	73.6	14.2	7.2	2.6	2.3	98.5	50.8	41.0
14	1004	70.9	17.3	7.5	2.5	1.8	98.4	45.3	35.0
15	844	71.0	17.1	5.6	3.3	3.1	98.2	42.1	32.0
16	121	81.0	13.2	5.0	0.0	*	95.0	33.1	25.6
17	64	71.9	18.8	*	*	*	96.9	28.1	21.9
18	17	52.9	29.4	*	0.0	*	100.0	23.5	*

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.

TABLE 6: FISSURE SEALANTS: AGE-SPECIFIC PREVALENCE¹

This table uses State-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. 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: Tasmania

Sampling ratio: 1:2.5

Data for period January-December 1992

Date of report: 1st November 1993

Age (years)	Number of children in sample ²	Number of sealants		CHILDREN WITH DMFT=0		CHILDREN WITH DMFT=1+	
		mean	sd	number	% with F/S=1+	number	% with F/S=1+
4	146	-	-	145	0.0	1	0.0
5	852	*	*	844	*	8	0.0
6	1440	0.06	0.41	1377	2.3	63	14.3
7	1633	0.38	1.03	1481	12.8	152	28.9
8	1598	0.85	1.40	1300	28.8	298	45.6
9	1672	1.05	1.53	1211	32.2	461	51.8
10	1614	1.26	1.60	1121	38.9	493	58.6
11	1564	1.42	1.70	929	42.9	635	58.4
12	1066	1.85	1.99	606	52.3	460	63.9
13	944	2.19	2.33	427	52.5	517	69.2
14	1004	2.51	2.53	370	57.3	634	70.5
15	844	2.44	2.58	278	44.6	566	71.4
16	121	2.21	2.49	31	51.6	90	60.0
17	64	2.44	2.59	14	57.1	50	62.0
18	17	2.18	2.38	3	33.3	14	71.4

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

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

TABLE 7: IMMEDIATE TREATMENT NEEDS AGE-SPECIFIC DISTRIBUTION¹

This table, based on State-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. 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: Tasmania

Sampling ratio: 1:2.5

Data for period January-December 1992

Date of report: 1st November 1993

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+
2	2	0	0.0	-	-	-	-	-	-	-	-	-
3	20	1	*	5.00	-	-	-	0.0	0.0	0.0	0.0	100.0
4	146	0	0.0	-	-	-	-	-	-	-	-	-
5	852	1	*	6.00	-	-	-	0.0	0.0	0.0	0.0	100.0
6	1440	3	*	6.00	2.65	-	-	0.0	*	*	0.0	*
7	1633	2	*	*	*	-	-	0.0	*	0.0	0.0	*
8	1598	3	*	3.67	2.52	*	*	0.0	66.7	0.0	*	0.0
9	1672	6	0.4	*	*	*	*	66.7	*	0.0	0.0	*
10	1614	1	*	4.00	-	2.00	-	0.0	0.0	100.0	0.0	0.0
11	1564	3	*	*	*	-	-	66.7	*	0.0	0.0	0.0
12	1066	6	0.6	-	-	*	*	66.7	0.0	*	0.0	0.0
13	944	3	*	*	*	*	*	100.0	0.0	0.0	0.0	0.0
14	1004	3	*	-	-	*	*	*	*	0.0	*	0.0
15	844	0	0.0	-	-	-	-	-	-	-	-	-
16	121	1	*	-	-	3.00	-	0.0	100.0	0.0	0.0	0.0
17	64	1	*	-	-	6.00	-	0.0	0.0	100.0	0.0	0.0
18	17	1	*	-	-	2.00	-	0.0	100.0	0.0	0.0	0.0

¹ 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

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

**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: Tasmania

Sampling ratio: 1:2.5

Data for period January-December 1992

Date of report: 1st November 1993

Age (years)	Number of children examined	Previous examination in School Dental Service (%)		CHILDREN WITH PREVIOUS EXAMINATION Months since last examination ¹ (%)			
		Yes	No	0-6	7-12	13-24	25+
4	788	20.9	79.1	25.8	41.1	31.3	*
5	1627	51.6	48.4	9.2	59.9	29.7	1.2
6	1918	89.6	10.4	6.6	57.0	35.8	0.6
7	1738	94.7	5.3	5.3	53.3	41.1	0.4
8	1770	95.4	4.6	4.4	49.6	45.8	0.2
9	1810	96.2	3.8	4.9	49.5	44.9	0.6
10	1755	96.0	4.0	6.7	53.1	39.5	0.7
11	1665	96.7	3.3	5.7	53.1	40.4	0.8
12	1158	96.9	3.1	4.6	56.0	38.7	0.7
13	1044	97.5	2.5	3.8	51.6	42.2	2.4
14	953	97.7	2.3	4.6	57.7	35.1	2.6
15	959	98.5	1.5	6.0	54.5	35.7	3.8
16	144	97.2	2.8	5.0	51.4	35.0	8.6
17	71	93.0	7.0	7.6	37.9	33.3	21.2
18	15	93.3	*	*	28.6	28.6	35.7

¹ 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

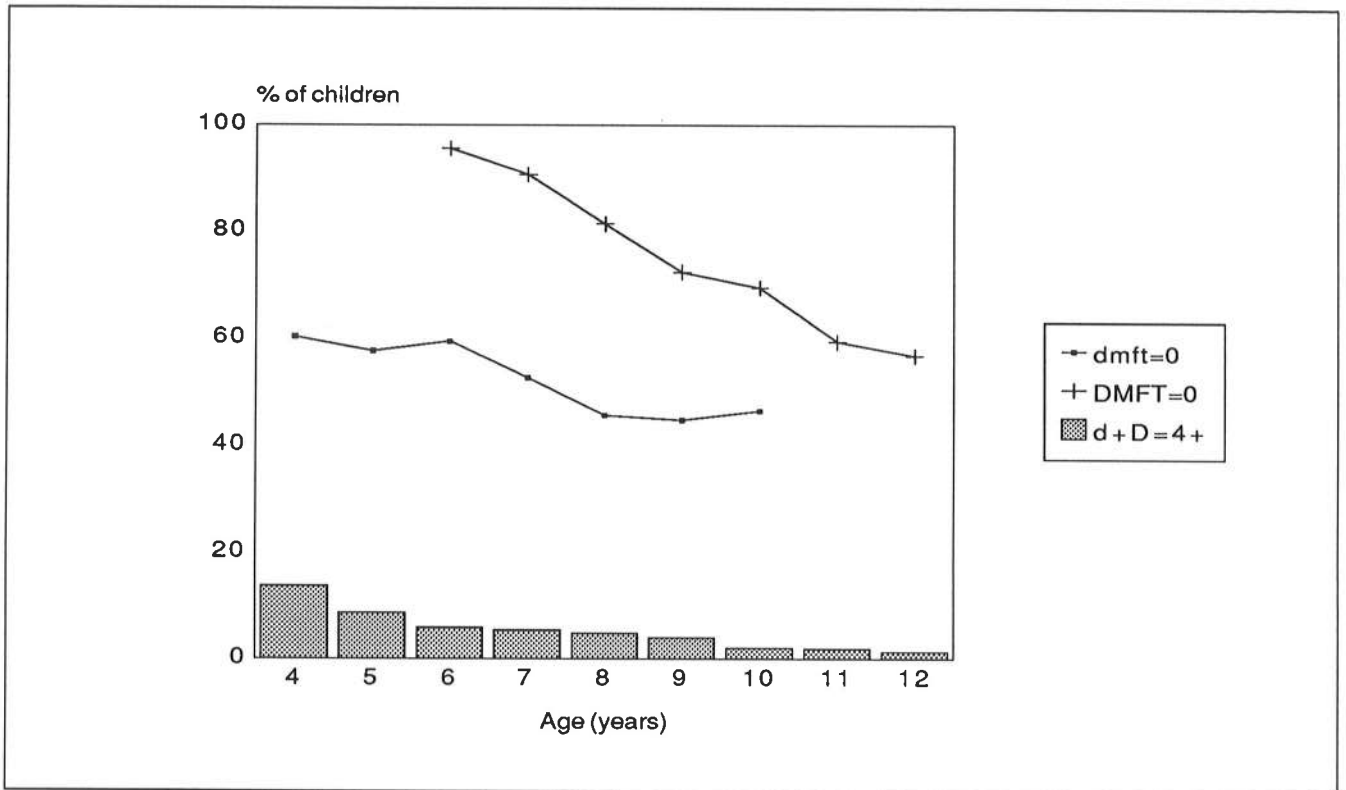


FIGURE 2: TIME SINCE LAST DENTAL EXAMINATION

