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# The Child Dental Health Survey Victoria, 1995

*by*

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This report is the Victorian component of the Child Dental Health Survey, a project in which all States and Territories are participating.

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 - VICTORIA 1995

### **Purpose of this report**

This report establishes the series of annual reports providing descriptive statistics concerning child dental health in Victoria, and follows the 1994 report. 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.

Data were collected during the 1995 calendar year from Victoria School Dental Service patients by dental therapists and dentists. A random sampling procedure was used to systematically select one in eight patients. This was achieved by maintaining a count of all examined patients and collecting data for every eighth patient counted.

The following sections briefly describe each table and provide a simple, summary statement highlighting differences between the 1995 and 1994 figures. 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**

A total number of 8,989 children were sampled during 1994. The age distribution of sampled children peaked at five to eight years. These correspond with the delivery of school dental services in Victoria which during 1993 targeted care primarily to children in certain grades (prep, one, three and four). It follows that some age groups are represented in only small numbers, particularly children aged over 10 years. It also illustrates that the sample is representative of primary school aged children, rather than all children in the state. The combination of relatively small numbers of some age groups and the selective nature of children provided with care in those age groups means that some caution needs to be used in interpreting findings.

### *Changes since 1994*

The total number of children sampled in 1995 is some 803 more than 1994, indicating that the sample is closer to the specified ratio of one in eight than in 1994. There were substantial increases in the number of children sampled aged 11 and 12 years, which may improve the representativeness of the sample.

**Table 3: Deciduous teeth: age-specific prevalence**

The mean number of decayed teeth among children aged 5 to 9 years varies from 1.12 to 0.77 and is lower among older children. The variation in mean dmft in this age range is greater (1.50 to 2.18), and the prevalence is higher among older children. Mean dmft declines over the age of 9, which is consistent with the exfoliation of deciduous teeth as children grow older.

The percentage of caries experience due to decay (d/dmft) shows an age-associated decline, more than halving from 77.4 per cent among five year-olds to 38.4 per cent among 9 year-olds. In addition, the percentage of caries-free children (% dmft=0) reduces from 60.2 per cent among 5 year-olds to 42.7 per cent among 9 year-olds. It is noteworthy that less than one half of children are free of deciduous caries experience above the age of seven. The percentage of caries free children therefore mirrors the mean dmft prevalence.

*Changes since 1994*

During 1994 there were no substantial changes in the mean number of decayed teeth, the d/dmft ratio or the percentage of children with no caries experience.

**Table 4: Permanent teeth: age-specific prevalence**

The mean number of decayed permanent teeth is consistently smaller than the mean number of decayed deciduous teeth, although it increases across the age groups between 6 and 11 years. The mean DMFT also increases quite consistently across age groups, although the proportional increase is not as great. As a consequence, the percentage of DMFT due to decay (D/DMFT) and the percentage caries free (DMFT=0) declines consistently across age groups. Age-specific D/DMFT percentages are greater than the corresponding d/dmft percentages in the deciduous dentition between the ages of six and ten. In contrast to the deciduous dentition, over 70 per cent of children aged 9 or less are caries free.

The caries experience of children aged over 10 years requires some special discussion. The mean DMFT for each of those ages appears to be greater than expected based on the age-associated pattern in younger ages. As noted already, children aged 11 years or more are outside the main target groups for universal care in Victoria, and in addition, there are relatively small numbers of such children in the sample. For these reasons the data may be less representative of the population. The DMFT for 12 year-old children in 1995 was 1.02.

*Changes since 1994*

For older children, there was a decline in DMFT while the D component remained relatively stable. As a consequence, the D/DMFT ratio has increased over 1994 levels.

**Table 5: All teeth: age-specific prevalence**

Untreated caries in the combined deciduous and permanent dentitions exists for between 35 and 48 per cent of children in the age range 5 to 10 years. The greatest likelihood of untreated decay occurs for 10 and 11 year-olds where only about one half of children have d+D of zero. It is noteworthy that the most extensive levels of untreated decay (4 or more deciduous or permanent teeth) declines across ages, ranging from 7.9 per cent of 11 year-olds to 12.3 per cent of 6 year-olds. This age trend suggests that the greatest contribution comes from the deciduous dentition.

While 90 per cent or more of children have no deciduous or permanent teeth missing due to caries, smaller percentages avoid fillings, and this clearly is associated with age. Similarly, the percentage of children with no caries experience (dmft+DMFT=0) is age associated, tending to reduce and plateau at approximately 35 per cent above the age of 8.

*Changes since 1994*

There appears to be no distinct pattern of change across age groups and outcomes, compared to the data for 1994.

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

Fissure sealants became relatively frequent in children aged 8 and above. There is a slightly higher frequency of fissure sealants among children with permanent caries experience (DMFT=1+) suggesting that permanent caries experience is becoming a criterion used in the selection of patients for such preventive care.

*Changes since 1994*

There was no substantial change in the frequency of fissure sealants across years.

**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 Victoria School Dental service. As expected, the figure is highest for the youngest ages (5 years or less) with fewer than 15 per cent of those aged 5 years or less having had a 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 aged six or less had a previous examination within the previous 12 months. However, fewer than 25 per cent of children aged 7 years or more had a previous examination within the preceding 12 months. The most common period since the previous

examination was between one and two years for those older children. More than one third of children aged 9 years or more had a previous examination more than two years previously.

*Changes since 1994*

The changes during 1994 in frequency and timing of examinations indicate smaller percentages of children receiving their last exam more than two years ago.

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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 Victoria the sampling is 1:8. This ratio is achieved by systematically selecting every eighth record of data from all children examined in the School Dental Service. The following table describes the number of records processed from children in Victoria.

State/Territory: Victoria

Sampling Ratio: 1:8

Data for period January-December 1995

Date of Report: 25th October 1996

Age (years)	NUMBER OF RECORDS PROCESSED			
	Males	Females	Not stated	Persons
4	8	14	1	23
5	530	517	21	1068
6	700	715	56	1471
7	725	651	35	1411
8	667	666	49	1382
9	645	626	44	1315
10	510	559	34	1103
11	439	466	20	925
12	156	123	7	286
13	3	1	1	5
<b>Total</b>	<b>4383</b>	<b>4338</b>	<b>268</b>	<b>8989</b>

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

These data were not collected in Victoria  
during the period January-December 1995.



**TABLE 3: DECIDUOUS TEETH: AGE-SPECIFIC PREVALENCE**

This table uses Statewide data to describe the dmft<sup>1</sup> 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: Victoria

Sampling ratio: 1:8

Data for period January-December 1995

Date of Report: 25th October 1996

Age (years)	Number of children in sample	decayed		dmft		d/dmf	Children with dmft=0
		mean	sd	mean	sd	%	%
5	1068	1.12	2.23	1.50	2.70	77.4	60.2
6	1471	1.12	2.19	1.78	2.94	66.9	55.6
7	1411	1.09	1.90	2.14	2.95	54.6	47.1
8	1382	0.92	1.59	2.18	2.85	46.3	45.4
9	1315	0.77	1.33	2.16	2.67	38.4	42.7
10	1103	0.73	1.46	1.81	2.47	40.6	47.0

<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**

This table uses Statewide data to describe the DMFT<sup>1</sup> 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: **Victoria**

Sampling ratio: 1:8

Data for period January-December 1995

Date of Report: 25th October 1996

Age (years)	Number of children in sample	DECAYED		DMFT		Children with	
		mean	sd	mean	sd	D/DMFT %	DMFT=0 %
5	1068	0.03	0.32	*	*	83.6	98.7
6	1471	0.13	0.84	0.14	0.86	90.9	92.4
7	1411	0.22	0.64	0.27	0.84	81.8	85.1
8	1382	0.37	0.84	0.55	1.76	77.5	74.0
9	1315	0.42	1.26	0.64	1.77	69.2	70.1
10	1103	0.36	0.83	0.68	1.22	54.9	66.1
11	925	0.52	1.13	1.04	1.89	53.2	57.6
12	286	0.54	1.13	1.02	1.72	54.7	58.4

<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: Victoria

Sampling ratio: 1:8

Data for period January-December 1995

Date of Report: 25th October 1996

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	1068	65.0	11.7	6.6	5.1	11.6	96.8	88.1	59.6
6	1471	61.9	13.3	7.6	5.0	12.3	95.6	79.5	54.1
7	1411	55.3	14.2	11.5	6.6	12.5	93.8	67.0	43.9
8	1382	51.8	18.1	11.1	6.9	12.1	90.4	60.1	38.5
9	1315	53.4	18.4	11.6	6.7	9.9	92.3	52.0	34.8
10	1103	55.4	18.9	10.8	5.6	9.2	93.7	52.1	34.8
11	925	56.8	19.5	10.5	5.4	7.9	95.5	56.4	38.7
12	286	66.4	12.9	9.4	4.9	6.3	96.9	62.2	43.7

<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: **Victoria**

Sampling ratio: **1:8**

Data for period January-December 1995

Date of Report: 25th October 1996

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+
5	1068	*	*	1054	*	14	7.1
6	1471	0.07	0.48	1359	2.2	112	8.9
7	1411	0.36	1.04	1201	11.0	210	18.6
8	1382	0.84	1.60	1023	27.6	359	31.2
9	1315	1.44	1.88	922	47.9	393	43.8
10	1103	1.65	1.76	729	52.8	374	55.6
11	925	1.74	1.93	533	55.2	392	56.6
12	286	1.76	1.92	167	56.3	119	56.3

<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**

This information was not collected in Victoria during the period of this report.

**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: **Victoria**

Sampling ratio: **1:8**

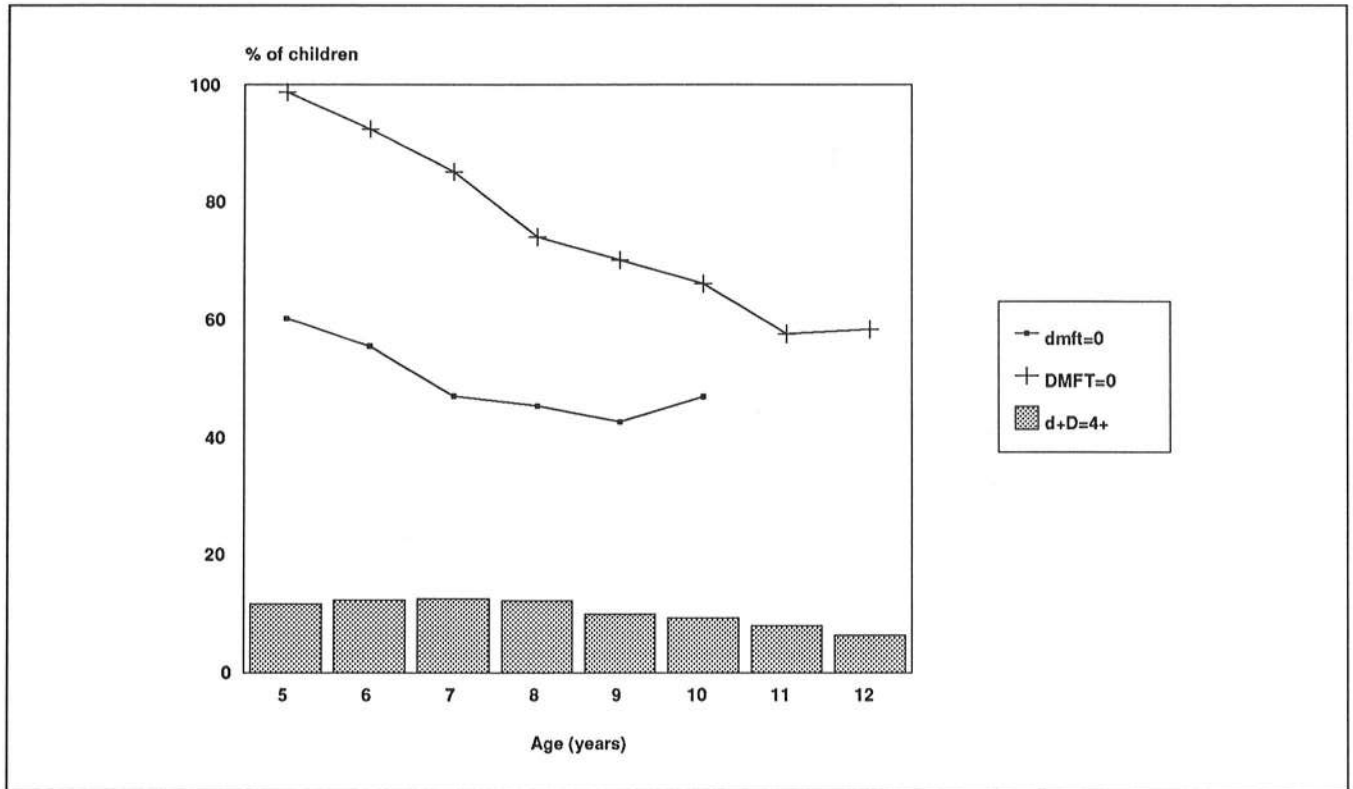
Data for period January-December 1995

Date of Report: 25th October 1996

Age (years)	Number of children examined	Previous examination in School Dental Service (%)		CHILDREN WITH PREVIOUS EXAMINATION Months since last examination <sup>1</sup> (%)			
		No/unknown	Yes	0-6	7-12	13-24	25+
5	1068	96.1	3.9	49.0	28.6	16.3	6.1
6	1471	91.5	8.5	32.9	30.8	30.1	6.3
7	1411	70.6	29.4	8.8	15.8	55.5	20.0
8	1382	63.1	36.9	8.0	13.7	49.7	28.6
9	1315	61.7	38.3	7.0	10.6	51.6	30.9
10	1103	64.5	35.5	7.0	11.4	53.8	27.8
11	925	62.3	37.7	4.9	10.4	53.3	31.3
12	286	79.2	20.8	5.0	6.7	63.3	25.0

<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=4+**



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

