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The Child Dental Health Survey Victoria 1993

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This report is the Victorian component of the Child Dental Health Survey, a project in which all Australian 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 1993

Purpose of this report

This report establishes the series of annual reports providing descriptive statistics concerning child dental health in Victoria, and follows the 1992 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 1993 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 eight patient counted.

The following sections briefly describe each table and provide a simple, summary statement highlighting differences between the 1993 and 1992 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 8,186 children were sampled during 1992. 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 1991 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 caution needs to be used in interpreting findings.

Changes since 1992

The total number of children sampled in 1993 is some 1,123 more than 1992, indicating that the sample is closer to the specified ratio of one in eight than in 1992. 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 1.23 to 0.78 and is lower among older children. The variation in mean dmft in this age range is greater (1.60 to 2.21), 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 79.3 per cent among five year-olds to 38.1 per cent among 9 year-olds. In addition, the percentage of caries-free children (% dmft=0) reduces from 61.2 per cent among 5 year-olds to 41.0 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 1992

During 1992 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 60 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 must be regarded as less representative of the population. This is regrettable since 12 year-olds are used as a benchmark age-group in some policies.

Changes since 1992

Among children aged 10 years or less the changes in the caries experience of permanent teeth were inconsequential. In particular, the mean DMFT differs by less than 0.1 teeth across the key age groups (7 to 10 years). There was a substantial increase in the numbers sampled who were aged 11 and 12 years, which may improve the representativeness of the sample.

Table 5: All teeth: age-specific prevalence

Untreated caries in the combined deciduous and permanent dentitions exists for between 35 and 47 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 7.1 per cent of 10 year-olds to 14.0 per cent of 5 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 30 per cent above the age of 8.

Changes since 1992

There appears to be in 1993 a more distinct pattern of decline across age groups in the percentage of children with d+D of 4 or more, compared to the dates for 1992.

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 1992

For children aged 8 to 12 years, where comparisons can be made between the two years, the mean number of fissure sealants increased noticeably.

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 more 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 20 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 1992

The changes during 1992 in frequency and timing of examinations indicate smaller percentages of children receiving their last exam within 6 months of the current exam.

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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 1993

Date of Report: 1st March 1995

Age (years)	NUMBER OF RECORDS PROCESSED			
	Males	Females	Not stated	Persons
4	18	20	1	39
5	567	566	80	1213
6	738	669	92	1499
7	685	691	92	1468
8	611	646	70	1327
9	507	584	60	1151
10	336	365	33	734
11	274	271	22	567
12	90	80	12	182
13	3	3	0	6
Total	3829	3895	462	8186

TABLE 2: COUNTRY OF BIRTH (INCLUDING ABORIGINALITY)

These data were not collected in Victoria during the period January-December 1993.

TABLE 3: DECIDUOUS TEETH: AGE-SPECIFIC PREVALENCE

This table uses Statewide data to describe the dmft¹ 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 1993

Date of Report: 1st March 1995

Age (years)	Number of children in sample	decayed		dmft		d/dmf %	Children with dmft=0 %
		mean	sd	mean	sd		
4	39	1.13	1.94	1.31	2.30	91.1	61.5
5	1213	1.23	2.35	1.60	2.91	79.3	61.2
6	1499	1.16	2.16	1.81	2.91	68.1	55.2
7	1468	0.92	1.65	2.03	2.83	47.4	48.9
8	1327	0.84	1.51	2.21	2.91	41.0	45.6
9	1151	0.78	1.32	2.25	2.73	38.1	41.0
10	734	0.66	1.13	1.96	2.43	36.3	42.8

¹ 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 DMFT¹ 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 1993

Date of Report: 1st March 1995

Age (years)	Number of children in sample	DECAYED		DMFT		D/DMFT	Children with
		mean	sd	mean	sd	%	DMFT=0 %
5	1213	0.04	0.34	0.04	0.36	95.3	97.5
6	1499	0.08	0.39	0.09	0.41	94.5	94.5
7	1468	0.24	0.68	0.31	1.03	83.3	83.3
8	1327	0.34	0.82	0.48	1.02	71.5	74.7
9	1151	0.36	0.82	0.60	1.16	63.9	70.1
10	734	0.40	0.85	0.78	1.20	53.2	59.4
11	567	0.48	1.00	1.19	1.70	39.9	51.7
12	182	0.65	1.19	1.52	2.06	44.3	45.1

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

TABLE 5: ALL TEETH: AGE-SPECIFIC PREVALENCE¹

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 1993

Date of Report: 1st March 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	1265	64.8	9.1	7.4	4.7	14.0	97.9	87.6	59.8
6	1587	61.1	11.3	9.3	6.2	12.1	95.2	79.3	53.4
7	1530	58.6	13.9	9.3	7.1	11.0	92.7	63.9	44.2
8	1400	56.7	15.3	11.0	5.9	11.1	91.8	55.2	39.4
9	1225	52.6	18.9	12.2	6.4	10.0	90.4	50.5	32.4
10	763	52.4	19.1	14.0	7.3	7.1	92.7	45.9	30.1
11	593	55.8	18.5	12.8	6.9	5.9	93.9	46.7	31.9
12	194	55.7	16.0	15.5	8.2	4.6	94.8	51.0	31.4

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

TABLE 6: FISSURE SEALANTS: AGE-SPECIFIC PREVALENCE¹

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 1993

Date of Report: 1st March 1995

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	1265	*	*	1235	0.6	30	0.0
6	1587	0.10	0.84	1499	2.7	88	6.8
7	1530	0.37	1.05	1271	11.1	259	20.1
8	1400	0.84	1.48	1041	25.7	359	33.1
9	1225	1.20	1.75	855	37.8	370	40.3
10	763	1.51	1.77	455	48.4	308	50.3
11	593	1.57	2.07	304	43.1	289	53.6
12	194	1.90	2.71	86	50.0	108	53.7

¹ 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 1993**

Date of Report: **1st March 1995**

Age (years)	Number of children examined	Previous examination in School Dental Service (%)			CHILDREN WITH PREVIOUS EXAMINATION Months since last examination ¹ (%)			
		No	Yes	Unknown	0-6	7-12	13-24	25+
4	40	85.0	15.0	0.0	12.5	0.0	*	85.0
5	1265	88.5	11.5	0.0	5.4	2.8	2.5	89.2
6	1587	75.5	24.5	0.0	6.5	5.1	10.9	77.5
7	1530	38.4	61.6	0.0	5.0	6.8	37.1	51.1
8	1400	26.8	73.2	0.0	5.7	9.5	37.9	46.8
9	1225	23.3	76.7	0.0	5.3	9.2	39.0	46.5
10	763	21.9	78.1	0.0	3.9	5.4	42.8	47.9
11	593	19.7	80.3	0.0	4.6	8.6	40.5	46.4
12	194	23.2	76.8	0.0	*	6.2	38.9	52.3

¹ Excludes those with no previous examination and where the date of previous examination is unknown.

FIGURE 1: PERCENTAGE OF CHILDREN WITH dmft=0, DMF=0 and d+D=4+

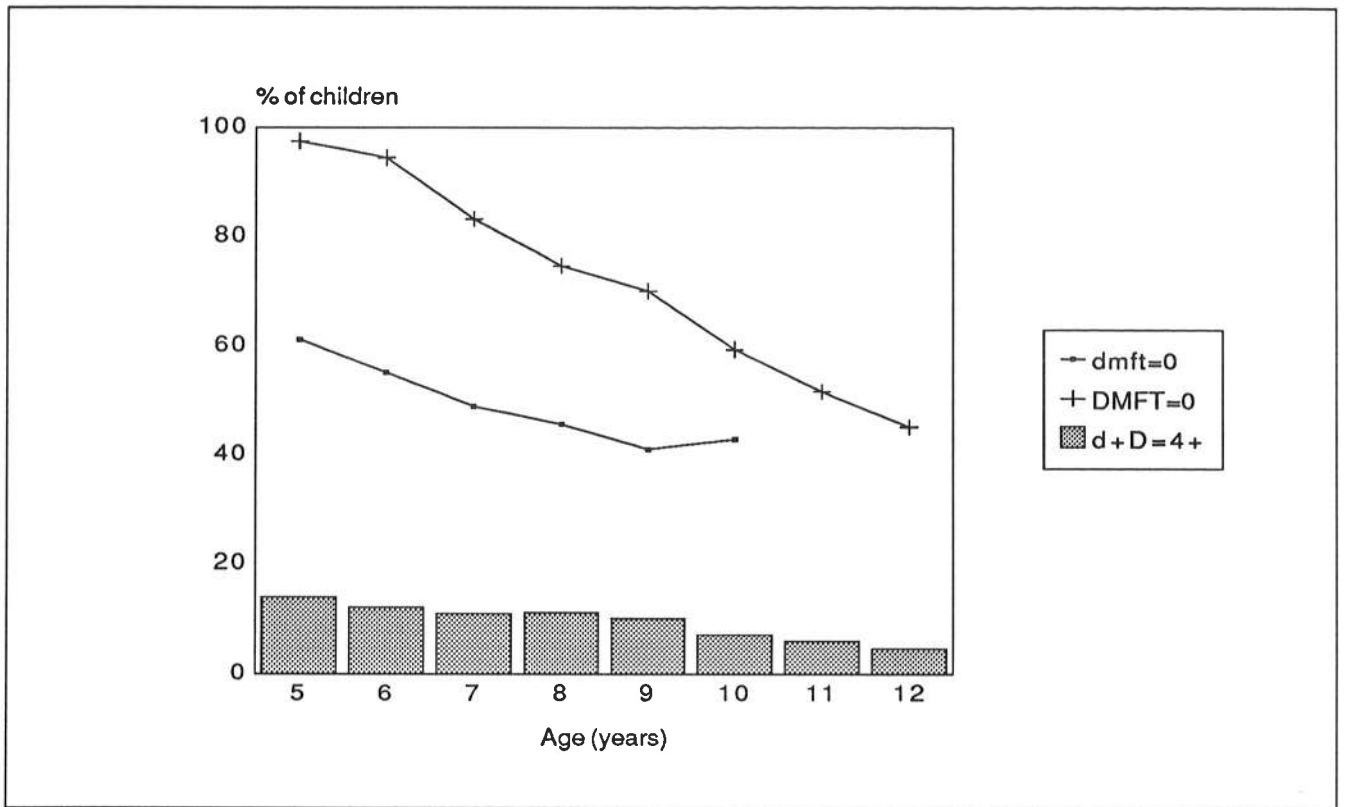


FIGURE 2: TIME SINCE LAST DENTAL EXAMINATION

