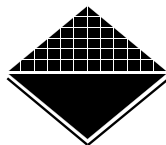


**Dental Statistics and Research**  
Number 4

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**The Child Dental  
Health Survey  
Australia, 1991**

**M J Davies  
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THE UNIVERSITY OF ADELAIDE

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This is the fourth 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**

Dental Statistics and Research Series. The Child Dental Health Survey for Australia, 1991.

### **Bibliography**

ISSN 1321-0254

### **Suggested citation**

AIHW Dental Statistics and Research Unit (1994). *The Child Dental Health Survey, Australia 1991*. AIHW Dental Statistics and Research Unit Series No. 4, The University of Adelaide, Adelaide.

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## THE CHILD DENTAL HEALTH SURVEY – AUSTRALIA 1991

### 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 enrollment in School Dental Services, with some jurisdictions serving more than 80.0 per cent of primary school children, and others serving smaller percentages. (For this reason the tables exclude data from Victorian children aged 11 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 derive 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 following scheme:

State	Ratio	Days of birth	Comments for 1991 collection
NSW	1:16	3rd or 30th	January–December
Vic	1:8	Systematic	No data for children aged 11+ years
Qld	1:1 Townsville	1st to 31st	January–December
	1:5 Rest of Qld	1st to 6th	January–December
SA	1:12 Metropolitan	13th, 30th, 31st	January–December
	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	January–December
NT	1:1.9 Darwin	1st to 16th	January–December
	1:1 Rest of NT	1st to 31st	January–December
ACT	1:1.9	1st to 16th	January–December

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 creates some variation. This was particularly apparent for Victoria for 1991, where due to sampling difficulties, the number of children aged 11 years and above included in the survey were very 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 ages 11 and above do not include data from Victoria.

### **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 country of birth (both of child and mother). The country of birth, 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). Country of birth 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 status was chosen as the preferred parental data item. Country of birth data items are not yet, however, recorded universally by each State or Territory. The data reported here have been obtained from Northern Territory, New South Wales, South Australia and Victoria. 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*, 1991.) 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 1991.

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, where indicated in the tables.

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 (generally) 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, 1989) of the estimated 1991 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'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 122,199 children aged between 5 and 15 years inclusive reported for the 1991 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 4. The relatively large numbers of reported cases from Queensland, South Australia and the Northern Territory receive relatively lower weights compared with other States and Territories. The weighted cases, which are used for estimates listed in subsequent tables, therefore represent smaller numbers of children from those three States. The national sample, consequently, is representative of the populations of all States and Territories, rather than the number of reported cases.

**Table 2: Country of birth (including Aboriginality) – SA, NSW and NT**

Information about country of birth and Aboriginality was available from South Australia, New South Wales and the Northern Territory where 92.4 per cent of children were Australian born (including Aboriginal, Torres Strait Islander and non-Aboriginal children). This compares with 79.9 per cent of Australian born mothers. Southern Europe, the Middle East, United Kingdom and Ireland, and South East Asia were the other main countries of birth among mothers, although none of them exceeded 5 per cent. The distribution of children is similar to the figure of 91.2 per cent Australian born reported for the Australian population aged 5–14 years (ABS, 1989). The sample has a larger percentage of Aboriginal/Torres Strait Islander children compared with the 1986 Census estimate of 1.8 per cent (ABS, 1986). However it should be noted that the survey data were recorded in NSW, NT and South Australia which have substantial Aboriginal populations. Furthermore, the 1986 census may have under-enumerated Aboriginal and Torres Strait Islander people.

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

Total caries experience in the deciduous dentition is expressed as the mean dmft prevalence and varied from 1.81 to 2.28 among 5 to 9 year-olds. The noticeable decline in 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 1.34 among 5 year-olds to 0.71 among 9 year-olds. As a consequence of both trends, the d/dmft ratio was highest among younger children, and declined to approximately 30 per cent by the age of 10. The percentage of children with no deciduous caries (dmft=0) mirrored the age variations in mean dmft by reducing across the age range 5 to 9 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, undoubtedly 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 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 10 years. In addition, the means for permanent teeth continued to increase among older ages. Despite the relatively high mean number of permanent teeth with untreated decay among those aged over 12 years, the D/DMFT ratio did not change considerably, due to the substantial increases in mean DMFT. It is noteworthy that over 61.9 per cent of children aged 10 years or less had no caries experience (DMFT=0), and even by the end of their primary school years, 52.5 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 4.



**Table 5: All teeth: age-specific 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 existed for between 28.5 and 41.4 per cent of children in the age range 5 to 12 years. The greatest likelihood of untreated decay was observed among 7, 8 and 9 year-olds (where only 58.6 per cent had d+D=0), although the greatest intensity of decay occurred in the youngest ages. For example, 14.1 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. However, the oldest group also featured with high frequency and intensity of decay.

Missing teeth were relatively uncommon among children aged 5 to 14 years, although 6.3 per cent of those aged 14 years had at least one missing tooth (which would be due to missing permanent teeth). Again, it is important to recognize that the oldest ages may be less representative of the Australian population. Both the percentage of children with no fillings (f+F=0) or caries experience (dmft+DMFT=0) declined with the exception of 11 and 12 year-olds across the age range contained in Table 5. 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 6: Fissure sealants: age-specific prevalence**

The mean number of fissure sealants was substantial among those aged 7 years or more, and through to 13 year-olds it exceeded the mean number of decayed permanent teeth (Table 4). Children with permanent caries experience (DMFT=1+) had a greater likelihood of sealants than children with no permanent caries experience (DMFT=0). For example, 24.9 per cent of 12 year-old children with DMFT=1+ had fissure sealants compared with 20.1 among those with DMFT=0. This should be interpreted as a tendency towards preferential provision of fissure sealants among children deemed to have a greater likelihood of dental caries.

**Table 7: Immediate treatment needs: age-specific distribution**

Immediate treatment (within a period of four weeks) was not recorded in Victoria or Western Australia in 1991. Consequently, the estimates may not be representative of all children. The percentage was greatest for younger children. There were correspondingly high levels of caries experience among children with immediate treatment needs. Age-specific means for dmft and DMFT tended to be at least twice the national averages listed in previous tables. For example, 5 year-olds with immediate treatment needs had a mean dmft of 5.78 (compared with 1.81 in Table 3) and 60.2 per cent had d+D=4+ (compared with 14.1 per cent in Table 5).

It should be emphasized 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 7 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 one third or more of 5 to 12 year-olds have no caries experience at all.

**Table 8: Interstate comparison: Five–six year-old dmft**

This represents a standard age group (cited, for example, within World Health Organization publications) and is useful for School Dental Services since it represents, predominantly, the dental health status of children new to School Dental Services. There exists a twofold difference between the lowest mean dmft (Australian Capital Territory, mean=1.04) and highest mean dmft (Queensland, mean=2.22). There are historical differences in caries prevalence as well as marked variations in population density and demography and levels of water fluoridation between the two which are significant. As well, there are differences in organization and delivery of both School Dental Services between these two jurisdictions, and all of these influential factors affect other State/Territory comparisons.

There are other notable characteristics of the statistics contained in Table 8. In general, the mean number of deciduous teeth with untreated decay is correlated with the mean dmft – a relationship which may not be surprising but which need not necessarily exist. In addition, the variation in percentage caries free (dmft=0), while representing the converse of mean dmft, shows less substantial variation (from 50.6 to 66.3 per cent) than the twofold difference in mean dmft. In other words, while less than one half of 5 to six year-olds in all jurisdictions have caries experience, the amount of accumulated disease (mean dmft) is more variable across jurisdictions.

**Table 9: Interstate comparison: 12 year-old DMFT**

There was a substantial variation in mean DMFT (from 0.91 in Australian Capital Territory to 1.46 in Queensland). This was less than the amount of variation observed in deciduous teeth, for the same locations. 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 (19.3 per cent in South Australia to 41.9 per cent in New South Wales).

The Australian Capital Territory stands out with the lowest mean dmft and lowest mean DMFT. In contrast, Queensland has the highest mean dmft and highest mean DMFT.

**Table 10: All teeth: Age-standardized prevalence**

Age-standardized data are 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, five to six year-olds) provide a somewhat unrepresentative picture of conditions in a specific State or Territory. The purpose of age-standardization 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 are quite profound differences in percentage of children with 4 or more decayed teeth (d+D=4+) despite relative consistency in percentage of children with no caries experience (dmft+DMFT=0). The most populous States of New South Wales and Victoria have the largest levels of untreated decay (d+D). As noted from previous tables, that appears to arise from the relatively high levels of decayed teeth observable in deciduous teeth among children in their early school years. Consistent with Tables 8 and 9, the Australian Capital Territory had the highest percentage of children with no caries experience (dmft+DMFT=0), while Queensland had the lowest (51.1% and 36.2% respectively).

**Table 11: National summary**

Age-standardized data are 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 11 reveal different profiles of caries experience among the States and Territories. Queensland and Victoria appear to have the highest levels of caries experience for both deciduous and permanent caries. This is consistent with Tables 8 and 9, where States with high standardized 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 11 years and older.

**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 free of caries in deciduous dentition is attenuated by the pattern of exfoliation of deciduous teeth, which effectively reduces the number of teeth at risk of caries.

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**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, 1989) to permit the calculation of Australia-wide prevalence estimates. The number of weighted cases excludes cases outside the age range of 5 to 15 years inclusive.

State/Territory: **Australia**

Data for 1991

Date of report: 1st March 1994

State	Number of processed cases	Estimated resident population	Weighted cases
NSW	5973	927242	27927.95
Vic	5139	680469	18636.98
Qld	44772	484958	14595.07
SA	17340	218239	6570.66
WA	11522	268959	8103.56
Tas	14457	77301	2327.93
NT	15792	31015	931.18
ACT	7204	49220	1481.98
<b>Total</b>	<b>122199</b>		

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

The country of birth of children is determined from information concerning birthplace of the child and mother. The number and percentage of children in each group is provided in this table. These data relate to South Australia, New South Wales and Northern Territory.

State/Territory: **SA, NSW and NT**

Data for 1991

Date of report: 1st March 1994

COUNTRY OF BIRTH	CHILDREN		MOTHERS	
	Number <sup>1</sup>	%	Number	%
Australia (non-Aboriginal)	21645	89.1	18050	76.6
Australia (Aboriginal or TSI)	806	3.3	766	3.3
United Kingdom and Ireland	211	0.9	709	3.0
Other English speaking	376	1.5	379	1.6
Southern Europe	121	0.5	740	3.1
Other Europe	174	0.7	364	1.5
Middle East	201	0.8	1104	4.7
South East Asia	328	1.4	652	2.8
Other Asia	200	0.8	397	1.7
Other	231	1.0	408	1.7
<b>Total</b>	<b>54018</b>	<b>100.0</b>	<b>54018</b>	<b>100.0</b>

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

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.

State/Territory: **Australia**

Data for 1991

Date of report: 1st March 1994

Age (years)	Number of children in sample <sup>2</sup>	decayed		dmft		d/dmft	Children with dmft=0
		mean	sd	mean	sd	%	%
5	7521	1.34	2.48	1.81	3.02	75.9	57.4
6	7611	1.17	2.18	2.00	3.02	60.6	52.1
7	7527	0.96	1.83	2.17	2.89	45.9	45.2
8	7435	0.80	1.52	2.28	2.79	37.5	42.1
9	7281	0.71	1.31	2.23	2.63	35.1	40.0
10	7255	0.50	1.06	1.83	2.44	29.9	46.3

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

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

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

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 11 and above have been excluded due to high standard errors.

State/Territory: **Australia**

Data for 1991

Date of report: 1st March 1994

Age (years)	Number of children in sample <sup>2</sup>	DECAYED		DMFT		D/DMFT	Children with
		mean	sd	mean	sd	%	DMFT=0 %
5	7521	0.01	0.18	0.02	0.27	70.1	99.0
6	7611	0.08	0.53	0.09	0.66	87.4	95.2
7	7527	0.18	0.60	0.24	0.71	74.0	86.2
8	7435	0.23	0.65	0.40	0.91	57.9	78.3
9	7281	0.28	0.75	0.56	1.08	49.4	71.4
10	7255	0.31	0.80	0.81	1.33	38.2	61.9
11	5495	0.28	0.77	0.91	1.47	31.5	59.9
12	5504	0.43	1.12	1.26	1.88	32.4	52.5
13	5624	0.60	1.19	1.83	2.51	33.8	40.7
14	5784	0.89	1.95	2.67	3.19	30.1	32.0
15	5972	1.06	2.36	3.00	3.09	28.2	29.9

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

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



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

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 11 and above have been excluded due to high standard errors.

State/Territory: **Australia**

Data for 1991

Date of report: 1st March 1994

Age (years)	Number of children in sample <sup>2</sup>	% of children with d+D=					% of children with		
		0	1	2	3	4+	m+M=0	f+F=0	dmft+DMFT=0
5	7521	62.2	10.7	7.8	5.2	14.1	97.0	85.0	57.0
6	7611	60.7	13.4	8.2	4.9	12.8	97.1	73.7	50.8
7	7527	58.6	15.8	9.3	6.0	10.3	95.5	61.1	42.0
8	7435	58.7	16.9	10.6	5.5	8.3	94.2	52.9	37.3
9	7281	58.6	17.5	10.4	5.6	7.9	94.8	48.6	33.6
10	7255	62.7	17.6	9.5	4.0	6.2	95.2	45.3	33.0
11	5495	70.4	16.2	6.6	3.7	3.2	97.9	51.4	40.1
12	5504	71.5	15.1	7.5	2.7	3.3	97.2	54.7	41.9
13	5624	67.6	14.5	8.9	4.3	4.7	95.0	49.9	36.2
14	5784	64.9	16.0	6.5	5.0	7.6	93.7	41.1	28.7
15	5972	69.3	8.8	7.6	4.3	10.0	98.3	37.3	29.0

<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

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

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

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 11 and above have been excluded due to high standard errors.

State/Territory: **Australia**

Data for 1991

Date of report: 1st March 1994

Age (years)	Number of children in sample <sup>2</sup>	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	7611	0.08	0.80	7247	2.0	364	9.9
7	7527	0.24	1.16	6489	7.1	1038	13.9
8	7435	0.42	1.28	5822	13.8	1613	20.4
9	7281	0.52	1.45	5196	17.0	2086	21.8
10	7255	0.58	1.30	4490	19.3	2765	25.2
11	5495	0.53	1.25	3292	18.9	2203	22.2
12	5504	0.68	1.64	2892	20.1	2612	24.9
13	5624	0.70	1.55	2290	20.2	3334	26.2
14	5784	0.86	2.06	1849	22.2	3935	28.4
15	5972	0.84	1.63	1783	20.4	4188	34.0

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

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

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

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 and Victoria.

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

Data for 1991

Date of report: 1st March 1994

Age (years)	Number of children in sample <sup>2</sup>	CHILDREN IN NEED OF IMMEDIATE TREATMENT										
		No.	% of all children	dmft mean	sd	DMFT mean	sd	% with d+D=				
								0	1	2	3	4+
5	4312	514	11.9	5.78	3.98	0.07	0.45	4.7	11.2	12.6	11.3	60.2
6	4265	534	12.5	5.01	3.47	0.17	0.69	4.3	16.8	17.8	9.8	51.3
7	4137	583	14.1	4.49	3.18	0.47	0.99	2.5	23.3	14.7	17.3	42.2
8	4089	570	13.9	4.15	3.03	0.71	1.08	9.1	21.7	23.0	14.2	31.9
9	4014	446	11.1	3.37	2.56	1.12	1.43	6.7	30.4	23.6	12.1	27.3
10	3954	402	10.2	2.74	2.74	1.43	1.60	12.8	30.6	23.7	12.2	20.7
11	3966	360	9.1	1.90	2.19	1.79	1.85	19.2	30.3	19.9	11.1	19.5
12	3920	319	8.1	1.10	1.66	2.47	2.72	14.2	40.0	12.9	7.1	25.8
13	4040	283	7.0	0.25	0.87	4.29	3.15	1.2	23.5	31.5	18.3	25.5
14	4424	521	11.8	0.28	0.94	6.11	3.82	11.7	12.8	6.2	17.4	51.9
15	4641	699	15.1	0.45	1.01	5.33	3.26	13.7	1.1	39.2	0.2	45.8

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

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

**TABLE 8: INTERSTATE COMPARISON: FIVE-SIX YEAR-OLD dmft<sup>1</sup>**

This table presents the age-standardized 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.

State/Territory: **Australia**

Data for 1991

Date of report: 1st March 1994

State	Number of children in sample <sup>2</sup>	decayed		dmft		d/dmft	Children with dmft=0
		mean	sd	mean	sd	%	%
NSW	5145	1.62	2.71	2.10	3.16	77.7	52.1
Vic	3718	1.27	2.32	1.84	3.01	73.1	56.9
Qld	2650	1.21	2.25	2.22	3.27	57.9	50.6
SA	1231	0.68	1.47	1.76	2.81	43.5	55.3
WA	1511	0.68	1.60	1.24	2.28	58.1	62.5
Tas	431	0.86	1.80	1.54	2.67	57.3	59.1
NT	182	1.25	2.24	1.82	2.81	68.8	52.2
ACT	263	0.74	1.59	1.04	2.07	73.7	66.3
Australia	15131	1.25	2.34	1.91	3.02	67.7	54.8

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

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

**TABLE 9: INTERSTATE COMPARISON: 12 YEAR-OLD DMFT<sup>1</sup>**

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.

State/Territory: **Australia**

Data for 1991

Date of report: 1st March 1994

State	Number of children in sample <sup>2</sup>	Decayed		DMFT		Children D/DMFT with DMFT=0	
		mean	sd	mean	sd	%	%
NSW	2473	0.54	1.38	1.18	1.91	41.9	57.1
Qld	1308	0.42	0.97	1.46	1.96	29.0	46.5
SA	581	0.20	0.56	1.06	1.51	19.3	52.2
WA	722	0.32	0.74	1.43	1.93	24.9	47.6
Tas	203	0.29	0.69	1.18	1.72	25.4	51.7
NT	80	0.36	1.26	1.26	1.92	23.7	50.6
ACT	137	0.30	1.10	0.91	1.57	30.5	57.4
Australia	5504	0.43	1.12	1.26	1.88	32.4	52.5

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

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

**TABLE 10: ALL TEETH: AGE-STANDARDISED PREVALENCE<sup>1</sup>**

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 standardized using the Australian Estimated Populations for each State and Territory for ages between 5 and 12 years inclusive. Data from Victoria for children aged 11 and above have been excluded due to high standard errors.

State/Territory: **Australia**

Data for 1991

Date of report: 1st March 1994

State	Number of children in sample <sup>2</sup>	% of children with d+D=					% of children with		
		0	1	2	3	4+	m+M=0	f+F=0	dmft+DMFT=0
NSW	27928	59.3	13.4	9.7	6.0	11.7	95.8	60.0	38.9
Vic	11071	56.8	15.4	9.7	5.9	12.2	92.5	62.9	42.5
Qld	14595	64.6	16.9	8.3	4.2	6.0	97.3	47.1	36.2
SA	6571	75.6	14.5	5.3	2.3	2.2	98.3	47.3	39.9
WA	8104	72.9	15.1	6.8	2.6	2.6	96.0	50.7	39.8
Tas	2328	68.1	15.8	8.4	3.6	4.1	97.8	54.8	42.9
NT	931	66.3	14.4	8.0	4.1	7.2	95.8	61.2	43.1
ACT	1482	69.4	14.0	6.4	3.3	6.9	98.3	64.4	51.1
Australia	73010	63.5	14.8	8.6	4.7	8.4	96.0	55.6	39.5

<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

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

**TABLE 11: NATIONAL SUMMARY<sup>1</sup>**

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

The number of children has been standardized 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 11 and above have been excluded due to high standard errors.

State/Territory: **Australia**

Data for 1991

Date of report: 1st March 1994

State	Number of children in sample <sup>2</sup>	dmft			DMFT			d+D=0
		mean	sd	dmft=0 %	mean	sd	DMFT=0 %	
NSW	27928	1.29	2.37	63.6	1.11	2.17	64.8	59.3
Vic	18637	1.45	2.52	62.0	1.64	3.12	61.1	49.5
Qld	14595	1.55	2.60	60.0	1.19	2.16	62.1	64.6
SA	6571	1.33	2.35	63.5	0.80	1.56	67.5	75.6
WA	8104	0.95	1.83	67.7	1.11	2.17	63.1	72.9
Tas	2328	1.13	2.10	65.7	0.83	1.62	67.3	68.1
NT	931	1.18	2.18	64.5	0.75	1.68	70.6	66.3
ACT	1482	0.88	1.74	67.2	0.75	1.61	72.3	69.4
Australia	80575	1.33	2.38	63.1	1.20	2.37	63.8	61.2

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

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

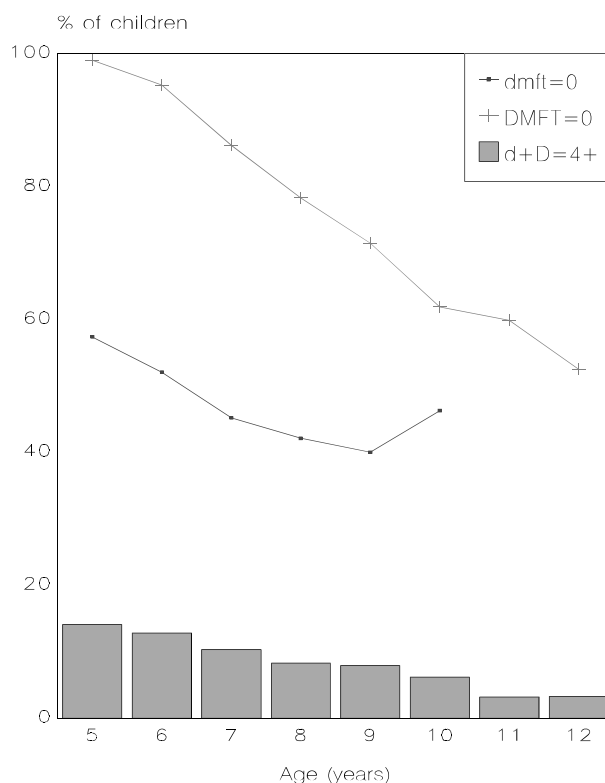
**FIGURE 1: PERCENTAGE OF CHILDREN WITH dmft=0, DMFT=0 and d+D=4+<sup>1</sup>**

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 excluded<sup>2</sup>. It should be noted that the rate of decline across ages in the percentage of children free of caries 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 1991

Date of report: 1st March 1994



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

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