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# The Child Dental Health Survey, New South Wales 2000

AIHW Catalogue No. DEN 117

AUSTRALIAN RESEARCH CENTRE  
FOR POPULATION ORAL HEALTH



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### **Suggested citation**

AIHW Dental Statistics and Research Unit (2003). *Child Dental Health Survey, New South Wales 2000*.

### **Acknowledgments**

The data used for this report were collected by the Oral Health Branch, NSW Health. The support of the service and their staff was crucial to the successful reporting of results for this survey.

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## Abbreviations

d – deciduous decayed teeth

m – deciduous missing teeth

f – deciduous filled teeth

dmft – deciduous decayed, missing and filled teeth

D – permanent decayed teeth

M – permanent missing teeth

F – permanent filled teeth

DMFT – permanent decayed, missing and filled teeth

dift – deciduous decayed, indicated for extraction and filled teeth

SD – standard deviation

## **Purpose of this report**

This report is part of the annual series providing descriptive statistics concerning child dental health in New South Wales. Information listed in the tables includes: the demographic characteristics of children in the sample, their deciduous and permanent caries experience, frequency of fissure sealants, immediate treatment needs and deciduous and permanent caries experience by geographical regions, sex, Indigenous status and country of birth.

In addition, there is a simple, summary statement highlighting differences between the 2000 and 1999 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.

## **Survey methods**

Dental therapists collected the following data during the 2000 calendar year from patients of the NSW Dental Service. The targeted children were in Kindergarten and Years 2, 4, 6 and 8. In contrast to other States and Territories where a random sampling procedure is used to select children from those receiving care in the School Dental Services, a full enumeration of children was used for analyses for NSW in 2000.

## **Data analysis**

The data were cleaned prior to analysis to remove duplicates. In addition, cases with ages more than 4 standard deviations from the mean age for a given grade were removed from the analysis or corrected where this could be determined. It is likely that the majority of these cases represented data input errors.

Indices were 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 was excluded. Age-specific indices denoted with an asterisk (\*) are those in which the relative standard error exceeds 40% and population estimates of these indices may be considered to be statistically unreliable. Due to the very small numbers of 15-year-olds sampled, this age group is excluded from most discussions of results (although results for this age group are still presented in the relevant tables).

## **Adjustments for the under-reporting of decay**

In 1996, the New South Wales Health Department implemented the SOKS program, a major change accompanying the program being the move from clinic-based examinations to oral assessments in the field as the primary environment for data collection. In the clinic, better lighting and the availability of other facilities such as compressed air optimise conditions for assessing oral health.

In 1999 NSW Health commenced a wide-ranging review of SOKS, with one aspect being a quality assurance project aimed at assessing the reliability and validity of data collected under SOKS assessment conditions. The technical report (NSW Health Department, 2001) found that while there were no statistically significant differences in

the reporting of missing and filled teeth between a field SOKS-style assessment and a clinical examination, there was a persistent and statistically significant under-reporting of the number of decayed teeth under field compared to clinic conditions. In deciduous teeth, the mean decay score for the SOKS assessment was 36% lower than that collected in the clinic, while the mean decay score for permanent teeth was 41% lower. Such an underestimation of decay also resulted in a significant underestimation in the dmft and DMFT indices.

As a result of these findings, the current report has included in Appendix A (Tables A1–A2, p. 14) figures adjusted for the under-estimation of decay in NSW. For children in NSW an additional weight of 1.56 was given for calculations of deciduous decay and 1.68 for calculations of permanent decay. Although it is believed that these adjusted figures may represent a more accurate estimation of caries experience in NSW, for the purpose of consistency with previous reports the data obtained via the SOKS assessments are retained for calculations in the body of this report.

## Demographic composition of the sample

As shown in Table 1, the majority of the children in the sample were aged between 5 and 13 (95.9%). Consistent with the selection process used for SOKS, the most common ages of sampled children were 5, 7, 9, 11 and 13 (representing 71.3% of the sample). Only approximately one-third the number in these age groups was represented in the age groups of 6, 8, 10, 12 and 14. Children aged less than 4 years old or greater than 14 years old were represented in smaller numbers, which resulted in low reliability for some computed statistics. Furthermore, these children are likely to be less representative of the respective population age groups than is the case for the majority of the sample aged 5 to 13.

**Table 1: Demographic composition of the sample**

Age (years)	Number of children in sample			
	Males	Females	Unknown	Persons
3	23	26	0	49
4	1,551	2,348	2	3,899
5	18,581	24,532	13	43,113
6	7,967	8,868	7	16,835
7	18,404	22,775	10	41,179
8	8,023	8,686	2	16,709
9	17,411	20,391	4	37,802
10	7,450	7,894	1	15,344
11	14,752	18,037	5	32,789
12	5,920	6,541	3	12,461
13	9,673	12,815	3	22,488
14	2,821	3,157	0	5,978
15	116	132	0	248
<b>Total</b>	<b>112,692</b>	<b>136,202</b>	<b>50</b>	<b>248,894</b>



The gender distribution within the sample was skewed, with 23,510 more females than males being sampled, a female to male ratio of 1.21:1.

### Changes since 1999

A total of 56,839 fewer children were sampled in 2000 than in 1999.

### Region of birth and Indigenous status

The large majority of children (94.0%) were born in Australia (see Table 2). Of those children born outside of Australia the most common region was Asia (2.9%). Children of Indigenous descent comprised 1.8% of the sample (see Table 3).

### Changes since 1999

There were few changes in either region of birth or indigenous status of the sample in 2000 compared to 1999.

**Table 2: Region of birth**

	Number	%
Australia	233,989	94.0
New Zealand and Other Oceania (e.g. Fiji, Papua New Guinea)	2,497	1.0
North-West Europe (e.g. Germany, Sweden, United Kingdom)	1,353	0.5
Southern and Eastern Europe (e.g. Croatia, Russian Federation, Spain)	1,163	0.5
North Africa and Middle East (e.g. Egypt, Morocco, Turkey)	1,320	0.5
South-East Asia (e.g. Cambodia, Indonesia, Viet Nam)	2,220	0.9
North-East Asia (e.g. China, Hong Kong, Japan)	3,121	1.3
Southern and Central Asia (e.g. India, Nepal, Uzbekistan)	1,719	0.7
Northern America (e.g. Bermuda, Canada, USA)	508	0.2
Other Americas (e.g. Argentina, Barbados, Mexico)	326	0.1
Sub-Saharan Africa (e.g. Gambia, Madagascar, South Africa)	701	0.3
Not known	20	0.0

**Table 3: Indigenous status**

	Number	%
Non-Indigenous	244,561	98.2
Indigenous	4,383	1.8

## Deciduous teeth

The mean number of decayed (d) teeth among those children aged from under 5 years to children aged 10 years old decreased from 0.82 to 0.32 (see Table 4). This decline can be largely explained by the exfoliation of deciduous teeth with increasing age and should not be seen as reflecting a reduction in the percentage of teeth with decay in older age groups. The mean number of teeth recorded as missing due to caries was small for all ages. The mean number of filled deciduous teeth increased from 0.15 for the youngest children to 0.49 for 8-year-olds before declining across successive age groups. The same pattern was evidenced in mean dmft, increasing to 1.12 in the 7- and 8-year-old age groups and then declining to 0.18 for 12-year-olds, consistent with the relatively rapid exfoliation of deciduous teeth from the age of 10 onwards. The mean dmft for 6-year-olds was 1.04.

The percentage of caries experience due to decay (d/dmft) showed an age-associated decline, almost halving from 85.1% among those aged less than 5 years old to 46.4% among 10-year-olds. By comparison, the percentage of caries-free children (% dmft = 0) in this age range showed considerably less variation, ranging from 69.8% among 5-year-olds to 61.9% among 8-year-olds. The high percentages of children aged 10 years and over with dmft = 0 is a result of children having increasingly exfoliated all their deciduous teeth at these ages.

## Changes since 1999

There were few changes in caries experience in the deciduous dentition between 1999 and 2000 and these were mostly small in magnitude.

**Table 4: Deciduous dentition – decayed, missing and filled teeth by age**

Age	Children <i>n</i>	Decayed (d)		Missing (m)		Filled (f)		dmft	
		mean	SD	mean	SD	mean	SD	mean	SD
≤4	3,950	0.82	1.78	0.05	0.54	0.15	0.73	1.01	2.07
5	43,126	0.70	1.63	0.04	0.46	0.18	0.77	0.92	1.95
6	16,842	0.66	1.49	0.06	0.47	0.32	1.05	1.04	2.01
7	41,189	0.63	1.34	0.06	0.44	0.43	1.16	1.12	1.95
8	16,711	0.57	1.24	0.06	0.39	0.49	1.22	1.12	1.89
9	37,806	0.45	1.03	0.05	0.34	0.48	1.15	0.98	1.69
10	15,345	0.32	0.87	0.03	0.29	0.40	1.03	0.76	1.46
11	32,794	0.15	0.55	0.01	0.15	0.20	0.68	0.35	0.96
12	12,464	0.08	0.38	0.01	0.11	0.10	0.48	0.18	0.67

**Table 5: Deciduous teeth – d/dmft and dmft = 0 by age**

Age	d/dmft		dmft = 0	
	<i>n</i>	%	<i>n</i>	%
≤4	1,248	85.1	3,950	68.4
5	3,014	80.2	43,126	69.8
6	5,604	69.4	16,842	66.7
7	15,214	61.8	41,189	63.1
8	6,365	56.4	16,711	61.9
9	13,835	50.3	37,806	63.4
10	4,664	46.4	15,345	69.6
11	5,634	43.0	32,794	82.8
12	1,234	44.6	12,464	90.1

## Permanent teeth

Detectable decay in the permanent dentition increased fairly consistently across the age range of 5–14 years, from 0.00 to 0.38 teeth. The mean number of filled teeth, which increased at each successive age group to 0.39 at age 14, showed a similar pattern. The mean DMFT also increased quite consistently across age groups, from 0.01 for 5-year-olds to 0.82 for children aged 14 years old. The age-related increase in D, F and DMFT scores reflects the increase in permanent teeth that occurs with age as well as the progressive nature of disease accumulation measured by these indices. The mean DMFT for 12-year-olds was 0.55.

**Table 6: Permanent dentition – decayed, missing and filled teeth by age**

Age	Children <i>n</i>	Decayed (D)		Missing (M)		Filled (F)		DMFT	
		mean	SD	mean	SD	mean	SD	mean	SD
5	43,126	0.00	0.09	0.00	0.03*	0.00	0.02*	0.01	0.10
6	16,842	0.03	0.25	0.00	0.04*	0.01	0.11	0.04	0.28
7	41,189	0.12	0.47	0.00	0.04	0.03	0.25	0.15	0.54
8	16,711	0.14	0.51	0.00	0.06	0.06	0.36	0.20	0.64
9	37,806	0.16	0.53	0.01	0.12	0.10	0.46	0.26	0.73
10	15,345	0.17	0.60	0.01	0.11	0.13	0.54	0.31	0.83
11	32,794	0.22	0.65	0.01	0.16	0.21	0.66	0.43	0.98
12	12,464	0.27	0.80	0.02	0.19	0.27	0.80	0.55	1.21
13	22,491	0.31	0.87	0.02	0.24	0.32	0.91	0.65	1.37
14	5,978	0.38	1.07	0.04	0.32	0.39	1.07	0.82	1.69
15	248	1.13	1.92	0.12	0.52	0.89	1.92	2.14	2.82

\* relative standard error ≥ 40%

The percentage of DMFT due to decay (D/DMFT) declined across age groups, ranging from 92.7% for 5-year-olds to 49.4% for 14-year-olds (see Table 7). The percentage of caries-free children (DMFT = 0) also decreased with age, from 99.6% for 5-year-olds to 68.9% for children aged 14.

### Changes since 1999

Other than differences for 15-year-olds that stem from the small number of children sampled in this age group, the only changes in the permanent dentition between 1999 and 2000 were small increases in DMFT scores for 7- and 8-year-olds and a small decrease in D/DMFT for 8-year-olds.

**Table 7: Permanent dentition – D/DMFT and DMFT = 0 by age**

Age	D/DMFT		DMFT = 0	
	<i>n</i>	%	<i>n</i>	%
5	155	92.7	43,126	99.6
6	427	87.6	16,842	97.5
7	3,725	82.2	41,189	91.0
8	1,953	72.5	16,711	88.3
9	5,737	63.2	37,806	84.8
10	2,601	56.9	15,345	83.0
11	7,435	52.7	32,794	77.3
12	3,165	49.8	12,464	74.6
13	6,291	50.1	22,491	72.0
14	1,858	49.4	5,978	68.9
15	139	56.0	248	44.0

### All teeth

Untreated detectable decay in the combined deciduous and permanent dentitions ( $d+D \geq 1$ ) existed for between 17.8% and 31.8% of children aged up to 14 (see Table 8). The greatest likelihood of detectable untreated decay existed for 7-year-olds. However, the most extensive levels of untreated decay occurred in the younger age groups with the percentage  $d+D = 4+$  generally declining with increasing age.

More than 96% of children in each age group had no deciduous or permanent teeth missing due to caries. However, smaller percentages of children avoided fillings, with between 13.0% and 24.5% of 6- to 14-year-olds having at least one filling present. The percentage of children without fillings declined to ages 9 and 10 before increasing slightly for older age groups. There was a similar pattern in the percentage of children with no caries experience in either their deciduous or permanent dentition (dmft+DMFT = 0), decreasing to 57.1% at age 9 before increasing to the high 60% mark among 12- to 14-year-olds.

### Changes since 1999

Changes in combined-dentition caries experience were minimal between 1999 and 2000.

**Table 8: All teeth – age-specific caries experience**

Age	Children <i>n</i>	d+D =						m+M = 0	f+F = 0	dmft+ DMFT = 0
		0	1	2	3	4	5+			
		%	%	%	%	%	%	%	%	
≤4	3,950	71.3	10.2	6.8	3.8	2.9	5.1	98.5	94.1	68.4
5	43,126	73.6	10.0	6.6	3.2	2.5	4.0	98.4	92.5	69.7
6	16,842	72.2	11.2	7.0	3.6	2.2	3.7	97.5	87.0	65.8
7	41,189	68.2	13.5	8.2	4.1	2.4	3.6	96.8	81.8	59.3
8	16,711	68.8	13.9	7.9	3.9	2.3	3.2	96.4	78.4	57.6
9	37,806	70.8	13.8	7.6	3.6	2.1	2.2	97.1	75.5	57.1
10	15,345	75.8	11.9	6.5	2.9	1.3	1.6	97.8	76.7	61.2
11	32,794	79.9	11.3	4.9	2.0	1.0	0.8	98.7	80.1	66.4
12	12,464	81.5	10.0	4.5	2.1	1.0	0.8	98.6	81.7	68.8
13	22,491	82.2	9.9	4.3	1.8	1.0	0.8	98.6	83.2	70.6
14	5,978	80.5	10.1	4.6	2.3	1.1	1.4	98.0	81.3	67.9
15	248	58.1	17.3	6.5	6.0	5.2	6.9	92.7	67.3	43.5

### Fissure sealants

The mean number of fissure sealants generally increased with increasing age, although children aged 11 had the highest mean number of sealants (see Table 9). There is consistent evidence of preferential use of fissure sealants among children with some caries experience (DMFT ≥ 1) in comparison to those with no caries experience (DMFT = 0). Among 12 year-olds, for example, 31.7% of those children with DMFT ≥ 1 had at least one fissure sealant compared to 16.3% of children with DMFT = 0, an increase of 94.5%.

## Changes since 1999

There were increases in the mean number of sealants reported for children aged 11, 14 and 15 between 1999 and 2000 while decreases were recorded for children aged 9 and 10. However, very little change was evident in the percentages of children with at least one fissure sealant, irrespective of caries experience.

**Table 9: Fissure sealants – age-specific experience**

Age	Children <i>n</i>	Sealants		Students with sealants			
				DMFT = 0		DMFT ≥ 1	
		mean	SD	<i>n</i>	%	<i>n</i>	%
6	16,842	0.03	0.34	16,415	1.1	427	5.4
7	41,189	0.16	0.73	37,464	4.9	3,725	9.9
8	16,711	0.33	1.02	14,758	9.6	1,953	17.4
9	37,806	0.53	1.25	32,069	15.3	5,737	26.4
10	15,345	0.59	1.32	12,744	17.2	2,601	28.9
11	32,794	0.65	1.38	25,359	18.0	7,435	32.3
12	12,464	0.62	1.40	9,299	16.3	3,165	31.7
13	22,491	0.58	1.49	16,200	12.4	6,291	31.3
14	5,978	0.63	1.62	4,120	12.7	1,858	31.2
15	248	0.47	1.59	109	10.1	139	15.1

## Immediate treatment needs

Immediate treatment needs were indicated when children were judged to be requiring immediate care (within a 24–48 hour period) due to the existence of pain, a dental condition likely to cause pain within the foreseeable future, the presence of a carious lesion or lesions in the permanent anterior teeth, or oral infection. Between 3.7% and 5.9% of children up to the age of 14 were deemed to be requiring immediate care (see Table 10). These children had greater caries experience than the overall sample (see Tables 4 and 6). In particular, a high percentage of these children had  $d+D \geq 4$ . Immediate treatment needs appear to be predominantly driven by deciduous caries experience in children aged up to 10 and by caries experience in the permanent dentition in older age groups.

## Changes since 1999

The percentage of children with immediate treatment needs was relatively unchanged between 2000 and 1999, and remained low in terms of overall percentage. Of those children with immediate treatment needs, decreases were evident in mean dmft for a number of age groups up to 10 and in mean DMFT for children aged 11 and between 13 and 15. There were also some decreases in the percentage of children needing immediate care and with  $d+D \geq 4$ .

**Table 10: Immediate treatment needs: age-specific distribution**

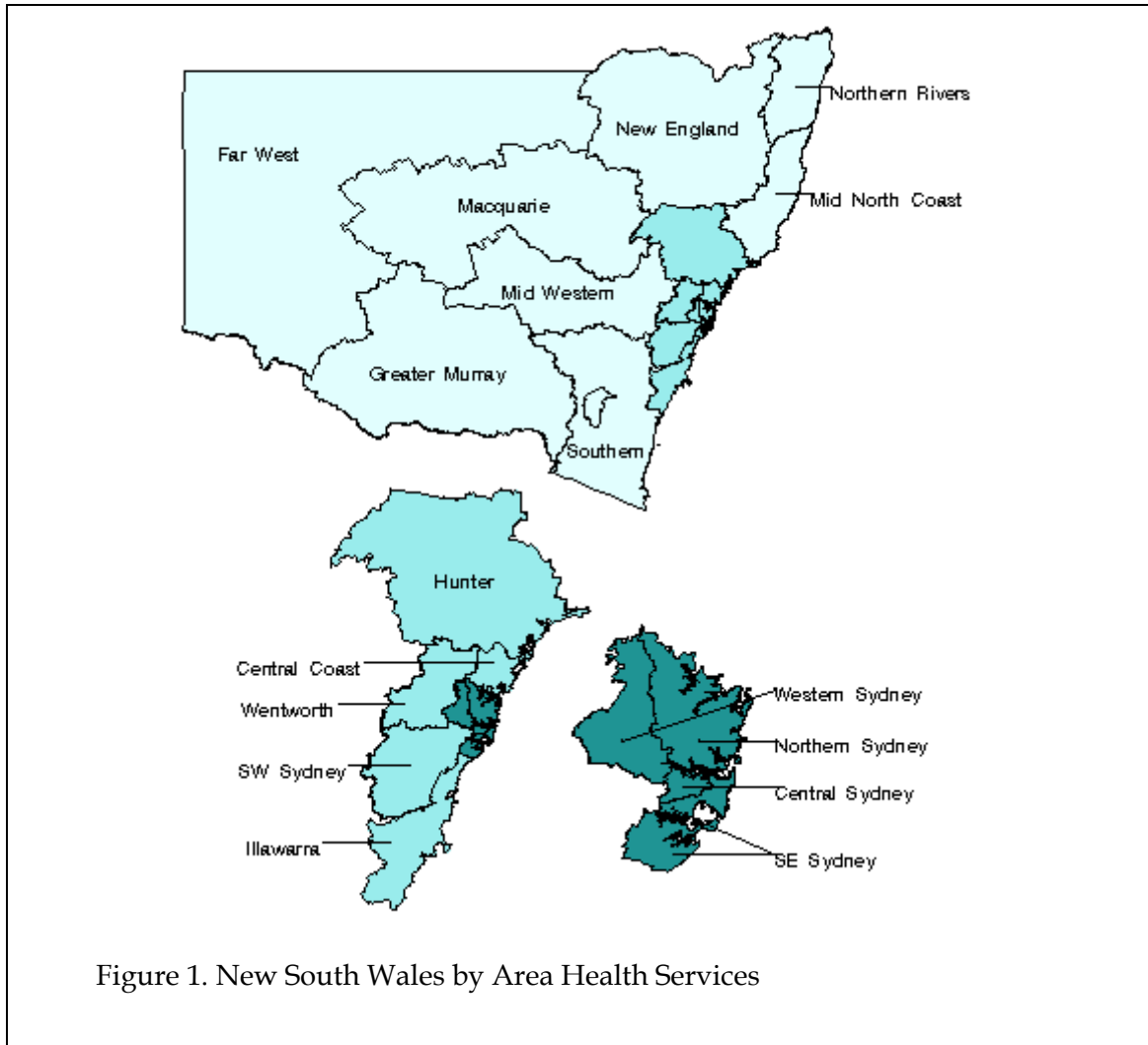
Age	Children		dmft		DMFT		d+D =				
							0	1	2	3	4+
	<i>n</i>	%	mean	SD	mean	SD	%	%	%	%	%
≤4	205	5.2	5.11	3.21	0.01*	0.16*	4.4	11.2	13.7	13.7	59.0
5	2,016	4.7	4.81	3.27	0.04	0.29	3.0	12.5	12.2	12.2	55.8
6	752	4.5	4.62	3.14	0.27	0.72	3.2	14.6	14.2	14.2	51.5
7	2,445	5.9	3.66	2.74	0.75	1.11	3.6	19.1	15.9	15.9	42.6
8	894	5.3	3.47	2.64	0.94	1.27	5.6	19.2	14.7	14.7	41.5
9	1,727	4.6	2.90	2.29	1.02	1.27	5.0	24.9	16.2	16.2	32.0
10	624	4.1	2.26	2.20	1.42	1.74	7.5	26.3	14.9	14.9	27.9
11	1,208	3.7	1.15	1.60	1.87	1.78	8.4	30.8	13.4	13.4	22.3
12	496	4.0	0.48	1.02	2.71	2.33	9.5	29.0	16.9	16.9	21.2
13	875	3.9	0.16	0.60	2.96	2.42	10.9	23.6	12.8	12.8	21.7
14	253	4.2	0.08	0.38	3.95	3.31	7.5	30.0	11.1	11.1	27.3
15	41	16.5	0.05*	0.31*	5.27	2.65	2.4*	12.2*	17.1	17.1	56.1

\* relative standard error ≥ 40%

## Deciduous caries experience by geographical region

New South Wales is serviced by a number of Area Health Services (AHSs), shown in Figure 1. Analyses of geographical differences in children's caries experience make use of these regional divisions.

Table 11 presents deciduous caries experience data for each of the AHS regions used in this report. Considerable variation can be seen in caries experience for the selected 5–6-year-old age group across geographical areas. Among these children, mean decay scores in the deciduous dentition ranged from 0.41 in Northern Sydney to 1.09 in the Mid North Coast region. The mean number of teeth missing due to caries was highest in the Northern Rivers region, although means were generally low for all regions. The mean number of filled teeth was highest in the New England (mean = 0.46) and Northern Rivers (mean = 0.38) regions and lowest in the Illawarra (mean = 0.12) and South Western Sydney (mean = 0.14) regions. Mean dmft scores were highest in the Northern Rivers region (mean = 1.53) and lowest in Northern Sydney, Illawarra and South Eastern Sydney (means = 0.63, 0.71 and 0.71 respectively). Consistent with these findings, the highest percentage of 6-year-olds with no recorded caries experience was in Northern Sydney (76.8%) while the lowest was in the Northern Rivers (59.6%) and Mid North Coast (59.8%) regions.



### Changes since 1999

There were increases in mean decay for 14 of the 17 Area Health Service regions between 1999 and 2000, with the largest increase being for Wentworth (showing an increase of 67.2%). Eight of the Area Health Services experienced decreases in mean detectable decay, with the largest being the Southern and Central Sydney regions (with decreases of 16.9% and 14.8% respectively). Similarly, both mean filled and mean dmft indices showed increases for some regions and decreases for other regions. There were increases in mean dmft for Mid West, New England, Northern Rivers, South Eastern Sydney and Wentworth regions, while decreases occurred for the Greater Murray, Mid North Coast, Southern, Central Sydney, Hunter, Illawarra and South Western Sydney regions.



**Table 11: Deciduous caries experience for 5–6-year-old children by region**

	Children	Decayed (d)		Missing (m)		Filled (f)		dmft		dmft=0
	<i>n</i>	mean	SD	mean	SD	mean	SD	mean	SD	%
Far West	1	0.00	–	0.00	–	0.00	–	0.00	–	100.0
Greater Murray	3,293	0.84	1.74	0.06	0.51	0.30	0.99	1.20	2.20	62.6
Macquarie	412	0.85	1.82	0.05	0.41	0.29	1.03	1.18	2.25	67.5
Mid North Coast	1,186	1.09	2.04	0.08	0.57	0.24	0.83	1.41	2.41	59.8
Mid West	1,609	0.78	1.70	0.08	0.65	0.28	0.93	1.14	2.11	64.1
New England	2,968	0.66	1.47	0.10	0.65	0.46	1.25	1.22	2.17	63.4
Northern Rivers	3,124	1.04	2.02	0.12	0.77	0.38	1.17	1.53	2.63	59.6
Southern	1,808	0.59	1.39	0.07	0.56	0.31	0.96	0.97	1.85	67.5
Central Coast	3,876	0.72	1.62	0.03	0.40	0.19	0.74	0.94	1.92	69.0
Central Sydney	3,922	0.69	1.58	0.04	0.41	0.25	1.01	0.98	2.03	70.0
Hunter	5,636	0.55	1.30	0.04	0.48	0.19	0.80	0.79	1.69	70.8
Illawarra	2,412	0.54	1.33	0.04	0.46	0.12	0.58	0.71	1.60	73.5
Northern Sydney	6,133	0.41	1.18	0.02	0.29	0.20	0.88	0.63	1.56	76.8
S. Eastern Sydney	6,163	0.52	1.37	0.02	0.22	0.18	0.78	0.71	1.65	74.8
S. Western Sydney	8,234	0.73	1.63	0.04	0.43	0.14	0.67	0.92	1.88	69.4
Wentworth	706	0.92	1.70	0.02	0.27	0.18	0.66	1.13	1.93	61.3
Western Sydney	8,485	0.84	1.85	0.05	0.45	0.17	0.74	1.05	2.12	66.6

## Permanent caries experience by geographical region

The mean number of clinically detectable decayed permanent teeth in 11–12-year-olds (see Table 12) was highest in the Far West (mean = 0.73) and Northern Rivers (mean = 0.31) regions. However, contrary to trends in the deciduous dentition, mean scores were lowest in the New England, Mid West and Northern Sydney regions (means = 0.13, 0.15 and 0.15 respectively). The mean number of filled teeth was highest in Northern Rivers (mean = 0.29) and lowest in the Far West region (mean = 0.04). Mean DMFT scores were highest in the Far West (mean = 0.81) and Northern Rivers (mean = 0.62) regions and again lowest in the New England (mean = 0.36) region. Approximately 88% of 12-year-olds in the Mid West region had no history of caries experience in their permanent dentition, while only 65.3% of 12-year-old children in the Wentworth region had a DMFT score of zero.

### Changes since 1999

Across all regions, increases in mean decay occurred less frequently than decreases. The biggest changes were increases for the Far West and Wentworth regions and a decrease for the Mid North Coast region. In contrast to decay in the permanent dentition variations in filled teeth by region were generally smaller. Changes in mean DMFT of greater than or equal to 0.03 occurred for 12 of the 17 regions, being largest for the Far West and Wentworth regions (mean increases = 0.27 and 0.26 respectively) and for the Mid North Coast region (mean decrease = 0.20). Six regions experienced increases while 6 regions experienced decreases.

**Table 12: Permanent caries experience for 11–12-year-old children by region**

	Children	Decayed (D)		Missing (M)		Filled (F)		DMFT		DMFT=0
	<i>n</i>	mean	SD	mean	SD	mean	SD	mean	SD	%
Far West	26	0.73	1.66	0.04	0.20	0.04	0.20	0.81	1.65	69.2
Greater Murray	2,709	0.17	0.59	0.01	0.17	0.21	0.68	0.39	0.95	79.7
Macquarie	345	0.18	0.62	0.04	0.30	0.23	0.63	0.45	0.97	75.4
Mid North Coast	1,075	0.20	0.67	0.03	0.22	0.21	0.66	0.44	1.01	78.3
Mid West	1,463	0.15	0.59	0.01	0.14	0.23	0.68	0.39	0.94	87.6
New England	2,000	0.13	0.50	0.01	0.18	0.22	0.67	0.36	0.90	81.4
Northern Rivers	2,475	0.31	0.88	0.02	0.19	0.29	0.79	0.62	1.26	72.6
Southern	1,320	0.16	0.54	0.02	0.16	0.19	0.66	0.36	0.91	81.1
Central Coast	2,879	0.27	0.76	0.01	0.16	0.25	0.75	0.54	1.13	74.3
Central Sydney	2,672	0.26	0.76	0.01	0.15	0.21	0.69	0.48	1.07	76.7
Hunter	4,562	0.22	0.60	0.01	0.09	0.21	0.65	0.44	0.93	74.8
Illawarra	1,856	0.24	0.65	0.02	0.20	0.24	0.70	0.50	1.01	74.1
Northern Sydney	3,801	0.15	0.60	0.01	0.13	0.23	0.76	0.39	1.04	80.7
S. Eastern Sydney	4,772	0.25	0.72	0.01	0.11	0.22	0.71	0.47	1.07	77.2
S. Western Sydney	6,167	0.25	0.71	0.01	0.16	0.21	0.69	0.47	1.04	75.9
Wentworth	562	0.44	0.95	0.01	0.11	0.25	0.69	0.71	1.24	65.3
Western Sydney	6,574	0.25	0.75	0.02	0.23	0.21	0.70	0.48	1.11	75.4

## Caries experience by demographic and socio-demographic variables

Caries experience for 5- and 6-year-old children and 11- and 12-year-old children is presented by sex of the child, Indigenous status and the child's country of birth in Table 13. In the deciduous dentition, males had a dmft score 14.4% higher than females, while the opposite trend occurred in the permanent dentition with females having slightly higher caries experience (14.0% higher DMFT) than males in the corresponding age range of 11–12 years.

Indigenous children had higher caries experience in both the deciduous and permanent dentitions. For 5- and 6-year-old children, Indigenous children had a mean dmft score almost 2.4 times higher than non-Indigenous children in the corresponding age group. This difference was not as pronounced in the permanent dentition, where Indigenous 11–12-year-old children had a mean DMFT score 1.5 times higher than non-Indigenous children in this age group.

Considerable differences are evident in the caries experience of children born in different regions of the world. For both 5–6-year-olds and 11–12-year-olds caries experience was lowest for children from North-West Europe and Northern America, with children born in Australia having the third lowest caries experience. The highest dmft and DMFT scores occurred for children born in New Zealand and Other Oceania, Southern and Eastern Europe, North Africa and Middle East, South-East Asia and North-East Asia. In the deciduous dentition, mean dmft of those children born in South-East Asia (mean = 2.52) was approximately 2.7 times higher than that of

children born in Australia (mean = 0.92). Among 11–12-year-olds the mean DMFT score of children born in Southern and Eastern Europe (mean = 1.42) was approximately 3.2 times higher than the caries experience of children born in Australia (mean = 0.44).

**Table 13: 5–6-year-old dmft and 11–12-year-old DMFT by sex, Indigenous status and country of birth**

Age	5-6-year-old dmft			11-12-year-old DMFT		
	<i>n</i>	mean	SD	<i>n</i>	mean	SD
Sex						
Male	26,548	1.03	2.06	20,672	0.43	1.00
Female	33,400	0.90	1.88	24,578	0.49	1.08
Indigenous Status						
Non-Indigenous	59,011	0.93	1.93	44,427	0.46	1.04
Indigenous	957	2.21	3.13	931	0.69	1.33
Country of Birth						
Australia	27,565	0.92	1.92	41,676	0.44	0.99
New Zealand and Other Oceania	525	1.94	2.63	487	0.73	1.44
North-West Europe	332	0.58	1.48	252	0.40	1.05
Southern and Eastern Europe	171	1.84	2.72	282	1.42	1.94
North Africa and Middle East	177	2.21	2.79	323	0.97	1.58
South-East Asia	281	2.52	3.67	557	0.96	1.84
North-East Asia	359	2.10	3.05	939	0.79	1.50
Southern and Central Asia	257	1.62	2.71	404	0.49	1.02
Northern America	123	0.73	1.58	93	0.29	0.82
Other Americas	40	0.93	1.29	87	0.61	1.14
Sub-Saharan Africa	136	1.51	2.58	147	0.46	0.87
Not Known	1	3.00	–	9	0.33	1.00

## Appendix A

The following tables present results with adjustments for the estimated under-reporting of decay in New South Wales (see pp 1–2). For calculations of deciduous decay, a weight of 1.56 was applied while for calculations of permanent decay a weight of 1.68 was applied.

**Table A1: Deciduous dentition adjusted caries experience**

Age (years)	Children <i>n</i>	Decayed (d)		dmft		d/dmft
		mean	SD	mean	SD	%
≤4	3,950	1.28	2.78	1.47	2.99	86.2
5	43,126	1.09	2.54	1.32	2.77	81.4
6	16,842	1.03	2.33	1.41	2.72	71.4
7	41,189	0.98	2.09	1.47	2.56	64.2
8	16,711	0.89	1.93	1.44	2.44	58.9
9	37,806	0.71	1.61	1.24	2.13	52.8
10	15,345	0.51	1.36	0.94	1.82	48.5
11	32,794	0.23	0.86	0.44	1.19	44.7
12	12,464	0.12	0.60	0.23	0.83	46.0

**Table A2: Permanent dentition adjusted caries experience**

Age (years)	Children <i>n</i>	Decayed (D)		DMFT		D/DMFT
		mean	SD	mean	SD	%
5	43,126	0.01	0.16	0.01	0.16	92.9
6	16,842	0.06	0.42	0.06	0.44	87.9
7	41,189	0.20	0.78	0.23	0.83	82.8
8	16,711	0.23	0.86	0.29	0.94	73.3
9	37,806	0.26	0.89	0.37	1.03	64.2
10	15,345	0.28	1.00	0.42	1.16	58.0
11	32,794	0.36	1.10	0.58	1.33	54.2
12	12,464	0.45	1.34	0.73	1.65	51.6
13	22,491	0.52	1.47	0.86	1.85	52.3
14	5,978	0.65	1.79	1.08	2.27	51.7
15+	248	1.90	3.22	2.91	3.84	59.9