





# The Child Dental Health Survey, Victoria 2002

**AIHW Catalogue No. DEN 158** 

J. Armfield G. Slade

AUSTRALIAN RESEARCH CENTRE FOR POPULATION ORAL HEALTH

The Australian Institute of Health and Welfare (AIHW) is Australia's national health and welfare statistics and information agency. The Institute's mission is to improve the health and well-being of Australians by informing community discussion and decision making through national leadership in developing and providing health and welfare statistics and information.

The AIHW Dental Statistics and Research Unit (DSRU) is a collaborating unit of the AIHW established in 1988 at The University of Adelaide. The DSRU aims to improve the oral health of Australians through the collection, analysis and reporting of information on oral health and access to dental care, the practice of dentistry and the dental labour force in Australia.

#### Suggested citation

Armfield JM, Slade GD. (2006). *Child Dental Health Survey, Victoria* 2002. AIHW cat. no. DEN 158. Adelaide: The University of Adelaide.

#### Acknowledgments

The data used for this report were collected by Dental Health Services Victoria. The support of the service and their staff was crucial to the successful reporting of results for this survey.

Any comments or information relevant to the subject matter of this report would be welcome. Correspondence should be directed to:

The Director AIHW Dental Statistics and Research Unit The University of Adelaide SOUTH AUSTRALIA 5005

Tel: (08) 8303 4051 Fax: (08) 8303 4858

E-mail: aihw.dsru@adelaide.edu.au

Website: http://www.adelaide.edu.au/socprev-dent/dsru

http://www.arcpoh.adelaide.edu.au

**Board Chairperson** 

The Hon. Peter Collins AM, QC

Director

Penny Allbon

# **Contents**

Purpose of this report	1
Source of subjects and sampling	1
Data analysis	1
Demographic composition of the sample	4
Deciduous teeth	5
Permanent teeth	6
All teeth	7
Fissure sealants	8
School Dental Service examinations	8
Caries experience by region	9
Caries experience by sex, card-holder status, water fluoridation status and country of birth	10
Selected trends, 1998-2002	12
Tables	
Table 1: Sample size and assigned weight by region	3
Table 2: Demographic composition of the sample	4
Table 3: Deciduous dentition - decayed, missing and filled teeth by age	5
Table 4: Deciduous dentition - caries experience indices by age	5
Table 5: Permanent dentition - decayed, missing and filled teeth by age	6
Table 6: Permanent dentition – caries experience indices by age	6
Table 7: All teeth – age-specific caries experience	7
Table 8: Fissure sealants – age-specific experience	8
Table 9: School Dental Service examinations – time since last visit	9
Table 10: Five-six-year-old deciduous caries experience by region	9
Table 11: Eleven-twelve-year-old permanent caries experience by region	10

Table 12:	5–6-year-old dmft and 11–12-year-old DMFT by sex, card-holder status water fluoridation status and country of birth
Table 13:	Sample size and percentage of total sample by region
Figur	es
Figure 1:	Regional and metropolitan Victoria by Department of Human Services health regions
Figure 2:	Percentage of children by region for sample and Victorian population (aged 5–14)
Figure 3:	Mean decayed deciduous teeth for 5–10-year-old children in Victoria from 1998 to 2002
Figure 4:	Mean missing deciduous teeth for 5–10-year-old children in Victoria from 1998 to 2002
Figure 5:	Mean filled deciduous teeth for 5–10-year-old children in Victoria from 1998 to 2002
Figure 6:	Mean decayed, missing and filled deciduous teeth for 5–10-year-old children in Victoria from 1998 to 2002
Figure 7:	Percentage dmft = 0 for 5–10-year-old children in Victoria from 1998 to 2002
Figure 8:	Mean decayed permanent teeth for 7–13-year-old children in Victoria from 1998 to 2002
Figure 9:	Mean filled permanent teeth for 7–13-year-old children in Victoria from 1998 to 2002
Figure 10	: Mean decayed, missing and filled permanent teeth for 7–13-year-old children in Victoria from 1998 to 2002
Figure 11	: Percentage permanent DMFT = 0 for 7–13-year-old children in Victoria from 1998 to 2002
Figure 12	: Percentage d+D = 0 for 5–13-year-old children in Victoria from 1998 to 2002
Figure 13	: Percentage d+D >= 4 for 5–13-year-old children in Victoria from 1998 to 2002
Figure 14	: Percentage f+F = 0 for 5–13-year-old children in Victoria from 1998 to 2002

0	Percentage dmft+DMFT = 0 for 5–13-year-old children in Victoria from 1998 to 2002	19
0	Mean fissure sealed teeth for 7–13-year-old children in Victoria from 1998 to 2002	20
0	Mean time since last visit for 6–13-year-old children in Victoria from 1998 to 2002	20

# **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

SD standard deviation

#### Purpose of this report

This report continues the series of annual reports providing descriptive statistics concerning child dental health in Victoria and follows the 2001 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, history of school dental service examinations and caries experience by geographical region, sex, card-holder status and country of birth.

The report also provides selected trends, highlighting differences between the years 1998 and 2002. However, no formal hypothesis tests have been undertaken and descriptions of differences between years are intended as a guide to the reader rather than as a formal statistical evaluation.

### Sources of subjects and sampling

Data were collected during the 2002 calendar year on Victorian School Dental Service patients by dental therapists and dentists. Children were sampled on the last day of each month during 2002 and were included if their birth dates fell between the 1st and the 12th day of the first four months of the year. A small percentage of sampled children had birth dates falling outside of this range and these children were left in the data set.

Data were weighted for all analyses to more accurately reflect the distribution of child population in Victoria. A map showing the geographical regions of Victoria is presented in Figure 1. The regions included five from rural areas (Barwon South Western, Grampions, Lodden Mallee, Hume and Gippsland) and four from metropolitan Melbourne and surrounds (Western Metropolitan, Northern Metropolitan, Eastern Metropolitan and Southern Metropolitan).

Children from the Barwon South Western, Gippsland, Grampions, Eastern Metropolitan and Southern Metropolitan regions were initially under-represented in the sampling relative to the population distribution and were weighted up in the analysis whereas children from the Loddon Mallee, Hume, Western Metropolitan and Northern Metropolitan regions were over-represented relative to actual population distribution and were weighted down in the analyses (Table 1).

Weighting was carried out so that the regional contributions for the study equaled the distribution of children aged 5–14 years in Victoria as provided by the Australian Bureau of Statistics as at 30 June 2002. A comparison of the percentage of children across regions for both the current sample and for the Victorian population is given in Figure 2.

## **Data analysis**

The data were cleaned prior to analysis to correct data entry errors and to eliminate any duplicate cases. Age-specific indices denoted with an asterisk (\*) are those in which the relative standard error exceeds 40% and population estimates of these indices are considered to be statistically unreliable and should be interpreted with due care.

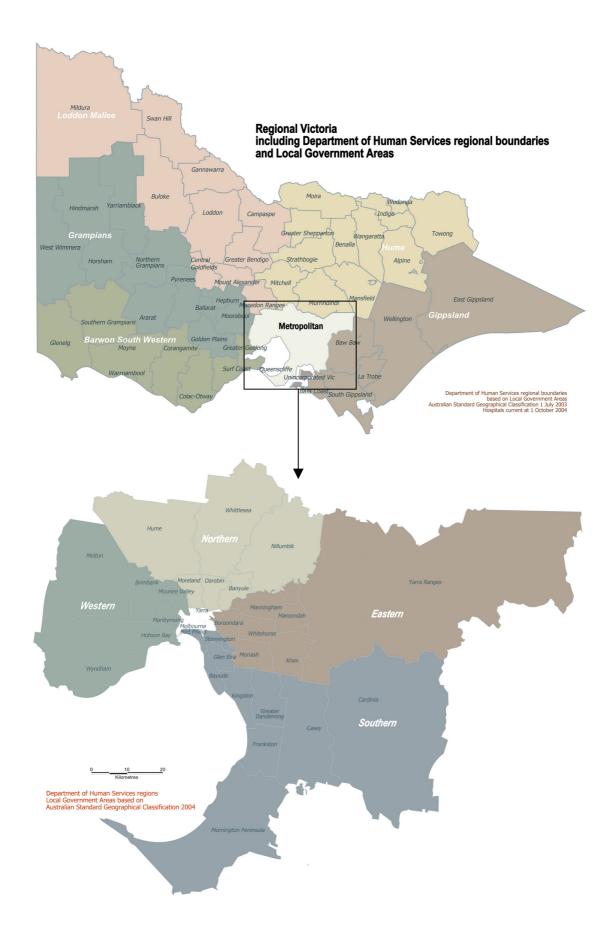


Figure 1: Regional and metropolitan Victoria by Department of Human Services health regions

Table 1: Sample size and assigned weight by region

Region	Number Sampled	Weight
Barwon South Western	626	1.10
Grampions	375	1.17
Loddon Mallee	851	0.74
Hume	689	0.79
Gippsland	470	1.08
Western Metropolitan	1,204	0.93
Northern Metropolitan	1,605	0.83
Eastern Metropolitan	1,650	1.06
Southern Metropolitan	1,702	1.27

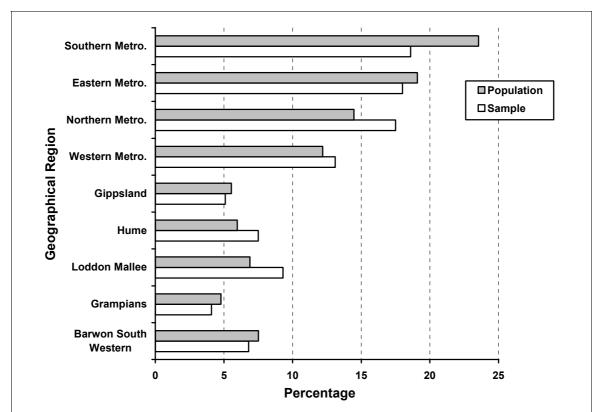


Figure 2: Percentage of children by region for sample and Victorian population (aged 5–14)

## Demographic composition of the sample

A total of 9,172 children aged 4 to 17 years were sampled in 2002 (see Table 2). The frequency distribution of children's ages peaked for children aged 6 years, and few children aged less than 5, or more than 13 years, were sampled. Accordingly, it is important to note that the sample was greatest for primary school aged children and that caution should be used when considering the representativeness of the sample for older children.

Due to the very small number of children aged 16 and older (n = 18) and those aged 4 years (n = 30) results for these age groups have been suppressed in the results to follow.

Table 2: Demographic composition of the sample

		Children	in sample		Children in sample (weighted)				
Age (years)	Males	Females	Unknown	Persons	Males	Females	Unknown	Persons	
	n	n	n	n	n	n	n	n	
4	15	15	0	30	15	16	0	30	
5	180	201	0	381	177	203	0	380	
6	712	675	0	1,387	713	681	0	1,393	
7	681	629	0	1,310	689	628	0	1,316	
8	637	613	3	1,253	639	621	0	1,263	
9	619	560	5	1,184	619	560	0	1,183	
10	660	602	6	1,268	654	608	0	1,269	
11	554	524	15	1,093	546	520	0	1,080	
12	415	391	8	814	413	397	0	818	
13	138	111	0	249	137	108	0	245	
14	79	63	5	147	77	57	0	138	
15	19	18	3	40	18	17	0	38	
16	6	3	0	9	7	3	0	10	
17	1	5	1	7	1	5	0	8	
Total	4716	4410	46	9172	4703	4424	0	9172	

#### **Deciduous teeth**

The mean number of clinically detectable decayed teeth was highest for 6-year-olds and declined steadily to 0.28 for children aged 12 years (Table 3). In contrast, the mean number of filled deciduous teeth increased to 0.98 for 9-year-old children before declining, again as a result of the exfoliation of deciduous teeth. The variation in mean dmft across the age range showed a similar pattern to that of the filled component, increasing from 1.76 for 5-year-olds to 2.17 for 8-year-old children before declining to 0.64 for 12-year-olds.

The percentage of caries experience accounted for by clinically detectable decay (d/dmft) showed an age-associated decline, almost halving from 78.9% among 5-year-olds to 43.5% for children aged 11 (see Table 4). The percentage of children with no recorded caries experience in the deciduous dentition (% dmft = 0) reduced from 59.5% among 5-year-olds to a low of 42.9% among 9-year-olds before rising again due to the exfoliation of deciduous teeth.

Table 3: Deciduous dentition - decayed, missing and filled teeth by age

Age Children	Children Decayed (d)		Missi	Missing (m)		Filled (f)		dmft	
	n	mean	SD	mean	SD	mean	SD	mean	SD
5	380	1.31	2.42	0.06	0.46	0.39	1.34	1.76	3.04
6	1,393	1.36	2.35	0.13	0.70	0.41	1.19	1.90	3.01
7	1,316	1.21	2.04	0.19	0.91	0.69	1.58	2.08	3.02
8	1,263	1.11	1.85	0.17	0.64	0.89	1.60	2.17	2.84
9	1,183	0.93	1.49	0.17	0.71	0.98	1.60	2.08	2.55
10	1,269	0.74	1.33	0.13	0.59	0.89	1.55	1.75	2.34
11	1,080	0.48	1.11	0.09	0.51	0.57	1.19	1.13	2.06
12	818	0.28	0.75	0.06	0.40	0.30	0.83	0.64	1.43

<sup>\*</sup> relative standard error ≥ 40%

Table 4: Deciduous dentition - caries experience indices by age

Age	d/d	lmft	dmft = 0		
	n	%	n	%	
5	156	78.9	380	59.5	
6	639	75.1	1,393	54.6	
7	661	65.3	1,316	50.1	
8	683	54.0	1,263	45.6	
9	679	48.4	1,183	42.9	
10	658	46.0	1,269	48.4	
11	419	43.5	1,080	62.1	
12	211	47.7	818	74.2	

#### Permanent teeth

The mean number of clinically decayed permanent teeth generally increased across the age groups (see Table 5). A similar pattern is apparent for filled teeth although at every age, except for 15-year-olds, children presented with more clinically decayed teeth than filled teeth. The mean DMFT also increased quite consistently across age groups, increasing from 0.03 for 5-year-olds to 2.21 for 15-year-olds. The DMFT for 12-year-old children in 2002 was 0.98.

The percentage of DMFT due to decay (D/DMFT) and the percentage caries free (DMFT = 0) declined steadily across age groups (see Table 6). At age 12, 59.0% of children had no clinically detectable indication of decay in their permanent dentition.

Table 5: Permanent dentition - decayed, missing and filled teeth by age

Age	Children	Decay	ed (D)	Missi	ng (M)	Fille	d (F)	DN	<b>NFT</b>
	n	mean	SD	mean	SD	mean	SD	mean	SD
5	380	0.03*	0.25*	0.00	0.00	0.01*	0.12*	0.03*	0.33*
6	1,393	0.05	0.29	0.00	0.05*	0.01*	0.17*	0.06	0.34
7	1,316	0.20	0.66	0.00	0.09*	0.05	0.33	0.25	0.80
8	1,263	0.30	0.73	0.00	0.08*	0.10	0.46	0.41	0.90
9	1,183	0.41	0.90	0.01*	0.14*	0.17	0.61	0.59	1.13
10	1,269	0.36	0.87	0.01	0.13	0.24	0.64	0.61	1.15
11	1,080	0.48	1.12	0.01*	0.14*	0.28	0.71	0.77	1.45
12	818	0.55	1.14	0.04	0.32	0.39	0.89	0.98	1.61
13	245	0.73	1.36	0.05*	0.34*	0.66	1.20	1.43	2.08
14	138	0.75	1.51	0.07*	0.34*	0.73	1.39	1.54	2.31
15	38	0.91	1.77	0.06*	0.24*	1.24	2.34	2.21	3.15

<sup>\*</sup> relative standard error  $\geq 40\%$ 

Table 6: Permanent dentition - caries experience indices by age

Age	D/D	MFT	DMFT = 0		
	n	%	n	%	
5	6	77.5	380	98.5	
6	53	89.7	1,393	96.2	
7	175	84.3	1,316	86.7	
8	281	78.9	1,263	77.8	
9	353	71.7	1,183	70.2	
10	397	58.0	1,269	68.8	
11	377	61.2	1,080	65.1	
12	335	57.5	818	59.0	
13	127	51.0	245	47.9	
14	72	47.0	138	47.8	
15	20	41.0	38	48.7	

#### All teeth

Untreated caries in the combined deciduous and permanent dentitions (see Table 7) existed for between 28.2% and 52.3% of children in any age group from 5 to 15 years. Within this range, the greatest likelihood of untreated decay occurred for 7-year-olds where only 47.7% of children had d+D=0. More extensive levels of untreated decay (5 or more decayed deciduous or permanent teeth) generally declined across ages, ranging from 15.7% of 6-year-olds to 6.1% of 12- and 13-year-olds. This age trend indicates that the greatest contribution to high levels of clinically detectable caries came from the deciduous dentition.

While 90% or more of children had no deciduous or permanent teeth missing due to caries in any age group, smaller percentages avoided fillings and this was clearly associated with age. Although 87.4% of 5-year-olds had no fillings, this declined to 56.9% for 10-year-olds before increasing again to 67.1% for 12-year-old children. Similarly, the percentage of children with no caries experience (dmft+DMFT = 0) was age associated, reducing to 33.7% for 9-year-old children before increasing to 48.7% of children aged 15 years.

Table 7: All teeth - age-specific caries experience

Age	_			d+			alua <b>f</b> fi i			
	Children	0	1	2	3	4	5+	m+M = 0	f+F = 0	dmft+ DMFT = 0
	n	%	%	%	%	%	%	%	%	%
5	380	62.7	11.0	6.6	5.3	3.5	10.9	97.3	87.4	58.5
6	1,393	59.1	10.9	9.6	4.7	4.8	10.9	94.2	83.9	53.4
7	1,316	55.7	12.3	11.6	5.5	5.3	9.7	91.8	75.5	47.4
8	1,263	50.7	16.5	12.4	6.7	5.1	8.7	90.5	64.2	39.8
9	1,183	47.7	19.1	14.8	6.3	5.3	6.9	90.6	57.2	33.7
10	1,269	55.2	17.7	12.4	5.5	3.7	5.5	92.9	56.9	37.4
11	1,080	58.5	18.1	10.8	5.6	3.5	3.6	95.0	62.0	42.6
12	818	61.5	17.0	9.8	5.5	3.1	3.0	95.4	67.1	45.3
13	245	62.3	16.6	11.2	3.8	2.0*	4.1	95.5	62.4	42.2
14	138	61.2	15.9	11.2	2.1*	2.5*	7.1	94.8	62.1	41.6
15	38	71.8	7.7*	2.9*	5.0*	2.4*	10.2*	94.3	62.2	48.7

<sup>\*</sup> relative standard error ≥ 40%

#### Fissure sealants

The mean number of fissure sealants increased sharply for children across the age range of 6 to 15 (see Table 8), rising from a mean of 0.04 to a mean of 2.17. There was generally a higher prevalence of fissure sealants among children with permanent caries experience (DMFT  $\geq$  1) than among those children with no caries experience (DMFT = 0).

Table 8: Fissure sealants - age-specific experience

					Students w	ith sealants	
Age	Children	Sea	lants	DMF	T = 0	DMFT ≥ 1	
	n	mean	SD	n	%	n	%
6	1,393	0.04	0.36	1,340	0.9	53	14.0
7	1,316	0.17	0.72	1,141	5.0	175	17.4
8	1,263	0.42	1.11	982	12.0	281	24.1
9	1,183	0.92	1.52	831	28.5	353	36.1
10	1,269	1.20	1.64	872	35.5	396	50.5
11	1,080	1.33	1.67	703	42.2	377	53.9
12	818	1.41	1.89	483	46.8	335	46.3
13	245	1.48	1.99	117	41.0	127	53.7
14	138	1.37	1.98	66	38.0	72	48.2
15	38	2.17	2.35	19	33.4	20	78.5

#### **School Dental Service examinations**

Due to the limited information available regarding those children who were not positively identified as having had a previous examination within the School Dental Service, the breakdown of children with previous, no previous, and unknown examination histories is not presented here. Table 9 therefore refers only to children with known previous examinations and indicates their distribution according to time since last dental examination. Fewer than 14% of children aged over 7 years of age had had a previous examination within the preceding 12 months. The most common time period since a previous examination for these children was greater than 2 years. Substantial percentages of children aged 7 years or more had also had their previous examination between 19 months and 24 months previously. For 12-year-old children who had previously had an examination, 30.5% had had an examination within the previous 2-year period

The mean time since last examination increased from 6.84 months for 5-year-old children to 31.91 months for children aged 14 years old. For 6-year-olds, approximately 86% had their last exam 0–18 months previously whereas only 16.3% of 12-year-olds had their last exam 0-18 months previously.

Table 9: School Dental Service examinations - time since last visit

Age		Months since last visit									
	Children	0–6	7–12	13–18	19–24	25+	mean	SD			
	n	%	%	%	%	%					
5	3	75.8	0.0	0.0	24.2*	0.0	6.84*	11.26*			
6	76	25.5	43.7	17.0	9.0	4.8*	10.14	6.45*			
7	286	7.7	20.3	21.3	18.6	32.1	18.21	8.54			
8	608	3.1	10.2	13.0	14.5	59.2	23.60	8.74			
9	717	3.0	7.8	12.0	16.1	61.1	26.22	11.01			
10	903	3.6	6.6	10.6	13.5	65.8	28.57	12.78			
11	829	2.8	6.7	7.4	13.1	70.0	29.42	12.95			
12	598	1.7	6.2	8.4	14.2	69.5	30.63	13.68			
13	169	3.5	8.7	18.1	8.0	61.8	29.22	15.53			
14	103	0.7*	3.9*	10.7	13.7	71.0	31.91	13.43			
15	28	6.1*	4.0*	6.7*	9.1*	74.1	31.31	13.95*			

<sup>\*</sup> relative standard error ≥ 40%

## Caries experience by region

Caries experience in the deciduous dentition varied markedly by region (see Table 10). Clinically detectable decay was lowest in the four metropolitan regions and highest in the Grampions and Hume regions (means = 2.08 and 2.04 respectively). A similar pattern to that shown with decay can also be seen in respect to deciduous missing and filled teeth, with children in rural regions having a greater mean number of missing and filled teeth than children in metropolitan regions Mean dmft ranged from 1.14 in the Eastern Metropolitan region to 2.92 and 2.91 in the Grampions and Lodden Mallee regions respectively.

Table 10: Five-six-year-old deciduous caries experience by region

Region		Decayed teeth		Missing teeth		Filled teeth		dmft	
	n	mean	SD	mean	SD	mean	SD	mean	SD
Barwon South Western	104	1.88	2.73	0.25	1.04	0.63	1.42	2.76	3.71
Grampions	64	2.08	2.68	0.14	0.53	0.70	1.61	2.92	3.67
Lodden Mallee	150	1.96	2.60	0.30	1.08	0.65	1.43	2.91	3.46
Hume	131	2.04	2.61	0.18	1.05	0.39	1.16	2.61	3.13
Gippsland	73	1.89	2.51	0.11	0.52	0.79	1.61	2.79	3.11
Western Metropolitan	227	1.32	2.34	0.11	0.65	0.45	1.46	1.89	3.04
Northern Metropolitan	324	1.16	2.31	0.10	0.46	0.27	0.83	1.53	2.66
Eastern Metropolitan	340	0.76	1.72	0.07	0.54	0.32	1.11	1.14	2.43
Southern Metropolitan	355	1.27	2.42	0.07	0.44	0.31	1.12	1.66	2.95

A similar pattern to that shown in the deciduous dentition can be see in the permanent caries experience of 11–12-year-olds (Table 11). Again, rural regions show generally higher caries experience than in metropolitan regions, although the differences are less than in the deciduous dentition and there is some overlap. The highest mean DMFT was again in the Grampions region (mean = 1.38) with the lowest mean DMFT in the Northern and Eastern Metropolitan regions (means = 0.60 and 0.64 respectively).

Table 11: Eleven-twelve-year-old permanent caries experience by region

Region		Decayed teeth		Missing teeth		Filled teeth		DMFT	
	n	mean	SD	mean	SD	mean	SD	mean	SD
Barwon South Western	124	0.60	1.30	0.16	0.70	0.44	0.95	1.21	1.96
Grampions	75	0.88	1.30	0.00	0.00	0.51	1.01	1.39	1.90
Lodden Mallee	191	0.63	1.27	0.02	0.29	0.41	0.87	1.06	1.67
Hume	141	0.48	1.57	0.02	0.15	0.52	1.08	1.01	2.03
Gippsland	119	0.87	1.83	0.03	0.22	0.50	1.02	1.41	2.16
Western Metropolitan	256	0.45	0.96	0.01	0.14	0.30	0.74	0.77	1.28
Northern Metropolitan	329	0.36	0.80	0.00	0.06	0.24	0.68	0.60	1.10
Eastern Metropolitan	346	0.38	0.87	0.01	0.12	0.25	0.68	0.64	1.16
Southern Metropolitan	326	0.52	0.98	0.01	0.08	0.24	0.67	0.76	1.39

# Caries experience by sex, card-holder status and country of birth

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, water fluoridation status and the child's country of birth in Table 12. In the deciduous dentition, females had a dmft only slightly higher than males. However, in the permanent dentition males had 46.7% higher caries experience than females in the corresponding age range of 11–12 years.

Children covered by a health care card or pensioner card had higher caries experience in both the deciduous and permanent dentitions than did children without cover. For 5- and 6-year-old children, children with a health care card had a mean dmft 72.2% higher than non-card holders in the corresponding age group. This difference was not so marked in the permanent dentition, where 11–12-year-old children covered by a health care card had a mean DMFT only 3.5% higher than non-card holding children in this age group, although a more pronounced difference was evident between non-card holders and children covered under pension cards.

The addition of fluoride to water supplies has long been confirmed as providing a population-level caries preventive benefit. In Victoria, it is predominantly metropolitan and surrounding areas that have been fluoridated. In the deciduous dentition, children residing in non-fluoridated areas had 60% more decayed, missing and filled teeth than children residing in fluoridated areas. In the permanent dentition, 11-12-year-old children in non-fluoridated regions had a mean DMFT 42.2% higher than for children in fluoridated regions.

Considerable differences are evident in the caries experience of children born in different regions of the world. For 5–6-year-olds caries experience was lowest for children from the Southern and Eastern Europe, Southern and Central Asia, and North-West Europe, with children born in Australia having the sixth lowest caries experience. The highest mean dmft occurred for children born in South-East Asia. The lowest DMFT occurred for children from Zealand and Other Oceania, Northern America and Sub-Saharan Africa while the highest was for children from Central and South America and from South-East Asia. In the deciduous dentition, mean dmft of those children born in South East Asia (mean = 2.96) was approximately 1.7 times higher than that of children born in Australia (mean = 1.78). Among 11–12-year-olds the mean DMFT score of children born in Other Americas (mean = 1.67) was approximately 1.9 times higher than the caries experience of children born in Australia (mean = 0.90).

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

Age	5-6	-year-old dm	ıft	11-1	11-12-year-old DMFT			
	n	mean	SD	n	mean	SD		
Sex								
Male	892	1.87	2.96	969	1.10	1.97		
Female	876	1.93	3.09	915	0.75	1.62		
Card Status								
Non Card Holder	788	1.33	2.39	747	0.86	1.64		
Health Care Card	541	2.29	3.37	630	0.89	1.96		
Pensioner Card	439	2.44	3.39	529	1.06	1.87		
Fluoridation status								
Fluoridated	1,351	1.66	2.91	1,368	0.83	1.72		
Non-fluoridated	412	2.66	3.21	530	1.18	1.99		
Country of Birth								
Australia	1,203	1.78	2.88	1,340	0.90	1.72		
New Zealand and Other Oceania	57	2.35	3.34	42	0.45	1.21		
North-West Europe	80	1.50	2.59	94	0.83	1.54		
Southern and Eastern Europe	63	1.40	2.67	100	0.98	2.32		
North Africa and Middle East	80	2.41	3.34	92	1.15	2.09		
South-East Asia	116	2.96	3.77	114	1.26	2.48		
North-East Asia	56	2.16	3.26	35	0.95	1.86		
Southern and Central Asia	41	1.44	2.96	32	0.59	1.43		
Northern America	3	0.00	0.0	6	0.17	0.41		
Other Americas	13	0.15	0.55	12	1.67	2.67		
Sub-Saharan Africa	25	1.88	2.80	18	0.39	0.98		
Not Known	8	3.63	3.66	3	0.33	0.58		

#### Selected trends, 1998-2002

Presented below is a table and a series of figures of selected 5-year trends across the period 1998–2002. Trends are proved for sample size, deciduous and permanent caries experience, fissure sealants and time since last visit.

Across the period 19982002 deciduous caries experience decreased for children aged 5–10 years old (Figures 3–5). Mean dmft for most age groups between 1999 and 2002 has varied little (Figure 6). The percentage of children with no deciduous tooth caries has been gradually increasing across the selected 5-year period (Figure 7).

In contrast to the deciduous dentition, the mean number of permanent decayed teeth has increased for most age groups compared to 2001 (Figure 8). For most age groups, a decrease was observed between about 1998 and 2000/01. The mean number of filled teeth has increased for some age groups but decreased for others, between 1998 and 2002 (Figure 9). Mean permanent DMFT traces a similar path to trends in mean decayed teeth, reducing from 1998 to about 2000/01 before increasing to 2002 (Figure 10). However, the percentage of children with dmft = 0 has been gradually increasing for most age groups between 1998 and 2002 (Figure 11).

Trends for the combined deciduous and permanent dentitions show that for 5–7-year-olds there has been an increase in the percentage of children with d+D=0 (Figure 12). However, among older aged children, increases in d+D=0 ceased in 2000/01 and there have been subsequent declines in 'decay-free' children. This trend is complimented by recent increases across many age groups in the percentage of children with d+D≥4 (Figure 13). However, the percentage of children with no fillings appears to be increasing (Figure 14). The percentage of 5–8-year-olds with no caries experience in either dentition has increased, however decreases are now apparent for many older age groups (Figure 15).

The mean number of fissure sealed teeth has been gradually declining between 1998 and 2002 (Figure 16). For example, across this time period the mean number of fissure sealants for 12-year-olds has decreased by approximately 15%.

Across the period 1998 to 2002 there has been a slight increase in the mean time since last visit in the School Dental Service for most age groups, however this difference is often not appreciable (Figure 17).

Table 13: Sample size and percentage of total sample by region

Region	199	98	19	99	20	00	20	01	20	02
	n	%	n	%	n	%	n	%	n	%
Barwon South Western	785	9.2	828	7.9	785	9.2	590	5.7	626	6.8
Grampions	364	4.2	593	5.6	364	4.2	453	4.4	375	4.1
Loddon Mallee	558	6.5	796	7.6	558	6.5	865	8.4	851	9.3
Hume	569	6.6	915	8.7	569	6.6	734	7.1	689	7.5
Gippsland	674	7.9	8	0.0	674	7.9	632	6.1	470	5.1
Western Metropolitan	948	11.1	1447	13.8	948	11.1	1859	18.0	1204	13.1
Northern Metropolitan	1590	18.5	1989	18.9	1590	18.5	1528	14.8	1605	17.5
Eastern Metropolitan	1260	14.7	1864	17.7	1260	14.7	1572	15.2	1650	18.0
Southern Metropolitan	1825	21.3	2072	19.7	1825	21.3	2108	20.4	1702	18.6
Total	8613	100.0	10512	100.0	8613	100.0	10341	100.0	9172	100.0

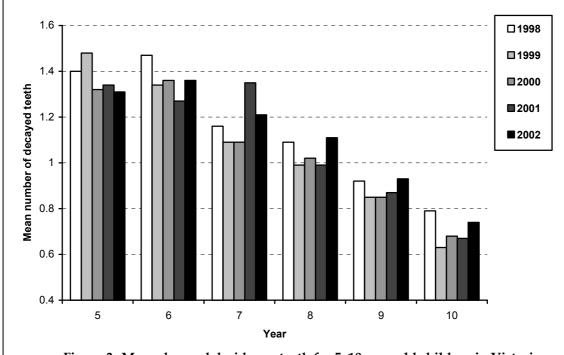
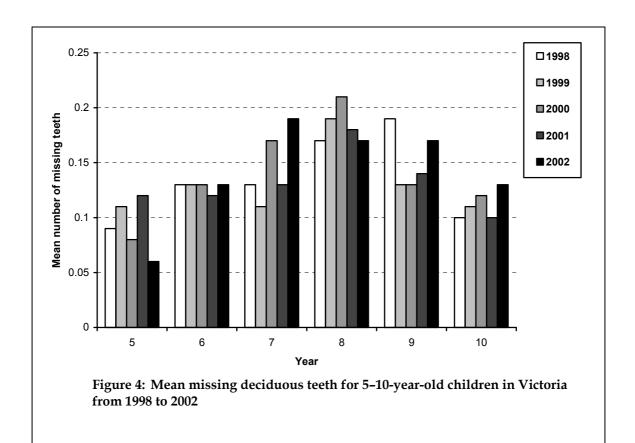
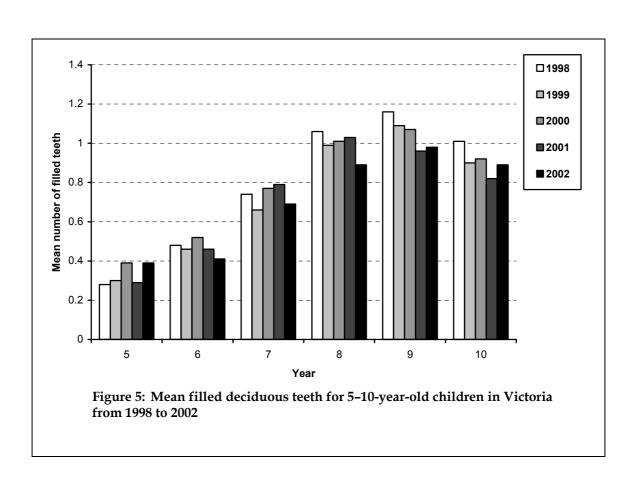


Figure 3: Mean decayed deciduous teeth for 5–10-year-old children in Victoria from 1998 to 2002





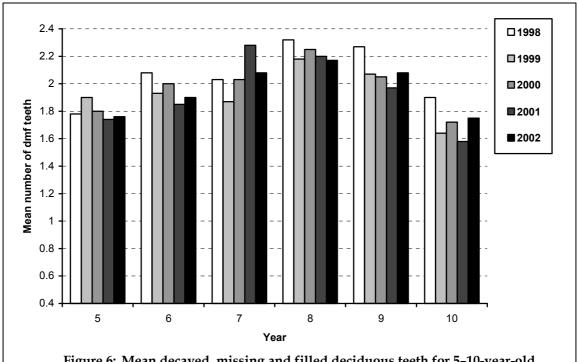
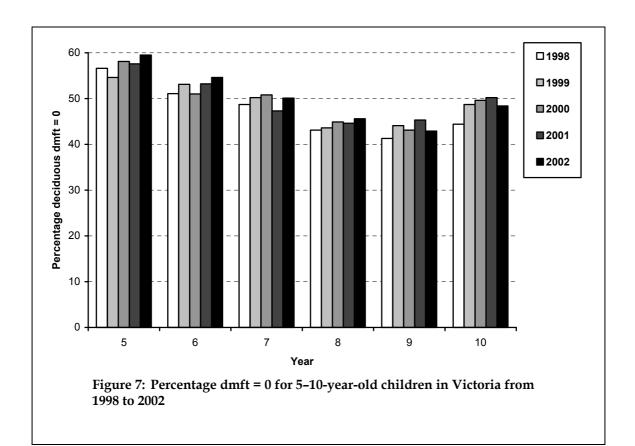
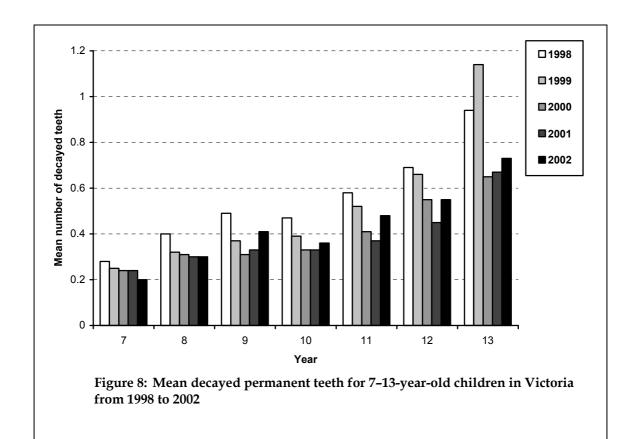
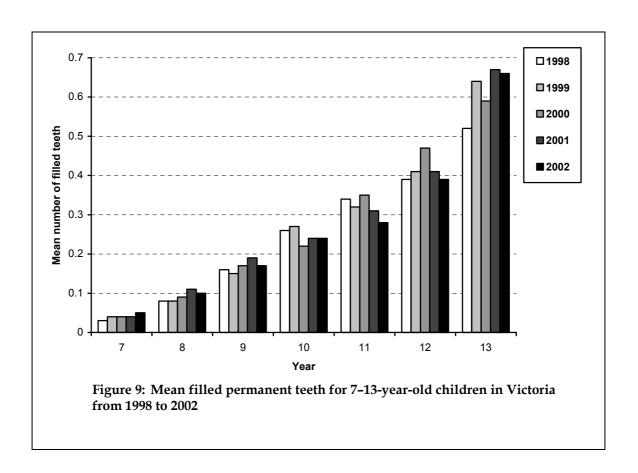


Figure 6: Mean decayed, missing and filled deciduous teeth for 5–10-year-old children in Victoria from 1998 to 2002







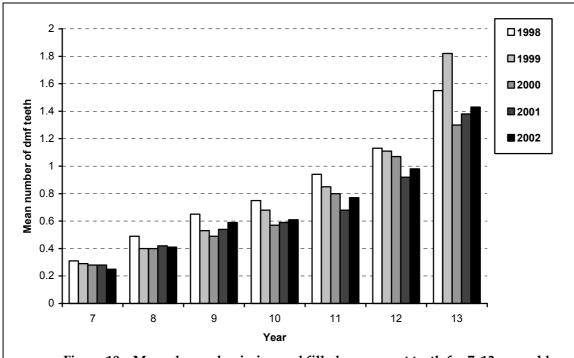
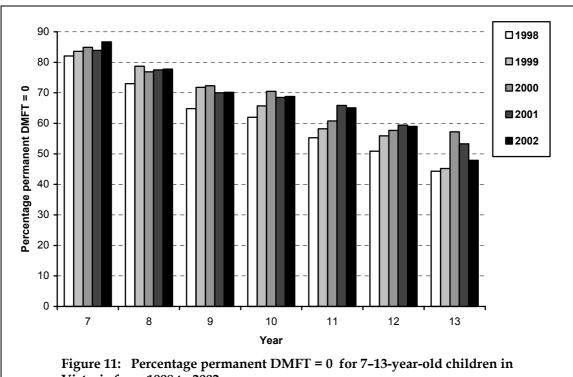


Figure 10: Mean decayed, missing and filled permanent teeth for 7-13-year-old children in Victoria from 1998 to 2002



Victoria from 1998 to 2002

