
Oral Health of United States Children

The National Survey of Oral Health in U.S. School Children: 1986-1987

Public Use Data File Documentation and Survey Methodology

1986-1987

For Administrative Use Only

Epidemiology and Oral Disease Prevention Program

NATIONAL INSTITUTES OF HEALTH
National Institutes of Dental Research

September 1992

Acknowledgments

We gratefully acknowledge the extensive contributions of the staff of Westat, Inc., the National Center for Health Statistics, the Association for State and Territorial Dental Directors, and the American Dental Association. We thank the participating school children and their parents as well as the school personnel at regional, state and local jurisdictions for their time and cooperation, without which this survey would not have been possible.

In particular, we acknowledge the contribution of Alexander J. Mallis, D.D.S., one of the dental examiners for the survey, whose sudden death was a loss to the study team.

Foreword

The present publication, "The National Survey of Oral Health in U.S. School Children: 1986-87--Public Use Data File Documentation and Survey Methodology," is the third release from the National Institute of Dental Research (NIDR) public use data file program. In December 1990, the NIDR initiated its Public Use MicroData Release Program with the publication of the data files and documentation for its 1985-86 Survey of the Oral Health of Employed Adults, which was followed a year later by the release of the public use data files for its 1985-86 Survey of the Oral Health of Seniors.

The 1986-87 National Survey of the Oral health of United States School Children was specifically designed to provide precise estimates of the prevalence of dental caries in school children. It was also designed to provide statistically reliable estimates of the prevalence and severity of dental fluorosis, gingival bleeding, periodontal diseases (among adolescents in grades 8 through 12), and soft tissue lesions in school-aged children. Questionnaires completed by the parents or guardians provided extensive residential histories and the sources of drinking water, including natural or adjusted fluoride exposure, if known. Past history and current use of tobacco and alcohol products was asked of students in grades 6 through 12. This publication includes data file documentation for all of these components of the survey.

In December 1989, a monograph entitled "Oral Health of United States Children: National and Regional Findings," was released. This monograph presented national and regional dental caries findings for children 5-17 years of age by age, sex, race, and location of residence. The results of more detailed analyses of dental caries and other topics have appeared in refereed journals. The availability of these data files and documentation should facilitate further analyses of these survey data.

Following the precedent set by earlier NIDR public use data file releases, every effort has been made to make the documentation of this data file as complete and user-friendly as possible. Essential information for accurate use of the data file has been complemented by ancillary information about the survey design, field procedures, and appropriate procedures for weighting the data, for estimating specific parameters, and for computing their sampling errors.

A bibliography of selected references has also been included to direct users to previous analyses of the data and to help identify substantive and methodological considerations that may be applicable to particular uses of the data.

I extend my appreciation to the many individuals within and outside the Institute who have contributed to the completion of this data file and documentation. I encourage the research community to use this resource.

Harald Loe, D.D.S.
Director
National Institute of Dental

Research

TABLE OF CONTENTS

Section	Pages
Foreword	iii
I. Introduction	1
II. Public Use Data File Description	5
III. Detailed Notes	293
IV. Oral Health in School Children (OHSC II) Sample Design	297
V. Analysis of OHSC II Data	303
Appendix	
I. Weighting	315
II. Variance Estimation	319
III. Administration and Field Operations	323
IV. Forms and Questionnaires	329
V. Diagnostic Criteria	341
VI. References	357
VII. Glossary	363

Oral Health of United States Children

The National Survey of Oral Health in U.S. School Children: 1986-87

Public Use Data File Documentation and Survey Methodology

Compiled and edited by
Cecelia B. Snowden and Ann J. Miller-Chisholm
Sampling, Statistics and Data Management Section, Health Assessment Branch
Epidemiology and Oral Disease Prevention Program
National Institute of Dental Research
National Institutes of Health

I. INTRODUCTION

The documentation presented in this manual pertains to epidemiologic data collected through the National Survey of Oral Health in U.S. School Children (OHSC II), which was sponsored by the Epidemiology and Oral Disease Prevention Program (EODPP) of the National Institute of Dental Research (NIDR), National Institutes of Health, U.S. Public Health Service. The survey was conducted by Westat, Inc., of Rockville, Maryland, under contract number NO1-DE-62560 between September, 1986 and June, 1987.

This survey was the second in a series of studies undertaken by the National Institute of Dental Research. The first study was the National Dental Caries Prevalence Survey (OHSC I), which was designed in cooperation with the National Center for Health Statistics, and conducted by Westat, Inc. for the NIDR during the 1979-80 school year. The 1979-80 study served as a benchmark against which to measure changes in the amount and distribution of dental caries. One of the principal objectives of the second survey was to monitor national progress in eliminating dental caries as a major public health problem. Both the 1979-80 and 1986-87 surveys were specifically designed to increase the precision of dental caries prevalence estimates that were obtained in previous surveys conducted by the National Center for Health Statistics. Additionally, the 1986-87 study was designed to provide estimates of the prevalence and severity of dental fluorosis, periodontal destruction, and soft tissue lesions.

Two primary objectives governed the design of the 1986-87 survey. The first was to provide reliable statistics on the level of dental caries in U.S. school children aged 5 to 17 for the total United States (excluding Alaska), for seven geographic regions, and for metropolitan versus non-metropolitan areas—a total of 14 domains. The key statistics measuring the prevalence of dental caries were the mean DMFS (decayed, missing, and filled surfaces of the permanent teeth) and

the mean DMFT (decayed, missing, and filled permanent teeth.)

Questionnaires completed by the parents or guardian provided extensive residential histories as well as information on sources of drinking water, including the natural or adjusted fluoride exposure, if known. This record of all locations where the children had resided for more than 6 months was later matched against data from the Fluoridation Census 1985 database.

A new component of the 1986-87 study was targeted to students in grades 6 through 12. It was designed to provide information on the students' smoking history and on their current use of smokeless tobacco, cigarettes, and alcohol. The data were collected in a personal interview conducted with each student at the conclusion of the oral examination. Each student was assured that his or her responses would be treated confidentially.

Contents of the User's Manual

In addition to a detailed file layout, this manual includes chapters describing the sample design and multi-stage sampling procedures, and data analysis considerations, including procedures of estimation, weighting, and calculation of variances. The appendices provide additional detail on weighting and variance estimation, a description of the survey administration and field operations, a facsimile reproduction of the survey forms, a description of the diagnostic criteria used in the oral examination, references, and a glossary.

Uses of the OHSC II Survey Data

The information provided in this manual regarding the description and methodology of the survey is intended to provide the researcher with the knowledge needed for independent and appropriate use of the data. This document will allow researchers to evaluate the strengths and limitations of the data. Adequate computer and statistical resources to manage data from a complex sample survey effectively and efficiently are necessary.

Because of the complexity of the data structure and sample design, a thorough understanding of the data structure, and Sections IV and V in this document will aid the researcher in producing the appropriate statistics for relevant populations. (See Section V, of OHSC II, p. 303).

With the goal of mutual benefit in mind, the NIDR requests that users of these data cooperate in certain actions:

- The National Institute of Dental Research is responsible for only the initial data. Any published material derived from these data should acknowledge the NIDR as the original source. It should also include a disclaimer that credits any analyses, interpretations, or conclusions reached to the author and not to the NIDR. An example of this citation is shown below.

The National Survey of Oral Health in School Children (OHSC II) was conducted by the National Institute of Dental Research, National Institutes of Health, Public Health Service, Department of Health and Human Services, 1986-87.

- Users who wish to publish technical descriptions of the data should make a reasonable effort to ensure that their descriptions are consistent with those published by the NIDR. The NIDR is not obligated to review such descriptions, however.
- Users may request updates to this publication and the data file. Mail the enclosed request

form to: Chief, Sampling, Statistics, and Data Management Section
Health Assessment Branch
5333 Westbard Avenue, Room 703
Bethesda, Maryland 20892

II. PUBLIC USE DATA FILE DESCRIPTION

<u>Record Number</u>	Record Type	Page
01	Summary and Records	7
02	Replicate Weights	23
03	Residential History	31
04	Caries Data	93
05	Periodontal Data	205
06	Tobacco Data	263
07	Oral Lesion Data	281

RECORD 01

Summary and Recodes

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 01
NUMBER OF RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	SUMMARY AND RECODES		
1-10	Coded Student ID Number		QID01
11-12	Record Number		REC01
	01 - Recodes	40693	
13-14	Subrecord		SUBREC01
	00 - Subrecord Number	40693	
15	Region		REGION
	1 - New England	4380	
	2 - Northeast	6304	
	3 - Midwest	7729	
	4 - Southeast	6833	
	5 - Southwest	4545	
	6 - Northwest	5267	
	7 - Pacific	5635	
16-17	Number of Residences Reported (Record 03)		HISTORY
	00 - No data reported	6	
	01-15 - Number of residences	40687	
18	Is There Caries Data? (Record 04)		CARIES
	1 - Yes	40693	
19	Is There Water Data? (Record 04)		WATER
	1 - Yes	40201	
	2 - No	492	
20*	Is There Periodontal Data? (Record 05)		PERIO
	1 - Yes	13885	
	2 - No	26808	
21	Is There Tobacco Data? (Record 06)		TOBACCO
	1 - Yes	20439	
	2 - No	20254	
22-23	Number of Oral Lesion Records (Record 07)		RED
	00 - None	38962	24BLANK
	01-06 - Number of oral lesion records	1731	(Data user work area)40693
25-26**	Student's Age		AGE

* See Notes.

** See Notes.

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 01
NUMBER OF RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
27	04-22 - Student's age Student's Sex	40693	SEX
	1 - Male	20097	
	2 - Female	20596	
28*	Student's Race and Ethnic Background		RACE
	1 - American Indian or Alaskan Native	350	
	2 - Asian and Pacific Islander	1025	
	3 - Black, Hispanic origin	739	
	4 - Black, not of Hispanic origin	4970	
	5 - White, Hispanic origin	4389	
	6 - White, not of Hispanic origin	29103	
	8 - Other	22	
	9 - Not ascertained	95	
29	Metropolitan Status of School as Determined From the 1985 QED (Quality Education Data) Frame		SMSA
	1 - SMSA	21688	
	2 - Non-SMSA	19005	
30	Were Replicate Weights Calculated for Student?		REPWGTS
	1 - Yes	40693	
[31-36]	Child's Date of Birth		DOB
31-32	Month of Birth		DOBMO
	01-12 - Month of birth	40588	
	99 - Not ascertained	105	
33-34	Day of Birth		DOBDA
	01-31 - Day of birth	40460	
	99 - Not ascertained	233	35-36Year of Birth DOBYSR
37	67-82 - Year of birth 99 - Not ascertained Has Your Child Ever Received Fluoride Drops?	40686 7	QIQAYC
	1 - Yes (See Cols. 38-41)	6905	
	2 - No	33300	
	7 - Refused	0	
	8 - Don't know	68	
	9 - Not ascertained	420	
[38-41]	Age: From/To		QIAGE
38-39	From Age		Q1FROM
	Blank - Inapplicable	33788	
	00 - Before age one	3531	
	01-20 - Actual age	2748	
	97 - Refused	0	
	98 - Don't know	178	
	99 - Not ascertained	448	
40-41	To Age		QITO

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 01
NUMBER OF RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
42	Blank - Inapplicable	33788	Q2QAYC [43-46]Age: From/ToQ2A GE
	00 - Before age one	245	
	01-20 - Actual age	5907	
	97 - Refused	0	
	98 - Don't know	196	
	99 - Not ascertained	557	
	Has Your Child Ever Received Fluoride Tablets?		
	1 - Yes (See Cols. 43-46)	7056	
	2 - No	33140	
	7 - Refused	0	
8 - Don't know	61		
9 - Not ascertained	436		
43-44	From Age		Q2FROM
	Blank - Inapplicable	33637	
	00 - Before age one	210	
	01-20 - Actual age	6241	
	97 - Refused	0	
	98 - Don't know	156	
	99 - Not ascertained	449	
45-46	To Age		Q2TO
	Blank - Inapplicable	33637	
	00 - Before age one	5	
	01-20 - Actual age	6365	
	97 - Refused	0	
	98 - Don't know	161	
	99 - Not ascertained	525	
47	Has Your Child Ever Received Fluoride Treatments at the Dentist's Office?		Q3QAYC
	1 - Yes (See Cols. 48-51)	20551	
	2 - No	19574	
	7 - Refused	0	
	8 - Don't know	125	
	9 - Not ascertained	443	
[48-51]	Age: From/To		Q3AGE
48-49	From Age		Q3FROM
	Blank - Inapplicable	20142	
	00 - Before age one	58	
	01-20 - Actual age	18225	
	97 - Refused	0	
	98 - Don't know	565	
	99 - Not ascertained	1703	
50-51	To Age		Q3TO

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 01
NUMBER OF RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	Blank - Inapplicable 00 - Before age one 01-20 - Actual age 97 - Refused 98 - Don't know 99 - Not ascertained	20142 4 18094 0 492 1961	52Has Your Child Ever Received Fluoride Treatments in a School Program?Q4 QAYC
[53-56]	1 - Yes (See Cols. 53-56) 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	8105 32086 0 90 412	Q4AGE
53-54	Age: From/To From Age		Q4FROM
	Blank - Inapplicable 00 - Before age one 01-20 - Actual age 97 - Refused 98 - Don't know 99 - Not ascertained	32588 3 7267 0 198 637	
55-56	To Age		Q4TO
	Blank - Inapplicable 00 - Before age one 01-20 - Actual age 97 - Refused 98 - Don't know 99 - Not ascertained	32588 2 7143 0 198 762	
57*	Which One of the Following Groups Best Describes Your Child?		Q5QAYC
	0 - Other 1 - American Indian or Alaskan Native 2 - Asian or Pacific Islander 3 - Black, Hispanic origin 4 - Black, not of Hispanic origin 5 - White, Hispanic origin 6 - White, not of Hispanic origin 7 - Refused 9 - Not ascertained	22 349 1023 739 4941 4374 29054 1 190	58Residential History CompleteQRS
	Blank - Inapplicable, complete residential history (parent) 1 - Complete 2 - Incomplete 9 - Not ascertained	0 33742 6945 6	

* See Notes.

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 01
NUMBER OF RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
59-70**	Revised Full Sample Weight Range 7.89-26093	40693	REVFSW
71-73	Decayed, Missing or Filled Surfaces of Permanent Teeth in Children Aged 5-17 Blank - Not in age group or no permanent teeth 000-093 - Number of surfaces	1538 39155	PERMDMFS
74-76	Decayed or Filled Surfaces of Deciduous Teeth in Children Aged 5-9 Blank - Not in age group or no deciduous teeth 000-080 - Number of surfaces	18754 21939	DEC_DFS
77	All Permanent Surfaces in Caries Free Children Aged 5-17 Blank - Not in age group or no permanent teeth 1 - Caries free 2 - Caries history	1538 19002 20153	CFPERM
78	All Deciduous Surfaces in Caries Free Children Aged 5-9 Only Blank - Not in age group or no deciduous teeth 1 - Caries free 2 - Caries history	18754 10831 11108	CFDEC
79	Indicator That Child Has At Least One Site with 1 mm or More of Attachment Loss (Grades 8-12) Blank - Not in grades 8-12 0 - No attachment loss more than or equal to 1 mm 1 - Attachment loss of more than or equal to 1 mm 9 - Not ascertained	26687 659 13209 138	LA1PLUS 80Indicator That Child Has At Least One Site with 2 mm or More of Attachment Loss (Grades 8-12)LA2PLUS
81	Indicator That Child Has At Least One Site with Gingival Bleeding (Grades 8-12) Blank - Not in grades 8-12 0 - No gingival bleeding 1 - Some gingival bleeding 9 - Not ascertained	26687 7016 6852 138 26687 5596 8211 199	GINBLEED

* See Notes.

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 01
NUMBER OF RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
82	Child Has Supragingival or Subgingival Calculus on At Least One Tooth Surface in Mouth (Grades 8-12) Blank - Not in grades 8-12 0 - No calculus 1 - Supragingival calculus present 2 - Subgingival or both sub and supragingival calculus present 9 - Not ascertained	26687 6300 4361 3152 193	CALCULUS
83-87	Percent of Examined Sites Found to be Bleeding (Grades 8-12) Blank - Not applicable, not in grades 8-12 000.0 - No bleeding sites 001.8-100.0 - Percent 99999 - No perio exam, but in grades 8-12	26687 5672 8211 123	GINGEXT
88	At Least One Sealant Present in Mouth (Children Aged 5-17) Blank - Not in age group 0 - No sealants indicated 1 - Sealants present	1487 35929 3277	SEALANTS
89	Indicator That Child Has At Least One Oral Mucosal Lesion in Mouth 0 - No lesion present 1 - Lesion present	38962 1731	OMLESION 90Child Has At Least One Lesion Present Diagnosed as Smokeless Tobacco Lesion (ST) (All Children)STLESION
91	0 - No smokeless tobacco lesion present 1 - Smokeless tobacco lesion present Any Adolescent Who Indicated Current Use of Tobacco-Cigarettes, Snuff, or Chewing Tobacco (Grades 6-12) Blank - Not in grades 6-12 0 - Not current tobacco user 1 - Current tobacco user 8 - Not ascertained 9 - No tobacco questionnaire administered, but in grades 6-12	40388 305 20225 18506 1917 16 29	TBACUSER
92	Child Is Characterized as to Current Single Tobacco Use (Grades 6-12)		TBACPROD

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 01
NUMBER OF RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	Blank - Not in grades 6-12	20225	
	0 - No tobacco use	18506	
	1 - Cigarettes only	1086	
	2 - Snuff only	232	
	3 - Chewing tobacco (CT) only	234	
	4 - Smokeless Tobacco (ST) snuff and CT	67	
	8 - Mixed use or part unknown or incomplete answers	314	
	9 - No tobacco questionnaire administered, but in grades 6-12	29	
93-94	Student's Grade		GRADE
	00-12 - Grade	40693	
95-106*	Original Full Sample Weight		FSW
	7.0-26093	40693	

* See Notes.

RECORD 02

Replicate Weights

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 02
NUMBER OF RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
REPLICATE WEIGHTS *			
1-10	Coded Student ID Number		QID02
11-12	Record Number		REC02
	02 - Replicate Weights	40693	
13-14	Subrecord		SUBREC02
	00 - Subrecord Number	40693	
15	This Field Always Blank		BLANK02
16-22	Replicate Weight - 01		REPWGT01
	Range 6-25469	40693	
23-29	Replicate Weight - 02		REPWGT02
	Range 6-25469	40693	
30-36	Replicate Weight - 03		REPWGT03
	Range 6-25469	40693	
37-43	Replicate Weight - 04		REPWGT04
	Range 6-25469	40693	
44-50	Replicate Weight - 05		REPWGT05
	Range 6-25469	40693	
51-57	Replicate Weight - 06		REPWGT06
	Range 6-25469	40693	
58-64	Replicate Weight - 07		REPWGT07
	Range 6-25469	40693	
65-71	Replicate Weight - 08		REPWGT08
	Range 6-25469	40693	
72-78	Replicate Weight - 09		REPWGT09
	Range 6-25469	40693	
79-85	Replicate Weight - 10		REPWGT10
	Range 6-25469	40693	86- 92Replicate Weight - 11REPWGT 11
	Range 6-25469	40693	
93-99	Replicate Weight - 12		REPWGT12
	Range 6-25469	40693	

* See Notes.

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 02
NUMBER OF RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
100-106	Replicate Weight - 13 Range 6-25469	40693	REPWGT13
107-113	Replicate Weight - 14 Range 6-25469	40693	REPWGT14
114-120	Replicate Weight - 15 Range 6-25469	40693	REPWGT15
121-127	Replicate Weight - 16 Range 6-25469	40693	REPWGT16
128-134	Replicate Weight - 17 Range 6-25469	40693	REPWGT17
135-141	Replicate Weight - 18 Range 6-25469	40693	REPWGT18
142-148	Replicate Weight - 19 Range 6-25469	40693	REPWGT19
149-155	Replicate Weight - 20 Range 6-25469	40693	REPWGT20
156-162	Replicate Weight - 21 Range 6-25469	40693	REPWGT21
163-169	Replicate Weight - 22 Range 6-25469	40693	REPWGT22
170-176	Replicate Weight - 23 Range 6-25469	40693	REPWGT23
177-183	Replicate Weight - 24 Range 6-25469	40693	REPWGT24
184-190	Replicate Weight - 25 Range 6-25469	40693	REPWGT25
191-197	Replicate Weight - 26 Range 6-25469	40693	REPWGT26
198-204	Replicate Weight - 27 Range 6-25469	40693	REPWGT27
205-211	Replicate Weight - 28 Range 6-25469	40693	REPWGT28
212-218	Replicate Weight - 29 Range 6-25469	40693	REPWGT29

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 02
NUMBER OF RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
219-225	Replicate Weight - 30 Range 6-25469	40693	REPWGT30
226-232	Replicate Weight - 31 Range 6-25469	40693	REPWGT31
233-239	Replicate Weight - 32 Range 6-25469	40693	REPWGT32
240-246	Replicate Weight - 33 Range 6-25469	40693	REPWGT33
247-253	Replicate Weight - 34 Range 6-25469	40693	REPWGT34
254-260	Replicate Weight - 35 Range 6-25469	40693	REPWGT35
261-267	Replicate Weight - 36 Range 6-25469	40693	REPWGT36
268-274	Replicate Weight - 37 Range 6-25469	40693	REPWGT37
275-281	Replicate Weight - 38 Range 6-25469	40693	REPWGT38
282-288	Replicate Weight - 39 Range 6-25469	40693	REPWGT39
289-295	Replicate Weight - 40 Range 6-25469	40693	REPWGT40
296-298	Pseudo Stratum Range 111-722	40693	STRATUM
299-301	Pseudo PSU Range 1-3	40693	PSU

RECORD 03

Residential History

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	RESIDENTIAL HISTORY *		
1-10	Student ID Number		QID03
11-12	Record Number		REC03
	03 - Residential History Records	40687	
13-14	Subrecord		SUBREC03
	00 - Subrecord Number	40687	
15	BLANK		BLANK03
[16-24]	FIRST RESIDENCE (current)		RES1
16-19	City		CITY1
	Blank - Inapplicable/foreign country	49	
	0001-9700 - City codes (except 3333)	39981	
	3333 - Not located	558	
	9999 - Not ascertained	99	
20-22	County		COUNTY1
	Blank - Inapplicable/foreign country	49	
	001-332 - County or parish	37277	
	333 - Named county could not be coded	1617	
	334-509 - County in Texas	664	
	510-850 - Independent city	1010	
	999 - County question not answered by parent	70	
23-24	State		STATE1
	Blank - Inapplicable/foreign country	49	
	01-56 - State	40638	
	99 - Not ascertained	0	
25-27	Country		CNTRY1
	Blank - Inapplicable	0	
	072 - Puerto Rico	0	
	926 - USA	40638	
	996 - Other country	49	
28-29	From Month		FROMM01
	Blank - Inapplicable	0	
	01-12 - Month	38262	
	97 - Refused	1	
	98 - Don't know	73	
	99 - Not ascertained	2351	
30-31	From Year		FROMYR1

* See Notes.

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
32-33	Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained	0 39358 1 21 1307	TOMO1
	To Month		
34-35	Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	0 40630 0 3 54	TOYR1
	To Year		
36	Blank - Inapplicable	0	PWS1
	Public Water Supply		
	Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	49 30508 8202 0 21 1907	37Type of FluoridationQFL1
38-39	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained	49 14318 2588 23020 621 91	QFLMO1
	Adjusted Fluoridation - Month		
40-41	Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained	25748 12929 0 2010	QFLYR1
	Adjusted Fluoridation - Year		
[42-50]	Blank - Inapplicable 45-87 - Actual year 33 - Not located 99 - Not ascertained	25748 14921 0 18	RES2
	SECOND RESIDENCE		
42-45	Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	21649 18164 638 236	CITY2
	City		

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
46-48	County Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	21731 17128 1059 336 242 191	COUNTY2
49-50	State Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	21731 18933 23	STATE2 51- 53CountryCNT RY2
[54-61]	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained	20544 82 18939 1105 0 1 16	DATLIV2
54-55	From Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	20544 18746 1 104 1292	FROMMO2
56-57	From Year Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained	20544 19795 1 29 318	FROMYR2
58-59	To Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	20544 18692 1 78 1372	TOMO2
60-61	To Year Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained	20544 19743 1 24 375	TOYR2
62	Public Water Supply		PWS2

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	21649 14946 3459 0 21 612	63Type of FluoridationQFL2
64-65	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained Adjusted Fluoridation - Month	21649 7575 1241 9771 237 214	QFLMO2
66-67	Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained Adjusted Fluoridation - Year	32875 6518 2 1292	QFLYR2
[68-76]	THIRD RESIDENCE		RES3
68-71	City Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	30713 9542 307 125	CITY3
72-74	County Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	30731 8859 615 215 164 103	COUNTY3
75-76	State Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	30731 9946 10	STATE3 77- 79CountryCNT RY3
	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained	30181 18 9952 532 0 0 4	

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
[80-87]	Dates		DATLIV3
80-81	From Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	30181 9623 0 70 813	FROMMO3
82-83	From Year Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained	30181 10279 0 24 203	FROMYR3
84-85	To Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	30181 9419 0 92 995	TOMO3
86-87	To Year Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained	30181 10259 0 27 220	TOYR3
88	Public Water Supply Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	30713 7995 1658 0 10 311	PWS3 89Type of FluoridationQF L3
	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained	30713 3881 674 5181 122 116	
90-91	Adjusted Fluoridation - Month Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained	36684 3325 4 674	QFLMO3
92-93	Adjusted Fluoridation - Year		QFLYR3

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	Blank - Inapplicable 45-87 - Actual year 33 - Not located 99 - Not ascertained	36684 3979 2 22	
[94-102]	FOURTH RESIDENCE		RES4
94-97	City		CITY4
	Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	35638 4829 158 62	
98-100	County		COUNTY4
	Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	35649 4501 312 109 63 53	
101-102	State		STATE4
	Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	35649 5034 4	103- 105CountryCN TRY4
	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained	35353 11 5034 285 0 0 4	
[106-113]	Dates		DATLIV4
106-107	From Month		FROMMO4
	Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	35353 4808 0 43 483	
108-109	From Year		FROMYR4
	Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained	35353 5170 0 17 147	
110-111	To Month		TOMO4

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
112-113	Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained To Year	35353 4687 0 51 596	TOYR4
114	Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained Public Water Supply	35353 5154 0 19 161	PWS4
	Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	35638 4061 808 0 9 171	115Type of FluoridationQFL4
116-117	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained Adjusted Fluoridation - Month	35638 1995 387 2555 54 58	QFLMO4
118-119	Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained Adjusted Fluoridation - Year	38638 1634 0 415	QFLYR4
[120-128]	FIFTH RESIDENCE		RES5
120-123	City		CITY5
	Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	38264 2334 61 28	
124-126	County		COUNTY5
	Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	38266 2151 143 54 47 26	

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
127-128	State Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	38266 2419 2	STATE5 129- 131CountryCN TRY5
[132-139]	Dates		DATLIV5
132-133	From Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	38119 2322 0 21 225	FROMMO5
134-135	From Year Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained	38119 2489 0 10 69	FROMYR5
136-137	To Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	38119 2255 0 31 282	TOMO5
138-139	To Year Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained	38119 2478 0 9 81	TOYR5
140	Public Water Supply Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	38264 1983 362 0 3 75	PWSS 141Type of FluoridationQF L5

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained	38264 988 198 1188 24 25	
142-143	Adjusted Fluoridation - Month		QFLMO5
	Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained	39675 815 1 196	
144-145	Adjusted Fluoridation - Year		QFLYR5
	Blank - Inapplicable 45-87 - Actual year 33 - Not located 99 - Not ascertained	39675 1008 0 4	
[146-154]	SIXTH RESIDENCE		RES6
146-149	City		CITY6
	Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	39952 705 15 15	
150-152	County		COUNTY6
	Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	39955 636 42 29 13 12	
153-154	State		STATE6
	Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	39955 731 1	155- 157CountryCN TRY6
	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained	39903 3 731 49 0 0 1	
[158-165]	Dates		DATLIV6
158-159	From Month		FROMMO6

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
160-161	Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained From Year	39903 694 0 5 85	FROMYR6
162-163	Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained To Month	39903 752 0 3 29	TOMO6
164-165	Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained To Year	39903 748 0 3 33	TOYR6
166	Public Water Supply Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	39903 748 0 3 33	PWS6 167Type of FluoridationQF L6
168-169	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained Adjusted Fluoridation - Month	39952 289 55 375 5 11	QFLMO6
170-171	Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained Adjusted Fluoridation - Year	40393 226 0 68	QFLYR6
[172-180]	SEVENTH RESIDENCE	40393 293 0 1	RES7

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
172-175	City Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	40357 311 12 7	CITY7
176-178	County Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	40357 282 25 12 4 7	COUNTY7
179-180	State Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	40357 330 0	STATE7 181- 183CountryCN TRY7
[184-191]	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained	40338 0 330 19 0 0 0	DATLIV7
184-185	From Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40338 297 0 4 48	FROMMO7
186-187	From Year Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained	40338 327 0 3 19	FROMYR7
188-189	To Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40338 286 0 4 59	TOMO7
190-191	To Year		TOYR7

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
192	Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained	40338 325 0 3 21	PWS7
	Public Water Supply Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	40357 257 39 0 1 33	193Type of FluoridationQFL7
194-195	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained	40357 118 34 169 1 8	QFLMO7
	Adjusted Fluoridation - Month Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained	40568 94 0 25	QFLYR7
196-197	Adjusted Fluoridation - Year Blank - Inapplicable 45-87 - Actual year 33 - Not located 99 - Not ascertained	40568 117 0 2	
[198-206]	EIGHTH RESIDENCE		RES8
198-201	City Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	40519 158 6 4	CITY8
	County Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	40519 144 10 8 3 3	COUNTY8
205-206	State Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	40519 167 1	STATES 207- 209CountryCN TRY8

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained	40511 0 167 8 0 0 1	
[210-217]	Dates		DATLIV8
210-211	From Month		FROMMO8
	Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40511 152 0 2 22	
212-213	From Year		FROMYR8
	Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained	40511 167 0 1 8	
214-215	To Month		TOMO8
	Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40511 146 0 2 28	
216-217	To Year		TOYR8
	Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained	40511 165 0 1 10	
218	Public Water Supply		PWS8
	Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	40519 128 26 0 0 14	219Type of FluoridationQF L8
220-221	Adjusted Fluoridation - Month		QFLMO8
	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained	40519 56 15 92 1 4	

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
222-223	Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained Adjusted Fluoridation - Year	40630 54 0 3	QFLYR8
	Blank - Inapplicable 45-87 - Actual year 33 - Not located 99 - Not ascertained	40630 57 0 0	
[224-232]	NINTH RESIDENCE		RES9
224-227	City		CITY9
	Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	40621 62 3 1	
228-230	County		COUNTY9
	Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	40621 60 4 0 1 1	
231-232	State		STATE9
	Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	40621 66 0	233- 235CountryCN TRY9
[236-243]	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained Dates	40618 0 66 3 0 0 0	DATLIV9
236-237	From Month		FROMMO9
	Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40618 58 0 1 10	
238-239	From Year		FROMYR9
	Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained	40618 63 0 0 6	

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
240-241	To Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40618 56 0 1 12	TOMO9
242-243	To Year Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained	40618 64 0 0 5	TOYR9
244	Public Water Supply Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	40621 51 7 0 0 8	PWS9 245Type of FluoridationQFL9
	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained	40621 29 3 32 2 0	
246-247	Adjusted Fluoridation - Month Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained	40656 26 0 5	QFLMO9
248-249	Adjusted Fluoridation - Year Blank - Inapplicable 45-87 - Actual year 33 - Not located 99 - Not ascertained	40656 31 0 0	QFLYR9
[250-258]	TENTH RESIDENCE		RES10
250-253	City Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	40655 30 2 0	CITY10
254-256	County		COUNTY10

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
257-258	Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	40655 27 4 0 1 0	STATE10 259- 261 CountryCN TRY10
	State Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	40655 32 0	
[262-269]	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained	40654 0 32 1 0 0 0	DATLIV10
262-263	From Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40654 28 0 1 4	FROMMO10
264-265	From Year Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained	40654 30 0 0 3	FROMYR10
266-267	To Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40654 28 0 1 4	TOMO10
268-269	To Year Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained	40654 30 0 0 3	TOYR10
270	Public Water Supply		PWS10

NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	40655 23 7 0 0 2	271Type of FluoridationQFL10
272-273	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained Adjusted Fluoridation - Month	40655 9 4 19 0 0	QFLMO10
274-275	Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained Adjusted Fluoridation - Year	40678 7 0 2	QFLYR10
[276-284]	ELEVENTH RESIDENCE		RES11
276-279	City Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	40671 15 0 1	CITY11
280-282	County Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	40671 15 0 0 0 1	COUNTY11
283-284	State Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	40671 16 0	STATE11 285- 287CountryCN TRY11
	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained	40669 0 16 2 0 0 0	

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
[288-295]	Dates		DATLIV11
288-289	From Month		FROMMO11
	Blank - Inapplicable	40669	
	01-12 - Month	14	
	97 - Refused	0	
	98 - Don't know	1	
	99 - Not ascertained	3	
290-291	From Year		FROMYR11
	Blank - Inapplicable	40669	
	65-87 - Actual number	15	
	97 - Refused	0	
	98 - Don't know	0	
	99 - Not Ascertained	3	
292-293	To Month		TOMO11
	Blank - Inapplicable	40669	
	01-12 - Month	13	
	97 - Refused	0	
	98 - Don't know	1	
	99 - Not ascertained	4	
294-295	To Year		TOYR11
	Blank - Inapplicable	40669	
	65-87 - Actual year	15	
	97 - Refused	0	
	98 - Don't know	0	
	99 - Not ascertained	3	
296	Public Water Supply		PWS11
	Blank - Inapplicable	40671	
	1 - Yes	11	297Type of FluoridationQFL11
	2 - No	3	
	7 - Refused	0	
	8 - Don't know	0	
	9 - Not ascertained	2	
	Blank - Inapplicable, lived here less than 6 mo.	40671	
	1 - Adjusted fluoridation	5	
	2 - Natural fluoridation	0	
	3 - Place not listed	9	
	6 - Combination of fluoridated and nonfluoridated water	1	
	9 - Not ascertained	1	
298-299	Adjusted Fluoridation - Month		QFLMO11
	Blank - Inapplicable	40681	
	01-12 - Month	5	
	33 - Not located	0	
	99 - Not ascertained	1	
300-301	Adjusted Fluoridation - Year		QFLYR11

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	Blank - Inapplicable 45-87 - Actual year 33 - Not located 99 - Not ascertained	40681 6 0 0	
[302-310]	TWELFTH RESIDENCE		RES12
302-305	City		CITY12
	Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	40679 6 1 1	
306-308	County		COUNTY12
	Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	40679 6 2 0 0 0	
309-310	State		STATE12
	Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	40679 8 0	311- 313CountryCN TRY12
	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained	40679 0 8 0 0 0 0	
[314-321]	Dates		DATLIV12
314-315	From Month		FROMMO12
	Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40679 6 0 0 2	
316-317	From Year		FROMYR12
	Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained	40679 7 0 0 1	
318-319	To Month		TOMO12

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
320-321	Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained To Year	40679 5 0 0 3	TOYR12
322	Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained Public Water Supply	40679 6 0 0 2	PWS12
	Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	40679 6 2 0 0 0	323Type of FluoridationQFL12
324-325	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained Adjusted Fluoridation - Month	40679 2 1 4 0 1	QFLMO12
326-327	Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained Adjusted Fluoridation - Year	40685 2 0 0	QFLYR12
[328-336]	THIRTEENTH RESIDENCE		RES13
328-331	City Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	40681 6 0 0	CITY13
332-334	County Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	40681 6 0 0 0 0	COUNTY13

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
335-336	State Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	40681 6 0	STATE13 337- 339CountryCN TRY13
	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained	40681 0 6 0 0 0 0	
[340-347]	Dates		DATLIV13
340-341	From Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40681 4 0 0 2	FROMMO13
342-343	From Year Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained	40681 5 0 0 1	FROMYR13
344-345	To Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40681 4 0 0 2	TOMO13
346-347	To Year Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained	40681 5 0 0 1	TOYR13
348	Public Water Supply Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	40681 6 0 0 0 0	PWS13 349Type of FluoridationQF L13

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained	40681 3 1 2 0 0	
350-351	Adjusted Fluoridation - Month		QFLMO13
	Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained	40684 2 0 1	
352-353	Adjusted Fluoridation - Year		QFLYR13
	Blank - Inapplicable 45-87 - Actual year 33 - Not located 99 - Not ascertained	40684 3 0 0	
[354-362]	FOURTEENTH RESIDENCE		RES14
354-357	City		CITY14
	Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	40684 3 0 0	
358-360	County		COUNTY14
	Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	40684 2 1 0 0 0	
361-362	State		STATE14
	Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	40684 3 0	363- 365CountryCN TRY14
	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained	40684 0 3 0 0 0 0	
[366-373]	Dates		DATLIV14
366-367	From Month		FROMMO14

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
368-369	Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained From Year	40684 2 0 0 1	FROMYR14
370-371	Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained To Month	40684 2 0 0 1	TOMO14
372-373	Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained To Year	40684 2 0 0 1	TOYR14
374	Public Water Supply Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	40684 3 0 0 0 0	PWS14 375Type of FluoridationQF L14
376-377	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained Adjusted Fluoridation - Month	40684 3 0 0 0 0	QFLMO14
378-379	Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained Adjusted Fluoridation - Year	40684 2 0 1	QFLYR14
[380-388]	FIFTEENTH RESIDENCE	40684 3 0 0	RES15

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
380-383	City Blank - Inapplicable/foreign country 0001-9700 - City codes (except 3333) 3333 - Not located 9999 - Not ascertained	40685 2 0 0	CITY15
384-386	County Blank - Inapplicable/foreign country 001-332 - County or parish 333 - Named county could not be coded 334-509 - County in Texas 510-850 - Independent city 999 - County question not answered by parent	40685 2 0 0 0 0	COUNTY15
387-388	State Blank - Inapplicable/foreign country 01-56 - State 99 - Not ascertained	40685 2 0	STATE15 389- 391 CountryCN TRY15
[392-399]	Blank - Inapplicable 072 - Puerto Rico 926 - USA 996 - Other country 997 - Refused 998 - Don't know 999 - Not ascertained	40685 0 2 0 0 0 0	DATLIV15
392-393	From Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40685 1 0 0 1	FROMMO15
394-395	From Year Blank - Inapplicable 65-87 - Actual number 97 - Refused 98 - Don't know 99 - Not Ascertained	40685 1 0 0 1	FROMYR15
396-397	To Month Blank - Inapplicable 01-12 - Month 97 - Refused 98 - Don't know 99 - Not ascertained	40685 1 0 0 1	TOMO15
398-399	To Year		TOYR15

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 03
NUMBER OF RESIDENTIAL HISTORY RECORDS = 40,687**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
400	Blank - Inapplicable 65-87 - Actual year 97 - Refused 98 - Don't know 99 - Not ascertained	40685 1 0 0 1	PWS15 401Type of FluoridationQFL15
	Public Water Supply Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	40685 2 0 0 0 0	
402-403	Blank - Inapplicable, lived here less than 6 mo. 1 - Adjusted fluoridation 2 - Natural fluoridation 3 - Place not listed 6 - Combination of fluoridated and nonfluoridated water 9 - Not ascertained	40685 1 0 1 0 0	QFLMO15
	Adjusted Fluoridation - Month Blank - Inapplicable 01-12 - Month 33 - Not located 99 - Not ascertained	40686 1 0 0	
404-405	Adjusted Fluoridation - Year Blank - Inapplicable 45-87 - Actual year 33 - Not located 99 - Not ascertained	40686 1 0 0	QFLYR15

RECORD 04

Caries Data

	Page
Surface data	93
Tooth data	165
Sealant data	181
Fluorosis	187
Priority for care	201
Water sample data	201

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
CARIES DATA			
1-10	Coded Student ID Number		QID04
11-12	Record Number		REC04
	04 - Caries Data	40693	
13-14	Subrecord		SUBREC04
	00 - Subrecord Number	40693	
15-17	BLANK (Data User work area)		BLANK04
[18-21]	Upper Left, Central Incisor		
18	<i>Lingual Surface</i>		UPLCILIN
	0 - Present but excluded	59	
	1 - Sound primary	4259	
	2 - Decayed primary	49	
	3 - Filled primary	61	
	4 - Unerupted permanent	691	
	5 - Sound permanent	35407	
	6 - Decayed permanent	32	
	7 - Filled permanent	108	
	8 - Missing permanent (due to caries)	6	
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	21	
19	<i>Buccal Surface</i>		UPLCIBUC
	0 - Present but excluded	59	
	1 - Sound primary	4267	
	2 - Decayed primary	48	
	3 - Filled primary	54	
	4 - Unerupted permanent	691	
	5 - Sound permanent	35471	
	6 - Decayed permanent	21	
	7 - Filled permanent	55	
	8 - Missing permanent (due to caries)	6	
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	21	
			20Mesial SurfaceUPLCI MES
	0 - Present but excluded	59	
	1 - Sound primary	4080	
	2 - Decayed primary	220	
	3 - Filled primary	69	
	4 - Unerupted permanent	691	
	5 - Sound permanent	35297	
	6 - Decayed permanent	111	
	7 - Filled permanent	139	
	8 - Missing permanent (due to caries)	6	
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	21	
21	<i>Distal Surface</i>		UPLCIDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	59 4188 124 57 691 35332 77 138 6 21	
22	BLANK (Data User Work Area)	40693	FILL22
[23-26]	Upper Left, Lateral Incisor		
23	<i>Lingual Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	21 7023 44 64 1601 31462 101 336 4 37	UPLLILIN 24 <i>Buccal Surface</i> UPLLI BUC
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	21 6982 89 60 1601 31820 27 52 4 37	
25	<i>Mesial Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	21 6884 176 71 1601 31664 100 135 4 37	UPLLIMES
26	<i>Distal Surface</i>		UPLLIDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
27	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) BLANK (Data User Work Area)	21 7029 47 55 1601 31833 25 41 4 37	FILLER1[28-31]Upper Left, Cuspid
28	<i>Lingual Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	9 17513 50 81 1379 21582 19 31 3 26	UPLCULIN
29	<i>Buccal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	9 17392 168 84 1379 21599 21 12 3 26	UPLCUBUC
30	<i>Mesial Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	9 17562 52 30 1379 21604 13 15 3 26	UPLCUMES 31Distal SurfaceUPLCUDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	9 17444 118 82 1379 21602 10 20 3 26	
32	BLANK (Data User Work Area)	40693	FILL32
[33-37]	Upper Left, 1st Bicuspid or 1st Primary Molar		
33	<i>Lingual Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	7 16021 108 326 387 22316 13 16 17 1482	UPLIBLIN
34	<i>Buccal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	7 16038 98 319 387 22315 14 16 17 1482	UPLIBBUC <i>35Mesial Surface</i> UPLIBMES
36	<i>Distal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	7 15797 186 472 387 22280 9 56 17 1482	UPL1BDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
37	0 - Present but excluded	7	UPL1BOCC [38-42]Upper Left, 2nd Bicuspid or 2nd Primary Molar
	1 - Sound primary	14405	
	2 - Decayed primary	575	
	3 - Filled primary	1475	
	4 - Unerupted permanent	387	
	5 - Sound permanent	22080	
	6 - Decayed permanent	24	
	7 - Filled permanent	241	
	8 - Missing permanent (due to caries)	17	
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	1482	
	<i>Occlusal Surface</i>		
	0 - Present but excluded	7	
	1 - Sound primary	13823	
	2 - Decayed primary	629	
	3 - Filled primary	2003	
	4 - Unerupted permanent	387	
	5 - Sound permanent	21514	
	6 - Decayed permanent	103	
	7 - Filled permanent	728	
8 - Missing permanent (due to caries)	17		
9 - Missing permanent (non-caries, i.e., ortho/trauma)	1482		
38	<i>Lingual Surface</i>		UPL2BLIN
	0 - Present but excluded	10	
	1 - Sound primary	17532	
	2 - Decayed primary	305	
	3 - Filled primary	1638	
	4 - Unerupted permanent	223	
	5 - Sound permanent	20885	
	6 - Decayed permanent	14	
	7 - Filled permanent	43	
	8 - Missing permanent (due to caries)	19	
9 - Missing permanent (non-caries, i.e., ortho/trauma)	24		
39	<i>Buccal Surface</i>		UPL2BBUC
	0 - Present but excluded	10	
	1 - Sound primary	19059	
	2 - Decayed primary	82	
	3 - Filled primary	334	
	4 - Unerupted permanent	223	
	5 - Sound permanent	20901	
	6 - Decayed permanent	20	
	7 - Filled permanent	21	
	8 - Missing permanent (due to caries)	19	
9 - Missing permanent (non-caries, i.e., ortho/trauma)	24		
40	<i>Mesial Surface</i>		UPL2BMES

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	10 17396 494 1585 223 20663 32 247 19 24	41 <i>Distal Surface</i> UPL2B DIS
42	<i>Occlusal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	10 18810 171 494 223 20504 30 408 19 24	UPL2BOCC
[43-47]	Upper Left, 1st Molar		
43	<i>Lingual Surface</i> 0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	10 2978 31751 376 5463 103 12	UPLIMLIN
44	<i>Buccal Surface</i> 0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	10 2978 36975 161 454 103 12	UPLIMBUC 45 <i>Mesial Surface</i> UPLIM MES

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME	
46	0 - Present but excluded	10	UPL1MDIS	
	4 - Unerupted permanent	2978		
	5 - Sound permanent	36204		
	6 - Decayed permanent	143		
	7 - Filled permanent	1243		
	8 - Missing permanent (due to caries)	103		
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	12		
	<i>Distal Surface</i>			
	47	0 - Present but excluded		10
4 - Unerupted permanent		2978		
5 - Sound permanent		37048		
6 - Decayed permanent		156		
7 - Filled permanent		386		
8 - Missing permanent (due to caries)		103		
9 - Missing permanent (non-caries, i.e., ortho/trauma)		12		
<i>Occlusal Surface</i>				
[48-52]		0 - Present but excluded	10	UPL2MLIN
	4 - Unerupted permanent	2978		
	5 - Sound permanent	25378		
	6 - Decayed permanent	1347		
	7 - Filled permanent	10865		
	8 - Missing permanent (due to caries)	103		
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	12		
	Upper Left, 2nd Molar			
	48	0 - Present but excluded	12	
4 - Unerupted permanent		22057		
5 - Sound permanent		17798		
6 - Decayed permanent		62		
7 - Filled permanent		697		
8 - Missing permanent (due to caries)		22		
9 - Missing permanent (non-caries, i.e., ortho/trauma)		45		
<i>Lingual Surface</i>				
49		0 - Present but excluded	12	50Mesial SurfaceUPL2M MES
	4 - Unerupted permanent	22057		
	5 - Sound permanent	18400		
	6 - Decayed permanent	49		
	7 - Filled permanent	108		
	8 - Missing permanent (due to caries)	22		
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	45		
	<i>Buccal Surface</i>			
	51	0 - Present but excluded	12	
4 - Unerupted permanent		22057		
5 - Sound permanent		18446		
6 - Decayed permanent		15		
7 - Filled permanent		96		
8 - Missing permanent (due to caries)		22		
9 - Missing permanent (non-caries, i.e., ortho/trauma)		45		
<i>Distal Surface</i>				

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
52	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Occlusal Surface	12 22057 18448 32 77 22 45	UPL2MOCC
[53-56]	Upper Right, Central Incisor Lingual Surface	12 22057 15196 485 2876 22 45	UPRCILIN
53	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	70 4268 38 61 715 35369 30 106 6 30	54Buccal SurfaceUPRCI BUC
55	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Mesial Surface	70 4278 35 54 715 35426 17 62 6 30	UPRCIMES
56	Distal Surface	70 4099 196 72 715 35255 110 140 6 30	UPRCIDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
57	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) BLANK (Data User Work Area)	70 4193 116 58 715 35264 84 157 6 30 40693	FILL54[58-61]Upper Right, Lateral Incisor
58	<i>Lingual Surface</i>		UPRLILIN
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	21 6938 40 64 1727 31405 106 345 7 40	
59	<i>Buccal Surface</i>		UPRLIBUC
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	21 6914 70 58 1727 31777 32 47 7 40	
60	<i>Mesial Surface</i>		UPRLIMES
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	21 6817 158 67 1727 31633 80 143 7 40	61Distal SurfaceUPRLIDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	21 6952 39 51 1727 31797 19 40 7 40	
62	BLANK (Data User Work Area)	40693	FILL58
[63-66]	Upper Right, Cuspid		
63	<i>Lingual Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	12 17546 41 86 1423 21523 9 25 1 27	UPRCULIN
64	<i>Buccal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	12 17418 139 116 1423 21534 11 12 1 27	UPRCUBUC 65 <i>Mesial Surface</i> UPRCU MES
66	<i>Distal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	12 17584 49 40 1423 21536 8 13 1 27	UPRCUDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
67	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) BLANK (Data User Work Area)	12 17457 131 85 1423 21539 3 15 1 27 40693	FILL63
[68-72]	Upper Right, 1st Bicuspid or 1st Primary Molar		
68	<i>Lingual Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	19 16118 91 347 378 22225 10 19 16 1470	UPR1BLIN <i>69Buccal Surface</i> UPR1B BUC
70	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) <i>Mesial Surface</i>	19 16129 96 331 378 22230 14 10 16 1470	UPR1BMES
71	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) <i>Distal Surface</i>	19 15890 170 496 378 22188 9 57 16 1470	UPR1BDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME	
72	0 - Present but excluded	19	UPR1BOCC [73-77]Upper Right, 2nd Bicuspid or 2nd Primary Molar	
	1 - Sound primary	14563		
	2 - Decayed primary	580		
	3 - Filled primary	1413		
	4 - Unerupted permanent	378		
	5 - Sound permanent	22010		
	6 - Decayed permanent	24		
	7 - Filled permanent	220		
	8 - Missing permanent (due to caries)	16		
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	1470		
	<i>Occlusal Surface</i>			
	0 - Present but excluded	19		
	1 - Sound primary	14031		
	2 - Decayed primary	598		
	3 - Filled primary	1927		
	4 - Unerupted permanent	378		
	5 - Sound permanent	21408		
	6 - Decayed permanent	105		
7 - Filled permanent	741			
8 - Missing permanent (due to caries)	16			
9 - Missing permanent (non-caries, i.e., ortho/trauma)	1470			
73	<i>Lingual Surface</i>		UPR2BLIN	
	0 - Present but excluded	16		
	1 - Sound primary	17510		
	2 - Decayed primary	293		
	3 - Filled primary	1619		
	4 - Unerupted permanent	239		
	5 - Sound permanent	20903		
	6 - Decayed permanent	16		
	7 - Filled permanent	45		
	8 - Missing permanent (due to caries)	15		
9 - Missing permanent (non-caries, i.e., ortho/trauma)	37			
74	<i>Buccal Surface</i>		UPR2BBUC	
	0 - Present but excluded	16		
	1 - Sound primary	19042		
	2 - Decayed primary	66		
	3 - Filled primary	314		
	4 - Unerupted permanent	239		
	5 - Sound permanent	20931		
	6 - Decayed permanent	14		
	7 - Filled permanent	19		
	8 - Missing permanent (due to caries)	15		
9 - Missing permanent (non-caries, i.e., ortho/trauma)	37			
75	<i>Mesial Surface</i>		UPR2BMES	

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 17334 511 1577 239 20682 27 255 15 37	76 <i>Distal Surface</i> UPR2B DIS
77	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) <i>Occlusal Surface</i>	16 18780 165 477 239 20538 25 401 15 37	UPR2BOCC
[78-82]	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Upper Right, 1st Molar	16 14505 1010 3907 239 19813 146 1005 15 37	UPR1MLIN
78	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) <i>Lingual Surface</i>	15 3027 31434 396 5717 92 12	UPR1MLIN
79	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) <i>Buccal Surface</i>	15 3027 36964 139 444 92 12	UPR1MBUC 80 <i>Mesial Surface</i> UPR1M MES

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
81	0 - Present but excluded	15	UPR1MDIS
	4 - Unerupted permanent	3027	
	5 - Sound permanent	36168	
	6 - Decayed permanent	123	
	7 - Filled permanent	1256	
	8 - Missing permanent (due to caries)	92	
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	12	
	<i>Distal Surface</i>		
	82	0 - Present but excluded	
4 - Unerupted permanent		3027	
5 - Sound permanent		37015	
6 - Decayed permanent		150	
7 - Filled permanent		382	
8 - Missing permanent (due to caries)		92	
9 - Missing permanent (non-caries, i.e., ortho/trauma)		12	
<i>Occlusal Surface</i>			
[83-87] 83		0 - Present but excluded	15
	4 - Unerupted permanent	3027	
	5 - Sound permanent	25012	
	6 - Decayed permanent	1432	
	7 - Filled permanent	11103	
	8 - Missing permanent (due to caries)	92	
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	12	
	Upper Right, 2nd Molar		
	84	0 - Present but excluded	19
4 - Unerupted permanent		22246	
5 - Sound permanent		17574	
6 - Decayed permanent		78	
7 - Filled permanent		714	
8 - Missing permanent (due to caries)		17	
9 - Missing permanent (non-caries, i.e., ortho/trauma)		45	
<i>Buccal Surface</i>			
86		0 - Present but excluded	19
	4 - Unerupted permanent	22246	
	5 - Sound permanent	18279	
	6 - Decayed permanent	12	
	7 - Filled permanent	75	
	8 - Missing permanent (due to caries)	17	
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	45	
	<i>Distal Surface</i>		

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
87	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Occlusal Surface	19 22246 18280 26 60 17 45	UPR2MOCC
[88-91]	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Lower Left, Central Incisor	19 22246 14888 509 2969 17 45	
88	Lingual Surface 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	15 2271 0 1 161 38221 3 8 1 12	LOLCILIN 89Buccal SurfaceLOLCI BUC
90	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Mesial Surface	15 2269 2 1 161 38222 3 7 1 12	LOLCIMES
91	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Distal Surface	15 2261 9 2 161 38195 17 20 1 12	LOLCIDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
92	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) BLANK (Data User Work Area)	15 2265 6 1 161 38203 10 19 1 12 40693	FILL87[93-96]Lower Left, Lateral Incisor
93	<i>Lingual Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 5211 1 7 704 34736 2 8 0 8	LOLLILIN
94	<i>Buccal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 5208 3 8 704 34739 3 4 0 8	LOLLIBUC
95	<i>Mesial Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 5198 12 9 704 34715 11 20 0 8	LOLLIMES 96Distal SurfaceLOLLI DIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 5203 9 7 704 34737 5 4 0 8	
97	BLANK (Data User Work Area)	40693	FILL91
{98-101}	Lower Left, Cuspid		
98	<i>Lingual Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	14 14552 26 52 1147 24888 3 5 0 6	LOLCULIN
99	<i>Buccal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	14 14368 119 143 1147 24873 13 10 0 6	LOLCUBUC 100Mesial SurfaceLOLCU MES
101	<i>Distal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	14 14547 46 37 1147 24891 1 4 0 6	LOLCUDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
102	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	14 14470 89 71 1147 24889 0 7 0 6	FILLER2
{103-107}	BLANK (Data User Work Area)		
103	Lower Left, 1st Bicuspid or 1st Primary Molar <i>Lingual Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	17 15160 138 560 611 22984 3 16 15 1189	LOLIBLIN 104 <i>Buccal Surface</i> LOLIB BUC
105	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) <i>Mesial Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	17 15201 124 533 611 22975 11 17 15 1189 17 15150 109 599 611 22980 2 21 15 1189	LOLIBMES
106	<i>Distal Surface</i>		LOLIBDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
107	0 - Present but excluded	17	LOL1BOCC [108-112]Lower Left, 2nd Bicuspid or 2nd Primary Molar
	1 - Sound primary	12849	
	2 - Decayed primary	917	
	3 - Filled primary	2092	
	4 - Unerupted permanent	611	
	5 - Sound permanent	22919	
	6 - Decayed permanent	6	
	7 - Filled permanent	78	
	8 - Missing permanent (due to caries)	15	
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	1189	
	<i>Occlusal Surface</i>		
	0 - Present but excluded	17	
	1 - Sound primary	12174	
	2 - Decayed primary	927	
	3 - Filled primary	2757	
	4 - Unerupted permanent	611	
	5 - Sound permanent	22564	
	6 - Decayed permanent	38	
	7 - Filled permanent	401	
8 - Missing permanent (due to caries)	15		
9 - Missing permanent (non-caries, i.e., ortho/trauma)	1189		
108	<i>Lingual Surface</i>		LOL2BLIN
	0 - Present but excluded	17	
	1 - Sound primary	18267	
	2 - Decayed primary	294	
	3 - Filled primary	731	
	4 - Unerupted permanent	533	
	5 - Sound permanent	20697	
	6 - Decayed permanent	12	
	7 - Filled permanent	32	
	8 - Missing permanent (due to caries)	52	
9 - Missing permanent (non-caries, i.e., ortho/trauma)	58		
109	<i>Buccal Surface</i>		LOL2BBUC
	0 - Present but excluded	17	
	1 - Sound primary	17772	
	2 - Decayed primary	236	
	3 - Filled primary	1284	
	4 - Unerupted permanent	533	
	5 - Sound permanent	20669	
	6 - Decayed permanent	15	
	7 - Filled permanent	57	
	8 - Missing permanent (due to caries)	52	
9 - Missing permanent (non-caries, i.e., ortho/trauma)	58		
110	<i>Mesial Surface</i>		LOL2BMES

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	17 17239 427 1626 533 20614 17 110 52 58	111 <i>Distal Surface</i> LOL2B DIS
112	<i>Occlusal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	17 18236 265 791 533 20402 18 321 52 58	LOL2BOCC
[113-117]	Lower Left, 1st Molar <i>Lingual Surface</i> 0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	17 14139 1128 4025 533 19604 105 1032 52 58	LOL1MLIN
114	<i>Buccal Surface</i> 0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	15 2670 36871 232 573 311 21	LOL1MBUC 115 <i>Mesial Surface</i> LOL1M MES

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
116	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Distal Surface	15 2670 36484 171 1021 311 21	LOL1MDIS
117	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Occlusal Surface	15 2670 36833 211 632 311 21	LOL1MOCC
[118-122]	Lower Left, 2nd Molar		
118	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Lingual Surface	11 20393 20093 33 79 38 46	LOL2MLIN
119	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Buccal Surface	11 20393 18774 315 1116 38 46	LOL2MBUC 120Mesial SurfaceLOL2M MES
121	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Distal Surface	11 20393 19990 24 191 38 46	LOL2MDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
122	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Occlusal Surface	11 20393 20119 36 50 38 46	LOL2MOCC
[123-126]	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Lower Right, Central Incisor	11 20393 15591 725 3889 38 46	LORCILIN
123	Lingual Surface 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	19 2240 4 1 161 38229 3 8 2 26	124Buccal SurfaceLORCI BUC
125	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Mesial Surface	19 2240 3 2 161 38224 8 8 2 26	LORCIMES
126	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Distal Surface	19 2235 9 1 161 38208 14 18 2 26	LORCIDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
127	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) BLANK (Data User Work Area)	19 2235 8 2 161 38207 15 18 2 26	FILLER3[128-131]Lower Right, Lateral Incisor
128	<i>Lingual Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	14 5155 0 5 734 34760 1 7 1 16	LORLILIN
129	<i>Buccal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	14 5151 5 4 734 34754 8 6 1 16	LORLIBUC
130	<i>Mesial Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	14 5139 14 7 734 34738 14 16 1 16	LORLIMES 131Distal SurfaceLORLI DIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	14 5143 11 6 734 34752 6 10 1 16	
132	BLANK (Data User Work Area)	40693	FILL125
[133-136]	Lower Right, Cuspid		
133	<i>Lingual Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 14405 16 67 1191 24981 2 7 1 7	LORCULIN
134	<i>Buccal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 14209 111 168 1191 24972 10 8 1 7	LORCUBUC 135Mesial SurfaceLORCU MES
136	<i>Distal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 14416 37 35 1191 24983 4 3 1 7	LORCUDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 14299 91 98 1191 24977 5 8 1 7	
137	BLANK (Data User Work Area)	40693	FILL129
[138-142]	Lower Right, 1st Bicuspid or 1st Primary Molar		
138	<i>Lingual Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	15 15111 155 557 572 23057 5 12 9 1200	LOR1BLIN 139Buccal SurfaceLOR1B BUC
140	<i>Mesial Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	15 15186 126 511 572 23050 10 14 9 1200	LOR1BMES
141	<i>Distal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	15 15111 113 599 572 23048 5 21 9 1200	LOR1BDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
142	0 - Present but excluded	15	LOR1BOCC [143-147]Lower Right, 2nd Bicuspid or 2nd Primary Molar
	1 - Sound primary	12893	
	2 - Decayed primary	901	
	3 - Filled primary	2029	
	4 - Unerupted permanent	572	
	5 - Sound permanent	22988	
	6 - Decayed permanent	9	
	7 - Filled permanent	77	
	8 - Missing permanent (due to caries)	9	
	9 - Missing permanent (non-caries, i.e., ortho/trauma)	1200	
	<i>Occlusal Surface</i>		
	0 - Present but excluded	15	
	1 - Sound primary	12195	
	2 - Decayed primary	934	
	3 - Filled primary	2694	
	4 - Unerupted permanent	572	
	5 - Sound permanent	22655	
	6 - Decayed permanent	52	
	7 - Filled permanent	367	
8 - Missing permanent (due to caries)	9		
9 - Missing permanent (non-caries, i.e., ortho/trauma)	1200		
143	<i>Lingual Surface</i>		LOR2BLIN
	0 - Present but excluded	16	
	1 - Sound primary	18194	
	2 - Decayed primary	288	
	3 - Filled primary	752	
	4 - Unerupted permanent	516	
	5 - Sound permanent	20805	
	6 - Decayed permanent	8	
	7 - Filled permanent	22	
	8 - Missing permanent (due to caries)	43	
9 - Missing permanent (non-caries, i.e., ortho/trauma)	49		
144	<i>Buccal Surface</i>		LOR2BBUC
	0 - Present but excluded	16	
	1 - Sound primary	17777	
	2 - Decayed primary	230	
	3 - Filled primary	1227	
	4 - Unerupted permanent	516	
	5 - Sound permanent	20785	
	6 - Decayed permanent	16	
	7 - Filled permanent	34	
	8 - Missing permanent (due to caries)	43	
9 - Missing permanent (non-caries, i.e., ortho/trauma)	49		
145	<i>Mesial Surface</i>		LOR2BMES

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 17175 417 1642 516 20726 9 100 43 49	146 <i>Distal Surface</i> LOR2B DIS
147	<i>Occlusal Surface</i> 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 18190 253 791 516 20512 24 299 43 49	LOR2BOCC
[148-152]	Lower Right, 1st Molar		
148	<i>Lingual Surface</i> 0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 14090 1085 4059 516 19723 109 1003 43 49	LOR1MLIN
149	<i>Buccal Surface</i> 0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	18 2746 36925 211 531 241 21	LOR1MBUC 150 <i>Mesial Surface</i> LOR1M MES

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
151	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Distal Surface	18 2746 36404 168 1095 241 21	LOR1MDIS
152	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Occlusal Surface	18 2746 36888 179 600 241 21	LOR1MOCC
[153-157]	Lower Right, 2nd Molar		
153	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Lingual Surface	17 20470 20002 43 73 42 46	LOR2MLIN
154	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Buccal Surface	17 20470 18660 283 1175 42 46	LOR2MBUC 155 <i>Mesial Surface</i> LOR2M MES
156	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Distal Surface	17 20470 19886 20 212 42 46	LOR2MDIS

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
157	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Occlusal Surface	17 20470 20037 39 42 42 46	LOR2MOCC
[158-164]	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Upper Left, Tooth Calls	17 20470 15693 611 3814 42 46	UPLCITC
158	Central Incisor 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	59 3996 285 88 691 35106 196 245 6 21	159Lateral IncisorUPL.LIT C
160	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) Cuspid	21 6815 233 83 1601 31215 220 464 4 37	UPLCUTC
161	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) 1st Bicuspids or 1st Primary Molar	9 17201 285 158 1379 21530 52 50 3 26	UPL1BTC

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
162	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	7 13686 795 1974 387 21497 121 727 17 1482	UPL2BTC
	2nd Bicuspid or 2nd Primary Molar 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	10 14392 1238 3845 223 19821 158 963 19 24	1631st MolarUPL1MTC
164	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	10 2978 24935 1525 11130 103 12	UPL2MTC
	2nd Molar 0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	12 22057 15088 537 2932 22 45	
[165-171]	Upper Right, Tooth Calls		
165	Central Incisor 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	70 4019 261 87 715 35058 197 250 6 30	UPRCITC
	Lateral Incisor		UPRLITC

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	21 6750 209 83 1727 31183 207 466 7 40	167CuspidUPR CUTC
168	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) <i>1st Bicuspid or 1st Primary Molar</i>	12 17214 280 179 1423 21484 29 44 1 27	UPR1BTC
169	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) <i>2nd Bicuspid or 2nd Primary Molar</i>	19 13877 781 1898 378 21392 117 745 16 1470	UPR2BTC
170	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) <i>1st Molar</i>	16 14269 1231 3922 239 19798 155 1011 15 37	UPR1MTC
	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	15 3027 24570 1617 11360 92 12	1712nd MolarUPR2MTC

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	19 22246 14805 554 3007 17 45	
[172-178]	Lower Left, Tooth Calls		
172	Central Incisor 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	15 2255 15 2 161 38176 28 28 1 12	LOLCITC
173	Lateral Incisor 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 5191 19 9 704 34706 17 23 0 8	LOLLITC
174	Cuspid 0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	14 14234 213 183 1147 24862 17 17 0 6	LOLCUTC 1751st Bicuspid or 1st Primary MolarLOL1BTC
176	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) 2nd Bicuspid or 2nd Primary Molar	17 12005 1133 2720 611 22547 48 408 15 1189	LOL2BTC

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	17 13951 1293 4048 533 19583 123 1035 52 58	
177	1st Molar		LOL1MTC
	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	15 2670 24092 1946 11638 311 21	
178	2nd Molar		LOL2MTC
	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	11 20393 15116 952 4137 38 46	[179-185]Lower Right, Tooth Calls
179	Central Incisor		LORCITC
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	19 2225 18 2 161 38188 30 22 2 26	
180	Lateral Incisor		LORLITC
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	14 5127 26 7 734 34726 23 19 1 16	
181	Cuspid		LORCUTC

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	16 14044 214 230 1191 24956 17 17 1 7	1821st Bicuspid or 1st Primary MolarLOR1BTC
183	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) 2nd Bicuspid or 2nd Primary Molar	15 12078 1100 2645 572 22636 66 372 9 1200	LOR2BTC
184	0 - Present but excluded 1 - Sound primary 2 - Decayed primary 3 - Filled primary 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) 1st Molar	16 13911 1261 4062 516 19713 119 1003 43 49	LOR1MTC
185	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma) 2nd Molar	18 2746 24254 1813 11600 241 21	LOR2MTC
	0 - Present but excluded 4 - Unerupted permanent 5 - Sound permanent 6 - Decayed permanent 7 - Filled permanent 8 - Missing permanent (due to caries) 9 - Missing permanent (non-caries, i.e., ortho/trauma)	17 20470 15200 816 4102 42 46	

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
[186-190]	Upper Left, Sealant		
186	<i>Lateral Permanent Incisor, Lingual</i> 0 - No sealant 1 - Sealant present	40683 10	UPLLISE
187	<i>1st Permanent Bicuspid, Occlusal</i> 0 - No sealant 1 - Sealant present	40398 295	UPL1BSE
188	<i>2nd Permanent Bicuspid, Occlusal</i> 0 - No sealant 1 - Sealant present	40404 289	UPL2BSE
189	<i>1st Permanent Molar, Occlusal</i> 0 - No sealant 1 - Sealant present	38816 1877	UPL1MSE
190	<i>2nd Permanent Molar, Occlusal</i> 0 - No sealant 1 - Sealant present	40151 542	UPL2MSE
[191-195]	Upper Right, Sealant		
191	<i>Lateral Permanent Incisor, Lingual</i> 0 - No sealant 1 - Sealant present	40684 9	UPRLISE
192	<i>1st Permanent Bicuspid, Occlusal</i> 0 - No sealant 1 - Sealant present	40391 302	UPR1BSE
193	<i>2nd Permanent Bicuspid, Occlusal</i> 0 - No sealant 1 - Sealant present	40392 301	UPR2BSE
194	<i>1st Permanent Molar, Occlusal</i> 0 - No sealant 1 - Sealant present	38819 1874	UPR1MSE
195	<i>2nd Permanent Molar, Occlusal</i> 0 - No sealant 1 - Sealant present	40155 538	[196-199]Lower Left, Sealant
196	<i>1st Permanent Bicuspid, Occlusal</i> 0 - No sealant 1 - Sealant present	40430 263	LOL1BSE
197	<i>2nd Permanent Bicuspid, Occlusal</i> 0 - No sealant 1 - Sealant present	40392 301	LOL2BSE
198	<i>1st Permanent Molar, Occlusal</i>		LOL1MSE

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
199	0 - No sealant 1 - Sealant present 2nd Permanent Molar, Occlusal	38639 2054	LOL2MSE
[200-203]	0 - No sealant 1 - Sealant present Lower Right, Sealant	40016 677	
200	1st Permanent Bicuspid, Occlusal		LOR1BSE
	0 - No sealant 1 - Sealant present	40403 290	
201	2nd Permanent Bicuspid, Occlusal		LOR2BSE
	0 - No sealant 1 - Sealant present	40384 309	
202	1st Permanent Molar, Occlusal		LOR1MSE
	0 - No sealant 1 - Sealant present	38640 2053	
203	2nd Permanent Molar, Occlusal		LOR2MSE
	0 - No sealant 1 - Sealant present	40027 666	
[204-206]	Upper Left, Sealant		
204	2nd Primary Molar, Any Surface		UPL2DMSE
	0 - No sealant 1 - Sealant present	40652 41	
205	1st Permanent Molar, Lingual		UPL1MLSE
	0 - No sealant 1 - Sealant present	40303 390	2062nd Permanent Molar, LingualUPL2M LSE
[207-209]	Upper Right, Sealant		
207	2nd Primary Molar, Any Surface		UPR2DMSE
	0 - No sealant 1 - Sealant present	40649 44	
208	1st Permanent Molar, Lingual		UPR1MLSE
	0 - No sealant 1 - Sealant present	40264 429	
209	2nd Permanent Molar, Lingual		UPR2MLSE
	0 - No sealant 1 - Sealant present	40622 71	

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
[210-212]	Lower Left, Sealant		
210	<i>2nd Primary Molar, Any Surface</i> 0 - No sealant 1 - Sealant present	40630 63	LOL2DMSE
211	<i>1st Permanent Molar, Buccal</i> 0 - No sealant 1 - Sealant present	40690 3	LOL1MBSE
212	<i>2nd Permanent Molar, Buccal</i> 0 - No sealant 1 - Sealant present	40542 151	LOL2MBSE
[213-215]	Lower Right, Sealant		
213	<i>2nd Primary Molar, Any Surface</i> 0 - No sealant 1 - Sealant present	40627 66	LOR2DMSE
214	<i>1st Permanent Molar, Buccal</i> 0 - No sealant 1 - Sealant present	40692 1	LOR1MBSE
215	<i>2nd Permanent Molar, Buccal</i> 0 - No sealant 1 - Sealant present	40536 157	LOR2MBSE
216	BLANK	40693	BLANKFLD02 17No Fluorosis ExamNOFLE XAM
	Blank - Inapplicable 0 - Not scored 1 - Fluorosis exam completed	2 40473 220	
[218-224]	Upper Left, Fluorosis		
218	<i>Central Incisor</i> Blank - Inapplicable 0 - Normal 1 - Very mild 2 - Mild 3 - Moderate 4 - Severe 5 - Questionable (.5) 9 - Tooth cannot be scored for fluorosis	0 21559 3693 765 218 33 6075 8350	UPLCIFL
219	<i>Lateral Incisor</i>		UPLLIFL

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME	
220	Blank - Inapplicable	0	UPLCUFL	
	0 - Normal	20370		
	1 - Very mild	2806		
	2 - Mild	516		
	3 - Moderate	161		
	4 - Severe	20		
	5 - Questionable (.5)	5333		
	9 - Tooth cannot be scored for fluorosis	11487		
	<i>Cuspid</i>			
	221	Blank - Inapplicable		0
0 - Normal		13991		
1 - Very mild		1558		
2 - Mild		289		
3 - Moderate		85		
4 - Severe		19		
5 - Questionable (.5)		2999		
9 - Tooth cannot be scored for fluorosis		21752		
<i>1st Bicuspid or 1st Primary Molar</i>				
Blank - Inapplicable		0	2222nd Bicuspid or 2nd Primary MolarUPL2BC FL	
0 - Normal	11975			
1 - Very mild	2420			
2 - Mild	508			
3 - Moderate	143			
4 - Severe	37			
5 - Questionable (.5)	4918			
9 - Tooth cannot be scored for fluorosis	20692			
223	Blank - Inapplicable	0		UPL1MOFL
	0 - Normal	11182		
	1 - Very mild	2483		
	2 - Mild	555		
	3 - Moderate	155		
	4 - Severe	29		
	5 - Questionable (.5)	5029		
	9 - Tooth cannot be scored for fluorosis	21260		
	<i>1st Molar</i>			
	224	Blank - Inapplicable	0	
0 - Normal		18092		
1 - Very mild		4434		
2 - Mild		880		
3 - Moderate		237		
4 - Severe		59		
5 - Questionable (.5)		8245		
9 - Tooth cannot be scored for fluorosis		8746		
<i>2nd Molar</i>				
Blank - Inapplicable		0		
0 - Normal	9329			
1 - Very mild	1905			
2 - Mild	391			
3 - Moderate	111			
4 - Severe	21			
5 - Questionable (.5)	4286			
9 - Tooth cannot be scored for fluorosis	24650			

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
[225-231] 225	Upper Right, Fluorosis <i>Central Incisor</i> Blank - Inapplicable 0 - Normal 1 - Very mild 2 - Mild 3 - Moderate 4 - Severe 5 - Questionable (.5) 9 - Tooth cannot be scored for fluorosis	0 21615 3680 760 221 34 6007 8376	UPRCIFL 226 <i>Lateral Incisor</i> UPRLIFL
227	Blank - Inapplicable 0 - Normal 1 - Very mild 2 - Mild 3 - Moderate 4 - Severe 5 - Questionable (.5) 9 - Tooth cannot be scored for fluorosis <i>Cuspid</i> Blank - Inapplicable 0 - Normal 1 - Very mild 2 - Mild 3 - Moderate 4 - Severe 5 - Questionable (.5) 9 - Tooth cannot be scored for fluorosis	0 20239 2747 495 163 18 5370 11661 0 13824 1560 293 90 20 3097 21809	UPRCUFL
228	<i>1st Bicuspid or 1st Primary Molar</i> Blank - Inapplicable 0 - Normal 1 - Very mild 2 - Mild 3 - Moderate 4 - Severe 5 - Questionable (.5) 9 - Tooth cannot be scored for fluorosis	0 11930 2412 503 165 35 4845 20803	UPR1BCFL
229	<i>2nd Bicuspid or 2nd Primary Molar</i> Blank - Inapplicable 0 - Normal 1 - Very mild 2 - Mild 3 - Moderate 4 - Severe 5 - Questionable (.5) 9 - Tooth cannot be scored for fluorosis	0 11229 2473 519 162 33 4991 21286	UPR2BCFL 230 <i>1st Molar</i> UPR1MOFL

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME	
231	Blank - Inapplicable	0	UPR2MOFL	
	0 - Normal	18014		
	1 - Very mild	4407		
	2 - Mild	894		
	3 - Moderate	245		
	4 - Severe	60		
	5 - Questionable (.5)	8295		
	9 - Tooth cannot be scored for fluorosis	8778		
	2nd Molar			
	Blank - Inapplicable	0		
0 - Normal	9338	LOLCIFL		
1 - Very mild	1858			
2 - Mild	386			
3 - Moderate	110			
4 - Severe	25			
5 - Questionable (.5)	4154			
9 - Tooth cannot be scored for fluorosis	24822			
[232-238] Lower Left, Fluorosis				
232 Central Incisor				
Blank - Inapplicable	0		LOLLIFL	
0 - Normal	27335			
1 - Very mild	2182			
2 - Mild	477			
3 - Moderate	128			
4 - Severe	13			
5 - Questionable (.5)	3085			
9 - Tooth cannot be scored for fluorosis	7473			
233 Lateral Incisor				
Blank - Inapplicable	0	234CuspidLOL CUFL		
0 - Normal	25541			
1 - Very mild	2068			
2 - Mild	439			
3 - Moderate	120			
4 - Severe	9			
5 - Questionable (.5)	3177			
9 - Tooth cannot be scored for fluorosis	9339			
235	Blank - Inapplicable		0	LOL1BCFL
	0 - Normal		16701	
	1 - Very mild	1526		
	2 - Mild	318		
	3 - Moderate	101		
	4 - Severe	6		
	5 - Questionable (.5)	2934		
	9 - Tooth cannot be scored for fluorosis	19107		
	1st Bicuspid or 1st Primary Molar			

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME	
236	Blank - Inapplicable	0	LOL2BCFL	
	0 - Normal	12368		
	1 - Very mild	2236		
	2 - Mild	435		
	3 - Moderate	140		
	4 - Severe	19		
	5 - Questionable (.5)	5229		
	9 - Tooth cannot be scored for fluorosis	20266		
	2nd Bicuspid or 2nd Primary Molar			
	237	Blank - Inapplicable		0
0 - Normal		11306		
1 - Very mild		2186		
2 - Mild		424		
3 - Moderate		132		
4 - Severe		16		
5 - Questionable (.5)		5117		
9 - Tooth cannot be scored for fluorosis		21512		
1st Molar				
[239-245] 239		Blank - Inapplicable	0	2382nd MolarLOL2MO FL
	0 - Normal	18669		
	1 - Very mild	4010		
	2 - Mild	735		
	3 - Moderate	216		
	4 - Severe	45		
	5 - Questionable (.5)	7960		
	9 - Tooth cannot be scored for fluorosis	9058		
	Lower Right, Fluorosis			
	240	Blank - Inapplicable	0	
0 - Normal		9425		
1 - Very mild		1884		
2 - Mild		375		
3 - Moderate		111		
4 - Severe		17		
5 - Questionable (.5)		4470		
9 - Tooth cannot be scored for fluorosis		24411		
Central Incisor				
240		Blank - Inapplicable	0	LORLIFL
	0 - Normal	27343		
	1 - Very mild	2158		
	2 - Mild	464		
	3 - Moderate	132		
	4 - Severe	13		
	5 - Questionable (.5)	3066		
	9 - Tooth cannot be scored for fluorosis	7517		
	Lateral Incisor			

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
241	Blank - Inapplicable	0	LORCUFL 2421st Bicuspid or 1st Primary MolarLOR1BC FL
	0 - Normal	25603	
	1 - Very mild	2028	
	2 - Mild	425	
	3 - Moderate	122	
	4 - Severe	10	
	5 - Questionable (.5)	3074	
	9 - Tooth cannot be scored for fluorosis	9431	
	Cuspid		
	Blank - Inapplicable	0	
	0 - Normal	16774	
	1 - Very mild	1512	
	2 - Mild	304	
	3 - Moderate	91	
	4 - Severe	12	
5 - Questionable (.5)	2888		
9 - Tooth cannot be scored for fluorosis	19112		
243	Blank - Inapplicable	0	LOR2BCFL
	0 - Normal	12372	
	1 - Very mild	2203	
	2 - Mild	412	
	3 - Moderate	131	
	4 - Severe	22	
	5 - Questionable (.5)	5296	
	9 - Tooth cannot be scored for fluorosis	20257	
	2nd Bicuspid or 2nd Primary Molar		
	Blank - Inapplicable	0	
	0 - Normal	11345	
	1 - Very mild	2205	
	2 - Mild	420	
	3 - Moderate	126	
	4 - Severe	18	
5 - Questionable (.5)	5115		
9 - Tooth cannot be scored for fluorosis	21464		
244	Blank - Inapplicable	0	LOR1MOFL
	0 - Normal	18779	
	1 - Very mild	3998	
	2 - Mild	763	
	3 - Moderate	212	
	4 - Severe	45	
	5 - Questionable (.5)	7935	
	9 - Tooth cannot be scored for fluorosis	8961	
	1st Molar		
	Blank - Inapplicable	0	
	0 - Normal	9393	
	1 - Very mild	1877	
	2 - Mild	378	
	3 - Moderate	110	
	4 - Severe	22	
5 - Questionable (.5)	4376		
9 - Tooth cannot be scored for fluorosis	24537		
245	Blank - Inapplicable	0	LOR2MOFL
	0 - Normal	9393	
	1 - Very mild	1877	
	2 - Mild	378	
	3 - Moderate	110	
	4 - Severe	22	
	5 - Questionable (.5)	4376	
	9 - Tooth cannot be scored for fluorosis	24537	
	2nd Molar		
	Blank - Inapplicable	0	
	0 - Normal	9393	
	1 - Very mild	1877	
	2 - Mild	378	
	3 - Moderate	110	
	4 - Severe	22	
5 - Questionable (.5)	4376		
9 - Tooth cannot be scored for fluorosis	24537		

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
246	History of Cold Sore(s) on Lips 0 - No 1 - Yes 9 - Not scored/don't know	23864 13921 2908	CSL 247Canker Sores HistoryCSM
248-249	Examiner 0 - No 1 - Yes 9 - Not scored/don't know 01-16 - Examiner Number	21698 15995 3000 40693	EXAMINER
250-251	Recorder 01-18 - Recorder Number	40693	RECORDER
252	Referral for Priority of Care 1 - Student should continue his/her usual dental care 2 - Student should see a dentist at the earliest convenience 3 - Student should see a dentist immediately 9 - Not ascertained	34414 5352 1 926	REFERQUE
253-254	BLANK (Data User work area)		FILL
255*	Fluoride Status 1 - Adjusted 2 - Natural 3 - None 4 - Mixed 6 - Mixed 9 - Not ascertained	7869 927 8970 3951 495 18481	FLUOSTAT
256	BLANK SCHOOL WATER SAMPLE*		FILL2
257-260	Fluoride Blank - Inapplicable 0.02-6.13 - Parts per million (Note: decimal point is 3rd from left)	492 40201	FLUORINE
261-264	Phosphorus Blank - Inapplicable 0004-1988 - Parts per billion	492 40201	PHOSPH 265-269CalciumCALCIUM

* See Notes.

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 04
NUMBER OF CARIES RECORDS = 40,693**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
270-274	Blank - Inapplicable 000.1-137.6 - Parts per million (Note: decimal point is 1st from left) Magnesium	492 40201	MAGNES
275-276	Blank - Inapplicable 000.1-060.7 - Parts per million (Note: decimal point is 1st from left) Arsenic	492 40201	ARSENIC
277-280	Blank - Inapplicable 10 - Parts per billion Lead	492 40201	LEAD
281-283	Blank - Inapplicable 0002-1024 - Parts per billion Molybdenum	578 40115	MOLYBDEN
284-286	Blank - Inapplicable 005-400 - Parts per billion Selenium	578 40115	SELENIUM
287-291	Blank - Inapplicable 010-108 - Parts per billion Strontium	578 40115	STRONTUM
292-294	Blank - Inapplicable 00010-71700 - Parts per billion Vanadium	634 40059	VANADIUM
	Blank - Inapplicable 010-960 - Parts per billion	578 40115	

RECORD 05

Periodontal Assessments

	Page
Gingival Scores	205
Calculus Scores	219
Periodontal Scores	227
Loss of Attachment	251

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	PERIODONTAL ASSESSMENTS*		
01-10	Coded Student ID Number		QID05
11-12	Record Number		REC05
	05 - Periodontal Data	13885	
13-14	Subrecord		SUBREC05
	00 - Subrecord Number	13885	
15	BLANK		BLANK05
[16-29]	Upper Left, Gingival Score		
16	<i>Central Incisor, Buccal</i>		GSUPLCIB
	0 - No bleeding	13020	
	1 - Bleeding	590	
	9 - Cannot be scored	275	
17	<i>Central Incisor, Mesial</i>		GSUPLCIM
	0 - No bleeding	13249	
	1 - Bleeding	333	
	9 - Cannot be scored	303	
18	<i>Lateral Incisor, Buccal</i>		GSUPLLIB
	0 - No bleeding	12637	
	1 - Bleeding	745	
	9 - Cannot be scored	503	
19	<i>Lateral Incisor, Mesial</i>		GSUPLLIM
	0 - No bleeding	12835	
	1 - Bleeding	515	
	9 - Cannot be scored	535	
20	<i>Cuspid, Buccal</i>		GSUPLCUB
	0 - No bleeding	12272	
	1 - Bleeding	783	
	9 - Cannot be scored	830	
21	<i>Cuspid, Mesial</i>		GSUPLCUM
	0 - No bleeding	12139	
	1 - Bleeding	895	
	9 - Cannot be scored	851	
			22 <i>Ist Bicuspid, Buccal</i> GSUPLIBB
	0 - No bleeding	11367	
	1 - Bleeding	640	
	9 - Cannot be scored	1878	
23	<i>Ist Bicuspid, Mesial</i>		GSUPLIBM
	0 - No bleeding	11452	
	1 - Bleeding	536	
	9 - Cannot be scored	1897	

* See Notes.

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
24	<i>2nd Bicuspid, Buccal</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	12317 459 1109	GSUPL2BB
25	<i>2nd Bicuspid, Mesial</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	12273 481 1131	GSUPL2BM
26	<i>1st Molar, Buccal</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	11681 1044 1160	GSUPL1MB
27	<i>1st Molar, Mesial</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	11571 1140 1174	GSUPL1MM
28	<i>2nd Molar, Buccal</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	11441 1348 1096	GSUPL2MB
29	<i>2nd Molar, Mesial</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	11692 1080 1113	GSUPL2MM [30-43]Upper Right, Gingival Score
30	<i>Central Incisor, Buccal</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	13016 586 283	GSUPRCIB
31	<i>Central Incisor, Mesial</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	13109 469 307	GSUPRCIM
32	<i>Lateral Incisor, Buccal</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	12430 933 522	GSUPRLIB
33	<i>Lateral Incisor, Mesial</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	12526 813 546	GSUPRLIM
34	<i>Cuspid, Buccal</i>		GSUPRCUB

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
35	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>Cuspid, Mesial</i>	11999 1070 816	GSUPRCUM
36	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>1st Bicuspid, Buccal</i>	11999 1046 840	GSUPR1BB
37	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>1st Bicuspid, Mesial</i>	11319 682 1884	GSUPR1BM
	0 - No bleeding 1 - Bleeding 9 - Cannot be scored	11384 601 1900	382nd <i>Bicuspid, Buccal</i> GSUP R2BB
39	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>2nd Bicuspid, Mesial</i>	12234 506 1145	GSUPR2BM
40	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>1st Molar, Buccal</i>	12199 517 1169	GSUPR1MB
41	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>1st Molar, Mesial</i>	11660 1094 1131	GSUPR1MM
42	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>2nd Molar, Buccal</i>	11722 1011 1152	GSUPR2MB
43	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>2nd Molar, Mesial</i>	11597 1157 1131	GSUPR2MM
[44-57]	Lower Left, Gingival Score		
44	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>Central Incisor, Buccal</i>	11914 805 1166	GSLOLCIB
45	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>Central Incisor, Mesial</i>	12268 1174 443	GSLOLCIM

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	0 - No bleeding 1 - Bleeding 9 - Cannot be scored	12633 772 480	46 <i>Lateral Incisor, Buccal</i> GSLO LLIB
47	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>Lateral Incisor, Mesial</i>	12247 1181 457	GSLOLLIM
48	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>Cuspid, Buccal</i>	12591 809 485	GSLOLCUB
49	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>Cuspid, Mesial</i>	12441 893 551	GSLOLCUM
50	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>1st Bicuspid, Buccal</i>	12351 950 584	GSLOL1BB
51	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>1st Bicuspid, Mesial</i>	11650 638 1597	GSLOL1BM
52	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>2nd Bicuspid, Buccal</i>	11884 371 1630	GSLOL2BB
53	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>2nd Bicuspid, Mesial</i>	12311 338 1236	GSLOL2BM
54	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>1st Molar, Buccal</i>	12448 166 1271	GSLOL1MB
	0 - No bleeding 1 - Bleeding 9 - Cannot be scored	12025 594 1266	55 <i>1st Molar, Mesial</i> GSLO L1MM
56	0 - No bleeding 1 - Bleeding 9 - Cannot be scored <i>2nd Molar, Buccal</i>	12272 319 1294	GSLOL2MB
	0 - No bleeding 1 - Bleeding 9 - Cannot be scored	11963 686 1236	

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
57	<i>2nd Molar, Mesial</i>		GSLOL2MM
	0 - No bleeding	12216	
	1 - Bleeding	397	
	9 - Cannot be scored	1272	
[58-71]	Lower Right, Gingival Score		
58	<i>Central Incisor, Buccal</i>		GSLORCIB
	0 - No bleeding	12100	
	1 - Bleeding	1295	
	9 - Cannot be scored	490	
59	<i>Central Incisor, Mesial</i>		GSLORCIM
	0 - No bleeding	12441	
	1 - Bleeding	918	
	9 - Cannot be scored	526	
60	<i>Lateral Incisor, Buccal</i>		GSLORLIB
	0 - No bleeding	12052	
	1 - Bleeding	1356	
	9 - Cannot be scored	477	
61	<i>Lateral Incisor, Mesial</i>		GSLORLIM
	0 - No bleeding	12518	
	1 - Bleeding	852	
	9 - Cannot be scored	515	
62	<i>Cuspid, Buccal</i>		GSLORCUB
	0 - No bleeding	12321	
	1 - Bleeding	1017	
	9 - Cannot be scored	547	
			63 <i>Cuspid, Mesial</i> GSLORCUM
	0 - No bleeding	12326	
	1 - Bleeding	971	
	9 - Cannot be scored	588	
64	<i>1st Bicuspid, Buccal</i>		GSLOR1BB
	0 - No bleeding	11590	
	1 - Bleeding	681	
	9 - Cannot be scored	1614	
65	<i>1st Bicuspid, Mesial</i>		GSLOR1BM
	0 - No bleeding	11832	
	1 - Bleeding	400	
	9 - Cannot be scored	1653	
66	<i>2nd Bicuspid, Buccal</i>		GSLOR2BB
	0 - No bleeding	12288	
	1 - Bleeding	391	
	9 - Cannot be scored	1206	
67	<i>2nd Bicuspid, Mesial</i>		GSLOR2BM
	0 - No bleeding	12475	
	1 - Bleeding	164	
	9 - Cannot be scored	1246	

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
68	<i>1st Molar, Buccal</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	11996 686 1203	GSLOR1MB
69	<i>1st Molar, Mesial</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	12334 307 1244	GSLOR1MM
70	<i>2nd Molar, Buccal</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	11797 803 1285	GSLOR2MB
71	<i>2nd Molar, Mesial</i> 0 - No bleeding 1 - Bleeding 9 - Cannot be scored	12166 400 1319	GSLOR2MM [72- 78]Upper Left, Calculus Score
72	<i>Central Incisor</i> 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	13131 230 243 281	CASUPLCI
73	<i>Lateral Incisor</i> 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	12805 283 306 491	CASUPLLI
74	<i>Cuspid</i> 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	12560 251 263 811	CASUPLCU
75	<i>1st Bicuspid</i> 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	11618 190 224 1853	CASUPL1B
76	<i>2nd Bicuspid</i> 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	12241 332 234 1078	CASUPL2B
77	<i>1st Molar</i>		CASUPL1M

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
78	0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	9829 1983 952 1121	CASUPL2M
	2nd Molar 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	10461 1591 753 1080	[79-85]Upper Right, Calculus Score
79	Central Incisor 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	13063 278 252 292	CASUPRCI
80	Lateral Incisor 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	12606 414 358 507	CASUPRLI
81	Cuspid 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	12350 400 331 804	CASUPRCU
82	1st Bicuspid 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	11607 184 230 1864	CASUPR1B
83	2nd Bicuspid 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	12235 272 262 1116	CASUPR2B
84	1st Molar 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	9879 1906 1002 1098	CASUPR1M
85	2nd Molar 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	10533 1445 786 1121	CASUPR2M [86-92]Lower Left, Calculus Score

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
86	Central Incisor 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	8496 3320 1643 426	CASLOLCI
87	Lateral Incisor 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	9199 2836 1417 433	CASLOLLI
88	Cuspid 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	11107 1462 796 520	CASLOLCU
89	1st Bicuspid 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	11777 298 233 1577	CASLOLIB
90	2nd Bicuspid 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	12427 129 127 1202	CASLOL2B
91	1st Molar 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	12250 213 185 1237	CASLOL1M
92	2nd Molar 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	12180 286 195 1224	CASLOL2M [93- 99]Lower Right, Calculus Score
93	Central Incisor 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	8528 3355 1544 458	CASLORCI
94	Lateral Incisor 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	9144 2912 1375 454	CASLORLI

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
95	<i>Cuspid</i> 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	11085 1437 838 525	CASLORCU
96	<i>1st Bicuspid</i> 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	11729 299 269 1588	CASLOR1B
97	<i>2nd Bicuspid</i> 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	12431 127 151 1176	CASLOR2B
98	<i>1st Molar</i> 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	12248 219 245 1173	CASLOR1M
99	<i>2nd Molar</i> 0 - Absence of calculus 1 - Supragingival but no subgingival 2 - Supragingival and subgingival or subgingival only 9 - Cannot be assessed	12120 248 245 1272	CASLOR2M

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
[100-109]	Upper Left, Central Incisor, Periodontal Score		
100-102	<i>Buccal, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13604 281	PSULCBFC
103-104	<i>Buccal, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13604 281	PSULCBFP
105-107	<i>Mesial, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13691 194	PSULCMFC
108-109	<i>Mesial, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13691 194	PSULCMFP
[110-119]	Upper Left, Lateral Incisor, Periodontal Score		
110-112	<i>Buccal, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13349 536	PSULLBFC
113-114	<i>Buccal, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13349 536	PSULLBFP
115-117	<i>Mesial, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13521 364	PSULLMFC
118-119	<i>Mesial, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13521 364	PSULLMFP
			[120-129] Upper Left, Cuspid, Periodontal Score
120-122	<i>Buccal, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13033 852	PSULCUBC
123-124	<i>Buccal, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13033 852	PSULCUBP

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
125-127	<i>Mesial, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13227 658	PSULCUMC
128-129	<i>Mesial, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13227 658	PSULCUMP
[130-139]	Upper Left, 1st Bicuspid, Periodontal Score		
130-132	<i>Buccal, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	11979 1906	PSUL1BBC
133-134	<i>Buccal, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	11979 1906	PSUL1BBP
135-137	<i>Mesial, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12304 1581	PSUL1BMC
138-139	<i>Mesial, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	12304 1581	PSUL1BMP
[140-149]	Upper Left, 2nd Bicuspid, Periodontal Score		
140-142	<i>Buccal, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12737 1148	PSUL2BBC 143- 144 <i>Buccal, FGM/Pocket</i> PSUL2BBP
145-147	<i>Mesial, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12737 1148	PSUL2BMC
148-149	<i>Mesial, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13140 745	PSUL2BMP
[150-159]	Upper Left, 1st Molar, Periodontal Score		
150-152	<i>Buccal, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13140 745 12709 1176	PSUL1MBC

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
153-154	Buccal, FGM/Pocket 00-12 - Free gingival margin/pocket 99 - Not ascertained	12709 1176	PSUL1MBP
155-157	Mesial, FGM/CEJ -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13102 783	PSUL1MMC
158-159	Mesial, FGM/Pocket 00-12 - Free gingival margin/pocket 99 - Not ascertained	13102 783	PSUL1MMP
[160-169]	Upper Left, 2nd Molar, Periodontal Score		
160-162	Buccal, FGM/CEJ -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12792 1093	PSUL2MBC
163-164	Buccal, FGM/Pocket 00-12 - Free gingival margin/pocket 99 - Not ascertained	12792 1093	PSUL2MBP 165-167 Mesial, FGM/CEJ PS UL2MMC
168-169	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained Mesial, FGM/Pocket 00-12 - Free gingival margin/pocket 99 - Not ascertained	12865 1020 12865 1020	PSUL2MMP
[170-179]	Upper Right, Central Incisor, Periodontal Score		
170-172	Buccal, FGM/CEJ -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13603 282	PSURCBFC
173-174	Buccal, FGM/Pocket 00-12 - Free gingival margin/pocket 99 - Not ascertained	13603 282	PSURCBFP
175-177	Mesial, FGM/CEJ -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13687 198	PSURCMFC
178-179	Mesial, FGM/Pocket 00-12 - Free gingival margin/pocket 99 - Not ascertained	13687 198	PSURCMFP

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
[180-189]	Upper Right, Lateral Incisor, Periodontal Score		
180-182	Buccal, FGM/CEJ -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13340 545	PSURLBFC
183-184	Buccal, FGM/Pocket 00-12 - Free gingival margin/pocket 99 - Not ascertained	13340 545	PSURLBFP
185-187	Mesial, FGM/CEJ -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13507 378	PSURLMFC 188-189Mesial, FGM/Pocket PSURLMFP
	00-12 - Free gingival margin/pocket 99 - Not ascertained	13507 378	
[190-199]	Upper Right, Cuspid, Periodontal Score		
190-192	Buccal, FGM/CEJ -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13044 841	PSURCUBC
193-194	Buccal, FGM/Pocket 00-12 - Free gingival margin/pocket 99 - Not ascertained	13044 841	PSURCUBP
195-197	Mesial, FGM/CEJ -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13238 647	PSURCUMC
198-199	Mesial, FGM/Pocket 00-12 - Free gingival margin/pocket 99 - Not ascertained	13238 647	PSURCUMP
[200-209]	Upper Right, 1st Bicuspid, Periodontal Score		
200-202	Buccal, FGM/CEJ -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	11970 1915	PSUR1BBC
203-204	Buccal, FGM/Pocket 00-12 - Free gingival margin/pocket 99 - Not ascertained	11970 1915	PSUR1BBP
205-207	Mesial, FGM/CEJ -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12294 1591	PSUR1BMC

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
208-209	<i>Mesial, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	12294 1591	PSUR1BMP [210-219]Upper Right, 2nd Bicuspid, Periodontal Score
210-212	<i>Buccal, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12714 1171	PSUR2BBC
213-214	<i>Buccal, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	12714 1171	PSUR2BBP
215-217	<i>Mesial, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13108 777	PSUR2BMC
218-219	<i>Mesial, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13108 777	PSUR2BMP
[220-229]	Upper Right, 1st Molar, Periodontal Score		
220-222	<i>Buccal, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12738 1147	PSUR1MBC
223-224	<i>Buccal, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	12738 1147	PSUR1MBP
225-227	<i>Mesial, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13127 758	PSUR1MMC
228-229	<i>Mesial, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13127 758	PSUR1MMP [230-239]Upper Right, 2nd Molar, Periodontal Score
230-232	<i>Buccal, FGM/CEJ</i>		PSUR2MBC

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
233-234	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained Buccal, FGM/Pocket	12754 1131	PSUR2MBP
235-237	00-12 - Free gingival margin/pocket 99 - Not ascertained Mesial, FGM/CEJ	12754 1131	PSUR2MMC
238-239	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained Mesial, FGM/Pocket	12825 1060	PSUR2MMP
[240-249]	00-12 - Free gingival margin/pocket 99 - Not ascertained Lower Left, Central Incisor, Periodontal Score	12825 1060	
240-242	Buccal, FGM/CEJ		PSLLCBFC
243-244	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained Buccal, FGM/Pocket	13379 506	PSLLCBFP
245-247	00-12 - Free gingival margin/pocket 99 - Not ascertained Mesial, FGM/CEJ	13379 506	PSLLCMFC
248-249	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained Mesial, FGM/Pocket	13569 316	PSLLCMFP
	00-12 - Free gingival margin/pocket 99 - Not ascertained	13569 316	[250-259]Lower Left, Lateral Incisor, Periodontal Score
250-252	Buccal, FGM/CEJ		PSLLLBFC
253-254	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained Buccal, FGM/Pocket	13378 507	PSLLLBFP
255-257	00-12 - Free gingival margin/pocket 99 - Not ascertained Mesial, FGM/CEJ	13378 507	PSLLLMFC

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
258-259	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained <i>Mesial, FGM/Pocket</i>	13578 307	PSLLLMFP
[260-269]	Lower Left, Cuspid, Periodontal Score		
260-262	00-12 - Free gingival margin/pocket 99 - Not ascertained <i>Buccal, FGM/CEJ</i>	13578 307	PSLLCUBC
263-264	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained <i>Buccal, FGM/Pocket</i>	13306 579	PSLLCUBP
265-267	00-12 - Free gingival margin/pocket 99 - Not ascertained <i>Mesial, FGM/CEJ</i>	13305 580	PSLLCUMC
268-269	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained <i>Mesial, FGM/Pocket</i>	13520 365	PSLLCUMP
	00-12 - Free gingival margin/pocket 99 - Not ascertained	13520 365	[270-279] Lower Left, 1st Bicuspid, Periodontal Score
270-272	<i>Buccal, FGM/CEJ</i>		PSLL1BBC
	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12246 1639	
273-274	<i>Buccal, FGM/Pocket</i>		PSLL1BBP
	00-12 - Free gingival margin/pocket 99 - Not ascertained	12246 1639	
275-277	<i>Mesial, FGM/CEJ</i>		PSLL1BMC
	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12553 1332	
278-279	<i>Mesial, FGM/Pocket</i>		PSLL1BMP
	00-12 - Free gingival margin/pocket 99 - Not ascertained	12553 1332	
[280-289]	Lower Left, 2nd Bicuspid, Periodontal Score		
280-282	<i>Buccal, FGM/CEJ</i>		PSLL2BBC

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
283-284	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained Buccal, FGM/Pocket	12614 1271	PSLL2BBP
285-287	00-12 - Free gingival margin/pocket 99 - Not ascertained Mesial, FGM/CEJ	12614 1271	PSLL2BMC
288-289	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained Mesial, FGM/Pocket	12975 910	PSLL2BMP
[290-299]	00-12 - Free gingival margin/pocket 99 - Not ascertained	12975 910	
290-292	Lower Left, 1st Molar, Periodontal Score Buccal, FGM/CEJ		PSLL1MBC
	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12607 1278	293- 294Buccal, FGM/Pocket PSLL1MBP
295-297	00-12 - Free gingival margin/pocket 99 - Not ascertained Mesial, FGM/CEJ	12607 1278	PSLL1MMC
298-299	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained Mesial, FGM/Pocket	12985 900	PSLL1MMP
[300-309]	00-12 - Free gingival margin/pocket 99 - Not ascertained	12985 900	
300-302	Lower Left, 2nd Molar, Periodontal Score Buccal, FGM/CEJ		PSLL2MBC
303-304	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained Buccal, FGM/Pocket	12661 1224	PSLL2MBP
305-307	00-12 - Free gingival margin/pocket 99 - Not ascertained Mesial, FGM/CEJ	12661 1224	PSLL2MMC
308-309	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained Mesial, FGM/Pocket	12770 1115	PSLL2MMP
	00-12 - Free gingival margin/pocket 99 - Not ascertained	12770 1115	

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
[310-319]	Lower Right, Central Incisor, Periodontal Score		
310-312	<i>Buccal, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13359 526	PSLRCBFC
313-314	<i>Buccal, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13359 526	PSLRCBFP 315-317 <i>Mesial, FGM/CEJ</i> PS LRCMFC
318-319	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained <i>Mesial, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13557 328 13557 328	PSLRMFC PSLRMFP
[320-329]	Lower Right, Lateral Incisor, Periodontal Score		
320-322	<i>Buccal, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13356 529	PSLRLBFC
323-324	<i>Buccal, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13356 529	PSLRLBFP
325-327	<i>Mesial, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13572 313	PSLRLMFC
328-329	<i>Mesial, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13572 313	PSLRLMFP
[330-339]	Lower Right, Cuspid, Periodontal Score		
330-332	<i>Buccal, FGM/CEJ</i> -12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13313 572	PSLRCUBC
333-334	<i>Buccal, FGM/Pocket</i> 00-12 - Free gingival margin/pocket 99 - Not ascertained	13313 572	PSLRCUBP
335-337	<i>Mesial, FGM/CEJ</i>		PSLRCUMB

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13536 349	338-339 <i>Mesial, FGM/Pocket</i> PSLRCUMP
[340-349]	00-12 - Free gingival margin/pocket 99 - Not ascertained Lower Right, 1st Bicuspid, Periodontal Score	13536 349	
340-342	<i>Buccal, FGM/CEJ</i>		PSLR1BBC
	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12242 1643	
343-344	<i>Buccal, FGM/Pocket</i>		PSLR1BBP
	00-12 - Free gingival margin/pocket 99 - Not ascertained	12242 1643	
345-347	<i>Mesial, FGM/CEJ</i>		PSLR1MBC
	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12547 1338	
348-349	<i>Mesial, FGM/Pocket</i>		PSLR1MBP
	00-12 - Free gingival margin/pocket 99 - Not ascertained	12547 1338	
[350-359]	Lower Right, 2nd Bicuspid, Periodontal Score		
350-352	<i>Buccal, FGM/CEJ</i>		PSLR2BBC
	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	12639 1246	
353-354	<i>Buccal, FGM/Pocket</i>		PSLR2BBP
	00-12 - Free gingival margin/pocket 99 - Not ascertained	12639 1246	
355-357	<i>Mesial, FGM/CEJ</i>		PSLR2MBC
	-12 to 12 - Free gingival margin/cemento enamel junction 99 - Not ascertained	13006 879	
358-359	<i>Mesial, FGM/Pocket</i>		PSLR2MBP
	00-12 - Free gingival margin/pocket 99 - Not ascertained	13006 879	[360-369] Lower Right, 1st Molar, Periodontal Score
360-362	<i>Buccal, FGM/CEJ</i>		PSLR1MBC

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
363-364	-12 to 12 - Free gingival margin/cemento enamel junction	12668	PSLR1MBP
	99 - Not ascertained	1217	
365-367	Buccal, FGM/Pocket		
	00-12 - Free gingival margin/pocket	12668	PSLR1MMC
	99 - Not ascertained	1217	
368-369	Mesial, FGM/CEJ		
	-12 to 12 - Free gingival margin/cemento enamel junction	13045	PSLR1MMP
	99 - Not ascertained	840	
[370-379]	Lower Right, 2nd Molar, Periodontal Score		
370-372	Buccal, FGM/CEJ		PSLR2MBC
	-12 to 12 - Free gingival margin/cemento enamel junction	12614	
	99 - Not ascertained	1271	
373-374	Buccal, FGM/Pocket		PSLR2MBP
	00-12 - Free gingival margin/pocket	12614	
	99 - Not ascertained	1271	
375-377	Mesial, FGM/CEJ		PSLR2MMC
	-12 to 12 - Free gingival margin/cemento enamel junction	12729	
	99 - Not ascertained	1156	
378-379	Mesial, FGM/Pocket		PSLR2MMP
	00-12 - Free gingival margin/pocket	12729	
	99 - Not ascertained	1156	
[380-407]	Upper Left, Loss of Attachment		
380-381	Central Incisor, Buccal		PSULCBL 382- 383Central Incisor, MesialPSUL CMB
	00-24- Millimeters	13604	
	99- Not ascertained	281	
384-385	00-24 - Millimeters	13691	PSULLBL
	99 - Not ascertained	194	
386-387	Lateral Incisor, Buccal		
	00-24 - Millimeters	13349	PSULLML
	99 - Not ascertained	536	
	Lateral Incisor, Mesial		
	00-24 - Millimeters	13521	
	99 - Not ascertained	364	

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
388-389	<i>Cuspid, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	13033 852	PSULCUBL
390-391	<i>Cuspid, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13227 658	PSULCUML
392-393	<i>1st Bicuspid, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	11979 1906	PSUL1BBL
394-395	<i>1st Bicuspid, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	12304 1581	PSUL1BML
396-397	<i>2nd Bicuspid, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	12737 1148	PSUL2BBL
398-399	<i>2nd Bicuspid, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13140 745	PSUL2BML
400-401	<i>1st Molar, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	12709 1176	PSUL1MBL
402-403	<i>1st Molar, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13102 783	PSUL1MML 404-4052nd Molar, BuccalPSUL 2MBL
406-407	00-24 - Millimeters 99 - Not ascertained <i>2nd Molar, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	12792 1093 12865 1020	PSUL2MML
[408-435]	Upper Right, Loss of Attachment		
408-409	<i>Central Incisor, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	13603 282	PSURCBL
410-411	<i>Central Incisor, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13687 198	PSURCML
412-413	<i>Lateral Incisor, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	13340 545	PSURLBL

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
414-415	<i>Lateral Incisor, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13507 378	PSURLML
416-417	<i>Cuspid, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	13044 841	PSURCUBL
418-419	<i>Cuspid, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13238 647	PSURCUML
420-421	<i>1st Bicuspid, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	11970 1915	PSUR1BBL
422-423	<i>1st Bicuspid, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	12294 1591	PSUR1BML
424-425	<i>2nd Bicuspid, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	12714 1171	PSUR2BBL 426-427 2nd Bicuspid, Mesial PSUR2BML
	00-24 - Millimeters 99 - Not ascertained	13108 777	
428-429	<i>1st Molar, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	12738 1147	PSUR1MBL
430-431	<i>1st Molar, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13127 758	PSUR1MML
432-433	<i>2nd Molar, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	12754 1131	PSUR2MBL
434-435	<i>2nd Molar, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	12825 1060	PSUR2MML
[436-463]	Lower Left, Loss of Attachment		
436-437	<i>Central Incisor, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	13379 506	PSLLCBL
438-439	<i>Central Incisor, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13569 316	PSLLCML

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
440-441	<i>Lateral Incisor, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	13378 507	PSLLLBL
442-443	<i>Lateral Incisor, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13578 307	PSLLML
444-445	<i>Cuspid, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	13305 580	PSLLCUBL
446-447	<i>Cuspid, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13520 365	PSLLCUML 448-449 <i>Ist Bicuspid, Buccal</i> PSLL1BBL
	00-24 - Millimeters 99 - Not ascertained	12246 1639	
450-451	<i>Ist Bicuspid, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	12553 1332	PSLL1BML
452-453	<i>2nd Bicuspid, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	12614 1271	PSLL2BBL
454-455	<i>2nd Bicuspid, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	12975 910	PSLL2BML
456-457	<i>Ist Molar, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	12607 1278	PSLL1MBL
458-459	<i>Ist Molar, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	12985 900	PSLL1MML
460-461	<i>2nd Molar, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	12661 1224	PSLL2MBL
462-463	<i>2nd Molar, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	12770 1115	PSLL2MML
[464-491]	Lower Right, Loss of Attachment		
464-465	<i>Central Incisor, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	13359 526	PSLRCBL

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 05
NUMBER OF PERIODONTAL RECORDS = 13,885**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
466-467	<i>Central Incisor, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13557 328	PSLRCML
468-469	<i>Lateral Incisor, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	13356 529	PSLRLBL 470- 471 <i>Lateral Incisor, Mesial</i> PSLR LML
	00-24 - Millimeters 99 - Not ascertained	13572 313	
472-473	<i>Cuspid, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	13313 572	PSLRCUBL
474-475	<i>Cuspid, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13536 349	PSLRCUML
476-477	<i>1st Bicuspid, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	12242 1643	PSLR1BBL
478-479	<i>1st Bicuspid, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	12547 1338	PSLR1MBL
480-481	<i>2nd Bicuspid, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	12639 1246	PSLR2BBL
482-483	<i>2nd Bicuspid, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13006 879	PSLR2BML
484-485	<i>1st Molar, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	12668 1217	PSLR1MBL
486-487	<i>1st Molar, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	13045 840	PSLR1MML
488-489	<i>2nd Molar, Buccal</i> 00-24 - Millimeters 99 - Not ascertained	12614 1271	PSLR2MBL
490-491	<i>2nd Molar, Mesial</i> 00-24 - Millimeters 99 - Not ascertained	12729 1156	PSLR2MML

RECORD 06
Tobacco Data

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 06
NUMBER OF TOBACCO RECORDS = 20,439**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	TOBACCO DATA*		
1-10	Coded Student ID Number		QID06
11-12	Record Number		REC06
	06 - Tobacco Data	20439	
13-14	Subrecord Number		SUBREC06
	00 - Subrecord Number	20439	
15-17	This Field Always Blank		BLANK06
18	Have You Ever Smoked at Least 100 Cigarettes in Your Entire Life?		Q1
	1 - Yes	1968	
	2 - No	18407	
	7 - Refused	0	
	8 - Don't know	19	
	9 - Not ascertained	45	
19-20	How Old Were You When You First Started Smoking Cigarettes Fairly Regularly?		Q2
	Blank - Inapplicable	18471	
	00 - Never smoked regularly	89	
	05-19 - Age	1844	
	97 - Refused	0	
	98 - Don't know	0	
	99 - Not ascertained	35	
21	Do You Smoke Now?		Q3
	Blank - Inapplicable	18560	
	1 - Yes	1314	
	2 - No	526	
	7 - Refused	0	
	8 - Don't know	0	
	9 - Not ascertained	39	
			22-23 How Long Has It Been Since You Stopped Smoking Cigarettes?
			Q4
	Blank - Inapplicable	19874	
	01-31 - Days, weeks, months, or years	487	
	98 - Don't know	1	
	99 - Not ascertained	77	
24	In Days, Weeks, Months, or Years Since Stopping?		Q4DWMY
	Blank - Inapplicable	19874	
	1 - Day	20	
	2 - Week	34	
	3 - Month	221	
	4 - Year	211	
	7 - Refused	0	
	8 - Don't know	1	
	9 - Not ascertained	78	
25-27	On Average, How Many Cigarettes Do You Smoke in a Day?		Q5

* See Notes.

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 06
NUMBER OF TOBACCO RECORDS = 20,439**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME	
28	Blank - Inapplicable	19125	Q6	
	000 - Less than one	27		
	001-100 - Actual number smoked	1285		
	997 - Refused	0		
	998 - Don't know	1		
	999 - Not ascertained	1		
	Have You Ever Used Any Other Form of Tobacco, such as Snuff or Chewing Tobacco?			
	1 - Yes	1749		
	2 - No	17868		
	3 - Only used once	811		
7 - Refused	0	29Have You Used Snuff?Q7SN F		
8 - Don't know	1			
9 - Not Ascertained	10			
30	Blank - Inapplicable		18690	Q7CHTO
	1 - Yes		849	
	2 - No		900	
	7 - Refused		0	
	8 - Don't know		0	
	9 - Not ascertained		0	
	Have You Used Chewing Tobacco?			
	Blank - Inapplicable	18690		
	1 - Yes	1140		
	2 - No	609		
7 - Refused	0	Q7CI		
8 - Don't know	0			
9 - Not ascertained	0			
31	Did/Do You Smoke a Cigar?			
	Blank - Inapplicable		18690	
	1 - Yes		90	
	2 - No		1659	
	7 - Refused		0	
	8 - Don't know		0	
	9 - Not ascertained		0	
	32	Did/Do You Smoke a Pipe?		
		Blank - Inapplicable	18690	
		1 - Yes	36	
2 - No		1713		
7 - Refused		0		
8 - Don't know		0		
9 - Not ascertained		0		
33		Other Forms of Tobacco?		
		Blank - Inapplicable	18690	
		1 - Yes	20	
	2 - No	1729		
	7 - Refused	0		
	8 - Don't know	0		
	9 - Not ascertained	0		
		Blank - Inapplicable	18690	34Total Students Reporting Either Snuff or Chewing Tobacco UsageBOXA
		1 - Snuff or chewing tobacco	1721	
		2 - Otherwise	28	
9 - Not ascertained		0		

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 06
NUMBER OF TOBACCO RECORDS = 20,439**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
35-36	How Old Were You When You First Started Using Snuff? Blank - Inapplicable 02-19 - Age 97 - Refused 98 - Don't know 99 - Not ascertained	19590 847 0 1 1	Q8A
37	Do You Use Snuff Now? Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	19590 407 442 0 0 0	Q9A
38-39	How Many Years or Months Did You Use Snuff? Blank - Inapplicable 00 - Less than one month 01-31 - Years or months of usage 97 - Refused 98 - Don't know 99 - Not ascertained	19997 92 346 0 0 4	Q10A
40	In Months or Years? Blank - Inapplicable 0 - Less than one month 1 - Month 2 - Year 7 - Refused 8 - Don't know 9 - Not ascertained	19997 92 205 142 0 1 2	Q10AMY 41-42How Many Years or Months Have You Used Snuff?Q11A
	Blank - Inapplicable 00 - Less than one month 01-31 - Years or months of usage 97 - Refused 98 - Don't know 99 - Not ascertained	20032 3 388 0 1 15	
43	In Months or Years? Blank - Inapplicable 0 - Less than one month 1 - Month 2 - Year 7 - Refused 8 - Don't know 9 - Not ascertained	20032 3 65 337 0 2 0	Q11AMY
44-45	How Many Days a Week or Month (Do/Did) You Use Snuff? Blank - Inapplicable 00 - Less than once a month 01-31 - Number of days 97 - Refused 98 - Don't know 99 - Not ascertained	19590 53 786 0 1 9	Q12A
46	Days Per Week or Per Month?		Q12AWM

NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 06
NUMBER OF TOBACCO RECORDS = 20,439

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
47-48	Blank - Inapplicable 0 - Less than once a month 1 - Days per week 2 - Days per month 7 - Refused 8 - Don't know 9 - Not ascertained	19590 53 692 94 0 2 8	Q13A
	On the Days You Use(d) Snuff How Many Times (Do/Did) You Place Fresh Tobacco in Your Mouth? Blank - Inapplicable 01-50 - Actual times per day 97 - Refused 98 - Don't know 99 - Not ascertained	19590 837 0 8 4	49-51When You Use(d) Snuff, How Long (Do/Did) You Leave It in Your Mouth?Q14 A
52-53	Blank - Inapplicable 001-996 - Actual minutes 997 - Refused 998 - Don't know 999 - Not ascertained	19590 841 0 5 3	Q8B
	How Old Were You When You First Started Using Chewing Tobacco? Blank - Inapplicable 02-19 - Age 97 - Refused 98 - Don't know 99 - Not ascertained	19299 1139 0 1 0	
54	Do You Use Chewing Tobacco Now? Blank - Inapplicable 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	19299 389 749 0 0 2	Q9B
	How Many Years or Months Did You Use Chewing Tobacco? Blank - Inapplicable 00 - Less than one month 01-31 - Years or months of usage 97 - Refused 98 - Don't know 99 - Not ascertained	19688 185 559 0 0 7	Q10B
57	In Months or Years? Blank - Inapplicable 0 - Less than 1 month 1 - Month 2 - Year 7 - Refused 8 - Don't know 9 - Not ascertained	19688 185 351 210 0 0 5	Q10BMY
			58-59How Many Years or Months Have You Used Chewing Tobacco?Q11B

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 06
NUMBER OF TOBACCO RECORDS = 20,439**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME		
60	Blank - Inapplicable	20050	Q11BMY		
	00 - Less than one month	11			
	01-31 - Years or months of usage	368			
	97 - Refused	0			
	98 - Don't know	0			
	99 - Not ascertained	10			
	In Months or Years?				
	Blank - Inapplicable	20050			
	0 - Less than 1 month	11			
	1 - Month	64			
2 - Year	311				
7 - Refused	0				
8 - Don't know	1				
9 - Not ascertained	2				
61-62	How Many Days a Week or Month (Do/Did) You Use Chewing Tobacco?		Q12B		
	Blank - Inapplicable	19299			
	00 - Less than once a month	104			
	01-31 - Number of days	1028			
	97 - Refused	0			
	98 - Don't know	0			
	99 - Not ascertained	8			
	63	Days Per Week or Per Month?			Q12BWM
		Blank - Inapplicable		19299	
		0 - Less than once a month		103	
1 - Days per week		868			
2 - Days per month		162			
7 - Refused		0			
8 - Don't know		1			
9 - Not ascertained		6			
64-65		On the Days You Use(d) Chewing Tobacco, How Many Times (Do/Did) You Place Fresh Tobacco in Your Mouth?		Q13B	
		Blank - Inapplicable	19299		
	01-50 - Actual times per day	1127			
	97 - Refused	0			
	98 - Don't know	10			
	99 - Not ascertained	3			
	66-68	When You Use(d) Chewing Tobacco, How Long (Do/Did) You Leave It in Your Mouth? Q14 B			66-68When You Use(d) Chewing Tobacco, How Long (Do/Did) You Leave It in Your Mouth? Q14 B
		Blank - Inapplicable	19299		
		001-996 - Actual minutes	1130		
		997 - Refused	0		
998 - Don't know		7			
999 - Not ascertained		3			
69		Indicator of Joint Snuff/Chewing Tobacco Usage		BOXB	
		Blank - Inapplicable	18718		
		1 - R uses snuff only	581		
		2 - R uses chewing tobacco only	872		
	3 - R uses both snuff and chewing tobacco	268			

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 06
NUMBER OF TOBACCO RECORDS = 20,439**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
70	(Do/Did) You Usually Place the Snuff on the Left Side, Front, or Right Side of Your Mouth? Blank - Inapplicable 1 - Left 2 - Front 3 - Right 4 - All three/alternate sides 7 - Refused 8 - Don't know 9 - Not ascertained	19590 235 348 179 76 0 1 10	Q15
71	In Which Jaw (Is/Was) the Snuff Usually Placed? Blank - Inapplicable 1 - Upper jaw 2 - Lower jaw 3 - Both 7 - Refused 8 - Don't know 9 - Not ascertained	19590 13 818 10 0 1 7	Q16
72	(Do/Did) You Usually Place the Chewing Tobacco on the Left Side, Front, or Right Side of Your Mouth? Blank - Inapplicable 1 - Left 2 - Front 3 - Right 4 - All three/alternate sides 7 - Refused 8 - Don't know 9 - Not ascertained	19299 282 421 320 106 0 5 6	Q17 73 In Which Jaw (Is/Was) the Chewing Tobacco Usually Placed? Q18
	Blank - Inapplicable 1 - Upper jaw 2 - Lower jaw 3 - Both 7 - Refused 8 - Don't know 9 - Not ascertained	19299 51 1028 51 0 3 7	
74	Have You Ever Drunk Alcoholic Beverages, that is, Beer, Wine or Liquor? 1 - Yes 2 - No 7 - Refused 8 - Don't know 9 - Not ascertained	12002 8352 2 2 81	Q19
75-77	During the Past 12 Months, On How Many Days Did You Drink Alcoholic Beverages? Blank - Inapplicable 000 - Less than once per month/on fewer than 12 days 012-365 - Actual number of times 997 - Refused 998 - Don't know 999 - Not ascertained	8437 8319 3298 1 38 346	Q20
78-79	On Days When You Drink, About How Many Alcoholic Beverages Do You Usually Have?		Q21

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 06
NUMBER OF TOBACCO RECORDS = 20,439**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	Blank - Inapplicable 01 - Sips/tastes/one drink or less 02-96 - Actual number of drinks per day 97 - Refused 98 - Don't know 99 - Not ascertained	10649 4051 5457 1 18 263	

RECORD 07
Oral Lesion Data

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 07
NUMBER OF ORAL LESION RECORDS = 1,879**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
ORAL LESION DATA			
1-10	Coded Student ID Number		QID07
11-12	Record Number		REC07
	07 - Oral Lesion Record	1879	
13-14	Subrecord		SUBREC07
	01-06 - Subrecord Number	1879	
15	This Field Always Blank		BLANK07
16	This Field Always Blank		FILL07
17	Maxillary Vermilion Border		LIP1
	Blank - Lesion does not involve this location	1765	
	1 - Lesion does involve this location	114	
18	Maxillary Labial Mucosa		LAB_MUC1
	Blank - Lesion does not involve this location	1822	
	1 - Lesion does involve this location	57	
19	Maxillary Labial Vestibule, Anterior		CTRVEST1
	Blank - Lesion does not involve this location	1847	
	1 - Lesion does involve this location	32	
20	Maxillary Gingiva, Anterior		CTRGING1
	Blank - Lesion does not involve this location	1844	
	1 - Lesion does involve this location	35	
21	Maxillary Labial Vestibule, Right Posterior		RT_VEST1
	Blank - Lesion does not involve this location	1854	
	1 - Lesion does involve this location	25	
22	Right Hard Palate		RTHARDPA
	Blank - Lesion does not involve this location	1866	
	1 - Lesion does involve this location	13	
23	Left Hard Palate		LTHARDPA
	Blank - Lesion does not involve this location	1868	
	1 - Lesion does involve this location	11	
24	Maxillary Gingiva, Right Posterior		RTGING1
	Blank - Lesion does not involve this location	1848	
	1 - Lesion does involve this location	31	25Maxillary Gingiva, Left PosteriorLTGI NG1
	Blank - Lesion does not involve this location	1855	
	1 - Lesion does involve this location	24	
26	Maxillary Labial Vestibule, Left Posterior		LT_VEST1
	Blank - Lesion does not involve this location	1846	
	1 - Lesion does involve this location	33	
27	Right Soft Palate		RTSOFTPA

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 07
NUMBER OF ORAL LESION RECORDS = 1,879**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
28	Blank - Lesion does not involve this location 1 - Lesion does involve this location Left Soft Palate	1873 6	LTSOFTPA
29	Blank - Lesion does not involve this location 1 - Lesion does involve this location Right Commissure	1873 6	RTCOMM
30	Blank - Lesion does not involve this location 1 - Lesion does involve this location Right Buccal Mucosa	1815 64	RTBUCMUC
31	Blank - Lesion does not involve this location 1 - Lesion does involve this location Left Buccal Mucosa	1736 143	LTBUCMUC
32	Blank - Lesion does not involve this location 1 - Lesion does involve this location Left Commissure	1705 174	LTCOMM
33	Blank - Lesion does not involve this location 1 - Lesion does involve this location Right Tongue (Dorsum)	1817 62	RTONGUED
34	Blank - Lesion does not involve this location 1 - Lesion does involve this location Left Tongue (Dorsum)	1635 244	LTONGUED
35	Blank - Lesion does not involve this location 1 - Lesion does involve this location Tongue, Right Ventral Surface	1639 240	RTONGUEV
	Blank - Lesion does not involve this location 1 - Lesion does involve this location 36Tongue, Left Ventral Surface	1868 11	LTONGUEV
37	Blank - Lesion does not involve this location 1 - Lesion does involve this location Mandibular Gingiva, Right Posterior	1868 11	RTGING2
38	Blank - Lesion does not involve this location 1 - Lesion does involve this location Mandibular Gingiva, Left Posterior	1844 35	LTGING2
39	Blank - Lesion does not involve this location 1 - Lesion does involve this location Right Floor of Mouth	1837 42	RTFLOOR
40	Blank - Lesion does not involve this location 1 - Lesion does involve this location Left Floor of Mouth	1869 10	LTFLOR

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 07
NUMBER OF ORAL LESION RECORDS = 1,879**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
41	Blank - Lesion does not involve this location	1868	RT_VEST2
	1 - Lesion does involve this location	11	
42	Blank - Lesion does not involve this location	1723	LT_VEST2
	1 - Lesion does involve this location	156	
43	Blank - Lesion does not involve this location	1673	CTRGING2
	1 - Lesion does involve this location	206	
44	Blank - Lesion does not involve this location	1840	CTRVEST2
	1 - Lesion does involve this location	39	
45	Blank - Lesion does not involve this location	1725	LAB_MUC2
	1 - Lesion does involve this location	154	
46	Blank - Lesion does not involve this location	1596	LIP2
	1 - Lesion does involve this location	283	
49*	Blank - Inapplicable	1	47-48Clinical DiagnosisCLIN DIAG
	1 - Lesion does involve this location	212	
49*	01 - Acute necrotizing ulcerative gingivitis	11	PRESENTN
	02 - Candidiasis	1	
	03 - Geographic tongue	245	
	04 - Gingival hyperplasia	12	
	05 - Herpes labialis	341	
	06 - Herpetic gingivostomatitis	4	
	07 - Mucocele	19	
	08 - Recurrent aphthous ulcerations	546	
	09 - Tumor (non-specific)	84	
	10 - Ulcerations (non-specific)	27	
	11 - Verruca vulgaris	12	
	12 - Unknown	50	
	13 - Other (diagnosis)	113	
	14 - Smokeless tobacco associated: degree 1 (wrinkling of the mucosa)	209	
	15 - Smoking tobacco associated: degree 2 (wrinkling with color change)	177	
	16 - Smoking tobacco associated: degree 3 (wrinkling with color change, furrows, and thickening)	27	
	Presentation		

* See Notes.

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 07
NUMBER OF ORAL LESION RECORDS = 1,879**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
50-51*	Blank - Not classified 1 - Single 2 - Multifocal 3 - Generalized Size (Length If Width Is Coded, Otherwise Diameter)	1617 217 25 20	DIA_LEN
52-53	Blank - Not classified 1-59 - Millimeters BLANK (Data User Work Area)	1627 252	FILLERS
54-55*	Size (Width) Coded Only If Lesion Is Irregularly Shaped, In Which Case, Length Is Also Coded Instead of Diameter Blank - Not classified or round 1-40 - Millimeters	1634 245	WIDTH 56*Surface MorphologySU RFMORP
57*	Blank - Not classified 1 - Elevated 2 - Vesicle/Bulla 3 - Nonelevated 4 - Ulcer 5 - Other Color: Normal?	1613 123 26 59 46 12	COLORNOR
58*	Blank - Not classified 1 - Yes 2 - No Color: White?	1614 75 190	COLORWHT
59*	Blank - Not classified 1 - Yes 2 - No Color: Red?	1614 102 163	COLORRED
60*	Blank - Not classified 1 - Yes 2 - No Color: Blue?	1614 8 257	COLORBLU
61*	Blank - Not classified 1 - Yes 2 - No Color: Brown/Black?	1614 19 246	COLORBRO
62*	Color: Other?		COLOROTH

* See Notes.

**NATIONAL SURVEY OF ORAL HEALTH IN U.S. SCHOOL CHILDREN: 1986-87
PUBLIC USE FILE—RECORD 07
NUMBER OF ORAL LESION RECORDS = 1,879**

FILE LOCATION	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	VARIABLE NAME
	Blank - Not classified 1 - Yes 2 - No	1614 6 259	63*Consistency CONSIST
64*	Blank - Not classified 1 - Soft 2 - Firm 3 - Fluid filled 4 - N/A 5 - Other Pain	1618 121 76 19 30 15	PAIN
65*	Blank - Not classified 1 - Yes 2 - No 3 - Don't know 4 - N/A Duration of Lesion	1615 25 226 13	DURATION
66*	Blank - Not classified 0-9 - Days, weeks, months or years Time Unit for Duration	1753 126	DURATIO2
67*	Blank - Not classified 1 - Days 2 - Weeks 3 - Months 4 - Years 5 - Don't know 6 - N/A Prior History	1618 60 15 13 43 129 1	PHISTORY
	Blank - Not classified 1 - Yes 2 - No 3 - Don't know 4 - N/A	1616 64 90 99 10	

* See Notes.

III. DETAILED NOTES

Users of this data file are encouraged to become thoroughly familiar with the survey instruments, which are found in Appendix IV, before working with the data. This will greatly enhance the user's ability to work with the data file without constantly referring to the questionnaires. In particular, familiarity with the skip patterns in all the questionnaires will result in quick recognition of subsets of data in the file that are only applicable to a subset of respondents. High control counts in the "inapplicable" category signal that data found in subsequent file locations only apply to a subset of students. Asterisks have been used throughout the documentation to alert the user to skip patterns and the explanations of selected data fields that are given below.

RECORD 01

File Location

20	"No" counts reflect three different situations: (1) students were not in the appropriate grade, (2) students were not examined for clinical reasons, or (3) they refused to be examined.
25-26	If a student's date of birth was not recorded on the "Questions About Your Child (QAYC)" form his/her age was recorded at the time of the oral examination.
28	Race and Hispanic ancestry description includes updated information obtained at the time of the oral examination (See file location 57).
57	As reported by a parent or guardian on the QAYC form (See file location 28).
59-70	Adjusted to reflect updated Census Bureau population counts by region, metropolitan status, age and gender.
95-106	Superseded on 10/01/91; provided for bridge tabulations (See file locations 59-70).

RECORD 02

File Location

16-301	Revised 10/1/91. For detail, see Section V (Analysis of OHSC II Data) and Appendix I (Weighting.)
--------	---

RECORD 03

For EACH place of residence, parents were asked beginning and ending dates (month/year) of residency, and whether the city was served by a public water supply. The information collected was later compared to data from the 1985 Fluoridation Census to determine each student's exposure to fluoridated water in each place of residence where the child had lived for at least 6 months. Data on the type of fluoridation and adjusted fluoridation were coded as applicable to that particular place of residence. An "Inapplicable" response indicates a skip pattern or residence

duration of less than 6 months. A student may have up to 15 different residences.

RECORD 04

File Location
255

The categories in this column are based on the classification used in the 1985 Fluoridation Census.

257-294

The data in these columns were derived from the analysis of the school water samples (500 ml, or approximately 1 pint per school) collected by the survey coordinators after completion of the oral examinations.

RECORD 05

RECORD 05 data apply to students in grades 8-12. (See Appendix V, Diagnostic Criteria, for clinical detail.)

RECORD 06

RECORD 06 data apply to students in grades 6-12. Students in these grades were asked questions about their smoking habits and use of other forms of tobacco, such as snuff or chewing tobacco. An affirmative answer led to more detailed questions about their use, including diagrams in which the students identified the exact area of the mouth where they usually placed the snuff or chewing tobacco. In addition, data were collected on the student's consumption of alcoholic beverages.

RECORD 07

File Location
49-67

RECORD 07
(continued)

Additional descriptions for selected clinical diagnoses are recorded in file locations 47-48 (See Appendix V, Diagnostic Criteria for clinical descriptions). Each lesion was recorded on a separate record (a student may have multiple 07 type records). Multiple lesions of the same type, however, were recorded on a single record.

IV. OHSC II SAMPLE DESIGN

Sampling Frame

The sampling frame for the survey consisted of all children in grades K-12 enrolled in public or private schools in the United States (excluding Alaska). The national listing of school districts, schools, and grade ranges for schools maintained by Quality Education Data, Inc. (QED) was selected as the most current and complete listing for the survey. From this listing, a multi-stage probability sample was drawn that represented 43 million children in the selected age groups. Special education, vocational-technical, pre-kindergarten, adult education, and remedial classes were eliminated from the QED roster of school records and considered to be out of scope.

Geographic Regions

In order to maximize the sensitivity of the 1986-87 survey to detect changes in major statistics of interest since the 1979-80 survey, it was important to retain as many of the 1979-80 Primary Sampling Units (PSUs) as possible. This principle guided the entire survey design from the grouping of contiguous states to the selection of PSUs.

The United States (excluding Alaska) was divided into the same seven geographic regions as in the 1979-80 survey, with the addition of Hawaii to Region VII. Each region was further stratified by Standard Metropolitan Statistical Area (SMSA) and non-SMSA areas for a total of 14 analytic domains.

Region I—New England:	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont
Region II—Northeast:	New Jersey, New York, and Pennsylvania
Region III—Midwest:	Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin
Region IV—Southeast:	Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia, and the District of Columbia
Region V—Southwest:	Arizona, Colorado, New Mexico, and Texas
Region VI—Northwest:	Idaho, Kansas, Montana, Nebraska, Nevada, North Dakota, Oklahoma, South Dakota, Utah, and Wyoming
Region VII—Pacific:	California, Hawaii, Oregon, and Washington

Stages of Sample Design

The three-stage sample design consisted of:

1. Primary Sampling Units (PSUs)—School districts or groups of contiguous school districts
2. Schools within the selected school districts
3. Classrooms within the selected schools

At the third stage of sampling, all students within the sampled classrooms were candidates for examination.

Five sample PSUs were allocated to each of the 14 strata derived from the stratification of the seven regions by metropolitan status. In the most populous areas, the sample size was supplemented in order to improve the reliability of estimates of change from 1979-80 data. The objective was to detect a 14 percent decrease or 16 percent increase from 1979-80 to 1986-87 in the DMFS for 12-year-old children at the national level. The number of PSUs assigned to each stratum is shown below.

Region	SMSA	non-SMSA
I	5	5
II	8	5
III	10	5
IV	8	6
V	5	5
VI	5	5
VII	6	5
All Regions	47	36

Selection of Primary Sampling Units

PSUs were constructed from 1985 public school district records and 1985 private school building records. For each cell, income strata of PSUs were formed using median per capita income as supplied by the Census Bureau for the 1978 Federal revenue sharing allocations. The 1985 enrollment aggregates for the strata were approximately equal within a cell. Exceptions occurred in the SMSA cells of Region II. In Region II, the New York City PSU had approximately twice the enrollment of any of the strata in this cell. Therefore, the number of sample classes allocated to that PSU was twice the number allocated to other PSUs. In the Region VII SMSA cell, Hawaii, which was designated a certainty PSU, had only 20 percent of the enrollment of the other strata in this cell. Therefore, the number of sample classes allocated to the Hawaii PSU was one-half the number allocated to other PSUs.

From each stratum, one PSU was selected using a complex procedure known as the Keyfitz Method. This procedure increased the overlap, at the PSU level, between the 1979-1980 survey and the 1986-1987 survey, while keeping overall probabilities of selection proportional to current student enrollment. The Keyfitz sample selection procedure was used when the number of strata within a cell did not change.

One sample PSU was selected in each income stratum for the nine cells where there were no changes in the five strata defined in 1979-80. In certain areas, however, additional PSUs were chosen in an effort to reduce sampling errors. According to the sampling plan, only one PSU was to be selected per stratum. The number of strata, therefore, had to be increased.

The Keyfitz procedure was used to select PSUs for cells with unchanged strata, and a variation of this method known as the Kish-Scott procedure was used for cells with newly defined strata. As previously stated, both procedures were designed to maximize the overlap of 1979-80 and 1986-87 PSUs. Use of the Keyfitz and the Kish-Scott procedures resulted in 62 of the 70 sample PSUs of the 1979-80 survey being retained.

It should be noted that, for operational reasons, two PSUs per stratum were in fact sampled. One was designated the primary PSU; the other, the reserve. The reserve was used when state officials did not grant approval for survey participation or when large school districts within the primary sample PSU refused to participate.

Sampling of Schools and Classes

Within each PSU, two schools were selected for each grade, K-12 (except in New York City, where 4 schools were selected per grade, and in Hawaii, where 1 school was selected per grade). The Keyfitz Method was used again but for a slightly different purpose. The schools were selected in such a manner as to use each school for as many grades as possible while keeping the probability of selection for each school-grade combination proportionate to student enrollment. (It was possible for a school to be selected as many as 10 times, although this never happened). The average number of grades represented per sampled school was three.

Once a school was selected, the next step was to create a list of all classes for the grades included in the sampling plan. This list, detailing the enrollment figures by class, was created by the Westat sampling assistants who collected the information from school principals by telephone.

For each selected grade, sampling assistants obtained the total number of students enrolled at the school. The student class weights were adjusted for a selected grade so that the sum of the class weights for the students in the sampled class was equal to the total student count for the selected grade. These adjustments compensated for undercoverage of the school's student count using the list of classes as the sampling frame.

All classes within a grade had equal probabilities of selection. Classes containing 10 students or fewer were combined with another class before sampling in order to produce more uniform class sizes for the survey. Other adjustments were made when necessary to compensate for unusual situations such as ungraded students or combined grade classrooms. Sampling assistants, after compiling lists and ensuring that all classes had at least 10 students, randomly selected 1 class from each grade.

Replacement of Noncooperating School Districts and Schools

When a district refused to participate, all selected schools in that district were replaced. For some PSUs, if one or more school districts in a PSU refused to participate, the designated reserve PSU was used. The within-PSU sampling procedures were the same for all PSUs regardless of whether they were the initial selections or reserve PSUs.

Sampling Results

The sampling procedures yielded a total of 2,171 sample classes in 711 schools from the 83 PSUs. These classes, in turn, yielded 40,693 students, compared to the expected sample size of 45,000. Of these, 39,206 students were aged 5 to 17, the age range for most published statistics from the survey.

The selected sample can be summarized as follows:

- 83 PSUs
- 711 schools
- 2,171 sample classes
- 40,693 sample examinees
- 39,206 in 5-17 age group

Summary of Response to Survey

Of the 83 PSUs initially selected for the sample, 60 provided adequate cooperation to meet survey sampling requirements. For 23 PSUs, this condition was not met, and the entire PSU was replaced.

After replacement of those PSUs, there were 250 school districts in the 83 PSUs. Of these, only 196 school districts were selected; 163 cooperated in the survey and 33 did not. To compensate for this lack of cooperation, the 163 cooperating school districts supplied a number of replacement school-grade combinations. In addition, 11 school districts were chosen to replace noncooperating districts.

Of the 664 schools selected in the initial sample, 91 percent participated in the survey. To replace noncooperating schools or to supplement participating schools that did not meet the minimum class size for the survey, an additional 107 schools were recruited. Thus, a total of 711 schools

were represented in the survey.

A total of 2,171 classes were selected, 167 classes at each grade level. These classes contained 52,289 students. Signed parental consent forms, required for the oral examination, were returned for 47,403 students (91%). Parental permission was given for 41,623 students, and refused in 5,780 cases for a variety of reasons, some of them medical. Consent forms were not received for 4,886 students.

Overall, examinations were completed for 78% of the sampled students. This percentage ranged from a high of 87 percent in grade K to a low of 67 percent for grades 10-12. Only 930 of the students for whom permission had been secured were not examined because of an explained or unexplained absence.

V. ANALYSIS OF OHSC II DATA

Reading the Data

Because the file is large, a mainframe computer is recommended. Statistical Analysis System (SAS) programs are included with the data file to create a SAS file from the "flat" file without tedious typing of column numbers. From SAS, the file can be translated to one of the other packages, such as Statistical Package for the Social Sciences (SPSS), Biomedical Computer Programs (BMDP), or OSIRIS.

Different types of records (file location 11-12) are linked by an identical Coded Student ID Number (file location 1-10). Records may be used independently of all other record types and/or in conjunction with other types of records.

Example

Population estimate - The number of children 5-9 years of age with all deciduous surfaces caries free may be obtained from Record Number 01 file locations 59-70 and 78.

Estimation

Constructing estimates from the Children's Dental files and evaluating their statistical reliability and significance require special consideration because the data were obtained from a complex, multistage probability sample.

Weights

The OHSC II is designed to produce estimates for the United States (excluding Alaska) School Children. Therefore, the data are weighted to inflate the sample numbers to school population estimates. The weight (file location 59-70 of RECORD 01) is the product of six factors.

- (1) PSU weight—inverse of the PSU probability of selection;
- (2) Grade weight—inverse of the school/grade probability of selection;
- (3) Class weight—number of classes within the selected grade;
- (4) School level ratio estimation factor;
- (5) PSU level ratio estimation factor; and
- (6) Poststratification adjustment to 1986 school population totals that are provided by the U.S. Census Bureau. (A more complete discussion can be found in Appendix I).

Population Estimates

An estimator of a population mean, such as the average number of permanent teeth per student, based on the sample is

$$\hat{Y}_1 = \frac{\sum_{i=1}^n w_i Y_i}{\sum_{i=1}^n w_i},$$

where w_i is the sampling weight and y_i is the characteristic of interest (in this case, the number of permanent teeth) for the i -th member of the sample. Similarly, an estimator of a population total such as the total number of edentulous students is

$$\hat{Y}_2 = \sum_{i=1}^n w_i Y_i,$$

where,

$$Y_i = \begin{cases} 1, & \text{if edentulous} \\ 0, & \text{otherwise and} \end{cases}$$

$w_i =$ is the revised full sample weight

Other Considerations When Using the Data from the OHSC II

When dealing with the data files from the OHSC II, two important situations which affect statistical analyses of the survey data are noted. The first is that of multiple measurement data. While the weights are on a person-level, there are eight different types of records possible per individual, and some of these records can repeat (e.g., there is a separate record for each oral lesion). Within other records, there are repeating patterns. To obtain person-level statistics, person-level data need to be constructed. For instance, a separate variable on loss of attachment exists for each mesial site on each tooth. If an individual has n tooth-site combinations, and d_i is the loss of attachment at the i -th site, the average loss of attachment at mesial sites for the person is

$$\frac{1}{n} \sum_{i=1}^n d_i.$$

Other possible person level summaries include

$$\max\{d_1, \dots, d_n\} \text{ and } \prod_{i=1}^n (1 - \delta_i),$$

where $\delta_i = 1$ if $d_i > 0$ and 0 otherwise. The first example indicates the maximum loss of attachment at any mesial site for the student. The second indicates whether the student has at least one mesial site with loss of attachment of 1 millimeter or more. In that case, δ_i is an indicator variable that is equal to "1" if a tooth meets a criterion and "0" otherwise. Several important "recodes" along these lines have already been calculated for the convenience of the user. These may be found near the end of RECORD 01.

The second situation is that of missing data, a common problem in surveys. The loss of information is caused by failure to either obtain or record some of the data. Note that discarding cases with incomplete data, as occasionally recommended, may lead to population estimates that are not consistent with known population totals. The many techniques for adjusting for missing data include making assumptions about data and imputation (see Little and Rubin, 1987).

Reliability of Estimates

Two types of errors are possible in an estimate based on a sample survey -- sampling and nonsampling. The standard error primarily indicates the magnitude of the sampling error, i.e., the variation in the data that occurred by chance because a sample rather than the entire population was surveyed. While standard errors also partially measure the effect of some nonsampling errors such as nonresponse, they do not measure any systematic biases in the data. The nonsampling errors can be attributed to many sources, e.g., inability to obtain information about all sampled individuals, definitional difficulties, errors made in collection such as recording or coding the data, errors made in processing the data, estimating values for missing data, and failure to represent all units within the sample. The full extent of nonsampling error is, generally, unknown. In the next section, procedures are described for calculating estimates of standard errors and for using these estimates to determine the amount of confidence that users should place in statistics from the survey.

Variance Estimates

Techniques for estimation of variances in complex surveys include Taylor series linearization and balanced repeated replications (BRR), of which Fay's Method is a special case. In this survey, variances were estimated using Fay's Method. Details of variance estimation are described in Appendix II.

Although the linearization and replication techniques make the estimation of the sampling variance of any statistic straightforward, the estimation process is computationally intensive and costly. Generalized variances are often considered as an alternative approach. Generalized variances enable users to use simple formulae to obtain roughly approximate standard errors of simple counts and percentages from the estimates themselves, while still accounting for the effects of the complex sample design.

One of the generalized variance estimation approaches that incorporates the complexities of the survey design in a cost efficient manner is the relative variance model. This model expresses a relationship between the relative variance of a statistic and the statistic itself. The relative variance of an estimator \hat{x} for a population parameter x , is defined as the variance of the statistic divided by the square of the parameter being estimated. If $Var \hat{x}$ denotes the variance of \hat{x} then the relative variance RV is:

$$RV(\hat{x}) = Var(\hat{x}) / \hat{x}^2. \tag{1}$$

For domain-enumerative statistics (e.g., number of 13-year old with one or more filled surfaces), the relative variance model approach assumes that there is an inverse relationship between the size of the estimate \hat{x} and its relative variance $RV(\hat{x})$.

A simple model to express the assumed relationship between $RV(\hat{x})$ and \hat{x} is:

$$RV(\hat{x}) = \alpha + \frac{\beta}{\hat{x}} + \varepsilon \quad (2)$$

where α is the intercept, β is the slope of the regression model, and ε is the random error term associated with the particular estimate. Based upon this model, the relative variance is approximated as:

$$RV(\hat{x}) = a + \frac{b}{\hat{x}} \quad (3)$$

where a and b are estimates for α and β respectively (Table 1.) These estimates can be determined by an iterative weighted least squares procedure.

Solving for $Var(\hat{x})$ in (1) and substituting $RV(\hat{x})$ with (3), the estimated standard error is obtained as

$$SE(\hat{x}) = \sqrt{a \hat{x}^2 + b \hat{x}}.$$

Other types of frequently used statistics for which variance estimates are needed are rates, proportions, and percentages (e.g., the percent of 13 year old that have one or more filled surfaces). The sample estimate for a population rate, proportion, or percentage, p , is the ratio of two estimated numbers $\hat{p} = \hat{x}/\hat{y}$ where \hat{y} is the estimated total and \hat{x} enumerates a subclass of the set enumerated by \hat{y} . Assuming that the relative variances for \hat{x} and \hat{y} can be derived from the same model for a population total, the Taylor Series approximation for the relative variance of \hat{p} is

$$RV(\hat{p}) = RV(\hat{x}) - RV(\hat{y}).$$

Applying equation (3),

$$RV(\hat{p}) = \frac{b}{\hat{x}} - \frac{b}{\hat{y}}.$$

If \hat{p} represents an estimated percentage, then substituting the above $RV(\hat{p})$ formula into (1) and solving for $Var(\hat{p})$, the standard error of \hat{p} can be approximated by

$$SE(\hat{p}) = \sqrt{\frac{b \hat{p} (100 - \hat{p})}{\hat{y}}}.$$

If the denominator \hat{y} in $\hat{p} = 100 \hat{x}/\hat{y}$ has no sampling error, then the standard error for an estimated percentage can be approximated by the formula

$$SE(\hat{p}) = \hat{p} \sqrt{a + \frac{b}{\hat{x}}}.$$

Table 1. Generalized variance function parameters for the National Survey of Oral Health in School Children, 1986-87

<u>All Regions and Metropolitan Statuses Combined</u>			
<u>DOMAIN</u>	<u>ESTIMATE</u>		
	<u>A</u>	<u>B</u>	
Single year of age/ Both sexes and races combined	-0.000114	4940	
Single year of age/ Separate sexes/All races combined	-0.0001586	3024	
Other	-0.000158	6817	
<u>Individual Metropolitan or Nonmetropolitan Regional Estimates</u>			
<u>REGION</u>	<u>SMSA</u>	<u>A</u>	<u>B</u>
New England	metro	-0.001973	3394
Northwest	metro	-0.000847	4824
Midwest	metro	-0.000753	5224
Southeast	metro	-0.000866	6450
Southwest	metro	-0.001459	5329
Northwest	metro	-0.001671	2725
Pacific	metro	-0.001085	6371
New England	non-metro	-0.001256	551
Northwest	non-metro	-0.001457	859
Midwest	non-metro	-0.001079	2892
Southeast	non-metro	-0.001145	4735
Southwest	non-metro	-0.001554	1554

Northwest	non-metro	-0.001082	1043
Pacific	non-metro	-0.001371	708

Examples of the Use of Variances

To produce approximate standard errors for OHSC II estimates, the type of characteristic to be estimated and the type of estimate are determined, that is, the parameter set in Table 1 to be used. The type of estimate corresponds to three rules, discussed in the following paragraphs.

Rule 1. Use for estimated totals. For the estimated number of cases for whom data are to be published, there are two cases to consider. For the first case, if the estimated number is any combination of the cells for one of the dimensions used in the raking poststratification (Appendix IV), then its value has been adjusted to official U.S. Bureau of the Census figures and its standard error is assumed to be 0.0. As an example, this would be the case for the number of students 5-17 years of age.

For the second case, the standard errors for all other estimates of totals, such as the number of 13 to 17 years old who are caries free, are approximated by using the parameters provided in Table 1 and formula (1) below.

If the estimated number x for a characteristic has associated parameters a and b , then the approximate standard error for x , $SE(x)$, can be computed by the formula

$$SE(\hat{x}) = \sqrt{ax^2 + bx} \quad (1)$$

Example of Rule 1. The estimated number of 13 to 17 years old that are caries-free is 6,907,205. In this case, use the first set of a and b parameters in Table 1, $a = -0.000114$, $b = 4940$. The estimated standard error is:

$$\sqrt{(-0.000114)(6,907,205)^2 + (4940)(6,907,205)} = 169,360.$$

An approximate 95 percent confidence interval for the number of 13 to 17 year old who are caries-free is $6,907,205 \pm (1.96) \cdot (169,360)$.

Rule 2. For rates, proportions, and percents when the denominator is generated by the poststratification classes. In this case, the denominator has no sampling error. For example, rule 2 would apply to the estimated percent of 16-year old students using tobacco. Approximate standard errors for such estimates can be computed using the a and b parameters in Table 1 along with formula (2) below.

If the estimate of a rate, proportion, or percent, p , is the ratio of two estimated numbers $p = x/Y$, with Y having no sampling error, then the approximate standard error for p is given by the formula

$$SE(p) = p\sqrt{a + \frac{b}{x}} \quad (2)$$

Example of Rule 2. The estimated percent of 16 year old students who currently use tobacco (cigarettes, snuff, or chewing) is 15.1 percent. The estimated number of these students is 554,940. In this case, use the third set (Other) of parameters a and b , $a = -0.000158$, $b = 6817$. The estimated standard error is:

$$15.1 \sqrt{(-0.000158) + \frac{6817}{554,940}} = 1.7$$

An approximate 95 percent confidence interval for the percent of students using tobacco is $15.1 \pm (1.96) \cdot (1.7)$, or 11.8 percent to 18.4 percent.

Rule 3. Proportions and percents when the denominator is not generated by the poststratification classes. If p represents an estimated percent, b is the parameter from Table 1 associated with the numerator characteristics and y is the number of persons in the denominator on which p is based, then the standard error of p may be approximated by

$$SE(p) = \sqrt{\frac{bp(100-p)}{y}}$$

(If p is a proportion, then the above formula can be used, but with 100 replaced by 1.0.)

Example of Rule 3. Among white children of age 5 to 17, 0.3 percent have a lesion involving the maxillary vermillion border. The number of white children of this age is 33,393,560. The standard error of the estimate of the percent is

$$\sqrt{\frac{6817 \cdot 0.3 \cdot (100 - 0.3)}{33,393,560}} = 0.078.$$

Here use the third set (Other) of parameters, $a = -0.000158$ and $b = 6817$. An approximate 95 percent confidence interval for the percent of white children at age 5 to 17 who have a lesion involving the maxillary vermillion border is $0.3 \pm (1.06) \cdot 0.078$, or 0.15 percent to 0.45 percent.

Software for Calculation of Variances

A number of computer programs have been developed to calculate sampling errors of estimates based on complex sample designs. SUDAAN, developed at Research Triangle Institute, uses a first-order Taylor series approximation of the deviations of estimates from their expected values. This approximation for large samples is given in Kendall and Stuart (1961). Woodruff (1971) presents the application of this technique to sample surveys. The method of BRR was introduced by McCarthy (1966, 1969) and is described in Wolter (1985). WESVAR, developed at Westat, uses BRR and Jackknife techniques for computing sampling errors. It can be accessed from the Statistical Analysis System (SAS) after installing a load module on a VAX minicomputer or an IBM mainframe. This load module is available from Westat for the cost of a tape.

SUDAAN and WESVAR procedures include a range of options such as χ^2 -statistics for contingency tables, variances for functions of multiple variables, standard errors, coefficient of variation, relative variances, and confidence intervals, as well as facilities for conducting hypothesis testing about the elements of the table, and for outputting a file of results. Other software includes OSIRIS, developed at the University of Michigan.

Examples of procedures for the mean number of permanent teeth by gender category follow:

WESVAR (BRR)

To calculate the standard error on the mean number of decayed, filled or missing surfaces per student by gender, the following set of SAS statements could be used:

```
PROC WESVAR DATA = INDD1 METHOD = BRR;
WEIGHT REVFSW REPWGT01 - REPWGT40;
FACTOR 100;
COMPUTE MEANDMFS = PERMDMFS/C;
TABLE GENDER/COMPUTE (VALUE TABULAR);
RUN;
```

In the above WESVAR example, the variable "C" is a dummy variable that is equal to 1 for all students aged 5 to 17 at the time of examination.

SUDAAN (TLS)

```
PROC SUDAAN DATA = INDD1;  
  NEST STRATUM PSU;  
  VAR PERMDMFS;  
  WEIGHT REVFSW;  
  SUBGROUP GENDER;  
  LEVELS 2;  
  TABLES GENDER;
```

The above statements assume that the name of the SAS file created by the user is INDD1 and that the user created the SAS file with the suggested variable names.

Each table will contain the mean of the variable of interest, sample size, and weighted population count of persons with valid responses to the analysis variable in each gender category.

APPENDICES

Appendices

Section		Page
I.	Weighting	315
II.	Variance Estimation	319
III.	Administration and Field Operations	323
IV.	Forms and Questionnaires	329
V.	Diagnostic Criteria	341
VI.	References	357
VII.	Glossary	363

APPENDIX I. WEIGHTING

The sample for the 1986-87 survey was a stratified three-stage cluster design, and the base sampling weight for each unit was the inverse of its selection probability. This base weight was adjusted using data known about the sampling unit, school district, or PSU.

PSU Probability of Selection

The first component of the sampling weight was the inverse of the PSU probability of selection. The PSU probability of selection for the sample PSU was E_{is}/E_s where E_{is} was the total enrollment (public and private) for the i -th PSU within the s -th stratum (defined by region, metropolitan status, and per capita income) and E_s was the total enrollment for all PSUs within the stratum. Since the New York City and Hawaii PSUs were certainty selections, their PSU selection probabilities were equal to one. Sample students from replacement PSUs had a first component equal to the inverse probability of selection for the originally chosen PSU.

School/Grade Probabilities

For sampling purposes, any school with some students in grades K-6 was randomly assigned to one of four disjoint "elementary" groups. Also, any school with students in grades 7-12 was randomly assigned to one of two disjoint "post-elementary" groups. This division into groups was done within each PSU. The elementary and post-elementary groups within a PSU were not necessarily disjoint from each other as some schools have grade ranges starting below 7 and ending above 7. Two of the four elementary groups had grades K, 2, 4, and 6 only. The other two had grades 1, 3, and 5 only. Both of the post-elementary groups provided one class from each grade 7-12.

The probability that a particular school would be selected to provide a class for a particular elementary grade was

$$P(\text{School}/\text{PSU}) = \frac{1}{2} \frac{\text{Projected school enrollment}}{\text{Projected group enrollment}}$$

Since grade-specific school enrollment figures were not available, the projected school enrollment for a grade was the total enrollment for the school divided by the number of grades offered at the school. Note that since projected group enrollment for a grade was roughly one-quarter of PSU enrollment for the grade, the probability was roughly

$$P(\text{School-grade}/\text{PSU}) \approx 2 \frac{\text{Projected school enrollment for the grade}}{\text{Projected PSU enrollment for the grade}}$$

The last formula would, however, be quite far off the mark when one school dominated a PSU. It is provided only as an intuitive aid.

The probability that a particular school would be selected to provide a class for a particular post-elementary grade was

$$(\text{School-grade/PSU}) = \frac{\text{Projected school enrollment for the grade}}{\text{Projected group enrollment for the grade}}$$

Since each post-elementary group within a PSU contained roughly half the PSU enrollment for the grade, the same rough formula holds true as for the elementary grades.

As at the PSU level, when replacements had to be made, the sample students in the replacement grade had a second component equal to the inverse probability of selection for the originally selected school.

Class Probabilities of Selection

Given the grade categories within a school, Westat sampling assistants obtained a list of classes for each selected grade and the enrollment count for each class on this list. If N_{hjk} is the number of classes in the k-th school providing a class for the j-th grade level in the sampled PSU within the h-th stratum, then the selection probability for any class in the j-th grade level in the k-th school is $1/N_{hjk}$.

School Level Ratio Estimation

The purposes of the school level ratio estimation were: (1) to compensate for undercoverage of the student population for a given grade category when the roster of classes did not include all students, (2) to compensate for the members of the sampled class who were not examined, and (3) to reduce the variability in the survey estimates due to the variation in class sizes within a grade category. The school level ratio estimate factor for the j-th grade level within the k-th school is

$$\frac{M_{hjk}}{N_{hjk} \times Q_{hjk}}$$

where:

M_{hjk} = total enrollment in the j-th grade for the k-th school providing the class in the sampled PSU within the h-th stratum;

Q_{hjk} = number of dental examinees in the sampled class for the j-th grade within the k-th school in the PSU sampled from the h-th stratum; and

N_{hjk} = number of classes in the j-th grade within the k-th school in the PSU sampled from the h-th stratum.

Note that the fourth component essentially cancels the third component and replaces it with the simple ratio of enrolled students to examined students.

PSU Level Ratio Estimation

Since the school selection probabilities for each grade were calculated using the estimated grade enrollments derived from QED school enrollment figures, they often either overstated or understated the actual size of the school enrollment for the selected grades. This resulted in variability between the sampling weights, which could have significantly increased the sampling variances of the survey estimates. By adjusting the weighted PSU enrollment counts for each selected grade within public school districts, so that they equaled the sum of the grade enrollment counts as reported by the public school districts, the variability of the survey estimates was reduced.

A comparable adjustment was not made for Catholic schools because of the difficulties in allocating archdiocese enrollment to the PSUs. Nor was any comparable adjustment possible for other private schools.

The PSU-level ratio estimate factor for a public school student in a particular grade was

$$\text{Weight 5} = \frac{\text{Public school enrollment in PSU for grade as reported by district}}{\text{Public school enrollment in PSU for grade as estimated with preliminary weights}}$$

The preliminary weights in the formula were calculated by multiplying the second, third, and fourth components together.

Raking Poststratification of Weighted Survey Estimates of Students to Current Population Survey Student Estimates

Raking poststratification by region, metropolitan status, age and sex was used to reduce sampling errors and reduce the biases that may have been caused by substitutions at the school and district levels and by nonresponse by students. The raking was two-dimensional. The first dimension consisted of the 14 region-by-metro analytic domains. The second dimension consisted of 26 age-by-sex analytic domains for students aged 5 through 17.

Separate two-dimensional raking poststratification of the same type was carried out for students under age 5 or over age 17.

Region was defined as indicated in section IV. Note that Alaska is not included in any of the regions. Metropolitan status was defined according to information available on the sampling frame. That sampling frame was derived from the 1985 QED file. QED appears to have used official 1983 OMB definitions of metropolitan areas. Age was defined as the age on the examination date, which could have been anytime between December of 1986 and June of 1987.

Independent control totals for the adjustment were obtained by means of a special tabulation of the School Enrollment Supplement to the October 1986 Current Population Survey (CPS) provided by the U.S. Bureau of the Census. For that survey, metropolitan status was defined according to official 1984 OMB definitions, and age was defined as of October, 1986. Since the only persons that were labeled "students" in the dental survey were those attending grades K through 12, all persons attending pre-school or post-secondary school were excluded from the special tabulation. Also, students from Alaska were excluded from the tabulation.

Early tabulations from the 1986-87 dental survey used a preliminary weight that was derived

using a slightly different post-stratification procedure. That procedure used a different definition of metropolitan status. For metropolitan status, it used a variable that was merged into the sampling from the sampling frame for the 1980 survey. It also used ordinary poststratification with collapsing of small cells instead of raking poststratification. The revised weights provide better consistency with CPS estimates of school enrollment by region, metropolitan status, age and sex, although full four-dimensional consistency is still not achieved. Both weights are available on the file for those who wish to compare new tabulations to old tabulations.

APPENDIX II. VARIANCE ESTIMATION

The variance estimation technique of balanced half-samples or balanced repeated replications (BRR) is widely used in complex survey designs involving stratification. The design is such that either two PSUs are selected per stratum or the strata can be redefined so that two PSUs are assigned to each resulting stratum. Such redefined strata are called pseudostrata. Half-samples are then formed by selecting one unit from the pair in each stratum. Each different way of splitting the sample into two half-samples leads to another replicate estimate. The variance among the replicate estimates provides an estimate of the variance of the statistic. McCarthy (1966, 1969) has contributed several useful references for this technique of variance estimation. BRR is particularly useful when nonlinear estimates are needed and the complexity of the survey design makes the expression of the variance estimate quite complicated and the resulting computations, even via computer, both burdensome and expensive. Indeed, for some estimates, exact analytic expressions for variances may not exist.

The strategy involved in balanced half-sample replication is to generate estimates \hat{x}_R of the statistic of interest, x , based on several different samples of one PSU per stratum. Thus, only half of the PSUs are used for any given sample. The statistic of interest on each selected half-sample is computed, and the variance of \hat{x} is estimated by taking the mean square difference of the full sample estimate from the replicate estimates. The variance of \hat{x} can be estimated by

$$\sigma_{\hat{x}}^2 = \frac{1}{T} \sum_{R=1}^T (\hat{x}_R - \hat{x})^2$$

where T is the total number of replicates employed, " R " of \hat{x}_R designates that the estimate \hat{x}_R is based on the R^{th} replicate (or half-sample), and \hat{x} is the estimate from the full sample.

The expression above is quite general and will provide an estimate of the variance of \hat{x} for any set of half-sample replicates. McCarthy showed that a particularly effective procedure is to have each replicate determined by application of an orthogonal matrix with dichotomous elements to the stratification scheme. To achieve a balanced set of half-samples, the number of replicates (half-samples) to be used is the smallest integral multiple of four that is greater than or equal to the number of strata designated.

When estimating the variance of ratios, one problem that occasionally arises from BRR is that one or more replicate estimates will be undefined due to zero denominators. In this study a modified version of the standard BRR method, Fay's Method, was used (Judkins, 1990). Instead of increasing the weights of one half-sample by 100 percent and decreasing the weights of the other half-sample to zero, Robert Fay suggested perturbing the weights by $\pm 100(1-K)$ percent. $100(1-K)$ is referred to as the perturbation factor. The perturbation factor for BRR is 100 percent ($K=0$). Fay originally suggested a perturbation factor of 50 percent ($K=0.5$). When the weights are perturbed more gently, the mean square error of the replicate estimates from the full sample estimate becomes smaller. For linear statistics, the mean square error is too small by a factor of $(1-K)^2$. To obtain a reasonable estimate of variance, Fay suggested multiplying the mean square error by $1/(1-K)^2$. Fay's estimate of variance is

$$\frac{1}{(1-K)^2} \left[\frac{1}{T} \sum_{R=1}^T (\hat{x}_R - \hat{x})^2 \right].$$

Application of Fay's Method to the OHSC II Survey

In this survey, 40 replicate weights were created with a value of $K=9$. So the formula for variance estimation is

$$\frac{100}{40} \sum_{R=1}^T (\hat{x}_R - \hat{x})^2.$$

The only PSUs that were selected with certainty were Hawaii and New York City. The first noncertainty selection for the New York City PSU was at the school rather than the PSU level. Thus, the New York City PSU was made into a separate pseudo-stratum and divided into two pseudo-PSUs, each containing half of the examined classes in New York City. For Hawaii, examined students were sorted by grade and then systematically divided into two half samples.

Just one PSU was selected from each of the 83 strata, so it was necessary to collapse the strata into pairs and triplets of strata known as pseudo-strata. A total of 37 pseudo-strata were formed. The collapsing always respected the 14 analytic domains defined by region and metropolitan status. If the number of strata in a domain was even, then the number of pseudo-strata was equal to half the number of true strata. If the number of strata was odd, then the number of pseudo-strata was one less than half the number of true strata. Strata to be collapsed were similar to each other with respect to per capita income. Following this procedure in each Region/SMSA domain, between 2 and 5 pseudo-strata were formed from the original 5 to 10 income-based strata. A half-sample consisted of either one or two PSUs.

The pseudo-strata defined in Exhibit 1 were assigned to one of the following three cases and appropriate adjustments were made to the Stage 5 weights:

- CASE I:** Each half-sample within the pseudostratum consisted of one PSU;
- CASE II:** The first half-sample within the pseudostratum consisted of one PSU and the second consisted of two PSUs; or
- CASE III:** The first half-sample within the pseudostratum consisted of two PSUs and the second consisted of one PSU.

The special perturbations for Cases II and III partially compensate for the difference in size in the two half-samples. For more details, see Judkins (1990).

Exhibit 1. Perturbation Factor by Case and Half Sample		
	First Half Sample	Second Half Sample
CASE I:	$f_{rp1} = 1 + d_{rp}(0.1)$	$f_{rp2} = 1 - d_{rp}(0.1)$
CASE II:	$f_{rp1} = 1 + d_{rp}(0.1)(1.4142)$	$f_{rp2} = 1 - d_{rp}(0.1)(0.7071)$
CASE III:	$f_{rp1} = 1 - d_{rp}(0.1)(0.7071)$	$f_{rp2} = 1 + d_{rp}(0.1)(1.4142)$

Note: d_{rp} is the value for the r-th row and p-th column of the aforementioned orthogonal matrix and is always equal to either +1 or -1.

After perturbation of the stage 5 weights, the same type of raking poststratification was applied to each set of replicate weights as had been applied to the full sample weights. This final step ensures that estimated variances for estimated numbers of total students by age and sex should be nearly equal to zero, given the control to CPS. Note that the replicate weights were revised in October 1991.

APPENDIX III. ADMINISTRATION AND FIELD OPERATIONS

Advance Activities

The OHSC II survey was very large and complex with many interrelated activities involving sampling, advance arrangements and data collection. Generally, from several weeks to several months were needed to complete arrangements with all school systems in a PSU and to decide if the school systems or PSU needed to be supplemented or replaced. At the same time, all necessary clearances with state agencies and the licensing board had to be obtained for States in the sample.

Advance contacts were made by Westat staff with a number of organizations or persons, including the American Dental Association, all state dental directors, the National Committee on Educational Data Systems, and with administrative offices for all public and private school systems and schools in the sample. Advance contacts were also made with state dental licensing boards to ensure that the survey examinations would comply with applicable state laws.

After clearance to contact state agencies and selected school systems was received in November 1986, the home office staff began efforts to complete all advance operations and to get examinations underway.

Training and Calibration

In the initial phase of preparation for the survey, Westat's dental consultants met with NIDR staff to become familiar with NIDR criteria for the various indices. Fourteen examiners (13 team examiners and 1 backup) and 13 recorders were trained during the 2 weeks beginning October 22, 1986.

NIDR staff conducted the first week of training. This consisted of lectures on the dental criteria, presentations of slides depicting dental conditions, practice in setting up equipment, and demonstration and practice conducting the examination. NIDR staff described the purpose of the survey, sampling design, methods and materials to be used in data collection, and coordination of project activities. They emphasized the roles of team members, need for professional ethics, and the importance of team effort.

Calibration for the Decayed, Missing, and Filled Surface (DMFS) index was accomplished with three rounds of examinations. Each trainee examined 10 volunteers per round, as did the Westat reference dentist, so that each trainee was calibrated with the standard examiner on a total of 30 subjects. Similarly, to calibrate for the periodontal examination, 3 rounds of 12 volunteers each were given periodontal examinations. The Westat reference dentist examined all four quadrants in each subject, and each trainee examined one quadrant per subject. Each trainee was calibrated with the standard examiner on at least 27 quadrants. Findings were recorded, tabulated, compared, and discussed. Additional training was provided for examiners as needed. By the end of training, all examiners were diagnosing consistently.

Recorders were trained concurrently with dental examiners and were cross-trained in areas pertaining to equipment, instruments, supplies, vehicles, and field operations. The recorders attended all lectures on the dental assessments and examination procedures. The only area in which recorders did not receive the same training as the examiners was in the dental examination itself. During that time, recorders were trained in data recording and data editing. Recorders also received extensive training on the proper administration of questionnaires, with role play

practice sessions for completing the tobacco questionnaire.

Field Operations

A team of survey managers who headed the home office data staff oversaw the various data collection tasks performed either in the home or in the field. The home office staff also included sampling assistants who surveyed each sampled school by telephone to obtain up-to-date rosters of classrooms and counts of students by classroom for each sampled grade.

The advance coordinating teams comprised a lead coordinator, an assistant coordinator, and a local assistant. Local assistants recruited by Westat usually joined the study when the coordinator and assistant coordinator arrived in the PSU. The coordinators were responsible for providing a manual to the local assistant for use in conjunction with a modified training session. The lead coordinator determined the responsibility level of the local assistants and assigned procedural tasks accordingly. Once the coordinating team left the PSU, the local assistant became a member of the examination team. Thereafter, the focus was on increasing response rates and facilitating a smooth examination pattern at the schools.

At the start of the data collection, 13 advance teams and 13 examination teams were assigned. In order to maintain the examination schedule and to complete the examinations during the school calendar year, the number of teams was increased to 14 midway in the field period, with the Westat reference dentist serving as an additional field examiner in 3 PSUs.

Survey coordinators arrived about 3 weeks before examinations were scheduled to begin at schools in a sample PSU and began their on-site work. They made presentations about the survey to school principals, to teachers in sampled classes, and to students, and gave the students survey materials. These materials included a letter to parents, parental consent forms to be signed by parents and returned, and the parent questionnaire, which was to be returned to the school by the student.

The local assistant maintained logs on all students and made follow-up visits to classrooms to collect forms. Where necessary, other means of increasing response rates were used such as direct mailing to parents or calls to parents to confirm refusals or gain parental consent. The survey coordinators worked under day-to-day oversight by home office staff. They were supported by a computer system that kept track of the distribution and collection of all written consent forms and parent questionnaires.

Generally, two traveling coordinators plus one locally-hired assistant were needed to handle the survey arrangements in each PSU, which took approximately 3 weeks to complete. When the dental examination team arrived in the PSU, the coordinator met with them to discuss the status of activities in the PSU, including the examination schedule, consent form returns, and any other pertinent information. Before leaving, the coordinator collected a water sample (500 ml, or approximately 1 pint) from each school within the PSU. Those samples were sent to the Westat home office for later analysis. After a coordinator left the individual PSU, the assistant coordinator, supported by the local assistant, continued to prepare the schools for the dental examinations.

Oral Examination

Examiner assignments were made from the Westat home office. Assignments were controlled by analytic domain to ensure that each dentist represented no more than one-fifth of all examinations in each domain. Whenever it became necessary to employ more than one examiner

in a PSU to complete work there on schedule, assignment of additional teams was made to ensure adherence to the “no more than one-fifth” rule.

The dental examining team, consisting of the examiner and the recorder, was responsible for setting up equipment in each school, conducting examinations, maintaining the examination supplies, keeping track of inventory, and cleaning equipment. They also prepared daily statistical reports on examination progress and worked to maximize student response in schools with special response problems.

At the conclusion of the examination, the recorder edited the NIDR data forms for completeness and consistency. The recorder then administered the Tobacco Usage questions to the students in grades 6-12. During this time, the examiner cleaned the equipment and prepared the examination area for the next student.

Dental teams continued in the same manner for scheduled classes throughout the school day. At the end of the scheduled examinations each day, the teams cleaned the dental equipment and supplies and returned them to the vans.

Quality Control Techniques

Several quality control strategies were adopted in an effort to reduce any systematic effect of examiner differences. Variability in dental diagnoses was checked using essentially two quality control techniques in the field: (1) replicate examinations by the Westat reference dentist who served as a standard examiner during training and field examinations; and (2) intrareplication by each dentist for about 5 percent of his or her examinees. In addition, at least 5 examiners were assigned to each of the 14 geographic domains, thereby minimizing the effect of any potential bias introduced by a single examiner. This plan allowed for no more than 20% of the examinations scheduled in a PSU to be conducted by any one examiner in any of those domains. No examiner conducted examinations in more than two metropolitan or non-metropolitan PSUs in any one region. In addition, recorders were rotated among examiners four times during data collection to minimize calling and recording errors.

The reference dentist recalibrated examiners to avoid major systematic errors. Each of the dental examiners was recalibrated twice during the 6 months of field activity. The goal for recalibration was 50 replicate examinations, approximately 25 students on each of 2 visits. Whenever possible, replicate examinations were scheduled with students in grades 6-12 so that periodontal assessments could also be checked. Recalibration was completed for decayed, missing and filled surfaces of permanent teeth (DMFS), loss of attachment, fluorosis, and soft tissue lesions.

At the end of each session, the standard examiner evaluated the results of calibration and discussed any problems with the dentist. Results were examined both in terms of raw average difference between the standard examiner and the field examiner, and as a normalized p-value, which shows the probability that the difference found occurred by chance. The p-value was computed using a paired-t test on the average differences between results for the reference and the field examiner.

Differences between the two examinations were analyzed for several variables: number decayed (D), number missing (M), number filled (F), the total DMF, cemento-enamel junction (CEJ), Pocket Depth, Loss of Attachment, and Fluorosis. Fluorosis differences were analyzed in two ways: first, by examining the mean difference and, second, by comparing the extent of agreement to within one unit on the measurement scale.

Overall, few differences were found among the various examiners. Differences that were detected were extremely small in comparison with expected levels of measurement error (no p-values of less than .05 for number of Decayed, Missing, Filled, or the total DMF). For the fluorosis index, complete agreement between the reference dentist and the original examiner in selecting one of the points on the five-point fluorosis scale was required. P-values of .05 or less were found for 7 of the 28 sets of replicate examinations. When the criterion for a match between the standard and original examiner was relaxed to within 1 point on the scale, no p-values of .05 or less were found.

About one-half of the p-values for CEJ, pocket depth and loss of attachment were less than .05. These data imply that certain dentists were obtaining depth measurements that were different from those observed by the standard examiner, revealing either a tendency to observe deeper measures or a tendency to observe shallower measures. However, the magnitude of these differences generally is below one tenth of a millimeter, a difference of little clinical significance.

For intrareplication, the students were selected by the local coordinator or the data recorder. The students scheduled for reexamination were selected at the beginning of the examination session and asked to wait or to return for a second examination. After the examination, the data form for the second examination was then marked "replicate" and attached to the form for the first examination. Both forms were sent to the home office and subsequently forwarded to NIDR for analysis.

Survey Instruments

The data collection forms required for the study included the following:

- Dental Caries Examination Form
- Periodontal Examination Form
- Oral Mucosal Tissue Examination Form
- Residential History Form ("Questionnaire About Your Child")
- Questionnaire on Use of Tobacco Products and Alcohol

The Dental Caries Examination Form was completed for all students examined in grades K-12. On this form, data were recorded for the coronal assessment (grades K-12), sealants (grades K-12), and fluorosis exams (grades 2-12).

On the Periodontal Examination Form, data were recorded for the gingival assessment, the calculus assessment and loss of attachment for students examined in grades 8-12.

The Oral Mucosal Tissue Examination Form was completed only when the examiner identified one or more oral lesions or conditions in the student's mouth. If more than one lesion or condition were identified, one form was completed for each condition.

The form designed for gathering each student's residential history, labeled as the "Questionnaire About Your Child," was completed by the parents. Information was requested on all places (city/town/military base and state) where the child had lived for 6 months or more, starting with the *current* residence and *going back in time*. A question on whether the residence was served by a public water supply was included. Each student's exposure to fluoridated water was later determined by survey staff who compared responses on the forms to data from a 1985 Fluoridation Census.

The brief questionnaire on students' use of cigarettes, smokeless tobacco products, and alcohol

was administered by the dental recorder to students in grades 6-12. After being assured of the confidentiality of their responses, students were questioned on their use of tobacco and alcohol while they were still in the private dental examination area.

All these survey forms were designed by Westat, Inc., tested during the pilot study, and revised as necessary. All forms were designed for optical scanning. Facsimile reproductions of the survey instruments are included in Appendix IV.

APPENDIX IV. FORMS AND QUESTIONNAIRES

Dental Caries Examination Form

Periodontal Examination Form

Oral Mucosal Tissue Examination Form

Tobacco Usage Questionnaire

Consent Form

Questions About Your Child Form

APPENDIX V. DIAGNOSTIC CRITERIA

NIDR CARIES SCORING SYSTEM

Tooth Status	Codes
Sound (no caries or restorations)	S
Full Crown Coverage	C
Unerupted	U
Missing (Caries/Periodontal Diseases)	E
Missing (Orthodontic or Non-Disease)	M
Exclusion	Y
Surface Status	
Caries	
Occlusal Surface	X
Lingual Surface	0
Buccal Surface	1
Mesial Surface	2
Distal Surface	3
Restorations	
Occlusal Surface	5
Lingual Surface	6
Buccal Surface	7
Mesial Surface	8
Distal Surface	9

Note: There is no code X or 5 for anterior teeth.

CORONAL CARIES

In conducting the survey it was intended that the methods of data collection be as uniform as possible among the sites surveyed. Probably the most important factor in obtaining uniform data with the index is that it be applied in a manner that is consistent among different examiners. The achievement of a high level of consistency requires that every examiner be thoroughly familiar with a uniform set of diagnostic criteria. These include criteria for diagnosing caries, for determining whether lesions or restorations extend onto additional tooth surfaces, for determining the status of eruption of teeth, and for determining the conditions for which certain teeth should be excluded from the analysis.

The diagnostic criteria for caries are, with certain exceptions, those adopted by the Conference on Clinical Testing of Cariostatic Agents, sponsored by the American Dental Association in 1968.

DMFS

The D component of the DMFS (decayed, missing or filled surface) assessment is diagnosed as follows:

Frank lesions are detected as gross cavitation. Incipient lesions may be subdivided into three categories according to location, each with special diagnostic considerations. The categories are:

- A. Pits and fissures on occlusal, buccal and lingual surfaces: These areas are diagnosed as carious when the explorer catches after insertion with moderate to firm pressure and when the catch is accompanied by one or more of the following signs of decay:
 - (1) Softness at the base of the area.
 - (2) Opacity adjacent to the area providing evidence of undermining or demineralization.

In other words, a deep pit or fissure in which the explorer catches is not in itself sufficient evidence of decay; it must be accompanied by at least one of the above-named signs.

- B. Smooth areas on buccal (labial) or lingual surfaces: These areas are carious if they are decalcified or if there is a white spot as evidence of subsurface demineralization and if the area is found to be soft by:

- (1) Penetration with the explorer, or
- (2) Scraping away the enamel with the explorer. (Care should be taken to avoid removal of enamel that could be remineralized).

These areas should be diagnosed as sound when there is only visual evidence of demineralization, but no evidence of softness.

- C. Proximal surfaces: For areas exposed to direct visual and tactile examination, as when there is no adjacent tooth, the criteria are the same as those for smooth areas on facial or lingual surfaces. For areas not available to direct visual and tactile examination, the following criterion applies: A discontinuity of the enamel in which the explorer will catch is carious if there is softness. In posterior teeth, visual evidence of undermining under a marginal ridge is not acceptable evidence of a proximal lesion unless a surface break can be entered with the explorer. In the anterior teeth, however, transillumination can serve as a useful aid in discovering proximal lesions. Transillumination is achieved by placing a mirror lingually and positioning the examining light so that it passes through the teeth and reflects into the mirror. If a characteristic shadow or loss of translucency is seen on the proximal surface, then this is indicative of caries on the surface. Ideally, the actual diagnosis should be confirmed with the explorer; however, clear visualization of a lesion by transillumination can justify a positive diagnosis.

Missing Teeth (the M component of the index)

The M (missing) component of the DMF surface assessment represents those permanent teeth that have been extracted as a result of caries. It is essential, therefore, to distinguish between teeth extracted because of caries and those extracted or missing for other reasons. Unerupted or congenitally missing teeth (code "U") must also be correctly identified and excluded from this category. Code "E" will be used to indicate teeth extracted because of caries, and a different call (code "M") will be used for teeth missing due to trauma, orthodontic treatment, or other non-disease related causes. Although not common in the age groups included in this survey, tooth loss due to periodontal disease may occasionally be seen. This should be scored in the same manner as teeth lost to caries (code "E").

Filled Tooth Surface (the F component of the index)

The F component represents a tooth surface that has been filled, with either a permanent or temporary filling, as a result of caries involvement. Here also it is necessary to distinguish between surfaces restored for caries and those restored for other reasons, such as trauma, hypoplasia, or malformation.

Guidelines for Scoring:

The following conventions have been adopted in the interest of achieving diagnostic consistency:

1. Incisal edges of anterior teeth are not considered to be separate surfaces. If a lesion or restoration is confined solely to the incisal edge its score should be assigned to the nearest adjacent surface. Thus, anterior teeth have only four scorable surfaces (mesial, distal, labial, and lingual). The inclusion of the occlusal surface for posterior teeth gives those teeth five surfaces.
2. When a filling or a lesion on a posterior tooth, or a caries lesion on an anterior tooth

extends beyond the line angle onto another surface, then the other surface is also scored as affected. However, a proximal filling on an anterior tooth is not considered to involve the adjacent labial or lingual surface unless it extends at least one-third of the distance to the opposite proximal surface. The reason for this criterion is that tooth structure on adjacent surfaces must often be removed to provide access for the restoration of a proximal lesion on anterior teeth.

3. If a permanent tooth has a full crown restoration placed because of caries, the tooth will be coded as "C" (crown), which represents the maximum number of surfaces for the tooth type, i.e., four surfaces on anterior teeth and five surfaces on posterior teeth. By convention, all crowns on posterior teeth, including abutment teeth for fixed or removable prostheses, are considered to have been placed as a result of caries. On anterior teeth, however, the examiner should make a determination of the reason for crown placement. If crown was placed for any reason other than caries, such as fracture, malformation or esthetics, the tooth is coded "Y" (excluded). This rule applies only to permanent teeth with full crowns or jackets. If a tooth has been restored with less than full coverage, all surfaces not involved should be scored in the usual manner.
4. Teeth that are banded or bracketed for orthodontic treatment are examined in the usual manner and all visible surfaces are scored.
5. Certain teeth, notably first bicuspid may have been extracted as part of orthodontic treatment. These teeth are coded "M" (missing) and will be excluded from the DMFS analysis. The examiner must make the determination that the teeth were extracted for orthodontic reasons rather than caries, although this is not usually difficult because of the typically symmetric pattern of these extractions. For the sake of uniformity, all orthodontically extracted bicuspid are scored as first bicuspid. Teeth other than bicuspid may also be extracted for orthodontic reasons. In many cases the subject will have good recall of the reason for the extractions, and can help in making the correct determination.
6. Non-vital teeth are scored in the same manner as vital teeth. If, however, a restoration on a non-vital tooth was placed solely to seal a root canal and not for caries, that restoration will not be scored. If no other lesions or restorations are present, the tooth will be called sound.
7. Hypoplastic teeth are scored in the usual manner. However, if a restoration on such a tooth was placed solely for aesthetic reasons and not for caries, that restoration will not be scored. If a hypoplastic tooth is restored with a full crown, it is to be coded "Y" (excluded).
8. Malformed teeth are scored in the usual manner except when they have been restored with a full crown for aesthetic reasons, in which case they are coded "Y" (excluded).
9. When the tooth crown is destroyed by caries and only the roots remain, score all surfaces carious (X,0,1,2,3 on posterior teeth and 0,1,2,3 on anteriors).
10. In general, when the same tooth surface is both carious and filled, only the caries is called. Note that only one call may be made for a given surface. If two or more conditions exist on the same surface, then caries receives precedence over a restoration. When examining a filling for recurrent caries, a defective filling is not considered carious in the absence of definitive visual and tactile criteria for caries.

11. Fractured or missing restorations are scored as if the restoration were intact. If caries is found within or adjacent to the margins of a fractured or missing restoration, caries should be scored.
12. In the case of supernumerary teeth, only one tooth is called for the tooth space. The examiner must decide which tooth is the “legitimate” occupant of the space.
13. If both a deciduous and a permanent tooth occupy the same tooth space, only the permanent tooth is scored.
14. Third molars are not scored. When examining second molars it is important to note that a drifted third molar may occupy the space of a missing second molar. In such cases, the diagnosis and call must relate to the status of the missing second molar, not the third molar. If the second molar, for example, was extracted due to caries and the space is now occupied by a sound third molar, the second molar is scored as extracted (coded “E”) and the third molar is not scored.
15. A tooth is considered to be in eruption when any part of its crown projects through the gum. This criterion is easier to standardize than one which calls for a more advanced stage of eruption.
16. Stain and pigmentation alone should not be regarded as evidence of decay since either can occur on sound teeth.
17. In this survey a distinction is not made between coronal and root surface caries. Any lesion or restoration visible on the tooth is scored as coronal caries.

Scoring Deciduous Teeth:

Decayed or filled surfaces of deciduous teeth are scored in the same manner as permanent teeth, using the same diagnostic criteria. However, because this survey is concerned with both deciduous and permanent teeth, it will be necessary to precede the surface calls for deciduous teeth with a “deciduous” call (code “D”) to distinguish them from permanent teeth. The “D” code can be combined with any other legitimate diagnostic call for decayed or filled surfaces. For example, if a deciduous molar has occlusal caries and is otherwise sound, the “D” code would be combined with the code for occlusal caries (i.e., “D,X”). The diagnostic procedures are exactly the same as for permanent teeth except that the “D” call must precede the surface calls. If the deciduous tooth is sound, the “D” code is used alone.

Missing deciduous teeth present potential problems in scoring because it is often not possible to distinguish exfoliated teeth from those extracted due to caries, especially during the period of mixed dentition. To avoid this problem, at the time of examination, all missing deciduous teeth are scored as unerupted permanent teeth (coded “U”). When data are analyzed, the age of the child will be used to determine the most likely reason for tooth loss.

Note: If both a permanent and a deciduous tooth are visible in the same tooth space, only the status of the permanent tooth is described and no call is made for the deciduous tooth.

Recording the Presence of Fissure Sealant:

In this survey, the presence of adhesive fissure sealant was recorded for specified pit-and-fissure sites on posterior teeth and maxillary lateral incisors. Sealant on these surfaces will be scored in addition to any other call for the surface. Note that on some teeth, more than one surface can be

scored for sealant. The call for sealant should be made after the tooth has been scored for caries.

It is important to note that sealant products vary in appearance, from clear to colored or white. Sealant should be scored as present when any part of the surface remains covered. If it appears that sealant material was used as a restoration rather than as a preventive procedure, score the surface as filled and do not record the presence of sealant.

Caries Examination Procedures:

In conducting the examinations, an effort should be made to examine each subject in the same manner, regardless of the amount of caries or prior treatment. It is well to systematize the examination procedure, and to follow the same routine for each examiner. The examination sequence follows the sequence shown on the data forms. The forms are arranged by quadrants; the examiner starts with the upper left central incisor and continues distally through the second molar in the same quadrant. The same sequence is followed for the upper right, lower left, and lower right quadrants. It is also necessary to develop a systematic approach to examining each individual tooth. The examiner should examine the surfaces in the following order: lingual, labial, mesial, and distal for anterior teeth, and occlusal, lingual, buccal, mesial, and distal for posterior teeth. It is not advisable to call out individual surface codes as each tooth surface is examined, as this is confusing to the recorder. It is better if the examiner accumulates the diagnostic codes in his or her memory in logical groupings before dictating the calls to the recorder.

DENTAL FLUOROSIS

Diagnosis and Classification:

General Guidelines for the Dental Fluorosis Examination

The examiner follows the same sequence in the mouth as for the DMFS examination. A single call is made for each tooth or tooth position present in children in Grades 2-12.

No fluorosis assessment is made for deciduous teeth, permanent teeth not in full eruption, or teeth in which more than one-half of the visible surface is obscured by a restoration, caries, or an orthodontic appliance. These tooth spaces will be excluded.

Classification and Scoring

The most commonly used system for clinically classifying and scoring dental fluorosis is the system described by Dean in 1942. In Dean's system, each tooth is examined and assigned to one of six categories according to its degree of fluorosis. Classification of a person is based on the two teeth most affected by fluorosis. If the two teeth are not equally affected, the classification given is that of the less involved tooth. The criteria for Dean's classification system and the corresponding scores are as follow:

<u>Classification (Score)</u>	<u>Criteria</u>
Normal(0)	The enamel represents the usual translucent semivitriform type of structure. The surface is smooth, glossy, and usually of a pale

creamy white color.

Questionable(.5)	The enamel discloses slight aberrations from the translucency of normal enamel, ranging from a few white flecks to occasional white spots. This classification is utilized in those instances where a definite diagnosis of the very mildest form of fluorosis is not warranted and a classification of "normal" is not justified. Included in this category are teeth that show no signs of fluorosis other than 1-2 mm of white opacity at the cusp tips of posterior teeth or incisal edges of anterior teeth.
Very Mild(1)	Small, opaque, paper white areas scattered irregularly over the enamel but involving less than 25 percent of the total surface area.
Mild(2)	The white opaque areas are more extensive but involve less than 50 percent of the total surface area.
Moderate(3)	At least 50 percent of the total surface area is affected. Surfaces subject to attrition often show wear and brown stains may be present.
Severe(4)	The entire surface area is usually affected. The diagnostic sign required for this classification is discrete or confluent pitting of the enamel. With marked confluent pitting, the tooth often presents a corroded-like appearance. Brown stains of intact enamel are often present.

Special Diagnostic Considerations

- Only fully-erupted teeth are scored, using a good source of artificial light. The teeth are not air-dried before scoring.
- A tooth is not scored if one-half or more of the visible enamel area is replaced with a restoration or is destroyed by caries or covered with an orthodontic band.
- Fluorosis in the milder classifications may be confined to particular areas of the enamel, or may occur irregularly over the entire enamel surface. The area affected is derived by visually coalescing all areas of fluorosis and relating that area to the total area of all visible enamel. For posterior teeth, the visible enamel is composed of the buccal and lingual surfaces, extending from embrasure to embrasure, and the occlusal surface. For anterior teeth, the visible area is composed of the labial and lingual surfaces, extending from embrasure to embrasure.
- Because of masticatory abrasion, occlusal surfaces of posterior teeth may show less fluorosis than buccal and lingual surfaces of the same teeth. Also, toothbrush abrasion and continued post-eruptive mineralization may result in gradual decreases in the intensity of fluorosis, particularly in areas of enamel affected by the milder forms of the condition. Thus, the level of fluorosis in a tooth does not always remain constant. Scoring must be based on the current state of the condition.
- Staining per se of intact enamel is not a diagnostic criterion specific to any of the classifications. A stained area of fluorosis is considered the same as a non-stained area of

fluorosis in determining the total affected area. For example, a tooth that shows severe fluorosis may not necessarily be stained, whereas, another tooth that demonstrates moderate fluorosis may show staining.

- Fluorosed teeth do not erupt with pits. Instead, pitting occurs post-eruptively when the teeth are subjected to masticatory forces. A pit is defined as a discrete, focal loss of outermost enamel. The defect is partly or wholly surrounded by a wall of enamel. Initially, the enamel wall is usually intact. With wear, however, the enamel wall can be abraded away, so that often only part of the wall can be detected. In contrast to intact enamel on which the explorer tip can be moved easily across the smooth surface, pitted areas demonstrate a definite physical defect in which the base of the defective area may be either carious or sound. If it is sound, the base of the pit is rough and offers resistance to the lateral movement of the explorer tip, and a scratchy sound is detected when the explorer is moved across it. If the base is carious, it demonstrates softness upon being probed with moderate pressure. The pitted area is usually stained or demonstrates a different color compared with the surrounding enamel.
- Confluent pitting of the enamel results from the coalescence of two or more discrete pits. The walls of pits at the occlusal or incisal edges can be abraded, so that only the walls on the gingival aspect remain intact, often leading to an irregular “ledging” effect. In some cases, confluent pitting may advance to a point where such large areas of enamel are corroded that the anatomy of the tooth is altered.

Differentiating Between Fluorosis and Non-Fluoride Opacities

Opacities occurring in enamel may be due to a multitude of etiological factors in addition to excessive fluoride intake. Because this survey was concerned solely with fluoride-induced enamel changes, it was necessary to distinguish between fluoride and non-fluoride enamel changes. This distinction is generally most difficult when examining for the milder forms of fluorosis. To aid the examiner in making an appropriate decision the following set of criteria were developed by Russell (Table 2.).

ORAL MUCOSA

Examination and Diagnosis of Lesions:

Although lesions related to the use of smokeless tobacco provided the central focus of the oral sort tissue examination, the examiners were trained to recognize a variety of other mucosal lesions likely to occur in children. Diagnostic criteria together with photographs were used in the training session.

Table 2

The Differential Diagnosis of Fluoride and Non-Fluoride Enamel Opacities

Characteristic	Milder forms of Fluorosis	Non-Fluoride Enamel Opacities
Area affected	Usually seen on or near tips of cusps or incisal edges.	Usually centered on smooth surface; may affect entire crown.

Shape of lesion	Resembles line shading in pencil sketch; lines follow incremental lines in enamel, form irregular caps on cusps.	Often round or oval.
Demarcation	Shades off imperceptibly into surrounding normal enamel.	Clearly differentiated from adjacent normal enamel.
Color	Slightly more opaque than normal enamel; "paper-white." Incisal edges, tips of cusps may have frosted appearance. Does not show stain at time of eruption (in these milder degrees, rarely at any time).	Usually pigmented at time of eruption; often creamy-yellow to dark reddish-orange.
Gross Hypoplasia	None. Pitting of enamel does not occur in the milder forms. Enamel surface has glazed appearance, is smooth to point of explorer.	Absent to severe. Enamel surface may seem etched, be rough to explorer.
Detection	Often invisible under strong light; most easily detected by line of sight tangential to tooth crown.	Seen most easily under strong light on line of sight perpendicular to tooth surface.

Examination Procedures

The examination procedure followed systematic assessment of the lips; labial mucosa and sulcus; commissures, buccal mucosa and sulcus; gingiva and alveolar ridges; tongue; floor of the mouth; and hard and soft palate. Based on the WHO guide, the procedure is as follows:

1. Begin examination by observing the lips both with the mouth closed and open. Note the color, texture and any surface abnormalities of the upper and lower vermillion borders.
2. With the mouth partially open, visually examine the labial mucosa and sulcus of:
 - a. the maxillary vestibule and frenulum, and
 - b. the mandibular vestibule.

Observe the color and any swelling of the vestibular mucosa and gingiva.

3. Using the two mouth mirrors as retractors and with the mouth open wide, examine first the right, then the left buccal mucosa extending from the labial commissures and back to the anterior tonsillar pillar. Note any change in pigmentation, color, texture and mobility of the mucosa, make sure that the commissures are examined carefully and are not covered by the mouth mirrors during retraction of the cheek.
4. Next, examine the gingiva and alveolar ridges (processes).
 - a. Buccal and Labial Aspects

Start with the right maxillary posterior gingiva and alveolar ridge and move around the arch to the left posterior gingiva. Continue with the left mandibular posterior gingiva and

alveolar ridge and move around the arch to the right posterior gingiva.

b. Palatal and Lingual Aspects

Same as above except on the palatal for the maxillary (right to left) examination and on the lingual for the mandibular (left to right) examination.

5. With the tongue at rest and mouth partially open, inspect the dorsum of the tongue for any swelling, ulceration, coating or variation in size, color or texture. Also note any change in the pattern of the papillae covering the surface of the tongue and examine the top and the tip of the tongue. The subject should then protrude the tongue and the examiner should note any abnormality of mobility. With the aid of mouth mirrors, inspect the margins of the tongue. Grasping the tip of the tongue with a piece of gauze will assist full protrusion and will aid examination of the margins. Then observe the ventral surface.
6. With the tongue still elevated, inspect the floor of the mouth for swellings or other abnormalities.
7. With the mouth wide open and the subject's head tilted backwards, gently depress the base of the tongue with a mouth mirror. First inspect the hard, and then the soft palate. Mucosal or facial tissues that seem to be abnormal should be palpated.

Training focused on the diagnosis of the following Oral Mucosal Lesions:

Acute Necrotizing Ulcerative Gingivitis
Acute Pseudomembranous Candidiasis
Geographic Tongue
Gingival Hyperplasia
Herpes Labialis
Herpetic Gingivostomatitis
Mucocele/Ranula
Recurrent Aphthous Ulcerations
Smokeless Tobacco-Associated Lesions
Verruca Vulgaris

Exophytic growths or ulcerative conditions that could not be classified into one of the listed diagnoses were coded as non-specific tumors or non-specific ulcers.

The following highlights the major clinical criteria for each of the above conditions.

Acute Necrotizing Ulcerative Gingivitis (ANUG)

Necrotic areas at tip of interdental papillae (“punched-out” papillae) covered by grayish-yellow pseudomembranes which can be readily removed, exposing bleeding surfaces.

Candidiasis (Acute pseudomembranous type)

Creamy white or grayish patches or nodules which can be easily rubbed off, leaving an erythematous or bleeding surface.

Geographic Tongue

Usually appears as one or more well-defined, irregularly shaped areas of the tongue with absence of filiform papillae. These areas are typically red, with white or yellowish, slightly elevated serpiginous margins.

Gingival Hyperplasia

(Drug-induced type) Enlarged gingiva and interdental papillae, which may exhibit either stippled or glazed appearance. In severe cases, clinical crowns may be covered by a solid mass of firm hyperplastic tissue, with marked pseudopockets.

(Idiopathic type) Fibrotic enlargement of gingiva. Facial and lingual aspects of teeth may be completely covered by thick, firm or soft, pink or red gingiva.

Herpes Labialis

Clusters of yellow vesicles or crusts on the lip or adjacent skin, but not involving the labial mucosa which may present an erythematous background.

Herpetic Gingivostomatitis

Gingivitis affecting marginal and attached gingiva, characterized by fiery red, swollen appearance. Gingival margin is often covered by a serofibrinous exudate. Shallow, ragged ulcers covered by a gray membrane and surrounded by a red halo may appear throughout the oral mucosa. Crusts may be present on the vermillion border. In early stages, the conditions may present as marked gingivitis with small yellowish vesicles on the oral mucosa.

Mucocele

A well-defined fluid-filled swelling which may be soft, firm or fluctuant. Color may range from normal to pink or bluish.

Recurrent Aphthous Ulcerations

Small, well-defined gray-white or yellowish round ulcerations surrounded by a red halo. A red macule or small papule is seen in early stages. The number of lesions varies from one to five or more.

Smokeless Tobacco-Associated Lesions

Slight to heavy wrinkling of the mucosa with or without whitish or yellowish to brown discoloration, and with or without obvious thickening. These lesions were classified in one of the following severity categories:

DEGREE 1:

Slight, superficial wrinkling of the mucosa. Color of the mucosa may range from normal to pale white or gray. Mucosa does not appear to be thickened.

DEGREE 2:

Distinct whitish, grayish or occasionally reddish color change. Wrinkling is obvious, but there is no thickening of the mucosa.

DEGREE 3:

Mucosa is obviously thickened, with distinct whitish or grayish color change. Deep furrows are present within the thickened areas.

Tumors, Non-Specific

Any exophytic growths not specifically listed on the recording form were recorded as non-specific tumors. For these conditions, and for those coded as unknown, the clinical description portion of the data form was completed.

Ulcer, Non-Specific

Any ulceration of the lip or oral mucosa that cannot be attributed to one of the conditions listed on the recording form should be recorded as a non-specific ulcer. These may include ulcers due to trauma as well as those for which a cause cannot be identified. Some typical presentations are described below.

Toothbrushing-induced ulcerations —

Traumatic ulcerations —

Verruca Vulgaris

Whitish or pinkish pedunculated or sessile growth with papillomatous surface.

PERIODONTAL DESTRUCTION ASSESSMENT

The assessment for periodontal destruction will be made for all four quadrants beginning with the 2nd molar on the upper left. Only permanent teeth in full eruption are to be measured.

Clinically and quantitatively the loss of attachment is the distance in millimeters (mm) from the cemento-enamel junction (CEJ) to the bottom of the pocket. Pocket depth is the distance from the free gingival margin (FGM) to the bottom of the sulcus/pocket.

The NIDR periodontal probe will be used to measure the loss of attachment in buccal (B) and mesial (M) sites. The distance from the FGM to the CEJ and the distance from the FGM to the bottom of the sulcus/pocket will be measured for each site. Where the gingival margin is subject to recession and the CEJ is exposed, the distance from the CEJ to the gingival margin is called a negative value. Loss of attachment will be calculated by the computer program.

The NIDR probe is color coded and graduated at 2, 4, 6, 8, 10, and 12 millimeters. The periodontal probe is to be held with a light grasp not to exceed 25 grams and pointed toward the apex of the tooth. Each measurement is rounded to the lowest whole millimeter. The probe is inserted from the buccal aspect to measure both buccal and mesial sites.

For the interproximal site (M) the examiner should keep the probe in the direction of the long axis of the tooth as close to the contact point as possible even if the adjacent tooth is missing. For the upper and lower molars the buccal assessments are always made at the midpoint of the mesial root.

Special Considerations:

1. Calculus at the mesial or buccal sites that obscures the CEJ or interferes with the correct placement of the probe is removed using the scaler.
2. When the margin of a restoration is below the CEJ, the position of the CEJ will be estimated using adjacent landmarks and dental anatomy.
3. When the CEJ cannot be estimated, the examiner will code "Y" to exclude the site.
4. When the natural tooth is missing (i.e., space maintainers, implants, partial denture, or pontics), the tooth sites are scored "Y". On the recording form, the missing tooth position should be the same for both the periodontal and caries assessments.
5. Mobile teeth should be examined with care. The CEJ should be estimated, if possible.
6. Orthodontically banded teeth, splinted teeth, and hemisected teeth will be considered on an individual basis and should be examined if possible.
7. Partially erupted teeth and root tips are excluded. (It is necessary to have at least a partial clinical crown, including the CEJ, present for the periodontal assessment.) The code of "Y" should be used for the mesial and buccal sites of the excluded tooth. If the entire quadrant cannot be scored, the single code of "NS" (no score) should be called.

Gingival Assessment

Buccal and mesial sites of all four quadrants will be assessed. A score of 0 or 1 will be assigned for each permanent tooth site.

- 0 = No Bleeding
- 1 = Bleeding
- Y = Cannot Be Assessed

The teeth should be dried with air before the examiner begins each quadrant. To examine the gingiva adjacent to each tooth, the NIDR probe will be inserted no more than 2 mm into the gingival sulcus, starting just distal to the midpoint of the buccal surface and then moved gently into the mesial interproximal area. After all sites of a single quadrant are examined in this fashion, the bleeding points are assessed. A call of 0 or 1 is made for each buccal and mesial site beginning with the second molar and continuing to the central incisor.

If the tooth is missing or cannot be assessed, a single "Y" call is made. Partially erupted teeth or deciduous teeth will also be coded as "Y". If the entire quadrant cannot be scored, the single code of "NS" (no score) will be called.

Calculus Assessment:

A single score will be assigned for each permanent tooth space present according to the following codes:

- 0 = Absence of calculus
- 1 = Supragingival calculus but no subgingival calculus present
- 2 = Supragingival and subgingival calculus, or subgingival calculus only
- Y = Cannot be assessed

The assessment for calculus should be made after the teeth are dried with air. The examiner should observe the buccal and mesial aspects of each tooth to determine the presence of supragingival calculus and probe for subgingival calculus using the #17 explorer or the NIDR probe. Once subgingival calculus is determined to be present at any site, the examiner should make a single call and proceed to the next tooth.

If the tooth is missing or cannot be assessed, a single “Y” call is made. Partially erupted teeth or deciduous teeth will also be coded as “Y”. If the entire quadrant cannot be scored, the single code of “NS” (no score) will be called.

Note. Supragingival calculus includes calculus located on the exposed crown and root of the tooth and extends up to 1 mm below the free gingival margin (FGM).

APPENDIX VI. REFERENCES

Published Analyses Using the National Survey of Oral Health of Children

- Bhat M, Brunelle JA: Gingival status of 14- to 17-year old U.S. school children. *J. Dent. Res.* (special issue), Abstract #704, p. 953, June 1989.
- Brunelle JA: Caries attack in the primary dentition of U.S. children. *J. Dent. Res., Abstracts of Papers*, Abstract # 575, 1990.
- Brunelle JA, Miller AJ, Carlos JP: Changes in dental caries prevalence. *J. Dent. Res., Program and Abstracts*, March 1982.
- Brunelle JA, Miller AJ, Smith JI: DMF in U.S. children with and without lifelong exposure to water fluoridation. *J. Dent. Res., Program and Abstracts*, March 1983.
- Brunelle JA, Miller AJ: Geographic variations in caries in prevalence in the United States ORCA XXIX Congress, Annapolis, January 1979.
- Brunelle JA, Miller AJ: Prevalence of dental caries. *Am. A. Advanc. Science, Program and Abstracts*, January 1982.
- Brunelle JA, Miller AJ: Prevalence of dental caries in United States children design of survey. *J. Dent. Res., Program and Abstracts*, March 1981.
- Brunelle JA: The prevalence of dental fluorosis in U.S. children, 1987. *J. Dent. Res.* 68 (special issue), Abstract # 1029, p. 995, June 1989.
- Brunelle JA: Prevalence of dental sealants in U.S. school children. *J. Dent. Res.* 68, (special issue), Abstract #12, p. 183, March 1989.
- Kingman A: Assessment of examiner error in scoring periodontal status of adolescents. *J. Dent. Res., Abstracts of Papers*, Abstract #627, 1990.
- Kingman A, Morrison E, Loe H, Smith J: Systematic errors in estimating prevalence and severity of periodontal disease. *J. Periodontol.* 59:707-713, 1988.
- Kleinman D, Swango P: Prevalence on oral mucosal pathologies in U.S. school children, 1986-87. *J. Dent. Res.* 68 (Abstracts of Papers), Abstract #1479, March 1989.
- Kleinman D, Swango P: Self-reported history of tobacco use by U.S. school children, grades 6-12. *Abstracts of APHA 117th Annual Meeting*, October 1989.
- Li SH, Kingman A: Surface-specific attach rates in primary teeth in children from two national surveys. *J. Dent. Res., Abstracts of Papers*, Abstract #576, 1990.
- Miller AJ, Brunelle JA: Dental restorative treatment needs in U.S. school children. *J. Dent. Res., Program and Abstracts*, March 1982.
- National Institute of Dental Research. *Calibration manual for the National dental caries prevalence survey*, July 24-27, 1979. *National Caries Program*.

National Caries Program, National Institute of Dental Research. *Dental treatment needs of United States children, 1979-1980*. Publication No. 82-2245. Washington, DC: U.S. Government Printing Office, December 1982 (iv & 287p).

National Caries Program, National Institute of Dental Research. *The prevalence of dental caries in United States children, 1979-1980*. NIH publication No. 83-2246. Washington, DC: U.S. Government Printing Office, December 1981 (iv & 159p).

Swango PA, Brunelle JA: Age- and surface-specific caries attack rates from the national dental caries prevalence survey. *J. Dent. Res.* 62 (Abstracts of Papers), Abstract #909, March 1983.

Swango PA, Kleinman D: The effect of tobacco use on oral mucosal pathologies. *Abstracts of AAPHD 53rd Annual Meeting*, October 1990.

Swango PA, Kleinman D: History of Aphthous Ulcers and Herpes Labialis in U.S. school children. *J. Dent. Res.* 68 (Abstracts of Papers), Abstract #1480, March 1989.

Swango PA, Brunelle JA: Surface-specific caries attach patterns from a national survey in school children: Implications for sealant use. *J. Pub. Health. Dent.* 50:3, Spring 1990.

Oral Epidemiology

Beck JD: Epidemiology of root surface caries. *J. Dent. Res.* 69(5):1216-1221, 1990.

Burt B: Public health implications of recent research in periodontal diseases. *J. Public Health Dent.* 48:252-6 1988.

Capilouto M, Douglass C: Trends in the prevalence and severity of periodontal diseases in the U.S.: a public health problem? *J. Public Health Dent.* 48:245-51, 1988.

Survey Methodology

- Beimer PP, Groves RM, Lyberg LE, et al: *Measurement Errors Surveys*. New York: John Wiley & Sons Inc., 1991.
- Cassel CM, Särndal CE, Wretman JH: *Foundations of Inference in Survey Sampling*. New York: John Wiley & Sons, 1977.
- Cochran WG: *Sampling Techniques*. New York: John Wiley & Sons, 1977.
- Cox BG, Cohen SB: *Methodological Issues for Health Care Surveys*. New York: Marcel Dekker, Inc., 1985.
- Encyclopedia of Statistical Sciences*. New York: John Wiley & Sons, 1983.
- Greenblatt J, Judkins D, Edmonds J: Westat, Inc. *Epidemiologic Survey of Oral Health in Adults, Estimation and Weighting*. Technical report prepared for the National Institute of Dental Research under contract No. NO1-DE-42553. Bethesda, MD: NIDR, National Institutes of Health, 1986.
- Groves RM: *Survey Errors and Survey Costs*. New York: John Wiley & Sons, 1989.
- Kendall M, Stuart A: *The Advanced Theory of Statistics*. London: Charles Griffin & Company Ltd., 1961.
- Judkins D: Fay's method for variance estimation. *J. Offic. Stat.* 3:223-240, 1990.
- Kalton G: *Introduction to Survey Sampling*. Beverly Hills, CA: SAGE Publications Inc., 1983.
- Kaplan B, Francis I: A comparison of methods and programs for computing variances of estimators from complex sample surveys. *Proceedings of the Section on Survey Research Methods*. Alexandria, VA: American Statistical Association, 1979, pp. 97-100.
- Landis JR, Lepkowski JM, Eklund S, Stehouwer S: A statistical methodology for analyzing data from a complex survey: the first National Health and Examination Survey. *Vital and Health Statistics*. Series 2-No. 92. DHHS publication No. 82-1366. Public Health Service. Washington, DC: U.S. Government Printing Office, 1982.
- Lee ES, Forthofer RN, Lorimor RJ: *Analyzing Complex Survey Data*. Newbury Park, CA: SAGE Publications, Inc. 1989.
- Lessler JT, Kalsbeck WD: *Nonsampling Error in Surveys*. New York: John Wiley & Sons, Inc., 1991.
- Little RJA, Rubin DB: *Statistical Analysis With Missing Data*. New York: John Wiley & Sons, 1987.
- McCarthy PJ: Pseudo-replication; half samples. *J. Int. Stat. Rev.* 37:239-264, 1969.
- McCarthy PJ: *Replication: An Approach to the Analysis of Data From Complex Survey*. National Center for Health Statistics, Series 2, No. 14. Hyattsville, MD: NCHS, Public

- Health Service, U.S. Department of Health and Human Services, 1966.
- Research Triangle Institute. *SUDAAN*. Research Triangle Park, NC: Research Triangle Institute, 1990.
- Shah BV: *SESUDAAN: Standard Errors Program for Computing of Standardized Rates From Sample Survey Data*, rev. ed. Research Triangle Park, NC: Research Triangle Institute, 1990.
- Skinner CJ, Holt D, Smith TMF: *Analysis of Complex Surveys*. New York: John Wiley & Sons, 1989.
- U. S. Department of Health and Human Services. *Fluoridation Census: 1985*. PP. 1327, 1988.
- Westat, Inc. *National Survey of Oral Health in School Children*. Final report prepared for the National Institute of Dental Research under contract No. NO1-DE-62560. Rockville, MD: Westat, 1988.
- Westat, Inc. *The WESVAR Procedure*, rev. ed. Rockville, MD: Westat, 1990.
- Westfall PH, Young SS: P value adjustments for multiple tests in multivariate binomial models. *Journal of the American Statistical Association*. 84:780-787, 1989.
- Wolter KM: *Introduction to Variance Estimation*. New York: Springer Verlag, 1985.
- Woodruff RS: A simple method for approximately the variance of a complicated estimate. *Journal of the American Statistical Association*. 66:411-414, 1971.

Other

- Dean HT: The investigation of physiological effects by the epidemiological method. In: *Fluorine and Dental Health*. Moulton FR (ed.). American Association for the Advancement of Science Pub. No. 19. Washington, DC, pp. 23-31, 1942.
- Guide to Epidemiology and Diagnosis of Oral Mucosal Diseases and Conditions* (reprinted from *Community Dentistry and Oral Epidemiology* 8:1-26, 1980.)
- Russell AL: The differential diagnosis of fluoride and non-fluoride enamel opacities. *Pub. Health Dent*. 21:143-146, 1961.

APPENDIX VII. GLOSSARY

One-fifth rule (20% rule). Quality control measure in which scheduling ensured that no more than 20 percent of the subjects in a PSU were examined by any one examiner.

ADA. American Dental Association.

CEJ. Cemento-enamel junction.

DFS (dfs). Decayed or filled permanent (deciduous) tooth surface.

DMFS (dmfs). Decayed, missing, or filled permanent (deciduous) tooth surface.

DFT (dft). Decayed or filled permanent (deciduous) tooth.

DMFT (dmft). Decayed, missing, or filled permanent (deciduous) tooth.

FGM. Free gingival margin.

MEC. Mobile examination center.

NCHS, CDC, PHS, US DHHS. National Center for Health Statistics, Centers for Disease Control, Public Health Service, U.S. Department of Health and Human Services.

NIDR probe. Probe designed expressly for NIDR epidemiologic surveys; its gold coating is patented by the American Dental Manufacturing Company, Missoula, MT.

NTIS. National Technical Information Service (division of the U.S. Department of Commerce), Springfield, VA 22161.

Periodontal destruction. In this survey, estimated by periodontal, gingival, and calculus assessments.

PSU. Primary sampling unit. In this survey, the PSU was a school district or a group of contiguous school districts.

QED. Quality Education Data, Inc.

RR. Response rate.

SMSA. Standard metropolitan statistical area.

Standard. Reference examiner for the purpose of calibrating field examiners.