

Idaho 2017

SMILE SURVEY REPORT



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Introduction

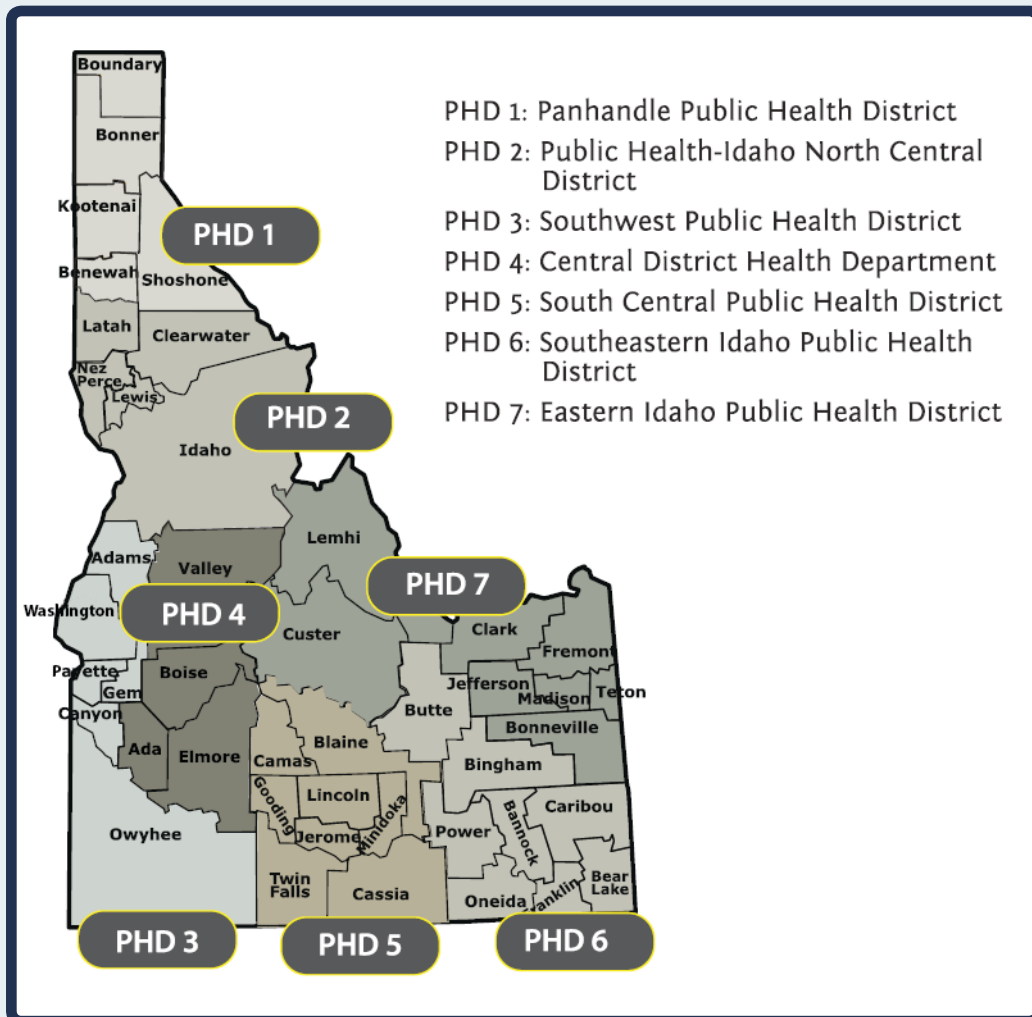


The Idaho Department of Health and Welfare's Oral Health Program contracts with the state's seven Public Health Districts (PHD) as part of its role to monitor and collect data on the oral health status of Idaho's children and citizens. The Oral Health Program would also like to thank Delta Dental of Idaho and the PHDs for their assistance in conducting the 2017 Smile Survey. This was the fifth Smile Survey of third-grade students conducted at four-year intervals since 2001.

The 2017 survey examined 3,687 students at 68 randomly selected schools for the prevalence of untreated tooth decay, treated tooth decay or missing permanent teeth due to tooth decay (caries experience), the presence of dental sealants and need for restorative dental care. Age, race/ethnicity, and gender were also collected. Income information per student was not available so school rates of Free and Reduced School Lunch Program (FRSLP) participation were used to provide economic indicators. Higher rates of FRSLP participation indicate a larger proportion of low-income families.

Please see pages 15 through 27 for additional details regarding survey methodology and detail results tables.

Map of Idaho Public Health Districts



Key Findings

1

Two thirds (67.2 percent) of Idaho third-grade students had dental sealants on at least one tooth recommended for sealants. **The Healthy People 2020 (HP2020) goal for children aged six to nine years is a rate of 28.1 percent or better on one or more of their permanent first molar teeth.** The rate has improved in each survey from 2001 with a statistically significant increase of 13.6 percent.

67.2%

Two thirds of Idaho third-grade students had dental sealants on at least one tooth recommended for sealants.

2

Nearly two thirds of Idaho third-graders (65.6 percent) had some caries experience. This rate is essentially unchanged since the 2001 survey with a rate of 65.4 percent. **The HP2020 goal for children aged six to nine is a rate of caries experience of 49 percent or less.**

3

Fewer than one in five students (17.1 percent) had untreated tooth decay, which is lower than all previous surveys. **The HP2020 goal for children aged six to nine years is a rate of untreated tooth decay of 25.9 or less.**

17.1%

Fewer than one in five students had untreated tooth decay, which is lower than all previous surveys.

4

The rate of third-grade students needing urgent restorative dental care due to pain, infection, inflammation, or bleeding was 1.9 percent. This is significantly lower than the rate of 5.4 percent in the 2001 survey.

5

More than one in three third-grade students (36.4 percent) had four or more teeth with untreated or treated tooth decay (severe tooth decay). There have been fluctuations of this rate between surveys; however, this is not significantly different than the rate of 35.8 percent from the 2001 survey.

6

Slightly more than one in ten third-grade students (11.1 percent) had active tooth decay with no indication of any dental care history, either no fillings or dental sealants. This rate was significantly lower than for any of the previous surveys.

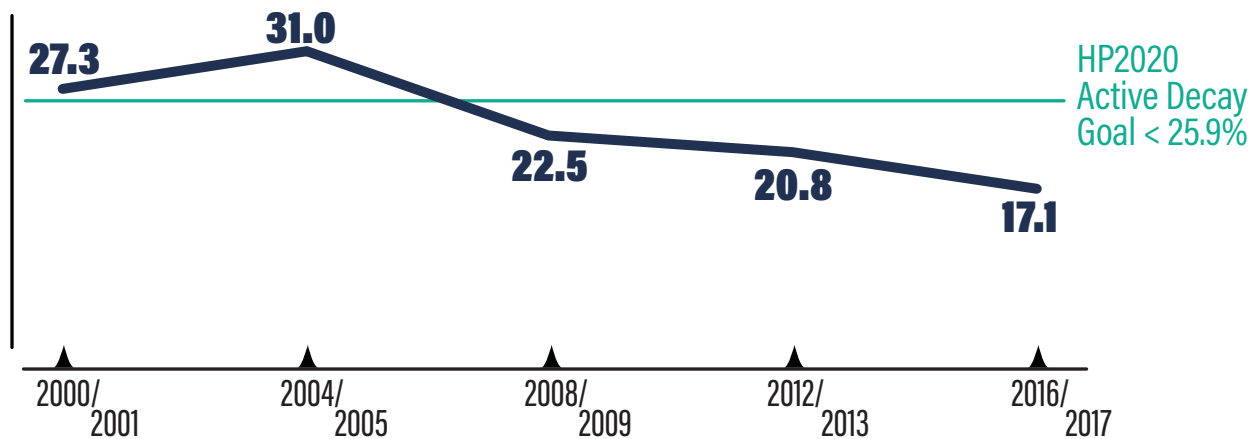
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Disparities of results between Hispanic and non-Hispanic third-grade students were detected; however, these disparities have improved over time. For example, the rate of active tooth decay for Hispanic students in 2017 compared to non-Hispanic students (19.4 percent vs. 16.6 percent), was not statistically significant when compared with the statistically significant difference from the 2001 survey (46.3 percent vs. 24.5 percent).

Active Tooth Decay

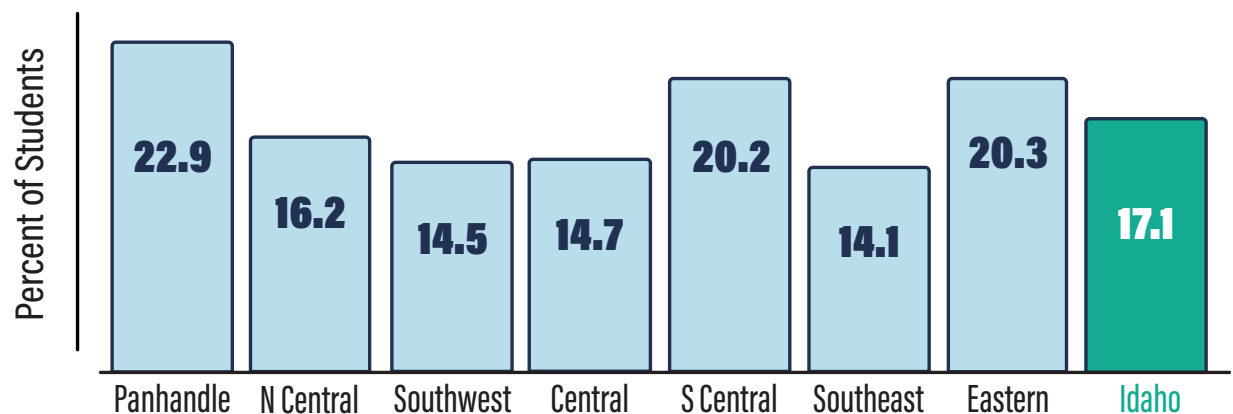
The prevalence rate of active tooth decay has significantly declined since 2001 among Idaho third-grade students. The rate of severe tooth decay, here defined as four or more teeth with active tooth decay, for 2017 was significantly less than in 2005 and 2009. **The HP 2020 goal for children aged six to nine is a rate of untreated tooth decay of 25.9 percent or less.** *Idaho has met this goal for untreated tooth decay among third-grade students since 2009.*

**Percent of Idaho Third-Grade Students with Active Tooth Decay
2001-2017**



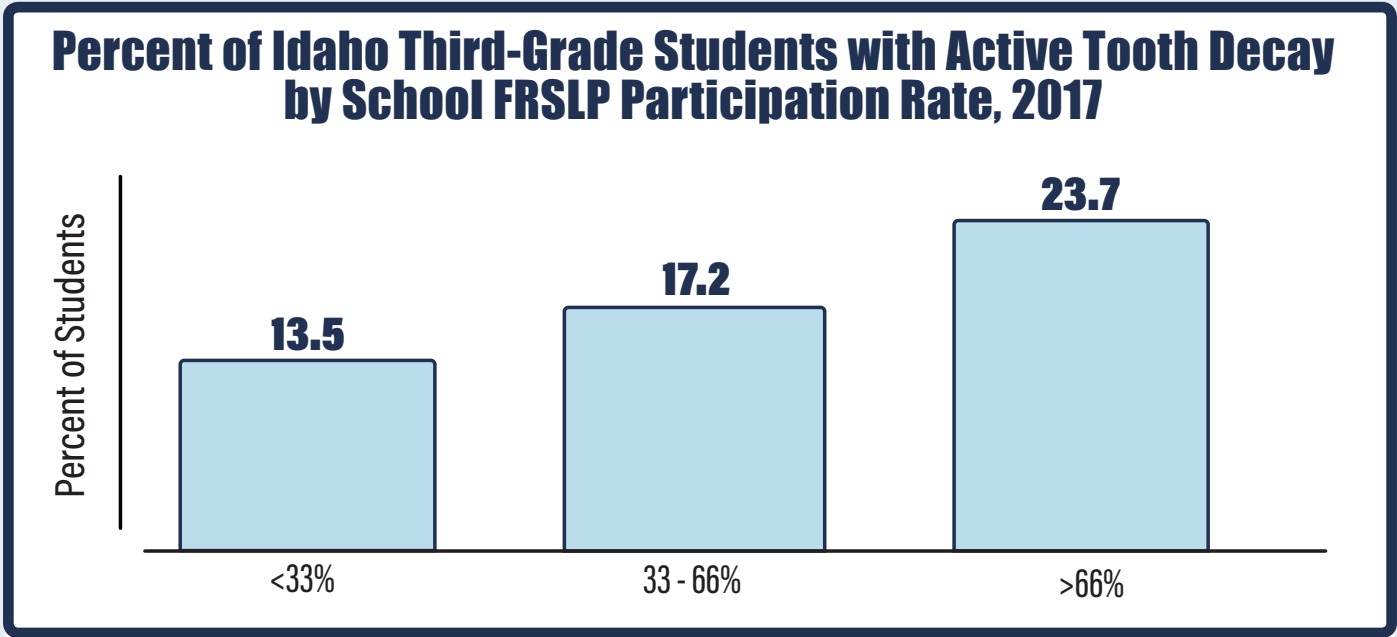
Southeastern Idaho Public Health District had the lowest percentage of students with any current active decay, 14.1 percent, but that was not statistically significant compared with Idaho as a whole or the other Public Health Districts.

**Percent of Idaho Third-Grade Students with Active Tooth Decay
by Public Health District, 2017**



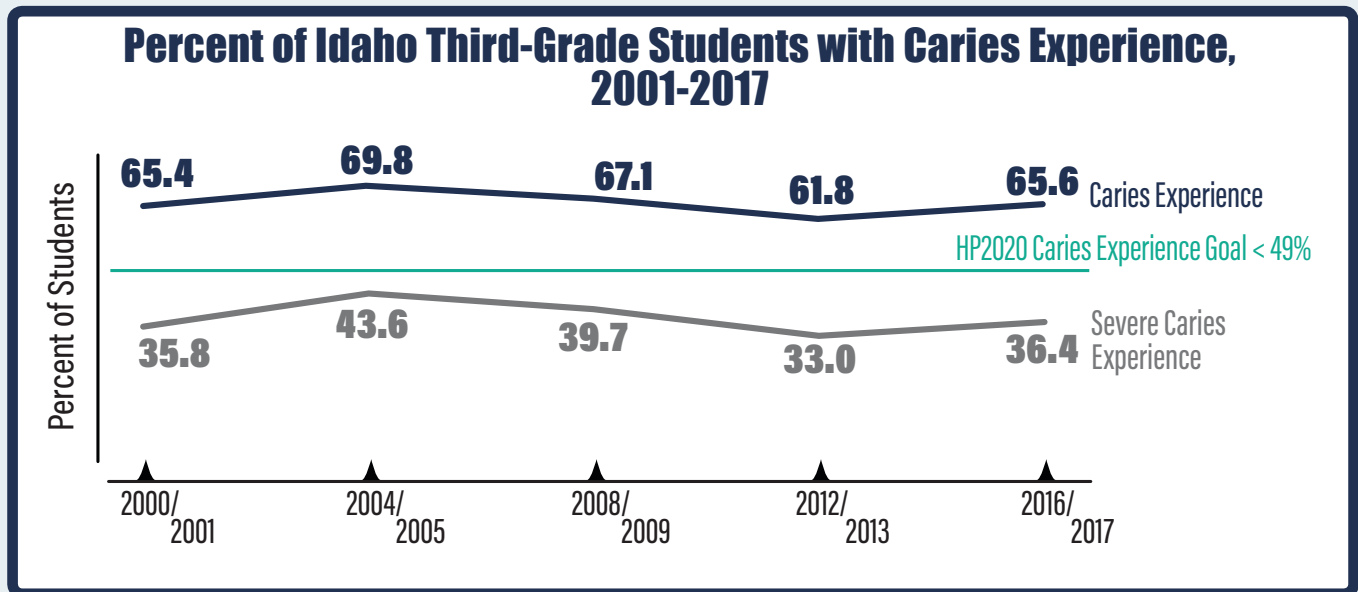
Active Tooth Decay Highlights:

- 1 Southwest Public Health District was the only district with a statistically significant difference in active tooth decay between Hispanic students, 22.2 percent, and non-Hispanic students, 10.8 percent.
- 2 Idaho students attending schools with higher participation rates in the FRSLP had a significantly higher rate of active tooth decay than students attending schools with lower FRSLP participation rates.

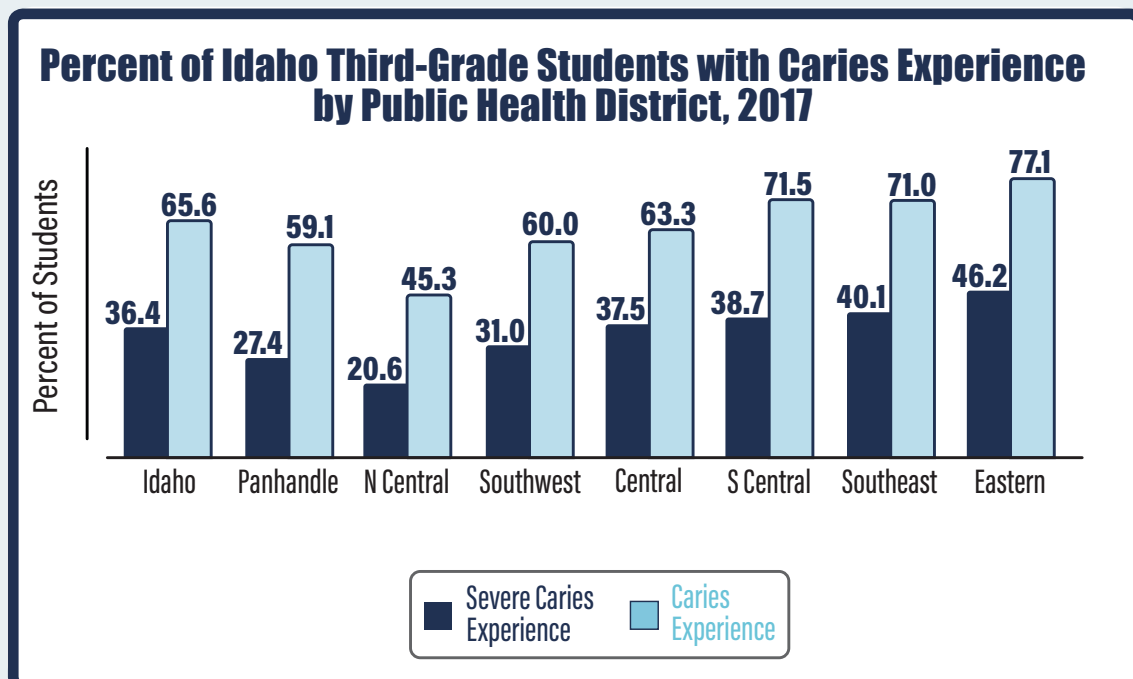


Caries Experience

The prevalence of any untreated tooth decay, treated tooth decay or missing permanent teeth due to tooth decay (caries experience) has remained similar statewide since 2001. **The HP2020 goal for children aged six to nine is a rate of caries experience of 49 percent or less. Idaho has not met the goal for caries experience among third-grade students during the surveys conducted.** Severe caries experience, defined as four or more teeth with active decay or fillings, has also not changed in a statistically significant manner.



North Central Health District had a caries experience rate of 45.3 percent which was statistically lower than Idaho as a whole and other Public Health Districts except for Panhandle and Southwest Public Health District. The same relationships were true for severe caries experience.



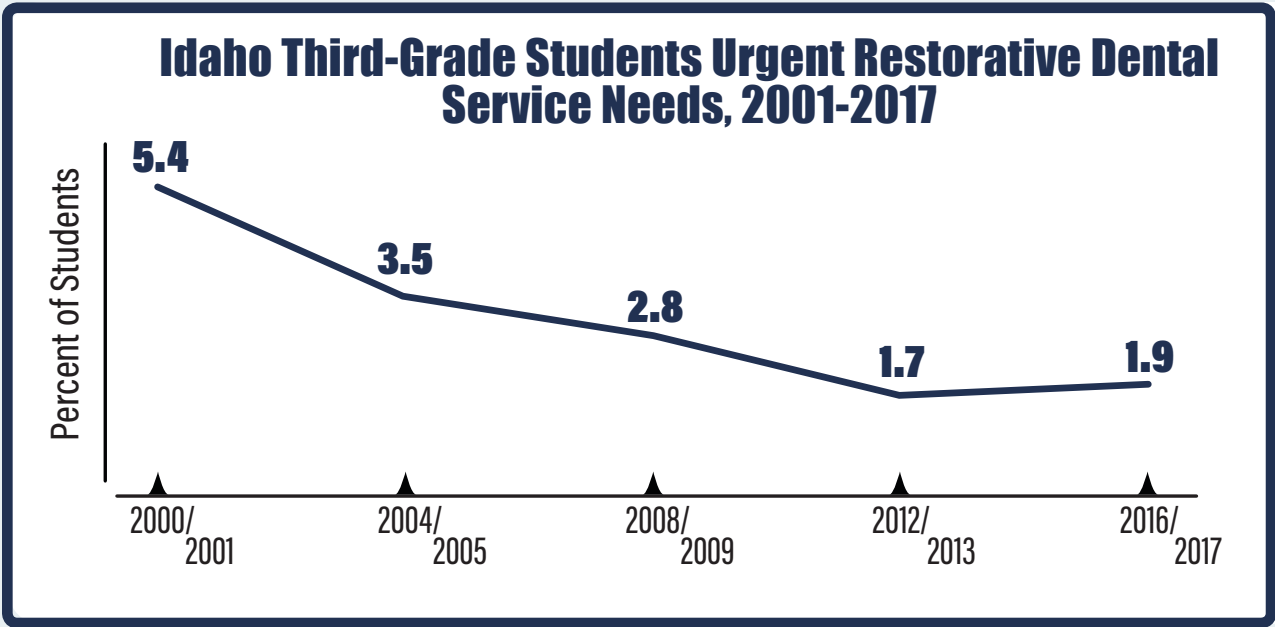
Caries Experience Highlights:

- 1 The rate of caries experience for Hispanic students, 78.5 percent, was significantly greater than for White students, 63.1 percent, non-White non-Hispanic students combined, 61.0 percent, Asian students, 55.0 percent, and Black students, 60.1 percent.
- 2 The rate of severe caries experience was significantly greater for Hispanic students at 50.7 percent than for Black students, 33.4 percent, Native American students, 19.8 percent, and White students 33.3 percent.
- 3 Hispanic students in Southwest and Eastern Idaho Public Health Districts had significantly greater caries experience rates, 78.2 percent vs. 87.7 percent, than for non-Hispanic students, 51.5 percent vs. 74.2 percent for the 2017 survey.
- 4 Students attending schools with FRSLP participation greater than 66 percent did not have a statistically significant rate of caries experience greater than students attending schools with FRSLP participation less than 33 percent for the first time in the history of this survey (72.4 percent vs. 61.4 percent).

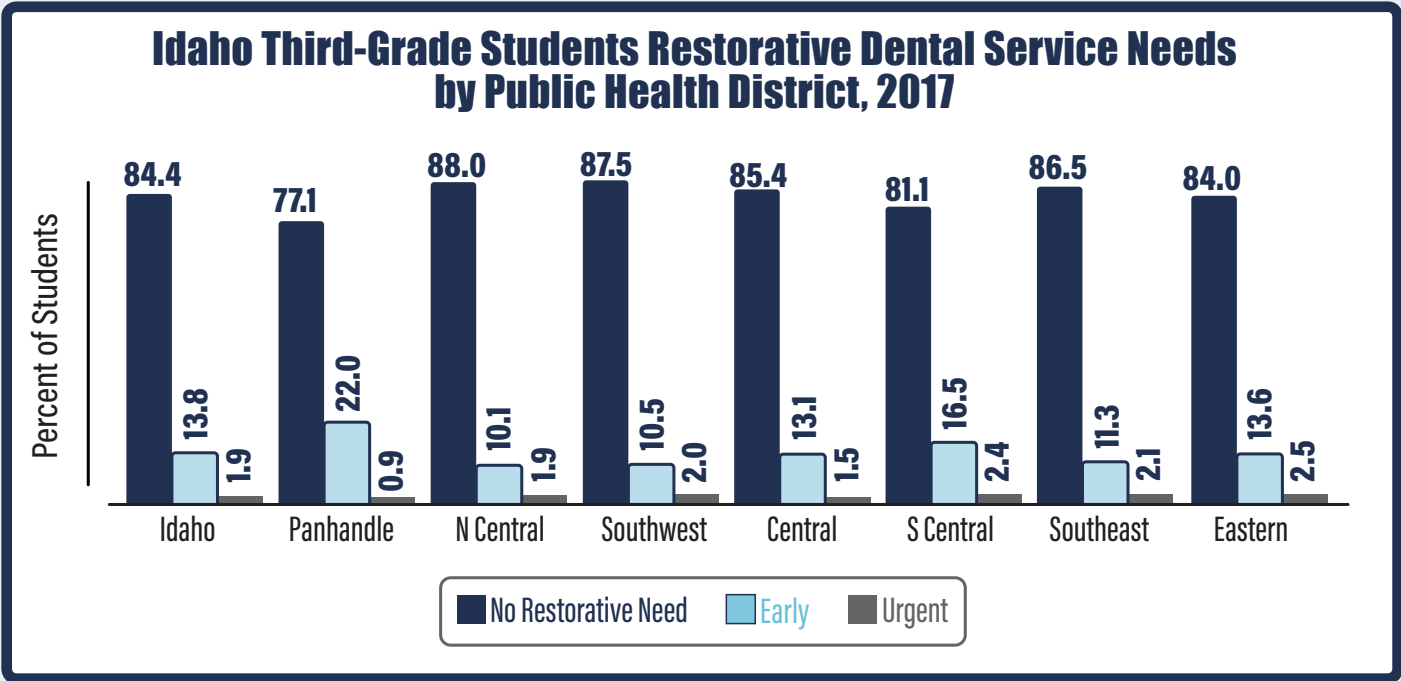


Restorative Dental Service Needs

The need for urgent restorative dental services due to pain, infection, swelling, bleeding, or ulceration has declined significantly since 2001.



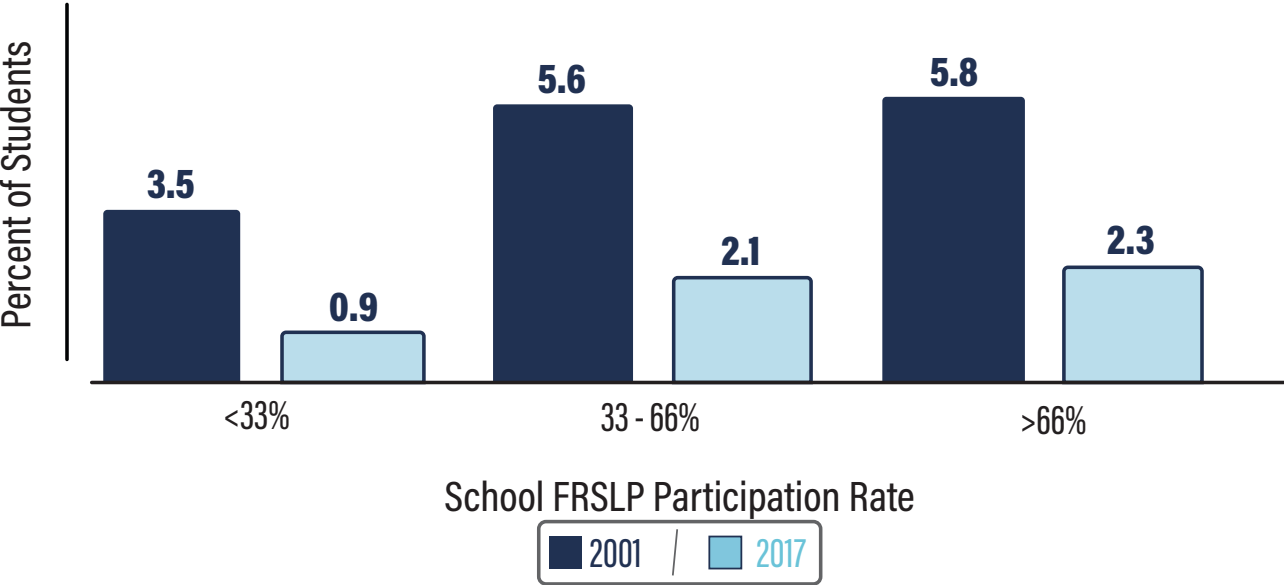
The data on restorative dental services was collected differently for 2017 than in prior surveys. Only the Urgent category was comparable to previous surveys. Panhandle Health District had the lowest rate of urgent restorative care at 0.9 percent but that was not statistically significant compared with any other health districts or statewide. North Central and Southwest Health Districts had the lowest rates of Early restorative care needs at 10.1 and 10.5 percent respectively but these rates were significant only when compared to Panhandle Health District with 22.0 percent.



Restorative Need Highlights:

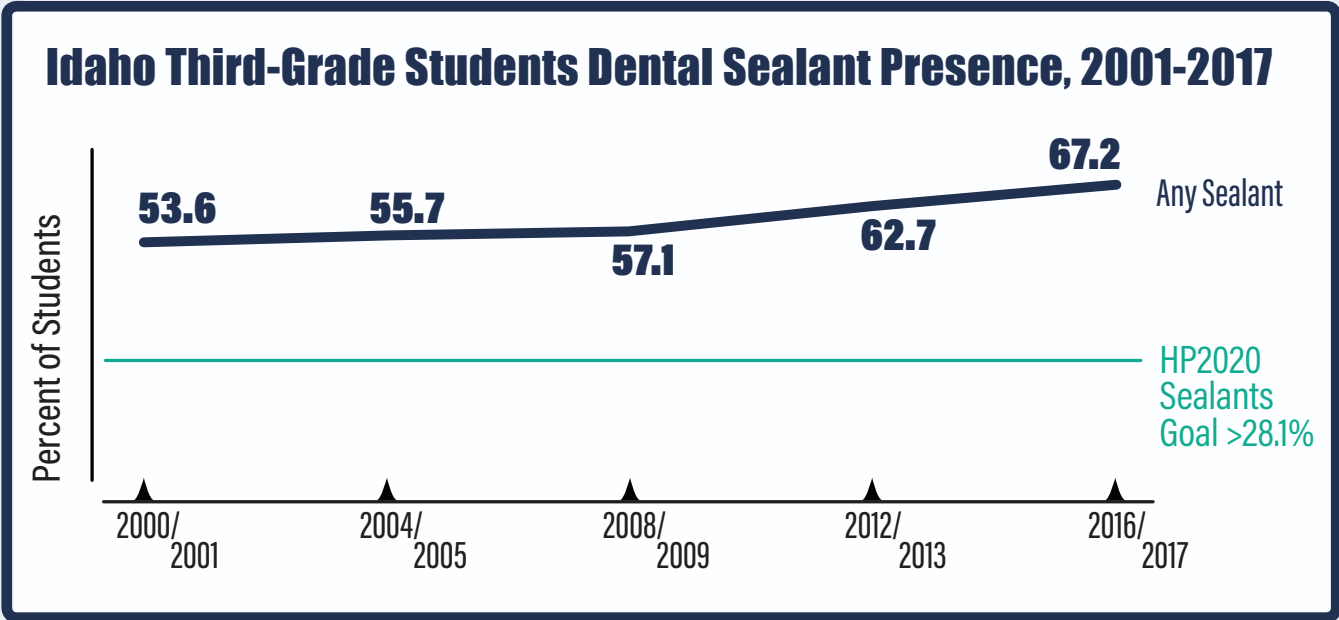
- 1 Students attending schools with FRSLP rates of less than 33 percent or 33 to 66 percent had a significantly higher rate of not having any restorative need, 86.7 and 84.6 percent respectively when compared to schools with FRSLP rate of 66 or greater, 78.6 percent.
- 2 Students attending schools with FRSLP rates of less than 66 percent had significantly lower rates of urgent restorative need when comparing 2001 with 2017.

Percent of Idaho Third-Grade Students with Urgent Restorative Dental Service Needs by School FRSLP Participation, 2001 and 2017

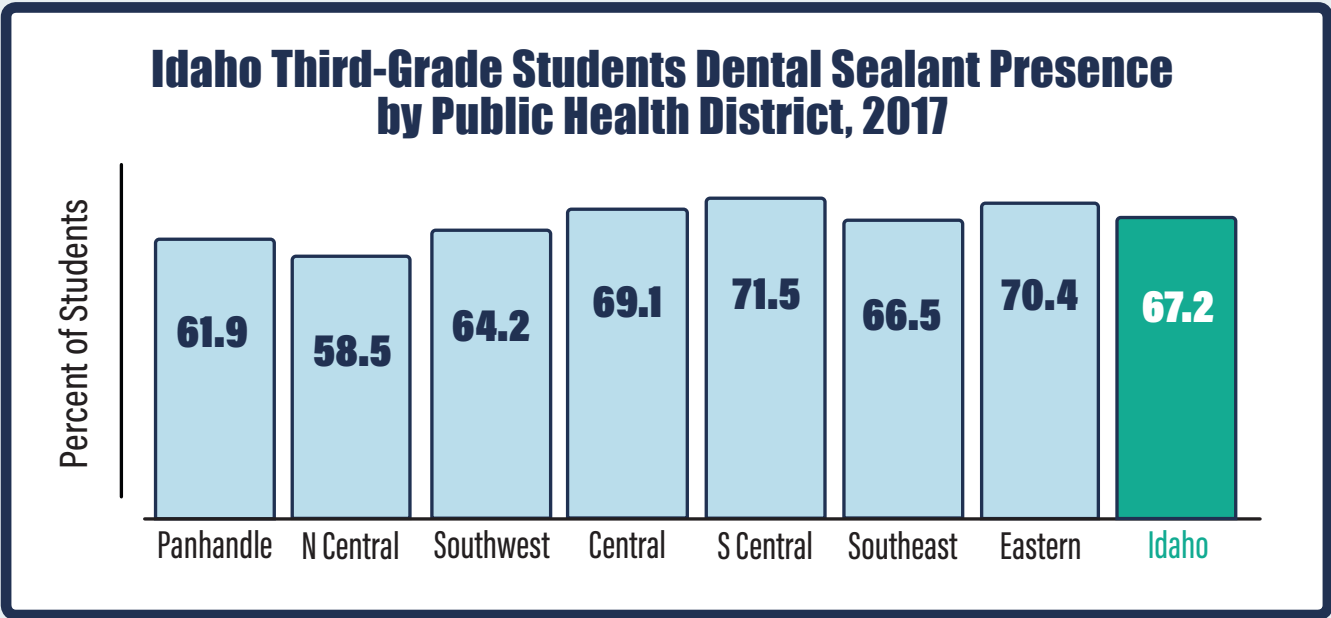


Dental Sealants

Dental sealants, a polymer protective material, should be applied to children’s permanent molar teeth to reduce tooth decay. **The HP2020 goal for children aged six to nine is a rate of 28.1 percent or better with sealants on at least one permanent molar. Idaho has met this goal for third-grade students in the surveys conducted with the rate increasing with each survey.** The 2017 rate of 67.2 percent was significantly greater than for 2009 and earlier.



South Central Public Health District had the highest rate for any sealants present at 71.5 percent, significantly greater only when compared to North Central Public Health District with 58.5 percent.



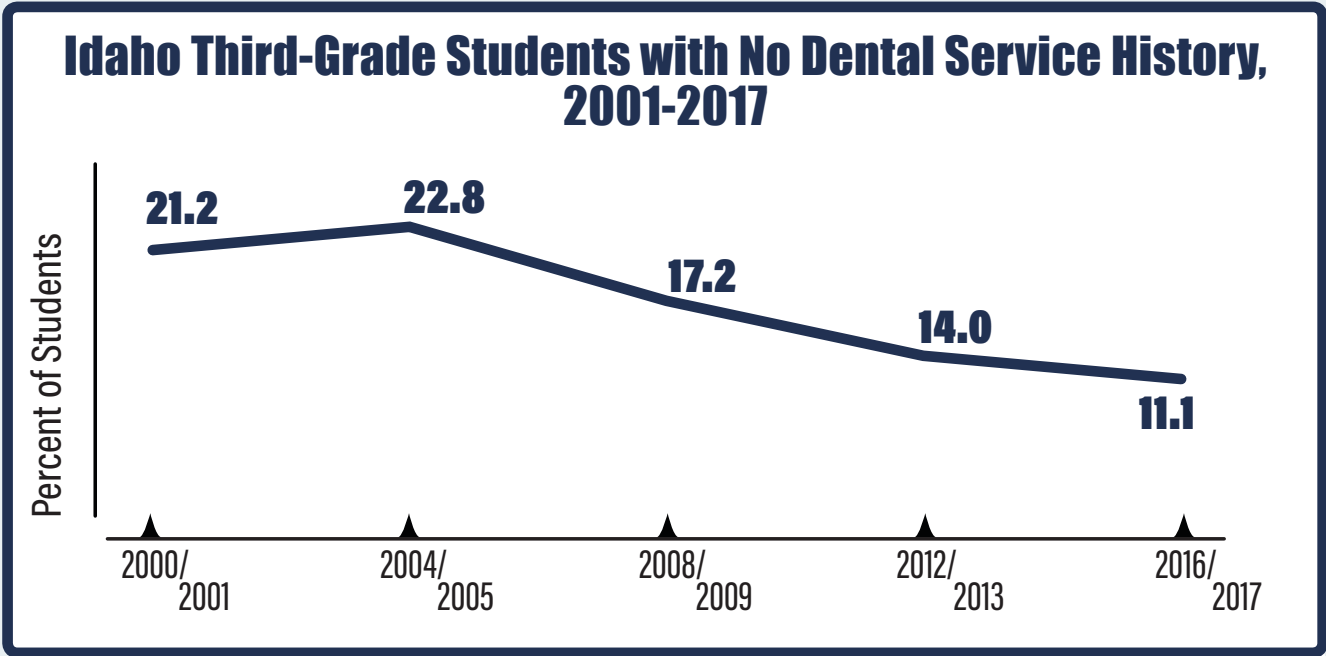
Dental Sealant Highlights:

- 1 The rate for presence of any teeth with dental sealants among schools with FRSLP rates below 33 percent has not changed significantly during the survey periods, 68.7 percent in 2001 and 68.8 percent in 2017.
- 2 The presence of sealants at schools with FRSLP rates between 33 and 66 percent have significantly increased from 51.8 percent in 2001 to 67.2 percent in 2017.
- 3 The change for presence of any dental sealants at schools with FRSLP rates greater than 66 percent increased from 49.9 percent in 2001 to 64.1 percent in 2017 but the difference is not statistically significant.
- 4 Each of the Public Health Districts had an increase in dental sealant presence from 2001 to 2017 with South Central Public Health District's increase from 37.1 percent to 71.5 percent being the largest increase.

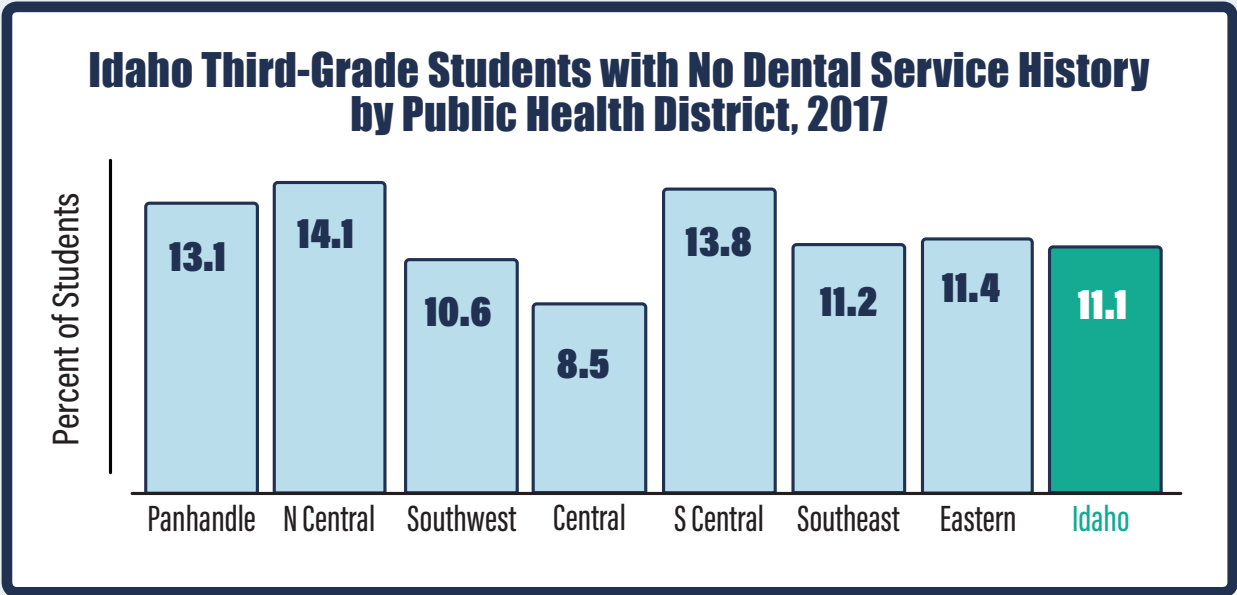


Dental Service History

The survey was not designed to collect direct data of whether students had ever or routinely visited a dentist. A surrogate measure for dental service was constructed using the presence of active decay without fillings or sealants in any teeth to approximate not having seen a dentist. The rate recorded for 2017 was significantly lower than in all previous surveys.



Central District Health Department had the smallest rate of no dental service history in 2017, 8.5 percent, which was only significantly less than South Central Public Health District with 13.8 percent.



Dental Service History Highlights:

1

Students attending schools with FRSLP rates greater than 66 percent had a statistically significant rate of no dental history, 15.7 percent, than students attending schools with FRSLP rates less than 33 percent, 7.9 percent, and schools with FRSLP participation of 33 to 66 with 11.3 percent. The rate comparison between schools with FRSLP of 33 to 66 percent was also significantly greater than for schools with FRSLP less than 33 percent.

2

Hispanic students had a statistically significant change of no dental history rate from 39.2 percent in 2001 to 11.2 percent in 2017. The change for white students, 18.4 percent to 10.9 percent was also significant. Non-white non-Hispanic students showed a decrease from 23.4 percent to 11.2 percent but the difference was not statistically significant.



Sample Design

The sampling frame consisted of all non-virtual public schools in Idaho based on enrollment in the second grade during the 2015/2016 school year. That school-year's enrollment was used to plan the sample as it was the latest available data during planning and represented the study cohort. School size, defined as estimated third-grade enrollment was limited to control costs per examined student by removing low-enrollment rural schools. School sizes were limited to those within each Public Health District that would ensure a minimum coverage of students within the health district of 95 percent. Budget constraints further limited the study to a single grade. Schools were selected using a systematic selection method using SAS software. All students in the sampled school were targeted for data collection. The sample was also stratified by Idaho's seven Public Health Districts, yielding a stratified cluster design. Sample size was chosen to provide 95 percent confidence intervals with a width of ± 5 percent at the Public Health District level for primary measures such as presence of dental sealants, active tooth decay or fillings. The Sample Characteristics table below summarizes schools and students of third grade only.

Schools that refused to participate or had been closed between sample selection and survey period were replaced by the school with the closest enrollment total within the health district. The individual school's rules for parental notification/permission were used resulting in noticeable differences in student participation rates. The overall response rate was 82.4 percent of enrolled students at examination dates participating with a range of 55.6 to 97.7 percent for individual schools. FRSLP participation rates were not available in open source documents for all schools and therefore not considered in sample selection.

Table 1: Sample Characteristics

		Total	Panhandle HD	North Central HD	Southwest HD	Central HD	South Central HD	Southeastern HD	Eastern HD
Schools	In District*	382	44	32	58	90	48	47	63
	Surveyed	68	10	10	9	11	8	11	9
Students	Surveyed	3,687	555	329	532	677	443	695	456
	Students in District**	23,445	2,434	1,025	4,126	6,323	3,145	2,845	3,547
	Surveyed Schools Enrollment	4,476	651	375	672	836	546	835	561
Participation Rate	District	82.4	85.3	87.7	79.2	81	81.1	83.2	81.3
	Minimum	55.6	78.3	83.3	61.2	71.4	72.7	73.5	55.6
	Maximum	97.7	95.8	97.7	85.9	90.5	95	88.6	95.2
FRLSP Rate All Schools	Not Published	63	4	5	9	13	12	11	9
	<33%	67	4	7	0	43	4	3	6
	33 to 66%	223	34	16	40	36	27	29	41
	66%+	41	5	4	9	1	7	7	8
FRLSP Rate Surveyed Schools***	<33%	10	0	3	0	7	0	0	0
	33 to 66%	49	9	6	8	4	4	9	9
	66%+	9	1	1	1	0	4	2	0

* When sample was designed, with students in third grade, excludes four virtual schools.

** Excludes virtual schools with state total third grade enrollment of 214.

*** 19 Schools with school district FRSL rate.

Data Collection

The screening criteria for caries experience, treatment need and dental sealants were the same as those outlined in the Association of State and Territorial Dental Directors (ASTDD) Basic Screening Surveys. Examiners were dental hygienists employed by the Public Health Districts and Delta Dental of Idaho's Community Outreach Program. A training conducted by the Idaho Oral Health Program prior to the school year in 2016 oriented examiners to the screening guidelines, infection control, survey logistics, forms, and coding. Exams recorded presence of any untreated tooth decay, treated tooth decay, severe caries experience defined as four or more teeth with untreated or treated tooth decay, any sealants present and urgency of restorative need as none, early or urgent.

All third-grade students attending the selected schools with appropriate permissions were examined on the date(s) the school was visited. Examinations were conducted from September 2016 to May 2017. The table below details demographic characteristics of the examined students.

Table 2: Demographics of Examined Students

		Total	Panhandle HD	North Central HD	Southwest HD	Central HD	South Central HD	Southeast ern HD	Eastern HD
Race	White	2,869	515	288	351	546	244	584	341
	Hispanic	552	0	3	169	50	154	75	101
	non-White non- Hispanic	266	40	38	12	81	45	36	14
	Other	130	32	21	5	29	29	13	1
	Asian	54	2	7	4	27	10	2	2
	Black	51	6	4	3	22	6	3	7
	Native American	31	0	6	0	3	0	18	4
Age	7	9	1	3	0	1	0	3	1
	8	1,950	295	234	263	397	176	345	240
	9	1,685	251	89	255	276	256	346	212
	10	43	8	3	14	3	11	1	3
Gender	Female	1,787	265	149	270	330	216	318	239
	Male	1,896	290	180	262	347	226	374	217
	Unknown	4	0	0	0	0	1	3	0

Data Limitations

The cluster nature of the sample using all students in a school may have introduced data bias if an entire school were significantly different from the population of third-graders within a Public Health District. Use of the FRSLP rates as a surrogate for income treats all students within a school as members of the same income group. Combined with the number of schools sampled some Public Health Districts do not have any students in the highest or lowest income groups and may only have one school in a reported FRSLP percentage range limiting the ability to include income in analysis with other population subgroups. Additionally, FRSLP rates were not available for all schools and a school district average rate was used as a surrogate. Results only reflect public schools.

Examiners were all trained together to minimize data bias at collection but there still could be differences between examiners. The duration of the data collection period and the age group examined could affect results due to eruption or loss of teeth as part of the growth cycle. Errors may have been introduced when transcribing examination form data. Student records missing more than two of the recorded examination points were excluded from the analysis. Some forms did not include one or more of gender, age, race or ethnicity. Analysis on those sub-domains excluded such records.



Detail Tables

Active Tooth Decay

Idaho third-grade students with active decay in at least one tooth, school year 2016-2017

	Idaho			Panhandle HD			North Central HD			Southwest HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	17.1	(15.5, 18.7)	3,687	22.9	(15.3, 30.6)	555	16.2	(10.6, 21.8)	329	14.5	(9.7, 19.2)	532
Race/Ethnicity												
White	16.9	(15.0, 18.9)	2,869	23.6	(15.8, 31.3)	515	16.4	(10.9, 22.0)	288	10.9	(7.2, 14.6)	351
Hispanic	19.4	(16.4, 22.4)	552			0	*	*	3	22.2	(17.7, 26.8)	169
Non-White Non-Hispanic	11.9	(7.9, 16.0)	213	*	*	9	15.7 **	(2.5, 28.9)	38	*	*	10
FRSLP												
<33%	13.5	(10.9, 16.0)	588			0	3.5 **	(0.8, 6.2)	85			0
33 to 66%	17.2	(15.2, 19.2)	2,691	22.5	(14.3, 30.7)	509	18.3	(14.5, 22.0)	226	12.2	(8.6, 15.9)	422
66%+	23.7	(21.7, 25.7)	408	28.3	(28.3, 28.3)	46	*	*	18	23.6	(23.6, 23.6)	110

	Central HD			South Central HD			Southeastern HD			Eastern HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	14.7	(12.4, 17.0)	677	20.2	(17.6, 22.8)	443	14.1	(9.5, 18.7)	695	20.3	(17.9, 22.8)	456
Race/Ethnicity												
White	14.9	(11.9, 18.0)	546	24.4	(18.9, 29.8)	244	12.9	(8.2, 17.6)	584	20.2	(15.6, 24.9)	341
Hispanic	19.5	(10.8, 28.2)	50	14.0	(9.1, 18.9)	154	19.8	(13.8, 25.8)	75	22.4	(16.7, 28.0)	101
Non-White Non-Hispanic	9.0 **	(3.0, 15.0)	78	16.4	(8.7, 24.2)	37	*	*	28	*	*	13
FRSLP												
<33%	14.0	(11.5, 16.6)	503			0			0			0
33 to 66%	16.7	(11.7, 21.6)	174	19.7	(16.0, 23.4)	297	12.6	(8.3, 16.9)	607	20.3	(17.9, 22.8)	456
66%+			0	21.2	(20.2, 22.2)	146	24.7	(15.2, 34.2)	88			0

*Number of responses too small for reliable estimate. ** Possibly reliable estimate, use with caution. *** Unreliable estimate suppressed.

Severe Active Tooth Decay

Idaho third-grade students with decay or fillings in four or more teeth, school year 2016-2017

	Idaho			Panhandle HD			North Central HD			Southwest HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	36.4	(33.3, 39.4)	3,686	27.4	(24.0, 30.8)	555	20.6	(15.7, 25.5)	329	31.0	(18.7, 43.4)	532
Race/Ethnicity												
White	33.3	(30.2, 36.3)	2,868	27.6	(24.2, 30.9)	515	18.7	(14.3, 23.1)	288	22.6	(9.9, 35.3)	351
Hispanic	50.7	(45.9, 55.4)	552			0	**	*	3	47.6	(36.8, 58.4)	169
Non-White Non-Hispanic	36.4	(30.5, 42.3)	213	*	*	9	34.1	(24.7, 43.5)	38	**	*	10
FRSLP												
<33%	35.0	(30.0, 39.9)	588			0	28.1	(19.3, 36.9)	85			0
33 to 66%	36.2	(32.3, 40.2)	2,691	27.3	(23.7, 31.0)	509	18.1	(15.2, 20.9)	226	30.4	(15.0, 45.8)	422
66%+	39.9	(31.1, 48.8)	407	28.3	(28.3, 28.3)	46	*	*	18	33.6	(33.6, 33.6)	110

	Central HD			South Central HD			Southeastern HD			Eastern HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	37.5	(33.2, 41.9)	677	38.7	(29.1, 48.4)	442	40.1	(32.8, 47.5)	695	46.2	(40.5, 51.9)	456
Race/Ethnicity												
White	36.7	(30.8, 42.6)	546	34.5	(25.8, 43.2)	243	38.3	(29.6, 46.9)	584	42.1	(36.2, 48.1)	341
Hispanic	44.2	(34.3, 54.2)	50	48.6	(38.6, 58.6)	154	55.6	(45.3, 66.0)	75	61.3	(54.9, 67.6)	101
Non-White Non-Hispanic	40.8	(30.9, 50.7)	78	27.0	(22.2, 31.8)	37	*	*	28	*	*	13
FRSLP												
<33%	35.4	(30.2, 40.6)	503			0			0			0
33 to 66%	43.8	(41.2, 46.4)	174	35.0	(24.3, 45.7)	297	39.4	(31.0, 47.8)	607	46.2	(40.5, 51.9)	456
66%+			0	46.0	(32.0, 60.0)	145	45.4	(44.6, 46.2)	88			0

*Number of responses too small for reliable estimate. ** Possibly reliable estimate, use with caution. *** Unreliable estimate suppressed.

Caries Experience

Idaho third-grade students with any active decay or filled teeth, school year 2016-2017

	Idaho			Panhandle HD			North Central HD			Southwest HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	65.6	(62.7, 68.5)	3,686	59.1	(52.3, 65.9)	554	45.3	(37.9, 52.7)	329	60.0	(49.8, 70.3)	532
Race/Ethnicity												
White	63.1	(60.4, 65.8)	2,868	59.8	(53.2, 66.4)	514	43.8	(36.2, 51.5)	288	51.6	(41.2, 62.0)	351
Hispanic	78.5	(73.4, 83.7)	552			0	*	*	3	78.2	(67.9, 88.4)	169
Non-White Non-Hispanic	61.0	(55.6, 66.4)	213	*	*	9	57.7	(43.7, 71.7)	38	* **	*	10
FRSLP												
<33%	61.4	(57.8, 65.0)	588			0	49.3	(39.4, 59.1)	85			0
33 to 66%	65.9	(62.1, 69.6)	2,690	58.9	(51.6, 66.3)	508	42.1	(33.6, 50.5)	226	58.7	(46.1, 71.3)	422
66%+	72.4	(62.3, 82.4)	408	60.9	(60.9, 60.9)	46	*	*	18	65.5	(65.5, 65.5)	110

	Central HD			South Central HD			Southeastern HD			Eastern HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	63.3	(60.2, 66.4)	677	71.5	(58.5, 84.5)	443	71.0	(64.3, 77.8)	695	77.1	(74.2, 80.1)	456
Race/Ethnicity												
White	63.3	(59.5, 67.0)	546	68.6	(54.1, 83.0)	244	69.5	(61.6, 77.4)	584	74.5	(70.8, 78.2)	341
Hispanic	69.7	(59.2, 80.2)	50	76.7	(63.8, 89.7)	154	79.3	(69.5, 89.0)	75	87.7	(82.4, 93.0)	101
Non-White Non-Hispanic	60.2	(52.0, 68.4)	78	65.2	(55.9, 74.5)	37	*	*	28	*	*	13
FRSLP												
<33%	62.1	(58.3, 65.9)	503			0			0			0
33 to 66%	66.7	(62.8, 70.6)	174	67.9	(51.5, 84.2)	297	70.3	(62.7, 77.9)	607	77.1	(74.2, 80.1)	456
66%+			0	78.5	(61.8, 95.3)	146	76.1	(75.2, 77.0)	88			0

*Number of responses too small for reliable estimate. ** Possibly reliable estimate, use with caution. *** Unreliable estimate suppressed.

Dental Sealants Present

Idaho third-grade students with a dental sealant on at least one tooth recommended for dental sealants, school year 2016-2017

	Idaho			Panhandle HD			North Central HD			Southwest HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	67.2	(64.8, 69.7)	3,685	61.9	(54.4, 69.4)	555	58.5	(51.3, 65.7)	329	64.2	(57.3, 71.1)	532
Race/Ethnicity												
White	67.9	(65.3, 70.4)	2,867	62.7	(55.7, 69.7)	515	58.1	(49.8, 66.4)	288	65.1	(57.8, 72.5)	351
Hispanic	66.9	(62.5, 71.3)	552			0	*	*	3	64.5	(58.4, 70.6)	169
Non-White Non-Hispanic	62.3	(56.0, 68.6)	213	*	*	9	63.8	(41.5, 86.0)	38	*	*	10
FRSLP												
<33%	68.8	(63.7, 74.0)	587			0	67.1	(63.7, 70.4)	85			0
33 to 66%	67.2	(64.4, 70.1)	2,690	63.2	(55.5, 70.8)	509	56.5	(46.9, 66.0)	226	65.5	(57.5, 73.4)	422
66%+	64.1	(54.3, 73.9)	408	45.7	(45.7, 45.7)	46	*	*	18	59.1	(59.1, 59.1)	110

	Central HD			South Central HD			Southeastern HD			Eastern HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	69.1	(65.0, 73.3)	675	71.5	(66.0, 77.0)	443	66.5	(59.8, 73.2)	695	70.4	(62.1, 78.8)	456
Race/Ethnicity												
White	69.6	(65.5, 73.6)	544	71.6	(65.7, 77.4)	244	69.7	(63.4, 75.9)	584	71.1	(61.6, 80.6)	341
Hispanic	66.4	(57.8, 74.9)	50	72.6	(62.9, 82.3)	154	51.6	(38.7, 64.6)	75	69.5	(59.2, 79.7)	101
Non-White Non-Hispanic	66.7	(58.6, 74.7)	78	70.4	(50.5, 90.2)	37	*	*	28	*	*	13
FRSLP												
<33%	68.9	(63.5, 74.4)	502			0			0			0
33 to 66%	69.7	(65.8, 73.6)	173	68.6	(64.8, 72.5)	297	69.1	(63.6, 74.5)	607	70.4	(62.1, 78.8)	456
66%+			0	77.0	(68.4, 85.7)	146	48.3	(31.0, 65.7)	88			0

*Number of responses too small for reliable estimate. ** Possibly reliable estimate, use with caution. *** Unreliable estimate suppressed.

Good Overall Dental Health

Idaho third-grade students with no requirement for restorative dental work, school year 2016-2017

	Idaho			Panhandle HD			North Central HD			Southwest HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	84.4	(82.7, 86.1)	3,697	77.1	(69.6, 84.7)	556	88.0	(83.1, 93.0)	329	87.5	(82.1, 92.8)	536
Race/Ethnicity												
White	84.4	(82.4, 86.3)	2,877	76.5	(68.8, 84.2)	516	88.4	(83.2, 93.6)	288	89.8	(86.4, 93.1)	354
Hispanic	83.4	(79.7, 87.1)	554			0	*	*	3	82.5	(73.1, 91.8)	170
Non-White Non-Hispanic	88.6	(84.2, 92.9)	213	*	*	9	84.3	(71.1, 97.5)	38	*	*	10
FRSLP												
<33%	86.7	(84.1, 89.4)	588			0	100	(100, 100)	85			0
33 to 66%	84.6	(82.4, 86.7)	2,701	77.5	(69.4, 85.7)	510	85.3	(82.4, 88.2)	226	89.9	(85.6, 94.3)	426
66%+	78.6	(76.7, 80.4)	408	71.7	(71.7, 71.7)	46	*	*	18	77.3	(77.3, 77.3)	110

	Central HD			South Central HD			Southeastern HD			Eastern HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	85.4	(83.3, 87.6)	677	81.1	(77.7, 84.4)	443	86.5	(82.1, 91.0)	699	84.0	(79.7, 88.2)	457
Race/Ethnicity												
White	85.3	(82.2, 88.3)	546	76.8	(71.0, 82.6)	244	87.7	(83.1, 92.2)	587	84.3	(78.9, 89.8)	342
Hispanic	80.5	(71.8, 89.2)	50	87.3	(83.1, 91.4)	154	81.9	(75.0, 88.9)	76	81.4	(77.8, 85.1)	101
Non-White Non-Hispanic	91.0	(85.0, 97.0)	78	86.2	(74.5, 98.0)	37	*	*	28	*	*	13
FRSLP												
<33%	86.0	(83.4, 88.5)	503			0			0			0
33 to 66%	84.0	(79.6, 88.3)	174	81.6	(76.6, 86.5)	297	87.2	(82.4, 92.0)	611	84.0	(79.7, 88.2)	457
66%+			0	80.2	(78.8, 81.6)	146	81.9	(79.3, 84.6)	88			0

*Number of responses too small for reliable estimate. ** Possibly reliable estimate, use with caution. *** Unreliable estimate suppressed.

Improve Dental Health

Idaho third-grade students with a requirement for early restorative dental work, school year 2016-2017

	Idaho			Panhandle HD			North Central HD			Southwest HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	13.8	(12.2, 15.3)	3,697	22.0	(14.7, 29.3)	556	10.1	(6.0, 14.1)	329	10.5	(6.6, 14.5)	536
Race/Ethnicity												
White	14.0	(12.2, 15.9)	2,877	22.6	(15.0, 30.1)	516	10.2	(5.6, 14.7)	288	8.4	(5.9, 11.0)	354
Hispanic	13.6	(10.4, 16.9)	554			0	*	*	3	15.1	(7.5, 22.8)	170
Non-White Non-Hispanic	10.1	(6.3, 14.0)	213	*	*	9	***	***	38	*	*	10
FRSLP												
<33%	12.4	(9.5, 15.2)	588			0	0	(0, 0)	85			0
33 to 66%	13.4	(11.3, 15.4)	2,701	21.7	(13.8, 29.6)	510	13.3	(10.7, 16.0)	226	8.7	(5.6, 11.9)	426
66%+	19.1	(17.7, 20.6)	408	26.1	(26.1, 26.1)	46	*	*	18	18.2	(18.2, 18.2)	110

	Central HD			South Central HD			Southeastern HD			Eastern HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	13.1	(10.7, 15.5)	677	16.5	(13.5, 19.5)	443	11.3	(7.6, 15.0)	699	13.6	(9.2, 18.0)	457
Race/Ethnicity												
White	13.5	(10.4, 16.6)	546	20.6	(14.7, 26.4)	244	10.6	(6.7, 14.6)	587	13.6	(8.8, 18.4)	342
Hispanic	15.6	(8.4, 22.8)	50	11.1	(7.0, 15.2)	154	12.8	(6.2, 19.4)	76	14.1	(7.4, 20.8)	101
Non-White Non-Hispanic	7.8	(3.2, 12.4)	78	13.8 **	(2.0, 25.5)	37	*	*	28	*	*	13
FRSLP												
<33%	13.1	(10.3, 15.8)	503			0			0			0
33 to 66%	13.2	(8.3, 18.0)	174	15.1	(10.7, 19.5)	297	10.4	(6.7, 14.1)	611	13.6	(9.2, 18.0)	457
66%+			0	19.1	(17.0, 21.2)	146	18.1	(15.4, 20.7)	88			0

*Number of responses too small for reliable estimate. ** Possibly reliable estimate, use with caution. *** Unreliable estimate suppressed.

Urgent Care Required

Idaho third-grade students requiring urgent restorative care due to pain, infection, swelling or ulceration, school year 2016-2017

	Idaho			Panhandle HD			North Central HD			Southwest HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	1.9	(1.3, 2.5)	3,697	0.9 **	(0.2, 1.6)	556	1.9 **	(0.2, 3.5)	329	2.0 **	(0.4, 3.5)	536
Race/Ethnicity												
White	1.6	(1.1, 2.2)	2,877	1.0 **	(0.2, 1.7)	516	***	***	288	1.8 **	(0.4, 3.2)	354
Hispanic	3.0	(1.5, 4.4)	554			0	*	*	3	2.4 **	(0.1, 4.7)	170
Non-White Non-Hispanic	1.3 **	(0.1, 2.6)	213	*	*	9	5.4 **	(1.0, 9.9)	38	*	*	10
FRSLP												
<33%	0.9 **	(0.2, 1.7)	588			0	0	(0, 0)	85			0
33 to 66%	2.1	(1.3, 2.8)	2,701	0.8 **	(0.1, 1.5)	510	1.4	(0.7, 2.1)	226	***	***	426
66%+	2.3 **	(0.8, 3.9)	408	2.2	(2.2, 2.2)	46	*	*	18	4.5	(4.5, 4.5)	110

	Central HD			South Central HD			Southeastern HD			Eastern HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	1.5	(0.7, 2.2)	677	2.4 ***	***	443	2.1 **	(0.5, 3.8)	699	2.5	(1.2, 3.7)	457
Race/Ethnicity												
White	1.3 **	(0.5, 2.1)	546	***	***	244	1.7 **	(0.5, 2.9)	587	2.0 **	(0.4, 3.6)	342
Hispanic	***	***	50	***	***	154	5.3	(2.3, 8.2)	76	4.5 **	(0.3, 8.7)	101
Non-White Non-Hispanic	***	***	78	0	(0, 0)	37	*	*	28	*	*	13
FRSLP												
<33%	1.0 **	(0.2, 1.8)	503			0			0			0
33 to 66%	2.9	(2.2, 3.5)	174	***	***	297	2.4 **	(0.6, 4.3)	611	2.5	(1.2, 3.7)	457
66%+			0	***	***	146	0	(0, 0)	88			0

*Number of responses too small for reliable estimate. ** Possibly reliable estimate, use with caution. *** Unreliable estimate suppressed.

South Central Public Health District had only three schools of eight with any urgent restorative need. The unweighted percentages at those 3 schools were 1.4, 14 and 8 percent. The wide range of percentages relative to the sample size and number of schools with any variability resulted in a very large coefficient of variation. The Public Health District total is included for limited reference but should be considered unreliable. Similar extremes of variability occurred within multiple Public Health Districts when subpopulations were examined.

No Dental Treatment History

Idaho third-grade students with tooth decay but no fillings or dental sealants present, school year 2016-2017

	Idaho			Panhandle HD			North Central HD			Southwest HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	11.1	(10.1, 12.1)	3,684	13.1	(10.0, 16.2)	554	14.1	(9.0, 19.1)	329	10.6	(7.9, 13.3)	532
Race/Ethnicity												
White	10.9	(9.7, 12.1)	2,866	13.2	(10.4, 15.9)	514	14.0	(8.9, 19.1)	288	9.1	(6.7, 11.5)	351
Hispanic	11.2	(9.1, 13.3)	552			0	*	*	3	13.7	(11.4, 16.1)	169
Non-White Non-Hispanic	11.2	(6.9, 15.5)	213	*	*	9	15.7 **	(2.5, 28.9)	38	*	*	10
FRSLP												
<33%	7.9	(6.1, 9.7)	587			0	2.3 **	(0.5, 4.1)	85			0
33 to 66%	11.3	(10.1, 12.6)	2,689	12.1	(9.4, 14.7)	508	16.0	(13.0, 19.0)	226	9.2	(7.5, 10.9)	422
66%+	15.7	(12.8, 18.6)	408	26.1	(26.1, 26.1)	46	*	*	18	16.4	(16.4, 16.4)	110

	Central HD			South Central HD			Southeastern HD			Eastern HD		
	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n
Total	8.5	(6.7, 10.4)	675	13.8	(11.4, 16.3)	443	11.2	(8.0, 14.5)	695	11.4	(8.4, 14.4)	456
Race/Ethnicity												
White	8.5	(6.4, 10.7)	544	17.2	(13.8, 20.5)	244	10.0	(6.6, 13.4)	584	11.1	(6.9, 15.3)	341
Hispanic	5.9 **	(0.3, 11.5)	50	7.7	(4.1, 11.2)	154	16.9	(10.0, 23.9)	75	13.0	(8.9, 17.2)	101
Non-White Non-Hispanic	9.0 **	(3.0, 15.0)	78	13.8 **	(2.0, 25.5)	37	*	*	28	*	*	13
FRSLP												
<33%	8.2	(6.4, 10.0)	502			0			0			0
33 to 66%	9.3	(4.3, 14.4)	173	15.0	(11.9, 18.1)	297	10.4	(7.2, 13.7)	607	11.4	(8.4, 14.4)	456
66%+			0	11.6	(8.7, 14.4)	146	17.0	(16.0, 18.0)	88			0

*Number of responses too small for reliable estimate. ** Possibly reliable estimate, use with caution. *** Unreliable estimate suppressed.

Trend Tables

Trends of Selected Measures By Public Health District

Idaho	Survey School Year											
	2000/01			2004/05			2008/09			2012/13		
	%	99% CI		%	99% CI		%	99% CI		%	99% CI	
Current Active Decay	27.3	(24.6, 29.9)		31.0	(28.9, 33.0)		22.5	(20.3, 24.5)		20.8	(18.8, 22.7)	
4+ Teeth Treated or Untreated Decay	35.8	(33.3, 38.2)		43.6	(41.6, 45.5)		39.7	(37.1, 42.1)		33.0	(30.5, 35.5)	
Decay, no dental services	21.2	(19.4, 23.0)		22.8	(20.9, 24.6)		17.2	(15.3, 19.0)		14.0	(12.1, 15.7)	
Any Decayed or Filled	65.4	(62.8, 67.8)		69.8	(67.8, 71.7)		67.1	(64.4, 69.6)		61.8	(58.6, 64.9)	
Urgent Restorative Need	5.4	(4.2, 6.5)		3.5	(2.8, 4.1)		2.8	(2.1, 3.4)		1.7	(1.1, 2.2)	
Sealants Present Any Teeth	53.6	(50.4, 56.7)		55.7	(52.8, 58.4)		57.1	(54.2, 59.8)		62.7	(59.9, 65.4)	
Panhandle HD	%	99% CI		%	99% CI		%	99% CI		%	99% CI	
Current Active Decay	17.2	(13.4, 20.8)		17.2	(14.0, 20.2)		26.4	(19.8, 33.0)		15.6	(12.0, 19.2)	
4+ Teeth Treated or Untreated Decay	35.4	(30.5, 40.1)		30.7	(26.2, 35.1)		38.2	(29.9, 46.4)		16.2	(12.9, 19.3)	
Decay, no dental services	15.1	(12.7, 17.5)		14.2	(12.4, 16.0)		16.2	(12.1, 20.1)		11.9	(8.4, 15.3)	
Any Decayed or Filled	59.6	(54.5, 64.6)		58.9	(53.2, 64.4)		73.7	(67.8, 79.5)		45.9	(41.4, 50.2)	
Urgent Restorative Need	3.4	(2.4, 4.2)		1.4	(0.5, 2.2)		2.1**	(0.8, 3.4)		2.1**	(0.9, 3.2)	
Sealants Present Any Teeth	48.3	(40.3, 56.1)		45.3	(39.3, 51.2)		64.9	(57.3, 72.4)		59.0	(53.6, 64.4)	
North Central HD	%	99% CI		%	99% CI		%	99% CI		%	99% CI	
Current Active Decay	13.1	(9.9, 16.1)		26.4	(19.9, 32.8)		24.4	(18.8, 29.9)		26.6	(22.8, 30.4)	
4+ Teeth Treated or Untreated Decay	26.0	(22.5, 29.4)		27.6	(21.9, 33.3)		32.2	(26.2, 38.2)		30.7	(25.4, 35.8)	
Decay, no dental services	11.3	(7.8, 14.7)		22.1	(16.2, 27.9)		21.1	(15.6, 26.6)		21.4	(17.7, 25.0)	
Any Decayed or Filled	52.1	(47.2, 56.9)		57.5	(50.5, 64.4)		57.4	(51.3, 63.5)		55.2	(50.2, 60.0)	
Urgent Restorative Need	1.2***	(0.2, 2.2)		6.6	(3.3, 9.8)		4.1	(1.9, 6.2)		2.5	(1.1, 3.9)	
Sealants Present Any Teeth	50.1	(45.4, 54.7)		39.3	(33.7, 44.8)		43.2	(33.3, 52.9)		45.5	(37.0, 53.9)	
Southwest HD	%	99% CI		%	99% CI		%	99% CI		%	99% CI	
Current Active Decay	40.3	(34.5, 46.0)		39.9	(33.9, 45.7)		18.9	(14.0, 23.8)		16.9	(15.0, 18.7)	
4+ Teeth Treated or Untreated Decay	38.3	(34.9, 41.6)		47.8	(43.0, 52.6)		29.9	(23.0, 36.7)		22.4	(14.7, 30.0)	
Decay, no dental services	27.4	(25.6, 29.1)		30.6	(25.1, 36.1)		16.3	(11.8, 20.7)		14.4	(11.7, 16.9)	
Any Decayed or Filled	73.8	(66.4, 81.0)		77.8	(72.3, 83.1)		61.4	(53.4, 69.4)		50.1	(41.8, 58.4)	
Urgent Restorative Need	5.2	(3.6, 6.7)		5.2	(3.6, 6.7)		2.6	(1.6, 3.5)		0.7**	(0.1, 1.2)	
Sealants Present Any Teeth	59.8	(51.2, 68.2)		56.8	(49.3, 64.2)		52.8	(47.3, 58.3)		52.7	(47.7, 57.6)	

** Possibly reliable estimate, use with caution. *** Unreliable estimate included for completeness.

Trends of Selected Measures By Public Health District

	Survey School Year									
	2000/01		2004/05		2008/09		2012/13		2016/17	
	%	99% CI	%	99% CI	%	99% CI	%	99% CI	%	99% CI
Central HD										
Current Active Decay	25.4	(17.5, 33.2)	25.8	(20.8, 30.8)	23.2	(18.4, 27.8)	20.8	(15.0, 26.4)	14.7	(12.4, 16.9)
4+ Teeth Treated or Untreated Decay	29.1	(22.7, 35.4)	39.3	(34.3, 44.1)	34.8	(29.7, 39.7)	26.0	(20.6, 31.3)	37.5	(33.2, 41.7)
Decay, no dental services	17.3	(11.9, 22.6)	15.9	(11.9, 19.8)	16.5	(12.1, 20.7)	14.7	(9.1, 20.1)	8.5	(6.6, 10.3)
Any Decayed or Filled	60.5	(53.5, 67.4)	63.9	(59.1, 68.7)	62.5	(56.4, 68.4)	58.7	(50.7, 66.6)	63.3	(60.2, 66.3)
Urgent Restorative Need	8.4	(4.3, 12.3)	2.6**	(0.8, 4.3)	2.5	(0.9, 4.1)	2.1**	(0.5, 3.6)	1.5	(0.6, 2.2)
Sealants Present Any Teeth	61.9	(54.1, 69.6)	61.0	(55.4, 66.5)	57.4	(50.9, 63.8)	62.5	(58.2, 66.8)	69.1	(65.0, 73.2)
South Central HD										
Current Active Decay	32.4	(27.5, 37.2)	44.1	(41.1, 47.0)	27.8	(21.5, 33.9)	25.4	(23.0, 27.7)	20.2	(17.6, 22.7)
4+ Teeth Treated or Untreated Decay	27.3	(20.4, 34.1)	45.5	(41.6, 49.2)	46.4	(40.7, 52.0)	47.8	(42.7, 52.7)	38.7	(29.2, 48.2)
Decay, no dental services	29.0	(24.0, 33.8)	37.6	(34.4, 40.8)	23.1	(17.5, 28.5)	14.3	(11.9, 16.7)	13.8	(11.4, 16.2)
Any Decayed or Filled	65.9	(61.0, 70.6)	75.2	(70.7, 79.5)	69.8	(63.1, 76.4)	76.0	(71.8, 80.0)	71.5	(58.7, 84.2)
Urgent Restorative Need	7.4	(4.0, 10.7)	2.6	(1.5, 3.6)	4.7	(2.5, 6.8)	0.5	(0.0, 0.8)	2.4***	(0, 5.2)
Sealants Present Any Teeth	37.1	(29.2, 44.9)	47.3	(43.1, 51.4)	45.1	(36.4, 53.6)	63.6	(50.6, 76.5)	71.5	(66.1, 76.8)
Southeastern HD										
Current Active Decay	20.6	(15.6, 25.5)	24.9	(19.3, 30.3)	16.9	(11.8, 21.9)	25.4	(19.9, 30.8)	14.1	(9.5, 18.6)
4+ Teeth Treated or Untreated Decay	47.2	(41.6, 52.7)	45.0	(39.8, 50.0)	49.6	(42.5, 56.6)	46.9	(42.9, 50.8)	40.1	(32.9, 47.3)
Decay, no dental services	17.7	(12.5, 22.7)	15.9	(11.2, 20.4)	14.5	(9.3, 19.6)	16.3	(11.3, 21.1)	11.2	(8.0, 14.4)
Any Decayed or Filled	72.0	(67.7, 76.3)	70.5	(65.6, 75.3)	76.7	(71.3, 81.9)	76.0	(69.9, 81.9)	71.0	(64.3, 77.6)
Urgent Restorative Need	0.2***	(0, 0.5)	0.4***	(0, 0.7)	0.2***	(0, 0.4)	1.0	(0.2, 1.6)	2.1	(0.4, 3.7)
Sealants Present Any Teeth	63.1	(55.8, 70.4)	72.4	(65.4, 79.3)	70.1	(61.6, 78.6)	67.0	(58.4, 75.5)	66.5	(59.8, 73.0)
Eastern HD										
Current Active Decay	32.1	(25.7, 38.3)	37.3	(32.9, 41.6)	21.7	(17.1, 26.3)	19.8	(16.3, 23.1)	20.3	(17.9, 22.7)
4+ Teeth Treated or Untreated Decay	48.9	(42.3, 55.4)	60.5	(57.5, 63.3)	51.4	(45.6, 57.2)	48.4	(44.8, 52.0)	46.2	(40.5, 51.8)
Decay, no dental services	26.5	(21.9, 30.9)	26.9	(21.6, 32.1)	16.3	(12.2, 20.3)	9.1	(6.8, 11.3)	11.4	(8.4, 14.3)
Any Decayed or Filled	69.2	(64.0, 74.4)	79.4	(76.5, 82.1)	70.9	(65.0, 76.8)	72.2	(67.4, 76.9)	77.1	(74.2, 80.0)
Urgent Restorative Need	6.4	(4.0, 8.7)	8.0	(5.5, 10.4)	4.3	(2.8, 5.7)	3.4	(1.6, 5.1)	2.5	(1.2, 3.7)
Sealants Present Any Teeth	46.2	(39.9, 52.5)	50.0	(39.8, 60.1)	60.1	(55.4, 64.6)	78.9	(72.3, 85.4)	70.4	(62.2, 78.6)

** Possibly reliable estimate, use with caution. *** Unreliable estimate included for completeness.



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