

Sealant Survey Report: FY03

Iowa Department of Public Health

Oral Health Bureau

For the fifth consecutive year, the Iowa Department of Public Health (IDPH) completed a survey to determine the prevalence of dental sealants on permanent molars of third-grade children in Iowa. The results from the surveys provide information about the use of dental sealants, a procedure that prevents decay from developing on the chewing surfaces of molars. The following describes the process for conducting the 2003 survey and the results.

Subjects

Based on information from the Iowa Department of Education, the number of third-graders in Iowa public schools for school year 2002-2003 was 33,653. A computerized random sample of 1,704 third-grade children was selected, based upon the location of 26 Title V child health centers in Iowa.

Examiners and support staff

The survey was conducted in collaboration with the state's Title V child health centers. The centers contracted with dental hygienists to conduct the survey. Three child health centers used dentists to conduct the survey. Screening protocol was given to each hygienist and dentist. The school superintendents and principals were informed, and consent forms were provided to each school to be completed by parents/guardians prior to the date of the survey.

Materials and methods

The screenings were visual only. Mouth mirrors and dental explorers were not used, with the exception of Kalona, Clark, Jefferson (Muscatine), and Sheldon Elementary Schools. The survey used data from these schools that was collected through school-based sealant programs. Toothbrushes were provided to all third-grade children. The brushes could be used to deflect tongue and cheeks and also to clean the teeth if necessary. Screeners also had the option of using a toothpick to feel the occlusal surfaces of the molars.

Data information

The screenings determined the number of children with at least one permanent first molar with a sealant. In addition, the consent forms collected information on payment source of dental care, participation in the free/reduced lunch program, recency of last dental visit, and whether each child had a dentist. Consent forms were returned to IDPH. Data was entered and analyzed by the use of SPSS. Data collected is confidential. Any report or publication of this information requires permission from the Oral Health Bureau at the IDPH.

Results

Fifty-six percent of the eligible students were screened (962 of 1,704). Of those surveyed, 39.4 percent had at least one sealant on a permanent first molar. Thirty-three percent of the students participated in the free and reduced lunch program. Forty-five percent had private dental insurance, 24.8 percent paid for dental care out-of-pocket, and 19.5 percent had Medicaid or *hawk-i* as their payment source.

Discussion

The 35.3 percent sealant rate for children without dental insurance is slightly higher than last year's rate of 34.8 percent. The sealant rate for children enrolled in Medicaid or *hawk-i* fell this year to 36.6 percent from 40.2 percent in 2002, as well as the rate for children with private dental insurance, declining to 43.9 percent from 46.4 percent last year. Children that reported having a dentist also declined from 89 percent to 85.4 percent. These changes are likely related to the increased number of children in our sample that participated in the free/reduced lunch program.

This year, 33 percent participated in the free/reduced lunch program, compared to 21.6 percent last year. The average lunch program participation in the state for school year 2002-03 was 28.5 percent. If we weight the FY02 and FY03 ratio of free/reduced lunch to non-free/reduced lunch participation, the FY03 sealant rate would be 43 percent. This is slightly higher than this year's 40.7 overall sealant rate.

There is no significant change from 2002 regarding recency of a child's last dental visit. There was a decrease in the number of children with Medicaid/*hawk-i* coverage, as well as children that participated in the free/reduced lunch program, that saw a dentist within the past year. This year's survey sample saw an increased number of Medicaid/*hawk-i* program participants, 19.5 percent compared to 12.5 percent in 2002. This change corresponds to the increase in the number of children participating in the free/reduced lunch program.

Conclusions

Goal Statement 15-7 from *Healthy Iowans 2010* is to increase to at least 70 percent by 2010 the proportion of children in the third grade who have received protective sealants in permanent molar teeth.

Title V child health contractors in the state continue to emphasize the effectiveness of dental sealants and to educate families and healthcare providers on the benefits and appropriate ages for application of dental sealants. The slight decrease in sealant rates this year is probably due to the increase in schools with higher than average free/reduced lunch program participation within the sample size. Overall, the state is seeing a positive use of dental sealants, but the rate of use is not sufficient for achieving the goal of 70 percent of third graders having a sealant by 2010.

The IDPH continues to look for funding to implement additional school-based sealant programs around the state in areas with a large number of low-income, uninsured, and underinsured children. These children are at a higher risk for tooth decay and, as this survey indicates, are less likely to have preventive dental care, such as dental sealants. Currently, IDPH funds five school-based sealant programs in the state. Additional school-based sealant programs should directly impact the dental sealant rates of Iowa children.

An increase in dental clinics affiliated with community health centers in the state could also increase sealant use, not only within the clinics, but through the community health centers' participation with local school-based sealant programs.

Efforts to increase the number of children with a payment source for dental care will also be necessary. The Oral Health Bureau will continue to partner with the Covering Kids program within the IDPH for improved outreach to families without health insurance. Identification of families that are eligible for Medicaid or *hawk-i* insurance, enrolling families in those programs, and care coordination efforts through Iowa’s Title V child health contractors will play a role in increased sealant use and access to routine and preventive dental care.

FY03 Sealant Survey Summary

	OVERALL TOTAL	Children on F/R Lunch	Children not on F/R Lunch	No dental insurance	Medicaid or <i>hawk-i</i>	Private dental insurance
Sealant Rate	39.4%	33.7%	42.4%	35.3%	36.6%	43.9%
Children with a dentist	85.4%	77.2%	96.0%	87.0%	80.0%	96.6%
Time since last dental visit						
6 months	67.4%	53.9%	74.9%	57.8%	59.4%	77.0%
1 year	20.6%	23.8%	18.8%	25.4%	21.7%	18.1%
3 years	7.3%	13.7%	4.1%	10.4%	13.2%	3.1%
5 years	1.8%	3.6%	1.0%	3.0%	2.4%	0.6%
Never	2.6%	4.8%	1.2%	3.0%	2.8%	1.2%
Free/Reduced Lunch						
Free/Reduced Lunch		Dental Insurance Coverage				
Yes	No	Private Insurance	Medicaid / <i>hawk-i</i>	No Insurance		
33.0%	67.0%	45.2%	19.5%	24.8%		

Seal Survey

COUNTY	CO #	AGENCY	DISTRICT	SCHOOL	PHONE	Students	Surveyed	Sealants	Percent
Des Moines	29	7	BURLINGTON	Corse	319/753-2707	57	19	3	15.8
Jefferson	51	1	FAIRFIELD	Pence	641/472-2957	50	24	11	45.8
Bremer	9	2	SUMNER	Durant	319/578-5400	45	32	12	37.5
Clinton	23	26	CAMANCHE	Camanche	563/259-3016	73	48	11	22.9
Worth	98	16	NORTH CENTRAL	North Central	641/454-2211	26	20	12	60.0
Marion	63	4	PELLA	Jefferson	641/628-8267	49	13	5	38.5
Muscatine	70	20	MUSCATINE	Jefferson	563/263-8800	67	29	8	27.6
Calhoun	13	5	SOUTHERN CAL	Lincoln	712/464-3091	43	37	16	43.2
Cass	15	6	ATLANTIC	Washington	712/243-5234	106	38	19	50.0
Lee	56	12	KEOKUK	Wells-Carey	319/524-2581	24	15	2	13.3
Jasper	50	9	NEWTON	Woodrow Wilson	515/792-7311	50	27	14	51.9
Linn	57	10	CEDAR RAPIDS	Polk	319/398-2475	34	23	6	26.1
Linn	57	10	CEDAR RAPIDS	Jackson	319/398-2471	45	22	10	45.5
Johnson	52	11	IOWA CITY	Kirkwood	319/339-6841	49	26	10	38.5
Johnson	52	11	IOWA CITY	Grant Wood	319/339-6869	65	21	12	57.1
Scott	82	17	DAVENPORT	Lincoln Fundamental	563/391-1463	49	20	9	45.0
Madison	61	13	EARLHAM	Earlham	515/758-2213	52	19	9	47.4
Story	85	14	AMES	Fellows	515/239-3765	57	27	12	44.4
Story	85	14	AMES	Edwards	515/239-3760	39	13	6	46.2
Sioux	84	15	ROCK VALLEY	Starkweather	712/476-2769	44	41	27	65.9
Mitchell	66	16	ST ANSGAR	St. Ansgar	515/736-2331	49	27	11	40.7
Woodbury	97	18	RIVER VALLEY	River Valley	712/384-2568	35	34	9	26.5
Woodbury	97	18	SIOUX CITY	Smith	712/279-6845	66	43	15	34.9
Page	73	19	SOUTH PAGE	South Page	712/582-3212	21	15	7	46.7
O'Brien	74	21	SHELDON	Sheldon	712/324-4337	51	35	13	37.1
Dubuque	31	8	DUBUQUE	Eisenhower	563/588-8316	82	52	28	53.8
Clayton	22	8	CENTRAL	Elkader	563/245-1472	39	19	9	47.3
Pottawattamie	78	22	TREYNOR	Treynor	712/487-3422	35	32	19	59.4
Polk	77	23	DES MOINES	Jefferson	515/287-2020	73	35	15	42.9
Polk	77	23	DES MOINES	Woodlawn	515/279-9744	62	49	12	24.5
Henry	44	24	NEW LONDON	Clark	319/367-0507	31	22	4	18.2
Washington	92	24	MID-PRAIRIE	Kalona	319/656-2243	37	25	10	40.0
Hamilton	40	26	HUMBOLDT	Taft	515/332-3216	99	60	13	21.7
TOTAL						1704	962	379	39.4

**The results on this table do not take all consent form information into account and are based strictly on the raw count provided by the survey examiners. See the written report for the actual statistical data.