

Sealant Survey Report: FY04

Iowa Department of Public Health

Oral Health Bureau

For the sixth 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 2004 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 2003-2004 was 31,283. A computerized random sample of 1,793 third-grade children was selected, based upon the location of 26 Title V child health centers in Iowa. This year, none of the schools chosen had previously participated in the annual sealant prevalence survey.

Examiners and support staff

The survey was conducted in collaboration with the state's 26 Title V child health centers. The centers contracted with dental hygienists to conduct the survey. Screening protocol was given to each hygienist. 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 WACO, Harlan (Mt. Pleasant), Washington (Muscatine) and Wapello 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 SPSS¹. Data collected is confidential. Any report or publication of this information requires permission from the Oral Health Bureau at the IDPH.

¹ SPSS Base 7.5 for Windows user's guide 7.5. Chicago, SPSS, Inc., 1997.

Results

The survey indicated that 39.9 percent had at least one sealant on a permanent first molar. Sixty-seven percent of the eligible students were screened (1,207 of 1,793). Thirty-one percent of the students participated in the free/reduced lunch program. Forty-six percent had private dental insurance, 26.4 percent paid for dental care out-of-pocket, and 18.2 percent had Medicaid or *hawk-i* (State Children's Health Insurance Program) as their payment source.

Discussion

This year's overall result does not show much variance from last year's report. The percentage of children qualifying for the free/reduced lunch program is slightly lower this year (30.8%) than last year (33%). Therefore, this year's higher percentage of children with a sealant, with a dentist, having private dental insurance, and having a recent dental visit are likely due to this decrease of low-income children in the survey. However, there was no dramatic change in the overall result, although all schools surveyed this year had not previously participated.

More children reported having a dentist this year, including those children with no dental insurance (91.4% compared to 87% in 2003) and those children on Medicaid or *hawk-i* (83.9% compared to 80% in 2003).

Conclusions

Although dental sealants are cost-effective and their preventive effects are well proven, they remain underused, particularly among children from low-income families and from racial/ethnic minority groups. Most dental sealants are placed in private dental offices, yet children and adolescents at greatest risk are least likely to get private care.²

School-based sealant programs should not only impact the dental sealant rates of Iowa children, but are strongly recommended as an effective decay-prevention intervention.³ There are nine school-based sealant programs in Iowa. The IDPH funds seven programs, targeting areas with higher rates of free/reduced lunch participation or that are underserved for preventive dental care.

Several communities are interested in initiating school-based sealant programs in their areas. Because IDPH funding is limited, the department is working to empower communities to develop these programs through infrastructure-building activities. Strategies to implement more school-based sealant programs around the state continue to be investigated.

The IDPH also continues efforts to increase the number of children with a payment source for dental care. Children with no dental insurance are less likely to access important preventive

² U.S. Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.

³ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. *Promoting Oral Health: Interventions for Preventing Dental Caries, Oral and Pharyngeal Cancers, and Sports-Related Craniofacial Injuries, A Report on Recommendations of the Task Force on Community Preventive Services*. Morbidity and Mortality Weekly report, November 30, 2001/Vol. 50/No. RR-21.

dental care, such as sealant application.⁴ The Oral Health Bureau will continue to partner with the Covering Kids and Families program within the IDPH for improved outreach to families without health insurance. Identification of families that are eligible for Medicaid or *hawk-i*, 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.

FY04 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	39.9%	32.3%	41.3%	33.3%	33.0%	41.0%
Children with a dentist	88.6%	83.4%	95.3%	91.4%	83.9%	95.8%
Time since last dental visit						
6 months	66.1%	58.9%	72.7%	57.4%	62.9%	77.5%
1 year	21%	24.3%	20.8%	30.6%	21.9%	16.4%
3 years	6.9%	11.7%	4.7%	10.5%	9.8%	4.6%
5 years	0.7%	2%	0.3%	0%	1.3%	0.9%
Never	1.6%	2.6%	1.3%	1.2%	3.1%	0.5%
Free/Reduced Lunch						
Free/Reduced Lunch		Dental Insurance Coverage				
Yes	No	Private Insurance	Medicaid / <i>hawk-i</i>	No Insurance		
30.8%	69.2%	46.4%	18.2%	26.4%		

⁴ U.S. Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.

COUNTY	DISTRICT	SCHOOL	STUDENTS	SURVEYED	SEALANTS
Wapello	OTTUMWA	James	28	15	1
Grundy	GRUNDY CENTER	Grundy Center	46	38	7
Jones	MIDLAND	Onslow	37	29	6
Warren	INDIANOLA	Emerson	72	43	23
Sac	WALL LAKE VIEW AUBURN	Wall Lake View Auburn	31	27	13
Shelby	HARLAN	West Ridge	53	23	13
Shelby	HARLAN	New Park	50	30	25
Des Moines	WEST BURLINGTON	West Burlington	47	38	6
Allamakee	ALLAMAKEE	East	70	54	30
Dubuque	WESTERN DUBUQUE	Drexler	83	65	37
Poweshiek	GRINNELL	Davis	130	69	21
Linn	MARION	Starry	120	39	20
Linn	MOUNT VERNON	Washington	77	59	8
Iowa	WILLIAMSBURG	Mary Welsh	57	39	19
Johnson	IOWA CITY	Weber	68	37	32
Lee	FORT MADISON	Richardson	62	30	3
Adair	NODAWAY VALLEY	Nodaway Valley East	58	42	12
Story	GILBERT	Gilbert	73	50	11
Benton	BENTON	Norway	39	19	13
Ida	GALVA-HOLSTEIN	Galva-Holstein	34	23	6
Mitchell	OSAGE	Lincoln	44	35	9
Worth	NORTH CENTRAL	North Central	45	22	14
Scott	PLEASANT VALLEY	Bridgeview	27	12	8
Woodbury	SIOUX CITY	Leeds	71	34	19
Page	ESSEX	Essex	16	6	2
Louisa	WAPELLO	Wapello	60	39	7
Muscatine	MUSCATINE	Washington	54	36	19
O'Brien	HARTLEY-MELVIN-SANBORN	Hartley-Melvin-Sanborn	48	36	14
Buena Vista	SIOUX CENTRAL	Sioux Central	24	21	5
Pottawattamie	COUNCIL BLUFFS	Roosevelt	65	29	14
Polk	DES MOINES	Wright	43	35	18
Polk	DES MOINES	Greenwood	58	40	16
Henry	MOUNT PLEASANT	Harlan	34	26	9
Washington	WACO	Waco	29	17	5
Wright	BELMOND-KLEMME	Parker	22	14	6
Clinton	CLINTON	Bluff	95	31	3

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.