

Oral Health Survey Report: FY06

Iowa Department of Public Health

Oral Health Bureau

For the eighth consecutive year, the Oral Health Bureau within the Iowa Department of Public Health (IDPH) completed an open-mouth survey of third-grade children in Iowa. The survey measured the prevalence of dental sealants on permanent molars, as well as the presence of cavitated lesions (potential tooth decay) and restored (filled) teeth. This report describes the process for conducting the 2006 oral health 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 2005-2006 was 34,064. A computerized random sample of 1,666 third-grade children from 29 schools was selected, based upon the location of 24 Title V child health centers in Iowa. This was the third year of participation in the survey for the selected schools.

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, with the exception of one which used a dentist.

Twenty-three of the hygienists participated in calibration training the previous year. These hygienists were sent a screening protocol and a copy of the presentation slides from the training to review prior to the date of the survey. The dentist and one hygienist did not participate in the 2005 training, and were mailed the protocol, presentation slides, and a videotape of the training. They were required to view the tape and other information prior to the date of the survey.

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 oral screenings were visual only; mouth mirrors and pen lights could be used. All third-grade children received toothbrushes. The brushes could be used to retract tongue and cheeks and 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, the number of children with at least one cavitated lesion in any tooth, and the number of children with at least one restored (filled) tooth. 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 were entered and analyzed by the use of SPSS¹. Data collected are confidential.

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

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Results

The survey indicates that 45.5 percent of the children have at least one sealant on a permanent first molar, 42.8 percent have at least one filled tooth, and 13.2 percent have a cavitated lesion. Sixty-eight percent of the eligible students were screened (1,126 of 1,666).

Just over 30 percent of the students surveyed participate in the free/reduced lunch program. Of those children, 18.3 percent have at least one cavitated lesion, compared to 10.9 percent of children not in the free/reduced lunch program. Of the children surveyed, 47.4 percent have private dental insurance, 24.6 percent pay for dental care out-of-pocket, and 20.7 percent have Medicaid or *hawk-i* (Iowa's State Children's Health Insurance Program) as their payment source.

Nearly 91 percent of children report having a dentist, and 69.7 percent report having been to the dentist within the past six months.

Discussion

This year's overall sealant rate (45.5 percent) is higher than last year's (43.4 percent). Fewer children have a cavitated lesion (13.2 percent compared to 17.5 percent) and more children have a filled tooth (42.8 percent compared to 40.4 percent) than last year. There are more children with private dental insurance this year (47.4 percent compared to 44.9 percent) and fewer children with no insurance (24.6 percent compared to 29.8 percent). The number of children covered by Medicaid or *hawk-i* increased by just over 2 percent, 20.7 percent compared to 17.9 percent in 2005. The percentage of children qualifying for the free/reduced lunch program is higher this year (30.6 percent) than last year (27.1 percent).

More children report having a dentist this year, including those children with no dental insurance (93.9 percent compared to 91.4 percent) and those children on Medicaid or *hawk-i* (86.3 percent compared to 83.9 percent). The percent of children that have never seen a dentist decreased this year—1.5 percent compared to 2.4 percent last year.

Conclusions

Survey results this year are encouraging. It appears that more children are accessing preventive care, and the increase in filled teeth and decrease in potential decay indicates improvements in accessing treatment services.

School-based sealant programs are strongly recommended as an effective decay-prevention intervention.² The IDPH funds seven programs, targeting areas with higher rates of free/reduced

² 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.

lunch participation or that are underserved for preventive dental care. However, budget cuts decreased the amount of funding each program could receive this year and did not allow expansion. IDPH continues to work toward empowering communities to work with local partners, including community health center dental clinics, to develop school-based sealant programs. As overall improvements in sealant rates continue, it will become even more important to target school-based programs to those populations most at-risk, including those from low-income families and racial/ethnic minority groups.

The increased number of children participating on the free/reduced lunch program appears to correlate with the larger number of Medicaid or *hawk-i* enrolled children. A rise in the number of uninsured may also be expected in relation to the increased number of children on the lunch program. However, the number of uninsured decreased. This is a positive sign that families are being successful not only in enrolling for health programs, but also being able to access services.

Although it has improved since last year, the number of third graders that have experienced tooth decay in at least one tooth is still alarming. Tooth decay is largely preventable. The Oral Health Bureau will continue its emphasis on prevention of dental disease within early childhood by working with programs such as WIC, Head Start, and programs targeting pregnant women. A legislative mandate to assure dental homes for Medicaid-enrolled children ages 12 and under should provide opportunities to strengthen early childhood initiatives.

Addendum

Students' heights and weights were also collected this year. This information is used by the Bureau of Nutrition and Health Promotion to calculate body mass indices for health assessment purposes. The dental hygienists were taught to use digital scales and stadiometers through the calibration training, and each third grader received a jump rope or beach ball to promote physical activity.

FY06 Oral Health Survey Summary

	OVERALL TOTAL	Children on Free/Reduced Lunch	Children not on Free/Reduced Lunch	No dental insurance	Medicaid or <i>hawk-i</i> *	Private dental insurance
Children with a Sealant	45.5%	41.8%	47.9%	40.4%	37.7%	52.0%
Children with a Cavitated Lesion	13.2%	18.3%	10.9%	14.8%	19.3%	10.5%
Children with a Filled Tooth	42.8%	48.0%	41.5%	40.4%	50.6%	42.7%
Children with a Dentist	90.9%	85.5%	97.3%	93.9%	86.3%	96.8%
Time since last dental visit						
6 months	69.7%	61.6%	76.8%	54.5%	68.2%	82.0%
1 year	17.9%	22.1%	16.5%	31.0%	17.6%	12.2%
3 years	6.7%	10.2%	5.2%	10.8%	7.7%	4.5%
5 years	1.3%	3.5%	0.3%	1.1%	3.9%	0.6%
Never	1.5%	2.3%	1.1%	2.2%	2.1%	0.7%
Free/Reduced Lunch Participation						
		Payment Source for Dental Care				
Yes	No	Private Insurance	Medicaid / <i>hawk-i</i> *	No Insurance		
30.6%	69.4%	47.4%	20.7%	24.6%		

*52 children reported having *hawk-i* as a payment source for dental care.

COUNTY	DISTRICT	SCHOOL	TOTAL 3 RD GRADERS	# SURVEYED	# W/SEALANT	# W/ FILLING	# W/ CAV. LESION
Wapello	OTTUMWA	James	33	11	3	7	3
Grundy	GRUNDY CENTER	Grundy Center	38	24	3	7	7
Warren	INDIANOLA	Emerson	66	54	25	22	8
Sac	WALL LAKE VIEW AUBURN	Wall Lake View Auburn	38	33	11	21	3
Shelby	HARLAN	West Ridge	44	31	18	17	4
Shelby	HARLAN	New Park	37	19	11	9	2
Des Moines	WEST BURLINGTON	West Burlington	51	43	14	15	5
Allamakee	ALLAMAKEE	East	69	59	28	35	7
Dubuque	WESTERN DUBUQUE	Drexler	67	48	25	23	1
Poweshiek	GRINNELL	Davis	122	78	30	40	4
Linn	MARION	Starry	99	37	25	20	0
Linn	MOUNT VERNON	Washington	74	63	26	21	5
Iowa	WILLIAMSBURG	Mary Welsh	62	35	20	20	5
Johnson	IOWA CITY	Weber	70	38	27	24	2
Lee	FORT MADISON	Richardson	44	25	7	13	2
Adair	NODAWAY VALLEY	Nodaway Valley East	49	39	14	24	4
Story	GILBERT	Gilbert	66	46	29	20	1
Benton	BENTON	Norway	30	23	8	12	2
Ida	GALVA-HOLSTEIN	Galva-Holstein	41	18	7	0	0
Mitchell	OSAGE	Lincoln	51	38	11	12	3
Worth	NORTH CENTRAL	North Central	39	31	15	10	3
Scott	PLEASANT VALLEY	Bridgeview	42	24	30	7	0
Woodbury	SIOUX CITY	Leeds	73	45	23	13	16
Page	ESSEX	Essex	22	9	3	4	2
O'Brien	HARTLEY-MELVIN-SANBORN	Hartley-Melvin-Sanborn	63	47	26	21	19
Buena Vista	SIOUX CENTRAL	Sioux Central	29	19	6	11	6
Pottawattamie	COUNCIL BLUFFS	Roosevelt	60	36	15	22	20
Wright	BELMOND-KLEMME	Parker	53	40	21	11	3
Clinton	CLINTON	Bluff	84	47	12	20	10
			1616	1060	493	481	147

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