

DataSpeak: April 16, 2008

National and State Surveillance Efforts to Monitor Oral Health Disparities in Children

Oral Health Information

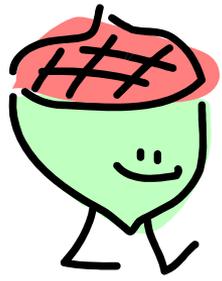


Mark D. Siegal, DDS, MPH
Ohio Department of Health

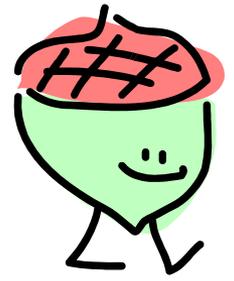
Data that we collect

- Primary Data
 - Ourselves
 - Others
- Secondary Data





People do not get dental care mostly due to:



- (lack of) Money
- Low expectations

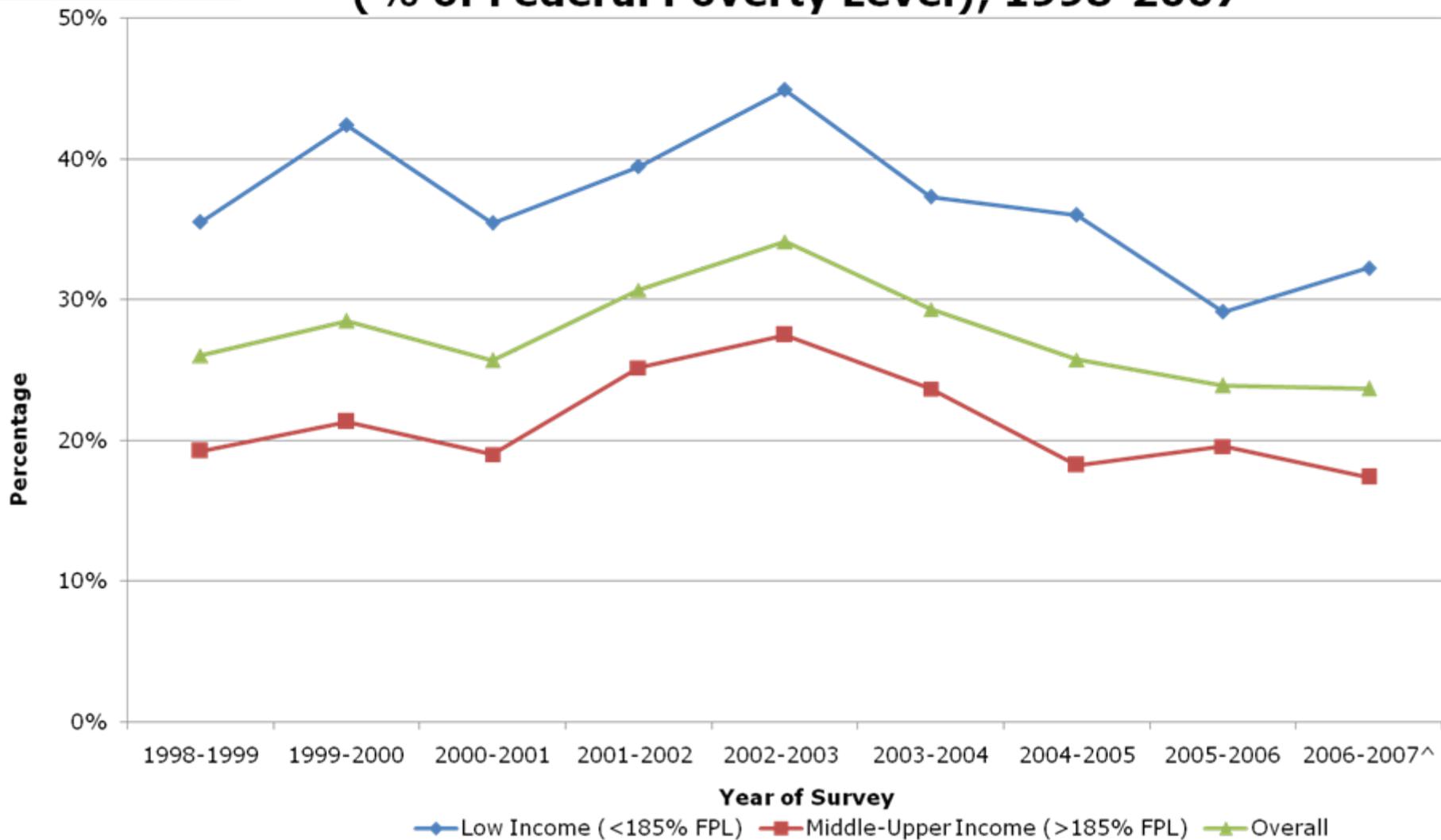


Ohio Children's Oral Health (3rd graders)

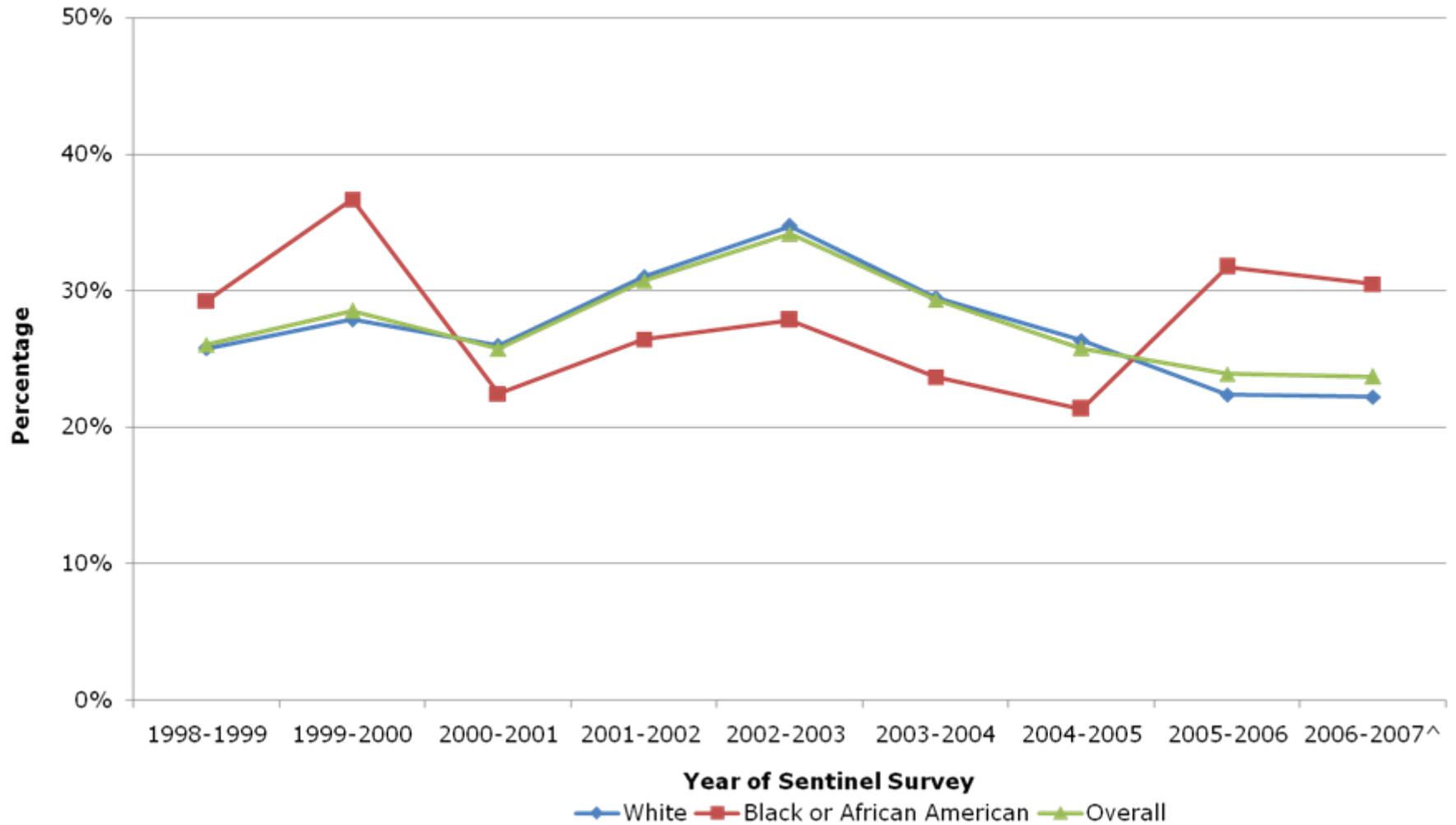
	1987-88 (6-8 y.o.)	1992-93 (6-8 y.o.)	1998-99	2004-05
history of tooth decay	50%	50%	51%	55%
untreated tooth decay	27%	31%	26%	26%
one or more sealants	11%	26%	34%	43%



Percentage of Ohio Third Grade Students With Untreated Cavities, by Family Income (% of Federal Poverty Level), 1998-2007

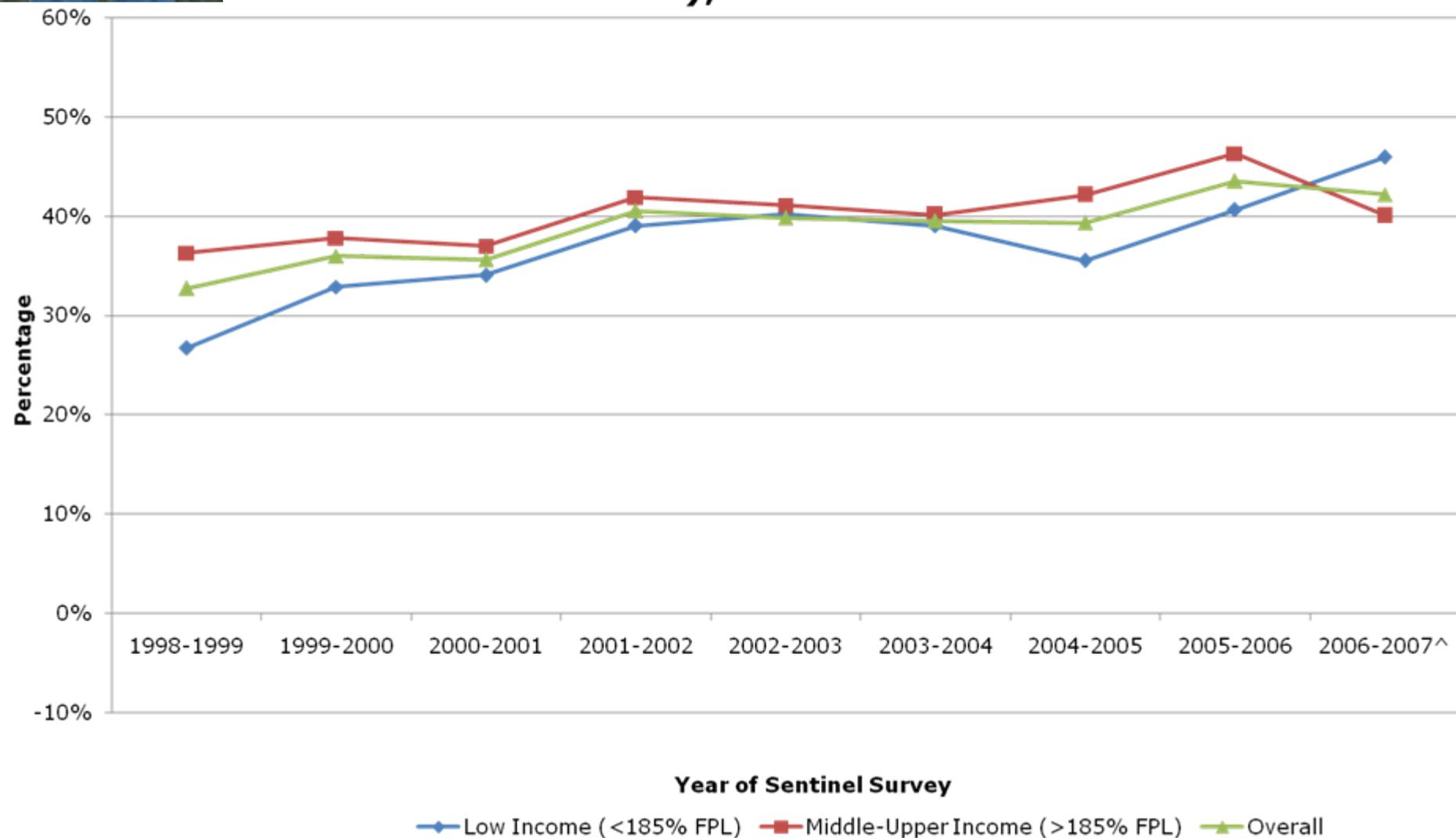


Percentage of Ohio Third Grade Students With Untreated Cavities, by Race, 1998-2007

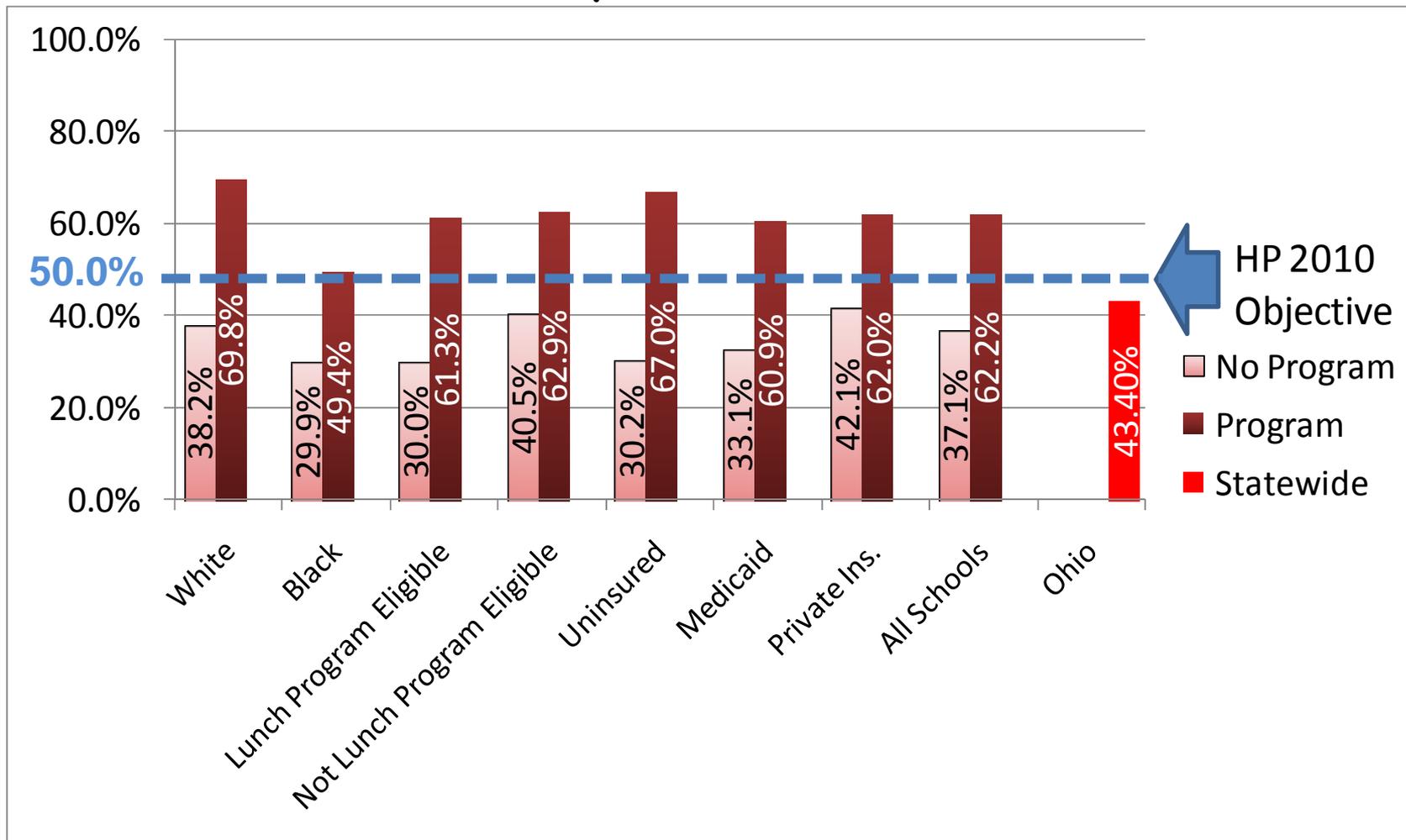




Percentage of Ohio Third Grade Students With Sealants, by **Family Income** (% of Federal Poverty Level), 1998-2007

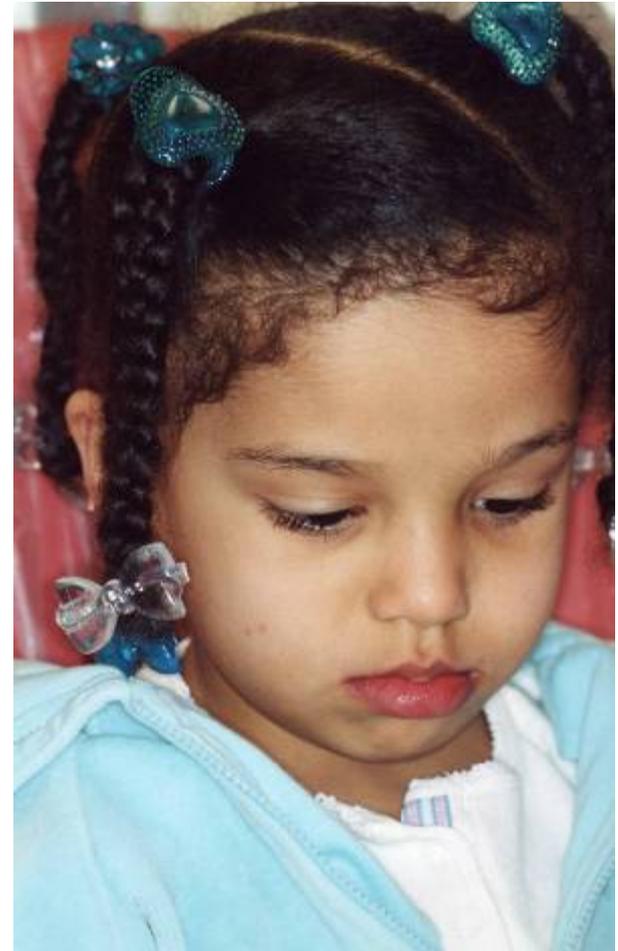


Sealant Prevalence in Schools with and without School-based Sealant Programs, Ohio, 2004-05



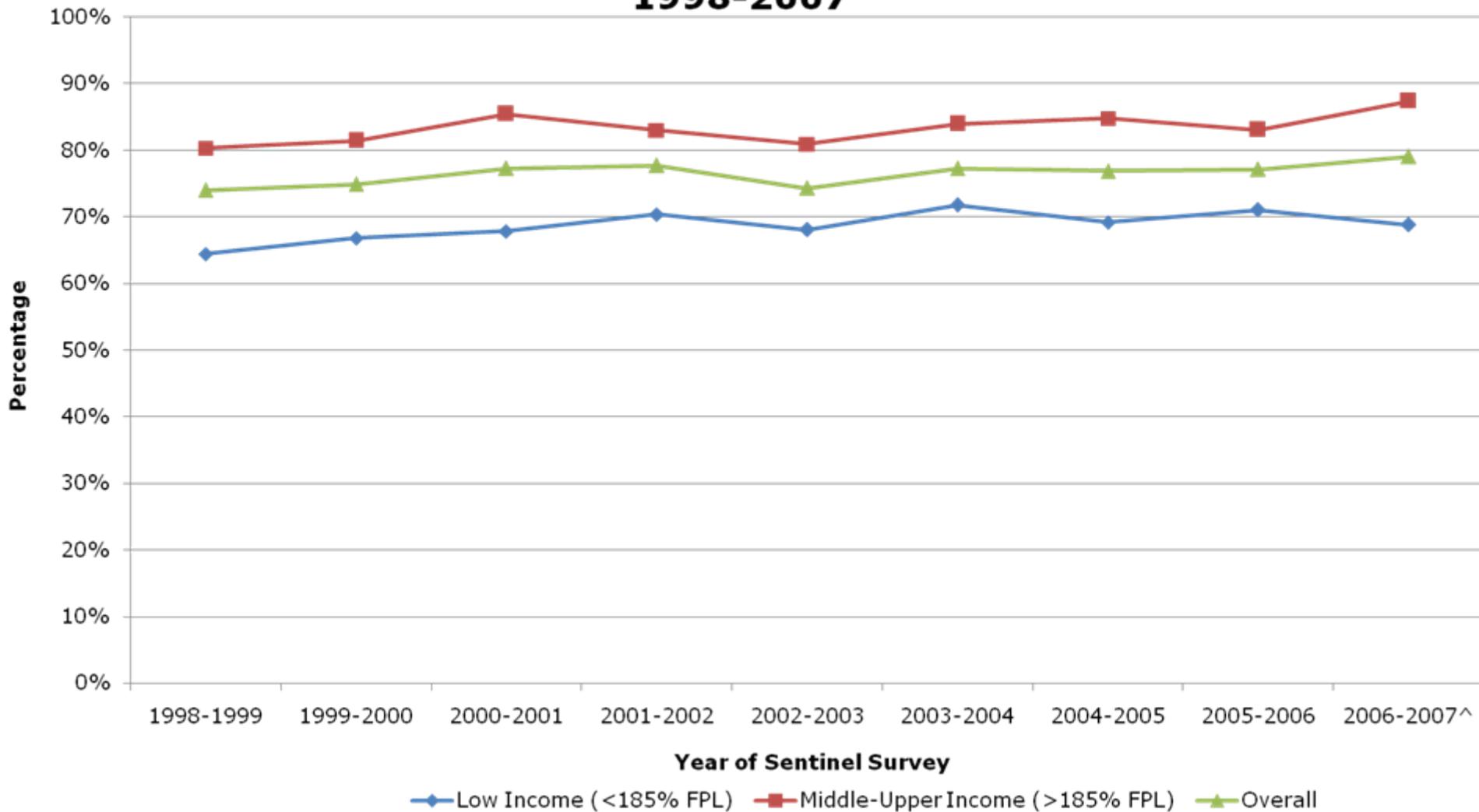
Children's Access to Dental Care

(dental visit within last
12 months)





Percentage of Ohio Third Grade Students Who Have Had a Dental Visit Within the Past Year, by **Family Income** (% of Federal Poverty Level), 1998-2007



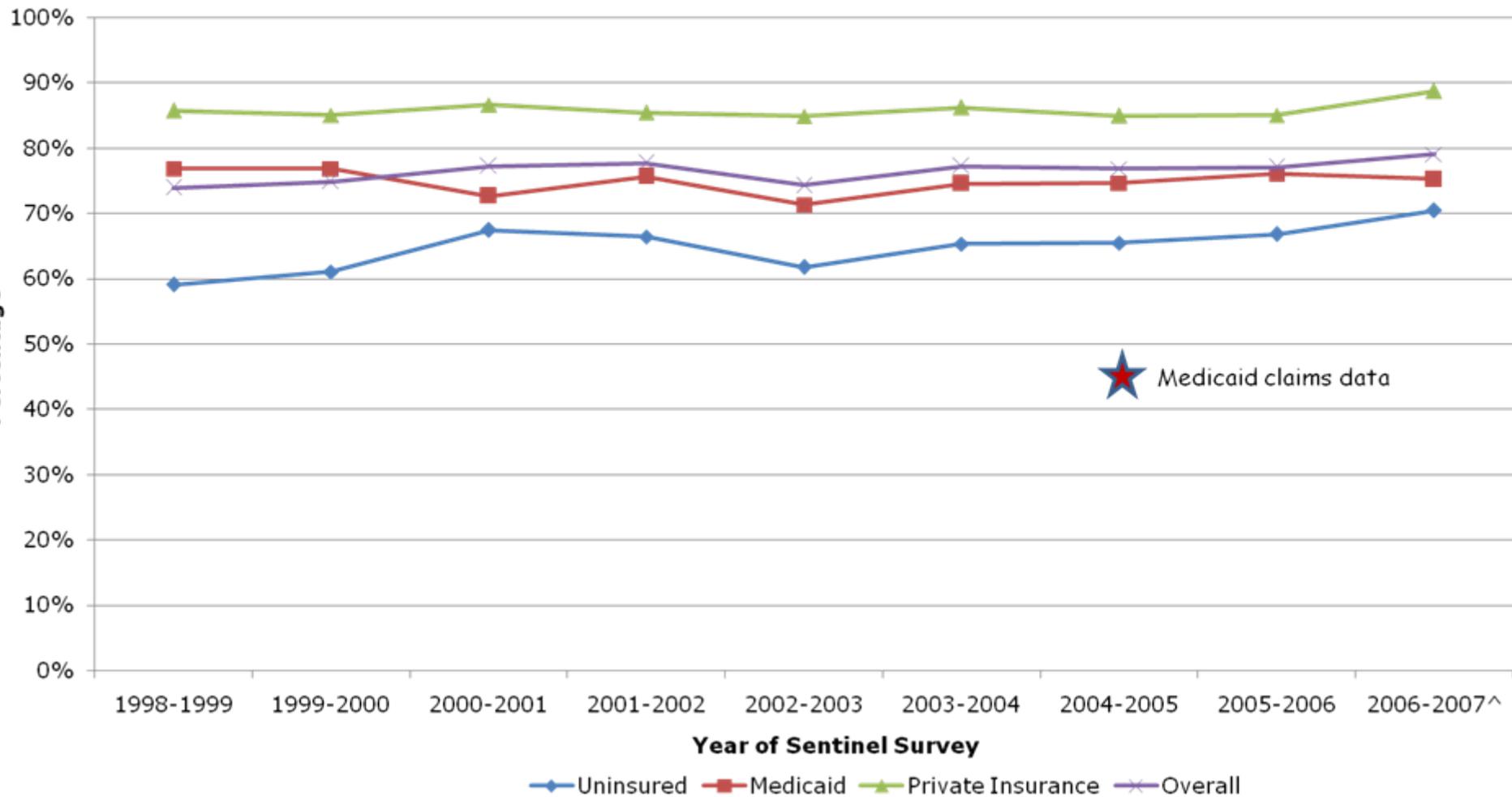
Uninsured

–5.4% of Ohio children have no **health** insurance

–23% of Ohio children lack **dental** coverage



Percentage of Ohio Third Grade Students Who Have Had a Dental Visit Within One Year, by **Dental Care Payment Source** 1998 - 2007



Welcome to the Ohio Oral Health Surveillance System!

Click on a county of interest, or highlight a county on the drop-down menu to view a one-page profile of oral health for that county.

An explanation of the data items presented in the profile can be accessed by clicking on "Description of Data Sources" at the top of the profile page. Comparison data for Ohio can be viewed by clicking on "State Profile".

Select a
county:

or click on a county in the map shown below.



Cuyahoga County

Ohio Oral Health Surveillance System, 2007

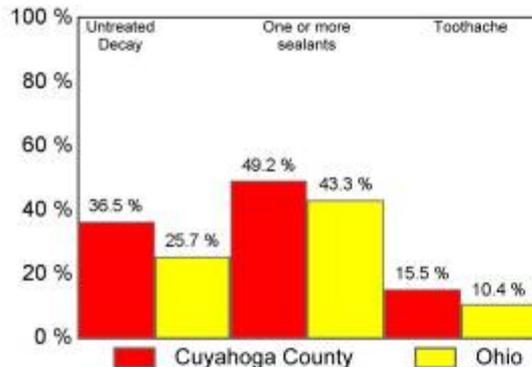
[Description of Data Sources](#) [State Profile](#)



Demographics	<18 Years	18-64 Years	65+ Years	Totals
Population by age (1)	320,052	812,423	202,842	1,335,317
Percent of population <100% of poverty level (2)	25.5%	14.9%	11.0%	16.9% (Rank: 79)
Percent of population <200% of poverty level (2)	39.9%	N/A	N/A	33.7% (Rank: 57)
Percent (#) of schools with 50% or more of students eligible for the Free and Reduced Price Meal Program (3)				51.8% (Schools: 128)

Medicaid (4)	0-2 Years	3-18 Years	19-64 Years	65+ Years
Percent of total county population eligible for Medicaid	69.9%	42.0%	13.8%	12.7%
Percentage of Medicaid-eligible population with a dental visit	9.2%	36.1%	29.9%	25.6%

Indicators of Oral Health, 3rd Grade Students (5)



Community Dental Disease Prevention (7)

Percent of population served by optimally fluoridated water	100.0%
Number of schools eligible for school-based sealant programs	146
Number of schools participating in school-based sealant programs	81

Dental Care Resources

Number of licensed dentists (8)	1094
Number of primary care dentists (general and pediatric) (8)	917
Ratio of population per dentist (8)	1,221 : 1
Number of dentists who treated Medicaid patients (4)	274
1-50 dental patients	123
51-249 dental patients	44
250+ dental patients	107
Ratio of Medicaid population per dentist who treats Medicaid patients (4)	1,065 : 1
Number of OPTIONS dentists (7)	47
Ratio of low-income patients per OPTIONS dentist (7)	9,584 : 1
Number of safety net dental clinics (7)	17
Number of Dental Health Professional Shortage Areas (HPSA) (7)	9

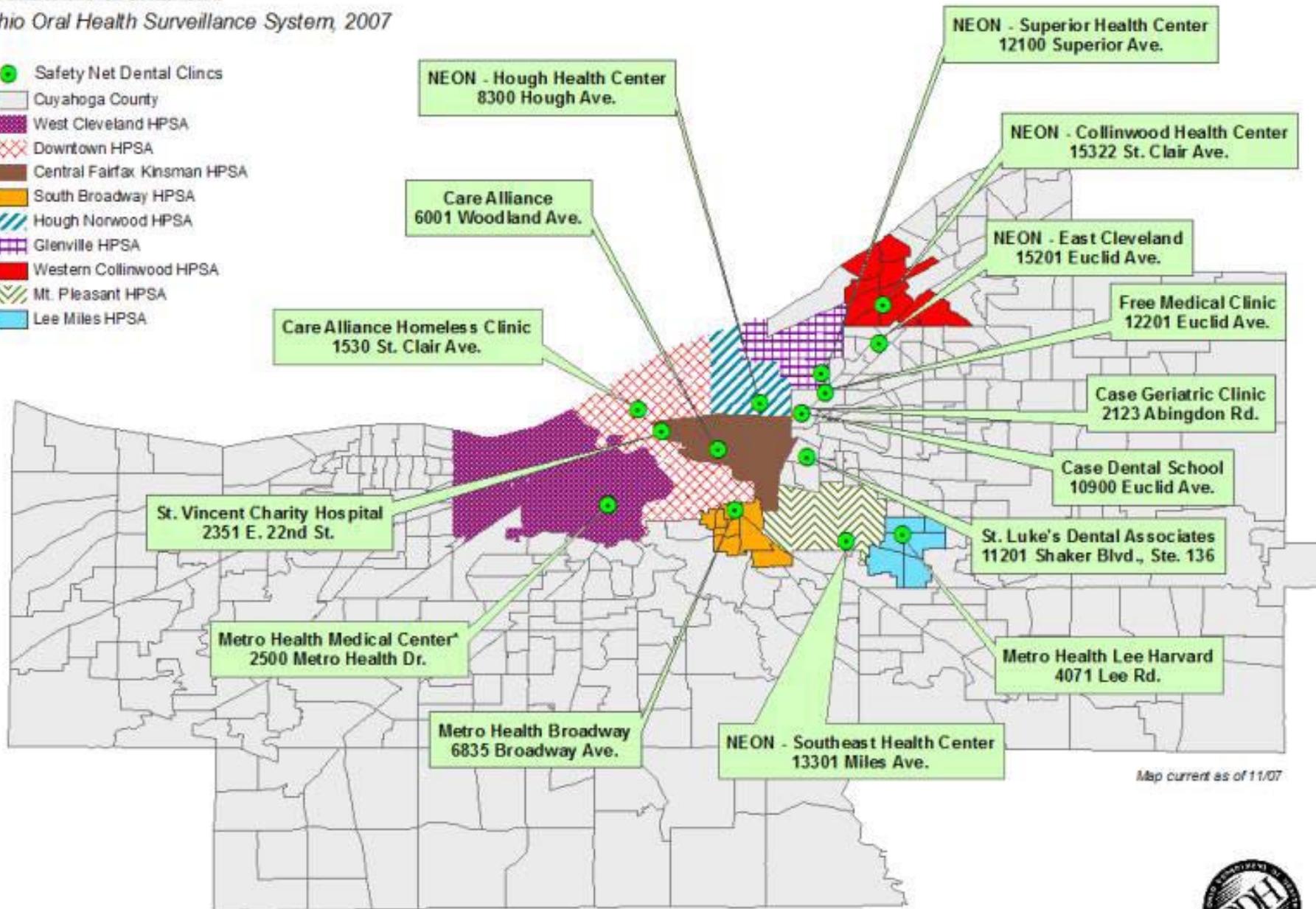
Oral Health Care Access of Children and Adults (6)

	< 18 Years	18-64 Years	65+ Years
Percent with a dental visit in the last year	68.0%	65.9%	61.6%
Percent who have never visited a dentist	15.9%	N/A	N/A
Percent uninsured for dental care	21.2%	22.3%	67.0%
Percent who could not receive needed dental care	4.2%	7.2%	5.1%

Cuyahoga County

Ohio Oral Health Surveillance System, 2007

-  Safety Net Dental Clinics
-  Cuyahoga County
-  West Cleveland HPSA
-  Downtown HPSA
-  Central Fairfax Kinsman HPSA
-  South Broadway HPSA
-  Hough Norwood HPSA
-  Glenville HPSA
-  Western Collinwood HPSA
-  Mt. Pleasant HPSA
-  Lee Miles HPSA



Map current as of 11/07

*Two clinics at this location



Hard Copy Reports

- Legislators
- Local health departments
- Safety net dental clinics
- Advocacy organizations
- Charitable foundations
- Universities

Make Your Smile Count!



 A Survey of the Oral Health of Ohio Schoolchildren, 2004-2005



 Oral Health and Access to Dental Care for Ohioans, 2007

- Child health programs (WIC, Head Start/EHS, CFHS)
- Dental societies
- Dental hygienist societies
- Other professional organizations
- State agencies
- County Family and Children First Councils

Publication in Journals

TRENDS

Ohio dental care providers' treatment of young children, 2002

MARK D. SIEGAL, D.D.S., M.P.H.,
MARY L. MARX, M.A.

Questions have been raised about the extent to which private dental practices treat children, particularly young children, those enrolled in public programs (for example, Medicaid or Head Start) and those with disabilities.¹⁻⁴ In 2000, only 21.1 percent of U.S. children younger than 6 years had a dental visit, with an average of 1.6 visits per child who had at least one visit.⁵ Children from low-income families (families with incomes below 200 percent of the federal poverty guideline) and nonwhite children were less likely to have a visit than were their counterparts.⁶ The most challenging dental care access problems for young children may intersect in Head Start programs, which serve preschool-aged children from low-income families and for whom dental care most often is paid for by Medicaid.^{1,7} Ohio Head Start programs have reported having considerable difficulty finding dental care providers for children in their programs.⁸ Twenty-eight percent of children in Ohio Head Start programs have untreated dental caries, despite the fact that 85 percent of their parents or caregivers reported that they had dental visits within the preceding 12 months.⁹

The likelihood of an Ohio child treating a young child is reduced dramatically if Medicaid pays for the child's care.

General dentists typically do not follow the profession's recommendations^{10,11} of a first dental visit for all children on eruption of their first tooth but no later than 12 months of age.¹² The willingness of dentists in private practice to treat young children often is influ-

enced by the availability of dental care providers. In Ohio, the number of dentists per 100,000 population is 10.5, compared with 12.5 in the United States.¹³ The number of dentists per 100,000 population in Ohio is 10.5, compared with 12.5 in the United States.¹³ The number of dentists per 100,000 population in Ohio is 10.5, compared with 12.5 in the United States.¹³

ABSTRACT

Background. Adequate access to dental care for young children—particularly those from low-income families—is a public concern. The authors conducted a survey of Ohio dental care providers to examine factors influencing their willingness to care for

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MMWR

August 31, 2001

Impact of Targeted, School-Based Dental Sealant Programs in Reducing Racial and Economic Disparities in Sealant Prevalence Among Schoolchildren—Ohio, 1998–1999

Despite the availability of highly effective measures for primary prevention, dental caries (tooth decay) remains one of the most common childhood chronic diseases (1). When properly placed, dental sealants are almost 100% effective in preventing caries on the chewing surfaces of first and second permanent molar teeth (2). However, sealants remain underused, particularly among children from low-income families and from racial/ethnic minority groups (3). Schools traditionally have been a setting for both dental disease prevention programs and for oral health status assessment. To determine the prevalence of dental sealant use among third grade students from schools with and without sealant programs, during the 1998–99 school year, the Ohio Department of Health conducted an oral health survey among schoolchildren. This report summarizes the results of this survey, which indicate that targeted, school-based dental sealant programs can substantially increase prevalence of dental sealants. Providing sealant programs in all eligible, high-risk schools could reduce or eliminate racial and economic disparities in the prevalence of dental sealants.

The study population was derived from a sample of elementary schools in Ohio. Eligible schools included those with complete data on enrollment and that participated in the free or reduced-cost lunch program. Of 1857 public schools with complete data, 335 (representing 87 of 88 Ohio counties) were selected randomly using the probability-proportional-to-size approach. The prevalence of dental sealant use was compared among students attending schools with a program (69 schools) to that of students attending schools without a program (1266 schools). On the basis of a student census in randomly selected classrooms (grades 1–3), 34,668 students were eligible for the survey; 19,471 of these were from the third grade. Parental consent was obtained and oral screenings performed on 11,191 third graders (57.5% of those eligible). Using mouth mirrors, artificial lighting, and dental explorers, 12 dental professionals completed the clinical screening. Weighted data were analyzed using Stata software (4). The Design-Based Pearson Statistic was used to test for association. Weighting was based on the relation between the number of children screened and the number in the underlying eligible population.

Among third grade students surveyed in Ohio, 34.2% (95% confidence interval [CI]—32.1%–36.4%) had at least one dental sealant on a permanent molar tooth. At schools with dental sealant programs, 56.7% of third grade students had a sealant, compared with 28.2% of students at schools without sealant programs (Table 1). By race, 61.6% of white third grade students in schools with sealant programs had sealants, compared with 30.0% of white third grade students in schools without programs. For black third grade students, 50.8% in schools with sealant programs had a sealant, compared with 17.7% of black third grade students in schools without programs.

Using eligibility for free or reduced-cost lunch programs as a proxy for low income, 54.4% of eligible third grade students in schools with sealant programs had a sealant, compared with 64.8% of third grade students not eligible for the program in the same schools; 19.0% of eligible third grade students in schools without programs had a sealant. Among third grade students in schools with sealant programs, the prevalence of sealants was similar for students with and without health insurance.

Vol. 63, No. 3, Summer 2003

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Statistical Model for Assessing the Impact of Targeted, School-based Dental Sealant Programs on Sealant Prevalence Among Third Graders in Ohio

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Background: Since Ohio school-based dental sealant programs target economically disadvantaged groups, simple comparison of sealant prevalence between sealant programs and those without is problematic due to underlying differences between the two in sealant prevalence. The goal of our analysis was the impact of sealant programs on sealant prevalence among third graders by applying a statistical model to data from a 1998–99 Ohio oral health survey of schoolchildren to control for differences in background factors. **Methods:** Included in the analysis were 9,747 third graders at selected schools in Ohio. Chi-square statistics and survey logistic regression were used to analyze the association of sealant presence with school lunch participation, dental care payment method, sex, race, and school lunch eligibility. **Results:** The unadjusted odds ratio for dental sealant use was 3.4 (95% confidence interval [CI]—2.5, 4.4; $P < .01$). Adjusting for some of the odds of having dental sealants among children in schools sealant programs increased to 4.8 (95% CI—3.5, 6.6; $P < .01$). Controlling for confounders can result in underestimation of the impact of school sealant programs. (*J Public Health Dent 2003;63(3): 195–99*)

Keywords: caries prevention, survey logistic regression, school sealant program, effect modification.

Sealants selectively prevent dental caries. Approximately 10% of children occur on tooth pits and fissures (1). Although the potential of dental sealants has been realized nationwide, not all children have been taken to sealant prevalence among children in the United States is 11 percent, with the active 13.8 in Healthy Pools for 50 percent of 8- and 9-year-old children to have one or more sealants (2). However, the national data for the objective of sealant prevalence (26%). With the target for sealant objective 21.8 for

Healthy People 2010 remaining at 50 percent (4), reducing or eliminating such disparities remains a challenge. Targeted school-based dental sealant programs, in which the sealants are placed at the school, or school-linked programs, in which students are contacted through schools but receive sealants off-site, are considered to be successful strategies for preventing caries (Community Guide) and for reaching minority and low-income children (5). In Ohio, targeted school-based dental sealant programs began in the mid-1980s, expanding from a single demonstration program in one city in 1984 to 21 programs serving 44 counties in 2002. In 1997–98, approximately 12,000 second grade students received sealants in Ohio school-based programs. Statewide oral health assessments have shown increases in the prevalence of dental

sealants among 8-year-olds from 11 percent in 1987–88 to 26 percent in 1992–93 (6).

Nationally, eight out of 10 sealant programs target schools in some manner. In particular, two-thirds of targeting programs use the percent of students eligible for the school lunch program as a criterion for selecting schools (7). Ohio's school-based sealant programs are specifically targeted to children from low-income families through the school lunch program. Enrollments at schools eligible for the program tend to be disproportionately minority and low-income. The underlying Ohio population is 87.1 percent white, 11.5 percent black, 1.6 percent Hispanic, 1.1 percent Asian/Pacific Islander, and less than 1 percent other (8). Children in families earning below 185 percent of the federal poverty level (\$30,821 for a family of four in 1998) were eligible for the school lunch program. Grade level and proportion of the student population from low-income families are the primary school eligibility criteria for Ohio school-based sealant programs. For urban schools, at least 50 percent of students must be eligible for the school lunch program. Students in rural school districts, where families are believed to be less likely to enroll their children in the lunch program, are eligible if the median family income is less than 150 percent of the federal poverty guideline. In 2000, Ohio sealant programs reached approximately half of all elementary schools that met the income-based targeting criteria.

The Ohio Department of Health conducted an oral health survey of children during the 1998–99 school year to monitor the prevalence of dental caries and dental sealants for Ohio

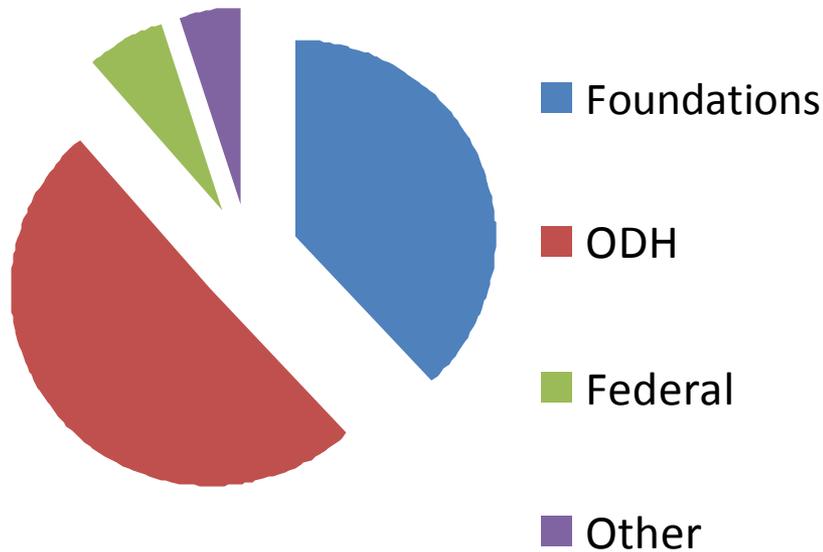
Correspondence and requests for reprints to Dr. Kim, Department of Psychology, 300 Porter Hall, Ohio University, Athens, OH 45701. (kim@osu.edu); Ms. Lehman and Dr. Lemeshow are with the Center for Biostatistics, Ohio State University. Dr. Siegal is with the Ohio Health. Manuscript received: 12/31/00; returned to authors for revision: 3/12/02; final version accepted for publication: 7/1/02.



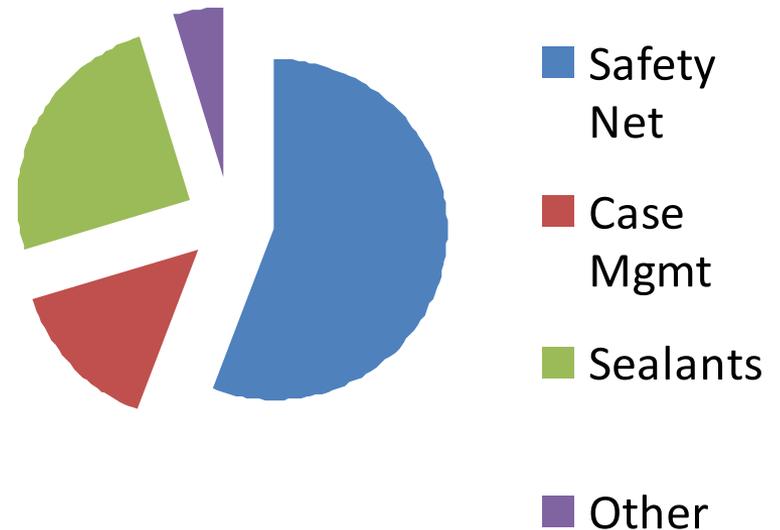
Funding for Oral Health Programs 2000-2007

~\$40 Million

Sources



Purposes



Future challenges and opportunities for monitoring children's oral health

Challenges



Cheap and Easy

Future challenges and opportunities for monitoring children's oral health

Opportunities





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www.odh.ohio.gov/odhPrograms/ohs/oral/oral1.aspx