

ORAL HEALTH OF GEORGIA'S CHILDREN

Results from the 2005 Georgia Third Grade Oral Health Survey



Introduction

Oral health is an essential and integral component of health throughout life. Poor oral health and untreated infections can have a significant impact on the quality of life for school aged children.¹ Evidence-based studies indicate oral health prevention is cost-effective and saves children from pain and lost days of school:

- The National Institutes of Dental and Craniofacial Research and the National Education Association cite research showing that American children miss 52 million hours of school each year due to oral health problems.² In addition to lost days of school due to dental treatment and pain, dental problems distract children from learning.
- Dental sealants are a cost effective means of preventing dental caries in at risk groups; in the U.S. 80% of tooth decay in permanent teeth is experienced by only 25% of the children.³ Dental sealants cost approximately one-third (\$27) the cost of an average filling (\$73). Every dollar invested in dental prevention saves as much as \$147 in future expenses.⁴
- Preventive dental services reduce costly dental problems. *Pediatric Dentistry* reported a study on Medicaid dental expenditures indicating that hospital care is ten times more expensive (\$6,498) than preventive treatment (\$660).⁵
- Dental disease puts our children at-risk for expensive chronic diseases. Studies have shown a link between oral disease and cardiovascular disease, diabetes, respiratory infections, and low birth weight. Tooth decay is five times more common than asthma.⁶

The purpose of this oral health report is to highlight the status of the oral health of third (3rd) grade children in Georgia who participated in the 2005 Georgia Third Grade Oral Health Survey. This basic screening survey⁷ provides a valuable oral health status update to information gathered in the 1989 Georgia dental disease prevalence survey⁸. The survey also collected measurements of height and weight. Results are available in the Obesity in Georgia's Third Grade Children, 2005 report.⁹

Key Findings

- 1 in 2 (56%) 3rd grade children in Georgia have caries experience.
- 1 in 4 (27%) 3rd grade children in Georgia have untreated dental decay.
- 4 in 10 (40%) 3rd grade children in Georgia have dental sealants.
- 1 in 4 (26%) 3rd grade children in Georgia need either early (22%) or urgent (4%) dental care.
- Children from high socioeconomic (SES) households are more likely to have good oral health than children from low SES households.
- Children from Metropolitan Atlanta are more likely to have good oral health than children from other regions, except for dental sealants.
- Children with access to dental insurance are more likely to have good oral health than children without access to dental insurance.
- Children who visited a dentist in the last year are more likely to have good oral health than children who had not visited the dentist in the last year.
- 1 in 8 (13%) of 3rd grade children in Georgia could not get dental care when needed.

Conclusions

- Poor oral health is a significant public health problem among children in Georgia.
- The percent of 3rd grade children in Georgia with caries experience, untreated dental decay, and dental sealants do not meet Healthy People 2010 objectives.
- Significant differences in oral health were found between SES households.
- Access to insurance and utilizing dental care are important factors in promoting good oral health.

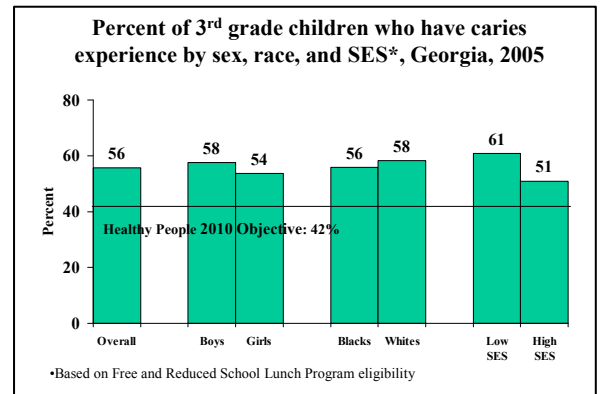
Actions to Improve the Oral Health of Georgia's Children

Historically, oral health program development in Georgia has been both a public and private collaborative effort.

- Provide documentation of local level needs through reporting of public health, community and school oral health data.
- Continue statewide needs assessments and funding to build oral health infrastructure that increases access to care.
- Increase the proportion of eligible low-income elementary school children who establish a dental home, receive dental treatment, and are free of oral-related pain and active oral disease.
- Continue concerted public health collaborations with private dental professionals, organizations and the Department of Community Health (Medicaid/PeachCare) that will result in improved oral health status for all of Georgia's children.

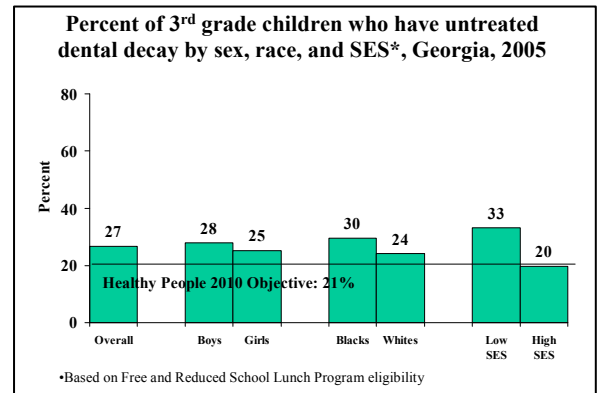
Caries Experience

- Boys are more likely to have caries experience (58%) than girls (54%).
- White children are more likely to have caries experience (58%) than black children (56%).
- Children from low SES households are more likely to have caries experience (61%) than children from high SES households (51%)*.
- All sex, race, and SES groups did not meet the Healthy People 2010 objective for caries experience (42%).



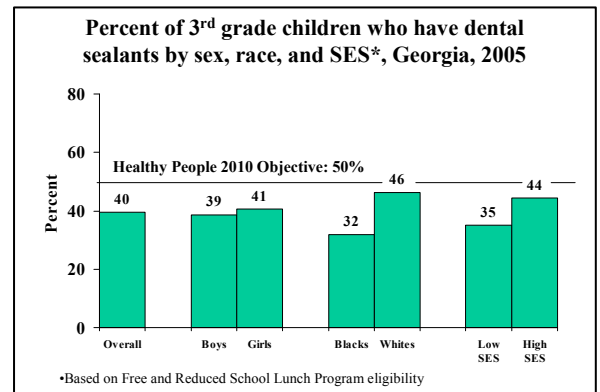
Untreated Dental Decay

- Boys are more likely to have untreated dental decay (28%) than girls (25%).
- Black children are more likely to have untreated dental decay (30%) than white children (24%).
- Children from low SES households are more likely to have untreated dental decay (33%) than children from high SES households (20%)*.
- Children from high SES households are the only group to meet the Healthy People 2010 objective for untreated dental decay (21%).



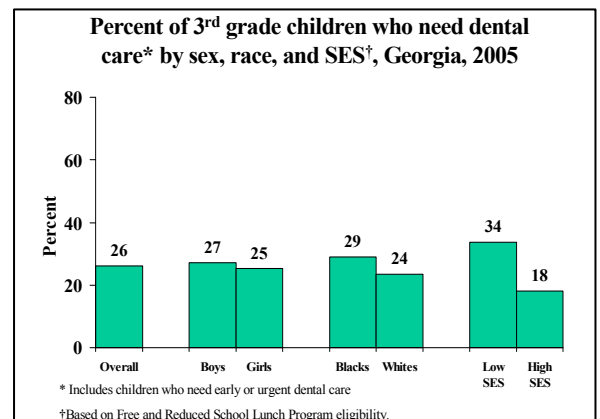
Dental Sealants

- Girls are more likely to have dental sealants (41%) than boys (39%).
- White children are more likely to have dental sealants (46%) than black children (32%)*.
- Children from high SES households are more likely to have dental sealants (44%) than children from low SES households (35%)*.
- All sex, race, and SES groups did not meet the Healthy People 2010 objective for dental sealants (50%).



Need Dental Care

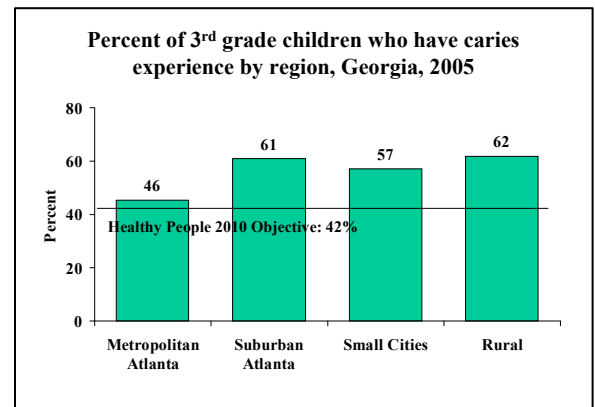
- Boys are more likely to need dental care (27%) than girls (25%).
- Black children are more likely to need dental care (29%) than white children (24%).
- Children from low SES households are more likely to need dental care (34%) than children from high SES households (18%)*.



* Differences are statistically significant: $p < 0.05$

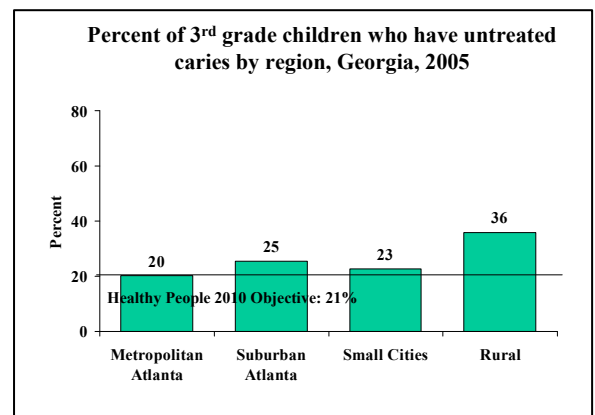
Caries Experience

- Children from Metropolitan Atlanta are least likely to have caries experience (46%).
- Children from rural areas (62%) and Suburban Atlanta (61%) are most likely to have caries experience.
- None of the regions in Georgia met the Healthy People 2010 objective for caries experience (42%).



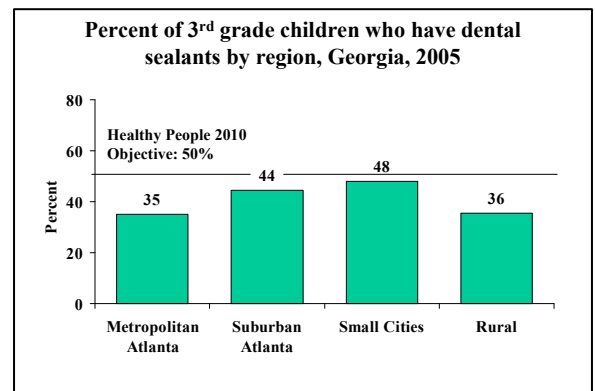
Untreated Dental Decay

- Children from Metropolitan Atlanta are least likely to have untreated dental decay (20%).
- Children from rural areas are most likely to have untreated dental decay (36%).
- Only Metropolitan Atlanta met the Healthy People 2010 objective for untreated dental decay (21%).



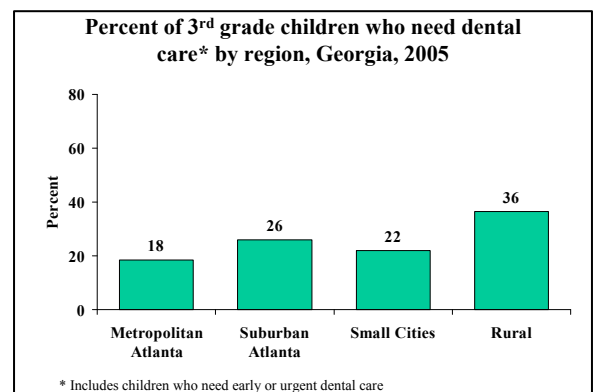
Dental Sealants

- Children from Metropolitan Atlanta (35%) and rural areas (36%) are least likely to have dental sealants.
- Children from small cities are most likely to have dental sealants (48%).
- None of the regions in Georgia met the Healthy People 2010 objective for dental sealants (50%).



Need Dental Care

- Children from Metropolitan Atlanta are least likely to need dental care (18%).
- Children from rural areas are most likely to need dental care (36%).



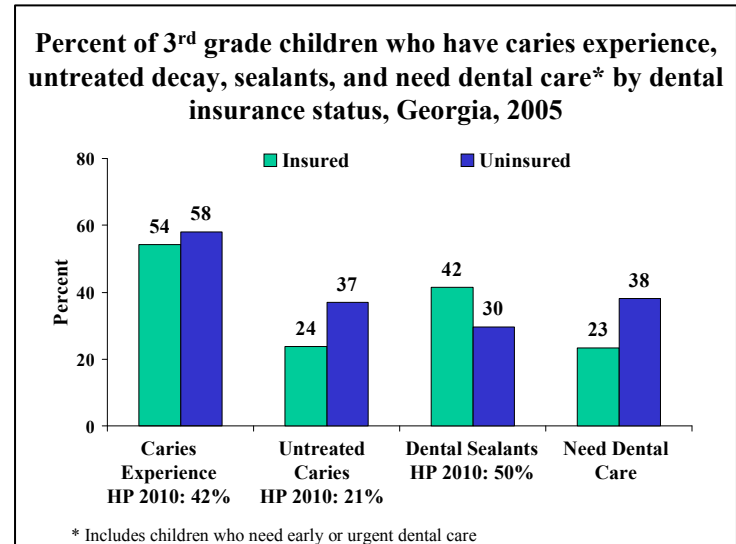
Access to Dental Care

- 8 in 10 (83%) 3rd grade children have access to either public or private dental insurance.

Oral Health by Insurance Status

Dental Insurance

- Children with access to dental insurance are less likely to have caries experience (54%) than children without access to dental insurance (58%).
- Children with access to dental insurance are less likely to have untreated dental decay (24%) than children without access to dental insurance (37%)*.
- Children with access to dental insurance are more likely to have dental sealants (42%) than children without access to dental insurance (30%)*.
- Children with access to dental insurance are less likely to need dental care (23%) than children without access to dental insurance (38%)*.
- The percentage of children with caries experience, untreated dental decay, and dental sealants do not meet Healthy People 2010 objectives regardless of dental insurance status.

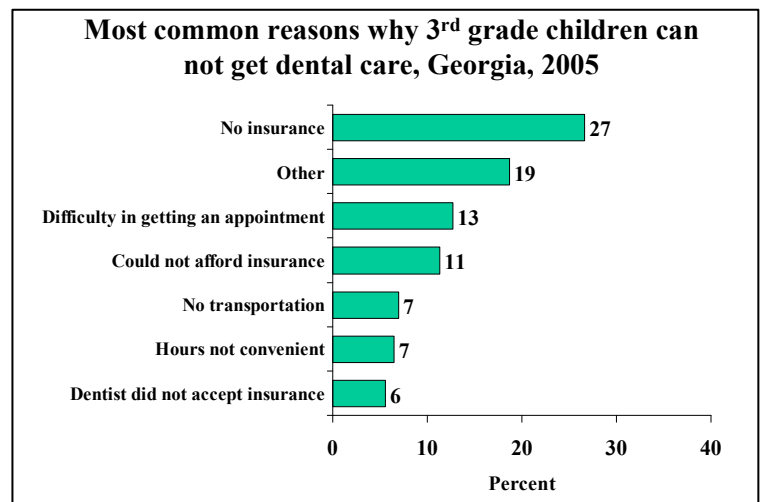


Barriers to Dental Care

- 1 in 8 (13%) 3rd grade children who needed dental care during the last year were not able to get it.

Most Common Barriers

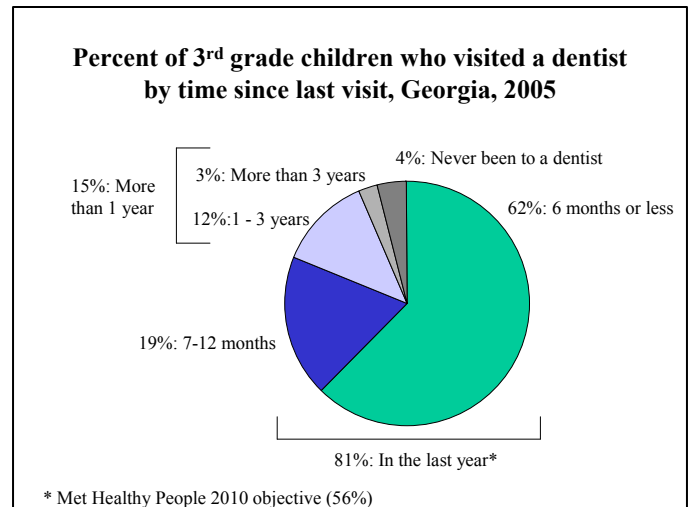
- 1 in 4 (27%) 3rd grade children in Georgia could not get dental care due to no insurance.
- Difficulty in getting appointment (13%), could not afford insurance (11%), no transportation (7%), inconvenient hours (7%), and dentist did not accept insurance (6%) are other reported barriers to dental care.



* Differences are statistically significant: $p < 0.05$

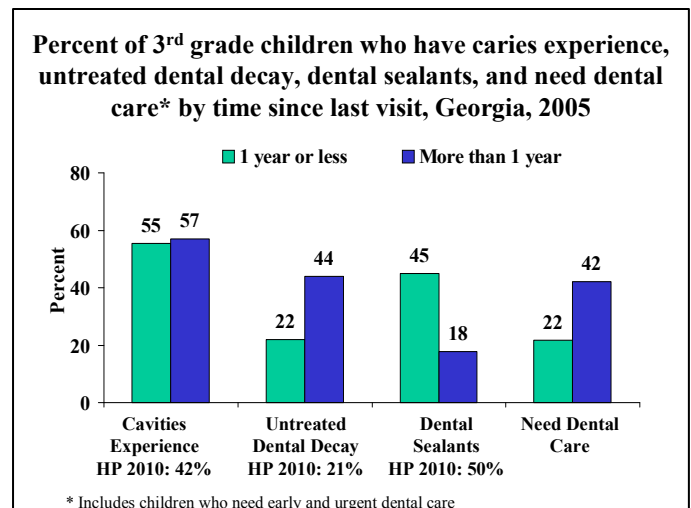
Time Since Last Visit

- 81% of 3rd grade children visited a dentist in the last year.
- 15% of 3rd grade children visited a dentist more than 1 year ago.
- 4% of 3rd grade children have never been to a dentist.
- The percentage of 3rd grade children in Georgia visiting a dentist (81%) met the Healthy People 2010 objective for utilization of the oral health system (56%).



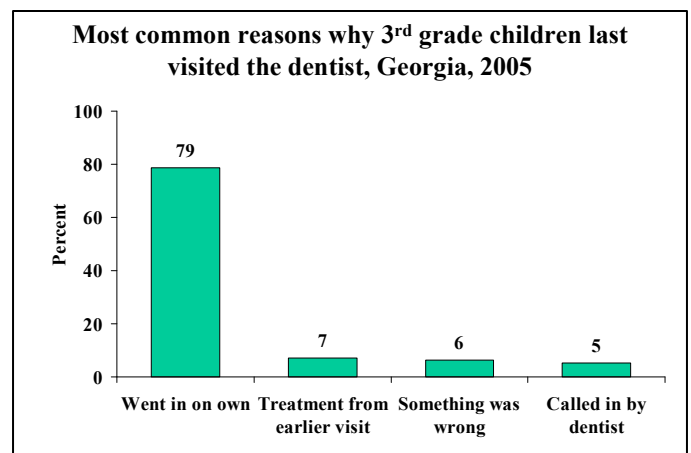
Oral Health by Time Since Last Visit

- Children who visited a dentist in the last year are less likely to have caries experience (55%) than children who visited the dentist more than 1 year ago (57%).
- Children who visited a dentist in the last year are less likely to have untreated dental decay (22%) than children who visited the dentist more than 1 year ago (44%)*.
- Children who visited a dentist in the last year are more likely to have dental sealants (45%) than children who visited the dentist more than 1 year ago (18%)*.
- Children who visited a dentist in the last year are less likely to need dental care (22%) than children who visited the dentist more than 1 year ago (42%)*.



Reasons for Last Visit

- The most common reason why 3rd grade children last visited a dentist was they went in on their own (79%).
- Treatment from earlier visits (7%), something was wrong (6%), and called in by dentist (5%) were other reported reasons for the last visit to a dentist.



* Differences are statistically significant: $p < 0.05$

Sampling

The Georgia Department of Human Resources, Division of Public Health conducted a statewide oral health screening in spring 2005. All public schools with 25 or more students enrolled in 3rd grade were eligible to participate in the screening. During the 2002-2003 school year, there were 1,145 schools with 115,523 children in the 3rd grade. The sampling frame was ordered by the proportion of students eligible for the free and reduced lunch (FRL) program. The 15th school was randomly selected to participate and every 20th school thereafter. If a school refused to participate, a replacement school within the same sampling strata was selected.

Screening methods

Only those children in third grade who returned a positive consent form were screened. Public health dentists and dental hygienists completed the screenings using gloves, penlights, and disposable mouth mirrors. The diagnostic criteria outlined in the Association of State and Territorial Dental Directors publication *Basic Screening Surveys: An Approach to Monitoring Community Oral Health*⁶ were used. The public health dentists and dental hygienists attended a full-day training session, which included a didactic review of the diagnostic criteria along with a hands-on calibration session. Calibration was monitored during the screening process to ensure consistency.

Parent questionnaire

Parents were asked to complete a one page questionnaire designed to obtain information on the prevalence of toothaches, time since last dental visit, reason for last dental visit, problems accessing dental care, and medical and dental insurance coverage. Parents also provided information on the child's race, ethnicity, age, and eligibility for the free or reduced school lunch program.

Participation

2,961 children (51% participation rate with parental consent) from 57 public schools in Georgia were screened. Completed parent questionnaires were gathered for 2,363 children. Data from both the parent questionnaire and screening were available for 2,326 children.

Weighting

Results were weighted for non-response and the race and sex distribution of 3rd grade students by geographic regions in Georgia. The sample was weighted by race-only groups due to a substantial proportion of children with unknown or missing ethnicity (26%). Race-only weights were derived by re-classifying Hispanic children in the school enrollment data into race-only groups based on the racial distribution of Hispanic children ages 5-9 in Georgia reported by the U.S. Census.

Definition of socioeconomic status (SES) and geographic regions

Eligibility in the FRL program was used as an indicator of SES in this analysis. Eligibility is based on the income and number of persons in the household. For example, households with four individuals were eligible to participate in the FRL program during the 2004-2005 school year if their annual income was less than \$34,873. The classification of regions in the state was based on county population density estimates in 2002. Metropolitan Atlanta included counties with 1,500 residents per square mile or more. Counties with 290-900 residents per square mile bordering counties in Metropolitan Atlanta were classified as Suburban Atlanta and those not bordering Metropolitan Atlanta were classified as small cities. Rural areas included counties with fewer than 290 residents per square mile.

Data analysis

The screening dataset was the source for estimating the percent of children who have caries, untreated dental decay, dental sealants, and need dental care by sex, race, SES, and region. The merged dataset linking data from the screening and parent questionnaire was the source for all other estimates. SAS was used to calculate weighted prevalence estimates with 95% confidence intervals.

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For more information and resources about programs to address oral health in Georgia, please visit <http://health.state.ga.us/programs/oral/> or contact:

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