



# ORAL HEALTH STATUS OF GEORGIA'S THIRD GRADE CHILDREN

Findings from the 2011 Georgia 3rd Grade Oral Health Survey

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# Table of Contents

Summary .....	2
What is the oral health basic screening survey? .....	3
Methods .....	3
Findings .....	4
Discussion .....	9

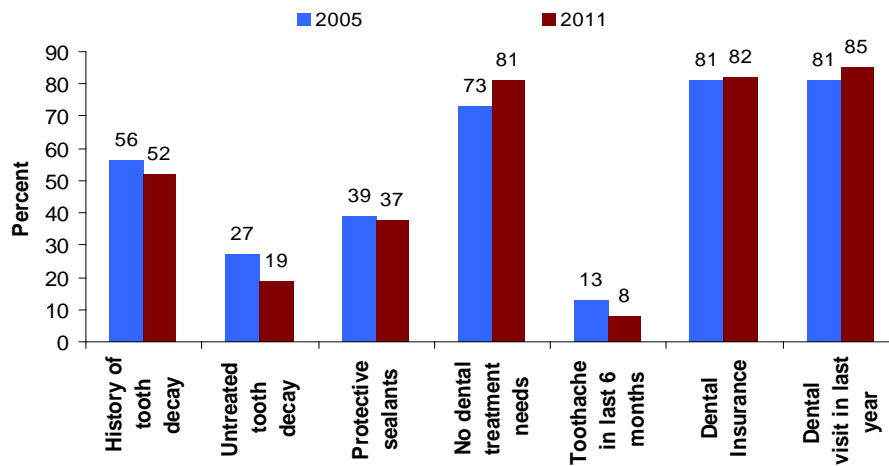
## Summary

During the 2011 school year, the Georgia Department of Public Health collaborated with the Georgia Department of Education to conduct a statewide oral health survey of 3rd grade children enrolled in Georgia's public school systems. In the participating schools, 3359 of 6462 3<sup>rd</sup> grade students completed a dental screening, yielding a response rate of 52%. Public health dentists and dental hygienists screened children who returned a positive consent form. Since the previous 3<sup>rd</sup> Grade Oral Health Survey in the 2005 school year, there have been significant improvements in oral health indicators at the state level (**Figure 1**), although disparities remain among various socioeconomic, racial, ethnic, and geographic groups.

### Key Findings

- The proportion of 3<sup>rd</sup> grade children with a history of tooth decay remains largely unchanged.
  - 52% of the children had a history of tooth decay in 2011, compared to 56% in 2005.
- The proportion of 3<sup>rd</sup> grade children with untreated tooth decay has decreased significantly.
  - 19% of the children had untreated tooth decay in 2011, compared to 27% in 2005.
- The proportion of 3rd grade children in Georgia with protective sealants remains unchanged.
  - 37% of the children had protective dental sealants in 2011, compared to 39% in 2005.
- The proportion of 3rd grade children with no dental care needs has increased significantly.
  - 81% of the children had no dental care needs in 2011, compared to 73% in 2005.
- The proportion of 3rd grade children who experienced a recent toothache has decreased.
  - In 2011, 8% experienced toothache in the last six months, compared to 13% in 2005.
- The proportion of 3rd grade children who have dental insurance remained stable.
  - 82% of the children had a dental insurance in 2011, compared to 81% in 2005.
- The proportion of 3rd grade children who visited a dentist within the last year remained high.
  - In 2011, 85% of the children visited a dentist in the past year, compared to 81% in 2005.
- Consistently, low-income and Hispanic children have poorer oral health outcomes.
- Georgia met the Healthy People 2010 objectives for untreated tooth decay and utilization of the oral health system (dental visits within the last year).

Figure 1. Change in prevalence of oral health indicators among children participating in two statewide surveys: Georgia, 3rd Grade Oral Health Basic Screening Survey, 2005 and 2011



## What is the Oral Health Basic Screening Survey?

The Oral Health Basic Screening Survey (BSS) was developed by the Association of State and Territorial Dental Directors (ASTDD) with the purpose of providing a framework for states and local health departments to collect timely, consistent, and inexpensive oral health data. In Georgia, the BSS is used to obtain data on oral health status, risk factors, and barriers to care and prevention services. The most recent BSS was conducted among 3<sup>rd</sup> grade children during the 2011 school year.

## Methods

### *Study Design and Sampling*

A cross-sectional study was conducted of third grade school children in Georgia. The sampling frame consisted of 1229 public elementary schools with at least 25 students enrolled in the third grade. Public schools (n=80) were selected by stratified random sampling, with stratification based on geography. Of the 80 selected schools, 63 participated in the survey. In the 63 participating schools, 3359 of 6462 3<sup>rd</sup> grade students completed a dental screening yielding a student response rate of 52%.

### *Data Collection*

In August 2010, positive consent was sought from parents in writing and only those children returning positive consent were screened. Dental screenings were performed by public health dentists and dental hygienists in accordance with the ASTDD guide *Basic Screening Surveys: An Approach to Monitoring Community Health*. Participating children were examined for history of tooth decay, presence of untreated tooth decay, sealants, and fluorosis. If a child was determined to be in urgent need of dental care, the parents or caregivers were notified and referred to a dental professional for treatment. Supplemental data on recent toothache, access to care, barriers to prevention services, and child demographics (e.g. age, race, ethnicity, eligibility for free/reduce lunch) were obtained from parents/caregivers through a self-administered questionnaire. All data collection activities were completed by December 2010.

### *Data Analysis*

Data was weighted for probability of selection and for non-response. Child's eligibility for the free/reduced lunch program was used as an indicator for household income or socioeconomic status. The SAS software (v9.2) and SAS-Callable-SUDAAN (v10.0.1) were used to generate statewide and regional estimates and corresponding confidence intervals.

## Findings

### *Tooth decay experience*

About 52% of the children screened had a history of tooth decay in their primary and/or permanent teeth (**Figure 2**). This is comparable to the 56% reported in 2005. Low-income, Hispanic, and rural children were more likely to have a history of tooth decay. Tooth decay experience reflects previous disease in the form of cavity, filling, or a history of extraction, and could represent missed opportunities for primary prevention in an earlier life stage.

### *Untreated tooth decay*

Nearly 19% of the children had untreated tooth decay at the time of screening (**Figure 3**). This represents a significant decline from the 27% reported in 2005. More low-income, Hispanic, and black children have untreated tooth decay. Untreated tooth decay measures the presence of a cavity that has not been treated in a timely manner.

### *Protective Dental Sealants*

The estimated percent of children who had protective dental sealants on at least one permanent molar was 37 (**Figure 4**). This is comparable to the 39% reported in 2005. Fewer low-income and black children have dental sealants. Dental sealants provide an effective way to prevent decay on the chewing surfaces of molars, which are known to be most vulnerable to decay.

### *Need for Dental Care*

Approximately 81% of screened children had no obvious need for dental care (**Figure 5**). This represents a significant increase from the 73% reported in 2005. A lower proportion of children from low-income households have no need for dental care. Need for dental care reflects access to both preventive and treatment services.

### *Toothache*

About 8% of screened children experienced a toothache within the previous six months (**Figure 6**). This is a significant decline from the 13% reported in 2005. More children from low-income households experienced a toothache, compared to high-income children. Toothache can be a good indicator for access to routine primary dental prevention care.

### *Dental Insurance*

Approximately 82% of the children had dental insurance (**Figure 7**). This is similar to the 81% reported in 2005. Compared to non-Hispanic children, Hispanic children are less likely to have dental insurance. Dental insurance coverage was more or less even across other groups. Children without dental insurance have worse oral health outcomes (**Figure 8**).

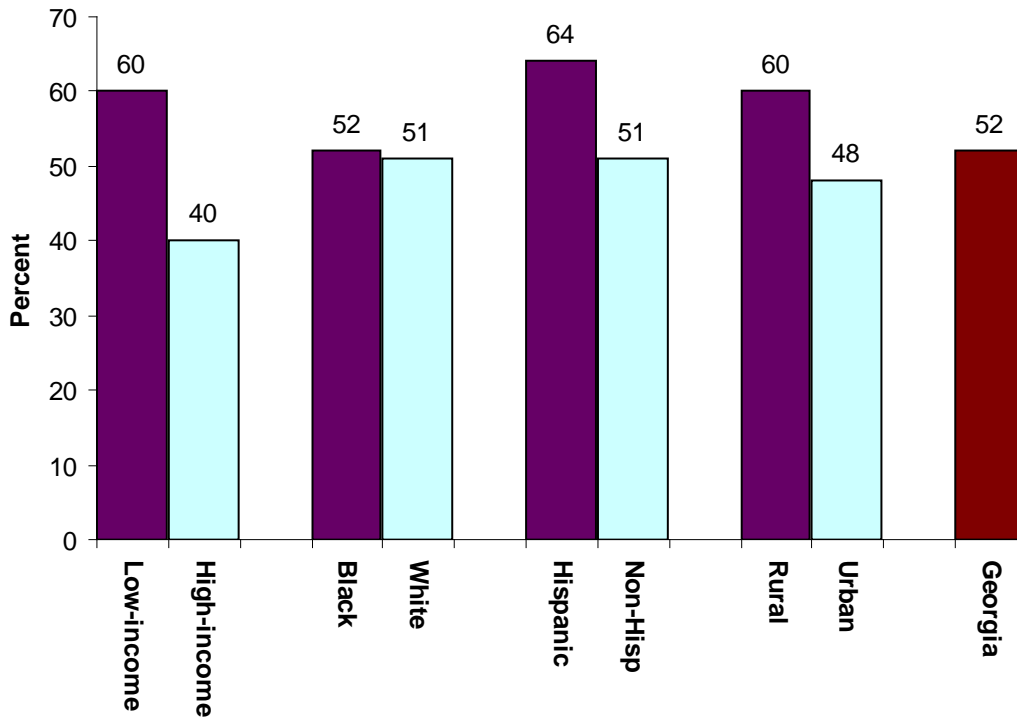
### *Dental Visits*

An estimated 85% of the children visited a dentist within the past year (**Figure 9**). This is comparable to the 81% reported in 2005. Lower proportions of low-income and black children visited a dentist within the previous 12 months. Children who have recently been to the dentist have better oral health outcomes (**Figure 10**).

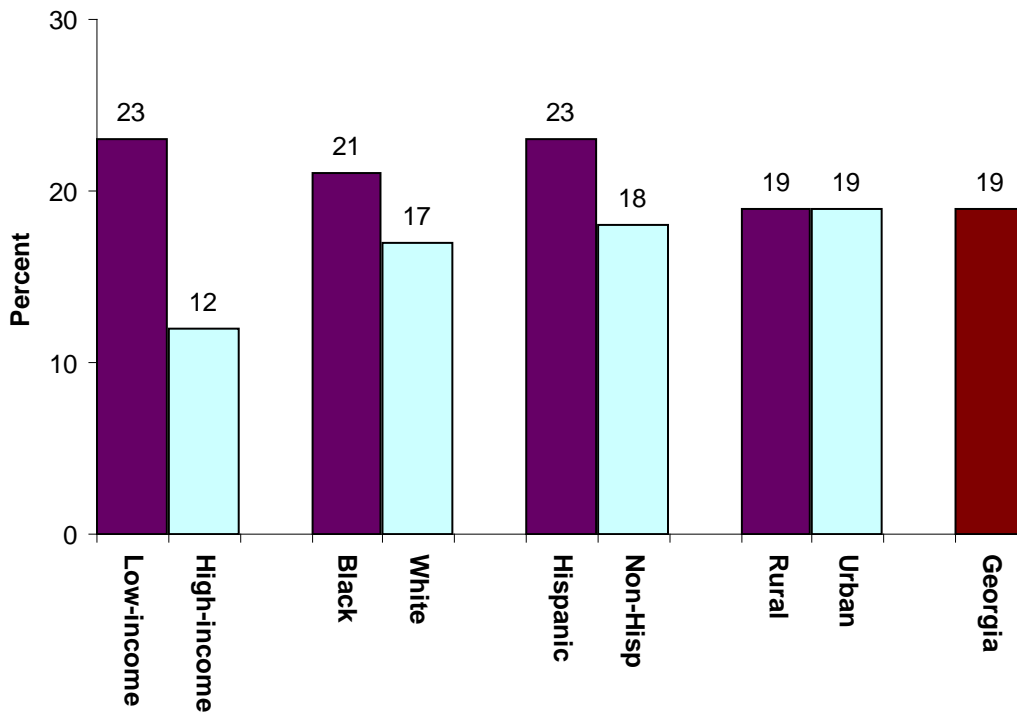
### *Barriers to Care*

An estimated 12% of the children could not get dental care in the year prior to the survey (**Figure 11**). This remains unchanged from the 2005 survey. Although there were no noticeable differences in dental insurance coverage between black and white children, black children were more likely not to receive dental care when they needed it. Low-income and Hispanic children were also more likely not to receive dental care.

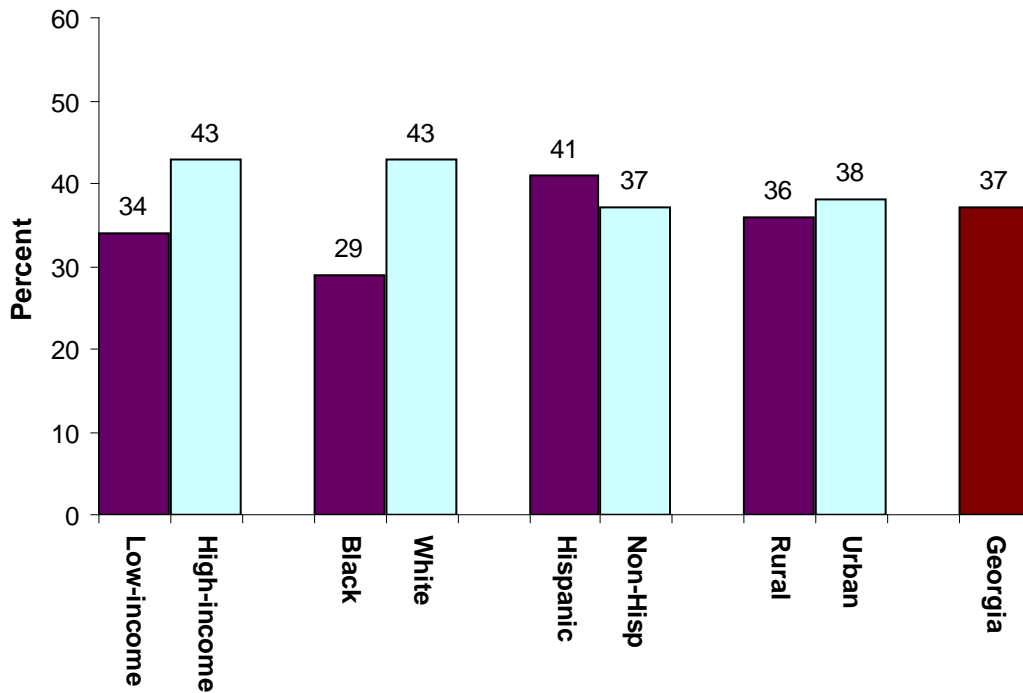
**Figure 2. Percent of 3rd graders who have had tooth decay  
Georgia, 2011**



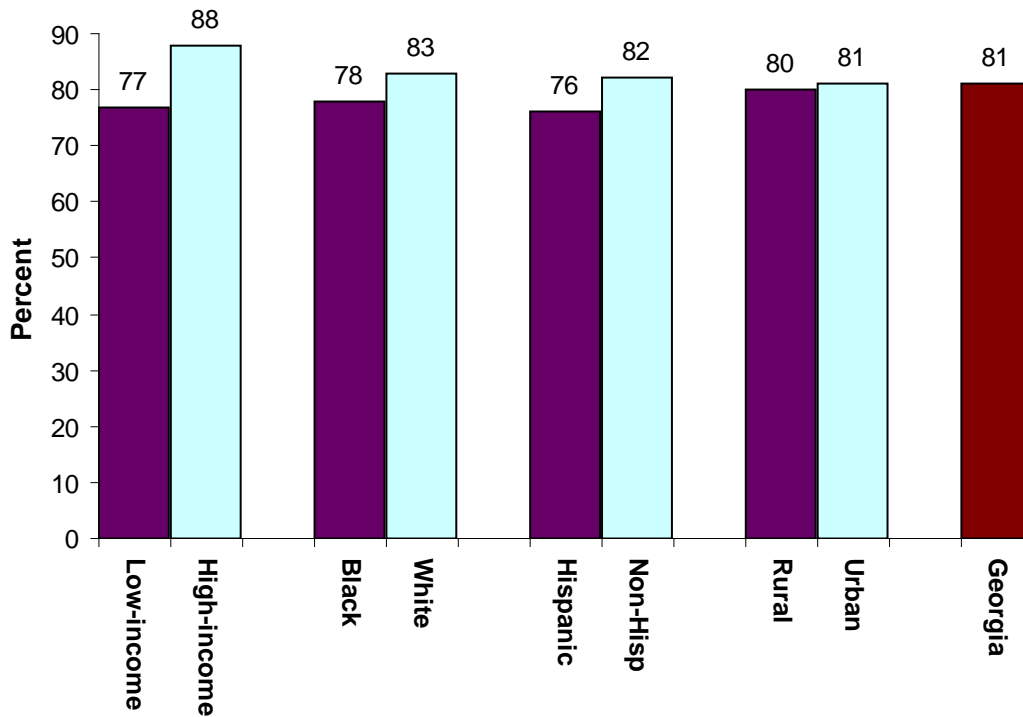
**Figure 3. Percent of 3rd graders who have untreated tooth decay, Georgia, 2011**



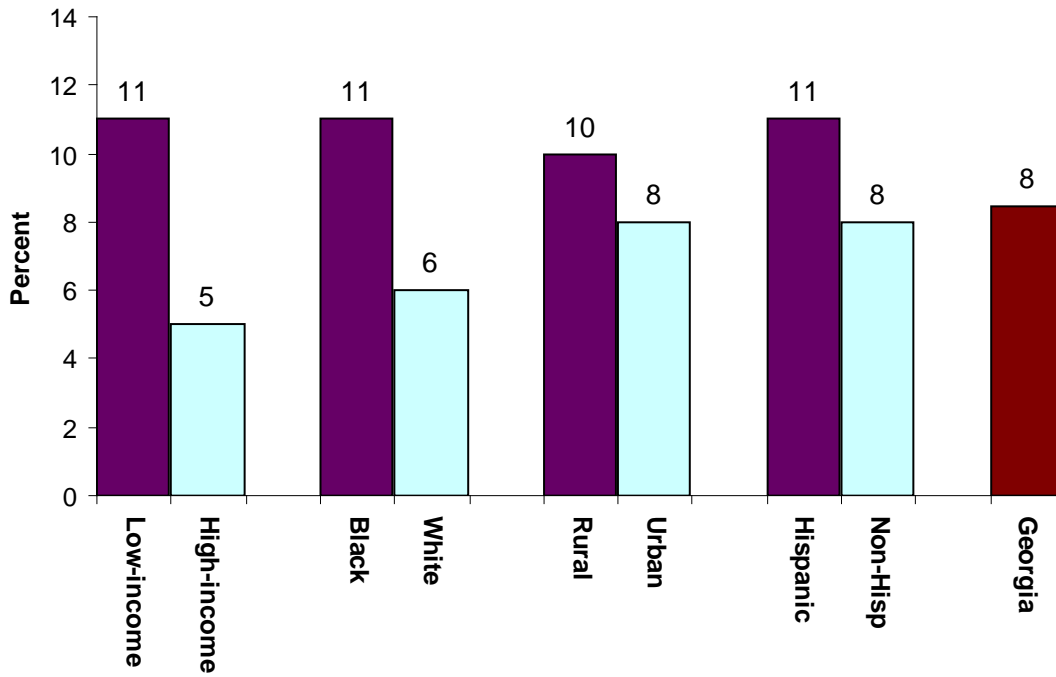
**Figure 4. Percent of 3rd graders who have sealants on at least one permanent molar, Georgia, 2011**



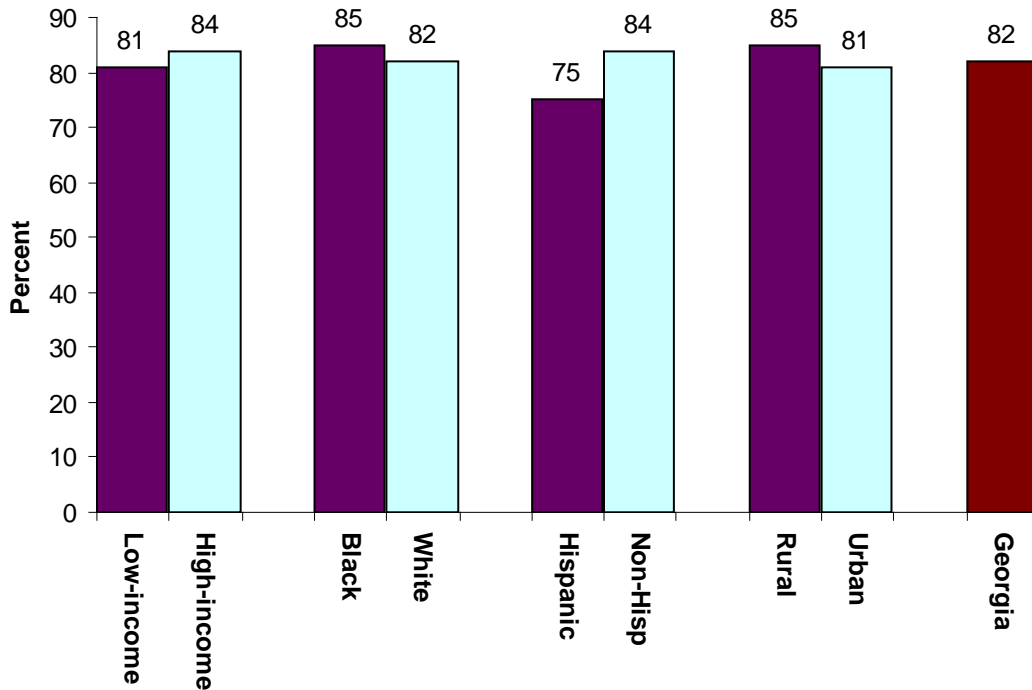
**Figure 5. Percent of 3rd graders who have no dental treatment needs, Georgia, 2011**



**Figure 6. Percent of 3rd graders who experienced toothache in the last 6 months, Georgia, 2011**

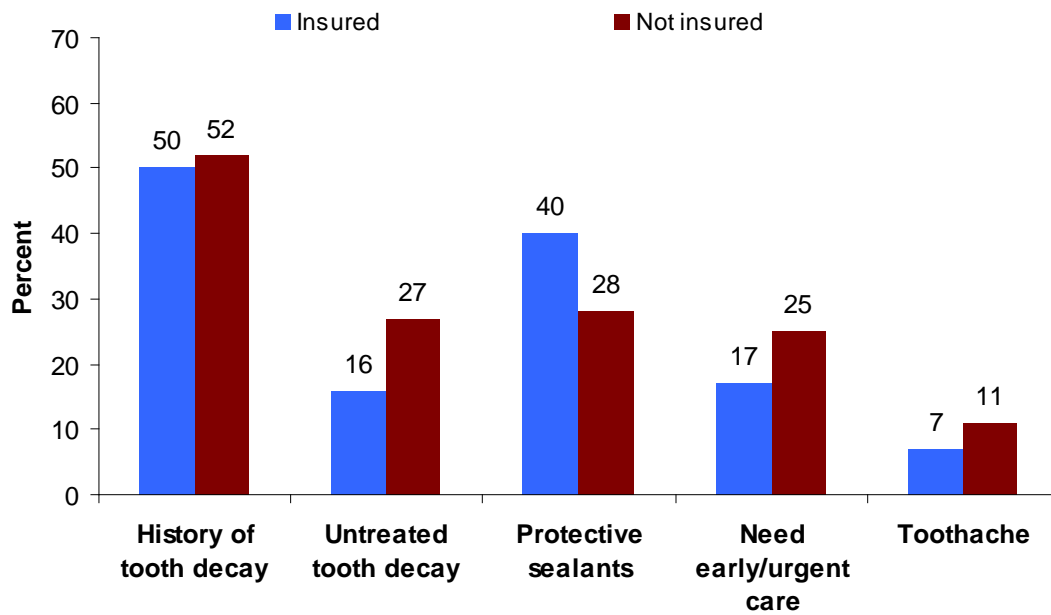


**Figure 7. Percent of 3rd graders who have dental insurance, Georgia, 2011**

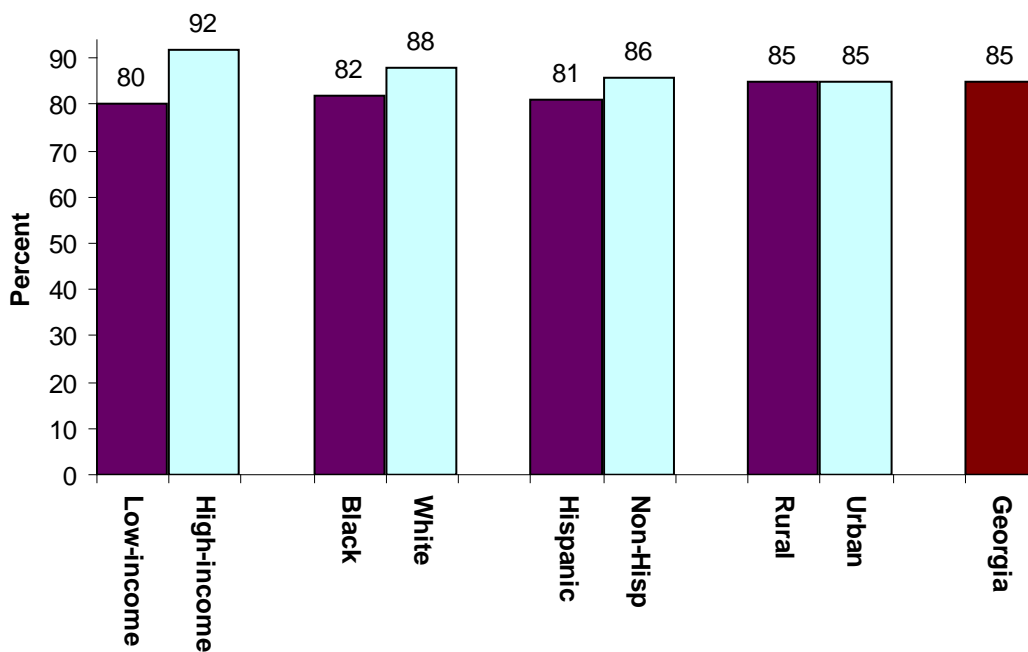




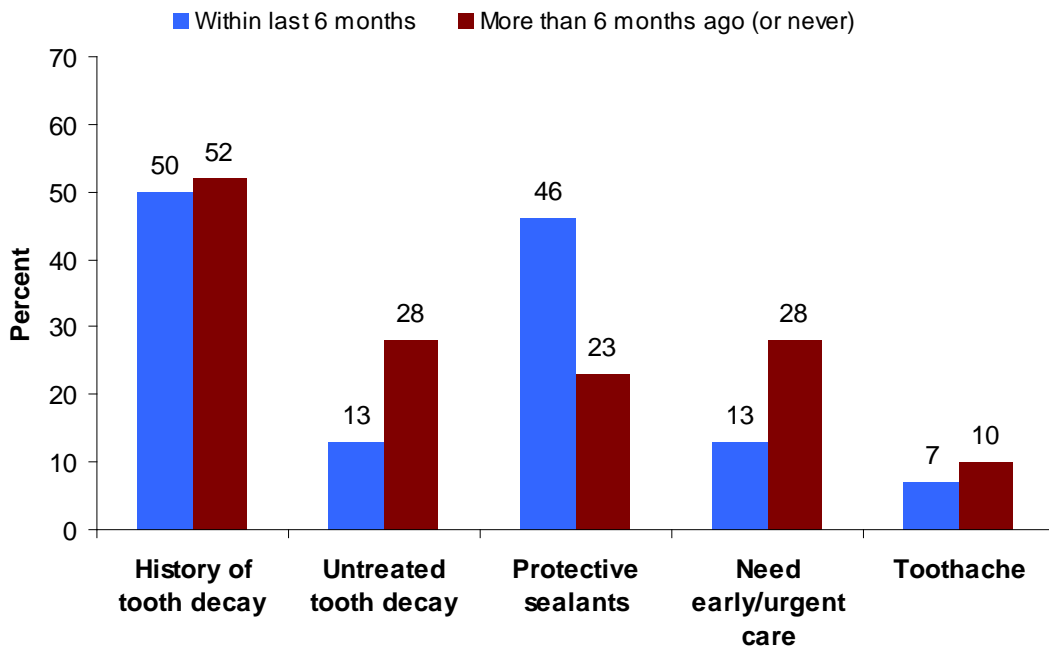
**Figure 8. Oral health indicators among 3rd grade children by dental insurance status, Georgia, 2011**



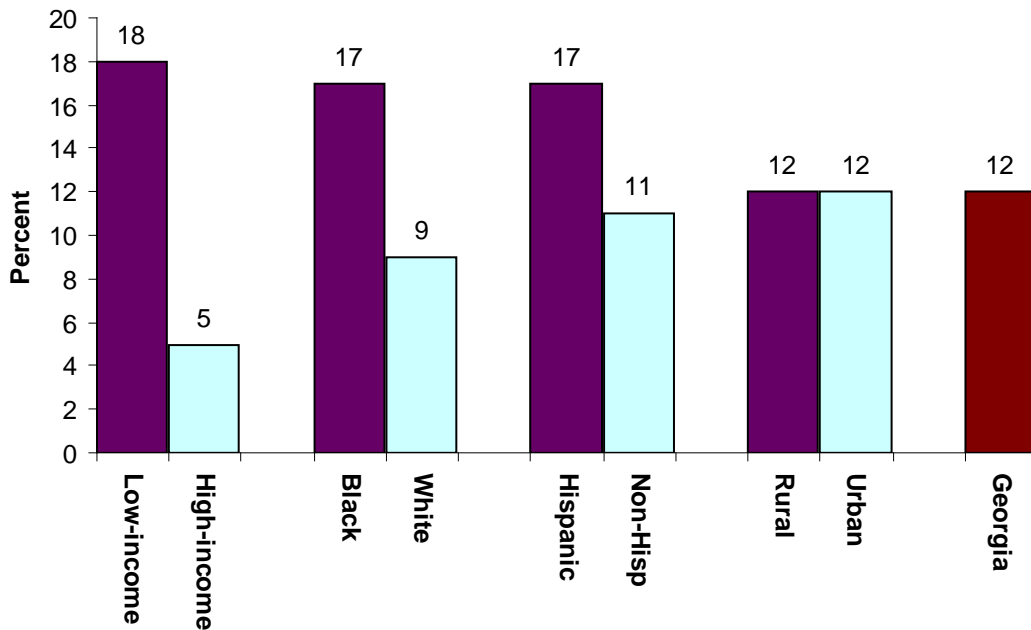
**Figure 9. Percent of 3rd graders who have visited the dentist in the last 12 months, Georgia, 2011**



**Figure 10. Oral health indicators among 3rd grade children by time since last visit to dentist, Georgia, 2011**



**Figure 11. Percent of 3rd graders who could not get dental care in the past 12 months, Georgia, 2011**



## Discussion

### *Improvements in Oral Health Outcomes*

The results suggest that statewide there have been improvements in oral health outcomes among 3<sup>rd</sup> grade children in Georgia since the last survey was conducted in the 2005 school year. Although the prevalence of tooth decay experience among 3<sup>rd</sup> graders in Georgia remains largely unchanged, the proportion of children with untreated tooth decay decreased significantly over the same period of time. This is an indication that children are perhaps receiving dental care in a timely manner. Consequently, the proportion of 3<sup>rd</sup> grade children in Georgia who have no obvious need for dental treatment increased significantly between the 2005 and 2011 school years. Moreover, fewer children experienced a recent toothache while the proportion of children visiting a dentist within the last year remained stable.

Several factors may explain the observed improvements in oral health outcomes since the last survey in 2005. These include: ongoing efforts by Care Management Organizations to promote oral health among Medicaid/PeachCare patients; sustained levels of dental insurance coverage among children in an uncertain economy; and increased emphasis on oral disease prevention by state public health authorities. Additionally, the trends in Georgia are similar to those observed in recent oral health surveys from other states, including Idaho, Massachusetts, Mississippi, Nevada, New Hampshire, Ohio, Oklahoma, South Carolina, Washington, and Wisconsin.

### *Disparities*

Furthermore, the findings show that disparities in oral health previously observed in Georgia as well as in other states and nationally are still apparent in the state. Consistently, children from low-income households and Hispanic children have poorer oral health outcomes. Compared to high-income children, low-income children have more tooth decay experience and untreated tooth decay, fewer sealants, and fewer make visits to the dentist. They also are more likely to need dental care, and less likely to have dental insurance or receive dental care when needed. Compared to non-Hispanic children, Hispanic children have more tooth decay experience and untreated tooth decay, and are less likely to have dental insurance, visit the dentist, or receive dental care when needed.

### *Healthy People Objectives*

Finally, these findings demonstrate that Georgia was successful in meeting selected Healthy People 2010 objectives at the end of the last decade. Healthy People 2010 outlined several oral health objectives for 6 to 8 year-old children. While the Georgia 3<sup>rd</sup> Grade Oral Health Survey was not designed to be representative of 6-8 year olds, it is the best source of data available for monitoring progress toward Healthy People objectives for this age group. Georgia met or exceeded the HP2010 objectives for untreated tooth decay and utilization of the oral health system (dental visits within the past year). To meet newly established HP2020 objectives, current progress must be sustained and significant improvements made with respect to achieving objectives for tooth decay experience and protective dental sealants.