CROSS-CUTTING ISSUES IN MATERNAL AND CHILD HEALTH

Georgia Title V Needs Assessment

Georgia Department of Public Health

Cross-Cutting Issues in Maternal and Child Health

QUANTITATIVE ANALYSIS

INTRODUCTION

This section will explore the various cross-cutting issues in Maternal and Child Health (MCH), which are public health issues that impact multiple MCH populations and have an influence throughout the life-course. Issues such as oral health, tobacco use, and insurance status are often central to an individual's overall health status. Despite this, oral health is often neglected due to numerous barriers, including lack of access, oral health education and insurance.

In Georgia, particularly in the areas of improving oral health outcomes, reducing tobacco use, and increasing insurance status for a greater population, great progress has been seen. Despite this, there remains room for improvement, in particular in addressing disparities by race/ethnicity, income and education. People with less access to preventive oral health services are at a greater risk for oral health disease and other chronic diseases. Poor insurance status has led to delay in care and greater number of poor health outcomes. Tobacco use has led to the increasing heart and lung disease, and for mothers who smoke during pregnancy, premature birth and low birth weight infants.

This section will explore the various cross-cutting issues in Maternal and Child Health (MCH), which are public health issues that impact multiple MCH populations and have an influence throughout the life-course. This section will explore Georgia's health outcomes with respect to the following topics:

- Oral hygiene for mothers and children
- Smoking during pregnancy
- Tobacco use among adolescents
- Insurance status for children and women

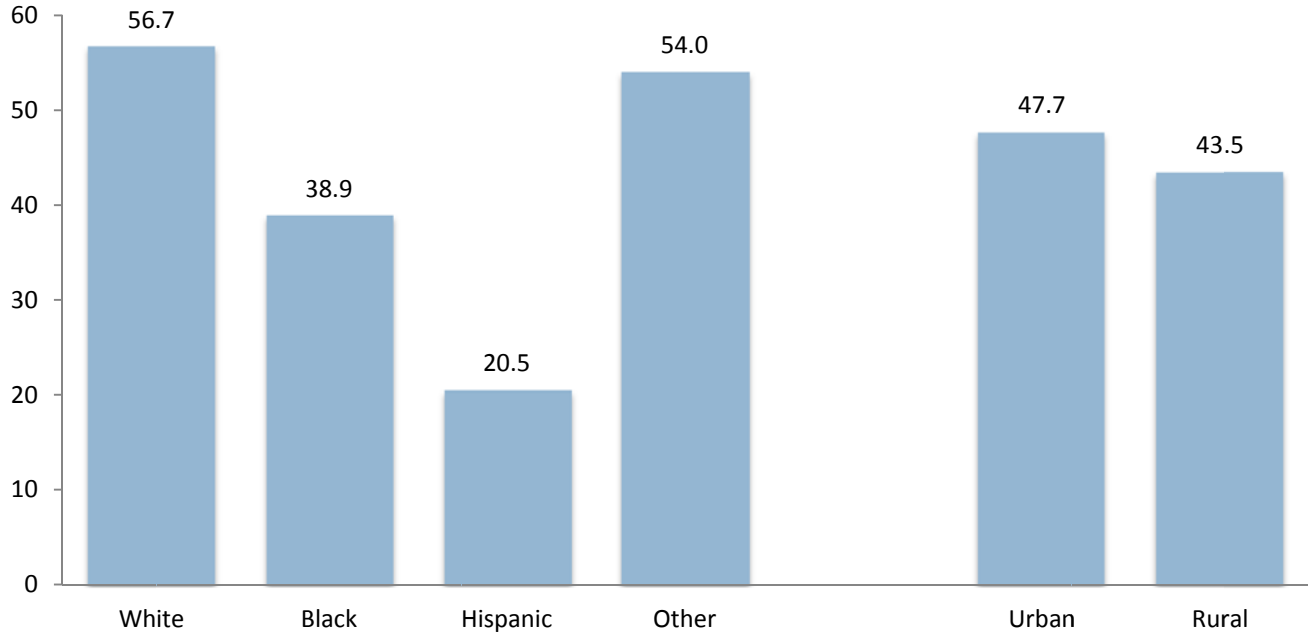
The data sources are the National Children's Health Survey (NCHS), Pregnancy Risk Assessment Monitoring System (PRAMS) and the Youth Risk Behavior Survey (YRBS). The section will conclude with recommendations for future areas of focus.

ORAL HEALTH

Pregnant Women

The percent of mothers getting their teeth cleaned during the year prior to pregnancy increased from 39.5% in 2009 to 46.5% in 2011. Additionally, older mothers are more likely to report having cleanings than younger mothers. For example, in 2011, only 38.2% of 20 to 24 year old mothers reported having their teeth cleaned the year before their pregnancy compared to 66.1% of mothers who are 35 and older. Upon stratifying by race/ethnicity and urban and rural status, some significant disparities appear. For example, only 20.5% of Hispanic mothers report having their teeth cleaned the year before their pregnancy compared to 56.7% of non-Hispanic White women. Surprisingly, the rates in urban versus rural areas were relatively comparable, with 47.7% of mothers in urban areas reporting teeth cleanings compared to 43.5% of mothers in rural areas.

Percent of women who had their teeth cleaned the year before their pregnancy
by race/ethnicity and urban/rural status, Georgia, 2011



Source: PRAMS 2009-2011

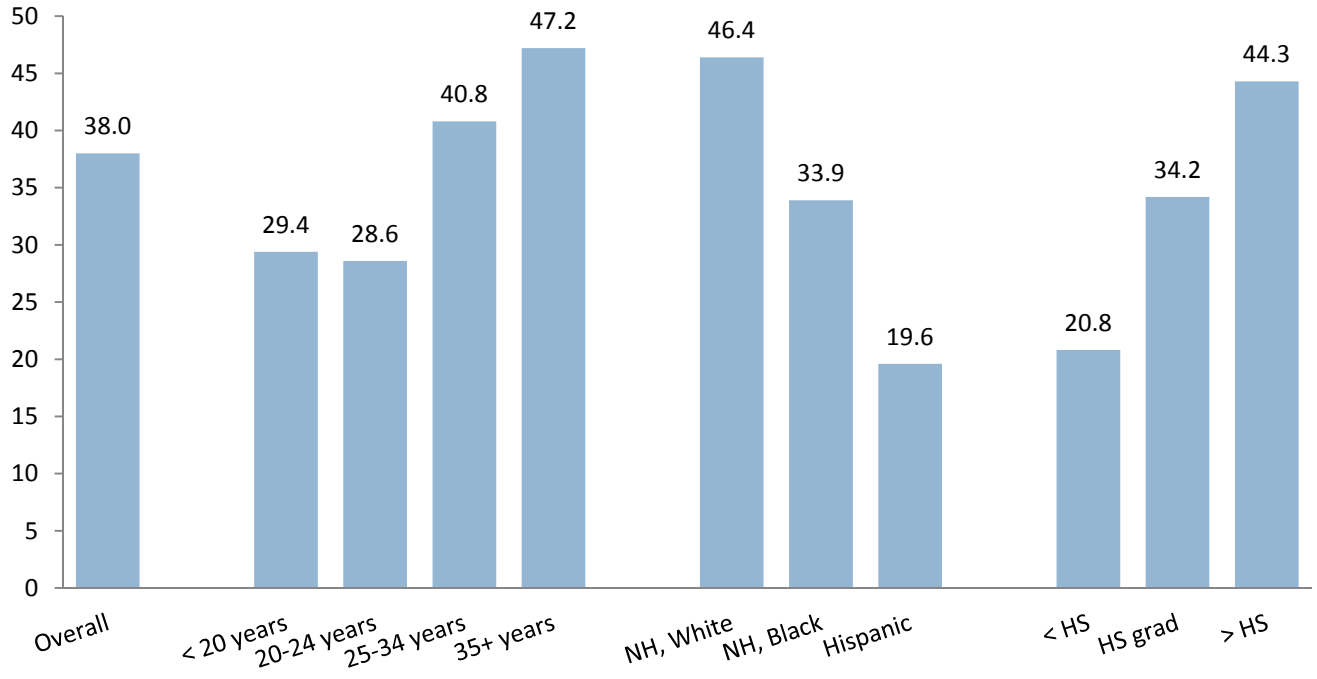
It is important to make note about the correlation between payor status and the likelihood of getting a teeth cleaning. Women who had insurance from their job were most likely to get a cleaning the year before pregnancy compared to those who were insured by Medicaid or Military coverage. For example, 64.7% of women with insurance from their jobs got a cleaning compared to only 8.4% of Medicaid patients and 4.7% of those with Tricare/Military insurance.

Percent of women reporting having a teeth cleaning the year before pregnancy by payor, Georgia, 2011	
Payor	Percent
Insurance paid by job	64.2%
Insurance paid by someone else	5.8%
Insurance paid by Medicaid	8.4%
Insurance paid by TRICARE/Military	4.7%
Insurance paid by PeachCare	1.4%
Insurance paid by Other	1.0%
No Insurance	20.6%

Source: PRAMS 2009-2011

Fewer women overall received a dental cleaning during pregnancy. Although 38% of women overall reported having their teeth cleaned during pregnancy, only 29.4% of mothers less than 20 years old saw a dentist or dental hygienist during pregnancy, compared to 47.2% of women over 35 years of age. Significant disparities are also present when stratified by race/ethnicity. Non-Hispanic white women (46.4%) were far more likely than their Non-Hispanic Black and Hispanic (33.9% and 19.6%) counterparts to receive a dental cleaning. As education level increases, so does the likelihood that women will receive a dental cleaning during pregnancy.

Percent of women who had their teeth cleaned during pregnancy, Georgia, 2012

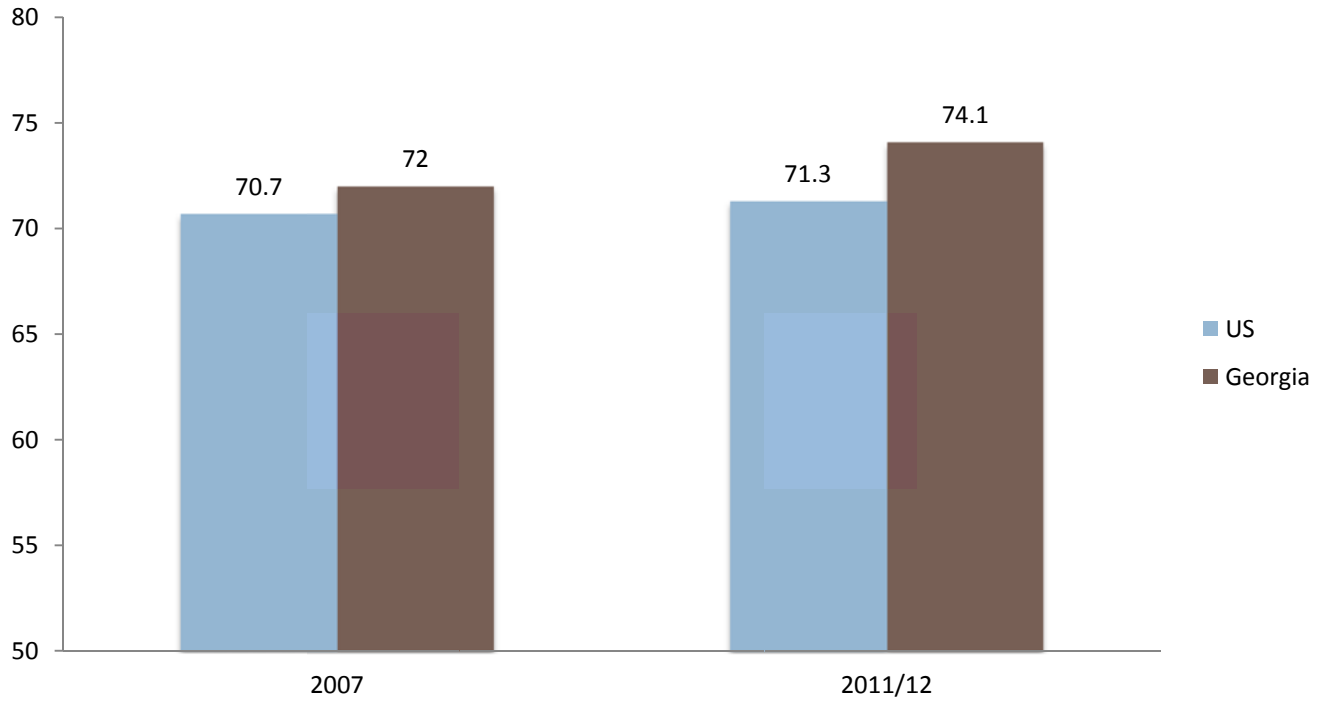


Source: PRAMS 2012

Children and Adolescents

Georgia's children reported having teeth that are in excellent/very good condition at a higher rate than the national average across the each time point measured. Comparing the data from 2007 to 2011/12, the overall percentage of children with very good or excellent teeth increased for both the nation and Georgia; however, the increase was greater for children in Georgia.

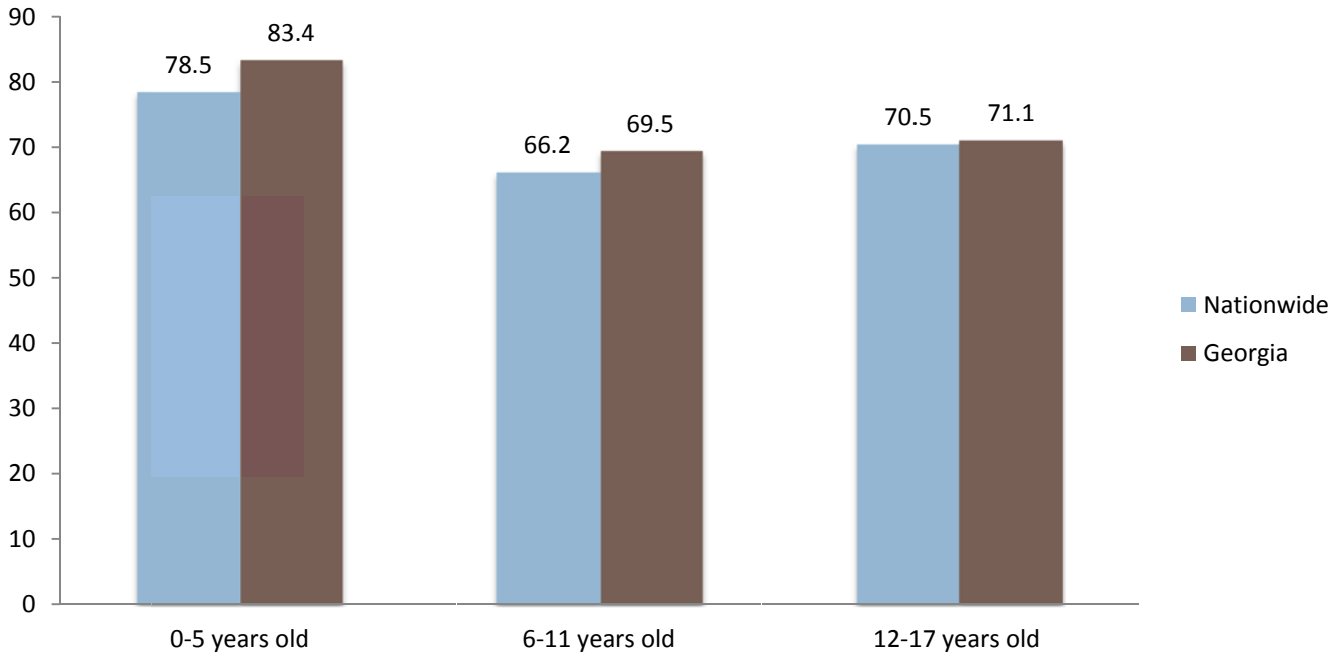
Percent of children ages 1-17 whose teeth are in excellent/very good condition by year, Georgia compared to the US, 2007 and 2011/12



Source: NSCH 2007 and 2011/12

Furthermore, children residing in Georgia experienced excellent/very good oral health at a greater rate than their counterparts nationally in every age category. The percent of children with teeth in excellent/very good condition was greatest among 1 to 5 year olds and lowest among 6 to 11 year olds. This statistic remained true for both Georgia and the nation as a whole.

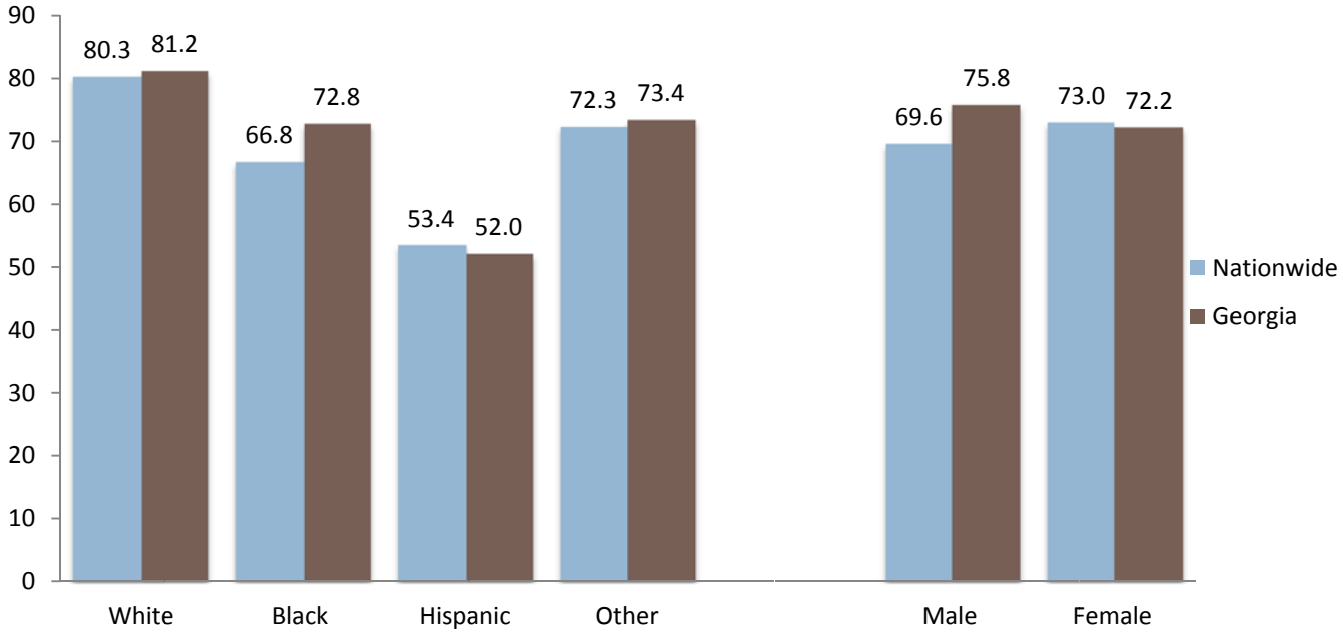
Percent of children ages 1 to 17 years whose teeth are in excellent/very good condition by age, Georgia compared to the US, 2011/12



Source: NSCH 2007 and 2011/12

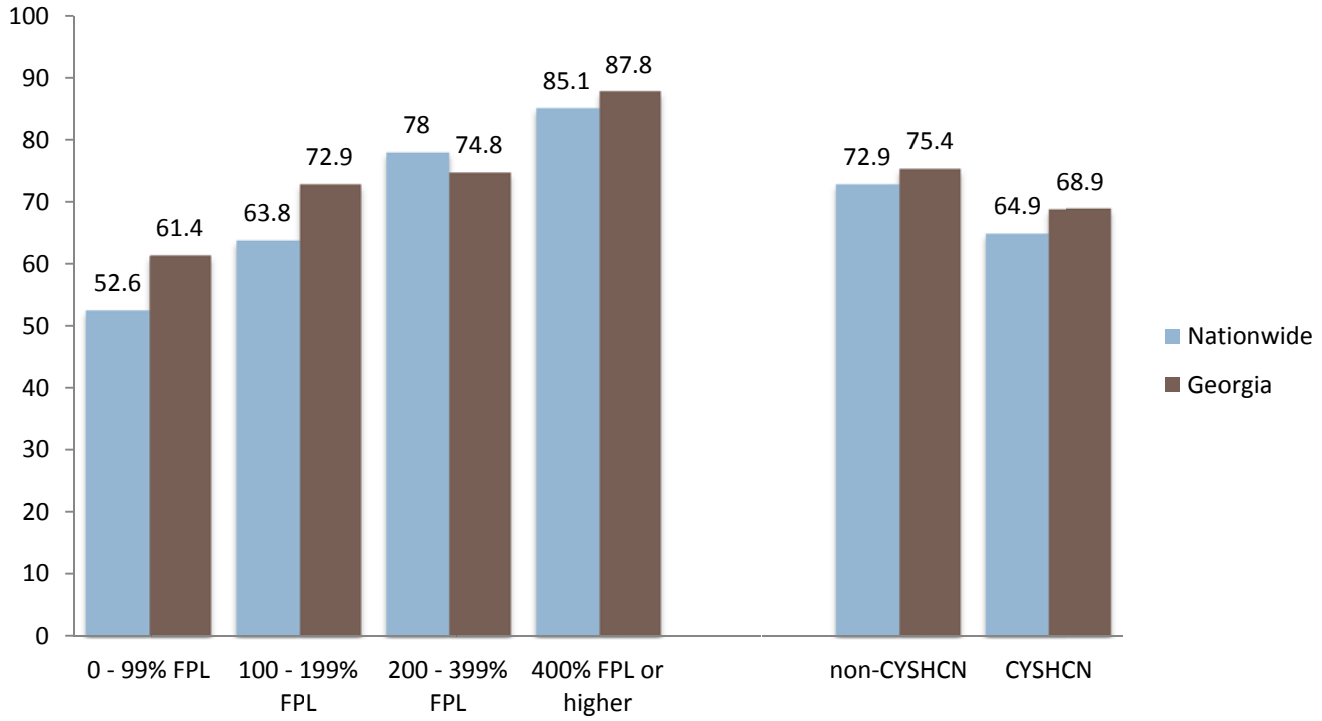
Disparities can be seen across race and ethnic groups with White children reporting having teeth in excellent/very good condition at a higher level than any other racial/ethnic group. Hispanics, both nationally and in Georgia, were about 50% less likely to report having teeth in excellent/very good condition in comparison to White children. In Georgia, female children were less likely to have very good or excellent teeth when compared to males, which is in contrast to the national data which shows that male children are less likely to have teeth in good or excellent condition when compared to females

Percent of children ages 1to 17 years whose teeth are in excellent/very good condition by race/ethnicity and gender, Georgia compared to the US, 2011/12



Source: NSCH 2007 and 2011/12

Percent of children ages 1 to 17 years whose teeth are in excellent/very good condition by income and special health care status, Georgia compared to the US, 2011/12

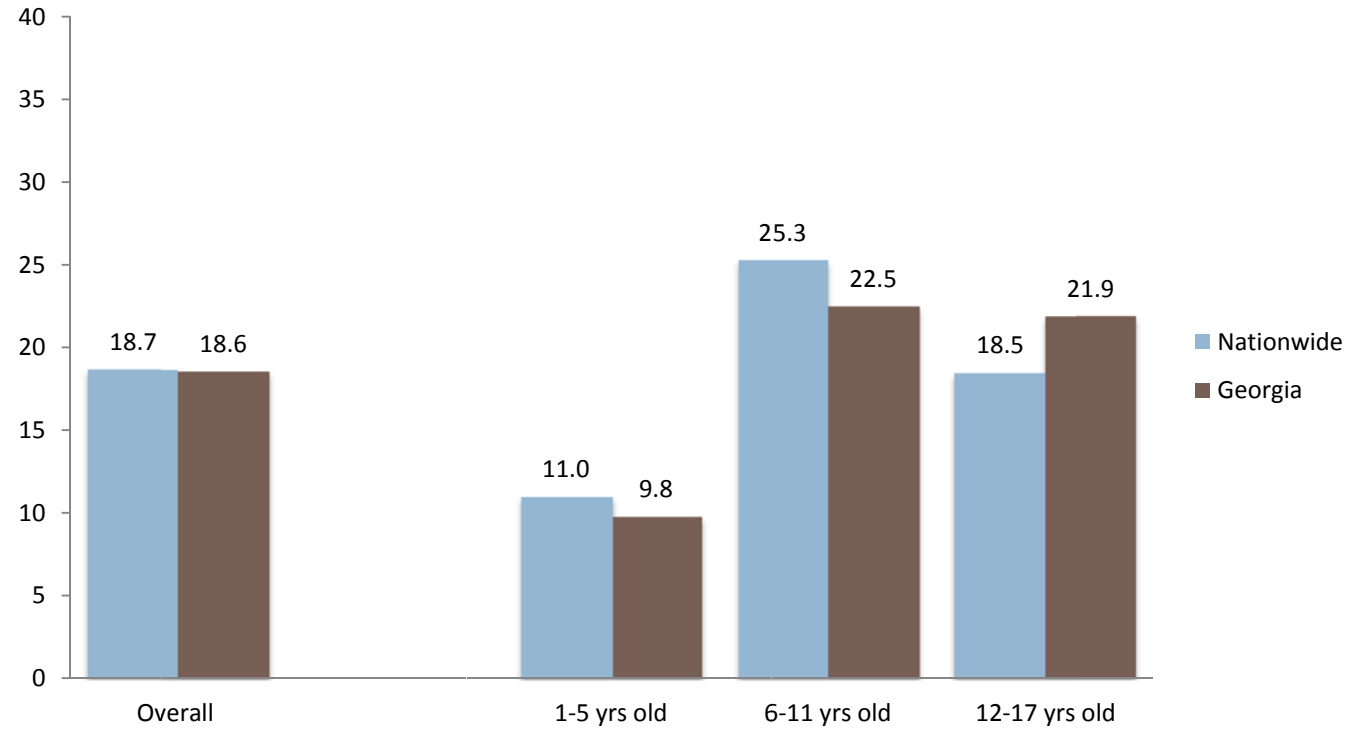


Source: NSCH 2007 and 2011/12

In Georgia and nationally, the likelihood of children reporting very good or excellent teeth increases with income. The increase is steady nationwide, with consistent increases as income rises. In Georgia, the increase is marginal among children with 100 to 199% of FPL to 200 to 399% FPL and increases sharply for those at 400% FPL or higher.

Children and Youth with special health care needs (CYSHCN) are less likely to report having teeth in very good or excellent condition when compared to children without special health care needs; this pattern is seen in Georgia and nationally as well.

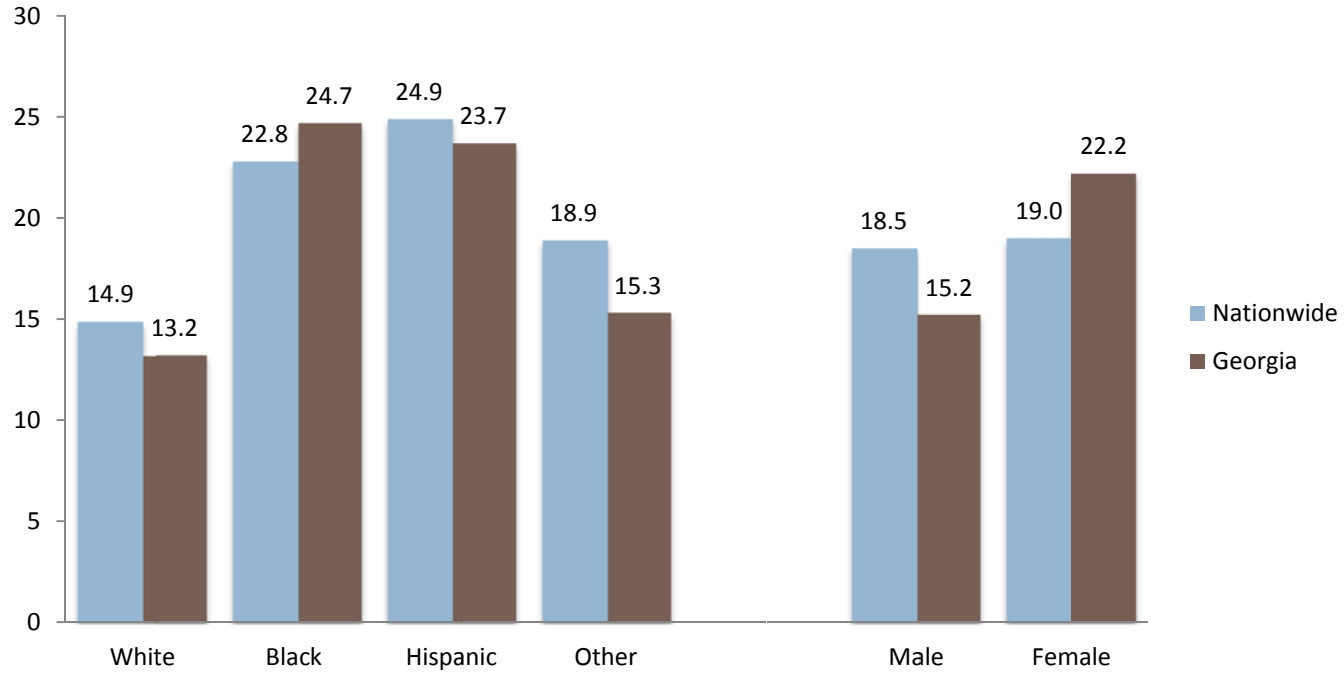
Percent of children ages 1 to 17 years who had one or more oral health problems in the past 12 months by age, Georgia compared to the US, 2011/12



Source: NSCH 2007 and 2011/12

The age group with the highest rate of oral health problems, defined as decayed teeth or cavities, both nationally and within Georgia are children 6 to 11 years old, followed closely by the 12 to 17 year olds. As such, 22.5 % of 6 to 11 year old children in Georgia had one or more oral health issues compared to less than 10% of 1 to 5 year olds and 21.9% of 12 to 17 year olds. This is not surprising, as 1 to 5 year old children generally have much adult supervision when brushing teeth, while 6 to 11 year olds are just learning to be more independent and may not have the maturity to fully understand and appreciate the importance of oral hygiene. As such, it is important to focus more oral hygiene awareness targeting this age group.

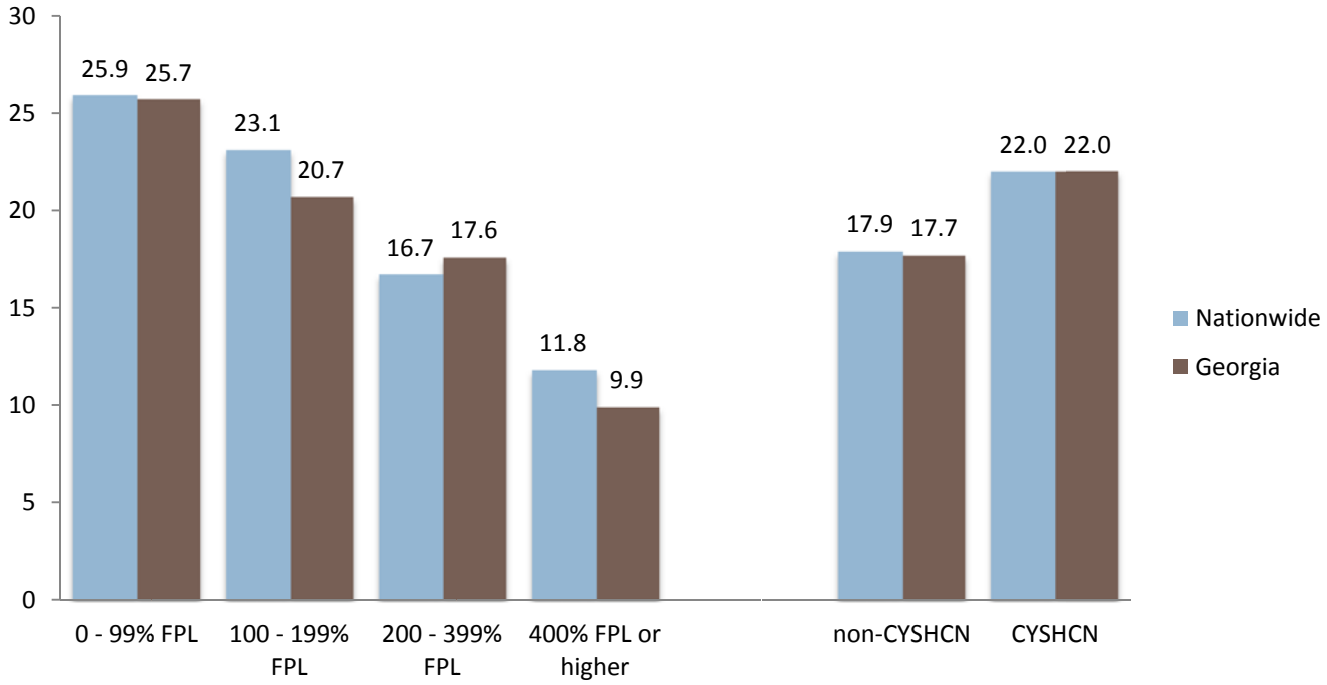
Percent of children ages 1 to 17 years who had one or more oral health problems in the past 12 months by race/ethnicity and gender, Georgia compared to the US, 2011/12



Source: NSCH 2007 and 2011/12

There were notable differences in the data when stratified by race and ethnicity. White children had the lowest rate of oral health problems in both Georgia as well as nationally, compared to their minority counterparts. For example, 24.7% of Blacks, 23.7% of Hispanics, and 15.3% of "Other" children reported oral health problems such as cavities and/or tooth decay. Additionally, female children were also more likely to report oral health problems compared to males both nationally and in Georgia.

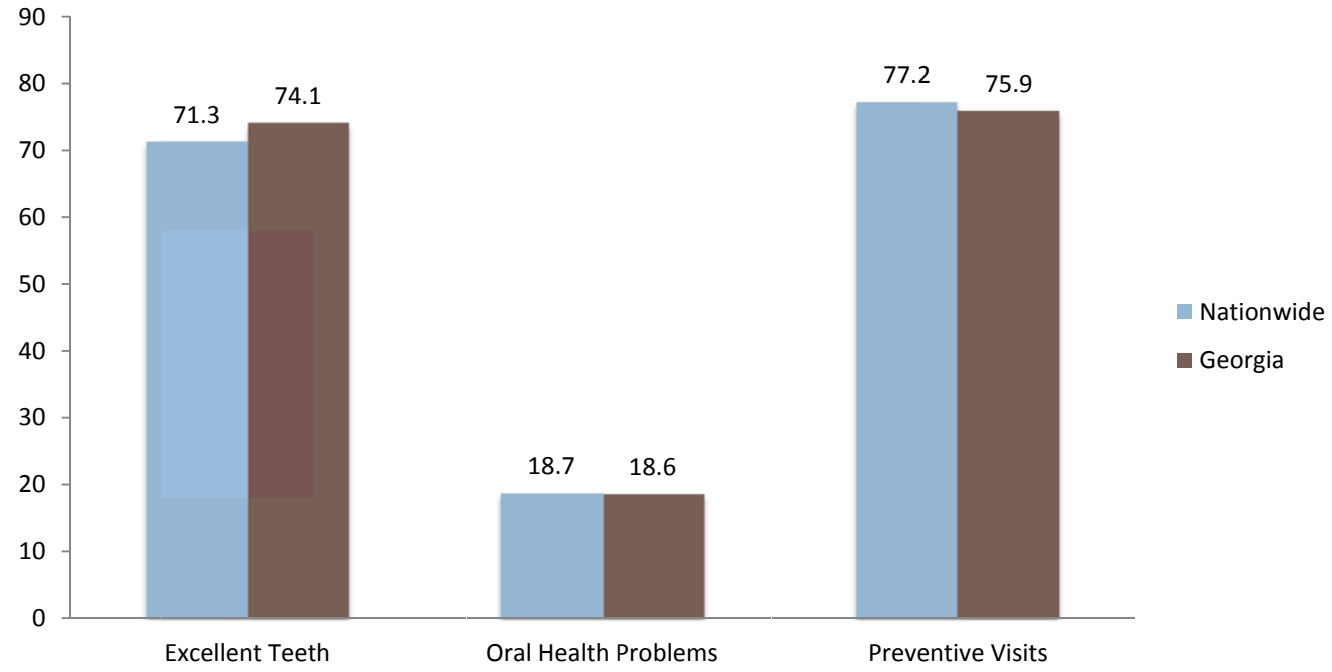
Percent of children 1 to 17 years who had one or more oral health problems in the past 12 months by income and special needs status, Georgia compared to the US, 2011/12



Source: NSCH 2007 and 2011/12

Not surprisingly, the percent of children who had one or more oral health problems was highest in the lowest income bracket, both nationally and in Georgia, at 25.9% and 25.7% respectively. The percent in the highest income group was nearly 2.5 times lower than those who lived in families earning 0 to 99% of the FPL, at 11.8% nationally and 9.9% in Georgia.

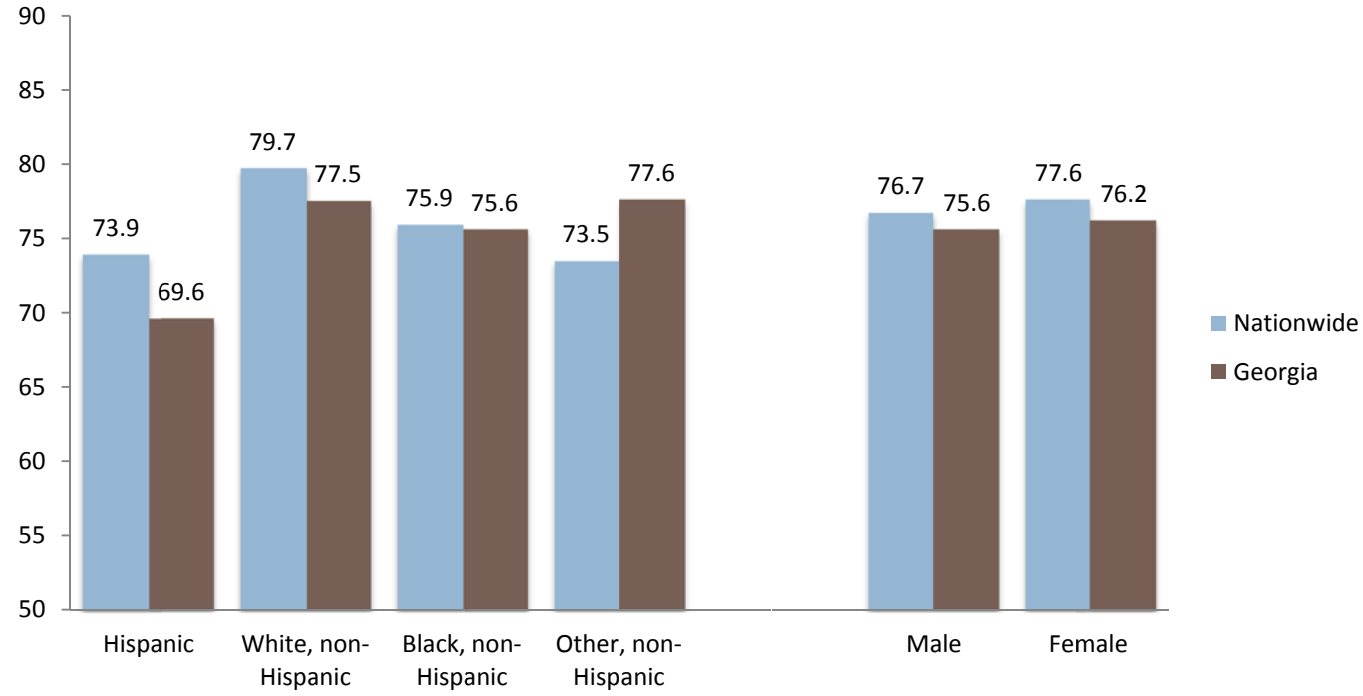
Percent of children ages 1 to 17 years with excellent teeth, oral health problems, and preventive visits in the last 12 months, Georgia compared to the US, 2011/12



Source: NSCH 2007 and 2011/12

When comparing US and Georgia data, there are no notable disparities. Georgia is surpassing the national rates of children reporting excellent teeth, at 74.1% compared to a 71.3% national average. The percent of children reporting oral health problems is roughly just under 19%, both in US and Georgia, and the percent of children going to preventive visits is 77.2% US compared to 75.9% in Georgia.

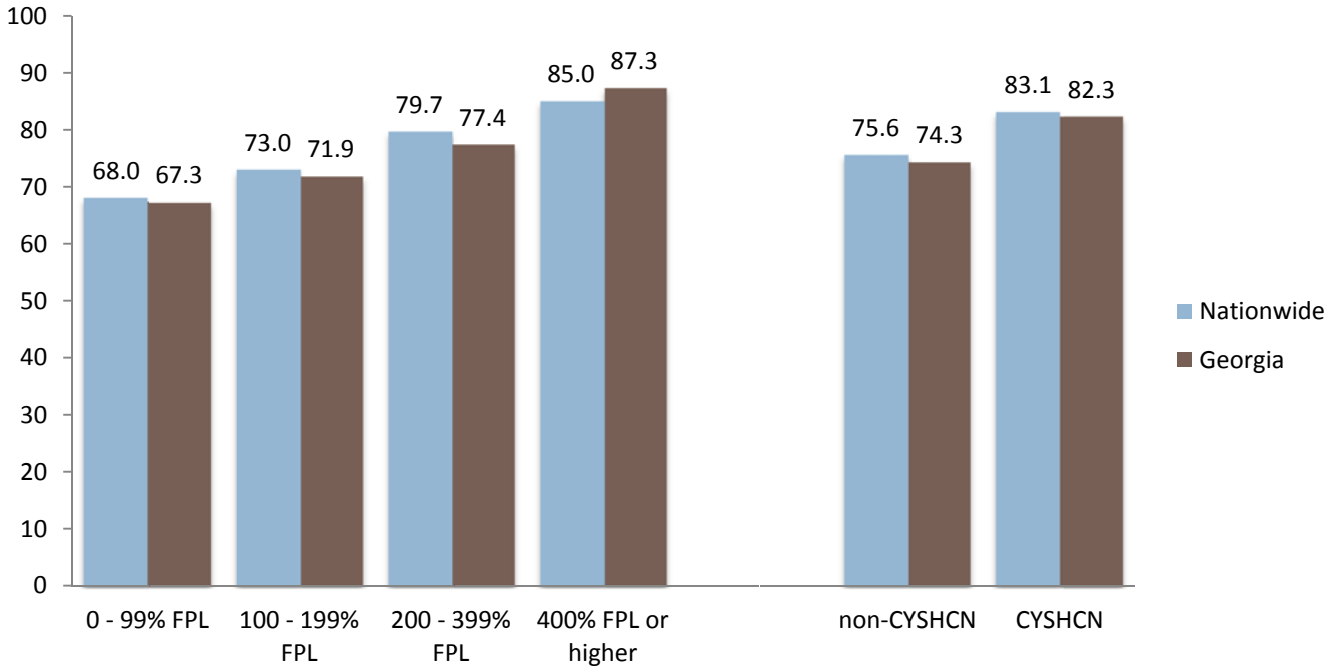
Percent of children ages 1 to 17 years old who had one or more preventive dental care visits in the last 12 months by race/ethnicity and gender, Georgia compared to the US, 2011/12



Source: NSCH 2007 and 2011/12

Within Georgia, the most significant ethnic disparity was in Hispanic children ages 1 to 17 years old in 2011/12. As such, only 69.6% of Hispanic children had one or more preventive dental care visits (check-ups and cleanings), compared to 73.9% nationally, and 77.5% of White children in Georgia.

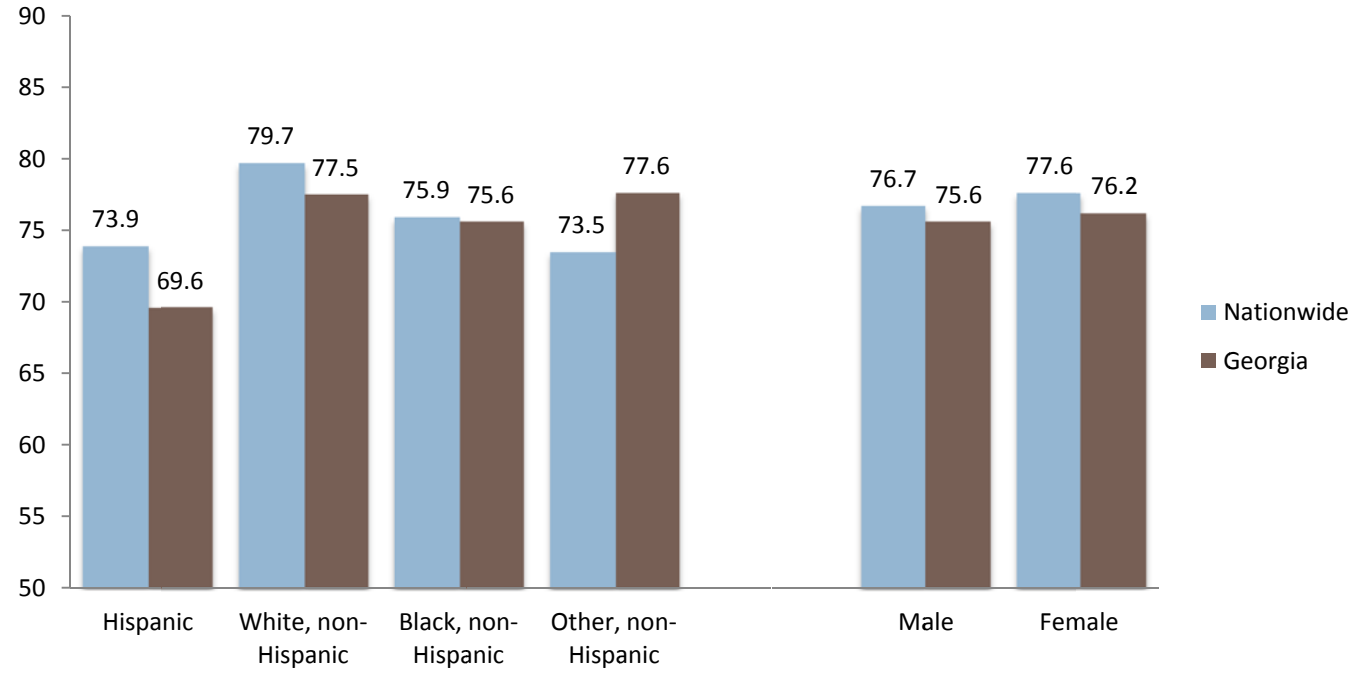
Percent of children ages 1 to 17 years who had one or more preventive dental care visits in the last 12 months by income and special health care needs status, Georgia compared to US, 2011/12



Source: NSCH 2007 and 2011/12

Not surprisingly, the data are similar when stratified by income. Only 67.3% of low-income children ages 1 to 17 in Georgia had one or more preventive dental care visits in the last 12 months in Georgia, compared to 87.3% of those in the highest income category. Interestingly, children with special health care needs had a higher rate of preventive dental care visits (82.3%) compared to their peers with no special health care needs (74.3%).

Percent of children ages 1 to 17 years old who had one or more preventive dental care visits in the last 12 months by race/ethnicity and gender, Georgia compared to the US, 2011/12



Source: NSCH 2007 and 2011/12

When looking specifically at children in Georgia, receipt of preventive visits did not tend to vary much by race (75.6% to 77.6%), but was lower among children of Hispanic ethnicity (69.6%). Interestingly, while Hispanic children were less likely to have preventive oral health visits, Black children were the most likely to have oral health problems with nearly a quarter of children age 1 to 17 reporting problems. There are no disparities by gender among children receiving preventive oral health care, however, female children are about 30% more likely to experience oral health problems.

One of the many successes Georgia has had in terms of oral health is in the proportion of the population receiving fluoridated water. In Georgia, 96.3% of Georgia's residents receive fluoridated water while only 74.6% of people do nationally. The Healthy People (HP) 2020 goal is to increase the proportion of the US population to be served by community water systems with optimally fluoridated water to 79.6%. Georgia has exceeded these standards and this serves as an example where Georgia is leading the rest of the nation.

TOBACCO USE

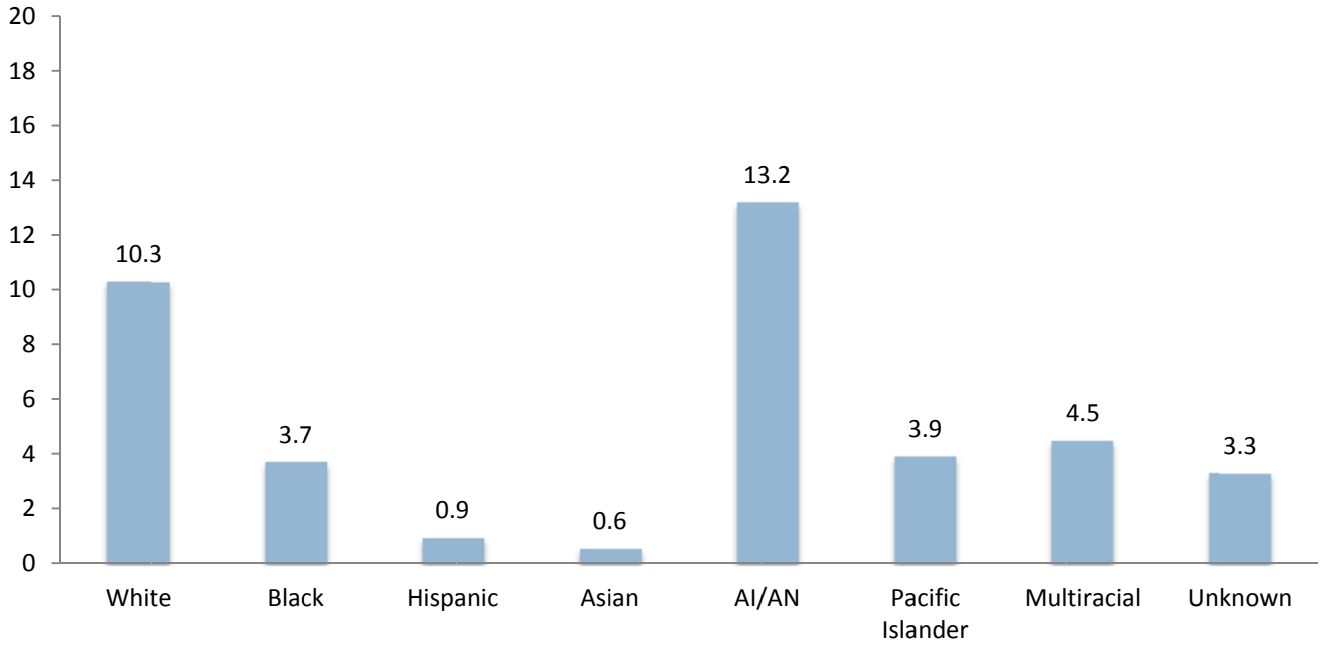
Pregnant Women

Healthy People 2020 Goal

MICH-11.3: Increase abstinence from cigarette smoking among pregnant women to 98.6%

From 2008 to 2012, the percent of mothers who smoked during pregnancy remained steady at about 6%, just shy of meeting the HP 2020 goal of 98.6% of mothers remaining abstinent from smoking. Additionally, the rates of smoking during pregnancy were highest among mothers ages 18 to 19 at 8.9% and mothers ages 20 to 24 at 9.1%. Once stratified by race and ethnicity, the highest proportion of smoking during pregnancy was among American Indian/Alaska Native mothers at 13.2%, more than twice the average of women across the state. White mothers were 1.5 times more likely to smoke during pregnancy when compared to the state average. Asian mothers were the least likely to report smoking during pregnancy, at less than 1%. Similar patterns were found among mothers who reported smoking during the last three months of pregnancy, with White mothers having the greatest likelihood of smoking during the last three months at 8.9% in 2011 compared to only 0.4% of "Other" race mothers.

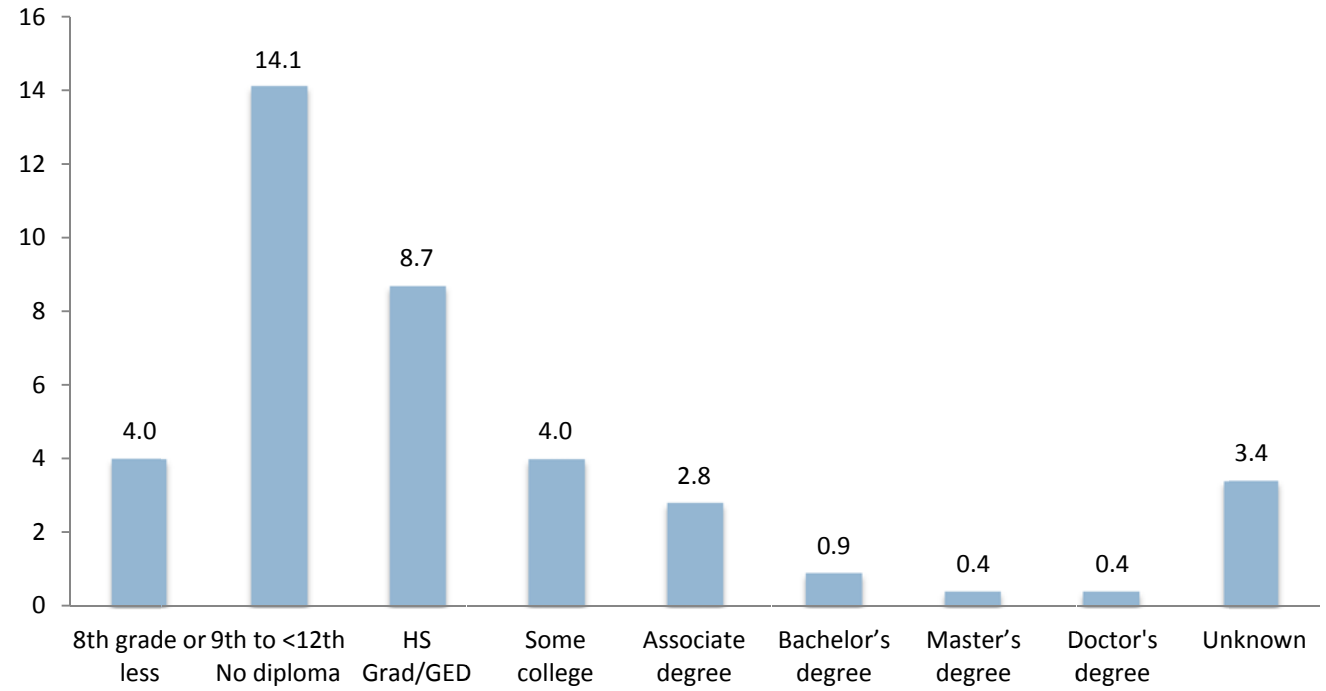
Percent of mothers who smoked during pregnancy by race/ethnicity, Georgia, 2009 to 2012



Source: Vital Records 2008-2012

The prevalence of smoking during pregnancy is affected when stratified by education. Women with at least some high school education, but not a high school degree, were most likely to report smoking during pregnancy at 14.1%. The rates dropped dramatically for those mothers with bachelor degrees or higher, to only 0.9% and 0.4%. This data is consistent with the conclusion that increased education leads to lower rates of risky behavior such as smoking during pregnancy.

Percent of mothers who smoked during pregnancy by education, Georgia, 2008 to 2012



Source: Vital Records 2008-2012

The table below shows how the percent of mothers who report smoking during pregnancy is distributed by public health district. This may provide an indication of areas to target smoking cessation messages to women on reproductive ages.

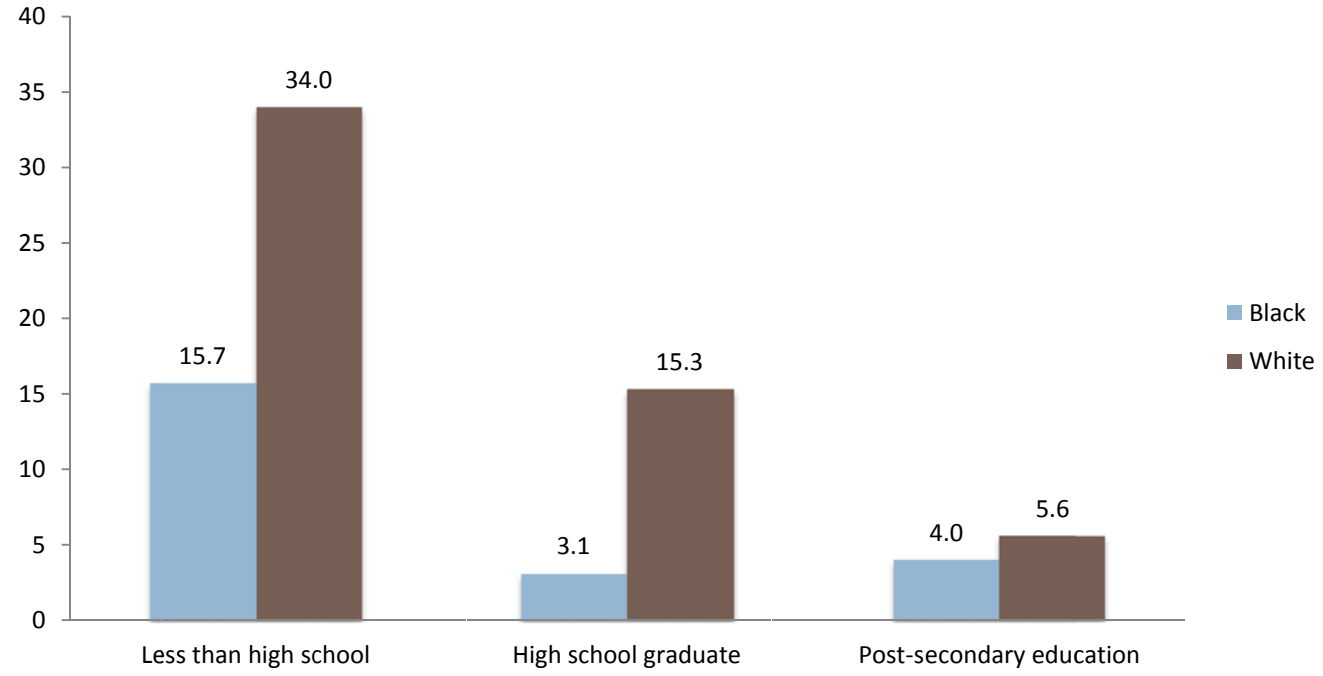
Percent of mothers who smoke during pregnancy by public health district, Georgia, 2008-2012	
Public Health District	Percent
Northwest Health District (Rome)	14.4
North Georgia Health District (Dalton)	5.9
North Health District (Gainesville)	6.3
Cobb/Douglas Health District	2.9
Fulton Health District	2.7
Clayton County Health District (Jonesboro)	3.5
East Metro Health District (Lawrenceville)	2.5
DeKalb Health District	1.8
LaGrange Health District	10.0
South Central Health District (Dublin)	12.6
North Central Health District (Macon)	10.4
East Central Health District (Augusta)	6.9
West Central Health District (Columbus)	7.1

South Health District (Valdosta)	5.3
Southwest Health District (Albany)	4.4
Southeast Health District (Waycross)	13.4
Coastal Health District (Savannah)	7.0
Northeast Health District (Athens)	9.5
Unknown	20.3

Source: Vital Records 2008-2012

When education level among Black and White mothers is compared to assess smoking habits during pregnancy, interesting differences are revealed. White mothers have the highest rates of smoking in all categories, 34% of White mothers with less than a high school degree reported smoking during their last three months of pregnancy compared to only 15.7% of their Black peers. Moreover, 15.3% of White mothers with a high school degree were more likely to report smoking during the last three months of pregnancy compared to 3.1% of Black mothers with a high school degree. The difference is less notable among mothers who have post-secondary education, with only 4% of Black mothers and 5.6% of White mothers reporting smoking during their last three months of pregnancy. Most interesting is that 5.6% of post-secondary educated White women smoked during pregnancy, compared to only 3.1% of high school educated Black mothers. This is notable as it is showing that despite education, race is still playing a factor in those that smoke during pregnancy.

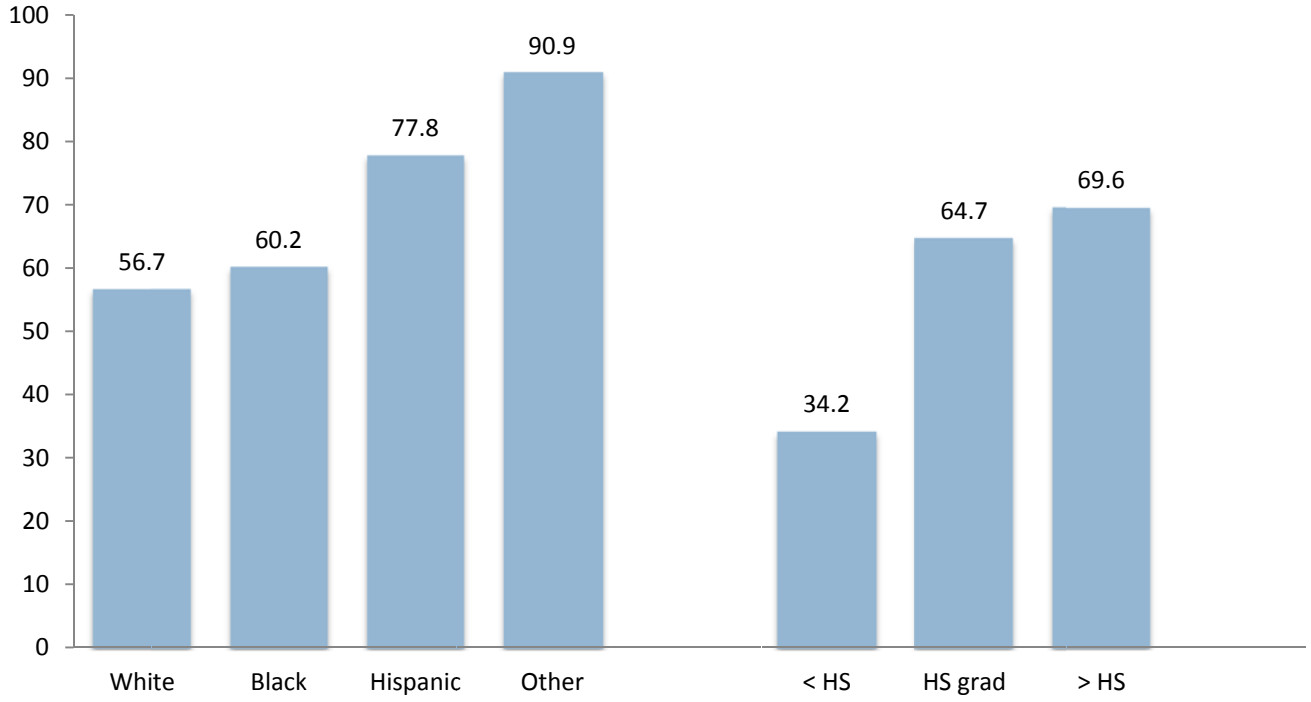
Percent of mothers who reported smoking during their last three months of pregnancy by race & education, Georgia, 2009 to 2011



Source: PRAMS 2009-2011

A final analysis was made to examine the percent of mothers who reported quitting smoking during pregnancy. Among smoking respondents, the rate of quitting during pregnancy increased over the years, with 56.9% quitting in 2009 compared to 61.1% in 2011. Additionally, the rate of quitting was highest among the youngest smokers less than 20 years at 74.2% and oldest mothers over 35 at 75.5%. When stratified by race and education, we notice that the highest rate of quitting during pregnancy was among "Other" race mothers at 90.9% and Hispanic mothers at 77.8% compared to only 56.7% of White mothers. Additionally, the highest rate of quitting during pregnancy was among those mothers with post-secondary education, at 69.6%.

Percent of mothers who quit smoking during pregnancy, Georgia, 2009 to 2011

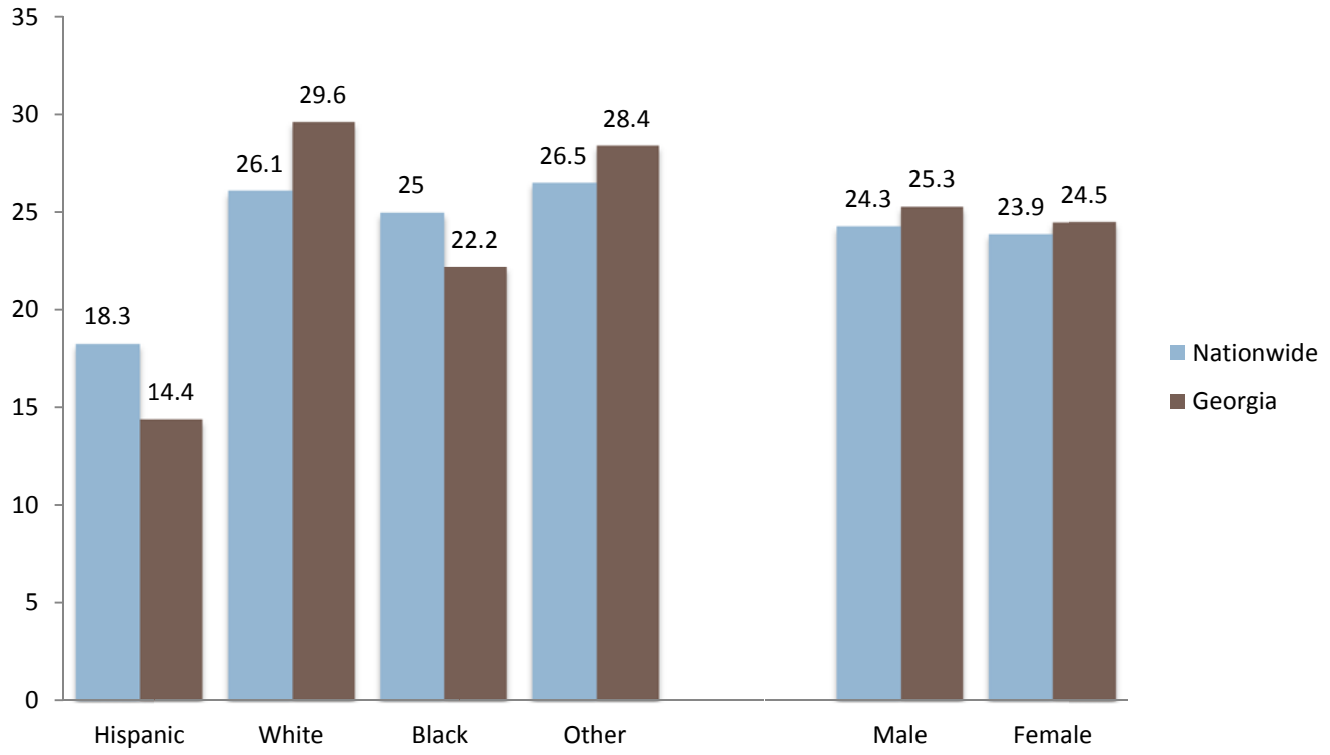


Source: PRAMS 2009-2011

Children

Nearly a quarter of children ages 0 to 17 years in Georgia live in homes where someone smokes. These results are similar when categorized by age (data not shown), and gender of child. While Georgia's data is not broken out by age groups, we can see that only a quarter of children ages 0 to 17 years old live in homes where someone smokes. When stratified by race/ethnicity, 14.4% Hispanic children lived in a home where someone smokes compared to 29.6% of White children. This racial/ethnic disparity is seen in Georgia and nationally.

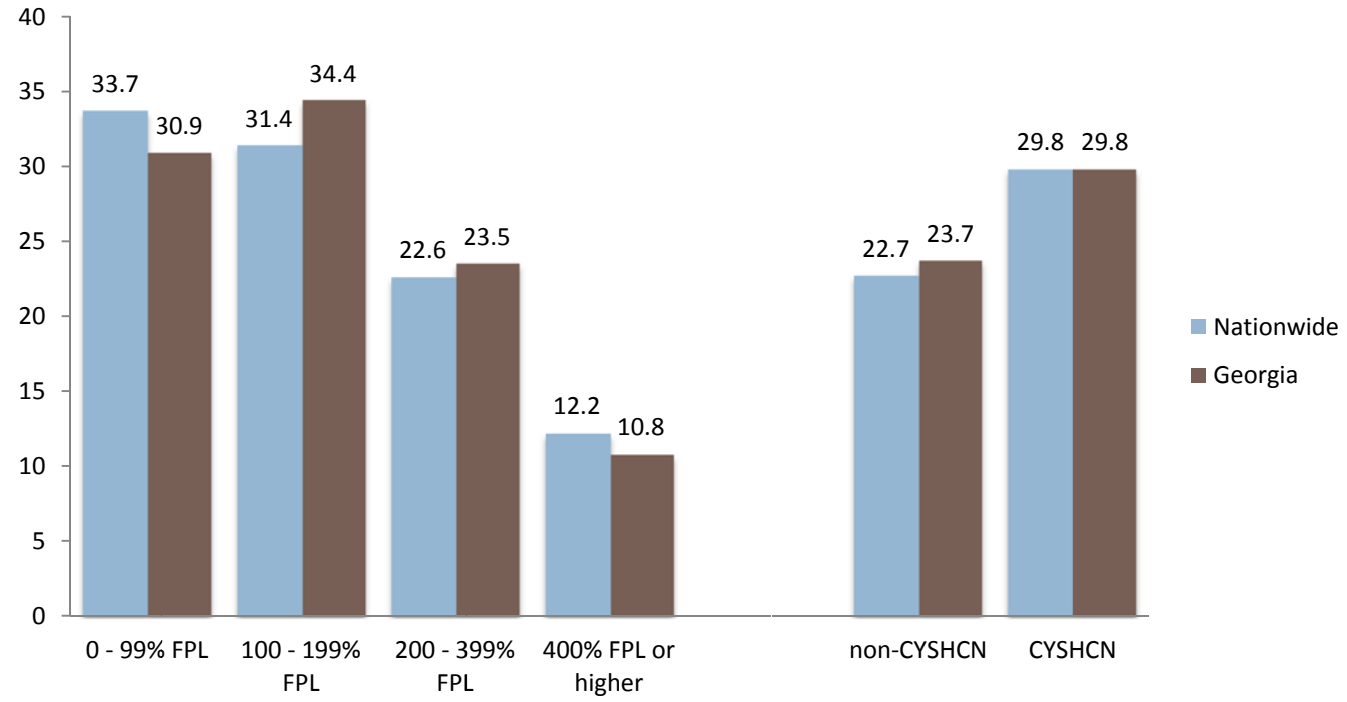
Percent of children 0 to 17 years who live in homes where someone smokes by race/ethnicity and gender, Georgia compared to the US, 2011/12



Source: NSCH 2007 and 2011/12

Georgia's data are as expected when stratified by income, children in the two lower income categories, 0 to 99% FPL and 100 to 199% FPL, were more likely to live in homes where someone smokes both nationally and in Georgia. Families within the lower income brackets were 30% more likely to live in a home where someone smokes when compared to children in the two higher income categories, with only 10.8% of children in the highest income level living in homes where someone smokes in 2011/12.

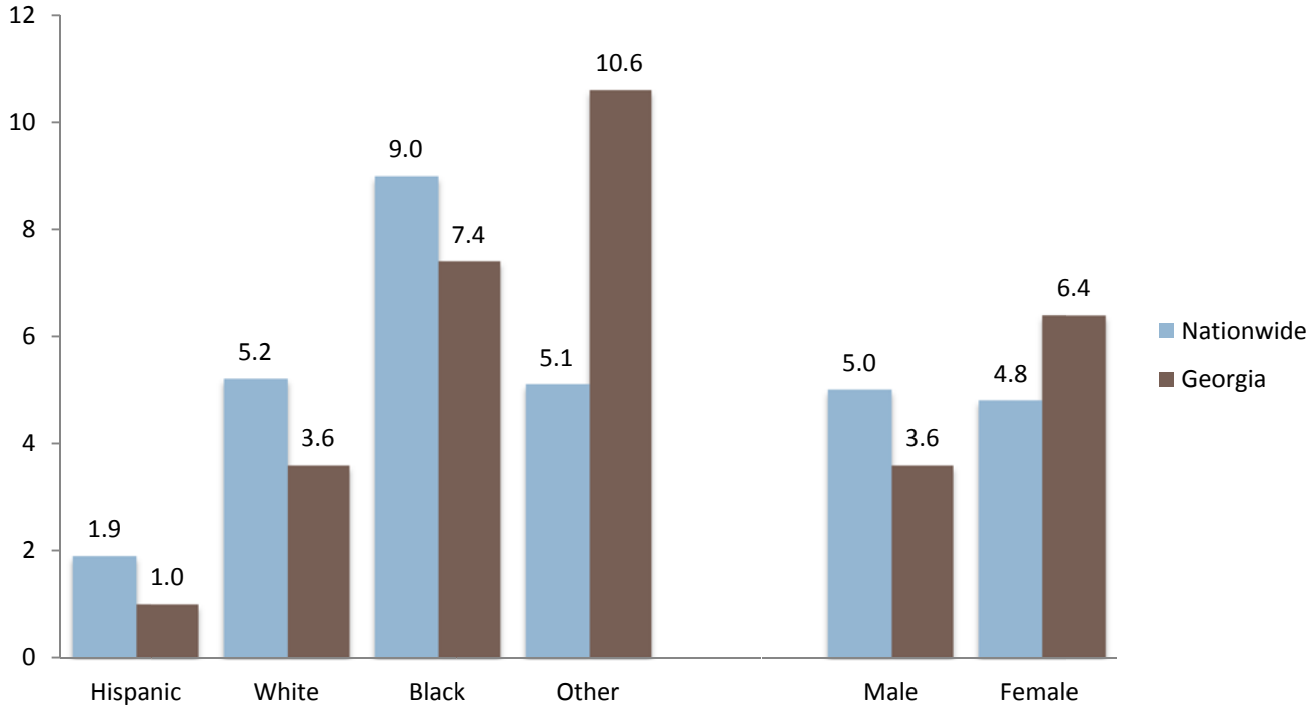
Percent of children 0 to 17 years who live in homes where someone smokes by income and special health care needs, Georgia comapred to the US, 2011/12



Source: NSCH 2011/12

Although a small sample (N=65), data were also analyzed for percent of children ages 0 to 17 who lived in households where someone smokes inside the home. 10.6% of "Other" race children as well as 7.4% of Black children lived in such homes in Georgia in 2011/12. This is compared to only 1% of Hispanic children and 3.6% of White children.

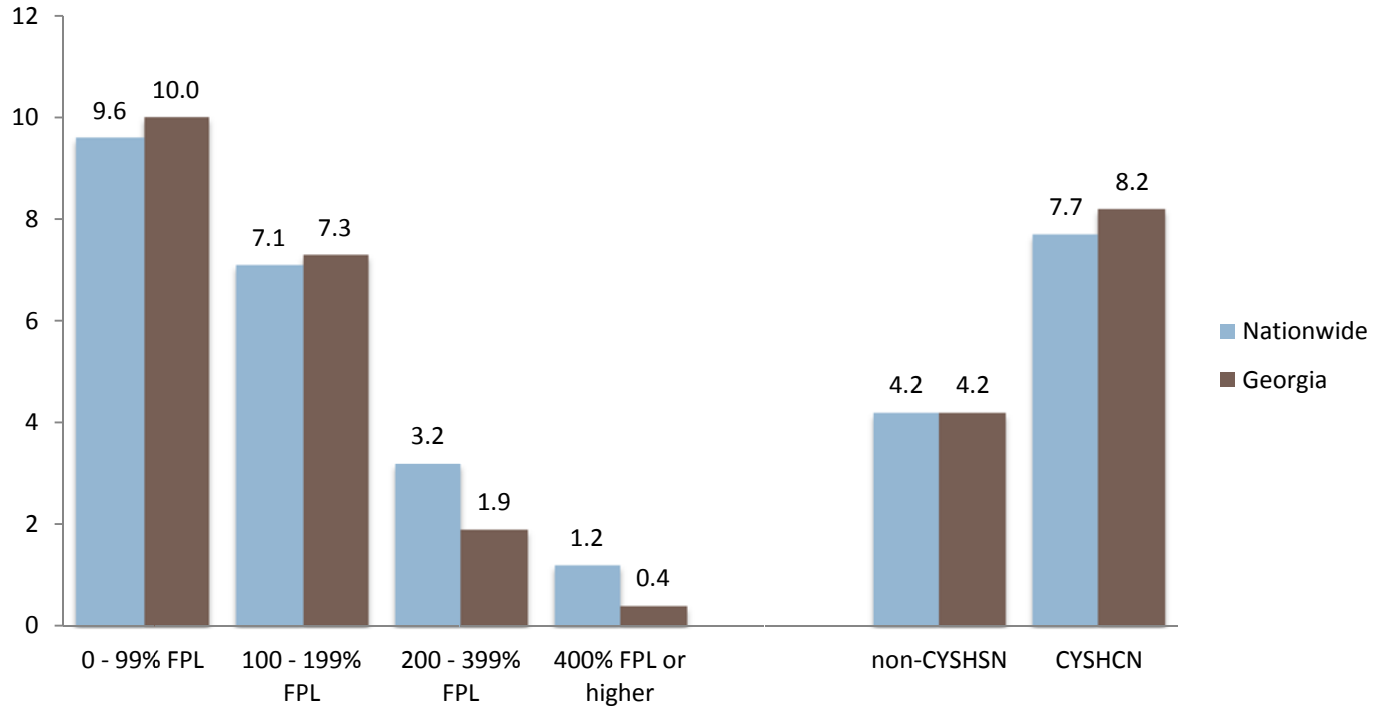
Percent of children ages 0 to 17 who live in households where someone smokes inside the home by race/ethnicity and gender, Georgia compared to the US, 2011/12



Source: NSCH 2011/12

The data are consistent for income categories, with the largest percentage of children living in homes where someone smokes inside the home also living in households where the total household income is below 200% of the FPL. Interestingly, there was a disparity among children with special health care needs compared to children without special health care needs, 8.2% of children in Georgia with special health care needs lived in households with someone who smokes inside the home, nearly twice the percentage of children with no special health care needs (4.2%).

Percent of children ages 0 to 17 who live in households where someone smokes inside the home by income and special health needs status, Georgia compared to US, 2011/12

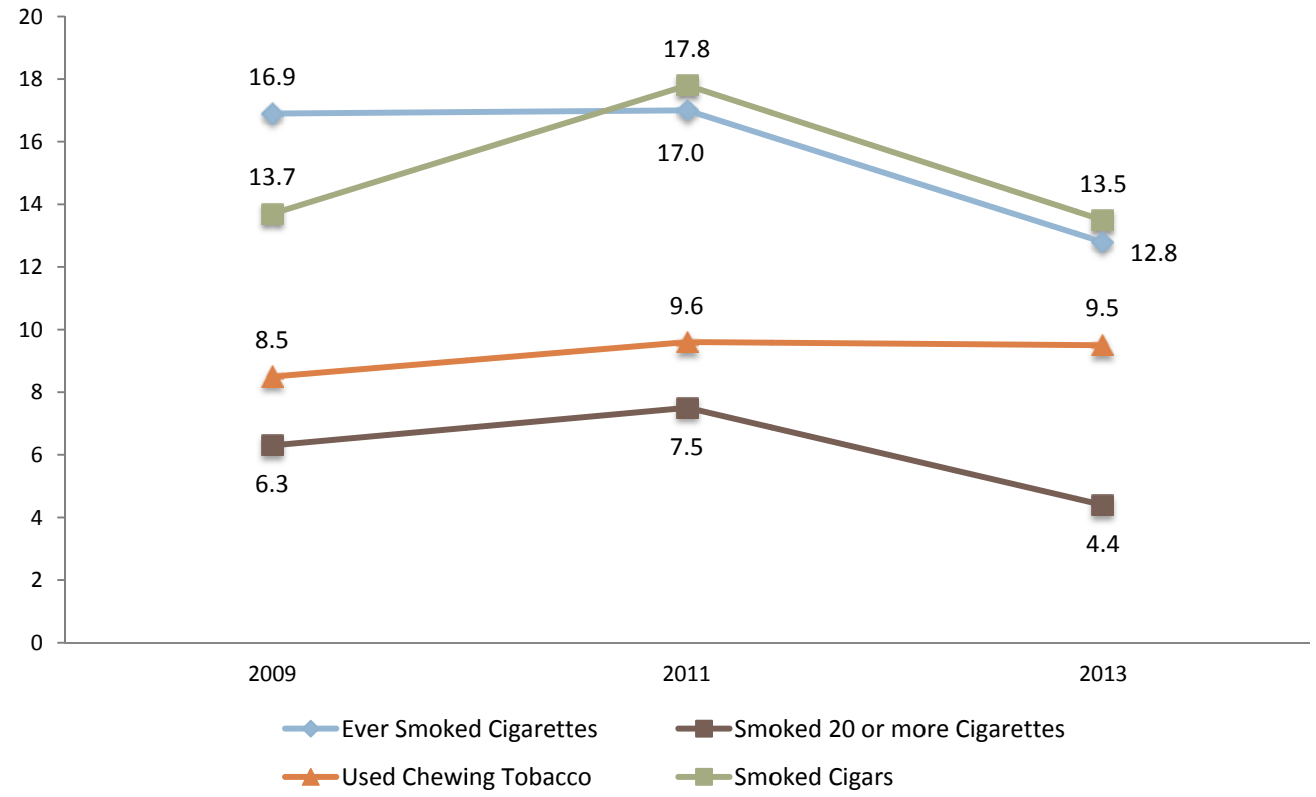


Source: NSCH 2007 and 2011/12

Adolescents

Georgia's high school students have met and exceeded this objective; the cigarette use prevalence was approximately 12.8% with only 4.4% of high school students smoking 20 or more cigarettes in a month in 2013.

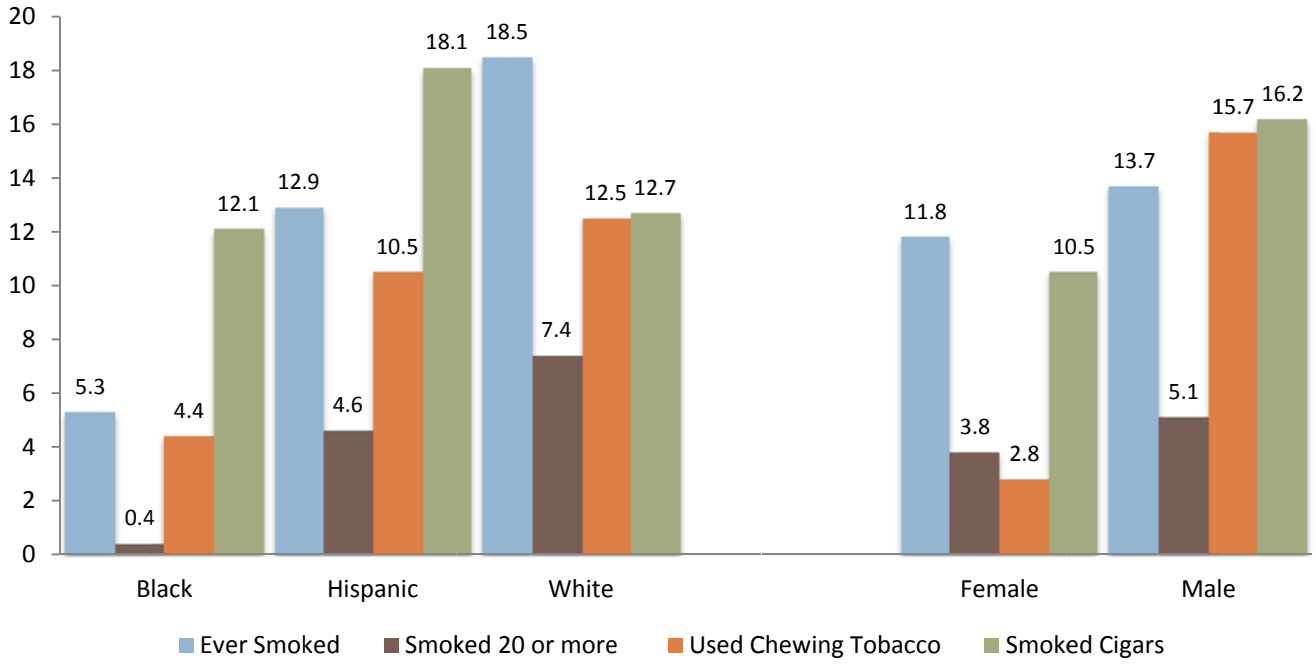
Percent of high school students reporting tobacco use by year, Georgia, 2009 to 2013



Source: YRBS 2009-2013

However, when stratified by race, cigarette use was dramatically greater among White high school students compared to other racial/ethnic groups and greater among male high school students compared to female high school students. Smokeless tobacco use was dramatically lower among Black high school students and female high school students compared to White, Hispanic or male students.

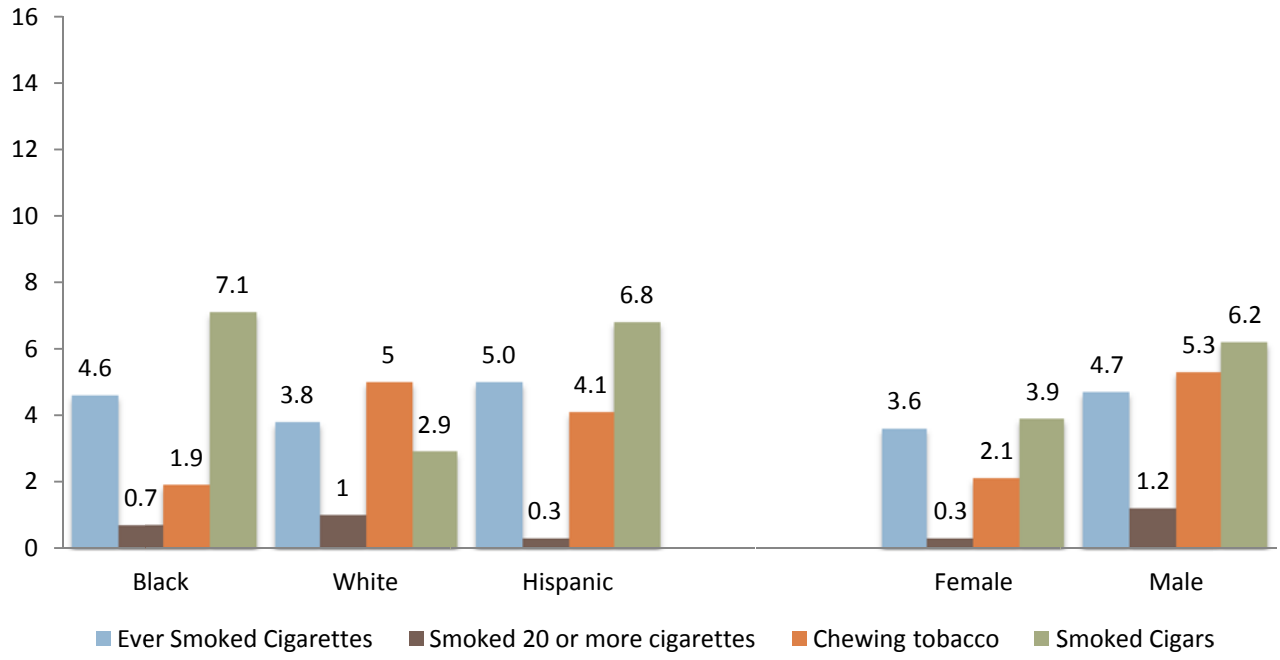
The percent of high school students reporting tobacco use by race/ethnicity and gender, Georgia, 2013



Source: YRBS 2013

Cigar use was dramatically higher in Hispanic and Black middle school students (6.8% and 7.1%, respectively) compared to White middle school students at 2.9% in 2013. Heavy tobacco use (20 cigarettes or more in 30 days) was uncommon in middle school students, particularly in female and Hispanic middle school students. Chewing tobacco was highest among White middle school students at 5% and male middle school students at 5.3%.

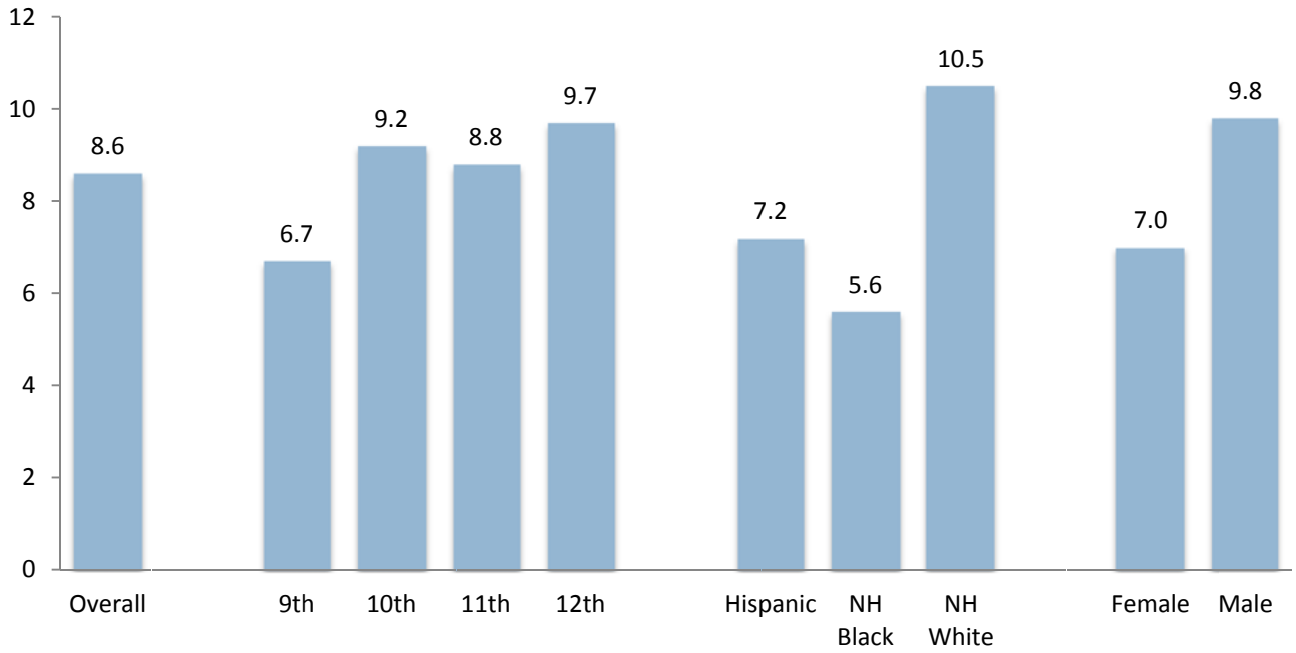
The percent of middle school students who report tobacco use by race/ethnicity and gender, Georgia, 2013



Source: YRBS 2013

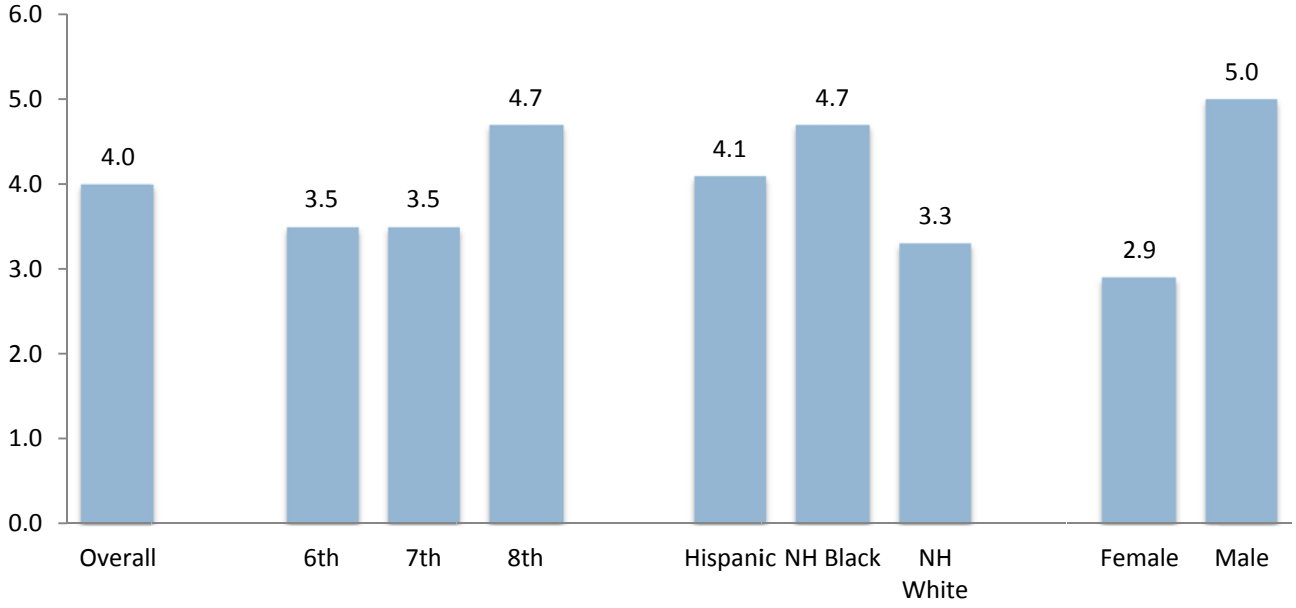
The overall percent of high school students reporting using e-cigarettes is 8.6%. The prevalence increases as grade increases. When stratifying by race/ethnicity, there are similar patterns to traditional tobacco use. Non-Hispanic Whites are more likely to smoke e-cigarettes than Non-Hispanic Black and Black high school students. Middle School students are less likely (4%) to report e-cigarette use than high school students. There are minor differences between middle school students of different races and grade levels, however males are more likely to smoke e-cigarettes than their female counterparts.

Percent of high school students who smoked e-cigarettes in the past 30 days by grade, race/ethnicity and gender, Georgia, 2013



Source: YTS 2013

Percent of middle school students who smoked e-cigarettes in the past 30 days by grade, race/ethnicity and gender, Georgia, 2013



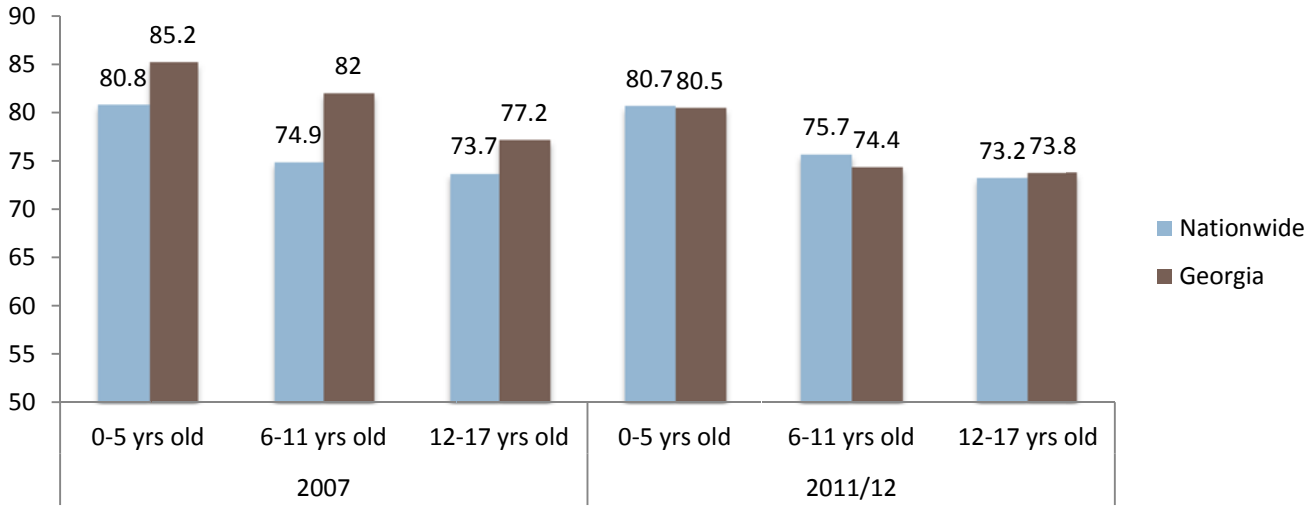
Source: YTS 2013

HEALTH INSURANCE

Children Insurance Status

When looking at insurance status, more than 70% of all children are adequately insured in every age category, both in Georgia and in the US. The highest rate of insurance was among very young children (0 to 5 years old), and while Georgia reported rates consistently higher than the national average in 2007, as of 2011/2012 Georgia's children experienced a loss of insurance at a staggering rate across each age category, and has fallen behind the nation for all age groups with the exception of 12 to 17 year olds.

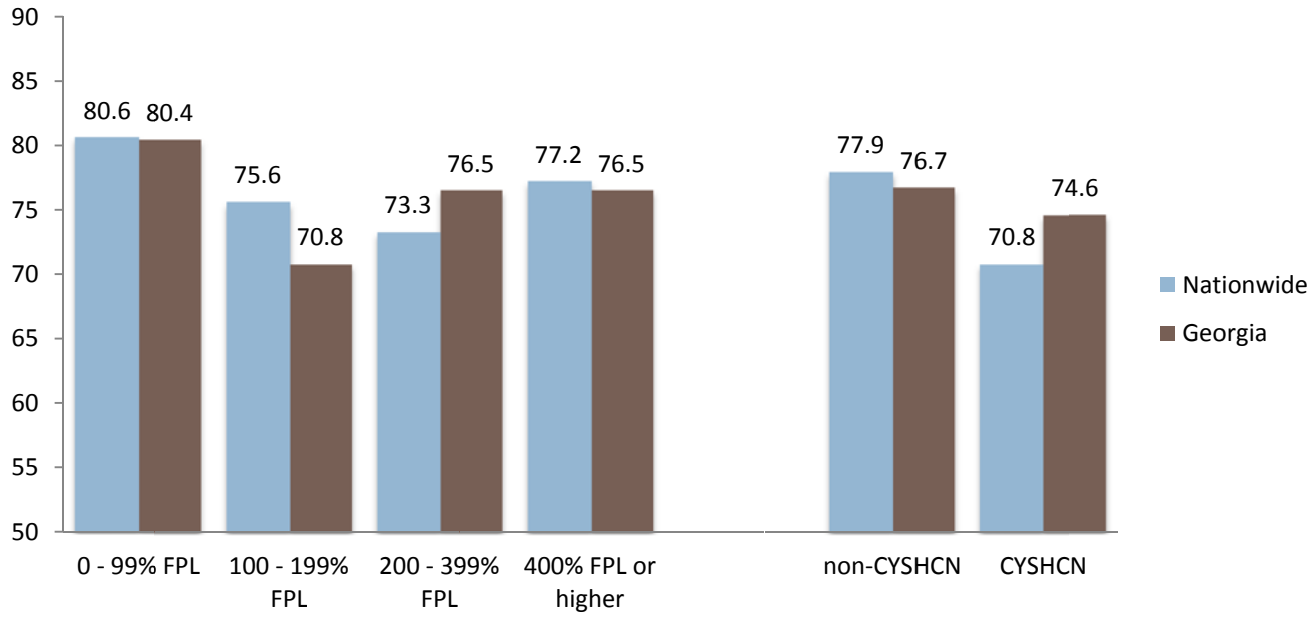
Percent of children ages 0 to 17 who are adequately insured by year and age, Georgia compared to the US, 2007 and 2011/12



Source: NSCH 2007 and 2011/12

When stratified by income, more than 80% of children 0 to 17 years old in the 0 to 99% FPL were adequately insured both nationally and in Georgia, compared to only 70.8% of children who live in households where the income lies between 100 to199% FPL. The rate of insurance coverage for children in families in the higher two income brackets is exactly the same in Georgia, this is a different pattern then what is seen nationally.

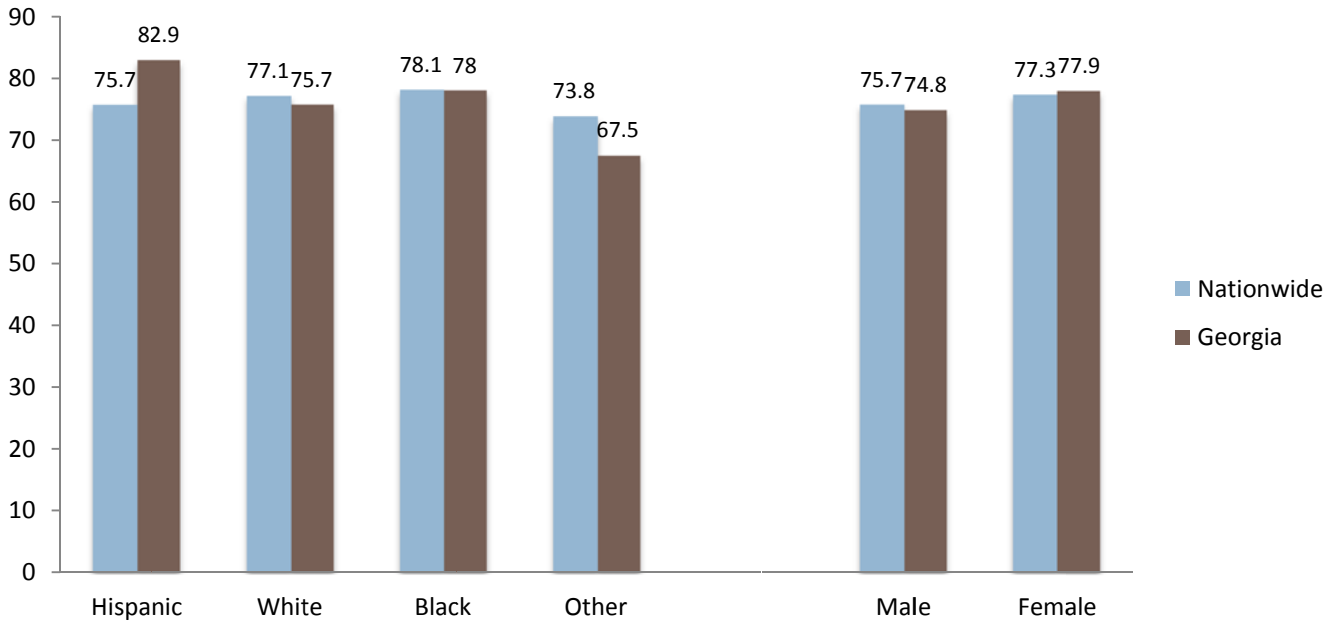
Percent of children ages 0 to 17 who are adequately insured by income and special health needs status, Georgia compared the US, 2011/12



Source: NSCH 2011/12

Upon stratifying by race, we do not see any notable disparities, except that Hispanic children have a significantly higher rate of insurance (82.9%) compared to only 67.5% of "Other" race children. Males and females generally have similar rates of insurance, both nationally and within Georgia.

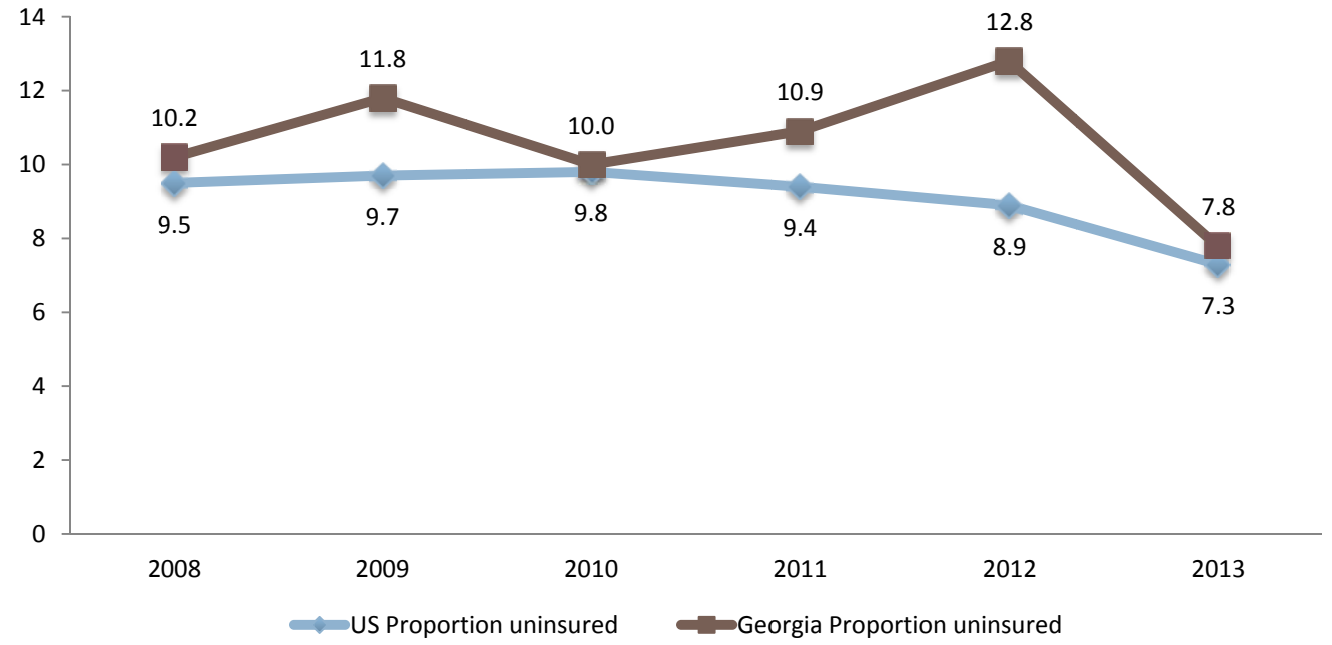
Percent of children ages 0 to 17 who are adequately insured by race/ethnicity and gender, Georgia compared to the US, 2011/12



Source: NSCH 2011/12

The data for children ages 0 to 17 years without health insurance coverage in Georgia has begun to decline starting in 2012, while the decline began nationally in 2010. In 2010, 9.8% of children in the US did not have health insurance compared to 7.3% in 2013. In 2012, there was a notable peak in Georgia data, where 12.8% of children did not have insurance. But, in just a year the rate fell back down to 7.8%, which is very comparable to US data for that year.

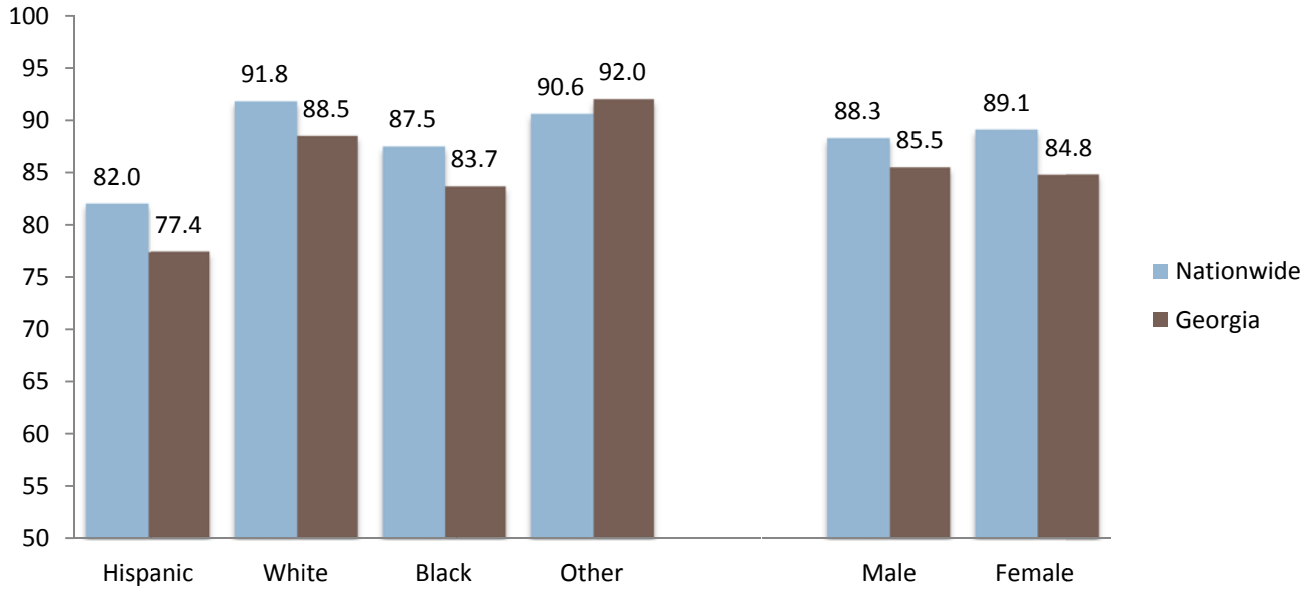
Percent of children ages 0 to 17 years without health insurance coverage by year, Georgia and US, 2008 to 2013



Source: Current Population Survey- Annual Social and Economic Supplement 2009 through 2013)

In 2011/12, Georgia lagged behind the nation in the percent of children insured and not experiencing gaps in insurance over a 12-month period (85.2%, 88.7%). Disparities exist in terms of race/ethnicity, both nationally and in Georgia. Nationally, the disparity in insurance status by race/ethnicity is less pronounced than it is in Georgia, ranging from a low of 82% for Hispanic children to a high of 91.8% for White children. However, the disparity by race/ethnicity in Georgia was more distinct, with the percent of Hispanic children lacking insurance with consistent insurance was 77.4% when children of "Other" race experienced consistent insurance at 92%. Disparities did not exist when data were stratified by gender.

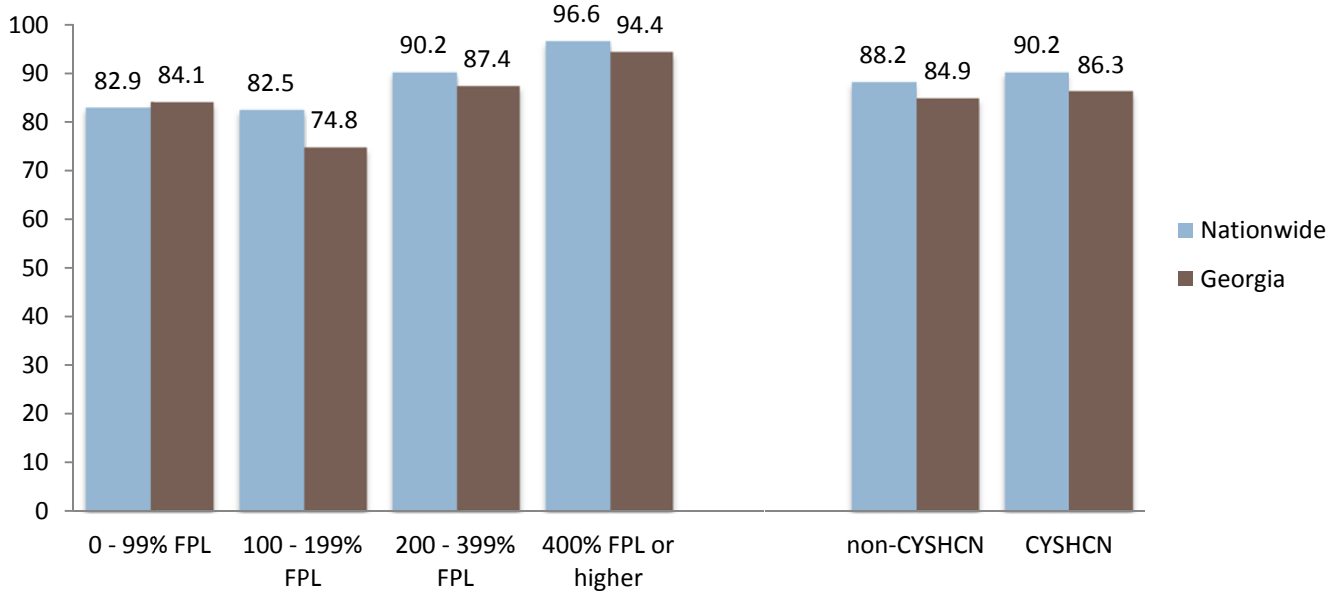
Percent of children who are currently insured and had no gaps in insurance in the past 12 months by race/ethnicity and gender, Georgia compared to the US, 2011/12



Source: NSCH 2011/12

There are few notable disparities when stratified by income and special health care needs status. Not surprisingly, 84.1% of children in the lowest income category had no gaps in coverage in Georgia, compared to 94.4% of children in the highest category.

Percent of children 0 to 17 years who are currently insured and did not have gaps in the past 12 months by income and special health care needs status, Georgia compared to the US, 2011/12



Source: NSCH 2011/12

CONCLUSION

This report has explored the status of Georgia's mothers, children, and adolescences, with respect to oral hygiene, tobacco use, and insurance status, using Health People 2020 objectives as the standard. Upon stratifying the date by race/ethnicity, gender, education and income, there are many important conclusions. Georgia is a leader in many areas. For example, Georgia has demonstrated excellence in ensuring its residents have access to fluoridated water, with over 96.4% of individuals in Georgia having regular access to fluoridated water. Increasing access to fluoridated water is not only a public health success, but Georgia's excellence in this area provides an example for other states to follow. Additionally, Georgia's mothers and children have shown steady improvement in oral hygiene, with respect to reporting preventive oral health visits as well as poor oral health outcomes. There is room for improvement, numerous disparities in race/ethnicity, income and education are present in the data and indicates the need to focus on the following areas:

- Increasing the awareness of the importance of oral health to overall health status and well-being to children ages 6 to 11 and to Hispanic and low income populations
- Reducing smoking among White mothers during pregnancy and among adolescents
- Improving health insurance coverage for Native Americans
- Reducing smoking among adolescents
- Improving oral health outcomes in lower income communities
- Increasing dental visits during pregnancy

Because of the strong correlation that oral health and insurance status has with overall health status, it is crucial for the state health department to pay special attention to these areas of concern and think about the root causes for these disparities. For example, the data revealed that oral health problems such as tooth decay and cavities were more likely in low-income populations. This is likely because historically lower income communities have less access to oral health care than those in higher incomes. Moreover, they also are more likely to have other barriers to accessing oral health care, such as lack of flexible schedule or dentists in their area. As such, it is recommended to think of innovative ways to increase access to oral health care for lower income children, such as school-based oral health screenings.

Analysis of smoking during pregnancy revealed that White mothers had higher rates of smoking during pregnancy compared to other racial and ethnic groups. White adolescents also had higher rates of smoking compared to their peers as well. Finally, children in lower income families were more likely to live in households where someone smokes compared to those in higher income families. It is important to increase efforts to raise awareness on the importance of smoking reduction as well as the health impact of exposure to second hand smoke.

As such we recommend the following:

- Focus should be on reduction of smoking during pregnancy, among adolescents, and inside the home in the presence of children.
- It is crucial to think about additional barriers to oral healthcare, such as cost or inflexible work schedules, and work to increase access to oral health services and screenings using innovative strategies.

- Increasing awareness and education efforts around oral health that are culturally-sensitive may improve understanding in minority communities.