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The Costs and Benefits in Oral Health Care Prevention

CHILDREN AND PREVENTION

Preventive activities are key to ensuring good oral health for the citizens of Georgia. Most diseases of the teeth and mouth are highly preventable with access to education, screening, preventive activities, and early treatment. However, far too often this does not occur, leaving our population vulnerable to poor oral health outcomes. Dental problems continue to be the most common unmet need among children. Nationwide, approximately 59 percent of children experience dental caries, far more than those who have asthma (11 percent).¹

Although it is documented that oral health has improved overall in the United States, children have not experienced this improvement at the same rate as adults. In fact, according to a study conducted by the Centers for Disease Control and Prevention (CDC), the number of children between the ages of two- to five-years-old with cavities has actually increased by 15 percent over the past decade. Furthermore, children between the ages of 2-11 with families living below the federal poverty level are twice as likely to have untreated tooth decay as their peers from households with higher incomes.²

The consequences of poor dental care can cause immediate setbacks in children and continue to have longer lasting effects through adulthood. Poor dental health has been cited as having a serious impact on school readiness and children's ability to succeed. Nationally, more than 51 million hours of school may be missed in a single year as a result of dental-related illness.³ Results of Georgia's 2009 Youth Risk Behavior Survey illustrate the relationship between poor dental health and school attendance: Approximately one-fifth of middle school students in Georgia reported missing school due to dental problems.⁴ Then, as adults, poor dental health may cause social exclusion and anxiety and may eventually affect their job productivity and livelihood. It has been estimated that 164 million hours of work are lost each year as a result of dental diseases.⁵ At its worst, decayed and missing teeth can make it difficult to obtain employment.

ISSUES OF ACCESS

Nationally, individuals with access to dental insurance and regular preventive dental visits are in the minority.⁶ In 2008, there were approximately 66,000 visits to emergency departments in Georgia for non-traumatic dental care at a cost of more than \$28.7 million dollars.⁷ Twice as many Americans lack dental insurance than the number who lacks regular health insurance. Disparities become evident when examining access to dental care by public versus private insurance. Nationally, 58 percent of children covered privately obtain dental care⁸, compared to 38 percent of Medicaid-covered children in 2008.⁹ With the national average for this measure at 38 percent; Georgia's Medicaid-covered children (Georgia Families) exceeded this average at 55 percent in 2009.¹⁰ In 2010, each of the three Care Management Organizations serving Georgia's Medicaid children reported more than 63 percent of enrolled children received an annual dental visit.¹¹

Disparities also result from geographic barriers to access. According to the Georgia Dental Association membership, of the 159 counties in Georgia, 32 of these counties do not have a member dentist.¹² In 2007, Georgia ranked 47th among all states in dentists per capita.¹³ Georgians who live in rural areas are more likely to have a problem accessing dental services. In the *Third Grade Oral Health Survey*, children living in rural areas were twice as likely to need early and urgent dental care compared to children living in the metropolitan Atlanta area.¹⁴

SOLUTIONS

Good nutrition and diet, good oral health care practices, oral health education, and access to preventive visits are cost-effective ways to combat dental conditions and disease.

The CDC and many evidence-based, systematic reviews have cited community water fluoridation and school-based sealant programs as the two most effective preventive strategies in oral health care.

These two preventive measures, if comprehensively provided to the state's children, would greatly decrease the prevalence of dental caries in children and their associated costs. Dental sealants cost approximately one-third the cost of the average filling. Studies show that over a 10-year period, sealants save money for all children and even more for children at high risk for caries.¹⁵ In addition, school fluoride programs and fluoride varnish are both cost-effective means to protect children's teeth from dental caries.

Studies have shown that when school-based sealant programs are targeted to schools with high-risk children, it can be extremely cost-effective. Georgia's sealant program does not meet the national Healthy People 2020 benchmark of reaching 26.5 percent of high-risk schools consistently, but succeeds in reaching between 25-46 percent of third graders. Georgia's 2011 Third Grade Survey finds that 37 percent of third grade children have sealants on their molar teeth.¹⁶ The Healthy People 2020 national benchmark for this measure in six- to nine-year-olds is 28.1 percent.¹⁷ A comparison of Georgia's 2011 Third Grade Survey results with 2005 results, suggests that Georgia's children are improving on most oral health indicators (see Figure 1).

Likewise, community water fluoridation is regarded as one of the most effective and efficient means of

preventing tooth decay in children and adults, as well as being deemed by the CDC as one of the greatest public health achievements of the 20th century. Community water fluoridation has been proven to be highly cost-effective and socially equitable because it reaches all of the various minority and socioeconomic groups in a community. It is estimated that for every \$1 invested in water fluoridation, communities save \$38 in dental care.¹⁸

About 96 percent of Georgia's population served by public, community water supplies receive optimally fluoridated water, surpassing the Healthy People 2020 target of 75 percent. However, the Georgia Environmental Protection Division estimates that about 15 percent of Georgia's population obtains their drinking water from private wells. The Oral Health Unit of the Department of Public Health is responsible for monitoring and surveillance of community water fluoridation in Georgia. Maintaining Georgia's water fluoridation achievements are key to continuing to reduce the number of children with dental decay.

All dentists seeing children in their practice can also augment population-based approaches by ensuring children in their care receive appropriate preventative services including sealants and fluoride treatments. Medicaid, PeachCare for Kids™ (Georgia's CHIP program), and most private dental plans cover sealants and fluoride varnish services. Pediatricians can play a critical role in starting young children out with good oral health by applying fluoride varnish to infants who likely have not yet had their first dental visit. Fluoride varnish used during well-child visits is effective in reducing early childhood caries in Medicaid populations.¹⁹

FIGURE 1: COMPARISON OF ORAL HEALTH INDICATORS AMONG CHILDREN IN THE THIRD GRADE, 2005 AND 2011 SCHOOL YEARS

Indicator	2005 School Year (percent)	2011 School Year (percent)
History of tooth decay	56.0	52.0
Currently has untreated, decayed teeth	27.0	18.7
Sealants on first permanent molars	40.0	34.7
No obvious need for dental treatment	74.0	81.0

Source: 2005 and 2011 Third Grade Basic Screening Survey
Oral Health Unit, Division of Public Health, Georgia Department of Community Health

OPPORTUNITIES FOR IMPROVEMENT

As the State of Georgia continues to strive to improve the oral health of the population, the Affordable Care Act (ACA) has made available several opportunities to continue existing funding or provide new funding in oral health preventive activities:

- School-based sealant programs are expanded to all 50 states;
- Funding was appropriated to support more school-based health centers;
- A prevention campaign was established to increase community understanding of water fluoridation and other preventive activities;
- Health plans offered through the new state health insurance exchanges must cover dental services for children; and
- If funded, the ACA increases appropriations for the CDC to establish additional cooperative agreements with states to improve oral health infrastructure (Georgia is already a grantee); establish a nationwide education campaign to increase the public's understanding of many oral health care issues; provide funding for entities that have programs in dental and dental hygiene schools for provider training; provide funding for new primary care residency programs which can include dental programs; and establish a community health center fund.

Additionally, the recent Child Health Insurance Program Reauthorization Act (CHIPRA) legislation mandated dental coverage for all children enrolled in state CHIP programs.

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