

# ORAL HEALTH IMPROVES FOR MARYLAND SCHOOL CHILDREN

## Untreated Tooth Decay Decreases Significantly



### Findings from the Oral Health Survey of Maryland School Children

The oral health status of Maryland school children has improved significantly in the last decade. Between 2001 and 2011 untreated tooth decay decreased by 41.0%. Maryland exceeded oral health objectives for caries experience\*, untreated decay, and the receipt of dental sealants\* set by Healthy People 2020, an initiative of the U.S. Department of Health and Human Services that provides evidence-based national objectives for improving the oral health of all Americans. Even so, oral health disparities persist among children of low socioeconomic status, or who are Hispanic or Black.

These are the key findings of the Oral Health Survey of Maryland School Children conducted by the Maryland Office of Oral Health (OOH), in conjunction with the University of Maryland School of Dentistry in 2011 and 2012. The survey included a questionnaire sent to parents to assess the child's oral health, including access to dental services, a screening (oral examination) to determine the current oral health status of the child, and a report sent to parents with the child's screening results. The survey - also conducted in 1994, 2000, and 2005 - samples children

in kindergarten and third grade. Ninth and tenth graders were also included in the 2000 survey.

A total of 1,723 students in 52 schools participated in the survey, and 1,486 in the oral health screening examinations. Response rates for the surveys were slightly higher than for the examinations. Response rates were higher for those in kindergarten (23.7%) than for children in third grade (16.9%). Data was compiled by region: Central Baltimore, D.C. Metro, Eastern Shore, and Southern and Western Maryland. The sample included all Maryland counties with the exception of Montgomery County, which would have been included in the D.C. Metro region along with Howard and Prince George's Counties.

#### \*Definitions:

1. Caries: Disease that causes decay and cavities in teeth
2. Dental Sealant: A protective seal applied to teeth to prevent dental decay
3. Caries Experience: The presence of treated or untreated (restored or filled) tooth decay
4. Dental Home: Ongoing dentist-patient relationship that is inclusive of all aspects of oral health care

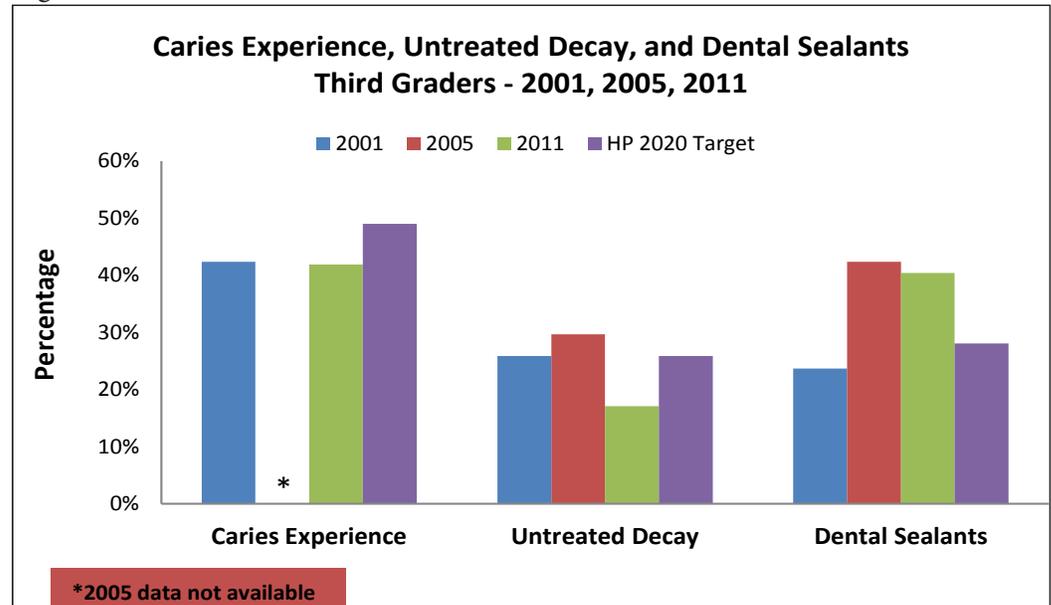
## Results

The number of children in kindergarten and third grade with untreated decay decreased by approximately 41% from 2001 - 2011 (23.1% to 13.7%). This decrease is significant and may be attributable to many factors, including an increase in access to care and in community awareness of the importance of oral health care, as well as more preventive programs. Children who were uninsured were significantly more likely to have had untreated decay than children with private insurance.

Dental caries\* is the most common chronic disease experienced by children, and causes irreversible damage to teeth. Dental sealants are highly effective in protecting teeth against the damage caused by dental caries.

- The Eastern Shore had the highest prevalence of dental caries, while Central MD/D.C. Metro regions had the lowest.
- The Eastern Shore and Southern Maryland had the highest overall rate of dental sealants on permanent first molars.
- Prevalence of dental sealants for kindergarten and third grade students was 32.9%, and overall dental caries\* prevalence was 33.2%.
- Maryland kindergarteners and third graders without dental insurance were significantly more likely not to have sought dental care in the last 12 months (54.4%) compared to those with private dental insurance (5.7%) or Medicaid/MCHP (5.0%).
- Maryland public school children in kindergarten and third grade without dental insurance were significantly more likely (27.0%) to have had untreated dental caries in both primary and permanent teeth combined than were those with private dental insurance (10.6%).

Figure 1



*The prevalence of caries experience, untreated decay, and the receipt of dental sealants in third graders exceeded objectives set by Healthy People 2020.*

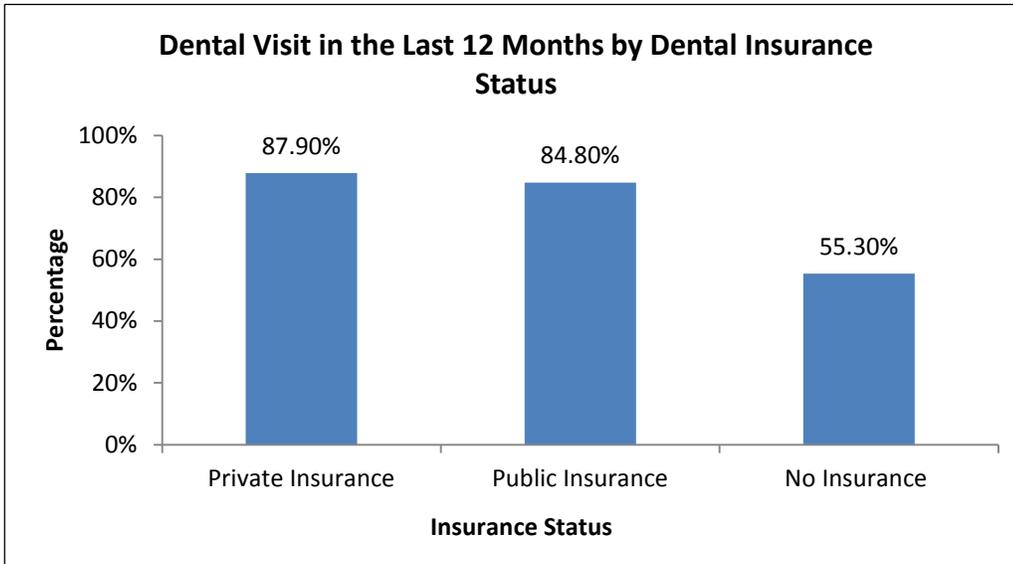
## Dental Visits/Insurance Status

Overall, 82.8% of students in the State reported a dental visit in the last year. Hispanic and non-Hispanic others (23.6%) were significantly less likely to have visited a dentist than non-Hispanic White children (12.2%). Those with a parent having 12 years of education were significantly less likely (75.7%) to have had a dental visit than were those living with a parent with more than 12 years of education (85.8%). By region, individuals residing in D.C. Metro were less likely to have had a dental visit than those residing in Western Maryland.

## Usual Source of Care (Dental Home)

In Maryland, 75.0% of school children in kindergarten and third grade reported having a dental home\*. However, children who reported their race as non-Hispanic Black (65.5%), non-Hispanic other (70.0%), and Hispanic (70.0%) were significantly less likely to have a dental home than were non-Hispanic Whites (83.4%). In addition, those with a parent having less than 12 years of education were less likely to receive care at a dental home than those living with a parent having greater than 12 years of education. Finally, those with no dental insurance coverage were significantly less likely to have a dental home than those having private dental

Figure 2



*Children with no dental insurance were significantly less likely to have had a dental visit (55.3%) than those with private dental insurance (87.9%).*

insurance (39.0% vs. 82.5%). Children in the D.C. Metro region were less likely to have a dental home (66.7%) than those in the Western region (81.4%). Within the Central Baltimore region, non-Hispanic Black children were significantly less likely to have a dental home than were non-Hispanic White children. School children eligible for free/reduced school meals were significantly less likely to have a dental home than were those who were ineligible.

- Maryland public school children in kindergarten and third grade without dental insurance were significantly less likely to report having a dental home (39.3%). In contrast, 82.5% of those with private dental insurance and 76.9% of those on Medicaid/Maryland Children’s Health Program (MCHP) (76.9%) reported having a dental home.

### Toothache in Last 12 Months

Overall, 9.1% of school children reported a toothache in the previous year. Children who qualified for free/reduced school meals were significantly more likely to have had a toothache than were children who were not eligible.

### Access to Dental Care

Approximately 10.0% of school children had problems accessing dental care. Hispanic children were significantly more likely to have an access problem (20.7%) than were non-Hispanic children (7.6%). Those with no dental insurance were

significantly more likely to have had an access problem than those with private insurance.

### Dental Caries

In 2011 33.2% of school children in kindergarten and third grade had a history of dental caries, similar to the results of the 2005 school survey. Also in 2011, 17.1% of third graders had untreated dental caries compared to 29.7% in 2001. Children who were eligible for free/reduced lunch were significantly more likely to have had a history of dental caries compared to the children who were not eligible. Non-Hispanic Black and Hispanic children were significantly more likely to have had a history of dental caries than non-Hispanic White children (Figure 3). The D.C. Metro region had the lowest prevalence (28.5%) of dental caries compared to the Eastern Shore, where children were significantly more likely to have had a history of dental caries. While many program interventions have improved access to dental care for children in Maryland, racial and regional disparities persist.

### Dental Sealants and Caries by Region

Nearly 33% of kindergarten and third grade school children report having dental sealants on permanent first molars. Non-Hispanic Black children were significantly more likely to have a history of dental caries (40.6%) compared to their non-Hispanic White counterparts (28.5%). Children in kindergarten were significantly less likely to have had at least one sealant than were children in third grade,

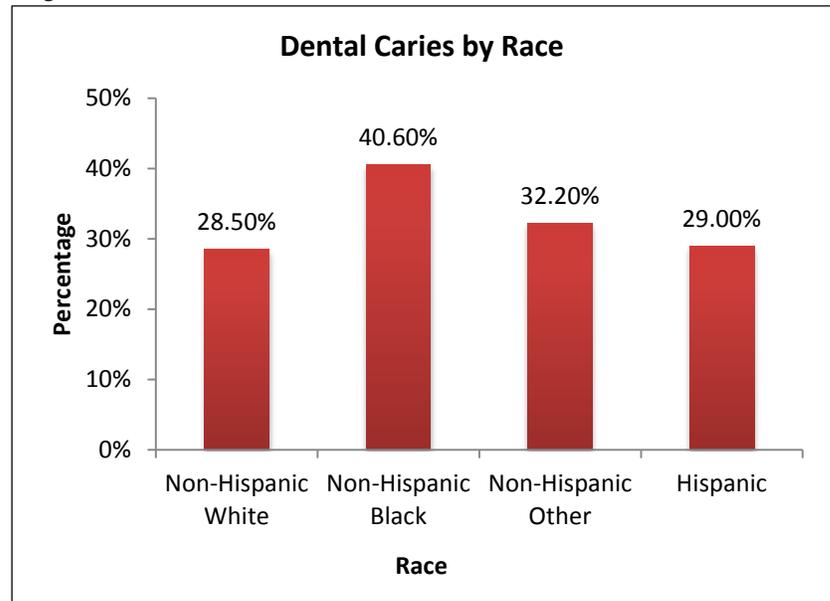
likely due to the fact that first molars are not fully erupted among that age group. Non-Hispanic Black third graders were significantly less likely to have had dental sealants (28.6%) than were non-Hispanic White children (47.5%).

## Conclusion

The last decade has seen significant progress in improving the oral health status of Maryland's children, especially as it refers to reducing oral health racial and ethnic disparities. Access to oral health care, which specifically targets low-income populations, has increased as witnessed by the expansion of safety net clinics and programs, and through increased dentist and patient participation in the Maryland Healthy Smiles Dental Program. In addition, the Maryland Mouths Matters Fluoride Varnish Program has trained a number of pediatricians, family physicians and nurse practitioners and these practitioners have administered more than 100,000 fluoride varnish treatments for low-income children ages 9 months to 3 years of age. The Maryland Oral Health Literacy Campaign, "Healthy Teeth, Healthy Kids" has increased awareness about the importance of oral health for parents of at-risk children. These improvements, together with encouraging results from the Maryland Oral Health of School Children Survey, are reasons to approach the next decade with hopefulness and enthusiasm.

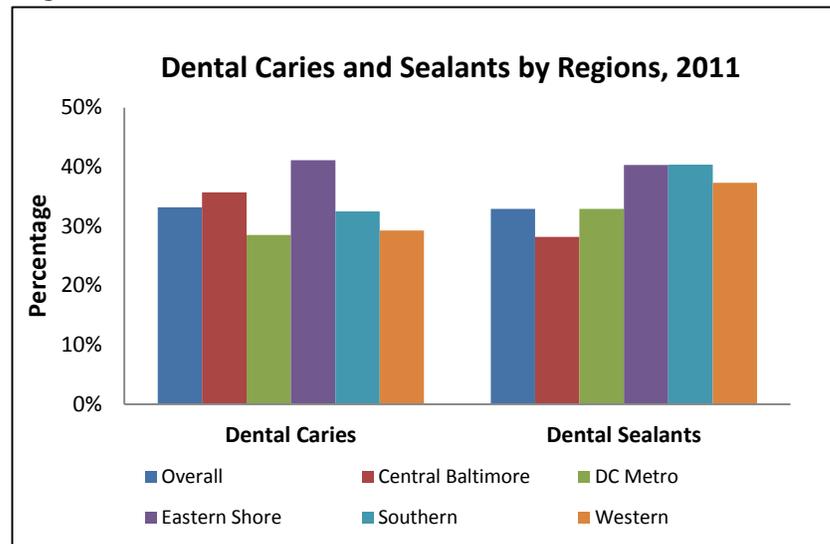
Maryland is viewed as a national leader in oral health by organizations such as the Pew Center on the States, the U.S. Department of Health and Human Services, and the national Center for Medicare and Medicaid Services, but much remains to be done. Targeted initiatives to reduce racial and ethnic disparities, such as school-based or linked dental sealants, optimal levels of community water fluoridation, and oral disease preventive services for children in Head Start, Judy Centers, and the Women, Infants, and Children (WIC) program will continue to expand. However, we can definitively state with confidence that the oral health standing of Maryland's children is on the rise.

Figure 3



*Non-Hispanic Black children were significantly more likely to have a history of dental caries (40.6%) compared to their non-Hispanic White counterparts (28.5%).*

Figure 4



*The Eastern Shore and Southern Maryland regions had the highest overall rate of dental sealants on permanent first molars.*



To access the full report, visit:  
<http://phpa.dhmfh.maryland.gov/oralhealth>