

2022-2023 Children's Oral Health Survey

BACKGROUND

The Maryland Department of Health, Office of Oral Health partnered with the Howard University College of Dentistry to conduct the 2022-2023 Maryland Oral Health Survey of School Children. The survey was conducted between January 15, 2022 and December 30, 2023, to assess the oral health status of public and public charter school children in kindergarten and third grade.



Licensed dentists and dental hygienists conducted in-school, non-invasive oral assessments consisting only of visual inspections using a dental mirror or tongue depressors. The survey is conducted every five years with funding from the U.S. Centers for Disease Control and Prevention. The survey results will inform the development of effective interventions to improve children's oral health in Maryland.

METHODS

Sample Design and Selection

The survey sample was chosen using guidelines provided by the Association of State and Territorial Dental Directors. This method involved stratifying schools based on geographic regions and the percentage of students eligible for the National School Lunch Program. The goal was to create a sample that accurately reflected the diversity of Maryland's school population. To ensure geographic diversity, the sampling frame was divided into regions – Central Baltimore, Southwest, Eastern, Southern, and Western Maryland. Initially, 60 schools were selected from the sampling frame. However, after facing some limitations, 48 schools participated; 4,950 students were screened.

Data Collection

Passive consent forms were sent to schools in advance to be distributed among parents of selected students at participating schools. (Schools in Carroll County requested active consent forms.) Screening teams used paper forms to capture information on oral health and demographic status for each student.

Data Analysis

Data collected from oral screenings was compiled and analyzed. The main outcome measures were the indicators of oral health status, including the prevalence of dental decay experience, untreated dental decay, presence of preventive dental sealants, need for preventive sealants, and the need for follow-up care. Demographic characteristics of the sample, including sex, race, socioeconomic status, and region were also examined.

Limitations

- Screened students attended public and public charter schools, in kindergarten and third grade. Students from private schools and other grades in public and public charter schools were excluded. The COVID-19 pandemic may have impacted response rates and participation due to various factors such as parental concerns about in-person activities.

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- The Central Baltimore region was underrepresented due to Anne Arundel and Baltimore Counties refusing to participate. Additionally, Baltimore City introduced a Memorandum of Understanding requirement after screening as screening was underway. The legal implications and processing time disrupted screening and resulted in only half of the selected Baltimore City schools participating.
- The Western Region had a high participation rate at the school level, despite Frederick County refusing to participate. However, the individual level participation rate was considerably lower. The requirement for active consent in Carroll County, which required parental consent to opt children into the survey, led to lower participation rates. The active consent process may have contributed to the low individual level participation rate in the region and could affect the sample's representativeness .
- The Southern Region had a low participation rate, partly due to Calvert County refusing to participate.

KEY FINDINGS

1) Dental Decay Experience

- Overall, 43% of surveyed children had experienced dental decay.
- Prevalence was slightly higher among third grade children (47%) compared to kindergarteners (37%).
- Hispanic children had the highest prevalence of decay (58%).
- Almost three in five children (59%) from the lowest economic group had dental decay experience.
- Children in Western region had the highest prevalence of decay (47%).

2) Untreated Dental Decay

- One in five (21%) children had untreated dental decay.
- Hispanic children had the highest prevalence of untreated decay (30%).
- One in three children (33%) from the lowest economic group had untreated decay.
- Children in Western region had the highest untreated decay than those of other regions (27%).

3) Sealant on First Permanent Molars

- Almost one in three third grade children (29%) had sealants present at the time of screening.
- Black children of third grade had the lowest prevalence of sealants present (27%).
- Third grade children from Western region had the lowest prevalence of sealant present (24%).

4) Sealant Needed

- More than half of Maryland school children (51%) needed sealants.
- Black children exhibited the highest prevalence of sealant need (60%).
- Children from Western region had the highest sealant need (72%).

5) Early Follow-Up Needed

- Almost one in three (30%) children needed early follow-up or urgent care regarding oral health.
- Hispanic children had the highest prevalence of early follow-up or urgent care need (38%).
- Children from lowest economic groups had the highest prevalence of early follow-up or urgent dental care need (38%).
- Almost half of the children (49%) had the need for early follow-up or urgent care need regarding oral health.

6) Urgent Dental Care Needed

- 6% of children needed urgent dental care because of pain or infection.
- Hispanic children had the highest need for urgent care (7%).
- Children from the lowest economic group had the highest urgent dental care need (9%).
- The Western region exhibited the highest prevalence of urgent dental care need (16%).