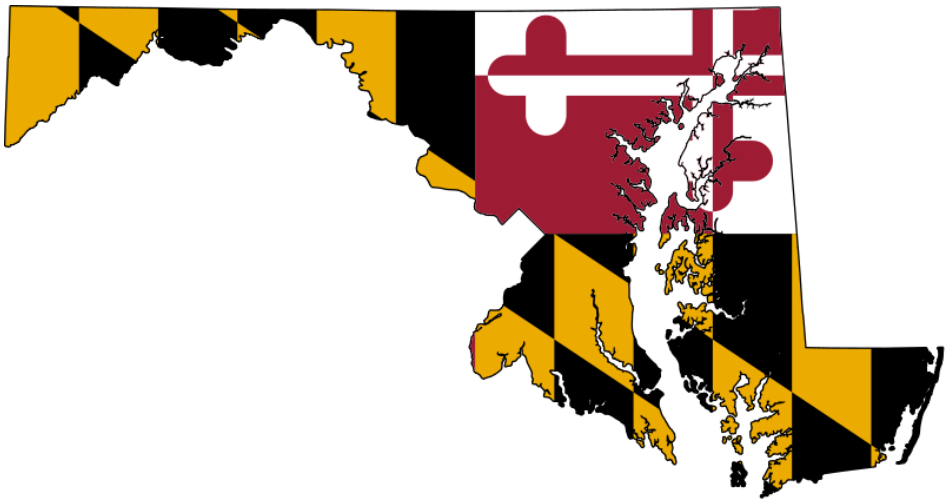
ORAL HEALTH SURVEY OF MARYLAND

SCHOOL CHILDREN, 2015-2016



Maryland Department of Health
Prevention and Health Promotion Administration
Office of Oral Health
Baltimore, Maryland

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ACKNOWLEDGMENTS

The *Oral Health Survey of Maryland School Children, 2015-2016* was a surveillance project that spanned just over two years and involved countless persons who provided administrative assistance and technical support. We would like to take this opportunity to thank the many individuals who thoughtfully guided this project to completion.

We would like to acknowledge the former State Superintendent of Schools, Dr. Lillian Lowry, for her invaluable support. We also extend our appreciation to the Association of State and Territorial Dental Directors for providing their technical assistance to the project, particularly in the area of sampling design and database development; thank you, Dr. Kathy Phipps.

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Finally, we would like to acknowledge the State of Maryland Department of Health for funding this project and guiding it to successful completion.

EXECUTIVE SUMMARY

Dental caries is the most common chronic disease affecting U.S. children (1). According to recent estimates from the National Health and Nutrition Examination Survey, 37 percent of children between the ages of 2 and 8 have experienced dental caries in their primary teeth and 58 percent of those 12 to 19 years have experienced caries in their permanent teeth (2).

The Maryland Department of Health has conducted statewide oral health surveillance in elementary schools for more than 20 years. During that period, surveillance data have helped to shape the types of dental public health programming that is implemented in the state. The data have also described improvements in oral health status over time.

The most recent surveillance project took place during the 2015-2016 academic term. As was the case with previous assessments, the goal of the most recent project was to describe oral health status in Maryland's public elementary school children, particularly those in kindergarten and third grade. Unlike previous assessments, this project was the first to use a passive consenting process and dental hygienists (instead of dentists) for conducting the oral screening examinations. A total of 7,923 students in 56 schools participated in the survey – a record for all of Maryland's oral health surveillance assessments. The overall response rate was also the highest ever, at 72.6 percent. The passive consenting process was most certainly the reason for these high numbers.

Overall, Maryland findings surpassed the Healthy People 2020 national objectives for percentage of dental caries, untreated dental caries, and dental sealants. The national objective for dental caries prevalence was 49 percent and Maryland's prevalence was lower, at 35.9 percent. For untreated dental caries, the national target was 26 percent and Maryland's estimate was only 13.6 percent. For dental sealant prevalence, Maryland also exceeded the national objective; Healthy People 2020 set 28 percent as the target and Maryland reached 41.4 percent.

Other key findings included:

- The oral health status was generally good in the state. The vast majority of Maryland's public

school children had no unmet dental treatment needs and less than 1% had any type of urgent need.

- In terms of dental decay history, some regional disparities existed in Maryland. The Western region had the lowest rates of decay and the Eastern Shore region had the highest rates.
- Disparities in terms of decay also existed for children across socioeconomic status groups. Children in schools with high proportions of free/reduced meals (low socioeconomic status) had a higher lifetime decay experience and were more likely to have untreated decay than were children in schools with low proportions of free/reduced meals.
- Although the state exceeded the target for dental sealants, need remained; more than 60% of children in all regions needed at least one sealant to be applied on a permanent first molar.
- Disparities in terms of dental sealants also existed. Children in schools with low proportions of free/reduced meals (high-SES) were more likely to have dental sealants than were children in higher socioeconomic status schools.

The oral health status of Maryland's school children has improved over the last decade. This progress may be attributable to many factors, including a series of reforms instituted after the death of a 12 year-old Maryland child, due to an untreated dental infection. Following this tragic event, Maryland committed itself to preventing another such case. Resulting reforms have improved access to care, prompted a statewide expansion of public health preventive programs, and increased community awareness through programs like Maryland's *Healthy Teeth, Healthy Kids* campaign that offered culturally appropriate, clear language information to high-risk, low-income families. In addition to bringing about significant improvements in the oral health of school children, the collective impact of these efforts has earned Maryland recognition as a national leader in oral health (3).

BACKGROUND AND PURPOSE

The Office of Oral Health at the Maryland Department of Health contracted with the Departments of Dental Public Health and the Department of Periodontics (Division of Dental Hygiene) at the University of Maryland School of Dentistry to conduct the Oral Health Survey of Maryland School Children 2015-2016 (herein referred to as the *Oral Health Survey 2015-2016*). A memorandum of understanding, dated February 17, 2015, indicated that services were to commence on or about April 15, 2015 and terminate on June 30, 2017.

Pursuant to Maryland Health-General Code Ann. § 13-2506, the Department of Health is required to periodically conduct a statewide follow-up survey of the oral health status of school children in Maryland. We selected the sample so that the resulting estimates would be representative of all Maryland public school children and the methods would be consistent with recommendations from the Centers for Disease Control and Prevention (CDC) and the Association of State and Territorial Dental Directors (ASTDD). We also designed the sample so that the findings could be compared with data from other states as part of the CDC's National Oral Health Surveillance System and the Child Indicators reporting program (https://chronicdata.cdc.gov/Oral-Health/NOHSS-Child-Indicators/qcai-zfj9).

Oral Health Survey 2015-2016 was a follow-up to previous oral health surveillance projects conducted in 1994-1995 (4), 2000-2001 (5), 2005-2006 (6), and 2011-2012 (7). The present project utilized methodology described by the Association of State and Territorial Dental Directors (ASTDD) in their *Basic Screening Surveys* document (8) and adapted from the earlier surveillance studies. The consistency in approach allowed for temporal oral health surveillance. Findings from *Oral Health Survey 2015-2016* were intended to facilitate the planning and funding of public health programs in Maryland. Findings were also meant to provide a baseline for future surveillance assessments.

The study period spanned approximately 27 months. Activities during the first three months included meetings with Maryland State Department of Education officials and submission of materials to the institutional review board at the Maryland Department of Health and University of Maryland,

Baltimore. During the summer prior to the 2015-2016 academic term, the study period was used to complete planning, including sample selection, contacting school administrators, hiring personnel, purchasing supplies, and developing survey materials. Oral screening examinations took place during the 2015-2016 academic term. Data analysis and report generation occurred during the remaining 12 months. In January of 2017, a preliminary report of findings was presented to the Office of Oral Health, and in August of 2017, final reports were submitted.

METHODS

The following paragraphs describe the methods used to administer *Oral Health Survey 2015-2016*. Use of a passive consenting process, and dental hygienists as examiners (instead of dentists), are new to this assessment.

Institutional Review Board Approval

The institutional review board (IRB) of the Maryland Department of Health was designated as the official IRB of the project. The IRB designated the project as "exempt" (Appendix A, p. 51). The University of Maryland, Baltimore's IRB relied on the Maryland Department of Health's IRB and no additional review was required.

Project Coordinator

The Project Coordinator was responsible for general oversight and administration of the project. Her responsibilities included:

- Contacting state and local school officials;
- Scheduling school visits;
- Recruiting dental examiners and arranging for their compensation;

- Coordinating training of the dental hygiene examiners;
- Managing equipment and supply purchases;
- Developing printed materials;
- Arranging for the materials to be delivered to sample schools prior to the site visit;
- Ensuring the data were collected properly;
- Responding to inquiries from surveillance team members, school administrators, and family members of children who were screened; and
- Assisting in the production of final reports.

Clearance from State Superintendent

We contacted Dr. Lillian M. Lowry (retired in 2015), Maryland State Superintendent of Schools, during the initial phases of the project to enlist her support for the project. After reviewing the study's purpose, she agreed to promote it among Maryland's public elementary schools. Support of the Maryland State Department of Education (MSDE) was critical to the success of the project. Gaining access to the elementary schools would have been very difficult without the support of the State Superintendent and MSDE staff.

Sample Design

Oral Health Survey 2015-2016 used a probability sampling method. A consultant from ASTDD directed sample selection. During the planning phase, it was determined that the budget and other resources allowed for the selection of 60 schools, statewide. Regional level estimates of oral health indicators were desired so the sampling frame was divided into the five geographic regions of Maryland (Central Baltimore, Southwest, Eastern Shore, Southern, and Western). Given that population size and school enrollment differed across these regions, disproportionate stratified sampling was used to attain sufficient school selections in the smaller, more rural regions (Eastern Shore, Southern, and Western) so

that the oral health indicator estimates derived from these regions would be statistically reliable.

There were 24 school districts in the five regions of the state (see Figure 1 and Table 1). All school districts were included in the sampling frame. We used stratified, probability-proportional-to-size (PPS) sampling within each of the five regions of the state. We also ordered the sampling frame list to achieve implicit stratification by free/reduced meals, a proxy measure of socioeconomic status.

We selected 60 schools for the final sample – 19 schools in the Central Baltimore region, 19 in the Southwest region, seven in the Eastern Shore region, six in the Southern region, and nine in the Western region. Of these 60 schools, 54 agreed to participate and six refused.

We selected replacements for the six refusals from the original sampling frame of schools. When this was done, we selected replacement schools from the same sampling interval as the declining school to ensure the replacement school was similar, both geographically and in terms of socioeconomic status. Of the six replacement schools selected, only two agreed to participate. The four other replacement schools that refused did so very late in the study period, leaving no time to select additional replacements. Consequently, the final sample included 56 schools.

Communicating with Local Department of Education Superintendents

The Project Coordinator mailed a letter of introduction (Appendix B, p. 55) to each of the school district superintendents whose jurisdictions were included in the sample (note, although all school districts were included in the sampling frame, and had a probability of being sampled, not all school districts were selected). The letter described the project and included samples of the written material that would be sent to school officials and the parents/guardians of children in kindergarten and third grade. The letter also called attention to the oral health problems that are often found in elementary school children, especially those in third grade. About two weeks following the mailing, the Project Director made initial follow-up telephone calls to the superintendents. The purpose of the calls was to provide additional information, answer questions, and obtain the names and contact information of principals and other key contacts from the sample schools in the respective school districts.

Establishing the Data Collection Schedule

Once school districts provided their approval to proceed, the Project Coordinator contacted the principals of the selected schools by telephone. During the calls, she described the project and established a tentative school visit date. Often, the process of securing a date required several calls. Once contact was made, other obstacles to selecting a school visit date were sometimes encountered. For example, the study competed with several other school activities, including screening for vision and hearing, as well as the administration of standardized achievement tests. The study also competed with dental screenings conducted by other private and/or community organizations.

Items Requested by the Study Team

After the school visit date was scheduled, the Project Coordinator sent a letter to each principal confirming the arrangements. The letter included an introduction to the project (Appendix C, p. 58) and a sample packet of information that would be sent home to the parents/guardians of children in kindergarten and third grade. The letter to the principals also included a list of items that the study team requested on the day of the school visit (Appendix D, p. 60). Requested items included a room with accessible electrical outlets, heavy duty electrical cords, several tables for supplies and record keeping, as well as chairs for the dental team and the children who were waiting to be screened. The letter stated that the project team desired a quiet, well-lit, private room/area. The letter also asked that volunteers/school aides be available to assist the dental team. Previous experience revealed that volunteers/aides would be useful in escorting children to and from their classrooms, since they would be more familiar with the school's layout than would members of the project team.

Information Packet

We designed an information packet (Appendix E, p. 62) specifically for the study. The packet consisted of a 9"x12" white envelope, printed with color graphics and text (English and Spanish versions were available) and containing the following documents:

- Letter of invitation to parents/guardians;
- *Frequently Asked Questions* flyer, printed on blue paper; and
- *Opt-Out* form.

The project used a passive consenting process whereby all children in kindergarten and third grade were eligible for screening, by default, unless the parent/guardian chose for their child not to participate. We asked parents/guardians to return the signed *Opt-Out* form when they did not want their child to receive an oral examination screening. ASTDD consultants advised the Maryland Department of Health to use a passive consenting process because this process was widely used across other states in the nation and because response rates (and corresponding statistical reliability) would dramatically improve.

Delivering Packets to the Schools

We contracted with a courier service to deliver materials to each sample school approximately three weeks prior to the school visit date. The Project Coordinator determined the number of information packets that were to be delivered to each school by speaking by telephone with the school nurse or other administrative staff person. During this telephone conversation, the Project Coordinator also determined how many packets would be required in English and Spanish. We always sent additional copies of the information packet in the event some envelopes were lost and/or additional copies were needed for school files. To ensure that deliveries occurred, contact persons at each school were asked to contact the Project Coordinator when the packets arrived. This confirmation process reduced the likelihood that packets would be delivered to the school and inadvertently misplaced (as happened occasionally).

Translation of Materials

Some of the written materials were needed in Spanish to accommodate parents/guardians who did not speak English. Spanish translations were conducted for the project by a certified translation agency. Approximately 10 percent of the printed documents were made available in Spanish across all schools.

Equipment and Supplies

As the dental screening examinations were conducted on site, the study required a number of portable items. Supplies for the study were divided into two categories, clerical and clinical. Clerical supplies included items such as paper, folders, pens and pencils, and other related articles. The clinical supplies included items such as flashlights, cotton gauze, disinfectants, paper goods, wipes, hand sanitizers, facial tissue, paper towels, table covers, disposable plastic dental mirrors, disposable examination gowns, safety goggles, mouth masks, and other similar items. In addition, every screened child received a toothbrush suitable for his or her age. These toothbrushes were also included among the necessary supplies ordered for the project.

Dental Screening Examinations

The dental team responsible for administering the oral screening examination component of the project consisted of a dental hygiene examiner, a data recorder, the Project Coordinator, and at least one assistant or helper. We recruited 12 dental hygiene examiners for the project. All of the examiners held an active Maryland license. Data recorders were trained to use the computer-based data entry program and to assist with paperwork and set-up. A copy of the training slide presentation (Appendix F, p. 75) and project team manual (Appendix G, p. 115) are included in the appendix to this report.

While the Project Coordinator was at the school site during the screening date, she served as the contact person with the school's staff and helped with paperwork, distribution of toothbrushes, and other necessary and related functions. Upon arriving at the school on the visit date, the Project Coordinator met with the designated contact person and introduced members of the dental team. The volunteer or aide usually escorted the group to the designated screening area. Once the equipment and supplies were transported from the vehicles to the designated room, set-up took approximately 30 minutes.

While the dental hygienist examiner and data recorder unpacked the supplies and arranged the room to maximize efficiency, the Project Coordinator reviewed the packets that the contact person had been holding until the arrival of the dental team. The primary purpose of the review was to determine if

any parents/guardians had signed the *Opt-Out* forms.

Once the team was ready to commence the screening examinations, approximately 5-6 children were escorted by the volunteer to the screening room at a time. A sequential number was assigned to each child that was used to identify their data in the computer database and the *Report of Findings* form (Appendix H, p. 139).

As the dental hygienist examiner performed the dental screening examination, findings were conveyed to the data recorder who entered the information into a tablet-based database software program. The screening examination focused on assessments of dental caries, dental sealants, and treatment need (described later in this report). Once the screening examinations were completed, each child received a toothbrush, the *Report of Findings* form, and a summary of dental resources available in their area (Appendix I, p. 142). These items were placed in a clear plastic bag. The children were encouraged to take the bag home and share the information with their parents/guardians. A member of the project team or a volunteer/helper escorted the children back to their classrooms.

For recording treatment needs, the dental hygienist examiner could select from among the following categories on the *Report of Findings* form:

- A dental infection or abscess – child needs immediate attention;
- Tooth decay – child should be taken to a dentist in next 4-6 weeks;
- Need for a dental cleaning – child should see a dentist in next 4-6 weeks; or
- No obvious dental problems – child should go for regular dental checkups every 6 months.
- Combination codes were also allowed, such as when dental caries and the need for a dental cleaning or dental sealants occurred concurrently.

We printed the *Report of Findings* form in triplicate. One copy of the report card was sent home with each child, as previously described. A second copy was given to the school nurse and the Project Coordinator stressed the importance of follow-up communication with family members, as well as referrals to a location in the jurisdiction if the child was an episodic user of dental services. A third copy

was retained by the project team.

After the screening examinations were completed, and prior to leaving the school, the Project Coordinator and data recorder reviewed the inventory list to determine which supplies needed to be replaced. The Project Coordinator also sent a "thank you" note to the school principal, referencing the school nurse and any volunteers that were involved.

Resource Information

In addition to the materials described above, each school nurse was presented with a copy of the *Oral Health Resource Guide* (*Resource Guide*), a comprehensive dental care access resource guide that was developed by the Office of Oral Health at the Maryland Department of Health. The *Resource Guide* was designed to assist parents/guardians in locating an affordable source of dental care services in Maryland. Only those dental public health programs or facilities that provided discounted, low-cost, or special dental services (*e.g.*, for homebound patients) were listed in the directory.

Examination Criteria

We based the dental caries and dental sealant assessments on established examination criteria. The dental caries assessment was based broadly on those developed by Radicke, as published in the *Proceedings of the Conference on the Clinical Testing of Cariostatic Agents* (9), with one modification, elimination of the "extraction indicated" code for the primary dentition. Similar criteria have been used in the previous surveillance assessments. Teeth were considered eligible for scoring if either the entire incisal edge or occlusal surfaces were erupted and visible. For the analysis of dental sealant prevalence in the permanent dentition, at least one permanent tooth needed to be present in the oral cavity. If a tooth or tooth surface appeared to have been restored with a resin restorative material and concomitantly covered with a dental sealant, the tooth was scored as having a resin restoration and not a sealant. We based the dental sealant assessment on visual cues, only.

ASTDD's Basic Screening Survey criteria dictate using a "find-it-and-stop" approach. That is, data collection is designed so that as soon as a carious lesion, dental restoration (filling), or dental sealant is identified, the condition is marked in the dataset and the examination stops. This oral cavity-specific instead of a tooth-specific approach increases efficiency. In other words, not all teeth need to be examined for dental caries, restorations or dental sealants. In addition to increasing efficiency, this approach provides an opportunity to estimate disease/condition prevalence – the focus of the current assessment. However, this approach does not allow the analysis to estimate the mean number of decayed, missing, and/or filled teeth. As such, *Oral Health Survey 2015-2016* provides an opportunity to compare prevalence values with previous assessments but it does not allow comparison of disease severity. This trade-off decision was made intentionally because the project team knew that increased efficiency would be necessary given the higher number of children screened at each school that would result from the passive consenting process.

As a rule, we standardized the screening examination protocol to minimize bias. The project team manual was always available, on-site, to serve as a useful resource for the examiners, recorders, and other members of the project team.

Examiner Calibration

Twelve dental hygienist examiners participated in the project. Each examiner was required to complete a training and calibration exercise prior to attending any of the schools. To ensure that screening criteria were consistently used during the entire study period, the aforementioned project team manual was available, on-site, to remind the examiners about specific scoring criteria and other data collection logistics.

Data Collection and Data Entry

The dental hygienist examiners used a disposable, non-magnifying dental mirror and tongue depressor to detect dental caries and dental sealants. We used new mirrors, tongue depressors, and vinyl

dental gloves with each child. The data recorder entered the data directly into a software program designed for this survey. The software program was created in *Epi-Info 7* (https://www.cdc.gov/epiinfo/index.html) and housed on a tablet device.

Data Management

We used unique identification code numbers to specify each participant's data. The final data set was maintained on a secure desktop computer at the University of Maryland School of Dentistry. In addition, multiple backup copies of the final data set were maintained at the School of Dentistry and Maryland Department of Health. None of these datasets contained personal identifying information about participating students.

Variables

The main descriptor variables for this project were region (*Central Baltimore*, *Southwest*, *Eastern Shore*, *Southern*, *Western*), grade level (*kindergarten*, *3rd grade*), and free/reduced meal status of the school (*low proportion*, *middle proportion*, *high proportion*). The region and grade level variables were child-level variables. That is, a particular grade level and regional identifier was available for each child in the sample. By contrast, the free/reduced meal status of the school variable was a school-level variable. That is, the project team did not collect information about which children in the sample qualified for free/reduced meals. Instead, the project team was only able to identify what percentage of kindergarten and third grade students at each sample school qualified for free/reduced meals. As such, analyses of socioeconomic status deriving from the free/reduced meal status of the school should be considered an indirect or correlational representation of the child's status, and not a direct representation.

The main outcome variables for the project included dental caries, untreated dental caries, having at least one dental sealant on an erupted permanent molar, needing a dental sealant, needing a dental cleaning, and treatment urgency. The *dental caries* variable represented a child's lifetime history of dental caries, including both treated (filled) and untreated disease. This variable was used to describe

both dentitions (primary and permanent), combined. The *untreated dental caries* variable reflected the presence of active dental caries – that is, dental caries that needed to be treated. This variable was also used to describe both dentitions, combined. The *having at least one dental sealant on an erupted permanent molar* variable described the presence of a dental sealant on an eligible permanent first molar. For this variable, only children in third grade were considered because permanent first molars are not typically erupted in kindergarten children. The *needs a dental sealant* variable reflected the child's need for a dental sealant, regardless of whether the child already had one. This variable was also only applied to permanent first molars and third graders. It was typically scored when either there were no dental sealants were present on the tooth or a previous dental sealant had come loose or became damaged/chipped. The *needs a dental cleaning* variable represented any child's need for a cleaning. This score was usually restricted to children with unusually high levels of dental plaque or gingivitis. The *treatment urgency* variable was meant to encapsulate the child's overall need for follow-up with a dentist. It included three categories (urgent, early, none) and was applied to children in both kindergarten and third grade. *Urgent* need meant that the child was experiencing pain or was exhibiting an abscess, and should be seen by a dentist, immediately. *Early* need meant that the child would benefit from a dental restoration (filling), dental sealant, and/or cleaning but the treatment could be provided within the next 6-8 weeks. Treatment urgency category *none* implied that no obvious (that is, visually detectable) needs were identified.

Analysis

We used the SAS statistical software program to combine datasets, manage the data, and recode variables, as necessary. We assessed the statistical significance of differences between estimates by adding or subtracting the product (1.96 times the standard error) to the estimate. The resulting range represented a 95 percent confidence interval that bounded each estimate. Confidence intervals that overlapped were not judged to be significantly different from one another. Confidence intervals that did not overlap were judged to be different from one another. We used a *0.05* alpha value for assessing

statistical significance in all analyses.

For some variables and analyses, the standard error of the estimate was rather large relative to the estimate. Larger standard errors were usually due to small sample size in a particular stratum. When the standard error was equal to or greater than 30 percent of the estimate, we judged the estimate to not meet the standard for statistical reliability. Such estimates should be interpreted with caution throughout this report. Individual estimates that included such large standard errors were not included in tests of statistical significance.

Sampling weights were applied to the analyses so that estimates would be representative of public elementary school children in kindergarten and third grade throughout the state. Weighted and unweighted estimates are clearly differentiated throughout the report.

RESULTS

Response Rates and Sample Characteristics

Table 2 describes the response rates for the survey, stratified by region and grade level. The overall response rate for children in kindergarten (73.9 percent) was slightly higher than for children in third grade (71.4 percent). For both grade levels, response rates were highest in the Western region and lowest in the Southwest region. The overall response rate for the survey, including both grade levels and all regions, was a very respectable, 72.6 percent.

Tables 3 and 4 describe both the unweighted and weighted sample characteristics of school children who participated in the survey. Note that a total of 7,923 students received an oral screening examination but the grade level for 46 of those children was unknown. Therefore, the sample characteristics contained in Tables 3 and 4 reflect the 7,877 children for whom complete information was known. This sample represented 134,094 kindergarten and third grade school children in the state.

The overall distribution of children in kindergarten and third grade was 3,833 (48.7 percent) and 4,044 (51.3 percent), respectively. With sample weighting applied, these distributions became 65,939

(49.2 percent) and 68,155 (50.8 percent), respectively.

The unweighted and weighted distributions of children in each region were, as follows:

- Central Baltimore: 2,450 (31.1 percent) 41,680 (31.1 percent);
- Southwest 2,763 (35.1 percent) 69,800 (52.1 percent);
- Eastern Shore 952 (12.1 percent) 6,675 (5.0 percent);
- Southern 750 (9.5 percent) 6,061 (4.5 percent); and
- Western 962 (12.2 percent) 9,878 (7.3 percent).

As described earlier and as evident from these data, children were oversampled in the three rural regions (Eastern Shore, Southern, and Western) of the state.

Dental Caries in Either Dentition

Table 5 describes the weighted prevalence of dental caries (representing the lifetime history of dental caries, including treated and untreated disease) in either dentition. Overall, 35.9 percent of school children had a history of dental caries and the remaining 64.1 percent had no history. Third grade children were significantly more likely to have had a history of dental caries than were children in kindergarten (41.3 percent *vs*. 30.2 percent).

Table 6 provides the region-specific findings for history of dental caries (representing the lifetime history of dental caries, including treated and untreated disease) in either dentition. Compared with the region with the lowest prevalence (Western region), only children from the Eastern Shore region were significantly more likely to have had a history of dental caries (28.8 percent *vs*. 44.4 percent).

Untreated Dental Caries in Either Dentition

Table 7 shows the weighted prevalence of untreated dental caries (*i.e.*, active disease only) in either dentition. Overall, 13.6 percent of the school children had untreated dental caries. There was no significant difference in prevalence of untreated dental caries between children in either grade level.

The region-specific estimates of untreated dental caries are listed in Table 8. The Southern region had the lowest prevalence of active disease (9.1 percent). Compared with this location, both the Eastern Shore and Southwest regions had significantly higher prevalence values (19.5 percent and 14.4 percent, respectively).

Dental Sealants on Permanent First Molars

The weighted prevalence of dental sealants on the permanent first molars is described in Table 9. These data represent children from third grade, only. Overall, 41.4 percent of children had at least one dental sealant on an erupted permanent molar and 58.6 percent had no dental sealants.

Statistically significant regional differences were detected (Table 10). The Southern region had the highest prevalence, at 48.5 percent. Compared to this location, the Eastern Shore was the only region to have a significantly lower prevalence (27.8 percent).

Need for Dental Sealants

The previous section described the weighted prevalence of having at least one dental sealant on an erupted permanent first molar among third grade students. However, the dental hygienist examiner also assessed if the child needed a dental sealant. This assessment, it should be noted, may include some children who were counted as having dental sealants already. That is, a child may have a dental sealant on a permanent first molar. This student would be captured within the "dental sealants on permanent first molars" category. Nonetheless, this same child may have a permanent molar in need of a dental sealant because: 1) one was never placed on the tooth, 2) one was placed and came dislodged over time, or 3) one was placed and a segment of the sealant became dislodged over time.

With the aforementioned description in mind, Table 11 describes the weighted prevalence of needing a dental sealant on at least one permanent first molar among children in third grade, only. According to the findings, 66.0 percent of children in third grade could have benefitted from a new and/or additional dental sealant.

Table 12 shows the region-level estimates. The Central Baltimore region had the lowest prevalence (59.9 percent) and the Eastern Shore region had the highest (72.6 percent). However, none of the differences between regions reached statistical significance.

Need for Dental Cleaning

Table 13 describes the weighted prevalence of needing a dental cleaning, stratified by grade level. Overall, 12.6 percent of children were identified as having poor oral hygiene, requiring some level of professional intervention. Children in kindergarten were less likely to need a dental cleaning than children in third grade and this difference was statistically significant (8.2 percent *vs.* 16.7 percent). Regional estimates were not listed because the low prevalence values (with corresponding high standard errors) were not statistically reliable.

Treatment Urgency

Weighted treatment urgency estimates are presented in Table 14. Overall, less than 1 percent of children had any type of urgent need (including the presence of pain or an abscess). Thirteen percent had some form of "early" need, representing the need for a dental restoration (filling), dental sealant, and/or cleaning. The remaining 86.3 percent had no immediate treatment needs; they were advised to visit their dentist, as usual. Differences between grade levels and across regions were too small to reach statistical significance.

Dental Caries in Either Dentition, by Socioeconomic Status

As described in the "methods" sections of this report, socioeconomic status (that is, qualifying for free/reduced meals at school) was not available at the child level but it was at the school level. Table 15 lists the weighted prevalence of a history of dental caries (including untreated and treated dental caries in either dentition) among children in kindergarten and third grade. A clear trend was evident. Children who came from schools with higher proportions of those who qualified for free/reduced meals also had

higher prevalence values. Compared with children who came from "low proportion" schools (showing the lowest prevalence of dental caries), the children who came from both the "middle proportion" and "high proportion" schools had significantly higher prevalence values.

Table 16 lists the region-level estimates, stratified by socioeconomic status. A number of the weighted prevalence estimates were either not applicable (no children were in the category) or not statistically reliable. Given the lack of statistical reliable in the table, no tests of differences across regions were performed.

Untreated Dental Caries in Either Dentition, by Socioeconomic Status

Table 17 shows the weighted prevalence of untreated dental caries (*i.e.*, active disease only) in either dentition among all school children, stratified by socioeconomic status. Unlike the findings for dental caries history, there was no trend for untreated dental caries. Only the difference between the "low proportion" and "middle proportion" groups reached significance (10.4 percent *vs.* 15.9 percent).

The region-specific estimates of untreated dental caries are listed in Table 18. Again, some of the weighted prevalence estimates were either not applicable or not statistically reliable. Consequently, no tests of statistical differences across regions were performed in this section, as well.

Dental Sealants on Permanent First Molars, by Socioeconomic Status

The weighted prevalence of having at least one dental sealant on an erupted permanent first molar is presented in Table 19, stratified by socioeconomic status. Although the estimates differed slightly across categories of socioeconomic status, no differences reached statistical significance. The region-specific estimates are provided in Table 20, for your reference. No statistical tests were performed because of missing and/or unreliable estimates.

Need for Dental Sealants, by Socioeconomic Status

Table 21 describes the weighted prevalence of needing a dental sealant, stratified by the socioeconomic status of the school. The estimates differed slightly across categories of socioeconomic status, but none of the differences reached statistical significance. The region-specific estimates are provided in Table 22, for your reference. No statistical tests were performed because of missing and/or unreliable estimates.

Need for a Dental Cleaning, by Socioeconomic Status

The prevalence values for needing a dental cleaning are presented in Table 23, stratified by the socioeconomic status of the school. The estimates showed that children who came from the "middle proportion" schools were more likely to need a dental cleaning than children in either of the other two categories. These differences, however, were not statistically significant. Region-specific estimates were not listed because the estimates were not statistically reliable.

Treatment Urgency, by Socioeconomic Status

Table 24 lists the weighted prevalence values for treatment need, stratified by socioeconomic status. Estimates are provided only for reference. No statistical tests were performed because several of the values were not statistically reliable. For this same reason, region-level analyses were also not performed.

Comparisons with Data from 2011-2012

A limited number of comparisons across surveys are presented here to provide insights into how the oral health status of Maryland's school children might have changed during the last five years. This section is limited primarily because the consenting processes used during the 2011-2012 academic term were quite different. Specifically, the 2011-2012 survey used a positive consenting process and the resulting response rate was only 17.5 percent, overall. As such, we present the findings for dental caries,

untreated dental caries, and dental sealants, only, stratified by socioeconomic status (to take any differences between samples into consideration).

Figure 2 describes changes in the weighted prevalence of dental caries for children in both grade levels. Overall, having a history of dental caries in either dentition increased for children in kindergarten and decreased slightly for those in third grade. We stratified these weighted prevalence values by socioeconomic status in Table 25. These data show that the largest increases noted among the kindergarten students occurred in the higher socioeconomic status categories; the low proportion group (wealthiest schools) showed an increase of 25.3 percent increase, the middle proportion group showed an increase of 46.5 percent, and the high proportion group (poorest schools) had an increase of only 4.2 percent. Table 25 also shows that the slight decreases in prevalence noted for children in third grade occurred across all socioeconomic status categories.

Figure 3 reveals that the weighted prevalence of untreated dental caries also increased among kindergarten children between survey periods. However, by contrast, the data show that untreated disease decreased markedly among third grade students.

Table 26 again shows that the largest increases in prevalence of untreated disease occurred among children who attended the wealthier schools; the increase for the low proportion group was 51.6 percent and the increase for the middle proportion group was 65.1 percent. It is interesting to note that despite these increases among the wealthier schools, the prevalence among the high proportion group actually decreased by 1.4 percent.

Table 26 also reveals some interesting trends among the third grader students. For the middle and high proportion groups, the weighted prevalence of untreated dental caries decreased markedly. However, the prevalence increased slightly for the wealthiest group (low proportion) by 3.7 percent.

The weighted prevalence of having at least one dental sealant on an erupted permanent first molar increased slightly between the two study periods (Figure 4). Table 27 shows that this overall increase was mainly due to category-specific changes in the middle and high proportion groups; the weighted prevalence among the wealthiest group actually decreased slightly (4.8 percent).

DISCUSSION

This section summarizes the project findings and places them in context. It concludes with a discussion of some challenges faced during the study and recommendations for the future.

In general, participation in the project was very high. More than 7,900 children received a screening examination, reflecting a response rate of more than 70 percent. The primary reason for these high numbers was the use of passive consenting. In previous studies, only children with a parent/guardian's signed consent received a screening examination. This approach yielded response rates no greater than 50 percent. By contrast, the passive consenting process used during the 2015-2016 assessment meant that all children received a screening examination, by default, unless the parent/guardian specifically opted out of the project. The onus shifted from giving permission to denying permission. The resulting increases in response were anticipated and this is specifically why passive consenting was used.

An increased response rate was not the only ramification from using passive consenting. One indirect result was a change in the character of the sample. In 2011-2012, for example, 30.9 and 41.5 percent of the sample represented children from low and high socioeconomic status schools, respectively. In 2015-2016, those percentages changed to 35.4 and 38.8. The change in the consenting process caused the sample in 2015-2016 to become more representative of low-socioeconomic status children in Maryland, the group that has historically shown the greatest levels of need.

Other changes also occurred in the 2015-2016 project. Dental hygienists were used as examiners for the first time. The switch from dentists to dental hygienists as examiners was done to make recruitment/hiring more efficient (a number of dental hygienists were available through the School of Dentistry, community colleges, and local health departments) and cost-effective. Our experience with the switch was entirely positive and this approach is recommended for future assessments. One additional change was the elimination of a health questionnaire component that was used in previous projects. In the past, the health questionnaire asked questions of the parent/guardian concerning the child's demographics

(age, race/ethnicity), dental insurance status, and use of dental services. The rationale for eliminating this from the current project was the switch to a passive consenting process and the desire to reduce the burden of paperwork involved for the schools and parents/guardians. Eliminating the questionnaire made the project and the analyses more streamlined. However, the resulting lack of these child-level variables meant that some of the descriptions contained in previous reports were not possible in the current project.

One additional change involved reductions in the use of portable equipment. In the past, portable dental chairs were used to conduct the screening examination, on-site, in the schools. Although the chairs provided a comfortable way of conducting the examinations, the team decided that it would be worth trading comfort for the reduced burden of transporting the heavy chairs from school to school. There appeared to be no effect on data collection from this decision in the current project.

The last change had to do with the way that the screening examinations were conducted. In previous assessments, each tooth (and sometimes each tooth surface) was scored by the examiner. The advantage of this approach was that severity of disease could be described, in the form of either *dft* (sum of decayed and filled primary teeth) or *DMFT* (sum of decayed, missing, and filled permanent teeth) scores. In the current project, the examiners used a "find-it-and-stop" approach, meaning that when the first cavity and/or filling was detected in the mouth, the screening would stop and the child would be classified as having a history of dental caries and/or active disease. The advantage of this approach was that it allowed for prevalence calculations, the primary purpose of the surveillance. However, this approach did not allow severity calculations. As such, comparisons of disease severity over time were not possible. One other advantage of using this approach was that it allowed a high number of screening examinations to be conducted during a single visit – that is, it would not have been possible for the examiners to score every tooth in the mouth, given the high number of participants that was encountered during the project.

In general, the surveillance data revealed that the oral health status of Maryland's public elementary school children in kindergarten and third grade was rather good. For three important indicators (dental caries prevalence, untreated dental caries prevalence, and dental sealant prevalence),

Maryland had met and was well ahead of the national health objectives defined by Healthy People 2020. Clearly, the many oral health programs implemented at the state and local levels were having an impact on the oral health of Maryland's children.

This good news, notwithstanding, some oral health issues could still be improved in the state. For example, although Maryland had already met or exceeded several national targets for oral health, data from the current project showed that dental caries prevalence and untreated dental caries prevalence had still increased in kindergarten students since the last project in 2011-2012. Most of this increase was due to changes among the wealthiest children, at least in terms of the socioeconomic status of their schools. Several factors might explain these disparities, including changes in the use of dental services, increased use of bottled water (that is not typically fluoridated), and other adverse dietary choices. Future surveillance projects should investigate the likelihood that any or all of these factors might be playing a role.

Another example of an oral health issue that requires attention in Maryland includes the high proportion of third grade children who still need dental sealants on at least one of their permanent molars. Dental sealants are highly effective in preventing dental caries on the pit-and-fissure surfaces of teeth. If more dental sealants were applied, particularly among the poorest children, then additional increases in dental caries could be averted.

The last issues that still need to be addressed are the disparities that exist across geographic regions and socioeconomic status. The Eastern Shore region, for example, continues to have higher levels of disease than other parts of Maryland. Children from low socioeconomic status schools continue to have greater needs than their high socioeconomic status counterparts have.

Recommendations for Future Oral Health Assessments

The goal of every statewide oral health assessment is to yield an accurate snapshot of oral health status that is representative of the state's public school children in kindergarten and third grade. We offer the following recommendations for future oral health assessments in order to maintain a high level of

scientific integrity.

Problem 1: Selection of a new sample every 5 years

- It is recommended that sentinel surveillance sites be established in Maryland in order to reduce the burden of selecting a new probability sample every time a statewide assessment is conducted
- School administrators, classroom teachers, school nurses, and parents/guardians at the sentinel sites would become familiar with the processes so less detailed explanation would be required
- Sentinel sites would provide the opportunity to follow cohorts of children over time (*e.g.,* as kindergarten students advance to third grade)
- The sentinel sites could be used to supplement some of the statewide probability sample school assessments

*Problem 2: Competing screening activities (*i.e.*, by mobile dental vans and public health clinics)*

- It is recommended that standardized screening criteria be used by all programs involved with screening school children in the state so that children who are screened outside of the parameters of a statewide assessment might also be included in surveillance
    - Standardized screening criteria would require training and oversight by the Department of Health
    - Standardized screening criteria could be designed so that the needs of the competing screening activities are still met

FIGURES AND TABLES

Figure 1: Map of Maryland counties and school districts

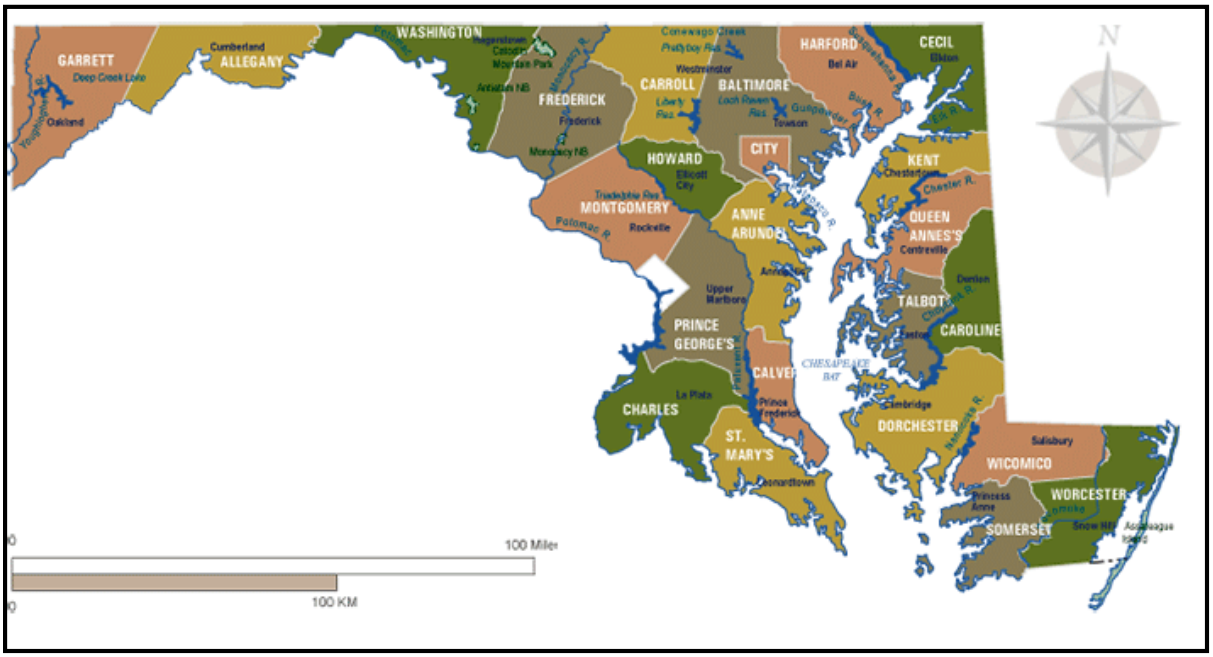

Table 1: Regional identifiers and constituent counties/school districts, Maryland 2015-2016

Number	Name	Constituent counties/school districts
1	Central Baltimore	Anne Arundel, Baltimore City, Baltimore County, Harford
2	Southwest	Howard, Montgomery, Prince George's
3	Eastern Shore	Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, Worcester
4	Southern	Calvert, Charles, St. Mary's
5	Western	Allegany, Carroll, Frederick, Garrett, Washington

Table 2: Frequencies and response rates for oral screening examinations, by region and grade level, Maryland, 2015-2016 (n=7,923*)

Region	Kindergarten		3rd grade		Both grades	
	n	%	n	%	n	%
Overall: All regions	3,833	73.9	4,044	71.4	7,877	72.6
Region 1: Central Baltimore	1,239	75.1	1,211	70.8	2,450	72.9
Region 2: Southwest	1,316	71.1	1,447	71.0	2,763	71.0
Region 3: Eastern Shore	490	76.9	462	66.2	952	71.3
Region 4: Southern	340	72.5	410	74.0	750	73.3
Region 5: Western	448	77.4	514	77.5	962	77.5

Source: Oral Health Survey of Maryland School Children, 2015-2016

*Grade level was unknown for 46 students

Table 3: Unweighted sample characteristics, by grade level and region, Maryland, 2015-2016 (n=7,877)

Sample characteristics	Region				
	Central Baltimore	Southwest	Eastern Shore	Southern	Western
	Frequency (percentage)				
Total	2,450 (100)	2,763 (100)	952 (100)	750 (100)	962 (100)
Grade level					
Kindergarten	1,239 (50.6)	1,316 (47.6)	490 (51.5)	340 (45.3)	448 (46.6)
3rd grade	1,211 (49.4)	1,447 (52.4)	462 (48.5)	410 (54.7)	514 (53.4)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 4: Weighted sample characteristics, by grade level and region, Maryland, 2015-2016 (n=7,877)

Sample characteristics	Region				
	Central Baltimore	Southwest	Eastern Shore	Southern	Western
	Frequency (percentage)				
Total	41,680 (100)	69,800 (100)	6,675 (100)	6,061 (100)	9,878 (100)
Grade level					
Kindergarten	22,014 (52.8)	33,229 (47.6)	3,359 (50.3)	2,686 (44.3)	4,651 (47.1)
3rd grade	19,666 (47.2)	36,571 (52.4)	3,316 (49.7)	3,375 (55.6)	5,227 (52.9)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 5: Weighted prevalence of dental caries (history of dental caries including treated and untreated) in <u>either dentition</u>, by grade level, Maryland, 2015-2016 (n=7,850)

Sample characteristics	History of dental caries	No history of dental caries (caries free)
	Percentage (standard error)	
Total	35.9 (1.6)	64.1 (1.6)
Grade level		
Kindergarten	30.2 (1.4)	69.8 (1.4)
3rd grade	41.3 (1.9)	58.7 (1.9)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 6: Weighted prevalence of dental caries (history of dental caries including treated and untreated) in <u>either dentition</u>, by grade level and region, Maryland, 2015-2016 (n=7,850)

Sample characteristics	Region				
	Central Baltimore	Southwest	Eastern Shore	Southern	Western
	Percentage (standard error)				
Total	36.4 (2.8)	35.9 (2.4)	44.4 (3.7)	34.0 (0.9)	28.8 (2.5)
Grade level					
Kindergarten	33.5 (2.5)	28.9 (2.1)	35.9 (4.8)	25.5 (2.8)	22.7 (3.4)
3rd grade	39.6 (3.9)	42.3 (2.9)	53.1 (3.5)	40.7 (1.7)	34.2 (2.6)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 7: Weighted prevalence of untreated dental caries in <u>either dentition</u>, by grade level, Maryland, 2015-2016 (n=7,850)

Sample characteristics	History of untreated dental caries	No untreated dental caries
	Percentage (standard error)	
Total	13.6 (0.8)	86.4 (0.8)
Grade level		
Kindergarten	13.4 (0.8)	86.6 (0.8)
3rd grade	13.8 (1.0)	86.2 (1.0)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 8: Weighted prevalence of untreated dental caries in <u>either dentition</u>, by grade level and region, Maryland, 2015-2016 (n=7,850)

Sample characteristics	Region				
	Central Baltimore	Southwest	Eastern Shore	Southern	Western
	Percentage (standard error)				
Total	13.1 (1.2)	14.4 (1.3)	19.5 (3.5)	9.1 (1.3)	9.2 (1.8)
Grade level					
Kindergarten	14.6 (1.6)	13.4 (1.2)	18.3 (4.2)	8.1 (1.8)	8.1 (1.9)
3rd grade	11.5 (1.3)	15.4 (1.6)	20.7 (3.9)	9.9 (1.2)	10.1 (1.9)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 9: Weighted prevalence of having at least one dental sealant on an erupted permanent 1st molar among public elementary students <u>in 3rd grade</u>, Maryland, 2015-2016 (n=4,044)

Sample characteristics	Has at least one dental sealant	Does not have at least one dental sealant
	Percentage (standard error)	
Total	41.4 (2.1)	58.6 (2.1)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 10: Weighted prevalence of having at least one dental sealant on an erupted permanent 1st molar among public elementary students in 3rd grade, by region, Maryland, 2015-2016 (n=4,044)

Sample characteristics	Region				
	Central Baltimore	Southwest	Eastern Shore	Southern	Western
	Percentage (standard error)				
Total	44.6 (4.3)	40.4 (3.1)	27.8 (3.4)	48.5 (3.6)	40.6 (4.8)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 11: Weighted prevalence of needing dental sealants on at least one erupted permanent 1st molar among public elementary students in 3rd grade, Maryland, 2015-2016 (n=4,044)

Sample characteristics	Needs at least one dental sealant	Does not need dental sealants
	Percentage (standard error)	
Total	66.0 (2.1)	34.0 (2.1)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 12: Weighted prevalence of needing dental sealants on at least one erupted permanent 1st molar among public elementary students in 3rd grade, by region, Maryland, 2015-2016 (n=4,044)

Sample characteristics	Region				
	Central Baltimore	Southwest	Eastern Shore	Southern	Western
	Percentage (standard error)				
Total	59.9 (4.2)	69.7 (3.1)	72.6 (5.2)	61.1 (5.0)	62.5 (4.6)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 13: Weighted prevalence of needing a dental cleaning among public elementary students, by grade level, Maryland, 2015-2016 (n=7,850)

Sample characteristics	Needs a dental cleaning	Does not need a dental cleaning
	Percentage (standard error)	
Total	12.6 (1.9)	87.4 (1.9)
Grade level		
Kindergarten	8.2 (1.4)	91.8 (1.4)
3rd grade	16.7 (2.7)	83.3 (2.7)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 14: Weighted prevalence of treatment urgency, by region and grade level, Maryland, 2015-2016 (n=7,877)

	Treatment Urgency		
Sample characteristics	Urgent	Early	None
	Percentage (standard error)		
Total	0.7 (0.2)	13.0 (0.8)	86.3 (0.8)
Grade level			
Kindergarten	0.8 (0.2)	12.6 (0.8)	86.6 (0.9)
3rd grade	0.6 (0.2)	13.3 (0.9)	86.0 (1.0)
Central Baltimore	0.9 (0.3)	12.3 (1.0)	86.8 (1.2)
Grade level			
Kindergarten	0.9 (0.4)	13.7 (1.4)	85.4 (1.6)
3rd grade	0.8 (0.3)	10.8 (1.1)	88.4 (1.3)
Southwest	0.8 (0.3)	13.8 (1.3)	85.4 (1.3)
Grade level			
Kindergarten	0.9 (0.4)	12.5 (1.1)	86.6 (1.2)
3rd grade	0.6 (0.2)	15.0 (1.6)	84.4 (1.6)
Eastern Shore	1.0 (0.9)	18.1 (2.9)	80.9 (3.3)
Grade level			
Kindergarten	1.1 (1.0)	16.9 (3.3)	82.0 (4.1)
3rd grade	0.8 (0.7)	19.4 (3.5)	79.8 (3.6)
Southern	0.1 (0.09)	8.9 (1.3)	91.0 (1.3)
Grade level			
Kindergarten	0.2 (0.2)	7.9 (1.8)	91.9 (1.8)
3rd grade	0.0 (0.0)	9.7 (1.2)	90.3 (1.2)
Western	0.1 (0.1)	9.0 (1.8)	90.9 (1.8)
Grade level			
Kindergarten	0.0 (0.0)	8.1 (1.9)	91.9 (1.9)
3rd grade	0.2 (0.2)	9.8 (1.9)	90.0 (1.9)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 15: Weighted prevalence of dental caries (history of dental caries including treated and untreated) in either dentition, by free/reduced meal status of the school, Maryland, 2015-2016 (n=7,850)

Sample characteristics	History of dental caries	No history of dental caries (caries free)
	Percentage (standard error)	
Total	35.9 (1.6)	64.1 (1.6)
Free/reduced meal status of the school		
Low proportion	26.7 (1.5)	73.3 (1.5)
Middle proportion	36.6 (1.2)	63.4 (1.2)
High proportion	45.4 (2.0)	54.6 (2.0)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 16: Weighted prevalence of dental caries (history of dental caries including treated and untreated) in either dentition, by free/reduced meal status of the school and region, Maryland, 2015-2016 (n=7,850)

Sample characteristics	Region				
	Central Baltimore	Southwest	Eastern Shore	Southern	Western
	Percentage (standard error)				
Total	36.4 (2.8)	35.9 (2.4)	44.4 (3.7)	34.0 (0.9)	28.8 (2.5)
Free/reduced meal status of the school					
Low proportion	25.8 (2.9)	26.3 (2.3)	34.8* (---)	34.4 (1.3)	25.3 (2.4)
Middle proportion	37.3 (1.8)	35.8 (1.9)	44.1 (3.5)	33.5 (1.6)	31.1 (0.6)
High proportion	44.9 (3.8)	45.6 (2.5)	50.0 (3.5)	n/a	41.3* (---)

Source: Oral Health Survey of Maryland School Children, 2015-2016

*Estimate may be unreliable due to small cell size

Table 17: Weighted prevalence of untreated dental caries in either dentition, by free/reduced meal status of the school, Maryland, 2015-2016 (n=7,850)

Sample characteristics	History of untreated dental caries	No untreated dental caries
	Percentage (standard error)	
Total	13.6 (0.8)	86.4 (0.8)
Free/reduced meal status of the school		
Low proportion	10.4 (1.0)	89.6 (1.0)
Middle proportion	15.9 (1.3)	84.1 (1.3)
High proportion	15.5 (1.6)	84.5 (1.6)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 18: Weighted prevalence of untreated dental caries in either dentition, by free/reduced meal status of the school and region, Maryland, 2015-2016 (n=7,850)

Sample characteristics	Region				
	Central Baltimore	Southwest	Eastern Shore	Southern	Western
	Percentage (standard error)				
Total	13.1 (1.2)	14.4 (1.3)	19.5 (3.5)	9.1 (1.3)	9.2 (1.8)
Free/reduced meal status of the school					
Low proportion	9.9 (1.7)	11.7 (1.7)	13.4* (---)	7.5 (1.1)	7.1 (1.8)
Middle proportion	17.0 (2.1)	15.7 (2.0)	20.5 (5.4)	10.8 (1.9)	11.9 (4.9)
High proportion	13.6 (1.6)	16.4 (2.6)	20.4 (7.8)	n/a	14.1* (---)

Source: Oral Health Survey of Maryland School Children, 2015-2016

*Estimate may be unreliable due to small cell size

Table 19: Weighted prevalence of having at least one dental sealant on an erupted permanent 1st molar among public elementary students in 3rd grade, by free/reduced meal status of the school, Maryland, 2015-2016 (n=4,044)

Sample characteristics	Has at least one dental sealant	Does not have at least one dental sealant
	Percentage (standard error)	
Total	41.4 (2.1)	58.6 (2.1)
Free/reduced meal status of the school		
Low proportion	39.7 (3.0)	60.3 (3.0)
Middle proportion	38.9 (3.7)	61.1 (3.7)
High proportion	45.1 (4.2)	54.9 (4.2)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 20: Weighted prevalence of having at least one dental sealant on an erupted permanent 1st molar among public elementary students in 3rd grade, by free/reduced meal status of the school and region, Maryland, 2015-2016 (n=4,044)

Sample characteristics	Region				
	Central Baltimore	Southwest	Eastern Shore	Southern	Western
	Percentage (standard error)				
Total	44.6 (4.3)	40.4 (3.1)	27.8 (3.4)	48.5 (3.6)	40.6 (4.8)
Free/reduced meal status of the school					
Low proportion	45.5 (8.6)	35.5 (3.3)	26.7* (---)	50.8 (4.9)	39.5 (2.6)
Middle proportion	42.8 (10.1)	37.5 (3.7)	30.2 (4.4)	45.8 (6.2)	38.3* (24.0)
High proportion	44.7 (5.6)	46.5 (6.1)	23.2 (9.8)	n/a	50.0* (---)

Source: Oral Health Survey of Maryland School Children, 2015-2016

*Estimate may be unreliable due to small cell size

Table 21: Weighted prevalence of needing dental sealants on at least one erupted permanent 1st molar among public elementary students in 3rd grade, by free/reduced meal status of the school, Maryland, 2015-2016 (n=4,044)

Sample characteristics	Needs at least one dental sealant	Does not need dental sealants
	Percentage (standard error)	
Total	66.0 (2.1)	34.0 (2.1)
Free/reduced meal status of the school		
Low proportion	63.4 (3.1)	36.6 (3.1)
Middle proportion	69.5 (2.4)	30.5 (2.4)
High proportion	66.4 (4.7)	33.6 (4.7)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 22: Weighted prevalence of needing dental sealants on at least one erupted permanent 1st molar among public elementary students in 3rd grade, by free/reduced meal status of the school and region, Maryland, 2015-2016 (n=4,044)

Sample characteristics	Region				
	Central Baltimore	Southwest	Eastern Shore	Southern	Western
	Percentage (standard error)				
Total	59.9 (4.2)	69.7 (3.1)	72.6 (5.2)	61.1 (5.0)	62.5 (4.6)
Free/reduced meal status of the school					
Low proportion	55.2 (9.0)	68.9 (3.3)	77.8* (---)	61.2 (2.6)	57.7 (3.9)
Middle proportion	57.8 (4.3)	76.3 (3.2)	71.6 (6.0)	61.1 (11.6)	78.5 (11.7)
High proportion	65.7 (6.0)	66.8 (6.9)	72.1 (18.6)	n/a	57.1* (---)

Source: Oral Health Survey of Maryland School Children, 2015-2016

*Estimate may be unreliable due to small cell size

Table 23: Weighted prevalence of needing a dental cleaning among public elementary students, by free/reduced meal status of the school, Maryland, 2015-2016 (n=7,850)

Sample characteristics	Needs a dental cleaning	Does not need a dental cleaning
	Percentage (standard error)	
Total	12.6 (1.9)	87.4 (1.9)
Free/reduced meal status of the school		
Low proportion	11.0 (2.1)	89.0 (2.1)
Middle proportion	16.4 (4.2)	83.6 (4.2)
High proportion	11.4 (3.3)	88.6 (3.3)

Source: Oral Health Survey of Maryland School Children, 2015-2016

Table 24: Weighted prevalence of treatment urgency, by region and free/reduced meal status of the school, Maryland, 2015-2016 (n=7,877)

	Treatment Urgency		
Sample characteristics	Urgent	Early	None
	Percentage (standard error)		
Total	0.7 (0.2)	13.0 (0.8)	86.3 (0.8)
Free/reduced meal status of the school			
Low proportion	0.3 (0.1)	10.3 (1.0)	89.4 (1.1)
Middle proportion	1.5 (0.4)	14.6 (1.2)	83.9 (1.4)
High proportion	0.6 (0.2)	14.8 (1.5)	84.6 (1.6)
Central Baltimore	0.9 (0.3)	12.3 (1.0)	86.8 (1.2)
Free/reduced meal status of the school			
Low proportion	0.5 (0.3)	9.4 (1.5)	90.1 (1.7)
Middle proportion	1.2 (0.5)	15.9 (2.1)	82.9 (2.6)
High proportion	1.0 (0.5)	12.6 (1.2)	86.4 (1.6)
Southwest	0.8 (0.3)	13.8 (1.3)	85.4 (1.3)
Free/reduced meal status of the school			
Low proportion	0.3 (0.2)	11.7 (1.7)	88.0 (1.8)
Middle proportion	2.1 (0.9)	14.0 (1.9)	83.9 (2.1)
High proportion	0.4 (0.2)	15.8 (2.5)	83.8 (2.6)

Eastern Shore	1.0 (0.9)	18.1 (2.9)	80.9 (3.3)
Free/reduced meal status of the school			
Low proportion	0.0* (---)	13.5* (---)	86.5* (---)
Middle proportion	1.7 (1.5)	18.6 (4.3)	79.7 (5.3)
High proportion	0.0* (---)	19.4 (6.8)	80.6 (6.8)
Southern	0.1 (0.09)	8.9 (1.3)	91.0 (1.3)
Free/reduced meal status of the school			
Low proportion	0.0* (---)	7.1 (0.9)	92.9 (0.9)
Middle proportion	0.2 (0.2)	10.7 (0.8)	89.1 (2.0)
High proportion	n/a	n/a	n/a

Table 24: Weighted prevalence of treatment urgency, by region and free/reduced meal status of the school, Maryland, 2015-2016 (n=7,877) (continued)

	Treatment Urgency		
Sample characteristics	Urgent	Early	None
	Percentage (standard error)		
Total	0.7 (0.2)	13.0 (0.8)	86.3 (0.8)
Western	0.1 (0.1)	9.0 (1.8)	90.9 (1.8)
Free/reduced meal status of the school			
Low proportion	0.2 (0.2)	7.0 (1.8)	92.8 (1.9)
Middle proportion	0.0* (---)	11.9 (4.9)	88.1 (4.9)
High proportion	0.0* (---)	13.6* (---)	86.4* (---)

Source: Oral Health Survey of Maryland School Children, 2015-2016

*Estimate may be unreliable due to small cell size

Figure 2: Weighted prevalence of dental caries (history of dental caries including treated and untreated) in either dentition, by grade level and study period, Maryland, 2011-2012 and 2015-2016

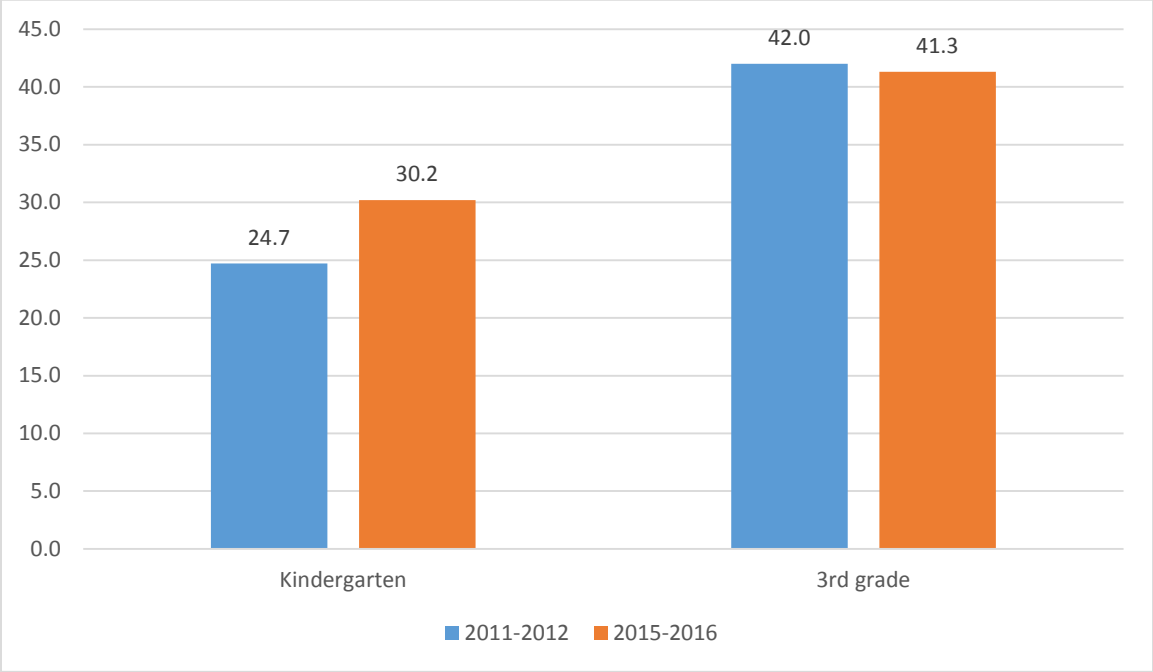

Table 25: Weighted prevalence of dental caries (history of dental caries including treated and untreated) in either dentition, by grade level, free/reduced meal status of the school, and survey period, Maryland, 2011-2012 and 2015-2016

	Free/reduced meal status of the school		
Grade level and survey period	Low proportion	Middle proportion	High proportion
	Percentage (standard error)		
Kindergarten			
2011-2012	17.0 (1.4)	22.8 (1.6)	35.9 (2.9)
2015-2016	21.3 (1.7)	33.4 (2.2)	37.4 (2.8)
Third grade			
2011-2012	32.1 (2.9)	44.2 (3.4)	54.3 (7.7)
2015-2016	31.7 (2.5)	39.8 (2.6)	53.2 (4.1)

Sources: Oral Health Survey of Maryland School Children, 2011-2012 and Oral Health Survey of Maryland School Children, 2015-2016

Figure 3: Weighted prevalence of untreated dental caries in either dentition, by grade level and study period, Maryland, 2011-2012 and 2015-2016

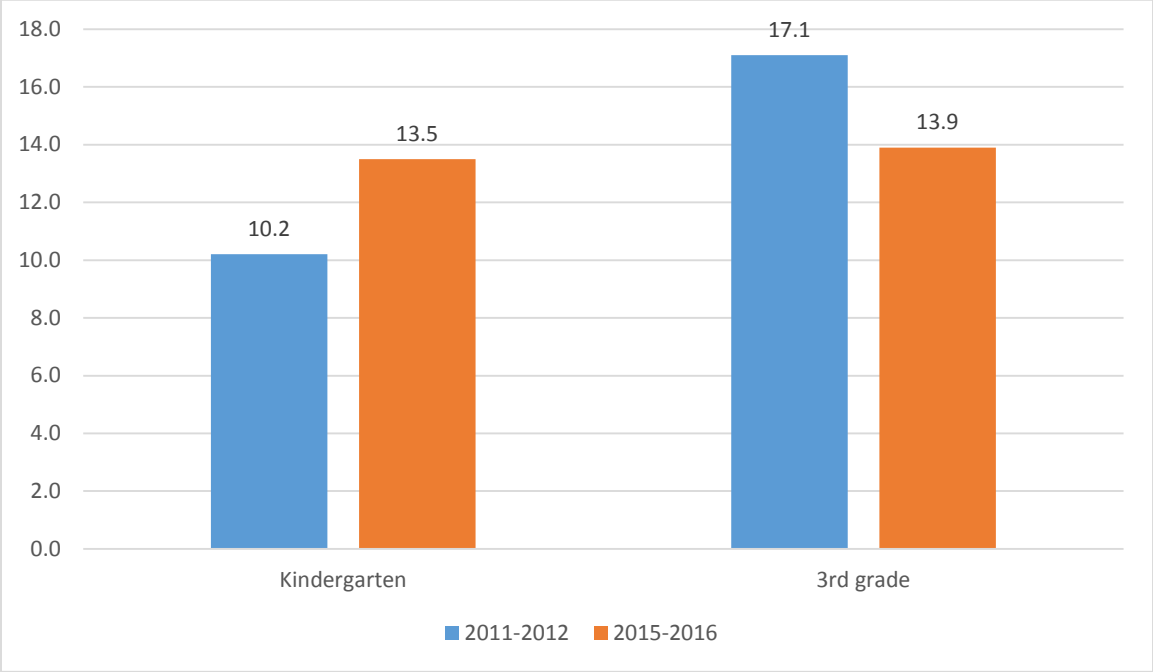

Table 26: Weighted prevalence of untreated dental caries in either dentition, by grade level, free/reduced meal status of the school, and survey period, Maryland, 2011-2012 and 2015-2016

	Free/reduced meal status of the school		
Grade level and survey period	Low proportion	Middle proportion	High proportion
	Percentage (standard error)		
Kindergarten			
2011-2012	6.4 (0.6)	10.6 (1.0)	14.7 (1.9)
2015-2016	9.7 (0.8)	17.5 (1.2)	14.5 (1.2)
Third grade			
2011-2012	10.8 (1.3)	21.0 (2.3)	22.5 (2.6)
2015-2016	11.2 (1.1)	14.4 (1.0)	16.5 (1.4)

Sources: Oral Health Survey of Maryland School Children, 2011-2012 and Oral Health Survey of Maryland School Children, 2015-2016

Figure 4: Weighted prevalence of having at least one dental sealant on an erupted permanent 1st molar among public elementary school children in 3rd grade only, by study period, Maryland, 2011-2012 and 2015-2016

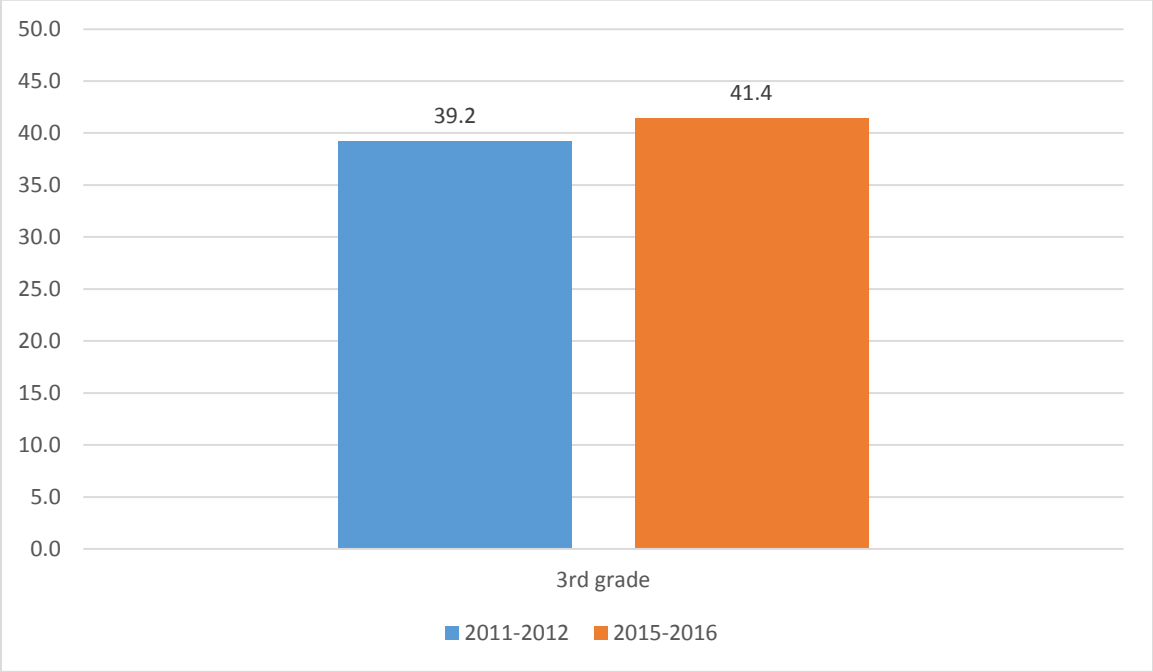

Table 27: Weighted prevalence of having at least one dental sealant on an erupted permanent 1st molar among public elementary school children in 3rd grade only, by free/reduced meal status of the school and survey period, Maryland, 2011-2012 and 2015-2016

	Free/reduced meal status of the school		
Grade level and survey period	Low proportion	Middle proportion	High proportion
	Percentage (standard error)		
Third grade			
2011-2012	41.7 (3.5)	37.1 (2.7)	37.5 (3.6)
2015-2016	39.7 (3.1)	39.0 (2.7)	45.1 (3.8)

Sources: Oral Health Survey of Maryland School Children, 2011-2012 and Oral Health Survey of Maryland School Children, 2015-2016

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APPENDICES

APPENDIX A: IRB APPROVAL DOCUMENTS

April 22, 2015

Mrs. Gay Hutchen
IRB Administrator
MD Department of Health & Mental Hygiene
Institutional Review Board
201 West Preston Street
Baltimore MD 21201

Re: Request for Waiver of IRB Review for the Maryland School Children Survey

Dear Mrs. Hutchen:

During the 2015-2016 school year, the Maryland Department of Health & Mental Hygiene will conduct the fifth Oral Health Survey of Maryland School Children. The Oral Health Survey of Maryland School Children is part of Maryland's ongoing oral health surveillance system; designed to obtain information on the oral health status of Maryland kindergarten and third grade children. Since 1995, the Oral Health Survey of Maryland School Children has been conducted every five years. Its consistency in approach has allowed for temporal oral health surveillance. In addition, as part of public health activity, an aggregate report (all data will be de-identified and in aggregate format) will be shared as state-specific data for the National Oral Health Surveillance System as required by the Centers for Disease Control and Prevention. Although the 2010-2011 survey was reviewed and approved by the IRB, we believe that the project is public health practice rather than human subjects' research. For this reason, we are requesting that the 2015-2016 survey be exempt from IRB review.

The Oral Health Survey of Maryland School Children is conducted every 3-5 years and has been reviewed continuously by the DHMH IRB since 1995. This project, initially mandated by senate bill 590 (Ch. 113 of the Acts of 1998), has been a valuable tool in assessment and planning for the Office of Oral Health. Each survey contain three components 1) a health questionnaire that is sent to parents to assess the child's oral health, 2) a screening to determine the current oral health status of the child, 3) a report sent to the parents with the child's screening results. It is important to note that this screening is not a full examination. The dentist and/or dental hygienist is simply looking in the child's mouth, possibly with a tongue depressor. The screening is a non-invasive, one minute assessment of the teeth.

<u>Reasons for Request for Exemption</u>

The Office of Oral Health is requesting that the Oral Health Survey of Maryland School Children be re-evaluated as "Exempt" rather than "Approved" as previously submitted, based on the following key points:

- Newly available information indicates that the project should be considered public health practice rather than research (Public Health Practice vs. Research). As described in the Council of State and Territorial Epidemiologists (CSTE) report *Public Health Practice vs. Research* (May 2004), public health practice involves the application of proven methods to monitor the health status of the community.
- The participants, rather than an external population, will receive the benefits (a free oral screening report and list of dentists);
- Individual health identifiers will not be collected or used as part of this surveillance project;
- The oral health surveillance system will not test any hypotheses.

Based on the factors listed above, we believe that the Oral Health Survey of Maryland School Children is public health practice rather than research and thus exempt from IRB Review.

Please see the abstract summary for more details about the project.

If you have any questions, please don't hesitate to contact me by phone or email.

Sincerely,

Harold J Goodman, DMD, M.P.H.

Dr. Harry Goodman

STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene

INSTITUTIONAL REVIEW BOARD

201 W. Preston Street • Baltimore Maryland 21201

Carol Johnston, APRN, PMH, BC, Chairperson

May 12, 2015

Harry Goodman, DMD, MPH
DHMH - Office of Oral Health
201 W. Preston Street
Baltimore, MD 21201

REF: Protocol #15-31

Dear Dr Goodman:

Your proposal entitled, "Oral Health Survey of Maryland School Children 2015-2016" was received by the Institutional Review Board (IRB) and reviewed by an expedited process. Your protocol does not meet the definition of research in accordance with 45 CFR 46.102(d) and such is exempt from IRB approval. No further IRB review is necessary unless you modify the protocol.

Thank you for your responsiveness to the IRB process. If you have any questions, please feel free to contact Ms. Gay Hutchen, IRB Administrator at 410-767-8448.

Sincerely,

Carol Johnston, APRN, PMH, BC
Chairperson
Institutional Review Board

cc: IRB Members

410-767-8448 Fax 410-333-7888
Toll Free 1-877-4MD-DHMH TYY for Disabled - Maryland Relay Service 1-800-735-2258
Web Site: www.cha.state.md.us/irb

APPENDIX B: LETTER TO SCHOOL DISTRICT SUPERINTENDENTS

Dr. <Name Here>
Chief Executive Officer
Baltimore City Public Schools
200 East North Avenue
Baltimore, MD 21202

Dear Dr. <Name Here>:

The University of Maryland School of Dentistry and the Maryland Department of Health and Mental Hygiene are seeking the participation of your school district in the *Oral Health Survey of Maryland School Children, 2015-2016* (*Oral Health 15/16*). What is *Oral Health 15/16?* It is an assessment of the oral health status of public schoolchildren in kindergarten and 3rd grade. Approximately every five years, Maryland is required to conduct this survey and to issue a report that will be disseminated to state and federal agencies. *Oral Health 15/16* represents the next of these scheduled assessments.

As you may know, tooth decay is the most common chronic disease in children. In order to effectively address this public health problem, an accurate assessment of dental needs in Maryland is needed. Your participation will help us bring beneficial dental programs to your region and other areas in the state.

Previous assessments have provided valuable insights into the dental health status of Maryland's children. Findings from the last survey, conducted during the 2011-2012 term, revealed significant unmet dental need in the state – 10.2% of public schoolchildren in kindergarten and 17.1% of schoolchildren in 3rd grade had untreated tooth decay at the time. These findings were used to allocate resources at the state and county levels, as well as solicit grant funds for preventive dental programs targeted to the children with the highest levels of need.

Approximately 50-60 elementary schools will be selected at random by our survey team to participate from among all public schools in the state. Once your support is provided, about 2-5 elementary schools will be selected from your school district. Students in kindergarten and 3rd grade from these selected schools will then be given an opportunity to participate.

In preparation for the assessment, an information packet will be sent home to parents containing: a description of the project, an opt-out form, and a disclosure of information form (draft versions enclosed). A brief oral screening examination will be conducted at a designated area within their school by a member of the survey team who is a licensed Maryland dental hygienist. This examiner will count the teeth, look for tooth decay, dental sealants, and other findings, and determine the need for follow-up care. A new, disposable dental mirror and tongue depressor will be used for each child and strict adherence to infection control will be followed at all times. The same procedures that were successfully used in previous years will be used during the *Oral Health 15/16* assessment.

Upon completion of the screening examination, each child will receive a *Summary of Findings* form describing the results of their screening examination (draft version is enclosed). A copy of the *Summary of Findings* form will also be given to the school nurse. In addition, each participating child will also receive a toothbrush and some fun items (*e.g.,* coloring book, stickers) to take home.

A *Frequently Asked Questions* brochure is enclosed in this mailing to provide additional information about the *Oral Health 15/16* project. A letter of support from Maryland's State Dental Director, Dr. Harry Goodman, and a copy of the letter from Dr. Lillian Lowery, State Superintendent, are also enclosed.

Within the next two weeks, you will be contacted by our Project Director, Ms. Susan Coller. She will provide further details about the project and answer any questions that you might have. Once your support is provided, the survey team will proceed with the selection of a random sample of schools from your district. The principals of these selected schools will also be contacted by Ms. Coller.

We thank you for your attention to this important request. If you have any questions for the Principal Investigators of this project, their contact information is provided below. We look forward to the opportunity to work with you and your staff.

Most gratefully yours,

Mark D. Macek

Mark D. Macek, DDS, DrPH
Associate Professor
Division of Health Services Research

Daphene Altema-Johnson

Daphene Altema-Johnson, MPH, MBA
Epidemiologist / Evaluation Scientist
Office of Oral Health

Enclosures (5)

APPENDIX C: LETTER TO SCHOOL PRINCIPALS

<Name
School Name
Address
City, MD, Postal Code>

Hello,

Enclosed, please find the envelope packets for the *Oral Health Survey of Maryland School Children, 2015-2016.* I included a few additional packets, in case they are needed.

As we discussed, our project team will visit your school on <**date here>.**

In preparation for our visit, please distribute the envelope packets as soon as possible to the children in **kindergarten and third grades, only.** Each child should take a packet home to his or her parents.

The envelope packet contains several documents. The first document is a "Disclosure Statement" form that explains details about the project. The second document is a "Frequently Asked Questions" flyer that provides useful information and an explanation of what will be done on the day of the "Smile Check" screening. The third document is an "Opt-Out" form, addressed to the parents. At the bottom of the "Opt-Out" form, there is a tear-off portion. Parents who do not want their child to receive a "Smile Check", should check the "No" box and return the form to the child's teacher.

Prior to our visit, I will contact you to discuss last-minute details and to determine how many children are likely to be screened. It will be helpful if the "Opt-Out" forms that are returned could be sorted by grade and classroom. Having the forms sorted will enable us to move the screening process along as quickly as possible. Recall that the "Smile Check" takes only about one minute, so children will be out of their classrooms for only a brief time.

I am also including a list of items that will be helpful to our team when we arrive at your school. If you need more information or have questions about the visit, please call me at **410-xxx-xxxx** or email me at **susan.coller@maryland.gov**.

Thank you very much for your assistance in making this project possible. The results of the project will be used to measure the effectiveness of ongoing dental programs and guide future policy for Maryland's public school children.

Sincerely,

Susan Coller

Project Director

APPENDIX D: LIST OF REQUIRED ITEMS

REQUESTED ITEMS

Our project team kindly requests that the following items be available when the team visits your school. If you have any questions, please contact Ms. Susan Coller at 410-916-2838 or susan.coller@maryland.gov.

- 2-3 tables or desks for supplies and paperwork
- 6 adult-size chairs
- Well-lit room/location with at least 1 electric outlet available
- 2 trash cans

Although not required, the project team always appreciates 1-2 “parent helpers” who might be available to help bring students to and from the “Smile Check” area

APPENDIX E: INFORMATION PACKET MATERIALS

Oral Health Survey of Maryland School Children, 2015-2016

Sponsored by the Maryland Department of Health and Mental Hygiene
Project Director: Ms. Susan Coller; 410-xxx-xxxx

Please, open as soon as possible!

STATEMENT OF DISCLOSURE

Participation in this project is voluntary. You can ask questions about this project at any time.

PURPOSE OF PROJECT

- The purpose of this project is to measure the dental health of children in kindergarten and 3rd grade who attend public schools in Maryland.
- You and your child are being asked to be in this project because your child's school was selected to participate.
- All children in kindergarten and 3rd grade from your child's school are being asked to participate.
- A total of about 7,500-10,000 children will take part in the project from a sample of 60 elementary schools in Maryland.

PROCEDURES

- The project includes a 1-minute "smile check" dental screening.
- The dental screening will take place at your child's school. A licensed dental hygienist will look at your child's teeth with a dental mirror and light. The dental hygienist will use a new, disposable dental mirror and new disposable dental gloves for each child.
- During the "smile check" dental screening, the dental hygienist will count your child's teeth and look for cavities and fillings. The dental hygienist will also see if your child needs dental treatment or dental sealants. The dental hygienist will not take x-rays.
- You will get a copy of all results after the "smile check" dental screening. The school nurse will also get a copy of your child's results. Except for the project team and the school nurse, no other person, agency, or organization will see your child's screening results.
- If your child needs dental treatment and you do not have a family dentist, we will provide a list of dentists in your area that treat children and accept Medicaid insurance.

POTENTIAL RISKS/DISCOMFORTS:

- The risk to you and your child for being in this project is minimal. Any risk anticipated in this project is no more than would be expected during a routine dental health screening.
- In all studies there is a risk for potential loss of confidentiality. Loss of confidentiality will be minimized in this project by allowing only members of the project team and the school nurse to see your child's "smile check" dental screening results. Loss of confidentiality will also be minimized by storing your child's information in a secure, locked cabinet.

POTENTIAL BENEFITS

- You and your child may or may not benefit from taking part in this project. There is no guarantee that you and your child will receive direct benefit from your participation in this study. The dental screening may identify cavities, and it may identify the need for dental treatment or sealants.
- You need to decide if your child's participation in this project is in your child's best interest.

ALTERNATIVES TO PARTICIPATION

- This is not a treatment study. The alternative to participation is to not take part. If you chose not to take part, your child's healthcare will not be affected.

COSTS TO PARTICIPANTS

- It will not cost you anything to take part in this project.

PAYMENT TO PARTICIPANTS

- You and your child will not be paid to participate in this project.
- If cavities or other need for dental treatment are identified, you will be given a list of dental clinics in your area that can provide dental treatment for your child. The project will not pay for these treatments.

CONFIDENTIALITY

- The dental screening and the health questionnaire contain confidential health information. Only members of the project team and school nurse at your child's school will have access to your child's results. The confidential information contained in the "smile check" dental screening will only be used for the purposes of this project.

RIGHT TO WITHDRAW

- Your participation in this project is voluntary. You and your child do not have to take part in this project.
- **If you do not want your child to participate, please check the NO box on the opt-out screening form included in this envelope. If you do want your child to participate, you do not need to return the opt-out screening form.**
- Refusal to take part or to stop taking part in the project will involve no penalty or loss of benefits to which you are otherwise entitled.
- If you decide to stop taking part, if you have questions, concerns, or complaints, or if you need to report an injury related to this project, please contact the Project Director, **Ms. Susan Colle**r, at **410-xxx-xxxx**.
- There are no adverse consequences (physical, social, economic, legal, or psychological) of your decision to withdraw from this project.

Q. What happens if the dental hygienist finds tooth decay or a serious dental problem?

A. Although the main purpose of the *Oral Health Survey* is to describe the overall dental health of school children in Maryland, the other purpose is to refer children with dental problems to a dentist for care. At the end of the screening, your child will get a letter that describes the results. You will also get a list of dental clinics in their area that can provide treatment services or dental sealants, if needed.

Q. Who will see the results?

A. Only members of the *Oral Health Survey* project team and the school nurse at your child's school will have access to the screening information. Final reports written by the state health department will contain summary results only. At no time will individual schools or individual school children be identified or described. The project team will follow all rules for maintaining confidentiality defined by the Maryland Department of Education, Maryland Department of Health and Mental Hygiene, and University of Maryland, Baltimore.

Q. What if I have additional questions?

A. Members of the *Oral Health Survey* project team are happy to answer any of your questions. Please, feel free to contact the Project Director, Ms. Susan Coller, at 410-[redacted]

Thank you very much for your time.

Oral Health Survey of Maryland School Children 2015-2016

Frequently Asked Questions

Sponsored by the
Office of Oral Health
Maryland Department of Health and Mental Hygiene
Baltimore, Maryland

Project Director
Ms. Susan Coller
(410) [redacted]

Oral Health Survey of Maryland School Children 2015-2016

FREQUENTLY ASKED QUESTIONS

Q. What is this project?

A. The *Oral Health Survey of Maryland School Children, 2015-2016* (also known as *Oral Health Survey*) will describe the dental health of public school children in kindergarten and 3rd grade from a sample of about 60 Maryland schools.

Q. What is the purpose of this project?

A. Maryland must measure the dental health of its public school children every five years so that public health programs and funding can be determined. *Oral Health Survey* will show which parts of the state have the highest levels of dental need. It will also show if dental health has improved in Maryland since the last survey in 2011-2012.

Q. Who will conduct the Oral Health Survey?

A. A team of dentists, dental hygienists, and other staff persons under contract with the state health department will conduct *Oral Health Survey*.

Q. Will all school districts and schools be involved?

A. No, the *Oral Health Survey* project team does not have the resources to describe all of the school children in Maryland. Instead, the project team will pick a sample of about 60 elementary schools that represent all Maryland public schools.

Q. Who will do the dental screenings?

A. A group of dental hygienists licensed in Maryland will conduct the dental screenings. Each dental hygienist may also have one or two assistants to help with the paperwork.

Q. Will my child's health benefits be affected if they choose not to participate?

A. No, participation in *Oral Health Survey* is completely voluntary. The healthcare benefits of school children who do not participate will not be affected in any way.

Q. How will the dental screenings be done?

A. The dental hygienist will screen each child in a classroom chair at your child's school. During the screening, the dental hygienist will look for tooth decay and dental fillings. The dental hygienist will also see if any dental treatment or dental sealants are needed. The dental screening will take about 1 minute.

The dental hygienist will use a new pair of disposable gloves and a new, disposable dental mirror for each child. The dental hygienist will follow all health and safety rules, at all times.

All children in kindergarten and 3rd grade will be screened unless their parent/guardian chooses not to let them participate.

Information from the dental screening will be kept confidential. Only the child's parent/guardian and the school nurse will see the results.

Q. What are dental sealants?

A. A dental sealant is a thin coating painted on the teeth to protect them from tooth decay. Dental sealants can be placed by dentists and dental hygienists in a dental office. Dental sealants will not be placed during *Oral Health Survey*.

Q. Where will the dental screenings take place?

A. The dental screenings will be done in common areas picked by your child's principal or the school nurse. Common areas in the school include places like the cafeteria, library, or gymnasium.

Dear Parent or Guardian:

Your child's school has been selected to take part in the state health department's *Oral Health Survey of Maryland School Children, 2015-2016* (*Oral Health Survey*). The purpose of the *Oral Health Survey* is to describe the dental health needs of kindergarten and 3rd-grade children in Maryland.

If you choose to let your child participate in the *Oral Health Survey*, a licensed dental hygienist will do a 1-minute "smile check" using a dental mirror and light. The dental hygienist will wear new disposable dental gloves and will use a new, disposable dental mirror for each child. Results of your child's "smile check" will be kept confidential. Your child will not be named in any health department reports.

As a "thank you" gift, your child will get a new toothbrush. We will also send home a letter telling you if the dental hygienist found any dental problems and you will get a list of the dental clinics in your area.

This "smile check" does not take the place of a regular dental check-up done by your family dentist. However, even if your child has a dentist, we encourage you to let your child participate in the *Oral Health Survey*. As you know, a healthy mouth is important for total health. By letting your child take part in the *Oral Health Survey*, you will provide the state health department with information that may help all of Maryland's children in the future.

If you do not want your child to have the "smile check" dental screening, please check the NO box on the opt-out form below and return the form to your child's teacher by the end of this week. If you do want your child to have the "smile check", you do not need to return this form. For questions about the Oral Health Survey, you can contact Susan Coller at (410) xxx-xxxx.

Sincerely,

Susan Coller

Project Director

Oral Health Survey of Maryland School Children, 2015-2016 – Opt-Out Form

If you do not want your child to have the "smile check" dental screening, please check the NO box, sign this opt-out form, and return it to your child's teacher by the end of this week.

☐ NO, I do not want my child to receive a "smile check" dental screening

Child's Name: _____ Grade: _____

Child's Teacher: _____

_____ _____

Parent/Guardian Signature Date

Encuesta sobre la salud bucal de los niños de las escuelas de Maryland, 2015-2016

Patrocinada por el Departamento de Salud e Higiene Mental de Maryland
Directora del proyecto: Sra. Susan Coller; 410-xxx-xxxx

¡Ábralo cuanto antes!

DECLARACIÓN DE DIVULGACIÓN

La participación en este proyecto es voluntaria. Puede hacer preguntas sobre este proyecto en cualquier momento.

PROPÓSITO DEL PROYECTO

- El propósito de este proyecto es evaluar la salud dental de los niños en jardín de niños y 3.er grado que asisten a las escuelas públicas de Maryland.
- Se les pide a usted y su hijo que participen en este proyecto porque se seleccionó a la escuela de su hijo para que participe.
- Se les pide a todos los niños de jardín de niños y 3.er grado de la escuela de su hijo que participen.
- En el proyecto participará un total de aproximadamente 7,500 a 10,000 niños, de una muestra de 60 escuelas primarias de Maryland.

PROCEDIMIENTOS

- El proyecto incluye un examen dental de "control de la sonrisa" de 1 minuto.
- El examen dental se realizará en la escuela de su hijo. Un higienista dental certificado controlará los dientes de su hijo con un espejo dental y luz. El higienista dental usará un espejo dental descartable nuevo y guantes dentales descartables nuevos con cada niño.
- Durante el examen dental de "control de la sonrisa", el higienista dental contará los dientes de su hijo, y buscará caries y empastes. El higienista dental también evaluará si su hijo necesita tratamiento dental o selladores dentales. El higienista dental no tomará radiografías.
- Usted recibirá una copia de todos los resultados después del examen dental de "control de la sonrisa". El personal de enfermería de la escuela también recibirá una copia de los resultados de su hijo. Salvo el equipo del proyecto y el personal de enfermería de la escuela, ninguna otra persona, agencia u organización verá los resultados del examen de su hijo.
- Si su hijo necesita tratamiento dental y usted no cuenta con un dentista de cabecera, le brindaremos una lista de dentistas en su área que atiendan a niños y acepten el seguro de Medicaid.

POSIBLES RIESGOS/MOLESTIAS:

- El riesgo que corren usted y su hijo por participar en este proyecto es mínimo. Cualquier riesgo previsto para este proyecto no es mayor que el riesgo que se correría durante un examen de salud dental de rutina.
- En todos los estudios existe el riesgo de una posible pérdida de la confidencialidad. En este proyecto, la pérdida de la confidencialidad se minimizará al permitir que únicamente los integrantes del equipo del proyecto y del personal de enfermería de la escuela vean los resultados del examen dental de "control de la sonrisa" de su hijo. La información de su hijo se almacenará en un armario seguro y cerrado bajo llave, lo que también contribuirá a minimizar la pérdida de confidencialidad.

POSIBLES BENEFICIOS

- Es posible que ni usted ni su hijo se beneficien de la participación en este proyecto. No existen garantías de que usted y su hijo reciban un beneficio directo de su participación en este estudio. El examen dental puede detectar caries y puede identificar la necesidad de recibir tratamiento o selladores dentales.
- Usted debe decidir si la participación de su hijo en este proyecto es lo mejor para él/ella.

ALTERNATIVAS A LA PARTICIPACIÓN

- Este no es un estudio que involucre un tratamiento. La alternativa a la participación es no participar. Si elige no participar, la atención médica de su hijo no se verá afectada.

COSTOS PARA LOS PARTICIPANTES

- Participar en este proyecto no le costará nada.

PAGO A LOS PARTICIPANTES

- Usted y su hijo no recibirán un pago por participar en este proyecto.
- Si se detectan caries o se identifica alguna otra necesidad de tratamiento dental, se le dará una lista de clínicas dentales en su área que puedan brindarle tratamiento dental a su hijo. El proyecto no pagará por dichos tratamientos.

CONFIDENCIALIDAD

- El examen dental y el cuestionario sobre salud contienen información de salud confidencial. Únicamente los integrantes del proyecto y del personal de enfermería de la escuela de su hijo tendrán acceso a los resultados de su hijo. La información confidencial que contiene el examen dental de "control de la sonrisa" solo se usará para los propósitos de este proyecto.

DERECHO A RETIRARSE

- Su participación en este proyecto es voluntaria. Usted y su hijo no están obligados a participar en este proyecto.
- **Si usted no quiere que su hijo participe, marque la casilla "NO" en el formulario de exclusión voluntaria del examen que se incluye en este sobre. Si no quiere que su hijo participe, no es necesario que vuelva a enviar el formulario de exclusión voluntaria del examen.**
- Negarse a participar o dejar de participar en el proyecto no implicará sanciones ni pérdidas de beneficios a los cuales, de otra manera, tiene derecho.
- Si decide dejar de participar, si tiene preguntas, inquietudes o quejas, o si necesita informar una lesión relacionada con este proyecto, comuníquese con la directora del proyecto, la **Sra. Susan Coller**, llamando al **410-xxx-xxxx**.
- No existen consecuencias (físicas, sociales, económicas, legales ni psicológicas) adversas por su decisión de retirarse de este proyecto.

P. ¿Qué sucede si el higienista dental detecta caries o un problema dental grave?

R. Si bien el propósito principal de la *encuesta sobre la salud bucal* es describir la salud bucal general de los niños de las escuelas de Maryland, el otro propósito es remitir a un dentista a los niños que tengan problemas dentales para que reciban atención. Cuando finalice el examen, su hijo recibirá una carta en la que se describirán los resultados. También recibirá una lista de clínicas dentales en su área que puedan proporcionarle los servicios o selladores dentales, de ser necesario.

P. ¿Quién verá los resultados?

R. Únicamente los integrantes del equipo del proyecto de la *encuesta sobre la salud bucal* y la enfermera de la escuela de su hijo tendrán acceso a la información del examen. Los informes finales redactados por el departamento de salud estatal incluirán únicamente un resumen de los resultados. En ningún momento se identificarán o describirán a las escuelas o a los niños de manera individual. El equipo del proyecto seguirá todas las reglas para conservar la confidencialidad que establecen el Departamento de Educación de Maryland, el Departamento de Salud e Higiene Mental de Maryland y la Universidad de Maryland, Baltimore.

P. ¿Qué sucede si tengo preguntas adicionales?

R. A los integrantes del equipo del proyecto de la *encuesta sobre la salud bucal* les complacerá responder sus preguntas. No dude en comunicarse con la directora del proyecto, la Sra. Susan Coller, llamando al 410-[redacted]

Muchas gracias por su tiempo.

Encuesta sobre la salud bucal de los niños de las escuelas de Maryland 2015-2016

Preguntas frecuentes

Patrocinada por la
oficina de salud bucal
Departamento de Salud e Higiene Mental de Maryland
Baltimore, Maryland

Directora del proyecto
Sra. Susan Coller
(410) [redacted]

Encuesta sobre la salud bucal de los niños de las escuelas de Maryland, 2015-2016

PREGUNTAS FRECUENTES

P. ¿De qué se trata este proyecto?

R. La *encuesta sobre la salud bucal de los niños de las escuelas de Maryland, 2015-2016* (también conocida como *encuesta sobre la salud bucal*) describirá la salud dental de los niños de escuelas públicas que estén en jardín de niños y 3.er grado, de una muestra de aproximadamente 60 escuelas de Maryland.

P. ¿Cuál es el propósito de este proyecto?

R. Cada cinco años, Maryland debe evaluar la salud dental de los niños que acuden a las escuelas públicas, para que se puedan determinar los programas y el financiamiento para la salud pública. *La encuesta sobre la salud bucal* revelará qué partes del estado tienen los niveles más altos de necesidades dentales. También revelará si la salud dental en Maryland ha mejorado desde la última encuesta en 2011-2012.

P. ¿Quién realizará la encuesta sobre la salud bucal?

R. Un equipo de dentistas, higienistas dentales y otros integrantes del personal que tengan un contrato con el departamento de salud estatal realizarán la *encuesta sobre la salud bucal*.

P. ¿Estarán todos los distritos escolares y todas las escuelas involucrados?

R. No, el equipo del proyecto de la *encuesta sobre la salud bucal* no cuenta con todos los recursos para incluir a todos los niños de todas las escuelas de Maryland. En su lugar, el equipo del proyecto escogerá una muestra de aproximadamente 60 escuelas primarias que representen a todas las escuelas públicas de Maryland.

P. ¿Quién realizará los exámenes dentales?

R. Un grupo de higienistas dentales con licencia de Maryland estará a cargo de realizar los exámenes dentales. Además, cada higienista dental puede tener uno o dos asistentes que lo ayuden con la documentación.

P. ¿Se verán afectados los beneficios de salud de mi hijo si elige no participar?

R. No, la participación en la *encuesta sobre la salud bucal* es completamente voluntaria. Los beneficios de atención médica de los niños que no participen no se verán afectados de ninguna manera.

P. ¿Cómo se realizarán los exámenes dentales?

R. El higienista dental examinará a cada niño en un pupitre en la escuela. Durante el examen, el higienista dental buscará caries y empastes dentales. El higienista dental también evaluará la necesidad de recibir un tratamiento dental o selladores dentales. El examen dental tomará aproximadamente 1 minuto.

El higienista dental usará un par de guantes descartables nuevo y un espejo dental descartable nuevo por cada niño. El higienista dental seguirá todas las reglas de salud y seguridad, en todo momento.

Todos los niños de jardín de niños y 3.er grado serán examinados, a menos que sus padres/tutores elijan no dejarlos participar.

La información del examen dental será confidencial. Únicamente los padres/tutores del niño y la enfermera de la escuela verán los resultados.

P. ¿Qué son los selladores dentales?

R. Un sellador dental es una película fina que se coloca en el diente para protegerlo de las caries. A los selladores dentales los pueden colocar dentistas e higienistas dentales en un consultorio dental. Los selladores dentales no se colocarán durante la *encuesta sobre la salud bucal*.

P. ¿Dónde se realizarán los exámenes dentales?

R. Los exámenes dentales se realizarán en áreas comunes elegidas por el director de su hijo o la enfermera de la escuela. Las áreas comunes de la escuela incluyen lugares como la cafetería, la biblioteca o el gimnasio.

Estimado/a padre/madre/tutor:

La escuela de su hijo ha sido seleccionada para participar en la *encuesta sobre la salud bucal de los niños de las escuelas de Maryland, 2015-2016* (*encuesta sobre la salud bucal*) del departamento de salud estatal. El propósito de la *encuesta sobre la salud bucal* es describir las necesidades de salud dental de los niños de jardín de niños y 3.er grado de Maryland.

Si elige permitir que su hijo participe en la *encuesta sobre la salud bucal*, un higienista dental autorizado le realizará un examen dental de "control de la sonrisa" de 1 minuto con un espejo dental y luz. El higienista dental usará guantes dentales descartables nuevos y un espejo dental descartable nuevo por cada niño. Los resultados del "control de la sonrisa" de su hijo serán confidenciales. No se nombrará a su hijo en ningún informe del departamento de salud.

Como obsequio de agradecimiento, su hijo recibirá un cepillo dental nuevo. También le enviaremos una carta a través de la cual le informaremos si el higienista dental encontró algún problema dental y recibirá una lista de las clínicas dentales en su área.

Este "control de la sonrisa" no reemplaza el chequeo dental de rutina que suele realizar el dentista de cabecera. Sin embargo, incluso si su hijo cuenta con un dentista, le recomendamos que le permita a su hijo participar en la *encuesta sobre la salud bucal*. Como ya sabe, una boca sana es importante para una salud completa. Al permitirle a su hijo participar en la *encuesta sobre la salud bucal*, le brindará al departamento de salud estatal información que podría ayudar a todos los niños de Maryland en el futuro.

Si no desea que a su hijo se le haga un examen dental de "control de la sonrisa", marque la casilla "NO" del formulario de exclusión voluntaria que figura más abajo y entréguele el formulario al maestro de su hijo antes del fin de esta semana. Si desea que a su hijo se le haga un examen dental de "control de la sonrisa", no es necesario que reenvíe este formulario. Si tiene preguntas sobre la encuesta sobre la salud bucal, puede comunicarse con Susan Coller llamando al (410) xxx-xxxx.

Atentamente.

Susan Coller

Directora del proyecto

Encuesta sobre la salud bucal de los niños de las escuelas de Maryland, 2015-2016 - Formulario de exclusión voluntaria

Si no desea que a su hijo se le haga un examen dental de "control de la sonrisa", marque la casilla "NO", firme este formulario de exclusión voluntaria y entréguelo al maestro de su hijo antes del fin de esta semana.

☐ NO, no deseo que a mi hijo se le haga un examen dental de "control de la sonrisa"

Nombre del niño: _____ Grado: _____

Maestro del niño: _____

_____ _____

Firma del padre/de la madre/del tutor Fecha

APPENDIX F: TRAINING AND CALIBRATION SLIDE SHOW

Oral Health Survey of Maryland School Children, 2015-2016

Sponsored by the Maryland Department of Health and Mental Hygiene (DHMH)

Examination Training & Logistics

Mark D. Macek, DDS, DrPH
Professor

Presentation overview

- Provide relevant background for the State Survey project
- Discuss important components of the screening examination process
- Calibrate scoring
- Practice scoring sample situations

Brief background

- The School of Dentistry has worked under contract with the Maryland Department of Health and Mental Hygiene (DHMH) on four previous "State Surveys" (1994-1995, 2000-2001, 2005-2006, and 2011-2012)
- Surveys had several features in common
  - Positive consent process (children screened only with parent/guardian's permission)
  - Licensed dentists conducted the screening examinations
  - Parents/guardians were asked to complete a health questionnaire as part of the consenting process

Brief background (cont'd)

- Screening examinations (in the past)
  - Representative sample of Maryland public schools selected (including grades K, 3, and occasionally 9, and 10)
  - Examination teams traveled to schools and conducted visual screening examinations using portable dental chairs
  - Each tooth (and sometimes each tooth surface) was screened and scored for dental caries, sealants, and more
  - Each screening examination took about 2-3 minutes
  - Screening data were entered directly into laptop computers

Brief background (cont'd)

- DHMH used findings to track oral health status trends, develop policies, determine resource allocation, and evaluate effectiveness of programs
- Findings were also reported to the CDC's *National Oral Health Surveillance System (NOHSS)*
  - http://www.cdc.gov/nohss/
- However, response rates have declined over time (<20% in 2011-2012) and findings have become less valid and reliable

What's new for 2015-2016?

- Positive consent replaced with passive consent process (all children screened unless parent/guardian says "no")
- Screening examinations now conducted entirely by licensed dental hygienists
- Health questionnaire component has been eliminated

ASTDD Basic Screening Survey (BSS)

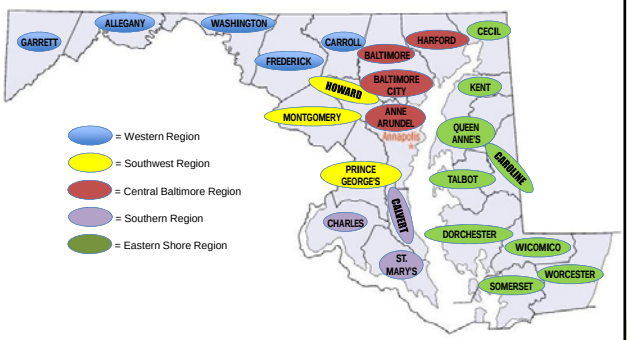
- Association of State and Territorial Dental Directors (ASTDD) developed the BSS in 1999,

  "…to provide state and local health jurisdictions with a consistent method for monitoring oral disease in a timely manner, at the lowest possible cost, with minimum burden on survey participants, and that will support comparisons within and between states."
- Surveillance is not research

BSS in brief

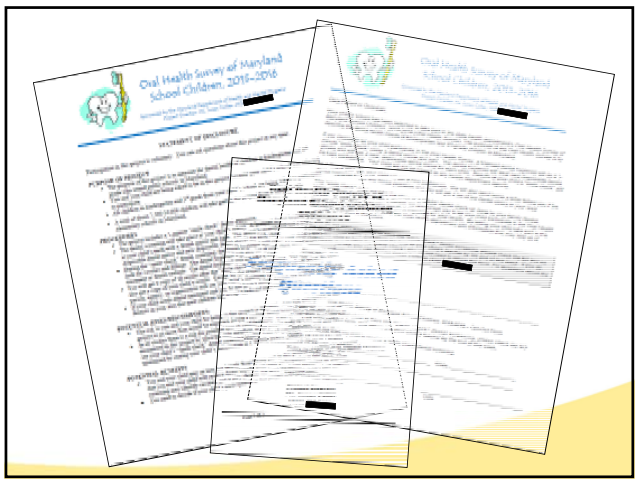
- Developed in 1999 with input from the Ohio Department of Health and the CDC
- Primary purpose
  - "…to provide state and local health jurisdictions with a consistent method for monitoring oral disease in a timely manner, at the lowest possible cost, with minimum burden on survey participants, and that will support comparisons within and between states."
- Surveillance is not research

I. Preliminary work

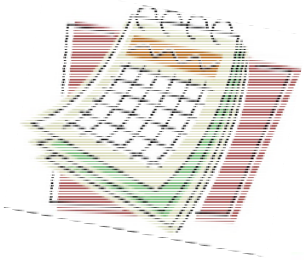


Selected schools (n=60)

Region	Number of schools	Total enrollment (K&3)
Western	9	1,235
Southwest	19	3,598
Central Baltimore	19	3,324
Southern	6	1,014
Eastern Shore	7	1,245
TOTAL	**60**	**10,416**



Dates are currently being scheduled



II. Preparing for the day

Preparing the team

- Coordinate travel with your team
  - Team members should drive together, as feasible (travel budget is finite, parking is limited)
  - Driver(s) should have school's address and telephone number, and driving directions
  - Team should maintain list of telephone contacts (home and cellular) for all members
- Know name(s) of school contact person(s)
- Coordinate participation of any DH students

Equipment and supplies – 2 options

- "Local" screening teams, utilizing Patty Warren and/or Susan Coller as site coordinators, will have equipment and supplies brought to the school sites
- "Distant" screening teams, utilizing members of their own team as site coordinators, will have equipment and supplies shipped/delivered ahead of time and will then bring the equipment and supplies with them to the school sites

Equipment list

- Samsung tablet and charging cord
- Extension cord
- Surge protector
- Handheld flashlights with replacement batteries
- "Cheat sheets" and other documentation
- Carrying case(s)
- No dental loupes, no magnification!

Supply list - mandatory

- Nitrile gloves (appropriate sizes, 1 pair per child)
- Toothbrushes (appropriate sizes, 1 per child)
- Plastic bags (1 per child)
- Disposable dental mirrors (1 per child)
- Face masks (1 per examiner)
- Disposable table covers (1-2 per school)
- Spray cleaner and paper towels
- Hand sanitizer (enough for use during 250 examinations)
- Clerical items (folders, pens, paper clips, *etc.*)
- Garbage bags (red, biohazard bags not necessary)

Supply list – mandatory (cont'd)

- "Report of Findings" forms, in triplicate (1 per child)
  - English (and Spanish?)
- Regional resource forms (1 per child)
  - English (and Spanish?)

Supply list – optional, as needed

- Manual recording forms (up to 1 per child)
- Disposable cotton tip applicators (up to 1 per child)
- Disposable 2x2 gauze (up to 1 per child)

Preparing yourself

- Decide on convenient meeting place/time for all team members (allow sufficient time for travel)
- Wear "professional" attire (scrubs are acceptable)
- Bring photo ID (driver's license and/or school ID preferred)
- Bring lunch/snacks – you won't leave school for food

III. Screening day

Arriving at the school

- Assemble group in school parking lot
- Report to school's Main Office
  - Check-in and receive "Visitor's Pass"
  - Ask to meet with school's contact person(s)
  - Ask whether parent helpers will be available
- Proceed to designated "dental screening" area
  - Should be spacious enough for team members, helpers, and group of school children
  - Should include 2-3 adult chairs and 2 small tables
  - Should include electrical outlet(s) and garbage can(s)

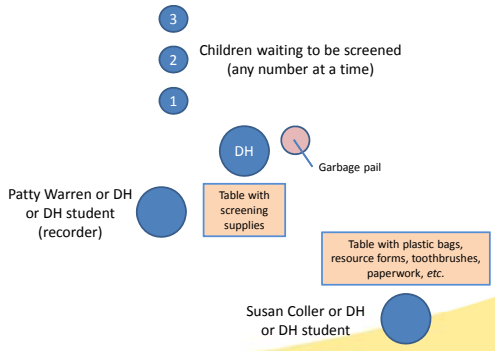
Arriving at the school (cont'd)

- Request a list of each child's name from K and 3rd-grade classrooms to use as a reference throughout the day (see "VI: Paperwork" in this training session)

Room set-up

- Room set-up is somewhat flexible but should include a layout that is convenient for both the team members and the school children
- Room set-up also depends on number of examiners (see layouts for one-examiner and two-examiner teams on the following slides)

One-examiner teams (enrollment <150)



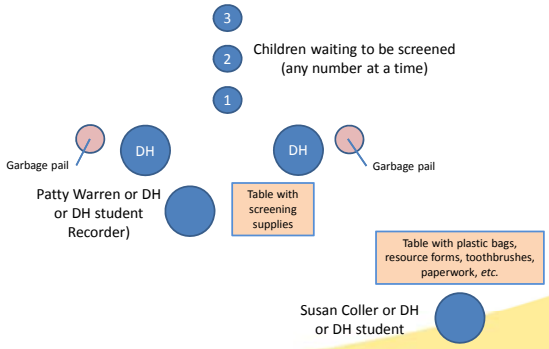
One-examiner process

- School children are brought to room by helper
  - Screening examinations go quickly so group may be large
  - Balance size of group against ability to manage behavior
- First child steps forward and is screened by DH
  - DH is seated in adult chair
  - Child stands in front of DH
  - DH uses flashlight and disposable mirror to score teeth
- Recorder enters data into tablet device
- Recorder and or DH student fills out "Report of Findings" form and gives to child

One-examiner process (cont'd)

- First child moves to the other table to receive
  - Plastic bag
  - Toothbrush
  - Dental treatment resource form
- Second child steps forward and is screened by DH and the process is repeated
- Process continues until all children in K and 3rd grade are screened

Two-examiner teams (enrollment >150)



Two-examiner process

- School children are brought to room by helper
  - Screening examinations go quickly so group may be large
  - Balance size of group against ability to manage behavior
- First child steps forward and is screened by DH
  - DH is seated in adult chair
  - Child stands in front of DH
  - DH uses flashlight and disposable mirror to score teeth
- Recorder enters data into tablet device
- Recorder fills out "Report of Findings" form and gives to child

Two-examiner process (cont'd)

- First child moves to the other table to receive
  - Plastic bag
  - Toothbrush
  - Dental treatment resource form
- Almost immediately (somewhat staggered) after first child is seated, second child steps forward and is screened by the second DH and process is repeated
- Process continues until all children in K and 3rd grade are screened

Two-examiner process (cont'd)

- Recorder must be both efficient and attentive
  - Recorder will quickly transition from one child to another
  - DH examiners will need to stagger screening examinations slightly so recorder can keep up
  - Remember, recorder can only enter data for one child at a time
- Helpers/assistants might be especially useful in the 2-examiner scenario to help fill out the numerous "Report of Findings" forms and shepherd the children to next available examiner

Table set-up for screening/recording

- Place clean table cover on tabletop
- Table should contain
  - Nitrile examination gloves (note, DH will already have face mask and flashlight, in-hand)
  - Hand sanitizer
  - Disposable mirrors
  - 2x2 gauze and disposable cotton-tipped applicators
- Recorder and DH students may also use the table for tablet device and/or paperwork and pen(s)

Table set-up for site coordinator

- Table should contain
  - Plastic bags
  - Toothbrushes (both sizes should be available)
  - Resource guides
  - Clerical supplies (pens, pencils, *etc.*)
  - Two folders
    - "School nurse"
    - "Project team"

Things to remember

- If child does not want to be screened, <u>do not force</u>
  - Give child a toothbrush, bag, and resource form, anyway
- If child <u>outside of K or 3rd-grade</u> is brought to you to "look at something that the teacher noticed", <u>you are to politely refuse!</u>
  - Give child a resource form and make note of the request and mention to the school nurse
- If child in K or 3rd-grade did not bring packet home, <u>child cannot be seen</u>
  - Give child a toothbrush, bag, and resource form, anyway

IV. Screening criteria

General rules

- Only licensed DH's are allowed to conduct screening examinations; DH students are not allowed
- New gloves are required for each screening exam
- Hand sanitizer should be used between exams
- Face mask and goggles are optional
- Magnification (dental loupes) is not to be used
- Do not give the school children gloves, mirrors, or masks to "play with"

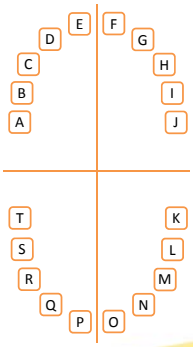
General rules (cont'd)

- When required, disposable 2x2 gauze may be used to wipe debris from teeth (should not be considered routine for every child)
- When required, disposable cotton-tipped applicator may be used to detect composites/dental sealants (should not be considered routine for every child)
- Accuracy and efficiency should be balanced throughout the screening examination process

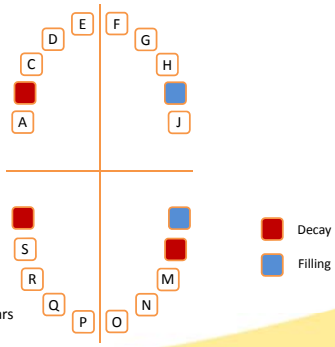
"Find-it-and-stop" approach

- BSS screening examination criteria are unique and include specific end-points
  1. Dental caries (untreated decay) in either dentition
  2. Dental restorations or other treatment for dental caries (treated decay) in either dentition
  3. Dental sealants on any permanent 1st molar
- Once the first tooth in any of these end-point categories is detected, the examiner stops and moves to next end-point category (*i.e.*, find-it-and-stop)
- Examples discussed

Primary dentition

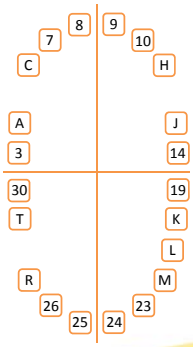


Primary dentition example

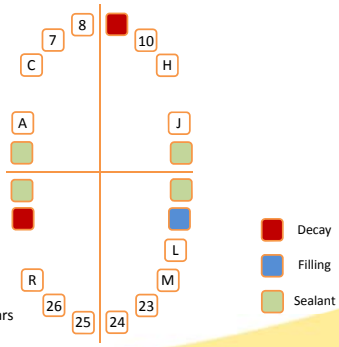


1. Dental decay
2. Dental treatment (caries)
3. Dental sealants on 1st molars

Mixed dentition



Mixed dentition example



1. Dental decay
2. Dental treatment (caries)
3. Dental sealants on 1st molars

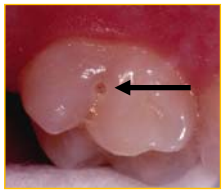
Screening ≠ Examination

What is "dental decay"?

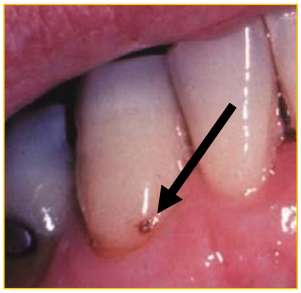
- According to BSS, dental decay is a measure of untreated disease (dental caries)
- In conducting the screening examination, the DH examiner should ask, "Does this child have any disease that has not been treated yet, but needs to be treated?"
- Remember, primary teeth and permanent teeth are scored together
- Also, remember, "find-it-and-stop" rule applies

Definition of "dental decay"

- A tooth is considered to have untreated dental decay when the DH examiner can readily observe breakdown of the enamel surface
- In other words, only cavitated lesions are considered to be dental decay

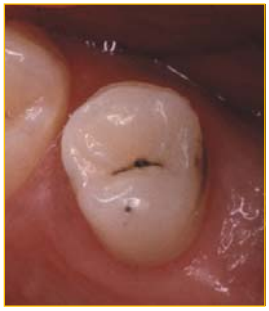


"Dental decay"



Smooth surface

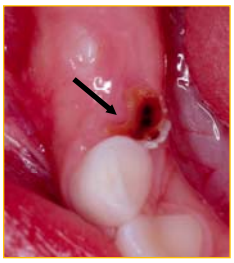
"Dental decay"



Pits and fissures

"Dental decay"

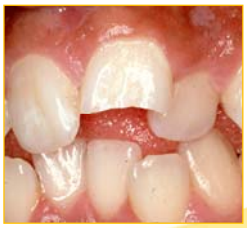
- Retained roots are considered untreated dental decay in most cases, except when the permanent successor is present
- In those cases, successor tooth is scored, instead



Retained roots = decay (usually)

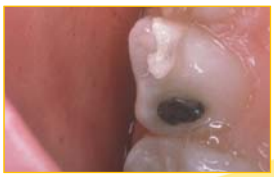
What is not "dental decay"?

- Broken or chipped teeth are considered sound, unless a cavity is also present



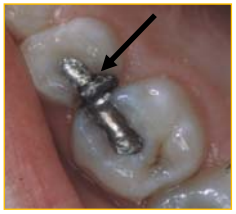
What is not "dental decay"?

- Temporary fillings are considered to be treated decay rather than untreated decay
- This tooth has treated decay (amalgam and temporary) but no untreated decay



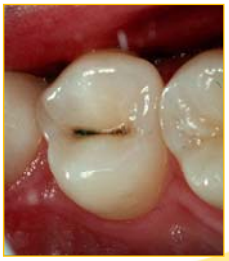
What is not "dental decay"?

- Broken/fractured fillings are considered to be treated decay rather than untreated decay, unless a cavity is also present
- This tooth has treated decay but no untreated decay



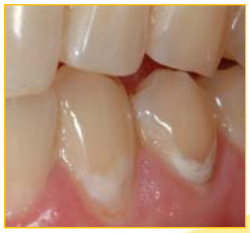
What is not "dental decay"?

- Teeth with stained pits and fissures and no enamel break are considered sound
- This tooth has stain but no break in the enamel so it is sound



What is not "dental decay"?

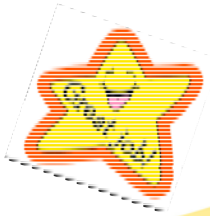
- "White spot lesions" are considered sound
- This tooth has "white spots" but no break in the enamel so it is sound



When in doubt, be conservative!
If you're not sure it's decay, assume it's not.

Coding for "dental decay"

- Untreated decay
  - ❑ No
  - ❑ Yes



What is "treated decay"?

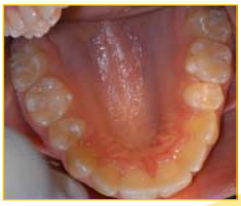
- According to BSS, treated decay is a measure of disease that has been addressed in the past
- Includes amalgams and/or composites, crowns (including stainless steel), and temporary restorations
- Remember, primary teeth and permanent teeth are scored together
- Also, remember, "find-it-and-stop" rule applies

What is not "treated decay"

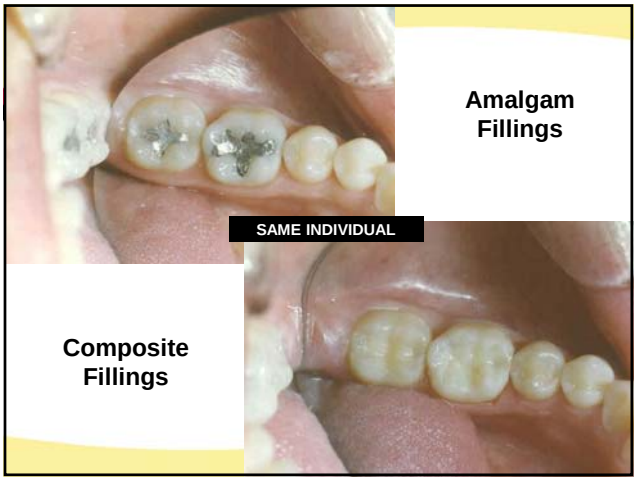
- Crowns placed because of trauma are not treated decay
- You may need to ask child
- This child has a crown because of trauma so the tooth is scored as sound; no treated decay and no untreated decay

What is not "treated decay"

- Teeth extracted because of orthodontics are not considered treated decay
- You may need to ask child
- This adolescent has missing premolars because of orthodontics; no treated decay and no untreated decay



Beware of composites!



Coding for "treated decay"

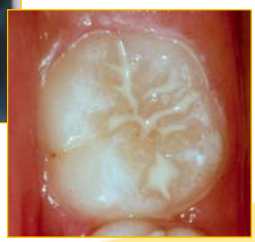
- Treated decay
  - ❑ No
  - ❑ Yes

Dental sealants

- Dental sealants are scored on permanent 1st molars only
- DH examiner may use the wooden end of the cotton-tip applicator to detect the smooth, glass-like surface of sealant
- Remember, sealants may be whitish, yellowish, or completely transparent
- Also, remember, "find-it-and-stop" rule applies

Dental sealants

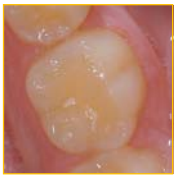
Transparent



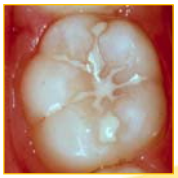
Opaque

Dental sealants (cont'd)

- Include both partially- and fully-retained sealants
- Both of these teeth would be scored as having dental sealants



Partially-retained



Fully-retained

Coding for dental sealants

- Dental sealants on permanent 1st molars
  - ❑ No
  - ❑ Yes

Beware of composites!
Composites and sealants look alike

When in doubt, be conservative!
If you're not sure it's a dental sealant, assume it's a composite.

Treatment need

- This category includes three (3) categories
  - Needs dental sealants
  - Needs dental cleaning
  - Restorative treatment urgency
- Scores are entered into the data entry program and also onto the "Report of Findings" form

Needs dental sealants

- In your professional opinion, if the child would benefit from receiving dental sealants on any of his/her permanent molars, you may choose the "yes" option for this category
- This option also applies to partially-retained dental sealants on permanent molars that need to be replaced

Treatment need – dental sealants

- Needs dental sealants (on permanent molars)
  - ❑ No
  - ❑ Yes

Needs dental cleaning

- In your professional opinion, if the child requires a dental prophylaxis, you may choose the "yes" option for this category
- Note, this option is intended for children who exhibit moderate-severe gingivitis and have unusually abundant amounts of plaque

Treatment need – dental cleaning

- Needs dental cleaning
  - ❑ No
  - ❑ Yes

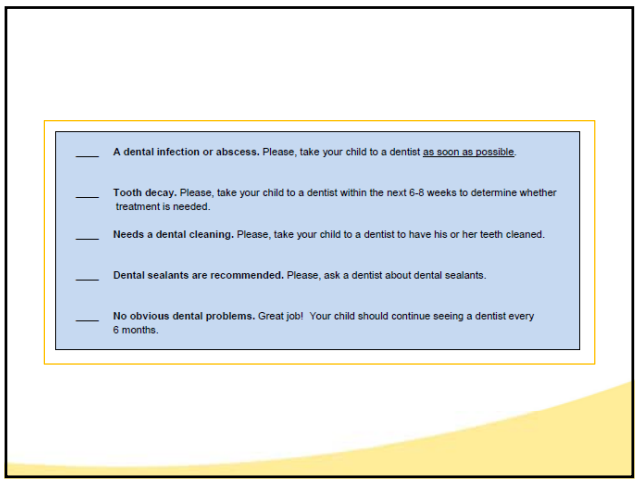
Restorative treatment urgency

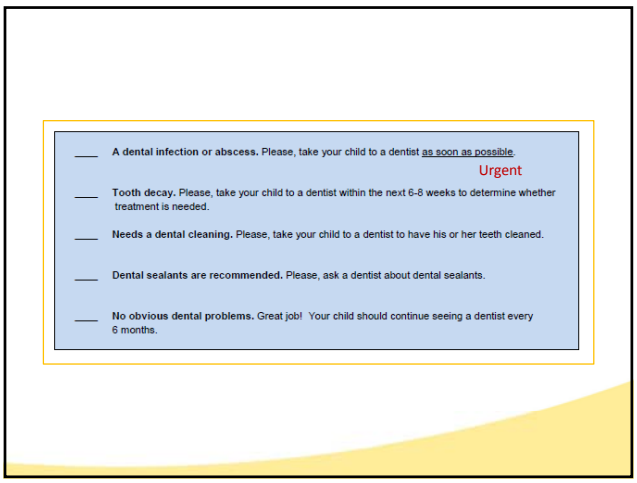
- Three levels depending on how soon a child should be examined by a dentist/pediatric specialist
  - A dental infection or abscess ("urgent")
  - Tooth decay/issue requiring treatment ("early")
  - No obvious dental problems ("none")
- These categories also correspond with those on the "Report of Findings" form

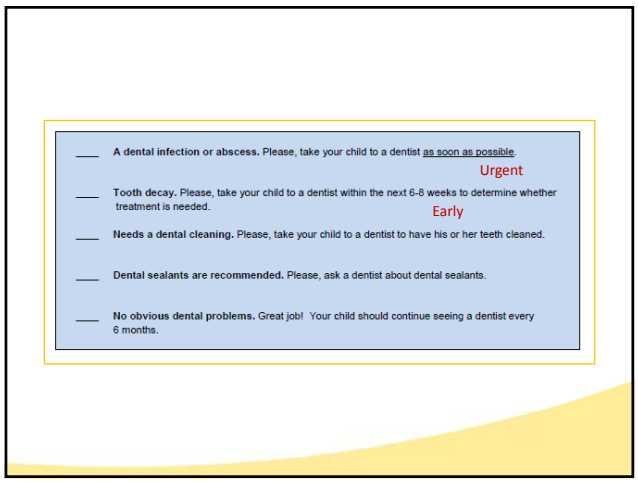
Oral Health Survey of Maryland School Children, 2015-2016

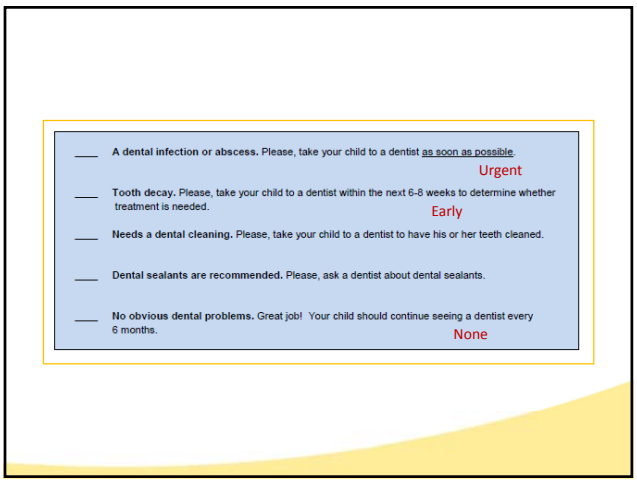
RESULTS OF DENTAL SCREENING

Triplicate form
- One goes to parent
- One goes to school
- One stays with team


___ A dental infection or abscess. Please, take your child to a dentist as soon as possible.
___ Tooth decay. Please, take your child to a dentist within the next 6-8 weeks to determine whether treatment is needed.
___ Needs a dental cleaning. Please, take your child to a dentist to have his or her teeth cleaned.
___ Dental sealants are recommended. Please, ask a dentist about dental sealants.
___ No obvious dental problems. Great job! Your child should continue seeing a dentist every 6 months.


___ A dental infection or abscess. Please, take your child to a dentist as soon as possible.
Urgent
___ Tooth decay. Please, take your child to a dentist within the next 6-8 weeks to determine whether treatment is needed.
___ Needs a dental cleaning. Please, take your child to a dentist to have his or her teeth cleaned.
___ Dental sealants are recommended. Please, ask a dentist about dental sealants.
___ No obvious dental problems. Great job! Your child should continue seeing a dentist every 6 months.


___ A dental infection or abscess. Please, take your child to a dentist as soon as possible.
Urgent
___ Tooth decay. Please, take your child to a dentist within the next 6-8 weeks to determine whether treatment is needed.
Early
___ Needs a dental cleaning. Please, take your child to a dentist to have his or her teeth cleaned.
___ Dental sealants are recommended. Please, ask a dentist about dental sealants.
___ No obvious dental problems. Great job! Your child should continue seeing a dentist every 6 months.

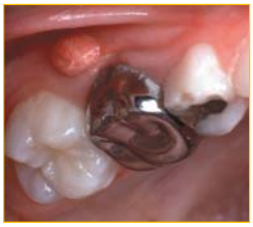

___ A dental infection or abscess. Please, take your child to a dentist as soon as possible.
Urgent
___ Tooth decay. Please, take your child to a dentist within the next 6-8 weeks to determine whether treatment is needed.
Early
___ Needs a dental cleaning. Please, take your child to a dentist to have his or her teeth cleaned.
___ Dental sealants are recommended. Please, ask a dentist about dental sealants.
___ No obvious dental problems. Great job! Your child should continue seeing a dentist every 6 months.
None

"Urgent" treatment need

- In your professional opinion, child should be seen by a dentist, as soon as possible (*i.e.*, 24-48 hours)
- Includes emergency-type signs and symptoms
  - Pain (be aware, child may not be willing to report)
  - Infection/abscess
  - Swelling

Example of "urgent" need

- Child has an abscess that is adjacent to tooth A
- This child would be scored as "urgent", requiring a dentist's assessment as soon as possible, within the next 24-48 hours

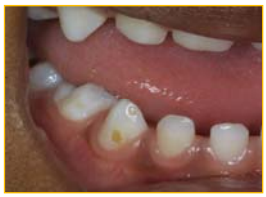


"Early" treatment need

- In your professional opinion, child should be seen by a dentist within the next 6-8 weeks to address an issue that has no emergency-type signs or symptoms
- Includes untreated decay, fractured teeth, and broken restorations, without pain, infection, or swelling

Example of "early" need

- Child has untreated decay on tooth R (no pain or infection)
- This child would be scored as "early", requiring a dentist's assessment within the next 6-8 weeks



"None" treatment need

- In your professional opinion, child has no obvious untreated decay or other dental problems requiring either "urgent" or "early" attention by a dentist

Treatment need – restorative

- Restorative treatment need/urgency
  - ❑ Urgent
  - ❑ Early
  - ❑ None

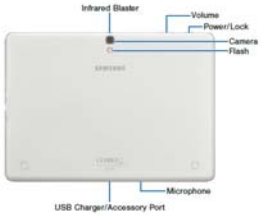
V. Data entry

The Samsung tablet

Front View

- **3.5 mm Headset Jack**: Connect an optional headset (not included).
- **Back**: Tap to return to the previous screen, or to close a dialog box, menu, or keyboard.
- **Front Camera**: Take pictures and videos of yourself.
- **Home**: Tap to return to the home screen. Activate the Fingerprint security feature to use as a finger-print reader.
- **Memory Card Slot**: Holds an optional microSD memory card (not included).
- **Proximity and Gesture Sensors**: Detects the presence of objects near the device.
- **Recent Apps**: Tap to display recent apps, or touch and hold for home screen options.
- **Speaker**: Plays sounds, notifications, and audio.

Back View



- **Camera**: Take pictures and record videos.
- **Flash**: Illuminate subjects in low-light environments when taking a photo or recording video.
- **Infrared Blaster**: Controls external devices using Infrared transmissions.
- **Microphone**: Records audio and detects voice commands.
- **Power/Lock**: Press and hold to turn the device on or off, or press to lock or wake up the screen. Press and hold to turn the device off or restart it, or for easy access to Airplane or Emergency Mode, and to Mute, Vibrate, and Sound modes.
- **USB Charger/Accessory Port**: Connect the Charger/USB cable (included), and other optional accessories (not included).
- **Volume**: Press to adjust the volume of your device's sounds.

Prepare Your Device

Charge the Battery

Your device is powered by a rechargeable, standard Li-Ion battery. A Wall/USB Charger (Charging Head and USB cable) is included with the device, for charging the battery.

The battery comes partially charged. You must fully charge the battery before using your device for the first time. A fully discharged battery requires up to 4 hours of charge time. After the first charge, you can use the device while charging.

Warning: Use only Samsung-approved charging devices and batteries. Samsung accessories are designed to maximize battery life. Using other accessories may invalidate your warranty and may cause damage.

Your device comes with a charger (charging head and USB cable) to charge your device from any 110/220 VAC outlet.

1. Insert the USB cable into the port.
2. Connect the USB cable to the charging head, then plug the charging head into a standard AC power outlet.
3. When charging is complete, unplug the charging head from the power outlet and remove the USB cable from the device.

Caution: Failure to unplug the wall charger before you remove the battery, can cause damage to the device.

When to Charge the Battery

When the battery is weak and only a few minutes of talk time remain, the battery icon ( ) blinks and the device sounds a warning tone at regular intervals.

In this condition, your device conserves its remaining battery power, not by turning off the back light, but by entering the dimming mode.

When the battery level becomes too low, the device automatically turns off.

► For a quick check of your battery level, glance at the battery charge indicator located in the upper-right corner of your device's display. Solid color ( ) indicates a full charge.

You can also choose to display a percentage value. Having a percentage value onscreen can provide a better idea of the remaining charge on the battery. For more information, see "Battery" on page 72.

Powering up and logging in

- Hold the "Power/Lock" button for 2-3 seconds
- Screen should light and a tone should sound
- If nothing happens, your battery may be low – plug the AC adaptor into an outlet and try the "Power/Lock" button, again
- If, for whatever reason, you are unable to use the tablet device, please use the "Manual Recording Form" as a back-up
- Password code is 2-0-8-4

Data entry – Epi Info 7

- Epi Info 7 is a free program designed by the CDC for health surveillance
- Our data entry program has been specifically designed for our project
- Administration through a tablet device allows for accuracy, convenience, and efficiency

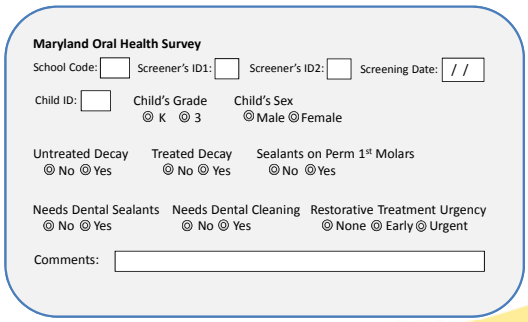
Accessing the Epi Info 7 program

- Select the *Epi Info 7* icon on the tablet home page to begin the program
- The start-up screen should include three options
- Select the "Collect Data" option
- An option box will appear
  - Select the arrow at the right side of the box
  - Scroll down and select the "Maryland Survey" option
  - Hit the "Load" button
- You should now be on data entry screen (see next slide)

Preparing for data entry

- Select "plus sign" (in blue circle) to access data entry screen
- The entire data entry sheet should fit on a single page; if not, you may need to scroll down
- The Samsung tablet uses touch-screen technology
- When you are ready to enter data, select the box (e.g., for school ID) and a typewriter will appear for you to enter the necessary numbers and/or characters
- You may also select the "N" and "Y" options by touching the corresponding circle

Data entry screen



School Code

- Each of the 60 elementary schools selected for the sample has a corresponding ID code
- A list of each code will be available for your reference among the "cheat sheet" documents

Screener's ID1 and 2

- The DH examiners (screeners) should place his or her initials in the "ID1" field (and "ID2", if applicable)
- Program is designed so that once a screener's initials are entered the first time, the field is automatically populated for each subsequent examination
  - If any screeners change during the day, be sure to enter new screener's name after the change

Screening Date

- Enter the date manually (*mm/dd/yyyy*) or select the date from the "calendar" icon adjacent to the field
- Once the correct date is entered for the first child, the field is automatically populated for all subsequent children during that screening session

Child's Grade and Child's Sex

- These data fields should be self-evident
- Only children from K and 3rd grade have been invited to participate

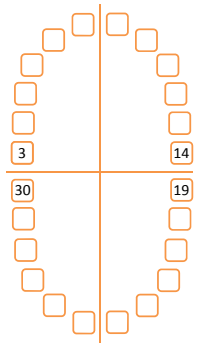
Oral health status and needs

- The remaining fields should be thought in a simplistic, 6-field pattern
  - Untreated decay – yes or no
  - Treated decay – yes or no
  - Sealants on permanent 1st molars – yes or no
  - Needs dental sealants – yes or no
  - Needs a dental cleaning – yes or no
  - Treatment needs – none, early or urgent

Oral health status and needs (cont'd)

- The DH examiner and recorder should find a rhythm whereby the 6-field pattern becomes second nature
- Because primary and permanent teeth are scored together, no need to differentiate the two dentitions except for presence of 1st permanent molars
- Scoring for the untreated dental decay, treated dental decay, dental sealants, and treatment needs were described earlier in this presentation (see scoring criteria and relevant examples)

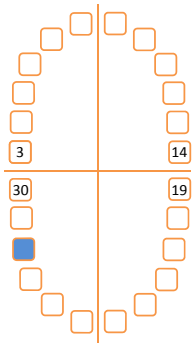
6-field pattern



1. Untreated decay
2. Treated decay
3. Dental sealants on perm. 1st molars
4. Needs dental sealants
5. Needs dental cleaning
6. Treatment needs

Decay
Filling
Sealant

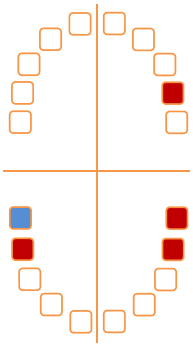
Example 1



1. Untreated decay
2. Treated decay
3. Dental sealants on perm. 1st molars
4. Needs dental sealants
5. Needs dental cleaning
6. Treatment needs

Decay
Filling
Sealant

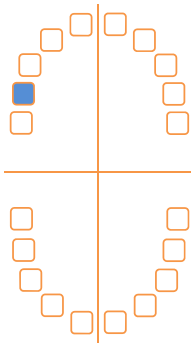
Example 2



1. Untreated decay
2. Treated decay
3. Dental sealants on perm. 1st molars
4. Needs dental sealants
5. Needs dental cleaning
6. Treatment needs

Decay
Filling
Sealant

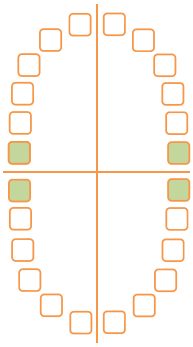
Example 3



1. Untreated decay
2. Treated decay
3. Dental sealants on perm. 1st molars
4. Needs dental sealants
5. Needs dental cleaning
6. Treatment needs

Decay
Filling
Sealant

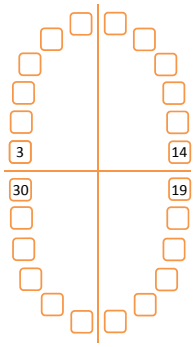
Example 4



1. Untreated decay
2. Treated decay
3. Dental sealants on perm. 1st molars
4. Needs dental sealants
5. Needs dental cleaning
6. Treatment needs

Decay
Filling
Sealant

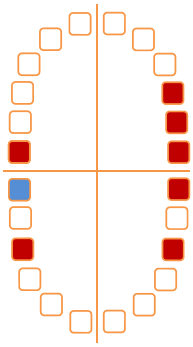
Example 5



1. Untreated decay
2. Treated decay
3. Dental sealants on perm. 1st molars
4. Needs dental sealants
5. Needs dental cleaning
6. Treatment needs

Decay
Filling
Sealant

Example 6



1. Untreated decay
2. Treated decay
3. Dental sealants on perm. 1st molars
4. Needs dental sealants
5. Needs dental cleaning
6. Treatment needs

Decay
Filling
Sealant

Comments

- Examples
  - Unusual issues during the screening examination (*e.g.*, "child refused to open wide enough to get a good view")
  - Unusual issues regarding scoring and/or data entry (*e.g.*, "wasn't sure how to score tooth O – supernumerary tooth present")
  - Other unusual occurrences

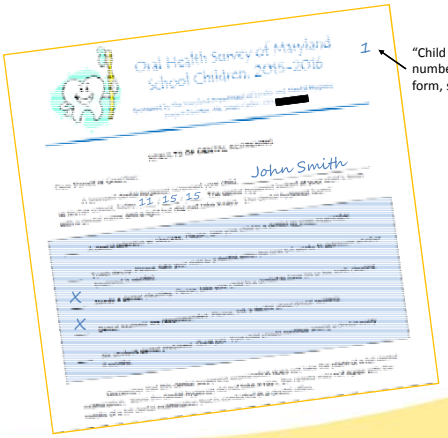
Child's data entry completed

- When you have entered all of the necessary data, select the "Save Record" icon in the top right corner
- The next screen will show that you have successfully captured data for one child
- To move to the next child, select the "plus sign" (in a blue circle) and continue the process

VI. Paperwork

"Report of Findings" form

- During each screening examination, the recorder and/or a DH student helper(s) will complete the "Report of Findings" form
- Child gets all three (3) pages of the triplicate form from the recorder
- Necessary information
  - Examination sequence ("Child ID")
  - Child's name and screening date
  - Treatment needs



"Child ID" sequence number added to each form, sequentially

"Report of Findings" form (cont'd)

- Given that "Child ID" numbers are placed on each form, sequentially, and given that the date will be the same on every form (for that screening day), it is advisable to place the ID numbers and dates on the forms when the day begins
- Given that each child's name must also go on the form, it is advisable to get a list of the names in each K and 3rd-grade class, when the day begins, to use as a reference (instead of asking each child, on the spot)

"Report of Findings" form (cont'd)

- When child comes to the second table with the triplicate "Report of Findings" form, the site coordinator and/or DH student is responsible for:
  - Tearing off the top, white page and placing it in the plastic bag
  - Separating the second and third pages and placing them in separate piles/folders on the table

Plastic bag

- The plastic bag should contain:
  - White, top-page copy of the "Report of Findings" form
  - Toothbrush appropriate for the child's age (smaller head for K and larger head for 3rd grade)
  - Resource form (describing clinics in the area that accept low-income children)
- The site coordinator and/or DH student gives the child his or her plastic envelope and the child is either told to wait with the others or sent back to his or her classroom, depending upon the wishes of each school

VII. Clean-up

Cleaning your assigned location

- Place all used materials (*e.g.*, gloves, masks, 2x2 gauze, cotton-tipped applicators, paper towels, *etc.*) into the garbage bag and secure it with closure
- Spray tables and chairs with cleaner and wipe dry with paper towel
- Replace tables and chairs to their original locations, if applicable

Retrieve your belongings

- Be sure to retrieve everything you brought along
  - Lunch bags
  - Extension cord and surge protector
  - Purses/wallets
  - Plastic bags and toothbrushes
  - Cell phones
  - Paperwork
  - Other items

VIII. End of the day

Final tasks

- Congratulations! You made it to the end of a busy but productive day!!
- Pat yourselves on the back and feel gratified that your work is improving the lives of children in Maryland
- If volunteer parents/helpers were involved, please thank them and ask for their names so we can refer to them in a follow-up, "thank you" mailing to the school

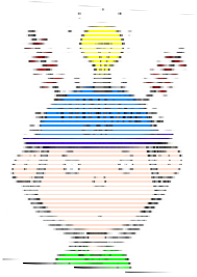
Final tasks (cont'd)

- School nurse
  - Give the "School Nurse" folder to the school nurse (or other designated official)
  - Also provide a copy of *Maryland Oral Health Resource Guide, 2015*
- Third page of the "Report of Findings" form goes in the "Project Team" folder
  - Keep this folder in a secure place and forward to Mark Macek as soon as possible

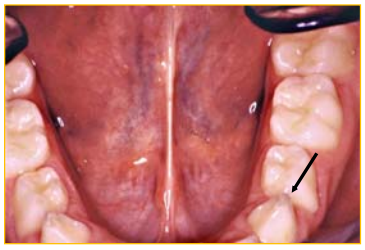
Final tasks (cont'd)

- Return to Main Office to turn in "Visitor's Badge" and to announce that you are leaving as a group
- Drive home safely!
- Record your hours (and mileage, if applicable) and notify Marion Manski/DHMH staff

IX. Quiz

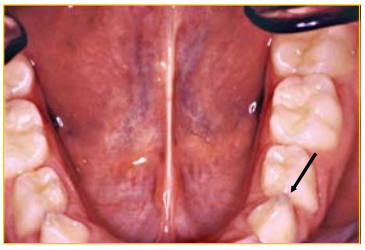


How would you code this?



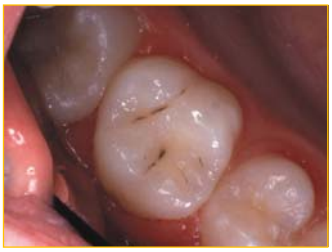
Cavitated lesion on both primary canines

How would you code this?

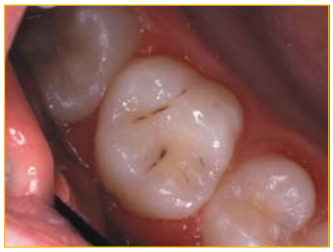


Untreated decay = yes; Treatment urgency = early

How would you code this?

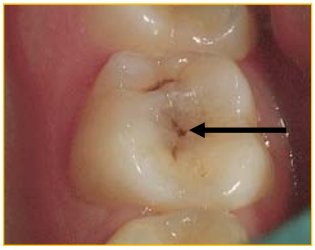


How would you code this?



Untreated decay = no; Dental sealant on 1st molar = no;
Needs dental sealants = yes; Treatment urgency = none

How would you code this?



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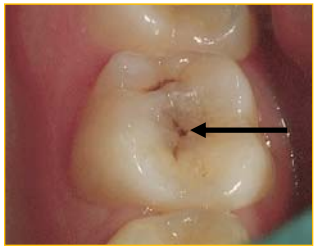
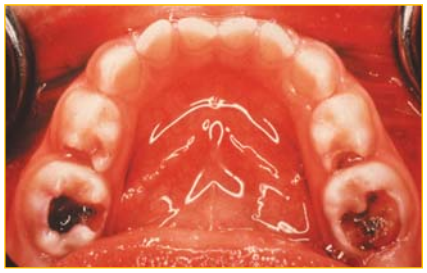
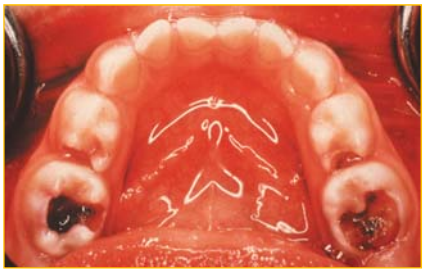


Untreated decay = yes; Treatment urgency = early

How would you code this?

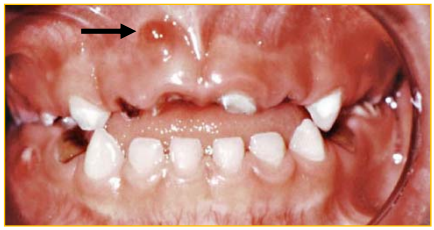


How would you code this?



Untreated decay = yes; Treatment urgency = early

How would you code this?



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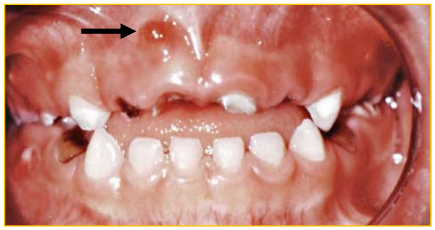
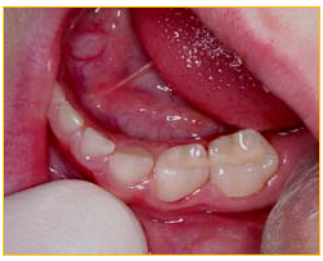
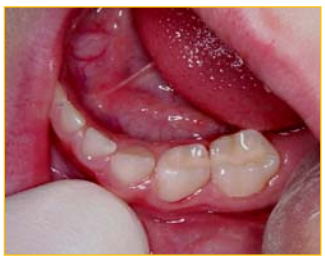


Untreated decay = yes; Treatment urgency = urgent

How would you code this?

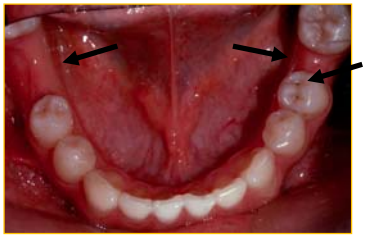


How would you code this?



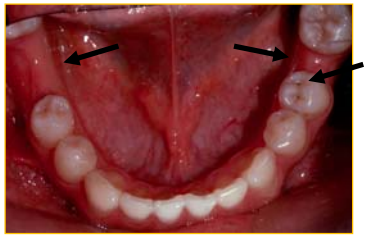
Treated decay = yes; Dental sealants on 1st molar = no

How would you code this?



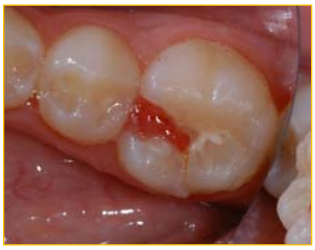
Cavitated lesion on premolar and missing teeth

How would you code this?



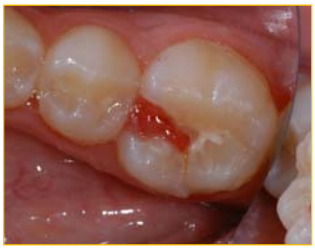
Untreated decay = yes; Treated decay = yes;
Dental sealants on 1st molar = no; Treatment urgency = early

How would you code this?



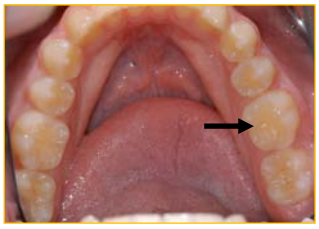
Fractured tooth from a fall with no pain or infection

How would you code this?



Untreated decay = no; Treated decay = no;
Dental sealant on 1st molar = yes; Treatment urgency = early

How would you code this?



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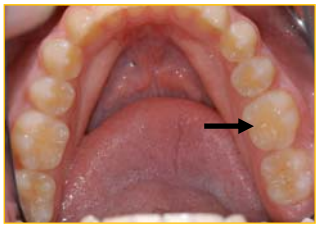
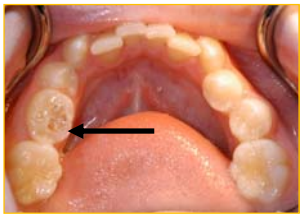


Untreated decay = no; Treated decay = no;
Dental sealant on 1st molar = yes; Treatment urgency = none

How would you code this?



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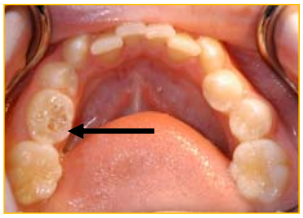
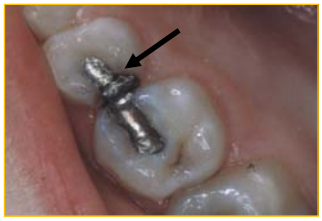


Untreated decay = yes; Treated decay = no;
Dental sealant on 1st molar = no; Treatment urgency = none

How would you code this?



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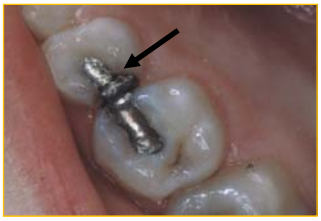
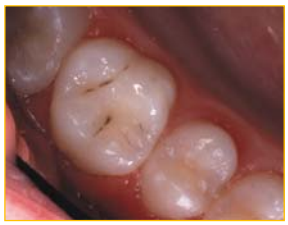


Untreated decay = no; Treated decay = yes;
Dental sealant on 1st molar = no; Treatment urgency = early

How would you code this?



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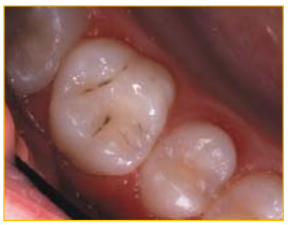
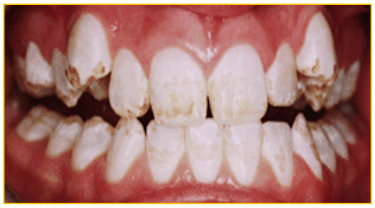


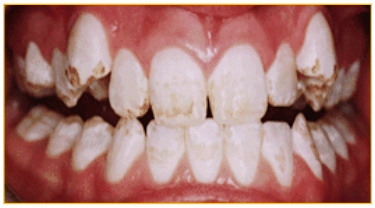
Untreated decay = no; Treated decay = yes;
Dental sealant on 1st molar = no; Treatment urgency = none

How would you code this?



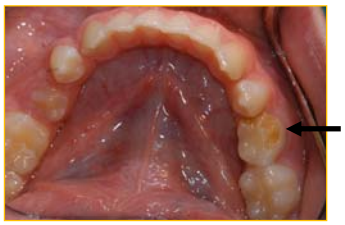
Severe dental fluorosis

How would you code this?



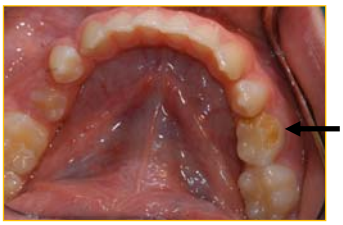
Untreated decay = no; Treated decay = no;
Treatment urgency = none

How would you code this?



Enamel hypoplasia

How would you code this?



Untreated decay = no; Treated decay = no;
Dental sealants on 1st molar = yes; Treatment urgency = none

Acknowledgments

- Daphene Altema-Johnson
- Harry S. Goodman
- Marion Manski
- Jane Casper
- Susan Coller
- Haiyan Chen
- Kathy Phipps

APPENDIX G: STUDY TEAM MANUAL

Oral Health Survey of Maryland School Children, 2015-2016

Sponsored by the Maryland Department of Health and Mental Hygiene
Project Director: Ms. Susan Coller; 410-xxx-xxxx

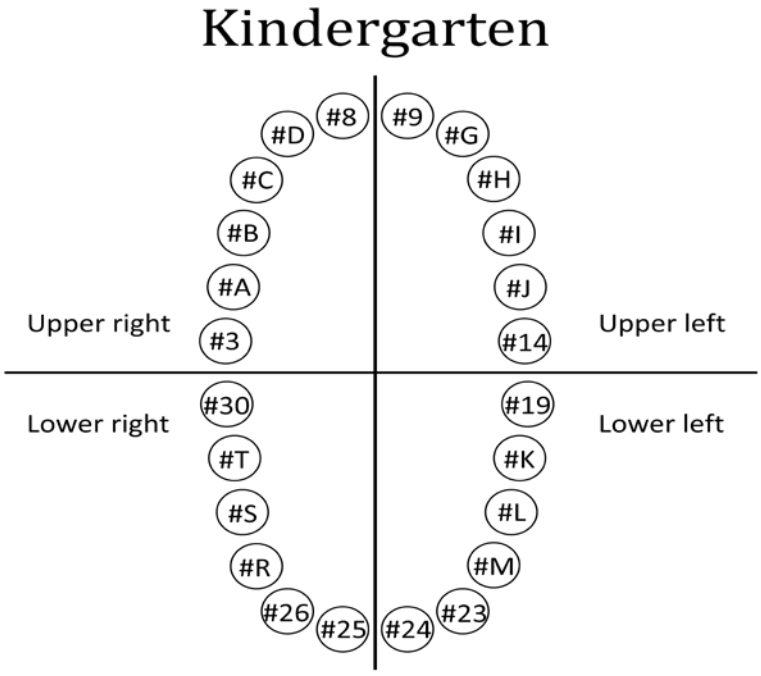
DOCUMENTATION AND OTHER USEFUL RESOURCES

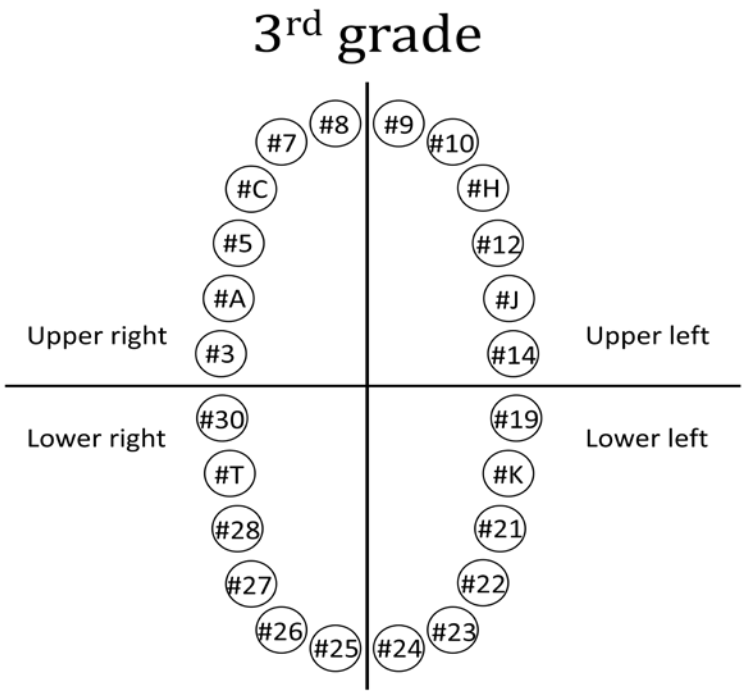
Table of Contents

Appendix

TOOTH ERUPTION DIAGRAMS (LIKELY SCENARIOS)

Age References
Kindergarten: 5 to 7 years
3rd grade: 8 to 10 years





TOOTH ERUPTION SCHEDULE

Age References
Kindergarten: 5 to 7 years
3rd grade: 8 to 10 years

Primary Dentition

Maxillary arch	Eruption	Exfoliation
Central incisors (E and F)	8 to 12 months	6 to 7 years
Lateral incisors (D and G)	9 to 13 months	7 to 8 years
Canines (C and H)	16 to 22 months	10 to 12 years
First molars (B and I)	13 to 19 months	9 to 11 years
Second molars (A and J)	25 to 33 months	10 to 12 years

Mandibular arch	Eruption	Exfoliation
Central incisors (O and P)	6 to 10 months	6 to 7 years
Lateral incisors (N and Q)	10 to 16 months	7 to 8 years
Canines (M and R)	17 to 23 months	9 to 12 years
First molars (L and S)	14 to 18 months	9 to 11 years
Second molars (K and T)	23 to 31 months	10 to 12 years

Permanent Dentition

Maxillary arch	Eruption	Root fully formed
Central incisors (8 and 9)	7 to 8 years	10 to 11 years
Lateral incisors (7 and 10)	8 to 9 years	11 to 12 years
Canines (6 and 11)	11 to 12 years	14 to 15 years
First premolars (5 and 12)	10 to 11 years	13 to 14 years
Second premolars (4 and 13)	11 to 12 years	13 to 15 years
First molars (3 and 14)	5 to 7 years	8 to 10 years
Second molars (2 and 15)	12 to 13 years	15 to 16 years

Mandibular arch	Eruption	Exfoliation
Central incisors (24 and 25)	6 to 7 years	9 to 10 years
Lateral incisors (23 and 26)	7 to 8 years	10 to 11 years
Canines (22 and 27)	9 to 10 years	12 to 13 years
First premolars (21 and 28)	10 to 12 years	13 to 15 years
Second premolars (20 and 29)	11 to 12 years	14 to 15 years
First molars (19 and 30)	5 to 7 years	8 to 10 years
Second molars (18 and 31)	11 to 13 years	14 to 16 years

ARRIVING AT THE SCHOOL

- Assemble group in parking lot
- Report to school's Main Office
    - Check-in and receive "Visitor's Pass"
    - Ask to meet with school's contact person(s)
    - Ask whether parent helpers will be available
- Proceed to designated "dental screening" area
    - Should be spacious enough to accommodate the screening team members, helpers, and group of children waiting to be screened
    - Should include 2-3 adult-size chairs and 2+ small tables
    - Should include an electrical outlet and 1-2 garbage cans
- If possible, request a list of children's names from the kindergarten and 3rd grade classrooms that will be screened

EQUIPMENT

- Carrying cases (2 or more)
- “Support Documentation” folder
- Samsung tablet and protective case (1)
- Samsung charger cord (1)
- Surge protector (1)
- Extension cord (1)
- Hand-held flashlight (2)
- Replacement batteries

Note: Loupes and/or other forms of magnification are not allowed!

SUPPLIES

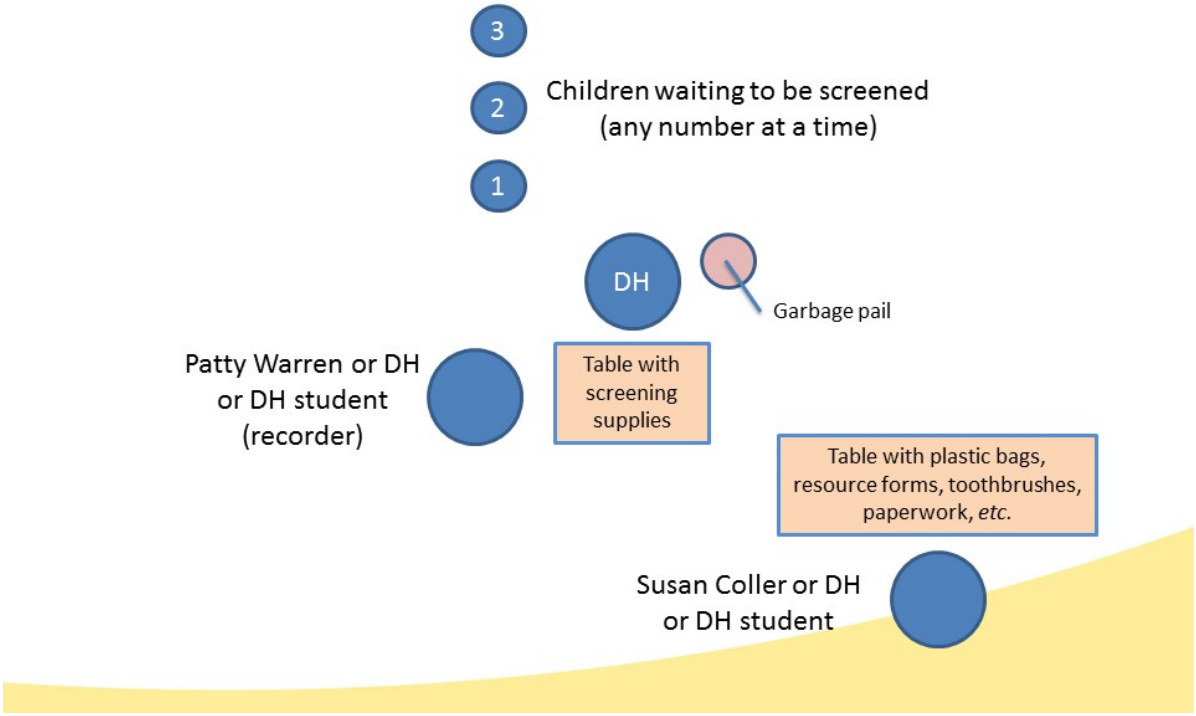
Mandatory Supplies

- Nitrile gloves (1 pair per child)
- Toothbrushes appropriate for children in kindergarten (1 per child)
- Toothbrushes appropriate for children in 3rd-grade (1 per child)
- Disposable dental mirrors (1 per child)
- Plastic, zip-lock bags (1 per child)
- Dental face mask (1 per examiner)
- Disposable table covers (*e.g.*, a paper plate or napkin) (~4 per school)
- Spray cleaner (1 per school)
- Paper towels (1 roll per school)
- Hand sanitizer (2 bottles per school)
- Clerical items (*e.g.*, folders, pens, pencils, paper clips, rubber bands, *etc.*)
- Garbage bags (~4 per school)
- Paperwork
    - "Report of Findings" forms (1 per child)
    - Treatment resource forms (1 per child)
    - Maryland Oral Health Resource Book (1 per school)
    - Manual recording forms (15 sheets per school)

Optional Supplies (only used with a child, when necessary)

- 2x2 gauze squares (up to 1 per child)
- Cotton-tipped applicator (up to 1 per child)

One-examiner teams (enrollment <150)



Two-examiner teams (enrollment >150)

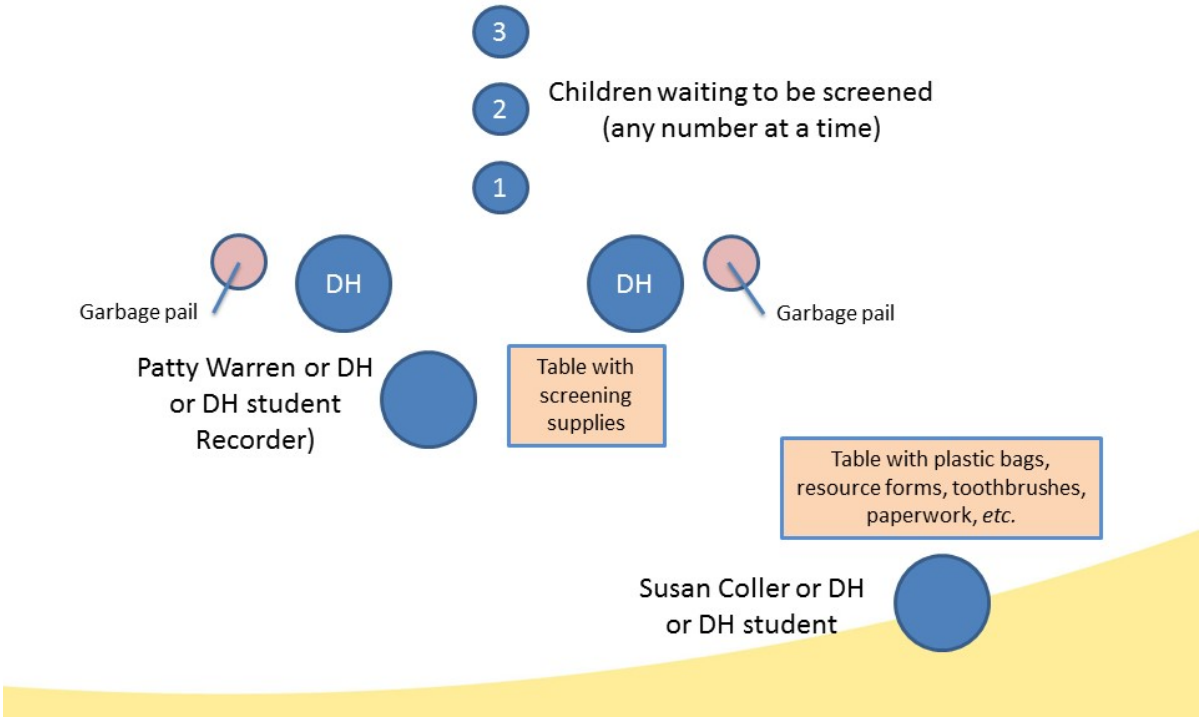


TABLE SET-UP (EXAMINER AND RECORDER)

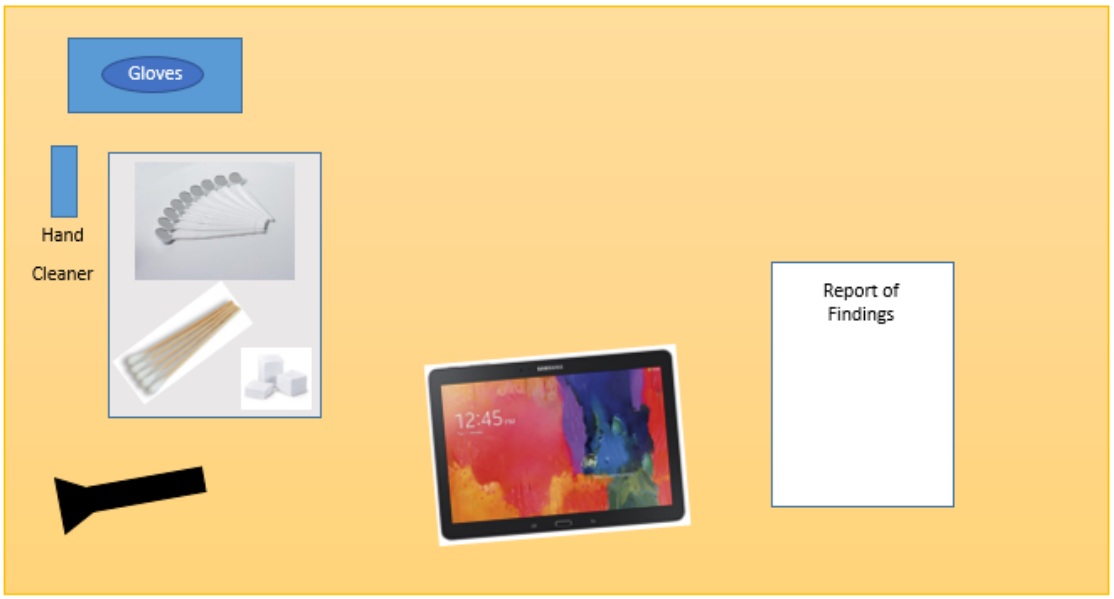
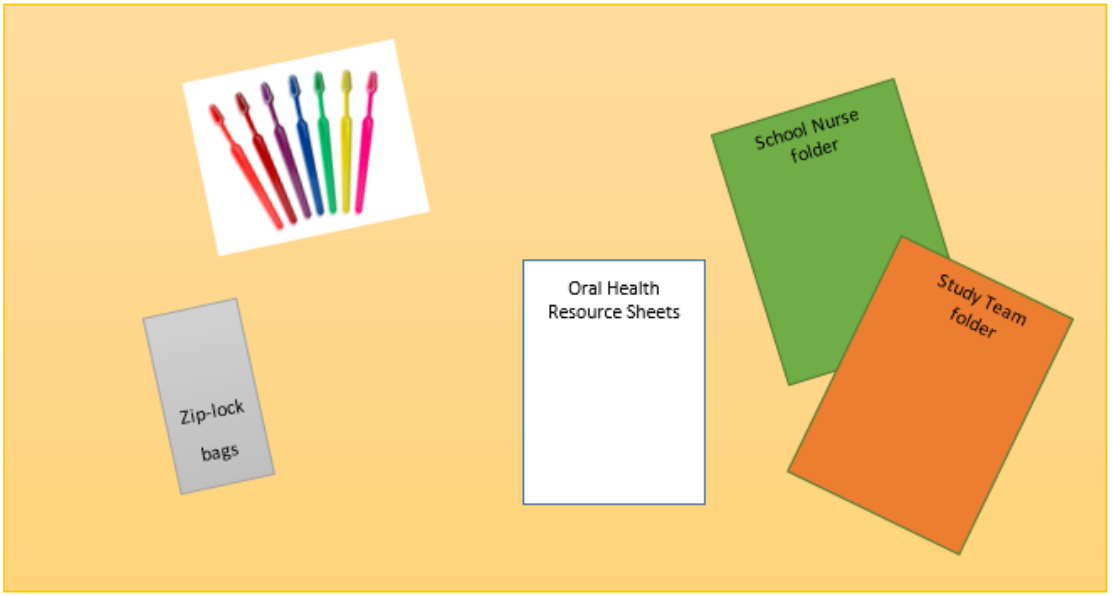


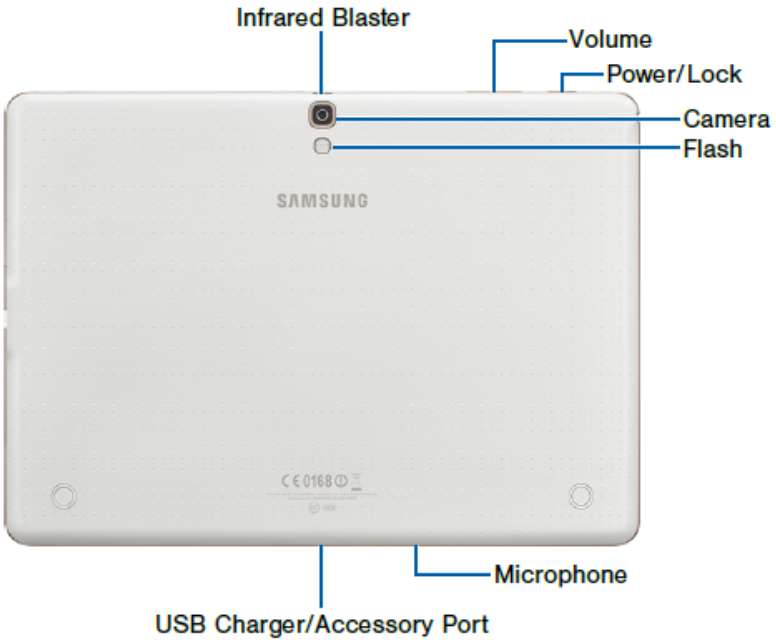
TABLE SET-UP (SITE COORDINATOR AND/OR HELPER)



Front View

- **3.5 mm Headset Jack**: Connect an optional headset (not included).
- **Back**: Tap to return to the previous screen, or to close a dialog box, menu, or keyboard.
- **Front Camera**: Take pictures and videos of yourself.
- **Home**: Tap to return to the home screen. Activate the Fingerprint security feature to use as a fingerprint reader.
- **Memory Card Slot**: Holds an optional microSD memory card (not included).
- **Proximity and Gesture Sensors**: Detects the presence of objects near the device.
- **Recent Apps**: Tap to display recent apps, or touch and hold for home screen options.
- **Speaker**: Plays sounds, notifications, and audio.

Back View



- **Camera**: Take pictures and record videos.
- **Flash**: Illuminate subjects in low-light environments when taking a photo or recording video.
- **Infrared Blaster**: Controls external devices using infrared transmissions.
- **Microphone**: Records audio and detects voice commands.
- **Power/Lock**: Press and hold to turn the device on or off, or press to lock or wake up the screen. Press and hold to turn the device off or restart it, or for easy access to Airplane or Emergency Mode, and to Mute, Vibrate, and Sound modes.
- **USB Charger/Accessory Port**: Connect the Charger/USB cable (included), and other optional accessories (not included).
- **Volume**: Press to adjust the volume of your device's sounds.

Prepare Your Device

Charge the Battery

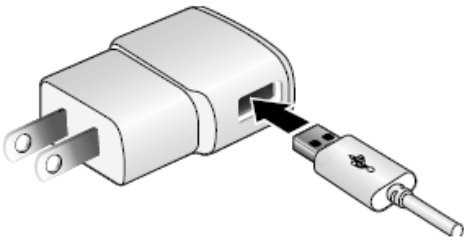
Your device is powered by a rechargeable, standard Li-Ion battery. A Wall/USB Charger (Charging Head and USB cable) is included with the device, for charging the battery.

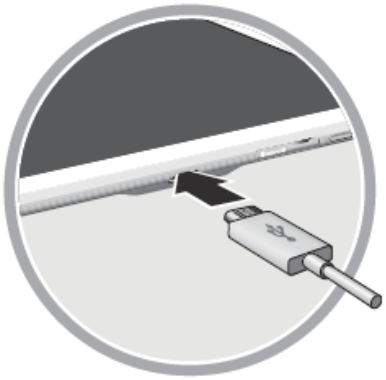
The battery comes partially charged. You must fully charge the battery before using your device for the first time. A fully discharged battery requires up to 4 hours of charge time. After the first charge, you can use the device while charging.

Warning: Use only Samsung-approved charging devices and batteries. Samsung accessories are designed to maximize battery life. Using other accessories may invalidate your warranty and may cause damage.

Your device comes with a charger (charging head and USB cable) to charge your device from any 110/220 VAC outlet.

1. Insert the USB cable into the port.
2. Connect the USB cable to the charging head, then plug the charging head into a standard AC power outlet.
3. When charging is complete, unplug the charging head from the power outlet and remove the USB cable from the device.





Caution Failure to unplug the wall charger before you remove the battery, can cause damage to the device.

When to Charge the Battery

When the battery is weak and only a few minutes of talk time remain, the battery icon ( ) blinks and the device sounds a warning tone at regular intervals.

In this condition, your device conserves its remaining battery power, not by turning off the back light, but by entering the dimming mode.

When the battery level becomes too low, the device automatically turns off.

► For a quick check of your battery level, glance at the battery charge indicator located in the upper-right corner of your device's display. Solid color ( ) indicates a full charge.

You can also choose to display a percentage value. Having a percentage value onscreen can provide a better idea of the remaining charge on the battery. For more information, see "Battery" on page 72.

Using the Protective Case

Powering Up and Logging In

- Hold the “Power/Lock” button for 2-3 seconds
- Screen should light and a tone should sound
- If nothing happens, the battery may be low
    - Plug the AC adaptor into the surge protector outlet
    - Try the “Power/Lock” button again
- If, for whatever reason, you are unable to use the tablet device, please use the “Manual Recording Form” as a back-up
- Password = 2084
- Note: It may be a good idea to keep the tablet plugged into an outlet during the entire screening session to ensure that the battery does not “die” during the day

Epi-Info Data Entry Program

- If the Epi-Info program is not already opened, select the Epi-Info icon on the tablet's main page
- The Epi-Info "start-up" screen should include three (3) options
- Select the "Collect Data" option
- An option box will appear
    - Touch the arrow at the right side of the box
    - Scroll down and select the "Maryland Survey" option
    - Touch the "Load" button
- You should now be on the data entry screen
    - Touch "plus sign" in blue circle
    - The entire data entry form should now be visible – if some of it does not show, scroll down to reveal any missing fields
- The Samsung tablet uses "touch-screen" technology
    - In order to type information into a text box, touch the box and a typewriter will appear at the bottom of the tablet screen; select the "Done" button when finished typing
    - In order to select a "Y" or "N" option, touch the circle next to the option
- When a child's data have been entered, touch the "SAVE RECORD" button at the top right of the screen
- To enter data for the next child, select the "plus sign" in the blue circle, again
- When the last child's data have been entered, select the "back" button on the tablet
    - When asked to "Exit the form", touch the "Yes" option
    - Select the "back" button on the tablet two more times to return to the tablet's "home screen"

Powering Down

- When the last child's data are entered, and the Epi-Info program is closed (see previous page), hold the "Power/Lock" button for 2-3 seconds
- An option box will appear – select the "power off" prompts

ORAL HEALTH SURVEY OF MARYLAND HEAD START CHILDREN, 2016-2017

Manual Recording Form (20 students per page)

Site Code: ________ **Screener's ID:** _____________ **Screening Date:** _________________

ID	Age	Sex	Race	Untreated DK	Treated DK	Needs cleaning	TX urgency
	2 3 4 5 6	M F	W B H A AI PI Mult Unk	N Y	N Y	N Y	N E U
Comments							
	2 3 4 5 6	M F	W B H A AI PI Mult Unk	N Y	N Y	N Y	N E U
Comments							
	2 3 4 5 6	M F	W B H A AI PI Mult Unk	N Y	N Y	N Y	N E U
Comments							
	2 3 4 5 6	M F	W B H A AI PI Mult Unk	N Y	N Y	N Y	N E U
Comments							
	2 3 4 5 6	M F	W B H A AI PI Mult Unk	N Y	N Y	N Y	N E U
Comments							
	2 3 4 5 6	M F	W B H A AI PI Mult Unk	N Y	N Y	N Y	N E U
Comments							
	2 3 4 5 6	M F	W B H A AI PI Mult Unk	N Y	N Y	N Y	N E U
Comments							
	2 3 4 5 6	M F	W B H A AI PI Mult Unk	N Y	N Y	N Y	N E U
Comments							
	2 3 4 5 6	M F	W B H A AI PI Mult Unk	N Y	N Y	N Y	N E U
Comments							
	2 3 4 5 6	M F	W B H A AI PI Mult Unk	N Y	N Y	N Y	N E U
Comments							

SCORING DECAY, RESTORATIONS, SEALANTS, AND TREATMENT NEEDS

Criteria for "untreated decay"

1. A carious lesion that also exhibits a break in the enamel (that is, a cavitated lesion) is scored as "untreated decay"
2. Retained roots are generally scored as "untreated decay" but it depends:
    a. If retained primary tooth root is present alongside its permanent successor, then the permanent tooth is scored and the primary tooth is ignored
    b. If retained primary tooth root stands alone (without its permanent successor), then the primary tooth is scored as "untreated decay"
    c. Any decayed permanent tooth root is scored as "untreated decay"
3. What is not considered "untreated decay"
    a. Chipped/fractured teeth without a cavitated carious lesion
    b. Temporary fillings
    c. Broken fillings without visually detectable decay
    d. Stained pits and fissures without a break in the enamel
    e. "White spot" lesions without a break in the enamel
4. When in doubt, be conservative – if you are not sure it is decay, score the tooth as "sound"

Criteria for "treated decay"

1. Any treatment resulting from dental caries is considered "treated decay"
    a. Amalgams
    b. Composites
    c. Metal and/or PFM crowns
    d. Stainless steel crowns
    e. Temporary restorations
    f. Permanent tooth extractions because of decay (history may need to be elicited from child)
2. What is not considered "treated decay"
    a. Crowns placed due to trauma (usually located on anterior permanent teeth)
    b. Permanent tooth extractions because of orthodontic therapy (usually premolars or canines)

Criteria for "dental sealants on permanent 1st molars"

1. Any dental sealant on a permanent 1st molar, including both partially- and fully-retained types, are scored as "dental sealants on permanent 1st molars"
2. When in doubt, be conservative - if it is not clear whether a tooth has a sealant or composite, assume it is a composite

Criteria for "urgent" treatment need

1. Tooth exhibiting infection and/or abscess and/or swelling
2. Child reporting toothache pain

Criteria for "early" treatment need

1. Any condition scored as "untreated decay"
2. Broken fillings and/or fractured teeth
3. Note: If child is referred for dental sealants or a dental cleaning and there are no other issues, select the "none" category

Criteria for "Comments" section in the Epi-Info program

1. Include comments that refer to unusual issues that were found during the screening examination (*e.g.*, a supernumerary tooth was present)
2. Include comments that refer to unusual issues regarding the examination, itself (*e.g.*, the child had a severe gag reflex and examiner was unable to conduct a thorough visualization)

Written comments on the "Report of Findings" form

1. If, in your professional opinion, the parents would benefit from some additional information about the condition of their child's oral cavity, you may write these comments on the "Report of Findings" form (*e.g.*, "dental sealant on the lower right molar needs to be replaced")
2. Remember, this option should be used sparingly, as each written comment will slow the examination process for the school

CLEAN UP

- Place all used/dirty materials (*e.g.*, gloves, disposable mirrors, paper towels, lunch wrappers, 2x2 gauze, table covers, *etc.*) into a garbage bag and secure it with tie
- Spray tables and chairs with cleaner and wipe dry with a paper towel
- Replace chairs and tables to their original locations, if applicable
- Be sure to retrieve all of your belongings before you leave the screening room and the school building

END OF THE DAY ACTIVITIES

- Congratulate yourselves on a job, well done
- If any volunteer helpers were involved, thank them for their time and request their names so that they may be mentioned in a follow-up “thank you” note to the school
- Give the “school nurse” folder (containing one copy of the “Report of Findings” form for each child) to the school nurse or a designated official
- Give the school nurse or designated official a copy of the Maryland Oral Health Resource Guide
- Keep the “project team” folder (containing the remaining copy of the “Report of Findings” form for each child) and hold for Dr. Macek
- Return to the office to turn-in “Visitor’s Pass” and to announce that the team is leaving
- Drive safely!
- Record your hours and mileage, as required for reimbursement

APPENDIX H: REPORT OF FINDINGS FORM

RESULTS OF DENTAL SCREENING

Dear Parent or Guardian:

A licensed dental hygienist screened your child, _____, at his/her school, today, ____ / ____ / ____. The dental hygienist looked at your child's teeth with a dental mirror and a light but **did not** take x-rays. The dental hygienist found:

____ **A dental infection or abscess.** Please, take your child to a dentist as soon as possible.

____ **Tooth decay.** Please, take your child to a dentist within the next 6-8 weeks to determine whether treatment is needed.

____ **Needs a dental cleaning.** Please, take your child to a dentist to have his or her teeth cleaned.

____ **Dental sealants are recommended.** Please, ask a dentist about dental sealants.

____ **No obvious dental problems.** Great job! Your child should continue seeing a dentist every 6 months.

Remember that this dental screening examination does not take the place of a full dental examination. Since the dental hygienist did not take x-rays, the results may not agree with the results of a full dental examination that is conducted in a dental office.

If you need help finding a dentist, we have given your child a list of dental clinics in your area. These dental clinics treat children, and they take Medicaid dental insurance (also known as *The Maryland Healthy Smiles Program* or *DentaQuest Insurance*). Please, let us know if you have any questions.

Sincerely,

Susan Coller

Project Director
(410) xxx-xxxx
xxxxxxxxx@maryland.gov

RESULTADOS DEL EXAMEN DENTAL

Estimado/a padre/madre/tutor:

Un higienista dental examinó a su hijo, _____, en su escuela el día de hoy, ____ / ____ / ____. El higienista dental examinó los dientes de su hijo con un espejo dental y luz, pero **no** tomó radiografías. El higienista dental encontró lo siguiente:

____ **Una infección o un absceso dental.** Lleve a su hijo al dentista cuanto antes.

____ **Caries.** Lleve a su hijo al dentista en las próximas 6 a 8 semanas para que este determine si es necesario un tratamiento.

____ **Necesita una limpieza dental.** Lleve a su hijo al dentista para que le realice una limpieza dental.

____ **Se recomienda la aplicación de selladores dentales.** Consulte con un dentista sobre los selladores dentales.

____ **Ningún problema dental aparente.** ¡Buen trabajo! Su hijo debe seguir viendo al dentista cada 6 meses.

Recuerde que este examen dental no reemplaza un examen dental completo. Dado que el higienista dental no tomó radiografías, es posible que los resultados no concuerden con los resultados del examen dental completo que se realice en un consultorio dental.

Si necesita ayuda para buscar un dentista, le hemos dado a su hijo una lista de las clínicas dentales en su área. Estas clínicas dentales atienden a niños y aceptan el seguro dental de Medicaid (también conocido como *Programa Sonrisas Saludables de Maryland* o *seguro DentaQuest*). Comuníquese con nosotros si tiene alguna pregunta.

Atentamente.

Susan Coller

Directora del proyecto
(410) xxx-xxxx
xxxxxxxxx@maryland.gov

APPENDIX I: COUNTY-LEVEL RESOURCES

Maryland Healthy Smiles Dental Program

The **Maryland Healthy Smiles Dental Program** is available to pregnant women and all Maryland Medicaid enrollees under age 21. Adults over age 21 with Rare and Expensive Medical (REM "Red & White Card") coverage are also eligible to participate in the program.

Effective July 1, 2009, DentaQuest handles the coordination of all dental-related customer service for Maryland Medicaid enrollees participating in the Healthy Smiles Dental Program. DentaQuest customer service can assist members with locating a dental provider, explaining dental benefits and verifying eligibility. DentaQuest will also perform dental provider enrollment, provide dental service authorizations and process claims.

Contact Information
DentaQuest: 1-888-696-9596
Website: www.dentaquestgov.com

DentaQuest
MARYLAND
Healthy Smiles Dental Program

Maryland Medical Assistance Program

GENERAL QUESTIONS
1-800-492-5231
TDD: 1-800-735-2258

MD MEDICAL ASSISTANCE HELPLINES
(for help applying for medical assistance programs, or for assistance in resolving problems with primary adult care or a managed care organization)
1-800-284-4510
1-800-456-8900
1-800-766-8962

- Medical Assistance for Families or MD
- Children's Health Program and Women's
- Services, option 1
- Health Choice Program, option 2
- Primary Adult Care Program, option 3
- Family Planning Program, option 4
- Provider Assistance, option 5

RECIPIENT ENROLLMENT
1-800-977-7388
TDD: 1-800-997-7389

ELIGIBILITY VERIFICATION SYSTEM
(to verify that a Medical Assistance client is eligible for provider services)
1-866-710-1447 or www.emdhealthchoice.org

RARE AND EXPENSIVE CASE MANAGEMENT PROGRAM (REM)
Case Management Hotline: 1-800-565-8190

PROVIDER RELATIONS
1-800-445-1159

Public Health Dental Services for Allegany County

ALLEGANY COLLEGE OF MARYLAND

Statewide Service Provider? No

Website: www.allegany.edu/dental

Eligibility:

- Adults & children 3 years of age and up
- Reduced fee
- By appointment only

Services:

- Preventive, sealants, x-rays, bleaching

Dental Hygiene Clinic

Service Hours:
Call to schedule an appointment

Contact Information:
12401 Willowbrook Road, SE
Cumberland, MD 21502
(301) 784-5250

ALLEGANY COUNTY HEALTH DEPARTMENT

Statewide Service Provider? No

Website: www.alleganyhealthdept.com

Eligibility:

- Allegany County resident
- Children 6 months through age 20 enrolled in the Maryland Healthy Smiles program
- Age 19 and up for extraction clinic
- Pregnant women with Maryland Medical Assistance
- Parents of children seen in the clinic who have an active Medical Assistance Managed Care Organization (MCO) card may be treated for dental services offered by their MCO

Services:

- Comprehensive dental services for children and pregnant women
- Extraction clinic 2 days a month for adults at less than 185% federal poverty level based on a sliding fee scale for Allegany County residents only

Dental Clinic

Service Hours:
8:30 a.m. - 4:00 p.m. Monday – Friday
Call to schedule an appointment

Contact Information:
12503 Willowbrook Road, SE
Cumberland, MD 21502
(301) 759-5030

Public Health Dental Services for Anne Arundel County

ANNE ARUNDEL COUNTY DEPARTMENT OF HEALTH

Statewide Service Provider? No

Website: www.aahealth.org

Eligibility:

- Anne Arundel County Resident
- Birth and up, no upper age limit
- Pregnant women
- Special needs clients accepted
- Adults must participate with REACH program of Anne Arundel County
- Medicaid accepted
- Reduced/Sliding fee scale

Services:

- Preventive, restorative, pediatric, endodontic, periodontal, emergency, limited extractions

Annapolis Health Center (Clinic)

Service Hours:
9:00 am - 5:30 pm Monday
8:00 am - 4:30 pm Tuesday - Friday
Call to schedule an appointment

Contact Information:
3 Harry S. Truman Parkway
Annapolis, MD 21401
(410) 222-7138

North County Health Services Center (Clinic)

Service Hours:
9:00 am - 5:30 pm Monday
8:00 am - 4:30 pm Tuesday - Friday
Call to schedule an appointment

Contact Information:
791 Aquahart Road
Glen Burnie, MD 214061
(410) 222-6861

ANNE ARUNDEL COUNTY DEPARTMENT OF HEALTH DENTAL ACCESS PROGRAM

Statewide Service Provider? No

Eligibility:

- Anne Arundel County Resident
- Uninsured
- Supply proof of total household income including number of people in the household
- Sliding fee scale (10%-35% discount on services provided through participating dentists)

Services:

- Restorative, periodontal, endodontics, oral surgery, orthodontics

Service Hours:
Call to schedule an appointment

Contact Information:
3 Harry S. Truman Parkway
Annapolis, MD 21401
(410) 222-7138

Public Health Dental Services for Baltimore City

UNIVERSITY OF MARYLAND SCHOOL OF DENTISTRY

Statewide Service Provider? Yes

Website: www.dental.umaryland.edu/patientinfo

Eligibility:

- Maryland Resident
- Adults and children
- Medicaid accepted in some clinics
- Fees for services are typically lower than private practice fees

Services:

- Comprehensive dental services

Pediatric Dentistry

Comprehensive preventive, diagnostic & restorative care for children ages 6 months to 18 years
All services are supervised by expert pediatric dental faculty members

Service Hours:
Call to schedule an appointment

Contact Information:
650 West Baltimore Street
Baltimore, MD 21201
(410) 706-4213

CHASE-BREXTON HEALTH SERVICES, INC.

Statewide Service Provider? Yes

Website: www.chasebrexton.org

Eligibility:

- Maryland residents
- Adults and children
- Maternity
- Sliding fee scale, proof of income required
- Medicaid accepted

Services:

- Preventive, prosthetic, restorative, and pediatric services
- Emergency services available

Dental Clinic

Service Hours:
10:30 a.m. - 7:00 p.m. Monday
8:45 am – 5:00 pm Tuesday – Friday
Call to schedule an appointment

Contact Information:
1111 North Charles Street
Baltimore, MD 21201
(410) 837-2050

Public Health Dental Services for Baltimore County

UNIVERSITY OF MARYLAND SCHOOL OF DENTISTRY

Statewide Service Provider? Yes

Website: www.dental.umaryland.edu/patientinfo

Eligibility:

- Maryland Resident
- Adults and children
- Medicaid accepted in some clinics
- Fees for services are typically lower than private practice fees

Services:

- Comprehensive dental services

Pediatric Dentistry

Comprehensive preventive, diagnostic & restorative care for children ages 6 months to 18 years
All services are supervised by expert pediatric dental faculty members

Service Hours:
Call to schedule an appointment

Contact Information:
650 West Baltimore Street
Baltimore, MD 21201
(410) 706-4213

BALTIMORE COUNTY DEPARTMENT OF HEALTH DENTAL HEALTH PROGRAM

Statewide Service Provider? No

Website: www.baltimorecountymd.gov/agencies/health/healthservices/dental.html

Eligibility:

- Baltimore County resident
- Medical Assistance for birth to 20 years
- Maternity
- Sliding fee scale for uninsured children, pregnant women, and 60+ adults
- No dental insurance or 3rd-party payer

Services:

- Preventive, prosthetic, restorative, and pediatric services

Eastern Family Resource Center

Service Hours:
Call to schedule an appointment

Contact Information:
9100 Franklin Square Drive
Baltimore, MD 21237
(410) 887-2780

Liberty Family Resource Center

Service Hours:
Call to schedule an appointment

Contact Information:
3525 Resource Drive
Randallstown, MD 21133
(410) 887-2781

Public Health Dental Services for Calvert County

CALVERT COMMUNITY DENTAL CARE

Statewide Service Provider? No

Eligibility:

- Must be a resident of either Calvert, St. Mary's, or Charles Counties
- Adults & children
- Maternity
- Medicaid, Maryland Healthy Smiles accepted
- Sliding fee scale available for those with low income or the uninsured
- Wheelchair accessible

Services:

- Preventive, pediatric, restorative, emergency
- Community outreach, educational presentations and onsite dental screenings

Service Hours:

9:00 am - 4:00 pm Tuesday and Friday
9:00 am - 5:00 pm Thursday
Hours may vary for different services
Call to schedule an appointment

Contact Information:

11840 Trueman Road
Lusby, MD 20657
(410) 535-8402

Public Health Dental Services for Caroline County

CHOPTANK COMMUNITY HEALTH SYSTEMS, INC.

Statewide Service Provider? Yes

Website: www.choptankhealth.org

Eligibility:

- No geographic restrictions
- Ages 1 year and up
- Maternity
- Medicaid accepted and sliding fee scale
- Some private insurances accepted
- Adult/senior care for dental emergencies or by referral from their medical provider ONLY

Services:

- Comprehensive dental services for families
- Adults with acute care needs (severe pain and swelling) may present or be referred for same-day care. Patients will be seen on a first-come, first-served basis.
- School-based dental program available at participating public schools in Talbot, Dorchester and Caroline Counties.

Service Hours:

7:30 a.m. – 4:45 p.m. Monday – Friday
Call to schedule an appointment

Contact Information:

215 Bloomingdale Avenue
Federalsburg, MD 21632
(410) 754-7583

Federalsburg Dental Center

Service Hours:

7:30 a.m. - 4:45 p.m. Monday – Friday
Call to schedule an appointment

Contact Information:

215 Bloomingdale Avenue
Federalsburg, MD 21632
(410) 754-7583

Goldsboro Family Dental Center

Service Hours:

8:00 am - 4:30 pm Monday - Friday
Call to schedule an appointment

Contact Information:

316 Railroad Avenue
Goldsboro, MD 21636
(410) 482-2224

Public Health Dental Services for Carroll County

ACCESS CARROLL

Statewide Service Provider? No

Website: www.accesscarroll.org

Eligibility:

- Family dental care for Carroll County residents of all ages
- Reduced fees based on sliding fee scale
- Wheelchair accessible
- Special needs clients accepted

Services:

- Preventive, diagnostic, restorative, emergency

Service Hours:
8:30 a.m. – 5:00 p.m. Monday – Friday
Call to schedule an appointment

Contact Information:
10 Distillery Drive
Westminster, MD 21157
(410) 871-1478

CARROLL COUNTY HEALTH DEPARTMENT ORAL HEALTH PROGRAM

Statewide Service Provider? No

Website: www.carrollhealthdepartment.dhmh.md.gov

Pediatric Dental Clinic

Eligibility:

- Carroll County residents only
- Children through age 14
- Must be a Medicaid recipient

Services:

- Pediatric, preventive, restorative, emergency

Service Hours:
8:00 a.m. - 4:30 p.m. Monday – Thursday
Call to schedule an appointment

Contact Information:
290 South Center Street
Westminster, MD 21157
(410) 876-4918

Dental Access Program

Eligibility:

- Carroll County residents only
- Ages 2-21 years & 60 years and up
- 35% reduced fee for income eligible
- Non-emergency program

Services:

- Referral to participating private dentists

Service Hours:
8:00 am - 4:30 pm Monday - Thursday
Call to schedule an appointment

Contact Information:
290 South Center Street
Westminster, MD 21157
(410) 876-4928

Public Health Dental Services for Cecil County

UNIVERSITY OF MARYLAND SCHOOL OF DENTISTRY, PERRYVILLE

Statewide Service Provider? No

Website: www.dental.umaryland.edu/perryville.html

Eligibility:

- Serving patients from Cecil, Harford, Queen Anne's and Kent Counties
- Children birth to 21, comprehensive care
- Maternity accepted
- Wheelchair accessible, special needs clients accepted
- Medicaid accepted
- Reduced fees available
- Private insurance accepted only for adult emergency treatment
- Age 22-59 emergency care and hygiene services only
- Age 60 and up emergency and comprehensive care if patient meets poverty guidelines
- Call for specific eligibility requirements.

Services:

- Comprehensive dental services provided by participating community dentists
- Senior care for dental emergencies if patient meets poverty guidelines

Service Hours:

9:00 am – 5:00 pm Monday - Friday
Call to schedule an appointment

Contact Information:

4863 Pulaski Highway, Suite 200
Perryville, MD 21903
(410) 706-4900
(877) 232-4050

WEST CECIL HEALTH CENTER

Statewide Service Provider? Yes

Website: www.westcecilhealth.org

Eligibility:

- No geographic restrictions
- Children and adults accepted
- Accepts most insurance plans
- Medicaid and sliding fee scale offered to the uninsured

Services:

- Preventive, restorative, comprehensive oral care, prosthetics, endodontics, pediatric care, some oral surgery

Service Hours:

8:00 am - 4:30 pm Monday, Tuesday, Thursday
8:00 am - 8:00 pm Wednesday
8:00 am - 1:00 pm Friday

Contact Information:

49 Rock Springs Road
Conowingo, MD 21918
(410) 378-9696
(877) 378-9696

Public Health Dental Services for Charles County

CHARLES COUNTY HEALTH DEPARTMENT

Statewide Service Provider? No

Website: www.charlescountyhealth.org

Eligibility:

- Charles County residents
- Children 6 months - 17 years
- Adults
- Maternity
- Special needs accepted
- Uninsured, Underinsured, Medicaid, Primary Adult Care (PAC) and sliding fee scale
- Some private insurance accepted

Services:

- Preventive, restorative, pediatric, and emergency services
- Offsite screening for oral cancer, school-based oral exams and fluoride varnish applications and sealants for children

Dental Clinic

Service Hours:

Pediatric services (6 months – 17 years)
8:00 am – 4:30 pm Tuesday - Friday
Adult services (17 years or older)
9:00 am – 4:00 pm Monday
Walk-ins accepted or call to schedule an appointment

Contact Information:

4545 Crain Highway
White Plains, MD 20695
(301) 609-6886

HEALTH PARTNERS, INC. (CHC)

Statewide Service Provider? No

Website: www.healthpartners.org

Eligibility:

- Charles County residents
- Children birth to adults
- Maternity
- Uninsured, Underinsured

Services:

- Preventive, pediatric, limited restorative, nonsurgical extractions
- Services provided by licensed dental hygienists and volunteer dentists
- Donations for services are accepted

Service Hours:

8:00 am - 5:00 pm Monday - Friday
Call to schedule an appointment

Contact Information:

3070 Crain Highway, Suite 101
Waldorf, MD 20601
(301) 645-3556

Public Health Dental Services for Frederick County

FREDERICK COUNTY HEALTH DEPARTMENT

Statewide Service Provider? No

Website: www.frederickcountymd.gov

Eligibility:

- Frederick County resident
- Children birth to age 18 years
- Medicaid accepted
- Sliding fee scale

Services:

- Preventive, restorative, pediatric, emergency

Dental Clinic

Service Hours:

8:00 a.m. – 4:00 p.m. Monday – Friday
Call to schedule an appointment

Contact Information:

350 Montevue Lane
Frederick, MD 21702
(301) 600-1041

Public Health Dental Services for Harford County

HARFORD COUNTY HEALTH DEPARTMENT

Statewide Service Provider? No

Website: www.harfordcountyhealth.com

Eligibility:

- Harford County resident
- Children ages 1 - 20 years
- Maternity
- Medicaid accepted
- No private insurance, reduced fees or sliding fee scales

Services:

- Preventive, restorative, pediatric, limited endodontic and emergency services

Dental Clinic

Service Hours:
8:00 a.m. – 4:30 p.m. Monday – Friday
Some walk-ins accepted or call to schedule an appointment

Contact Information:
2204 Hanson Road
Edgewood, MD 21040
(443) 922-7670

UNIVERSITY OF MARYLAND SCHOOL OF DENTISTRY, PERRYVILLE

Statewide Service Provider? No

Website: www.dental.umaryland.edu/perryville.html

Eligibility:

- Serving patients from Cecil, Harford, Queen Anne's and Kent Counties
- Children birth to 21, comprehensive care
- Maternity accepted
- Wheelchair accessible, special needs clients accepted
- Medicaid accepted
- Reduced fees available
- Private insurance accepted only for adult emergency treatment
- Age 22-59 emergency care and hygiene services only
- Age 60 and up emergency and comprehensive care if patient meets poverty guidelines
- Call for specific eligibility requirements.

Services:

- Comprehensive dental services provided by participating community dentists
- Senior care for dental emergencies if patient meets poverty guidelines

Service Hours:
Call to schedule an appointment

Contact Information:
4863 Pulaski Highway, Suite 200
Perryville, MD 21903
(410) 706-4900

Public Health Dental Services for Howard County

CHASE-BREXTON HEALTH SERVICES, INC.

Statewide Service Provider? Yes

Website: www.chasebrexton.org

Eligibility:

- Maryland residents
- Adults and children
- Maternity
- Sliding fee scale, proof of income required
- Medicaid accepted

Services:

- Preventive, prosthetic, restorative, and pediatric services
- Emergency services available

Service Hours:

Call to schedule an appointment

Contact Information:

5500 Knoll North Drive #400
Columbia, MD 21045
(410) 884-7831

Public Health Dental Services for Montgomery County

MONTGOMERY COUNTY DEPARTMENT OF HEALTH AND HUMAN SERVICES – COMMUNITY HEALTH SERVICES DENTAL PROGRAMS

Statewide Service Provider? No

Website: www.montgomerycountymd.gov

Eligibility:

- Clinical services are offered to Montgomery County residents only who meet income guidelines. Specific information on eligibility requirements, clinic fees, and appointments can be obtained from each clinic specific to a client's age group or population groups described below.
- All clients inquiring about access for Montgomery County Clinics must show proof of county residence.
- Age groups: Children ages 1-18 years, adults 19 years and older, senior adults 60 years and older.

Services:

- Preventive and restorative dental care
- Limited oral surgery procedures

Fenton Street Dental Clinic

Children and maternity dental services

Service Hours:
8:00 am - 4:30 pm Monday - Friday
Call to schedule an appointment

Contact Information:
8630 Fenton Street, 10th Floor
Silver Spring, MD 20902
(240) 777-3135

Germantown Health Center

Children and maternity dental services

Service Hours:
8:00 am - 4:30 pm Monday - Friday
Call to schedule an appointment

Contact Information:
12900 Middlebrook Road, 2nd Floor
Germantown, MD 20874
(240) 777-3290

Piccard Drive Dental Clinic

Children, maternity, senior/adult dental services, and urgent care referral

Service Hours:
8:00 am - 4:30 pm Monday - Friday
Call to schedule an appointment

Contact Information:
1335 Piccard Drive, 1st Floor
Rockville, MD 20850
(240) 777-1875

Public Health Dental Services for St. Mary's County

CALVERT COMMUNITY DENTAL CARE

Statewide Service Provider? No

Eligibility:

- Must be a resident of Calvert, St. Mary's, or Charles counties
- Adults & children
- Maternity
- Medicaid, Maryland Healthy Smiles accepted
- Sliding fee scale available for low income, uninsured
- Wheelchair accessible

Services:

- Preventive, pediatric, restorative, emergency
- Community outreach, educational presentations and onsite dental screenings

Service Hours:
9:00 a.m. – 4:00 p.m. Tuesday & Friday
9:00 a.m. – 5:00 p.m. Thursday
Hours may vary for different services
Call to schedule an appointment

Contact Information:
11849 HG Trueman Road
Lusby, MD 20657
(410) 535-8402

Federalsburg Dental Center

Service Hours:
7:30 a.m. - 4:45 p.m. Monday – Friday
Call to schedule an appointment

Contact Information:
215 Bloomingdale Avenue
Federalsburg, MD 21632
(410) 754-7583

ST. MARY'S COUNTY HEALTH DEPARTMENT

Statewide Service Provider? No

Website: www.smchd.org

Eligibility:

- St. Mary's County residents
- Children enrolled in Maryland Healthy Smiles Program
- Call for specific eligibility requirements

Services:

- Limited dental funds available to access services for emergency extractions of fillings

Dental Clinic

Service Hours:
Call to schedule an appointment

Contact Information:
21580 Peabody Street
Leonardtown, MD 20650
(301) 475-4316

Public Health Dental Services for Talbot County

CHOPTANK COMMUNITY HEALTH SYSTEMS, INC.

Statewide Service Provider? Yes

Website: www.choptankhealth.org

Eligibility:

- No geographic restrictions
- Talbot County does not have a public health dental clinic
- Ages 1 year and up
- Maternity
- Medicaid accepted and sliding fee scale
- Some private insurances accepted
- Adult/senior care for dental emergencies or by referral from their medical provider ONLY

Services:

- Comprehensive dental services for families
- Adults with acute care needs (severe pain and swelling) may present or be referred for same-day care. Patients will be seen on a first-come, first-served basis.
- School-based dental program available at participating public schools in Talbot, Dorchester and Caroline Counties.

Service Hours:

7:30 a.m. – 4:45 p.m. Monday – Friday
Call to schedule an appointment

Contact Information:

215 Bloomingdale Avenue
Federalsburg, MD 21632
(410) 754-7583

Federalsburg Dental Center

Service Hours:

7:30 a.m. - 4:45 p.m. Monday – Friday
Call to schedule an appointment

Contact Information:

215 Bloomingdale Avenue
Federalsburg, MD 21632
(410) 754-7583

Goldsboro Family Dental Center

Service Hours:

8:00 am - 4:30 pm Monday - Friday
Call to schedule an appointment

Contact Information:

316 Railroad Avenue
Goldsboro, MD 21636
(410) 482-2224

Public Health Dental Services for Washington County

WALNUT STREET COMMUNITY HEALTH CENTER

Statewide Service Provider? Yes

Website: www.walnutstreetchc.org

Eligibility:

- Maryland residents enrolled in Medicaid
- Children under age 1 and up
- Maternity
- Sliding fee scale for uninsured; proof of income required
- Some private insurance accepted
- Wheelchair accessible
- Special needs clients accepted

Services:

- Pediatric, preventive, restorative
- Limited oral surgery and emergency services
- Mobile dental unit provides care at various schools and other sites in Washington County

Service Hours:

8:00 am – 6:00 pm Monday – Thursday
8:00 am – 4:30 pm Friday
Call to schedule an appointment

Contact Information:

24 North Walnut Street
Hagerstown, MD 21740
(301) 393-3450

Public Health Dental Services for Wicomico County

THREE LOWER COUNTIES COMMUNITY SERVICES, INC.

Statewide Service Provider? No

Website: www.tlccs.org

Eligibility:

- Maternity
- Medicaid accepted
- Sliding fee scale available
- Some private insurances accepted
- Wheelchair accessible
- Special needs clients accepted

Services:

- Preventive, pediatric, restorative, prosthetic, emergency

Dental Department

Service Hours:

8:30 am – 7:30 pm Wednesday
8:00 am – 5:00 pm Monday, Tuesday, Thursday and Friday
Call to schedule an appointment

Contact Information:

12165 Elm Street
Princess Anne, MD 21853
(410) 651-5151

WICOMICO COUNTY HEALTH DEPARTMENT

Statewide Service Provider? No

Website: www.wicomicohealth.org

Eligibility:

- Residents of Wicomico, Worcester and Somerset Counties (Lower Eastern Shore region)
- Birth to age 20
- Maternity
- MD Healthy Smiles Dental Program
- Wheelchair accessible
- Special needs clients accepted

Services:

- Comprehensive dental services

Village Dental Center

Service Hours:

8:00 am – 4:30 pm Monday – Friday
Closed from 12:00 to 1:00
Call to schedule an appointment
Emergency walk-ins taken as schedule allows

Contact Information:

705 North Salisbury Boulevard
Salisbury, MD 21801
(410) 334-3401

Public Health Dental Services for Worcester County

THREE LOWER COUNTIES COMMUNITY SERVICES, INC.

Statewide Service Provider? No

Website: www.tlccs.org

Eligibility:

- Maternity
- Medicaid accepted
- Sliding fee scale available
- Some private insurances accepted
- Wheelchair accessible
- Special needs clients accepted

Services:

- Preventive, pediatric, restorative, prosthetic, emergency

Dental Department

Service Hours:

8:30 am – 7:30 pm Wednesday
8:00 am – 5:00 pm Monday, Tuesday, Thursday and Friday
Call to schedule an appointment

Contact Information:

12165 Elm Street
Princess Anne, MD 21853
(410) 651-5151

WORCESTER COUNTY HEALTH DEPARTMENT

Statewide Service Provider? No

Website: www.worcesterhealth.org

Eligibility:

- Worcester County residents only
- Children birth through age 20
- Pregnant women
- MD Healthy Smiles Dental Program
- Sliding fee scale
- Special needs clients accepted

Services:

- Preventive, restorative, pediatric, endodontic, emergency

Worcester County Dental Center

Service Hours:

8:00 am – 4:30 pm Monday – Friday
Call to schedule an appointment

Contact Information:

107 William Street
Berlin, MD 21811
(410) 641-0240