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SECTION I: OVERVIEW

The overarching goal of the project is to develop a realistic health systems strategy that will extend oral health services to families and children. Three priority goals identified to address this project include:
1. Increase age one dental visits for children most at risk for disease (Project 2)
2. Improve access to oral health service for children with special health care needs (Project 1 and 2), and
3. Ensure restorative treatment of active disease through sealant programs (Project 1)

Refer to the Program Abstract for a brief summary of the project. Each project will be discussed separately to address the required program narrative sections. The four year summary of each project is included within each project section.

SECTION II: PROGRESS AND PROGRAM NARRATIVE SECTIONS

Project #1:
Goal 1: Ensure restorative treatment of active disease through sealant programs
Goal 2: Improve access to oral health service for children with special health care needs

a. Experience to Date:
As noted in the work plan, this project originally planned to implement a new dental sealant program within a rural location of the state for year 4 of the grant, as well as continue year two of funding for the year 3 grantee—Thunder Bay Community Health Services (TBCHS). However, only two organizations applied for funding in response to the Request for Funds Proposal (RFP) and each were past grantees of the grant—St. Johns and Henry Ford. Upon a graded competitive grant process, Henry Ford received funding for the final year of the project to begin sealant programs within additional schools in Detroit, Michigan, as well as Thunder Bay Community Health Services, Inc. (TCBHS), which is located in Montmorency County, in rural Northern Michigan.

As the work plan demonstrates, Henry Ford Health System (HFHS) received a majority of the funding for Year 1 of the grant, and within the 2nd year, received half of the funding while a new program was started. In year 2, St. John’s Health System (SJHS) began their first full year of funding, while HFHS received half funding. In year 3, TBCHS began its first year of funding and the existing program at SJHS received half funding. In addition to year 3, the HFHS was funded for an additional half of year (February 2010-September 2010) with funding granted from carry over funds from year 2, this funding assisted them with the growth of another school-based dental sealant program. In year 4, TBCCHS received half funding and HFHS received one last year of full funding. As noted in the commentary, SJHS, HFHS, and TBCHS have developed and expanded their programs during this grant period and are demonstrating long-term sustainability of the projects. HFHS continues to assist SJHS in the development of a model for school-based sealant program and extended assistance in developing a referral network with the University of Detroit Mercy School of Dentistry (UDM).
The overarching principle of this project is that the project is to developing a sustainable infrastructure and care delivery system that improves the integration of oral health services in the Detroit, Wayne county service area and within a rural area of Michigan.

- **Thunder Bay Community Health Services:**
  (Summary of overall project accomplishments during the reporting period)

Thunder Bay Community Health Services, Inc. (TBCHS) is located in Montmorency County in Northern Michigan. TBCHS is a Federally Qualified Health Center (FQHC) and received funding through a competitive grant process to begin a dental sealant program within a school-based health center. The school-based health center is located within Onaway Community Schools, which is located within Presque Isle County. This region has been designated a Health Professional Shortage Area (HPSA) for many years due to the shortage of providers. Due to the geographical isolation, there are multiple issues with respect to opportunities for employment in combination with a high transient population. The service area is comprised of low-income school children/adolescents and their families. This makes for a dynamic of poverty that dictates the fabric of the community. Many students spend over an hour of travel time, mostly by school bus, and travel at least 30 miles, one way, to attend school in Onaway, per day. The dental sealant program implemented a school-based dental sealant program within a school-based health center, which offers a link to comprehensive dental services for 1st, 2nd, 3rd, and 6th grade students.

The school is comprised of students from kindergarten through 12th grade (K-12) and are all housed within the same complex (elementary, middle, and high school). Students who attend the school reside in Presque Isle (70%) and Cheboygan Counties (30%). There is a great need to implement a school-based dental program as a means of addressing the unmet oral health needs that compromise the uninsured, underinsured and publicly insured children within this area. Children in the Northern Lower Peninsula experience dental caries and untreated dental disease at higher rates than the rest of Michigan. It is important to note that the Onaway Area Community School does not have a fluorinated water system.

The dental sealant program will target 75% of the 238 students in the 1st, 2nd, 3rd, and 6th grades for placement of dental sealants and all students with special needs. All children seen through the dental sealant program are referred to the nearby TBCHS Dental Clinic. The TBCHS has a comprehensive dental treatment referral system set up for the children to receive needed dental care services within their Atlanta TBCHS Clinic located in Atlanta, Michigan and is the only clinic in the area which does not deny any Medicaid payer source. Every effort is made to follow up with parents to ensure that the needed services were received. In addition, TBCHS is the only provider of medical and dental care services to low-income uninsured and underinsured residents.

As originally proposed, TBCHS received full funding within their first grant year and half that amount of funding for the following year. In their second year of funding, they sustained the dental program within Onaway School and they added on an additional 10 schools to provide school-based dental sealant programs within. The additional 10 schools covers a 56-mile
extremely rural radius to bring dental sealants to 1st, 2nd, 3rd, 6th and 7th grade students within all 11 schools. In the 2010-2011 school-year the program placed an amazing 1,269 dental sealants on over 330 students. Provided oral health education to 2,067 students and to even further their success the retention rate for the dental sealants placed is currently at 100%, meaning all dental sealants are still present on the teeth preventing dental decay! The school-based dental sealant program is expects to be fully sustainable and has also assisted two additional sealant programs start up within the rural counties that surround them.

Barriers to progress that have been encountered and strategies/steps taken to overcome them:
Minimal barriers are available to report in school year 2010-2011 and their second year of the grant. Largest challenge seems to be getting parental consent for the middle school population. The program is currently piloting a different type of incentive to try to receive more 6th and 7th graders positive permission slips.

- **Henry Ford Health System**
  (Summary of overall project accomplishments during the reporting period)

The Henry Ford Health System/University of Detroit Mercy Oral Health Program (HFHS/UDM OHP) have been able to identify oral health disparities within the school-based setting and effectively assist in the reduction of these disparities. This was accomplished, through dental sealant placement, oral health education and by establishing a dental home for under served children. When a child presents with any catastrophic or emergency issues the child is referred to Children’s Hospital/Developmental Dentists. The Henry Ford Health System (HFHS) has expanded from four to five schools for school-based/school-linked dental sealant programs, through the period of this grant (2010-2011), and the sealant program in all schools are fully expected to be self-sustainable and to continue following the end of the grant period.

Through cooperation with the University of Detroit Mercy School of Dentistry (UDM), two part-time hygienists provide dental screenings, oral health education, and referral for dental treatment. Children identified as requiring dental restorative treatment receive a note for the parent to schedule an appointment at the University of Detroit School of Dentistry or other dental provider of their choice. The hygienists, with the assistance of a sealant coordinator funded by HFHS, contact each parent/guardian to assist in scheduling the child for an appointment and to provide reminder calls to keep the appointment. The sealant coordinator assists the family in arranging for bus tokens, cab fares or other transportation to UDM. Every effort is made to follow up with parents following any appointments that resulted in bleeding or there is a need for emergency follow up. Follow-up contact with parents is made if two weeks pass after a referral for restorative care is sent home and no appointment has been made at UDM. Through collaboration with the Children’s Toothfairy Foundation (CTFF), any child up to age 17 presenting to UDM without insurance (including Medicaid) or an ability to pay for services will receive dental services that are paid by the CTFF. Children's Developmental Dentistry Specialists are on contract with HFHS to service all special needs children who are unable to receive dental care elsewhere.

With the final year of funding, that began October 1, 2010, 399 children were screened and provided preventive care services in two months of the program by the Dental Hygienists. The
services included the placement of 1,133 dental sealants, 401 oral prophylaxis and 399 fluoride varnish applications. Of the children, 106 were classified as special needs children, and 410 received oral health education. 136 patients were identified as needing dental care according to the urgency of need for dental care criteria (Adapted from ASTDD Screening Survey Tool). Two (2) children needed urgent dental care. Fifteen (15) appointments were made at the UDM School of dentistry for comprehensive dental care. Two (2) appointments were made with the Children's Developmental Dentistry Specialists. Twenty-two (22) made appointments at an "Other" location. Twenty-one (21) reported that they will make an appointment with UDM or with the Children's Developmental Dentistry Specialists. The remaining students were unable to be reached for follow-up. Five (5) appointments have been failed appointments at UDM. One (1) appointment at UDM was cancelled. At this time, the amount of completed appointments is unknown.

All children who present with a positive permission consent slip are serviced. To maximize services and to simplify school forms, consent forms for the dental program has been integrated into the overall health center consent. Consents are sent out at the beginning of the school year for all clinics. Although HFHS offers comprehensive dental service, prophylaxis, fluoride varnish, and dental sealants, only the cost to provide dental sealants and staff are funded for out of the Dental Preventative Services in State Funded Adolescent Health Centers Grant. All children who serviced by the oral health program have received oral health education. The oral health coordinator is continually working with the parents, in collaboration with the school-based clinic staff and school staff, to educate parents on the value and importance of oral health sealants and receiving other preventive dental services. Dental sealant retention checks are performed on 20% of the students seen in the dental sealant program with a 90% or higher retention rate on occlusal surfaces and 60% or higher on buccal pits.

Improve access to oral health service for children with special health care needs
HFHS served five schools during the 2010-2011 grant period. They served the schools of: University Preparatory Academy (UPA) Mark Murray, UPA Ellen Thompson, UPA Middle, Detroit Edison Public School Academy (DEPSA), and Plymouth Education Center (PEC). They are in current discussion with additional schools to continue the growth of the program, however with school restructuring in the Detroit area adding schools may not be possible.

Barriers to progress that have been encountered and strategies/steps taken to overcome them
The greatest barrier in the program continues to be educating parents on the importance of their child’s oral health. HFHS has difficulty ensuring that parents schedule and keep appointments with UDM Dental School. Parents do not follow-up on the dental care needed for their children due to various reasons:

1. Lack of transportation to the dentist’s office
2. Lack of Medicaid providers
3. Lack of providers who want to treat children
4. No perception of oral health needs of the children/parental perception of urgency of needs
5. Low priority of dental needs perceived by the caregivers
6. Single working parents who cannot take time out from their work to take their children for dental appointments
7. Lack of dental insurance.
Dental hygienists and the oral health care coordinator continuously follow-up with the parents of the children who need dental care. HFHS has implemented new and intensive methods of engaging parents, such as offering “Parent Education Forums” and continuing to provide transportation to their first restorative care appointment.

b. Significant Changes:
Due to restructuring of the schools, the closing of schools, loss of population in Detroit, and the Detroit Public School budget issues, HFHS lost four of their eight schools between 2008-2010. However, due to combining schools, the dental sealant program continues to excel due to new students being transferred in from schools that HFHS originally was unable to serve.

A parent education workshop continues to grow within the HFHS program to enhance parental understanding of their dental needs and their child’s dental needs. Parents are taught oral health education and skills, such as, brushing and flossing techniques, how to identify potential dental caries, healthy foods and drinks that promote food oral health, and how to find a dentist and whom to contact to assist in finding a dentist. The workshop has continued to increase dental restorative services for children serviced by the program.

The dental coordinator at HFHS developed a focus group during the 2010-2011 school year that focused on parents of students and was designed to evaluate school-based dental programs with the parents in mind. The focus group examined parental oral health education levels, along with thoughts, feelings, and concerns when it comes to their children receiving dental treatment within the school. The one-year pilot was successful and Henry Ford has implemented the findings within their school-based dental programs to assist in easing parental concerns. The overall general low health literacy of oral health was a primary lesson learned from the focus group and Henry Ford now takes additional steps to educate the parents on the benefits of good oral health and the risks of poor oral health.

School caseworkers have begun working with the HFHS clinic staff to ensure students are getting the needed restorative care. Parents have begun referring other parents to the education workshop (see p. 8), ideally over time this will have a positive impact on the oral health status of the children.

TBCHS forecasts sustainability within their school-based sealant program. They have further plans to add on a more comprehensive school-based dental program as they are able to hire additional hygienists. The area schools have been pleased with their services and billing services has enabled them to achieve true program sustainability.

c. Collaboration:
Henry Ford Health Systems (HFHS) has a contract with the University of Detroit Mercy Dental School to serve as a “dental home” for children referred. Children that cannot be accommodated by UDM are referred to the Children’s Developmental Dentistry Specialists or the Children’s Hospital Dental Clinic in Detroit. HFHS, the UDM dental clinic and Children’s Hospital are all within a five mile radius within bus lines. HFHS has a contract with the University of Detroit Mercy Dental School (UDM) to provide preventive outreach activities and serve as a dental home for the children seen within the program. Both HFHS
and SJHS school and adolescent health centers are funded through grants from the Michigan Department of Community Health Child and Adolescent Program. Collaboration with Paula Tutman Children’s ToothFairy Foundation (CTFF) provides needed financial resources to provide for the restorative care that cannot be paid by Medicaid, other third party payors, or the parents/guardians, however due to lack of funding this program is due to close. Both HFHS and SJHS are members of the School-Health Alliance, a group with a close connection to the MDCH Oral Health Program. Working collaboratively, each organization is working in tandem to develop a sustainable preventive dental program with a direct link to restorative access.

TBCHS has acted as a mentor to two additional school-based sealant programs. TBCHS is currently working with a neighboring county (Alcona) to assist them with beginning a new school-based sealant program and TBCHS also assisted a new program in the Upper Peninsula with beginning a school-based program. MDCH has encouraged sharing of all materials, networking, and lessons learned so that many more Michiganders will benefit from preventative dental sealants.

d. Monitoring:
The internal management plan is monitoring if the planned project activities met the objectives of the work plan. The timeline and completion of activities are evaluated through various tools to track progress on the project. Patient satisfaction surveys are conducted by HFHS, UDM and CTFF to determine ways to improve service and promote keeping scheduled dental appointments. One outcome of evaluation was the development of a pamphlet to assist clients in enrolling in Medicaid. In Year 4, due to technological difficulties, the programs both (HFHS and TBCHS) ceased the use of SEALS software to track data. In replacement, the programs continued to collect data using the SEALS Child-Level form and the MDCH Epidemiologist developed a sealant tracking system in Microsoft Access. This modification took place due to the continued unreliability of SEALS. In addition to the Child-Level SEALS Access database, the Coordinator also inputs sealant data within the HFHS School-Based Children’s Health Project (SBCHP) oral health program database and TBCHS uses their practice management software system. This eases retention check days because name, classroom, grade, and school can easily identify the student. The Coordinator can then mark within the child’s electronic record he/she has had a retention check and if any sealants were lost or retained. HFHS, UDM, CTFF and TBCHS track if dental appointments are made and if they are kept. Each objective has a corresponding evaluation mechanism to ensure that the program stays on target in meeting the work plan and the grant requirements. Each grantee, HFHS and TBCHS, received quarterly reviews by the MDCH dental sealant coordinator. Ongoing program evaluation was completed.

c. Significant Results: Over 75% of the children screened received at least one dental sealant through the Henry Ford Health System. The demographics of the population are 98% Black/African American, many of whom are experiencing their first access to oral health services. This program removes the barrier of disparities, as all children are provided services, regardless of the ability to pay. The program targets children in the 1st, 2nd, 6th, and 7th grade. The majority of children provided dental sealants received comprehensive dental services, a significant improvement over the traditional dental sealant programs. Children
with special health care needs are receiving dental services with comprehensive follow-up care available. The previous expansion of the Henry Ford Health System from one to eight schools within 1.5 years is significant. However, due to economic conditions HFHS lost several schools. In less than a year they recruited four new schools to begin in and are still approaching others. The program growth demonstrates the viability of the model to be replicable and the long-term sustainability of the program. The project model of developing dental programs within school and adolescent health centers is garnering attention within the Michigan Department of Community Health. With the support of the Dental Sealant Coordinator and the Michigan Oral Health Coalition, this model is strong enough to replicate across Michigan. The MDCH is continuously looking towards methods to increase resources to build this model in additional areas around Michigan. TBCHS has potential to have a sustainable dental sealant program now that they have secured all of their staff and have a year of growth and experience.

f. Response to Conditions/Recommendations from MCHB:
The responses to the recommendation from MCHB were incorporated in the Response to Final Summary Statement submitted on 9/15/07. No conditions and/or recommendations from the last Notice of Grant Award/Notification Letter were given to Michigan for this grant.

g. Listing of Publications and Other Materials:
The SEAL! Michigan dental sealant program was published by the Association of State and Territorial Dental Directors (ASTDD) as a best practice in March 2011 and is located at: http://www.astdd.org/bestpractices/DES25007MISealantProgram.pdf. Un-published monthly newsletters are provided to grantees to assist with program success. An unpublished dental sealant training was created for the school-based dental sealant programs in Michigan to utilize. Permission was granted from Ohio to modify the Ohio training into a Michigan focused training to provide to Michigan programs. The training is nearly 300 slides on PowerPoint, offers three (3) hours of continuing education and is required to be completed by those funded or seeking funds from MDCH. The training covers proper sealant placement, OSHA requirements, CDC recommendations, as well as the history and future of the sealant programs. The training is stored with Microsoft Workspace and is provided to anyone who requests access—regardless of their funding source. An annual workshop was provided to the sealant grantees in June 2011 in Lansing, Michigan. The eight-hour workshop consisted of a half-day presentation by Dr. Margherita Fontana, DDS, on dental sealant research and the topic of the safety of placing sealants over dental decay. The other half of the day highlighted Kim Laudenslager RDH, MPA from OSAP on infection control update for portable dental settings. Evaluations from the day were extremely positive and have continued to show that this workshop had a long lasting effect on the school-based dental sealant programs, through multiple program changes.

h. Four-Year Grant Summary Project 1:
The grant began in 2008 and over the four years has provided funding to three different organizations—Thunder Bay Community Health Services (TBCHS), Henry Ford Health System (HFHS) and St. John’s Health System (SJHS). All organizations are located in Michigan and were supported financially and administratively to begin and continue school-based dental sealants programs with the overall focus of establishing means of restorative services to students,
with a focus on those with special needs. Between TBCHS, HFHS and SJHS, students in Kindergarten through grade seven within twenty-five (25) different schools received the benefits of school-based dental care. Follow up with SJHC in Year 4 demonstrated that their program continued after their final funding year in Year 3 and has active preventative dental programs within three schools, with follow up care available through local dental clinics. HFHS and TBCHS also both report program continuance and growth, which is the ultimate goal—sustainability. The three programs together, over the four years, brought oral health access, education, dental sealants, and additional preventative services to thousands of children, parents, and educators within Michigan. In addition, HFHS has given the gift of true public health education to the University of Detroit Mercy Dental School Dental Hygiene students through their school-based sealant programs.

The project over the four years was not always smoothly executed within each program, with the primary barrier lying within the restorative treatment requirement. Two of the three programs struggled with establishing a partnership that could effectively and efficiently provide restorative care and a true dental home to students. HFHS was successful by establishing a sound collaboration with the University of Dental School and referral system to easily track which children received follow up care. However, TBCHS had poor outcomes within the first year because they had a dentist on site who was a relatively new graduate who tended to be a slower worker and who was uncomfortable acting as a supervising dentist for the hygienists to place dental sealants. Their dentist was much more comfortable having a full exam and radiographs done on each child prior to dental sealant placements and then she also wanted to provide a full follow-up exam to check the sealants. This simply bottle necked their program in year one. In year two, TBCHS worked only with a registered dental hygienist and coordinator under the remote supervision of a different dentist. With this modified staffing plan they were able to expanded into 10 additional schools and set up a sound referral and tracking mechanism with the Thunder Bay Community Health Services dental clinic providers to ensure follow up and to create a true dental home for their students and families. The first grant year TBCHS had less than 100 dental sealants placed and the second grant year they placed over 1,200 and reported a 100% retention rate on their dental sealants of the 20% rechecked. SJHS also had initial trouble beginning their school-based dental programs within their first year, primarily due to struggling with establishing a partnership with the University of Detroit Dental School to provide a sound referral and tracking system for the students seen within their program. The second year, SJHS established hygienists to place dental sealants, but this was coordinated by their school nurse who was attempting to coordinate too many health services and because of that they also were still unable to establish a true partnership with the University of Detroit Mercy Dental School. It was not until the third year (which was an unfunded year) that they were able to establish a working dental sealant program. The financial assistance and technical support provided through grant funds were what created the opportunity that eventually lead to the program continuing.

Additional barriers for all three programs were also statewide and multi-state mobile dental programs that would cause a disruption in the treatment provided and follow-up care. Several multi-state mobile dental programs would come into schools and provide treatment to the students while the school-administration did not understand the difference between the communities based program and the mobile dental programs. The Michigan Department of Community Health also had staffing changes within the four years, with a switch of the Oral
Health Director, from Sheila Vandenbush to Christine Farrell and the Dental Sealant Coordinator from Tameika Hart to Jill Moore. When new begin program management there is a natural delay in productivity while the establishment of new roles are taking place, and this delay amounted to approximately six-month delay while staff members were learning new roles.

Although many barriers existed, many successes emerged from the grant as well. The dental sealant program requirements were by far the easiest to establish and to expand, then through an established dental sealant program the programs were able to work in the restorative piece. Even with several barriers that challenged the new programs, at the end of the four years they are all sustainable and continue to grow. The SEAL! Michigan program has benefited from the success of the grant as well through an unexpected gift for Fiscal Year 2012. Overall due to the growth and continued success of the school-based dental sealant programs in Michigan that have been supported by HRSA, CDC, ASTDD and Title V, the Delta Dental of Michigan recognized the success and has donated $150,000 for Fiscal Year 2012. These funds have begun three new dental sealant programs in Michigan that will target an anticipated additional thirty-five (35) schools. The SEAL! Michigan program is now also taking steps to begin a certification program for school-based dental sealant programs in Michigan that are not financially supported by the MDCH and federal grant funds. The certification program will allow unfunded programs to obtain the SEAL! Michigan certification status so that schools will have a way of identifying a community-based program that can offer true follow-up care versus a statewide dental program that can not offer true follow-up of restorative care and establishment of a true dental home. Much of the certification process will use many of the resources that have been developed and created over the last four years. The MDCH will also be working the Michigan Dental Association (MDA) to work on the mobile dental issue within the state, by creating a document for school administration to understand the difference between a community based program and a statewide dental program. Thank you for the opportunity to increase access to preventative and restorative oral health care for children in Michigan.

Project #2:
- Increase age one dental visits for children most at risk for disease
- Improve access to oral health service for children with special health care needs

a. Experience to Date
Points of Light Project:
Points of Light is an initiative through the Michigan Academy of Pediatric Dentistry that builds relationships between medical and dental professionals for the purpose of detecting early childhood caries and finding a dental home by age one. This grant has been helping to support their efforts since 2008. Agreements have been renewed with the Michigan Department of Community (MDCH) for the full grant period. (Attachment I Work Statement)

The Points of Light Project (POL) consists of a “Point Dentist” who is charged with running the project in their community by developing a list of general dentists that are willing to accept infant patients into their practices. Once the list is established, the Point Dentist sends the list and a copy of the American Academy of Pediatrics Oral Health Policy to all pediatric medical providers within the community. They also need to connect with a medical provider willing to be the other half of the “team” and help in the training of other physicians and dentists from their
community. This has the intent of establishing referral networks to allow the message of the importance of infant oral health to be relayed at the grass roots level from the dental community to the pediatric medical community. The networks have grown from the first year of the grant of 15 networks to over 60 network communities today.

Since all children with special health care needs (CSHCN) are considered high risk for dental caries, programs that facilitate early, appropriate referrals from pediatric medical providers to a dentist will improve health outcomes and oral health access for these children. As it is cost prohibitive for a community or a state to support a network of specialists dedicated to the surgical management of complicated and comprehensive oral rehabilitation, the enduring intent of the POL project is to present patients to early caries management rather than management of existing decay. In this way, POL addresses the access issue for CSHCN by efficient utilization of a general dentist within a community.

The first year use of these grant funds helped sponsor Michigan’s first “Infant Oral Health Summit” held October 3, 2008. This summit invited participation from nearly 300 licensed medical and dental professionals from across Michigan. Topics discussed at this summit were, Evidenced Based Practices, Cariology, Preventive Modalities, Rational for Early Interventions, and the POL Project. The summit resulted in a sell out crowd with an unaddressed waiting list. All participants received continuing education credit and created strong interest in infant oral health in numerous communities across Michigan.

The October 1, 2010 Points of Light: Infant Oral Health Summit was the second full day event that brought together all the major stakeholders from across Michigan to bring attention to early and preventive oral health care for our youngest patients. Both meetings proved invaluable toward developing momentum amongst physicians, dentists, nurses and hygienists with regard to timely establishment of ‘Dental Homes. Collectively, more that 600 participants have attended the Summits.

The goals of the Summits were two fold. First, to educate attendees regarding the importance of Infant Oral Health (IOH) and the early dental visit:

- IOH is the best utilization of professional resources, (general dentists can see infant patients preventively)
- IOH significantly reduces the cost of care delivery (preventive care is vastly less expensive than surgical intervention)
- IOH provides and opportunity for primary prevention (modification/optimization of maternal flora prior to and during colonization)
- Children with Special Health Care Needs can be identified and referred early for care

Secondly, the Summits sought to establish community based collaborative of physicians that would screen and refer and dentists that would accept these infant patients and provide comprehensive ‘Dental Homes’. Both Points of Light: Infant Oral Health Summits have met with favorable reviews from our participants and have resulted in a marked expansion of age-one dental visits throughout Michigan.
The Points of Light (POL) project was featured in the January 2009 edition of the Michigan Dental Journal. The project has caught the attention of the International College of Dentists and the POL project was featured in their global publication in April of 2010.

POL communities are beginning to be geographically dispersed throughout Michigan and the work continues to expand to all communities within Michigan. More areas need to be targeted for the Upper Peninsula.

The POL project was invited to present on 'Improving Access to Care' at a symposium at the University of Minnesota in 2009. Dr. Phil Monroy, a POL dentist, represented MDCH with distinction.

The Michigan Dental Association's (MDA) Annual Session, had graciously invited the POL project back again in 2010 and Drs. Kevin Hale and Daniel Briskie, pediatric dentists, presented. Dr. Hale is also on the MDA Access to Care Committee and gives updates on the project at each meeting.

Trainings have been set up around the state this past year through POL to train dental professionals on seeing infants. Dentists and Dental Hygienist Associations have been approached to participate.

POL started with a list-serve and web access which was supported by the Michigan Academy of Pediatric Dentistry's website (MichiganAPD.org). The list-serve enabled any member of the POL community to post questions and comments to the rest of the community and assisted in furthering the collaboration between physicians and dentists as well as community to community contact. The MAPD website hosted a POL logo and served as a portal for information useful to POL members.

In this past year, a new website has been developed: http://www.pointsolightonline.org/. This is an interactive site that has an excellent video with POL Chairman, Dr. Kevin Hale, describing the benefits of the age one dental home. There are resources for parents as well as professionals with listings of dentists across the state willing to see infants. Dentists can indicate if they wish to be referred to for infants, Head Start children, CSHCN, Healthy Kids Dental and Medicaid when they register. The new POL brochure, poster, many handouts, and self teaching videos are also available here. (See Attachments)

**Varnish! Michigan- Babies Too!**

Since the inception of Medicaid billing for applying fluoride varnish for physicians and nurse practitioners was initiated in November 2008 the interest from the medical field to include oral health as part of their well baby exams has increased. The Michigan Department of Community Health (MDCH) has developed an online training and quiz for medical professionals to become certified to bill Medicaid for applying fluoride varnish on high-risk children up to age three. http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-150940--,00.html

The connections for POL have increased as well, due to this interest. We have continued to add physicians and nurse practitioners to our growing list of medical providers allowed to bill
Medicaid for fluoride varnish applications in Michigan. We started with 48 medical providers certified in 2008-09 and currently, there are 74. This will need to grow if we are to continue to see an expansion in the age one dental home.

We have also been encouraging these medical practices to collect oral health screening data on these young children by offering free fluoride varnish to those turning in the data to MDCH through the Varnish! Michigan- Babies Too Program. Since the program’s initiation in 2008, we have 18 medical provider agencies collecting data on the number of teeth present, previous caries experience, untreated decay, white spot lesions, treatment urgency as well as number of fluoride varnish applications in a 12 month period. Data is collected on a continuous basis and entered into an MDCH database quarterly.

**Head Start Dental Home Initiative:**

Michigan was the recipient of a grant from the American Academy of Pediatric Dentists and Head Start to launch a Dental Home Initiative in Michigan. Teams are still being organized with dentists and Head Start staff to bring together these groups and provide dental homes to all Head Start children. A May 7, 2010 conference was held that brought these teams together and gave guidance on how each area can meet the needs of all HS families in acquiring a dental home. This initiative ties in closely with Points of Light as to connecting professionals and the age one dental home.

Several trainings have been set up across the state to train dentists and dental hygienists on infant and child oral health to aid in this initiative. (See Attachment)

**b. Significant Changes:**

The significant changes for this project are the number of physicians and medical providers willing to start doing oral screenings on infants and toddlers and applying fluoride varnish to the high risk infants. There has been much more interest in the POL project with the growth from 15 networks the first year to over 60 networks presently. The development of the Points of Light new website has greatly enhanced resources available for providers and parents on infant oral health.

MDCH currently has over 74 physicians and nurse practitioners certified to bill Medicaid. The Babies Too! Program has grown from 10 programs in 2009 to 19 programs today. Three of these programs are in the County WIC programs where nurses are under the supervision of a physician or dentist applying doing oral screenings and applying fluoride varnish.

The Head Start Dental Home initiative has brought together dentists and Head Start communities to provide needed care, encouraging the “Age 1” dental visit and establishing dental homes for HS children throughout Michigan.

**c. Collaboration**
The original partners in the project, the Michigan Chapter American Academy of Pediatrics (MIAAP), the Michigan Academy of Pediatric Dentistry (MAPD), and representatives of the Michigan Department of Community Health (the Oral Health Program, Medicaid and Children’s Special Health Care Needs) and the Michigan Dental Association have worked with dedication and professionalism to reach the goal of this grant.

Additional collaborative partners have joined the original committee members. New members include additional representations from the Michigan State University Institute for Health Care Studies, the University of Michigan, Michigan State University, Michigan Medical, P.C. and the Head Start Dental Home Initiative.

Sponsors of the Infant Oral Health Summits included the Department of Community Health, the Michigan Academy of Pediatric Dentistry, the Michigan Dental Association (MDA), the Michigan Chapter of the American Academy of Pediatrics, Blue Cross Blue Shield of Michigan, Crest Oral B, Delta Dental, Henry Schein Dental and Omni Pharmaceuticals.

Collaboration among dental and medical professionals through Points of Light is exceeding all expectations. There are now over 60 POL network communities that team dentists with physicians. Each acts as a source for information from the other. Referrals for a dental home can be made early in life to reduce risks of future oral health problems. Children with special health care needs can be assessed early for dental disease risk and be connected to a dental home.

Medicaid collaborated with us and was instrumental in getting the policy out for reimbursements to medical providers in time in the fall of 2008. They were also very helpful in their organization to get the online infant oral health training and other materials on their website for medical providers to access. The MDCH Oral Health Program provides Medicaid monthly with new certified medical providers and their NPI numbers so that a current listing of providers can be maintained. We also are working with Medicaid to allow a policy change so we can use the national “Smiles for Life” Oral Health Training Modules as a certification tool for the fluoride varnish applications. “Smiles for Life” would award continuing education credit, whereas, the Michigan training does not.

d. Monitoring

The internal management plans in place have demonstrated that the planned project activities have mostly met the objectives of the work plan. The evaluation plan has been in place to evaluate the program from the start to the completion of the program. Over 77% of the respondents of the Infant Oral Health Summit of 2008 planned to implement a POL project within the year.

Printed materials were the number one resource requested by participants of both the 2008 and 2010 Summits. Materials are now available on the new website.

Over 69% of the respondents from the summits were interested in participating in a POL list serve. The participants from the dental community presented a 91% rate that the Summit prepared them to approach members of the medical community.
Minutes of meetings, summit survey results and the number of POL communities are examples of the tracking information utilized to monitor the project. We also have received periodic reports from Dr. Kevin Hale, the Director of POL, which described Summit results, program updates, website and educational material updates.

e. **Significant Results**

Over 60 communities throughout Michigan now have linkages with physicians and pediatric dentists or general dentists to provide oral health exams by age one. For many children, this will be their only opportunity for early dental prevention activities.

The development of the new Points of Light website has been a large significant result as to resources available to professionals and to parents on infant oral health. The handouts and videos available for professionals and parents will lead to increased knowledge in the area of Infant oral health. Providing names of dentists willing to treat infants, Head Start children, Medicaid clients or children with special health needs is a much needed resource for Michigan.

As a result of the Infant Oral Health Summits, the POL project, the collaboration with Medicaid and the MDCH Oral Health Program, physicians and nurse practitioners can now be reimbursed for varnish applications during ESPDT well baby checks (See Attachment- Bulletin M-50)

WIC programs are now jumping on board by utilizing their nurses to apply fluoride varnish with a standing order from a physician or dentist. Home visiting programs, such as our MDCH Maternal Infant Health Program (MIHP), are looking more seriously at encompassing oral health education and fluoride varnish applications into their programs. We will begin a pilot program with our MIHP starting in Jan 2012 to train home visiting nurses to perform an oral health assessment and apply fluoride varnish to newly erupted teeth on children under one year old. The main objective will be to connect families to a dental home by the time the child turns one. We are hoping the results from our pilot program will convince Medicaid to begin reimbursement through this program. (See Attachment- MIHP Pilot Protocol)

Our infant oral health online training module was updated in September 2011. When certified by passing the on-line training, physicians and nurse practitioners can be reimbursed by Medicaid. At-risk children and children with special health care needs benefit most from the project, as this group faces the most severe access to oral health care. The wide sweeping ability to see all children removes all discrimination from the program.

f. **Sustainability**

Points of Light will continue with the help of various support; other grants and a private donation. They now have strong dental community support with close to 500 dentists signed up on their website as a referral source.

We plan to continue the Varnish! Michigan-Babies Too program, which provides free fluoride varnish to medical practices willing to collect screening data for MDCH through grants.
The support of the Head Start Dental Home Initiative, programs to encourage dental homes for CSHCN will be budgeted through other resources.

g. **Listing of Publications and Other Materials:**

1. Points of Light Brochure  
2. Points of Light Poster  
3. Infant Oral Health Handout  
4. Enhanced Care Through Appropriate Medical Referrals (ECTAMR)  
5. High Caries Risk Protocol  
6. Infant Oral Health Intervention for Physicians  
7. Benign Oral Health Enhancement  
8. Infant Oral Health Interventions for Dentists  
9. Knee to Knee Exam Video  
10. Well Baby Knee to Knee Exam Video  
11. Infant Oral Hygiene: Home Care Recommendations Video  
12. Looking for a Change in Culture Video  
13. Dental Care: A Pediatrician’s Perspective Video  
14. Fluoride Varnish in the Pediatric Office Video  
15. Through the Eyes of the Pediatric Dentist Video  
16. What to Look For Video  
17. Points of Light in an FQHC Setting Video

h. **Current Staffing:**

- Dr. Kevin Hale is Chair of Points of Light Program  
- Dr. Martin Makowski is treasurer of grant at Michigan Section of American Academy of Pediatric Dentists  
- Andrea Sunderman is MDA liaison for Infant Oral Health Summits  
- Susan Deming is grant administrator, MDCH Oral Health Program

i. **Technical Assistance:**

MDCH Oral Health has continually been available to offer assistance as needed. We helped sponsor both summits as well as provided assistance in the organization of both meetings.

j. **Description of Linkages:**

The partners in the project include the Michigan Chapter American Academy of Pediatrics (MIAAP), the Michigan Academy of Pediatric Dentistry (MAPD), and representatives of the Michigan Department of Community Health (the Oral Health Program, Medicaid and Children’s Special Health Care Needs), the Michigan Dental Association and the Michigan State University Institute for Health Care Studies.
Medicaid has been a crucial link in the advancement of this project. The initiation of reimbursements to medical providers for fluoride varnish application

Head Start is now engaged in the project. The significance of this collaborative is not only the provision of dental screenings and varnish application, but the establishment of a dental home. Other Points of Light teams are in various stages of establishing this linkage with Head Starts in their specific areas through the Head Start Dental Home Initiative Project.

k. Other Programmatic Requirements:

None noted.

l. Four Year Program Narrative Summary:

The 4 year Program Narrative Summary for this project will highlight the advances made in the age one dental visit in Michigan and the improved access to care for children with special health care needs. Points of Light (POL) was our main initiative these past four years for this grant. With advances in Medicaid reimbursement, the Babies Too! Program, and the Head Start Dental Home Initiative has grown in collaborating with the POL program to improve oral health for our youngest population.

The following objectives were addressed through this grant:

1. Establish a workgroup to increase age one dental visits for children at risk for oral health. By bringing together representatives from the Michigan sections of the American Academy of Pediatric Dentistry (MAPD) and the American Academy of Pediatrics (MCAAP) we were able to initiate discussions on ways to address the problem of getting children to the dentist by age one. Dr. Kevin Hale began the Points of Light Program to form teams of medical and dental providers to work together in different communities and teach each other about infants and oral health. In September of 2007, representatives from the Michigan Department of Community Health (MDCH), and the Michigan Dental Association (MDA) met with representatives of the MAPD, the MCAAP, the MDCH Medicaid program and Children with Special Health Care Services for a first strategic planning meeting to facilitate communication, establish a shared vision for implementing infant oral health in Michigan and to develop a strategic plan for the project. This committee grew by adding representatives from the University of Michigan, Michigan State University, Michigan Medical, individual physicians and dentists. This committee met several times to set in motion plans for the first Infant Oral Health Summit for Michigan that was held October 3, 2008 with plans to have teams of dentists and physicians do community training on infant oral health. We reconvened a short time later to schedule a second Infant Oral Health Summit for 2010. Teams of dentists and physicians continue to be formed through the Points of Light Program to promote the age one dental visit throughout Michigan.

2. Develop, implement and evaluate an institute to train/expose/ familiarize pediatricians and their auxiliaries with the use of the caries risk assessment tool according to the AAP Oral Health Policy Statement on Oral Health Risk Assessment Timing and
Establishment of the Dental Home. The major thrust of the first year was the Infant Oral Health Summit in October 2008. This was developed to bring together medical and dental professionals statewide in a central location, Lansing, for training and knowledge information exchange on infant oral health. Physicians, nurse practitioners, physician assistants, dentists and dental hygienists were invited to the summit. It was limited to these professionals to allow enough room for participants. Topics discussed were evidenced based practices, cariology, risk assessments, preventive modalities, rational for early interventions, and the POL Project. Break out sessions were designed to allow the POL teams to work with smaller groups on addressing infant oral health in the medical and dental office. This was a huge success with over 300 participants and many more on a waiting list. Those physicians and nurse practitioners attending received certification at the state level for completing the Medicaid training for fluoride varnish.

Meanwhile, MDCH had developed an online training for medical providers to become certified to bill Medicaid for fluoride varnish applications. The curriculum includes much of what was covered in the first summit. This became available in November of 2008. We now have 74 physicians and nurse practitioners across the state certified with over 150 staff having taken the training. The training has just been updated as of September 2011. We are currently looking to incorporate the national “Smiles for Life” modules as the state training so as to allow for continuing education credits to medical providers.

The second Infant Oral Health Summit occurred October 1, 2010. There was again, strong participation but mostly from dental professionals. Having close to 300 participants, this was not a bad thing. The dental community in Michigan needs to understand the age one dental visit more thoroughly but we would have liked more participation from medical professionals. Same topics as above were discussed with an emphasis on engaging the medical community in performing oral risk assessments, screenings, and applying fluoride varnish.

3. Increase the number of pediatricians who complete an oral screening and caries risk assessment on children by age one. Increase the proportion of pediatricians counseling parents/guardians on appropriate infant feeding habits and fluoride varnish applied to at-risk children during well-child visits at periodic intervals. Increase the number of one-year referrals by pediatricians to dental practitioners.

These originally were separate goals but we have combined these as the summary is the same for all three. We have struggled to acquire data for baseline on this information but we now look at Medicaid data for oral screenings and fluoride varnish applications to get an estimate for Medicaid recipients. The Babies Too! Program has also collected data on these same parameters of care, as well as collection on caries risk assessments performed. Newly added in the last 6 months is number of children referred for care.

There were 924 fluoride varnish applications billed to Medicaid through medical providers for FY 09-10. From our FY 09-10 Babies Too! program data, 1350 children were screened by medical providers and 1341 children received at least 1 fluoride varnish application. It is assumed all those children received some counseling, or anticipatory guidance, and were referred to a dental home. We will use this data as the baseline from now on.
FY10-11 data collection for Medicaid is not available at this time. Babies Too! data collection is near completion. The number, thus far, of children screened has increased to 2,239. First varnish applications have increased by almost 900 applications, with over 440 children receiving a 2nd, 3rd, or 4th varnish application in the 12 month period. It is assumed that guidance to parents and referral to a dental home are part of the appointment.


The Points of Light program has grown their website into a usable referral base for both professionals and parents to find care for their infants, Head Start children, Children with Special Health Care Needs (CSHCN), and Medicaid families. When a dentist signs up on their site to be a referral source, they can indicate which of these populations they are willing to see. The person looking for a source of care can then access the site, indicate which type of dental provider they need and then access the list of dental providers in a designated mile range that could see the child. Close to 300 Michigan dentists are listed on this site that will see infants. Even a few dentists in Indiana and Missouri are listed here. Around 200 dentists have indicated they would see Head Start children, 130 would see CSHCN. Unfortunately, only 70 dentists have signed up to see children on Medicaid.

Through the Oral Health Program at MDCH we develop directories by county on agencies that offer oral care to children with Medicaid or who are uninsured, including a directory for CSHCN. We are a resource for families or providers who need connections to dental homes. As a part of the Babies Too! training these directories are made available to all involved in the program.

5. Develop long term strategy for the age one dental visit.

The development of a long term strategy to promote the age one dental visits continues in Michigan. Our strategy is to continue our promotion of this concept through continued efforts initiated from this grant. The Points of Light Program, MDCH Babies Too! in addition, the Head Start Dental Home initiative are working together and as separate programs to continue to encourage that all children see a dentist by their first birthday.

We continue to meet and discuss what works and what does not. The Points of Light Program is forming a new Board of Directors and has asked MDCH to be a part of it. Continued efforts to increase the Medicaid reimbursement rate is a priority in this state. We have just added 4 new counties to our Healthy Kids Dental Program, managed through Delta Dental, which reimburses dentists at a much higher rate for exams, cleanings and fluoride applications.

By encouraging more general dentists to see children by age one we are building the base in Michigan for this to become the norm. When dentists see the validity of seeing children early, when they see that they can be reimbursed for these quick, short visits, then more of them are signing up. By encouraging early referrals through the medical providers we are encouraging relationships between medical and dental providers that will continue to provide parents early guidance regarding their child’s oral health.
6. A decrease in the amount of oral disease reported for infants and children 0-5 years of age.

We are developing a baseline to determine if our efforts in Michigan to get children to a dental home by age one are worth something. In order to know if decay rates are reduced in our 0-5 age children we first need a valid assessment of what is currently happening. From our Head Start and Babies Too! data we are only compiling information collected from our screeners, none of which has been randomly sampled or looked at closely by an epidemiology team. Luckily we should have new Head Start data soon as the University of Michigan has just completed a controlled oral health assessment on 0-5 year olds across the state. This will act as our baseline for the state, which can then initiate further controlled studies to collect information. We will begin to look closer at Medicaid data as it becomes more readily available through medical provider databases.

7. Project evaluation.
Project evaluation has been our weakest link for this project. As mentioned above we are still organizing baseline data for assessment. The majority of evaluation has come from the Points of Light reports for the last 4 years, the number of POL teams, the number of dentists signed up to see infants, CSHCN and Medicaid families. We are also using some data from the Babies Too! program but most of that information will only tell us how many children are getting oral screenings and fluoride varnish applications through medical providers. Evaluation will continue to be worked on as we step up our efforts with these programs.

Conclusions:

Over 60 POL communities throughout Michigan now have linkages with physicians and pediatric dentists or general dentists to provide oral health exams by age one. For many children, this will be their only opportunity for early dental prevention activities. Close to 300 Michigan dentists are listed on their website that will see infants.

The development of the new Points of Light website has been a large significant result as to resources available to professionals and to parents on infant oral health. The handouts and videos available for professionals and parents will lead to increased knowledge in the area of Infant oral health. Providing names of dentists willing to treat infants, Head Start children, Medicaid clients or children with special health needs is a much needed resource for Michigan.

As a result of the Infant Oral Health Summits, the POL project, the collaboration with Medicaid and the MDCH Oral Health Program, physicians and nurse practitioners can now be reimbursed for varnish applications during ESPDT well baby checks (Bulletin M-08-50)

WIC programs are now jumping on board by utilizing their nurses to apply fluoride varnish with a standing order from a physician or dentist. Home visiting programs, such as our MDCH Maternal Infant Health Program (MIHP), are looking more seriously at encompassing oral health education and fluoride varnish applications into their programs. We will begin a pilot program
with our MIHP starting in Jan 2012 to train home visiting nurses to perform an oral health assessment and apply fluoride varnish to newly erupted teeth on children under one year old. The main objective will be to connect families to a dental home by the time the child turns one. We are hoping the results from our pilot program will convince Medicaid to begin reimbursement through this program.

Our infant oral health online training module was updated in September 2011. When certified by passing the on-line training, physicians and nurse practitioners can be reimbursed by Medicaid. At-risk children and children with special health care needs benefit most from the project, as this group faces the most severe access to oral health care. The wide sweeping ability to see all children removes all discrimination from the program.

Lessons Learned:

We have learned through this project that Michigan public health can work together with the private sector to bring about better oral health access to care. With collaborations of the Michigan Academy of Pediatric Dentistry, Michigan Chapter of the American Academy of Pediatrics, and the Michigan Dental Association, more private offices are opening their doors to infants, CSHCN, Medicaid families and Head Start children. Points of Light is a major success by getting more general dentists on board with accepting infants and other at risk populations.

We have learned that by encouraging medical providers to look in the mouth early, assess a child’s risk for decay and refer to a dental home by age one that more children and families will be connected to dental care. What we have also learned is that reimbursement for services is important if you wish to draw in providers to see at risk populations. Nine dollars is hardly worth the effort to apply fluoride varnish on children’s teeth. Some states reimburse for the oral screening too, which helps. Michigan will need to pursue this as well if we want to keep medical providers engaged.

The Infant Oral Health Summits were a big hit for the dental professionals but not so much for the medical providers. Most of the attendees at both Summits were dental professionals. Our main focus was to be for medical professionals. We have learned that most medical providers prefer to have trainings by other medical providers, not dental providers, even though they are the oral health experts. We also learned that we have to offer continuing education credits to make any training worth the while of medical providers. The MDCH online training does not currently offer CE credits to medical providers. We are trying to get Medicaid to recognize the national oral health training, “Smiles for Life” as the Michigan training for billing Medicaid. This would allow all CE credit to a variety of medical providers.

We have learned that we need a valid, controlled study for baseline data collection in order to highlight our state’s accomplishments in reducing decay by our efforts with our age one dental home initiatives. This was a weak point when this project began. How do we collect information on numbers of children seen, number of children referred, number of children with reduced decay? These questions should have been addressed at the beginning of this program. The evaluation piece for this project needed to be thought out and planned at a much higher level than what our resources allowed.
Thank you again for the opportunity to make some advances in the access to oral health care for our most vulnerable children.

**Response to Conditions/Recommendations from MCHB**
No conditions and/or recommendations from the last Notice of Grant Award/Notification Letter were given to Michigan for this grant.

**Plans for the Upcoming Budget Year**
Not applicable—end of funding period.

**Listing of Publications and Other Materials**
See individual project summaries

**Section III: Current Staffing**
No staffing changes in Year 4:
Christine Farrell as the MDCH Oral Health Director.
Susan Deming MDCH Fluoridation Coordinator and Education Coordinator as the Project Manager for Points of Light for Project 2.
Jill Moore MDCH Dental Sealant Coordinator as the Project Manager for Project 1.

**Section IV: Technical Assistance Needs**
Not applicable—end of funding period.

**Section V: Description of Linkages**
The TOHSS grantee meeting strengthened the collaborative work with the Early Childhood Investment Corporation.

Project #1: Henry Ford Health System has been a collaborative partner through the SEAL! Michigan dental sealant program. The expanded linkages that HFHS have developed ensure project sustainability long after the grant funding is exhausted. For example, the University of Detroit Mercy School of Dentistry and the Children’s Hospital Dental Clinic will ensure capacity for children to receive needed restorative dental services and establish a “dental home”. Henry Ford, Thunder Bay, and St. John will bill Medicaid for services provided ensuring a steady stream of revenue.

Project #2:
The partners in the project include the Michigan Chapter American Academy of Pediatrics (MIAAP), the Michigan Academy of Pediatric Dentistry (MAPD), and representatives of the Michigan Department of Community Health (the Oral Health Program, Medicaid and Children’s Special Health Care Needs) and the Michigan Dental Association and the Michigan State University Institute for Health Care Studies.

Head Start are being engaged in the project. The significance of this collaborative is not only the provision of dental screenings and varnish application, but the establishment of a dental home.
Other Points of Light are in various stages of establishing this linkage with Head Starts in their specific areas through the Head Start Dental Home Initiative Project.

Section VI: Other Programmatic Requirements
All other programmatic requirements have been included in this application.

References:
| 1. Seal! Michigan ASTDD Best Practice Descriptive Summary | 2 pages |
| 2. Seal! Michigan ASTDD Best practice Descriptive Report | 8 pages |
| 4. MDCH Medicaid Bulletin MSA 08-50 | 2 pages |
| 5. Preventive Oral Health Intervention for Pediatricians | 10 pages |
| 6. Benign Floral Enhancement and Anticipatory Guidance | 1 page |
| 7. Enhance Care Through Appropriate Medical Referrals | 3 pages |
| 8. Oral Health for Our Youngest Patients | 1 page |
| 9. Pediatric Medicine: Oral Health Intervention Algorithm | 1 page |
| 10. High Caries Risk Protocol | 1 page |
| 11. General Dentistry: Infant Oral Health Intervention | 1 page |
| 12. Benign Floral Enhancement | 1 page |
| 14. Points of Light Video Library | 3 pages |
| 15. Points of Light Brochure | 2 pages |
| 16. Points of Light Poster | 1 page |
Dental Public Health Activity
Descriptive Summary

Practice Number: 25007
Submitted By: Michigan Department of Community Health, Oral Health Program
Submission Date: December 27, 2010
Last Updated: December 27, 2010

SEAL! Michigan School-Based Dental Sealant Program

The SEAL! Michigan dental sealant program is a school-based program designed to provide eligible students with dental sealants on their first and second permanent molars to prevent tooth decay. The school-based dental sealant program is an important program to have within the state because according to the Count Your Smiles Survey in 2006, nearly one in ten (9.6%) 3rd grade children in Michigan have immediate dental care needs with signs or symptoms of pain, infection, or swelling; one in four Michigan 3rd grade children (25.0%) has untreated dental disease; only 23.3% of 3rd grade children in Michigan had dental sealants present on first molar teeth, which is below the Healthy People 2020 goal of 28.1%.

The Michigan Department of Community Health (MDCH) administers the SEAL! Michigan program by awarding qualifying applicants through a competitive grant process. All grantees are non-profit organizations operating with PA 161 dental hygienists and most are affiliated with local health departments. PA 161 hygienists can work without the direct supervision of a dentist. Grantees are funded for three years, target schools which have 50% or greater of their student population participating in the Free and Reduced Lunch Program, and serve all first, second, sixth, and seventh grade students who return a positive parental permission slip. Grantees focus on schools in counties that do not have Healthy Kids Dental (a Michigan Medicaid program which provides a higher reimbursement rate than Medicaid). To promote program sustainability, the grantees are required to bill any applicable insurance for the dental sealants but must provide dental sealants to students regardless of insurance coverage or ability to pay.

All grantees take an on-line dental sealant training annually and receive three hours of continuing education credits. Monthly newsletters are sent out to the grantees to provide informational reminders on the grant, provide latest research findings or product information, and to recognize the efforts of their sealant programs. Workshops are planned annually to share program successes, to assist grantees in learning from one another, and to teach data entry systems.

Grantees are required to provide each student served with a resource to establish a dental home. The dental home must be within 20 miles of the schools that the child attends. If a child presents with urgent dental needs, the grantees must follow up with the parents, school, teacher, school nurse, and/or student until restorative care is received. Grantees are required to perform retention checks on 20% of the students sealed within each school within a six month time frame and replace/repair any missing sealants. A 90% retention rate is expected. Dental hygiene students which place dental sealants are expected to provide a retention check on each student that they provide sealants.

All grantees are strongly encouraged to evaluate their programs on a regular basis with school administrations and effectiveness of education. Many of the programs have begun to give the students receiving dental sealants pre and post tests to evaluate the oral health education component of the sealant program (e.g., age specific dental education video). Grantees are required to track their sealant data in CDC’s Sealant Efficiency Assessment for Locals and States (SEALS) software, and provide the data information to MDCH at the end of the grant year.

The MDCH dental sealant coordinator assists the grantees throughout the year with their programs. This is often technological support, aid in creating forms or documents, ideas on solutions to barriers, providing additional supplemental information which will strengthen their programs (i.e., free posters, literature, brochures, grant opportunities). The coordinator conducts quarterly site visits with each grantee.

The SEAL! Michigan dental sealant program is supported by funds from the Maternal and Child Health Block grant (MCH), the Centers for Disease Control (CDC) Oral Health Cooperative Agreement, and Health Resources and Services Administration (HRSA). Grantees can request up to $75,000, although most operate well beneath the maximum amount.
Since the inception of the dental sealant program in 2007, the programs have grown and continue to expand into many schools. Some programs are now incorporated within school-based health centers. School administrators have become strong advocates for the programs. Each year the existing dental sealant grantees are able to run their programs more efficiently with both funding and time.

The following are the output results from the 2009-2010 grantee year:

- Schools served: 85
- Students: 3,029 screened and 1,853 sealed
- Total sealants placed: 11,426
- Students who received fluoride: 2,412 with varnish and 134 with topical fluoride
- Students receiving a dental referrals: 1,364
- Children who received oral health education: 8,924
- Cost per child screened with grant funding: $75.10 (experience program average)
- Cost per child sealed with grant funding: $93.50 (experienced program average)

Program outcomes included:
- A comparison of the Count Your Smiles Survey in 2006 to 2010 showed an increased in percentage of 3rd grade children with dental sealants, from 23.3% to 26.4%.
- Established programs can place dental sealants, fluoride varnish, and oral health education for much less than the cost of treatment in a private dental practice.
- Each ongoing grantee expanded into new schools each year.
- Grantees expanded their preventive services to include fluoride varnish applications.
- Increased number of applications for the competitive grant process (10 grant proposals submitted in 2010 compared to six proposals in 2007).

Lessons Learned:
- New programs take several years to become cost effective;
- Encouraging grantees to provide a small incentive (of their choice) to both teachers and students drastically improved student participation in the dental sealant program;
- To provide a time for grantees to gather and share lessons learned and experiences ;
- Good marketing of programs within schools to build trust;
- Schedule the school to be served one year out for the following years visit;
- Utilize PA 161 hygienists and parent volunteers.

Barriers:
- Need for sustainability of dental sealant programs;
- Need for ongoing source of funding;
- Need to increase positive permission slips returned from parents;
- Need to increase participation in the middle school population
- Need to access to some schools and populations; and
- Need to assure that urgent follow-up care is received by all children.

Contact Person(s) for Inquiries:
Jill Moore, RDH, BSDH, MHA, Dental Sealant Coordinator, Michigan Department of Community Health, Division of Family and Community Health, P. O. Box 30195, Lansing, MI 48909, Phone: 517-373-4943, Fax: 517-335-8697, Email: MooreJ14@michigan.gov
**Dental Public Health Activity**

**Descriptive Report**

**Practice Number:** 25007  
**Submitted By:** Michigan Department of Community Health, Oral Health Program  
**Submission Date:** March 2011  
**Last Updated:** March 2011

### SECTION I: PRACTICE OVERVIEW

**Name of the Dental Public Health Activity:** SEAL! Michigan School-Based Dental Sealant Program

**Public Health Functions:**  
- Assurance - Population-based Interventions  
- Assurance - Building Linkages and Partnerships for Interventions  
- Assurance - Building State and Community Capacity for Interventions

<table>
<thead>
<tr>
<th>Healthy People 2020 Objectives:</th>
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<tbody>
<tr>
<td><strong>OH-1</strong></td>
<td>Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth</td>
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<tr>
<td><strong>OH-2</strong></td>
<td>Reduce the proportion of children and adolescents with untreated dental decay</td>
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<tr>
<td><strong>OH-7</strong></td>
<td>Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year</td>
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<tr>
<td><strong>OH-8</strong></td>
<td>Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year</td>
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<tr>
<td><strong>OH-9</strong></td>
<td>Increase the proportion of school-based health centers with an oral health component</td>
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<tr>
<td><strong>OH-12</strong></td>
<td>Increase the proportion of children and adolescents who have received dental sealants on their molar teeth</td>
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<tr>
<th>State:</th>
<th>Federal Region:</th>
<th>Key Words for Searches:</th>
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<tr>
<td>Michigan</td>
<td>Midwest Region V</td>
<td>Dental sealants, SEAL! Michigan, school-based dental sealant program, school-linked dental sealant program, children's oral health, prevention, population-based intervention, access to oral health care</td>
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**Abstract:**  
It has been shown that dental sealants reduce tooth decay; reducing dental decay improves the oral health and general well-being of children. The Michigan Department of Community Health's SEAL! Michigan dental sealant program works to prevent dental disease through prevention. SEAL! Michigan provides dental sealants, fluoride varnish, and oral health education to students in Michigan in their school settings. By utilizing Registered Dental Hygienists who travel to schools to provide prevention services onsite, cost saving is realized. The SEAL! Michigan program delivers dental sealants, fluoride varnish, and oral health education to children for less than $100 per student. Since the inception of the dental sealant program in 2007, thousands of children have received dental sealants. For the 2009-2010 school year, the program served 85 schools, screened 3,029 students and 214 students with special needs, and provided 11,426 sealants to 1,853 students. Surveys in 2006 and 2010 showed an increased in percentage of 3rd grade children with dental sealants, from 23.3% to 26.4%, closer to reaching the Healthy People 2020 target of 28.1%.

**Contact Persons for Inquiries:**

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SECTION II: PRACTICE DESCRIPTION

History of the Practice:

Sealants are protective coatings placed on the grooved surfaces of teeth to prevent dental disease. The SEAL! Michigan dental sealant program is a school-based program designed to provide students with free dental sealants on their first and second permanent molars. The program originally was known as the Smile! Michigan program and began in 2007 after a year long pilot program in Detroit, Michigan.

Two main factors, dental hygienists practicing under the Public Acts of 2006 (Act No. 161) and a Cooperative Agreement from the CDC Division of Oral Health, came together to make school-based dental sealant programs a reality in Michigan:

1. **The PA 161 Hygienists:** In 2005, the Public Acts of 2005 (Act No. 161) was approved by the 93rd Legislature providing rules in which a dental hygienist may provide preventive dental hygiene services to underserved patients. The law regulates the supervision requirements for a hygienist practicing under PA 161 and states that "dental hygienist may perform dental hygiene services under the supervision of a dentist as part of a program for dentally underserved populations in this state conducted by a local, state, or federal grantee health agency for patients who are not "assigned by a dentist." In other words, the patient provided services by a PA 161 hygienist can not be a "patient of record" of a dentist. Therefore, for a sealant program, a general dentist no longer needs to be on site for a PA 161 hygienist to place dental sealants.

2. **CDC Cooperative Agreement:** The Center for Disease Control and Prevention (CDC) Cooperative Agreement awarded to Michigan, which greatly assisted with the inception of the statewide sealant dental sealant program. The Cooperative Agreement provided grant funding to build infrastructure that will support preventive programs. Support for the sealant program initially through the Title V Maternal & Child Health funding and currently is through both Title V and the Health Resources and Services Administration (HRSA) grant funding.

With the pilot project having demonstrated success, the program was expanded. A Request for Funds Proposal (RFP) was released as a competitive grant process for others within the state to begin local dental sealant programs. The program initially funded grantees one year at a time but changed to three-year awards to assist in sustainability.

Justification of the Practice:

The school-based dental sealant program is important for Michigan given these findings of the Count Your Smiles Survey in 2006:

- Nearly one in ten 3rd grade children in Michigan, 9.6%, have immediate dental care needs with signs or symptoms of pain, infection, or swelling. Children lacking dental insurance, children of lower socioeconomic status, and children who had not visited a dentist in the past year were most likely to have immediate dental needs.

- Only 23.3% of 3rd grade children in Michigan had sealants present on first molar teeth in 2006. A comparison of the Count Your Smiles Survey in 2006 to 2010 showed an increased in percentage of 3rd grade children with dental sealants, from 23.3% to 26.4%, which is still below the Healthy People 2020 goal of 28.1%.

- Over one in eight parents of 3rd grade children in Michigan, 13.0%, reported their child had a toothache when biting or chewing in the past six months. Toothaches were more common among children attending schools in the city of Detroit and among children who had difficulty obtaining dental care in the past year.

- One in four Michigan 3rd grade children, 25.0%, has untreated dental disease. Hispanic and African American schoolchildren had higher rates of untreated dental disease. Lower socioeconomic status and lack of dental insurance were also associated with untreated dental disease.
• Nearly one in six 3rd grade children, 15.1%, lack dental insurance – twice the number of Michigan children who lack medical insurance. Uninsured children had significantly more dental disease and substantially less access to dental services.

• Roughly one in nine Michigan 3rd grade children, 11.2%, encountered problems that prevented them from obtaining dental care in the past year. Increased difficulty in obtaining dental care was common among all racial and ethnic minorities as well as children not covered by private dental insurance. Cost and a lack of dental insurance were the two most frequently cited reasons for failure to obtain dental care.

• A substantial number of children visit the dentist every year with 84.4% of parents reporting that their child had visited the dentist in the past year. A lack of dental insurance was strongly associated with failing to visit the dentist, particularly among Hispanics.

Inputs, Activities, Outputs and Outcomes of the Practice:

The SEAL! Michigan Program is administered and operated under the following parameters:

Funding of Grantees
The Michigan Department of Community Health (MDCH) funds qualifying applicants through a competitive grant process. To assist with sustainability, grantees are funded for a cycle of three years.

Who are Served
The grantees are required to serve schools which have 50% or greater of their student population participating in the Free and Reduced Lunch Program. They are required to serve all first, second, sixth, and seventh grade students who return a positive parental permission slip. Grantees are to focus on schools that are in counties without the Healthy Kids program (provides a wide range of health care coverage and support services for qualifying pregnant women, babies and children under age 19).

Payment for Sealants
The SEAL! Michigan grantees offer dental sealants to any student who returns a positive parental permission slip. The grantees are required to bill any applicable insurance for the dental sealants, but must provide dental sealants to students regardless of the ability to pay or insurance coverage. The additional income from insurance billing assists with sustainability of their program.

Incentives
All grantees are encouraged to provide a small incentive to the students to return a positive permission slip. All grantees are encouraged to provide a teacher incentive to encourage students to return permission slips. Incentives for both teachers and students have drastically improved the student participation in the dental sealant program. It is to the discretion of each grantee to determine the incentives. Student’s incentives may be a pencil, tooth shaped silly bands or a child’s spin brush; teacher’s incentives may be a $10 gift card or an adult spin brush.

Referrals and Emergent Care
All grantees are required to provide each student in the program with a resource to establish a dental home. The dental home must be within 20 miles of the school attended by the child. If a child presents with urgent dental needs, the grantees must follow-up with the parents, school, teacher, school nurse, and/or student until restorative care is received.

Retention Checks
Grantees are required to perform retention checks on 20% of the students sealed within each school within a six month time frame. In the event that sealants are found to be fully or partially lost, the sealant will be replaced or repaired. For those grantees who utilize dental hygiene students, each hygiene student checks retention on every student receiving a sealant.

Data
All grantees are required to track their sealant data in SEALS (CDC’s Sealant Efficiency Assessment for Locals and States software) and provide the data back to MDCH at the end of the grant and upon request. Each grantee also provides their SEALS data sheets to MDCH at the end of the grant year so that data comparison can be performed. Additional data tracking by grantees is encouraged, for example, in a dental practice management software program.
Oral health education

All grantees must provide oral health education to parents and students. For education of the children, some of the grantees do classroom or auditorium presentations (this is generally determined by each principal within each school) and others will provide education one on one when a child is screened. Many of the programs give the students a pre-test, provide age specific dental education with a video, laptop computer and head phones, and then administer a post-test after the video. This type of evaluation assures that children are provided with effective oral health education as required by the grant.

Evaluations

All grantees are strongly encouraged to evaluate their programs on a regular basis. Evaluation shall involve the school administration, teachers, parents, and students.

MDCH Dental Sealant Coordinator

The MDCH dental sealant coordinator assists the grantees with their programs throughout the year. This includes technological support, aid in creating forms or documents, brainstorming for solutions to barriers, provision of supplemental information to strengthen their programs (i.e., free posters, literature, brochures, and additional grant opportunities), and developing monthly newsletters. The coordinator conducts quarterly site visits on each grantee.

Communication

The quarterly site visits with each grantee provides face-to-face communication. The site visits take place at a school while students are receiving dental sealants. Time is always set aside to discuss the program strengths and barriers, check current SEALS data, and review the current work plan and budget. Further communication is provided via e-mail with all grantees at least bi-weekly.

Training

All grantees take an online dental sealant training annually and the dental professionals receive three continuing education credits for the training. All who work in the school-based sealant programs are required to take the dental sealant program training. The course consists of six chapters and takes approximately three hours to complete. The training covers dental sealants within a school-based health center, the latest OSHA and MI-OSHA safety guidelines, and MDCH requirements of the grantees.

Newsletters

Monthly newsletters are developed by the MDCH Coordinator sent out to the grantees to provide informational reminders on the grant, recent information research studies or products, highlights of specific programs’ successes, and recognition of sealant program efforts.

Workshops

Workshops are planned annually to provide face-to-face networking, share successes and lessons, teach data entry systems, and update clinical and infection control techniques.

Organization

Each grantee has a Microsoft Workspace developed to assist them with communication and organization. Within the Microsoft Workspace, all documents and newsletters are easily filed and located for their convenience. Online training is located within their Microsoft Workspace accounts.

Outputs of the SEAL! Michigan Program

Since the inception of the dental sealant program in 2007, thousands of children have received dental sealants. The programs have grown serving an increased number schools. Some programs are now incorporated within school-based health centers. School administrators have become strong advocates for the programs after observing the benefits and efficiency of the programs. Grantees improve their programs’ efficiency in use of funding and time. The following are outputs from the 2009-2010 grantee year:

- Schools served: 85
- Students screened: 3,029
- Students with special needs screened: 214
- Students sealed: 1,853
- Total sealants placed: 11,426
- First molars sealed: 9,943 / Second molars sealed: 1,433 / Other surfaces sealed: 50
- Students who received fluoride varnish: 2,412
- Students who received fluoride:134
- Children who received oral health education: 8,924
- Cost per child screened with grant funding: $75.10 (for more experienced programs)
• Cost per child sealed with grant funding: $93.50 (for less experienced programs)

Outcomes of the SEAL! Michigan Program
Program outcomes included:
• The proportion of children with dental sealants increased. A comparison of the Count Your Smiles Survey in 2006 to 2010 showed an increased in percentage of 3rd grade children with dental sealants, from 23.3% to 26.4%.
• The program demonstrated cost effectiveness. Students can receive a screening, sealants, fluoride varnish, and oral health education for less than equivalent services in a private dental office. In addition, the school-based programs also eliminate the costs of transportation and time off work for parents.
• Each continuing grantee expanded into new schools each year. In the first year of the program (2007), approximately 20 schools were serviced by the SEAL! Michigan dental sealant program. Four years later (2010), 85 schools were served. The SEAL! Michigan program is still growing and expect to serve over 100 schools by the fall of 2011.
• Preventive care expanded. Although not a grant requirement, grantees expanded their preventive services to include fluoride varnish applications. Grantees also applied fluoride varnish to students that did not require sealants; more children received fluoride varnish than dental sealants.
• Number of applications for the competitive grant process increased. There were 10 grant proposals submitted for consideration in 2010 compared to six proposals in 2007.

Budget Estimates and Formulas of the Practice:

The SEAL! Michigan dental sealant program is supported by funds from the Maternal and Child Health Block grant (MCH), the Centers for Disease Control (CDC) Oral Health Cooperative Agreement, and Health Resources and Services Administration (HRSA). Approximately $300,000 of Title V funding supports the statewide sealant program.

Lessons Learned and/or Plans for Improvement:

Lessons Learned
The MDCH learned the following lessons to reduce barriers/challenges:
• Give new programs time to address challenges (can take several years) and become successful (e.g., being cost-effective);
• Offer teacher incentives to improve support for the program;
• Provide a time for all grantees to network and share their experiences and lessons;
• Market the sealant programs among schools to build trust and recognition;
• Schedule schools one year in advance;
• Assure the grantees provide the highest customer service to the schools (e.g., make it easy for teachers and principals);
• Evaluate programs to better meet the needs of the schools, teachers, parents and students;
• Attend back-to-school nights with a sealant program booth, hand out permission slips directly to parents, and collect the signed permission that night; and
• Utilize PA 161 hygienists and parent volunteers.

Plans for Improvement
The MDCH plans to make the following improvements:
• Incorporate the option of passive permission slips for initial screenings;
• Explore additional data reporting system;
• Continue to seek funding to expand statewide program;
• To incorporate mini grants as an option (e.g., serve one or two schools) with use of donated or borrowed portable dental units possibly with dental hygiene students; and
• Incorporate dental hygiene students within school-based sealant programs to increase cost effectiveness and to provide the students with learning opportunities for dental public health.
• Increase collaboration with the MDCH funded school-based health centers on how to incorporate oral health and sealant programs into their existing health centers.

Available Information Resources:

1. SEAL! Michigan Dental Sealant Plan 2010-2011: Annually updated, contact MDCH,
2. SEAL! Michigan Dental Sealant Brochure in English, Spanish, and Arabic:
http://www.michigan.gov/mdch/0,1607,7-132-2942,4911,4912,5226-145381--,00.html

3. Dental Sealant Fact Sheet (for consumers/parents):

4. Request for Proposal for SEAL! Michigan School-based/School-linked Dental Sealant Program (a request for funds proposal):

5. Request for Proposal for Dental Preventive Services in State-Funded Child & Adolescent Health Centers (a request for funds proposal):

6. Additional Dental Sealant Program Forms:
Forms are available and can be requested to be sent by email. Contact Jill Moore, RDH, BSDH, MHA, Dental Sealant Coordinator, Michigan Department of Community Health at MooreJ14@michigan.gov.
SECTION III: PRACTICE EVALUATION INFORMATION

Impact/Effectiveness
How has the practice demonstrated impact, applicability, and benefits to the oral health care and well-being of certain populations or communities (i.e., reference scientific evidence, outcomes of the practice and/or evaluation results)?

The SEAL! Michigan Dental Sealant Program increased the proportion of children with dental sealants increased (from 2006 to 2010 an increased from 23.3% to 26.4% in percentage of 3rd grade children with dental sealants) and provide cost effectiveness to the delivery of dental sealants (less cost than receiving equivalent services in a private dental office and eliminating the cost related to transportation and time off work for parents.)

Efficiency
How has the practice demonstrated cost and resource efficiency where expenses are appropriate to benefits? How has the practice demonstrated realistic and reasonable staffing and time requirements? Provide unit cost analysis or cost-benefit analysis if appropriate.

The program demonstrates cost efficiency. The cost of one child receiving a screening, sealants (up to eight sealants per child, fluoride varnish, and oral health education is $93.50 compared to the same services being provided in a private practice dental office for $201 (receiving four sealants).

Demonstrated Sustainability
How has the practice showed sustainable benefits and/or how has the practice been sustainable within populations/communities and between states/territories? What mechanisms have been built into the practice to assure sustainability?

The SEAL! Michigan program is funded under MCH Block grant funds, a five-year CDC Cooperative Agreement, and also supported by a four-year HRSA grant. The MDCH Oral Health Program is always seeking new grant opportunities to ensure sealant program growth across the state.

The SEAL! Michigan program went from a one-year funding period to a three-year funding period to increase the chances of sustainability. By eliminating the risk of no funds, the SEAL! Michigan grantees are able to schedule schools one-year in advance. Also, by providing a three-year grant period it increases the sustainability of workforce within each sealant program because program employees can plan on a sustainable job for three-years. This decreases program workforce turnover.

Feedback from the grantees on financial stability shows that programs grow and become more sustainable each year. Equipment is purchased under SEAL! Michigan grant funding and grantees establish a steady stream of funding from Medicaid and revenue from other insurance plans. This contributes to program sustainability.

Collaboration/Integration
How has the practice built effective partnerships/collaborations among various organizations and integrated oral health with other health projects and issues? What are the traditional, non-traditional, public and private partnerships/collaborations established by the practice for integration, effectiveness, efficiency and sustainability?

The MDCH dental sealant coordinator has worked to establish effective collaborations and partnerships. Within the state, collaboration exists with the School and Adolescent Health program. This relationship builds linkages between dental sealant programs and the MDCH funded school-health centers. In addition, oral health educational seminars have been provided to school-nurses (Registered Nurses and Nurse Practitioners) on the importance of having oral health within the schools. The dental sealant coordinator collaborates with other sealant programs which are not funded through MDCH to share resources and networking possibilities.

The MDCH oral health coordinator serves on a national ASTDD School and Adolescent Oral Health (SAOH) Committee, communicate with dental sealant coordinators from other states funded by the
CDC, and participates in a sealant committee organized by Rory Reese in Florida to discuss lessons learned. Many of the information obtained through the partnerships, networks, and shared lessons have been incorporated into the SEAL! Michigan program for improvements. These collaborative relationships have been vital to the success of the sealant program.

Objectives/Rationale
How has the practice addressed HP 2010 objectives, met the National Call to Action to Promote Oral Health, and/or built basic infrastructure and capacity for state/territorial/community oral health programs?

The SEAL! Michigan dental sealant program address several goals of the Michigan State Oral Health Plan (2010):
- Implement evidence-based preventative practices that maintain optimal oral health for Michigan Communities.
- Increase knowledge of the relationship between oral health and systemic health.
- Increase access to oral health services in underserved populations and communities.
- Increase oral health access for persons with special needs.

The SEAL! Michigan dental sealant program meets the objectives of the Healthy People 2010 and Healthy People 2020 related to improving children’s oral health through reducing dental caries experience in primary or permanent teeth, reducing untreated dental decay, increasing the use of the oral health care system in the past year, increasing preventive dental services during the past year, increasing dental sealants on molar teeth, and Increasing school-based health centers with an oral health component that includes dental sealants.

Extent of Use Among States
Describe the extent of the practice or aspects of the practice used in other states?

The 2010 State Synopses showed that in FY 2008-2009, 39 states and District of Columbia reported having dental sealant programs.
SEAL! MICHIGAN
Dental Sealant Training 2011-2012

Acknowledgements
Much of this training was adapted from the National Maternal and Child Oral Health Resource Center and Ohio Department of Health. Support for development of this training was provided by Health Resources and Services Administration Michigan Targeted State Maternal and Child Oral Health Service Systems (H47MC08650). The contents of this training are solely the responsibility of the author and do not necessarily reflect the view of HRSA.

After completing the curriculum, please take a moment to fill out the course evaluation. Your feedback will help improve the curriculum.

The survey can be located at: https://www.surveymonkey.com/s/SEALMichigan

Objectives of entire course:
- To provide detailed guidelines for infection control in school-based programs
- To discuss tooth selection and assessment for dental sealants
- To review the dental sealant application process
- To provide information about program operations
- To provide information on SEALS data entry
- To review specific program requirements specific to the SEAL! Michigan dental sealant program funded by MDCH

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WELCOME!
Welcome to Michigan Department of Community Health's (MDCH) on-line School-Based Dental Sealant Program Guide. This guide is designed to ensure that school-based dental sealant program staff have a thorough understanding of the history, operations, and underlying principles of the sealant program funded by the MDCH Oral Health Program.

Access to training...
This PowerPoint can be accessed as often as needed, however must be completed by each sealant grantee once per year and completed by each person who is working within the sealant program.

*The course needs to be completed by October 15th of each grant year.*
Post-Tests

A pre-made form is available in each grantee’s Microsoft Workspace titled: “CE Answer Form.”

Please contact Jill Moore at 517-373-3943 or MooreJ14@Michigan.gov with any questions.

*The post-tests need to be completed and received by October 15 of each grant year by each person clinically working under the grant.

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Overview of Chapter 1

This module provides a description and history of school-based dental sealant programs in the United States and in Michigan, discusses the rationale and evidence for these programs, and reviews the underlying principles of programs funded by the Michigan Department of Community Health (MDCH).

Learning Objectives
- Explain what dental sealants are and their protective purpose.
- Describe the indications of poor children served by school-based dental sealant programs.
- List sources of risk factors that predispose children at higher risk for dental decay.
- Explain the importance of systemic reviews of the evidence of effective efficacies of programs in school-based programs.
- List the elements of MDCH’s approach and discuss its school-based program.

Description and History of Sealant Programs and Program Basics

Dental sealants are thin protective plastic coatings bonded to the pit and fissure surfaces of teeth to prevent tooth decay. Sealants provide a physical barrier that stops, delays, and decreases the progression of tooth decay by preventing the attachment of bacteria to the tooth surface. The use of sealants is the most effective strategy for preventing dental caries in teeth and prevents the need for more invasive treatments.
Community Health Perspective

Sealant programs deliver a clinical preventive service. When they are designed in response to population data and in accordance with public health principles (Prevent, Protect, Preserve) they represent a community-based approach to disease prevention.

History of Sealant Programs

A 1994 national survey conducted by ODH (Ohio Department of Health) and the Association of State and Territorial Dental Directors (ASTDD) identified 150 school-based and school-linked dental sealant programs. The first school-based program in the United States reportedly started in the early 1950s in Pennsylvania. Sealant programs became more common in the 1980s following the National Prevention Demonstration Program's research on school-based dental sealant programs. Favorable results. Unfortunately, no comprehensive national survey that provides information about school-based dental sealant programs throughout the United States has been conducted since 1994.

History of Sealant Programs in Michigan

In Michigan, a pilot project was started in October 2006 with 6 community health departments. Through the utilization of MCH Block Grant funding, the first RFP for BMI/MI school-based Michigan program was released in April 2007. Nine grantees were selected among a competitive RFP process to begin delivering dental sealants in October 2007. A Dental Sealant Advisory Board was instrumental in assisting MCH in setting parameters for the dental sealant program. The grant parameters (per sealant reimbursement vs lump sum) have changed as we learn from evaluation of the programs.

Note: There are additional sealant programs existing currently within Michigan communities along with the BMI/MI sealant programs. However, it is difficult to track the presence and history of all the different sealant programs within Michigan communities. MDCH supports and encourages the growth of school-based dental sealant programs around the state.

Rationale and Evidence for Programs

Sealant and evidence for programs

Initially, some dentists had uncertainties about dental sealants, but over time most have adopted sealant use. The resin type may have been due to the majority of the early UV light-cured sealants, which are tough to use. In addition, some dentists continue to believe that there is a significant risk associated with placing sealants over unerupted dental units, despite extensive evidence to the contrary.

Risk for Dental Caries

Dental caries is the most common chronic disease of childhood in 2006, approximately 58 percent of third graders and 6-7% of adults in Michigan have presence of teeth with fillings, teeth with accumulated decay, or the loss of permanent molars due to caries. Some children are at higher risk for dental caries than others. Risk factors for dental caries are described in the next slide.

Rationale and Evidence for Programs

Income-Based Risk Factors

Children from families with low incomes experience a higher incidence of dental caries than their higher-income counterparts. When this is based on socioeconomic indicators (i.e., eligibility for participation in FRPL or Medicaid program), and other access-related indicators (i.e., no insurance coupled with lack of access to dental care), children at high risk are more likely to have had dental caries and to have untreated dental caries than children at lower risk.

Average number of teeth affected by caries experience

Rationale and Evidence for Programs

Income-Based Risk Factors

Average number of teeth affected by caries experience among Michigan third-grade children who are eligible for the free and reduced lunch (FRPL) program, 2005-06

Rationale and Evidence for Programs

Income-Based Risk Factors

Average number of teeth affected by caries experience
**Free and Reduced Lunch Program**

The National School Lunch Program (NSLP) is a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions. It provides nutritious, balanced, low-cost or free lunches to children each school day. The program was established under the National School Lunch Act, signed by President Harry Truman in 1946. 

![Image](image_url)

**Helpful Links for Free and Reduced Lunch Program:**

- For information on each school district's FRLP program visit the Michigan Center for Educational Performance and Information at: http://www.michigan.gov/cepi/0,1607,7-113-21423-30451-36965-210564--,00.html

**Count Your Smiles 2005-2006**

The Count Your Smiles document is a wonderful resource for reviewing the need for sealant programs in Michigan. This document is being updated in 2011—hopefully!

![Image](image_url)

**Quick Fact**

Sadly, Michigan ranks next to last among the states in the percentage of third grade children with sealants. According to The Pew Center on the States Report in 2011, Michigan ranked 56 from the bottom of the list of 42 states. However, the amount of sealants placed on third graders has improved from 23.3 in 2006 to 26.4 in 2010.

![Image](image_url)

**Additional Care Needed...**

When assessing the need for sealants, school-based dental sealant programs typically identify children with treatment needs, such as untreated dental caries, and notify those children's parents and the school nurse. If a sealant program is not available, a school nurse or teacher should be notified.

Ensuring that children receive appropriate oral health care may be the most difficult step of implementing a sealant program. It is common to find that children need additional dental treatments (e.g., restorations, extractions) that are beyond the scope of the program. Ideally, these children would receive treatment at private dental practices or clinics. In order, many children who are screened have limited access to oral health care. In addition, some families may have a low income or seeking oral health care for their children is not a priority competing demands.

Although school-based dental sealant programs provide a health benefit, it is not the same benefit that provides for dental homes. Sealant programs will often have difficulty in gaining funding that the children may receive additional needed treatment (other than dental services). Depending on program resources, programs may use a variety of approaches (e.g., sending mouth guards, providing transportation services, providing care directly) to help ensure that children receive necessary treatment.
Emergent Care

It is essential that a plan for follow-up is in place to ensure all children who need care receive care.

Remember YOU may be the only voice for a child in pain.

Tooth-Surface Risk Factors

About 90 percent of caries lesions are found in the pits and fissures of permanent posterior teeth, with molars being the most susceptible compared to other tooth types.

Tooth-Type Risk Factors

Among permanent teeth with pits and fissures, the molars are the most susceptible to caries attack. Premolars are more, but there is a large gap in the dental caries rates of molars vs. premolars.

Rationale and Evidence for Programs

Evidence-Based Decision-Making

Making decisions based on scientific evidence has become challenging in recent times because of the staggering amount of information available on the Internet and also because of the media's reporting of study results that have not necessarily undergone a rigorous review process. Program staff must be able to identify information that is based on sound science and to exercise good judgment when making decisions. Systematic reviews can help programs make this distinction.

The American Dental Association (ADA) states that "based on a majority of evidence, systematic review of mechanized methods of caries control is the highest level of current best evidence." The ADA also states that a systematic review "is a process of systematically identifying, appraising, and synthesizing evidence from scientific studies in order to obtain a single overview. The aim is to ensure a review process that is comprehensive and unbiased. Findings from systematic reviews may be used for decision-making about research and the provision of health care."

Rationale and Evidence for Programs

Evidence-Based Decision-Making: Dental Sealants Evidence Base

Since 2000, several systematic reviews of dental sealants have been conducted. The following reviews consistently demonstrated that dental sealants significantly reduce the incidence of decay in children.

A 2004 review by the National Institute of Dental and Craniofacial Research (NIDCR) concluded that "dental sealants are effective in reducing the incidence of decay in children."

A 2006 review by the Cochrane Collaboration, an international, not-for-profit, and independent organization, concluded that "dental sealants are effective in reducing the incidence of decay in children."

A 2009 review by the Canadian Dental Association (CDA) concluded that "dental sealants are effective in reducing the incidence of decay in children."
**Principles of programs funded by the Michigan Department of Community Health**

The MCH block grant and a statutory gift from Delta Dental of Michigan currently funds the SEAL Michigan dental sealant program. The funding sources enable grantee to:

- Adapt a community-based approach to prevent dental caries
- Target children at higher risk for dental caries
- Follow-up with students who present with emergent needs
- Operate efficiently
- Ensure quality
- Maximize the use of public funding (Billing for Medicaid when available)
- Track sealant data on SEAL data forms and submit to MCH for analysis

**SEAL! Michigan Program**

**Using a Community-Based Approach**

Michigan's school-based dental sealant program is a community-based public health approach to preventing dental caries. The program was developed based on Michigan's dental sealant program data and requires those who operate sealant programs to work with the community (e.g., schools). Although program goals are accomplished one child at a time, MCH focuses on the health of the population and on reducing disparities.

**SEAL! Michigan Program**

**Targeting Children at Higher Risk for Dental Caries**

Programs provide sealants primarily to the most decay-prone teeth and tooth surfaces (i.e., the pits and fissures of permanent molars) of children at higher risk for dental caries. For the purpose of MCH-funded sealant programs, children at higher risk are those who are eligible for Free and Reduced Lunch Programs (FRLP), Medicaid, or who do not have dental insurance and did not have a dental visit in the past year. Because of schools' unwillingness to make the program available to children based on income criteria, the program operates in schools in which a certain percentage of students participate in FRLP.

**SEAL! Michigan Program**

**Operating Efficiently**

Programs need to place sealants in the *best* manner possible while delivering a quality product.

- Experienced program teams can generally provide sealants for 25 or more children per day, and some report providing sealants for over 20 children per day. Programs are designed to maximize productivity while minimizing cost.
- For funding to be continued for the SEAL! Michigan program, it must be shown that the cost of a sealant program will decrease dental disease and is less expensive than restorative dental work.

**Example:**

- **Group A**
  - Applies 200 sealants with a budget of $5,000
  - $500 / 200 = $2.50 per sealant

- **Group B**
  - Applies 200 sealants with a budget of $20,000
  - $20,000 / 200 = $100 per sealant

**Group A** has shown that it is cost effective to place sealants and sends this data to MCH.
**MCH** takes the data to prove that sealant programs in Michigan save money and prevent disease.
**MCH** is then able to secure ongoing funding for the following year for sealant programs in Michigan.
SEAL! Michigan Program
Ensuring Quality

- MDCH will:
  - Provide information about sealants and sealant programs to grantees to keep them abreast of the state of the science behind dental sealants.
  - Set evidence-based standards for both program design and clinical operations.
  - Communicate standards, guidelines, and program performance expectations to grantees.
  - Establish a system for reporting by grantees.
  - Evaluate grantees' performance against standards, guidelines, and performance expectations through a review of grantee reports and other communications, including quarterly pre-scheduled site visits, or as necessary.
  - As necessary, directly provide or approve plans for technical assistance that grantees need to meet performance expectations or otherwise improve their operations.
  - Analyze the submitted SEALS data forms to assess the impact of each sealant program individually and as a state.

SEAL! Michigan Program
Maximizing the Use of Public Funding

MDCH requires all funded school-based dental sealant programs to identify Medicaid enrollees for whom it provides sealants and to bill the appropriate Medicaid managed care plan, Mt-Child, Healthy Kids Dental (HKD), or other dental insurance plans. In doing so, the grant dollars that MDCH awards can be used for the maximum number of children at highest risk for dental caries with no identifiable funding source.

- To promote the best use of public funding for the dental sealant program, MDCH does not permit its grantees to utilize sealed funding for services beyond dental sealants. Examples of such services include:
  - Diagnostic services, such as examinations and x-rays.
  - Prophylaxis.
  - Fluoride application.

Fluoride Varnish & Sealants

- The MDCH Oral Health Program highly encourages a fluoride application following the sealant application, for scientific reasons.
- However, the funding for sealants must be focused on sealants only and what it takes to place a sealant on the tooth.
- We would encourage all grantees to apply fluoride following the sealant application and bill Medicaid and other insurance when possible.
- Also to be creative in ways to find funding for fluoride and this will also aid in making your program sustainable.
- Note: Varnish is not covered through insurance programs the same as a Fluoride treatment. It is recommended you have a firm understanding on what is covered by which insurance.

Key Points

- Dental sealants are thin plastic coatings that are bonded to the pit-and-fissure surfaces of teeth to prevent dental caries.
- School-based dental sealant programs generally provide sealants to children who are less likely than their high-income counterparts to receive private and health care such as children who are enrolled in federal programs like FRPL, Medicaid or who are uninsured.
- In 2001, a systematic review conducted by the Task Force on Community Preventive Services found that school-based and school-linked dental sealant programs are effective in reducing dental caries.
- A number of variables (e.g., attrition rate, length of study, errors in calculation of population density or enrollment) influence the extent to which sealants save money.
- MDCH provides grantees in school-based dental sealant programs that have already exhausted their grant funds and have received additional public funding to provide sealants to students (with positive parental consent) at no charge to parents participating in any school system.
- Key elements of the MDCH approach are to make sure that programs are a community-based approach to dental caries prevention, target children at higher risk for dental caries, operate efficiently, ensure quality, maximize the use of public funding and target schools with greater than 50% participation on the FRPL.
- It is essential that a plan for follow-up is in place to ensure all children receive care.

Post Test - Chapter 1

To receive CE credit the post test must be scored by MDCH. Please complete within 30 days of purchase and mail to:

Allan J. Moore
Washington Square Building - 4th Floor
PO BOX 10959
Lansing, MI 48909
Or
moorel@mdh.state.mi.us
Fax (517) 434-8241
Chapter 1 - Post Test

1. True or False. School-based dental sealant programs generally provide sealants to children who are less likely than their higher income counterparts to receive private and health care.
2. True or False. Federal programs should target any school with 50% or greater FRPL participation that will let them in.
3. True or False. It is an expectation for all grantee schools districts across Michigan will always be guaranteed funding for the MCHC Health Michigan program.
4. True or False. Programs provide students primarily to more deep-drilled teeth and tooth surfaces.
5. True or False. For programs to be receivable, all eligible students must be tested.
6. True or False. The MCHC Health Michigan program highly encourages applying some type of fluoride after a medical examination.
7. True or False. Sealants guarantee that the tooth will never decay.
8. True or False. Comprehensive care is important and students should have a complete examination, x-rays, and fluoride.
9. True or False. Sealant program for some children are the only option for oral health care.
10. True or False. Sealed teeth are more likely to occur in a child with a severe decay in 12th grade if it is required under the SEAL Michigan Program.

Chapter Two

Infection Control

Overview of Chapter 2

Learning Objectives
- List three factors that make infection control a challenge for school-based dental sealant programs.
- List three important habits that programs must follow to protect their health.
- Explain what determines the need for personal protective equipment (e.g., gloves, face protection, protective clothing).
- List the requirements for sterilizing instruments in Michigan.
- Explain the Centers for Disease Control's recommendation for water used for routine dental instruments.

Introduction

The role of infection control in school-based dental sealant programs presents particular challenges. Schools often lack isolated classrooms, so programs may operate in any available space (e.g., the cafeteria, the stage, the nurse's office, and the gym). The space may or may not include a sink, and students and staff may need to pass through the area. These programs need to move their equipment and materials from school to school frequently and in certain instances the portable equipment must be set up and taken down daily.

This module describes infection control procedures for programs to follow when conducting screenings to select teeth for sealant placement and when applying sealants. The CDC Division of Oral Health's four basic principles for infection control are the best way to reduce opportunistic contact within the oral health professionals and the child during these procedures, and OSHA regulations are the basis for these infection-control guidelines.

Standard Precautions

Standard precautions include infection-prevention practices that apply to all patients. The anticipated degree of exposure to blood, body fluids, or pathogens determines the types of precautions to be implemented.
**Infection Control**

It is critical that program staff receive education and training on the principles and rationale for recommended infection-control practices. Programs must have written infection-control plans (including post-exposure plans) that contain policies and procedures to reduce risk of transmission of infectious agents and that clarify the steps to be taken in case transmission occurs.

One program staff member should be designated the infection-control coordinator. This individual is in charge of maintaining the infection control plan. The program should have access to a health professional qualified to provide post-exposure care, consultation, and follow-up. A post-exposure plan should delineate protocols and procedures, including exposure and medical care in the event of exposure to blood or other potentially infectious material (OPIM). Program staff should regularly review their plan and procedures and update them as necessary.

**Best available locations for needle programs...**

To help prevent needle-stick injuries to program staff, the MIOSHA program has access to needle-waste and disposal units that have sufficient capacity to operate one to three needles.

**MIOSHA**

- The State of Michigan has developed a state OSHA plan known as MIOSHA.
- The mission of the MIOSHA program is to help assure the safety and health of Michigan workers. The agency vision is to enhance the quality of life and contribute to the economic vitality in Michigan by serving as an effective leader in occupational safety and health provided through inclusion of staff and stakeholder creativity and commitment.

To view the MIOSHA plan please see:
http://www.osha.gov/dts/ostateprog/michigan.html

**HIIN Precautions**

*(or the most current strand of influenza)*

For the latest HIIN guidelines please review the CDC's website located at:
http://www.cdc.gov/h1n1flu/guidance/ill-hecp.htm

**Take Action to Stay Healthy**

To protect their health, program staff should:
- Stay current on recommended immunizations.
- Follow appropriate hand-hygiene protocols.
- Ensure that staff receive ANNUAL education and training about the principles of infection control, occupational-related risks for infection, taking measures to prevent exposures, and post-exposure management.

**Protect the Provider: Immunizations**

- Program staff should stay current on immunizations according to CDC's recommended adult immunization schedule. To view click here:
http://www.cdc.gov/mmwr/PDF/wk/mm5735.pdf
- All new staff should be tested for tuberculosis.

**Protect the Provider: Immunizations**

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http://www.cdc.gov/mmwr/PDF/wk/mm5735.pdf
- All new staff should be tested for tuberculosis.
Hand Hygiene

Either soap and water or alcohol-based hand sanitizers may be used for cleaning hands. However, hands must be washed with soap and water (not hand sanitizers) when they are visibly soiled, before eating and also after using the restroom.

The CDC currently reports that hand washing with soap and water is the most effective hand hygiene method.

Hand Hygiene

Hand💙

Hand Hygiene

Hand hygiene information is available from the CDC's Hand Hygiene Resource and can be retrieved from:
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5406a1.htm

Hand Hygiene

How to use an alcohol-based hand sanitizer

Alcohol-based hand sanitizers — which do not require water — are an excellent alternative to soap and water. If you choose to use a commercially prepared hand sanitizer, make sure the product contains at least 60 percent alcohol. Then follow these simple steps:

- Apply enough of the product to the palms of your hands to wet your hands completely.
- Rub your hands together, covering all surfaces, for up to 20 seconds or until they are dry. For product to be effective, hands should be wet with the sanitizer for at least 20 seconds.
- If your hands are visibly dirty, however, wash with soap and water. Antimicrobial wipes or washcloths are another option, although they are not as effective as alcohol-based sanitizers.

Hand Sanitizers

Because hand sanitizers do not remove the powdery residue that can form under gloves, program staff using hand sanitizers should also wash hands periodically with soap and water.
Hand Sanitizer Steps

Step 1: Apply enough sanitizer on palm of hand.
Step 2: Rub hands together, palm to palm.
Step 3: Rub back of each hand with palm of other hand.
Step 4: Spread sanitizer on all parts of hands.
Step 5: Spread sanitizer between fingers.
Step 6: Keep rubbing hands together until dry. Do not wipe with a towel.

Photo courtesy of www.cdc.gov

Additional Precautions

- Do not eat, drink, smoke, apply cosmetics, or handle contact lenses in areas where exposure to blood or other potentially infectious materials (PIMIs) may occur. Hand cream is not considered a cosmetic.
- Keep jewelry simple (e.g., wedding band, watch) and avoid wearing long fingernail designs.
- Thoroughly wash and dry liquid soap containers before refilling them, as liquid soap can be contaminated by infilt.

Guidelines for Infection Control in Dental Health-Care Settings - 2003 by the CDC.

Please follow this link to review the most updated infection control guidelines required through the SEAL! Michigan Sealant Program:

http://www.cdc.gov/oralhealth/infectioncontrol/guidelines/slides/001.htm

Personal Protective Equipment

The need for personal protective equipment (PPE) (e.g., gloves, face protection, protective clothing) is determined based on the amount of anticipated splatter or contact with the patient’s mucous membranes or with instruments, equipment, or surfaces that may be contaminated with infectious agents. PPE is not necessary for screenings and visual examinations during which the oral health professional is unlikely to touch mucous membranes. However, oral health professionals should use gloves for any screening or examination during which there is potential for touching mucous membranes. PPE should be worn in the patient care area only.

Gloves

Gloves are single-use, disposable items, and they must be removed and disposed of immediately if they are damaged, punctured, or torn. Gloves that are damaged must be removed and replaced immediately. If gloves are worn in the presence of blood or other body substances, they should be removed and replaced immediately. Gloves should be removed and replaced immediately if they are visibly contaminated with blood or other body substances.

Face Protection

Face protection, such as face shields, masks, and eye protection, is required when there is the potential for exposure to blood or other body substances. Masks should be worn by all health care workers when there is the potential for exposure to blood or other body substances. Eye protection should be worn by all health care workers when there is the potential for exposure to blood or other body substances.

Protective Clothing

Protective clothing must be worn when there is any potential for exposure to blood or other body substances. This includes gloves, gowns, and other protective clothing. Protective clothing must be washed, disinfected, or discarded when it is visibly contaminated with blood or other body substances.

Safe Handling of Sharps

Safe handling of sharps is essential to prevent the transmission of infectious diseases. All sharps must be handled, transported, and disposed of in a safe and appropriate manner. Sharps must be placed in a sharps container before they are transported. Sharps containers must be properly disposed of after they are filled.

Management and Follow-Up of Occupational Exposure

Management and follow-up of occupational exposure is critical to prevent the transmission of infectious diseases. The employer must have a written policy and procedure for the management and follow-up of occupational exposure. The policy and procedure must be reviewed and updated regularly. The employer must provide training and education to all employees on the management and follow-up of occupational exposure.
**Limit the spread of blood and saliva via spatter**

Program staff should use the side-stream syringe carefully to avoid creating backspash or spatter. The high velocity evacuation (HVE) tubing and container should also be used in such a way as to limit potential spatter. One manufacturer (Ametype) advises keeping the on/off button depressed before the HVE tubing is placed inside the patient's mouth and until the hose end has been removed from the mouth to avoid waste flow back.

![Image](image1.png)

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**Surface Disinfectant**

Review the following links to review 2010 clinical contact surface disinfectant resources and infection control for mobile dental units:

http://www.osap.org/?page=Disinf_Info

http://www.osap.org/?page=ChartsChecklists

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**Barriers and Disinfection of Surfaces**

Use the following procedures to clean and disinfect clinical contact surfaces:

- Spray surface with disinfectant.
- Wipe surface to clean it, and remove any debris.
- Spray surface with disinfectant again.
- Follow manufacturer's directions for the amount of contact time required to allow the product to achieve disinfection.

**Note:** If disinfectant wipes are used, clean the surface and discard the wipe, then use a fresh wipe for disinfection. Please always follow the manufacturer's directions — even if wipes are used, the surface must still remain wet per manufacturer instructions.

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**Barriers and Disinfection of Surfaces**

Treatment area surfaces can be divided into those with potential for clinical contact (e.g., trolleys, instrument tray, light handles) and housekeeping surfaces (e.g., floors, walls). Clinical contact surfaces must either be cleaned and disinfected with a hospital disinfectant or a disinfecting wipe product that is registered with the Environmental Protection Agency (EPA) between patients or be covered with barriers that are discarded and replaced between patients. The decision about which approach to use depends on factors such as time, cost, chemical waste disposal considerations, and the ability to place barriers.

![Image](image2.png)

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**Barriers and Disinfection of Surfaces**

Barrier use, compared with cleaning and disinfecting, minimizes wait time between patients and also decreases handling of and exposure to disinfectants. If a surface is not barrier protected or if contact is made under a barrier, the surface must be cleaned and disinfected. The MDCH facility program allows each operator to decide which barriers and disinfection to utilize with understanding that they will meet all Environmental Protection Agency (EPA) guidelines.

![Image](image3.png)
Waste Disposal

Although, as previously mentioned, programs are unlikely to see sharps, other than needles, or to generate blood-borne waste, it is always best to use the appropriate disposal methods. Used needles should be placed in puncture-resistant containers and disposed of appropriately. Used sharps, such as scalps, should be placed in puncture-resistant containers and disposed of appropriately.

Make Instruments and Equipment Safe

Heat sterilization is required for all patient-care items that touch patient's mucous membranes and that can withstand repeated exposure to high heat. Instruments may be heat sterilized on- or off-site. For more information about instrument sterilization, see Instrument Sterilization from the CDC in Section VI retrieved from:

http://www.cdc.gov/ncidod/dvcons/infant/bkg/sterilization_cleaning.htm

Make Instruments and Equipment Safe

It is impractical for certain programs to use chemical disinfection to sterilize contaminated instruments because of the toxicity of the chemicals which necessitates proper ventilation. Depending on the sterilization process (steam sterilization takes 10-12 hours and the transport of toxic chemicals. Reusable instruments can be used if they can withstand heat sterilization. Disposable instruments are easier to obtain and cost less than reusable instruments, but using disposable instruments increases cost and waste and presents disposal challenges.

Programs that use handsfree or air/water syringes that are detachable from the unit should be sterilized between patients and not be sterilized in the same package. The barrel of the syringe should be covered with a replaceable barrier. Use a new disposable syringe tip for each patient. Programs that use air/water syringes to apply materials may wish to consider using single-use, disposable syringes, rather than the multi-use type.

Instrument Sterilization Fundamentals

The instrument processing area should be divided into two separate zones: a 'dirty zone' for trash, cleaning, and packaging of contaminated items and a 'clean zone' for sterilizing instruments. A clean zone should be immediately after use in a puncture-resistant container. The instruments should be transported off-site, they should be removed from the solution and transported in a securely closed, appropriately labeled, and puncture-resistant container.
**Instrument Sterilization Fundamentals**

MDCH-funded sealant programs should store packaged instruments in clearly and appropriately labeled puncture-proof and secured containers. Containers should be labeled "Clean" or "Dirty" instruments. Containers with contaminated instruments should have the biohazard symbol. Containers should be disinfected before and after use. Brushes used to clean instruments should be disinfected and stored in a labeled container.

After appropriate sterilization, a bag or pouch is considered sterile unless it is torn, wet, dropped on floor, or compromised in another way. If a bag or pouch is compromised, the instruments should be cleaned, placed in a new bag or pouch, and put through the sterilization process once again.

**Make Instruments and Equipment Safe**

- **Off-Site Sterilization**
  Proper transport cases are required for off-site sterilization. MDCH-funded sealant programs should use securely fastened containers for transporting instruments so that instruments will not spill when crossed. Cleaning instruments before transport is not required, but it can reduce possible exposure risk during transport. Any case or lock mechanisms preventing transport of biohazardous materials should be followed.

- **On-Site Sterilization**
  Adequate space for and design of the treatment processing area is of primary importance for on-site sterilization. The sterilization area should have adequate ventilation and access to a sink and should be separate from the treatment area. It should have enough space to separate the dirty and clean zones and should allow for receiving, cleaning, packaging, sterilization/decontamination, and storing of processed instruments. Avoid carrying or loading contaminated instruments at times when the area is crowded with children.

**Sterilization Monitoring**

Autoclaves should be monitored every 7 days, on the same day each week, by biologic testing (spore test) for proper functioning, and programs should document testing and keep a log with test results. Testing should be performed weekly and is non-dependent on the amount of use.

If the autoclave has been idle for an extended period (e.g., during summer break), staff should perform a biologic spore test before program start-up to ascertain whether the autoclave is functioning correctly.

**Portable Dental Unit Water Quality**

CDC recommends that water used for routine dental treatment meets EPA regulatory standards for drinking water (i.e., 500 CFU/mL of heterotrophic water bacteria). Some manufacturers of portable dental equipment advise that tap water (of good quality from a municipal supply) or distilled or purified water be used in the water supply bottle. Programs should consult with the manufacturers of their dental water to determine appropriate methods and equipment to maintain and maintain dental-unit water quality. Dental water line cleaners should be used according to the manufacturer's directions and in accordance with the manufacturer's recommendations. Some manufacturers also recommend draining the water at the end of each day.

CDC recommends that water and air be flushed for a minimum of 30-60 seconds after each patient from any device connected to the dental water system that enters the patient's mouth (e.g., air/water syringe) to expel organisms that may have been drawn into the waterline.

**Key Points**

- The portable nature of school-based dental sealant programs presents particular challenges for infection control.
- It is critical that program staff receive education and training on the principles and rationale for recommended infection-control practices.
- The need for personal protective equipment (i.e., goggles, face protection, protective clothing) is determined based on the amount of anticipated spatter or contact with the patient's mucous membranes of with instruments, equipment, or surfaces that may be contaminated with infectious agents.
- In Michigan, instruments may be heat sterilized on or off-site.
- CDC recommends that water used for routine dental treatment meet EPA regulatory standards for drinking water.

**Post Test**

To receive CE credit the post test must be scored by MDCH. Please complete within a word document and mail to:

Attn: Jill Moore
Washington Square Building
4th Floor
PO Box 3015
Lansing, MI 48909

Or:
Momyer@Michigan.gov
Fax: (517) 335-6394
Chapter 2: Post test

1. True or False: HTH-070 toothpaste must be used at least twice a day for 2 minutes each time.

2. True or False: A mouthwash should be used after brushing and flossing to kill any remaining bacteria.

3. True or False: Fluoride gels are more effective than fluoride toothpaste for preventing cavities.

4. True or False: The use of mouthwash is beneficial in reducing bad breath.

5. True or False: Regular dental visits are essential to maintain good oral health.

6. True or False: Brushing with a hard-bristled toothbrush is recommended for cleaning the teeth.

7. True or False: Tooth brushing should be done with a toothbrush with medium hardness.

8. True or False: The placement of dental sealants on children is recommended to prevent cavities.

9. True or False: The use of fluoridated toothpaste can reduce the risk of cavities.

10. True or False: The eruption of the third molars occurs at the age of 18-25 years.

Overview of Chapter 3

This module provides information on how to assess a child's teeth to determine whether they would benefit from dental sealant placement. It presents an overview of the dental caries disease process, emphasizing practical concepts related to caries prevention, controlled release systems, dental sealants, and third molars. The module also presents information on how to determine whether to use amalgam and which teeth to seal.

Learning Objectives

- Discuss the factors that influence tooth decay in children.
- Explain the differences between caries-active and caries-resistant individuals.
- Understand the role of dietary habits in the development of dental caries.
- Describe the types of dental sealants and their effectiveness in preventing caries.
- Identify the factors that determine the need for dental sealant placement.
- Understand the importance of dental sealant placement in the prevention of dental caries.

Dental Caries Disease Process

Dental caries is a multifactorial disease that results from the interaction between the bacterial biofilm (i.e., dental plaque) and the dental enamel. The disease process involves a shift in balance between protective factors that aid in remineralization (i.e., formation of minerals that remineralize the tooth) and the destructive factors that add to and demineralization (i.e., loss of minerals from the tooth), resulting in demineralization over time. Understanding the dental caries disease process and its factors is essential in determining whether teeth are good candidates for dental sealant placement.

Stages in Caries Lesion Severity and Activity

The dental caries disease process can be characterized as follows:

- The disease manifests itself on the tooth surface as a caries lesion.
- The disease is dynamic, but not continuous.
- The lesion is site-specific, occurring in areas where plaque accumulates for long periods (e.g., the pits and fissures of teeth).
- In the early stage, the disease is reversible (i.e., before cavitation occurs).
- The lesion is chronic. In most people, the progression from sound tooth structure to a caries lesion (i.e., cavitation) takes several years; however, during the decay period when the dentin is exposed, lesions can progress much faster.
- The lesion can be arrested at any point.
- About 70% of dental lesions are found in the pits and fissures on the occlusal surfaces of permanent posterior teeth, with molars being the most susceptible.
- A tooth is most susceptible to the disease while it is erupting, and during the first few years afterwards.
- Certain populations (e.g., children from certain minority and ethnic groups, children from families with low incomes, children with special health care needs) experience higher rates of dental caries and more severe caries lesions, compared with their counterparts (e.g., white children from families with higher incomes, children without special health care needs), as shown in the table below.

- Fluoride is effective in slowing or arresting the caries process by contributing to the remineralization of demineralized tooth structure, causing fluoride to be widely used (e.g., via toothpaste, community water systems, and fluoridated toothpaste), it can take years for lessons to progress from one stage to the next, and many lesions can arrest (e.g., not progress to cavitation) or regress (e.g., remineralize).

Dental caries can be classified into two categories: non-cavitated and cavitated.
Stages in Caries Lesion Severity and Activity

Non-Cariated Lesion: Also sometimes referred to as an early lesion, this lesion occurs when the enamel surface is not in contact with plaque and is protected by the salivary pellicle. It is exposed to cycles of demineralization and remineralization, and it retains some minerals (including fluorides) and becomes less prone to further demineralization. Thus, eventually the lesion progresses under the surface. At this stage, the demineralization process can be reversed or arrested via biochemical means (e.g., fluoride use), mechanical means (e.g., dental sealant placement), or both.

In its earliest stages of development, a non-carriated lesion is not visible to the naked eye, but it can be detected with aids (e.g., a quantitative light-induced fluorescence instrument). At this stage, lesions appear white, but they can also be brown, yellow, or a mixture of white, brown, and yellow.

Stages in Caries Lesion Severity and Activity

Carious Cariated Lesion: Cariated lesions (also referred to as cavities) are lesions that have progressed to a more advanced stage. Cavitation usually occurs because of external forces that eventually lead to the collapse of the outer surface of a non-carriated lesion, which in turn leads to a discontinuity or break in the surface. The break in the surface may be limited to cortical enamel or may expose the dentin. By this point, demineralization has usually progressed histologically, radiographically, and clinically into the dentin, and bacteria can invade the dentin and cause bacterial infection. This stage of the disease generally requires operative intervention to restore function and to help prevent the caries process inside the tooth.

Distinguishing lesions...

- Active lesions tend to be whitish or yellowish in color and opaque (non-glossy). Inactive lesions can be whitish or yellowish in color but tend to be shiny or glossy.
- Active lesions feel rough when the tip of the explorer is moved gently across their surface. Inactive lesions feel hard and smooth when the tip of the explorer is moved gently across their surface.
- Active lesions are located close to the gingival margin when the lesion is in a smooth surface. Inactive lesions are located further away from the gingival margin when the lesion is in a smooth surface.

Occlusal Surface Caries

When the lesion is in an occlusal surface, it is more difficult to differentiate between an active and an inactive lesion. This is because many such lesions are not easily visible to the naked eye or accessible to the gentle touch of the blunt explorer, especially if the lesion does not extend beyond the confines of the pit-and-fissure system on the occlusal surface.

Caries Management

Caries management involves removing decayed tooth structures to restore the natural contours of the tooth. This is done with the help of various tools and techniques, including hand instruments, rotary files, and laser equipment. The goal is to remove all decayed tissue and leave healthy tooth structures for optimal function and aesthetic appearance.
Making Decisions About Sealant Placement

Making Decisions About Sealant Placement

There is strong evidence that sealants are effective when used on sound permanent posterior teeth in children and when used on non-cavitated lesions in the latter case, evidence shows that sealants significantly reduce the percentage of non-cavitated lesions that progress into cavitated lesions in children, adolescents, and young adults 1.

Based on this evidence, the American Dental Association (ADA) recommends scaling sound pit-and-fissure surfaces as well as non-cavitated pit-and-fissure lesions in children at higher risk for dental caries 2. An expert workgroup sponsored by the Centers for Disease Control and Prevention (CDC) also recommends scaling sound and non-cavitated pit-and-fissure lesions in children at higher risk for dental caries. In other words, any lesion in the pit-and-fissure surfaces that is less severe than a cavitation should be sealed in children at higher risk.

The following information may help in the decision-making process on whether to place sealants or not...

- Scaling over cavitated lesions lowers the number of bacteria in the cavity by at least 104 times 3.
- Small cavitated lesions as well as lesions radiographically into dentin can be sealed without removing all the softened infected tissue and will become asymptomatic or non-cavitated over time while they are sealed 4.
- The CDC expert workgroup acknowledged that school-based dental sealant programs treat only children at higher risk for dental caries who are often from families with low income and may lack access to oral health care. Therefore, the workgroup recommended that in addition to making an effort to contact children who have cavitated lesions with a source of free or low-cost care, oral health professionals in school-based dental sealant programs who are authorized to select teeth for sealant application might choose to seal small cavitated lesions with non-cavitated lesions with no visual signs of dental caries.
- Sealants can be removed at any time, and a reapplication can be placed. One does not preclude the other.

Criteria and Methods for Selecting Teeth to Be Sealed

A variety of tools are available that can help oral health professionals in school-based dental sealant programs determine which teeth are good candidates for sealant placement. All the criteria and methods discussed in this module are primarily focused on identifying cavitated lesions in the pits and fissures of teeth (including occlusal surfaces, buccal pits, and lingual grooves), to determine whether to place sealants on teeth in school-based dental sealant programs.

To effectively place a resin-based sealant, the tooth surface must be kept dry. Thus, the area to be sealed must be isolated (i.e., it cannot be covered by soft tissue). Surfaces that cannot be isolated and kept dry should not be sealed. In some instances, it may be possible to seal the occlusal surface of a tooth that has partially erupted, but it may not be possible to seal the buccal pit or lingual groove, because the tooth has not erupted sufficiently. These other surfaces may need to be sealed at a follow-up evaluation.

Caries Detection vs. Caries Diagnosis

The terms “caries detection” and “caries diagnosis” have distinct meanings. “Caries detection” implies finding a sign of the disease (e.g., finding a non-cavitated lesion). This is the first step in the diagnostic process. “Caries diagnosis” implies determining whether lesions of disease are present (detection), determining how severe the disease is, if it is present, and deciding whether lesions are active or treated (assessment).

Diagnosis, once detection alone, should inform the assessment of future dental caries risk and help guide the process of how to manage oral health. From the caries detection perspective, only active lesions require treatment. The type of treatment depends on the severity of the active lesion (e.g., whether it is carnate or not carious).

Because most cavitated lesions are non-self-cleaning, they are considered active lesions and therefore require treatment—usually restorative treatment.

Non-cavitated lesions treated on recently erupted posterior teeth in children at higher risk for dental caries are likely to be active and thus in need of treatment. In school-based dental sealant programs, sealant placement is the appropriate treatment for these lesions.

Visual Criteria

- ADA and CDC both support the use of visual assessment (i.e., without the use of tools) as the method of choice to decide whether dental sealants should be placed.
- Visual assessment alone is appropriate and sufficient to detect surface cavitation and other signs of dental involvement before sealant placement.
- Before being assessed, the tooth surface should be cleaned with a toothbrush to remove debris and plaque.
- In order to detect cavitated lesions in which the lesions are visually visible, the tooth surface does not need to be dried. However, since small lesions are easily missed, the tooth should be dried with compressed air, when available. If sound surfaces or early non-cavitated lesions are to be detected (which is necessary in school-based dental sealant programs to determine which teeth need sealants) then the tooth needs to be thoroughly dried with compressed air for at least 5 seconds.

Making Decisions About Sealant Placement

School-based dental sealant programs grapple with the dilemma of how to best deal with cavitated caries lesions in children who may not receive restorative oral health care. Although sealants are not necessarily the treatment of choice for cavitated lesions, in these instances, it is up to the oral health professional to decide whether to place sealants. As we have learned from Dr. Fontana in the June 2011 workshop, it may be the only treatment that child may receive and scientific evidence shows that placing a sealant on a cavitated carious lesion will not increase the level of bacteria, will lower the number of viable bacteria at least 100-fold, and also reduce the number of lesions with any viable bacterial by about 30% (Bailey, 2009).

Criteria and Methods for Selecting Teeth to Be Sealed

X-rays:
- X-rays should not be taken for the sole purpose of determining whether sealants should be placed.
- Whether taking x-rays results in more accurate assessment (compared with visual assessment of the occlusal surface) has not been determined.
- Many non-cavitated lesions encased in caries have not been identified, although they are active and therefore in need of preventive intervention. Thus, an occlusal surface, being a lesion in the dentin (at any point in the caries progression), should not be diagnosed as a caries lesion.
- Since the decision about whether to seal a tooth is based on a surface examination and not on whether a lesion is limited to the enamel or is histologically or radiographically in the dentin, taking x-rays without school-based dental sealant program decisions about whether to seal a tooth.

Criteria and Methods for Selecting Teeth to Be Sealed

Magnification:
Few studies have assessed whether the use of magnification in addition to a visual examination results in improved assessment, and findings from existing studies have been inconsistent. Therefore, although magnification can be used in the assessment, it is not necessary and may not be helpful. The CDC and ADA both support unbiased visual assessment.

Criteria and Methods for Selecting Teeth to Be Sealed

Technologically Advanced Tools:
Technologically advanced tools, such as laser fluorescence, are designed to help oral health professionals interpret visual cues in detecting and monitoring lesions over time, especially non-cavitated lesions. These tools should be used only as adjunctive devices to detect caries lesions and are not required to detect cavitation. These tools are also NON-reimbursable under the MCHC Grant Funds.

Findings from validation studies of these tools indicate an increase in the detection of non-cavitated lesions, as well as an increase in the likelihood that a sound surface will be mistakenly identified as caries. Therefore, the use of such tools by themselves will lead to many sound teeth being misdiagnosed as cavities and thus possibly excised from existing sealants. For this reason, and also because these tools are not designed to detect cavitation and are costly, their use in school-based dental sealant programs is not recommended.


Selecting Existing Sealants for Repair or Replacement

Oral health professionals working on school-based dental sealant programs who evaluate long-term sealant retention should use their judgment. When evaluating whether sealants should be replaced, it makes sense to attempt to disprove the existing sealant. Instead of accepting the explorer, it is generally more justifiable to replace the sealant.
Chapter 3: Post Test

1. True or False: Caries lesions can be classified into two categories: non-cavitated and cavitated.

2. True or False: The use of laser fluorescence is not recommended to use to better identify if a tooth is a good candidate for sealant placement.

3. True or False: Explorers should not be used because a non-cavitated lesion may become cavitated with age, pressure, and tooth decay.

4. True or False: If a tooth is half erupted, a sealant should always be placed.

5. True or False: Any lesion in the pits and fissures surfaces that is less severe than a cavitation should be sealed in children at higher risk.

6. True or False: All lesions require preventive treatment.

7. True or False: Active lesions are often smooth and glossy.

8. True or False: Any lesion in the pit and fissure surfaces that is less severe than a cavitation can safely be sealed in children at higher risk.

9. True or False: A tooth is most susceptible to the disease while it is erupting and during the first few years afterwards.

10. True or False: The caries disease process involves an adult balance between protective factors that aid tooth mineralization and destructive factors that aid in tooth demineralization.

Chapter 4

Materials and Application Techniques

Overview of Chapter 4

Learning Objectives

- Identify at least three desirable attributes of selected sealant materials for use in school-based dental sealant programs
- List three ways to prevent operator injuries in school-based sealant programs
- Explain what is currently known about use of bondable (BPA)-related risks from in-office exposure to BPA from dental sealants
- List the steps in the sealant application process, in order
- Explain the difference between short-term and long-term retention methods

Sealant Material Selection

Sealant Materials: There are a number of commercially available dental sealant materials, each with different attributes. Sealant materials that work well in private practice may not be the most appropriate for school-based dental sealant programs. Programs must select the sealant material that works best in the conditions under which they operate.

In school-based programs, unlike in private practices, a dentist is often not available to adjust occlusion; therefore, resin-based sealant materials that contain no fillers are preferable, since sealant materials with high percentages of fillers require occlusal adjustment.
Consider the following when choosing your sealant product...

- Whether a program is portable or fixed. School-based programs move from school to school. Preventive picking, transport, and unpacking places equipment, such as curing lights, at risk for damage.
- Whether continuity of care is available. School-based programs are not dental homes and do not provide continuity of care; rather, they refer students to dental homes where continuity of care is provided. Sealants placed at school should be easily visible to dentists who may subsequently examine a child. Therefore, colored or opaque sealant materials that do not match tooth color are preferred over clear or translucent sealant materials.
- Temperature-control capabilities (programs may work in old school buildings or other school settings with poor temperature control). Temperature control affects sealant materials setting time. Using a light-cured sealant material provides the greatest control over setting time.

Please note:

- In the state of Michigan a registered dental hygienist cannot remove tooth structure. If they are cared for, just as to adjust the sealant, there is no problem that may arise.
- Always wear gloves within the scope of your practice—whether a sealant or not.
- For the latest Administrative Rules of the Michigan Board of Dentistry:
  http://www.michigan.gov/hsr/0,4201,7-166-3164--,00.html
- The Michigan Office of the Attorney General or local health department.

Sealant Material Selection

Sealant Material Attributes—Programs should select dental sealant materials with the following attributes:

- Materials should have high resistance rates. Although documentation of effectiveness is a published clinical trial is preferred, such documentation is not available for many sealant materials, unless those that are new to the market. Upon mention of those materials, curing light must be applied and the sealant should dry to be usable.
- Materials should be easy to add through normal scalloping.
- Materials should be easily applied using normal occlusal sealers.
- Materials should be repeatedly evaluated to assess the tooth color, and if necessary, sealant materials should allow adequate control of tooth color, transparency, and flow.

Sealant Material Selection

Auto-Polymerized vs. Light-Cured Materials

- The retention rates of auto-polymerized and light-cured sealant materials are comparable.
- Auto-polymerized sealants require less armamentarium.
- Light-cured sealants require a curing light, which must be purchased, maintained, and regularly checked for proper wavelength and intensity.
- Both auto-polymerized and light-cured sealants are acceptable for use in MDCF-funded dental sealant programs.

Auto-polymerized vs. Light-cured

Auto-polymerized sealant mix

Light-cured sealant and light

Sealant Material Selection

Resin-Based vs. Glass Ionomer Materials

- The effectiveness of resin-based sealants has been demonstrated repeatedly and depends upon sealant retention. Glass ionomer sealant materials' retention rates are inadequate.
- According to the American Dental Association, resin-based sealant materials are superior to glass ionomer materials.
- MDCF-funded programs are requested to use resin-based material rather than glass ionomer materials.
Sealant Material Selection

Filled vs. Unfilled Materials

- When more filler than necessary to adjust viscosity is added to unset sealant materials, hardness increases, and ability to seal adjacent surfaces decreases. Also, the penetrability of the sealant decreases with increased filler amount.

- MICD recommends that those filled through the selective process use unfilled sealant materials that are either unfilled or have less than 10 percent filler by weight. This allows for sealant materials to quickly self-etch through normal occlusal wear. Materials with high filler levels (i.e., 30%-60 percent by weight) require the use of a to adjust occlusion, which adds a step to the sealant-application process. In addition, high filler levels have not been shown to increase sealant longevity.

Hydrophilic vs. Hydrophobic Materials

- At least one sealant material has been marketed as moisture tolerant (hydrophilic). While the manufacturer states that this product is formulated differently from other resin-based sealant materials, it utilizes the same placement as hydrophilic sealant materials until the curing stage. The manufacturer's instructions differ: a tooth must be dried only after rinsing with water to ensure the tooth is "lightly moist" but not "wet.

- Hydrophilic sealants lack the consumer evidence demonstrating effectiveness available for hydrophobic sealants.

- MICD does not recommend the use of any product that utilizes the counter indications of hydrophilic sealants.

Sealant Material Selection

Use of Newer Bonding Systems with Sealants

- A one-bottle bonding agent can be used between a resin-based sealant and the cavosurface, and the sealant material, in the opinion of the dentist or dental hygienist, the bonding agent would enhance retention. The bonding agent may enhance retention when placing sealants where moisture control is difficult.

- Self-etching bonding agents without a separate etching step may provide less retention than the standard acid-etching technique and are not recommended.

- MICD recommends that the sealant programs do not use self-etching bonding agents.

Sealant Material Selection-Safety of Sealant Materials

Allergic Reactions

A small proportion of the population is known to be allergic to acrylic resins, such as those used in some sealant materials. Program staff should not use any resin-based sealant materials with children who have known allergic reactions.
**Sealant Material Selection - Sealant Material Safety**

**Injury Prevention:**

- Wear safety glasses (e.g., chin-length face shields, eye/face shield) during the sealant application process (recommended for staff and children), and have an eye wash available.

- Do not allow etchant (phosphoric acid) or uncured sealant material to come into contact with the eyes, skin, or soft tissues. Perforated contact with soft tissues, such as those adjacent to a buccal or lingual groove, during sealant application is not dangerous.

- If uncured sealant material inadvertently comes into contact with the skin, rinse immediately with soap and water. If contact with the eyes or prolonged contact with oral soft tissues occur, flush with large amounts of water. If irritation persists, seek medical attention. If uncured sealant material contacts a glove, remove it, wash hands with soap and water immediately, and re-glove.

**Sealant Material Selection - Bisphenol-A**

BPA is a chemical commonly used in the manufacturing process of certain plastics. BPA can be found in the lining of food cans and toys. In dentistry, BPA may be found in some dental sealant materials, and, to a lesser extent, in dental composite resin filling materials.

There has been concern about BPA because of widespread human exposure and the potential of BPA to interfere with estrogen receptors of relevant cells in cell cultures, impacting the development and reproductive systems of some animals. However, although BPA may affect health in animals, to date, no effects have been observed in humans. There is debate over the level of exposure that might pose a risk to humans.

**Sealant Material Selection - Bisphenol-A**

BPA may be present in some dental resins or as a degradation product in other. Several chemical and mechanical factors, including the exposure of some dental resin fillings materials to saliva, may result in their slow and persistent degradation and in BPA release. BPA has been detected in saliva samples in individuals following the application of one specific dental sealant material (e.g., Tekklor LC) for up to 1 hour after application, but it is possible that BPA is not absorbed by the body, or it may be present in undetectable amounts in circulation.

A systematic review of the scientific literature investigating whether sealant placement causes toxicity concluded that the evidence suggests that individuals are not at risk for BPA exposure from sealants.

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**The Sealant-Application Process**

**Step 1: Tooth Preparation**

Sealant material manufacturers recommend that tooth surfaces be cleaned before acid etching. Demonstrations have shown that sealant retention rates for teeth cleaned with a toothbrush are at least as high as for teeth cleaned with a handpiece. MIDCH recommends using a toothbrush to clean the surfaces of teeth to be sealed prior to placement of acid etch.

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Step 2: Tooth Preparation

Meticulous isolation of tooth surfaces to avoid saliva contamination is the most crucial step in the sealant-application process. Any salivary contamination following acid etching will result in a weakened bond between the sealant and enamel and in poorer chances of retention. Sealant teams that effectively isolate half of a mouth at one time increase efficiency by reducing the sealant-application time.

Follow these steps to achieve proper isolation:

- Position the child's head with the chin elevated, tilted away from the teeth to be sealed.
- Place cotton rolls buccally and lingually to the mandibular teeth to be sealed. Cotton roll holders can help the sealant team isolate half of a mouth rather than a quadrant.
- Place a broad, dry angle type shield covering the proximal and opening opposite the upper first permanent molar.
- Read a dry angle type shield at a right angle; place the shield between the tongue and the lingual cusp of the tooth and gently hold it in place to isolate the child's tongue.
- If saturation of breath occurs, exchange wet towels with dry ones in a manner that does not contaminate.

Step 3: Acid Etching

- Etch the tooth surface with phosphoric acid (Etch-it-up) gel or kit to achieve a moderately rough surface.
- Use air to dry the etched surface.
- Apply etchant at least 30 seconds to allow the enamel to chemically bond to the sealant.
- Avoid contact of etchant with skin or soft tissue, if contact inadvertently occurs, rinse the skin or tissue immediately with water.

Step 4: Rinsing and Drying

- Thoroughly rinse all etchant from tooth surfaces for at least 15 to 15 seconds, using the high-volume evacuation system to keep the saliva free from saliva.
- Dry teeth until the enamel appears frosty or chalky. If teeth do not take on a frosty or chalky appearance or are contaminated with saliva at any time, re-etch for 15 to 20 seconds, rinse, and dry.

Step 5: Sealant Application

- Follow the manufacturer's instructions for mixing the sealant material and applying the sealant to the tooth surface.
- Carefully flow sealant from one end of the fissure to the other to avoid air bubbles if an air bubbles does form, trim out with an explorer tip or applicator tool before curing.
- Do not re-fill or under-fill and do not cover the marginal ridges with sealant material.
**Step 6: Curing**

- For non-polymerized sealants, allow sufficient time for sealant to cure. Following manufacturer's instructions. The temperature of the uncured sealant material in the plastic well in which the components were mixed will regulate sealant polymerization. The sealant will become warm during the polymerization reaction. Once the key molecule, the monomer should be able to enter the hardening sealant from the well. The sealant on the tooth should be set by then, as well.
- For light-cured sealants, hold the light tip as close as possible to the surface without touching the sealant material.
- Follow the manufacturer's instructions for curing time (consult manufacturer instructions to be the minimum amount of time acceptable for curing).

- If you are using a light-cured sealant, you must ensure that proper wavelength and intensity for each type of curing light (according to the manufacturer's instructions) are maintained by checking the light at least monthly for output and intensity with a meter designed for that purpose. Lights may be checked by a dental products registrar and approved. If needed, light meters are available for purchase through dental supply companies.

**Sealant Assessment**

- Immediately following sealant placement, while the teeth are still isolated, check sealants to:
  - Ensure complete coverage. Examine the teeth to check that all possible pits and fissures have been sealed. If incomplete coverage is observed, add additional sealant material until coverage is complete.
  - Check for bubbles or voids. Adding sealant in necessary only in the unlikely event that the void or bubble exposes enamel. However, where a void has sealant material at its base, operators frequently choose to add sealant material.
  - When adding additional material to a sealant, if saline contamination has not occurred, simply add more sealant material, and cure. If the teeth is contaminated by saliva, re-rinse the area for at least 10 seconds, rinse, dry, add more sealant material, and cure.

**Key Points**

- The effectiveness of resin-based sealants has been demonstrated repeatedly and depends upon sealant retention. Glass ionomer sealant materials' retention rates are adequate. MSCII bench programs request that resin-based materials are used.
- Resin-based sealant materials may be inappropriate in comprehensive dental care settings, such as private practices and specialty clinics, may not be the most appropriate for school-based dental sealant programs. Programs must select the sealant material that works best in the environment in which they operate.
- Maximizing retention of tooth surfaces to avoid saliva contamination combines with sticking for 10-30 seconds with 37 to 40 percent phosphoric acid is the standard for successful bonding of sealants to enamel.
- Sealants should be evaluated for complete coverage and absence of voids or bubbles immediately after placement, and sealants should be replaced if necessary.
- Retention checks can detect clinical problems related to sealant materials, equipment, or application techniques.
- Retention checks should be performed within the same grant year and have a program retention rate of 90% or better for occlusal surfaces and 65% or better for isolated pits.

**Step 7: Final Treatment of Surface**

To remove the oxygen-inhibited layer and reduce the possibility of depolymerized monomer remaining on the tooth, wipe the surface of the tooth with a cotton roll or cotton applicator before having the child thoroughly rinse with water.

**Sealant Retention Evaluation**

Retention checks are done to ensure quality control with dental sealant placement. Retention checks can detect clinical problems related to sealant materials, equipment, or application techniques. Retention is checked using visual and tactile techniques.

The MSCII SEAL program requires that retention checks must be performed on 20% of children who receive dental sealants. The target goal is to maintain sealant retention rates of 90% or better on occlusal surfaces and 65% or better in buccal and lingual areas. The 10% of retention checks must be performed and recorded within 60 days following the sealant placement. Retention checks must be completed 3-6 weeks after sealant placement with a re-patient.

If sealants are found missing, then the dental sealant must be immediately replaced free of charge to the student.

**Post Test**

To receive CE credit the post test must be scored by MSCII. Please complete within a word document and mail:

Attn: Jill Moore
Washington Square Building 4th Floor
P.O. Box 30193
Lansing, MI 48909
Or
Msdii@msu.edu
Fax (517) 355-4294
Chapter 4: Post test

1. True or False: Self-etching bonding agents without a separate etching step may provide less retention than the standard acid etching technique and are not recommended.

2. True or False: If the tooth comes in contact with eyes, skin, or oral soft tissues, it is immediately necessary to wash off according to manufacturers' guidelines. One way to save on program costs is to minimize the use of dry, dusty powders used within the oral cavity when placing dental sealants.

3. True or False: EPA is a cause for concern with dental sealing and many brands offer RPA fans.

4. True or False: Saliva based sealant materials that contain no fillers are preferable.

5. True or False: Staff and students should wear protective eye wear.

6. True or False: Teeth should be brushed with a toothbrush prior to sealant placement.

7. True or False: Metabolic isolation of a tooth surface to avoid saliva contamination is the most crucial step in the sealant application process.

8. True or False: If the sealant has a habit of it, it is only necessary to replace the sealant if caries is exposed.

Chapter Five
Operating Effective Programs

Overview

This module provides information about school-based dental sealant program operations, with an emphasis on the specific requirements that apply to programs funded by the Michigan Department of Community Health (MDCH).

- Identify three things that school-based dental sealant programs need to do to be effective.
- Explain why dental sealant programs target certain populations.
- Describe the results of making a dental sealant program more efficient.
- List three questions that can help programs decide how to best design a program that will comply with state laws.
- Explain why MDCH sets requirements and monitors the programs it funds.
- List the two types of site reviews that MDCH conducts.

Effective Program Operations

To be effective, school-based dental sealant programs must:

- Provide high-quality sealants with good retention rates.
- Serve children at higher risk for dental caries.
- Apply sealants efficiently, so that as many children as possible receive sealants.

In addition, effective programs have the support of key community stakeholders in their communities (e.g., school administrators, school nurses, dentists). Seal America: The Prevention Initiative (2nd ed.) provides useful information on how to obtain such support.

Effective Program Operations

Targeting populations & Schools

For programs, the objective of targeting is to provide sealants to the largest possible number of children at higher risk for dental caries. Targeting programs to populations has been shown to be more cost-effective than targeting them to specific children based on risk status, and the former is easier to implement. National data show that, compared with children from families with higher incomes, children from families with low incomes are at higher risk for experiencing dental caries and are less likely to have dental sealants, and are less likely to have a dental visit in a year.
Healthy Kids Dental

Healthy Kids Dental (HKD) is an insurance program that is unique to Michigan. The program reimburses dental professionals at a much higher rate than Medicaid. This enables children to have more access to care because dental providers are more willing to see these children. Due to the cost of the program there is not enough funding to cover all counties in Michigan. Currently (October 2017) coverage is in 64 counties. The SEALI Michigan program concentrates on those counties which are NOT HKD counties.

Targeting Children in Specific Grades

SEALI Michigan is focused on first, second, sixth, and seventh graders to ensure permanent molars are sealed upon eruption.

Efficient Program Operations

The efficiency of a program depends on the extent to which planning takes place before the sealant team arrives at a school, as well as on staff mindset, which must be oriented toward working as efficiently as possible. Making a program more efficient results in more children (e.g., 20 vs. 10) receiving sealants each day, which in turn leads to completing a school in fewer days and serving more schools during a school year. Efficient operations also translate into lower per-child costs for providing sealants.

Sealant programs must have strong administrative skills to communicate effectively with the schools that they serve. This will ensure a more positive and productive visit for all.

Insurance and billing...

Programs must provide dental sealants for free to all children regardless of ability to pay. However, any students who do have dental insurance the program must bill the insurance only for the dental sealants. This assists the program with their own sustainability and maximizes grant funds.

Consent forms

All students may only receive dental sealants if their legal guardian has signed the consent form to make it a "positive" consent form.
Sub-Recipient Grant Monitoring

Sub-recipient grant monitoring will be performed quarterly. The meetings are pre-scheduled and the sealant coordinator will contact the grantees to set up a mutually convenient time to meet. The sealant coordinator will travel to your site while dental sealants are being placed. The visits require a minimum of 30 minutes of observation time, and a minimum of an hour to sit and discuss the specifics of the program.

The purpose of the meetings are to discuss the program’s successes, barriers, review the program’s current data report, to ensure all OSHA and MIOSHA guidelines are being followed, and to have an open discussion on any additional questions, thoughts, ideas, concerns etc.

MDCH to Assist

It is the goal of MDCH to provide technical assistance to the grantees of the SEALJ Michigan dental sealant program.

Please communicate with the dental sealant coordinator via phone or e-mail when ever your program may need assistance.

Cost Goals

- SEALJ Michigan needs to have the most dental sealants placed for the least amount of money, without sacrificing quality of care.
- MDCH would like to see $70 or less per child sealed within the programs it funds.

HIPAA

SEALJ Michigan grantees must all be HIPAA complaint.

Reporting

- Reporting is done via SEALJ data forms (child-level and event-level) also via periodic evaluations sent by the dental sealant coordinator. The 2010-2012 is a time of change in data collection so all patience is greatly appreciated.
- Accurate reporting is very important because it is essential that the MDCH has the data and additional information to meet reporting requirements from the SEALJ Michigan funding sources.
- If the MDCH does not have data or accurate data it may reflect that the SEALJ Michigan program is not cost effective and the state and federal dollars could be withdrawn and allocated to a different program. However, if we show excellence within the program, the funds for the program may be increased.
SEALS Reporting

- Hard copies of the SEALs data forms are due at the end of the grant year (9/30/2012) on all information within the program. It is no longer required to use the SEALs software. Programs may still use SEALs if they wish, but it is not required. However, the hard copy data forms themselves are still required by MDCH.
- Quarterly data collection sheets program reports need to be prepared for the quarterly meetings.

MDCH Required Forms

Non-Competitive Continuation Grant

- If your program is eligible for the continuation grant for an additional two years, you must follow the application process on page 13 of the SEALs Michigan RFP.
- Note: Postmark must be by April 1 of each grant year.
- Any additional questions, contact the dental sealant coordinator.

Grant Requirements

For all other grant requirements view the official Request for Funds Proposal at:


Michigan Department of Community Health

Key Points

- Effective programs must provide high quality sealants that retain long term.
- SEALs Michigan needs to have the most dental sealants placed for the least amount of money, without sacrificing quality of care.
- SEALs reporting is due at the end of the grant year, with all information within the program.
- If your program is eligible for the continuation grant for an additional two years, you must follow the application process on page 13 of the SEALs Michigan RFP.
- Job Recipient grant meetings will be performed quarterly. The dental sealant coordinator will assist the grantees on setting up meeting logistics, and current data collection will be reviewed.
- It is the goal of MDCH to provide technical assistance to the grantees of the SEALs Michigan dental sealant program.
- All programs must be HIPAA compliant and are solely responsible for their own records.
**Post Test**

To receive CE credit the post test must be scored by MDCH. Please complete within a word document and mail to:

Attn: Jill Moore
Washington Square Building 4th Floor
P.O.Box 3095
Lansing, MI 48909
Or
MooreJH@Michigan.gov
Fax: (517) 339-8294

**Chapter 6: Post test**

1. True or False: Effective programs will provide the most dental sealants that they can to whom ever.
2. True or False: Participating schools must have a minimum of 50% of their students enrolled in the Free or Reduced Lunch Program.
3. True or False: SEALs Michigan programs focus on non-HMO counties.
4. True or False: It is determined by each individual program if they choose to bill applicable insurance.
5. True or False: Any student with a positive consent form must receive free dental sealants under the SEALs Michigan Program.
6. True or False: MDCH would like these each child sealed to be under $500.
7. True or False: SEALs reports are due at the end of the grant year.
8. True or False: The dental sealants coordinator is available to provide technical assistance to all SEALs Michigan programs.
9. True or False: All program success and lessons learned shall be hidden to prevent from competition.
10. True or False: Accurate data reporting is very important because it is the foundation of the dental sealant money.

**Overview**

This module provides information about the SEALs data reporting system that is required of all grantees to maintain during the grant year and to submit to MDCH by October 1 of the end of each grant year.

**Learning Objectives**

- To understand what SEALs is and why we use it.
- To learn about the tools that are provided to grantees to enable them to be successful SEALs users.
- To learn about ways to grow and strengthen your dental sealant program.

**NOTE:**

- The use of the SEALs software is now (as of April 1, 2011) is now an optional software collection tool to be used. The SEALs information will still be included within this training for those who wish to continue its use.
- For those programs who continue to use SEALs will be responsible for transferring their data from the SEALs forms to the MDCH data forms (showed several slides ago) to be reviewed at site visits.

**SEALS**

SEALS: Sealant Efficiency Assessment for Locals and States

Developed by the Centers for Disease Control and Prevention
SEALS

SEALS was developed to provide school based dental sealant programs and the states a system of analyzing the benefits and costs of dental sealants. It is important to note that SEALS is an excel spreadsheet that uses macros. Macros are basically a way of telling the application what it needs to do. It's essentially a small program that can tell the application a whole range of things it can do and how to go about doing them. However, behind the scenes the SEALS software is an excel spreadsheet. Although the program appears as though it may be stored on-line, it is saved within your computer just as you would save a Microsoft Word document.

Where to begin with SEALS...

Each grantee will receive:
- A "clean" SEALS spreadsheet. You may want to save this clean program in one place and then copy it for the one that is used. In case it takes some time to learn, you will always have a clean program to use.
- A copy of the SEALS User's Manual
- A copy of the SEALS Technical Notes
- A copy of the Event Level Report
- A copy of the Child Level Report

New Year...

- At the beginning of each grant year, October 1, a new SEALS program should be used.
- It is important that all data for the year, including retention checks, be entered into one SEALS database.
- If retention checks in year 2 are entered into the database form year 1 after it has been submitted to MDCH, then MDCH will NOT have those numbers.

Event Level Report/Child Level Report

- Each school will have an event level report
- Under each event is where all of the child level reports are entered.
- A program report may be generated to give an up-to-date reflection on where your program is at with numbers and to "sell" your program to additional schools that you are interested in growing your program into.

Costs to enter

- To gain a reflection of the cost of the dental sealant program, SEALS must have entered into it the costs of the program. Funds that come into the program (grant, third party payers, etc...) must be entered accurately. The program staff time must also be entered accurately.
- Note: Do not add in costs of "In-Kind Donations". Although this reflects positively on your program to MDCH, it will reflect negatively within SEALS because it will drastically increase the total cost to place sealants.

Costs

The costs of the program are used to generate the program reports which will show how much each dental sealant costs, so it is very important to have accurate.
**Assessing Costs – Labor use per task**

Labor hour per chair hour during:
- Screening
- Sealing
- Retention check/follow up

**Assessing costs by category**

- Labor
- Equipment
- Instrument
- Consumable
- Administrative

... cost per child screened

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**Recommendation**

- For staff time, estimate about how much time it takes to accomplish the tasks and stay with that number... some will take longer and some will take shorter... so use the average to simplify the project.
- Know the cost of how much in supplies that it costs your program to place dental sealants on a child and use that number.

**SEALS considers many aspects to calculate reports**

- Untreated decay
- Urgent dental needs
- Caries experience
- Sealants present
- Caries attack rate in 1st molars

Accuracy is very important!

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**Delivering sealants efficiently**

SEALS looks at:
- Cost per child screened
- Cost per child sealed
- Cost per tooth sealed

**Working to better SEALS**

If there are issues with SEALS, please notify the dental sealant coordinator. The CDC is working to make it better and often asks for feedback from those using it. Your issues and concerns will be addressed with the CDC.
Promoting & Growing Your School-Based Dental Sealant Program

Resources...
- The SEAU Michigan brochures will be provided by MDCH as long as funding exists for them and are available in English, Spanish and Arabic.
- Advertise your program via flyers, e-mails, websites, etc.
- Contact MDCH dental sealant coordinator when any support is needed.
- Use national resources that can be searched for on-line.
- Read the monthly newsletters as they will have additional resources listed.

Making Your Case – Need Exists & Your SBSP Fills It

Explain to schools that your program decreases barriers to sealants among the underserved.

Decreasing Barriers to Underserved – Showing Need

Baseline screening data indicates targeted children have limited access to care
- Children with untreated decay
- Children needing early and/or urgent care
- Children without sealants present

Showing Need...
- Compare oral health of children served by your program to national or state average
- Explain symptoms of unmet need and consequences of not treating
- Compare baseline sealants present to national or state goals

Example: Showing Need
- 37% of children had untreated dental decay before intervention
- This value is more than twice that for the average U.S. child of similar age*
- Among children with untreated decay, one half were in urgent need of dental care because of pain or infection
- Pain and suffering resulting from dental decay can in turn lead to problems in eating, speaking, and attending to learning

Decreasing Barriers to Underserved – Meeting Need

Report for your program:
- Number of children screened
- Number of children sealed
- Number of teeth sealed
- Number of cavities averted
- Percentage of early referrals that resulted in a dental visit
- Percentage of urgent referrals that resulted in a dental visit

Example: Meeting Needs

- About 90% of decay is children’s permanent teeth occurs on the chewing surfaces of the back teeth.
- Sealants placed on these surfaces serve as a physical barrier to the bacteria that cause decay and are nearly 100% effective when they stay in place.
- Our program screened 48 children during the 2006-2007 school year and referred 24 for dental care.
- We delivered sealants to 42 children, and available data indicate the first year retention rate was almost 90%.

Example: Meeting Need – continued:

- Our program is estimated to save 89 molars from decay over the next 9 years (or 2.1 cavities per child sealed).
- In addition, half of referrals for treatment among children with early or urgent dental needs were successful.

Making Your Case – Your SBSP Is a Good Investment

As it is free to students and families!

Programs Should Efficiently Use Resources

Take a close look at the cost per sealant placed...is it less than a restoration? We need to prove that dental sealants are cost effective.

History of the Program...

- The longer that the program has been running the more cost effective it becomes.
- Newer programs have many start up costs.
- MDCH takes into account the history of the dental sealant program when reviewing costs.
Cost-Effectiveness

- Net cost per cavity averted
- If treatment costs averted are greater than program costs, your program is cost saving
- Even if it's not cost saving, it is still most likely a good investment since it is prevention based

Reducing disparities

The served schools should show a change in sealant prevalence before and after program among:
- Racial/ethnic minorities
- Low-income children (e.g., % on free/reduced lunch)

Example of Showing Impact on Disparities

<table>
<thead>
<tr>
<th>Race</th>
<th>% Sealed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before SBSP</td>
</tr>
<tr>
<td>Black</td>
<td>24.4</td>
</tr>
<tr>
<td>White</td>
<td>43.4</td>
</tr>
</tbody>
</table>

Please utilize all resources to make your program more cost efficient...

- Free toothbrushes from Delta Dental: Renee Beclowith 517-347-5542
- Free dental sealant material from Oral Health America's Smile Across America program: www.oralhealthamerica.org/pdf/ProductDonationForm2010.pdf
**Key Points**

- Effective programs must provide high-quality sealants that remain long-term, serve children at higher risk for dental caries, and apply sealants so that as many children as possible receive sealants.
- For programs, the objective of targeting is to provide sealants to the largest possible number of children at higher risk for dental caries.
- Data reports are due at the end of the grant year, with all information within the program.
- At this time, the use of SEALs software is optional.
- It is very important to enter information into SEALs correctly so that the grantee program and state program reflect accurately.
- SEALs program reports will generate a wealth of information that the grantee can use to grow their program into new schools.
- It is essential that programs operate in a cost-effective manner. Dental sealants must be more cost effective than fixing dental decay.
- Resources should be utilized to support the dental sealant programs, thus assisting in making it more cost-effective.

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**Chapter 6: Post Test**

1. True or False: SEALs is an optional program that is offered to grantees to grow their programs.
2. True or False: Data collection should be as accurate as possible.
3. True or False: SEALs program reports should be generated often and used by the grantee to grow their programs.
4. True or False: If a program signs out using SEALs, they must complete additional MDCH data tracking forms.
5. True or False: The larger a sealant program operates, the more expensive it is to operate.
6. True or False: The reporting mechanism must be accurate to grow sealant funds in Michigan.
7. True or False: SEALs questions should be directed to the MDCH dental sealant coordinator.
8. True or False: SEALs is an online program.
9. True or False: Child level information can be entered before event level information.
10. True or False: It is important to remember where SEALs is saved on the computer because the dental sealant coordinator cannot access it.

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**Evaluation**

After completing the curriculum, please take a moment to fill out the course evaluation. Your feedback will help improve the course.

The survey can be located at: https://www.surveymonkey.com/s/SEALsMichigan

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**Thank you for your time in completing this program. Your hard work and dedication to the children in Michigan is greatly appreciated!**

**Contact Jill Moore with any questions or comments: Moorej14@Michigan.gov or 517-373-4943.**
The Centers for Medicare and Medicaid Services (CMS) conducted an onsite review of the Michigan Department of Community Health (MDCH) Medicaid Program’s Early and Periodic Screening, Diagnosis and Treatment (EPSDT) Dental program earlier this year. The scope of the dental review included the periodicity schedules, diagnosis and treatment, beneficiary notification and access to services.

**EPSDT Periodicity Schedule and Oral Health Screening**

One area reviewed was the EPSDT periodicity schedule for oral screening. The Medicaid Program utilizes the American Academy of Pediatrics (AAP) Periodicity Schedule. Included in the periodicity schedule is the oral health screen provision for the primary care physician. It indicates that an oral health screen is provided at 12 months and referral to a dentist if dental care is needed. It also indicates that an oral health risk assessment be completed at 12 months.

The AAP Periodicity Schedule can be found online at: www.aap.org/visit/prevent.htm.

One of the CMS recommendations was for the State to better inform providers, both medical and dental, of the periodicity schedule regarding the oral health screen and dental services. In addition, the State should increase its effort to identify children and get them enrolled into dental care. Efforts are being made by the Medicaid Program along with the Oral Health Program, the Michigan Chapter of the American Academy of Pediatrics, the Michigan Academy of Pediatric Dentistry, and the Michigan Dental Association to address these recommendations.

**Oral Health Screening and Fluoride Varnish**

Effective for dates of service on and after November 1, 2008, the Michigan Department of Community Health (MDCH) is implementing an age one (12 months) oral health screen and fluoride varnish program for medical providers. This program is intended for medical providers, such as pediatricians, family practitioners, and nurse practitioners who treat beneficiaries up to age three (0 – 35 months). This program will help aid in early identification of caries and help provide a risk assessment and intervention for medical providers in order to help reduce the risk of early childhood caries.

The MDCH Oral Health Program has developed an online training program and fluoride varnish manual for use in medical practices. Medical providers are required to complete the training and submit verification of the completion to the Oral Health Program. The Oral Health Program will distribute a certificate to the medical providers upon completion. In addition, the Oral Health Program will keep an updated list and monitor the practices that receive a completion certificate.
Training materials will be posted mid-October to the MDCH website at www.michigan.gov/medicaidproviders >> Billing and Reimbursement >> Provider Specific Information >> Dental.

The MDCH Oral Health Program will offer group and/or individual fluoride varnish training programs depending upon the demand. For further information, contact:

Susan Deming, RDH, RDA, BS  
Education/Fluoride Coordinator  
Oral Health Program  
Michigan Department of Community Health  
PO Box 30195  
Lansing, Michigan 48909

517-335-8879  oralhealth@michigan.gov

Billing and Reimbursement for Fluoride Varnish
The fluoride varnish program is for children up to age three (0 – 35 months). Fluoride varnish can be applied to teeth up to four times a year. The procedure code for fluoride varnish application is D1206. This code can be billed on the CMS 1500 or the 837 4010A1 Professional claim format. The fluoride varnish application is a separate reimbursement.

The oral health screen is part of the well-child visit performed by the medical provider. There is no additional reimbursement for the screen.

Referrals to Dentists and Age One Dental Visit
The Michigan Academy of Pediatric Dentists is implementing an initiative called Points of Light. This initiative plans to establish referral mechanisms between medical and dental practices within a community for infant oral health.

At this time, the Medicaid Program recommends that a beneficiary be referred to a dentist at age one for a dental visit but it is not required. The required age for a referral to a dentist is age three. Until the Medicaid Program has had sufficient time to recruit an adequate network of dentists willing to examine and treat infants and young children, the age one dental visit is a recommendation, not a requirement. A periodicity schedule for dentists will be forthcoming in the upcoming months.

Manual Maintenance

Retain this bulletin until the information has been incorporated into the Michigan Medicaid Provider Manual.

Questions

Any questions regarding this bulletin should be directed to Provider Inquiry, Department of Community Health, P.O. Box 30731, Lansing, Michigan 48909-8231, or e-mail at ProviderSupport@michigan.gov. When you submit an e-mail, be sure to include your name, affiliation, and phone number so you may be contacted if necessary. Providers may phone toll-free 1-800-292-2550.

Approved

Paul Reinhart, Director  
Medical Services Administration
Preventive Oral Health Intervention for Pediatricians
Section on Pediatric Dentistry and Oral Health
Pediatrics 2008;122;1387-1394; originally published online Nov 17, 2008;
DOI: 10.1542/peds.2008-2577

The online version of this article, along with updated information and services, is
located on the World Wide Web at:
http://www.pediatrics.org/cgi/content/full/122/6/1387
Preventive Oral Health Intervention for Pediatricians

Section on Pediatric Dentistry and Oral Health

ABSTRACT
This policy is a compilation of current concepts and scientific evidence required to understand and implement practice-based preventive oral health programs designed to improve oral health outcomes for all children and especially children at significant risk of dental decay. In addition, it reviews cariology and caries risk assessment and defines, through available evidence, appropriate recommendations for preventive oral health intervention by primary care pediatric practitioners. Pediatrics 2008;122:1387–1394

PURPOSE/INTRODUCTION

Review of Circumstances Leading to Development of This Policy

Oral health is an integral part of the overall health of children.1 Dental caries is a common and chronic disease process with significant consequences. As health care professionals responsible for the overall health of children, pediatricians frequently confront morbidity associated with dental caries. Because caries is a nonclassic infectious process (arising from shifts in subpopulation ratios of established normal flora), pediatricians have an opportunity to prevent, intervene, and, in collaboration with dental colleagues, manage this disease.

Justification of Policy

The prevalence of dental caries for the youngest of children has not decreased over the past decade, despite improvements for older children.2 Data from the Medical Expenditure Panel Survey revealed that 89% of infants and 1-year-olds had office-based physician visits annually, compared with only 1.5% who had dental visits. Consequently, visits to physicians outnumbered visits to dentists at 250 to 1 for this age group.3 Because the youngest of the pediatric patient population visit the pediatrician more than the dentist, it is critical that pediatricians be knowledgeable about dental caries, prevention of the disease, and interventions available to the pediatrician and the family.

Rationale for Format

This policy statement is an effort to assist the primary care pediatric practitioner in addressing issues of dental caries and general oral health. The statement begins by building a knowledge base regarding the caries process that can serve as a foundation for understanding prevention and intervention strategies. After explaining the science of cariology, assessment of caries risk is described to assist the pediatrician in deciding which preventive and intervention strategies need to be used. Specific prevention and intervention strategies are then described and explained.

In addition, the concept and importance of the dental home as well as strategies for improving the connection of the medical and dental homes are presented. Last, recommendations are provided to assist the pediatrician with implementation of the provided information.

BACKGROUND CONCEPTS

Cariology
The most common oral disease encountered by children is dental caries. Dental caries is a nonclassic infectious disease4 that results from an interaction between oral flora and dietary carbohydrates on the tooth surface. To adhere to tooth structure, oral flora utilize dietary sugars to create a sticky biofilm that is referred to as dental plaque. Dietary sugar can change the biochemical and microbiologic composition of dental plaque. In the presence of a high-carbohydrate diet, cariogenic organisms constitute a greater portion of the total bacterial population.5 Acids
produced by bacterial fermentation of carbohydrates reduce the pH of dental plaque to the point at which demineralization of the enamel occurs. The initial carious lesion appears as an opaque white spot on the enamel, and progressive demineralization results in cavitations of the teeth. Dental caries is a process, and loss of tooth structure (a dental cavity) is an end stage in the process.7

Human dental flora, generally regarded as qualitatively stable once established and site specific to human dentition, is believed to consist of more than 1000 different organisms, of which only a limited number are associated with dental caries.8 Streptococcus mutans is most strongly associated with dental caries and is considered to be an indicator organism of a subpopulation of cariogenic organisms. S mutans, like its related cariogenic cohorts, has the ability to adhere to enamel and is uniquely equipped to produce significant amounts of acid (acidogenic) and endure within that acidic environment (aciduric).

Dental flora adheres to the teeth by creating a tenacious and highly complex biofilm referred to as dental plaque. Dental plaque is capable of concentrating dietary sugars; therefore, the chronic consumption of sugary foods and liquids will continually recharge the plaque matrix, resulting in copious supplies of sugars within the plaque matrix. S mutans and other cariogenic flora will then ferment available sugars, resulting in high levels of lactic acid, a decreased local pH (~5.0), and demineralization of dental enamel (at an approximate pH <5.5). Because S mutans and its aciduric cohorts continue to thrive at low pH, the resulting environment selects against nonaciduric flora, creating a shift in the subpopulation ratio of benign to aciduric flora. As this process continues over multiple generations, aciduric organisms incur an upregulation of virulence genes that allow them to thrive at even lower pH (~4.0). Diet-mediated shifts in subpopulation ratios of dental flora are instigated by significant sugar intake (environmentally selecting for carious organisms). Therefore, significant sugar intake is a driving cause of the caries process.

Preventive Strategies
An understanding of normal dental flora serves as a foundation for the development of preventive strategies, with 2 important considerations. First, dental flora exists in a symbiosis with the human species. Second, only a small number of the organisms within dental flora cause caries. Therefore, our objective is not to eliminate all dental flora but to suppress the cariogenic bacteria within the flora.

Preventive strategies can be differentiated into 2 distinct categories. Primary prevention involves optimization of maternal dental flora before and during colonization of the oral flora of the infant (during eruption of the primary dentition). This invaluable mode of prevention provides an opportunity for a reduction in the mother's constitutionally virulent, aciduric flora and downregulation of virulence genes within the aciduric flora, decreasing the child's risk of dental decay, and is the basis for first dental visit recommendations at 1 year or earlier made by various medical and dental organizations. This mode of prevention and its adjuncts are reviewed in detail in a policy statement from the American Academy of Pediatrics, “Oral Health Risk Assessment Timing and Establishment of the Dental Home.”9

Secondary prevention is the continual and ongoing management of subpopulation ratios of benign and aciduric flora within dental plaque. This mode of prevention consists of managing the balance between causative factors and protective factors and is critical for preventing and reversing the caries process. Secondary preventive strategies are hierarchical and currently consist of dietary counseling, oral hygiene instruction, and judicious administration of fluoride modalities. Therefore, although all preventive modalities are important, modification of diet is most important, followed by oral hygiene compliance and then administration of fluorides.

By controlling risk factors before disease occurs, the probability of preventing disease, both in the immediate future and the long-term, is improved. Preventive strategies for this complex, chronic disease require a comprehensive and multifocal approach that begins with caries risk assessment.

Caries Risk Assessment
Caries risk assessment, based on developmental, biological, behavioral, and environmental factors, evaluates the probability of enamel demineralization exceeding enamel remineralization over time. The goal of risk assessment is to anticipate and prevent caries initiation before the first sign of disease. During the period of 1999–2002, 41% of US children 2 to 11 years of age had caries in primary teeth.2 An earlier study noted that 25% of children 5 to 17 years of age had 80% of carious permanent teeth.10 Assessing each child's risk of caries and tailoring preventive strategies to specific risk factors are necessary for improving oral health in a cost-effective manner.

Caries risk assessment is very much a work in progress. In a systematic review of literature regarding risk factors in primary teeth of children aged 6 years and younger, a paucity of studies of optimal (ie, longitudinal) design was noted.11 A study that evaluated the reliability of multiple risk indicators determined that there is no consistent combination of risk variables that provide a good predictor of caries risk when applied to different populations across different age groups.12 The authors concluded that the best predictor of caries in primary teeth was previous caries experience, followed by parents’ education and socioeconomic status,12 although previous caries experience cannot be used as a risk indicator for the predentate or very young child, white-spot lesions, as precursors to cavities, can be considered analogous to previous caries experience when assessing the risk of a very young patient. An analysis of National Health and Nutrition Examination Survey (NHANES III) data revealed that children from households with low income levels are more likely to experience caries and have higher levels of untreated caries than their counterparts from higher-income households.13 Collectively, children enrolled in Special Supplemental Nutrition Pro-
gram for Women, Infants, and Children (WIC) programs, Head Start, or Medicaid are at higher risk than are children in the general population.

Caries risk factors unique to infants and young children include perinatal considerations, establishment of oral flora and host-defense systems, susceptibility of newly erupted teeth, dietary transitioning from breast and bottle feedings to cups and solid foods, and establishment of childhood food preferences. Although preterm birth per se is not a risk factor, a child with low birth weight may require a special diet or have developmental enamel defects or disabilities that increase caries risk. Early acquisition of Staphylococcus mutans is a major risk factor for early childhood caries and future caries experience. A reduction of the salivary level of S. mutans in highly infected mothers can inhibit or delay colonization of their infants. Although evidence suggests that children are most likely to develop caries if S. mutans is acquired at an early age, this may be compensated in part by other factors such as good oral hygiene and a noncariogenic diet. High-risk dietary practices seem to be established early, probably by 12 months of age, and are maintained throughout early childhood. In addition to the amount of sugar consumed, frequency of intake is important. Sugar consumption likely is a more significant factor for those without regular exposure to fluorides. Children experiencing caries as infants and toddlers have a much greater probability of subsequent caries in both the primary and permanent dentitions.

Early risk assessment targets infants and young children who traditionally have yet to establish a dental home. Unrecognized disease and delayed care can result in exacerbated problems, leading to more extensive, costly, and time-consuming care.

Risk-assessment strategies most applicable for screening purposes include those that are acceptable to patients, reliable, inexpensive, and performed easily and efficiently and require limited equipment/supplies. The American Academy of Pediatric Dentistry (AAPD) has developed a caries risk-assessment tool for use by dentists and primary care practitioners familiar with the clinical presentation of caries and factors related to caries initiation and progression (see www.aapd.org/media/ Policies_Guidelines/P_CariesRiskAssess.pdf). Radiographic assessment and microbiologic testing have been included in the caries risk-assessment tool but are not required. In addition, the American Academy of Pediatrics has created Oral Health Risk Assessment Training for Pediatricians and Other Child Health Professionals, which provides a concise overview of the elements of risk assessment and triage for infants and young children (see www.aap.org/commnpeds/dochs/oralhealth/screening.cfm).

The chronic, complex nature of caries requires that risk be reassessed periodically to detect changes in the child’s behavioral, environmental, and general health conditions. All available data must be analyzed to determine the patient’s caries risk profile. Periodic reassessment allows the practitioner to individualize preventive programs and optimize the frequency of recall and dental radiographic examinations.

SPECIFIC PREVENTIVE STRATEGIES

Dietary Counseling
Dietary counseling for optimal oral health in children should be an essential part of general health counseling. The recent policy statement from the American Academy of Pediatrics on prevention of pediatric overweight and obesity highlighted concerns about health problems in overweight children, including cardiovascular, endocrine, and mental health problems, and the importance of promoting healthy eating behaviors. Consumption of juice and sugar-sweetened beverages has been linked to childhood obesity and caries development.

 Sugars are a critical factor in caries development. Caries risk is greatest if sugars are consumed at high frequency and are in a form that remains in the mouth for longer periods. Sucrose is the most cariogenic sugar, because it can form glucan, which enables bacterial adhesion to teeth and limits diffusion and buffering of acids. Although starch-rich foods pose a low caries risk, mixtures of finely ground, heat-treated starch and sucrose (e.g., cereals, potato or corn chips) are also cariogenic.

 Human milk by itself does not promote tooth decay. However, breastfed infants are at risk of caries when they receive sugary liquids or eat foods with sugars and fermentable carbohydrates.

 Parents and caregivers should be counseled on the importance of reducing exposure to sugars in foods and drinks. To decrease the risk of dental caries and ensure the best possible health and developmental outcomes, it is recommended that parents do the following:

- Breastfeed infants during the first year of life and beyond as is mutually desired.
- After nursing, remove the breast from a sleeping infant’s mouth and cleanse the gums and teeth after feedings and before bedtime.
- Discourage a child’s sleeping with a bottle; any bottle taken to bed should contain only water.
- Limit sugary foods and drinks to mealtimes.
- Avoid carbonated beverages and juice drinks (juice drinks contain high-fructose corn syrup and <100% natural juice).
- Encourage children to drink only water and milk between meals.
- Encourage children to eat fruits.
- Limit the intake of 100% fruit juice to no more than 4 oz per day.
- Foster eating patterns that are consistent with MyPyramid guidelines from the US Department of Agriculture.

Optimal Use of Fluorides
Fluoride, a naturally occurring element, has been instrumental in the widespread decrease in dental caries. The mechanisms of fluoride are both topical and systemic, with evidence pointing to a greater topical effect.
Fluoride reduces enamel dissolution while it encourages remineralization. Antimicrobial effects of fluorides at low pH are also significant.

The delivery of fluoride includes community-based, professionally applied, and self-administered modalities. Water fluoridation is a community-based intervention that optimizes the level of fluoride in drinking water, resulting in preeruptive and posteruptive protection of the teeth. Water fluoridation is a cost-effective means of preventing dental caries, with the lifetime cost per person equaling less than the cost of 1 dental restoration. In short, fluoridated water is the cheapest and most effective way to deliver anticaries benefits to communities.

Professionally applied topical fluorides (PATFs) have their greatest effect preventing caries and must be applied at regular intervals. PATFs include gel, foam, in-office rinse, and varnish. PATFs are safe and efficacious, with varnishes having the advantage of adherence to the tooth surface, decreasing likelihood of ingestion, and increasing time of contact between the fluoride and tooth surface. In the primary dentition, varnish effectiveness (measured by percent of caries reduction) ranges from 30% to 63.2%, and an analysis of the number of fluoride-varnish applications received resulted in a dose-response effect that was enhanced when coupled with counseling. Finally, self-administered fluorides, including dietary fluoride supplementation and fluoridated toothpaste, have proven effective, providing low but protracted elevation of fluoride concentrations. Caries reduction associated with self-administered fluoride supplementation ranges from 32% to 72% in the primary dentition. In children and adolescents, fluoride toothpastes, mouth rinses, and gels reduce dental caries to a similar extent.

The decision to use fluoride therapies must balance the risk of caries against the risk of enamel fluorosis (hypomineralization of the developing enamel caused by excess fluoride ingestion). Patients determined to be at increased risk of dental caries are candidates for more aggressive fluoride therapy utilization. Caries susceptibility and sources of dietary fluoride (eg, water supplies, beverages, prepared food, toothpaste) should be considered before recommending fluoride therapies. Enamel fluorosis develops before tooth maturation and emergence, typically in children younger than 8 years. The risk of enamel fluorosis is an aesthetic concern, with very mild or mild forms most commonly observed in the general population.

**ANTICIPATORY GUIDANCE**

Anticipatory guidance is the process of providing practical, developmentally appropriate information about children’s health to prepare parents for significant physical, emotional, and psychological milestones. Anticipatory guidance during well-child visits is an effective tool to educate parents about maintaining children’s health. Mirroring the pediatric model, the American Academy of Pediatric Dentistry advocates oral health anticipatory guidance. Anticipatory guidance focused on oral health disease should be an integral part of preventive pediatrics. Information concerning the impact of diet on dental health and counseling in regards to oral hygiene, nonnutritive oral habits, and dental safety should be shared with parents. Therefore, in addition to dietary counseling and optimizing fluoride exposure, anticipatory guidance for oral health includes:

1. **Infant oral hygiene instruction:** Teeth should be brushed at least twice daily with caregiver supervision and assistance for children. For children with elevated dental caries risk, consider using a pea-sized amount of toothpaste or an amount equivalent to the child’s fifth-digit fingernail. Flossing should begin as soon as adjacent teeth are in contact and for surfaces at which 2 teeth touch and they can no longer be cleansed with a toothbrush.

2. **Counseling regarding nonnutritive oral habits:** Use of pacifiers in the first year of life may prevent sudden infant death syndrome. Sucking habits (eg, pacifiers or digits) of sufficient frequency, duration, and intensity may be associated with dental/velar deformations. Some changes persist past cessation of the habit. Professional evaluation is indicated for nonnutritive sucking habits that continue beyond 3 years of age.

3. **Age-appropriate information regarding dental injury prevention:** Parents should cover sharp corners of household furnishings at the level of walking toddlers, ensure use of car safety seats, and be aware of electrical cord risk for mouth injury. Properly fitted mouth guards are indicated for youths involved in sporting activities that carry a risk of orofacial injury. Anticipatory guidance is valuable, because it emphasizes prevention of dental problems rather than surgical or restorative care. Anticipatory guidance and well-child visits during the first 2 years of life decrease the number of hospitalizations among poor and near-poor children irrespective of race and health status. Oral health anticipatory guidance can reduce dental expenditures. In light of this evidence, oral health anticipatory guidance should be integrated as a part of comprehensive counseling during well-child visits.

**INTERPROFESSIONAL COLLABORATION AND ESTABLISHMENT OF A DENTAL HOME**

To be successful in preventing dental disease, interventions must begin within the first year of life. Pediatricians are well positioned to initiate preventive oral health care by providing early assessment of risk, anticipatory guidance, and timely referral to establish a dental home. The American Academy of Pediatric Dentistry, the American Dental Association, and the American Association of Public Health Dentistry recommend that infants be scheduled for an initial oral examination within 6 months of the eruption of the first primary tooth but by no later than 12 months of age. The pediatric community promotes the concept of a medical home to improve families’ care utilization, seeking appropriate and preventive services with optimal compliance to recommendations. The concept of the
dental home is based on this model and is intended to improve access to oral care. A dental home is the ongoing relationship between the dentist and the patient, inclusive of all aspects of oral health care delivered in a comprehensive, continuously accessible, coordinated, and family-centered way. A dental home should be able to provide the following:

1. an accurate risk assessment for oral diseases and conditions;
2. an individualized preventive dental health program based on risk assessment;
3. anticipatory guidance about growth and development issues (eg, maxillofacial and dental alveolar development);
4. a plan for emergency dental trauma management;
5. information regarding care of teeth and oral soft tissues;
6. nutrition and dietary counseling;
7. comprehensive oral health care in accordance with accepted guidelines and periodicity schedules for pediatric oral health; and
8. referrals to dental specialists such as endodontists, oral surgeons, orthodontists, and periodontists when care cannot be provided directly within the dental home.

Lack of access to dental care can be a barrier to establishment of a dental home. Because of the specialized training and expertise, the dentist provides an ideal dental home; however, when a dentist is not available, the pediatric medical provider should fulfill the dictates of preventive oral health care until a dentist can be accessed and a dental home can be established. Therefore, primary care pediatric practitioners are an integral community component in the overall effort to address oral health issues (eg, access to care, preventive intervention). With the continuing challenges of access to dentistry with preschool-aged children making many more visits to medical offices than to dental offices, primary care practitioners with oral health training have reported that they have provided preventive oral health services for their pediatric patients. North Carolina primary care practitioners were able to integrate preventive dental services into their practices, increasing preventive services for young children who receive Medicaid benefits and whose access to dentists is restricted (eg, geographically or because of nonparticipation of dentists). Often, the first step of timely establishment of a dental home is a referral from the physician. Although a report from the US Preventive Services Task Force on physicians' roles in preventing dental caries in preschool-aged children found referral by a primary care practitioner only partially effective in increasing dental visits, another study reported that dentists were more likely to see young children referred by primary care practitioners.

Primary care practitioners are able to identify children in need of a referral to a dentist. After 2 hours of training in infant oral health, primary care pediatric practitioners accurately identified children with cavities with good specificity (92%–100%) and sensitivity (87%–99%). These results suggest that dental screening can be incorporated into a busy pediatrics practice and that primary care pediatric practitioners can contribute significantly to the overall oral health of young children by encouraging parents to enroll their children in a dental home as early as possible.

In summary, the ideal setting for administration of oral health care is the dental home. When there is no access to a dentist, the pediatric medical provider should consider administering risk-based preventive oral health measures until a dental home can be made available. With preparation, primary care practitioners are routinely able to screen accurately and provide oral health anticipatory guidance for children. Furthermore, they are ideally positioned to refer children to a dental home in a timely manner. Establishing collaborative relationships between physicians and dentists at the community level is essential for increasing access to dental care for all children and improving their oral and overall health.

RECOMMENDATIONS FOR PRIMARY CARE PEDIATRIC PRACTITIONERS

1. An oral health risk assessment should be administered periodically to all children.
2. Oral health risk-assessment training should be recommended for medical practitioners who are in training programs and those who currently administer care to children.
3. Dietary counseling for optimal oral health should be an intrinsic component of general health counseling.
4. Anticipatory guidance for oral health should be an integral part of comprehensive patient counseling.
5. Administration of all fluoride modalities should be based on an individual's caries risk. Patients who have a high risk of caries are candidates for consideration of more intensive fluoride exposure after dietary counseling and oral hygiene instruction as compared with patients with a lower risk of caries (see Figs 1 and 2).
6. Supervised use of fluoride toothpaste is recommended for all children with teeth.
7. The application of fluoride varnish by the medical practitioner is appropriate for patients with significant risk of dental caries who are unable to establish a dental home.
8. Every child should have a dental home established by 1 year of age.
9. Collaborative relationships with local dentists should be established to optimize the availability of a dental home.

CONCLUSIONS

Oral health is an integral part of the overall health and well-being of children. A pediatrician who is familiar
with the science of dental caries, capable of assessing caries risk, comfortable with applying various strategies of prevention and intervention, and connected to dental resources can contribute considerably to the health of his or her patients. This policy statement, in conjunction with the oral health recommendations of the American Academy of Pediatrics Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, 3rd edition, serves as a resource for pediatricians and other clinicians to be knowledgeable about addressing dental caries. With dental caries being such a common and consequential disease process in the pediatric population, it is essential that pediatricians include oral health in their daily practice of pediatrics.

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### Preventive Oral Health Intervention for Pediatricians

Section on Pediatric Dentistry and Oral Health

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Infant Oral Health:
Benign Floral Enhancement and Anticipatory Guidance

General anticipatory guidance for the mother (or other intimate caregiver) before and during the colonization process should include the following:

- **Caries Removal** - the parent should have an oral examination and all carious lesions treated as soon practical.
- **Diet** - the parent should be instructed to consume fruit juices only at meals and to avoid all carbonated beverages including sports/power drinks during the first 30 months of the infant's life.
- **Oral hygiene** - the parent should be instructed to brush thoroughly twice daily (morning and evening) and to floss at least once every day.
- **Fluoride** - the parent should be instructed to use a fluoride toothpaste approved by the American Dental Association and rinse every night with and alcohol-free over-the-counter mouth rinse with .05% sodium fluoride.
- **Delay of colonization** - parents should be educated to prevent early colonization of dental flora in their infants by avoiding sharing of utensils (i.e., shared spoons, cleaning a dropped pacifier with their saliva, etc).
- **Xylitol chewing gums** - recent evidence suggests that the use of xylitol chewing gum (4 pieces per day by mother) had a significant impact on decreasing the child's caries rate.

General anticipatory guidance for the infant (0 to 3 years of age) should include the following:

- **Diet** - after the eruption of the first teeth, the parent should provide fruit juices (not to exceed 1 cup per day) during meals only. Carbonated beverages, power/sport drinks, juice boxes should be excluded from the child's diet. Infants should not be placed in bed with a bottle containing anything other than water. Ideally, infants should have their mouths cleansed with a damp cloth after feedings.
- **Oral hygiene** - the parent should begin to brush the child's teeth as soon as they erupt (twice daily, morning and evening) and floss between the child's teeth once every day as soon as the teeth contact one another.
- **Fluoride** - all children should have optimal exposure to topical and systemic fluoride. Caution should be exercised in the administration of all fluoride-containing products. The specific considerations of the judicious administration of fluoride should be reviewed and tailored to the unique needs of each patient. Review articles with applicable fluoride recommendations and supplementation algorithms are available.
ECTAMR is a grass-roots initiative between Dentists and Medical Care Providers to improve access and quality of pediatric oral health care by enhancing appropriate referral timing.

Introduction

Enhanced Care Through Appropriate Medical Referrals (ECTAMR) has been designed for the community dentist who wishes to enhance the number of infant patient referrals through effective interaction with local pediatric, medical primary care providers (PCPs). ECTAMR is a template for interaction between dental and medical practitioners that defines “best practice” in terms that will impact the medical PCP. This concept approach requires face-to-face contact with your local medical PCPs and offers an opportunity to accurately define your mission within the community.

Defining the Dentist’s Role to the Medical PCP

Although it may seem unnecessary, defining our identity and capabilities to our medical colleagues can significantly improve our rapport and collaborative ability to care for our communities. Primary medical providers offer, as you might suspect, primary care. Introducing them to a new paradigm of early preventive intervention, which allows pathology to be anticipated and ameliorated, essentially redefines and improves our collective ability to impact oral health. We are, in fact, primary care providers for oral health and a huge scope of our expertise and care delivery is geared toward preventing our patients from requiring restorative intervention.

There are two additional pieces of information the medical provider will require to give them a clear picture of the dentist’s role in the health care community. First, dentists are the best and only qualified providers of comprehensive oral health care to young children with restorative needs. The most appropriate role of all dentists is to establish patient relationships early enough to prevent caries because the alternative can result in the patient being untreatable except by a pediatric dentist. Secondly, pediatric dentists make up less than 3% of all dentists and their skill sets are generally in high demand. Therefore, the best overall utilization of dentists within the healthcare community is to provide patients early enough to avoid the need for complex restorative intervention.

Defining Appropriate Referral Timing

The purpose of establishing a dental home is to provide a conduit for comprehensive dental services. The best time to establish a dental home is prior to any occurrence that
would warrant the surgical intervention of a dentist and allow an opportunity for preventive intervention and anticipatory guidance. Whereas, as stated by the AAPD, the ADA and the AGD, it is ideal for all infants to establish a dental home by 12 months of age, there are a significant number of infants who should be seen as early as 6 to 9 months of age based on “risk assessment”. The American Academy of Pediatrics’ (AAP), oral health policy, “Oral Health Risk Assessment Timing and Establishment of the Dental Home”, states that all infants should receive an oral health risk assessment by 6 months of age and those at risk should be referred to a dentist. Therefore, a literal interpretation of the AAP policy would facilitate a referral as early as 6 months of age. This alignment of medicine and dentistry validates the concept of early intervention and represents an untapped opportunity for collaboration at a grass-roots level.

Enhancing Access

Early referral and intervention allows the dental community to integrate a greater number of patients into their practices in “preventive mode” and ameliorates the need for costly restorative care delivery. Many of the services required to maintain patients in preventive mode can be delegated to auxiliary staff under the supervision of a dentist, while primarily the dentist must treat “restorative mode” patients. Therefore, a dental practice can more effectively and efficiently treat a greater number of patients in preventive mode. Measures that increase the number of patients that can be effectively treated, while reducing treatment costs, are key elements of optimal utilization of dentists as a community resource.

Conclusions

Dentists can best care for the communities they serve by initiating “Infant Oral Health Programs” in their practices and by establishing productive relationships with the medical PCPs within their communities. ECTAMR offers the means to present us to our medical colleagues as allies in a continuing struggle to improve the overall health of our communities through efficient utilization of the dentist as a community resource.

Our bottom line message to our medical colleagues is that it is inappropriate to wait until children have significant, although preventable, oral disease before being referred to a dentist. It is up to the individual practitioner within their own community to initiate effective outreach that will change to way medical providers perceive quality oral health care and the role of dentists.

Action Issues

Developing rapport with your local medical colleagues is a key method of enabling one to provide the highest level of oral health care to their community. With their support you will most effectively bring an infant oral health program to operational fruition. Be prepared to invest your time toward this endeavor. If you haven’t already had a face-to-face meeting with your local physicians, now is a good time give them a call.
Community medical staffs are always open to having lunch brought in by a local deli and it gives you a great opportunity to present your educational program. Keep in mind that you have to convince the entire staff of the value of early oral health intervention.

**Talking Points for Consideration**

- Dentists are primary care providers for oral health.
- Good oral health has been conclusively linked to better overall health.
- Early oral health intervention enhances oral health for the life of the patient.
- Dentists are the only qualified health care providers to offer comprehensive/restorative oral health care to very young children.
- The goal of the dentist and a large part of our practice effort is to prevent the need for restorative intervention.
- The ideal time for a dental referral is no later than 12 months of age, (be prepared to accept patients deemed “at risk” by the physician by 7 to 9 months).
- Infant dental referrals are supported by AAP policy (May, 2003).
- The goal of the infant dental referral is not about increasing the dentist’s patient volume. The goal of the infant dental referral is about improving the quality of care provided to the entire community.
- Early referrals offer the dentist the ability to prevents pathology rather than react to it.
- “Preventive mode” patients can be treated in greater numbers at less cost than “restorative mode” patients.
- Appropriate referral timing is “best practice” and the best utilization of the dentist as a community resource.

**References**

Oral Health for Our Youngest Patients

Every child should begin to receive oral health risk assessments by 6 months of age from a pediatrician or a qualified pediatric health care professional.

Referring a child for an oral health examination by a dentist who provides care for infants and young children 6 months after the first tooth erupts or by 12 months of age establishes the child's dental home and provides an opportunity to implement preventive dental health habits that meet each child's unique needs and keep the child free from dental or oral disease.

Pediatricians, family practitioners, pediatric nurse practitioners and physician assistants should be trained to perform an oral health risk assessment on all children beginning by 6 months of age to identify known risk factors for early childhood dental caries.

Infants identified as having significant risk of dental caries should be entered into an aggressive anticipatory guidance and intervention program provided by a dentist between 6 and 12 months of age.
Establishment of a Dental Home

Management of risk factors until
Fluoride Varnish as indicated by
Dietary & Hygiene Counseling,

High Caries Risk Protocol:

No access to a Dental Home

Establish Dental Home @ 6 to 12 Months
Apply Fluoride Varnish. Establish
Dietary & Hygiene Counseling,

Moderate & High Caries Risk

Establish Dental Home @

12 to 18 months of age

Establishe Dental Home @

Low Caries Risk

Pre-Cavity Oral Health Risk Assessment

Pediatric Medicine: Oral Health Intervention Algorithm

Figure 1
Hygiene, Fluoride exposure and apply fluoride varnish.

Managed: Reappoint every 6 months, review diet,
At 3 month recall intervals, if all risk factors are well
managed until risk factors are well managed.

If risk factors are not controlled: Continue with 1 month recall,
At the third 1 month visit, if all risk factors are well
managed: Reappoint at 3 months, review diet, hygiene,

Review fluoride exposure and apply fluoride varnish at
each appointment.

Review fluoride exposure and apply fluoride varnish at
(Plaque/Inflammation).

Assess Oral Hygiene at each appointment,

Review dietary intake of juices, (sugars sources) etc., at

Assign Patient at 1 month intervals X 3.

High Caries Risk Protocol:

Figure 2
General Dentistry: Infant Oral Health Intervention

Oral Health Risk Assessment

Low Caries Risk

Moderate or High Caries Risk

High Caries Risk Protocol

Continue until change in career risk status.

Intervals:

- Fluoride Varnish: 1 year
- Fluoride exposure & apply

Hygiene Instruction, Review of Diet,

Benign Floral Enhancement:

Appoint for Diet Counseling.

Benign Floral Enhancement:

Hygiene Instruction, Review of Diet,

Fluoride exposure & apply

Counseling, Hygiene Instruction,

Benign Floral Enhancement:

Review of Fluoride exposure & apply

Continued with High Risk Protocol.

until all risk factors are well managed.

Moderate or High Caries Risk

TX cavitated lesion if present

High Caries Risk Protocol

Fluoride Varnish (see attached)

Review of Fluoride exposure & apply

Counseling, Hygiene Instruction,

Benign Floral Enhancement:

Low Caries Risk
based on patient's caries risk

Administration of Fluoride Modalities

Brushing & Flossing

Oral Hygiene Instruction (Effective Sugars)

Dietary Counseling to Reduce Intake of

Removal of active decay

while suppressing pathogenic flora

Management to enhance non-carogenic flora

Hierarchical Strategy for Comprehensive Caries

Benign Florid Enhancement
Oral Health Risk Assessment Timing and Establishment of the Dental Home
Section on Pediatric Dentistry
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http://www.pediatrics.org/cgi/content/full/111/5/1113
Oral Health Risk Assessment Timing and Establishment of the Dental Home

ABSTRACT. Early childhood dental caries has been reported by the Centers for Disease Control and Prevention to be perhaps the most prevalent infectious disease of our nation's children. Early childhood dental caries occurs in all racial and socioeconomic groups; however, it tends to be more prevalent in low-income children, in whom it occurs in epidemic proportions. Dental caries results from an overgrowth of specific organisms that are a part of normally occurring human flora. Human dental flora is site specific, and an infant is not colonized until the eruption of the primary dentition at approximately 6 to 30 months of age. The most likely source of inoculation of an infant's dental flora is the mother or another intimate care provider, through shared utensils, etc. Decreasing the level of cariogenic organisms in the mother's dental flora at the time of colonization can significantly impact the child's predisposition to caries. To prevent caries in children, high-risk individuals must be identified at an early age (preferably high-risk mothers during prenatal care), and aggressive strategies should be adopted, including anticipatory guidance, behavior modifications (oral hygiene and feeding practices), and establishment of a dental home by 1 year of age for children deemed at risk.

INTRODUCTION

The Centers for Disease Control and Prevention reports that dental caries is perhaps the most prevalent of infectious diseases in our nation's children. Dental caries is 5 times more common than asthma and 7 times more common than hay fever in children. More than 40% of children have tooth decay by the time they reach kindergarten. Infants who are of low socioeconomic status, whose mothers have a low education level, and who consume sugary foods are 32 times more likely to have caries at the age of 3 years than children in whom those risk factors are not present. Decay of primary teeth can affect children's growth, lead to malocclusion, and result in significant pain and potentially life-threatening swelling. Because pediatricians and other pediatric health care professionals are far more likely to encounter new mothers and infants than are dentists, it is essential that they be aware of the infectious pathophysiology and associated risk factors of early childhood dental caries to make appropriate decisions regarding timely and effective intervention. Dental decay can be well advanced by 3 years of age.

BACKGROUND

Dental caries results from an overgrowth of specific organisms that are part of normally occurring human dental flora. Streptococcus mutans and Lactobacillus species are considered to be principal indicator organisms of those of aciduric bacteria responsible for caries. Human dental flora is site specific, and an infant is not colonized with normal dental flora until the eruption of the primary dentition at approximately 6 to 30 months of age. The vertical colonization of S. mutans from mother to infant is well documented. In fact, genotypes of S. mutans in infants appear identical to those present in mothers in approximately 71% of mother-infant pairs. Furthermore, evidence suggests that specific organisms exhibit discrete windows of inoculation; the acquisition of S. mutans occurs at an average age of approximately 2 years. The significance of this information becomes focused when considering 3 points. First, high caries rates run in families and are passed from mother to child from generation to generation. The children of mothers with high caries rates are at a higher risk of decay. Second, approximately 70% of all dental caries are found in 20% of our nation's children. Third, the modification of the mother's dental flora at the time of the infant's colonization can significantly impact the child's caries rate. Therefore, an oral health risk assessment before 1 year of age affords the opportunity to identify high-risk patients and to provide timely referral and intervention for the child and allows an invaluable opportunity to decrease the level of cariogenic organisms in the mother with a significant caries risk before and during colonization of the infant.

BASIC PREVENTIVE STRATEGIES

Historically, the approach to preventing the development of dental caries has been to establish and maintain good oral hygiene, optimize systemic and topical fluoride exposure, and eliminate prolonged exposure to simple sugars in the diet. The success of this age-old approach is also the foundation for the ideal standard of establishment of the dental home.
by 1 year of age, as endorsed by the American Dental Association, the American Academy of Pediatric Dentistry, supporting organizations of Bright Futures, and numerous other children's health organizations.

Dental caries typically results from diet-mediated shifts in dental bacterial populations that favor acidogenic-aciduric (cariogenic) organisms.\textsuperscript{17} The judicious optimization of diet, fluoride intake, and hygiene reverses the aciduric shift, resulting in fewer cariogenic flora and decreased rates of caries. Clinical observations suggest that aciduric shifts are often associated with pregnancy, with return to prepregnancy cariogenic-benign flora ratio occurring on the same timeline as the colonization of the infant with dental flora (6 to 30 months of age). The overall strategy is to lower the numbers of cariogenic bacteria in the mother's mouth and delay colonization as long as possible (avoid sharing of spoons, orally cleansing pacifiers, etc).

Tooth decay is a disease that is, by and large, preventable. Because of how it is caused and when it begins, however, steps to prevent it ideally should begin prenatally with pregnant women and continue with the mother and young child, beginning when the infant is approximately 6 months of age. The primary thrust of early risk assessment is to screen for parent-infant groups who are at risk of early childhood dental caries and would benefit from early aggressive intervention. The ultimate goal of early assessment is the timely delivery of educational information to populations at high risk of caries to avoid the need for later surgical intervention.

**ORAL HEALTH RISK ASSESSMENT**

Every child should begin to receive oral health risk assessments by 6 months of age by a qualified pediatrician or a qualified pediatric health care professional. The Caries Risk Assessment Tool (provided and continually updated by the American Academy of Pediatric Dentistry and available at https://www.aapd.org/members/referencemanual/pdfs/02-03/Caries%20Risk%20Assess.pdf) can be used to determine the relative risk of caries of the patient. In the case of the very young patient, a risk assessment to identify parents (usually mothers) and infants with a high predisposition to caries can easily be performed by taking a simple dental history from a new mother. Questions directed at dietary practices, fluoride exposure, oral hygiene, utilization of dental services, and the number and location of the mother's dental fillings can give a relative indication of the mother's baseline decay potential. Frequent sugar intake, low fluoride exposure, poor oral hygiene practices, frequent utilization of dental services and/or active decay and/or multiple dental fillings in multiple quadrants of the mouth indicates a high caries risk in the mother. Because the dental history of the mother has a direct correlation to that of her infant, it is justifiable and appropriate for the pediatrician to garner permission to examine the mother's dentition and gingival tissues. Additionally, clinical observations suggest that second and third infants tend to be colonized earlier, when the mother’s cariogenic flora is at a higher level. Therefore, the later-order offspring of a mother with mildly to moderately high caries rate may be at higher risk of caries than are offspring born earlier. Unfortunately, the lack of accessible longitudinal dental databases has not yet allowed these observations to be epidemiologically confirmed.

**RISK GROUPS FOR DENTAL CARIES**

The caries risk potential of an infant can be determined by the use of the Caries Risk Assessment Tool. However, even the most judiciously designed and implemented caries risk assessment tool can fail to identify all infants at risk of early childhood dental caries. If an infant is assessed to be within 1 of the following risk groups, the care requirements would be significant and surgically invasive; therefore, these infants should be referred to a dentist as early as 6 months of age and no later than 6 months after the first tooth erupts or 12 months of age (whichever comes first) for establishment of a dental home:

- Children with special health care needs
- Children of mothers with a high caries rate
- Children with demonstrable caries, plaque, demineralization, and/or staining
- Children who sleep with a bottle or breastfeed throughout the night
- Later-order offspring
- Children in families of low socioeconomic status

Despite all efforts to predict children at high risk of caries, patients can and do fall outside statistical expectations. In these cases, the mother may not be the colonization source of the child’s dental flora, the dietary intake of simple carbohydrates may be extremely high, or other uncontrollable factors may combine to place the patient at risk of caries. Therefore, screening for risk of caries in the parent and patient coupled with oral health counseling, although a feasible and equitable approach to early childhood caries control, is not a substitute for early establishment of the dental home. Whenever possible, the ideal approach to early childhood caries prevention and management is the early establishment of a dental home.

**ESTABLISHING THE DENTAL HOME**

The concept of the “dental home” is derived from the American Academy of Pediatrics concept of the “medical home.” The American Academy of Pediatrics states, “the medical care of infants, children, and adolescents ideally should be accessible, continuous, comprehensive, family centered, coordinated, compassionate, and culturally effective. It should be delivered or directed by well-trained physicians who provide primary care and help to manage and facilitate essentially all aspects of pediatric care.”\textsuperscript{18} Pediatric primary dental care needs to be delivered in a similar manner. The dental home is a specialized primary dental care provider within the philosophical complex of the medical home. Referring a child for an oral health examination by a dentist who provides care for infants and young children.
6 months after the first tooth erupts or by 12 months of age establishes the child's dental home and provides an opportunity to implement preventive dental health habits that meet each child's unique needs and keep the child free from dental or oral disease. The dental home should be expected to provide:

- An accurate risk assessment for dental diseases and conditions
- An individualized preventive dental health program based on the risk assessment
- Anticipatory guidance about growth and development issues (i.e., teething, digit or pacifier habits, and feeding practices)
- A plan for emergency dental trauma
- Information about proper care of the child's teeth and gingival tissues
- Information regarding proper nutrition and dietary practices
- Comprehensive dental care in accordance with accepted guidelines and periodicity schedules for pediatric dental health
- Referrals to other dental specialists, such as endodontists, oral surgeons, orthodontists, and periodontists, when care cannot be provided directly within the dental home

ANTICIPATORY GUIDANCE AND PARENT AND PATIENT EDUCATION

General anticipatory guidance for the mother (or other intimate caregiver) before and during the colonization process should include the following:

- Oral hygiene—the parent should be instructed to brush thoroughly twice daily (morning and evening) and to floss at least once every day.
- Diet—the parent should be instructed to consume fruit juices only at meals and to avoid all carbonated beverages during the first 30 months of the infant's life.
- Fluoride—the parent should be instructed to use a fluoride toothpaste approved by the American Dental Association and rinse every night with an alcohol-free over-the-counter mouth rinse with 0.05% sodium fluoride.
- Caries removal—parents should be referred to a dentist for an examination and restoration of all active decay as soon as feasible.
- Delay of colonization—mothers should be educated to prevent early colonization of dental flora in their infants by avoiding sharing of utensils (i.e., shared spoons, cleaning a dropped pacifier with their saliva, etc.).
- Xylitol chewing gums—recent evidence suggests that the use of xylitol chewing gum (4 pieces per day by mother) had a significant impact on decreasing the child's caries rates.16

General anticipatory guidance for the young patient (0 to 3 years of age) should include the following:

- Oral hygiene—the parent should begin to brush the child's teeth as soon as they erupt (twice daily, morning and evening) and floss between the child's teeth once every day as soon as teeth contact one another.
- Diet—after the eruption of the first teeth, the parent should provide fruit juices (not to exceed 1 cup per day) during meals only. Carbonated beverages should be excluded from the child's diet. Infants should not be placed in bed with a bottle containing anything other than water. Ideally, infants should have their mouths cleansed with a damp cloth after feedings.
- Fluoride—all children should have optimal exposure to topical and systemic fluoride. Caution should be exercised in the administration of all fluoride-containing products. The specific considerations of the judicious administration of fluoride should be reviewed and tailored to the unique needs of each patient. Review articles with applicable fluoride recommendations and supplementation algorithms are available.19–23

RECOMMENDATIONS

1. Early childhood caries is an infectious and preventable disease that is vertically transmitted from mothers or other intimate caregivers to infants. All health care professionals who serve mothers and infants should integrate parent and caregiver education into their practices that instruct effective methods of prevention of early childhood caries.

2. The infectious and transmissible nature of bacteria that cause early childhood caries and methods of oral health risk assessment, anticipatory guidance, and early intervention should be included in the curriculum of all pediatric medical residency programs and postgraduate continuing medical education curricula at an appropriate time.

3. Every child should begin to receive oral health risk assessments by 6 months of age from a pediatrician or a qualified pediatric health care professional.

4. Pediatricians, family practitioners, and pediatric nurse practitioners and physician assistants should be trained to perform an oral health risk assessment on all children beginning by 6 months of age to identify known risk factors for early childhood dental caries.

5. Infants identified as having significant risk of caries or assessed to be within 1 of the risk groups listed in this statement should be entered into an aggressive anticipatory guidance and intervention program provided by a dentist between 6 and 12 months of age.

6. Pediatricians should support the concept of the identification of a dental home as an ideal for all children in the early toddler years.

SUMMARY

Early childhood dental caries emerges within all cultural and economic pediatric populations; however, it approaches near epidemic proportions in populations with low socioeconomic status. Dental caries is an infectious disease usually passed from mother to child from generation to generation. Judicious optimization of diet, fluoride intake, and hy-
giene can decrease bacterial levels of specific organisms responsible for dental caries residing within normal dental flora. Decreasing the levels of cariogenic flora in the mother before and during the colonization process coupled with counseling directed toward optimal practices of diet, oral hygiene, and fluoride exposure can significantly and positively impact the child’s predisposition to early childhood caries.

Pediatricians and pediatric health care professionals should develop the knowledge base to perform oral health risk assessments on all patients beginning at 6 months of age. Patients who have been determined to be at risk of development of dental caries or who fall into recognized risk groups should be directed to establish a dental home 6 months after the first tooth erupts or by 1 year of age (whichever comes first).

The ideal deterrence to early childhood caries is the establishment of the dental home when indicated by the unique needs of the child. Although not always feasible because of manpower and participation issues, best practice dictates that whenever feasible, all patients should have a comprehensive dental examination by a dentist in the early toddler years.

**SECTION ON PEDIATRIC DENTISTRY, 2002–2003**

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All policy statements from the American Academy of Pediatrics automatically expire 5 years after publication unless reaffirmed, revised, or retired at or before that time.
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Knee-To-Knee Exam

Infant Oral Hygiene:  Home Care Recommendations

Looking For A Change In Culture
Dental Care: A Pediatrician's Perspective

Fluoride Varnish In The Pediatric Office

Well Baby Knee-to-Knee Exam Video

Through The Eyes Of The Pediatric Dentist
What To Look For

Points of Light in a FQHC Setting
Welcome to Points of Light, a collaborative children’s oral health program serving Infants, Head Start participants, Children with special health care needs. The goal is to serve the dental health needs of all children, of all ages.

Finding a Dental Home
www.pointsflightonline.org
Infant dental care
Early dental visits are all about prevention. That’s why it’s so important to start building a good foundation for your child’s oral health. Both the American Dental Association and American Academy of Pediatrics recommend infants visit the dentist six months after their first tooth comes in or by their first birthday. That way, the dental team can begin early to protect your infant’s smile by identifying risk factors and behaviors that could be trouble in the future. For instance, too much fruit juice and poor oral hygiene can result in tooth decay by age 2 or 3. Starting dental care at a young age may eliminate the need for early dental fillings.

Head Start participants
The goal of Head Start is to help every child reach their full potential. That includes ongoing, quality, comprehensive dental care tailored to each child’s needs. The link between your child’s oral health and general health is well documented. Early comprehensive and preventive dental care is the best way to establish and maintain your child’s healthy smile.

Children with special health care needs
Sometimes the dental care of children with special health care needs such as autism, cerebral palsy, seizure disorders, ADHD, asthma and others is overlooked. Often it’s because parents spend so much time addressing their child’s special health care needs, they only go to the dentist after a problem occurs. Or visits are delayed because parents aren’t sure if a dentist will be comfortable treating their child.

Remember, a child’s oral health care is key to their general health, making good dental care for children with special health needs even more important. Starting early is always better.

Finding your child’s “dental home”
Every child needs a dental home, a good foundation for both their oral health and overall health. Let us help you ensure your child’s healthy smile. Visit www.points4lightonline.org to find a Points of Light dentist near you.
VACCINES, WELL-CHILD CHECKUPS...

what about the dentist?

Your child's dental health is important. Let the Points of Light project help you find a dentist. We serve:

- Infants -
- Head Start participants -
- Children with special health care needs -

points of light
connecting children with dentists

All children should see a dentist by age 1. Find your child's dental home at www.pointsOfLightOnline.org