Dental Public Health Activity Descriptive Report

Practice Number: 51001
Submitted By: Vermont Department of Health, Office of Oral Health
Submission Date: December 2001
Last Reviewed: July 2016
Last Updated: July 2016

SECTION I: PRACTICE OVERVIEW

Name of the Dental Public Health Activity: Tooth Tutor Program

Public Health Functions:

"X"	Assessment
x	1. Assess oral health status and implement an oral health surveillance system.
x	2. Analyze determinants of oral health and respond to health hazards in the community
x	3. Assess public perceptions about oral health issues and educate/empower them to achieve and maintain optimal oral health
	Policy Development
x	4. Mobilize community partners to leverage resources and advocate for/act on oral health issues
x	5. Develop and implement policies and systematic plans that support state and community oral health efforts
	Assurance
x	6. Review, educate about and enforce laws and regulations that promote oral health and ensure safe oral health practices
x	7. Reduce barriers to care and assure utilization of personal and population-based oral health services
x	8. Assure an adequate and competent public and private oral health workforce
x	9. Evaluate effectiveness, accessibility and quality of personal and population-based oral health promotion activities and oral health services
x	10. Conduct and review research for new insights and innovative solutions to oral health problems

Healthy People 2020 Objectives:

"X"	Healthy People 2020 Oral Health Objectives	
x	OH-1	Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth
x	OH-2	Reduce the proportion of children and adolescents with untreated dental decay
	OH-3	Reduce the proportion of adults with untreated dental decay
	OH-4	Reduce the proportion of adults who have ever had a permanent tooth extracted because of dental caries or periodontal disease
	OH-5	Reduce the proportion of adults aged 45 to 74 years with moderate or severe periodontitis
	OH-6	Increase the proportion of oral and pharyngeal cancers detected at the earliest stage
x	OH-7	Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year
x	OH-8	Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year
x	OH-9	Increase the proportion of school-based health centers with an oral health component

	OH-10	Increase the proportion of local health departments and Federally Qualified Health Centers (FQHCs) that have an oral health component
	OH-11	Increase the proportion of patients who receive oral health services at Federally Qualified Health Centers each year
x	OH-12	Increase the proportion of children and adolescents who have received dental sealants on their molar teeth
	OH-13	Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water
	OH-14	Increase the proportion of adults who receive preventive interventions in dental offices
	OH-15	Increase the number of States and the District of Columbia that have a system for recording and referring infants and children with cleft lips and cleft palates to craniofacial anomaly rehabilitative teams
	OH-16	Increase the number of States and the District of Columbia that have an oral and craniofacial health surveillance system
	OH-17	Increase health agencies that have a dental public health program directed by a dental professional with public health training

State: VT	**Key Words for Searches:** Sealants, access to care, school-linked, school-based oral health, oral health education, dental home

Abstract:

The Vermont Office of Oral Health (OOH) administers the Tooth Tutor Program (TTP), which aims primarily to help children who have not accessed dental care (those who have not been to the dentist or who are missing dental information on their health information records) in the previous year to find and connect with a dental home where they can receive dental sealants and other procedures (i.e. restorative treatment), as needed. Most of the children in this category are at higher risk for dental disease (i.e. low income, rural populations). In Vermont, Medicaid-eligible children have no cap for dental services through a program called Dr. Dynasaur. However, in spite of the availability of Medicaid benefits, these children have a higher rate of decay: decay experience is 1.6 times more prevalent and untreated decay is 2 times more prevalent in this group than in non-Medicaid children (2013 Burden of Oral Disease in Vermont). Although the utilization rate of dental care among Medicaid-eligible children throughout Vermont has been rising over time, there is still considerable room for improvement.

Public health dental hygienists (present in 5 of Vermont's 12 district offices, as of 2016) provide support for the program by helping to advertise openings to dental hygienists interested in working as Tooth Tutors (TTs) and providing training, technical assistance, and monitoring. The OOH also provides screening and teaching materials for the program and coordinates two meetings per year. For the past two years, these meetings have included training sessions on cultural competence and motivational interviewing. Additional trainings have included a discussion group on issues related to cultural competence; for example, in 2015 we purchased the book "The Spirit Catches You and You Fall Down" by Anne Fadiman, and distributed it to all TTs. At our mid-year meeting in January 2016 we had a lively "book-club style" discussion. We plan on continuing this tradition at upcoming mid-year meetings and are currently selecting materials – books, films, short videos, and documentaries – for discussion at the January 2017 meeting.

Participation in the TTP is voluntary and dependent on the school determining the need for dental care access and wanting to improve oral health for the students. Other than the dental hygienists' salaries, there is no additional cost for schools to participate in the TTP. Medicaid Administrative Claims/ Early and Periodic Screening, Diagnostic and Treatment (MAC/EPSDT) is the main source of funding for the program. Some schools run the TTP through funding from foundations and other organizations. The state Oral Health program provides basic supplies for TTs to perform classroom education and oral health screenings.

Surveys conducted with TTs showed that a significant barrier in accessing care for the program's children is the lack of priority placed on routine preventive care by their parents or guardians. We have been working to overcome this barrier through cultural competency and motivational interviewing trainings for TTs.

Contact Person(s) for Inquiries:

Debora Teixeira, DDS (not licensed in VT), M.Ed. Candidate, Oral Health Program Administrator, Vermont Department of Health, Office of Oral Health, 108 Cherry Street, PO Box 70, Burlington, VT – 05402, Phone: 802-652-4115, Fax: 802-651-1634, Email: debora.teixeira@vermont.gov

Robin N. Miller, RDH, MPH, Oral Health Director, Vermont Department of Health, Office of Oral Health, 108 Cherry Street, PO Box 70, Drawer 38, Burlington, VT – 05402, Phone: 802-863-7272, Email: robin.n.miller@vermont.gov

SECTION II: PRACTICE DESCRIPTION

History of the Practice:

Dental disease is the single most prevalent chronic disease of childhood, yet it is largely preventable. Access to dental care is an essential component of prevention of dental disease for children and adults.

Children in Vermont generally fare well with regard to oral health and tooth decay compared to children in other states. Statewide data from 2013-2014 showed that among 1st-3rd graders, 34.5% had experienced tooth decay (10 percentage points lower than 2003), 68.1% were decay-free (compared to 60% in 2003), and 10.8% have untreated tooth decay (down 6 points from 2003).

In Vermont, children who are eligible for Medicaid have no cap for dental services through a program called Dr. Dynasaur, which is administered by the Department of Vermont Health Access (DVHA, VT's Medicaid office). Dr. Dynasaur provides free or low-cost health care (including dental) to children, teenagers under 19, and pregnant women with qualifying household incomes. However, data have shown that although the oral health of children in the state continues to improve, presence of dental decay and untreated decay are unevenly distributed and concentrated among particular groups, such as children in low-income families eligible for Medicaid. In spite of the availability of Medicaid benefits to treat tooth decay, these children have a higher rate of decay: decay experience is 1.6 times more prevalent and untreated decay is two times more prevalent in this group than in non-Medicaid children (2013 Burden of Oral Disease in Vermont). Although the utilization rate for dental care, which includes preventive and restorative, among Medicaid-eligible children throughout Vermont has been rising slowly over time, there is still considerable room for improvement. Vermont school nurses have consistently reported that oral health and access to dental care for Medicaid enrolled children are pressing issues.

Justification of the Practice:

Through Medicaid's Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Program, Vermont schools have funding, now called the Medicaid Administrative Claiming (MAC) funds, to use for health related activities. The MAC agreement most schools use to fund the TTP is essentially a reimbursement for activities that support Medicaid administration services performed at schools. Supervisory Unions/Supervisory Districts obtain partial federal reimbursement for activities conducted in support of the Medicaid program for delivery of health-related services. This is governed by a very specific agreement between the Centers for Medicare and Medicaid (CMS) and Vermont schools (K-12). The work the Tooth Tutors (TTs) do to improve access to dental services through the Medicaid system is considered an administrative service that is being provided for Medicaid. The school health boards decide where the MAC/ESPDT funds will be spent in any given year. The OOH recommends that schools with FRL rates greater than 50% participate in the TTP.

EPSDT is a federal program; schools that participate in EPSDT can generate MAC funds for their school. Oral health was listed as one of the top priorities by the School Health Team, which is coordinated by the Vermont Department of Health (VDH). Although the Tooth Tutor Program (TTP) is on that list, it is ultimately up to the schools to decide how they will reinvest those funds. Many school nurses contacted the VDH, Office of Oral Health (OOH) and expressed interest in using the money for oral health. In response, the OOH designed and developed the (then called) Tooth Tutor Dental Access Program to reflect best practices. The TTP was originally

modeled after Washington State's ABCD program; Vermont adapted the program to address the needs in its educational and health care systems for access to dental care. The TTP focuses and invests resources on the most vulnerable children who have not seen a dentist in the past year. These children are likely to have more dental disease and higher unmet dental treatment needs.

Implementation Timeline and Milestones:

The TTP began in 1997 as a pilot project in three different regions in Vermont. By 2003, it grew by word of mouth to include about 60 schools. During the school year 2003-2004, the state received a grant from the Robert Wood Johnson Foundation to fund Tooth Tutors in schools for three years. Forty more schools were added and most schools continued with the program after the grant funding ended, by using MAC funds. In 2009, there were 135 participating schools. TTP then expanded to include Head Start children. One Head Start program participated in 2005. By 2006, each of the seven Head Start programs in the state had its own Tooth Tutor.

In the 2014-2015 school year, nearly 100 elementary, middle, and high schools participated in the program with a total of 21,023 students and a target group of 3,108 students who had not accessed dental care in the previous year. This includes children whose caregivers failed to provide the name/contact information of the dentist who last saw the child. Sometimes the parents will provide that information after being contacted by the TT. If the child has, in fact, received care within the past year, he/she is removed from the target group.

At the end of the school year, 56% of the children in the target group had accessed dental care. Previously the OOH tracked where services were received, such as private practice, Federally Qualified Health Center (FQHC) or other locations, this has since been discontinued. Furthermore, the TTP has expanded to include establishing dental homes for Head Start and Early Head Start children. Presently, 15 Pre-K schools and all seven of the state's Head Start Programs participate in the TTP.

Inputs, Activities, Outputs and Outcomes of the Practice:

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	OUTCOMES

- Office of Oral Health staff (statewide program coordinator)
- Registered dental hygienists to serve as Tooth Tutors (hired by the school districts or supervisory unions);
- Funding through MAC/EPSDT or other sources;
- Collaboration with: local dental offices, Vermont Agency of Education, school nurses and Offices of Local Health School Liaisons, Vermont State Dental Society, and in some instances, private companies (donations of toothbrushes and dental education materials).

INPUTS	**PROGRAM ACTIVITIES**	OUTPUTS	OUTCOMES

- Establishing a target group of children who have not accessed dental care in the past year. This is usually accomplished by analyzing student health information forms, in collaboration with the school nurses;
- Conducting basic "open mouth" oral health screening for children in the target group who have parent's or guardian's permission;
- Finding local dental offices who are accepting Medicaid-eligible children as patients (Those who are not Medicaid eligible may receive services under the Dr. Dynasaur program.);
- Contacting the parents/guardians and providing referrals to these local dental offices (TTs may provide assistance with scheduling if needed.);
- At the end of the year, contacting the dental offices to obtain non-identifiable data that will serve to evaluate the program (number of children who received sealants, number of permanent first molars sealed, and number of permanent second molars sealed);
- Providing classroom education;
- Participating in various school and community events to increase awareness of oral health issues.

INPUTS	PROGRAM ACTIVITIES	**OUTPUTS**	OUTCOMES

- # of children in the target group who received sealants → 2014-2015 school year:339 children
- # of students who received oral health education → 2014-2015 school year: 11,235 students (All students participate in oral health education.)
- % of children in the target group who visited dentists → 2012-2013 school year: 53%; 2013-2014 school year:56.09%; 2015-2016 school year: 62% (surpassed the 60% goal for this school year).
- Mid and end-of-the-year surveys conducted (accomplished in the past year; ongoing in the present year); these surveys were sent to all TTs with the goal of identifying their barriers and successes towards the achievement of program goals.

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	**OUTCOMES**

The Tooth Tutor Program has undergone a transformation since 2010, when the Vermont Oral Health Program received a 3-year grant from the Centers for Disease Control and Prevention (CDC) to enhance the infrastructure of the program. By integrating the sealant component, the TTP is now a school-linked sealant program which collects data that enables us to track the progress. It is the only CDC-supported school-linked sealant program (as opposed to school-based program, in which the sealants are placed in the school) in the country.

The TTP has been operating for many years; therefore, it is considered to be in maintenance/outcomes stage. However, with the relatively recent transformation of the program, it is also going through an implementation stage.

During the 2013-14 school year, we reached our goal of 55% of students who had not accessed dental care in the previous year accessing care through the TTP. This is up from 53% from the previous school year. Our goal for the 2015-16 school year (60%) was surpassed, with 62% of students accessing dental care through participation in the TTP.

Below is a comprehensive list of intended outcomes:

Short-Term Outcomes (1-2 years)

- Tooth Tutors (TT) become embedded within the school community
- Better defined target schools through needs assessment (currently schools with ≥ 50% FRL)
- 60% of students in the target group receive sealants
- TTs provide education in 100% of classrooms in participating schools
- Schools with ≥50% free or reduced lunch (FRL) rates participation increases
- 100% of dental offices partner with TTP by accepting and treating students insured by Medicaid
- Program improvement data collected at annual and mid-year TT meetings, bi-annual surveys and "questions of the month" sent out to TTs

Intermediate Outcomes (2-5 years),

- 100% of participating schools' sealant data are collected (Data is comparable across the board and TTs are trained on the data collection process.)
- 65% of students in the target group receive sealants
- 75% of VT schools with ≥ 50% FRL participate in the program
- An increased understanding of importance of regular dental care among parents, children, schools, communities
- Process evaluation on effectiveness, efficiency, and improvement conducted
- Continuous program improvements made as needed, based on information from aggregated data and TT surveys.

Long-Term Outcomes (5+ years)

- Decreased oral health disparities
- Increased use of dental system among Medicaid eligible and rural populations
- Decreased incidence of dental disease
- Reduction in childhood decay

The Performance Measures for this and other Office of Oral Health programs can be found on the Vermont Department of Health Oral Health Dashboard (hyperlink: http://healthvermont.gov/hv2020/dashboard/oral_health.aspx)

Budgetary Information:

1. What is the annual budget for this activity?

   We do not have access to this information, since the budget is managed by each school district/supervisory union.

2. What are the costs associated with the activity? (Including staffing, materials, equipment, etc.)

   Variable and contingent upon school budget (see above).

3. How is the activity funded?

   Each school or Head Start program selects and contracts a dental hygienist as a Tooth Tutor to implement the TTP. For Head Start programs, American Recovery and Reinvestment Act of 2009 (ARRA) funds were used in 2009-2010 to contract Tooth Tutors. For schools, the primary funding for the dental hygienists comes from Medicaid Administrative Claims (MAC) funds, as described in detail above. A school can decide how they want to spend MAC funds and the Tooth Tutor Program is one of the options. Occasionally, there will be alternate sources available that schools can apply to fund Tooth Tutors. For example, Northeast Delta Dental has assisted several schools to start TTP. For each school, a Tooth Tutor's service hours will vary depending on the number of students served and available funding. In general, most Tooth Tutors provide services to a school for one day a week throughout the school year.

   According to the Vermont Board of Dental Examiners, dental hygienists with a minimum of 3 years licensed experience may provide services in a school or institution under the supervision of a dentist via a general supervision agreement. "The agreement authorizes the dental hygienist to provide services, agreed to between the dentist and the dental hygienist. The agreement does not require physical presence of the dentist but it stipulates that the supervising dentist review all patient records." (American Dental Hygienists' Association: https://www.adha.org/resources-docs/7513_Direct_Access_to_Care_from_DH.pdf)

   The Office of Oral Health provides training, supplies, and technical support for the Tooth Tutors to deliver oral health education and establish dental homes for the children. OOH program administrative staff provides all assistance needed for TTP, including materials for dental screenings and teaching, most of which are supported through funding from the Maternal and Child Health Block Grant.

4. What is the plan for sustainability?

   The Vermont TTP was originally developed for elementary schools, with the goal of linking every child in grades K-6 to a dental home. The American Academy of Pediatric Dentistry defines **dental home** as "the ongoing relationship between the dentist and the patient, inclusive of all aspects of oral health delivered in a comprehensive, continuously accessible, coordinated, and family-centered way." (AAPD Definition of a Dental Home, http://www.aapd.org/media/policies_guidelines/d_dentalhome.pdf) The TTP continues to expand and now includes all Head Start programs in VT as well as several preschool programs and middle/high schools, to establish a dental home for every child in the State.

   There is general recognition by participating schools that the TTP is a valuable resource to promote oral health of students. TTs work in collaboration with school nurses, teachers and remaining staff to promote oral health in several ways, including participation in school

events such as open houses, posting articles in the health newsletter, organizing National Children's Dental Health Month activities, etc. Concerted effort is placed on maintaining a relationship with school principals and superintendents and to raise awareness of the TTP among these professionals. It is our hope these school districts/supervisory unions will continue to allot a portion of MAC/EPSDT funds or other funding sources towards the TTP and that additional schools join the program in the future. As previously mentioned, an additional potential element for success is the fact that, starting summer 2016, dental hygienists licensed in Vermont will be eligible to register as Medicaid providers and bill for their services. This may allow some schools to start school-based sealant programs (as opposed to school-linked).

Lessons Learned and/or Plans for Addressing Challenges:

We have learned that the greatest barrier to achieving program goals is the difficulty in engaging parents/guardians and, in some rare instances, school personnel. Cultural competency and motivational interviewing skills are valuable tools to effectively communicate with parents and guardians. We plan on continuing these trainings and have launched a cultural competence improvement "club" that will choose materials to read/watch and meet yearly for discussion sessions.

Moving forward, the TTP may transition into a school-based sealant program where sealants would be placed at the school, thus eliminating the need for parents/guardians to take the children to the dental office. This may be facilitated by the fact that starting in summer 2016, all dental hygienists licensed in VT will be able to enroll as Medicaid providers and bill directly for their services.

Lack of parent/guardian engagement and cooperation is the most significant challenge (see above); we address this issue by providing ongoing cultural competency and motivational interviewing trainings to Tooth Tutors.

These strategies have helped TTs to fulfill their responsibilities and benefited the achievement of the Tooth Tutor Program goals:

- Promote the concept of the "dental home" and importance of regular visits.
- Increase the percentage of children in the true target group (children who have not accessed dental care in the previous year) that access dental care.
    - Build and maintain working relationships with local dental homes in order to decrease barriers to access for children and families.
    - Educate school partners about the importance of oral health, and accessing comprehensive services in a dental home.
    - Build trust/rapport with families/caregivers by becoming visible and involved in the school community.
    - Communicate with caregivers regarding the importance of preventive dental care.
- Increase the number of sealants placed on 1st and 2nd molars because of the Tooth Tutor Program.
    - Nurture and maintain good communication with dental referral base.

Available Information Resources:

The Tooth Tutor online manual is regularly updated and provides in-depth information on the TTP: https://drive.google.com/folderview?id=0ByUT4-v9Az43dEdxVktoOWt6b0E&usp=sharing

Whole School, Whole Community, Whole Child Model

Provide a thorough description of how you are implementing each of the ten components of the WSCC Model. Include any challenges you experienced (If applicable) and how you resolved those challenges. If you are not implementing any activities for a component, please signify that by checking the "Not Part of Our Program." If you have tried to implement a particular component and weren't able to resolve those challenges, please provide a brief (1-2 sentences) on what occurred.

You may find the resource, "Recommendations for Integrating Oral Health into the WSCC Model" useful for completing this section.

Component	Description of Activity(s) & Process	Not Part of Our Program
Health Education – Integrate oral health into the health education curriculum or other subjects,(i.e. biology, nutrition, food service, phy ed).	Tooth Tutors, working in coordination with teachers, regularly provide Oral Health classroom education sessions; they try, whenever feasible, to fit the concepts they teach into other subjects that students are learning at that moment. For example, one Tooth Tutor reported that one of the classrooms had just finished reading "*The Gingerbread Boy*" by Richard Egielski and they were setting up a town with a post office, stores, etc. The Tooth Tutor included a dental office in the town and developed stories about all the great things that the Gingerbread Boy learned at his visit to the dentist.	
Physical Education & Activity – Enforce the use of head/ facial protection to prevent injury during sports or related activities.	Several Tooth Tutors reported talking about the importance of using a mouth guard when practicing sports. Some dental offices in VT have coordinated with Tooth Tutors to provide free sports guards to students.	
Nutrition Environment & Services – school nutrition policies promote optimal dental health.	Tooth Tutors continuously integrate Oral Health into activities related to nutrition. One of them created a magnetic board using a cookie sheet: she then cut the shape of a tooth from white paper and pasted it to the bottom of the cookie sheet using clear contact paper. Next, she worked with the children to go through old magazines and select images of snacks that were healthy and unhealthy for the teeth. On the back of the "bad" snacks, she glued magnets, so they would stick to the teeth. The healthy choices had no magnets, to show that they slide right off from the tooth surface. This was an extremely successful activity centered on Nutrition, which this hygienist shared with other Tooth Tutors in the program.	
Health Services – Promote a medical/dental integration that includes dental sealants and fluoride.	Tooth Tutors work together with the school nurses, but we see this as an area for potential improvement for this program (possibly reaching out to medical providers in the community?). One development that may enhance the activities of Tooth Tutors is the fact that, starting in summer 2016, Vermont dental hygienists will be eligible to enroll as Medicaid providers and bill directly for their services.	

Counseling, Psychological & Social Services – Educate/emphasize the impact that poor oral health has on the ability to learn and on self-esteem.	This is one area that we have not directly addressed yet, but that has been in our discussions for development of activities and their future implementation. We are aware of the relationship between oral health and self-esteem; some Tooth Tutors who serve in High Schools have presented on the importance of good oral health for employability.	X
Social & Emotional Climate – Establish an environment where oral health prevention practices and programs are supported and valued.	Tooth Tutors are aware of the importance of being involved with the school community. One of the central goals of the Tooth Tutor Program is to "Educate school partners about the importance of oral health, and accessing comprehensive services in a dental home." Some Tooth Tutors attend school meetings and most participate in the Open Houses at the beginning of the school year. In order to enhance their ability to engage the communities where they work, Tooth Tutors regularly undergo trainings on cultural competency and motivational interviewing.	
Physical Environment – Assure the students and staff have fluoridated water available throughout the day.	We place great effort in promoting Community Water Fluoridation (however, this effort is not specific to the school environment).	X
Employee Wellness – Support tobacco cessation programs for students & staff using tobacco/e-cigarettes.	Some of the goals of the Tooth Tutor Program are directly related to enhancing wellness of everyone in the communities where they serve, including school employees, who are considered partners (see the first bullet under Family Engagement). Activities specific to tobacco cessation are currently under consideration. We currently work in collaboration with Vermont's Tobacco Control program and have performed outreach to dental providers, aiming to increase the number of referrals to tobacco cessation programs. It would be possible to extend this outreach to communities in which the Tooth Tutors serve, since they already act as liaisons between the schools and local dental providers.	
Family Engagement – Promote school and family support for oral health screenings and regular dental visits.	These are some of the core goals of the Tooth Tutor Program: • Educate school partners about the importance of oral health, and accessing comprehensive services in a dental home. • Build trust/rapport with families/caregivers by becoming visible and involved in the school community. • Communicate with caregivers regarding the importance of preventive dental care. • Promote the concept of the "dental home" and importance of regular visits. Tooth Tutors aim to achieve these goals by being visible in their communities and serving as the primary point of contact for information on Oral Health at the schools where they serve.	

	Community Involvement – Establish partnerships with local dental professionals to assure access to dental care & preventive interventions.	Tooth Tutors function as the liaisons between students' families and local dental professionals. As a matter of fact, many Tooth Tutors serve in the communities where they live; several of them refer students to the dental offices where they work as hygienists. Two of the main goals of the Tooth Tutor Program relate directly to this component: • Build and maintain working relationships with local dental homes in order to decrease barriers to access for children and families. • Nurture and maintain good communication with dental referral base. One specific example of community involvement was mentioned above, under Physical Education & Activity.		