



# Dental Public Health Activity Descriptive Report

**Practice Number:** 51001  
**Submitted By:** Vermont Department of Health, Office of Oral Health  
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<b>SECTION I: PRACTICE OVERVIEW</b>		
<b>Name of the Dental Public Health Activity:</b> <span style="color: blue; font-weight: bold;">Tooth Tutor Dental Sealant School-linked Program</span>		
<b>Public Health Functions:</b>  Assurance – Access to Care and Health System Interventions Assurance – Building Linkages and Partnership for Interventions		
<b>Healthy People 2020 Objectives:</b> OH-1 Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth 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-8 Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year OH-12 Increase the proportion of children and adolescents who receive dental sealants on their permanent molars		
<b>State:</b> Vermont	<b>Federal Region:</b>	<b>Key Words for Searches:</b> Dental access, access to care, dental home, dental treatment, school-linked program, dental sealants, prevention
<b>Abstract:</b>  The Vermont Department of Health, Office of Oral Health, has coordinated the Tooth Tutor Program (TTP) since 1997. It was developed for elementary schools with the main goal of linking every child to a dental home. The TTP provides a dental hygienist (the Tooth Tutor) to work with each participating school. The Tooth Tutor provides classroom dental health education, identifies a target group of children without a dental home, and works closely with the school nurse, health liaison, classroom teachers, community dentists, and families to establish a dental home for each child in the targeted group. 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 without a dental home. The TTP has expanded to include 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.		
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## SECTION II: PRACTICE DESCRIPTION

### **History of the Practice:**

Through Medicaid's Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Program, Vermont schools have funding, now called the Medicaid Administrative Coding (MAC) funding, to use for health related activities. Many school nurses contacted the Vermont Department of Health, Office of Oral Health (OOH) and wanted to use the money for oral health, one of their top priorities. In response, the OOH designed and developed the Tooth Tutor Dental Access Program (TTP) 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 would focus and invest 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.

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 (dental hygienists) 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. At the end of the school year, 56% of the children in the target group had accessed dental care. 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.

### **Justification 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 1<sup>st</sup>-3<sup>rd</sup> graders, 34.5% had experienced tooth decay (10 percentage points lower than 2003), 68.1% were caries-free (compared to 60% in 2003), and 10.8% have untreated tooth decay (down 6 points from 2003). However, data have shown that although the oral health of children in the state continues to improve, presence of dental caries and untreated decay are unevenly distributed and concentrated among particular groups, such as children in low-income families. In spite of the availability of Medicaid benefits to treat tooth decay, these children have a higher rate of caries 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 of dental care 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.

### **Inputs, Activities, Outputs and Outcomes of the Practice:**

#### **Program Administrator**

The OOH administers the TTP. Public health dental hygienists (currently present in 5 of Vermont's 12 district offices) provide support for the program, including identifying dental hygienists interested in becoming Tooth Tutors and providing training, technical assistance, and monitoring. The OOH also provides screening and teaching materials for the program. Furthermore, the OOH coordinates an annual Tooth Tutor meeting. For the past two years, trainings have focused on development of cultural competence and motivational interviewing skills.

#### **Program Goal**

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. 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.

### **Participation of Schools**

There is no special qualification for a school to participate in TTP. Participation is voluntary. Interest in participating is dependent on the school determining the need for dental care access and wanting to improve oral health for the students.

The OOH provides TTP information to the districts' school liaisons at the Health Department, who then present the program to their district's school nurses. Word of mouth has been the best promotion of the program, although more recently many hygienists have learned about the program through the Vermont Dental Hygienists Association Facebook page.

### **Participation of Head Start Programs**

Head Start programs advocate for good oral health for their children, but have found dental care access difficult due to the young ages of the children and their method of payment (Medicaid or a state insurance program). The TTP is conducted the same for Head Start programs as for elementary schools. However, Tooth Tutors are funded for more hours by Head Start programs to assist the children and families. Head Start parents and staff are also more easily accessible to the Tooth Tutors.

Milestones in the expansion of TTP to include Head Start programs included:

- Champlain Valley Head Start received a small award to employ a Tooth Tutor as part of an RWJ Grant that ended in 2005.
- The HRSA SOHCS Grants were awarded to three Early Head Starts to employ Tooth Tutors ending in 2006.
- Vermont received a grant from the Association of State and Territorial Dental Directors (ASTDD) to conduct an Oral Health Forum in May 2005.
- From that forum, the Vermont Head Start State Collaboration Offices (VHSSCO), the Vermont Head Start Association (VHSA), and the Vermont Department of Health (VDH) developed an Oral Health Action Plan. A Head Start Forum Follow-up grant (\$1,500) was awarded from ASTDD and funded: (1) a continuing education course called "Welcoming the Young Child into your Practice," and (2) a "Lunch and Learn" program – a Tooth Tutor visited 10-12 dental offices during the lunch hour and provided instruction on how to work with young children.
- In 2006, the seven Head Start programs in Vermont received a Bureau of Head Start Oral Health Initiative Grant; the only statewide grant in the country. The funding provided a Tooth Tutor for each Head Start program. The three-year grant ended in November 2009.
- After the grant ended, Head Start programs continued funding the Tooth Tutor program using the American Recovery and Reinvestment Act (ARRA) funds for 2009/2010.
- Two Head Start programs received VDH "Dental Access Grants" for Tooth Tutors to assist linking parents of Head Start children to dental care. These grants also included money to help pay for dental needs above Vermont's adult Medicaid (MC) cap.
- Vermont was selected by the American Academy of Pediatric Dentistry (AAPD) for a Dental Home Initiative Grant and the State Launch took place in September 2009. An additional grant was received from AAPD to have Tooth Tutors provide "Lunch and Learns" for dental offices to assist the practices to treat young children.

### **Program's Target Population**

All children in participating schools and Head Start programs are served by TTP; the Tooth Tutors provide dental health education to all classes. Children identified without a dental home become the target group for intense efforts to establish a dental home. The target children are identified from the school health histories that ask for the name of their dentist and the date of their last visit.

## **Program Set-up and Services**

The TTP helps each participating school and Head Start program to contract a dental hygienist called the "Tooth Tutor." The program provides a list of dental hygienists who are able to serve as program providers to the schools and Head Start programs. This list is developed by OOH through recruiting efforts including information in the VDHA newsletter and Facebook page, word of mouth at meetings, and posting of opportunities on the VDHA website.

Each school or Head Start program selects and contracts a dental hygienist as a Tooth Tutor to implement TTP. For Head Start programs, 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. 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.

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 needed support for TTP, including all materials for dental screenings and teaching. Each year, the OOH holds an annual meeting/training for Tooth Tutors, which offers continuing education credit. As of November 2015, Tooth Tutors can join a closed group on Facebook.

A Tooth Tutor works closely with the school nurse, health liaison, classroom teachers and community dentists on the following two primary activities.

1. The Tooth Tutor assists families to establish a dental home for their children:
  - Assistance is provided in updating dental information in each child's school health file.
  - A target group (children who have not accessed dental care in the previous year) is identified using completed school health history forms.
  - Free dental screenings are provided to the target group (children need a permission slip or a "blanket permission" from their guardians).
  - Visits to local dentists are made to explain the program, answer questions about Medicaid, and assure that referrals are from local schools in their community.
  - Families are offered assistance to identify dentists for their children. Support is also provided to help families understand dental care needed by their children, answer questions related to dental appointments and being a dental patient, and address other barriers to dental care.
  - At the end of the school year, Tooth Tutors gather data from the local dental offices and fill out an online survey.
  
2. The Tooth Tutor delivers oral health education:
  - Education is provided to all classes in a participating school or Head Start program during the school year using the American Dental Association (ADA) *Smile Smarts* curriculum. Each Tooth Tutor tailors the education appropriately for the age of the children. The OOH provides Tooth Tutors with classroom dental education supplies.
  - Education is provided to the school staff. These workshops help staff understand the Tooth Tutor Program and enlist their support to reach the parents. The workshops emphasize the importance of oral health and the challenges some parents have in obtaining dental care for their children.

Historically, more than half of the target children have required only preventive care (e.g., dental prophylaxis/cleaning, fluoride treatment, and dental sealants) and the rest of the children require additional restorative dental treatment (e.g., fillings and crowns). The Tooth Tutors have been successful in enlisting dentists in the community to accept children into their practices for care.

The TTP also links with a state insurance program, called **Dr. Dynasaur**, which provides families in Vermont with medical and dental insurance. Dr. Dynasaur provides health care for children under the age of 18 as well as pregnant women. Eligibility for this insurance is based on family income level. The Tooth Tutors refer families to this program and help with enrollment if needed.

### **Program Partners**

Key TTP partners include the Dept. of Vermont Health Access, Vermont's Head Start programs, the local offices of the Vermont Department of Health, and Northeast Delta Dental. The Vermont State Dental Society and Vermont Dental Hygienists' Association have also been supportive of the program.

### **Program Outputs**

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. At the end of the school year, 56% of the children in the target group had accessed dental care. 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.

### **Program Outcomes**

The success of this program has had an impact on the oral health of Vermont children as evidenced by its wide acceptance and number of children linked to a dental home. Schools have moved away from the screening and referral system in favor of a targeted approach where resources are mainly focused on children without a dental home. Fifty percent of Vermont's children with Medicaid Insurance had a dental visit last year.

The TTP has built local infrastructure to support families in accessing dental care services. The program has established a process for schools and Head Start programs to target children without dental homes and lack professional dental care, enlisted community dentists to accept the target children into their practices, and leveraged resources from the Medicaid/EPSTDT and a state insurance program to reduce dental access barriers.

The 2013-2014 Keep Smiling Vermont Oral Health Survey of children in grades 1-3 statewide ([http://healthvermont.gov/family/dental/documents/oral\\_health\\_survey\\_2013-2014.pdf](http://healthvermont.gov/family/dental/documents/oral_health_survey_2013-2014.pdf)) showed that the TTP has reached children with high risk for tooth decay. Vermont's oral health programs are working. Compared to previous surveys, fewer children have experienced tooth decay and fewer have untreated decay.

- In comparing the oral health status children in grade 3 from the 2009/2010 survey to the 2013/2014 survey, the percentage of the children who were caries-free increased from 61% to 65% and the percentage of children with untreated decay decreased from 15% to 11%.
- The percentage of 8-year-old children with at least one sealant on a permanent molar increased from 43% to 64%.
- Vermont has greatly exceeded all of the Healthy People 2020 objectives to decrease the proportion of 6-8 year olds who have caries experience (target 49%) and have untreated tooth decay (target 26%), and to increase the proportion of 8-year olds who have dental sealants (target 28%).

### **Budget Estimates and Formulas of the Practice:**

- Currently the Office of Oral Health receives funding from General Funds, the Prevention Block Grant and the Maternal & Child Health Block Grant for the TTP.
- Compensation for the contracted dental hygienists (serving part-time as Tooth Tutors for the schools and Head Start Programs) is about \$30.00 per hour. Most of the Tooth Tutors' compensation is covered by MAC funds but a few are funded through grants and foundations. The schools determine how to use their MAC funds and Head Start programs find their own funding mostly through grants (with the Office of Oral Health assistance).
- Approximately \$10,000 are needed each year to reproduce and distribute program materials for all participating schools and Head Start programs (e.g., supplies for screening and education, manuals, forms, letters, training, and technical support).

### **Lessons Learned and/or Plans for Improvement:**

- A significant barrier in accessing care for the program's children who do not have a dental home is the lack of priority placed on routine, preventive care by their parents or guardians.
- It has been easier to get dentists to see the children for preventive dental services than emergency and restorative care (approximately half of the TTP participating children need only preventive care). In addition, while school nurses have always tried to get students with emergency dental needs into a dental office, they have not had adequate time to help students who need preventive care only.
- Most areas of Vermont have dentists who will accept Medicaid children, so the fact that children in the target group do not receive consistent dental care cannot be simply attributed to lack of providers in the area. Other important barriers for parents/guardians include transportation, literacy, fear, inability to take time off from work, and poor experiences with previous dental visits.
- Often, it is the dental offices where the Tooth Tutors work that will accept the program's target children. It has been helpful at times to be able to tell a child and a parent that the Tooth Tutor is the dental hygienist who will see the child at his/her dental appointment.
- TTP oral health education for students, school staff and parents connect them to the program goals and the Tooth Tutors' efforts.
- During the past couple of years, cultural competency training has been emphasized at the Tooth Tutor meetings; this came in response to a survey in which many of the Tooth Tutors mentioned communication barriers with the families of children in the target group as the greatest obstacle to achieving program objectives. It is our hope that these trainings will increase TT's awareness of cultural differences and provide tools to help them overcome cultural barriers for communication.

### **Available Information Resources:**

- TTP Information is available on the VDH Website:  
<http://healthvermont.gov/family/dental/tooth-tutor.aspx>
- Two videos for families of Head Start children or school-aged children describe how a Tooth Tutor will work with families to find a dentist and establish a dental home:  
[http://healthvermont.gov/family/dental/media\\_center.aspx](http://healthvermont.gov/family/dental/media_center.aspx)
- The Tooth Tutor Manual is a resource guide for the dental hygienists to implement the program within schools and Head Start programs. The manual describes the program and its services, contains the TTP protocol, gives letter and form samples, provides information about screenings and infection control and mandated reporting, and offers links to oral health resources. The manual is available online:  
<https://drive.google.com/folderview?id=0ByUT4-v9Az43dEdxVktoOWt6b0E&usp=sharing>
- The 2013-2014 Keep Smiling Vermont Oral Healthy Survey report provides a summary of the survey findings and serves as an overview of the oral health status of children in Tooth Tutor

Schools vs. non-Tooth Tutor schools:

[http://healthvermont.gov/family/dental/documents/oral\\_health\\_survey\\_2013-2014.pdf](http://healthvermont.gov/family/dental/documents/oral_health_survey_2013-2014.pdf)

### 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 Tooth Tutor Dental Access Program (TTP) began in 1997 and expanded over the years. 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 without a dental home. At the end of the school year, 56% of the children in the target group had accessed dental care. 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.

The 2013-2014 Keep Smiling Vermont Oral Healthy Survey of children in grades 1-3 showed improved oral health status compared to 2002-2003. Vermont has achieved and far exceeded the targets of the Healthy People 2020 oral health objectives.

#### **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 TTP pools resources from several programs to link children to dental homes. The program's dental hygienists (Tooth Tutors) are contracted mainly with Medicaid/EPSTD funding. The Department of Health provides training and supplies for the program. Schools provide working space and staff support for the Tooth Tutors. The state insurance program, Dr. Dynasaur, provides insurance coverage for the dental services needed by most of the TTP children.

#### **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?*

TTP was initiated as a pilot project in 1997 and has grown over the past 13 years. The program has a sustainable source of funding through EPSTD for contracting the dental hygienists as Tooth Tutors. It has the commitment of the Vermont Department of Health to continue to provide training, supplies and technical support for the dental hygienists in the program. Moreover, the TTP has received continuous support from the Vermont State Dental Society and by the Vermont Dental Hygienist's Association.

#### **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?*

TTP receives funding from the Medicaid Outreach Program and links with the Dr. Dynasaur state insurance program to provide dental care for eligible TTP children. Further, the program is a collaborative effort supported by school nurses, community dentists and dental hygienists, and the Vermont Department of Health. One of the most successful partnerships is with all Head Start Programs in Vermont contracting a Tooth Tutor.

**Objectives/Rationale**

*How has the practice addressed HP 2020 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 program aims to improve access to dental care by providing a dental home to school age and Head Start children. This goal addresses Healthy People 2020 oral health objectives in reducing dental caries experience in children, reducing untreated dental decay, increasing utilization of oral health system, and increasing preventive dental services for low income children. The program also addresses disparities described in the Surgeon General's Report on Oral Health and in the National Call to Action to Promote Oral Health.