Dental Public Health Activity

Descriptive Report Submission Form

The Best Practices Committee requests that you complete the Descriptive Report Submission Form as follow-up to acceptance of your State Activity Submission as an example of a best practice.

Please provide a more detailed description of your **successful dental public health activity** by fully completing this form. Expand the submission form as needed but within any limitations noted.

ASTDD Best Practices: Strength of Evidence Supporting Best Practice Approaches
Systematic vs. Narrative Reviews: http://libguides.mssm.edu/c.php?g=168543&p=1107631

NOTE: Please use Verdana 9 font.

CONTACT PERSON PREPARING THE SUBMISSION AND TO ANSWER QUESTIONS

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SECTION I: ACTIVITY OVERVIEW

Title of the dental public health activity:

Ready Set Smile

Public Health Functions*: Check one or more categories related to the activity.

"X"	**Assessment**
x	1. Assess oral health status and implement an oral health surveillance system.
	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
	4. Mobilize community partners to leverage resources and advocate for/act on oral health issues
	5. Develop and implement policies and systematic plans that support state and community oral health efforts
	Assurance
	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
	8. Assure an adequate and competent public and private oral health workforce
	9. Evaluate effectiveness, accessibility and quality of personal and population-based oral health promotion activities and oral health services
	10. Conduct and review research for new insights and innovative solutions to oral health problems

***ASTDD Guidelines for State and Territorial Oral Health Programs that includes 10 Essential Public Health Services to Promote Oral Health**

Healthy People 2020 Objectives: Check one or more key objectives related to the activity. If appropriate, add other national or state HP 2020 Objectives, such as tobacco use or injury.

"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

"X"	**Other national or state Healthy People 2020 Objectives: (list objective number and topic)**	

Provide 3-5 Key Words (e.g. fluoride, sealants, access to care, coalitions, policy, Medicaid, etc.) These will assist those looking for information on this topic:

School-based oral health, access to care, children services, prevention, children oral health, fluoride mouthrinse/tablet/varnish, silver diamine fluoride

Executive Summary: Complete after Section II: Detailed Activity Description. Please limit to 300 words in one or two paragraphs.

Provide a brief description of the dental public health activity. Include information on: (1) what is being done; (2) who is doing it and why; (3) associated costs; (4) outcomes achieved (5) lessons learned, both positive and negative.

Ready Set Smile (RSS) is a community-based organization whose mission is to prepare and empower all children to care for their oral health through education and preventive services. RSS provides on-site atraumatic dental services and classroom education for under-resourced children in nine Minneapolis schools serving children from pre-K through 8th grade. RSS has seen improvements in the dental health of the students it serves over four years. The clinical team: a collaborative dental hygienist oversees clinics, an advanced dental therapist provides evaluations and Interim Therapeutic Restorations (ITR), and community health workers (CHWs) serve as dental assistants, teach in the classrooms and serve as the liaisons to school staff and parents. Services include toothbrush polishing, scaling, sealants and fluoride varnish application (FVA). Two atraumatic techniques are used to control active caries: silver diamine fluoride (SDF) and interim therapeutic restoration (ITR). Children with urgent needs are referred to a home dental clinic for comprehensive care.

RSS uses the New England Survey System (NESS) tablet technology to track each student's oral health and caries data. At baseline 48% of the population served has untreated decay. In the first three years the number of children with active caries was reduced by almost 30% and the number of teeth with decay was reduced by 25%. The atraumatic techniques are successfully controlling caries.

The average annual cost per child is $350.00.

Challenges we face are that 35% of the children served are uninsured. Outreach to families whose children have urgent needs is difficult at best. CHWs require on-the-job training to do their work effectively. CHWs who reflect the communities served are an asset. Our goal is not to perform comprehensive care in the schools, but to break the chain of a preventable disease with preventive services and education.

SECTION II: DETAILED ACTIVITY DESCRIPTION

Provide detailed narrative about the dental public health activity using the headings provided and answering the questions. Include specifics to help readers understand what you are doing and how it's being done. References and links to information may be included.

Complete using **Verdana 9 font.

Rationale and History of the Activity:

1. What were the key issues that led to the initiation of this activity?

Founded in 2013 by private practice dentists, Ready Set Smile (RSS) operates on the premise that prevention is paramount in the delivery of dental services to under-resourced children and families. The vision is for every child in our community to have an opportunity to be free of dental disease.

The key observation that served as the inspiration for RSS started with our yearly participation in Give Kids a Smile. This American Dental Association (ADA) program provides free volunteer services for school age children one day a year. Our private practice was a proud participant for >10 years through our service to one local school. However, we started to notice that some of the same kids were coming back year after year and it became very clear that we could not "drill and fill" our way out of the problem of childhood decay. Our "lightbulb moment" was the realization that we needed to get upstream and give kids the tools, through education and prevention, to take control of their dental health and PREVENT them from needing urgent dental services in the future. RSS was started in 2013 with the simple but ambitious vision to have a community in which EVERY child has the opportunity to be free of dental disease…like the children in our private practice.

RSS now provides on-site dental services and education for under-resourced children in nine Minneapolis schools. We have specifically targeted schools that serve under-resourced children because that is where the need is the greatest. In RSS schools, the percentage of children who qualify for the National School Lunch Program (NSLP) ranges between 68–98%. Further, these schools report a rate of children who are homeless or highly mobile of 17–45%. These schools also have a high percentage of students who are new arrivals to our country however, for privacy reasons; the children are not specifically identified. This percentage can vary from 0 to 20%. It is easy to imagine that children in these schools have significant obstacles to the preventive dental services that we know are effective. In 2018 we will serve over 1200 children.

Call to action: Based on data collected with our New England Survey Systems (NESS) tablet tracking system in which we track the health of every tooth of every registered student, we know that, at baseline, a staggering 48% of the children have untreated decay when they enter the program; this in a community with fluoridated water. Since 2013 we have reduced the number of children with active decay by almost 30% and reduced the number of teeth with decay by 25%. Data clearly demonstrate the longer a child remains in the program the lower the number of teeth with untreated decay. We are also very proud of the fact that as we treat kids with active decay, we are also giving them the tools to prevent further decay. Our data show that there is minimal development of new decay in children.

Fluoride Varnish Application (FVA): Based on national best practices, the fluoride varnish protocol is for children to have two to four varnish applications per year. This number of FVAs is determined by their Caries Risk Assessment (CRA). Our unique CRA is based on clinical factors, health history and if a child reports drinking tap water. It is not based on poverty or a parent interview. Essentially all of our children are in poverty and interviewing parents is rarely possible.

Children with the presence or history of decay: **High**
Child with no history of decay but positive for one or more other risk factor: **Moderate**
Child with no history of decay and good oral hygiene: **Low**

Our FVA protocol is as follows: Every six months FVA is placed by clinical staff in our school clinics during routine preventive care appointments. For children with low risk, these two treatments are the

only FVAs they will receive. For children of high or moderate risk, Community Health Workers (CHWs) provide a third FVA and possibly even a fourth FVA, if the school year length permits. In Minnesota, CHWs are considered non-dental health providers. As health providers, they can be trained to apply fluoride varnish on the teeth of children and teens. CHWs must successfully complete the free online training from the Smiles for Life: Module 6 Caries Risk Assessment, Fluoride Varnish and Counseling. They must also be registered as CHW providers with the Minnesota Department of Human Services and undergo training with the supervision of RSS's volunteer medical director. Interestingly, they cannot apply fluoride varnish in our dental clinics as non-dental health providers, but they can in the halls of our schools under the orders of our medical director. All treatments are documented in the NESS system where consent has been documented.

RSS can be reimbursed for the CHW's fluoride procedures under the medical code for FVA. Ironically the Minnesota statute does not allow more than two FVAs per year by dental providers, but allows four FVAs per year ordered by a medical provider. Reimbursement is minimal and remains an arduous process to establish through medical credentialing.

Silver Diamine Fluoride (SDF): SDF (tradename: Advantage Arrest) has been used at RSS since its release by Elevate Oral Care in the spring of 2015. SDF is used to arrest incipient carious lesions and in the interim therapeutic restoration (ITR) protocol to either arrest or slow the progress of active caries. A separate consent for the use of SDF is established with parents/guardians at registration. Approximately 90% of families consent to SDF.

If by exam/evaluation a tooth has an incipient lesion, the area is isolated and SDF is applied for 1-2 minutes. The SDF is dried from the tooth with cotton and the child rinses and spits. Areas of SDF treatment are then covered with fluoride varnish. Charted lesions are re-treated a second time using the same protocol at the next recall appointment. Arrested decay is charted as diagnosed.

In Minnesota, a dental hygienist can apply SDF. On clinic days without the presence of an advanced dental therapist (ADT) or volunteer dentist, the collaborative dental hygienist will place SDF on a suspicious area. The child will then return to clinic on another day to be evaluated by the ADT or a volunteer dentist.

In the ITR protocol, decay is removed with hand instrumentation to the best that conditions permit. SDF is applied to arrest any remaining decay with the same protocol as above. A glass ionomer conditioner and restoration is then placed in the preparation. Fluoride varnish is placed over the final glass ionomer restoration. For interproximal lesions, a T-band may be used. Carious lesions that may lead to pulpal exposure are treated with SDF only.

2. What rationale/evidence (may be anecdotal) did you use to support the implementation of this activity?

Barriers to dental care for families with low resources are multiple and devastating. Even when children are identified with urgent painful decay, parents cannot navigate the system to get their children treatment. Even transportation to a dental office (if they had dental coverage) would be a challenge for many families. That is why one of the foundations of RSS is that we go to the children. We set up our educational programs and our simple "dental office" in the school so there is ready access.

For many of the children we serve, school is the safest most secure place they know. They suffer from the toxic stress of poverty, homelessness, food insecurity, and immigration uncertainty. In school, decay can be controlled without drills and needles. Children are happy to see RSS as they develop warm relationships with health care providers in their school. It is critical to not present children with difficult procedures in their school environment where there is no immediate family support. School staff has reported to us that atraumatic care in their school is important to them. A teacher recently stated that she loves our program, because kids return to her classroom happy and ready to get back to work. They are not disoriented because their face is numb nor have a piece of gauze hanging from their mouth due to a recent extraction.

A rubric is used to select a school. Points are given for different categories. The school must have over 60% of the children on the NSLP. When interviewed, the principal must be fully committed to the program and agree to blend us into the school systems. School rosters need to be accessible. Email access to staff is necessary for communication with school nurses, social workers and teachers. Logistically, a room with a sink can be dedicated or a temporary room with a lockable storage closet works well. Availability of school phones is an asset for caller ID purposes when families are called. Based on scores from different categories, a school is chosen.

In all RSS schools, attending after-school events increases enrollment and parent involvement. CHWs set up tables at carnivals, conference days and family nights to register and educate families in both elementary and early childhood programs. It is important to have staff that reflects the community being served. Having a Caucasian dental hygienist sitting at a table in an all Somali school might inhibit families from registering. A Somali speaking CHW or even a Somali volunteer puts families at ease and they flock to the table. One of the secrets to our success is that RSS becomes a part of the culture of the school.

Children with urgent needs still face barriers to treatment even with a referral system in place. The protocol for our referral system is that children identified with urgent needs have their families called by CHWs. The initial call is made from the school for caller ID purposes to encourage parents to pick-up their phone. Only 35-40% of calls result in a connection and of those; only 10-15% respond by bringing their child for comprehensive care. Some parents get as far as making an appointment, but then do not show-up or follow-through at clinic appointments where comprehensive care or even sedation dentistry has been scheduled.

After three attempted phone calls the list of urgent children are delivered to the school nurse or social worker. At this point, we let go of this time consuming process. RSS knows that the school-based services are the only care some children will receive and it does improve their oral health.

RSS is breaking the chain of oral disease for these children, as they learn that oral health care providers support their good health and that they can proactively care for their own health. Education in their classroom brings a new level of awareness to oral health and prevention.

3. What month and year did the activity begin and what milestones have occurred along the way? (May include a timeline.)

Feb. 2012: Following GKAS, idea to launch Ready Set Smile considered by private group practice owned by women dentists.

Spring 2013: Board of Directors established
Articles of Incorporation and Bylaws written
Applied for 501(c) 3

May 2013: Ready Set Smile received 501(C) 3 status

Sept. 2013 Entered our first school - Jefferson Community School
Dental services and education
Employees: Dental Therapist who also served as Executive Director (ED)
Dental Assistant
2 volunteer dentists

January 2014 Entered our second school - Loring Community School
Hired collaborative dental hygienist to oversee clinics

May 2014 Full time Executive Director hired
Hired our first Community Health Worker

Summer 2014 Started Oral Health CHW Internship Program which continues to this day

Sept 2014 Entered our third school - Sojourner Truth Academy

January 2015 Hired second Community Health Worker

Summer 2015 Hired clinical director- retired University of Minnesota dental hygiene instructor established clinic protocols. (She was employed for 2 years)

Sept 2015 Continued with three schools; Added education in early two early childhood programs
Hired third Community Health worker

Sept 2016 Entered fourth and fifth schools -Stonebridge and Ascension

Feb 2017 Added three early childhood programs with dental services; including

toddlers and parents
Hired fourth Community Health Worker

May 2017 Current Executive Director hired
Hired fifth Community Health Worker

Sept 2017 Entered three new schools, Prodeo, Hiawatha Academies Morris and Northrop
Added two early childhood programs, Joyce Preschool, Center for Excellence and the Jeremiah Program

Nov 2017 Entered ninth school Benaadir - all Somali School

Summer 2018 Three new early childhood programs will be added, expanding the parent education program.

September 2018 One additional Somali charter school will be added.

Current plans for 2019 are to hold steady and dig deeper to increase enrollment in our current schools.

The sections below follow a logic model format. For more information on logic models go to: W.K. Kellogg Foundation: Logic Model Development Guide

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	OUTCOMES

1. What resources were needed to carry out the activity? (e.g., staffing, volunteers, funding, partnerships, collaborations with various organizations, etc.)

1. Funding from foundations and private donors
2. Clinic Staff: Collaborative Dental Hygienist: Oversee Clinics
   Advanced Dental Therapist (ADT) provides evaluations and atraumatic ITR
   Supplemental volunteer dentists work when there is no ADT
   Collaborative Dental Assistant who works under the Collaborative RDH
   Community Health Workers serve as dental assistants, charting scribes, classroom educators, case managers, liaisons to parents, teachers, school nurse, social worker, insurance navigators.
3. Portable dental chairs, stools and trays (3 of our schools have dedicated rooms with fixed dental chairs; no compressor or vacuum)
4. Dental instruments and supplies
5. Technology for data collection, charting and record keeping
6. Pre-K - 8 schools serving low income populations
7. Office space for administrative activities, storage of portable equipment and dental sterilization room
8. Office equipment

INPUTS	**PROGRAM ACTIVITIES**	OUTPUTS	OUTCOMES

2. Please provide a detailed description the key aspects of the activity, including the following aspects: administration, operations, and services.

1. Children are registered for services
2. Dental services in onsite portable clinics including routine preventive and atraumatic caries controlling procedures.
3. Fluoride Varnish Application at 3 month intervals to fall and spring visits provided by CHWs outside the classroom.
4. Oral health education to classrooms pre-K-5th grade. We do not teach in the higher grades at this time. All education is done by CHWs. Third graders are tested to evaluate progress.
5. Staff attends after-school events such as back-to-school orientations, family nights, conference days, etc. This is where we meet face-to-face with parents to increase enrollment

and educate on our program. It is critical at these events to have staff or volunteers who reflect the ethnic culture of the school's population.
6. Billing of procedures
7. Education of CHWs
8. Managerial and administrative oversight of staff activities

INPUTS	PROGRAM ACTIVITIES	**OUTPUTS**	OUTCOMES

3. What outputs or direct products resulted from program activities? (e.g., number of clients served, number of services units delivered, products developed, accomplishments, etc.)

1. Low resource children who may otherwise not receive dental services are met with services where they are.
2. Children are educated in their classrooms about healthy lifestyles, diet and nutrition, the science of fluoride and sealants and oral hygiene.
3. Parents are informed of the oral health status of their children
4. Parents learn about the importance of oral health for children
5. The entire school community indoctrinated on the importance of oral health
6. Reimbursement for services received from Medicaid
7. Awareness of oral health in the greater community
8. This school year close to 1200 children were served with dental services
9. Over 2500 children received classroom education on oral health science and lifestyle
10. Over 100 parents of preschoolers received education on raising a caries free child

RSS is collaborating with the Univ. of Minnesota Dental School to do a thorough cost analysis. A graduate student is working on this as their capstone project.

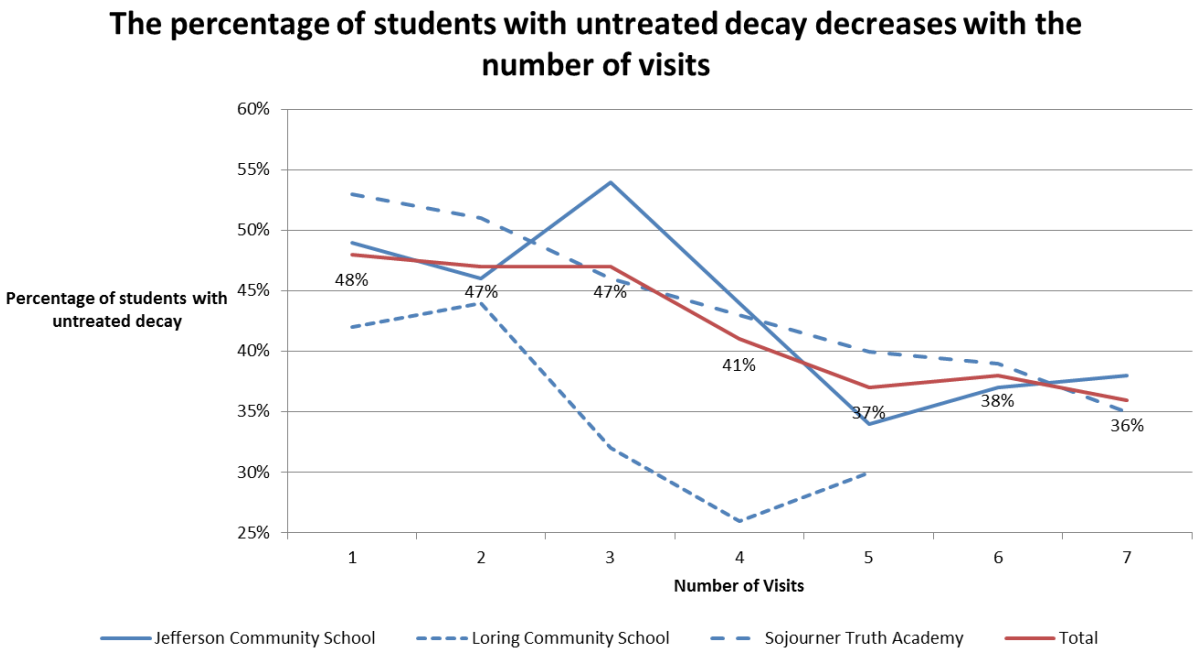
INPUTS	PROGRAM ACTIVITIES	OUTPUTS	**OUTCOMES**

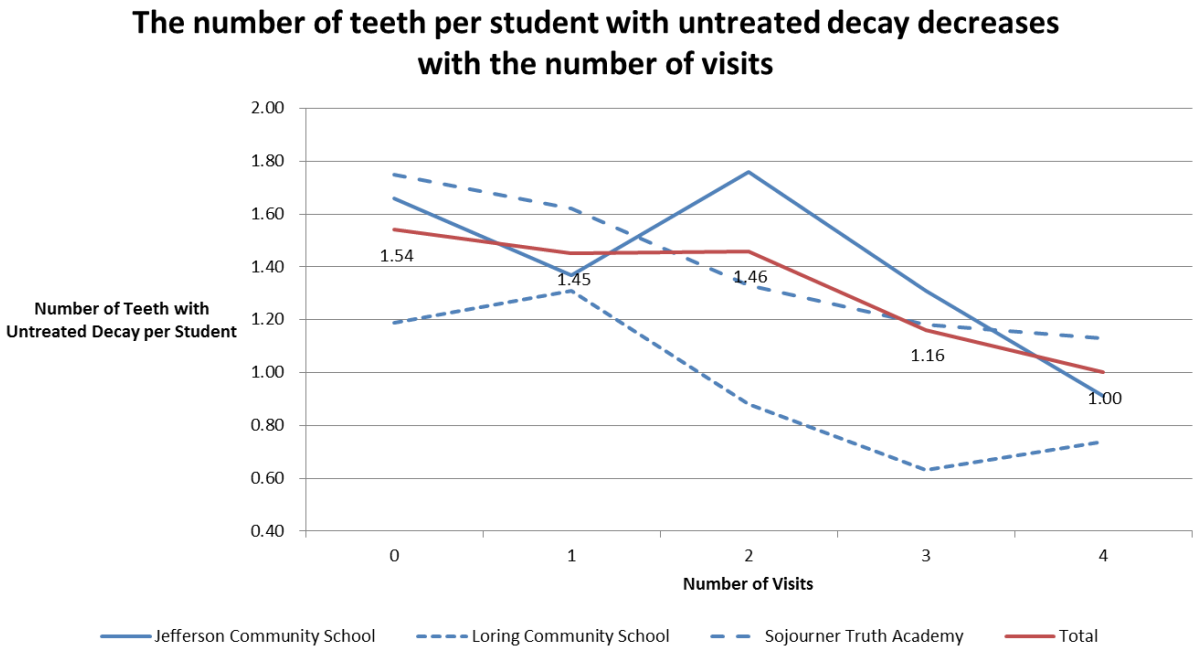
4. What outcomes did the program achieve? (e.g., health statuses, knowledge, behavior, care delivery system, impact on target population, etc.) Please include the following aspects:
    a. How outcomes are measured
    b. How often they are/were measured
    c. Data sources used
    d. Whether intended to be short-term (attainable within 1-3 years), intermediate (achievable within 4-6 years), or long-term (impact achieved in 7-10 years)

1. Data reported annually through NESS. Raw data is inputted from tablet clinical exam entries. Data is entered every 6 months for each registered student. No data is entered for a FVA visit, except for a notation that it was completed.
2. Over three years 30% reduction in the number of children with untreated decay
3. Over three years 25% reduction in the number of teeth with active caries
4. The longer a child stays in our program the lower their decay rate

We report these as trends and are proud of the results. Each year we almost doubled our population. The results might be even more dramatic, but these populations are highly mobile. A school may lose as many as one third of their student population in a given year.

RSS collaborated on a grant with the Univ. of Minnesota Dental School that will allow for a comprehensive evaluation of our program. This will include pre and post-test on both behavior and response to services.





Budgetary Information:
NOTE: Charts and tables may be used to provide clarity.

1. What is the annual budget for this activity?

Our budget for this year is $620,000. However $213,000 of this budget is uncompensated care related to Medicaid write-offs and uninsured children. Minnesota is in 49th place for Medicaid reimbursement rate for children's dental services. Each year our budget has changed dramatically due to continuous growth from a startup position. We are constantly training and evolving.

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

- About 50% of our budget is program expenses, including our uncompensated care
- About 40% of our budget is employee expenses

- The remaining 10% is administrative, development fundraising, occupancy and management expenses.
-

3. How is the activity funded?

- Philanthropic Donations: 35%
  The patients of the founding practice and local private practice corporations have proven to be generous supporters.
- Foundation support - 40%
- Medicaid reimbursement- 25%

4. What is the plan for sustainability?

Our goal is to move Medicaid reimbursement for services to 50% of our expenses. If more children were covered and if our reimbursement for classroom education expanded, we could reach this goal. The more children we can serve in a single school will improve our efficiency. That is why we will spend a year increasing our influence in our current schools, rather than adding more schools.

The 50% gap could easily be divided evenly between foundations and philanthropy.

Lessons Learned and/or Plans for Addressing Challenges:

1. What important lessons were learned that would be useful for others looking to implement a similar activity? Was there anything you would do differently?

Community Health Workers who reflect the population of the schools are the strength of our program. When children in unfamiliar circumstances hear the voice of their home language spoken or see someone who looks like them, their entire state-of-mind changes. They are ready to trust, accept and learn.

An oral health curriculum for CHW training needs to be established. There are seven institutions in Minnesota who train CHWs and none of them have an oral health curriculum. This makes on-the-job training necessary for an organization that relies on this workforce. We are working hard to develop an online website with modules to educate on oral health.

Dental hygienists in Minnesota may apply SDF. This was accomplished through an RSS staff member going to Minnesota State Board of Dentistry meetings when SDF was discussed and advocating for this to be added to the scope of practice for dental hygienists. The policy passed, with our influence.

Having an ADT is powerful in school-based program.

2. What challenges did the activity encounter and how were those addressed?

A workforce of oral health CHWs is greatly needed. Extensive on-the-job training is provided to develop our CHW staff. The skills they must learn are broad: from motivational interviewing to charting teeth to the biology of caries to case management. We use modules developed for other oral health professionals. We use online college courses and hire guest educators. We are in the processes of developing a curriculum for Oral Health Community Health Workers. It is costly for an emerging nonprofit to provide all this training, but a workforce of oral health CHW does not exist.

Expectation should be low on parents response rates to their children's' oral health condition. Other school-based programs have reported similar frustrations. Precious resources can be wasted trying to get parents to take their children for comprehensive care. In our first year, we attempted to report negligence to the proper county children's welfare agency for children with infection and pain. The attorneys were unwilling to consider our cases because they pale in comparison to other issues they cover. It is best to stick to a protocol and then pass the information to your school's health staff or social worker. This is why we must get ahead of the curve on this preventable disease.

A financial hardship is that 35% of the children served are uninsured. Most of these children are either undocumented or have undocumented relative(s). In an attempt to decrease the number of uninsured children, we have had our CHWs trained as insurance navigators. In September 2018, they will begin reaching out to uninsured families to help them register or renew their medical and dental insurance. Online training for CHWs is provided through the Minnesota Department of Human Services.

To achieve significant enrollment, sending forms home is not fruitful. Staff must be active at school events and have a regular presence in the schools. Families can be easily overwhelmed by registration forms and consents. They frequently need support to fill them out. Some parents are illiterate. Face-to-face contact with families is critical.

CHWs were slated to start navigating insurance registration in March 2018 however; the CHWs felt they needed more training even though they were certified by the state of Minnesota. One of our partner clinics (a Federally Qualified Clinic) is helping the CHWs by giving them free "intern" time over the summer with their experienced navigators so they can develop fluency in the process. Our CHWs will begin navigating insurance registration in September 2018.

Available Information Resources:

Share any models, tools, and/or guidelines developed by the program specifically for this activity that may be useful to others seeking additional information. Hyperlink resources if possible.

Graphs included above are based on data input into the NESS.

TO BE COMPLETED BY ASTDD	
Descriptive Report Number:	26008
Associated BPAR:	Fluoride in Schools
Submitted by:	Ready Set Smile
Submission filename:	DES26008MNreadysetsmile-2018
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