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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PROVIDE CONTACT INFORMATION FOR ONE ADDITIONAL PERSON WHO COULD ANSWER QUESTIONS REGARDING THIS PROGRAM

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SECTION I: ACTIVITY OVERVIEW

Title of the dental public health activity:

Children's Dental Services

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.
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

***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
X	OH-3	Reduce the proportion of adults with untreated dental decay
X	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
X	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
X	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:
Access to care, planning with partners, emergency department, non-traumatic dental conditions

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.

Children's Dental Services (CDS) is an independent, non-profit agency that, since 1919, has dedicated itself to improving the oral health of low-income children by making affordable and culturally-targeted dental care and education available. There continues to be a lack of dental providers who will see uninsured and publicly insured patients across Minnesota, which has led to a crisis in access to dental care for low-income families. CDS' innovative history began at its inception when it was the first dental program in Minnesota to target free care to orphaned children with no health care safety net. This tradition was recognized by the Minnesota community when it awarded CDS the 2006 Mission Innovations Award recipient from the Minnesota Council of Nonprofits. CDS' clinical staff on-site includes dentists, hygienists, advanced dental therapists, dental therapists, and dental assistants along with administrative staff including MNSure Navigators, public health assistants, billing specialists and receptionists.

CDS' innovative approaches include its site-based care within public schools and Head Start centers, its leadership in implementing teledentistry, and the effective use of mid-level providers in both permanent and portable care locations. CDS follows an evidence-based, public health model in its provision of care, utilizing its resources efficiently by adhering to strict controls, and by providing high quality, necessary care (i.e., non-cosmetic) to as many patients as possible. CDS provides care with 80 professional clinicians and more than 35 interns at any given time every weekday, two evenings per week, and every Saturday. This is in contrast to many providers, who treat on select days each month, only in certain regions. CDS serves children from birth until the age of 26 and pregnant women. CDS accepts all forms of insurance and offers a sliding fee scale and free care.

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?

   There continues to be a lack of dental providers who will see uninsured and publicly insured patients across Minnesota, particularly in rural communities, which has led to a crisis in access to dental care for low-income families. Additionally, there are a lack of dental providers offering culturally-targeted oral health care and education across Minnesota. (https://www.mprnews.org/story/2018/09/17/minnesota-refugees-oral-health-decay-dentist) In addition to providing free and reduced-cost care to patients, CDS employees speak over 22 different languages and hail from as many countries, giving them first-hand knowledge of the various cultures represented in the communities served by CDS. Also, all CDS staff receive cultural competency training.

   Another issue is that roughly half of children insured by public programs are unable to receive dental services until there is an emergency, such as bleeding of the gums, pain in gums and/or teeth, infection, etc. A year-long study of seven hospitals in the Twin Cities region traced 10,325 emergency room visits to toothaches, abscesses or other untreated dental problems.

   Finally, Minnesota's Medical Assistance reimbursement rate for dental services is among the lowest in the nation. The state currently ranks 49th out of the 50 states in the nation for reimbursement rates of children needing dental care according to a study released by the Health Policy Institute of the American Dental Association (MN Dental Association) https://www.mndental.org/news/2018/06/minnesota-dental-association-seeking-to-put-teeth-in-medicaid-reimbursement-for-states-children/)

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

   CDS' mission is to improve the oral health of children from families with low incomes by providing accessible treatment and education in our diverse community. Dental disease remains the most common, chronic childhood disease. In Minnesota less than 40% of children on public programs see a dentist each year. According to the Health Resources and Services Administration (HRSA) there is a significant shortage of public health dental professionals in inner city regions of the Twin Cities as well as rural Greater Minnesota, particularly the Central and Southwestern areas.

   HRSA defines dental shortage geographic areas as those that meet one of the following conditions: 1) have a population to full-time-equivalent dentist ratio of at least 5,000:1; 2) have a population to full-time equivalent dentist ratio of less than 5,000:1 but greater than 4,000:1 and unusually high needs for dental services; or 3) dental professionals in contiguous areas are over utilized, excessively distant or inaccessible to the population. There are serious funding challenges for safety net providers, such as CDS, as Minnesota counties and cities in which CDS is proposing to provide care continue to experience record funding shortages. These factors lead to a public dental health crisis in these regions, resulting in minimal access to dental services for uninsured patients and those covered by public insurance programs (Medicaid and MNCare).

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

   Children's Dental Services arose from the 1918 efforts of the Woman's Committee of the Council of National Defense (now the Woman's Community Council). Called into action because approximately 25% of Minneapolis children suffered from malnutrition, this Council elicited $1,000 in seed funding from Mr. J. L. Record of the Minneapolis Steel and Machinery Company to establish

the South Town Children's Dental Clinic. On January 1, 1919, this clinic became a member of the Council of Social Agencies (currently the United Way) receiving support from the local Community Fund. Minneapolis Children's Dental Clinics Association arose from the South Town Children's Clinic and was incorporated on February 4, 1954. From this Children's Dental Services Association was incorporated on December 30, 1965. Finally, in 1985, the program changed its name to the current Children's Dental Services.

In 1994, Children's Dental Services (CDS) merged with the Women and Children's Dental Program of the Minneapolis Department of Public Health. The Women and Children's Dental Program established school-based and Head Start-based dental clinics in areas accessible to low-income children. Today CDS significantly expands on the roots of its original programs by providing comprehensive, quality dental care to underserved children all across Minnesota. CDS is the only community dental services agency in Minnesota dedicated exclusively to providing oral health outreach, education, and treatment to children and pregnant women, and is an expert in the provision of culturally targeted dental care, telehealth services and the integration of novel workforce initiatives into the provision of care.

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.)

CDS provides dental services with a combination of 80 professional clinicians and more than 35 interns at any given time every weekday, two evenings per week, and every Saturday. CDS trains 200 interns (including a combination of 16 advanced and dental therapy interns, 36 dental hygiene interns, 36 dental assisting interns, 15 community health worker (CHW) interns, 30 pediatric medical residents and 67 pre-dental, law, public health, nursing, college, and vocational interns) in a variety of innovative service delivery programs annually to further its accessibility to underserved populations of Minnesota. CDS employs administrative staff including managers, assistant managers, public health assistants, billing specialists and a grant-writing team. CDS billing specialists work closely with insurance companies and patients to be sure insurance reimbursement is occurring and that write-offs for patients on medical assistance is happening accurately.

Significant grant funding is necessary to support CDS' activities. CDS' grant-writing team applies for 5-10 grants per month and CDS' management team, including Executive Director and Assistant Director, work to inform partners and community members of CDS services across the state of Minnesota with outreach, in-person meetings, and applicable board and legislative work.

CDS prides itself on unique and innovative partnerships that strengthen the safety net for Minnesota's low-income and underserved families. CDS partners with county public health departments, community WIC programs, Head Starts, school districts, state departments, cultural minority community leaders, at-risk youth programs, shelters, and drop in centers to make sure that no community is left unserved.

INPUTS	**PROGRAM ACTIVITIES**	OUTPUTS	OUTCOMES

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

CDS' innovative approaches include its site-based care within public schools, Head Start centers, and an array of community-based settings, its leadership in implementing telehealth within public health dentistry, and the effective use of mid-level providers in both permanent and portable care locations. CDS follows an evidence-based, public health model in its provision of care, utilizing its resources efficiently by adhering to strict controls, and by providing high quality, necessary care (i.e., non-cosmetic) to as many patients as possible. Costs of dental services vary as with any full-service practice, but Minnesota's Medical Assistance reimbursement rates for dental services are currently among the lowest in the US.

CDS is a pioneering leader in bringing dental therapy to Minnesota, which directly impacts the number

of patients able to access care, thereby reducing the number of ER visits. According to MN statute 105A.105 Subdivision 2, a dental therapist "is limited to primarily practicing in settings that serve low-income, uninsured, and underserved patients or in a dental health professional shortage area (HPSA)."

CDS reduces oral-related visits to the emergency room by having walk-in appointments and emergency appointments available Monday-Saturday at its headquarters clinic. This initial emergency visit, completed at a CDS dental clinic, as opposed to a hospital-based setting, helps begin to build a dental home for patients to continue their preventive and restorative care with CDS. CDS' clinical staff on-site includes dentists, hygienists, advanced dental therapists, dental therapists, and dental assistants. There are typically 6-7 dental chairs occupied at any time. In addition to emergency dental appointments to address tooth specific concerns, CDS also partners with multiple local hospitals to provide comprehensive dental care for children 6 and younger under general anesthesia. The availability of emergency care through CDS clinics, and of more intensive hospital-based dental treatment options for young children, help reduce the number of families that repeatedly return to the ER for chronic oral health pain that cannot be addressed in a traditional clinic.

CDS implements significant strategies to reduce costs, including: a) addressing material needs through the precept of "reduce, reuse, recycle", b) increasing self-sufficiency through strategic use of in-house skill, in-kind donations and installation of environmentally sustainable energy systems, c) following evidence-based practices in improving the efficacy of the dental team, and d) implementing cost-savings and health reform through a new provider workforce model based on the implementation of Advanced Dental Therapists. CDS currently operates out of over 700 clinical locations across Minnesota.

CDS actively targets high-risk children by screening and referring over 14,000 patients each year at schools, community buildings and outreach events. Screenings are conducted by trained and calibrated dental hygienists and assistants, and lay staff, such as CDS public health assistants, unlicensed dental assistants and community health workers.

CDS has a successful medical/dental integration pilot initiative with family medicine residents in North and Northeast Minneapolis that includes prenatal dental and medical care coordination and increased provision of co-located medical and dental care on-site at University of Minnesota Physicians Broadway Family Medicine Clinic and Mills Health Free Clinic.

CDS is the largest provider of school-based dental care in Minnesota. CDS' robust partnership with school districts and their nurses, social workers, and school-based health centers across Minnesota has increased accessibility to affordable dental care and has made dental care an integral part of care in more than 700 schools. CDS deploys collaborative practice hygienists to rural communities first for triage and assessment, who then work closely with their supervising dentist through teledentistry to determine treatment needs. This model is extremely cost effective and allows CDS to utilize its dentists as efficiently as possible, creating even more opportunities for patients to access care. And, in addition to providing a full range of preventive care, CDS is one of the only programs in Minnesota that offers restorative dental care within schools. This comprehensive model allows for treatment completion on-site in schools. Rates of sealant placement in the schools CDS serves is 3 times as high as those it does not, according to the most recent state sealant survey.

CDS is active in state policy, helping advance its seminal 2008 dental therapy legislation, and working with legislative partners and stakeholders to pass telehealth legislation in Minnesota during the 2016 legislative session. A recent innovation within CDS is the utilization of dental therapists in the provision of telehealth services, which has increased efficiency and decreased overall cost of care. Together CDS dental therapists supported the expansion of dental care to over 3,000 additional patients via telehealth services in 2017, and a total of 12,000 patients in 2018.

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.)

CDS serves over 37,000 patients annually at 700 different satellite sites and permanent clinics across Minnesota including the seven county Twin Cities Metropolitan area, across Northern Minnesota including Bemidji, Duluth, Grand Rapids and surrounding communities, the Iron Range, International Falls, on the North Dakota border in Fargo and in Moorhead, in Central Minnesota, including St. Cloud and surrounding communities, and Southern Minnesota, including Faribault and Worthington, and

dozens of other locations where public health dental resources fail to meet the demands of a growing and increasingly diverse population

CDS also implements care initiatives targeting underserved and at-risk communities including immigrants and refugees, infants, toddlers and pregnant women at WIC clinics, pregnant and parenting teens, homeless, those with drug-addiction, LGBTQ youth, Native American children and pregnant women, and those who are wheel-chair bound, deaf, blind or have emotional disabilities.

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)

CDS serves over 37,000 patients a year, including over 1,500 emergency appointments and over 1,000 hospital treatments under generally anesthesia. By diverting families away from emergency rooms, CDS is not only able to address the immediate needs of the patient, but also establishes a dental home, eliminating subsequent ER trips. Families who utilize CDS' option for emergency appointments often return for regular preventive care, and CDS encourages all patients to return for follow up examinations and any necessary preventive or restorative work.

CDS provides approximately 90% of all sealants placed in Minnesota schools and places more than 100,000 annually. CDS' retention checks yield that over 95% of its sealants are effective in preventing decay on the more than 30,000 children treated by CDS who received sealants in 2018.

In 2018, approximately 95% of patients who came for an emergency appointment accessed follow up treatment at CDS and approximately 80% completed necessary follow up treatment. Furthermore, CDS' implementation of sealant programs and routine dental care in community settings reduces the amount of overall dental decay, therein reducing the need for emergency services. Per claims data from Delta Dental of Minnesota, the largest payor of MA claims in the state, CDS is one of the two largest providers of MA dental services. Per Delta claims data, in 2018 CDS provider the largest number of Silver Diamine Fluoride applications in Minnesota.

Beginning in 2002 CDS has evaluated all of its programs through a patient satisfaction survey, implemented with the assistance of professional program analyst, Laurie L. Meschke, Ph.D. In 2004 Dr. Meschke spearheaded a comprehensive evaluation of CDS programs. In 2004 CDS also received a grant from the United Way through which a comprehensive, ongoing program evaluation blueprint for all CDS programs is being established. Patients and partners are asked to complete pre- and post-visit satisfaction surveys to help determine program successes. Additionally CDS utilizes the dental software, Open Dental, to manage all patient charts, records and information and has the ability to verify outcomes such as number of patient visits, related health outcomes, and patient demographics. Furthermore, CDS does monthly and ongoing reports to gather data for various reasons including funding sources and partner feedback. CDS project goals and overall work is able to make significant impact short-term (1-3 years) as well as continue to impact and improve overall health and well-being for the communities it serves long-term (7-10+ years). Evaluations from partners and patients are ongoing for CDS programs.

Evaluation results are used to compile a comprehensive program evaluation report. Evaluation is used on each of CDS' programs and projects, in the middle of the project period and at the end of the project. Annually, CDS includes a combination of these results and program outcomes in its agency-wide reports as well as reporting to individual funders and partners. Utilizing these reports, CDS is able to determine the need to implement any programmatic change. For example, programs and enhancements that are implemented are largely a result of feedback gathered through the evaluation process. Immediate success and areas of improvement are shared with CDS' partners and stakeholders. CDS long-term evaluation results are disseminated via CDS' annual report, presentations, and other publications.

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

1. What is the annual budget for this activity?

   $4,735,025.00

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

Total Automobile Expense	21,700.00
Bank Service Charges	50.00
Dental Laboratory	500.00
Dues and Subscriptions (a portion of this supports CDS' EHR software)	2,200.00
Total Equipment	185,900.00
Total Insurance	22,950.00
Licenses and Permits	8,500.00
MinnesotaCare Tax	41,500.00
Total Personnel and Related	3,336,600.00
Total Professional Fees (a portion of this supports CDS' EHR software)	36,125.00
Total Supplies	205,000.00
Printing and Reproduction	12,000.00
Postage and Delivery	16,000.00
Telephone and Internet (a portion of this supports CDS' EHR software)	6,000.00
Training and Meetings	17,000.00
Uncategorized Expense	1,000.00
Utilities	20,000.00
Building Expenses	800,000.00
Miscellaneous	2,000.00
Total Expense	**4,735,025.00**

3. How is the activity funded?

Total Direct Public Support (Individual and Foundation Support)	1,241,500.00
Total Indirect Public Support (United Way and Other Federated Campaigns)	74,000.00
Total Government Support	687,525.00
Interest Income	3,000.00
Total Program Fees	2,729,000.00
Total Income	**4,735,025.00**

4. What is the plan for sustainability?

CDS has significant expertise in managing grants and ensuring the continuity of programs, services, and relationships with other agencies. A hallmark of CDS services is that they are exceptionally cost effective. As such CDS is successful in making programs self-sustaining within approximately 12 to 18 months of operation. As a Critical Access Provider for the State of Minnesota, CDS is eligible for increased Medical Assistance payment reimbursements, which enhance insurance reimbursements by 20% per patient.

CDS has a proven track record of successfully sustaining gains in patient care expansion by 1) leveraging funds and in-kind donations; 2) utilizing Expanded Functions and dental interns to reduce costs of care; and 3) reinvesting in Critical Access funds received for the expanded care it provides. Critical Access Dental Payment Programs help support safety net dental clinics with a high volume of Minnesota Health Care Program participants in order to help expand access to care. For more information, please visit http://www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=dhs16_147765

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?

   CDS has found that strong collaborations with community partners and schools are essential to reducing the need for emergency dental care. By actively providing preventive services, screenings, and offering onsite dental care within public schools, Head Start centers, and community resource buildings, CDS is able to establish accessible dental homes for families that would otherwise wait to address dental concerns until the pain required immediate attention.

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

   One challenge that CDS has faced is that of easily extracting data from its electronic health records, dental software. CDS has had to work closely with the software to set up the kind of queries it needs to successfully run reports that extract specific and accurate data. This continues to be a work in progress but CDS now has an established relationship with its dental software company's technical service and they have been really flexible with setting up reporting mechanisms that match CDS' needs.

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.

CDS has multilingual, culturally appropriate oral health education that can be distributed upon request and is frequently used in community outreach across Minnesota. CDS has also worked closely with the Minnesota Department of Health (MDH) to create and distribute a "Dental Therapy Manual," which offers guidelines and support for dentists or other states interested in increasing access by implementing an alternative dental provider into the work force. This document is also available to the public and can be requested through either CDS or the MDH.

TO BE COMPLETED BY ASTDD	
Descriptive Report Number:	26005
Associated BPAR:	The Role of Oral Health Workforce Development in Access to Care; Emergency Department Referral Programs
Submitted by:	Children's Dental Services
Submission filename:	DES26005MNchildrendentalservices-2019
Submission date:	September 2015
Last reviewed:	March 2019
Last updated:	March 2019