Dental Public Health Project Descriptive Report Form

Please provide a description of your organization's successful dental public health project by completing this form. Add extra lines to the form as needed but stay within **word limits**.

Please return the completed form to Lori Cofano: lcofano@astdd.org

Name of Project
Children's Dental Services WIC and Early Childhood Collaborative Project
Executive Summary (250-word limit))
Children's Dental Services (CDS) expanded services and dental education across Minnesota through partnerships with agencies that host the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) programs, Early Head Start programs, Early Childhood Dental Network (ECDN), Early Childhood Family Education (ECFE) Programs, Minnesota Department of Health (MDH), and other primary medical providers targeting care to pregnant women and infants. CDS and partners developed a system for identifying pregnant women in need of oral health services and referred them to appropriate and accessible services. This project has been conducted through three phases: logistical planning, implementation, and evaluation. Goals accomplished included: 1) increasing the number of infants and pregnant women across Minnesota receiving regular dental care to over 710,000; 2) demonstrating improved oral health outcomes for 10,000 infants and pregnant women; 3) improving quality and sustainability of project activities through the use of evidence based practices, continuous quality improvement, and participation in ongoing training; and 4) collecting data from families, providers, and community-based organizations to identify barriers in developing integrated dental and medical systems and evaluating the impact of system changes. CDS has multiple staff providing services, education and materials. Its Dental Director oversees clinical staff including Advanced Dental Therapists, Licensed Dental Assistants, and Registered Hygienists who provide comprehensive dental treatment and oral health instruction. Associated costs with this project include salaries, travel, equipment and supplies, printing and communications totaling over $471,494 annually.
Name of Program or Organization Submitting Project
Children's Dental Services

Essential Public Health Services to Promote Health and Oral Health in the United States

Place an "X" in the box next to the Core Public Health Function(s) that apply to the project.

X	Assessment
X	Policy development
X	Assurance

http://www.astdd.org/state-guidelines/

Project submissions will be categorized by the Core Public Health Functions on the ASTDD website.

Healthy People 2030 Objectives

List Healthy People 2030 objectives related to the project.

- OH-01 Reduce the proportion of children and adolescents with lifetime tooth decay.
- OH-02 Reduce the proportion of children and adolescents with active and untreated tooth decay.
- OH-03 Reduce the proportion of adults with active or untreated tooth decay.
- OH-07 Increase the proportion of oral and pharyngeal cancers detected at the earliest stage.
- OH-08 Increase the use of the oral health care system.
- OH-09 Increase the proportion of low-income youth who have a preventative dental visit.
- OH-10 Increase the proportion of children and adolescents who have dental sealants on 1 or more molars.
- AHS-02 Increase the proportion of people with dental insurance.
- AHS-05 Reduce the proportion of people who can't get dental care they need when they need it.
- NWS-10 Reduce consumption of added sugars by people 2 years and over.

This information will be used as a data resource for ASTDD purposes.

Keywords for sorting the project by topic.

Provide **three to five** keywords (e.g., access to care, children, coalitions, dental sealants, fluoride, policy, Medicaid, older adults, pregnant women, etc.) that describe the project. Keywords are used to categorize submissions.

Access to care: pregnant women (prenatal/perinatal) services, access to care: children services, women, infants and children, WIC, acquiring oral health data, non-traumatic dental conditions, underserved, community-based care, Early Head Start, prevention: pregnant women, prevention: early childhood tooth decay

Detailed Project Description

Project Overview
(750-word limit)

1. What problem does the project address? How was the problem identified?

There continues to be minimal access to dental services for low-income pregnant women and infants in Minnesota because of a lack of dentists who see patients covered by public programs

a lack of sliding fee care, the high cost of treating tooth decay for those who must pay out-of-pocket because they lack commercial insurance, poor public transit infrastructure particularly in rural communities, and a lack of dental providers offering culturally appropriate care. The lack of dental health services available to low-income pregnant women and their infants has led to disturbing statistics: poor children have twice as many dental caries as their more affluent peers, their disease is more likely to be untreated, and poor children suffer nearly 12 times more restricted activity days than children from higher income families. Untreated dental concerns in pregnancy can lead to gingivitis, high levels of tooth decay, and pregnancy tumors. 17% of rural Minnesota women are without health insurance compared to 15.9% of urban women, and infants of rural women are more likely to experience preterm births, low birth weight and cesarean sections.

CDS met with legislators, stakeholders, its board of directors, community members, patients, local foundations and community organizations across Minnesota, who all expressed concern about the significant lack of dental providers and the need for oral health education within their communities. This led CDS to seek funding to expand its care network across Minnesota, particularly in rural areas.

2. Who is the target population?

At-risk and underserved infants, early childhood-aged children, and pregnant women of all ages across Minnesota, with an emphasis on inner city regions of the Twin Cities as well as rural areas in Northeastern and Southwestern Minnesota.

3. Provide relevant background information.

CDS conducted meetings to formalize partnerships with several community agencies including WIC clinics, ECFE sites, ECDN and other primary care programs to establish protocols for data collection with its primary evaluating partner, MDH. CDS and partners 1) finalized plans for the provision of clinical services and shared use of networks and space, and 2) developed a protocol for the system of referrals that directed program participants to appropriate services, including oral health services and education, in accordance with existing referral systems used within partner agencies.

After meeting with community agencies that host WIC and Head Start partners, CDS met with a randomized sample of patients to receive input regarding how best to inform program participants of new and expanded services within target locations. Meanwhile, CDS purchased the required equipment for expanding care across the state, including two sets of portable dental equipment. Existing CDS equipment inventory and donated equipment committed to this project were also utilized. The project evaluation team designed data collection and analysis protocols and gathered feedback from advisory committee members and other stakeholders.

CDS developed culturally/linguistically appropriate outreach materials. Outreach materials were designed to provide information for a wide demographic, including individuals with low literacy and those who speak English as a second language. CDS has tested all outreach materials on an array of cultural focus groups and adapted materials based on this feedback. CDS provided its care team training and support to conduct extensive outreach among diverse populations of pregnant and perinatal women across the state. Efforts were targeted specifically to areas with low rates of coverage and/or access to dental services. CDS' dental team, including supervising dentists, advanced dental therapists, and hygienists provided comprehensive dental treatments at partner agencies that host WIC, EHS, ECFE, ECDN and other primary services across the state. Services included cleanings, examinations, fluoride, sealants, x-rays, extractions, crowns, fillings, pulpotomies and one-on-one oral health education. CDS also utilized telehealth dentistry in its provision of services. CDS utilizes asynchronous teledentistry through its electronic dental records, Open Dental, through which it is able to lower the number of in-person appointments

necessary for patients, and target planned visits to occur with greater efficiency, thereby eliminating several barriers to accessing services. Providers are able to review charts remotely, including x-rays and hygienist notes and create treatment plans so that the next time a patient is served it can be for essential restorative dental care on site in settings easily accessible to them. CDS referred patients to other dental providers as necessary. CDS expanded its hospital care program and these services were available to program participants. Because CDS has among the most expansive portable dental care program in the nation (https://amchp.org/database_entry/childrens-dental-services/?utm) it already developed best practices for increasing access to care for underserved populations while decreasing per patient cost through program efficiencies and innovative practice models using auxiliary personnel and non-traditional partnerships.

4. Describe the project goals.

1) increase infants and pregnant women across Minnesota receiving regular dental care to over 10,000, or 25% over baseline; 2) demonstrate improved oral health outcomes for 10,000 infants and pregnant women, or 25% over baseline; 3) improve quality and sustainability of project activities through the use of evidence based practices, continuous quality improvement, and participation in ongoing training; and 4) collect data from families, providers, and community-based organizations to identify barriers in developing integrated dental and medical systems for Minnesota low-income infants and pregnant women and evaluate the impact of system changes. These goals were identified based on partner and stakeholder feedback, and strategic planning through which CDS' capacity was determined and targeted expansion was planned.

Resources, Data, Impact, and Outcomes
(750-word limit)

1. What resources were/are necessary to support the project (e.g., staffing, volunteers, funding, partnerships, collaborations with other agencies or organizations)?

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. CDS heavily relies on the use of volunteers and interns to provide affordable, state-wide care. CDS trains 200 interns annually (including 16 advanced 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 to further its accessibility to underserved populations of Minnesota.

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 Start programs, school districts, state departments, community colleges across Minnesota, cultural minority community leaders, at-risk youth programs, shelters, and drop-in centers to make sure that no community is left unserved. As part of the Perinatal, Infant, Oral Healthcare Quality Improvement grant, through HRSA, CDS allocated .8 FTE Dental Therapist, 1.5 FTE Dental Hygienists, .05 FTE Project Director, 1.0 FTE Project Manager, 0.5 FTE Network Liaison, .35 FTE Data Collection Specialist, and .15 FTE Data Evaluator to this project (?).

2.
a). **What process measure data are being collected (e.g., sealants placed, people hired, etc.)?**

CDS' computerized database of patient and program records will track:

- The increase in the percentage of women who have received oral health care during pregnancy

- The increase in the percentage of infants who have received oral health care by age one, including children with special health care needs (CSHCN)
- The increase in the percentage of women who received preventive services during pregnancy (i.e., oral health education and anticipatory guidance, including development of self-management goals and oral health care)

b.) **What outcome measure data are being collected (e.g., improvement in health)?**

CDS had short-term (see above) and long-term goals including:

- Reduce the prevalence of oral disease in pregnant women and infants
- Reduce oral health disparities in the MCH community
- Reduce ECC throughout early childhood; including CSHCN
- Increase utilization of preventive dental care and restorative services among pregnant women
- Establish a dental home for infants (by age one)
- Reduce dental expenditures for the MCH community
- Establish a statewide data system/source that drives quality improvement and makes "real time" data available

c.) How frequently are data collected?

CDS regularly develops monthly, quarterly, and annual reports to gather data for various reasons including funding sources and partner feedback.

3. How are the results shared?

Immediate success and areas of improvement are shared with CDS' partners and stakeholders across Minnesota. CDS' long-term evaluation results are disseminated via CDS' annual report, presentations, and other publications.

Budget and Sustainability
(500-word limit)

Note: Charts and tables may be used.

1. What is/was the budget for the project?

$471,494.00 annually

- Total Personnel Cost: $251,100
- Total Fringe Cost: $22,902
- Total Travel Cost: $18,450
- Total Portable Equipment Cost: $70,402
- Total Teledentistry Equipment Cost: $32,620
- Total Supplies Cost: $25,000
- Total Other: $3,520
- Total Indirect Costs: $47,500

2. How is the project funded (e.g., federal, national, state, local, private funding)?

Annually, this activity is funded by:

- HRSA funds: $250,000
- Non – HRSA funds: $173,994
- In-Kind: $47,500

3. What is the sustainability plan for the project?

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 the gains in patient care expansion by 1) leveraging funds and in-kind donations; 2) utilizing Expanded Functions, mid-level dental providers and dental interns to reduce costs of care; and 3) reinvesting Critical Access funds received for the expanded care it provides.

Lessons Learned
(750-word limit)

(a) What lessons were learned that would be useful for others seeking to implement a similar project?

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 schools, Head Start centers, and community resource buildings, CDS can establish accessible dental homes for families that would otherwise wait to address dental concerns until the pain required immediate attention. CDS' extensive work across Minnesota has made it very well-known. Being a "known commodity" in these locations, particularly in rural Minnesota, has led to increased word-of-mouth referrals, which has helped get CDS' *foot in the door* in WIC, community, and public health locations in almost every county in the state.

(b) Any unanticipated outcomes?

One challenge that CDS has faced is that of easily extracting data from its electronic health records (EHR), dental software. CDS has had to work closely with the EHR software, "Open Dental" 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 flexible with setting up reporting mechanisms that match CDS' needs. Additionally, almost always, oral health electronic health records, do not "talk-to" medical records, and community clinic (ex: WIC) electronic records, which makes it tricky to gather data about a patient's "whole health." The unanticipated outcome here is that CDS learned how to better run its Open Dental reports and worked closely with Open Dental techs to establish additional reporting mechanisms that were more specific and accurate. Additionally, as CDS began this project, it realized the number of patients needing urgent care was even more extensive than originally thought due to increasing workforce shortages across Minnesota, and it therefore expanded its project significantly to include trauma-informed care, hospital based and endodontia services.

(c) Is there anything you would have done differently?

CDS found that it needed to find new sites and additional clinic days when the need exceeded the sites CDS had set up in the first year of the grant, therefore it would have set up more sites from the onset. Additionally, CDS learned that it needed to use remote translating services when the rural Minnesota dental teams needed languages that were only offered at CDS' headquarters- CDS would have set this up from the onset.

Resources

List resources developed by this project that may be useful to others (e.g., guidelines, infographics, policies, educational materials). Include links if available.

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 available to the public and can be requested through either CDS or the MDH. CDS has a WIC-specific brochure it uses across Minnesota that is available upon request.

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