



**Dental Public Health Project
Descriptive Report Form**

Name of Project
Cavity Free at Three
Executive Summary
<p>Cavity Free at Three (CF3) is a statewide program housed at the Colorado Department of Public Health and Environment (CDPHE) Oral Health Unit (OHU). The OHU works to advance the health of Coloradans by using a comprehensive approach to facilitate oral health preventive interventions identified by and tailored to community needs. This is achieved by fostering collaborative partnerships and utilizing data to measure impact and guide the implementation of evidence-based strategies and innovative approaches.</p> <p>CF3 trains medical and oral health professionals, clinic staff, and health professional students to provide preventive oral health care for children from birth to age five and pregnant women. CF3’s mission is to decrease oral disease and reduce oral health disparities among populations at high risk. The CF3 curriculum includes the current oral health standards of care, oral health education, the six essential services of the CF3 model, and methods for interprofessional collaboration and service integration to improve oral health outcomes. The CF3 six essential services include the caries risk assessment, clinical evaluation, fluoride varnish application, anticipatory guidance, self-management goal setting, and establishing dental homes.</p> <p>The program uses CF3 master trainers to provide peer-to-peer training, and technical assistance is provided by CF3 staff. Master trainers are medical or dental health professionals who champion oral health in their clinical practice. The CF3 training and technical assistance model focuses on clinic-wide implementation, resulting in increased clinic capacity for implementation and supporting sustainability of CF3 over time, particularly during periods of high turnover.</p>
Name of Program or Organization Submitting Project
Colorado Department of Public Health and Environment, Oral Health Unit

Detailed Project Description

Project Overview

In a 2007 [Centers for Disease Control and Prevention \(CDC\) report](#), oral health status trends showed tooth decay (cavities) in primary (baby) teeth of children aged 2 to 5 years increased from 24% to 28% between 1988 and 1994, and 1999 and 2004. In 2004 and 2007, the [Colorado Basic Screening Survey](#), an intraoral screening of kindergarten and third-grade students, also showed alarming rates of tooth decay.

Analysis of this data demonstrated a clear need for increased early preventive oral health services. During CF3 program development, data revealed that children ages birth through 3 are more likely to see a medical provider for their well-child checks than to visit a dental provider. CF3 staff identified the well-child visit as an area of opportunity for providing preventive oral health services, which research strongly shows prevent early childhood caries and tooth decay. The well-child visit was shown to be a good connection point to make dental referrals for patients.

The most recent oral health data from [Colorado's 2022-23 Basic Screening Survey](#) continues to point to evidence that CF3 is needed. Cavities remain the number one chronic disease in children, with potential developmental, economic, and social ramifications. Colorado's geographic landscape contributes to varied access to oral health services. For example, 77% of Colorado's rural or frontier counties are designated as [Dental Health Professional Shortage Areas](#), and 46% of children in Colorado have experienced tooth decay by the time they reach kindergarten.

Research by Dr. Patricia Braun shows that fluoride varnish is a simple and effective way to prevent early childhood caries, reducing decay in primary teeth by an average of 37%, with four applications of fluoride varnish by age 3.¹ Due to this research on the preventive benefits of fluoride varnish, its application has been integrated as one of the six essential services of the CF3 program.

Target populations

The audiences for CF3 training and technical assistance are medical and dental professionals, clinic staff, and health professional students. The implementation of CF3 within a medical or dental clinic setting increases access to preventive oral health services for Colorado's pregnant women and children ages 0 - 5.

Project goals

CF3 trains medical and dental professionals, clinic staff, and health professional students to provide preventive oral health services for young children and pregnant women. Ultimately, the program's goals are to decrease dental disease for this population and to help remove barriers to access in Colorado communities. The CF3 program utilizes the [Colorado Priority Community Geographic Index](#) to identify communities with low access to oral health care, and tracks locations of clinics trained to identify communities where expanded access to CF3 would be

¹ Braun, P. A., Widmer-Racich, K., Sevick, C., Starzyk, E. J., Mauritson, K., & Hambidge, S. J. (2017). Effectiveness on Early Childhood Caries of an Oral Health Promotion Program for Medical Providers. *American journal of public health*, 107(S1), S97–S103. <https://doi.org/10.2105/AJPH.2017.303817>

beneficial. The OHU conducts oral health surveillance using the Basic Screening Survey to track the status of children's oral health in Colorado.

1. What lessons learned would be useful for others seeking to implement a similar project, including what did not work?

The CF3 program has evolved over the past 18 years in response to CF3 programmatic evaluation data (compiled through CF3 Readiness Assessments, training surveys, and technical assistance clinician feedback), and changes in research. The most frequently expressed hesitation about implementing CF3 has been from medical clinicians wondering how preventive oral health services will integrate within well-child checks due to the range of topics already required. However, with CF3's resources and technical assistance, clinics can successfully implement and sustain these services.

The early CF3 training model focused on training individual clinicians across multiple organizations, rather than separately training full clinic teams, an approach that did not always lead to sustainable implementation. CF3 shifted to a clinical quality improvement and organizational change management approach, where the entire clinic staff is trained, with clear guidance on roles and an identified clinic workflow. This clinic-based approach allowed CF3 staff to better guide technical assistance and implementation success. CF3 staff also work directly with the clinic billing staff to ensure barriers in billing and documentation are addressed.

The early CF3 training was nearly four hours in length, resulting in many challenges to participation and logistics. Based on clinician feedback and evaluation data, the training was updated and condensed in 2018 to be provided in under two hours. For medical clinics, this shortened length of training is logistically easier to coordinate, resulting in high rates of participation.

The overarching purpose of the CF3 Readiness Assessment is to assess a clinic's readiness to implement the Cavity Free at Three model and identify areas where the CF3 team can provide technical assistance to support that process. The CF3 Readiness Assessment data collection is led by CF3 staff and the identified clinic champion, who gathers information on the clinic's well-child visit workflow, staffing model, patient and payor demographics, and medical-dental integration training history. CF3 staff encourage clinics to understand the needs of their community, so that outreach and implementation of CF3 can be tailored to community needs, strengths, and opportunities. For example, of Colorado's 64 counties, 47 are designated dental health professional shortage areas. Interprofessional collaboration, like what is promoted in CF3, can help communities with dental workforce shortages gain access to preventive oral health services.

Another component of the CF3 Readiness Assessment allows the clinic champion to evaluate what is motivating at all levels of an organization and tailor messaging around implementation for buy-in. For example, clinic leadership may value the monetary reimbursement of providing oral health services, while providers may value the impact on overall health and how patients feel about the integration of preventive services. While clinics do not receive funding from the CF3 program, the training and technical assistance is offered at no cost. In addition, medical clinics are eligible to receive reimbursement for the delivery of preventive oral health services during well-child visits.

The CF3 program involves a multidisciplinary group of stakeholders and key messengers, including medical and dental professionals, payors, community members, community-based organizations, state agencies, and other oral health partners participating on an advisory board to provide input into program direction. The CF3 Advisory Board has been active since 2015.

A key strategy to build the oral health workforce includes connecting with professional training programs. The CF3 program benefits from its location within CDPHE's Oral Health Unit, a leader in Colorado's oral health network. The CF3 program utilized existing partnerships with Master Trainers and other community oral health champions to connect and build relationships with health professional training programs. CF3 training is offered annually to the following programs:

- University of Colorado Dental School
- University of Colorado Pediatric Nurse Practitioner Program
- University of Colorado Child Health Associate/Physician Assistant Program
- Pueblo Community College Dental Hygiene Program

The CF3 program also conducts outreach to professional organizations, such as Colorado's Primary Care Association (Colorado Community Health Network), the Colorado chapter of the American Academy of Pediatrics, Colorado Dental Association, and the Colorado Dental Hygiene Association, which promote training and implementation.

Resources, Data, Impact, and Outcomes

The resources necessary to support this project include:

- Funding:** CF3 was founded through an initial investment from seven health foundations in Colorado. In addition, the OHU has received one CDC grant and two HRSA grants that furthered the development and evaluation of CF3. The OHU continues to support the CF3 program through funds allocated annually from the state budget, through the [Oral Health Community Grants Program](#) implemented by the OHU. These investments created the necessary infrastructure for CF3 to become and remain a high-quality program.
- Staffing and support:** CF3 is housed within the OHU, which provides financial, programmatic, and evaluation infrastructure support. CF3 is well supported with dedicated staff members who have experience in oral public health and clinical quality improvement.
- Partners:** The OHU has been able to establish key partnerships across medical and dental organizations, professional training sites, community organizations, state agencies, and other oral public health stakeholders that work to address barriers to care. These key partners are essential when connecting with local communities and collaborating with CF3 to train local clinics and organizations. The OHU established key partnerships with other programs to further integrate oral health messaging and referral into community-based frameworks. Examples of established partnerships include WIC, Healthy Child Care Colorado, and Head Start programs.
- CF3 Master Trainers:** CF3 utilizes a clinician-to-clinician model, leveraging a robust network of master trainers to facilitate training across Colorado. These medical and oral health professionals serve as community champions and subject matter leads, providing the peer-to-peer engagement and technical guidance necessary for clinics to successfully implement the CF3 model.
- Cavity Free Care Network:** Established through HRSA's Improving Oral Health Integration grant funding, the Cavity Free Care Network of Colorado (also housed in the OHU) has enhanced the CF3 program and collaboration for program improvement, expansion, and sustainability.

2. What process measure data (counting) were collected, such as the number of sealants placed or people served?

Currently, the CF3 team follows up with trained clinics to collect data about the goal that the clinic chose during the readiness assessment. The goals that clinics can choose include the number of oral health evaluations/screenings, the number of patients receiving fluoride varnish, and the number of dental referrals written. Clinics may select the method of data collection, including claims or EHR data.

- a. CF3 collects pre-training data, including providers' demographic information and current oral health services implemented in their practice (i.e., oral health evaluation, counseling, and fluoride varnish application). Post-training data, including the level of CF3 implementation, facilitators and barriers to implementation, and technical assistance needs, are collected approximately two months after CF3 training. The CF3 Readiness Assessment and follow-up technical assistance provide additional context and clinic-level data that inform evaluation of the program and reach.
- b. The CF3 program maintains a list of trained clinics and uses that data to inform training outreach in underserved communities in Colorado.

3. What outcome measure data (results) were collected, such as improvement in health?

The CF3 staff and clinics meet three times over the course of the first-year post-training for technical assistance and data review. Data collected is compared to the established clinic goal and CF3 staff provides technical assistance around these metrics as needed. Unfortunately, due to clinic staff turnover, maintaining the technical assistance meetings and data collection can be challenging.

- a. In 2022, the CDPHE epidemiologist and OHU staff used population-level data to identify communities that experience a high rate of oral disease and barriers to accessing oral health care. These data were then compared to CF3 program data to better understand CF3's reach to populations experiencing oral health inequities. This information informs outreach efforts.
- b. The CF3 team is currently drafting a CF3 Impact Report for release later in 2026, recognizing nearly 20 years of implementation of the program. In addition to including the training and technical assistance data, the report will incorporate data on fluoride varnish application by medical providers in Colorado through a claims data analysis. In addition, CF3 staff are working with Denver Health to include a cost-benefit analysis to understand how fluoride varnish is connected to later oral health treatment needs.

4. How frequently were data collected?

The CF3 staff collects process data from clinics through the readiness assessment pre-training (baseline) and collects post-training implementation data during technical assistance meetings at 1 month, 6 months, and 12 months post-training.

5. How were the results shared?

The CF3 program produced the [Cavity Free at Three: CDC Evaluation 2013–2018](#). These results were shared publicly, and the report is still available upon request.

Budget and Sustainability

1. What was the budget for the project?

The CF3 program blends funding from state and federal sources. CDPHE is a recipient of HRSA's Networks For Oral Health Integration Within the Maternal And Child Health Safety Net ([NOHI](#)), with a budget of \$425,000 annually for a 4 year period (2024-2028). This funding supports CF3 staff working on the Cavity Free Care Network activities. The CF3 program is also supported by the OHU's funding from the state general fund source. OHU allocates approximately \$85,000 annually towards CF3 staff, CF3 Master Trainers, and supplies.

2. How was the project funded, such as governmental or philanthropic funding?

- a) The initial funders for CF3 were the Caring for Colorado Foundation, the Colorado Health Foundation, The Colorado Trust, the Delta Dental of Colorado Foundation, Kaiser Permanente, and the Rose Community Foundation. CF3 also received federal funding from HRSA's NOHI, Grants to States to Support Oral Health Workforce Activities, the Perinatal and Infant Oral Health Quality Improvement Initiative, and previous funding from the CDC's Division of Oral Health.
- b) The CF3 program has been supported by state funding received by the OHU since 2013, as a key strategy of the Oral Health Community Grants Program.

3. What was the sustainability plan for the project?

- a) Colorado legislation enacted the Oral Health Community Grants Program to be implemented by the OHU. This program includes CF3 and allows the OHU to dedicate state funding resources to maintain implementation of the program.
- b) The OHU has built subject-matter expertise in oral health prevention strategies through dedicated CF3 staff funded by state and federal sources, allowing for efficient and effective implementation of the CF3 program.

Resources

Cavity Free at Three maintains a database of resources on the [ColoradoOralHealth.org](https://coloradooralhealth.org) website. Additional resources are available upon request.

Resources include:

- [A public data dashboard.](#)
- Patient-facing educational material (e.g., educational pamphlet in nine languages).
- An oral health education flipbook (visual aid tool for medical offices for birth to age 5).
- [Caries risk assessment.](#)
- Self-management goal sheet.
- [Contact form for training requests and technical assistance.](#)

Resources coming soon via collaboration with the Cavity Free Care Network project funded by HRSA:

- Cavity Free at Three e-module.
- Cavity Free Youth e-module (for ages 6 - 20).
- Cavity Free Care Network oral health literacy e-module.

- Cavity Free Care Network flipbook (visual aid expanded to include information relevant to ages 6 - 20).

Contact for Inquiries	
Name:	Leah Brunner, MPH
Title:	Cavity Free at Three Outreach and Education Coordinator
Agency/Organization:	Colorado Department of Public Health and Environment
Address:	4300 Cherry Creek Drive South Denver, CO 80246
Phone:	303-692-2269
Email:	leah.brunner@state.co.us
Second Contact for Inquiries	
Name:	Ashleigh Kirk, MSW
Title:	Oral Health Unit Manager
Agency/Organization:	Colorado Department of Public Health and Environment
Address:	4300 Cherry Creek Drive South Denver, CO 80246
Phone:	303-692-2269
Email:	ashleigh.kirk@state.co.us

To Be Completed By ASTDD	
Descriptive report number:	07009
Associated BPAR:	Integrating Oral Health Care into Primary Care
Submitted by:	Colorado Department of Public Health and Environment, Oral Health Unit
Submission file name:	DES07009CO-cavity-free-three
Submission date:	April 2026
Last reviewed:	May 2026
Last updated:	May 2026

