

Integrating Oral Health Care into Primary Care

Five Successful, Long-Standing, Statewide Programs
Providing Care for the Maternal and Child Health Population



Program Spotlight

Cavity Free at Three

Overview

Cavity Free at Three (CF3) is a statewide program of the Colorado Department of Public Health and Environment (CDPHE), Oral Health Unit (OHU) that trains medical professionals and oral health professionals to provide preventive oral health care for young children from birth to age 5 and pregnant women. CF3's mission is to decrease the incidence of oral diseases and reduce oral health disparities among young children and pregnant women at high risk for oral diseases. The CF3 model includes six services: caries risk assessment, clinical evaluation using the knee-to-knee exam, fluoride varnish application, anticipatory guidance, self-management goal setting, and establishment of a dental home.

The program uses CF3 master trainers to provide peer-to-peer technical assistance (TA), including training, to medical professionals and oral health professionals. Master trainers are either clinical champions from various health professions or regional oral health specialists

(ROHSs) contracted through local public health agencies. The four ROHSs are primarily dental hygienists covering approximately 25 counties, mostly rural and frontier areas, across Colorado.

In 2019, based on rates of requests for retraining due to medical professional turnover in clinics, CF3 shifted its TA model from a clinician-focused approach to a clinic-based approach. The clinic-based approach increased TA to further build clinic capacity and infrastructure to sustain CF3 over time, particularly during periods of high staff turnover.

CF3 uses a readiness assessment that is a vital tool to assess a clinic's capacity to implement the program. This assessment was expanded in 2019 to focus on key factors that contribute to the successful implementation of CF3 in clinics. The readiness assessment guides CF3 staff in supporting clinics through organizational change management to ensure that sustainable processes and procedures are integrated into clinic operations.



“The CF3 TA is provided using a peer-to-peer model. A nurse practitioner, physician, dentist, or dental hygienist leads the training, which creates support for the clinicians who are being trained since they can learn from a professional peer, as well as reinforcing CF3 skill building.”

—CF3



Inception and Early Years

In 2007, in response to trends in Colorado showing increases in dental caries rates among children ages 2 to 5, six local health foundations established CF3. A group of oral health champions with scientific and academic expertise developed the first CF3 training curriculum, which was initially offered at the Area Health Education Center in the University of Colorado's School of Medicine. Reimbursement codes for medical professionals to bill Medicaid for oral health evaluation and fluoride varnish application were created in 2009. The CF3 training curriculum became one of two programs that meet the education requirement for medical professionals to bill Medicaid for oral health evaluation and fluoride varnish application and to receive reimbursement from Medicaid.

In 2013, CF3's administrative home moved from the University of Colorado to CDPHE, OHU. Establishing OHU as the new administrative home for CF3 was strategic, because CF3's mission aligns with OHU's mission and programmatic efforts, and CF3 was able to leverage OHU's resources for program growth, including integrating clinical-quality-improvement efforts into CDPHE. CF3 was founded as a collective effort; over time, it has built an oral health network across the state that continues

to support and champion the mission of reducing oral health disparities among young children and pregnant women at high risk for oral diseases.

Funding

During the 2018 legislative session, Oral Health Colorado, the state oral health coalition, provided state lawmakers with compelling data on issues related to oral disease prevalence and lack of access to oral health care. As a result, the Long Bill Appropriation Act was passed. The bill appropriates state funds annually to CDPHE's OHU to implement CF3 and other preventive oral health programs (e.g., community water fluoridation programs, dental sealant school programs). Currently, CDPHE receives approximately \$800,000 annually from state general funds.

Historic CF3 funders have included 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 receives (or has received) federal funding from the Health Resources and Services Administration (e.g., Grants to States to Support Oral Health Workforce Activities, Perinatal and Infant Oral Health Quality Improvement Initiative).

Notable Program Strengths

- Colorado's oral health statute allocates state general funds annually to implement primary prevention activities, including fluoride varnish applications by medical professionals.
- CF3 is housed within CDPHE, which provides financial, programmatic, and evaluation infrastructure support.
- CF3 staff members have experience in oral public health and clinical quality improvement.
- CF3 uses master trainers to provide TA in local communities. CF3 also provides trainings in professional degree programs (e.g., physician assistant programs, nurse practitioner programs, dental schools and dental hygiene programs) to increase students' awareness of the importance of preventive oral health care and encourage future implementation of CF3. Master trainers, ROHSs, health professional students, and multi-sector partners across the state champion the program and are key to its success.
- The [Colorado Oral Health](#) website promotes CF3 awareness and outreach by hosting partner-facing CF3 content. The website includes information about the program, a TA request form, and a resource library.
- CF3 is collaborating with the Office of Planning and Public Health Partnerships to align oral health priority strategies with local public health agencies' priority strategies identified through their public-health-improvement planning process.
- CF3 helped increase support for the Colorado Medical-Dental Integration project by increasing medical professionals' awareness of their role in providing oral health care and of the integrated dental hygienist models of care.

Notable Program Evaluation Activities

- In 2022, the CDPHE epidemiologist and OHU staff used population-level data to identify communities that experience a high rate of oral diseases and bar-



riers 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 guides current and future outreach efforts.

- CDPHE maintains the [VISION: Visual Information System for Identifying Opportunities and Needs](#) data dashboard. The dashboard contains prioritized chronic disease and behavioral health measures in Colorado and includes several oral health measures.
- CF3 has access to the Health Services and Evaluation Branch within CDPHE to help with evaluation efforts; however, funding to support robust evaluation efforts is limited.
- CF3 uses Freshdesk, a free online platform that streamlines TA requests by serving as a centralized communication hub. CF3 staff can assign requests to appropriate staff, categorize and prioritize needs, and run reports on several metrics (e.g., number and type of inquiries received).

Evaluation Methodology

CF3 uses the following data sources and performance measures to evaluate its program.

Source: Pre- and post-training assessments

- Qualtrics, an online survey platform, is used to evaluate differences in oral health implementation that medical and oral health professionals self-report before and after CF3 training.
- The readiness assessment collects clinic-level data that includes patient demographics and program reach.
- Pre-test data (i.e., medical professional demographic information and current oral health services implemented in their practices) are collected during training registration. Post-test data (i.e., level of CF3 model implementation, facilitators and barriers to implementation and TA needs) are collected at 1-month, 6-month, and 12-month intervals after CF3 training.

Source: TA tracking

- TA data from Freshdesk are regularly gathered, analyzed, and shared with CF3 staff to inform training and program improvements.

Source: Baby & You Survey, Basic Screening Survey, Colorado Child Health Survey, Pregnancy Risk Assessment Monitoring System, and periodic data reports through an inter-agency agreement with the Colorado Department of Health Care Policy and Finance

- Population-level data are used to evaluate CF3's impact on trends in dental caries rates in children, pregnant women, and other population-level health indicators.

Select Evaluation Findings

Source: *Cavity Free at Three: CDC Evaluation 2013–2018 (2018)*

- Children enrolled in Medicaid who had a well-child visit that included a CF3 service were 12 percent more likely to have a dental visit within 6 months after the visit, compared to those enrolled in Medicaid who did not have such a visit.
- The percentage of well-child visits that included a CF3 service rose from 0.5 percent in 2010 to 5 percent in 2016.
- The percentage of children enrolled in Medicaid from birth to age 2 who received oral health services from a medical professional or an oral health professional rose from 23 percent in 2010 to 33 percent in 2017.

Resources to Learn More About Evaluation

- [Effectiveness on Early Childhood Caries of an Oral Health Promotion Program for Medical Providers \(2017\)](#)



From Battani K, Crall J, Fischer D, Goodman H, Holt K. 2024. *Integrating Oral Health Care into Primary Care: Five Successful, Long-Standing, Statewide Programs Providing Care for the Maternal and Child Health Population*. Washington, DC: National Maternal and Child Oral Health Resource Center. Permission is given to save and print this publication and to forward it, in its entirety, to others.