Integrating Oral Health Care into Primary Care

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

National Maternal and Child Oral Health Resource Center

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More than 25 years serving the MCH community

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Executive Summary

Background

In the past century in the United States, oral health has improved considerably and use of oral health care has increased, especially among children and adolescents enrolled in Medicaid or the Children's Health Insurance Program.[1] Unfortunately, not all Americans have equal access to these improvements. Oral diseases (i.e., dental caries, periodontal disease, oral cancer) remain among the most common health conditions, and dental caries is the most prevalent chronic disease among children in the United States.[2,3]

In 2018, 34 percent of Americans (112 million) and 54 percent of children from birth through age 5 (13 million) had a medical visit but did not have a dental visit.[4] Less than half of pregnant women in the United States report having a dental cleaning during pregnancy, and that number is much lower among pregnant women enrolled in Medicaid.[5] Persistent problems with access to and use of oral health care among pregnant women and young children have resulted in growing awareness of the need to integrate oral health care into primary care, since these groups visit medical professionals more often than oral health professionals.

Purpose

In 2021, the Maternal and Child Health Bureau (MCHB) funded the Consortium for Oral Health Systems Integration and Improvement (COHSII), a national partnership led by the National Maternal and Child Oral Health Resource Center working with the Association of State and Territorial Dental Directors and the Dental Quality Alliance. COHSII's purpose is to develop and expand accessible, high-quality integrated preventive oral health care for the maternal and child health (MCH) population by providing technical assistance (TA).

MCHB's interest in identifying key factors (drivers and barriers) and strategies that support the integration of oral health care into primary care for the MCH population led to COHSII's conception of the development of a report to share information about successful,

long-standing, statewide programs. The COHSII project team supported production of the report. In addition, COHSII convened an MCH Oral Health Think Tank ("Think Tank") to serve in an advisory role. The Think Tank consisted of 10 subject matter experts with knowledge and experience related to integrating oral health care into primary care.

Methodology

Think Tank members helped the COHSII project team identify successful, long-standing, statewide programs that focus on integrating oral health care into primary care serving the MCH population. The Think Tank selected the following programs that agreed to participate in interviews with the COHSII project team: Cavity Free at Three, Colorado Medical-Dental Integration, From the First Tooth, Into the Mouths of Babes, and I-Smile and Cavity Free Iowa.

The COHSII project team conducted 1-hour interviews with program staff and guests, synthesized information from the interviews and supplemental materials provided by the programs, and identified common themes across programs. A draft report was developed and shared with programs for review to verify accuracy and completeness of information. A revised draft of the report was then shared with Think Tank members and the MCHB project officer for final review and input. The report provides a summary of information collected from the programs and a synthesis of findings prepared by the COHSII project team.

Findings

The report includes spotlights with information about each of the five programs focused on integrating oral health care into primary care serving the MCH population. Spotlights include a program overview; a description of the program's inception and early years; information about funding, notable strengths, notable evaluation activities, and evaluation methodology; select evaluation findings; and resources to learn more about evaluation. The report also describes key elements and challenges common across all programs that support or limit program success.

Key elements for program success include collaborative partnerships and leadership support; sustained, diverse funding; commitment to TA; and evaluation. Some common challenges related to the key elements include lack of partners with research and evaluation expertise and lack of funding for ongoing evaluation, insufficient number of dentists to whom medical professionals can refer patients and who are comfortable providing care to the MCH population, threat of reduction or elimination of support from state general funds and foundations, difficulty obtaining buy-in from health professionals to integrate oral health services into primary care when Medicaid reimbursement is inadequate, and difficulty accessing Medicaid administrative claims data. Despite persistent challenges, the programs achieved their goals by frequently identifying and implementing strategies to address their challenges and by seeking to maintain or enhance capacity.

Conclusion

Primary care, as the main point of entry to the health care system, represents a remarkable opportunity to help meet the oral health needs of the MCH population and to address social determinants of health.

This report spotlights five successful, longstanding, statewide programs focused on integrating oral health care into primary care serving the MCH population. The programs serve as examples of statewide programs that use a variety of strategies at community and individual levels to improve access to oral health care and reduce oral health disparities for the MCH population. The information in the report may be useful for states wanting to enhance an existing statewide program or to develop a new statewide program.

Introduction

Background

In the past century in the United States, oral health has improved considerably and use of oral health care has increased, especially among children and adolescents enrolled in Medicaid or the Children's Health Insurance Program (CHIP).[1] Unfortunately, not all Americans have equal access to these improvements. Oral diseases (i.e., dental caries, periodontal disease, oral cancer) remain among the most common health conditions, and dental caries is the most prevalent chronic disease among children in the United States.[2,3] The oral health status of some people from certain racial/ethnic (i.e., Mexican American, non-Hispanic black, American Indian and Alaska Native) and socioeconomic groups has worsened as a result of social determinants of health—conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.[6,7] Despite reductions in oral disease among these populations, oral health disparities remain a cause for concern.[8]

An increased focus on understanding the impact of social determinants of health on oral health disparities and on the use of oral health care has spawned efforts to identify innovative health-care-system improvements to enhance maternal and child health (MCH).[9] There is growing awareness of the importance of addressing social determinants of health to reduce health disparities, improve systems of care, and enhance health outcomes.[10–12]

Poor oral health is associated with direct, indirect, and intangible costs throughout life, such as treatment expenditures, missed days from school and work, and reduced quality of life.[13] Oral conditions can negatively impact the body in many ways. Oral diseases have been associated with poor outcomes among people with various health conditions and with damage to organ systems (e.g., cardiovascular system).[14] Chronic inflammation associated with periodontal disease has been associated with poor glycemic control among people with diabetes and with increased risk for delivering preterm and/or low-birthweight infants.

In 2000, the landmark *Oral Health in America: A Report of the U.S. Surgeon General* recognized the significance of oral health to overall health. The report proposes integrating oral health care into primary care based on evidence that there is a synergistic relationship between oral health and overall health and that coordinating care is essential to maintaining overall health.[15] *Oral Health in America: Advances and Challenges,* produced by the National Institute of Dental and Craniofacial Research in 2021, identifies many safe and effective measures to improve oral health and prevent disease. The report recognizes that strategies for integrating oral health care and overall health care delivery are emerging and that a multipronged approach and coordinated effort to use these strategies to improve access to oral health care will be required.[8]

Primary care, as the main point of entry to the health care system, represents a remarkable opportunity to help meet oral health needs. The principles of primary care include being person- and family-centered, continuous, comprehensive and equitable, team-based and collaborative, coordinated and integrated, accessible, and high-value.[16]

In 2018, 34 percent of Americans (112 million) and 54 percent of children from birth through age 5 (13 million) had a medical visit but did not have a dental visit.[4] Less than half of pregnant women in the United States report having a dental cleaning during pregnancy, and that number is much lower among pregnant women enrolled in Medicaid.[5] Persistent problems with access to and use of oral health care among young children and pregnant women have resulted in growing awareness of the need to integrate oral health care into primary care, since these groups visit medical professionals more often than oral health professionals.

Purpose

In 2021, the Maternal and Child Health Bureau (MCHB) funded the Consortium for Oral Health Systems Integration and Improvement (COHSII), a national partnership led by the National Maternal and Child Oral Health Resource Center working with the Association of State and Territorial Dental Directors and the Dental Quality Alliance. COHSII's purpose is to develop and expand accessible, high-quality integrated preventive oral health care for the MCH population by providing targeted technical assistance (TA).

MCHB's interest in identifying key factors (drivers and barriers) and strategies that support the integration of oral health care into primary care for the MCH population led to COHSII's conception of a report to share information about successful, long-standing, statewide programs. The COHSII project team supported production of the report; the team consisted of Katy Battani, Harry Goodman, and Katrina Holt (COHSII staff) and James Crall and Dana Fischer (COHSII consultants). In addition, COHSII convened an MCH Oral Health Think Tank ("Think Tank") to serve in an advisory role. The Think Tank consisted of 10 subject-matter experts with knowledge and experience related to integrating oral health care into primary care (see the acknowledgments for a list of Think Tank members). James Crall served as chair of the Think Tank.

Methodology

Think Tank members helped the COHSII project team identify successful, long-standing, statewide programs that focus on integrating oral health care into primary care serving the MCH population. Below are definitions of terms included in "successful, long-standing, statewide programs that focus on integrating oral health care into primary care serving the MCH population."

- Successful: The program achieves its goals by frequently identifying and implementing strategies to address challenges, as they occur, and by seeking to maintain and/or enhance capacity. The program's results are documented by outcome and/or impact evaluation.
- Long-standing: The program has been operating for 10 or more years.
- Statewide: The program's services extend throughout a particular state.
- Integrating: The program integrates oral health care into primary care (e.g., prenatal visits, well-child visits) and builds effective partnerships with stakeholders.

- Primary care for the MCH population: The program operates in public or private settings (e.g., prenatal care clinics, primary care clinics, school-based health centers) where medical professionals provide primary care to MCH population groups (e.g., pregnant women, infants, children, adolescents), including those with low incomes.

The Think Tank selected the following programs that agreed to participate in interviews with the COHSII project team:

- **Cavity Free at Three** is a statewide program of the Colorado Department of Public Health and Environment Oral Health Unit 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.
- **Colorado Medical-Dental Integration** is a statewide project of the Delta Dental of Colorado Foundation that integrates dental hygienists into medical practices to increase access to oral health care for vulnerable populations, improve patients' oral health, and build sustainable medical-dental integration models.
- **From the First Tooth** is a statewide initiative, led and administered by MaineHealth in partnership with the Children's Oral Health Network of Maine, that aims to improve the oral health of children and adolescents from the time of tooth eruption to age 21 by implementing an evidence-based preventive oral health approach in the medical home.
- **I-Smile** is a statewide program of the Iowa Department of Health and Human Services that connects pregnant women and children and their families with oral health, medical, and community resources to help ensure a lifetime of health and wellness. **Cavity Free Iowa** is a companion program of I-Smile that serves to increase the number of children from birth to age 6 who receive oral health screenings, anticipatory guidance, fluoride varnish applications, and dental referrals in medical practices during a well-child visit.
- **Into the Mouths of Babes** is a statewide program co-managed by the North Carolina Department of Health and Human Services, North Carolina Medicaid, Division of Health Benefits and the North Carolina Department of Health and Human Services, Division of Public Health, Oral Health Section that aims to prevent and reduce early childhood caries (ECC) and increase referrals to dental homes for children at high risk for ECC.

With assistance from Think Tank members, the COHSII project team developed a set of interview questions to ask all programs. Lessons learned from MCHB-funded projects informed the development of the interview questions. Programs include the Perinatal and Infant Oral Health Quality Improvement project (2013–2019), the Oral Health Quality Indicators for the Maternal and Child Health Population project (2017–2021), the Partnership for Integrating Oral Health Care into Primary Care project (2019–2021), the Networks for Oral Health Integration Within the MCH Safety Net project (2019–2024), and the Integrating Oral Health Care and Primary Care Learning Collaborative: A State and Local Partnership project (2022–2024).

The COHSII project team conducted 1-hour interviews with program staff and guests, synthesized information from the interviews and supplemental materials provided by the programs, and identified common

themes across programs. A draft report was developed and shared with programs for review to verify accuracy and completeness of information. A revised draft of the report was then shared with Think Tank members and the MCHB project officer for final review and input. This report provides a summary of information collected from the programs and a synthesis of findings prepared by the COHSII project team.

The report includes

- Spotlights with information about each of the five programs, including a program overview; a description of the program's inception and early years; information about funding, notable strengths, notable evaluation activities, and evaluation methodology; select evaluation findings; and resources to learn more about evaluation.
- Key elements and challenges common across all programs that support or limit program success.

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 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 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 interagency 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)

Program Spotlight

Colorado Medical-Dental Integration Project

Overview

The Colorado Medical-Dental Integration (CO MDI) project of the Delta Dental of Colorado Foundation integrated dental hygienists into medical practices to increase access to oral health care for vulnerable populations,[a] improve patients' oral health, and build sustainable medical-dental integration models. The project initially consisted of three waves from 2007 to 2011, 2014 to 2019, and 2018 to 2022. The CO MDI project has been sustained in participating health care organizations, and the model has expanded in community health centers participating in the Rocky Mountain Network for Oral Health Integration project (2019 to 2024) funded by the Maternal and Child Health Bureau, Health Resources and Services Administration.

During monthly meetings and biannual in-person learning sessions, CO MDI implementation coaches provided technical assistance to medical practices on workflow modifications, billing, dental equipment purchasing, regulations, and safety. Measures were tracked monthly and used to drive the delivery of high-quality oral health care and continuous improvement. CO MDI was implemented by the Adult and Child Center for Outcomes Research and Delivery Science (ACCORDS) at the University of Colorado Anschutz Medical Center, Delta Dental of Colorado Foundation, and 26 health care

[a] Vulnerable populations include people with low incomes, who are uninsured, and/or who are from racial and ethnic minorities; children from families with low incomes; older adults; and people with chronic health conditions. Vulnerable populations also include people living in rural areas who encounter barriers to accessing health care.

"Technical assistance is key to expansion and replication of the model. It's understanding billing. It's understanding scope of practice. It's understanding the relationship between providers and how they implement the work. It's understanding what's required for liability, insurance, collaborative agreements, and those kinds of things. It's the coaching and technical assistance that Patty and her team provide that makes it work and makes it successful."

—CO MDI

organizations that integrate dental hygienists into their medical practices. Over the course of the CO MDI project, 43 dental hygienists have been integrated into 33 medical practices in 27 health care organizations across Colorado.

Inception and Early Years

The broad scope of practice for dental hygienists in Colorado created a supportive environment for pioneering medical-dental integration and developing integrated care-delivery models. Between 2007 and 2011, grantees (medical practices) focused on building evidence for the feasibility of using dual-functioning exam rooms within medical practices to increase access to oral health care provided by integrated dental hygienists. The findings from the feasibility project (2007–2011) informed Wave 1 (2014–2019) and Wave 2 (2018–2022) of CO MDI.

While the initial goal was to reach young children, CO MDI sites provided oral hygiene care to people across the lifespan. Early in the project, the population of focus changed from children to the population being seen in the medical practices: Adults were served in 40 percent of visits and children under age 5 in 27 percent.

Funding

CO MDI was funded by the Delta Dental of Colorado Foundation.

Notable Program Strengths

- The project had steady funding from the Delta Dental of Colorado Foundation for approximately 15 years, from the feasibility study (2007–2011) through two implementation waves (2014–2019 and 2018–2022).
- Colorado has a broad scope of practice for dental hygienists that allows for dental-hygiene diagnosis;[b] prescribing fluoride, topical medications, and chlorhexidine gluconate on a limited basis; and administering anesthesia with indirect supervision of a dentist. Dental hygienists can also practice independently without the supervision of a dentist and can bill Medicaid directly. These factors facilitated the development, implementation, and sustainability of the project.
- Grant funds were used to purchase dental-hygiene equipment, support the initial salary of integrated dental hygienists, and facilitate a learning network for participating medical practices. The learning network served as a forum for medical practices to learn, share, and work together to improve the coordination, quality, and integration of medical care and oral health care.

Notable Program Evaluation Activities

- Project data helped inform the development of the Medical-Dental Integration Toolkit, which contains materials for practices in Colorado and other states that provide guidance on implementing integrated dental-hygienist models of care.
- Project data were analyzed and published, adding to the body of evidence for the effectiveness of co-locating and integrating dental hygienists in primary care settings.
- Evaluation expertise from Patty Braun, University of Colorado ACCORDS program, was instrumental in conducting the CO MDI evaluation.

[b] "Dental-hygiene diagnosis" means the identification of an existing oral health problem that a dental hygienist is qualified and licensed to treat within the scope of dental hygiene practice. The dental-hygiene diagnosis focuses on behavioral risks and physical conditions that are related to oral health. [Colo. Rev. Stat. § 12-220-104 2024]

Evaluation Methodology

In each wave, clinics tracked measures monthly to evaluate implementation of models and drive the delivery of high-quality care and continuous improvement. Financial measures were tracked quarterly.

Source: Monthly measures

Objective 1: Expand access to dental services for underserved populations.

- Number of total patient visits.
- Percentage of patient visits by insurance type.

Objective 2: Develop financially sustainable models for delivering CO MDI project services.

Objective 3: Improve the oral health of CO MDI patients.

- Number of patient referrals for restorative care.
- Number of patients who attended restorative care.

Select Evaluation Findings

Source: Colorado Medical-Dental Integration: Wave 1 Report 2020 **(2020)**

Between September 2015 and March 2019:

- 67,092 visits were provided by dental hygienists integrated into CO MDI sites.
- 34,157 referrals to dentists were made for untreated dental caries.
- 55 percent of patients who were referred to a dentist for restorative care attended those visits.

Resources to Learn More About Evaluation

- Embedding Dental Hygienists into Medical Care Teams: Implementation and Evaluation of a Medical-Dental Integration Approach in Colorado (2023)
- Integrating Dental Hygienists into Medical Care Teams: Practitioner and Patient Perspectives (2021)
- Collaboration Between Medical Providers and Dental Hygienists in Pediatric Health Care (2016)
- Feasibility of Colocating Dental Hygienists into Medical Practices (2013)

Program Spotlight

From the First Tooth

Overview

From the First Tooth (FTFT) is a statewide initiative, led and administered by MaineHealth in partnership with the Children's Oral Health Network (COHN) of Maine. FTFT aims to improve the oral health of children and adolescents from the time of tooth eruption to age 21 by implementing an evidence-based preventive oral health approach in the medical home. The program encourages pediatricians and family physicians to incorporate oral health risk assessment, fluoride varnish application, education for parents or other caregivers, and referrals for oral health care into well-child visits. MaineHealth collaborates with COHN, the Maine chapter of the American Academy of Pediatrics, the Maine Primary Care Association, and Northern Light Health to implement FTFT and extend its reach throughout the state.

The program provides technical assistance (TA) to primary care practices interested in participating in the initiative. TA includes implementation assistance, medical staff training using *Smiles for Life: A National Oral Health Curriculum*, integration of oral health risk assessment and evaluation into electronic medical records, and materials for parents and other caregivers.

Inception and Early Years

In 2005, the Sadie and Harry Davis Foundation, a family foundation, wanted to honor the memory of Harry Davis, one of the first pediatricians in Maine, by addressing a pediatric or family medicine need. The foundation convened a group of thought leaders and chose a proposal put forth by a pediatric dentist, Jonathan Shenkin, to address the widespread issue of tooth decay among the children of Maine. The decision to choose oral health was based on a compelling story about disparities in oral health care for children in Maine and on the profound impact that oral diseases can have during childhood and throughout the lifespan. The foundation and an advisory group initiated a pilot of FTFT with a small number of practices, modeled in part on North Carolina's Into the Mouths of Babes program.

The pilot was staffed by a facilitator who oversaw the project and a dental hygienist who provided trainings to the pilot practices. As the model was developed and the time came to spread the work statewide, a more robust administrative home was needed. MaineHealth, a not-for-profit integrated health system, was chosen as the administrative home for FTFT because of MaineHealth's wide reach in Maine. MaineHealth's experience with another statewide program, Raising Readers, provided a framework for FTFT to reach all primary care practices in the state.

In 2008, MaineCare (Maine's Medicaid program) began providing reimbursement for fluoride varnish application in physicians' offices.

Funding

FTFT has been continuously funded by the Sadie and Harry Davis Foundation, now through COHN. The program previously received funding from Northeast Delta Dental and the Health Resources and Services Administration.

Notable Program Strengths

- FTFT is implemented collaboratively with several partners in the state. The partners have agreed-upon roles and responsibilities, targets, tasks and work plans, and a joint data dashboard that all partners use.
- FTFT built relationships between physicians and dentists using the "Dining with the Dentists: Building Bridges in the Medical Neighborhood" model. The main objective was to bring together oral health professionals and medical professionals within a community or a region to better coordinate overall health care and oral health care of children ages 6 months to 5 years.
- FTFT has had steady, long-term infrastructure funding from the Sadie and Harry Davis Foundation.
- FTFT staff also co-lead COHN's Health Integration Action Team, whose members collaborate on statewide policy efforts and pilot-test innovative strategies to deepen and extend oral-health-integration efforts beyond the traditional FTFT services.
- Maine is a largely rural state with a relatively small population, and most of the state is classified as a dental professional shortage area, which helps the program engage and enroll medical professionals.
- Diversity, equity, and inclusion is an important focus area for COHN. COHN is broadening its steering committee representation and has crafted an equity statement that is informing action planning.
- In 2022, MaineCare engaged many pediatric medical practices in PCPlus, a payment model that focuses on high-quality, value-based care. As part of PCPlus, all participating primary care practices are required to offer oral health risk assessment, evaluation, and fluoride varnish application to children and adolescents ages 6 months to 21 years who do not have a dental home or have not seen a dentist in the past year. Practices can contact FTFT for training if they are not providing the required oral health services. FTFT and COHN have a symbiotic partnership that is sustaining FTFT as it expands to provide TA to help practices meet the new PCPlus oral-health-services requirement.

Notable Program Evaluation Activities

- Tracking four consistent MaineCare indicators enables FTFT to assess progress over time, including factors that may have impacted progress, and to determine whether changes are needed. For example, a review of program data led to the recognition that the program needed a broader approach to policy and systems change and that FTFT was only part of the solution. This led to the formation of COHN.
- Program data help inform strategic planning and advocacy efforts. For example, data helped make the case for MaineCare to include oral health risk assessment, evaluation, and fluoride varnish application as oral health requirements of the PCPlus payment model.
- COHN has incorporated an annual analysis of the Maine Health Data Organization's (MHDO's) All Payer Claims Dataset by the University of Southern Maine's Cutler Institute into its annual data contract, which ensures that data analysis is coordinated with broader oral-health-data efforts.

> "The Sadie and Harry Davis Foundation has enormous patience. They were giving us 5-year and 10-year timeframes in the beginning and continue to do so now. They understand how long it takes to make these changes—they understand the long arc. The foundation is a remarkable part of our story."
>
> —FTFT

Evaluation Methodology

FTFT uses several data dashboards for tracking process and program outputs. It uses the following data sources and performance measures to evaluate its program:

Source: MaineCare claims data from the MHDO's All Payer Claims Dataset

- Percentage of children reached by FTFT with at least one well-child visit in the measurement year, by year, ages 12 through 23 months.
- Percentage of well-child visits with an oral health evaluation and/or fluoride varnish application for children ages 12 through 47 months.
- Percentage of children who received at least four fluoride varnish applications by age 4, by year.
- Percentage of 4-year-old MaineCare members who have received at least four fluoride varnish applications by age 4, by year, by provider type.

Source: Internal program data

- Number of primary care practices contacted in-person or virtually, by month.
- Number of health professionals trained in-person or virtually, by month.
- Number of primary care practices that have requested educational materials for parents and other caregivers, by month.
- Participation status of each practice, updated as contacts identify status change.

Select Evaluation Findings

- Percentage of well-child visits with an oral evaluation and/or fluoride varnish application for children ages 12 through 47 months rose from 14 percent in 2011 to 36 percent in 2014. (Source: *From the First Tooth: Healthy Smiles for Life—Annual Update 2022* [No date])
- Since PCPlus began in 2022 with the new oral health requirement, FTFT has provided trainings to 43 PCPlus practices across the state. (Source: *From the First Tooth: Healthy Smiles for Life—Annual Update 2022* [No date])
- Percentage of children who received at least four fluoride applications by age 4 rose from 8 percent in 2011 to 30 percent in 2018. (Source: *From the First Tooth: Healthy Smiles for Life—Annual Update 2022* [No date])

Resources for More Information About Evaluation

- *From the First Tooth Healthy Smiles for Life Strategic Plan 2022* (No date)

Health and Human Services

Program Spotlight

I-Smile and Cavity Free Iowa

Overview

I-Smile is a statewide program of the Iowa Department of Health and Human Services (Iowa HHS) that connects pregnant women and children and their families in Iowa with oral health, medical, and community resources to help ensure a lifetime of health and wellness. Iowa HHS administers I-Smile through contracts with regional public and private nonprofit organizations as part of the state's Title V maternal and child health (MCH) program. Each contractor employs an I-Smile coordinator (dental hygienist) who is responsible for working with pregnant women and children and their families; dentists and dental office staff; medical professionals; school nurses, teachers, and administrators; businesses; civic organizations; and social service organizations. There are currently 15 I-Smile coordinators serving all 99 counties across Iowa.

Cavity Free Iowa (CFI) is a companion program of I-Smile that works to increase the number of children from birth to age 6 in Iowa who receive oral health screenings, fluoride varnish applications, anticipatory guidance, and dental referrals during a well-child visit in medical practices. Local I-Smile coordinators provide on-site training for pediatric and family practice medical staff and assist with referrals for children needing oral health care. CFI previously convened a workgroup quarterly to discuss strategies for increasing awareness of the initiative as well as other medical-dental integration opportunities. This workgroup has evolved and joined Oral Health Iowa, a statewide oral health coalition, to increase CFI's impact. The CFI workgroup includes representatives from the Iowa HHS oral health program, the Broadlawns Dental Clinic, the Delta Dental of Iowa Foundation, local I-Smile coordinators, Iowa's Medicaid program, pediatricians, nonprofit dental clinics, and others.

Inception and Early Years

I-Smile launched in 2006 in response to the passage of the 2005 IowaCare Medicaid Reform Act, which includes a provision that every child age 12 and younger enrolled in Medicaid must have a designated dental home. The state legislature also sought to ensure that children receive oral health screening and preventive care identified as part of the Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) program's oral health standards. I-Smile was funded via a memorandum of understanding between the Iowa Department of Human Services and the Iowa Department of Public Health, now Iowa HHS.

Iowa has had a strong state MCH program that contributes funding for oral health efforts; it also has a robust partnership with the state Medicaid program. The passing of the Medicaid Reform Act secured $1,000,000 annually for I-Smile. Additionally, the program obtains federal administrative claims match funds to support program infrastructure.

Many years after I-Smile began, CFI launched in 2017 because of the interest of two pediatricians. At an MCH advisory council meeting, after hearing about the addition of fluoride varnish application to Iowa's EPSDT periodicity schedule in 2015, the pediatricians wanted to get more involved in oral health and provide fluoride varnish during well-visits. One of the pediatricians, who is one of the program's biggest champions, along with Iowa HHS staff, convened a workgroup that developed CFI. Additionally, because CFI is linked to I-Smile, CFI has used I-Smile's resources, including I-Smile coordinators, to provide training for medical office staff and technical assistance (TA) on Medicaid billing issues.

Funding

I-Smile receives additional support from the state's Title V Maternal and Child Health Services Block Grant and other state and federal programs. I-Smile contracts with and provides funding to 15 local Title V agencies (public or private nonprofit organizations) that administer I-Smile as part of the state's MCH program, which helps ensure that children and pregnant women across the state receive oral health care. Local contractors also receive Medicaid reimbursement for preventive oral health care provided to children enrolled in Medicaid. In 2023, the Iowa Department of Human Services and Iowa Department of Public Health merged to form Iowa HHS. The merger did not affect funding for the I-Smile program.

> "I think a key strength of the program is that local dentists like having an I-Smile coordinator as a local liaison. Whether they want to take Medicaid dental referrals or not, they know they have somebody they can talk to. Having that communication at a local level is big and the relationships between I-Smile coordinators and dental offices is really important. And so locally, dentists get a lot of support."
>
> —I-Smile

Iowa HHS oral health program staff facilitate workgroup meetings, and grants from the Delta Dental of Iowa Foundation have paid for fluoride varnish supplies and award plaques for participating medical offices. Medicaid provides reimbursement to medical professionals for fluoride varnish for children through age 5, based on the well-child visit schedule. Most private insurers provide reimbursement to medical professionals for fluoride varnish applications based on the U.S. Preventive Services Task Force's recommendation that primary care clinicians apply fluoride varnish to the primary teeth of all infants and children starting at primary tooth eruption up to age 5.

Notable Program Strengths

- I-Smile receives annual support of $1,000,000 from state general funds.

- I-Smile maintains strong partnerships with the state Medicaid program.
- The program uses I-Smile coordinators (dental hygienists) who are liaisons within their communities. Dentists appreciate being able to reach out to their local I-Smile coordinator in their own community. The relationship between dentists and I-Smile coordinators is key and helps garner program support from the Iowa Dental Association.
- I-Smile programs can bill Medicaid for preventive oral health care and receive funding to provide care-coordination services.
- Physicians can be reimbursed by Medicaid for fluoride varnish applications for children through age 5 when done during a well-child visit.
- CFI has a workgroup in Iowa that developed a training toolkit for I-Smile coordinators.
- Iowa HHS staff provide quarterly trainings for I-Smile coordinators, which helps ensure that coordinators learn from one another and use consistent messaging. Trainings also include leadership skill-building guidance for coordinators.
- I-Smile coordinators are required to make outreach visits to all pediatricians or family medicine physicians in their counties.
- The Oral Health Iowa coalition is supportive of I-Smile.

Notable Program Evaluation Activities

- The I-Smile and CFI evaluation uses multiple metrics that cover various populations.
- The Medicaid program shares data with the state I-Smile program upon request.
- I-Smile and CFI evaluation is completed internally. With support from the Iowa HHS oral health program's epidemiologist and oral health consultants, program data are reviewed, and TA and quality-improvement support are offered to contracted agencies providing I-Smile services.
- State I-Smile staff review data quarterly, which allows the program to quickly address any concerns with services and outcomes.

- I-Smile coordinators complete a needs assessment every 3 to 5 years and update it annually. This helps the program identify and understand the needs of specific populations.
- I-Smile and CFI use data to complete annual summaries that are widely shared with stakeholders and posted online. They also share data at conferences, Oral Health Iowa coalition meetings, and partner organization meetings. Additionally, they use data to develop a postcard for Children's Dental Health Month that is distributed to state legislators.

Evaluation Methodology

I-Smile uses the following data sources and performance measures to evaluate its program.

Source: Medicaid paid claims data

- Percentage of Iowa Medicaid-enrolled children from birth to age 12 with a service from a dentist/dental clinic.
- Percentage of Iowa Medicaid-enrolled children from birth to age 12 with a service from I-Smile (Title V contractor).

Source: CMS 416 data

- Percentage of Iowa Medicaid-enrolled children from birth to age 2 with any dental or oral health service.
- Percentage of Iowa Medicaid-enrolled children from birth to age 5 with any dental or oral health service.
- Percentage of Iowa Medicaid-enrolled children ages from birth to age 20 with any dental or oral health service.

Source: I-Smile data

- Number of children served through I-Smile.
- Number of children provided a direct service through I-Smile.
- Number of children provided dental care coordination through I-Smile.
- Percentage of children screened with dental caries.
- Percentage of Medicaid-enrolled children who received dental care coordination with a Medicaid-reimbursed dental visit within 180 days.

Source: Iowa HHS oral health program surveillance data

- Percentage of children in Head Start; the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); and third grade with dental caries.
- Percentage of children in Head Start, WIC, and third grade with filled teeth.
- Percentage of children in Head Start, WIC, and third grade with a history of dental caries.
- Percentage of children in third grade with previously sealed molars.

Select Evaluation Findings

- In 2018, 50 percent of children enrolled in Medicaid received dental services, including two out of every three children ages 3 to 12. Iowa rates surpassed both the national average of 34.6 percent of children from families with low incomes receiving preventive dental services and the Healthy People 2020 goal of 33.2 percent (Source: *Iowa's I-Smile Program Promotes Dental Care for Children, Pregnant Women, and Adults* [2020]).

- In 2018, more than 30,650 children received preventive dental services in public health locations, including WIC clinics, schools, and Head Start centers—nearly four times higher than the number receiving such services in 2005 (Source: *Iowa's I-Smile Program Promotes Dental Care for Children, Pregnant Women, and Adults* [2020]).
- In 2019, 73 percent more children enrolled in Medicaid in Iowa saw a dentist than in 2005 (Source: *Iowa's I-Smile Program Promotes Dental Care for Children, Pregnant Women, and Adults* [2020]).
- Medicaid costs per child (from birth to age 12) per year have remained relatively steady since the start of the program in 2005. After accounting for inflation and a 1 percent rate increase in 2014, the average cost was $150.75 in 2005 and $170.74 in 2019 (Source: *Iowa's I-Smile Program Promotes Dental Care for Children, Pregnant Women, and Adults* [2020]).
- In 2021, 51,630 children received care coordination from I-Smile for dental services (Source: *Inside I-Smile 2021 Update on Children's Oral Health in Iowa* [2022]).
- About two-thirds of the children receiving services from I-Smile pay out-of-pocket for dental services or are enrolled in Medicaid (Source: *Inside I-Smile 2021 Update on Children's Oral Health in Iowa* [2022]).

Resources for More Information About Evaluation

- *Inside I-Smile 2021 Update on Children's Oral Health in Iowa* (2022)
- *Iowa's I-Smile Program Promotes Dental Care for Children, Pregnant Women, and Adults* (2020)

Program Spotlight

Into the Mouths of Babes

Overview

Into the Mouths of Babes (IMB) is a statewide program co-managed by the North Carolina Department of Health and Human Services, North Carolina Medicaid, Division of Health Benefits and the North Carolina Department of Health and Human Services, Division of Public Health, Oral Health Section (OHS) that aims to prevent and reduce early childhood caries (ECC) and increase referrals to dental homes for children at high risk for caries. The program trains medical professionals to deliver preventive oral health services to young children enrolled in Medicaid in North Carolina from the time of tooth eruption to age 42 months. IMB encourages medical professionals to incorporate oral health risk assessment and evaluation, counseling for parents and other caregivers, fluoride varnish application, and referral to dental homes.

OHS employs 20 public health dental hygienists throughout 10 regions across North Carolina to serve populations across the lifespan within communities. As part of their role, these dental hygienists provide IMB training to medical professionals interested in implementing IMB. Once medical professionals are trained, the practice can follow a train-the-trainer model in which medical professionals can train staff using the *Into the Mouths of Babes Toolkit*. The medical practice can also request that the public health dental hygienist return to provide IMB training for new staff. Technical assistance is also available and includes billing and payment support provided by the North Carolina Medicaid, Division of Health Benefits.

Inception and Early Years

In 1995, pediatricians and child advocacy organizations in western North Carolina identified the need for oral health care as a top priority, owing to the high prevalence of ECC in children from families with low incomes. With a limited number of dentists participating in the Medicaid program, the child advocacy organizations focused efforts on promoting preventive oral health care within the medical home. After identifying fluoride varnish as an effective preventive intervention, the organizations submitted an application to the Appalachian Regional Commission, and in 1998 the Smart Smiles nine-county pilot program was funded. The child advocacy organizations then created an advisory committee consisting of subject matter experts who developed training and educational materials. Since the program was unable to provide reimbursement to medical professionals for preventive oral health services, it relied on their willingness to deliver care without financial compensation.

In 2001, the North Carolina Medicaid, Division of Health Benefits began reimbursing for initial and periodic oral evaluations using local W codes, which greatly increased the number of medical professionals participating in IMB. Also, in 2001, the division received a 5-year demonstration grant from the Centers for Medicare & Medicaid Services (CMS) and rebranded the Smart Smiles pilot as the IMB program. In 2007, the North Carolina Medicaid, Division of Health Benefits adopted D0145 (oral evaluation for a patient under age 3 and counseling with primary caregiver) and D1206 (topical application of fluoride varnish) for medical professionals to receive reimbursement as part of the IMB program.

Funding

The North Carolina Medicaid, Division of Health Benefits provides reimbursement to medical professionals for oral evaluation, counseling to parents or other caregivers, and fluoride varnish application. IMB services are reimbursed under a fee-for-service model.

IMB previously received funding from the Centers for Disease Control and Prevention, CMS, and the Health Resources and Services Administration.

Notable Program Strengths

- Medical professionals were involved in early identification of ECC as a high priority need in the community and in the development of IMB. The program has benefitted from their strong and consistent buy-in.
- The North Carolina Medicaid, Division of Health Benefits co-manages IMB and provides reimbursement for oral health care and access to Medicaid claims data for program evaluation.
- Medicaid reimbursement levels for oral evaluation for a child under age 3 and counseling with primary caregiver (D0145) and fluoride varnish application (D1206) are considered fair by medical professionals. Reimbursement helps incentivize medical professionals to participate in IMB.
- The training is accredited for 1 hour of prescribed continuing medical education credit by the American Academy of Family Physicians.
- Two training approaches—the use of regional public health dental hygienists and the train-the-trainer model—allow for fast and widespread adoption of IMB across North Carolina. Twenty regional public health dental hygienists, employed by OHS, covering 10 public health regions in North Carolina are

responsible for supporting oral health programing across the lifespan. For IMB, this includes training medical professionals and serving as a community resource to assist in the identification of dental homes. Once a medical professional receives IMB training from a regional public health dental hygienist, the medical professional can then train other medical professionals and staff using the IMB training curriculum. This train-the-trainer approach is especially useful for initial and ongoing training of medical professionals and staff members and reduces reliance on regional public health dental hygienists for training.

> "One of the strengths of IMB has been the reimbursement paid to participating primary care medical professionals. I believe that the reimbursement has been a welcome surprise for physicians because they probably thought they'd be reimbursed less for additional services rendered during a well-child visit. When you compare our program to other states, that's one reason why we've had success, not the only reason, but one that's been impactful for sure."
>
> —IMB

Notable Program Evaluation Activities

- IMB has benefitted from the assistance of academic partners at the University of North Carolina Adams School of Dentistry and the Gillings School of Global Public Health, which led program evaluation. The evaluation team tracked IMB recipients over several years until cost savings and other impacts were demonstrated. Program evaluation in the early years of IMB was funded by the National Institutes of Health. Having a skilled research team to conduct robust studies highlighted the efficacy of the program and made IMB a widely admired and duplicated program nationwide.
- There is a wealth of published studies about the success of IMB in increasing access to preventive oral health care, reducing the oral disease burden of children from families with low incomes, and realizing cost savings for the Medicaid program in North Carolina.
- The evidence behind IMB helps influence policymakers when they make decisions about spending cuts in times of economic austerity and has helped sustain funding for the program. IMB has also provided program information including evaluation data to other states to help them develop and implement similar programs.

Evaluation Methodology

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

Source: North Carolina Medicaid, Division of Health Benefits

- Number of primary care preventive oral health service visits for beneficiaries from birth to age 42 months.
- Number of beneficiaries from birth through age 3 receiving oral health services from a medical professional.
- Percentage of children ages 1 through 20 who received at least two topical fluoride applications within the reporting year (Core Set of Children's Health Care Quality Measures).

Source: Basic Screening Survey

- Percentage of North Carolina kindergarten students with dental caries experience (annually).
- Percentage of North Carolina prekindergarten students with dental caries experience (every 5 years).

Select Evaluation Findings

- By 2006, approximately 30 percent of well-child visits for children ages 6 months to 3 years included IMB services. (Source: *How a North Carolina Program Boosted Preventive Oral Health Services for Low-Income Children* [2010]).
- For children receiving four or more IMB visits before age 3, there was a 21 percent reduction in hospitalizations for dental treatment. (Source: *Cost-effectiveness of Preventive Oral Health Care in Medical Offices for Young Medicaid Enrollees* [2012]).
- On average, children with four or more IMB visits before age 3 show a 17.7 percent reduction in dental caries, compared to children with no IMB visits. (Source: *Effects of Physician-Based Preventive Oral Health Services on Dental Caries* [2015]).

Resources for More Information About Evaluation

- *Office-Based Preventive Dental Program and Statewide Trends in Dental Caries* (2014)
- *How a North Carolina Program Boosted Preventive Oral Health Services for Low-Income Children* (2010)
- *Evaluation of Into the Mouths of Babes Program* (2007)
- *Prevention of Early Childhood Caries in North Carolina Medical Practices: Implications for Research and Practice* (2003)

Key Elements for Program Success

Following interviews with program staff and guests, COHSII project staff synthesized information and identified common themes across all programs. The following elements were identified by programs as important for their success:

- Collaborative partnerships and leadership support
- Sustained, diverse funding
- Commitment to TA
- Evaluation

Collaborative Partnerships and Leadership Support

Collaborative partnerships and leadership support were identified by programs as key to their success. Developing and maintaining partnerships and working collaboratively with others are essential for building trusting relationships and for obtaining buy-in, commitment, involvement, and support. Also essential to program development, growth, and sustainability was ensuring that there are organizational leaders who manage and support program activities (e.g., building and engaging advisory groups), and who identify and sustain relationships with key stakeholders and champions in communities who advocate for the program. Engaging with others working toward common goals is an effective way for programs to develop and implement strategies that address unmet oral health needs, avoid duplication of effort, ensure synergy of resources, reduce oral health inequities, and improve oral health.[17]

The Centers for Disease Control and Prevention (CDC), Division of Oral Health states that "a partnership is composed of organizations that share a common focus and combine resources to implement joint activities." Partnerships can increase the success of any public health program.[18] Although some partnerships are problem-oriented, time-limited, or convened to accomplish a specific objective, others evolve into long-term efforts, responding to changing environments.[17]

Programs cited the following partners as key to their development, growth, and sustainability:

- Academic partners
- Advocacy coalitions
- Community-based organizations
- Funders
- Government programs (e.g., state oral health program, maternal and child health program, Medicaid program)
- Health care organizations and clinics
- Legislators
- Medical professional champions
- Oral health professional champions
- Professional associations
- People with lived experience
- Program leaders (e.g., coordinators, directors, managers)

"Oral Health Iowa, the oral health advocacy coalition in the state, has been very supportive of I-Smile, even taking it beyond just kids to all Iowans. Advocacy partnerships are going to be critical into the future. And we must continue to demonstrate what's working and why we need their support."

—I-Smile

"We're very lucky to have longstanding champions who have been involved since the beginning and remain involved until this day. There's a stability there that helps weather the ebbs and flows, ups and downs, changes in staffing, and ground that gets lost here and there. These champions are still there to keep it going and to get it back on track every time."

—From the First Tooth (FTFT)

Maintaining an Effective Advisory Group

To gain and maintain collaborative partnerships and leadership support, programs described the importance of maintaining an advisory group (e.g., advisory committee, advisory council) with diverse representation, including partners such as those mentioned in the list above. Establishing an advisory group helps the program ensure that the community's needs and interests are being adequately addressed.

An effective advisory group provides support without becoming involved in the day-to-day activities of planning and implementing the program. Advisory group members are typically champions for the program who are committed to and passionate about the program's mission. They can help gain the support of their colleagues and organizations and can contribute to educating the community about the importance of oral health and integrating oral health care into primary care, which may help generate community, financial, and political support.

Challenges

Programs shared the following challenges related to collaborative partnerships and leadership support:

- Identifying and securing partners with research and evaluation expertise.
- Inadequate staff capacity and time to build relationships with health professionals and staff in the field.
- Insufficient number of dentists in the community to whom medical professionals can refer patients and who are comfortable providing care to the MCH population, including pregnant women and young children.

"Research expertise is the most critical resource needed for evaluation, and if the partner/institution with such expertise is unable to financially support the research, funding becomes the next most important needed resource. For many years, IMB was fortunate to have several wonderful academic partners in our backyard."

—Into the Mouths of Babes (IMB)

Sustained, Diverse Funding

Programs identified seeking and obtaining funding from a variety of sources as key to maintaining financial viability and adapting to funding fluctuations. Funding from federal, state, and philanthropic sources to support program infrastructure and staffing, as well as reimbursement from Medicaid for oral health services provided by

medical professionals (and integrated dental hygienists in Colorado), are seen as essential for program development, growth, and sustainability. Programs often rely on and leverage braided funding—combining two or more sources of funding to support a program or activity—to carry out their efforts.

Federal, State, and Philanthropic Funding

Programs shared the following observations about the use of federal, state, and philanthropic funding.

- Funding supports program development (including testing innovative models and strategies), growth, and sustainability.
- Funding supports staff developing program curricula, conducting training, monitoring activities, and generating supporting evidence.
- Multi-year funding allows programs to increase staff and evaluation capacity, engage a variety of stakeholders, and expand program reach.
- Federal funding is critical for developing, expanding, and sustaining programs. For example, I-Smile receives funding from the state's Title V Maternal and Child Health Services Block Grant. During IMB's early years, the program received a 5-year demonstration grant from the Centers for Medicare & Medicaid Services (CMS) and later received funding from HRSA.
- State funding is also valuable. Colorado, Iowa, and North Carolina receive state general funds that support program infrastructure and staffing to manage the programs.
- Private foundations play a significant role in program funding and sustainability. For example, FTFT has received funding from the Sadie and Harry Davis Foundation since 2007, and the CO MDI project received funding from the Delta Dental of Colorado Foundation for 14 years. CF3 has historically received funding from several health foundations in Colorado (i.e., Caring for Colorado Foundation, Colorado Health Foundation, Colorado Trust, Delta Dental of Colorado Foundation, Kaiser Permanente, Rose Community Foundation).

Program Callout

In Iowa, the state legislature contributes $1,000,000 annually to the I-Smile program. The I-Smile program then draws down federal administration claims matching funds to support program infrastructure.

In addition, the I-Smile program is funded using a small portion of the state's Title V MCH Services Block Grant and other federal funding.

Medicaid Reimbursement

In addition to federal, state, and philanthropic funding, reimbursement from Medicaid for oral health services is critical for program success and sustainability.

Adequate reimbursement attracts and helps attain buy-in from medical professionals (and integrated dental hygienists in Colorado) to participate in the programs and helps sustain their engagement.

> "It is critical for sustainability that state appropriations continue at levels that will result in Medicaid reimbursement that incentivizes medical professionals to continue to participate in the program."
>
> —IMB

Current Medicaid Reimbursement Rates for Oral Health Services Provided by Medical Professionals

State and Program	Year Reimbursement First Established	Current Reimbursement Rates by Oral Health Services
Colorado CF3 CO-MDI	2009	D0145 (under age 3): $33.57 D0145 (over age 3): $15.83 D1206 (under age 21): $41.96
Iowa I-Smile Cavity Free Iowa	2002	CPT 99188 (under age 6): $13.95
Maine FTFT	2008	D0145 (under age 3): $50.21 D0191 (over age 3): $14.55 CPT 99188 or D1206 (under age 21): $26.58 D1354: $27.82/tooth
North Carolina IMB	2001	D0145: $34.55 D1206 (under age 3½): $15.25

D0145: Oral evaluation for a patient under age 3 and counseling with primary caregiver
D0190: Screening of a patient
D0191: Assessment of a patient
D1206: Topical application of fluoride varnish
D1354: Interim caries arresting medicament application

Challenges

Funding challenges are a reality that programs must continually confront and address. Programs shared the following challenges related to funding:

- Reduction or elimination of longstanding and continual support from state general funds and foundations. It can be difficult to find grant funding that is multi-year and for programs that are well-established and successful.
- Fluctuations in funding can be disruptive and limit program expansion (e.g., staffing).
- Inadequate Medicaid reimbursement to obtain buy-in from medical professionals (and integrated oral health professionals in Colorado) to integrate oral health services into primary care.
- Inadequate funding to support robust and ongoing program evaluation.
- Teaching medical offices how to bill Medicaid for oral health services, including which codes to use and which services to bundle together (if required).

Commitment to Technical Assistance

Programs identified TA as critical to program success. TA includes the planning, development, and delivery of activities designed to achieve specific learning objectives, resolve problems, and foster the implementation of innovative strategies to integrating oral health care into primary care. TA comes in different forms, including sharing knowledge, building participants' skills, sharing resources (e.g., toolkits), and providing in-person and virtual interactions (e.g., trainings).[19]

> "We frequently get questions about billing. It's a challenge for clinics. They have to document high-risk status, and it has to be paired with the well-child check. So, there is some nuance to the billing that comes up."
>
> —CF3

Programs shared that using regional staff was helpful for providing tailored TA to medical professionals who are integrating oral health care into primary care. Specifically, billing support is a frequent TA request because medical offices are often unaccustomed to billing for oral health services. A common strategy across programs was including billing support during trainings and partnering with state Medicaid offices to provide direct assistance to medical staff on billing, payment reconciliation, and other administrative support. This strategy helps ensure that medical offices have a direct point of contact to get questions answered.

Regional models also help programs achieve statewide reach, provide community support, and create sustainable training models. The table below describes models used by the programs to implement TA.

> "We've shifted our thinking over time to realize that training is necessary but not sufficient. There's more coaching happening now and a mindset shift toward implementation and not just training."
>
> —FTFT

Technical Assistance Models

Programs	TA Models
CF3	CF3 uses master trainers to provide peer-to-peer TA, including training, to medical professionals and oral health professionals. Master trainers are either volunteer clinical champions from various health professions or ROHSs contracted by the CDPHE through Local Public Health Agencies employed by CDPHE. The four ROHSs are primarily dental hygienists who work in approximately 25 counties, mostly rural and frontier areas, across Colorado. CF3 works with the Colorado Department of Health Care Financing and Policy to provide TA on billing directly to medical offices. CF3 staff in CDPHE's Oral Health Unit provide TA prior to and post-training to support clinic change management, sustainability, and data collection.
CO MDI	CO MDI provides TA to participating medical practices through a learning network facilitated by project staff. CO MDI staff and medical professionals and dental hygienists working in integrated systems provided TA on topics specific to integrating dental hygienists into primary care settings (e.g., billing, credentialing, electronic medical records, purchasing supplies, setting up sterilization, workflow modifications).
FTFT	FTFT provides TA to medical practices interested in participating in the initiative. TA includes implementation assistance, medical staff in-person and virtual trainings using *Smiles for Life: A National Oral Health Curriculum*, support to integrate oral health risk assessment and evaluation into electronic medical records, and educational resources for parents and other caregivers.
IMB	Regional public health dental hygienists employed by the North Carolina Department of Health and Human Services, Division of Public Health, Oral Health Section provide IMB training to medical professionals interested in implementing the program. Once staff members within a medical practice are trained, the practice can follow a train-the-trainer model in which trained medical professionals then train staff within the practice using the online *Into the Mouths of Babes Toolkit*. TA is also available and includes billing and payment support provided by the North Carolina Medicaid, Division of Health Benefits.
I-Smile and CFI	Regional I-Smile coordinators (dental hygienists employed by local public health organizations that are contracted by the Iowa Department of Health and Human Services) provide CFI TA, including training, for pediatric and family practice medical staff in local communities. They also assist with referrals for children needing oral health care.

Challenges

Programs shared the following challenges related to TA:

- Finding medical professionals and program staff who can provide TA on integrated-care delivery (e.g., workflow modifications, documenting oral health care in electronic medical records). Most program staff typically have backgrounds in oral health and/or public health.
- Inadequate staff capacity and time to provide TA to health professionals and program staff in the field.

> "The biggest challenge for every local coordinator is identifying dentists to refer to. Not having enough dentists for the needs that the coordinators identify during screenings and preventive visits is a big and ongoing problem."
>
> —I-Smile

Evaluation

Programs identified evaluation as key to their success. Programs gather and analyze process and outcome data for quality-improvement purposes and to assess program effectiveness. Data are also often tracked on program dashboards and shared with leadership, champions, health professionals and staff, and stakeholders. However, ongoing evaluation relies on funding, staff capacity, research and evaluation expertise, and internal and external partnerships (e.g., Medicaid agency, academic partners). Funding for evaluation may come from multiple sources, including federal, state, and philanthropic organizations.

Programs use a variety of evaluation methods and data sources to track program-level and state-level data, as described below. Specific measures and data sources that the programs use can be found on their individual program spotlights.

Program-Level Data

Program-level data include data gathered on indicators that programs have established. Programs use a variety of methods to collect and analyze qualitative and quantitative data from sources such as needs assessments, practice-readiness and intent-to-implement assessments, pre- and/or post-training surveys, financial reports, TA reports, key informant interviews, and monthly reports.

State-Level Data

State-level data that programs use for evaluation include Medicaid administrative enrollment and claims data, Medicaid data from *Form CMS-416: Annual EPSDT (Early and Periodic Screening, Diagnostic and Treatment) Participation Report,* and oral health surveillance data. Each is described below.

> “Having an epidemiologist on staff has been critical for our program evaluation. The ability to hire someone in this position has been due to receiving oral health funding through CDC and HRSA.”
>
> —I-Smile

Medicaid Administrative Enrollment and Claims Data

Some programs use quarterly or annual analysis of topical fluoride and other dental and oral health services as part of their evaluation. This analysis uses administrative enrollment and claims data for children enrolled in Medicaid and CHIP. Data elements include date of birth, date of service, Current Dental Terminology (CDT) codes, tooth number, provider taxonomy codes, and provider billed amounts. Programs often partner with epidemiologists or data analysts for assistance.

Accessing data may be challenging; however, the Dental Quality Alliance (DQA) maintains the *DQA State Oral Healthcare Quality Dashboard* that provides analysis of the Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files from CMS. The dashboard offers access to DQA Quality Measures for Children, which contains data about state Medicaid and CHIP beneficiaries. Data can be viewed by population, state, year, program, measure, service type, and stratification (e.g., age, geographic location). State comparisons, national comparisons, and trend time data are available.

Medicaid Data from CMS-416 Annual EPSDT (Early and Periodic Screening, Diagnostic and Treatment) Participation Report

Some programs use the *Form CMS-416: Annual EPSDT Participation Report* as part of their evaluation. Lines 12a–12g report dental and/or oral health services rendered to children under age 21 with at least 90 continuous days of enrollment.

- 12a: Total eligibles receiving any dental services
- 12b: Total eligibles receiving preventive dental services

Program Callout

As part of its program evaluation, IMB uses the DQA topical fluoride for children quality measure, the percentage of children ages 1 through 20 who received at least two topical fluoride applications as (a) dental or oral health services, (b) dental services, and (c) oral health services within the reporting year.

Note: This measure may be of interest to statewide programs that integrate oral health care into medical care, as the numerator can be stratified by fluoride varnish application as an oral health service by a nondental provider.

- 12f: Total eligibles receiving oral health services provided by a nondentist provider
- 12g: Total eligibles receiving any preventive dental or oral health service

Service-type classifications for the purpose of measurement are based on federal definitions used by CMS.

- "Dental services" refers to services provided by or under the supervision of a dentist. Supervision is a spectrum and includes, for example, direct, indirect, general, collaborative, or public health supervision as provided in the state's dental practice act.
- "Oral health services" refers to services provided by any qualified health provider or by a dental provider who is neither a dentist nor providing services under the supervision of a dentist, for example (1) primary care medical providers or (2) dental hygienists or dental therapists who are not working under the supervision of a dentist.
- The "dental or oral health" numerator is not a sum of the "dental" and "oral health" numerators but represents the unduplicated count of children who received topical fluoride as a dental service or as an oral health service.

Line 12f may be of particular interest to statewide programs that integrate oral health services into pediatric medical care, as it relates to children who are eligible for oral health services from a nondentist provider. CMS-416 data are publicly available.

Oral Health Surveillance Data

Some programs use oral health surveillance data as part of their evaluation and to monitor program impact at the population level. A common tool used for oral health surveillance by the programs is the Basic Screening Survey (BSS) developed by the Association of State and Territorial Dental Directors (ASTDD), with approval of the Council of State and Territorial Epidemiologists, to help state and local public health agencies monitor the burden of oral disease. These surveys include direct observation of a child's mouth. ASTDD provides guidance for conducting, analyzing, and reporting BSS data. ASTDD recommends that the BSS be conducted every 5 years. Because significant resources are required to conduct the BSS, most states conduct the survey less frequently, and there may be a significant lag between data collection and reporting.

Challenges

Programs shared the following challenges related to evaluation:

- Lack of evaluation and research expertise.
- Insufficient funding to support ongoing program evaluation, including supporting staff and/or external partners assisting with the evaluation. Lack of funding to support screeners in the field is also a challenge.
- Difficulty accessing Medicaid administrative claims data because of data-sharing limitations and limited staffing resources within state Medicaid programs.
- Lack of partnership with Medicaid program staff.

Conclusion

Primary care, as the main point of entry to the health care system, represents a remarkable opportunity to help meet oral health needs of the MCH population and to address social determinants of health.

This report includes spotlights with information about each of the five programs focused on integrating oral health care into primary care serving the MCH population. Spotlights include a program overview; a description of the program's inception and early years; information about funding, notable strengths, notable evaluation activities, and evaluation methodology; select evaluation findings; and resources for more information about evaluation.

The report also describes key elements and challenges common across all programs that support or limit program success. Key elements for program success include collaborative partnerships and leadership support, diverse funding, commitment to TA, and evaluation. Some common challenges related to the key elements include lack of partners with research and evaluation expertise and lack of funding for ongoing evaluation, insufficient number of dentists to whom medical professionals can refer patients and who are comfortable providing care to the MCH population, threat of reduction or elimination of support from state general funds and foundations, difficulty obtaining buy-in from health professionals to integrate oral health services when Medicaid reimbursement is inadequate, and difficulty accessing Medicaid administrative claims data. Despite persistent challenges, the programs have achieved their goals by frequently identifying and implementing strategies to address their challenges and by seeking to maintain or enhance capacity.

The programs serve as examples of statewide programs that use a variety of strategies at community and individual levels to improve access to oral health care and reduce oral health disparities for the MCH population. The information in the report may be useful for states wanting to enhance an existing statewide program or to develop a new statewide program.

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