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IMPACT REPORT

The Collaborative Effect

Transforming Oral Health in North Carolina

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IMPACT REPORT

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Transforming Oral Health in North Carolina

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Participating Dental Practices

- Access Dental Care
- AppHealthCare
- Blue Ridge Community Health Services
- Cabarrus Health Alliance
- Carolina Family Dental Center
- Clayton Pediatric Dentistry
- Guilford County DHHS Clinic
- High Country Community Health
- MeckDental
- Pender County Main Dental Clinic
- Piedmont Health Services
- UNC Hispanic Student Dental Association
- United Health Centers
- Wake County DHHS Dental Clinic

Executive Summary

The Community Oral Health Transformation (COrHT) Initiative represents a significant, coordinated effort to improve oral health equity and care delivery across North Carolina.

Spearheaded by a partnership between the North Carolina Oral Health Collaborative (NCOHC), the Blue Cross and Blue Shield (BCBS) of North Carolina Foundation, and CareQuest Institute for Oral Health (CareQuest Institute), the Initiative sought to align community needs with person-centered, integrated care principles through cross-sector collaboration, advocacy, and systems transformation.

The Initiative engaged 14 safety-net dental practices serving 47 counties across North Carolina in a learning community for one year, with 10 practices continuing into an optional second year. The learning community was supported through funding from BCBS and CareQuest Institute, capacity-building resources, coaching, and a pay-for-reporting alternative payment model that incentivized quality data submission and improvement in care delivery. These efforts impacted over 87,000 unique patients representing diverse communities across the lifespan from 2022 to 2024.

The Initiative underscores that true oral health equity requires structural change: investment in infrastructure and workforce, data-informed practices, patient-centered models, and integrated care.

Key areas of focus included:

- **Technology and Teledentistry:** Teledentistry visits increased by 635%, significantly expanding access to preventive care for underserved and rural populations.
- **Minimally Invasive and Personalized Care:** Silver diamine fluoride applications grew by 423%, and documented self-management goals rose by 285%, reflecting a shift toward prevention and patient-centered approaches.
- **Integrated Care:** Chronic disease screenings rose by 434% and care coordination/referrals by 563%, supporting whole-person health and stronger linkages across health systems.
- **Patient Experience:** Participants improved patient-reported experience across all measured categories, using data to inform operational changes and enhance access.
- **Data Infrastructure:** Participants earned 97.2% of available pay-for-reporting dollars, demonstrating increased capacity for meaningful data collection and use to guide transformation.

The Initiative underscores that true oral health equity requires structural change: investment in infrastructure and workforce, data-informed practices, patient-centered models, and integrated care. COrHT illustrates a path forward — one in which providers, payers, and communities collaborate to deliver equitable, accessible, and preventive oral health care. The lessons and recommendations offer a road map for sustaining and scaling transformation to achieve long-term systemic change.

Introduction

Attaining optimal oral health is a challenge for many people in the United States, with some communities experiencing a significant burden of oral disease and challenges to accessing care.[1] However, these disparities are not merely a matter of access to care; they are deeply intertwined with broader systemic issues, including fragmented health care systems, lack of health insurance and affordability, socioeconomic inequalities, and cultural barriers to care.[1] Achieving true health equity in which everyone has the opportunity to obtain optimal oral health requires more than just addressing these disparities; it requires a fundamental shift in care delivery and infrastructure.

> **Achieving true health equity in which everyone has the opportunity to obtain optimal oral health requires more than just addressing these disparities; it requires a fundamental shift in care delivery and infrastructure.**

While oral health disparities are a pressing issue nationwide, their impact is acutely felt in North Carolina:

75,934 North Carolinians **went to emergency departments (EDs) for oral health care** because they lacked accessible routine care in 2019.[2]

From 2022–2023, Hispanic and Black kindergartners had **untreated tooth decay** at higher rates (23.9% and 23.8% respectively) than the state average (19.9%).[3]

93 **of North Carolina's 100 counties** are Dental Health Provider Shortage Areas as of 2024, making access to care difficult in certain state regions.[4]

Figure 1. Timeline of North Carolina's Transformation of Its Oral Health Care System

2020
Legislation passed expanding the scope of practice for Registered Dental Hygienists to practice under general supervision of a dentist in Federally Qualified Health Centers, public schools, and special-needs and some elder-care facilities.[5]

2021
Legislation passed establishing standards for the practice of teledentistry and expanding the scope of practice for Registered Dental Hygienists to administer local anesthesia.[6]

2022
Legislation expanded the Medicaid for Pregnant Women program to provide extended coverage up to 12 months postpartum and led to an additional 28,000 eligible beneficiaries in 2022.[7]

2022–2023
The North Carolina Institute of Medicine and the North Carolina Oral Health Collaborative convened a multisector task force to evaluate, assess, and recommend potential oral health system transformation.[8]

2023
Medicaid coverage, including dental services, was expanded to adults with incomes up to 138% of the poverty level; as of December 2024, over 600,00 people in North Carolina enrolled via expansion.[9]

North Carolina has invested in transforming its oral health care system to address these disparities through a combination of strategic initiatives, policy changes, and community partnerships (see Figure 1). As community and state-level advancements specific to the oral health care delivery system occurred, broad scale investments in transformation were also implemented by the North Carolina Department of Health and Human Services (NCDHHS) around the same time. In 2021, the state's Medicaid managed care program, modeled to reflect a patient-centered medical home, was implemented.[10] Though dental services were carved out of the model, the design prioritized methods to increase access, quality, and value of care through elements such as these:

- Telehealth
- Care coordination
- Care management to encourage Advanced Medical Homes
- Data collection and sharing
- Tools to address health-related social needs and reduce disparities
- Alternative payment arrangements

Leaders in the state of North Carolina recognize the opportunity to bridge improvement efforts for oral health care with broader health transformation work underway. This perspective underscores the need for additional strategic opportunities that align community needs with the interests of payers, providers, and patients to provide a unified approach to improving oral health outcomes where access, cost, and satisfaction of care are addressed. Collectively, North Carolina's social environment demonstrates the state's readiness for oral health transformation by aligning with its oral health champions and leaders, collaborative culture, collective efficacy, and common vision for transformation as well as supportive infrastructure like statewide data, funding, and policy momentum.[11]

> **“By envisioning a future where oral health is incorporated into the larger health care system and aligned with the desired future of health in North Carolina, our state can ensure that patient needs drive investments and care decisions and that all residents receive timely, tailored, and personalized oral health care that complements whole-person health.”**
>
> **— North Carolina Institute of Medicine[8]**

Stakeholder Alignment and Shared Mission

The Community Oral Health Transformation (COrHT) Initiative was a partnership between the North Carolina Oral Health Collaborative (NCOHC), a program of the Foundation for Health Leadership & Innovation (FHLI); the Blue Cross Blue Shield Foundation (BCBS) of North Carolina; and CareQuest Institute for Oral Health (CareQuest Institute). The three organizations realized the need for oral health transformation in North Carolina, and each brought unique contributions to the program in addition to a shared mission of improving access to care and health equity. BCBS's priority of community-informed systems change augmented NCOHC's efforts to enhance health policy change in the state. CareQuest Institute's expertise and experience in driving care, payment, and data transformation at the national level provided a trusted framework to implement oral health improvements. The cross-sector collaboration allowed for a combination of resources, knowledge, and vision to create effective, tailored, and sustainable solutions with communities across the state.

Background and Selection Criteria

The COrHT Initiative offered a learning community environment for participants to share best practices for value-based care (VBC), support a network of "champions" for change management at the dental practice level, and help advance health policy change in North Carolina.[12] The program sought participation from the dental safety net, of which there are an estimated 151 dental access points in the state,[8] including local health departments, Federally Qualified Health Centers, free clinics, and mobile dental clinics. Interested participants needed to reflect the following criteria:

- A local health department, a community-based nonprofit organization that was exempt under Section 501(c)(3) of the Internal Revenue Code, or a private practice with a payer mix of 15% or greater Medicaid
- A minimum of three operatories
- Provided comprehensive care (full range of diagnostic, preventive, restorative, surgical, and periodontal services)
- Use of electronic health records (EHRs); preferred EHRs: Open Dental, EagleSoft, Epic, and Dentrix

In addition to basic eligibility, the following areas were also considered critical success factors:

- Alignment among leadership, providers, and staff concerning continuous learning and clinical and administrative improvement
- The ability to engage two to three individuals to serve as the Site Implementation Team — attending virtual and face-to-face sessions and providing leadership on a day-to-day basis at the clinic to implement new practices
- Staff buy-in (clinical and administrative)
- Commitment to interdisciplinary practice (e.g., partnership with primary care/behavioral health)

Staff from CareQuest Institute, NCOHC, and BCBS, along with three external reviewers with significant experience in public health dentistry and the dental safety net, selected practices to participate in the yearlong Initiative (July 2022–July 2023). Seventeen total dental practices applied. Each was assessed on operational and clinical practices related to VBC, along with leadership buy-in and capacity.

The selection team chose 14 dental practices with high leadership buy-in and capacity to engage in activities with other participants and varying levels of readiness for implementing VBC. Select staff from each dental practice filled implementation roles including a day-to-day leader, clinical champion, and data manager. Additionally, after the first year of the Initiative, participants, NCOHC, BCBS, and CareQuest Institute decided to continue the collaboration.
The learning community and supports were extended through July 2024. While 14 dental practices participated in the first year (July 2022–July 2023), only 10 of those 14 participated in the second year (August 2023–July 2024). The selected dental practices will be referred to as participants throughout the remainder of the report.

Value-Based Care Framework

The COrHT Initiative leveraged a systematic and evidence-based approach to set clear program and individual participant aims, establish measures for success, and conduct plan-do-study-act (PDSA) cycles to test changes and drive improvements. Changes aligned with several themes to support VBC in oral health: technology, minimally invasive care, personalized and interprofessional care, alternative payment, and policy change. The improvement-based approach provided participants with a guide to address root causes of disparities and challenges within the oral health system (see Figure 2).

Figure 2. Value-Based Care Framework

Initiative Supports

Funding

A sponsorship of $20,000 per practice, provided by BCBS and CareQuest Institute, was available to support clinical and administrative staff with quality improvement activities and capacity building (described below). Grants of up to $50,000, provided by BCBS, were also available by application for local health departments and 501(c)(3) nonprofit clinics to support expenses such as technology, equipment upgrades, or staffing.

Capacity Building

The Initiative utilized a variety of activities to support participants in their quality improvement efforts while creating a network that fostered collaboration and support. These included training, monthly coaching calls, quarterly community calls, annual convenings, and sustained community, as described in Figure 3.

Figure 3. Capacity-Building Activities

Training: On-demand and live instruction with the aim of increasing knowledge of value-based care themes before beginning improvement efforts.

Monthly Coaching Calls: Virtual one-on-one meetings with participants to provide targeted support for data-driven decision-making, goals, and quality improvement efforts.

Quarterly Community Calls: Virtual meetings where all participants connect to share challenges, discuss solutions, and align on improvement efforts with value-based care subject matter experts.

Annual Convenings: In-person gatherings for training, maintaining program momentum, ensuring goal alignment, and fostering a collaborative and deeply connected cohort. Activities and discussion primarily focused on system-level drivers of health transformation.

Sustained Community: Connection of participants outside of formal engagements is crucial for many value-based care activities that take a higher degree of planning and funding to fully implement.

Data and Analytics Technical Assistance

The COrHT Initiative aimed to improve quality data reporting around VBC themes (teledentistry, minimally invasive treatments, and integrated and personalized care). To enhance understanding of the importance of data and analysis in how care delivery is transformed, the Initiative operationalized a pay-for-reporting incentive that mimicked a fee-for-service (FFS) + incentive alternative payment model (APM) where participants earned dollars for reporting quality (consistent), complete, and timely data.

The Initiative required each participant to submit periodic (monthly and quarterly) encounter-based data reports — including clinical data — around teledentistry, minimally invasive care, integrated and personalized care, demographic data, and financial data. All data wee extracted from practices' EHR systems by participants and submitted to CareQuest Institute using a secure portal. See Appendix for Initiative quality measures, including pay for reporting.

As participants submitted the required data each month, CareQuest Institute scored the data according to the pay-for-reporting design and transformed that data into interactive digital dashboards that displayed each quality measure for each practice to be able to evaluate their own progress. Additionally, as participants reported data, CareQuest Institute completed data quality checks and provided technical assistance to support needed data corrections. Pay-for-reporting payouts were awarded to each participant according to a set schedule of eight payouts over the course of the Initiative. Each participant was eligible to receive up to $24,000 ($12,000 per initiative year) from the pay-for-reporting arrangement. Ultimately, 12 of the 14 selected practices had the ability to submit the required data and were eligible to receive these funds.

Accessible and actionable data is also important to understanding the experience of care. In addition to data reported to CareQuest Institute, seven participants opted to measure patient-reported experience metrics using the DifferentKind (differentkind.com) software platform. Patient experience data collection done with DifferentKind was separate from monthly data reporting and dashboards with CareQuest Institute. The patient-management software was integrated with the practice's existing EHR system and provided a dashboard and visualizations. Data collection from patients was done via automated text messages sent the day following their appointment.

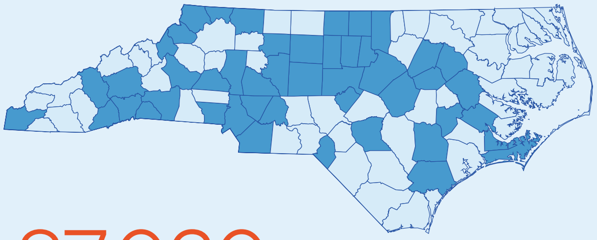
In addition to patient experience and quality measurement data, qualitative data were collected through periodic third-party interviews with participants and program leaders (NCOHC, BCBS, and CareQuest Institute). The program coaches also kept a qualitative log of participant experience, progress, and challenges as coaching sessions occurred throughout the program. The sections below draw from these data sources and summarize key Initiative impact themes.

Impact Assessment

The COrHT Initiative aimed to bring about measurable change by addressing three key theme areas: implementing technology (teledentistry), minimally invasive and personalized care, and care integration. Through the interventions described below, the Initiative sought to enhance data infrastructure, decision-making, and participant capacity, and to drive equitable, accessible, and integrated care. To support flexibility with clinic and community needs, participants identified their own goals within the three key themes. As such, each participant did not report on all Initiative quality measures, necessitating careful interpretation of the results. This section provides a comprehensive look at the outcomes of these efforts and evaluates the impact of value-aligned care for patients and the health care system.

The Core of Impact: Communities

When a delivery system implements care changes, it is critical to understand their impact on the individuals and communities connected to these changes. Over the course of the Initiative, participants serving 47 of 100 North Carolina counties reported interactions with 87,020 unique patients.

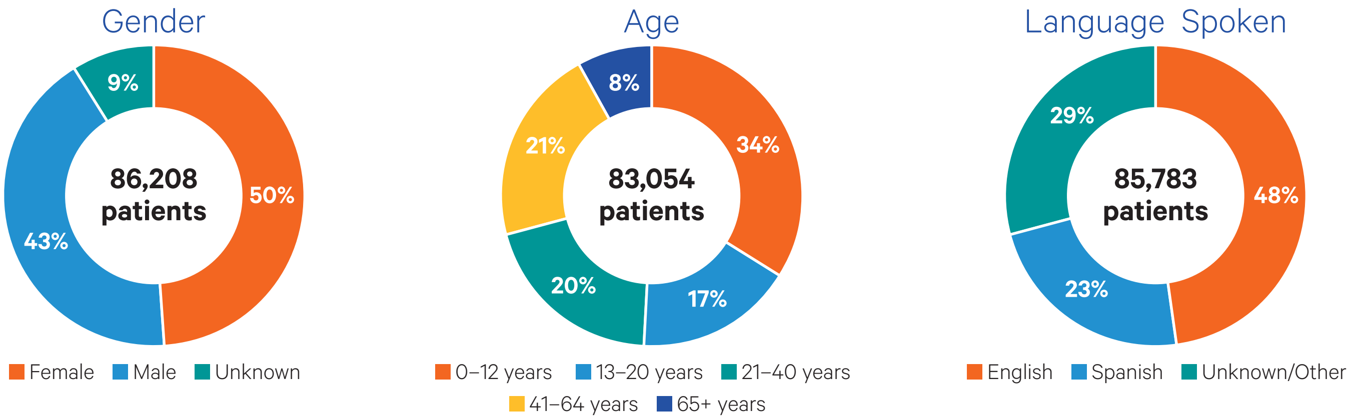


87,020 unique patients served

47 of 100 counties impacted

1 mission to transform oral health

Figure 4. Demographic Information of Patients



Demographic information is an important aspect of understanding who within a community has access to oral health care and what type of care they receive. Participant collection of accurate patient demographic information was hindered by inadequate software capabilities, lack of standardized processes, or the absence of financial incentive to do so. Participants were encouraged to collect and report demographic information such as age, race, ethnicity, language spoken, gender identity, sexual orientation, language barriers, homeless status, poverty status, chronic conditions, and social drivers of health as a part of the Initiative. Information about chronic conditions and social drivers of health was recorded using standardized ICD coding, but participants were not consistently able to collect and report this data. The most commonly reported demographic information by participants included patient gender, age, race, ethnicity, and language spoken. The demographic information reported revealed that the Initiative impacted a range of communities and individuals across the lifespan (see Figure 4). Of patients with reported demographic information, gender was most commonly reported as female (50%) or male (43%), while ages ranged across the lifespan (0–65+ years). Patients most commonly spoke English (48%), Spanish (23%), and a variety of other languages (29%).

It is important to note that gender, age, and language spoken were not reported for every patient, making the total patients represented in each Figure 4 graph different. Additionally, while each participating practice reported patient race and ethnicity information, they did so using practice-specific categories and reporting formats. Therefore, collective race and ethnicity information could not be interpreted or shared across participants. More comprehensive demographic data collection would allow for an even deeper understanding of communities engaging in care and is considered an area for future improvement for equitable data collection.

While demographic data collection as a whole was challenging for participants, they did highlight the importance of understanding the communities they served as a foundational element of promoting health equity. This priority drove efforts to enhance patient communication strategies, such as implementing interpretation services and providing cultural sensitivity training for staff. Additionally, participants integrated screenings to assess social drivers of health, allowing them to identify barriers to care and connect patients with much-needed services and community resources. This proactive approach further supported efforts to address disparities and improve oral health outcomes. These changes were also seen as critical steps toward fostering trust and improving patient-provider relationships, which are fundamental to promoting equitable oral health.

> **“To make an impact, we need to understand the community we serve... The demographic data made us realize there are steps we need to take clinically to better capture this data and ultimately better support community engagement and connect patients to resources.”**
>
> **— Participant**

Infrastructure for Transformation: Data and Technology

At the outset of the Initiative, each participant completed an electronic VBC readiness assessment to evaluate their capacity and infrastructure to take on care transformation efforts. Responses from the assessment indicated that while most (82%) survey respondents somewhat or strongly agreed that VBC is an important element to improving the US health care system, fewer (72%) somewhat or strongly agreed that participating in VBC is realistic. Only 36% somewhat or strongly agreed that there was organizational buy-in regarding the importance of VBC.

These findings highlight a gap between desire and actual readiness to pursue change. Readiness assessment responses indicated that data reporting was the most anticipated organizational challenge when implementing VBC. The Initiative sought to support participants in preparing for care transformation through enhancing their readiness for collecting and using data to make decisions, monitor progress on goals, and measure outcomes. During the first few months of the Initiative, participants received one-on-one technical assistance from CareQuest Institute to review Initiative quality measures, data requirements, and electronic reporting capabilities. In return for setting up a reporting process and submitting the required data periodically, the participants were rewarded with pay-for-reporting incentive dollars based on the quality and timeliness of data reported. Over the two-year Initiative, participants successfully reported quality data, with competency improving over time. While participants began at 100% complete clinical data and maintained this level of completeness for the entire Initiative, completeness of demographic and financial data proved more challenging. Despite this, improvements of 20% and 24% were observed in completeness of demographic and financial data, respectively.

$256,635
pay-for-reporting dollars earned

Funds used for enhanced capacity and quality improvement plans:

- Dental equipment (e.g., SDF supplies)
- Technology (e.g., teledentistry equipment)
- Salaries for new staff (e.g., care coordinator)

Participants began at **100% complete clinical data** for the first reporting period and maintained this level of completeness for the entire Initiative.

Participants achieved a **20% improvement** in the completeness of reported demographic data from the first reporting period **(80%)** to the final reporting period **(100%)**.

Participants achieved a **24% improvement** in the completeness of reported financial data from the first reporting period **(66%)** to the final reporting period **(90%)**.

Out of the $264,000 in available pay-for-reporting earnings, participants earned a total of $256,635 pay-for-reporting dollars over the duration of the program, representing 97.2% of available earnings. The most complete reporting domain was clinical data, while participants missed out on reporting earnings most often for incomplete financial data. Additionally, earnings for completeness of demographic data were based on what information clinics were able to report at baseline. For example, if a clinic was only able to report on patient race, ethnicity, age, sex at birth, and homeless status at baseline, that was considered a complete set of demographic data for that individual clinic. Over the course of the Initiative, clinics were encouraged to bolster their demographic data collection and add to what was considered their complete set of demographic data. Over the course of the Initiative, participants improved their ability to report, collect, and use data that ultimately drove their decision-making in how to transform care delivery in their communities.

Transforming Care Delivery

A hallmark aim of VBC is to improve access to appropriate health care services and to prevent disease.[13] The Initiative sought to support participant capacity and resources to deliver preventive oral health care through the use of teledentistry and minimally invasive care. The percentage of overall preventive services that clinics provided (prophylaxis, fluoride, sealants, oral hygiene counseling, etc.) was also monitored throughout the Initiative.

Fourteen participants began the Initiative in July 2022. At the end of the first year (July 2023), 12 participants had provided data for the entire year. Only 10 of the original 14 participants continued into the second year of the Initiative and reported data through July 2024. Accordingly, data reported in the following sections will reflect data at baseline (prior to Initiative start) and after the first year from 12 participants and data after the second year from the 10 remaining participants.

Before the Initiative began, 24% of all services provided by 12 reporting practices were considered preventive. During the first year of the Initiative, 25% of all services among 12 practices were considered preventive; that percentage rose to 27% among 10 practices in the second year. Collectively, participants used teledentistry and minimally invasive care to augment efforts in prevention.

For the 10 participants that completed the full two years, **preventive procedures increased by 2.1%** during the Initiative **(26.7%)** compared to baseline **(24.6%)**.

Teledentistry

Teledentistry was primarily used to deliver screening, examination, prophylaxis, and risk assessments to children in schools, individuals who were homebound, individuals in long-term care facilities, and migrant farm workers. Participants highlighted teledentistry as a transformative tool in expanding access to care, particularly for those patients who experience the greatest health disparities and inequities and are in remote communities.

Prior to engaging with COrHT, **25% (3 of 12)** participants reported using teledentistry. **58% (7 of 12)** reported by the end.

Overall, for the 10 participants that completed the full two years, teledentistry visits increased by 635% during the Initiative (2,953 visits) compared to baseline (402 visits).

While three practices reported **448 teledentistry visits** at baseline, **1,463 teledentistry visits** were completed across seven practices in the first year. In the second year, while only four practices remaining utilized teledentistry, they reported **1,646 visits**, more visits than during the first year.

Teledentistry visits for the duration of the Initiative were primarily asynchronous (97%) and preventive (68%) in nature.

Several participants noted that their success with teledentistry was largely due to the financial support provided by the BCBS Innovation Grant and the recent expansion of North Carolina's state statutes that allows public health dental hygienists to work independently using mobile care delivery. Participants primarily used the asynchronous teledentistry modality, which involves the exchange of dental information captured during examinations (such as images and radiographs) by a dental hygienist and transmitted and evaluated by the supervising dentist at another location or time.[14] Participants also faced challenges in utilizing teledentistry, as it required much effort and time to acquire teledentistry technology/equipment, coordinate schedules with community partners, and update staffing models. The recent expansion of North Carolina's statutes for public health dental hygienists to deliver care under more flexible supervision models, reimbursement of provider-to-provider teledentistry examination by NC Medicaid, and peer support among participants proved invaluable for utilizing teledentistry to care for communities. Though supportive to expanding care delivery, updates to these policies to address ongoing workforce challenges and further service reimbursement continue to be a work in progress. Although recent statutory changes have improved access to care, several challenges remain. Providers underutilize statute allowances due to inconsistent policy language. Workforce barriers also persist — particularly the requirement that dental hygienists accumulate three to five years of experience before qualifying as public health hygienists. Additionally, cumbersome reporting requirements for employing a limited supervision hygienist (NCAC 16Z) further complicate service delivery. The lack of Medicaid reimbursement for periodic oral exams via teledentistry also disrupted the efficiency of mobile programs, as dentists were required to be physically present at mobile clinics instead of delivering care remotely. NCOHC continues to collaborate with policymakers to refine statutes, rules, and administrative policies to expand access and ensure more patients receive essential oral health care.

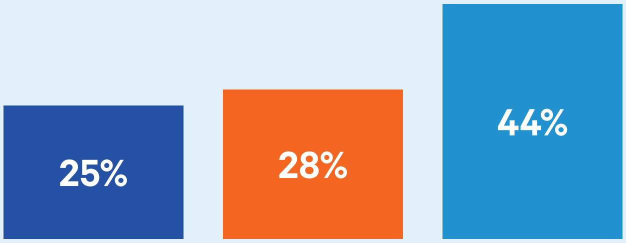
Like teledentistry, other infrastructure advancements around mobile dental equipment supported alternative care delivery. During the Initiative, three participants received funding to acquire buses equipped with dental operatories, and two additional teams used portable equipment to perform screenings and provide services at various community locations, such as schools. One participant noted that such equipment was particularly impactful in rural and remote areas in helping to bridge gaps in access, improve health equity, and address longstanding disparities in care.

> **The mobile units have been critical in reaching patients who otherwise would not have access to dental care. Teledentistry allowed us to connect these patients to dentists for consultation and follow-up care without requiring them to travel long distances."**
>
> **— Participant**

Minimally Invasive and Personalized Care

Minimally Invasive Care (MIC) in dentistry drives a focus on prevention through evaluating risk for developing oral disease, addressing risk factors, detecting early signs of disease, and conserving tooth structure in restorative treatment.[15] The Initiative encouraged participants to explore MIC through implementation of caries risk assessment (CRAs), silver diamine fluoride (SDF), and other efforts such as applying sealants, topical fluoride, and discussion of self-management goals with patients. This approach to care encourages personalized assessments and tailored treatment planning to meet specific patient needs.[16]

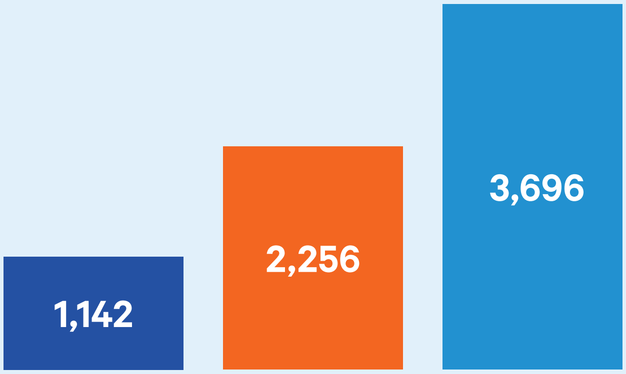
Prior to engaging with COrHT, **50% (6 of 12)** participants reported performing caries risk assessment. **100% (12 of 12)** reported by the end.



While six participants reported that **25% of patients** due for a CRA (annually) received one at baseline, all twelve participants reported that **28% of patients** due for a CRA received one in the first year. This percentage increased to **44%** across ten participants in the second year.

Over the course of the Initiative, over half (55%) of patients who received a CRA were identified as having high caries risk. CRAs supported oral health provider collaboration with their patients to determine the best course of action to address patients' risk factors and improve their oral health.

Prior to engaging with COrHT, 92% (11 of 12) of participants reported using SDF. By the end of the Initiative, 100% (12 of 12) reported using SDF.



While 11 participants reported **1,142 SDF applications** at baseline, **2,256 SDF applications** were completed across 12 practices in the first year. In the second year, while only 10 practices remaining in the Initiative utilized SDF, they reported **3,696 applications**, more than during year one.

Among the 10 participants that completed the full two years, SDF applications increased by 423% during the Initiative (5,819 applications) compared to baseline (1,112 applications).

Other personalized care services provided included fluoride varnish applications, sealants, and discussion of self-management goals (nutritional, tobacco, and oral hygiene counseling):

- Over the course of the Initiative, fluoride varnish applications remained steady at 7% of all services provided, and sealants remained at 1%.
- Among the 10 participants that completed the full two years, documented self-management goals increased by 285% during the Initiative (61,228 goals) compared to baseline (15,907 goals).

Participants emphasized the value of integrating CRAs into their workflows, which served as a foundation for better utilization of other preventive services. By identifying patients' caries risk levels, they were able to tailor care plans that incorporated services such as SDF and discussions of self-management goals. This structured approach enhanced the efficiency and effectiveness of patient care and contributed to increases noted in utilization of preventive services across participants.

The success of these workflows extended beyond individual care delivery. Participants found that preventive workflows that included services linked to CDT codes, regardless of whether these services were reimbursed, both encouraged documentation and facilitated the operational development of new policies and processes. These novel processes and workflows included implementing assisted dental hygiene models, optimizing appointment scheduling and confirmation processes, and integrating asynchronous teledentistry with public health dental hygienists. Participants stressed that these operational improvements were driven by data-informed practices, which enabled them to identify inefficiencies, refine their care approaches, and ensure that changes were sustainable over time. This alignment of clinical care with data-driven decision-making is consistent with a population health management framework that implements risk assessments and oral health education to address the health of those at highest risk for oral disease.[17]

Despite progress in MIC during the Initiative, challenges remained in expanding the use of fluoride varnish, particularly in adults. Utilization rates remained relatively steady, which was likely due to limited reimbursement rates for this service in adult patients. One participant prioritized increasing fluoride applications for adults and successfully improved their measures. However, clinic leadership expressed concerns about the lack of reimbursement, raising questions about the long-term sustainability of these efforts. Addressing this barrier will require policy changes to support broader coverage and strategies to encourage long-term adoption of expanded preventive care for adult populations.

> **“Using caries risk assessments as a guide helped us streamline preventive care delivery and focus on what each patient truly needed.”**
>
> **— Participant**

Integrated Care

Despite the growing understanding of the relationship between oral health and systemic disease, oral health care often remains separate from the rest of the health care system.[18] Providers across the health care system must be enabled to work together to care for the whole health of a person. The Initiative supported participants to integrate care through chronic disease screenings in the dental setting, care coordination, and referrals.

The documentable chronic disease screenings by dental providers included:

- HbA1c in-office point of service testing
- Blood glucose level in-office point of service testing
- Dental case management, a coordinated approach to assist patients with accessing and navigating the health care system by addressing barriers such as scheduling and financial obstacles as well as social drivers of health

Due to lack of available CDT codes, blood pressure screening was not evaluated as part of the Initiative.

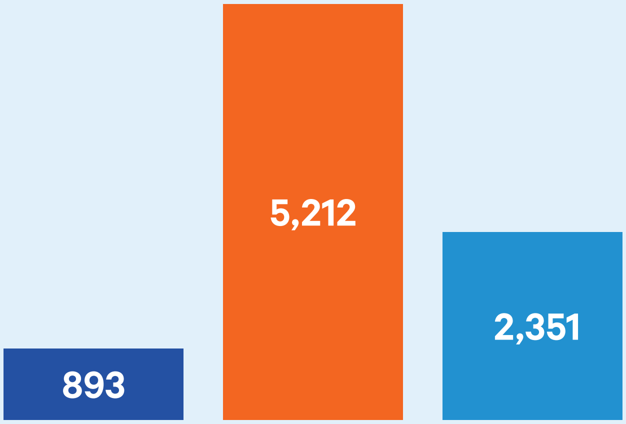
Among the 10 participants that completed the full two years, chronic disease screenings increased by 434% during the Initiative (4,771 screenings) compared to baseline (893 screenings).

Beyond assessing overall health as appropriate in the dental setting, successfully integrated care requires coordinating care and using referral networks between providers. Documentable services considered part of care coordination and referrals include diagnostic services provided by a dentist or physician, consultation with a medical health care professional, and care coordination. Care coordination involves managing a patient's care across multiple providers. This includes communication between providers, tracking follow-up appointments, and assisting patients to access necessary services. Unlike a consultation, which is a single interaction where a provider seeks advice from another professional, care coordination is a continuous process seeking to reduce gaps in treatment.

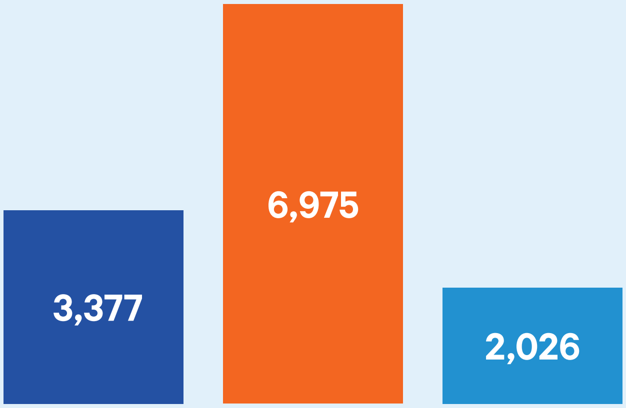
Among the 10 participants that completed the full two years, care coordination and referral services increased by 563% during the Initiative (3,336 services) compared to baseline (503 services).

Prior to engaging with COrHT, **8% (1 of 12)** participants reported doing chronic disease screenings. **25% (4 of 12)** reported by the end.

Prior to engaging with COrHT, **50% (6 of 12)** participants reported doing care coordination and referrals. **100% (12 of 12)** reported by the end.



While one participant reported **893 chronic disease screenings** at baseline, **5,212 screenings** were completed among four participants in the first year. In the second year, **2,351 screenings** were completed among three participants.



While six participants reported **3,377 care coordination and referral services** at baseline, **6,975 total coordination and referral services** were completed among 12 participants in the first year. In the second year, **2,026 services** were completed among nine participants.

Participants also acknowledged challenges with performing integrated care. Many dealt with difficulty aligning workflows with health center medical peers and the inability to share information and track referrals completion status across electronic record systems. Additionally, some integrated care services were not fully captured in existing billing codes (e.g., blood pressure screening) or reimbursed by insurers (e.g., care coordination), which hindered the participants' ability to implement new screenings and coordination processes.

In response to challenges with reimbursement for integrated care, one participant completed an analysis of potential annual organizational revenue for providing care coordination services. They used this information to advocate for reimbursement of care coordination by NC Medicaid to support wider utilization of these services for improved provider collaboration and chronic disease management.

Several teams also implemented patient screenings to address social drivers of health (e.g., challenges with transportation or access to nutritious food) as part of their workflows, connecting patients with resources to address broader challenges impacting their overall well-being. By addressing these interconnected factors, dental teams demonstrated a deeper understanding of the complexities of health equity.

> **“We're now more involved with senior care, prenatal care, interdepartmental coordination as well as the mobile health unit for outreach activities.”**
>
> **— Participant**

Throughout the two-year Initiative, participants worked to align dental care processes with other health disciplines (e.g., medical health, behavioral health) and implemented new services. These efforts not only improved care quality in the dental setting but also strengthened the relationships between oral health and the broader health care system, fostering a more cohesive and whole-person approach to integrated care.

> **“We encourage staff to think beyond the teeth. Mental health, general health, and social disparities are just as important as dental health.”**
>
> **— Participant**

Patient Experience

The Initiative focused on implementation of several key drivers to improve oral health, as described above. Assessing and addressing the impact of the patient experience as part of the Initiative allowed participants to align their clinical efforts with what matters to patients. Patient experience was a key insight captured to better support continuity across the patient journey. Patient experience in oral health is increasingly important as the profession focuses on rewarding quality, outcomes-driven care.

Participants measured **14 unique patient-reported experience metrics**, including:

- **Ease of access,** ability to get an appointment when needed
- **Shared decision-making,** having a central role in treatment decisions
- **Price transparency,** clear understanding of cost before appointment

As defined by the Beryl Institute, a leading nonprofit committed to improving patient experience, patient experience (PX) is "the sum of all interactions, shaped by an organization's culture, that influence patient perceptions across the continuum of care."[19] From a clinical perspective, patient experience with care correlates with adherence to provider advice and treatment plans, as well as processes of care like accordance with preventive measures and chronic disease management skills,[20–24] all of which support the goals and outcomes described above. As dental professionals treat chronic diseases where adherence to daily prevention and completion of treatment plans are crucial to achieving overall oral health, it follows that practices and groups looking to support these patient goals would benefit from paying close attention to measuring and improving patient experience.

Overall, participants improved across all experience metrics over the course of the Initiative. Patients rated their dental experience highest on empathy, patient consideration, and office environment and lowest on price transparency, ease of access, and after-visit management. Participants used the data to highlight their successes and opportunities around patient experience with their health center boards, including advocating for additional resources to increase the staff of their call centers to better meet patient needs.

By incorporating the measurement of patient experience into the overall efforts of the Initiative, participants were able to see the correlation of patient experience with clinical improvements like increases in minimally invasive care. Effective communication skills, such as motivational interviewing and shared decision-making, have consistently been shown to improve clinical outcomes,[25] but organizations seeking to promote these skills have not been able to measure them consistently. This Initiative has shown that clinical outcomes and patient-reported experience can be viewed, measured, and improved holistically.

BCBS provided funding so participants could use DifferentKind's platform to consistently track patient experience. Monitoring and improving the patient experience was a key focus of the DifferentKind support, with participants leveraging patient feedback and data to identify and address barriers to care. For some participants, this process included tracking broken appointments for the first time, which provided a clearer understanding of gaps in access and patient follow-through. Data collected through the DifferentKind dashboard also captured valuable patient feedback on scheduling challenges, with long wait times emerging as a concern for patients. This insight allowed teams to recognize the need for targeted improvements in appointment availability and scheduling efficiency.

> **It is painful to hear patients call us out for some things. It is a good reminder to do the most we can for people in the nicest, fastest, most efficient way possible… but to also remember we can't make everyone happy all the time. Especially with teeth. But we can try!"**
>
> **— Participant**

Additionally, several participants implemented strategic workflow changes to enhance access to care. Approaches involved adopting assisted dental hygiene workflows and advanced access scheduling for recall appointments, both of which enabled providers to see more patients per day and reduce the number of individuals on waiting lists for recalls. These efforts reflect a data-driven approach to improving the patient experience by demonstrating how feedback can inform meaningful operational changes that enhance access and continuity of care.

Network Building

The Initiative's foundation of shared activities and goals drove participants to establish a close, collaborative community amongst themselves. In fact, in a survey after Initiative completion (August 2024), participants were asked to rank the most useful components of the Initiative (see Figure 5). Participants ranked peer-to-peer sharing and convening in person as two of the most useful components of the Initiative, in addition to funding support.

Continual engagement with peers allowed participants to discuss challenges, resources, and solutions for implementation of the VBC themes at the practice level. For example, multiple participants wanted to extend their reach to deliver preventive care to the community through mobile dentistry programs. While these programs typically require a great deal of coordination of staff, community partners (schools, nursing facilities, etc.), workflows, and scheduling, participants with experience were able to share resources (e.g., patient informed consents) and recommendations (e.g., mobile equipment) with other participants that desired to do the same type of work. Collaboration not only led to changes at the practice level, but it also supported consensus building around health policy priorities for change at the state and health care system level.

> **“The support has helped us to not give up and throw in the towel when we come across obstacles… The COrHT meetings are always positive — we acknowledge problems, but we support one another and look for solutions.”**
>
> **— Participant**

As participants convened in person, they identified policy changes, like scope-of-practice changes for dental auxiliary workforce and modifications to Medicaid reimbursement, that would support their work and improve the general accessibility of oral health care. Once identified, NCOHC played a key role in incorporating these recommendations into a policy agenda for further action with North Carolina legislators. This showcases the value of a network of stakeholders that play distinct yet synergistic roles to accomplish meaningful change.

Figure 5. Participants' Ranking of the Most Useful Components of the Initiative

How does this care compare to oral health care delivered outside of the Initiative?

To understand how care delivered by Initiative participants compares to oral health care by other providers not participating in the Initiative, data from a nonparticipating FQHC in North Carolina was compared to participant data using a difference-in-differences analysis. At the primary observation point (October 2023), several key findings around delivery of preventive services were observed:

- Initiative participants were significantly more likely to complete prophylaxes ($p = 0.05$) and deliver fluoride varnish ($p = 0.04$) and self-management goals ($p = 0.05$) than nonparticipants.
- Initiative participants were significantly more likely to apply silver diamine fluoride ($p = 0.05$) than nonparticipants.
- Initiative participants delivered significantly fewer surgical dental services ($p = 0.04$) than nonparticipants.
    - In fact, of the 10 participants that completed the full two years, surgical services, as a percentage of all delivered services, decreased by 1.3% from baseline (11.1%) through the Initiative (9.8%).
- While other measures were compared (caries risk assessment, chronic disease screenings), no significant differences between participants and nonparticipants were observed.

Overall, Initiative participants delivered more preventive services while lowering the need for surgical dental services over time compared to a safety net dental practice that did not participate in the Initiative. While comparison to one dental practice should not be generalized to all dental practices in the state, these findings suggests that value-based oral health care delivery is viable and is enhanced by supporting dental practices with funding, training, and a strong peer network.

The Path Forward

Improving oral health requires a comprehensive, sustainable approach that necessitates investment, collaboration, and alignment of health care systems, resources, and policies to create equitable solutions. Lessons learned from the Initiative set the foundation for recommendations for a path forward for dentistry to embrace VBC. The recommendations below are meant to guide transformation efforts generally and within the state of North Carolina to improve oral health for all.

Investments Are Foundational to Improvement

Lessons Learned	Recommendations for the Path Forward

• Capital investments in technology (e.g., EHR upgrades), equipment (e.g., mobile dental units), and staff (e.g., care coordinator) enhanced participants' ability to collect meaningful data, deliver care in community settings, address social drivers of health, and align staffing models with integrated care.	• Public infrastructure investments are traditionally catered to medical care (e.g., funding for mandated EHR use) and have not been historically required or available for dentistry. Private and public investments (e.g., government funds, private grants) are needed to support technology, equipment, and staffing models necessary for VBC.
	• EHR systems used by dentists must both support practice management and streamline patient care and information exchange. While the market and technological advancements are making such systems more mainstream, dentists also need to be incentivized to invest in these infrastructural improvements.
	• Update data exchange standards. Private/public investments in the safety net can ensure dental professionals are equipped to collect and report demographic data to promote health equity as an industry standard.
	• **North Carolina:**
	  • Enhance readiness and incentivize dental connection to the state Health Information Exchange, NC HealthConnex.[26]
	  • Incentivize dental provider participation in screening to address social drivers of health to inform health policy and resource allocation.

• Coding for all provided services, regardless of insurer reimbursement, supported tracking and a fuller awareness of practice operations and population impact. • Evaluating a variety of data (patient demographics, clinical, operational, financial) generated evidence to inform changes in dental care delivery and health center operations. • Collecting information about patient experience, risks for developing oral disease, or health impact by social and environmental factors supported a deeper understanding of individuals and communities beyond clinical needs. • A financial incentive to report data necessitated careful attention to data collection processes, quality, and successful use.	• With health care decisions becoming increasingly data driven, the creation of training and tools for dentistry to frequently and meaningfully use data is essential. • Patient risk-measurement and population health management tools must be utilized in dental settings to evaluate overall patient health alongside oral health. • Standardize patient experience and demographic data collection to support a fuller understanding of diverse populations and their health care experiences for meaningful decision-making and appropriate interventions to improve health equity. • Health Information Technology stakeholders must consider how regulations and vendor products apply to dentistry to enhance their ability to integrate with the broader health care system. • **North Carolina:** • Insurers and NC Medicaid should evaluate how dental data are collected, used, and shared, including diagnostic coding, to inform decision-making at the practice and state or plan levels.

Alignment Supports Effective Solutions

Lessons Learned	Recommendations for the Path Forward

• Use of technology and alternative care pathways (teledentistry and mobile equipment, dental hygienists in community settings) particularly benefited rural communities and those with limited access to traditional care settings (e.g., special needs populations).	• Identify and document best practices from successful mobile health programs to adopt more broadly with populations that are known to lack access to oral health care.
	• Partner with communities and/or other health centers to strengthen the infrastructure for mobile and telehealth services.
	• Establish long-term funding and support structures (e.g., health center budget, private grants) to maintain and upgrade equipment to ensure reliability, especially in rural areas.
	• Employ community navigators to oversee logistics of planning, scheduling, and maintaining equipment for community outreach.
	• Implement systems to track service utilization, processes, and patient health outcomes and experience with alternative care pathways.
	• Advocate for policies related to reimbursement for teledentistry services and flexible scope of practice for dental health professionals.
	• **North Carolina:**
	  • Advocate for the improved collection of workforce data during license renewal by the North Carolina Board of Dental Examiners to provide a clearer picture of provider distribution needs.
	  • Align the Public Health and Limited Supervision statutes to support clear use and practicing in full licensure scope by dental hygienists and dental assistants.

• Prioritizing regular engagement with peer networks fostered shared learning and collaborative solution building for sustainable improvements at the practice level.	• Health care employees should seek (and be given) opportunities to engage with peers within and outside of their organization to learn from others and improve ways of working.
	• Share best practices of VBC transformation across the dental safety net.
	• **North Carolina:**
	  • Organizations positioned to convene dental providers (e.g., nonprofits, foundations, academic institutions) should consider directing resources (e.g., funding, time) toward training and networking opportunities.
	  • Continue North Carolina Area Health Education Centers dental practice management training (created in 2025) to equip safety net dental providers with best health center operational and financial practices.

Broad Change Requires Collaboration

Lessons Learned	Recommendations for the Path Forward
• Through regular engagement with each other, the cohort recognized opportunities and built consensus around health policy priorities needed to improve care access (e.g., teledentistry reimbursement, dental hygiene scope of practice).	• It is critical that individuals working in health care settings have input in policy and regulatory updates, so the changes result in effective solutions. • Engage payers, providers, and policymakers in efforts to identify public and private investment strategies that build infrastructure and operational capacity and support peer networks. • When forming peer networks, structure them to not only support a continuous learning community, but also with the objective of identifying action plans to address shared barriers through advocacy. • **North Carolina:** • Enhance allowable uses and reimbursement channels for teledentistry. The utility of alternative care settings and communication through teledentistry can be enhanced if reimbursement is allowed for periodic and limited oral evaluations. NC Medicaid currently reimburses dental providers for limited oral evaluations through teledentistry from provider to provider only (not provider to patient). • Advocating for the reimbursement of periodic oral evaluations through teledentistry will increase the sustainability of mobile programs and decrease the need for additional patient appointments. • By reimbursing for teledental periodic oral evaluations, safety net providers can more effectively and affordably provide care in nontraditional settings like schools and elder care facilities.
• Through investment of time, knowledge, skill development, and financial incentives, the cohort grew proficiencies to apply data insights not only to changes in clinical care but also improvements more broadly at their organizational and state policy level.	• Leverage investments, insights, and improvements at the peer level to collaborate more broadly with communities, among states, and nationally to extend impact. • Leverage aggregate data to assess needs, rationale, and impact for policy recommendations at the state or national level. Routine analysis of health care utilization and socioeconomic data to identify trends showcasing progress and potential impediments for access to care, health outcomes, and patient experience is critical for equitable policy recommendations. • Grow capabilities to leverage patient experience and storytelling to humanize and add community context in advocacy efforts. • Build on investments in data proficiencies at the practice level to position them for broader health care integration through optimal business management, data exchange, and participation in alternative payment models. • **North Carolina:** • Consider how oral health's inclusion in NC Managed Care can further improve coordinated, quality care and health outcomes for North Carolinians.[8] • Payers, providers, and stakeholder groups should evaluate provider network enablement strategies to support infrastructure, knowledge, and skill development.

Findings from the COrHT Initiative exemplify how data-driven strategies and collaborative care models can drive meaningful progress. Participants worked to enhance care delivery, improve access, and create operational strategies to promote person-centered approaches to care. These strides addressed immediate gaps in care delivery and fostered a network for collective effort to continue improving and transforming care. To continue this momentum, communities, providers, payers, advocates, and policymakers must commit to aligning interests and building care, data and analytics, and payment solutions toward a unified approach for accessible care that is integrated with the broader health care system to prevent oral disease and improve health outcomes.

Appendix

Initiative Reporting Quality Measures

1. Completeness of reported clinical data
2. Completeness of reported financial data
3. Completeness of reported demographic and social data
4. Quality of reported data

Initiative Clinical Quality Measures

1. Percentage of oral health services provided via telehealth
2. Percentage of patients with caries risk assessment
3. Percentage of primary and secondary preventive procedures
4. Percentage of periodontal maintenance procedures
5. Percentage of periodontal risk assessments
6. Percentage of care coordination and referral services
7. Percentage of surgical procedures
8. Percentage of chronic disease screenings
9. Percentage of emergency visits and broken appointments

Note: The term "percentage" refers to the number of a given service compared to the number of all procedure codes identifying that oral health services were provided during the measurement period.

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