Early Childhood Oral Health Systems in Colorado: A Landscape Scan

EARLY **MILESTONES**
COLORADO

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Introduction

Good oral health improves overall health and well-being for adults and children alike. Though Colorado's oral health system has improved over the last 20 years, there are still many opportunities for greater impact for children and families.

Good oral health habits in early childhood can prevent cavities, support school readiness, and set children up for lifelong achievement.[1] Many children are not receiving preventive oral health services. Children under the age of six, particularly those experiencing other hardships, are less likely to receive these services and more likely to require invasive restorative care. The chronic and acute pain of untreated cavities can also make it difficult for children to sleep and lead to poor nutrition, social-emotional health concerns, and lifelong health disparities.

Pregnancy is a great time to promote habits that reduce risks of complication and dental disease for the child. In 2017, less than half of pregnant people in Colorado (46%) reported having their teeth cleaned during pregnancy. Nearly one-third of kindergartners (30%) had cavities.[2]

Pandemic conditions impact oral health services; nutrition and hygiene habits; and food, housing, and financial insecurity. A combination of these factors, dental office closures, and hesitation to seek care likely have caused a rapid growth in dental diseases.

As Colorado aims to recover from the pandemic, there is opportunity to promote better oral health practices and improve the systems that support children and families. This landscape scan is designed to help state leaders identify where future system-level investments in oral health access, integration, and data can create positive change.[3]

[1] Crall, J. J., & Vujicic, M. (2020). Children's Oral Health: Progress, Policy Development, And Priorities For Continued Improvement: Study examines improvements in American children's oral health and oral health care that stem from major federal and state initiatives, and persistent disparities. Health Affairs, 39(10), 1762-1769.

[2] Calanan, R., Elzinga-Marshall, G., Gary, D., Payne, E., & Mauritson, K. (2018). Tooth Be Told...Colorado's Basic Screening Survey, Children's Oral Health Screening: 2016-17. Colorado Department of Public Health and Environment. https://www.colorado.gov/pacific/sites/default/files/PW_OH_BSSReport.pdf

[3] The information in this report was compiled from 21 stakeholder interviews with 28 total participants.

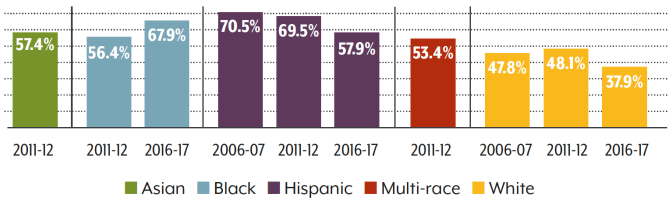
Coverage & Access

Before the pandemic, dental coverage in Colorado was at an all-time high.[4] This was likely due to the growing number of Coloradans covered through Medicaid, which includes dental benefits for adults and children. However, progress was not equally distributed across racial and ethnic groups. Hispanic and Black Coloradans experience significantly worse oral health than their non-Hispanic white peers. The percentage of white children with dental disease decreased between 2011 and 2017, while disease rates increased among Black children. The only group that did not see an increase in access to needed dental care was Black women. In 2017, 43% of Black women did not have the care they needed, compared to 23% of white women and 23% of Hispanic women.[5]

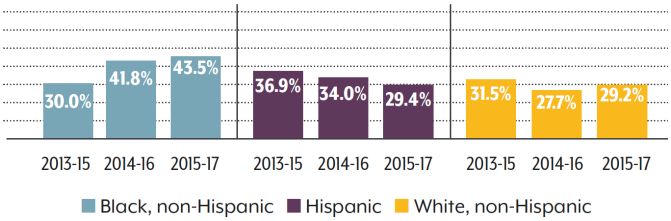
Colorado's fragmented oral health care system is a major cause of access and opportunity gaps. The system is rooted in fee-for-service payment, which incentivizes volume of procedures rather than value and prevention. Private dental and medical insurance are typically separated, with oral health care not built into medical care. Most care is delivered by dentists who operate their own practices.

The Affordable Care Act (ACA) helped address fragmentation. Insurance plans on small group and individual markets are required to cover children's oral health care. States could also expand Medicaid programs that provide oral health benefits up to age 20. Colorado's Medicaid program, Health First Colorado, added a limited dental benefit in 2014, shortly after expanding Medicaid eligibility under the ACA. In 2019, a dental benefit was also added for pregnant people covered by the Child Health Plan Plus (CHP+). These additions make Colorado one of the most generous states for covering oral health services through Medicaid.

Percentage of Third-Grade Students with Cavities Experience[6]



Percentage of Women Who Just Gave Birth Who Needed to But Did Not Visit a Dentist[6]



The Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit provides comprehensive health care services for children under age 21 who are enrolled in Medicaid. A 2021 review of states' management of EPSDT revealed that Colorado could improve dental payment policies and better align care schedules with EPSDT requirements.[7] The review specifically indicated that Health First Colorado should make more effort to ensure children are assessed for risk of oral disease and provided individualized treatment.

[4] Ratcliff, A., et al. (2021) Ensuring Smiles: In Colorado, Insurance Shapes Access to Dental Care. Denver, CO: Colorado Health Institute.
[5] Calanan, R., Elzinga-Marshall, G., Gary, D., Payne, E., & Mauritson, K. (2018). Tooth Be Told...Colorado's Basic Screening Survey, Children's Oral Health Screening: 2016-17. Denver, CO: Colorado Department of Public Health and Environment. https://www.colorado.gov/pacific/sites/default/files/PW_OH_BSSReport.pdf
[6] Colorado Health Institute. (2019) Open Wide for Opportunity: Medicaid's Leadership in a New Vision of Oral Health for Colorado. Denver, CO: Colorado Health Institute.
[7] Fosse, C., & Edelstein, B. L. (2021). State Medicaid Authorities' Policy Communications With Providers on Individualized Pediatric Dental Care. Public health reports (Washington, D.C. : 1974), 333549211008452. Advance online publication. https://doi.org/10.1177/00333549211008452

Attention to oral health by Health First Colorado increased in 2019 with its second phase of the Accountable Care Collaborative. A new key performance indicator allowed the seven Regional Accountable Entities—which help coordinate care for Medicaid members—to earn financial bonuses. Oral health professionals were also recognized as part of the health neighborhood of providers.

Health First Colorado covers one in four Coloradans, many of whom experience the greatest health disparities. Despite recent advances, many children and pregnant people still lack the care they need. Remaining barriers include a shortage of providers who serve pregnant people and young children with Medicaid, provider reimbursement complications, and minimal payment incentives for preventive care. To advance systemic equity, greater emphasis on prevention, integration, and evidence-based care is needed from payors.

Integration

Even with coverage, many families face barriers to oral health services due to systemic inequities, socioeconomic status, and geographic location. Integrating oral health education and services into community-based settings, such as medical practices (e.g., OB-GYN, pediatricians, primary care), early learning environments, home visitation programs, and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), can help reduce or eliminate barriers to care. For more than a decade, Colorado has been a leader in piloting community-based oral health programs. Learning from and expanding the following initiatives will ensure even more families can be reached.

Cavity Free at Three (CF3), operated by the Colorado Department of Public Health and Environment (CDPHE), offers free, on-site training to medical and dental professionals. Regional specialists support providers to build the skills, knowledge, and resources needed to deliver preventive oral health services to infants, toddlers, and pregnant people.

Beginning in 2007, various initiatives, including Colorado Medical-Dental Integration (CO MDI) and Rocky Mountain Oral Health Network (RoMoNOH), have supported integration of dental care into medical settings, removing barriers to services, and improving patients' overall oral health. Since 2014, CO MDI has embedded registered dental hygienists into 39 medical practices across the state, supporting full-scope hygiene services for patients visiting their medical providers. The initiative also created a toolkit to help communities build similar collaborative models. RoMoNOH was created in 2019 to focus on the prevention of dental disease in pregnant women and young children who receive care in community health centers (CHCs) throughout Arizona, Colorado, Montana, and Wyoming. RoMoNOH provides CHCs with technical assistance to improve data collection, educational resources to build capacity, and support to test a value-based payment approach. RoMoNOH also collects data annually about health professional scope of practice, Medicaid fee-for-service reimbursement for medical and oral health professionals, state health care reform, and payment innovations. These industry scans help identify state-level barriers, opportunities, and the systemic changes needed to better integrate oral health care into medical practices.

From 2015 to 2020, the Spanning Miles in Linking Everyone to Services (SMILES) Dental Project piloted a virtual dental home model to reduce barrier to care. The model embeds dental hygienists into community-based settings to deliver full-scope dental care under the virtual supervision of a dentist. After a dental hygienist

conducts an oral health risk assessment, X-rays, and an exam in a community setting, a dentist reviews the patient's files remotely and provides a treatment plan to the hygienist, who delivers both preventive care and interim therapeutic restorations. SMILES also provided navigation services to connect patients to a dental clinic for more comprehensive or complex treatment when needed. SMILES ended just as schools and dental clinics closed in response to the pandemic, but the pilot showed that the virtual dental home model significantly reduces barriers to care. A roadmap is available to support further implementation.

Colorado Early Head Start and Head Start serve as an example for how oral health can be promoted within a variety of early care and learning settings. The programs' performance standards require providers to support parents in accessing oral health care for their children and track the provision of care. Resources are available to educate parents and pregnant people about the benefits of good oral health and the importance of establishing a dental home and seeking care. The programs also promote brushing, healthy eating, and other good habits in the classroom and at family meetings.

Cavity Free Kids is an education curriculum that promotes oral health habits for young children and their families. It includes a collection of lessons, activities, stories, songs, and other resources that engage children through play-based learning. Although Healthy Child Care Colorado offers the training and materials at no cost to early childhood providers across the state, attendance has been minimal. This is likely because Colorado Shines, the state's quality rating and improvement system, has no indicators related to oral health, and early childhood providers have limited capacity for additional training.

Home visitation and WIC reach some of the most vulnerable pregnant people and families with young children. However, few efforts include a strong oral health component. The Family Visitor Program in the Roaring Fork Valley is an exception. Its home visitors use an oral health screening tool and the CF3 model to educate pregnant people and caregivers about the importance of oral health and to identify dental concerns. Learning from this program's successes and challenges can help other home visitation and WIC programs integrate oral health education and services.

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to see a 20-year history of major events in Colorado's early childhood oral health system

Data

A truly equitable system requires robust, accurate, and relevant data. The Colorado Oral Health Surveillance System (COHSS) was created to be an integrated system for monitoring the prevention and control of oral diseases and risk factors. It has expanded since to include multiple statewide data indicators and is incorporated into Colorado VISION, an online data set for chronic disease and behavioral health measures. COHSS includes the following oral health data sources:

- **Colorado Child Health Survey (CHS)** was a call-back survey from the Behavioral Risk Factor Surveillance System (BRFSS) that operated from 2004 to 2017 to fill the health data gap for children between the ages of one and 14. BRFSS is a statewide telephone survey developed by the Centers for Disease Control and Prevention to monitor lifestyles and behaviors related to chronic health conditions among adults. Once an adult respondent completed the BRFSS survey, they were asked if they have a child within the target age range in their household. If the respondent agreed to participate in the CHS, they were called back about 10 days later to answer additional questions, including ones about access to dental services. Limitations to this survey included a relatively small sample size and dependence on caregiver-reported information.
- The **Pregnancy Risk Assessment Monitoring System** is designed to identify and monitor behaviors and experiences before, during, and after pregnancy. CDPHE conducts this annual survey of parents who have recently given birth, including questions about oral health insurance and dental visits. Limitations to this survey are the small sample size and dependence on caregiver-reported information.
- The **Basic Screening Survey** evaluates a representative sample of kindergarten and third-grade students from across Colorado and includes a dental screening to identify the presence of dental disease. Beginning in the 2003-04 school year, CDPHE conducts this survey every five years. The survey only captures the oral health status of white, Black/African American, Hispanic/Latinx, and a combined other racial/ethnic group of

students. Trend analyses have been limited to comparisons between white and Hispanic/Latinx students. The oral health disparities of other races, such as Indigenous students, have not been assessed due to small sample sizes. These disparities could be significant and require targeted interventions. This survey has been put on hold due to the pandemic.

- The **Early and Periodic Screening, Diagnostic, and Treatment Services (EPSDT) Report** monitors the effectiveness of state EPSDT programs. It does so by tracking the number of children who are provided oral health screening services, referred for corrective treatment, and receiving dental services. The report includes services under both fee-for-service and capitated managed care arrangements. Colorado stakeholders are concerned about data reliability, due to inconsistencies in how providers bill for services. Federally Qualified Health Centers, which serve most Colorado children with Medicaid, receive an encounter payment that covers services, supplies, and coordination. Therefore, many do not report regularly on specific oral health services provided.

Colorado VISION offers the technical infrastructure for a strong surveillance system. However, several limitations to current COHSS data sources contribute to a lack of timely, consistent, and reliable data. There is also a lack of information about the oral health workforce to understand which providers are serving pregnant people and young children. These data limitations make it difficult to adequately evaluate oral health needs across populations, as well as the outcomes of health interventions. A more comprehensive and coordinated system is needed to measure oral health outcomes, accountability, and impact across programs.

Key Takeaways

Oral health is important. Oral health is critical for overall health and well-being, though it is rarely prioritized as a policy area. It must be elevated within system-level conversations to improve understanding and awareness.

Families that brush together have better health. Promoting the importance of oral health to parents and caregivers increases the likelihood that they will access services for their children and practice healthy habits at home. Strengthening oral health education and services in programs that reach the whole family, such as home visitation, WIC, and primary care will have the greatest impact.

Integration works. Colorado has the track record and favorable policy framework to effectively integrate oral health services into multiple community-based settings. Streamlining care and payment models that incentivize preventive care would accelerate adoption.

Better data is needed. Insufficient data makes it difficult to fully understand who is receiving oral health services, how services are accessed, and what interventions are most effective.

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