Colorado Medical-Dental Integration

Wave I Report - 2020

Delta Dental of Colorado Foundation

mdi COLORADO

DELTA DENTAL

Wave I began in 2015 with

28 RDHs integrated into

18 sites within

16 healthcare organizations

Executive Summary

Delta Dental of Colorado Foundation launched the Colorado Medical-Dental Integration Project (CO MDI) in 2015 to expand access to dental services for populations who experienced limited access to dental care due to insurance status, location, and transportation barriers.

CO MDI supported an innovative care model that integrates medical and dental care by placing registered dental hygienists (RDHs) in medical settings. CO MDI's first wave began in 2015 with twenty-eight RDHs integrated into 18 practices within 16 healthcare organizations. By March 2019, hygienists in the 12 organizations that completed Wave I provided more than 67,000 hygiene visits, expanding access to oral health care and improving oral health outcomes for historically underserved Coloradans of all ages.

Foundation funding included grants to the participating practices, support for a CO MDI Learning Network, practice transformation activities, and a robust Institutional Review Board evaluation. The evaluation was led by Patricia A. Braun, MD, MPH through the Adult and Child Consortium for Research and Delivery Science at the University of Colorado. Dr. Braun is a national expert on pediatric oral health with a strong research and evaluation record. The information in this report draws heavily on Dr. Braun's evaluation findings for Wave I.

Dr. Braun (center) converses with grantees at a CO MDI Learning Network Session.

Why CO MDI?

Oral health is a critical component of overall health. Research clearly demonstrates that the mouth is a window to the body. Improving oral health reduces the risk of serious physical conditions, including tooth decay, diabetes and heart disease. A healthy mouth absent of pain also contributes to good mental health and is foundational for employment and one's ability to learn in school. Yet too many Coloradans go without regular oral health care, especially those with lower incomes and those living in rural communities.

Dental and medical professions have traditionally been separated from one another from education and training to payment and practice. This creates challenges to integrating oral health into medical care.

Workforce efforts to date have reinforced, not resolved, the siloes between medical and oral health. Delta Dental of Colorado Foundation funded CO MDI, recognizing that Coloradans more commonly visit the medical office than the dental office.

CO MDI is an innovative project to expand access to dental services by integrating medical and dental care in medical care practices for populations who experienced limited access to dental care due to insurance status, location, and transportation barriers.

Higher-earning Coloradans were more likely to visit the dentist

61.2%
of Coloradans earning <134% of the FPL visited a dental provider in 2019

82.7%
of Coloradans earning >400% of the FPL visited a dental provider in 2019

Coloradans earning below 134% of Federal Poverty Level (FPL) are eligible for Colorado Medicaid, which includes dental benefits for all enrollees.

2019 Colorado Health Access Survey

People living in South and Northeast Colorado were less likely to visit a dental professional

58.6% Alamosa, Conejos, Costilla, Mineral, Rio Grande, and Saguache counties

59.9% Logan, Morgan, Phillips, Sedgwick, Washington, and Yuma counties

73.6% of all Coloradans

73.6% of all Coloradans visited a dental professional in 2017, up from 65.3% in 2013.

2019 Colorado Health Access Survey

CONNECTING ORAL AND OVERALL HEALTH

Doctor's Care

"A woman was scheduled for a new patient physical and a dental cleaning appointment in the same visit. She informed us that she had felt like she has something stuck in her throat for at least the last two months and it would not go away.

Our dental hygienist then saw the patient for her preventive cleaning appointment. During her head, neck and oral cancer exam the hygienist noted a 4mm round mass on the patient's right anterior tonsil. The hygienist showed the medical provider the mass and a referral was made to Care Coordination. Within just a few hours, the Care Coordinator referred the patient to an Ear, Nose and Throat specialist that accepts Medicaid. The specialist removed the mass."

CO MDI WAVE I FAST FACTS

16 initial grantees with **21** sites.

12 grantees completed Wave I in **18** sites.

4 grantees dropped out over the course of the program.

28 integrated dental hygienists participated in CO MDI.

67,092 integrated dental hygiene visits provided by Wave I CO MDI hygienists.

WHY CO MDI? (continued)

The overarching goal of the CO MDI Project included:

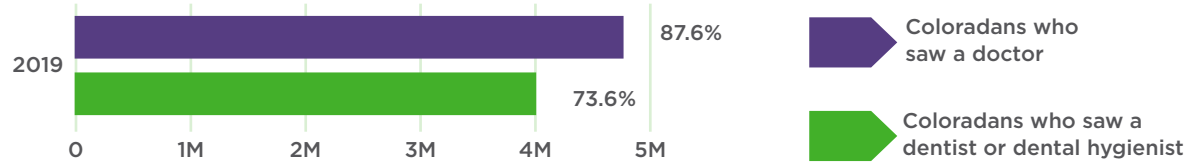
1. Expand access to dental services.
2. Improve oral health outcomes of CO MDI populations.
3. Build financially-sustainable CO MDI models.

These goals align closely with Delta Dental of Colorado Foundation's long-term focus of ensuring all Coloradans have access to oral health care, that services are available to prevent tooth decay and that oral health is recognized as a critical part of overall health care.

CO MDI embodies the foundations of success identified in **Delta Dental of Colorado Foundation's theory of change**. The project aims to address workforce gaps by supporting innovative models of care; provides direct services to Coloradans facing the greatest barriers to accessing oral health care and prevention services; and creates affordable options for patients. The model – led by RDHs who are trained in oral health prevention and education – also provides critical education and awareness for many caregivers and children on the importance of oral health care.

Not only does CO MDI provide much-needed oral health care services, the project is continuously being evaluated for its impact and adding to the body of research that integrated RDHs are an effective means of improving the oral health, and ultimately, the well-being of all Coloradans.

Coloradans were more likely to visit the doctor than a dental provider



2019 Colorado Health Access Survey

2019 Colorado Health Access Survey

What is CO MDI: History

CO MDI places RDHs into medical care teams, where RDHs offer full-scope preventive oral health services on-site in medical practices. By integrating the RDHs into the care team, they become part of the healthcare community and also coordinate referrals to co-located dentists (when available) or outside community dentists to get people the restorative dental care they need.

Delta Dental of Colorado Foundation supported co-location of RDHs into medical practices in five clinics from 2008 through 2011. The feasibility of co-locating RDHs was studied. The results showed that co-locating RDHs into medical practices was not only feasible, but an innovative model to provide preventive oral health services to disadvantaged children.

Building off this initial success, Colorado healthcare organizations were invited to apply to participate in CO MDI in 2014. A total of 18 organizations applied. Sixteen organizations were selected to participate in Wave I, with four grantees dropping out over the course of the program.

Ten organizations were awarded Wave II grants in 2018. Wave II began in 2019 and runs through April 2022. Twenty-six organizations in total have been awarded grants that serve 39 different locations across Colorado. These practices span beyond just the Denver metro area, and touch the four corners of the state. CO MDI supports integrated practices from La Junta in southeast Colorado to Holyoke in the northeast, to Craig in the northwest and Durango in the southwest.

CO MDI locations

- Wave I
- Wave II

MORE DENTAL VISITS, LESS UNTREATED DECAY

Worthmore clinic

During the project period, the prevalence of Worthmore Clinic patients receiving a dental visit in the last year improved from between 55-80% at the beginning of the project to 75-90% at the conclusion. Patients of all ages had a significant decline in untreated decay, from 75-40% (based on age) at the beginning to 40-20%.

"A refugee from Nepal came to our clinic after undergoing a secondary resettlement from Arizona, where he was originally resettled. For several months, he had been trying to find employment, but believed himself unemployable because of the condition of his oral hygiene.

He was missing many of his teeth and had severe decay in those that remained. We were able to conduct a full mouth extraction and place full top and bottom dentures.

He recently came back to the clinic to talk, smile, and let us know that he had found work in a luxury hotel in Denver. We have seen the incredible improvements in dental and overall health, as well as the restoration of a dignity that was once thought to be lost. This is what we are most proud of and what motivates us to continue to grow and reach more lives."

INNOVATION

CO MDI has generated national interest as one-of-a-kind across the country. The American Dental Hygiene Association has kept a steady pulse on the progress of the project as well as stakeholders in other states. Other states including Pennsylvania, Florida, Wisconsin, Minnesota, Oregon, and Florida are testing the integration of dental hygienists into medical care teams and using CO MDI as an important resource.

WHAT IS CO MDI: HISTORY (continued)

CO MDI evolved from the Foundation's early support of co-location, with an emphasis on addressing the medical and dental systems that historically separated oral health from overall health, including billing, scheduling, and clinical workflow.

In Colorado, the scope of work of RDHs is broad, which allows hygienists to provide a wide array of services. For example, Colorado is one of only two states (with Oregon) that allow hygienists to diagnose oral conditions within their scope of practice as part of a hygiene treatment plan. Colorado is one of eight states that allows prescriptive authority for RDHs. In addition to direct access practice, hygienists in Colorado are able to administer anesthesia with indirect supervision, sealants, x-rays, provide dental hygiene diagnosis, limited prescriptive authority and now interim therapeutic restorations (ITR) and silver diamine fluoride (SDF), and more.

A key element to the success of the CO MDI program was technical assistance (TA). Organizations received TA to develop a hygiene space and participated in a Learning Network, which included biannual collaborative day-long sessions and location-specific practice transformation coaching using project metrics and continuous quality improvement approaches to help with building integrated models.

By end of Wave I in March 2019, 12 grantees remained in the cohort offering integrated care at 18 practices with 28 RDHs.

Measuring Impact

CO MDI successfully integrated RDHs into medical teams as an innovate approach to increase access to oral health services. The model provided patients with alternative access to oral health services.

CO MDI expanded access to dental care

CO MDI's Wave I hygienists delivered more than 67,000 integrated hygiene visits since September 2015 through March 2019. Seventy percent of visits with individuals enrolled in Medicaid and 24 percent (one of four) for those without insurance. In addition, these hygienists provided over 34,000 referrals to dentists for untreated dental decay among the individuals they saw.

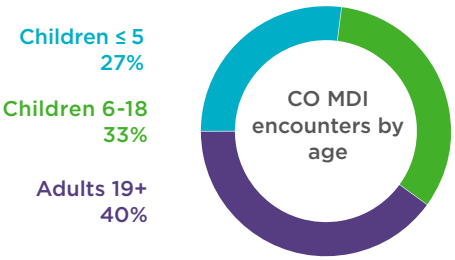
CO MDI provided dental hygiene care to a broad spectrum of individuals across the lifespan. CO MDI's initial goal was to reach young children. This changed early in the project to improve access to care for all patients being seen in the medical practice. Forty percent of visits were with adults over age 19 and 27 percent with children ages 5 and below.

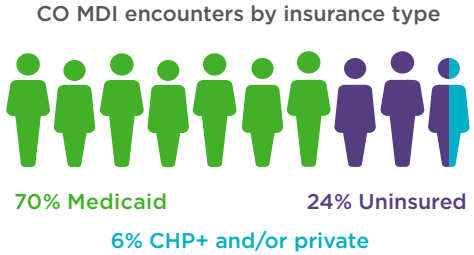
Additionally, across all visits, almost half (45 percent) of the patients had not had a dental visit in more than a year.

Care provided by CO MDI Wave I RDHs: September 2015 – March 2019

67,092 integrated dental hygiene visits

34,157 referrals to dentists for untreated dental decay





REDUCING TIME BETWEEN DENTAL VISITS

Northwest Colorado Health

Northwest Colorado Health had a significant improvement in the proportion of CO MDI visits with a past dental visit within the past year across all ages Among children ages 0 to 5, the proportion increased from less than 10 percent to over 60 percent during the project period.

"At 15 years old, Andrew had never brushed his teeth. Unable to take the pain in his mouth, he begged his mother to take him to the dentist. The day he came to our office, we gave Andrew his first toothbrush and showed him how to brush his teeth. We were able to give Andrew the education and tools to take care of his teeth, a life-changing experience."

IMPROVING DISEASE OUTCOMES

Colorado Coalition for the Homeless

"A family displaced by Hurricane Michael came to Colorado with the hopes of employment for the mother, as the father is disabled. They came to our Stout Street location for a pediatric visit, seeking routine paperwork so their 3 kids, ages 6, 8, and 11, could enter school.

We did a dental screening for the children and were able to identify the need for sealants and urgent dental care. That same day, staff scheduled them and did all of the needed work. The parents were very grateful, and thought that dental care would have to be an afterthought to care, as they didn't have means to travel "all over town" to get dental care for their family.

That was three years ago, and we're happy to report that the mother and all three of the children receive routine care and have no outstanding decay. They have restored mouths, and restored family. The mother not only got a job, but was granted a promotion, and the family is housed and getting back on their feet."

MEASURING IMPACT (continued)

CO MDI impacted oral health outcomes

Approximately half (51 percent) of CO MDI patient visits with the RDHs had untreated dental decay (at least one cavity). The prevalence of patient visits with untreated dental decay declined over the span of the project in many of the CO MDI practices. While influences within and around the medical practices may have had a role in reducing the percent of CO MDI visits with untreated decay, the evaluation suggests the association of CO MDI visits with improved oral health outcomes (specifically untreated dental decay).

Patients did at times struggle to access the type of care provided by dentists, sometimes referred to as restorative care, including dental procedures. Only about one-third of the participating practices had a dentist on-site, and interview information suggested that on-site dentists didn't have sufficient capacity to see additional patients. Never-the-less, over half (55%) of referrals to a dentist for untreated dental decay were completed.

CO MDI practices were asked to track referrals for six months, so this is likely an undercount. Tracking referrals had inherent challenges, especially in systems without integrated medical-dental health records. Other challenges to tracking referrals included a lack of communication from outside dentists to learn if patients did visit, and challenges in contacting patients to learn if they attended the dental referral.

RDHs and practice leaders interviewed expressed frustration at not being able to get patients in for restorative services with a dentist. On occasion, they would see patients return with untreated decay.

The prevalence of periodontal disease among the often-disadvantaged adult patients served by the Colorado Coalition for the Homeless hit a high of near 90 percent during the project, but trended downward to 70 percent over the project period.

Critical Success Factors

The CO MDI Wave I evaluation identified critical success factors for adopting the model through interviews with practice leaders and administrators:

Three major themes emerged as organization-level facilitators – leadership support and buy-in for the program; commitment to integration and integrated care delivery models, which was more common for the participating Federally Qualified Health Centers with incentives to achieve greater levels of integration; and previous dental experience, from billing and equipment to service delivery, within the organization.

Practice-level facilitators included team-based approaches to sustain awareness and collaboration; efficient workflows; and motivated hygienists with exceptional communications and interpersonal skills. RDHs also proved critical to patient retention by establishing relationships and serving as an on-site dental resource.

Some of the challenges cited by administrators included billing and insurance issues; moving staff culture toward integration; and limited on-site restorative dental services as a factor in patient retention.

"When I talk to patients, the enthusiasm, whether they're getting dental for themselves or their children, is really high. I think the simplicity of having dental as a part of a well visit—a part of preventive and well care—has been successful."

-CO MDI practice CEO

ADDRESSING UNTREATED DECAY

Valley-Wide Health System

The prevalence of untreated dental decay among children seen by the CO MDI RDH at Valley-Wide Health Systems substantially improved throughout the project with rates as high as 50-80% (based on age) to less than 20%. Untreated dental decay among adults showed improvement in the last project year.

"A patient at our La Junta Clinic was scheduled for a heart procedure, but the surgeon cancelled the surgery because of the patient's mouth. The surgeon was concerned that the patient's oral disease would compromise recovery and requested that the patient's oral health issues be taken care prior to rescheduling the surgery.

The patient didn't have insurance, but our dental patient navigator and program financial eligibility specialist found that they qualified for financial assistance through Valley-Wide Health Systems. The patient was scheduled with our dental hygienist the following week, and after a screening and x-rays, was scheduled with a dentist the following day.

Dental treatment was completed at the end of June and the patient's heart surgery was rescheduled for the beginning of July. The eligibility assistance, comprehensive exam and dental treatment were completed within three weeks. The medical doctor, hygienist, dentist, navigator, dental support staff, and eligibility specialist brought together their talents to provide timely services and ensure our patient's well-being."

FINDING ADAPTABLE HYGIENISTS

Denver Health and Hospitals Foundation

"The last three years with the MDI program have shown me the most growth in not only professional but also personal life. I found my "calling" working with low-income children and families.

The first three months, I had no equipment. This gave me the chance to learn processes, see where needs were, start to form process maps and meet the staff. We had many meetings where pediatrics, obstetrics, dental, clerical, leadership, DDCOF, and CDPHE came together to brainstorm our project!

The MDI project grew my administrative skills with creating meeting minutes, metrics, online meetings, communication between several departments, and stepping up as a leader in our clinic. My clinical skills excelled as I was practicing as an independent. Although there was a dentist a few floors away, I needed to grow confidence in my own knowledge and skills.

The relationships I formed were invaluable, not only within the Eastside Clinic but with our external partnerships. I have become a 'go-to' for the Colorado Dental Hygiene Association for my work and knowledge in the integration model. My life has been changed by the opportunity to work with the CO MDI model and I am forever grateful."

- JESSICA JENSEN

CRITICAL SUCCESS FACTORS (continued)

CO MDI RDHs also shared their perspectives on critical success factors. These included RDH characteristics that emphasized adaptation, problem solving, and meeting patients where they are. Practice-level supports include supportive practice leaders, especially around scheduling and billing as well as delegation across a care team.

RDHs also identified challenges including limited on-site restorative services (described earlier in this report) and feeling like a solo practitioner. Scheduling processes that were separate from medical scheduling also created barriers to integration.

All interviewees highlighted several systems-level factors that impacted the program's success. These included having dental insurance, especially for low-income patients; dental insurance billing knowledge; and insurance reimbursement for CO MDI services.

For example, RDHs expressed frustration with providing dental hygiene services that were not reimbursed, sometimes due to changes in the dental insurance benefit or a change in patient insurance coverage, but also due to limited knowledge at the practices about how to accurately submit dental insurance claims.

Jessica Jensen (left) at the Eastside Clinic.

Program Perceptions

Medical providers from CO MDI practices completed surveys several times during the project, providing feedback on their oral health knowledge, attitudes, beliefs, and behaviors.

Overall medical providers had very favorable attitudes toward CO MDI throughout the project and felt strongly about the importance of oral health for their patients' health and well-being.

> *Importantly, more providers reported being able to assess their patients' risks for oral health disease after participating in CO MDI for two years than at the initiation of the program.*

Among respondents of a sample of CO MDI patients surveyed about their care, most patients/parents agreed it was convenient to get care from a RDH in a medical setting and that they were more likely to see a RDH in a medical office than a dental office.

Investing in the model of COMDI Financial Metrics - Wave I

CO MDI COACHES

CO MDI practice coaches proved key to many of the program's success factors. Practice coaches kept leaders engaged with the development of workflows and aware of problems, helped teams with keeping CO MDI on the practice's agenda, and brought resources to the teams when needed. Initially, practices needed technical assistance and coaching support for hiring the right RDH and buying equipment. Later, practices needed support with developing workflows, identifying processes to route patients to the RDH, and successfully getting dental claims paid.

The Future of CO MDI

Ten grantees are currently in the second year of CO MDI Wave II with grant support from Delta Dental of Colorado Foundation and the Colorado Health Foundation. The evaluation of that work runs until April 2022.

In 2019, integrated care practices participating in Wave II:

- **Had 5,132 visits, including 2,991 patient-visits with Medicaid coverage, accounting for over half (58 percent) of all patient-visits in 2019. Over one quarter (29 percent) of patient-visits in 2019 were without dental insurance (1,500 patient-visits). The rate of uninsured visits is slightly higher in 2019 than in previous years.**
- **Provided integrated dental care in 10 different settings across the state, including six rural communities.**
- **Provided 365 pregnant women with dental hygiene services.**

To capture its success, Delta Dental of Colorado Foundation is beginning to establish best practices. Evaluation results informed the development of the **CO MDI Toolkit and CO MDI Change Package**. This is a "how-to" guide based on the experiences of CO MDI Wave I. This resource is for Colorado medical practices interested in replicating the model to improve oral health of their patients. Many of these resources are applicable across state lines.

The CO MDI Toolkit helped inform Wave II work and the work of others testing similar models. These products are now recognized nationally and are being utilized in the Maternal Child Health Bureau, Health Services Resource Administration Networks for Oral Health Integration within the Maternal and Child Health Safety Net. This five-year initiative (Sept 2019 - August 2024) will benefit from the CO MDI products and evaluation findings.

Delta Dental of Colorado Foundation is currently assessing whether to launch a Wave III, using 2020 for planning and decision-making. One element of the assessment includes the extent to which solutions to key challenges, specifically through dental insurance coverage, can be addressed or mitigated through Delta Dental of Colorado and future policy decisions within Medicare, Health First Colorado (Colorado's Medicaid Program), and the Child Health Plan Plus.

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Variation in Dental Hygiene Scope of Practice by State. 2019. Oral Health Workforce Research Center. http://www.oralhealthworkforce.org/resources/variation-in-dental-hygiene-scope-of-practice-by-state/

RESOURCE LIST

Access more information and data on oral health in Colorado, by visiting the Delta Dental of Colorado Foundation resource page.

ACKNOWLEDGMENTS

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