



S . M . I . L . E . S
DENTAL PROJECT®
Spanning Miles in Linking Everyone to Services

A Brief History of SMILES: Interview Findings and Recommendations

Background: In August 2019, the SMILES (Spanning Miles in Linking Everyone to Services) Dental Project® staff conducted interviews with leadership from five partner organizations to assess how they are implementing recent legislation to expand the scope of practice for dental hygienists. This report summarizes the Virtual Dental Home in Colorado, relevant legislation, and our interview findings and recommendations.

The Problem: According to findings from the 2017 Colorado Health Access Survey (CHAS), nearly one in three Coloradans (33.6 percent) did not see a dentist or dental hygienist during the year – up from 31.7 percent in 2015 (1). Caring for Colorado began work with our partners in 2015 to explore a new system of care that will eliminate barriers and improve access to dental care in Colorado. The initiative aimed to bring care to populations that are not accessing the dental delivery system by using the oral health workforce differently.

Colorado is the 2nd state in the nation to implement a new system of dental care developed by the University of the Pacific, known as The Virtual Dental Home. This model expands the scope of care for dental hygienists and deploys them in community settings to provide both preventive and restorative care via a telehealth connected dental team.

The SMILES Dental Project® was created using the concept of the Virtual Dental Home. SMILES Dental Project® uses telehealth connected teams to allow patients to receive risk assessment, x-rays, an oral evaluation, and preventive dental services in a community setting, with records reviewed remotely by a dentist as needed. The dentist then provides a treatment plan to the community-based dental hygienist who delivers both preventive care and certain treatment services. This system also allows for a connection between the patient, the dental hygienist, and the dentist, with the option to receive more complex restorative treatment in a dental clinic when necessary. The goal of the model is for the patients to receive all services in the community, eventually, and to maintain oral health through ongoing preventive care.

Relevant Legislation: To facilitate the implementation of the SMILES Dental Project®, the Colorado General Assembly passed new legislation that expands the scope of services dental hygienists are authorized to deliver.

- **Protective Restorations by Dental Hygienists- House Bill 15-1309:** This bill expands dental hygienists' scope of practice to place interim therapeutic restorations (ITRs) and authorizes Medicaid and CHP+ to reimburse for this service delivered via telehealth supervision.
 - Passed May 6, 2015
 - Dental hygienists who meet the following criteria can apply for a permit to place ITRs via telehealth supervision by a dentist:

1. Holds a license in good standing.
2. Completed an ITR course from an accredited program.
3. Carries professional liability insurance.
4. Completed 2000 hours supervised or 4000 hours of unsupervised dental hygiene experience.¹

Licensed dental hygienists, under telehealth supervision and with an ITR permit, may place an ITR after a dentist provides a diagnosis, treatment plan, and instruction to perform the procedure. If a supervising dentist authorizes an ITR at a location other than the dentist's practice location, the dental hygienist must provide the patient or parent with written notification that the care was provided at the direction of a dentist. Additionally, the dental hygienist shall notify the patient or parent of their right to receive interactive communication with the distant dentist. Finally, the dental hygienist will inform the patient or parent in writing and require the patient or parent to acknowledge by signature that the interim therapeutic restoration is a temporary repair to the tooth and that appropriate follow-up care with a dentist is necessary.

Under this bill, dentists cannot supervise more than five dental hygienists who place ITRs under telehealth supervision.

The American Academy of Pediatric Dentistry recognizes interim therapeutic restoration (ITR) as a "beneficial provisional technique" in pediatric dental restorations (2). The procedure includes partial removal of decay followed by the placement of a glass ionomer on the affected tooth surface. This process can be completed quickly and is pain-free without the use of anesthesia. There is increasing evidence that for populations who wouldn't otherwise receive dental care, the ITR treatment is producing outcomes equivalent to or better than traditional restorative techniques (3).

- Dental Hygienist Apply Silver Diamine Fluoride - HB 18-1045: This bill allows dental hygienists to apply silver diamine fluoride (SDF), in collaboration with a dentist.
 - Passed March 22, 2018
 - Allows any dental hygienist to apply SDF who meets the following criteria:
 1. Holds a license in good standing.
 2. Completed an SDF course from an accredited program.
 3. Carries professional liability insurance.
 4. Has a collaborative agreement with a dentist. If used in collaboration with a dentist utilizing telehealth, store and forward, the dental hygienist must:
 1. Notify patient/parent that SDF is being provided in collaboration with supervising dentist.
 2. Notify of the right to receive interactive care from the supervising dentist.

SDF is an inexpensive topical medicament used to treat dental caries. SDF is used internationally, despite being relatively new in the U.S.²

¹ The regulating board may waive the hours of experience for a Dental hygienist who performs ITR exclusively under the direct supervision of a dentist

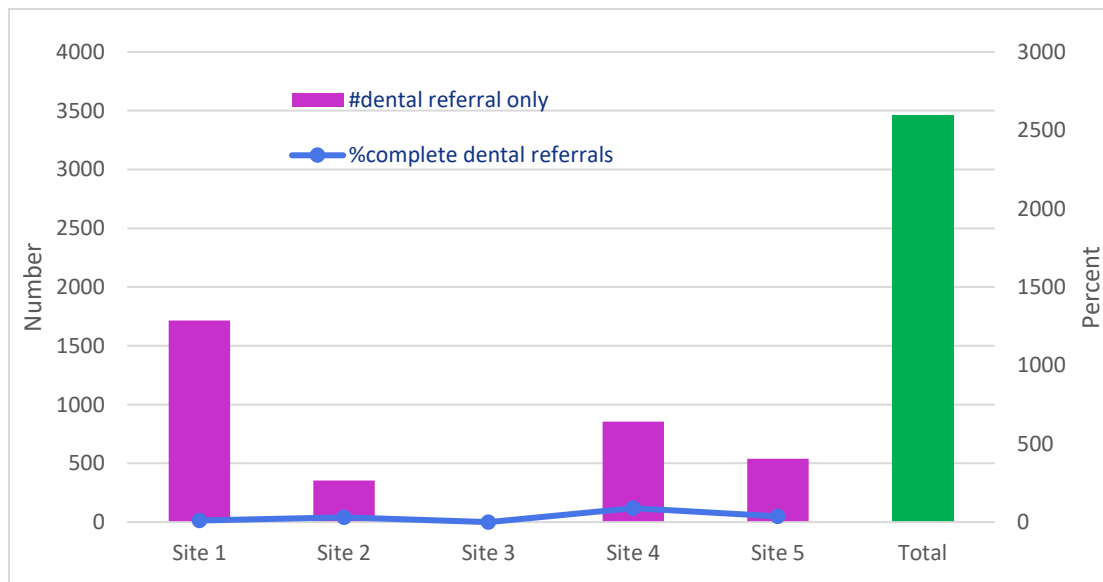
²SDF was first cleared in the U.S. by the Food and Drug Administration in 2014

- **Health Care Delivery Via Telemedicine Statewide - HB 15-1029:** This bill expands telehealth services statewide and requires insurance carriers to reimburse providers for the delivery of health care services via telehealth.
 - March 20, 2015.
 - This bill includes dental in the definition of healthcare services.
 - It precludes a health benefit plan from requiring in-person care delivery when telemedicine is appropriate, regardless of the geographic location of the health care provider and the recipient of care.
 - A provider need not demonstrate that a barrier to in-person care exists for coverage of telemedicine under a health benefit plan to apply.

SMILES Data: Through the SMILES Dental Project®, Caring for Colorado Foundation and the Colorado Health Foundation partnered with five non-profit organizations to evaluate this new workforce model for patient and provider satisfaction, financial sustainability, improved patient outcomes, and the ability to scale the model beyond the demonstration projects. Three of these non-profits were federally qualified health centers, and two were non-profit organizations. Four of the partner organizations serve school-aged children while one serves adults, seniors, and homeless populations. As of February 2020, SMILES grantees had completed more than 11,700 patient visits. Medicaid or CHP+ covered half of the patient visits in three years of implementation. 61% of all patients served had a dental visit within the last year. Over half (51%) of new patient visits had untreated decay as compared to established patient visits with untreated decay (43%). Over the data collection period³, SMILES partner organizations provided ITR at 561 community visits, as depicted in Table 1 of Appendix A.

Figure 1 displays the number of visits referred to a dentist compared to the percentage of referrals completed. Dental referrals far exceed the rate of completed referrals.

Figure 1. Dental Referrals vs. Percentage of Complete Dental Referrals



³ The referenced data collection period is February 2017- February 2020.

Qualitative interviews conducted with the parents of children who participated in the past school year in the SMILES Dental Project® revealed that families are very supportive of this model of care. Generally, the parents told our evaluation team they very much appreciated the availability of dental care for their children in the SMILES Dental Project®. Parent feedback included that the SMILES dental hygienist was courteous and kind with their child, provided good dental health education, and satisfaction with the service of the SMILES dental hygienist meeting their child's needs. Overall, their consensus was that SMILES provided exceptional dental care. All of the children received dental exams, and many required dental fillings. Several children received x-rays and sealants. One mother mentioned she was delighted that her child received silver diamine fluoride treatment. A few had dental pain, and a handful required referrals to a community dentist. None had any concerns about the SMILES dental hygienist having a virtual relationship with a community-based dentist. Some parents described their experiences with the SMILES dental hygienist as much better for their child than their experiences with other dental practices in the community.

Summary of SMILES Partner Organization Interviews: In preparation for the sunset review of House Bill 15-1309 (ITR) and House Bill 18-1045 (SDF), SMILES team leaders participated in interviews to provide feedback about their experience providing dental care under this new legislation. Listed below are summaries of the team leaders' responses, including what has worked well, barriers, and recommendations for change.

All of the interviewees agreed the legislation is a step in the right direction to improve access to dental care and address a crucial and unmet need in many Colorado communities. Furthermore, our partner organizations welcomed the expanded scope of care for dental hygienists to address dental disease in the communities they serve.

SMILES team leaders specifically noted two positive changes after the House passed the legislation. At the introduction of the ITR permit, the original application to the Colorado Department of Regulatory Agencies (DORA) required a notarized signature by a dentist to certify the number of hours a dental hygienist had practiced. DORA removed this requirement in 2018. Interviewees stated that eliminating this barrier has improved the efficiency of the application process substantially. Also, when the rules for the SDF bill were first approved, there was a requirement for a dentist to provide a treatment plan before a dental hygienist could apply SDF. This requirement was removed in 2019 because the dental board agreed that the legislation intended SDF for use in collaboration with a dentist.

Barriers: The SMILES Dental Project® partner organizations have now provided care using the Virtual Dental Home for three years⁴. As of February 2020, the five partner organizations have provided 11,742 patient visits in community settings; only 561 visits included ITR. Many of these patients have never been to the dentist, and 38% were not receiving regular dental care. However, partner organizations identified the following barriers to the full utilization of this expanded scope of care.

1. **Treatment planning.** The ITR legislation requires a treatment plan by a dentist resulting in some patients not getting the care they need. This requirement creates a minimum of four steps before treatment can be delivered that addresses dental infection. In the SMILES Dental Project®, only 4.8%

⁴ The first remote virtual site opened in February 2017

of patient visits received an ITR during the project period. At the same time, the barriers to accessing the dental clinic remain, with fewer than 40% of patients referred to the dental clinic receiving care. Dental hygienists are licensed professionals with adequate education and training to place ITRs. We know from experience that adding the step of a dentist's treatment plan severely limits access to a potentially tooth-saving and health-protecting service. The steps include:

Step 1: The dental hygienist serves the patient in the community

Step 2: The dental hygienist sends records to the dentist via telehealth store and forward

Step 3: The dentist reviews and creates a treatment plan

Step 4: The dentist sends the treatment plan to the dental hygienist at the community site

Step 5: The dental hygienist gets patient or parent consent

Step 6: The dental hygienist brings the patient to the community clinic again to place ITR

2. **Consent process.** The legislation requires a dental hygienist to notify the patient or parent in writing and requires the patient or parent to acknowledge by signature that the ITR is a temporary repair to the tooth and that appropriate follow-up care with a dentist is necessary. The language in the consent form is unnecessarily alarming for patients or parents, resulting in patients not getting the care they need. One of the interviewees commented, "there is nothing else we do that has so many warning labels and nothing else we do that requires a form that says I did this, and you should see your dentist after. Having this language makes families and the profession nervous."
3. **Onerous training requirements.** The legislation requires an eight-hour course from an accredited dental hygiene school for dental hygienists to receive an ITR permit. However, the dental hygiene schools in Colorado have stated that they are not covering this topic in the regular dental hygiene curriculum because of the required hours of practice included in the legislation restricts who can apply for ITR permits. Teaching ITR in dental hygiene schools would eliminate the need for the current course and limit time away from the clinic and patients.

Interviewees noted that, currently, the course is only taught once a year in Denver, but the training program does not list the course until a certain number of dental hygienists indicate they want to register. This makes it difficult for dental hygienists across Colorado, those operating in rural areas particularly, to arrange their schedules to attend the course.

4. **Number of experience hours.** The legislation requires a dental hygienist to have completed 2000 hours of supervised or 4000 hours of unsupervised dental hygiene experience before applying for an ITR permit. This requirement prevents communities across Colorado from fully utilizing licensed dental hygienists who have completed the curriculum and graduated from dental hygiene school.
5. **Limit of the number of dental hygienists supervised by a dentist under telehealth.** The legislation states that dentists cannot supervise more than five dental hygienists who place ITRs under telehealth supervision. This limitation adds barriers to accessing dental care, as noted by the SMILES partner organizations.
6. **Name of procedure 'Interim Therapeutic Restoration.'** 'Atraumatic Restorative Technique' is the name of the procedure used in the scientific literature. There is nothing temporary about this

procedure, and the title should be changed to be consistent with the literature and practices around the world.

The barriers listed below are not precisely the result of the three pieces of legislation discussed above (ITR, SDF, and telehealth bills) but were noted by the partner organizations as opportunities to improve implementation of the Virtual Dental Home in Colorado.

- **Lack of private insurance coverage.** Private insurance should pay for services through telehealth just as Medicaid and CHP+ reimburse for services under telehealth.
- **Medicaid denies claims for services provided by dental hygienists within their scope of practice.** The incorrect linking between an ITR permit and telehealth authorization resulted in the denial of claims for services provided within the scope of practice of the dental hygienist.
- **Leadership gap.** Interviewees stated that even though legislation was passed to support these expanded services, there is a lack of understanding among some dental professionals about the evidence base for these procedures. This lack of recognition results in dentists' reluctance to treatment plan acceptable services.
- **Liability Coverage.** The Dentists Professional Liability Trust of Colorado is denying malpractice coverage for dentists who work with dental hygienists unless they are W-2 employees. We also have heard that the federal tort claims act (FTCA) coverage provided to HRSA-supported health centers is also not available to dentists/dental hygienist teams unless they are both employed by the health center. This has prevented some dentists from participating in the Virtual Dental Home.

Recommendations for Change: All of the SMILES team leaders agree that the legislation is a positive move for improving access and outcomes for patients. However, there are some unnecessary regulations that are preventing patients from receiving care. Below are recommendations that we believe could further advance access and improve patient outcomes.

Recommendation #1: Remove the need for a dentist to diagnose and treatment plan ITR.

Experts in value-based care advocate for doing as much for patients while they are in the office for any given visit, to reduce future work and reduce costs. In many cases, this eliminates the need for extra appointments. There is a cost to the health care system and to the patient every time a patient comes in for care. To maximize the value of care in one visit, we recommend eliminating the requirement that a dentist diagnose, treatment plan and give instruction to place an ITR before the dental hygienist performs the service. Dentists from the SMILES partner organizations trust their dental hygienists and “have full confidence that dental hygienists can do this work.” The World Health Organization published a training manual for public health workers titled *How to Carry Out Atraumatic Restorative Treatment (ART) on Decayed Teeth*⁵. The WHO manual describes a simple technique that “can be implemented by properly trained personnel with even nondental backgrounds” (4). In the state of New Hampshire, Certified Public Health Dental hygienists can place temporary restorations, without excavation, without a treatment plan from a dentist. By eliminating the need for treatment planning by a dentist, the

⁵ Referred to as ITR in Colorado’s legislation

necessity for some return visits will decline. The dental hygienist has completed the training, demonstrated competency and received an ITR permit.

To compare our recommendation to remove the dentist treatment plan with a routine pediatric visit, we present the following scenario:

A parent brings their child with a suspected ear infection to be examined by a healthcare provider. The provider tells the parent the child does have an ear infection, but another provider will need to confirm the infection before prescribing antibiotics. The parent will need to return with the child once confirmation is received from the second provider to receive treatment. Meanwhile, the sick child misses school or childcare, and the parent loses time at work. By trusting the licensed and capable provider, the second visit could be eliminated, resulting in faster treatment and an improved patient outcome.

Recommendation #2: Remove the hours of experience needed for a dental hygienist to be eligible to apply for an ITR permit.

In many rural areas of Colorado, it is common to hire dental hygienists who are recent graduates. Under the current legislation, new graduates are not eligible to obtain an ITR permit because they do not meet the 2000-hour experience criteria. Further, dental hygiene schools have stated that they do not include this training in their curriculum because the practice experience requirements prevent dental hygienists from applying for the ITR permit. Incorporating ITR training into the dental hygiene school curriculum could decrease costs and reduce barriers to care. Note, the silver diamine fluoride bill does not require experience hours.

Recommendation #3: Remove the limit of the number of dental hygienists a dentist can “supervise” under telehealth.

The SMILES partner organizations have noted that the legislative limit of a maximum of 5 dental hygienists creates barriers to care. In some communities, dental hygienists work in the Virtual Dental Home part-time. Further, given Colorado’s natural geography, rural communities often work with geographically distributed dental hygienists. Ultimately, restricting the number of dental hygienists a dentist can work with limits access to care. Thus, limiting the number of individuals who can work in communities is an unnecessary barrier to care.

Recommendation #4: Change the name of ITR to ART to be consistent with literature and practices around the world.

‘Atraumatic Restorative Technique’ is the name of the procedure used in the scientific literature. There is nothing temporary about this procedure, and the title should be changed to be consistent with the literature and international practices.

Recommendation #5: Remove consent language in the legislation.

The SMILES partner organizations have stated that the required language for consent is inhibiting access to care. HB 15-1309 requires the consent form to state that ITR is a temporary repair to a tooth, and follow-up care from a dentist is necessary. This is confusing to patients, parents, and providers as there is no evidence this procedure is temporary. ITR has been shown to last as long as amalgam or composites. Removing the consent language in the legislation will

decrease confusion among patients, parents, and providers and could assist in achieving better patient outcomes by increasing access to care.

Recommendation #6: *In a telehealth setting, remove the need for an ITR permit for dental hygienists to bill for services within their scope of work.*

With the current wording of HB 15-1309, Medicaid is denying reimbursement for services provided within dental hygienists' scope of work because they are incorrectly linking an ITR permit and telehealth authorization.

Recommendation #7: *Align systems to support legislation and access to care.*

Some dentist/dental hygienist teams are unable to secure liability protection because carriers are requiring that they both work for the same entity. In geographically diffuse areas of Colorado, the dental hygienist may work as a contractor to a community-based organization. Further, dental hygienists can also work independently under Colorado law. However, some liability carriers are refusing to cover dentists who sign collaborative agreements with dental hygienists, if the dental hygienist is not a W-2 employee. In addition, private dental insurers are still not paying for services provided via telehealth, which threatens the sustainability of the Virtual Dental Home. We recommend that barriers to fully implementing policies passed by the Colorado legislature be identified and addressed.

Conclusion: Colorado dental public health professionals agree that the ITR and SDF legislation has been instrumental in improving access to care and patient outcomes. With 11,742 patient visits over a three-year period, in populations that were not accessing the dental delivery system, the SMILES Dental Project® partner organizations have found success using the Virtual Dental Home model for delivering ITR and SDF to manage the caries disease process. By maximizing the use of treatment modalities for cavitated lesions by dental hygienists at community sites for those patients who might otherwise receive no services, SMILES teams have achieved a higher level of caries control that prevents dental caries from being a threat to patient well-being.

The SMILES Dental Project® Team is grateful for the work of many people across Colorado for passing and implementing legislation to expand access to care and ultimately improving patient outcomes. We see opportunities to further enhance dental care delivery and access in Colorado's communities by building on the recommendations in this report.

We want to thank all our partners in this effort: The five SMILES Partner Organizations: Dental Aid, Mountain Family Health Centers, Salud Family Health Centers, Summit Community Care Clinic and Tri-County Health Network; The Department of Regulatory Affairs (DORA), The Colorado Health Institute, Colorado Community Health Network (CCHN), Colorado Dental Association, Colorado Dental Hygiene Association, the Colorado Department of Health Care Policy and Financing (HCPF), and Community College of Denver.

Finally, thank you to Caring for Colorado Foundation and Colorado Health Foundation for their leadership, vision, and funding for the SMILES Dental Project®.

Contact Information:

Katina Widmer Racich

Program Lead

Caring for Colorado Foundation

Main: 720.524.0770 | Direct: 303.414.6712

<https://smilesdentalproject.org/>

www.caringforcolorado.org

References

1. Colorado Health Institute. "Colorado's New Normal: Findings from the 2017 Colorado Health Access Survey". Colorado Health Institute.
https://www.coloradohealthinstitute.org/sites/default/files/file_attachments/2017%20CHAS%20DESIGN%20FINAL%20for%20Web.pdf (accessed October 29, 2019).
2. American Academy of Pediatric Dentists. "Policy on Interim Therapeutic Restorations (ITR)". American Academy of Pediatric Dentists.
https://www.aapd.org/media/policies_guidelines/p_itr.pdf (accessed October 29, 2019).
3. Glassman, Paul, Paul Subar, and Alan Budenz. "Managing Caries in Virtual Dental Homes Using Interim Therapeutic Restoration". *Journal of the California Dental Association* 41 no. 10 (2013): 744-752.

4. Momand, Palwasha and Jayanthi Stjernsward. "How to carry out Atraumatic Restorative Treatment (ART) on decayed teeth – a training manual for public health workers." World Health Organization.
<https://www.mah.se/upload/FAKULTETER/OD/Avdelningar/who/art/artmanual/ARTManual2008.pdf> (accessed October 29, 2019).

Appendices

- A. SMILES data
 - a. Table 1. SMILES Project Dental Dashboard Metrics
- B. Sunset Review Questionnaire
- C. Map of SMILES Sites

Appendix A

**Table 1. SMILES Project Dental Dashboard Metrics
(2/1/17-2/29/2020)**

Smiles Site	Setting # of clinics	Staffing Model	Total Visits	Established Visits (vs. new)	Medicaid	% WITH Dental Visit in the last year	New patient visits with untreated decay	Established patient visits with untreated decay	#ITR visits only	#ITR visits and dental referral	#dental referral	# (%) Complete dental referral
#1 FQHC	5	****	3,440	58%	41%	60%	44%	44%	5	7	1,714	170 (10%)
#2 FQHC	3	****	3,120	63%	60%	59%	46%	37%	235	42	354	120 (30%)
#3 FQHC	4	***	2,834	77%	52%	85%	40%	38%	76	86	-	-
#4	4	*	997	44%	66%	47%	94%	81%	2	16	856	783 (89%)
#5	2	**	1,351	68%	34%	64%	48%	43%	14	78	539	225 (36%)
All sites aggregate			11,742	61%	50%	62%	51%	43%	332	229	3,463	1,298

Majority of patient population 6-18 years

Majority of patient population >18 years

>1 RDH

**** = 10 hours of dentist review/week

*** = 8 hours of dentist review/week

** = 4 hours of dentist review/week

* = <4 hours of dentist review/week

Appendix B

Questions for Sunset Review Interview

1. How many dental hygienists in your program have received a permit to place ITRs? How many have completed the SDF requirements?
 - a. How many are providing ITR?
 - b. How many are providing SDF?
2. What has worked well with the new legislation?
3. What gets in your way of everyone working to the top of their licensure?
4. What barriers do you experience? What could be improved?
5. Do you think the legislation and rules contribute to the optimal use of personnel? And if not, what changes would you suggest?
6. What other policy barriers exist that prevent you from scaling/sustaining/reaching all who need care. (or policy opportunities) –E.g. education policy ideas or payment policy ideas, etc.
7. The SDF bill sunsets at the same time as the ITR bill. Are there changes you would propose to the SDF legislation or rules?

Appendix C

Map of SMILES Dental Project® Partner Organizations

SMILES Dental Project®

Partner Organizations

