



The Virtual Dental Home in San Joaquin County: Building Best Practices into the Oral Health Care Delivery System for Children

Acknowledgments

This brief was prepared by **Jenny Kattlove**, Consultant, and **Dr. Paul Glassman**, Professor and Associate Dean for Research and Community Engagement, **California Northstate University**. Primary support for this brief comes from **First 5 San Joaquin** through the California Department of Health Care Services' implementation of the Dental Transformation Initiative.

Introduction



While largely preventable, dental caries (tooth decay) is the number one chronic disease among children.¹ It is especially prevalent among low-income children, such as those enrolled in Medi-Cal, California's Medicaid program. One of the main reasons low-income children do not get needed dental care is that the traditional office-based dental care delivery system does not reach a large segment of the population, including children. Many families face significant barriers to accessing dental care because of financial, transportation, language, and cultural barriers. This is in addition to the difficulty of finding dental offices that accept Medi-Cal, especially for children with special needs and young children.

These barriers hold true for children in San Joaquin County. While having a dental visit is not a definitive indicator of complete or regular care, available data show that only 42.3 percent of children in San Joaquin County enrolled in Medi-Cal had had a dental visit in 2018, lower than the already dismal state rate of 47.6 percent.²

This is why First 5 San Joaquin chose to implement the Virtual Dental Home (VDH) as part of its Local Dental Pilot Project (LDPP). The aim of the LDPPs—which were part of the Dental Transformation Initiative (DTI) of California's Medi-Cal 2020 waiver—was to increase Medi-Cal-enrolled children's use of preventive, risk-based, and continuous dental care through innovative pilot projects, such as the VDH.

The VDH uses technology and innovations in workforce to bring safe, high-quality dental care to children where they already spend time, such as at schools and even medical clinics.³ Through this pilot, First 5 San Joaquin contracted with Community Medical Centers (CMC), a Federally Qualified Health Center (FQHC), to implement the VDH in 34 sites—31 schools and three medical clinics.

Notably, during the last year of the pilot, CMC was operating within the COVID-19 Public Health Emergency (PHE). Yet, the VDH continued to serve as children's dental homes by using phone and videoconferencing to provide oral health education, support, and connections to needed care. And CMC is prepared to continue supporting children's oral health—whether onsite or remotely—as community sites identify and continually modify how they will operate over the foreseeable future.

This issue brief provides background on the VDH, outlines how the VDH had been implemented in San Joaquin County as part of the LDPP, identifies lessons learned and best practices related to the deployment of the VDH, and provides recommendations for sustaining and integrating best practices into the oral health care delivery system throughout San Joaquin County and the state. Importantly, this brief considers the impact of the COVID-19 pandemic on the implementation of the VDH.

¹ US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, Oral Health in America: A Report of the Surgeon General (Rockville, MD: US Department of Health and Human Services, 2000): 63; Dental Health Foundation, Mommy, It Hurts to Chew: The California Smile Survey: An Oral Health Assessment of California's Kindergarten and 3rd Grade Children (Oakland, CA: Dental Health Foundation, 2006).

² California Health and Human Services Open Data Portal <https://data.chhs.ca.gov/dataset/242e5248-686f-4fdb-8c85-dc970de43d8f/resource/cbcdc262-5877-422e-8d2a-bd1459a90950/download/mdsd-utilization-and-sealants-by-county-cy-2013-to-2018.csv>; <https://data.chhs.ca.gov/dataset/f256b423-68ed-4958-ae79-9b2505e0578b/resource/ced1302b-0f32-426f-83d7-fb4c9e283444/download/mdsd-utilization-and-sealants-by-age-cy-2013-to-2018.csv>

³ While the project described in this document is geared toward children, the VDH serves all ages.

Overview of the Virtual Dental Home



Created by the Pacific Center for Special Care at the University of the Pacific School of Dentistry (UOP) and currently supported by Dr. Paul Glassman and his team at California Northstate University (CNU), the VDH is an evidence-based strategy for addressing barriers to accessing dental care by bringing that care to patients where they are—such as at schools, medical clinics, and other sites in the community.

Through the VDH, specially trained dental hygienists and assistants go to community sites to provide preventive and therapeutic dental care to patients. They start by collecting dental diagnostic information from patients, using portable x-ray machines, intra-oral cameras, cameras, and charting. They send that information electronically via a secure web-based system (called store-and-forward telehealth) to the collaborating dentist at a provider office. The dentist uses that information to establish a diagnosis and create a dental treatment plan for the hygienist or assistant to carry out. That plan can include activities such as providing preventive and therapeutic procedures—including sealants, cleanings, and interim therapeutic restorations (ITRs)⁴—education, and care coordination. The hygienists and assistants refer patients to dental offices in the community—more often than not, the collaborating dentist's office—for procedures that require the skills of a dentist.

The VDH teams often provide additional services to support the oral health of children and families at the community site. For example, they provide group oral health education to children and youth in classrooms and educate and engage parents and community site staff during meetings and school events.

The VDH started in 2008 as a pilot. In 2014, legislation was enacted to allow dental hygienists and certain dental assistants to perform two procedures that were currently not allowed under their licensure, ensuring these providers could provide comprehensive, preventive dental services in the community. The legislation also required Medi-Cal to pay for store-and-forward teledentistry, allowing dental providers to be paid for using the VDH to provide care to patients in community settings. The VDH has been implemented in dozens of communities, including by 17 community health centers and other dental providers throughout five counties as part of four separate LDPPs.



⁴ An Interim Therapeutic Restoration uses a fluoride-releasing glass ionomer – a dental restorative material – and without using local anesthetic or dental drill to prevent the progression of dental decay.

The Virtual Dental Home in San Joaquin County



CMC had been implementing the VDH in San Joaquin County for approximately two years with support from other sources of funding before the LDPP began. The LDPP enabled CMC to expand the number of sites they could go to, engage in care coordination activities, and continue to test and hone best practices. Through the LDPP, the VDH was implemented at elementary and middle schools, a school for children with special needs, and medical clinics.

The implementation of the VDH at three medical clinics is a fairly unique model. The clinics were at San Joaquin General Hospital, where the VDH was set up in a small room in the clinic area. Medical and administrative staff as well as care coordinators referred children to the

VDH for both scheduled and walk-in appointments from pediatric visits, WIC appointments, the waiting room, a nearby shelter for children, and the Child Advocacy Center, which provides services in response to allegations of child abuse.

Training and Technical Assistance

While CMC had already been trained and receiving technical assistance

from UOP before the LDPP began, UOP and then CNU continued to provide comprehensive training and technical assistance to CMC. (The training and technical assistance staff started at UOP and transferred to CNU two years into the project.) They created an online toolkit, conducted in-person and online trainings, and conducted regular phone calls with CMC. Unique to CNU's support was their ability to tailor training and assistance to the community. For example, because the LDPP included a school for children with special health and developmental needs, CNU provided extensive training and assistance on providing dental care to children with special needs to both CMC and other members of the community, including the school.

Numbers

Despite the challenges outlined below, such as slow start-up, in the course of two years, 1,188 children received diagnostic, preventive, and early intervention dental services in community settings. These numbers reflect the period of time before the COVID-19 Public Health Emergency when clinics and educational sites were fully operational.

Methods to Assess Implementation of the Virtual Dental Home in San Joaquin County

CNU contracted with an independent consultant to interview CMC personnel, First 5 San Joaquin, and other stakeholders in San Joaquin County as well as CNU to assess the implementation of the VDH in the County. The consultant used the information collected to develop this brief.

The Value of the Virtual Dental Home in San Joaquin County

While it took time for CMC to expand their services to new sites with the LDPP dollars due to the time it took to process and approve agreements that required Board approval and other start-up challenges, the program ultimately reaped many benefits for children, families, and communities. Even more important is the potential for the VDH to be integrated into the county's and California's oral health delivery systems to ensure every child has a dental home and good oral health.

Addressing Barriers to Dental Care for Children

The number one benefit of the VDH is that children get dental care that they most likely would not have received. The VDH addresses families' barriers to bringing children to a

dental office. Barriers include the lack of transportation; an inability to take time off of work; an inability to find a dentist that is open at times when parents can take their children; and an inability to find a dentist who will treat children, particularly those with special needs.

Providing Oral Health Education

Just as important, the VDH addresses gaps in knowledge about oral health. The VDH teams can spend much more time educating students, parents,

and school staff than is possible in a dental office environment. Notably, they are able to provide incremental suggestions for behavior change over multiple encounters to better support the adoption of positive oral health behaviors.

Further, families with children not directly enrolled in the VDH benefit from the VDH oral health education. CMC's VDH teams provided education to children in the classroom and to parents and school staff at meetings and on-site events, such as back-to-school nights and parent-teacher conferences.



“If we didn't bring the services, they would not get them. It's really hard for families to get to the dentist.”

– Felicia Estrada, DTI Program Manager, Community Medical Centers

“One of my greatest concerns, during my 24 years as the principal of Walton Special Center has been the lack of dental care for our student population—children with significant developmental and medical challenges.”

– Tom Whitesides,
Principal,
Walton Special Center



Acclimating Children to Dental Care

Another critical benefit of the VDH is helping children become comfortable with dental care in a setting that is familiar and safe to them, such as their school. This is especially true for children with special needs. The VDH structure allows the on-site dental team to take more time with children, easing them into care. And if a child is not comfortable with having all needed care done at once, the on-site dental team can complete the care during a subsequent visit so that the child can get used to dental care over time. Many traditional dental offices simply do not have the time or capacity to work with children to address their fears and concerns nor are they in an environment in which children feel comfortable.

Coordinating Care

Care coordination is a vital activity of the VDH. Having VDH team members support families' understanding of oral health and help them navigate the oral health care system makes all the difference in ensuring that children actually get care and that families begin to adopt positive

“The VDH team made a situation that could have been uncomfortable and scary into a positive experience. They slowed down and made accommodations to make sure that the students were as comfortable as possible.”

– Tom Whitesides, Principal, Walton Special Center

oral health behaviors. Through this pilot, the VDH care coordinators educated families about oral health and scheduled children for VDH visits at the community sites as well as for in-clinic appointments for patients who needed follow-up care, ensuring patients who needed emergency or urgent care were scheduled immediately. Care coordinators also verified patients' insurance status, helped families sign up for health coverage, and tracked patients' needs for recall visits. Finally, they connected families to other health services that CMC provides, such as medical and behavior health care.

Facilitating Continuity of Care

Another benefit of the VDH is that children receive ongoing care. Because

children's dental home is at the schools, children receive their six-month check-ups and other follow-up care prescribed by the dentist. Further, the VDH care coordinators conducted extensive follow up with the children who were seen at the medical clinics so that they, too, received ongoing care.

Improving Academic Outcomes

The VDH plays a role in addressing barriers to academic achievement, particularly around reducing school absences and decreasing pain and associated health problems impacting children's ability to learn. Many of the teachers whose schools were a part of this pilot appreciated that children were being taken out of class for only 45 minutes through the

VDH—instead of an entire day—for a dental appointment. Stakeholders note that the VDH also kept children from missing days of school due to dental pain and infection. In addition, the oral health education students received from CMC in the classroom and during dental appointments enhanced their learning.

Creating a Culture of Oral Health

By being a presence on school campuses and medical clinic settings, the VDH helps to create awareness around the need for oral health care. At the schools, in many instances, the on-site VDH teams were seen as a vital component of the support services schools provide to enhance children's education, wellness, and development. The staff at the San Joaquin General Hospital clinics integrated oral health education and referrals to the VDH into their day-to-day activities.

Facilitating Whole Body Care

The VDH in San Joaquin County facilitated the connection between overall health and oral health for families in at least two important ways. First, by embedding the VDH into the hospital clinic setting, children received dental care at the same place and, often, on the same day that they received medical care. Secondly, CMC referred VDH patients to behavior health care and medical services at their clinics, as needed.

Promoting Workforce Development

The VDH is building a workforce of health providers who are gaining skills to both meet the oral health needs of communities and advance their careers. The on-site VDH teams were passionate about children getting the dental care they needed and recognized the significant

“Students are only out of class for about 45 minutes. This is helping the school because they don't have to worry about the student missing school for something we can take care of.”

– Felicia Estrada, DTI Program Manager, Community Medical Centers

benefit to bringing that care to them in community settings. Moreover, through the VDH, they built a unique set of skills in community-based care, care coordination, oral health education, and project management.

Increasing Patient Volume

The VDH demonstrated the potential to increase the total number of patients CMC can see by keeping VDH patients healthy in the community. This can create appointment space for additional patients and those who need more extensive treatment as well as reduce wait times for all CMC patients.

Supporting Oral Health in Crises

Building on the trusting relationships that the VDH teams developed with families and schools, the teams were able to quickly transition to support families' oral health in alternative ways during the COVID-19 PHE. The VDH teams called families to keep them informed of updates to CMC's oral health services during the PHE. If, for example, a patient's non-emergency appointment was canceled, they let them know why, and they scheduled appointments for patients who needed emergency dental care. They also provided oral health education via video and

mailed out oral health toolkits so that the parents could apply fluoride varnish to their children's teeth under the direction of the dentist during a video dental visit.

We are still in a pandemic as of the writing of this brief. Yet, the VDH teams are well positioned to resume in-person care because of their expertise in being flexible, their relationships with community sites and families, and the training they received from CNU in providing care in community settings during the pandemic.



Challenges in Implementing the Virtual Dental Home

Provider Level Challenges

CMC experienced challenges in expanding the VDH with LDPP dollars even though they had some experience implementing the VDH previously. Once they expanded, CMC was implementing one of the largest VDH projects among the LDPPs. Such a large expansion came with its own challenges related to hiring, data management, and ensuring all activities of the VDH and clinic were coordinated so that the project would run smoothly.

However, fortunately, because of their previous experience and support from CNU, CMC had addressed many barriers that come with starting up new programs. They learned and adopted strategies needed to implement the project well, such as ensuring strong leadership and project management and how to best engage community sites and families. Many of these lessons are reflected in the recommendations below.

State Level Programmatic and Policy Challenges

Though this was a State-sponsored pilot program, CMC faced barriers that, in hindsight, could have been addressed by State support and leadership.

Slow Start Up and Lack of Ongoing Support

While this was supposed to be a four-year pilot, it took significant time to clarify, define, and complete the VDH portion of the LDPP contracting processes on behalf of California Department of Health Care Services



(DHCS) with First 5 San Joaquin, UOP/CNU, and other LDPPs that included the VDH in their LDPPs. (Statewide coordination of training and technical assistance was needed among the LDPPs that included the VDH.) In addition, the State required one of their grantees, either First 5 San Joaquin or CNU, to purchase the equipment. This limitation caused delays that could have been avoided had CMC been able to purchase the equipment directly. These and other barriers meant that CMC had only one year and nine months to implement the VDH at full capacity with five VDH teams.

Moreover, because of the COVID-19 pandemic, all of the LDPPs lost nearly a full year of implementation in the final year of the project—time CMC and its partners could have used to hone best practices and develop sustainability plans. In response to the lost time experienced by other

activities included in the Medi-Cal 2020 waiver, the State requested an extension of the waiver through December 2021. Unfortunately, they excluded the LDPPs from this request, leaving the pilot projects unable to fulfill their potential.

Complicated Process for Establishing Intermittent Clinics

In order for FQHCs to provide services in a community setting, they need to establish the community site as an intermittent clinic. An intermittent clinic is an extension of the clinic that is operated off site in the community, offering services for a limited number of hours. CMC noted that the process was burdensome and unclear. They received varying and, sometimes, conflicting information from state and federal regulators—and even different information from different people within the same state and federal agencies.

Recommendations

This pilot has had the advantage of funding and support associated with starting up the program, training, care coordination, administration, equipment, and supplies. These investments allowed San Joaquin County stakeholders to build on their already successful VDH program to hone their best practices. And while it is disappointing that the State did not include the LDPPs in its request to extend the Medi-Cal 2020 waiver for another year, with the right commitment and by building on the lessons learned and best practices of the pilot, there is an opportunity to continue to integrate the VDH into community systems of care through the following recommendations.

Recommendations for Providers

The following recommendations are guidance based on the best practices from CMC's implementation of the VDH in San Joaquin County. As providers look to implement the VDH

in their communities, there is a growing group of experienced practitioners—including those from CMC—who can supplement formal training with strategies for how they customized the following guidance.

Demonstrate Leadership and Institutionalize the VDH Within Provider Organizations.

Once a provider has decided to adopt the VDH model, it is important that all staff members—from senior staff to the on-site team to administrative and information technology (IT) staff—buy into and champion the VDH model so that it gets the attention it needs. This leadership should be demonstrated in several ways. Fortunately, CMC was successful in providing the needed leadership described in this section.

- ▶ **Implement the VDH as intended.** In order for the VDH to truly serve as a comprehensive system of care that benefits families, providers, communities alike, provider leadership needs to support the goal of keeping as many children as possible healthy in the community as opposed to the traditional goal of using community activities to screen and refer patients to dental offices. Fortunately, CMC embraced this mindset. In addition, CMC leadership ensured that their clinical dental staff were comfortable with performing evidence-based dental procedures, such as virtual examinations, ITRs, and allowing dental hygienists to order sealants.
- ▶ **Invest in effective project management.** CMC learned early on that the VDH impacts multiple sectors of clinic operations, including clinical services,

community engagement and outreach, IT, billing, and other administration services. Strong project management is essential to ensure the right people at the clinic understand their roles, have autonomy to make decisions within those roles, collaborate as the VDH team, and get the training and support they need.

- ▶ **Identify staffing structure needs.** Another area that requires strong leadership is around staffing needs—both in terms of function and where staff are located. Over time, CMC learned to do a thorough assessment of needed activities—including, but not limited to, start-up activities, project management, training, clinical care, care coordination, relationship building with communities and families, billing and other administrative tasks, and IT support—to identify how to provide the highest quality care while providing as many billable visits as possible.
- ▶ **Invest in training.** Provider leadership should ensure all staff participate in available VDH training, such as the training created and provided by CNU. Dentists and dental hygienists need training in the latest evidence-based, minimally invasive dental procedures. Dental hygienists and assistants need training in providing dental care in community settings. Information technology staff need training in the technology aspects of the VDH and how to support the clinical staff. And the non-dental team members, such as the care coordinators and administrative staff, need training



“One of the reasons that sites are so open to us is because we are not inconveniencing them. We work with them.”

– Felicia Estrada,
DTI Program Manager,
Community Medical Centers



in the basics of oral health. CMC recognized that investing in this training helps ensure that the VDH runs smoothly, saving the provider time and resources in the long run.

Engage and Nurture Relationships with Community Sites.

The VDH is a partnership between the community site and dental clinic to pursue the collective goal of improving the oral health of children. The design of the program should reflect this partnership, with mutually agreed upon decisions, clear expectations on behalf of all partners, and clear and ongoing communication among the partners.

- **Ensure a champion at the community site.** CMC noted that having a champion as a partner at the community site, such as at a school, can make the difference in whether or not the program is successful. Once a leader, such as a principal or school nurse, sees how the VDH is a benefit to children, they will often impart the importance of the program to other school staff. They also support the VDH teams by helping them identify clinic space, facilitate conversations with parents and school staff, help develop systems to get children enrolled in the program, and assist with other aspects of the project.

- **Develop and communicate clear expectations for both clinic teams and community site staff.** It is important to remember that implementing the VDH requires work on behalf of the community site. As relayed by CMC, while many sites are willing to put in the extra effort to support the program, they will be much more engaged if expectations are clear.

Utilizing the guidance and checklists provided by CNU and creating protocols that work for both the clinics and community sites will help ensure the program runs smoothly and will minimize disruption to the daily activities of the community site. Examples include identifying appropriate space at the community site that works for the VDH team but also does not disrupt the day-to-day operations of the site; understanding and planning for school schedules, such as summer breaks, mid-year breaks, and shortened school days; identifying

the best times to take students out of class; and protocols for working with teachers and other school staff. Dental providers and community sites should tailor protocols to meet the unique needs of their programs, regardless if the community site is a school, an early learning site, a health center, or another place in the community.

- **Exercise flexibility.** As CMC developed relationships with schools, they learned that each school had its own requirements and requests, such as when teachers are open to having students taken out of class for a dental visit; where the VDH program is located on campus and the possibility of that changing either on a regular basis or sporadically; and not being able to hold a VDH clinic on certain days because of other school calendar conflicts, such as an assembly or shortened academic day. In addition, some schools offered more support, such as providing students' schedules, while other

“The dental team does amazing work with our students. They’ve had students in the dental chair, their lap, and even in the teacher’s lap. They make necessary modifications for every child in the program.”

– Tom Whitesides, Principal, Walton Special Center

schools did not provide this type of support. Though this can cause chaos at times, it is important to be willing to accept a certain level of unpredictability and adapt to it.

- **Pay special attention to students' needs.** What is unique about the VDH is the ability to be flexible and adapt to children's needs. This is especially relevant for children with developmental and medical challenges. Each child may have a different need in order to be comfortable receiving dental services. The CMC team was acutely aware of this and assessed and responded to each child's needs.
- **Engage families in decisions about program design.** While each family has unique needs as discussed below, they collectively know what works for them as a community. It is critical to give them a voice in how the VDH is implemented at their school or other community setting.
- **Recognize when a site may not be a good match.** While schools and other community sites want the best for their populations, they sometimes struggle to bring in additional support services above and beyond their regular services. For example, sometimes they do not have staff and/or the capacity to champion or support programs like the VDH. In these cases, it may be best to identify alternative sites rather than struggle with sites that are not a good fit for VDH services at the time.

Engage Families: VDH Enrollment, Education about the VDH, and Care Coordination.

CMC found that the best strategy for engaging families was to show up when they knew they would see parents, such as at parent-teacher conferences, back-to-school nights, and other school gatherings. To enroll them in the program, they were most successful

when they sent the VDH enrollment packet home with the emergency forms the schools sent home. They then called the parents to make sure they understood the program and what they were signing. Finally, through care coordination, they were able to work with families to address their barriers to accessing care outside of the school setting. The care coordinators understood that this work requires multiple communications with families, persistence, and empathy.

State-Level Programmatic and Policy Recommendations

While this was a State-endorsed pilot program, there were several areas in which the State could have better supported the VDH programs of the LDPPs. And based on the learnings of this pilot, there are several areas in which the State should maximize its investment in this pilot by supporting the integration of the VDH's best practices into statewide systems of care.

Simplify and Clarify the Process for Establishing Intermittent Clinics.

Decisionmakers at the state level should work with the federal government to simplify the process, clarify instructions, and provide consistent assistance to clinics in establishing intermittent clinics.

Create a Statewide Program to Support the Start-up Costs and Sustain the VDH.

Because the VDH is such a different system of care than the traditional office-based delivery system, establishing the VDH takes time and resources. However, this pilot proved that the costs are worth the investment, given that children get the preventive care they need. By creating a supportive policy and payment environment, a statewide program—housed at either the California Department of Public

Health (DPH) or DHCS—would ensure that the VDH could be integrated into California's oral health care system and be sustained over time. Moreover, supporting the VDH would help the State meet its obligation to provide care to children enrolled in Medi-Cal.

- **Invest in VDH equipment.** The State generously allowed the LDPP providers to keep the equipment purchased as part of the pilot. This made the difference for dental providers in terms of whether they would be able to continue implementing the VDH past the pilot. The State should create a pool of funds to support providers' purchase of equipment for the VDH.
- **Support care coordination.** Care coordination is such a critical component of the VDH, truly ensuring children get the services they need to improve their oral health. Providers need upfront and ongoing support for this activity. Such support could come from multiple mechanisms, such as a grant program, systems to draw down Medi-Cal dollars, or other creative strategies.
- **Support training and technical assistance.** Once a supportive policy environment is in place, the State should play a role in developing and supporting systems of training, technical assistance, and materials development—such as template forms, checklists, and other documents—along the lines of the support provided by CNU. In addition, such programs should support experienced VDH providers in advising the development and implementation of new VDH programs. Finally, the State should identify ways to support VDH in communities coming together to learn from each other to further streamline best practices.

The Next Era of the Virtual Dental Home



While there were challenges—such as slow start up and the COVID-19 pandemic—in implementing the VDH through the LDPPs, this pilot demonstrated that there is a clear path for the VDH to successfully bring dental care to children who most likely would not get that care otherwise. The VDH's community-based approach not only addresses families' socioeconomic barriers to care, but it also facilitates dental team members to work at the top of their credentials; supports more efficient provider operations; and supports schools, early learning sites, medical clinics, and other community sites in fulfilling their objectives around advancing the wellbeing of children and families.

Sources

- California Northstate University
- Community Medical Centers
- First 5 San Joaquin
- San Joaquin General Hospital
- Walton Special Center, Stockton Unified School District



<http://dentalmedicine.cnsu.edu/>