

# Report of the Virtual Dental Home Demonstration

## Executive Summary

Improving the Oral Health of Vulnerable and Underserved Populations  
Using Geographically Distributed Telehealth-Connected Teams

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## Introduction

The Pacific Center for Special Care at the University of the Pacific School of Dentistry (Pacific) has developed and directed a six year demonstration of a new system for improving the oral health of groups in the U.S. population who do not get dental care on a regular basis and have high rates of untreated dental disease. This system is called the Virtual Dental Home (VDH) because it provides all the essential ingredients of a “health home”, but does so using geographically distributed, telehealth-connected teams.<sup>1</sup> As distinct from “dental home” systems that regard the dental office as the “home”, this model reaches people who do not regularly visit dental offices by bringing services to them. The VDH system emphasizes prevention and early intervention services in community settings, while linking to and expanding the involvement of dental offices and clinics.

This report is a summary of the six year demonstration of the VDH system. While it does not contain all the data and detailed results of this demonstration, it is intended to provide an overview of the system, major accomplishments, lessons learned, and future directions.

## What is a Virtual Dental Home?

The Virtual Dental Home (VDH) is a community-based oral health delivery system in which people receive preventive and early intervention therapeutic services in community settings. It utilizes telehealth technology to link allied dental personnel in the community with dentists in dental offices and clinics. Pacific has demonstrated that registered dental hygienists in alternative practice (RDHAP), dental hygienists working in public health programs (RDH) and registered dental assistants (RDA), working in telehealth-connected teams, can keep most people healthy in community settings by providing education, triage, case management, preventive procedures, and Interim Therapeutic Restorations (ITR). Where more complex dental treatment is needed, the Virtual Dental Home connects patients with dentists in the area. In 2014, legislation was adopted in California which defined the categories of allied dental personnel allowed to participate in this system as including RDHAPs, RDHs and Registered Dental Assistants in Extended Functions (RDAEF), collectively refer to in the remainder of this document as allied dental personnel.

This system promotes expansion of dental practices and linkages between dentists in dental offices and these community-based allied dental personnel. Most importantly, it brings much-needed services to individuals who might otherwise receive no care.

## The Virtual Dental Home Demonstration

The VDH demonstration was conducted from 2010 to 2016. It was a largely grant funded “proof-of concept” demonstration that also tested and collected data on a number of elements of the delivery system and its outcomes. Approximately 27 funding agencies and organizations

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1. American Academy of Pediatrics. Role of the medical home in family-centered early intervention services. Council on Children With Disabilities. *Pediatrics* 2007;120(5):1153-1158.

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provided over \$5.5 million to support this demonstration in 11 communities and approximately 50 sites across California. In addition to testing the ability of dentists and allied dental personnel to function in telehealth-connected teams and create Virtual Dental Homes, the demonstration also tested the safety and efficacy of two procedures that were not formerly within the scope of practice of allied oral health personnel through a California Health Workforce Pilot Project (HWPP).

## Results

The results of the Virtual Dental Home (VDH) demonstration included the following:

- The project demonstrated the ability to organize and use geographically distributed telehealth-connected teams. These teams provided services for 3,442 patients who received 7,967 visits.
- Examining dentists using the telehealth system determined that approximately two-thirds of children and about half of seniors and people with disabilities in long term care facilities could have their oral health needs met by allied dental personnel in the community site without the need to see a dentist in-person.
- The VDH system allows dentists to verify, using the telehealth system, that most people can be and are kept healthy in the community. This allow scarce referral and care navigation resources to be focused on those minority of people who need additional care.
- All procedures performed by allied dental personnel in the HWPP were rated as “acceptable” which means they met all criteria for correct performance. In addition, there were no reports of adverse outcomes reported in this project.
- A preliminary analysis showed a high rate of retention of ITRs placed by dental hygienists.
- Approximately one-third of children were determined to need to see a dentist in-person. A preliminary analysis indicated that 83% of children had all their needs met.
- There was a high degree of satisfaction with this system of care among parents, caregivers, and administrators.
- A preliminary analysis of the program’s “basic measures” system indicated that the VDH system not only reaches people who don’t get care in the traditional dental care system, and applies proven preventive strategies, but also improves the health of the populations being served.
- The VDH system delivers significantly more prevention and early intervention care at less cost per patient than the current Denti-Cal system as it includes ITR procedures, patient, parent and caregiver education, case management and integration of oral health prevention and care in community settings.
- A financial projection indicated that the system could be financially viable in both the Denti-Cal fee-for-service system and the encounter-based billing system.
- The VDH demonstration resulted in new legislation and regulations that incorporated the procedures tested in the HWPP into the scope of practice of allied dental personnel and required California’s Medicaid dental program, Denti-Cal to pay for services performed using “store-and-forward” teledentistry.

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## Future work

With the completion of the VDH demonstration and the adoption of legislation and regulations described above, Pacific intends to continue to expand the VDH system and further study its ability to impact health outcomes and the evaluate the economics of using this system in various environments. Aspects of the future work include:

- Help entities in other states replicate the VDH system. There are currently VDH replication projects funded and underway in Colorado, Oregon, and Hawaii. A number of other states have expressed interest or are already planning for VDH replication projects.
- Expand the use of the VDH system in California. Pacific has replication projects underway in several communities in California and plans to support many more communities in the future.
- Expand the study of health outcomes, barriers to success, patient and provider satisfaction, and economic results.

## Conclusions

The Virtual Dental Home model is a system of care that has been demonstrated in a multi-site demonstration project across California. Included in the demonstration was a Health Workforce Pilot Project (HWPP) that demonstrated the safety and acceptability of two procedures when performed by allied dental personnel. The Virtual Dental Home system has proven to be a safe and effective method to bring dental care to California’s most vulnerable and underserved populations. It is also a system for providing essential prevention and early intervention services at a low cost per individual.

Among the main finding are:

- The VDH creates a “continuous presence” system of care where allied dental personnel are present in community sites throughout the year, integrating oral health awareness considerations and activities into the structure and processes of community educational, social, and general health systems. This system of continuous presence is critical to influencing children, parents, adults, and caregivers to adopt and support health promoting prevention procedures and diets that are critical to improving oral health.
- The VDH allows the majority of people seen in community sites to be kept healthy with only allied dental personnel being physically present with them. It also allows these individuals to be verified as healthy by dentists, removing the need for them to travel to a dental office to be verified as healthy.
- The VDH connects dentists in dental practices and clinics to activities in community sites creating “community-clinical” linkages and a full system of care.
- The VDH creates a new vision of a dental practice with the dental office and clinic becoming a part of a larger “practice without walls” that includes the community location.

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## About the Authors

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More information about the Virtual Dental Home demonstration project is also available at:  
<http://www.virtualdentalhome.org>