

The Virtual Dental Home

Using new technology to bring dental care to underserved children

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Introduction

New advances in technology are announced every day, but often overlooked is the opportunity to turn these advances into better oral health for underserved children and adults. The Virtual Dental Home, being demonstrated by the Pacific Center for Special Care at the University of the Pacific Arthur A. Dugoni School of Dentistry (Pacific), combines technological advances with innovations in workforce to reach underserved children and adults with the dental care they need. And now—thanks to groundbreaking legislation enacted in 2014—the Virtual Dental Home has the potential to become a sustainable and scalable model for delivering dental care.

Need

While largely preventable, dental caries (tooth decay) is the number one chronic disease among children. It accounts for persistent pain, trouble eating and sleeping, missed school days, and expensive emergency room visits for preventable dental problems. Yet, much of the reason dental disease persists comes down to the fact that underserved children and other vulnerable populations in California lack access to routine dental care.

Unfortunately, the traditional office-based dental care delivery system does not reach a large segment of California's population. Many families face significant barriers accessing dental care because of financial, transportation, language, and cultural barriers, in addition to difficulty finding dental offices that accept Medi-Cal, California's Medicaid program.

Solution

The Virtual Dental Home is a new system of dental care that uses technology to bring dental care to children where they already spend time, such as at schools and Head Start sites. It has been proven both successful and cost-effective in demonstration projects throughout California and can contribute to the solution of getting dental care to those who need it most.

“As dentists and allied dental personnel become more comfortable with the new technology, we are able to bring dental care to children at school who would otherwise go without needed care”– Nicole Thompson-Marvel, DDS, Dental Director, Venice Family Clinic



How It Works

The science behind the Virtual Dental Home is quite simple. It includes all the technology we have become accustomed to in a dentist's office, except that new advances have made them more effective in community settings and more portable. It also makes the most of scarce workforce resources by allowing dentists to stay in their clinics or offices and focus on addressing the more advanced needs of patients. This is done by deploying allied dental providers, such as dental hygienists—under the supervision of a dentist—to community sites to provide preventive and basic restorative care to patients who would otherwise be unable to access such care.

Typically, a dental hygienist will bring a portable dental chair, a laptop computer, a digital camera, and a handheld X-ray machine—which, together, can all fit into the trunk of a car—to a site such as a preschool, elementary school, or community center. Within minutes, children and others who need care are getting state-of-the-art diagnostic, preventive, and early intervention dental care.

After initial information is collected about the child's oral health, the hygienist uploads and makes available the complete digital records—including photos and X-rays—to a secure web server, where a dentist, from his or her office, makes a diagnosis and develops a treatment plan. In general, care can be provided at the community site. For more advanced treatment needs, an appointment or a referral to a dentist can be made on the spot. Data from Pacific's demonstration indicates that around two-thirds of children can be kept healthy over time with only the procedures performed in the community site.

Patient Satisfaction and Quality of Care

The Virtual Dental Home has been providing care to high-risk children and adults for over three years in California under a state-approved demonstration program. Almost 3,000 patients have been seen at more than 50 sites around California with overwhelmingly positive results. A rigorous evaluation has demonstrated patient safety with no negative or adverse outcomes. Further, patients expressed a high degree of satisfaction with the program, in large part because this program is designed in a way that makes accessing dental care easy and convenient for patients and their families. In fact, 86 percent of all patients indicated that they were “very satisfied” and 7 percent indicated that they were “somewhat” satisfied. Perhaps most importantly, the survey also revealed that 95 percent of respondents would continue with the program if it continued to be available.

Economic Benefits

In addition to the positive impacts of the program, an analysis of the economic viability of preventive care models, such as the Virtual Dental Home, demonstrated that such models could actually produce savings. In fact, the study found that Medi-Cal would have paid less per visit for the diagnostic, prevention, and early intervention procedures using the Virtual Dental Home model than Medi-Cal is currently paying per visit in the current traditional delivery model. In short, the Virtual Dental Home model will have better economic results as it provides a low-cost system for getting preventive and early intervention dental care to children and avoids the expensive consequences of untreated problems.

“Think about how far we have come in the resolution of digital images in the last 10 years. In many cases, digital imagery is providing us a clearer look into the patient’s mouth than we can get with our own two eyes.” – Yogita Thakur DDS, MS, Dental Director, Ravenswood Family Health

“If 1,000 children enrolled in Head Start who were previously not receiving dental services were to participate in such a program, California’s Medi-Cal program would actually save \$2000 because the cost of providing the services would be more than offset by lower costs stemming from the consequences of neglect. This is just one example of the potential benefits of such a research and prevention based program. Other populations stand to reap benefits as well.” (*The Costs of Neglect of Dental Disease*. University of the Pacific, Blue Sky Consulting Group, 2013)



Dental hygienist collects electronic records at a local Head Start center. A supervising dentist will then make a treatment recommendation based on the records that were collected.

From Demonstration to Policy

Because this model had been operating on a demonstration basis and is grant funded, policy changes were needed to enable the Virtual Dental Home to spread statewide. The Children’s Partnership (TCP), in partnership with Pacific and a wide range of stakeholders, advanced AB 1174 (Bocanegra), which passed the Legislature and was signed by Governor Brown in September 2014. The bill allows all dental hygienists and specified dental assistants to be trained to perform the additional duties previously only allowed to be performed by providers involved in the pilot and requires Medi-Cal to pay for dentists who use telehealth to provide dental care. Now this innovative, safe, and cost-effective system of delivering high-quality dental care to underserved populations can continue and spread.

Next Steps

As the various state agencies are working in 2015 to implement the provisions of AB 1174, Pacific and TCP are educating clinics, schools, Head Start sites, and other stakeholders about how they can implement the Virtual Dental Home in their communities. And Pacific is training clinics and providers so that the Virtual Dental Home can roll out on a large scale beginning in 2016. Finally, TCP and Pacific are working with the dental community, the State, and other stakeholders to identify a statewide source of funding to invest in the start-up of the Virtual Dental Home to enable the system to reach a critical mass and spread throughout the state.

For more information please visit:

<http://www.childrenspartnership.org/our-work/dental-health> or www.virtualdentalhome.org

The Children’s Partnership

The Children’s Partnership is a national, nonprofit child advocacy organization—with offices in Santa Monica, CA, and Washington, DC—working to ensure that all children have the resources and opportunities they need to grow up healthy and lead productive lives.

The Pacific Center for Special Care

The Pacific Center for Special Care is a Health Services Research Center within the Arthur A. Dugoni School of Dentistry committed to improving the oral health of underserved people on the local, state and federal level.