

## THE VIRTUAL DENTAL HOME

A Demonstration Project of the Pacific Center for Special Care  
at the University of the Pacific, Arthur A. Dugoni School of Dentistry

### **WHY IS A NEW SYSTEM OF ORAL HEALTH CARE NEEDED?**

Many Californians face serious obstacles in obtaining dental services. These individuals may have complex medical, physical or social conditions that make it difficult to get to a dentist's office. They may be institutionalized, economically disadvantaged or living in remote or underserved areas. It has been estimated that over 30% of the population of California, or over 11 million children and adults are not able to get their oral health needs met through the traditional dental care system. As a result, they have significantly worse oral health than those in other segments of the population.

The Pacific Center for Special Care at the University of the Pacific, Arthur A. Dugoni School of Dentistry (Pacific) is demonstrating a new model of care. By creating a "Virtual Dental Home" in sites throughout California, Pacific is delivering oral health services in locations where people live, work, play, go to school and receive social services. The Pacific Center has partnered with a number of funding organizations to implement this demonstration project to bring much-needed oral health services to these underserved populations. These populations range from children in Head Start Centers and elementary schools to older or disabled adults in residential care settings or nursing homes.

### **WHAT IS A VIRTUAL DENTAL HOME?**

The Virtual Dental Home creates a community-based oral health delivery system in which people receive preventive and simple therapeutic services in community settings where they live or receive educational, social or general health services. It utilizes the latest technology to link practitioners in the community with dentists at remote office sites.

This project is demonstrating that registered dental hygienists in alternative practice (RDHAP), dental

hygienists working in public health programs (RDH) and registered dental assistants (RDA) can keep people healthy in community settings by providing education, triage, case management, preventive procedures, and interim therapeutic restorations. Where more complex dental treatment is needed, the Virtual Dental Home connects patients with dentists in the area.

This system promotes collaboration between dentists in dental offices and these community-based dental hygienists and dental assistants. Most importantly, it brings much-needed services to individuals who might otherwise receive no care.

### **HOW DOES IT WORK?**

This model relies on the advanced training and community-based practice of a group of allied oral health professionals. In the Virtual Dental Home, the RDHAP, RDH, or RDA collaborates with a dentist to provide care. Technology helps bridge the geographic gap between the community provider and dentist.

Equipped with portable imaging equipment and an internet based dental record system, the RDHAP, RDH or RDA collects electronic dental records such as X-rays, photographs, charts of dental findings, and dental and medical histories, and uploads the information to a secure website where they are reviewed by a collaborating dentist. The dentist reviews the patient's information and creates a tentative dental treatment plan. The RDHAP, RDH or RDA then carries out the aspects of the treatment plan that can be conducted in the community setting. These services include:

- Health promotion and prevention education;
- Dental disease risk assessment;
- Preventive procedures such as application of fluoride varnish, dental sealants and for dental hygienists, dental prophylaxis and periodontal scaling;

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- Placing carious teeth in a holding pattern using interim therapeutic restorations (ITR) to stabilize patients until they can be seen by a dentist for definitive care; and
- Tracking and supporting the individual's need for and compliance with recommendations for additional and follow-up dental services.

The RDHAP, RDH or RDA refers patients to dental offices for procedures that require the skills of a dentist. When such visits occur, the patient arrives with health history and consent arrangements completed, a diagnosis and treatment plan already determined, preventive practices in place and preventive procedures having been performed. The patient is likely to receive a successful first visit with the dentist as the patient's dental records and images have already been reviewed. All of this adds up to a more successful dentist visit.

In some cases the dentist may come to the community site and use portable equipment to provide restorations or other services that only a dentist can provide. In either case, the majority of patient interactions and efforts to keep people healthy are performed by the RDHAP, RDH, or RDA in the community setting after consultation with a collaborating dentist, thus creating a true community-based dental home.

## WHAT IS THE CURRENT STATUS OF THE PROJECT?

Phase I of this project is now completed and has included:

- Development of the project concept and design;
- Development and implementation of the legal framework for the project including agreements, consent forms, liability coverage, and Institutional Review Board (IRB) approval;
- Creation and adaption of the project technology hardware and software systems;
- Development of training materials, site protocols, and guidelines;
- Completion of a study validating the ability of dentists to make treatment decisions after evaluating digital oral health records without an in-person examination;
- Enlistment and training of providers and sites in nine communities; and the

- Application for and approval of a Health Workforce Pilot Project (HWPP) from the California Office of Statewide Health Planning and Development (OSHPD) to allow the project allied dental professionals to perform several new duties beyond their current scope of practice including making a decision about which radiographs to take based on protocols, and placing Interim Therapeutic Restorations (ITR) under general supervision of a dentist.

With the completion of Phase I Pacific is now operating in nine sites across California and will collect data about over the next several years about the health and economic benefits of this system. It is expected that this innovative community-based oral health home can keep children, elders, disabled adults, and other low income vulnerable populations healthy at lower cost than other systems of care. There are indications that the next several years of this project will demonstrate the viability and effectiveness of a significant new approach to improving and maintaining oral health of underserved populations that can make a significant difference in the epidemic of dental disease for California's vulnerable children and adults.

## WHERE ARE THE CURRENT PROJECT SITES?

The Virtual Dental Home is being demonstrated at a number of sites in California including:

**Sacramento:** Elementary school-based facilities associated with the Twin Rivers Unified School District working with community dentists.

**Visalia/Fresno:** Nursing home facilities working with community dentists.

**San Diego:** Head Start Centers and Elementary schools working with FQHC community health centers.

**Eureka:** Community residential facilities for people with disabilities working with an FQHC community health center.

**Alameda and Contra Costa:** Community residential facilities for people with disabilities associated with the Regional Center of the East Bay and working with community dentists.



**Santa Clara and Santa Cruz Counties:** Community residential facilities for people with disabilities associated with the San Andreas Regional Center and working with community dentists.

**San Mateo County:** Community residential facilities for people with disabilities associated with the Golden Gate Regional Center and working with community dentists.

**Pacoima:** The MEND Community Center working with community dentists.

## WHICH ORGANIZATIONS HAVE PROVIDED PROGRAM SUPPORT?

The following organizations have supported the first phase of Pacific Center's Virtual Dental Home demonstration project:

- The California Health Care Foundation
- California Dental Association Foundation
- American Dental Hygienists' Association
- The California Department of Developmental Services
- The Verizon Foundation
- Paradise Valley Community Health Fund
- The California Endowment
- California Consumer Protection Foundation
- The California Emerging Technology Fund
- The Paradise Valley Foundation
- The California Department of Public Health

## WHAT ARE THE NEXT STEPS FOR THIS PROJECT IN PHASE II?

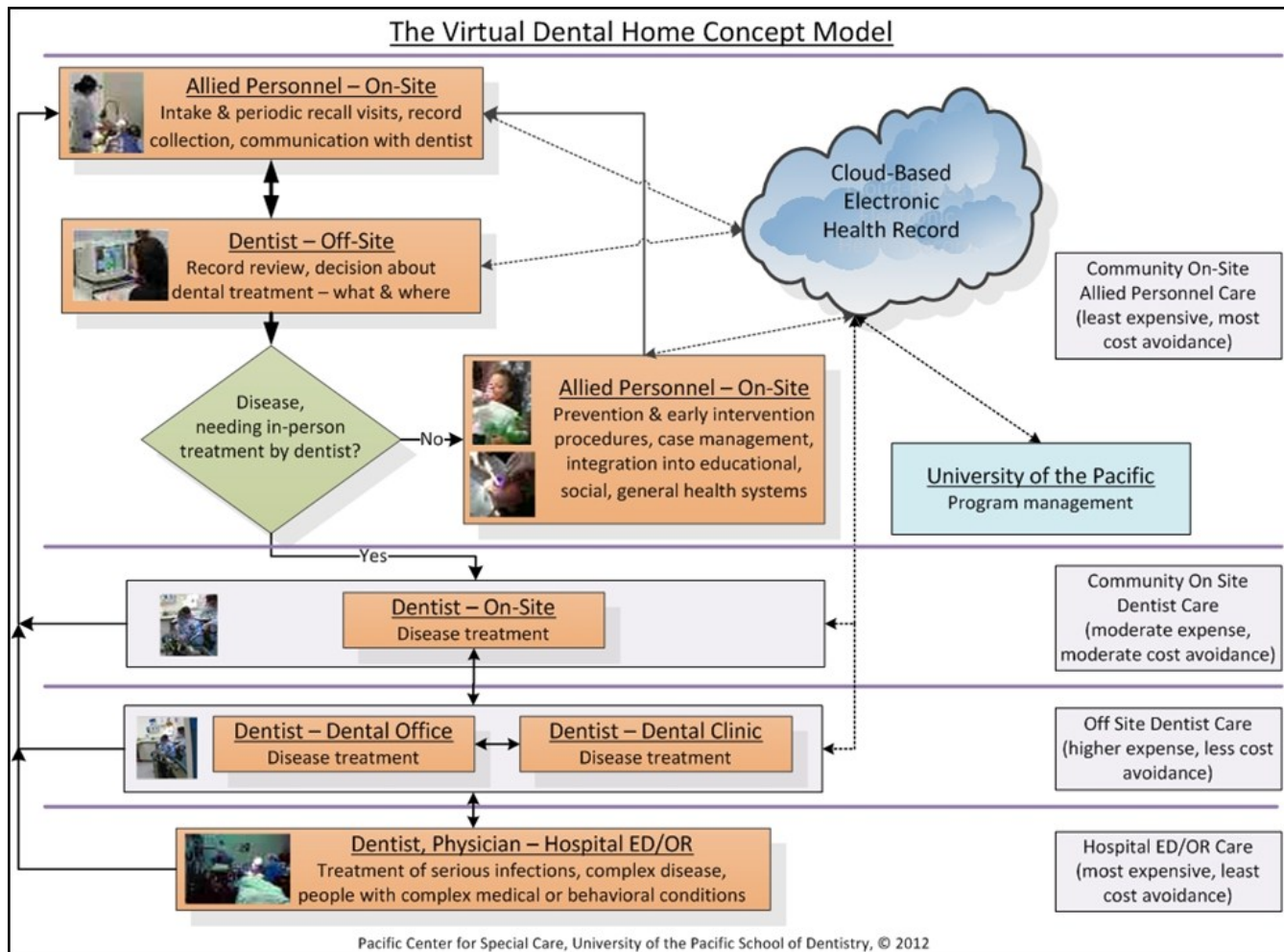
The goals of the next phase, Phase II, of the demonstration project are to:

1. Operate all of the sites where ongoing funding is available and collect data that will demonstrate the effectiveness of this model. This includes:
  - a. The ability to provide services for children and adults who otherwise have great difficulty receiving oral health services;
  - b. The ability to effectively maintain and operate a geographically distributed, collaborative, tele-health facilitated delivery system; and
  - c. The ability to track and manage patient's care in the community, referrals to dental offices and clinics, and follow-up care.
2. Collect and analyze data on the improvement in basic health measures of the population served by this model.
3. Collect and analyze data on the cost-effectiveness of the model including:
  - a. The amount of services delivered and the cost of delivering those services under this model; and
  - b. The relative cost of delivering these services using the traditional delivery system or other systems of oral health care.
4. Collect data on the safety and efficacy of the new duties being performed by project allied dental professionals under the OSHPD HWPP.
5. Use project data to enhance proposals and advocate for policy and reimbursement reform needed to spread and sustain this model.
6. Build the documentation, expertise, teaching and consulting tools needed to facilitate spread of the model as regulatory and reimbursement reforms are enacted which allow and facilitate spread.

## WHAT ARE THE EXPECTED LONG-TERM OUTCOMES OF THIS PROJECT?

The Virtual Dental Home project is demonstrating a new system of care that is more likely to improve oral health of underserved populations at a lower cost than other systems of care. The demonstration project will locate allied dental professionals in community sites where underserved children and adults receive educational, general health, and social services. It will set up tele-health enabled collaborative arrangements with dentists. It will allow these allied dental professionals to provide education, triage, case management, preventive procedures, and interim therapeutic restorations in the community locations. The data collected from this demonstration will support regulatory and reimbursement change needed to allow and facilitate spread of the model. The long term result will be the ability to reach

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underserved populations, improve and maintain their oral health and do so using a cost-effective system of care which will produce more oral health per dollar than current systems.

As this delivery system is developed and spread over the next several years it will be combined with evolving systems integral to the vision embodied in federal health reform including paying for health based on performance and linking systems of care using interoperable health information systems. This combination will produce significant systems change in delivery of oral health for underserved populations.

## RESOURCES

*Government Action & Communication Institute (GACI) has partnered with the Pacific Center for Special Care at the University of the Pacific, Arthur A. Dugoni School of Dentistry to*

*distribute this brief as part of their legislative and executive education and training efforts through generous funding from the San Francisco Foundation.*

For more information, please contact:

### **Pacific Center for Special Care**

University of the Pacific Arthur A. Dugoni School of Dentistry  
2155 Webster Ave, Suite 409, San Francisco, CA 94038  
P: 415-749-3384, F: Fax 415-749-3399

**Paul Glassman, DDS, MA, MBA** is the Project Director of the Virtual Dental Home Demonstration Project. He is a Professor and Director of Community Oral Health and Director of the Pacific Center for Special Care at the University of the Pacific School of Dentistry. P: 415-929-6490, E: [pglassman@pacific.edu](mailto:pglassman@pacific.edu)

**Maureen Harrington MPH** is the Program Manager of the Pacific Center for Special Care and the Virtual Dental Home Demonstration Project. P: 415-749-3383, E: [mharrington@pacific.edu](mailto:mharrington@pacific.edu)