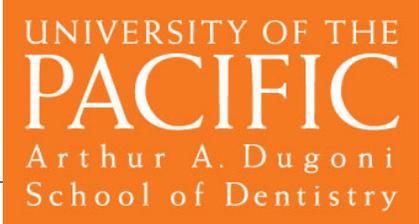




OSHPD
Health Workforce
Pilot Project #172
Report and Evaluation

May 12, 2013

Pacific Center for Special Care



**The California Office of Statewide Health Planning and Development
Health Workforce Pilot Project #172
Report and Evaluation
May 12.2103**

Contents

The California Office of Statewide Planning and Development (OSHPD) Health Workforce Pilot Project Program 1

Health Workforce Pilot Project # 172 – Training Allied Dental Personnel for New Duties in Community Settings..... 1

The Virtual Dental Home Demonstration Project..... 2

HWPP #172: Trainees, Dentists and Sites 3

HWPP #172: Curriculum and Training 4

HWPP # 172: Utilization Phase and Evaluation..... 5

The OSHPD HWPP Evaluation Process..... 5

Results: Patients, Procedures and Visits..... 6

Results: Health Workforce Pilot Project Procedures..... 8

Results: Satisfaction Surveys..... 9

Results: Economic Analysis 10

Conclusions 12

About the Authors..... 13

The California Office of Statewide Planning and Development (OSHPD) Health Workforce Pilot Project Program

To enhance California's understanding of the structure and function of its healthcare delivery system, the Office of Statewide Health Planning and Development (OSHPD) was established in 1978. OSHPD's role includes collecting and disseminating information about California's healthcare infrastructure, promoting an equitably distributed healthcare workforce and publishing valuable information about healthcare outcomes.

The Health Workforce Pilot Projects Project (HWPP) is established within OSHPD's Healthcare Workforce Development Division (Division 107, Part 3, Chapter 3, Article 1 of the Health and Safety Code, beginning with Section 128125). The HWPP allows for organizations to test, demonstrate, collect data, and evaluate new or expanded roles for healthcare professionals, or new healthcare delivery alternatives before changes in licensing laws are made by the Legislature. HWPP is authorized to waive laws that would otherwise bar clinicians from learning and performing procedures outside their current scope of practice.

Since 1973, one hundred seventy-two (172) projects have been submitted for consideration. These projects have covered expanded roles for registered nurses, allied dental personnel, medical auxiliaries, licensed vocational nurses, pharmacists, women's health care workers, and team relationships of several health care providers.

Over 5,000 health providers have been prepared and utilized under the protective and evaluative umbrella of the HWPP Program. These health workers have learned and utilized new skills - skills not permitted under existing licensing laws.

The Health Workforce Pilot Projects Program has enabled the people of California to demonstrate and evaluate new and expanded health roles. Changes in laws and regulations have occurred as a result of these projects.

Health Workforce Pilot Project # 172 – Training Allied Dental Personnel for New Duties in Community Settings

On February 25, 2010, The Pacific Center for Special Care at the University of the Pacific Arthur A. Dugoni School of Dentistry (Pacific) submitted Health Workforce Pilot Project (HWPP) Application #172 to OSHPD. It was titled "Training Allied Dental Personnel for New Duties in Community Settings." The purpose of this application was to establish a HWPP to test two new duties to be performed by allied dental personnel. The goal was to expanding the duties that could be performed by Registered Dental Assistants (RDA), Registered Dental Hygienists working in Public Health Programs (RDH), and Registered Dental Hygienists in Alternative Practice (RDHAP) working in community locations in order to improve the oral health of underserved populations in California. The two new duties that were proposed to for testing under this HWPP are:

- Determine, based on protocols, which radiographs to take, if any, to facilitate an initial oral evaluation by a dentist.
- Place “Interim Therapeutic Restorations” (ITR) when directed to do so by a collaborating dentist.

The ITR is a restoration designed to stop the progression of dental caries. It should be noted that “Interim Therapeutic Restoration” is the term developed by the American Academy of Pediatric Dentistry in its *Policy on Interim Therapeutic Restorations (ITR)*.¹ As described in that document, this term refers to a technique described more broadly in the literature as Atraumatic Restorative Technique (ATR). The scientific literature, as analyzed in numerous studies and systematic reviews, has concluded that this technique can stop the progression of decay, result in less pain and anxiety for patients than conventional restorations, reduce risk for pulpal exposure and pulpal symptoms, and produce restorations that last as long as, or longer, than conventional restorations.^{2,3,4,5}

Pacific’s application for HWPP #172 was officially approved in December 2010 for one year. The approval was renewed for additional one year periods in December 2011 and December 2012.

The Virtual Dental Home Demonstration Project

HWPP # 172 is being carried out in the context of a demonstration of a new oral health delivery model called the Virtual Dental Home (VDH). Pacific is demonstrating this new model of care in sites across California. By creating a "Virtual Dental Home" Pacific is delivering oral health services in locations where people live, work, play, go to school and receive educational and social services. The VDH is a community-based oral health delivery system in which people receive preventive and simple therapeutic services in community settings. It utilizes telehealth technology to link allied dental personnel in the community with dentists in dental offices and clinics.

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

-
1. American Academy of Pediatric Dentistry. Policy on Interim Therapeutic Restorations (ITR). Adopted 2001. Revised 2004, 2008. http://www.aapd.org/media/Policies_Guidelines/P_ITR.pdf.
 2. Mertz-Fairhurst EJ, et al. Ultraconservative and cariostatic sealed restorations: Results at 10 years. *JADA*. 1998;29:55-66.
 3. Schwendicke F, Dorfer CE, Pafiris S. Incomplete Caries Removal: A Systematic Review and Meta-analysis. *J. Dent. Res.* 2013;92(4):306-314.
 4. Mickenautsch S, Yengopal V, Banerjee A. Atraumatic restorative treatment versus amalgam restoration longevity: a systematic review. *Clin Oral Investig.* 2010 Jun;14(3):233-40. Epub 2009 Aug 18.
 5. Carvalho TS, et. al. The atraumatic restorative treatment approach: An “atraumatic” alternative. *Med Oral Patol Oral Cir Bucal.* 2009 Dec 1;14 (12):e668-73.

complex dental treatment is needed, the Virtual Dental Home connects patients with dentists in the area.

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 this information to a secure website where these records 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.

Pacific 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 and older adults in nursing homes.

The Virtual Dental Home is been demonstrated in multiple communities in California including

- Sacramento: Elementary school-based facilities working with community dentists
- Visalia/Fresno: Nursing home facilities working with community dentists
- San Diego: Head Start Centers and Elementary schools working with a health centers
- Eureka: Residential facilities for people with disabilities working with a health center
- Alameda and Contra Costa Counties: Residential facilities for people with disabilities working with community dentists
- Santa Clara and Santa Cruz Counties: Residential facilities for people with disabilities working with community dentists
- San Mateo County: Residential facilities for people with disabilities working with community dentists
- Pacoima: a Community Center working with community dentists
- San Mateo County: Head Start Centers working with a Health Center
- Los Angeles: Head Start Centers working with a Health Center

HWPP #172: Trainees, Dentists and Sites

After approval of HWPP #172, Pacific recruited trainees and dentists, enlisted partner sites, and developed curriculum and evaluation materials. To date, Pacific has enrolled and trained one RDA, two RDHs, and nine RDHAPs as trainees. All trainees had at least one year experience working in community sites, had training during the educational program leading to their license or had completed a board approved course in operating dental radiographic equipment and had training and experience charting intraoral conditions, and performing intraoral procedures. They also all had training in the application of pit and fissure sealants during the educational program leading to their license or had completed a board approved course in the application of pit and fissure sealants subsequent to obtaining their license. All trainees completed the required OSHPD consent to participate which indicates that the new procedures being tested

can only be performed in the context of this HWPP and provided evidence of having a current California license, malpractice coverage, and other requirements delineated by OSHPD.

Pacific has also enlisted dentists to participate in the HWPP in the role referred to as the “collaborating dentist.” These dentists practice in the same community as the trainee, review digital records, make recommendations and provide instructions to the trainee, and accept referrals from the trainee for patients needing the in-person services of a dentist. The collaborating dentists practice in health centers, private practices and dental education institutions. Dentists also completed the required OSHPD consent to participate which indicates that the new procedures being tested can only be performed in the context of this HWPP and provided evidence of having a California current license, malpractice coverage, and other requirements delineated by OSHPD.

Pacific also recruited and developed agreements with organizations that run facilities in each community where the HWPP trainees provide patient care. These organizations include, as listed above, Head Start pre-schools, elementary schools, residential facilities for people with disabilities, and nursing homes.

HWPP #172: Curriculum and Training

Pacific has developed specific protocols, training materials, and training methodologies for each of the new duties. The complete training protocols are available in separate documents which contain specific information about the steps, evaluation, testing, and completion criteria for the training. These protocols are summarized here. For both of the new duties, successful completion of the training program is based on a “mastery” level criterion evaluation where completion is based on demonstration of mastery of the material.

The curriculum for the duty to determine, based on protocols, which radiographs to take, if any, to facilitate an initial oral evaluation by a dentist is based on the American Dental Association’s and the American Academy of Pediatric Dentistry’s radiographic guidelines.^{6,7} Pacific’s protocols are very conservative with trainees instructed to err on the side of taking too few radiographs if they have any doubt in a particular situation. This instruction is based on the fact that the collaborating dentist can ask for additional radiographs to be taken if more are desired. The training curriculum for this duty consists of didactic training, guided exercises using simulated cases and testing using case studies under direct supervision of dentist faculty members from Pacific. The mastery level criteria used for this training is the ability to repeatedly identify which radiographs to take based on case studies where the radiographic

6. American Dental Association. Council on Scientific Affairs. Dental Radiographic Examinations: Recommendations for Patient Selection and Limiting Radiation Exposure. Revised 2012.

7. American Academy of Pediatric Dentistry. Guideline on Prescribing Dental Radiographs for Infants, Children, Adolescents, and Persons with Special Health Care Needs. Revised 2009.

examination chosen does not result in an excessive number of radiographs in the judgment of the supervising dentist.

The curriculum for the duty to place Interim Therapeutic Restorations is based on extensive publications and systematic reviews on this subject referred to earlier. The training curriculum consists of didactic training followed by laboratory exercises and testing. After satisfactory completion of the laboratory exercises and testing, trainees participated in clinical training and testing with patients under direct supervision of dentist faculty members from Pacific. The mastery level training used for this duty is that the restorations: 1) are not too high, 2) do not have voids between the restoration and the tooth, and 3) do not contain excess material beyond the cavity.

In addition to training on the specific HWPP duties, trainees received instruction on their roles in the VDH and HWPP, on using the telehealth equipment, on working with the cloud-based electronic health record, and on working in geographically distributed telehealth-enabled teams.

The collaborating dentists also received instruction on their roles in the VDH and HWPP, on using the telehealth equipment, on working with the cloud-based electronic health record, and on working in geographically distributed telehealth-enabled teams.

A series of ongoing webinars has taken place all during the HWPP to answer questions, reinforce previous instruction, and discuss issues that have arisen.

HWPP # 172: Utilization Phase and Evaluation

OSHPD refers to the placement of trainees in field sites as the “utilization” phase of the HWPP. After completing the didactic, laboratory, and clinical training under direct supervision of dentists from Pacific, trainees entered the utilization phase in community sites in their area. Trainees generally have worked with a specific population which was determined by requirements of the funders for their community and the availability of suitable sites. Some trainees have worked with several population groups in their community.

During the utilization phase trainees have worked with the collaborating dentist(s) in their community as described above. Each time one of the HWPP duties is performed, it is evaluated using the same criteria described above by both the collaborating dentist in the community and by an independent dentist evaluator. The evaluations are performed by review of telehealth records of each procedure and by sampling of procedures reviewed in person.

The OSHPD HWPP Evaluation Process

OSHPD has appointed ten members to an evaluation team for HWPP #172. These individuals are representatives from the healing arts board (dental hygiene committee of California and the dental board of California), related professional associations, and state departments. The

evaluation team along with OSHPD representatives are performing two site visits per year to interview the allied dental professionals, visit the community sites where the professionals are working, and review de-identified patient records. To maintain confidentiality of individual patient information, the evaluation team is barred from interviewing patients.

To date, there have been three site visits in which the evaluation team interviewed the following: eight trainees, three of the collaborating dentists, and five of the site administrators. Five practice sites were visited during the three visits. The populations served in these practice sites include preschools, elementary schools, and group homes for adults with developmental disabilities. A fourth site visit to be held in May 2013 will be in a long term care facility. Regions visited include: urban, suburban and the visit in May will be rural. Northern and Southern California have also been represented. Central California will be represented during the visit in May.

OSHPD Staff have clarified OSHPD's process regarding reporting data and progress on HWPP #172 and its closing process. Data submitted by HWPP sponsors (Pacific) regarding progress reports, site visits, medical abstraction records, patient satisfaction rates, training and clinical utilization, and interviews with practitioners are collected by OSHPD. These data are public information and can be made available to the public at their request. The final closing report is submitted by the HWPP sponsors (Pacific) and provides detailed and summarized information on the project. The HWPP sponsors (Pacific) can also prepare detailed and summarized information on the project at any time during the project. OSHPD typically does not produce a separate closing report. Further, it is not a requirement of the HWPP that a project be closed before legislation can be considered. Legislative action as a result of a pilot is outside of OSHPD's authority. Some HWPPs have submitted legislative initiatives while the pilot is still in effect, while other pilots have waited for their completion.

Results: Patients, Procedures and Visits

The Virtual Dental Home (VDH) demonstration project started patient care in July 2010. In January of 2011, after authorization was received from OSHPD for HWPP # 172, patient care began with the new HWPP duties. The allied dental personnel in the VDH project have completed the following types of procedures:

- Collect patient information (including medical and dental history, consent forms, caries risk assessment)
- Chart pre-existing conditions
- Take digital radiographs
- Take digital intra and extra-oral photographs
- Prophylaxis
- Fluoride varnish
- Sealants
- Interim Therapeutic Restorations

- Patient, parent, staff oral health education
- Nutritional counseling
- Oral hygiene instructions
- Case management
- Referrals
- Communication with collaborating dentist

In addition to the procedures listed above performed by allied dental personnel, dentists in the project have performed initial and periodic patient evaluations using the telehealth system and performed other advanced dental procedures for patients referred to their offices.

Table 1 summarizes the number of patients and visits by the type of community site as of 4/30/13.

Population Type	# of Patients Seen	Total Visits
Head Start Center	871	2537
Elementary School	214	1027
Long Term Care Facility	179	798
Multifunction Community Center	221	483
Regional Center	112	486
Total	1597	5331

Table 1: Virtual Dental Home Patients and Visits by Type of Site as of 4/30/13

A benefit of the VDH model of care is that many individuals can receive all the care they need in the community location where the VDH program is located. After the dentist reviews the individual's records and develops a set of recommendations and instructions, procedures that can be performed in the community location are performed there. When individuals need more advanced care, they are referred to dental offices or clinics. Even those individuals who need more advanced treatment in dental offices or clinics can then have continuing preventive services performed in the community site. Table 2 lists the percent of individuals participating in the VDH system that were deemed by the reviewing dentist to need care at that time in a dental office or clinic. All patients, including those needing a referral to a dental office, receive on-going routine preventive procedures in the community setting. It should be noted in Table 2 that the percent in long term care reflects the fact that some individuals who might have benefited from care in a dental office were too medically complex or fragile for a trip to a dental office to be advisable.

Type of Site	% Needing Referral to Dental Office
Elementary School	66%
Long Term Care Facility	51%
Head Start Center	43%

Table 2: Percent of Individuals Deemed by Reviewing Dentist to Need Treatment in a Dental Office or Clinic as of 4/30/13

Results: Health Workforce Pilot Project Procedures

Table 3 lists the number of HWPP procedures performed as of 4/30/13. Note that every patient seen in the project had a decision made about which radiographs to take, even if the decision was not to take any radiographs. There have been 1597 patients seen and therefore 1597 decisions even though there were only 1025 instances where the decision was to take radiographs. Also note that 110 Interim Therapeutic Restorations were placed during the training phase of the program in addition to the 340 placed in the utilization phase for a total of 450. Those placed in the training phase were placed under direct supervision of dentists while those placed in the utilization phase were placed under general supervision of dentists. Under California law general supervision refers to procedures performed by allied dental personnel based on instructions given by a licensed dentist, but not requiring the physical presence of the supervising dentist during the performance of those procedures.

Population Type	# of Patients Seen	X-rays Taken in Utilization	ITRs Placed in Utilization	ITRs placed in Training
Head Start	871	351	61	40
Elementary	214	300	14	20
Multifunction Community Center	221	201	33	20
Long Term Care	179	109	178	10
Regional Center	112	64	54	20
Total	1597	1025	340	110

Table 3: HWPP Procedures Performed as of 4/30/13

As described above allied dental personnel participating in this project have been closely monitored in what is called the “utilization” phase of the project by both the collaborating dentist in their community and an independent dentist evaluator not connected with the care they are providing in their community. A specific set of criteria and rating rubric is used for rating the decision about which radiographs to take and placement of Interim Therapeutic Restorations. The procedures that meet the criteria are rated as acceptable. Procedures that do not meet the criteria are rated as unacceptable.

In addition to the evaluations by the two dentist evaluators of the results of the HWPP duties being tested, there is a system in place to report any adverse outcomes. This would include patients who developed problems as the result of procedures performed by allied dental personnel participating in the project. Such adverse outcomes could include a pulp exposure during the procedure, part of a tooth breaking during or after the procedure, a tooth becoming sensitive or painful as a result of the ITR, gums being injured or other problems.

As listed in Table 4, all procedures performed by the allied dental personnel have been rated as “Acceptable”. No procedures were rated as “Unacceptable”. In addition there have been no reports of adverse outcomes reported in this project. Table 4 lists the two HWPP procedures and the evaluations of them plus a column showing adverse outcomes of the HWPP procedures plus all the other procedures performed in the VDH demonstration system.

Procedure Performed During Utilization Phase	# Performed	# of Procedures Rated as Acceptable	# of Procedures Rated as Unacceptable	Adverse Outcomes
Radiographic Decision	1597	1597	0	0
Interim Therapeutic Restorations	340	340	0	0
All Other Procedures	8934	-	-	0

Table 4: Ratings of Procedures and Occurrences of Adverse Outcomes as of 4/30/13

These results indicate that allied dental personnel in the Virtual Dental Home demonstration project are able to perform the duties being tested under HWPP #172 safely and effectively.

Results: Satisfaction Surveys

The Virtual Dental Home (VDH) demonstration was designed as a patient-centered model of care that would address obstacles to accessing dental care faced by many underserved and vulnerable people in a manner that was sensitive to and respectful of the needs and desires of patients, caregivers, and administrators. To assess the satisfaction of those groups a series of satisfaction surveys were conducted in 2012. As indicated in Table 5, satisfaction with the VDH system among parents of children served is quite high with 89% of all respondents indicating that they were "very satisfied" (81%) or "somewhat satisfied" (8%) with the overall dental care their children received. Perhaps more importantly, all respondents (100%) indicated that they would continue with the program if it continued to be available.

Satisfaction	Number Responding	% of Respondents
Very satisfied	34	79%
Somewhat satisfied	3	7%
Somewhat dissatisfied	4	9%
Very dissatisfied	0	0%
I do not know	2	5%
Total	43	0

Table 5: Patient/Parent Satisfaction with VDH System as of 4/30/13

Satisfaction surveys also assessed the degree to which the VDH model addressed known barriers to receiving oral health services. Table 6 indicates that nearly all respondents reported that the VDH made dental care more convenient (81%) than the traditional system, that their children had less fear (41%) of receiving dental care in the VDH compared to the traditional system, that wait times were shorter (49%), and that the quality of dental care through the VDH was higher than alternatives (46%). Nearly half of all respondents (46%) also indicated that they saw higher quality as a benefit of the dental care delivered through the VDH.

Benefit	Number Responding	% of Respondents
It is much more convenient.	34	79%
There is less fear.	15	35%
The wait time was less.	20	47%
The quality is better.	18	42%
The cost is lower.	20	47%

Table 6: Reported Benefits for Patients and Caregivers from the Virtual Dental Home as of 4/30/13

Table 7 indicates that Administrators of organizations and facilities affiliated with the VDH were also highly satisfied with the system with 96% of respondents reporting that they are “very satisfied”.

How satisfied are you with the dental care provided through the VDH?		
Satisfaction	Number Responding	% of Respondents
Very satisfied	25	96.2%
Somewhat satisfied	1	3.8%
Not very satisfied	0	0.0%
Not at all satisfied	0	0.0%
Don't know	0	0.0%

Table 7: School Administrator Satisfaction with the Virtual Dental Home as of 4/30/13

Additional results reported by school administrators were that students and families faced fewer transportation issues, had lower cost for care, appreciated the flexible appointment scheduling, faced reduced language barriers, and had an easier time getting dental care for young children and individuals with behavior challenges or complex medical problems.

Results: Economic Analysis

The Virtual Dental Home demonstration project has been funded through grants and contracts from federal and state government sources and private foundations. An analysis has been conducted to project the economic viability of this model of care if it were to be supported by the California Dental Medicaid program, Denti-Cal. Denti-Cal was chosen for this analysis

because over 90% of the patients seen in the program are enrolled in the California Medicaid program and eligible for Denti-Cal benefits. It should be noted that Denti-Cal benefits are available in California for adults living in Intermediate Care Facilities (ICF) and Skilled Nursing Facilities (SNF) and similar benefits are available for adults in the California Regional Center system. However, the results presented here are for children as the best comparison data from the current Denti-Cal program is available for children.

Potential Billing from the Virtual Dental Home Model of Care

A calculation was performed of potential billable procedures under the California Denti-Cal program by listing the procedures performed by allied dental personnel for children in the Virtual Dental Home demonstration over the last year and applying current Denti-Cal fees to those procedures that are covered under the Denti-Cal program.⁸ Table 8 lists the potential average payment for procedures performed for children in the Virtual Dental Home demonstration program and compares those results with current Denti-Cal payments for diagnostic and preventive procedures. The Denti-Cal system paid \$83.13 per child per visit for diagnostic and preventive procedures and \$123.64 per child per year for these same procedures. In the Virtual Dental Home model, Denti-Cal would have paid \$136.04 per year or \$42.91 per visit for children in Elementary Schools and \$120.28 per year or \$41.05 per visit for children at Head Start Centers for these procedures. In the VDH model these visits included ITR procedures in addition to the diagnostic and preventive procedures paid for by Denti-Cal. Therefore, Denti-Cal would have paid less for these prevention and early intervention procedures using the VDH model than Denti-Cal is currently paying in the traditional model of care. In addition Denti-Cal is paying for an average of 1.61 visits per child for diagnostic procedures and 1.39 preventive procedures per year while the VDH model is providing an average of 2.93 diagnostic and preventive visits per child in Head Start and 3.17 in elementary schools at a lower average cost per child.

Potential Billing	Elementary Schools			Head Start Centers			All Children		
	Visits/Yr	\$/yr	\$/Visit	Visits/Yr	\$/yr	\$/Visit	Visits/Yr	\$/yr	\$/Visit
VDH	3.17	\$136.04	\$42.91	2.93	\$120.28	\$41.05			
Denti-Cal Payment (2012)							1.61	\$123.64	\$83.13

Table 8: Average Visits and Potential Payment for VDH Program compared with Current Denti-Cal Program Payment for Diagnostic and Preventive Procedures as of 4/30/13

Cost of Providing Care in the Virtual Dental Home Model

The next analysis performed was a calculation of the cost of providing services through the Virtual Dental Home model. Table 9 contains a projection of costs for providing care in the

8. Denti-Cal’s MCS0070 Report Fiscal Year 2012

Virtual Dental Home model in elementary schools and Head Start Centers based on the experience in the Virtual Dental Home demonstration. The costs for oral health personnel are listed along with the costs for supplies and amortization of equipment. This data is presented as per visit costs.

Average Cost	Elementary School Visit			Head Start Visit		
	Rate/Hr	hrs/visit	\$/visit	Rate/Hr	hrs/visit	\$/visit
Hygienist	42	0.50	\$21.00	42	0.33	\$13.86
Dental Assistant	15	0.50	\$7.50	15	0.33	\$4.95
Dentist	75	0.13	\$9.38	75	0.13	\$9.38
Supplies			\$3.00			\$2.00
Equipment			\$1.00			\$1.00
Total			\$41.88			\$31.19

Table 9: Average Costs for the Virtual Dental Home Model of Care in Schools and Head Start Centers as of 4/30/13

The costs of providing care in the VDH model consist of per hour payments to dentists and allied dental personnel as described above plus cost for supplies and amortized costs for equipment. As the VDH project has progressed the time per visit has decreased. It is estimated that in a production environment the allied dental personnel could see 3 children per hour in a head start center and 2 children per hour in an elementary school. Adding an estimated \$2 per visit for supplies and \$1 per visit for amortized equipment produces a cost per visit of \$31.19 in Head Start and \$41.88 in elementary schools. This cost would be slightly less than projected billing per visit. It is noteworthy to realize that the VDH system delivers significantly more care than the current Denti-Cal system does in that it includes ITR procedures, patient, parent and caregiver education, integration of oral health considerations in these social and educational systems, and case management.

The VDH model will have even better economic viability as our oral health care system turns further toward paying for health outcomes since it provides a low cost system for getting preventive and early intervention care to children who do not normally access dental care in the traditional delivery system.

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 is a Health Workforce Pilot Program that has 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.

About the Authors

This policy brief was prepared by Paul Glassman, DDS, MA, MBA, Maureen Harrington MPH and Maysa Namakian MPH. Dr. Glassman is a Professor in the Department of Dental Practice at the University of the Pacific Arthur A. Dugoni School of Dentistry. Ms. Harrington and Ms. Namakian are Program Managers at the Pacific Center for Special Care at the University of the Pacific Arthur A. Dugoni School of Dentistry.

For further information contact:

Paul Glassman DDS, MA, MBA
Professor of Dental Practice
Director, Pacific Center for Special Care
University of the Pacific
Arthur A. Dugoni School of Dentistry
2155 Webster St
San Francisco, CA 94115
Email: pglassman@pacific.edu
Web: www.pacificspecialcare.org

Maureen Harrington MPH
Program Manager
Pacific Center for Special Care
University of the Pacific
Arthur A. Dugoni School of Dentistry
2155 Webster St
San Francisco, CA 94115
Email: mharrington@pacific.edu
Web: www.pacificspecialcare.org

Maysa Namakian MPH
Program Manager
Pacific Center for Special Care
University of the Pacific
Arthur A. Dugoni School of Dentistry
2155 Webster St
San Francisco, CA 94115
Email: mnamakian@pacific.edu
Web: www.pacificspecialcare.org

More information about the Virtual Dental Home demonstration project is also available at:

[http://dental.pacific.edu/Community_Involvement/Pacific_Center_for_Special_Care_\(PCSC\).html](http://dental.pacific.edu/Community_Involvement/Pacific_Center_for_Special_Care_(PCSC).html)

Scroll down that page and choose the link to Virtual Dental Home