Phased Strategies for Reducing the Barriers to Dental Care in California

California Dental Association Access Report



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The Capacity of the Dental Care System in California, Brown et al.

The Impact of Additional Private Practice Dentists and Hypothetical Allied Dental Personnel on the Earnings per Hour of Current Private Practice Dentists, Brown et al.

California Oral Health, Cummins

Are Procedures Performed by Dental Auxiliaries Safe and of Comparable Quality? A Systematic Review, Dasanayake et al.

California's State Oral Health Infrastructure: Opportunities for Improvement and Funding, Diringer et al.

Workforce Model Feasibility Study, ECG Management Consultants

Advanced Dental Education Programs: Status and Implications for Access to Care in California, Glassman

B. Expert Presentations

SECTION 1: Phased Strategies for Reducing the Barriers to Dental Care in California



Executive Summary

This proposal was conceived in the context of an association of members who are healing professionals bound by a public covenant and as a collective association purposed with a vision of promoting oral health and the profession of dentistry.

The scope of this proposal is both ambitious and practical. It reflects the understanding that there must be a realistic, comprehensive approach to solutions, focusing resources where they are most likely to have substantial impact, and initially setting up a foundational structure that will contribute to the success of subsequent recommendations.

The result is a *3-Phase Proposal*. While barriers to oral health care are quite complex, the strategic approach of this proposal is simple (which is not to say easy): First, enhance capacity by expanding what works and establishing a foundation for public oral health programs. Second, optimize early disease prevention. And third, further expand the capacity to provide care to at-risk populations. With that approach in mind, there are three broad phases, each comprised of multiple recommendations:

- 1. Establish State Oral Health Leadership and Optimize Existing Resources (years 1-3)
- 2. Focus on Prevention and Early Intervention for Children (years 3-5)
- 3. Innovate the Dental Delivery System to Expand Capacity (years 4-7)

Background

Poor access to oral health care is a significant problem in California that will worsen unless the state makes oral health a priority.

CDA has made a substantial commitment over many years to improve access to oral health care. Many of the successes have been achieved through advocacy efforts, CDA Foundation programs and initiatives, and local programs and initiatives, such as those supported by local First 5 commissions. Notwithstanding these accomplishments, barriers to oral health care remain for millions of Californians.

- California is a large and diverse state; home to over 38 million people. More than 7 million people are low-income or disadvantaged enough to be eligible for California's Medicaid program (known as Medi-Cal). Of the Medi-Cal eligible population, an overwhelming number are children estimated at 1 in 3 children, or 4.5 million. Another 900,000 children are covered by California's CHIP program, known as Healthy Families.
- An estimated 11 million Californians do not have any form of dental coverage benefits.
- California has over 200 dental professional shortage areas, areas where the ratio of dentists to the population is so low that the state considers the area underserved.

Furthermore, the state of California has not made a strong commitment to oral health:

- The state's dental Medicaid program, Denti-Cal, suffers from chronically low reimbursement rates and an aggressive commitment to fraud protection that unfortunately adds to the already high administrative burden inherent in government programs. The program accounts for less than two percent of the overall Medicaid budget and is so underfunded and difficult to navigate that, in 2007, only 25 percent of California's dentists accepted Denti-Cal patients, down from 40 percent in 2003.
- Funding for California's only statewide school-based oral health prevention program (Children's Dental Disease Prevention Program) was suspended in 2009. This program had provided essential dental disease prevention services to low-income children for 30 years.

- California does not have a state dental director; it relies on one state employee in the "oral health unit" to carry out necessary functions.
- Adding to this chronically anemic commitment, annual multi-billion dollar budget shortfalls have resulted in additional proposals to further reduce oral health services for the neediest Californians.

In short, California has a huge population in need of oral care that is not being served, in large part, because of limited state resources and chronic budget shortfalls.

To help meet this need, in November 2008 the CDA House of Delegates directed the association to undertake a comprehensive study aimed at improving access to dental care for underserved populations. Per this directive, the Access Workgroup and the Workforce and Forecasting Research Task Force were created to identify ways to improve access to dental care for the nearly 30 percent of the population that experiences barriers to care while preserving the dental delivery system that serves the majority of Californians.

Research Findings

Reducing barriers to oral health care is critical to advancing the CDA vision of promoting oral health and the profession of dentistry.

This proposal is based on a thorough, research-based and deliberative process that focused on the following areas:

- Oral health infrastructure
- Medicaid reform
- School-based/linked oral health programs
- Incentives for working in public health
- Dental residency programs
- Oral health literacy
- Capacity of California's dental delivery system
- Economics of new workforce models
- Impact of new workforce models on private practice dentists
- Safety and quality of irreversible procedures performed by dental providers worldwide

Further, this work was informed by an extensive list of papers and presentations by authorities with expertise relevant to the groups' objectives. This disciplined and comprehensive body of research produced the following key findings:

access

The Challenge:

Just as there is no single barrier to care, there is no single solution.

Approximately 30 percent of Californians face multiple barriers to accessing our dental care delivery system, resulting in significant untreated dental disease.

Barriers are multi-factorial, influenced by economics, culture, education and geography.

California does not have an adequate state oral health infrastructure to successfully promote, fund, or coordinate public oral health programs.

There is no longer a state-wide, school-based dental disease prevention program for California's low-income children.

Children are the most vulnerable to economic disparities and other obstacles to accessing dental care and cannot make decisions for their own wellbeing.

1 in 3 of California's children, estimated at over 4.5 million children, are eligible for Denti-Cal through their Medi-Cal eligibility.

Significant barriers exist to dentist participation in Denti-Cal, including low reimbursement and high administrative overhead.

In 2007, 24 percent of California's dentists accepted Denti-Cal patients; fewer than 4,000 of them bill more than \$10,000 in services annually.

Healthcare reform is expected to extend dental benefits to more than 1 million additional California children by 2014.

Capacity to provide care to these additional children does not currently exist within the dental delivery system in California.

Escalating costs, limited resources, and national healthcare reform create significant external pressures to develop healthcare systems that provide care at the lowest cost.

External pressures exist to expand the capacity to provide oral health care by developing a new dental provider category.

Proposed changes to the California dental delivery system, including potential changes to the dental workforce, must focus on the 30 percent of the population for whom access to dental services is a significant obstacle, while preserving the system that serves the remaining 70 percent.

access

The Profession:

Barriers to care are not the result of a failure of the dental profession, but it is in the best interest of the profession to proactively address the solutions.

The large majority of Californians receive excellent dental care.

The dental profession is not solely responsible for improving the oral health of underserved populations; it is a shared societal responsibility in which the dental profession has a significant role.

As a learned and respected profession, dentistry enjoys the public's trust. With that trust comes the responsibility to address society's unmet oral health needs and to contribute to meaningful solutions.

CDA has a long history and prides itself on taking the lead in finding solutions to challenges related to the profession and oral health.

Being at the forefront in finding solutions optimizes the opportunity for solutions that work well for both the public and the profession.

Dentists are responsible to ensure their patients receive high-quality comprehensive oral health care; any changes to the dental workforce or dental delivery system must ensure safe, quality care, with the dentist as the leader of the dental team.



Considerations for Solutions:

Significant need calls for significant change.

A comprehensive and multifaceted approach will be necessary, employing many strategies that individually and together address multiple barriers.

Changes should build on what works, supporting and expanding successful programs and best practices.

Prevention of dental disease is essential; solutions must prioritize children, especially very young children.

As a result of healthcare reform, the greatest expansion of children's benefits is likely to occur in public programs.

Children's dental care programs are mandated and financially supported by the federal government, providing sustainability to strategies that expand care to children.

Community health workers have proven beneficial in improving health outcomes in the communities in which they live and work.

Financial incentives can assist in promoting provider participation in public health. However, research shows that provider licensure restrictions (e.g. population, settings, etc.) ensure that dental providers successfully reach the 30 percent of the population in need of care.

There is evidence that additional dental providers who provide basic preventive and restorative oral health care to low-income children, in or close to where they live and go to school, have the potential to reduce the disease burden in the population most in need. This approach to reducing barriers must be part of a comprehensive integrated system of dental care with the dentist as the head of that system. However, the safety and quality of irreversible dental procedures delivered by traditional and non-traditional dental providers has not been established through qualified research—research that is needed to make an evidence-based recommendation with regard to the dental workforce.

Phases and Recommendations: A 3-Phase Proposal

The barriers to oral health care in California are complex.

The strategic approach to solutions is simple (which is not to say easy).

This proposal calls for a multi-year set of solutions in phases, recognizing that some objectives will best be achieved after other foundational work is completed. Each phase is characterized by a series of specific recommendations. No one phase of the proposal can completely solve access issues, but taken as a whole, it represents a comprehensive and integrated collection of evidence-based initiatives that will improve the state of oral health in California.

Phase 1:

Establishing State Oral Health Leadership and Optimizing Existing Resources (Years 1-3)

The recognition that there must be a strong foundation on which to build any future programs and initiatives inspires the first recommendation in this phase: to establish a sufficiently staffed state office of oral health led by a strong dental director with significant status in the Administration who can develop a plan of action, secure available federal and private funding, and coordinate oral health programs throughout California. These are the fundamental, vital functions necessary to develop programs that will bring oral health care to California's low-income families.

This recommendation leads to several others in Phase 1, that are detailed in the report. It is important to note that the recommendations in this phase are designed to build on things that have already been proven to be effective:

- Ensuring earlier dental disease prevention and use of best practices
- Incentivizing public health practice
- Supporting dentists to care for low-income populations without the barriers imposed by Denti-Cal
- Expanding community water fluoridation

Phase 1 also includes the Workforce Task Force's recommendation to support additional research on the safety, quality, cost-effectiveness, and patient satisfaction of traditional and non-traditional dental providers so that evidence-based decisions regarding the dental workforce can be made in the future.

Phase 2:

Focusing on Prevention and Early Intervention for Children (Years 3-5)

Phase 2 is designed to optimize early disease prevention and reduce the need for treatment. Once an oral health infrastructure is in place, it will facilitate the creation of sustainable programs that will bring dental disease prevention to children, close to where they live and go to school, and as early as possible. School-based/linked programs remove many of the barriers that keep children from receiving the early preventive and restorative services necessary to be healthy. As experience shows that kindergarten is often too late to prevent disease, Phase 2 recommendations include developing programs that engage Women Infants and Children programs (WIC), Early Head Start and Head Start, and preschools.

Phase 3:

Innovate the Dental Delivery System to Expand Capacity (Years 4-7)

Phase 3 explores ways to make substantial changes to the delivery system. These recommendations are intentionally placed in Phase 3 because they will take more time to develop and, as efforts in the first two phases progress, reassessment of the success of earlier efforts will reshape future plans.

Phases 1 and 2 focus on enhancing the capacity of the existing system and reducing disease burden, as well as completing research to fill in knowledge gaps with regard to irreversible procedures performed by all dental providers. Phase 3 recognizes the need for more capacity to provide care, especially to vulnerable adults as well as children, and the dental workforce is a key influence on capacity. Addressing capacity in Phase 3 recognizes that the recommendations should be evidence-based, particularly as they relate to protecting patient safety and quality of care provided, and time is needed to complete that research.

California Dental Association: Phased Strategies for Reducing Barriers to Dental Care in California



Phase	Establishing State Oral Health Leadership and Optimize Existing Resources (Years 1-3)	
Objective	Strategy	Rationale
1.State oral health infrastructure	 a. Assist the state to hire a state dental director and staff responsible for developing, funding, and coordinating oral health activities. The dental director and his/her staff will be responsible for achieving the following: Developing a comprehensive and sustainable state oral health action plan Securing funds to support infrastructure, and statewide and local programs Advancing and protecting the importance of oral health within the Administration Encouraging private and public collaboration Promoting evidence-based approaches to increase oral health literacy Establishing a system for surveillance and oral health reporting 	To effectively build and execute statewide oral health activities, the state needs a dental director, preferably a dentist with public health experience, an oral health epidemiologist, an administrative assistant, an analyst, and a program coordinator. Key to the success of this effort is sufficient staff to carry out essential functions of the office, including surveillance, program coordination and fund development. Additionally crucial is the strategic placement of the dental director within the state structure, ensuring the dental director is part of the executive team, intimately involved in the decision making process, and able to work across programs to ensure oral health inclusion. This recommendation is made first as it provides the foundation for key Phase 2 objectives.
2.Expand capacity within dental public health	a. Encourage and support dental professionals to obtain advanced degrees in public health	Dental public health leaders are needed to plan and implement programs, and advocate for the oral health of Californians. As the infrastructure at the state is rebuilt, more dental public health leaders will be needed to fill key roles at the state and local level in addition to filling advocacy roles at the federal level.
	b. Support incentives for dentists to establish practice in the public health sector	Dental loan repayment programs have proven to be a successful incentive for dentists to locate their practice in remote locations or dental public health settings, resulting in increased dental care to underserved populations. Though the large dollars required for each loan repayment grant effectively limits the scope of this type of program, each dentist provides essential dental care to thousands of patients over the loan repayment period. As such, loan repayment incentives continue to play an important role in bringing more dental care to underserved Californians.

2. Expand capacity within dental public health (continued)	c. Develop a pipeline for expanded function dental assistants to work in dental public health	There is strong evidence that allied dental personnel increase productivity of dental offices and clinics. In 2010, via AB 2637, California Registered Dental Assistants in Extended Functions (RDAEF) received additional restorative functions, allowable under the direct supervision of a dentist. This education and training is currently taking place in just a few locations and is expensive. This recommendation seeks to identify dental assistants in underserved communities who are interested in RDAEF practice, but are limited by financial barriers, and provide assistance in exchange for a commitment to work in a community health clinic or other public health setting.
3. Safety net expansion of dental services	a. Promote expansion of dental care in safety net settings; remove any perceived or real barriers to FQHCs providing dental care beyond their "4 walls" including contracting with private dental providers	 In 2009, the U.S. Congress determined that federally supported health clinics (FQHCs) may contract with private dentists to provide dental services to health center patients in the dentists' private offices. The benefits of contracting include: Dentists are able to address the needs of their community by serving those who have the most need and the least access to care provide services to Medicaid patients in their offices without enrolling in the program themselves, allowing them to avoid the billing and administrative burdens of the Denti-Cal program predetermine through a contract with the FQHC the amount of time, number of patients, and/or number of visits they will devote to clinic patient care Health centers are able to meet their requirement to provide dental services reduce the burden of expensive capitalization of dental facilities and equipment reduce staffing requirements, expand the number of available dental providers in their communities, and stabilize their dental service costs
4. Volunteer provision of care coordination	a. Support a coordinated process for the volunteer-based provision of care at the local level; optimize the contributions of retired dentists	Many individuals and organizations focus charity efforts on low-income and disadvantaged populations that experience barriers to dental care, and dentistry, with its strong commitment of service to the public, participates in many of these events. In order to organize and optimize the dental profession's participation in charitable events, CDA has endorsed Missions of Mercy (MOM) and moving forward will support community-based efforts in partnership with MOM. Additionally, many retired dentists are interested in staying active in a profession they love and willingly donate their time and expertise to "give back" to their communities. As a largely untapped and valuable resource for providing dental care to disadvantaged populations, engaging retired dentists more fully in charity care is mutually advantageous.

5. Fluoridation	a. Complete community water fluoridation in San Jose	Community water fluoridation (CWF) in California has tripled over the last 20 years – from 17 percent in 1990 to 58.8 percent in 2008 (the last year for which recorded data are available). In February 2011, the city of San Diego initiated CWF, providing fluoride's preventive benefits to an additional 1.3 million people. The next big effort, to bring CWF to San Jose, the largest non-fluoridated city in California, would raise the percentage of Californians with access to fluoridated drinking water to approximately 65 percent, or a total of 24,233,176 million people.
6. Expand capacity to provide children's care, especially to young children	a. Increase the ability of general dentists to provide care to children, especially children ages 0-5	The Affordable Care Act will provide dental benefit coverage to more than one million additional children in California by 2014. General dentists are an important resource for providing care for this newly insured population. However, studies show that relatively few general dentists have children enter their practices for regular care before the age of three years and 69.5 percent report that children were 20 percent or less of their patient pool. The CDA Foundation Pediatric Oral Health Access Program (POHAP) was developed specifically to address this and provides specialized training for dentists on dental care for very young and special needs children. In the seven years since its inception, 389 POHAP dentists have provided care for over 73,000 children under the age of 12. Increasing dentists' participation in POHAP, or other similar training programs, will increase the capacity of existing providers to care for children.
	b. Increase utilization of best practices in caries management by dentists and dental hygienists	A paradigm shift over the last decade in the management of dental caries recognizes caries as a chronic, infectious disease. Protocols that require early caries risk assessment, and prevention and treatment tailored to risk, are now best practice in dentistry (CAMBRA). This recommendation seeks to utilize resources in the most effective and efficient manner by increasing the number of dental professionals who employ best practices for risk assessment, prevention and management of dental caries.
7.CDA Foundation	a. Align the CDA Foundation's priorities and strategic plan with these phased strategies	The CDA Foundation's commitment to its mission to improve the oral health of Californians by supporting the dental health profession in its efforts to meet community needs has resulted in exciting and impactful research and programs. The Foundation plays an important role in the success of this proposal to reduce barriers to dental care and alignment of its strategic plan will be essential in the plan's implementation.

8. Workforce Capacity

a. Promote initiatives that utilize community health workers, such as promotores, in local oral health programs to provide case management, and other services that support improved oral health and oral health literacy

b. Advocate for a scientifically rigorous study to answer questions regarding the safety, quality, cost effectiveness, and patient satisfaction of irreversible dental procedures.

Limit study to California licensed RDHs and RDAEF2s with modular training on specified new duties for limited time and conducted under auspices of a California university. Any permanent changes to scope of practice require separate future legislation, and CDA's position on any future scope of practice change would require approval by the CDA House of Delegates.

Study parameters were further defined by the CDA House of Delegates. See Resolution 1S6-2012-H Community health workers, such as promotores, are highly effective at working in their communities to improve health outcomes. They are typically respected members of their communities who understand the cultural and social norms and are effective at helping people change their health behaviors. Their oral health literacy and case management activities increase health seeking behaviors, access to prevention, and receipt of comprehensive care.

Study rationale:

- The capacity does not exist to care for the 30 percent of Californians who suffer a disproportionate burden of dental disease.
- Significant need calls for significant change; a comprehensive and multifaceted approach will be necessary, employing many strategies that individually and together address multiple barriers.
- Additional dental providers who provide basic preventive and restorative oral health care to lowincome children, in or close to where they live and go to school, when included as part of comprehensive approach to reducing barriers, have the potential to reduce the disease burden in the population most in need. These providers must be part of an integrated system that provides access to comprehensive care with the dentist as the head of that system.
- The safety and quality of irreversible dental procedures delivered by dental providers worldwide has not been established through qualified research research that is needed to make an evidence-based recommendation with regard to dental workforce changes.

This research should commence immediately and, consistent with CDA's commitment to an evidence-based process, when the research is complete, CDA recommends that the research results be used to guide any further action regarding the dental workforce.



Focusing on Prevention and Early Intervention for Children (Years 3-5)

Objective	Strategy	Rationale
1.Reach children in school- based/linked programs, WIC, Head Start and other public health settings	a. Support the re-establishment and expansion of school-based/ linked programs for low-income children, focusing first on prevention and oral health literacy, with a long-term goal of comprehensive care	A successful school-based/linked program increases the number of children receiving preventive and restorative oral health care by providing care to children where they are located: at schools. Such programs eliminate many of the barriers that keep underserved children from receiving essential care, including lack of parental understanding of need, inability to find a dentist who accepts the child's dental insurance, or inability of the parent to leave work to transport the child to the dentist. National healthcare reform has made school-based dental disease prevention a priority and includes funding to all states to support these programs. Further, as it is most effective and efficient to <i>prevent</i> dental disease, early access to children is essential to reducing disease burden and the need for treatment. Partnerships with agencies responsible for the early care and education of children and families, such as Women, Infant and Children (WIC), Early Head Start and Head Start, and state preschools, should be established to reach children as early as possible. The goals of a California school-based/linked program are to: – Increase early prevention and decrease the rate of dental disease in children – Increase the number of children with a source of continuous, comprehensive dental care (dental home) – Establish a system of care at the local level – Decrease absenteeism
2. Utilize proven technology	a. Evaluate and support the expansion of quality and cost-effective technology solutions for providing oral health services to those who face difficulties accessing the dental office	Technology now exists to support distance collaboration between dentists and allied dental health professionals working in community settings, such as schools and long-term care facilities. Electronic collaborations are frequently used in medicine, but have been slow to be adopted in dentistry. However, they hold potential to bring more patients into the dental delivery system. In dentistry, allied dental health professionals working in community settings could collect diagnostic information, such as x-rays, photographs, and charting, and electronically transmit these records to a supervising dentist for diagnosis. This arrangement allows patients, while still in the community setting, to receive the care that is within the scope of the allied professional, and facilitates the provision of more complex care by the dentist by completing record collection and treatment planning prior to transporting patients to the dentist's location.

3. Expand early prevention through reimburse- ment incentives	a. Advocate for the augmentation of Medicaid rates for select services provided by dentists certified through an Access to Baby and Child Dentistry (ABCD) type program	The principle of the ABCD program is that starting dental visits early will yield positive behaviors by both parents and children, thereby helping to control the caries process and reduce the need for costly future restorative work. It focuses on preventive and restorative dental care for Medicaid-eligible children from birth to age six, with emphasis on enrollment by age one. Enrolled families receive case management and coaching about the need for early and preventive dental care, and dental office etiquette, including the need to keep appointments. Dentists and their teams receive training on techniques for examination, risk- assessment, prevention and treatment for very young children. ABCD certified general dentists receive enhanced Medicaid reimbursement for selected procedures for enrolled children.
	b. Support expansion of augmented rates program to commercial benefit plans	Promotion and support of best practices for risk assessment and prevention of dental disease in young children should be applied to all children, regardless of the payer source.
4. Fluoridation	a. Protect and preserve community water fluoridation throughout California; support efforts at the local level where opportunities arise	Fluoridation remains key to dental disease prevention in all sectors of the population. As challenges to community water fluoridation are likely to continue, support of community water fluoridation must be consistent and ongoing to maintain optimal fluoridation throughout California.
Phase 3	Delivery System Innovations	(Years 4-7)
Objective	Strategy	Rationale
1.Adult dental care	a. Advocate for the re- establishment of systems that provide adult dental care for Medicaid beneficiaries.	The recognition that oral health is integral to overall health grows steadily as scientific evidence mounts that the mouth is truly a window into the rest of the body. Further, there is pressure within the healthcare system to reduce costs and more effectively manage costly chronic diseases, such as diabetes and cardiovascular disease. National healthcare reform, mounting cost and health outcome pressures, and ongoing oral health advocacy at the federal level, are all likely to lead to dental coverage becoming a mandatory benefit for adult Medicaid beneficiaries within the next 5-10 years. When this occurs, there must be a functional network of providers who can provide that care.
	b. Identify and support initiatives that expand care to institutionalized, medically compromised and frail elderly	According to the U.S. Census Bureau, by 2030, approximately 18% of Californians will be over age 65, totaling over 8 million people. The Surgeon General's 2000 Report, Oral Health in America, identifies the frail elderly as an underserved population and notes that at any given time, approximately 5% of adults are living in a long-term care environment that faces challenges in meeting the oral health needs of its residents. California has Registered Dental Hygienists in Alternative Practice (RDHAPs) authorized to provide periodontal care in long-term care facilities now, but the need is much greater than is being met, must include a fuller range of essential care, and will only continue to grow as the first full generation of dentate Californians age. Providing oral health care to seniors, especially in institutional settings, is a complex problem that will require greater collaboration of skilled dental teams, relevant agencies, and stakeholders to address. Non-profit and public partnerships at the local level become especially important in optimizing resources necessary for sustainability of non-traditional delivery models that provide care to impacted populations (e.g. Apple Tree Model).

2. Hospital- based treatment	a. Identify and promote initiatives to increase the capacity of hospitals to provide dental treatment	Significant inefficiencies now exist with regard to hospital emergency rooms' response to patients presenting with treatable dental conditions. Without on-site ability to provide dental care, ERs are limited to providing prescriptions to alleviate pain and infection, along with a recommendation for the patient to seek the care of a dentist. This often results in a revolving door of visits to the ER – a costly and inefficient use of resources. This recommendation seeks to impose a requirement for hospitals to dedicate space for dental services if/when they expand their facility or build new facilities, and partners with a recommendation outlined below for a required post-graduate year of residency for dental licensure in California.
3. Workforce capacity	a. Support optimization of the dental workforce's capacity to provide care	CDA policy is committed to the dentist as the head of the dental team in a single integrated system of oral health care, supports programs that improve the delivery of oral health care to California's underserved populations, and encourages the use of well-trained dental team members in the provision of care. Research shows that use of highly trained dental teams results in increased care. California has some of the most highly trained allied dental personnel anywhere in the country. Policies and activities that promote the full utilization of dental team skills will maximize the dental delivery system's capacity to provide care. This Phase 3 dental workforce recommendation takes into consideration that five to seven years after initial implementation of the proposal allows sufficient time for the research proposed in Phase 1, and the impact of early initiatives to be evaluated.
	b. Support increased graduate residency opportunities for general dentistry in California	This recommendation seeks to increase the number of graduate residency opportunities for general dentistry through increased funding, incentives, and information sharing with dental students regarding issues of access/barriers to care. (<i>Modified recommendation by CDA House of Delegates</i>) Residency programs increase learning opportunities for dental school graduates and increase confidence and skill, especially in the provision of complex care and care to people with complex needs. Residency programs are also an opportunity to expose new graduates to non-traditional work environments such as hospitals and community clinics. Findings from research by the Center for California, San Francisco on the impact of a requirement for a year of "service and learning" in an accredited residency program indicate residency programs increase oral health services to underserved populations.

SECTION 2: The Proces

3-Phase Proposal



The Process

Background

CDA has a long-standing commitment to increasing access to dental care and improving the oral health of Californians. Through CDA's policies, advocacy and the CDA Foundation, the association has consistently pursued its mission of commitment to the success of its members in service to their patients and the public.

In 2002, the CDA House of Delegates (house) adopted Resolution 28-2002-H, approving a position paper on access to care.¹The paper acknowledged the findings in the landmark report, *Oral Health in America: A Report of the Surgeon General*, affirming that access to oral health care is a matter of importance for all Californians in order to maintain general health and well-being.² CDA's position paper further states:

...the association and its members acknowledge that access to dental care is a multi-faceted issue that will require multi-agency and multi-organizational cooperation in order to adequately address the challenges associated with improving access. Thus, addressing access to care will require public, private, professional, business and government participation in order to move closer to solutions that will and should go well beyond the resources of the California Dental Association.

In 2008, recognizing that a significant portion of Californians continue to experience barriers to oral health care, the house adopted Resolution 36S1-2008-H, directing CDA to undertake a comprehensive study aimed at improving access to dental care for underserved populations.³ Resolution 36S1-2008-H was referred to the Policy Development Council (PDC), under which the Access Workgroup (Workgroup) was formed. Given the amount of workforce-specific activity that was occurring nationally at this time, the Workforce and Forecasting Research Task Force (Task Force) was appointed by the CDA president specifically to research proposed changes to the dental workforce as part of CDA's overall access analysis. The focus of both groups was to develop strategies to improve access to dental care for the nearly 30 percent of the population that experiences barriers to care now (see appendix F), while preserving the dental delivery system that serves the majority of Californians; ultimately developing a CDA action plan to advance policies and programs that reduce oral health disparities for Californians.

Workgroup and Task Force Project Objectives:

The project objective of the Workgroup was to conduct analyses and research, and consult with experts on barriers to accessing oral health care and the strategies to mitigate these barriers; and develop a prioritized and targeted list of recommendations to improve access to oral health care for underserved populations in California. Project success criteria were:

- Complete analysis of strategies to create meaningful improvements in access to oral health care for underserved Californians
- Develop specific and prioritized recommendations that are realistic, practical and cost effective
- Present a comprehensive Access to Oral Health Care report, including the recommendations of the Task Force, to appropriate councils, committees and to the house

The project objective of the Task Force was to examine the capacity and effectiveness of the dental delivery system in California and the economics of dental workforce proposals, and propose recommendations for workforce and delivery models that have the potential to improve access to care for underserved Californians. Project success criteria were:

¹ California Dental Association. 2011 Policy Manual. Page A-2. Retrieved May 2011 from http://www.cda.org/library/cda_member/policy/policy_manual.pdf

² U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research. (2000). Oral Health in America: A Report of the Surgeon General. Rockville, MD. 2000

³ California Dental Association 2011 Policy Manual. Page A-1. Retrieved May 2011 from http://www.cda.org/library/cda_member/policy/ policy_manual.pdf

- Produce research on capacity and efficiency of the current dental delivery system; the impact of workforce models on private dental practice; the economics and sustainability of proposed workforce models
- Complete analysis of existing and proposed dental workforce models, including safety and quality, for potential to improve oral health care to underserved populations in California
- Develop specific and targeted recommendations for inclusion in a comprehensive Access to Oral Health Care analysis conducted by the PDC

The research and analysis details of the Task Force project are provided in the Workforce and Forecasting Research Task Force Report, Section 4.

Access Workgroup Research And Analysis

The Workgroup began by developing a list of ideas to increase access to care for the approximately 30 percent of Californians who experience difficulty receiving the regular oral health care they need to be healthy. After proposing more than 20 possible actions, the Workgroup selected the following priority areas for further study:

- Building an oral health infrastructure
- Medicaid reforms
- Rebuilding school-based/linked dental programs for children
- Oral health literacy
- Incentives for working in public health
- Dental residencies

Upon identifying these priority areas, the Workgroup found that much of the research it needed to conduct its analysis was already available. Motivated by the Surgeon General's 2000 report that raised concerns nationally over oral health disparities, research on improving access to oral health care for underserved populations was available from numerous governmental agencies, children's advocates, and health organizations. In addition to utilizing existing research, the Workgroup commissioned studies and engaged expert presenters to further assist in its analysis. In particular, the Workgroup received the following presentations and CDA-commissioned research (see Section 6):

- Comprehensive report on California demographics, the state of oral health programs, and national activities related to access by Diane Cummins
- Research on Oral Health Infrastructure by Joel Diringer, JD, Diringer and Associates.
- Research on Dental Residencies by Paul Glassman, DDS, MA, MBA, Professor of Dental Practice and Chair, Center for Special Needs, University of the Pacific School of Dentistry.
- Perspective on the New Zealand School and Community Health Program by Neil Croucher, BDS, Northland Oral Health Advisor and Clinical Director, Northland District Health Board.
- Perspectives on the Dental Workforce by James J. Crall, DDS, ScD, pediatric dentist and AAPD's Child Advocate.
- Current ADA and the CDA Foundation oral health literacy activities, by Lindsey Robinson, DDS, pediatric dentist and past ADA CAPIR chair, past CDA Foundation Chair, past CSPD President and current CDA Vice President and Policy Development Council Chair.
- Increasing access to oral health care for vulnerable populations through community health workers: Susan Bauer, MA, MPH, Executive Director Community Health Partnership of Illinois.
- ADA Community Dental Health Coordinator: Dunn Cumby, DDS, and Marsha Beatty, University of Oklahoma.
- The Apple Tree Model in Minnesota by Mike Helgeson, DDS, CEO of Apple Tree Dental, Susan Voight, and Dick Gregory, DDS, San Mateo Dental Society.
- Proposal for a comprehensive school-based/linked system of care by Jared Fine, DDS, Dental Director for the Alameda County Health Department and member of the Workforce and Forecasting Research Taskforce and Access Workgroup.

Analysis

Two assumptions were central to the Workgroup's analysis:

- Resources are scarce, and substantial and sustained increases in funding for oral health are not likely any time in the near future
- California's political environment will influence the success or failure of initiatives

With acknowledgement that significant increases in funding would make many of the suggestions to improve access to care that have been proposed in the current literature easier to pursue, and that politically untenable proposals are non-starters, the Workgroup analyzed proposed strategies through the lens of practicality.

The Workgroup's analysis of barriers to oral health care, the role of the dental profession, and considerations for solutions laid the foundation for a comprehensive approach and the development of CDA's Access Proposal: *Phased Strategies for Reducing Barriers to Dental Care in California.* This 3-Phase Proposal is characterized by a series of targeted and prioritized recommendations. The strategies it contains are laid out in three phases, over multiple years, recognizing that not everything can be accomplished immediately and some objectives are best achieved after other foundational work is completed. The proposal recognizes:

- there are a multitude of reasons that nearly 30 percent of Californians do not receive regular dental care;
- sustainable funding remains a challenge, regardless of the proposed strategy;
- all strategies to reduce barriers have strengths and weaknesses;
- limitations of the private dental delivery system to provide care to many who are now underserved (locations, hours of operation, patient finances, special needs, etc.) require the inclusion of strategies that do not rely primarily on the private dental delivery system to achieve; and
- it will take many strategies, working together, to reduce barriers to the degree that significantly more Californians receive dental care and experience better health outcomes.

The rationale (strengths) for each recommendation included in the proposal are contained in Section 3. Below is a description of some key limitations (weaknesses) identified by the Workgroup that influenced its recommendations.

Medicaid Reform

Much of the current literature on access to dental care suggests that low reimbursement rates keep dentists from participating in the chronically underfunded Medicaid program, and the solution to sufficient dentist participation is higher rates. However, analyses on the effect of raising Medicaid reimbursement rates show that, while higher rates are necessary for increased provider participation, rate increases are not sufficient on their own to substantially improve access to dental care.^{4 5} Even after significant effort and investment in states that raised Medicaid rates, only 32 to 43 percent of children covered under Medicaid received dental care, pointing to the need to explore other solutions as well.⁶

A 2006 survey, completed for the Solano Coalition for Better Health, identified the following reasons for dentists' non-participation in Denti-Cal (respectively): low reimbursement rates relative to other payors; administrative program complexity; documentation requirements; and unfavorable perceptions of or experiences with Denti-Cal patients.⁷ In all, one-half of dentists surveyed (36) stated that better reimbursement would be necessary for their office to participate "more or at all in Denti-Cal" and "nearly one-third (22) said 'nothing' could encourage them to participate."⁸

⁴ U.S. General Accounting Office. (September 2000). Factors Contributing to Low Use of Services by Low-Income Populations.

⁵ Borchgrevink, A., Snyder, A., Gehshan S. (March 2008). The Effects of Medicaid Reimbursement Rates on Access to Dental Care. National Academy for State Health Policy. Retrieved April 2011 from http://www.nashp.org/node/670

⁶ Ibid

⁷ Barbara Aved and Associates. (June 2006). Participation in Denti-Cal and Suggested Strategies to Increase Provider Involvement. Completed for the Solano Coalition for Better Health.

⁸ Ibid

Further, California's history of increasing Denti-Cal rates and reducing administrative requirements is instructive. In 1990, the California Department of Health Services lost a Medicaid lawsuit, *Clark v. Kizer*, which claimed that California's dental Medicaid program policies violated Medicaid's equal access provision. In 1992, the Department of Health Services raised rates on 56 primary care and preventive procedures to 80 percent of the average fee billed to Denti-Cal. Additionally, almost all documentation requirements were eliminated on 38 common procedures. Over the next four years, the number of users doubled from approximately 400,000 to over 800,000, but the cost of the program quadrupled. Program analysis showed that the volume of treatment each beneficiary received increased significantly during this time.⁹ The steep increase in patient treatment and program costs associated with program changes eventually led the legislature to enact a series of benefit reductions, institute fraud protections through new enrollment and documentation requirements, and propose reimbursement reductions (which have so far been overturned by the courts).

In light of the complex set of the factors that influence dentists' participation, California's history with Medicaid reform, its financial and political environment, and ongoing efforts by federal legislators to reduce government expenditures (including healthcare), the Workgroup determined that raising Medicaid rates high enough to sustain sufficient and lasting increases in dentists' Medicaid participation was neither cost-effective nor realistic. For these reasons, the Workgroup recommends a narrow and targeted approach to Medicaid rate enhancement that focuses on prevention for children.

Public Health Incentives

Student Loan Repayment and Student Scholarships

The proposal recognizes the positive effect student loan repayment and scholarship programs have on influencing a dentist's decision to work in the public sector.¹⁰ It recommends expanding these programs to include advanced degrees in dental public health and for expanded function dental assistants in community clinics, as both clinicians and thought leaders are essential to successful public health programs. In making these recommendations, however, the Workgroup also acknowledges that these programs have limitations.

As with Medicaid reform, California's history with loan repayment programs informs the discussion. In 2002, AB 982 (Firebaugh) established the Physician Corps Loan Repayment Program within the Medical Board of California (renamed the Steven M. Thompson Physician Corp Loan Repayment Program in 2004). As the program received no budget allocation, it was initially funded through a variety of sources, including the California Endowment, a large private donor and voluntary physician contributions. The program, now in existence for nearly a decade, has not received state support and is still funded by donations, grants and voluntary physician contributions. In 2007-08, voluntary physician contributions totaled \$58,802.¹¹ In this environment, where the state relies on the health professions to fund loan repayments, the capacity for substantial repayment awards is severely limited.

Further consideration with regard to loan repayment or scholarship programs recognizes that federally sponsored programs require ongoing funding, subjecting them to repeated requirements for legislative appropriations and economic fluctuations. Private loan repayment programs, such as the CDA Foundation program,¹² may be steadier over the long-term, but are limited in scope by the large cost of each award. What's more, once a loan repayment contract ends, dentists are free to relocate. Thus, such programs often provide only short-term benefit to underserved environments. Additionally, the Workgroup analysis affirmed that meeting the needs of the 10 million Californians in need of regular dental care will require more than the few dentists each year who receive loan repayment or scholarship grants. For these reasons, the Workgroup concluded that loan repayment and student scholarship programs should not be relied on as a primary strategy to significantly increase dental care to underserved populations.

⁹ Analysis conducted by David Noel, DDS, MPH, Chief Dental Consultant, Department of Health Services. (June 1999).

¹⁰ U.S. Department of Health and Human Services, National Health Service Corp. *Facts and Figures*. Retrieved May 2011 from http://nhsc. hrsa.gov/about/facts.htm

¹¹ Steven M. Thompson Physician Corps Loan Repayment Program. *Report to the Legislature* 2009. Retrieved May 2011 from http://www.transparency.ca.gov/Common/Document.ashx?ID=8053&TB_iframe=true

¹² For program information: California Dental Association Foundation. *Student Loan Repayment Program*. http://www.cdafoundation.org/receive/ student_loan_repayment_grant_program

Tax Incentives

Another commonly recommended strategy for addressing barriers to care – tax breaks – was not advanced in the proposal. This strategy suggests that tax reductions for dentists working in public health settings, providing care to Medicaid beneficiaries, or providing pro bono care will increase the amount of care provided to the underserved. Tax reduction proposals are introduced almost annually in California and, despite CDA's support, none has been successful. The Workgroup's decision to exclude this recommendation acknowledges the political realities, but also recognizes the reasons it has so far been unsuccessful: it requires involvement of multiple government agencies, has high projected financial costs due to lost tax revenue, and would create additional state, and potentially federal, costs for auditing. If the state were in a financial position to provide additional funds for dental care for low-income Californians, the simpler and more direct approach would be to pursue increased reimbursement for that care.

Oral Health Literacy

Health literacy in dentistry is "the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate oral health decisions."¹³ Health literacy initiatives are promoted by public health advocates, government agencies, and organized dentistry and are widely considered an important part of efforts to improve the health outcomes of disadvantaged populations.

Poor utilization, a result of low oral health literacy, is a common reason cited for Medicaid beneficiaries and other underserved populations' failure to receive timely dental care. Research into underlying causes reveals a much more complex picture than a simple failure to understand the importance of oral health or prioritize it.¹⁴ Inability to leave one's job during standard dental office hours, unreliable transportation, and little to no discretionary income are just a few barriers to making and keeping a dental appointment. Evidence exists that social and economic conditions have the greatest influence on poor health overall, and oral health is no exception.¹⁵

Further confounding recommendations for oral health literacy programs are varying interpretations of what such programs entail, spanning everything from brochures and chair side education to radio and TV ad campaigns. Moreover, it is difficult to measure the outcome of health literacy efforts and evaluate a program's effectiveness – from both behavior change and cost effectiveness perspectives. Evidence from California's highly successful, multi-year tobacco campaign indicates that individual behavior change is difficult to achieve, is heavily influenced by cultural and societal norms, and requires a multi-pronged approach to accomplish.¹⁶

The proposed recommendation with regard to oral health literacy programs respects the essential role education plays in helping people understand the need for and benefits of care, and in assisting them to navigate the system that provides it. Raising the dental IQ of all Californians should be a core principle for every healthcare provider in every program and setting. However, the recommendation with regard to oral health literacy also reflects acknowledgement that health literacy programs can be very expensive, outcomes are difficult to define and measure, and as important as these programs are, they have some limitations. For this reason, the proposal places the principal responsibility for identifying and promoting evidenced-based oral health literacy programs with the dental director and the State Office of Oral Health (see Phase 1 recommendation). This recommendation acknowledges the expertise of the office and the opportunity to use a school-based/linked oral health program as a primary, though not exclusive, vehicle for implementation.

¹³ U.S. Department of Health and Human Services. *Healthy People 2010*. Oral Health, Section 21, Page 38. Retrieved May 2011 from www. healthypeople.gov/2010/document/word/volume2/21oral.doc

¹⁴ For information on effects of poverty, see: Payne, R.K., A Framework for Understanding Poverty. Aha! Process, Inc. 1996

¹⁵ California Endowment. (November 2002). *Reducing Health Disparities Through a Focus on Communities*. Retrieved May 2011 from http://www.calendow.org/uploadedFiles/reducing_health_disparities.pdf

¹⁶ California Department of Public Health, Tobacco Control Section. (October 1998). A Model for Change: The California Experience in Tobacco Control.

Timeline

The Task Force forwarded its draft report and recommendations on March 2, 2011 to the Workgroup. The Workgroup approved **CDA's Access Proposal:** *Phased Strategies for Reducing Barriers to Dental Care* (3-Phase Proposal), with the inclusion of the Task Force recommendations, on March 23, 2011. On April 21, 2011, the Task Force approved its final detailed recommendation, followed by the PDC approval of the 3-Phase Proposal on April 22, 2011. PDC recommended the Executive Committee forward the proposal to the Board of Trustees (board).

The 3-Phase Proposal will be reviewed and discussed at the June 3, 2011 board meeting. The board will take action on this item at its August 26, 2011 meeting. A final action item on the proposal will be brought to the house in November 2011.

Access Proposal: Phased Strategies for Reducing Barriers to Dental Care in California



Phase	Establishing State Oral Health and Optimize Existing Resour	Leadership ces (Years 1-3)	
	1. State oral health infrastructure	5. Fluoridation	
	2. Expand capacity within dental public health	6. Expand capacity to provide children's care, especially to	
	3. Safety net expansion of dental	young children	
	4. Volunteer provision of care coordination	8. Workforce capacity [Task Force Recommendation]	
Phase	Focusing on Prevention and Early Intervention for Children (Years 3-5)		
	 Reach children in school-based/linked programs, WIC, Head Start and other public health settings 		
	2. Utilize proven technology		
	3. Expand early prevention through re	eimbursement incentives	
	4. Fluoridation		
Phase	Delivery System Innovations (Years 4-7)	
	1. Adult dental care		
	2. Hospital-based treatment		
	3. Workforce capacity		

SECTION 3: Analysis

3-Phase Proposal



Phase 1 Oral Health Infrastructure: Phase 1

Background

The Association of State and Territorial Dental Directors (ASTDD), a national resource for state dental public health programs, defines state oral health infrastructure as, ". . . systems, people, relationships, and the resources that would enable State oral health programs to perform public health functions." ASTDD specifies that a key infrastructure element is having leadership to address oral health problems, and this includes a full-time state dental director and an adequately staffed oral health unit capable of performing core public health functions.²

California has virtually no state oral health infrastructure. It has been nearly 30 years since a dentist has led the State Office of Oral Health. The office was recently reduced to an "oral health unit" that relies on one state employee to carry out necessary functions.³Further, as a result of the elimination of the California Children's Dental Disease Prevention Program (CDDPP) in 2009, hundreds of thousands of low-income children whose only source of oral health education and early dental disease prevention was this state program, no longer receive preventive services. While there are many locally organized efforts to address the oral health needs of disadvantaged populations, they are disparate and poorly coordinated.⁴

Knowing that other states have robust dental public health programs, CDA commissioned Diringer and Associates to study how these states sustain their programs (see commissioned research, Section 6). One of the consistent findings from this research is that influential leadership is essential to success. A dental director, placed prominently in the Administration, who can assertively promote, protect, and secure funding for oral health programs, is essential if California is to develop public programs that will be effective in reducing barriers to care.

Diringer and Associates' research details the following lessons learned from states with strong statewide oral health programs:

- Leadership: the most critical element for an effective state oral health office is leadership. It is essential to have a person with an oral health background and a public health orientation, coupled with a vision for how to improve the oral health status of a state.
- Strong support from the state health department and policymakers: support and understanding from leadership in the state health department, as well as those in policymaking roles within the executive and legislative branches is important.
- Visibility in state agency: a state oral health office must have sufficient visibility in the state health department to be considered a core component of the health infrastructure and the department's budget. Access to department heads and policymakers is key to developing and implementing strategic agendas.
- State legislation establishing an office of oral health and director position is helpful but not essential: some states with strong oral health offices do not have any legislative mandate for such an office, and having a legislative mandate does not guarantee an effective office.
- Models and infrastructure support are readily available from the Centers for Disease Control and Prevention (CDC) and ASTDD: these agencies have national standards for offices of oral health, tools and roadmaps for developing a strong infrastructure, funding and valuable technical assistance.

¹ Association of State and Territorial Dental Directors. (2010) *Guidelines for State and Territorial Oral Health Programs*. Retrieved May 2011 from http://www.astdd.org/docs/ASTDD_GuidelinesfinaldraftSectionI6-4-101.pdf

² Ibid

³ Cummins, Diane. (April 2011) California Oral Health. See Commissioned Research.

⁴ Ibid

- Not all work needs to be done by the state: successful state dental directors emphasized that the state oral health office does not generally operate large programs, but rather partners with other agencies in the public and private sectors to implement them.
- **Doing something is better than doing nothing:** it took a number of years for the successful programs to develop. Rather than trying to plan and implement all components at one time, the directors developed the programs over time. Having a strong leader, developing an oral health plan in partnership with statewide coalitions, and accessing available funding are important first steps.

Finally, this study recommends that California:

- Hire a dental director with dental public health experience
- Develop an oral health plan building on what exists throughout California
- Work with existing stakeholders and programs
- Seek federal and private funding to support programs
- Develop new childhood dental disease prevention programs

Workgroup recommendation: assist the state to hire a state dental director and staff responsible for developing, funding, and coordinating oral health activities.

Given the fundamental role infrastructure plays in the success of public oral health programs and in key proposed Phase 2 objectives, the recommendation to establish oral health leadership and build an oral health infrastructure in California is CDA's first priority. The dental director and his/her staff will be responsible for the following:

- Developing a comprehensive and sustainable state oral health action plan
- Securing funds to support infrastructure, and statewide and local programs
- Advancing and protecting the importance of oral health within the Administration
- Encouraging private and public collaboration
- Promoting evidence-based approaches to increase oral health literacy
- Establishing a system for surveillance and oral health reporting

access

Public Health Incentives: Phase 1

Background

California is home to over 38 million people. In 2008, an estimated 14.6 percent of Californians lived in poverty.⁵ California's Medicaid program, Medi-Cal, provides coverage for about one in six Californians and one in three of California's children. Many low-income individuals and families face challenges accessing regular dental care and rely heavily on public programs for care. Statistics from 2007 indicate that only 24 percent of California's dentists participated in the Denti-Cal program.⁶ While dentists' decisions to participate in public programs are influenced by many factors, a significant consideration for new dentists is the large debt burden they assume during dental school. Practically speaking, graduates who wish to pursue advanced degrees in public health, or practice in rural areas or in public programs often find such options financially unsustainable.

Loan repayment and student scholarship programs offer repayment (or paid tuition) in exchange for a contractual obligation to provide care in underserved areas, or to underserved populations (known as Dental Health Professional Shortage Areas). Contracts usually require three or more years of service. These programs allow dentists to practice in the public health sector and result in significant amounts of care to low-income and underserved populations. Loan repayment programs are offered by several federal agencies,⁷ by the California Dental Association Foundation,⁸ and through July 2012, by the Dental Board of California.⁹



Leaders and clinicians are essential to building and sustaining high functioning public health programs, and financial barriers play a significant role in decisions to enter the public health sector. This is the basis for the recommendation to continue to support student loan repayment/student scholarship programs for dentists providing direct patient care, as well as to expand these financial incentives with the goal of increasing the number of dentists in the public sector with advanced public health education.¹⁰

⁵ Cummins, Diane. (April 2011). California Oral Health. See Commissioned Research

⁶ California Health Care Foundation. (May 2010)Denti-Cal Facts and Figures. Retrieved May 2011 from http://www.chcf.org/ publications/2010/05/dentical-facts-and-figures

⁷ For program information: U.S. Department of Health and Human Services, *National Health Service Corp.* Retrieved May 2011 from http:// nhsc.hrsa.gov

⁸ For program information: California Dental Association Foundation. Student Loan Repayment Program. Retrieved May 2011 from

⁹ For program information: The Dental Board of California. Loan Repayment. Retrieved May 2011 from http://www.dbc.ca.gov/licensees/dds/ loan_repayment.shtml

¹⁰ U.S. Department of Health and Human Services. *Healthy People 2010 Oral Health Objective*. OH-17: Increase health agencies that have a dental public health program directed by a dental professional with public health training

Further, this recommendation acknowledges the strong evidence that allied dental personnel increase productivity of dental offices and clinics.¹¹As of 2010, California registered dental assistants in extended functions (RDAEF) are able to place and finish amalgam and composite restorations under the direct supervision of a dentist. This education and training is currently taking place in just a few locations and is costly. The recommendation includes a focus on expanding the role of RDAEFs in the public health sector by identifying dental assistants in underserved communities who are interested in RDAEF practice, but lack the resources to pursue the necessary education, and providing assistance to them in exchange for a commitment to work in a community health clinic or other public health setting.

¹¹ Beazoglou T, Brown LJ, Ray S, Chen L, Lazar V. (2009). An Economic Study of Expanded Duties of Dental Auxiliaries in Colorado. Chicago: American Dental Association, Health Policy Resources Center

Expansion Of Dental Services In Safety Net Clinics: Phase 1

Background

Expansion of dental services in safety net clinics can be an effective way to expand access to dental care for underserved populations. This expansion can be accomplished in more than one manner. One option is the addition of a bricks-and-mortar dental clinic on-site or satellite to an existing clinic. Advantages of physically expanding an existing community clinic to provide care include:

- Easy access to dental care for referrals by medical providers, especially as they counsel expectant mothers and determine the risk status of young children
- Continuity of care provided by a dental home
- Ability to have dental student externships enhancing both access to care as well as dental students' development
- Ability to draw on the expertise of additional experienced dentists who can provide teaching, oversight and new perspectives

However, when limited resources or lack of physical space makes expanding a particular site challenging, a community clinic can contract with dentists within its service area to provide care. Expanding the number of providers who can care for clinic patients is especially attractive to Federally Qualified Health Centers (FQHCs), as the federal government requires FQHCs to provide dental care to clinic patients. Contracting between FQHCs and local dentists has the following benefits:

- 1. Dentists are able to:
 - a. address the needs of their community by serving those who have the most need and the least access to care
 - b. provide services to Medicaid patients in their offices without enrolling in the program themselves, allowing them to avoid the billing and administrative burdens of the Denti-Cal program
 - c. predetermine through a contract with the FQHC the amount of time, number of patients, and/ or number of visits they will devote to clinic patient care
- 2. FQHCs are able to:
 - a. meet their requirement to provide dental services
 - b. avoid the burden of expensive capitalization of dental facilities and equipment
 - c. reduce staffing requirements, expand the number of available dental providers in their communities, and stabilize their dental service costs
- 3. Patients have increased access to care, including shorter wait times for appointments and more geographically diverse locations for care

In 2003, the Connecticut Health Foundation commissioned the Children's Dental Health Project (CDHP) to investigate strategies to improve access to dental services for underserved populations. CDHP involved the National Association of Community Health Centers and legal counsel to develop guidelines for FQHC contracting with private practice dentists. CDHP updated the guidelines, Increasing Access to Dental Care Through Public/Private Partnerships: Contracting Between Private Dentists and Federally Qualified Health Centers, in April 2010.¹² This

¹² Children's Dental Health Project. (April 2010). Increasing Access to Dental Care Through Public/Private Partnerships: Contracting Between Private Dentists and Federally Qualified Health Centers. Retrieved April 2011 from http://www.cdhp.org/system/files/FQHC_ Handbook_March_2011.pdf

handbook describes how FQHCs obtain the authority to provide dental services and secure funding, payment mechanisms, scope of contracted services, risks, accountability, and includes a model contract.

Recognizing the potential for increasing dental care to children outside of the FQHC's "four walls," the 2009 Children's Health Insurance Program Reauthorization Act (CHIPRA) specified that states cannot prevent health centers from entering into contracts with private dentists. However, evidence remained that states, including California, appeared reluctant to fully embrace this expansion of services for FQHCs. In response, the Centers for Medicare and Medicaid Services (CMS) released a clarifying letter in March 2011, further paving the way for FQHCs in California to utilize this strategy to increase oral health services to patients.¹³



CDA recognized the potential to increase access to care by expanding dental services in safety net sites and, in 2006, adopted the following policy:

Expansion of Dental Services in Safety Net Clinics (46-2006)¹⁴

Resolved, that CDA supports the role safety net clinics have in providing care to underserved populations, and be it further

Resolved, that CDA supports expansion of dental services in safety net clinics by initially facilitating communication between clinics and dental components, being an information resource, and providing technical assistance to members or community organizations seeking to expand their local safety net clinics to include services.

This Phase 1 recommendation seeks to remove any existing barriers FQHCs experience with regard to expanding their capacity to provide dental care and fully utilize the capacity of private practice dentists to provide care to low-income families.

¹³ Centers for Medicare and Medicaid, Department of Health and Human Services. (March 25, 2011). Recent Developments in Medicaid and CHIP Policy. Retrieved April 2011 from http://healthreform.kff.org/~/media/Files/KHS/docfinder/cms_guidance_Medicaid_birth_centers.pdf

¹⁴ California Dental Association 2011 *Policy Manual*. Page A-1. Retrieved April 2011 from http://www.cda.org/library/cda_member/policy/ policy_manual.pdf

Volunteer Provision Of Care Coordination: Phase 1

Background

CDA and its members collectively and individually provide millions of dollars of charitable care every year through national, state, and local events. This charitable work targets a variety of populations such as schoolchildren, the elderly, homeless, veterans, and people with developmental disabilities. This care is provided by practicing, as well as actively licensed retired dental professionals.

The recent economic downturn and persistent state budget deficits have resulted in job losses and cuts to public health programs and services for low-income families, including most adult Medicaid dental benefits. The reductions have increased the number of people seeking low or no-cost dental care.

Responding to this need, community-wide events, where medical and dental professionals assemble in one location to provide free care to thousands of individuals, have increased in frequency.¹⁵ Such events take place over multiple days, are sponsored by one or more organizations, and require vast fundraising efforts.

Volunteer dental professionals are key to the success of such events. Even when a community comes together to provide much needed care, demand for health services usually exceeds the capacity of the event. Many individuals stand in line for hours to receive free care but are often turned away. Others receive some care but are unable to have all of their health needs met.

Community-based charitable events benefit both the public and the profession in several ways. They offer dentists the opportunity to focus their charitable efforts on one event while not precluding them from fulfilling other requests. Such events are also excellent venues to engage an often underutilized source of care – retired dentists. Many retired dentists are interested in staying active in the profession and are willing to donate their time and expertise.

Centering community-wide events on dental-only services has particular advantages.¹⁶ The event space can be organized optimally for the provision of dental care; more comprehensive care, including a broader range of dental services, can be offered during multi-day events; and greater resources may be available for both oral health education and referrals for additional care.

Workgroup recommendation: support a coordinated process for the volunteer-based provision of care at the local level; optimize the contributions of retired dentists

Partnering with organizations that allow CDA to manage community-wide dental care events provides for a focused, coordinated approach to charitable contributions and is consistent with CDA's mission and strategic plan. Advantages of this format include determining the time, location and length of events; establishing treatment criteria; overseeing logistics and media coverage; controlling the budget; and post-event evaluation.

Community-wide dental events, community-based clinics and other public health programs rely on volunteer dental professionals. Recognizing the important contributions retired dentists can make, CDA adopted policy in 2003 urging cooperation with the Dental Board of California and the legislature to reduce barriers for retired

 $^{^{\}rm 15}$ For program information: Remote Area Medical. www.ramusa.org .

¹⁶ For program information: America's Dentists Care Foundation, Missions of Mercy. www.adcfmom.org

dentists seeking to provide care to patients in underserved communities.¹⁷ California now offers several incentives for retired dentists to remain active in their communities by donating their professional services. The Dental Board of California offers a reduction in licensing fees (50 percent) for dentists who have reached retirement age, have practiced in California for 20 plus years, and customarily provide services free of charge.¹⁸ In addition, The Dentists Insurance Company (TDIC) offers reduced professional liability premiums for retired dentist volunteers and CDA offers reduced membership dues (50 percent).

Another way to ease barriers to volunteerism for retired dentists is to reduce the number of continuing education units (CEU) required for active licensure for dentists who provide only uncompensated care (California requires 50 units every two years for relicensure). Continuing education is intended to ensure dentists remain current in the practice of dentistry throughout their careers. In most volunteer situations, however, dentists provide basic care: fillings, extractions, dental sealants, stainless steel crowns, etc. This diminishes their need for ongoing education in the use of advanced techniques and new technologies. Reducing (but not eliminating) the number of CEUs required for retired active licensure respects the need for dentists to stay current while easing what may be an unnecessary obstacle for retired dentists to volunteer their time.

¹⁷ California Dental Association 2011 Policy Manual. Retired Dentists Who Wish to Provide Care in Underserved Communities (33-2003-H) Page A-2. Retrieved May 2011 from http://www.cda.org/library/cda_member/policy/policy_manual.pdf

¹⁸ Dental Board of California. Retrieved May 2011 from www.dbc.ca.gov/formspubs/pub_reduced_fee.pdf.

Fluoridation: Phase 1

Background

Tooth decay is one of the most common diseases in our country, affecting "approximately 91 percent of dentate adults aged >20 years . . .¹⁹ The scientific evidence base supports community water fluoridation (CWF) as the foundation for improving a community's public health by minimizing the prevalence and severity of tooth decay. Fluoridation has been shown to be cost-effective, as well as provide cost savings. One study determined that the reduction in costs of fillings significantly exceeds the cost of CWF (average savings ranging from \$15.95 per person per year in small communities to \$18.62 per person per year in larger communities). ²⁰ Additionally, CWF does not discriminate; it benefits all people, regardless of age, income, education, or socioeconomic status.

CDA has a long history of supporting CWF, initially adopting policy in 1973 (updated policy, 2009).²¹ In 1995, CDA advanced community fluoridation by sponsoring Assembly Bill 733, legislation that requires communities with 10,000 or more water connections to fluoridate when funding becomes available to do so. In 1998, the CDA Foundation formed a collaborative partnership with the Department of Health Services (now the Department of Public Health) and the Dental Health Foundation (now the Center for Oral Health) to administer a California Endowment grant to fund such projects. The Metropolitan Water District, City of Los Angeles, Sacramento, Escondido, Santa Maria and Daly City are just a few of the communities that have benefited from this grant funding.

In 2004, the CDA Board of Trustees agreed to fund efforts to preserve fluoridation in the cities of Palo Alto and Arcata. In addition, resources were committed to fight initiatives sponsored by anti-fluoridation organizations and to defend against legal challenges brought by these same groups. CDA also sponsored successful legislation in 2004 (SB 96), to strengthen and clarify AB 733, the existing statewide fluoridation law.



CDA's efforts to increase CWF have been extraordinarily successful. Since 1990, the number of Californians who have access to CWF has tripled – from 17 percent in 1990 to 58.8 percent in 2008 (the last year for which recorded data are available).²² In February 2011, the city of San Diego initiated CWF, providing fluoride's preventive benefits to an additional 1.3 million people.²³The next big effort, to bring CWF to San Jose, the largest non-fluoridated city in California, would raise the percentage of Californians with access to fluoridated drinking water to approximately 65 percent, or a total of 24,233,176 million people.²⁴

Also see Phase 2 fluoridation recommendation

¹⁹ Beltrán-Aguilar, E.D., et al. (2005, August 26). Surveillance for Dental Caries, Dental Sealants, Tooth Retention, Edentulism, and Enamel Fluorosis–United States, 1988-1994 and 1999-2002 MMRW. 54(03); 1-44. Available on Centers for Disease Control and Injury Prevention Website at www.cdc.gov/mmwr/preview/mmwrhtml/ss5403a1.htm.

²⁰ Griffin S.O., Jones K, & Tomar S.L. (2001) Journal of Public Health Dentistry 61(2):78-86.

²¹ California Dental Association (2011) Policy Manual. Page A-11. Retrieved May 2011 from http://www.cda.org/library/cda_member/policy/ policy_manual.pdf

²² US Department of Health and Human Services, Centers for Disease Control and Prevention. (2008). 2008 Fluoridation Statistics. Retrieved May 2011 from www.cdc.gov/fluoridation/statistics/2008stats.htm

 ²³ U.S. Census Bureau. (2000). State and County Quick Facts. Retrieved May 2011 from http://quickfacts.census.gov/qfd/states/06000.html
 ²⁴ Ibid

Expand Capacity To Provide Children's Care: Phase 1

Background

An estimated 1.8 million California children are without dental coverage,²⁵ a large majority of whom are expected to gain coverage by 2014 through the federal Affordable Care Act. General dentists will be an important resource in providing care for this newly insured population. However, studies show that relatively few general dentists provide regular care for children before the age of three years and 69.5 percent of dentists report that fewer than 20 percent of their patients are children.²⁶

Many protocols and programs have been developed over the past several years to increase the number of young children who receive early dental care. One of the first of these efforts was the First Smiles Program.²⁷ Funded by First 5 California and led by the CDA Foundation and the Center for Oral Health (then known as the Dental Health Foundation), this four-year project trained dental and medical professionals to perform an early oral health risk assessment for children and provide anticipatory guidance to their parents. It was a robust statewide effort that educated over 16,000 dental professionals and over 4,500 medical professionals on early dental disease prevention.

Taking the benefit of additional training a step further, the CDA Foundation, in collaboration with the California Society of Pediatric Dentistry, developed the Pediatric Oral Health Access Program (POHAP) in 2002.²⁸ POHAP provides free specialized training for dentists on dental care for very young and special needs children. Targeting its efforts toward underserved children, the program accepts general dentists who practice in underserved areas and treat uninsured patients or currently accept publicly-funded dental insurance programs. In exchange for the free training, participating dentists agree to routinely provide oral health care to young children, including children with special needs, as well as provide free restorative treatment to an agreed-upon number of children who have no ability to pay. In the seven years since its inception, 389 POHAP-trained dentists have provided care to more than 73,000 children under the age of 12.

Another California program, Healthy Kids, Healthy Teeth (HKHT), piloted in Alameda County, is based on a successful program in Washington State, the Access to Baby and Child Dentistry program.²⁹ HKHT focuses on reducing early childhood caries (in children up to five years of age), training dentists on techniques to provide care to very young children, instructing medical providers on early dental prevention, and establishing a system of referral and case management into dental care.

Workgroup recommendation: expand capacity to provide children's care, especially to young children

- a. Increase the ability of general dentists to provide care to children, especially children ages 0-5
- b. Increase utilization of best practices in caries management by dentists and dental hygienists

²⁵ California Health Interview Survey (2007). Retrieved May 2011 from http://www.chis.ucla.edu/

²⁶ McQuistan, M.R., Kuthy R.A., Daminano, P.C. & Ward, M.M. (2006) General dentists' referrals of 3- to 5-year-old children to pediatric dentists. Journal of the American Dental Association. 137;653-660

²⁷ For program information: California Dental Association Foundation. First Smiles Education and Training Program. Retrieved May 2011 from http://www.cdafoundation.org/learn/first_smiles_education_and_training_program

²⁸ For program information: California Dental Association Foundation. Pediatric Oral Health Access Program. Retrieved May 2011 from http:// www.cdafoundation.org/learn/pediatric_oral_health_access_program

²⁹ Alameda County Public Health Department. Healthy Kids, Healthy Teeth Program. Retrieved May 2011 from http://www.acphd.org/user/ services/AtoZ_PrgDtls.asp?PrgId=39
In 2007, recognizing the value of an evidence-based approach to caries management, CDA adopted the following policy:³⁰

Adoption of CAMBRA³¹Consensus Statement Principles (18RC-2007-H)

Resolved, that the following main principles for Caries Management by Risk Assessment be adopted:

- Modification of the oral flora to favor health;
- Patient education and informed participation;
- Remineralization of non-cavitated lesions of enamel and dentin / cementum;
- Minimal operative intervention of cavitated lesions and defective restorations.

This Phase 1 recommendation acknowledges the primary role of early prevention in reducing dental disease burden and the necessity of continued efforts to achieve widespread practice among dentists and dental hygienists. Further, it recognizes the success achieved by the POHAP and HKHT programs and their contribution to increasing dental care for young children.

³⁰ California Dental Association. 2011 Policy Manual. Page A-12. Retrieved May 2011 http://www.cda.org/library/cda_member/policy/policy_ manual.pdf

³¹ For additional information: Young, D.A., Featherstone, J.D.B., & Roth, J.R., (2007). Caries Management by Risk Assessment (CAMBRA). California Dental Association Journal. 35:777. Also available at http://www.cda.org/library/cda_member/pubs/journal/jour1007/index.html. http://www.cdafoundation.org/who_we_are/publications/cda_journal_november_2007/

Workforce Capacity: Phase 1

Background

In 2005, the Dental Health Aide Therapist (DHAT) program that provides dental care to Alaskan natives on tribal lands focused national attention on the dental workforce. This focus has been intensified over the past few years by several events and activities including:

- The American Dental Hygienists' Association proposal for a Master's level, independent Advanced Dental Hygiene Practitioner (ADHP)
- The Institute of Medicine's (IOM) convening of a workshop to examine the "U.S. Oral Health Workforce in the Coming Decade"; their subsequent report released in August 2009; and their convening of two Workgroups in 2010 to study the status and delivery of oral health care in the U.S.
- Federal legislation that focuses on expanding the dental workforce, including Children's Health Insurance Program Reauthorization (CHIPRA) and the Patient Protection and Affordable Care Act (ACA)
- The creation of two new dental providers in Minnesota- a dental therapist and an advanced dental therapist
- The W.K. Kellogg Foundation's efforts to promote dental therapists in the U.S. through funding DHAT education at the University of Washington, and coalition building to create a new dental provider in Washington, Ohio, New Mexico, Kansas and Vermont
- The W.K. Kellogg Foundation's and the Josiah Macy Jr. Foundation's joint grant in 2010 to the American Association of Public Health Dentistry to develop a two-year curriculum for a dental therapist, and Kellogg's additional grant for three supplemental projects to answer questions related to the accreditation, licensing and integration of dental therapists in the U.S.
- The Pew Center on the States' National Children's Dental Campaign, which in part focuses on developing a new dental provider, is now in contract with the Children's Partnership in California to develop a new dental provider for children.

The IOM committee's description of the concern is consistent with much of the literature that fuels current efforts to reshape the dental delivery system and the team that provides dental care:

"The oral health system still largely depends on a traditional, isolated dental care model in the private practice setting – a model that does not always serve significant portions of the American population well."³²

The first part of the recommendation with regard to the dental workforce occurs in Phase 1 (the second part is in Phase 3) and considers several factors. The recommendation acknowledges that CDA policy is committed to dentists leading the provision of care in a single integrated system of oral health care; supports programs that improve the delivery of oral health care to California's underserved populations; and encourages the use of well-trained dental team members in the provision of care.³³ Moreover, the recommendation is the result of a two-year research project by CDA's 10-member Workforce and Forecasting Research Task Force (Task Force) that engaged in a detailed study of the capacity and economics of the California dental delivery system and dental workforce models.

After analysis of the research, the Task Force concluded:

- The capacity does not exist in California's current dental delivery system to care for the 30 percent of Californians who suffer a disproportionate burden of dental disease.
- Significant need calls for significant change; a comprehensive and multifaceted approach will be necessary, employing many strategies that individually and together address multiple barriers.
- Additional dental providers who provide basic preventive and restorative oral health care to low-income children, in or close to where they live and go to school, when included as part of a comprehensive approach to reducing barriers, has the potential to reduce the disease burden in the population most in need. These providers must be part of an integrated system that provides access to comprehensive care with the dentist as the head of that system.

Significant to its recommendation, the Task Force also found that:

• Community health workers have proven beneficial in improving health outcomes in the communities in which they live and work.

³² Institute of Medicine of the National Academies, Committee on an Oral Health Initiative, Board of Health Care Services. Advancing Oral Health in America. (April 2011). The National Academies Press. Washington D.C. (*Prepublication copy*)

³³ Ref: California Dental Association. 2011 Policy Manual. Retrieved April 2011 from http://www.cda.org/library/cda_member/policy/policy_ manual.pdf

• The safety and quality of irreversible dental procedures delivered by dental providers worldwide has not been established through qualified research. This research is needed to make an evidence-based recommendation with regard to dental workforce changes.

In view of these findings and conclusions, the following Task Force recommendations are incorporated into Phase 1 of this proposal:



Phase 2

School Based/Linked Oral Health Programs: Phase 2

Background

Children frequently miss school because of dental disease – the most common chronic disease of childhood.³⁴In 2007, California children reported missing an estimated 874,000 school days due to dental problems, costing school districts \$29.7 million.³⁵

California's school-based program, the Children's Dental Disease Prevention Program (CDDPP), was created in 1979 and annually served approximately 348,000 children from low income schools (schools where at least 50 percent of children are eligible for the federal free and reduced-price lunch program) in 31 counties. This program was funded by the State General Fund (\$3.3 million annually) and provided oral health education, screenings and referral, fluoride, and (in limited numbers) dental sealants. In 2009, funding for CDDPP was eliminated, leaving California without any organized program to deliver essential dental disease prevention to California's neediest children.

Widely available in other states, school-based/linked programs, increase the number of children receiving oral health care because they provide care to children where they spend most of their day - at school. These programs eliminate many of the barriers that keep underserved children from receiving care, including lack of parental understanding of need, inability to find a dentist who accepts the child's dental insurance, or inability of the parent to leave work to transport the child to the dentist.

Several federal entities offer best practices for school-based dental disease prevention programs, and in some cases grant funding, including the Centers for Disease Control and Prevention (CDC)³⁶ and the Association of State and Territorial Dental Directors (ASTDD).³⁷ To date, California has not taken advantage of federal funding for school-based dental disease prevention programs.

This recommendation recognizes the importance of shared responsibility between the state and counties. It proposes that counties develop, organize and implement oral health programs and the state establish requirements and provide technical assistance and oversight for them.

Workgroup recommendation: support the re-establishment and expansion of school-based/linked programs for low-income children, focusing first on prevention and oral health literacy, with a long-term goal of comprehensive care

access

³⁴ U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research. (2000) Oral Health in America: A Report of the Surgeon General. Rockville, MD.

³⁵ Pourat, N., Nicholson, G. (November 2009). Unaffordable Dental Care is Linked to Frequent School Absences. UCLA Health Policy Research Brief. Retrieved April 2011 from http://www.healthpolicy.ucla.edu/pubs/Publication.aspx?pubID=387

³⁶U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Division of Oral Health. School-based Dental Sealant Programs Retrieved April 2011 from http://www.cdc.gov/OralHealth/topics/dental_sealant_programs.htm

³⁷ Association of State and Territorial Directors. *Best Practice Approach Reports*. Retrieved April 2011 from http://www.astdd.org/best-practice-approach-reports/

The program would prioritize services for children with the highest need, emphasizing local partnerships and case management to ensure children receive the full scope of care required. To be financially sustainable, the program cannot rely on the State General Fund (as did the previous CDDPP); but must utilize all types of government funding such as Denti-Cal, Healthy Families, federal grants, and county funding.

Further, as it is most effective from both cost and health perspectives to *prevent* dental disease, early access for children is essential to reducing dental disease and the need for treatment. Partnerships with agencies responsible for the early care and education of children and parents, such as Women, Infants and Children (WIC), Early Head Start and Head Start, and state preschools, are essential and should be promoted as part of the proposed expansion.

Utilize Proven Technology: Phase 2

Background

People living in rural communities and those with developmental disabilities or other special needs often face considerable barriers to care. Collaborative technology is frequently used in medicine to support patient care in remote locations or when a physician cannot be available on site. Such technology, however, has not been widely adopted in dentistry. As defined in model statute developed by the Center for Connected Health Policy:

Telehealth is a mode of delivering health care services and public health that utilizes information and communication technologies to enable diagnosis, consultation, treatment, education, care management, and self-management of patients, at a distance from health providers. Telehealth allows services to be accessed when providers and patients are in different physical locations, facilitates patients' self-management and caregiver support for patients, and includes synchronous and asynchronous interactions.³⁸

Collaborations utilizing electronic communication hold significant potential to reach more people with preventive dental care, and bring more of them into the dental delivery system to receive comprehensive care.

Workgroup recommendation: support the expansion of quality and cost-effective technology solutions for providing oral health services to those who face difficulties accessing the dental office

Models are emerging that demonstrate the value of distance collaboration in dentistry. The Community Health Aide Program (CHAP) in Alaska links health professionals in over 170 remote villages with medical and dental providers in "hubs" located in population centers.³⁹ This program has effectively provided health care services to Alaska natives for over 40 years. Since 2006, Dental Health Aide Therapists (DHAT) (just one of the health aides in CHAP) have provided dental care in remote villages under the supervision of dentists located off- site through electronic communication.

In California, a demonstration project is currently testing dental hygienists and dental assistants working in community settings, such as nursing homes and low-income schools.⁴⁰ The hygienist or assistant collects diagnostic information (e.g., X-rays, photographs, and charting) and electronically transmits these records for diagnosis to a supervising dentist located in the community. This arrangement allows patients, while still in the community setting, to receive assessments and preventive care immediately. Further, it facilitates the provision of more complex care by the dentist by completing record collection and treatment planning prior to arranging an appointment with or transporting the patient to a local dentist for comprehensive care.

Collaborations based on electronic exchange of information are just one of the many approaches that hold potential to expand care in meaningful ways to those most challenged to obtain it in traditional settings.

³⁸ Center for Connected Health Policy. (February 2011). Advancing California's Leadership in Telehealth Policy. A Telehealth Model Statute & Other Policy Recommendations.

³⁹ For program information: Alaska Community Health Aide Program. Retrieved April 2011 from http://www.akchap.org/GeneralInfo.cfm.

⁴⁰ University of the Pacific, Arthur A Dugoni School of Dentistry. (2010) Virtual Dental Home Demonstration Project. Retrieved June 2011 from: http://dental.pacific.edu/Community_Involvement/Pacific_Center_for_Special_Care_(PCSC)/Projects/Virtual_Dental_Home_ Demonstration_Project.html

Expand Early Prevention Through Reimbursement Incentives: Phase 2

Background

California's Medicaid program, known as Medi-Cal, is the largest in the nation, serving over 6.8 million adults. In 2009-10, program costs totaled \$37 billion, \$25 billion of which was paid for by the federal government.⁴¹ Since the program's inception more than 40 years ago, low-income families, frail elderly, and people with disabilities have primarily received dental care through Denti-Cal. Denti-Cal expenditures account for less than 1.5 percent of California's Medicaid budget.⁴²

California has faced a decade of shrinking budgets and Denti-Cal program funding has decreased significantly during this time. Reimbursement rates are now among the lowest in the nation and administrative requirements designed to reduce fraud and lower costs have increased the burden on dentists who participate. Additionally, the state initiated a series of program benefit restrictions to the adult dental program in 2003 that eventually led to the elimination of all but emergency dental care for adults in 2009.

Prior to changes that began in 2003, the Denti-Cal program budget was approximately \$800 million per year – \$400 million in General Fund dollars and \$400 million in federal dollars. By contrast, Denti-Cal expenditures for fiscal year 2009-10 were estimated at \$482 million, with just \$175 million coming from the State General Fund.⁴³

A 2010 California Health Care Foundation report notes that only 24 percent of California's private dentists accept Denti-Cal reimbursement, down from 40 percent in 2003.⁴⁴



Evidence from the Washington State Access to Baby and Child Dentistry (ABCD) program, initiated in 1995, demonstrates that early prevention programs and enhancement of targeted Medicaid reimbursements are effective in increasing the percentage of very young children who receive dental care, lowering caries rates among those children and reducing overall costs.⁴⁵ In recognition of this, the ABCD program was named a "best practice" by the American Academy of Pediatric Dentistry in 2000. It was also selected by the Association of State and Territorial Dental Directors as one of their "best practices."⁴⁶

⁴⁶ Ibid

⁴¹ Department of Health Care Services. Medi-Cal Expenditures by Service Category Fiscal Year 2009-10. Retrieved May 2011 from

⁴² Ibid
⁴³ Ibid

⁴⁴ California Health Care Foundation. (May 2010). Denti-Cal Facts and Figures. Retrieved April 2011 from http://www.chcf.org/ publications/2010/05/dentical-facts-and-figures.

⁴⁵ Washington Access to Baby and Child Dentistry. Retrieved April 2011 from www.abcd-dental.org

Recommendation "A," a targeted approach to Denti-Cal reform that limits and directs enhanced reimbursement, acknowledges that California's fiscal situation makes significant Denti-Cal rate increases or substantive reductions in administrative requirements unlikely any time in the near future. Further, this recommendation is consistent with an approach to direct resources where they are most effective — early prevention. Finally, this objective occurs in Phase 2 in order to allow sufficient time to establish a State Office of Oral Health (see Phase 1 recommendation) that can advocate for Denti-Cal program changes within the Administration and for California to begin to recover from the current economic recession so that this type of program change can be given due consideration.

Recommendation "B" recognizes that promoting best practices for risk assessment and dental disease prevention in young children is important, regardless of a child's dental care payer source.

Fluoridation: Phase 2

For general background discussion on community water fluoridation, see Phase 1 fluoridation recommendation.



Fluoridation remains key to dental disease prevention in all sectors of the population. As challenges to community water fluoridation (CWF) are likely to continue, support for CWF must be consistent and ongoing to maintain optimal fluoridation throughout California. Additionally, educating the public and policy makers on the benefits of CWF is vital to continued success of this objective.

Phase 3 Adult Dental Care: Phase 3

Background

When the federal government established Medicaid in 1965, California initiated an adult dental program for its Medicaid beneficiaries – Denti-Cal. Over the years, Denti-Cal has provided comprehensive preventive and restorative care to millions of low-income and disabled adults in California.

Since 2000, however, the Denti-Cal program has undergone substantial changes that were primarily intended to lower program costs and reduce fraud. These changes have reduced benefits and added additional claim requirements (2003); limited the annual individual benefit to \$1800 (2006); and proposed fee reductions (2006, 2008, and 2009). Throughout this period, CDA has worked with dentists, policymakers, health advocates, and legislators to protect the essential components of the adult dental program. However, in 2009, multi-year, multi-billion dollar state budget shortfalls resulted in the elimination of all but emergency services for adults.

Most other state Medicaid programs have also severely limited their adult dental programs. As of 2010, all but nine states provided limited, emergency, or no dental care for adults.⁴⁷ During this same period, there have been advocacy efforts at the federal level to require adult dental coverage in the Medicaid program. Notably, the American Dental Association policy on adult Medicaid Dental Services supports "the inclusion of adult dental services in the federal Medicaid program" and proposes that "adult coverage under Medicaid should not be left to the discretion of individual states but rather, should be provided consistent with all other basic health care services."⁴⁸



While scientific evidence strongly supports that oral health and overall health are inextricably linked,⁴⁹ decisions have nevertheless been made to eliminate adult dental benefits for Medicaid beneficiaries. Cardiovascular disease and diabetes, two of the most costly and difficult chronic conditions to manage, are negatively impacted by uncontrolled dental disease. Pressure within the healthcare system to reduce costs and more effectively manage chronic diseases is likely to create the need to provide dental care to adults to improve overall health, not just oral health. Coupled with national healthcare reform and ongoing oral health advocacy at the federal and state levels, these pressures could very well lead to dental coverage becoming a benefit for adult Medicaid beneficiaries again in California within the next five to 10 years.

This recommendation is included in Phase 3 to provide ample time to focus resources on children first, to allow adequate time for federal Medicaid policy or Medi-Cal to once again provide a funding stream for adult dental care, and to develop a functional network of providers and successful models of care.

⁴⁷ American Dental Association. Adult Dental Benefits in Medicaid: FY 2002-2010

⁴⁸ American Dental Association Policy 2004:327. Retrieved May 2011 from http://www.ada.org/sections/about/pdfs/doc_policies.pdf.

⁴⁹ Barnett, M. The oral-systemic disease connection. Journal of the American Dental Association. Vol 137, No suppl_2, 5S-6S

Hospital Based Treatment: Phase 3

Background

California's hospital emergency rooms (ER) are ill-equipped to respond to patients presenting with treatable dental conditions. On average, more than 80,000 people visit California's ERs each year for preventable dental conditions.⁵⁰ These visits average \$172 per visit without a hospital stay and more than \$5,000 per visit when hospitalization is required.⁵¹ Further, without dentists or clinical dental facilities on-site, ERs are only able to recommend treatment from a dentist and provide prescriptions to alleviate pain and infection. Many of these patients, however, lack the resources to obtain private dental care. This often results in repeated visits to the ER –a costly and inefficient use of resources.

Other states, most notably New York, have a network of hospitals equipped with clinical dental facilities and staffed by dental residents capable of providing dental care both to ER patients and hospitalized patients in need of dental care. The ability of the hospital to provide dental care benefits the patient, reduces the time medical staff spends on dental-related conditions and reduces the need for repeat visits. Additionally, hospitals with the capability to provide clinical dental care have the ability in-house to assure that patients requiring medical surgical procedures (e.g., cardiovascular surgery or organ transplant surgery) are free of dental infections prior to surgery. Without the capacity to provide dental care directly, required medical treatment may be postponed, sometimes for long periods, while waiting for dental infections to be treated.

Dental residents traditionally staff hospital dental clinics. This mirrors medicine, where medical residents receive advanced training in patient care while hospitals' overhead costs for the care provided by clinicians are significantly reduced. The federal government recognizes the value of this relationship as well, supporting hospital residency programs for medical and dental residents through Graduate Medical Education (GME) funding.⁵²



It is important to recognize the value to patients, new dentists, and hospitals when hospitals have on-site clinical dental facilities staffed by dental residents. This Phase 3 recommendation seeks to impose a requirement that hospitals dedicate space for dental services if or when their facilities are expanded or new ones are built. This recommendation is related to and supports the next Phase 3 recommendation to require a post-graduate year of residency for dental licensure in California.

⁵⁰ Maiuro, L.S., Health Management Associates. (March 2009). Emergency Department Visits for Preventable Dental Conditions in California Retrieved April 2011 from http://www.chcf.org/publications/2009/03/emergency-department-visits-for-preventable-dental-conditions-incalifornia.

⁵¹ Ibid

⁵² Glassman, P. (2010). Advanced Dental Education Programs: Status and Implications for Access to Care in California. See Commissioned Research.

Workforce Capacity: Phase 3

For general background discussion on the dental workforce, see Phase 1 workforce recommendation.

Background

In the past 30 years, numerous national organizations and commissions, including the American Dental Association, the American Dental Education Association, Pew Charitable Trusts, the U.S. Health Resources and Services Administration, and the Institute of Medicine have called for expanded or required postdoctoral education for dental graduates. The thrust of this has been primarily the need for further education of dental graduates in order that they are prepared to treat a progressively more complex patient population in the increasingly complex field of dentistry. Of additional benefit is the impact on the public health system of care. Like medical residency programs, which have long provided a low cost workforce for hospitals, dental residents could expand hospitals' capacity to provide dental care (see Phase 3 objective to increase capacity of hospitals to provide dental care).

CDA-commissioned research found that primary care residencies in dentistry provide a positive experience for new dentists and have the potential to positively affect access to dental care in California.⁵³ Additional report findings include:

- A 2002 analysis of the impact of Post Doctoral General Dentistry (PGD) training concluded that PGD training has an enduring impact on practice patterns and improves access to dental care for underserved populations.
- A 2004 comparison of various workforce strategies by the Center for California Health Workforce Studies at the University of California, San Francisco concluded that the strategy with the largest potential for increasing oral health services to underserved populations was a required year of "service and learning" in an accredited residency program.

The research also noted that there are challenges to requiring dental graduates in California to complete a residency program. One of the more commonly expressed concerns is that there is inadequate residency capacity to train all of California's dental school graduates; though the research also notes that solutions are available for developing and financing the necessary expansion.



The recommendation to return to a focus on the dental workforce in Phase 3 is based on the premise that implementation of Phase 1 and 2 strategies will maximize the capacity of the existing dental workforce and reduce the burden of dental disease through best practices in early disease prevention and care. Phase 1 also initiates research on the safety, quality, patient satisfaction, and cost effectiveness of multiple types of dental providers caring for children in defined public health settings. This Phase 3 dental workforce recommendation takes into consideration that five to seven years after initial implementation of the proposal allows sufficient time for additional research proposed by the Task Force in Phase 1, and

⁵³ Glassman, P. (2010). Advanced Dental Education Programs: Status and Implications for Access to Care in California. See Commissioned Research.

the impact of early initiatives, to be evaluated. Any Phase 3 recommendations related to the dental workforce and delivery system changes would be based on validated evidence obtained through the research proposed in Phase 1.

Additionally, the recommendation to support a required post-graduate residency year for dental licensure in California is positioned in Phase 3 to give ample time for dental schools, students and residency programs to do the planning required for implementation.

SECTION 4: Workforce and Forecasting Research Task force Report



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Introduction

In an effort to find meaningful solutions to improve the oral health status of all Californians, CDA has authorized a series of research activities over the past several years, focusing on the approximately 30 percent of the California population that experiences difficulty accessing oral health care.

Within the scope of access to care discussions, activities at the state and national levels have raised the specter of dental workforce changes, leading CDA to establish a volunteer body to learn more. The Workforce and Forecasting Research Task Force, an extension of a previously existing Forecasting Research Workgroup, was appointed specifically to study the dental workforce in the U.S. and internationally to ensure that CDA has a comprehensive body of knowledge upon which to engage with others to find evidenced-based, meaningful solutions to reduce barriers to oral health care.

The specific focus of this document is a summary of the completed work and the recommendations of the Workforce and Forecasting Research Task Force appointed to fulfill the directive of the 2008 CDA House of Delegates per Resolution 36S1-2008-H.

Background

National Attention On Dental Workforce

National attention on the dental workforce, set in motion in 2005 when the Dental Health Aide Therapist (DHAT) began to provide care to Alaskan natives on tribal lands, has intensified over the last few years due to several events and activities, including:

- The American Dental Hygienists' Association proposal for a Master's level, independent Advanced Dental Hygiene Practitioner (ADHP)
- The Institute of Medicine's (IOM) convening of a workshop to examine the "U.S. Oral Health Workforce in the Coming Decade," their subsequent report released in August 2009, and in 2010, their convening of two workgroups to study the status and delivery of oral health care in the U.S.
- Federal legislation that focuses on expanding the dental workforce, including Children's Health Insurance Program Reauthorization (CHIPRA) and the Patient Protection and Affordable Care Act (ACA)
- The creation of two new dental providers in Minnesota- a dental therapist and an advanced dental therapist
- The W.K. Kellogg Foundation's efforts to promote dental therapists in the U.S. through funding DHAT education at the University of Washington, and coalition building to create a new dental provider in Washington, Ohio, New Mexico, Kansas and Vermont
- The W.K. Kellogg Foundation's and the Josiah Macy Jr. Foundation's joint grant in 2010 to the American Association of Public Health Dentistry to develop a two-year curriculum for a dental therapist, and Kellogg's additional grant for three supplemental projects to answer questions related to the accreditation, licensing and integration of practice of dental therapists in the U.S.
- The Pew Center on the States' National Children's Dental Campaign, which in part focuses on developing a new dental provider, now in contract with the Children's Partnership in California to develop a new dental provider for children

CDA Directives In Response To The Focus On Dental Workforce

In 2000, the report: Oral Health in America: A Report of the Surgeon General described the nature and scope of oral health disparities, turning national attention to improving access to dental care. In 2002, the CDA House of Delegates approved a Position Paper on Access to Care affirming CDA's commitment to the public's oral health. Included in this paper are the following guidelines and recommendations regarding the availability of dental care providers:

The California Dental Association will promote and support an increase in the availability of providers who participate in and deliver oral health care to California's underserved and special needs populations. Additionally, CDA will promote and support the expansion of the public health infrastructure and public/private partnerships to ensure a "safety net provider network" to provide treatment for underserved, special needs and at-risk populations. Efforts to expand public health infrastructure will be primarily focused in geographic areas or in special needs populations that the current dental delivery system, which relies heavily on private practice dental offices, is having difficulty reaching.

The California Dental Association will advance programs designed to encourage the location of dental care professionals in isolated and/or underserved geographic regions throughout the state, as well as supporting licensure statutes dealing with licensure by credential and scope of practice flexibility.

The California Dental Association will support and promote dental, dental hygiene and dental assisting educational programs designed to increase the number of providers who practice in underserved areas and/or treat special needs populations. The development of new or the expansion of existing traditional and non-traditional allied training programs designed to meet the need for increased allied dental personnel will be encouraged and supported by CDA.

All efforts related to scope of practice and licensure will be undertaken with an understanding and acknowledgment of the importance of appropriate education and training.

Since 2006, CDA and the CDA Foundation have been engaged in a multi-year effort with The Nicolas C. Petris Center, University of California, Berkeley School of Public Health, to conduct research on the delivery of oral health services in California. CDA formed a Forecasting Research Workgroup, as a subcommittee of the Policy Development Council (PDC), to oversee this work. Between 2006-2008, the group completed the following foundational studies:

- "The Demand for Dental Care and Financial Barriers in Accessing Care Among Adults in California"
- "The Effect of Functional Limitations on the Demand for Dental Care Among Adults 65 and Older"
- "Adult Oral Health Status in California, 1995-2006: Demographic Factors Associated With Tooth Loss Due to Disease"
- "The Oral Health Status of Adults 65 and Older in California: 1995-2006"

In 2008, as concern over oral health disparities continued to receive attention in the state and nationally, the CDA House of Delegates adopted Resolution 36S1-2008-H, which directed CDA to consult with a "cross section of those providing care or are knowledgeable about providing care to underserved populations" to find meaningful solutions to improve access to dental care.

In March 2009, the research workgroup reported to the Board of Trustees on the progress of the various research projects and suggested additional areas of study to provide the data from which solutions could be crafted. Further, given the amount of workforce-specific activity occurring nationally, it was recommended that research involving proposed changes to the dental workforce be examined. CDA President Carol Summerhays appointed a 10- member Workforce and Forecasting Research Task Force (Task Force) to conduct this work.

Workforce And Forecasting Research Task Force Members

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Task Force Project

Scope Of Work

The Task Force's authorized project objectives were to:

- 1. Examine the capacity and effectiveness of the dental delivery system in California and the economics of dental workforce proposals;
- 2. Propose options to workforce and delivery models that have the potential to improve access to care for underserved Californians; and

Project Success Criteria

The Task Force's project success criteria are:

- Produce research results on the capacity and efficiency of current dental delivery system; the impact of workforce models on private dental practice; and the economics and sustainability of proposed workforce models
- Complete an analysis of existing and proposed dental workforce models, including safety and quality, for their potential to improve oral health care to underserved populations in California
- Develop specific and targeted recommendations for inclusion in a comprehensive Access to Oral Health Care analysis conducted by the PDC

Research Agenda

In order to achieve the defined objectives, the Task Force undertook a comprehensive research agenda, relying on several formal commissioned studies and a series of presentations from experts and other relevant contributors representing the spectrum of dental workforce perspectives (See Section 6).

The formal research commissioned by CDA sought greater understanding of the capacity and efficiency of current dental delivery system; the economics, sustainability, safety and quality of proposed workforce models; and the impact of workforce models on private dental practice. The studies are outlined as follows:

Service Capacity And Provision Of Care

Description: A review of the current California dental delivery system capacity to address unmet dental care needs. Research questions include:

- 1. What is the percentage of the population currently receiving dental care?
- 2. What is the maximum possible service output from existing dental practices?
- 3. What specific areas, if any, of technical inefficiency exist in the dental care system?

Economics

Description: Research on the economics of workforce models, including feasibility, sustainability and potential impact on private practice dentists. Two studies were commissioned:

- 1. A financial analysis of the feasibility and sustainability for proposed new workforce categories, intended to answer the following key questions:
 - a. What is the cost of training and the corresponding educational debt for the practitioner?
 - b. What compensation is necessary for the practitioner to ensure a sustainable career path?

- c. What are the start up capital costs to ensure initial deployment of a new practitioner?
- d. What are the material and supply costs associated with the provision of ongoing care?
- e. What is the likely ongoing financial overhead expense for the practitioner?
- f. How likely is it that the new practitioner could be recruited from a culturally/socioeconomically diverse background?
- 2. An econometric model to estimate the impact of the introduction of additional dental care providers (dentists and hypothetical new categories) on private practice dentists' income. Research questions include:
 - a. What is the relative economic value produced by each of three hypothetical allied dental personnel (HADP) categories relative to the economic value produced by the average private practice dentist?
 - b. What is the impact on the earnings per hour of private practice dentists from the entry of additional private practice dentists into the dental labor market?
 - c. What is the hypothetical impact on the earnings per hour of private practice dentists from the entry of HADP into the dental labor market?

Safety & Quality

- 1. Systematically evaluate the available evidence in relation to the safety and effectiveness of procedures performed by non-dentist providers;
- 2. Evaluate the cost-effectiveness of the procedures performed by non-dentist providers;
- 3. If possible, using meta-analysis, evaluate the overall safety and effectiveness of the irreversible procedures performed by non-dentist providers.



This research analyzed the technical efficiency of private practice dentists and safety net dental providers in California as a means of measuring the capacity of the system to provide care. Technical efficiency is defined as the maximum amount of output (*e.g.*, dental visits per week, patients seen per day) that can be produced from a given set of inputs (*e.g.*, dentists, operatories, dental hygienists, dental assistants, and office staff).

Key findings:

- There is virtually no excess capacity among general and pediatric dentists (96.5 percent efficiency) and only a small amount of excess capacity among specialists and safety net providers.
- The practice patterns of dentists are quite stable when analyzed over the long term. Though the current economic recession and recent elimination of optional services for adults under Denti-Cal have likely created temporary excess capacity among private dental practices, market forces stabilize this effect over time and result in adjustments that keep practices profitable.
- Without significantly changing the practice patterns of dentists, the maximum percentage of the California population that the dental care system in California can currently serve is approximately 70 percent.

This study assessed the economic viability of alternative practitioner models (DT, DHAT, ADHP)¹ for provision of dental care to the underserved. The assessment for each practitioner included evaluation of compensation levels, cost of training, cost of practice, estimated productivity, and potential revenue using three payor mix scenarios.

Key findings:

- Utilizing DT or DHAT practitioners is a cost-effective approach but will require some subsidy or more sustainable reimbursement basis than modeled. Without tuition subsidies, the debt burden on potential practitioners made the practice unfeasible.
- The magnitude of the difference in expense for the ADHP clearly indicates that, based on economics alone, this practitioner model would not be implemented.
- With encounter-based reimbursement of \$125, both the DT and DHAT are viable, but the ADHP is not.
- Intensive technical training programs, such as the DT/DHAT program, can effectively train quality practitioners in a short period of time and reduce the cost of providing dental services in low-access areas. Compared to the ADHP, they offer a more rapid response to the current access issue.
- Beyond the economics, policies and approaches must be in place to successfully recruit and retain practitioners. Creating a pipeline of nontraditional applicants and limiting their scope of practice is key to retaining practitioners.

¹ Model assumes the following: Dental Therapist (DT) treats only children, Dental Health Aide Therapist (DHAT) and Advanced Dental Hygiene Practitioner (ADHP) treat children and adults; DTs and DHATs have 18-24 months technical education and training and required preceptorship, ADHP is graduate level education (72 months) at a University. For additional assumptions, review ECG Management Consultants (April 2010) *Workforce Model Feasibility* Study (see Commissioned Research).



The Impact of Additional Private Practice Dentists and Hypothetical Allied Dental Personnel on the Earnings per Hour of Current Private Practice Dentists

Timothy T. Brown, PhD, **Sun-Soon Choi**, MS, and **Jessica Chung**, PhD, **Nicholas C. Petris** Center on Health Care Markets and Consumer Welfare, School of Public Health, University of California, Berkeley

This study sought to determine the impact additional providers of dental care have on the income of private practice dentists when such providers enter the market as potential competitors, rather than as collaborators within a dental practice. The study evaluated the impact of additional general dentists, pediatric dentists and potential new members of the dental workforce, referred to in this study as hypothetical allied dental personnel, or HADPs.

Key findings:

- Additional dental providers entering the dental labor market have very little impact on the income of current private practice dentists.
- Additional general dentists have the greatest negative effect on the income of other general dentists, but the effect is very small: income is reduced by approximately one-quarter of 1 percent per the entrance of one dentist per 100,000 population (approximately 382 dentists in California).
- The entrance of pediatric dentists, or HADPs who serve only children, into the dental labor market has a very small positive impact on the earnings per hour of all dentists. Some likely explanations for this phenomena are: since those who exclusively care for children serve as a gateway, they bring new patients into the dental care system and these children eventually migrate to the care of general dentists as they age; parents who may have previously neglected their own dental health may begin to seek care for themselves; additionally, many pediatric dental providers in a community may raise the awareness of the importance of children's dental care and bring benefits to neighboring pediatric dental practices. This very small positive effect on all dentists is projected to cease and then become a very small negative effect after the addition of approximately 650 pediatric dentists or 5,000 HADPs in California (using 2008 figures).
- The entrance of general dentists, or HADPs who serve children and adults, has greater negative effects on the earnings of currently practicing pediatric dentists than on general dentists, though the negative effects are very small in both cases. This is likely due to general dentists referring children to pediatric dentists at very low rates because they are providing the care to the children of their adult patients who may otherwise be served by pediatric dentists.
- Those who serve all uninsured or publicly insured patients are not negatively affected by the entrance of additional dental providers because there are currently more uninsured or publicly insured patients than there are providers to provide care to these groups.



Are Procedures Performed by Dental Auxiliaries Safe and of Comparable Quality? A Systematic Review

A.P. Dasanayake, B.S. Brar and V.K. Ranjan, Department of Epidemiology and Health Promotion, New York University College of Dentistry, and S. Matta, Department of Adult Dentistry, Faculty of Dental Medicine, Columbia University, Harlem Children's Health Projecty

This report observes that non-dentists were introduced into the dental workforce around the world in the 1920s and have performed both reversible and irreversible procedures with varied levels of training and under differing supervision levels for nearly 100 years. The objective of this study was to systematically evaluate the existing evidence in relation to the safety, quality, productivity or cost-benefit, and patient satisfaction of the procedures performed by dental providers worldwide.

The researchers conducted a systematic literature review using the guidelines given in the Preferred Reporting Items for Systematic Reviews and Meta-Analysis: The PRISMA Statement. The level of evidence within each accepted study was graded using the modified Strength of Recommendation Taxonomy (SORT) as published in the *Journal of Evidence Based Dental Practice*.

The authors conclude that while there are high quality studies comparing *reversible* procedures (such as dental sealants), there are no studies with a high level of evidence demonstrating the safety of *irreversible* procedures performed by non-dentist providers compared to dentists. They note that "the quality of the irreversible procedures is at best inconclusive due to numerous methodological deficiencies of these studies . . ." and recommend a fully powered randomized controlled trial to obtain valid estimates related to safety, quality, costbenefit, as well as patient satisfaction related to the procedures performed by non-dentist dental providers.

Expert Presentations

The Task Force research agenda also included numerous presentations by speakers with workforce expertise, interest in the dental workforce, research and experience with alternative dental workforce models, as well as others with expertise or research relevant to the Task Force's objectives. The following presentations were received by the Task Force (See Section 6).

- 1. David A. Nash, DMD, MS, EdD, University of Kentucky. *Pediatric Oral Health Practitioner Model; and Contemporary Views of Justice and the Social Contract*
- 2. Julie Satur, PhD, Melbourne Dental School, The University of Melbourne. Australia Dental Therapist/ Oral Health Therapist Model
- 3. Dave Hemion, Assistant Executive Director, Washington State Dental Association (WSDA). WSDA's proposed dental therapist model (verbal)
- 4. Louis Fiset, DDS, Medex Northwest, University of Washington School of Medicine. Alaskan Dental Health Aide Therapist
- 5. Cindy Lyon, DDS, Chair, Department of Dental Practice, University of the Pacific. Statutes, practice and education of three dental hygiene providers: Registered Dental Hygienist, Registered Dental Hygienist in Alternative Practice; and proposed Advanced Dental Hygienist Practitioner
- 6. Joan Greenfield, RDAEF, MS, Director, Department of Continuing Education, Sacramento City College. Extended Function Dental Assisting Education in California (verbal)
- 7. Martin C. Courtney, DDS, San Fernando Valley Dental Society: Accomplishing meaningful increased access to dental care for underserved populations utilizing the current workforce (verbal)
- 8. James J. Crall, DDS, ScD, AAPD and Head Start Child Advocate. Perspectives on Dental Workforce Movements
- 9. Neil Croucher, BDS, Oral Health Advisor and Clinical Director, Northland District Health Board. New Zealand School and Community Oral Health Program
- 10. Susan Bauer, MA, MPH, Executive Director Community Health Partnership of Illinois. *Increasing* Access to Oral Health Care for Vulnerable Populations through Community Health Workers
- 11. Dunn Cumby, DDS, and Marsha Beatty, University of Oklahoma: ADA Community Dental Health Coordinator
- 12. Paul Glassman, DDS, MA, MBA, Professor of Dental Practice, and Chair, Pacific Center for Special Care, University of the Pacific, Arthur A. Dugoni School of Dentistry. *Dental Residencies*
- 13. Mike Helgeson, DDS, CEO, and Susan Voight: Apple Tree Model in Minnesota; Dick Gregory, DDS, San Mateo Dental Society: San Mateo's proposed project with Apple Tree

Research: Key Policy Implications

The Task Force's analysis of the commissioned research and presentations reveals several important policy implications.

The key finding of the **research on the capacity of the current California dental delivery system** is that the system has remained quite stable when viewed over the long-term and can meet the oral health needs of approximately 70 percent of Californians. While acknowledging contractions and expansions occur with economic cycles, the findings indicate that the majority of dentists are practicing the number of days and in a practice size that is reasonable to meet their professional needs. It is not likely that dentists would add the additional hours or days necessary to treat the low-income or disadvantaged populations who are not now receiving care (estimated at 30 percent). Without wholesale change to dental practices in California, there is limited capacity to treat additional patients.

Additionally, it should be recognized that many patients who do not receive dental care now often face multiple barriers to getting to a traditional private dental office for that care. Consequently, if some measure of excess capacity exists in the California dental delivery system as a whole, or in a particular dental office individually, it does not mean it will be, or can be, filled by patients in need of care. Therefore, policy recommendations should include strategies to substantially expand the current delivery system and/or develop new systems or settings to provide dental care.

Research on how *additional providers of dental care impact private dental practice income* finds that additional providers entering the dental labor market are projected to have a very small impact on private dental practice income, regardless of the specific provider type introduced, though additional general dentists are likely to have the greatest negative impact. The research also showed that additional pediatric dental providers (dentists or another category of provider who treats only children), have a very small but positive impact on the income of private practice dentists as they serve as a gateway into care. These findings indicate that with dental benefit coverage for children expected to grow substantially by 2014, focusing new dental providers on children's care holds the most promise for sustainability in both the private and public sectors. The findings also indicate that the introduction of new dental providers into the system will be most effective at reaching populations that are now not well served, and will have the least impact on the existing system, if statute or regulations direct them into the public sector.

The *economic modeling of new workforce categories* study notes that both the dental practice model and individual practitioner economics must be sustainable. Further, the authors report that clinical dental education and training is very expensive and results in a large debt burden for students, regardless of the type of dental provider being trained. Length of education and debt burden are of significant concern when assessing the feasibility and sustainability of any new model, especially when the goal is for that provider to provide care at the lowest possible cost. The report also notes that there are significant advantages to drawing from the populations and geographic areas that are in need of care. These findings lead the authors to conclude that the ADHP model, which requires a dental hygienist with a bachelor's level education for program entry, is the most expensive proposed new provider to educate and draws from a predetermined (restricted) pool of applicants, and therefore would not be recommended.

Further, the policy recommendation that may be drawn from this report is that the type of new dental provider most likely to provide care to underserved populations and to be sustainable over time would be recruited from the geographic areas or underserved populations in need of more dental services; would be trained in the most efficient, shortest program to safely and competently provide care within established scope; and would have practice restrictions that place them in public health settings that receive the types of subsidies public health receives now, including an encounter-based reimbursement system.

Research into the safety and quality of dental care by dental providers worldwide concluded:

Available evidence is sufficient to conclude that the non-dentist providers are capable of providing safe and high quality reversible procedures while enhancing the productivity of the practices. Patients have generally shown satisfaction with their performance. However, the evidence in relation to the irreversible procedures related outcomes are insufficient and there is a need for further investigations using adequately powered and well designed randomize control trials and other large observational studies. As the authors conclude that a significant research gap exists with regard to the provision of irreversible procedures in dentistry, the policy implication from this study is that rigorous research should be undertaken to provide high-quality evidence that, at a minimum, answers questions with regard to the safety and quality of irreversible procedures provided by all dental providers.

Task Force research also included significant *testimony from a wide range of experts* within dentistry and with dental workforce experience. Some key influencers in this body of work include:

- Dr. David Nash's ethics presentation, advancing the position that a basic principle of American life is to provide all children equal opportunity to succeed; further, it is society's responsibility to direct limited resources to the most vulnerable among us and those are children.
- Diane Cummins' report on the state of oral health in California, describing a lack of commitment that over the years has led to an almost non-existent state oral health program, low Medicaid rates, and a large number of Californians who live with untreated dental disease.
- Presentations by those involved with programs where non-dentists provide restorative dental care, such as Dr. Louis Fiset, DHAT training program at the University of Washington; Dr. Julie Satur, Oral Health Therapist educator at the University of Melbourne Dental School, Australia; and Dr. Neil Croucher, clinical dental director in the New Zealand school oral health program. All of these professionals are involved directly with programs utilizing alternative dental providers and spoke highly of the training received, provider competencies, and the contribution they make to lower rates of untreated disease.
- Presentations by dentists who feel strongly that the current workforce is adequate to meet the oral health needs of Californians and other strategies, such as improved Medicaid rates and oral health literacy programs, are more likely to improve oral health.

What is most evident about the expert testimony received, when taken as a whole, is that a wide variety of opinions exist; even experts in this field hold differing attitudes and draw contradictory conclusions when examining the validity of recommendations for dental workforce change. In view of this, the key policy implication that can be drawn from the expert testimony is that recommendations for dental workforce change must be well researched and evidenced-based.

Further, recommendations must support CDA's ability to execute its responsibilities to its members and the public consistent with CDA policy - policy that respects the dentist as the head of the dental team, leading the provision of care in a single integrated system of oral health care; supports programs that improve the delivery of oral health care to California's underserved populations; and encourages the use of well-trained dental team members in the provision of care.

Conclusions and Recommendations

The charge of the Task Force to complete an analysis of existing and proposed dental workforce models has produced a disciplined and comprehensive body of research on a topic that to this point in time has been largely influenced by conjecture, anecdotal evidence and individual experience. Moving forward, this research serves as an important resource as the dental profession, health access advocates, and policy makers seek meaningful and scientifically supported solutions to improve oral health.

As a result of these analyses, the Task Force finds:

- The large majority of Californians have access to excellent dental care.
- Approximately 30 percent of Californians face multiple barriers to accessing our dental care delivery system, resulting in significant untreated dental disease.^{2 3}
- The dental profession is not solely responsible for this situation; it is a shared societal responsibility of which the dental profession is a part.
- Proposed changes to the dental delivery system or the dental workforce in California must focus on the 30 percent of the population for whom access to dental services is a significant obstacle, while preserving the system that works well for the remaining 70 percent.
- As a learned and respected profession, dentistry enjoys the public's trust to address society's unmet oral health needs and to contribute to meaningful solutions.
- CDA has a long history and prides itself on taking the lead in finding solutions to challenges related to the profession and oral health.
- Being at the forefront in finding solutions optimizes the opportunity for solutions that work well for both the public and the profession.
- Children are the most vulnerable to economic disparities and other obstacles to accessing dental care and cannot make decisions for their own wellbeing.
- One in three of California's children, estimated at over 4.5 million children, qualify for Denti-Cal.⁴
- In 2007, 24 percent of California's dentists accepted Denti-Cal patients; fewer than 4000 of them bill more than \$10,000 in services annually.⁵
- Healthcare reform is expected to extend dental benefits to more than 1 million additional California children by 2014.⁶
- The greatest expansion of children's benefits is likely to occur in public programs.
- Capacity to provide care to these additional children does not currently exist within the dental delivery system in California.⁷
- Children's dental care programs⁸ are mandated and financially supported by the federal government, providing sustainability to strategies that expand care to children.
- Escalating costs, limited resources, and national healthcare reform create significant external pressures to create healthcare systems that provide care at the lowest cost.
- External pressures exist to expand the capacity to provide oral health care by developing a new dental provider category.^{9 10}
- Provider licensure restrictions (e.g. population, settings, etc.) ensure that dental providers work in settings most able to reach the 30 percent in need of care.¹¹
- Community health workers have proven beneficial in improving health outcomes in the communities in which they live and work.¹²

• The safety and quality of irreversible dental procedures delivered by dental providers worldwide has not been established through qualified research—research that is needed to make an evidence-based recommendation with regard to dental workforce changes.¹³

After full consideration of the research findings commissioned by CDA, expert opinion and professional responsibility, **the Task Force concludes:**

- The capacity does not exist to care for the 30 percent of Californians who suffer a disproportionate burden of dental disease.
- Significant need calls for significant change; a comprehensive and multifaceted approach will be necessary, employing many strategies that individually and together address multiple barriers.
- Additional dental providers who provide basic preventive and restorative oral health care to low-income children, in or close to where they live and go to school, when included as part of comprehensive approach to reducing barriers, have the potential to reduce the disease burden in the population most in need. These providers must be part of an integrated system that provides access to comprehensive care with the dentist as the head of that system.

In view of these conclusions, the Task Force recommends:

- 1. Initiatives be promoted that utilize community health workers, such as promotores, in local oral health programs to provide case management and other services that improve oral health and oral health literacy.
- 2. A scientifically rigorous study be undertaken to answer questions regarding the safety, quality, cost effectiveness, and patient satisfaction of irreversible dental procedures performed by traditional and non-traditional providers. Research parameters should include:
 - Public health settings
 - Multiple models of dentist supervision
 - Multiple pathways of education and training
 - Multiple dental providers, including dentists and non-dentists

Study Definitions:

- 1. Irreversible procedures:
 - a. Local anesthesia
 - b. Tooth preparation for, and placement and finishing of, direct restorations
 - c. Interim Therapeutic Restoration

⁴ Cummins, Diane. (April 2011). California Oral Health. See Commissioned Research.

⁸ For children's program information: *Insure Kids Now* http://www.insurekidsnow.gov/index.html

² Dental Health Foundation. (February 2006). Mommy, It Hurts to Chew: The California Smile Survey: An oral health assessment of California's kindergarten and 3rd grade children. Oakland, CA.: Author.

³ American Dental Association. (2006). Community Dental Health Coordinator Report; Based on 2000 US census. Chicago, IL.

⁵ Ibid

⁶ California Health Interview Survey (2007). http://www.chis.ucla.edu/

⁷ Brown T.T., Chung, J., Choi, S. (May 2011). The Capacity of the Dental Care System in California. See Commissioned Research.

⁹ The Children's Partnership. (2011). Children's Dental Workforce Campaign: A project to increase access to dental care for children. Retrieved April 2011 from http://www.childrenspartnership.org/AM/Template. cfm?Section=Home&TEMPLATE=/CM/HTMLDisplay. cfm&CONTENTID=14742

¹⁰ Cummins, Diane. (April 2011). California Oral Health. See Commissioned Research.

¹¹ ECG Management Consultants. (April 2010). Workforce Model Feasibility Study. See Commissioned Research.

¹² Bauer, S., Community Health Partnership of Illinois. (September 2010). Increasing Access to Oral Health Care for Vulnerable Populations through Community Health Workers. See Presentations.

¹³ Dasanayake, A. P. et al. (May 2011). Are Procedures Performed by Dental Auxiliaries Safe and of Comparable Quality? A Systematic Review. See Commissioned Research.

- d. Stainless steel crown placement
- e. Therapeutic pulpotomy
- f. Pulp cap, direct and indirect
- g. Extraction, primary teeth
- 2. Children: defined by the federal government through the Medicaid program: 0 to 21 years of age
- 3. Public Health Settings: FQHCs, Head Start, schools with >50 percent participation in the federal free and reduced-price lunch program
- 4. Traditional and non-traditional providers:
 - a. Dentists
 - b. Two-year trained dental therapist
 - c. Hygienist who has received the appropriate modular training on procedures listed above not currently within training/scope
 - d. RDAEF who has received the appropriate modular training on procedures listed above not currently within training/scope
- 5. Multiple models of dentist supervision: preceptorship followed by remote supervision; general supervision

The Task Force recommends that this research commence immediately and, consistent with CDA's commitment to an evidence-based process, when the research is complete, that the research results be used to guide any further action regarding the dental workforce.

SECTION 5: Appendices

- A. Glossary of Terms
- B. Workgroup and Task Force Members
- C. CDA House of Delegates Resolution 36S1-2008-H
- D. Commissioned Research S ummary
- E. Presentations Summary
- F. ADA Barriers to Dental Care Population Breakdown



Appendix A Glossary of Terms

Affordable Care Act (ACA) – A federal statute signed into law in March 2010 as a part of the healthcare reform agenda of the Obama administration. Signed under the title of The Patient Protection and Affordable Care Act, the law included multiple provisions that would take effect over a period of years, including the expansion of Medicaid eligibility, the establishment of health insurance exchanges, and prohibiting health insurers from denying coverage due to pre-existing conditions.

ASTDD – The Association for State and Territorial Dental Directors is the United States national non-profit organization representing the directors and staff of state public health agency programs for oral health.

California Children's Medical Services – A Branch of California state government that provides a comprehensive system of health care for children through preventive screening, diagnostic, treatment, rehabilitation, and follow-up services.

California Endowment – a private, statewide health foundation created in 1996 as a result of Blue Cross of California's creation of WellPoint Health Networks, a for-profit corporation.

CAMBRA – Caries Management by Risk Assessment represents a paradigm shift in dental science from the surgical/restorative treatment of caries to a medical model of disease prevention and management.

CDC – Centers for Disease Control and Prevention - CDC is one of the major operating components of the US Department of Health and Human Services. CDC provides expertise, information, and tools that people and communities need to protect their health.

CDDPP – The California Children's Dental Disease Prevention Program is California's school-based dental disease prevention program, established in 1979 by SB 111. The program provided fluoride, dental sealants, oral health education, and brushing/ flossing instruction to low-income children. Funding for this program was suspended in 2009.

Center for Oral Health (formerly Dental Health Foundation) – a nonprofit, California-based organization, founded in 1985, dedicated to promoting public oral health, with a focus on children and vulnerable populations.

CWF – Community water fluoridation.

Children's Partnership – national nonprofit advocacy organization for children's issues, with offices in California and Washington, DC. The Children's Partnership's primary focus since its inception in 1993 has been securing health coverage for uninsured children and promoting telehealth efforts.

CHIPRA – Children's Health Insurance Program Reauthorization Act, 2009. California's Children's Health Insurance Program (CHIP) is known as Healthy Families.

CMS – Centers for Medicare and Medicaid Services. The US federal agency that administers Medicare, Medicaid, and the Children's Health Insurance Program.

Community Health Center – (aka safety net clinic) Community-based and patient-directed organizations that serve populations with limited access to health care including low-income populations, the uninsured, those with limited English proficiency, migrant and seasonal farm workers, individuals and families experiencing homelessness, and those living in public housing.

First 5 California – Created by Proposition 10, First 5 supports children from prenatal to age 5 through healthcare, childcare and other programs. The initiative, approved by voters in November 1998, added a 50 cent-per-pack tax on cigarettes and a comparable tax on other tobacco products. The distribution of the \$590 million that is generated annually is controlled by county-level commissions.

FQHC – Federally Qualified Health Center. FQHC's are community-based organizations that provide comprehensive primary care and preventive care, including health, oral, and mental health, substance abuse services to persons of all ages, regardless of their ability to pay. They receive payment from the federal government and are funded under the Health Center Consolidation Act (Section 330 of the Public Health Service Act).

GPR – General practice residencies are generally one year, with a possibility of a second year at some facilities.

GME – Graduate Medical Education funding. Provided by the federal government to support teaching hospitals that serve vulnerable and low-income people, GME finances a large share of residents' salaries, the costs of teaching and supervision, and care for uninsured patients.

Healthy Families – California's Children's State Health Insurance Program(CHIP). Healthy Families is low cost insurance for children and teens providing health, dental and vision coverage to children who do not have insurance and do not qualify for free Medi-Cal. Children in families with incomes up to 250% of the federal poverty level are eligible for Healthy Families.

Healthy Kids, Healthy Teeth (HKHT) – program developed by the Alameda County Department of Health, based on the Washington State Access to Baby and Child Dentistry (ABCD) Program. HKHT trains dentists on techniques to provide care to very young children and instructs medical providers on early dental prevention. HKHT also provides case management and linkages to dental care.

HRSA – Health Resources and Services Administration, an agency of the U.S. Department of Health and Human Services, is the primary federal agency for improving access to health care services for people who are uninsured, isolated or medically vulnerable.

Institute of Medicine (IOM) – The health arm of the National Academy of Sciences, this independent, nonprofit organization, provides national advice on medicine, health and biomedical science issues. IOM's mission is to serve as adviser to the nation to improve health.

Medicaid – Established in 1965 by the federal government as a means to assist low-income and disabled individuals to access medical care. Medicaid is a state administered program; each state sets its own guidelines regarding eligibility and services. Medi-Cal – California's Medicaid program. Denti-Cal – California's Medicaid dental program.

Oral Health Literacy – The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.

Pediatric Oral Health Access Program (POHAP) – program founded by the CDA Foundation in collaboration with the Los Angeles Oral Health Foundation, to provide free specialized training for dentists on dental care for very young and special needs children.

Pew Charitable Trusts – an independent nonprofit, is the sole beneficiary of seven individual charitable funds established between 1948 and 1979 by two sons and two daughters of Sun Oil Company founder Joseph N. Pew and his wife, Mary Anderson Pew. The Pew Charitable Trusts utilize a "rigorous, analytical approach to improve public policy, inform the public and stimulate civic life."

Pew Center on the States - a division of the Pew Charitable Trusts, identifies and advances state policy solutions.

PGY – post-graduate year of residency.

Safety Net Clinic – see Community Health Center.

W. K. Kellogg Foundation – created in the 1930s as the W.K. Kellogg Child Welfare Foundation to protect and support opportunities for children, today the Kellogg Foundation "supports children, families, and communities as they strengthen and create conditions that propel vulnerable children to achieve success as individuals and as contributors to the larger community and society."

Appendix B Workgroup and Task Force Members

Access Workgroup:

Brian E. Scott, DDS, chair Past president, California Dental Association Member, Workforce and Forecasting Research Task Force General dentist, Palo Alto, CA

John L. Blake, DDS

Member, CDA Policy Development Council Executive director/dental director, Children's Dental Health Clinic at Miller Children's Hospital, Long Beach, CA

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Member, CDA Policy Development Council Clinical professor, Oral & Maxillofacial Surgery, Loma Linda University Private practice oral & maxillofacial surgeon, Orange County, CA

Jared I. Fine, DDS, MPH

Member, Workforce and Forecasting Research Task Force Dental director, Alameda County Public Health Department, Alameda, CA

Robert A. Gandola, DDS

Trustee, CDA Board of Trustees Chair, CDA Committee on Volunteer Placement General dentist, San Diego, CA

Gary N. Herman, DDS

Patient management faculty, UCLA School of Dentistry General dentist, Valley Village, CA

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Paul A. Reggiardo, DDS

Member, Workforce and Forecasting Research Task Force Consultant, CDA Policy Development Council Past president, California Society of Pediatric Dentistry Assistant clinical professor, Department of Pediatric Dentistry, USC School of Dentistry Pediatric dentist, Huntington Beach, CA

Lindsey A. Robinson, DDS

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Ariane R. Terlet, DDS

Member, CDA Government Affair Council Chief dental director, La Clinica de la Raza, Oakland Private practice general dentist, Berkeley CA

Workforce and Forecasting Research Task Force:

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Member, Access Workgroup Dental Director, Alameda County Public Health Department, Oakland, CA

Debra S. Finney, DDS, MS

Past president, California Dental Association Periodontist, Folsom, CA

Robert E. Reed, DDS

Developed a dental outreach program in Thailand General dentist, Bakersfield, CA

Huong Nguyen Le, DDS Member, Dental Board of California Dental director, Asian Health Clinic, Oakland CA

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Joseph A. Sciarra, DDS

Medi-Cal, Special Needs Children, Hospital and Sedation Dentistry Pediatric dentist, Woodland Hills, CA

Brian E. Scott, DDS

Past president, California Dental Association Chair, Access Workgroup General dentist, Palo Alto, CA

Thomas H. Stewart, DDS

Immediate past president, California Dental Association General dentist, Bakersfield, CA

Peter A. DuBois

Executive director, California Dental Association

Appendix C CDA House of Delegates Resolution 36S1-2008-H

106	36S1. RESOLVED, THAT THE CALIFORNIA DENTAL ASSOCIATION SUPPORTS IMPROVING
107	ACCESS TO ORAL HEALTH CARE FOR ALL CALIFORNIANS, AND BE IT FURTHER
108	
109	RESOLVED, THAT THE PRESIDENT DIRECT THE APPROPRIATE CDA ENTITY TO ANALYZE
110	THE LACK OF ACCESS TO ORAL HEALTH CARE AND CONSIDER SOLUTIONS INCLUDING
111	BUT NOT LIMITED TO INCREASING DENTIST PARTICIPATION IN PUBLICLY SUPPORTED
112	PROGRAMS, EXPANSION OF LOAN REPAYMENT PROGRAMS FOR COMMUNITY SERVICE IN
113	UNDERSERVED POPULATIONS AND IMPROVING LEVELS OF REIMBURSEMENT IN
114	PUBLICLY SUPPORTED PROGRAMS, AND BE IT FURTHER
	RESOLVED, THAT THIS CDA ENTITY CONSULT WITH A CROSS-SECTION OF THOSE
	PROVIDING CARE OR ARE KNOWLEDGABLE ABOUT PROVIDING CARE TO UNDERSERVED
	POPULATIONS, AND BE IT FURTHER
	RESOLVED, THAT A REPORT ON THIS ISSUE BE PRESENTED TO THE 2009 BOARD OF

TRUSTEES AND HOUSE OF DELEGATES.
Appendix D Commissioned Research Summary

The following are brief summaries of the research commissioned to support CDA's access analysis. Commissioned research, along with analysis of existing research and expert presentations informed the development of the recommended 3-Phase access proposal: Phased Strategies for Reducing the Barriers to Dental Care in California.

These summaries are not intended as a comprehensive representation of the research. Please review the full reports in Section 6, supplemental information on compact disc (enclosed with this report).

The Capacity of the Dental Care System in California

Timothy T. Brown, PhD, Jessica Chung, PhD, Sun-Soon Choi, MS, Nicholas C. Petris Center on Health Care Markets and Consumer Welfare, School of Public Health, University of California, Berkeley; Nadereh Pourat, PhD and Gina Nicholson, MPH, UCLA Center for Health Policy Research; and Paul Glassman, DDS, MA, MBA, Arthur A. Dugoni School of Dentistry, University of the Pacific.

This research analyzed the technical efficiency of private practice dentists and safety net dental providers in California as a means of measuring the capacity of the system to provide care. Technical efficiency is defined as the maximum amount of output (*e.g.*, dental visits per week, patients seen per day) that can be produced from a given set of inputs (*e.g.*, dentists, operatories, dental hygienists, dental assistants, and office staff).

Key findings:

- There is virtually no excess capacity among general and pediatric dentists (96.5 percent efficiency) and only a small amount of excess capacity among specialists and safety net providers.
- The practice patterns of dentists are quite stable when analyzed over the long term. Though the current economic recession and recent elimination of optional services for adults under Denti-Cal have likely created temporary excess capacity among private dental practices, market forces stabilize this effect over time and result in adjustments that keep practices profitable.
- Without significantly changing the practice patterns of dentists, the maximum percentage of the California population that the dental care system in California can currently serve is approximately 70 percent. The Impact of Additional Private Practice Dentists and Hypothetical Allied Dental

Impact of Additional Private Practice Dentists and Hypothetical Allied Dental Personnel on the Earnings per Hour of Current Private Practice Dentists

Timothy T. Brown, PhD, Sun-Soon Choi, MS, and Jessica Chung, PhD, Nicholas C. Petris Center on Health Care Markets and Consumer Welfare, School of Public Health, University of California, Berkeley

This study sought to determine the impact additional providers of dental care have on the income of private practice dentists when such providers enter the market as potential competitors, rather than as collaborators within a dental practice. The study evaluated the impact of additional general dentists, pediatric dentists and potential new members of the dental workforce, referred to in this study as hypothetical allied dental personnel (HADPs).

Key findings:

- Additional dental providers entering the dental labor market have very little impact on the income of current private practice dentists.
- Additional general dentists have the greatest negative effect on the income of other general dentists, but the effect is very small: income is reduced by approximately one-quarter of 1 percent per the entrance of one dentist per 100,000 population (approximately 382 dentists in California).
- The entrance of pediatric dentists, or HADPs who serve only children, into the dental labor market has a very small *positive* impact on the earnings per hour of *all* dentists. Some likely explanations for this phenomena are: since those who exclusively care for children serve as a gateway, they bring

new patients into the dental care system and these children eventually migrate to the care of general dentists as they age; parents who may have previously neglected their own dental health may begin to seek care for themselves; additionally, many pediatric dental providers in a community may raise the awareness of the importance of children's dental care and bring benefits to neighboring pediatric dental practices. This very small positive effect on all dentists is projected to cease and then become a very small negative effect after the addition of approximately 650 pediatric dentists or 5,000 HADPs in California (using 2008 figures).

- The entrance of general dentists, or HADPs who serve children and adults, has greater negative effects on the earnings of currently practicing pediatric dentists than on general dentists, though the negative effects are very small in both cases. This is likely due to general dentists referring children to pediatric dentists at very low rates because they are providing the care to the children of their adult patients who may otherwise be served by pediatric dentists.
- Those who serve all uninsured or publicly insured patients are not negatively affected by the entrance of additional dental providers because there are currently more uninsured or publicly insured patients than there are providers to provide care to these groups.

California Oral Health

Diane Cummins

This report presents an extensive view of the state of oral health and oral health programs in California, describing a lack of commitment that over the years has led to an almost non-existent state oral health program, low Medicaid rates, and a large number of Californians who live with untreated dental disease.

Topics covered in the report include:

- California demographics
- Oral health in California
- Programs providing dental services to children
- Recent changes in California children's oral health care
- Impact of national health care reform
- Barriers to accessing oral health care services
- Efforts to reduce barriers
- Dental workforce activities
- National health care reform related to workforce

The report concludes:

"National and state-level activities focused on reducing barriers to care demonstrate both the persistence and urgency of the access issue and the momentum for change. As policy makers and individuals become more convinced of the evidence linking good oral health to general health and well-being, and the true costs of untreated dental disease, there will be additional pressure for action. National health care reform, by containing various provisions related to dental care, also serves to raise the immediacy of dental care access issues."

"With amplified scrutiny on the issue, it is essential that the dental profession be an active participant in the discussion on solutions to access issues. If not, the risk is having solutions imposed by those who do not have the expertise of the very professionals who provide that care. Additionally, for any solution to be successful, it must target both the barriers to care and the populations who are now impacted by those barriers."

Are Procedures Performed by Dental Auxiliaries Safe and of Comparable Quality? A Systematic Review

A.P. Dasanayake, B.S. Brar and V.K. Ranjan, Department of Epidemiology and Health Promotion, New York University College of Dentistry, and S. Matta, Department of Adult Dentistry, Faculty of Dental Medicine, Columbia University, Harlem Children's Health Project

Across the world, non-dentists have performed both reversible and irreversible procedures with varied levels of training and under differing supervision levels for nearly 100 years. The objective of this study was to systematically evaluate the existing evidence in relation to the safety, quality, productivity or cost-benefit, and patient satisfaction of the procedures performed by dental providers worldwide.

The researchers conducted a systematic literature review using the guidelines given in the Preferred Reporting Items for Systematic Reviews and Meta-Analysis: The PRISMA Statement. The level of evidence within each accepted study was graded using the modified Strength of Recommendation Taxonomy (SORT) as published in the *Journal of Evidence Based Dental Practice*.

The report concludes:

While there are high quality studies comparing *reversible* procedures (such as dental sealants), there are no studies with a high level of evidence demonstrating the safety of *irreversible* procedures performed by non-dentist providers compared to dentists. They note that "the quality of the irreversible procedures is at best inconclusive due to numerous methodological deficiencies of these studies . . ."

The authors recommend a fully powered randomized controlled trial to obtain valid estimates related to safety, quality, cost-benefit, as well as patient satisfaction related to the procedures performed by non-dentist dental providers.

California's State Oral Health Infrastructure: Opportunities for Improvement and Funding

Joel Diringer, JD, Diringer and Associates

This research brings together resources and expertise on the benefits of a strong oral health infrastructure, which include the leadership and programming to address oral health problems; specifically, a full-time state dental director and an adequately staffed oral health unit competent to perform core public health functions.

Detailing lessons learned from states with strong statewide oral health programs, the report describes that California has been understaffed and without leadership in its oral health unit for many years and that there are good models and federal funding available to support a viable state infrastructure.

The report recommends that California:

- Hire a state dental director with dental public health experience
- Develop an oral health plan building on what exists throughout California
- Work with existing stakeholders and programs
- Seek federal and private funding to support programs
- Develop new childhood dental disease prevention programs

Workforce Model Feasibility Study

ECG Management Consultants

This study assessed the economic viability of alternative practitioner models (DT, DHAT, ADHP)¹ for provision of dental care to the underserved. The assessment for each practitioner included evaluation of compensation levels, cost of training, cost of practice, estimated productivity, and potential revenue using three payor mix scenarios.

Key findings:

- Utilizing DT or DHAT practitioners is a cost-effective approach but will require some subsidy or more sustainable reimbursement basis than modeled. Without tuition subsidies, the debt burden on potential practitioners made the practice unfeasible.
- The magnitude of the difference in the projected cost of education and salary for an ADHP, (versus a DT or DHAT) clearly indicates that, based on economics alone, this practitioner model would not be implemented.
- With encounter-based reimbursement of \$125, both the DT and DHAT are viable, but the ADHP is not.
- Intensive technical training programs, such as the DT/DHAT program, can effectively train quality practitioners in a short period of time and reduce the cost of providing dental services in low-access areas. Compared to the ADHP, they offer a more rapid response to the current access issue.
- Beyond the economics, policies and approaches must be in place to successfully recruit and retain practitioners. Creating a pipeline of nontraditional applicants and limiting their scope of practice is key to retaining practitioners.

Advanced Dental Education Programs: Status and Implications for Access to Care in California

Paul Glassman, DDS, MA, MBA, Professor of Dental Practice and Chair, Center for Special Needs, University of the Pacific School of Dentistry

The report details the benefits of primary care residencies in dentistry, as well as some of the opportunities available and challenges faced in establishing such programs.

The report notes:

- Postdoctoral General Dentistry (PGD) training has an enduring impact on practice patterns and improves access to dental care for underserved populations.
- A 2004 comparison of various workforce strategies concluded that the strategy with the largest potential for increasing oral health services to underserved populations was the requirement for a required year of "service and learning" in an accredited residency program.
- Directors of the California community health centers affiliated with the Lutheran Medical Center indicate that having a dental resident at their site has allowed them to increase the number of services they provide.

¹ Model assumes the following: Dental Therapist (DT) treats only children, Dental Health Aide Therapist (DHAT) and Advanced Dental Hygiene Practitioner (ADHP) treat children and adults; DTs and DHATs have 18-24 months technical education and training and required preceptorship, ADHP is graduate level education (72 months) at a University. For additional assumptions, review ECG Management Consultants (April 2010) *Workforce Model Feasibility Study* (see Commissioned Research).

• Opposition to a required year of "service and learning" will come from dental students opposed to lengthening the period of their educational program before beginning dental practice and from policymakers concerned about the cost of creating new residency positions and the increased billing of dental services through any significant expansion of dental providers treating patients with Denti-Cal dental benefits. Also dental school administrations will face the dilemma of justifying the need for additional training.

The report concludes that an expansion of primary care dental residency positions in California has the potential to positively impact access to care, though significant political and financial barriers must be overcome to realize this potential.

Appendix E Workgroup and Task Force Presentations Summary

The following are brief summaries of the expert presentations supporting CDA's access analysis. Expert experience and opinion, along with analysis of existing and commissioned research informed the development of the recommended 3-Phase access proposal: Phased Strategies for Reducing the Barriers to Dental Care in California.

These summaries are not intended as a comprehensive representation of the presentations. Please see presentation slides, available in Section 6, supplemental information on compact disc (enclosed with this report).

JOINT WORKGROUP AND TASK FORCE PRESENTATIONS:

Increasing Access to Oral Health Care for Vulnerable Populations Through Community Health Workers

Susan Bauer, MA, MPH, Executive Director Community Health Partnership of Illinois

Ms. Bauer presented information about this 40 year old, comprehensive program utilizing community health workers to improve the health outcomes for disadvantaged populations.

- Promotores, and other community health workers, provide education and system navigation in the course of daily life
- Guiding principles of community health worker programs:

The art of effectively communicating with, reaching, and touching individuals is perhaps the most promising hope for eliminating health disparities

Community health workers are essential to the success of the program – educating and engaging underserved populations in their own health care decisions

- Workers are well known, well informed trusted peers
- Talk with (conversation) rather than talk to (presentation) "target audience"
- Community is not the "object" of the intervention, but rather a partner in health care
- Funding the services of community health workers is an ongoing challenge, as most of these services are not directly reimbursable by Medicaid.

Perspectives on Dental Workforce Movements

James J. Crall, DDS, ScD, American Academy of Pediatric Dentistry and Head Start Child Advocate

Dr. Crall reviewed national activities promoting changes to the dental workforce and framed the debate and perspectives of supporters and detractors of new workforce models.

- Providers: low reimbursement vs. lack of willingness to treat low SES;
- Patients: lack of education and understanding vs. lack of motivation

His presentation advanced AAPD's position on new dental workforce categories:

- There is little evidence that a new dental provider would be beneficial
- Before any workforce models could be considered viable, they must be tested in the United States --International data is not relevant

In summary, his presentation questioned the validity of claims made by proponents of new workforce models and advanced the opinion that access can be addressed by current providers.

Perspective on the New Zealand School and Community Oral Health Program

Neil Croucher, BDS, Oral Health Advisor, Northland Regional Health Board

The New Zealand School and Community Oral Health Program started over 80 years ago and utilizes dental therapists (once called dental nurses) to provide basic preventive and restorative care to children (just recently, the age limit changed from 13 years of age to 17 years of age, as the program is trying to address rising dental disease rates of adolescents). The program has undergone some significant restructuring in the last 5-10 years, as the model has moved away from a bricks and mortar clinic at every school to a hub and spoke system that has community clinics (hub) in key places and mobile facilities (spoke) to bring care to children in schools located in remote places. This change came about for a number of reasons that were primarily aimed at utilizing resources more efficiently. Below are some of the highlights of Dr. Croucher's presentation:

- NZ focuses their resources on children to give all an equal opportunity to be healthy and give them the skills they need to maintain good oral health.
- Within a 12-18 month period of time, over 90% of the children enrolled in the program have their treatment plans completed and have infection free, functional and esthetic dentitions.
- The optimal goal of preventing disease/ lowering caries rates is challenged by the living conditions and limited resources (i.e. social determinants of health) that impact all disease rates in impoverished communities and oral health is just one of those.
- Social determinants of health are a bigger factor than individual protective factors such as saliva and fluoride; dental disease can be predicted through deprivation levels. Social debt has a bigger impact than fluoride on DMFT rates.
- Even so, fluoride programs are increasing; varnish is applied at every opportunity. The program promotes healthy eating, effective oral hygiene practices, early access to preventative dental services, and use of topical fluorides.
- Dental therapists (DT) provide basic restorative care to children 0-17 years old.
- The average DT salary range is \$50,000 to \$65,000.
- The DT-patient workload in the public sector is 1:1200 per year; about eight patients/day.
- DTs are required to have a professional relationship with a dentist who is responsible for providing timely access to advice and for arranging standing orders for medication.
- DTs are required to have a pre-agreed referral pathway to public funded dentists and specialists for treatment beyond their scope of practice.
- The program is capitated (\$75 per child) that fee covers program costs including the dentist, DT and materials.

ADA Community Dental Health Coordinator

Dunn Cumby, DDS, and Marsha Beatty, University of Oklahoma

Dr. Cumby and Ms. Beatty provided an historical overview of the Community Dental Health Coordinator (CDHC) development, current status of the educational program at the University of Oklahoma, expected role of the CDHC, and existing challenges in creating a sustainable model.

- The CDHC resulted from ADA's comprehensive review of the dental workforce
- CDHC is a dental team member with the following functions:

Collect diagnostic data

Provide preventive services

Place temporary restorations

Help the patient understand their insurance options

Understand and motivate the population served

- Community settings envisioned for the CDHC:
- Community health clinics (FQHCs)
 - Schools
 - WIC clinics
 - Head Start and Early Head Start centers
 - Institutions
 - Medical and other health clinics (Tribal and Indian Health Service)
- Several of the functions of the CDHC as with other community health workers do not have a direct reimbursement, challenging the sustainability of the model. ADA is working with states to identify remedies and establish funding /redirect funding wherever possible.

Apple Tree Dental: A Model for Access to Dental Care

Mike Helgeson, DDS, CEO of Apple Tree Dental; Susan Voight, Apple Tree Dental; and Dick Gregory, DDS, San Mateo Dental Society

- Apple Tree Dental provides dental care in many non-traditional settings
- Not for profit provider of dental care that strives to provide care through use of an integrated team focused on the needs of patients in the community. Adheres to the value that "the patient's interest is the only interest to be considered"
- Provides much of its care to the elderly. The presentation documented the "tsunami" of oral health care that will be needed as the baby boomers age
- Follows a model of collaborative community practice: "Delivering oral health services where people live, work, go to school, or receive other health and social services"
- Utilizes new oral health systems that are: proactive and patient-centered, geographically distributed, collaborative, telehealth enabled, prevention and outcome focused and are virtual health homes without walls
- Overcomes barriers by proactively providing early education and prevention, before problems arise; provide special care in collaboration with nurses, teachers and social service providers; gets financial support from the whole community
- Uses a hub and spoke model and has a highly effective mobile model utilizing dental vans that deliver modular equipment
- Stresses the team approach, utilizing each team member to his/her maximum capacity; waiting to hire Minnesota DTs as soon as they graduate -- DTs will cost less for routine care and allow dentists to provide more complex care
- Utilizes innovations for efficiency: placing dental directors in nursing homes; Minimum Data Assessment (MDS) and daily care planning at admission in LTC; screenings and use of telehealth model in Head Start programs
- Engaged in research, fundraising and oral health advocacy
- Only goes into communities that want them; partners with all local resources, including private practice dentists; develops detailed business plans that determine whether or not a new Apple Tree project moves forward

WORKGROUP PRESENTATIONS

School-Based/Linked Program Concept

Jared Fine, DDS, MPH, Alameda County Dental Director

Dr. Fine presented this school-based/linked program proposal, a comprehensive program serving children age one through 12^{th} grade:

- Relies on school-based services, or linked services and referral, to ensure children receive comprehensive care
- Places responsibility with the county for the development, organization, and implementation of oral health programs and places responsibility with the state for program requirements, oversight, and technical assistance
- As *preventing* dental disease is most effective and efficient, early access to children is essential to reducing disease burden and the need for treatment. Partnerships with agencies responsible for the early care and education of children and families, such as Women Infant and Children (WIC), Head Start and state preschools, should be established to reach children as early as possible

The goals of a California school-based/linked program are:

- Increase early prevention and decrease the rate of dental disease in children
- Increase the number of children with a source of continuous, comprehensive dental care (dental home)
- Establish a system of care at the local level
- Decrease absenteeism

Program requirements:

A set percentage of children will:

- Receive a dental screening (based on a standardized, state surveillance protocol)
- Receive case management

Have a dental home, measured by the first validated appointment and the number of treatment plans completed each year

Receive insurance assistance

Be linked to other social and health services as needed

- Receive oral health education
- Receive dental sealants
- Receive fluoride
- Participate in the program who are between ages 1 and 5 years

Current ADA and CDA Foundation Oral Health Literacy Activities

Lindsey Robinson, DDS, pediatric dentist and past ADA CAPIR chair, past CDA Foundation Chair, past CSPD President and current CDA Vice President and Policy Development Council Chair

Dr. Robinson presented on the concept of health literacy in dentistry, defined as: "the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate oral health decisions."

The ADA Council on Access, Prevention and Interprofessional Relations and its ad hoc advisory committee on health literacy in dentistry developed a strategic action plan as a set of principles, goals and, in some cases, specific strategies to provide guidance to the Association and its Councils and Commissions, dental professionals, policy makers and others to improve health literacy.

ADA Strategic Focus Areas

- 1. Training and Education (change perceptions of oral health)
- 2. Advocacy (overcome barriers, replicate effective programs and proven efforts)
- 3. Research (build the science base and accelerate science transfer)
- 4. Dental Practice (increase workforce diversity, capacity, and flexibility)
- 5. Build and Maintain Coalitions (increase collaborations)

Dr. Robinson also discussed oral health literacy research initiatives (e.g. Alice Horowitz; Dushanka Kleinman), and the CDA Foundation's oral health literacy proposal.

TASK FORCE PRESENTATIONS

Accomplishing Meaningful Increased Access To Dental Care For Underserved Populations Utilizing The Current Workforce

Martin C. Courtney, DDS, San Fernando Valley Dental Society

Dr. Courtney is a private practice dentist in the San Fernando Valley and presented the viewpoint that the San Fernando Valley Dental Society delegation advanced at the 2009 CDA House of Delegates. He offered the following points for consideration:

- Additions/changes to the dental workforce are not the answer to improving access
- Dentists are ready and willing to provide care
- Medicaid reform, especially rate increases, and improving oral health literacy are key to resolving access problems
- Numerous others strategies could be pursued, but adding more providers in the workforce is not one that would be beneficial; the difficulties now encountered by dentists (especially regarding issues associated with low Medicaid reimbursement) would be encountered by any new dental provider

Washington State's Workforce Process

Dave Hemion, Assistant Executive Director, Washington State Dental Association

Mr. Hemion presented the recent history of workforce initiatives in Washington, WSDA's process to develop a workforce model, and their member outreach and education process as they approached the WSDA House of Delegates.

Alaskan Dental Health Aide Therapist

Louis Fiset, DDS, Medex Northwest, University of Washington School of Medicine

Dr. Fiset met twice with the task force; first to present the conceptual model and functions of the DHAT, and secondly, to present the education and training, including the specific curriculum.

- DHAT model recruits candidates specifically from and for the locations in need of dental providers
- Alaskan Native Tribal Health Consortium (ANTHC) is the responsible agency and subsides education and living expenses

- Education utilizes a "need to know" model, as opposed to the model of higher education customary in the United States which includes significant foundational education and a "more is better" approach
- Outlined in detail why he felt the education, training, support and supervision of this model work well
- Expressed confidence that DHATs provide quality care, know their limitations, and receive the dentist oversight they need to provide appropriate care and protect patients
- Indicated that the DHATs' education and training is so focused, they receive more training than dental students in their specific/narrow scope.

Extended Function Dental Assisting Education in California

Joan Greenfield, RDAEF, MS, Director, Department of Continuing Education, Sacramento City College

Ms. Greenfield described the education, training, and scope of the "RDAEF 2" (graduates after January 1, 2010):

- The RDAEF 2 is allowed to perform substantial restorative duties, being able to place and finish virtually all direct restorative materials
- All RDAEF 2 restorative duties require the direct supervision of a dentist, so this model functions very well in a traditional office or clinic environment where the dentist can diagnose, treatment plan, provide the anesthesia and tooth preparation and the RDAEF 2 can finish the procedure
- The dentist must check the procedure before the patient leaves. There is an explicit expectation that the RDAEF 2 will work side-by-side with a dentist, rather than at a remote site -- expressly intended to significantly expand the care dentists can provide in their offices

Statutes, Practice And Education Of California Dental Hygienists

Cindy Lyon, DDS, Chair, Department of Dental Practice, University of the Pacific

Dr. Lyon discussed the education and training California dental hygienists receive:

- Dental hygienists, at all levels, receive a broad foundation in health sciences; the clinical care they provide is focused on prevention and periodontal health
- Associate degree programs require one to two years of specific classes prior to program entry; Bachelor's degree programs require four years, two of which are foundational; the RDHAP program requires an additional 150 hours of post-Bachelor's degree education

Pediatric Oral Health Practitioner Model

David A. Nash, DMD, MS, EdD, University of Kentucky

Dr. Nash promoted the concept that in a just society there is a responsibility to the most vulnerable among us and especially to children, who are not responsible for their circumstances, and supported a new children's dental provider (see editorial in fall 2010 JPHD).

- Presented the viewpoint that historically and traditionally in America, the social system supports equalization of opportunity for children (e.g. schools)
- When resources are scarce, they must be utilized at the maximum ability to provide the care society is responsible to provide and must go first to children
- Other countries have proven that children's oral health care can safely and competently be provided by dental professionals that have less education and training than dentists
- Promoted the concept of a 2-year trained dental therapist (or a 3-year trained therapist/hygienist)

Australia Dental Therapist/Oral Health Therapist Model

Julie Satur, PhD, Melbourne Dental School, the University of Melbourne

Dr. Satur began her career as a DT. She holds a PhD in dental therapy; her dissertation was on the evolution of that profession and she is a strong advocate of the model.

- DTs specialize in the provision of dental care to children, and have provided safe and appropriate care in Australia for decades. They are regulated and responsible for the care they provide
- DTs are collegial with the dentists with whom they work, but have a lot of autonomy (diagnose and treatment plan) and know their limitations/know when they need to refer
- Because there is a lack of dental hygienists in Australia and the need for that function exists, recent dental therapy education has evolved to three years, includes both DT & RDH curricula and dual degrees, graduating Oral Health Therapists (OHT). That education takes place in University settings
- OHT students receive significant public health training; tend to prefer the DT functions and working in the public sector
- Some parts of Australia now allow OHTs in the private sector and many split their time working in both

Appendix F Barriers to Dental Care Population Breakdown (ADA)



82 Million People (29.1% of total U.S. population)



Populations experiencing barriers to care

Note: Percentages are of the total population Source: American Dental Association 2006 Community Dental Health Coordinator Report, 2000 Census

SECTION 6: Supplemental Information

Commissioned Research & Expert Presentations

