Finding Solutions:
Implementation of the ADHP Model

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Introduction

The Advanced Dental Hygiene Practitioner (ADHP) model for health care delivery in the U.S. champions the provision of accessible quality care to the underserved, the promotion of healthy lifestyles and quality of life, and the belief that oral health care must be integrated into the delivery of comprehensive health care services. The first *Surgeon General's Report on Oral Health*,[1] *Healthy People 2010*,[2] and a *National Call to Action to Promote Oral Health*[3] are 3 federal documents that illuminate health disparities within our society, chart a course for increasing the quality and years of healthy life for American citizens, and acknowledge that attainment of oral health is essential to achieving total well-being. The purpose of this paper is to demonstrate how the role and dimensions of the ADHP are congruent with the philosophies, objectives, and strategies set forth in these documents.

The first *Surgeon General's Report on Oral Health* provides a broad description of oral health and highlights the relationship between oral health and general health (i.e., the oral-systemic link). Inequities in the provision of oral health care services to many disadvantaged populations within the U.S. are emphasized. Prevention is viewed as the measure to halt the "silent epidemic of oral disease" and the main strategy for reducing unnecessary pain and suffering associated with compromised oral health.[1] Philosophically, the ADHP concept and the *Surgeon General's Report* share 3 salient similarities: both recognize that meeting oral health needs must be brought to the forefront, prevention is paramount in disease eradication, and oral health is an integral component of total well-being. The key themes of the *Surgeon General's Report* are: 1) oral health means much more than healthy teeth, 2) oral health is integral to general health, 3) safe and effective disease prevention measures exist that everyone can adopt to improve oral health and prevent disease, and 4) general health risk factors, such as tobacco use and poor dietary practices, also affect oral and craniofacial health.[1] The essence of the ADHP derives from these themes. Themes 1 and 2 are realized by the ADHP's holistic approach to oral health and overall well-being and the concomitant belief that oral health is a lynchpin for systemic health. As promulgated by the ADHP, healthy teeth enable proper nutrition and have the potential to increase self-esteem and general health. Recognition of the oral-systemic link is integral to comprehensive patient assessment, treatment planning, and case management. Multi-disciplinary collaboration, an important aspect of the ADHP's role, highlights the inextricable relationship between oral health and total well-being.

In relationship to theme 3, the ADHP is a proponent of disease prevention and health promotion, and realizes that the delivery of individualized, culturally sensitive educational messages can help people adopt effective disease prevention behaviors. By working with families and community groups, the ADHP can help create coalitions that convey these key preventive messages to their constituencies. As professionals who integrate current research into their practices, ADHPs employ cost-effective prevention strategies, and can adapt those strategies to meet community needs.

Regarding theme 4 of the *Surgeon General's Report*,[1] the ADHP would target deleterious habits that threaten oral and systemic health, such as tobacco use and improper diet. For example, when educating and treating pregnant women, the ADHP will address and monitor tobacco use and discuss associated hazards posed to both mother and developing fetus. In their efforts to stem oral and craniofacial disease, ADHPs will identify high risk individuals and groups and plan interventions based on sound assessment data. Coalitions formed with community groups (e.g., American Cancer Society, American Heart Association, Head Start, WIC) can raise awareness of the association between craniofacial anomalies, oral disease, tobacco use, and poor dietary practices. Philosophically, the ADHP is aligned consistently with the *Surgeon General's Report*.[1]

Healthy People 2010 addresses both oral and systemic health through its inclusion of 28 health arenas, one of which is oral health. The oral health goal for *Healthy People* is "to prevent and control oral and craniofacial diseases, conditions and injuries, and to improve access to related services."[2] The 17 oral health objectives which emanate from this goal are broad-based and cover a gamut of oral health issues,

policy matters, and population-specific oral health concerns, ranging from sealant placement to early detection of oral cancers (Table 1). The ADHP has direct relevance to each of these objectives. In addition, *Healthy People 2010* includes many other health categories to which the ADHP can contribute. The ADHP can make positive contributions to arenas that include access to quality health services, cancer reduction, diabetes prevention, educational and community based programs, health communication, tobacco use, substance abuse, health insurance, injury and violence prevention, and maternal, infant, and child health. In essence, the ADHP could aid in the attainment of the majority of *Healthy People 2010's* goals and objectives. Table 2 exhibits the congruence of the ADHP competencies with the *Healthy People 2010's* oral health objectives. These relationships will be discussed later in this report.

Table 1 - Objectives for Oral Health, adapted from Healthy People 2012

Goal	
Prevent and control oral and craniofacial diseases, conditions, and injuries and improve access to related services.	
Number	**Objective**
1	Reduce dental caries experience among adolescents and children in primary and permanent teeth
2	Reduce untreated dental decay among children, adolescents, adults
3	Reduce permanent tooth loss
4	Reduce complete tooth loss
5	Reduce periodontal disease
6	Increase rate of early detection of oral and pharyngeal cancers
7	Increase annual examinations for detection of oral and pharyngeal cancers
8	Increase dental sealant placement in children's molars
9	Increase availability of fluoridated community water
10	Increase child and adult use of oral health care system
11	Increase use of oral health care system by residents in long-term care facilities
12	Increase receipt of preventive dental services by low-income children and adolescents
13	Increase numbers of school-based health centers with oral health component
14	Increase numbers of community health centers with oral health service components
15	Increase number of U.S. jurisdictions that systematically record and refer children with craniofacial abnormalities to rehabilitative teams
16	Increase number of U.S. jurisdictions that have an oral and craniofacial surveillance system
17	Increase number of effective tribal, state, and local dental programs directed by dental professionals with public health training

A National Call to Action to Promote Oral Health,[3] which emanated from the first *Surgeon General's Report on Oral Health*, proposes 3 major goals: 1) promote oral health, 2) improve quality of life, and 3) eliminate oral health disparities. The report urges that oral health promotion, disease prevention, and oral health care be visible in all health policy agendas, set at all levels of government. For this to occur, the report emphasizes that all stakeholders must recognize that oral health is integral to general health, and that "the oral health community must be ready to act in efforts to address the nation's overall health agenda." The 5 actions set forth by the *Call to Action* (CTA) are: 1) change perceptions of oral health, 2) overcome barriers by replicating effective programs and proven efforts, 3) build the science base and accelerate science transfer, 4) increase oral health workforce diversity, capacity and flexibility, and 5) increase collaborations. These strategies demonstrate a high degree of congruence with the ADHP framework and mission.[4] Further, since CTA emphasizes implementation, a close scrutiny of the ADHP's competencies in relationship to these action plans is important.

The aspirations expressed in the first *Surgeon General's Report*,[1] *Healthy People*,[2] and the CTA[3] necessitate action. The belief that oral health is essential to the general health and well-being of all Americans resonates throughout these documents. Yet establishing measures to address their stated goals and objectives is challenging. It is clear that cost-effective preventive measures are available to the American public[1] – the issue is to provide the underserved with access to these services. The number of dentists available to the population is declining,[5] emphasizing the need for other well-educated and skilled providers to deliver oral health care services. In addition, research reveals that non-dentist providers with the requisite levels of education and practical experience possess the skills, judgment, and attitudes needed to deliver

Table 2. Congruence between ADHP and Healthy People 2010

	HEALTHY PEOPLE 2010 OBJECTIVES FOR ORAL HEALTH															
ADHP COMPETENCIES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Health Promotion/Disease Prevention	x	x	x	x	x	x	x	x	x		x	x	x				
2. Provision of Primary Care	x	x	x	x	x	x	x	x			x	x	x				
3. Case Management	x	x	x	x	x	x	x	x		x	x	x					
4. Multi-disciplinary Collaboration	x	x	x	x	x	x	x	x		x	x	x	x				
5. Health Care Policy	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
6. Advocacy	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
7. Practice Management	x									x			x	x	x	x	x
8. Quality Assurance	x	x	x	x	x	x	x	x		x					x	x	
9. Fiscal Management													x				x
10. Evidence-based Practice	x	x	x	x	x	x	x	x									
11. Clinical Scholarship	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
12. Ethics and Professional Behavior	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
13. Lifelong Learning	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→

Table 3. Congruence between ADHP Competencies and CTA Actions

	A NATIONAL CALL TO ACTION: FIVE ACTIONS				
ADHP COMPETENCIES	Action 1	Action 2	Action 3	Action 4	Action 5
Health Promotion & Disease Prevention	x	x		x	x
Provision of Primary Care	x	x		x	x
Case Management	x	x		x	x
Multi-disciplinary Collaboration	x	x	x	x	x
Health Care Policy	x	x		x	x
Advocacy	x	x		x	x
Practice Management	x	x		x	
Quality Assurance	x	x		x	
Fiscal Management	x	x		x	x
Evidence-based Practice	x	x	x		
Clinical Scholarship	x	x	x		x
Ethics and Professional Behavior	x	x	x	x	x
Lifelong Learning	x	x	x		

high quality preventive and primary care dental services.[6-9] Models similar to the ADHP have been integral to oral health care delivery systems in numerous countries for decades, and their impact has reaped positive benefits.[10-13] To appreciate the congruence of the ADHP with *Healthy People*[2] and the CTA,[3] an overview of the ADHP's competencies are provided in the next section.

Competencies for the ADHP[4]

Within the document, *Competencies for the Advanced Dental Hygiene Practitioner*, 5 key themes, known as domains, are established: Provision of Primary Oral Health Care, Health Care Policy and Advocacy, Management of Oral Care Delivery, Translational Research, and Professionalism. From these domains, 13 broad competencies are derived (Tables 2 and 3). These broad competency areas directly address the oral health objectives as presented in *Healthy People 2010*[2] and the 5 strategies outlined in the CTA[3]. The competency-driven education designed for the ADHP provides the foundation and framework for the successful delivery of cost-effective, accessible, affordable, high quality, holistic care

to underserved populations in non-traditional settings.

Congruence of the ADHP Competencies with *Healthy People 2010*[2] Objectives

When examining the relationships between the *Healthy People*[2] objectives and the ADHP competencies, many parallels are obvious. As Table 2 indicates, Competencies 5, 6, 11, 12, and 13 cut across all of the oral health objectives. These competencies represent inherent characteristics and capabilities of the ADHP that would be present regardless of the role assumption or the activity in which the ADHP is engaged. A more specific analysis of all competencies and the oral health objectives follows.

Health promotion, disease prevention, and the provision of primary care (Competency 1, 2) have direct relevance to Objectives 1-8 (Table 1). Objectives 1-4 address the need for reductions in the proportion of children and adolescents who have dental caries experience, the proportions of untreated decay in children, adolescents, and adults, and the proportion of adult extractions. Objectives 5-8 are directed at increasing detection rates and the number of annual examinations for head and neck cancers, the placement of sealants in children's molars, and the reduction of periodontal disease. Through health promotion and disease prevention (Competency 1), the ADHP conducts risk assessments to identify an individual's susceptibility to caries, periodontal disease, and oral cancer. Clients are provided with the tools to adopt preventive oral hygiene and healthy lifestyle habits that have the potential to reduce the incidence of oral disease. The community-based family approach fostered in the ADHP provides a foundation for family reinforcement of a child's habits and the opportunity to raise awareness of oral health and disease prevention within the community. Competency 2 states that through the provision of primary oral health care, the ADHP utilizes health education, counseling, and health promotion theory to achieve positive health behaviors, recognizes health conditions, and provides interventions that prevent disease and promote healthy lifestyles. This competency meets the objectives to reduce the proportion of untreated decay, unnecessary tooth loss, and periodontal disease, since the ADHP will design "care plans that include the delivery of primary care dental services when appropriate." These include providing restorative services that treat infection, relieving pain, promoting function and oral health, delivering non-surgical periodontal therapy, and prescribing pharmacologic adjuncts that can reduce periodontal infection. It is logical that preventive interventions that reduce caries and periodontal disease will ultimately reduce tooth loss. Other primary care services the ADHP delivers include screening for early detection of oral and pharyngeal cancers.

ADHP case management (Competency 3) utilizes assessment data to create appropriate care plans that reduce risk, promote health, and foster patient partnerships that enhance informed decision-making, positive lifestyle change, and appropriate self-care. All of these endeavors will help reduce caries, unnecessary tooth loss, and periodontal disease. In addition, they will help increase sealant placement in children's molars and augment the detection of oral and pharyngeal cancers. The ADHP will create care plans to reduce risk for all types of oral disease - a key step in prevention.

Multi-disciplinary collaboration (Competency 4) is the foundation for comprehensive and individualized patient care. When warranted, patients will be referred to other providers. The ADHP will dialogue with health professional colleagues to ensure the delivery of individualized, culturally competent, and appropriate patient care.

The health care policy and advocacy roles (Competency 5, 6) of the ADHP specifically address Objective 9 of *Healthy People 2010*,[2] which is to "increase the proportion of the U.S. population served by community water systems with optimally fluoridated water."[2] However, the ADHP's commitment to health promotion, disease prevention, and the provision of primary care are the basis for this advocacy.

Objectives 10 and 11 aspire to increase the proportion of children, adults, and residents in long-term care who use the oral health care system. These objectives speak directly to availability and access to care. The creation of a new cadre of oral health professionals who can fill the gap left by decreasing numbers of practicing dentists offers a partial solution to the access problem. The mission of the ADHP[4] is to improve the public health of the underserved by providing "access to early interventions, quality preventive oral health care, and referrals to dentists and other health care providers." With the continuing growth of long-term care residents, creating options for meeting their oral health needs is mandatory. To date, most long-term care facilities cannot afford hiring a staff dentist. The ADHP could provide services to residents on-site or work with facility administrators to provide transportation to a community facility where the ADHP is employed. Skills in practice and fiscal management (Competencies 7, 9) could facilitate establishment of on-site programs. Through the provision of primary care, the delivery of health promotion and disease prevention messages, and health policy advocacy (Competencies 1, 2, 5, 6), ADHPs can work toward extending primary care to disadvantaged and remote populations not receiving care in traditional settings.

Objective 12 hopes "to increase the proportion of low income children and adolescents who receive

preventive care."[2] ADHPs will position themselves to provide preventive and primary care services to these population groups. By working with community leaders, other health professionals and families, the ADHP will develop and implement appropriate health care interventions that are culturally specific and consistent. Through the ADHP's efforts in advocating for the underserved and promoting the role of the ADHP, community leaders will be able to direct those in need to new care sources (Competencies 1-6).

Objectives 13 and 14 address the need to increase the proportion of school, local, and community based health centers (including migrant and homeless health centers) that have an oral health component. Professionalism (Domain 5, Competency 12) states that the ADHP will "develop strategic relations with community stakeholders to optimize resources."[5] As advocates and policy-makers with strong community roots, the ADHP will actively engage in efforts that promote oral health as a necessary component of health centers (Competencies 5, 6).

ADHPs will contribute to the attainment of objectives 15, 16, and 17 if they are employees of the health agencies whose infrastructure is cited in the objective. However, skills in establishing partnerships, collaborative relationships, quality assurance, practice, and fiscal management would enhance ADHP contributions to existing programs (Competencies 4, 7, 8, 9). A major portion of the ADHP curriculum addresses public health and community issues. Further, examples of ADHP practice settings include community health centers, federally qualified health centers (FQHC's), and the Indian Health Service.

The desire to collaborate with other health care providers (Competency 4) is integral to all aspects of the ADHP's role and therefore related to each of the oral health objectives. Similarly, commitments to lifelong learning, clinical scholarship, and evidence-based practice are ingrained characteristics of the ADHP. The advocacy and health policy roles of the ADHP (Competencies 5, 6) universally apply to all 17 of the oral health objectives. Through advocacy, the ADHP will be engaged in efforts to promote the delivery of accessible, affordable, and quality oral health care to the underserved. Working with policy makers to endorse water fluoridation, sealant placement, the creation of oral health programs, and the provision of care to those outside the traditional delivery system contribute to the attainment of objectives 8-17. Finally, all initiatives instituted by the ADHP will be predicated on quality assurance, sound fiscal management, and evidence-based practice (Competencies 8, 9, 10, 12). Adherence to these principles will ensure high quality and judicious clinical outcomes, viable continuity of care, and the provision of state-of-the-art services. Through a commitment to lifelong learning and scholarship, ADHPs will subscribe to self-assessment and continually seek to improve themselves and the publics they serve (Competencies 11, 13).

Congruence of the ADHP Competencies with the *National Call to Action to Promote Oral Health*

In the *National Call to Action to Promote Oral Health*,[3] the first action calls for a change in the perceptions of oral health among policy makers, health care providers, and the public. All 13 ADHP competencies are essential to achieving a change in the perceptions of oral health. To effect genuine change within these groups, ADHPs will lead by example and embrace their diverse roles as preventive health educators, community advocates, and providers of primary oral health care services. ADHPs will educate clients, communities, and other health care professionals about oral health and share information about associations between oral and systemic health, thereby illuminating the importance of oral health. Utilizing sound practice and fiscal management and providing high quality care will draw positive attention to the ADHP. Through advocacy, the ADHP will put oral health care on the political agenda. As well-educated, ethical practitioners who employ evidence–based decision making and value clinical scholarship and lifelong learning, ADHPs will improve the public's perception of oral health.

Action 2 talks about replicating effective programs and proven efforts to overcome barriers to care. Knowledge of health promotion, disease prevention, and the ability to provide primary care (Competencies 1, 2) contribute to the development of effective programs. As a health professional that adheres to evidence-based decision making, the ADHP has a strong knowledge of what is effective and what is not (Competency 10). When case managing clients, the ADHP will confer with colleagues to overcome immediate barriers and seek out best practices that can serve as models for replication (Competencies 3, 4). Staying up to date with current literature and practice is the hallmark of the ethical professional, a defining characteristic of the ADHP (Competencies 10-13). Knowledge of insurances and a high level of cultural competence are 2 other emphases of the ADHP curriculum (Competency 9). Practice management (Competency 7) and an eye for a strict surveillance will allow the ADHP to track populations that lack access, a key barrier to service delivery, and utilization. The mere existence of the ADHP will improve access to care in that a high-level provider can be positioned in communities where no other oral health care professionals are located. Lastly, ADHPs will promote health literacy through edu-

cation and advocacy.

The ADHP can contribute to Action 3, to "build the science base and accelerate science transfer." An entire domain of the ADHP curriculum is devoted to translational research. In this domain, clinical scholarship and the contribution to the development of best practices are highlighted (Competencies 10, 11). ADHPs, in their quest to remain state-of-the-art, will utilize scientifically sound technologies during assessment, planning, delivery, and evaluation of care. They will have the capabilities to employ tele-dentistry to access immediate information, evaluate research studies, and analyze and interpret information to make decisions and problem solve effectively. Through their commitments to professionalism and lifelong learning (Competencies12, 13), ADHPs are dedicated to building the science base and accelerating science transfer. In their provision of primary care, preventive education, and patient case management (Competencies 1-3), ADHPs will document the effectiveness of approaches, treatments, and outcomes, generating data to build the science base. Collaborations with colleagues from other disciplines may inspire research (Competency 4).

By definition, the ADHP will "increase oral health workforce diversity, capacity, and flexibility" (Action 4). ADHPs are intended to be indigenous community members who can relate to and empathize with the publics they serve. If not a member of the immediate community, the ADHP possesses a strong educational background in cultural competence, public health, and communication; in addition, the ADHP curriculum requires that a student complete a minimum of 12 semester hours "in the field." As is often the case, field work may occur in the community where the ADHP ultimately is employed. Didactic coursework that highlights establishing community relationships, coalition building, legislative skills, and advocacy will support the ADHP's comfort in the community.

The ADHP model borrows from the well-established nurse practitioner (NP) role. Like NPs, ADHPs receive the requisite didactic and experiential learning that will enable the delivery of high quality health care services, specifically in oral health. The dentist workforce capacity is decreasing while that of the dental hygienist is increasing exponentially.[5] Students entering the ADHP program must already have baccalaureate degrees and practice experience in dental hygiene. Almost 300 dental hygiene programs are in existence in the U.S.[14]; dental hygienists are an untapped resource that can "grow" the capacity of high quality providers in areas where oral health care services are inaccessible and/or costly.

An accredited standardized curriculum will allow the ADHP to provide oral health care services across the nation that currently are not allowable in many U.S. jurisdictions. For example, in the state of Washington, dental hygienists place restorations.[15] If the ADHP could legally offer this type of service nationally, more care could be delivered and more untreated decay could be resolved, particularly in community centers and facilities that often reach the disadvantaged and underserved. Given the Bureau of Labor Statistics data,[5] it is sensible to promote the education of an already growing cadre of oral health care providers (i.e., dental hygienists) who are licensed health care professionals possessing foundational knowledge. This seems a logical option when the numbers of prospective dentists are declining.

The ADHP offers flexibility for other reasons. This provider has an understanding of macro community needs while also appreciating the need for individualized care (Competencies 3-6). The ADHP works in the context of the total health care system, but also provides primary preventive oral health care services to individual patients. Further, the ADHP serves as a triage and referral source when warranted. Sound judgment that derives from comprehensive education, experiential learning, and the ADHP's professional attitude allows flexibility in terms of patient case management and the appropriate delivery of holistic care. By definition, and through participation in a formal program, the ADHP will participate "in state-funded programs for reducing disparities, serve in community clinics or in health care shortage areas, assist in community-based surveillance and health assessment activities, participate in school-based disease prevention efforts, and volunteer in health-promotion and disease-prevention efforts such as tobacco cessation programs."3

The ADHP addresses Action 5 to increase collaborations through many avenues. In their advocacy roles, ADHPs work to form partnerships to advance the attainment of oral health within both public and private sectors of the community (Competency 6). Exposure to curriculum that builds skills in sound practice and fiscal management will enhance the ADHP's potential to create lasting and effective partnerships (Competencies 7, 9). A key component of the ADHP role is to plan, design, monitor, and evaluate oral health programs. Programs designed for social service, health care, and educational entities will be established. The potential for coalition building, a key goal for the ADHP, will be encouraged. Partnerships with dental industry and community oral health professional associations will be fostered.

The oral systemic link serves as an excellent basis for collaborative activities (Competency 4). The ADHP's involvement in health promotion and disease prevention naturally fits with diet counseling, mouth guard protection, and tobacco cessation. On a larger scale, community-wide programs that address these

issues will be implemented by the ADHP in concert with other groups. The suggested oral connection to heart disease and pre-term low birth weight babies establishes commonalities with organizations such as WIC, women's health groups, and the American Heart Association. Improper nutrition can affect oral health by heightening risks for caries and periodontal diseases. The inclusion of oral health education for school nurses and for curriculum planners in pre-kindergarten and elementary/lower schools is critical. Similarly, large scale dental screenings for school children is essential. Uncontrolled diabetes and periodontal disease exacerbate each other. The American Diabetic Association, nutrition, and endocrinology groups could forge coalitions related to diabetes and oral health. A comprehensive approach to oral and systemic health is a hallmark of the ADHP.

Conclusion

It is apparent that the ADHP can be a key force in implementing the action plans set forth in the CTA and in meeting the objectives articulated in *Healthy People 2010*. The congruence in philosophy between the *Surgeon General's Report on Oral Health* and the ADHP is apparent. There is well-substantiated need for the ADHP[4] - a provider who can help fill the growing gap in disparities by addressing the oral health care needs of the underserved in the U.S.

Competencies for the Advanced Dental Hygiene Practitioner,[4] in addition to providing sound rationale for the creation and implementation of the ADHP's role, presents a well-delineated educational plan and sample curriculum for role preparation. The competencies reflect the thought, rigor, and thoroughness that went into their development. Recognizing the size of looming challenges, the framework as presented shows a concerted, meticulous, and elaborate plan for creating the ADHP. The document demonstrates that the pieces are in place to begin implementation of action plans. As the U.S. moves forward to meet the oral health care needs of the underserved, quality initiatives are needed. The role of the ADHP promises hope for bringing accessible care to the underserved and for promulgating the tenet that oral well being is a reflection of overall systemic health.

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