

Interprofessional Education and Practice: An Opportunity to Reunite the Mouth with the Body and Make the Patient Whole



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We embrace a vision of all people enjoying oral health as part of overall health. Our vision begins with the people most affected by poor oral health: vulnerable populations at risk for the crippling illnesses of decaying teeth, gingival damage, and cancer—individuals, people—before they are “patients.”

In keeping with the admonition attributed to Albert Einstein that the definition of insanity is doing the same thing over and over again and expecting different results, our thesis is that in order to realize a vision of oral health for all, change is mandatory. We cannot continue to act in the same old ways and expect different outcomes.

After providing an overview of national oral health issues and current Federal activities, this article will highlight some innovative concepts to improve oral health outcomes. Hopefully these ideas and suggestions will not fit Einstein’s description of insanity, but will stimulate real change to improve oral health, which is to say, to improve health.

Oral health, as a critical component of health, is embedded in the World Health Organization’s 1948 broadened definition: “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” (1)

*Oral Health in America:
A Report of the Surgeon General*, published in 2000, spotlighted the devastating reality of poor oral health in America. (2) The lack of effective oral health education, hygiene,

and preventive services across the nation has led to an immense need for dental and craniofacial repair, restoration, and treatment, to the point that the need for complex repair has now become the national norm. The array of disorders,



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many of which can be attributed to socioeconomic and behavioral etiologies, is particularly prevalent and severe in vulnerable populations, disproportionately affecting the poor and underrepresented minorities—those least in a position to afford necessary treatment.

Oral disease, complex in nature, directly affects one's quality and standard of living, including sustenance (chewing and eating), self-image and esteem, communication, productivity, and employability. The afflicted and affected are often found among lower socioeconomic strata as a direct impact and burden of poor oral health, unattractive dentition, and loss of facial structure.

The American health system has historically separated oral health care from overall health in both professional education and practice. As a direct result of the educational and practice environment, the majority of medical professionals are not knowledgeable about and are not practicing oral health prevention, diagnosis, treatment, and referral to the extent necessary to change population-level health outcomes.

In 2003, under the leadership of Surgeon General Richard Carmona, a publication titled *A National Call to Action to Promote Oral Health* described the national burden of poor oral health and called for “adequate public and private health personnel and resources” to meet national needs and to integrate oral health with general health. (3) A variety of systemic issues, including lack of payment or reimbursement for prevention and education, poor dental insurance coverage, and policy makers' incomplete perceptions of the oral disease burden in the population have contributed to an untenable situation. Actions recommended in the *Call to Action* include improving access to care for overburdened populations, addressing disparities, and enhancing the workforce, including through increased representation of underrepresented minorities.

The Department of Health and Human Services (DHHS) Strategic Plan, FY 2010–2015, in reference to oral health calls on the Department to “expand the primary oral health care team and promote models that incorporate new providers, expanded scope of existing providers, and utilization of medical providers to provide evidence-based oral health preventive services, where appropriate.” (4)

At the 2013 National Oral Health Conference (5), DHHS Assistant Secretary Howard K. Koh announced the DHHS Oral Health Strategic Framework to facilitate improved coordination of efforts to integrate oral health activities across the Department. The purpose of the Framework is to move closer to a greater collective impact within DHHS, and to set the stage for effective public-private



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collaborations addressing the multiple issues at play that affect outcomes, including prevention, health literacy, access to care, dental workforce, financing models, data and research, and health disparities.

Multiple demonstrations and a variety of partnerships have evolved to respond to geographic variations, available resources, and population-specific traditions and perspectives—all designed to train and deploy workers in a variety of scenarios. As pilots are completed and studies are published, models are emerging that demonstrate improved outcomes. Some examples were reported in *The U.S. Oral Health Workforce in the Coming Decade: Workshop Summary* in 2009. (6) These examples highlight a trend toward reinforcing the current clinical workforce with new types of professionals trained to assess and respond to specific community and population needs.

The Community Dental Health Coordinator (CDHC), for example, engages the community under the supervision of a dentist and focuses on patient education, prevention, health promotion, and behavioral change. In Alaska, the Dental Health Aide Therapist (DHAT) model, adapted from the New Zealand prototype, emphasizes prevention and definitive care in remote areas and is likened to a physician assistant who practices concurrently with physicians. These providers are recruited from and return to practice in high-need communities. The Dental Therapist (DT) model developed in Minnesota is designed to deliver screening, triage, preventive education, sealant application, restorative dental procedures, and basic extractions in community settings. (7) Rural and underrepresented minority talent is recruited through pipeline programs.

Two Institute of Medicine (IOM) reports in 2011 updated and further highlighted oral health issues and offered recommendations to begin to ameliorate problems faced by Americans across generations, including the 4.6 million children left

out of dental care due to poverty (9), and 33.3 million persons living in Dental Health Professional Shortage Areas. (10)

Prominent among the recommendations in the IOM reports are specific references to workforce development, including who is trained, how they are trained, and where they should be deployed to effectively improve population and individual outcomes. Increasing the diversity and refining the cultural competency of these workers in providing care is a key consideration. According to the IOM reports, “Interprofessional, team-based care has the potential to improve care-coordination, patient outcomes, and produce cost savings, yet most health care professionals are not trained to work in either intra- or interdisciplinary teams.” (11)

Previously, in a 2010 report, the Health Resources and Services Administration (HRSA) Advisory Committee on Training in Primary Care Medicine and Dentistry recommended that “training grants should provide funds to develop, implement, and evaluate training programs that promote interprofessional practice in the Patient-Centered Medical-Dental Home model of care.” (12)

The unified health home that integrates oral health into general primary care incorporates overall clinical outcomes aligned with quality and financial measures. Oral health competencies and curriculum can no longer be considered an “add-on” but must be seamlessly incorporated into existing practice processes and patterns with emphasis on interrelated care. The health system infrastructure that facilitates referrals, knowledge exchange, and follow-up among the care team in a patient-centered model must be pursued and achieved.

A new operational paradigm needs to be established that will build on a knowledge base reflecting shared values and goals that commit to actions necessary to advance population oral health. These efforts must include primary care clinicians, public health practitioners, pharmacists, philanthropic representatives, and government (particularly HRSA), where a number of

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activities, including development of the oral health core clinical competencies for primary care professionals, are ongoing. A set of domains and associated competencies represents an essential minimum that each practice and profession may build upon as needed and appropriate. In order to transform the current paradigm, where medicine and dentistry are practiced separately and care of the patient is partitioned at the oral cavity, it will take true champions, visionaries, and those willing to pledge to reunite the mouth with the body to make the person/patient whole. Meaningful evolution toward shared goals requires a commitment to change, including leading those who are comfortable with the status quo.”

Interprofessional practice must be aligned and rooted in integrated, collaborative training and education that encompasses both fundamental didactic knowledge and critical experiential learning necessary to support a cohesive, seamless, unified approach to meet the health needs of communities. Many efforts are underway to encourage health professions institutions to develop integrated experiential education using a multipronged approach throughout the process of pipeline recruitment, professional education, accreditation, and practice, including recruitment and

retention policies in community settings. Examples include HRSA-funded collaborative practice and education models among schools of nursing and dentistry, as well as development

of oral health curricula for medical schools and practicing physicians. In addition, promising practice models of physician assistant training include integrating oral health into review of systems and physical diagnosis modules, examinations, and even credentialing. Federal funding from HRSA supports pilot programs to expand statewide al-

ready successful community models aimed at integrating oral health into perinatal care for the infant and mother. Integrating oral health education, screening, preventive interventions and treatment into perinatal care is an excellent opportunity to reconnect the mouth with the body during an important stage of the life cycle.

It is critically important to keep focused on the goal of oral health integration and primary care: better health outcomes.

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Engaging the Public and Affected Individuals and Populations

The perspective of the individual within an affected group determines outcomes. Without engagement, outreach, education, prevention, and “buy-in,” care is not effective. Engagement of the public includes understanding the needs and the levels of intervention that are acceptable, such as the amount of investment, time and commitment necessary to initiate and sustain change. Achieving enduring solutions and improved health outcomes necessitates assuring that the vision is shared and prioritized by all stakeholders.

For example, a community with an extremely high prevalence of heart disease was the target of a university intervention study to assess community based education to decrease cholesterol and high blood pressure. There was poor attendance and lackluster enthusiasm for each community event and it was apparent that the intervention (education) was not valued by the community. A follow up survey was administered and surprisingly, heart disease was ranked as a priority by community members but crime and personal security were overwhelmingly ranked as the number one concern of all respondents. (13) (14) When considering how to maximize impact and thus, change behavior, it behooves all partners to work towards collective impact. This example underscores the essential need to engage and retain the public on issues that impact their oral and overall health if substantial improvement is to be achieved.

In order to access evidence-based, high-quality oral health care for all, across the generations, the underserved and vulnerable must be included and be part of the solution. To overcome the barriers that contribute to oral health disparities, it is necessary to prioritize disease prevention, expand service settings, and prepare a “diverse and expanded array of providers competent, compensated, and authorized to provide evidence-based care” to an informed public. (15) It is critically important that the role of the public be recognized in determining the path forward in addressing oral health disparities.

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Creating an Educational Paradigm Shift That Integrates Faculty and Learner Preparation for New Models

Dental education is shifting from strictly brick-and-mortar institutions to include community-based learning where students are educated by a distributed faculty. The community-based (CB) model arose with the goal and promise to provide more graduating dentists to work in underserved or higher-need geographic areas. The new CB dental education model provides increased clinical experience in a number of settings and has increased the length of time senior students and residents spend in community-based rotations from an average of 10 days in 2002-03 to 52 days in 2006-07. Participating schools have seen an increase in enrollment of underrepresented minority students. (16)

Competencies taught and acquired in CB models need to be integrated into educational, accreditation, and certification standards. These models provide a unique opportunity for interprofessional, team-based learning and patient-centered care.

Interprofessional, team-based care requires training and education within an environment where team-based learning can occur. It is imperative that health professions faculty be competent and experienced in dealing with the complexities associated with caring for the whole patient. Participating faculty may hold appointments in multiple professional schools and share a set of core clinical competencies taught and practiced in schools of nursing, public health, and medicine, as well as in dental schools. Mechanisms to achieve widening of the traditional patient-centered team necessitate faculty trained through robust interprofessional faculty development programs. Training non-dental, primary care clinicians improves their ability to recognize oral disease and appropriately manage it and strengthens the medical acumen of dental clinicians. In addition, practice changes resulting from this training can lead to increased access to preventive services and referral, as well as to decreased dental disease. Dentistry must no longer be allocated to separate walls, buildings, and missions, but it must be integrated into the larger health paradigm in order to yield a substantial and necessary impact.

Embedding Financial Incentives in Health System Redesign

A multifaceted approach to align interrelated but disparate systems is required. The business case must be clarified and quantified through use of standardized oral health clinical measures that are reported with resulting health and financial accountability data. The links between oral and systemic

health, risk assessment parameters, preventive measures (including hygiene and education), along with diagnosis, treatment, and referral, are all needed if the management of oral health issues is to change. In addition to utilizing the five levers of intervention — policy, funding, technical assistance, data, and partnerships—there is also a need for system-wide incentives, such as the electronic health record.

An integrated, user-friendly, electronic health record supports an improved patient experience, tracks care across settings, is accessible to patients and multiple clinicians with provisions to include communication and educational and resource access. EHR associated systems should be used to identify and define essential data elements that can facilitate measurement of health improvement and provide systems that support utilization analysis and inform decision making leading to improved planning and patient satisfaction. These systems must support data sharing of medical and dental records and of laboratory and other tests, plus allow portability.

Financial system modifications are required to encourage, incentivize, and support desired outcomes. Opportunities to align public and private resources toward common outcomes are being sought by leaders with vision and experience in policy, systems change, finance, and education. An exemplar of stakeholder collaboration is the U.S. National Oral Health Alliance, which strives for collective impact for improved oral health for vulnerable populations across the nation. (17)

Incentives and financial tools such as scholarships, student loan repayment programs, and increased Medicaid reimbursement can be leveraged to build a competent, quality workforce poised to serve in underserved areas. Integrating oral health, public health, and non-dental primary care exploits common and shared perspectives to bridge gaps among the systems of health care, education, payment, and delivery.

To improve outcomes, these initiatives require that leaders—educators and health professionals—incorporate oral health into education programs, accreditation standards, professional licensing, reimbursement mechanisms, continuing education, and practice—indeed, into the entire health enterprise.

Driving change to improve health requires integration of overall health with oral health and the recognition that the mouth is inseparable from the body. This vision is intrinsic to ensuring the well-being of individuals and the population. Incorporation of education and practice of oral and medical health professionals will launch better health outcomes for all populations, especially those most vulnerable.

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