

DENTAL HYGIENE

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ADHA

Letter from the 2004–2005 ADHA President

What would the future of dental hygiene be if it were written by dental hygienists with the freedom to envision, to aspire, and to accomplish?

In 2002, the American Dental Hygienists' Association (ADHA) set out to answer this question when it implemented the "Future of Dental Hygiene" project. Three years later, *Dental Hygiene: Focus on Advancing the Profession* is realized.

This report encompasses far more than just the future of the dental hygiene profession, which was the original intention. In fact, this report expertly and logically documents our history and current events. It also outlines an innovative direction for dental hygiene's future. There have been significant milestones reached throughout the history of dental hygiene. However, we clearly have numerous opportunities ahead that will not only benefit the public's oral health, but will open doors for dental hygiene professionals in every state.

On behalf of the ADHA Board of Trustees, which approved this report at its winter 2005 meeting, I am proud to share the thoughtful, engaging, surprising and possibly controversial ideas with our state and local association leaders, members, health professionals, governmental officials, and other interested groups.

The board clearly recognizes and appreciates the time and effort that has gone into this report by the advisory board, subcommittees, and ADHA staff. This report exemplifies the endless commitment to ADHA and to the profession of dental hygiene by these individuals.

Best regards,



Helena Gallant Tripp, RDH
ADHA President

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Disparities in access to oral health care services can be found today among population groups according to socioeconomic levels, race and ethnicity, age, and gender.

Overview

A dental hygienist is a licensed health care professional, who supports the health and well being of the American public through oral health promotion, education, prevention, and therapeutic services. Dental hygienists are graduates of accredited dental hygiene programs in colleges and universities, and are required to pass a national written examination and a state or regional clinical examination in order to obtain a license for practice. There are more than 120,000 registered dental hygienists in the United States.¹

As health care professionals, dental hygienists provide oral health expertise in an array of workplace settings. As clinicians, dental hygienists may choose to work in private dental offices, school-based dental clinics, hospitals, managed care organizations, community health centers, correctional institutions, and nursing homes. In addition to direct patient care, dental hygienists may work in government, sales or marketing positions, or as educators, researchers, administrators, health policy makers, managers, consumer advocates, or consultants.

Dental hygiene practice varies by state, with state regulatory boards determining

the range of services and granting licenses for practice. The type and range of services differ according to each state's regulations.

The varied settings in which dental hygienists practice and the comprehensive dental hygiene services they provide are critical because Americans face an epidemic of periodontal (gum) disease and dental caries (cavities, also known as tooth decay). Dental caries is the major cause of tooth loss in children, while periodontal disease is the major cause of tooth loss in adults. Fifty percent of all American youth ages 17 and under have had caries in their permanent teeth, while 75 percent of the U.S. population has some form of periodontal (gum) disease.² In addition, more than 27,000 cases of oral and pharyngeal cancer are diagnosed each year.³ Despite these serious consequences of poor oral health, almost half of Americans do not receive regular oral health care.

Additionally, many research studies have suggested that periodontal (gum) disease is a potential risk factor for a number of diseases. Research has identified it as a possible risk factor for heart and lung disease; diabetes; pre-mature and low

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birth-weight babies; and a number of other conditions. As one example, two out of three dental hygienists report that they see signs of hypertension and heart disease in their patients.² If left untreated, poor oral health can increase the risk of developing potentially life-threatening diseases that are responsible for the deaths of millions of Americans each year.

Despite the connection between poor oral health and a host of systemic diseases and conditions, disparities in access to oral health care services can be found today among population groups according to socioeconomic levels, race and ethnicity, age, and gender. Research has demonstrated that oral disease rates and oral health needs are highest in low-income and special needs populations, such as the elderly or the disabled.

Access to preventive and therapeutic oral health care can be increased by maximizing the services hygienists are educated to provide, expanding dental hygiene practice settings, reimbursing directly for services delivered, and removing restrictive supervision requirements.⁴

It is clear that in order to promote total health, the public needs comprehensive

preventive oral health care and dental hygienists are the health care professionals with the knowledge and skills best suited to meet these needs. As such, dental hygienists should be integrated more fully into the health care workforce to provide a broader array of services to meet the needs of the American public. Legislators and policy makers, as well as other health care entities must recognize and support this expanded role for dental hygienists. The profession itself must embrace change, focus on growth and development, and plan for its future as well as the future oral health needs of the public.

Dental hygiene education faces many challenges: the proliferation of new associate degree programs; the lack of incentive for completion of a baccalaureate degree versus an associate degree; and the various educational levels for entry into the profession.

Introduction

During the 1980s, members of the dental hygiene profession, working with the leadership of the American Dental Hygienists' Association (ADHA), held a series of workshops to address dental hygiene education and practice. Through these workshops, practicing dental hygienists and educators from around the country reached consensus on major issues of importance to the future of dental hygiene. A prospectus was developed that offered a philosophical and conceptual foundation to meet the changing societal needs and health systems challenges of the 21st century.⁵

Since those first education and practice workshops more than twenty years ago, numerous changes have taken place in higher education, health care, and public policy.

Colleges and universities have had, and continue to face, challenges, particularly in terms of a deteriorating fiscal environment. Cuts in federal tax rates and state spending patterns have prompted higher education administrators to maximize efficiency and re-evaluate programs that are costly to operate. As a result, a number of dental and dental hygiene programs have been closed.

In addition to fiscal concerns, dental hygiene education faces many other challenges: the proliferation of new associate degree programs; the lack of incentive for completion of a baccalaureate degree versus an associate degree; and the various educational levels for entry into the profession. In addition, there is a shortage of appropriately educated dental hygiene faculty members, no universal plan for the various levels of dental hygiene education, lack of control over accreditation standards for dental hygiene education by the dental hygiene profession, and the threat of preceptorship (on-the-job training) or career tracks that do not require a formal accredited education.

While dental hygiene education *has* been addressing these issues, the profession also has been focused on establishing a theoretical framework to validate dental hygiene education and practice. A National Dental Hygiene Research Agenda (NDHRA) was formulated and validated in 1995.⁶ In 2001, priorities for NDHRA were recommended that included research related to health services, access to care for underserved populations, health promotion, and disease prevention.⁷

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Some in dental hygiene raised fundamental issues with respect to the use of this national agenda to guide research efforts. However, the dental hygiene community must commit to using the agenda to guide research and other professional efforts. A consistent and reliable system is needed to monitor the progress and outcomes of efforts made in conducting research, in preparing hygienists as researchers, and in publishing findings. This tracking and evaluation system will provide direction and focus for the research conducted by dental hygienists.

In 1997, the ADHA House of Delegates adopted a model of evidence-based practice for dental hygiene. This model calls for conducting new research and promoting the application of research findings among all members of the profession—clinicians, educators, administrators, and researchers themselves. To support research efforts and build a rigorous body of knowledge, a research infrastructure is essential.

Another area of intense change is science and technology. Over the years, the health care community has achieved dramatic scientific and technological advances, resulting in a greater

understanding of the relationship between oral health and systemic disease. As the associations between periodontal and cardiovascular diseases, diabetes, low birth-weight and other medical conditions become better defined, it will be incumbent upon dental hygienists to embrace these changes.

In addition, this past decade witnessed the release of the first-ever U.S. Surgeon General's Report on oral health (released June 2000): *Oral Health in America: A Surgeon General's Report* (Surgeon General's Report). The report's focus on oral health sensitized the nation to the connection between oral health and systemic disease and the reality that there is a silent epidemic of oral diseases affecting poor children, the elderly, and many members of racial and ethnic minority groups. The report also maintained that America's continued growth has resulted in broad socio-economic differences that hinder the ability of some segments of the population to access oral health care.⁸

Currently, almost 43 million Americans live in dental health professional shortage areas, as defined by the U.S. Department of Health and Human Services Health Resources and Services Administration,⁹

The disparity in access to oral health care is exacerbated by a current and projected worsening shortage of dentists. Dental workforce data projects a decrease in the number of graduating and practicing dentists.

and 108 million people lack private dental insurance, which is more than 2.5 times the number of those who lack medical insurance.¹⁰ As a follow-up to the Surgeon General's Report, a *National Call to Action to Promote Oral Health* was released in May 2003 from the U.S. Department of Health and Human Services to support changes in the research and delivery of oral health care.¹⁰

Access to care continues to remain a concern to the public seeking oral health care and to dental hygienists attempting to provide care in all settings in order to improve oral health for all Americans. The disparity in access to oral health care is exacerbated by a current and projected worsening shortage of dentists. Dental workforce data projects a decrease in the number of graduating and practicing dentists. According to the Bureau of Labor Statistics, the projected growth for dentists is 4 percent—slower than average growth. However, for dental hygienists there is a projected growth of 43 percent—much faster than average—through 2012.¹¹

Currently, there are 130,000 dentists in the U.S., compared to 120,000 practicing dental hygienists.¹² However, as the number of dentists decreases and the number of dental hygienists increases, this balance will shift dramatically. As this happens, fewer dentists will be available to address the needs of

underserved segments of the population. With accredited education, licensure, growing numbers, and a regulatory system already in place, dental hygienists are the logical oral health care providers to play a key role in filling this void.

The extent of unmet need will worsen dramatically unless the oral health workforce is provided economic and other incentives to locate/practice in underserved areas. Further, these providers must exhibit cultural competence and communication skills to fully meet the needs of increasingly diverse populations. In addition, this workforce must have regulatory authority to practice to the extent of their educational qualifications and standards of competence rather than limited scopes of practice. It is important for dental hygienists to initiate planning of new models of oral health care delivery to meet the needs of underserved population groups. Once these models are initiated, it is important for policy makers and other health care providers to support their implementation.

In the face of this increasingly serious oral health manpower crisis and a lack of access to oral health care for certain segments of the population reaching crisis proportions, ADHA determined that it was time to prepare for the future of dental hygiene.

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In 2002, ADHA appointed a working group of dental hygiene leaders from around the country and identified the following focus areas for the creation of a report on the future of dental hygiene: research, education, practice and technology, licensure and regulation, public health, and government.

Throughout the year, member input was solicited at the ADHA annual session, board-of-trustees' strategic planning session, constituent officers' workshop, and council meetings. Dental hygienists and other interested individuals were encouraged to share their vision and ideas through dental hygiene publications and through the association's Web site and email list forum. Throughout this process, it became clear that dental hygienists share a number of fundamental beliefs that shape the focus and direction of dental hygiene. These beliefs are:

- Access to oral health care is a right of all people.
- The oral and general health needs of the U.S. population are growing, and dental hygiene practice and education must evolve to meet them.
- Dental hygienists should be able to provide the care they have been educated to deliver.
- Dental hygiene is part of an overall health care delivery system, not simply an arm of dentistry. Dental hygiene

must create an integrated model of oral health care delivery with other health care providers.

- Dental hygiene needs to identify and remove the barriers that restrict the public's access to oral health care.
- Dental hygiene must move from a mechanical-based treatment of disease model to a wellness model of care.
- Dental hygienists advocate high standards of professional practice.
- It is the responsibility of dental hygienists to determine the profession's future regarding education, licensure, and practice, and they should continue to build the profession's knowledge through the expansion of its research base.

The Future Vision for Dental Hygiene

To establish the framework for dental hygiene's future, hygienists were asked to consider what dental hygiene would be like five years from now and 20 years from now.

A future vision for dental hygiene, developed by this process, is

Dental hygiene is the preventive oral health care profession, highly valued

There must be greater networking among dental hygienists and increased collaboration within and across career specialties to ensure that dental hygienists' concerns are heard and that the oral health needs of the public are met.

for its knowledge, skill and commitment to improving the quality of the nation's overall health by providing effective and accessible oral health care.

The profession contributes to quality health care by utilizing evidence-based approaches for clinical decisions, fostering professional growth through advanced education and life long learning, providing leadership in health policy to create change and improve delivery systems that will result in increased access to care for the public.

The majority of individuals who choose dental hygiene as a career remain active in the profession because of the opportunities for personal and professional development, the chance to help others through public service, stimulating work environments, and financial remuneration commensurate with various professional roles and responsibilities.

Focus Areas—A Call for Action

To realize the future envisioned by the dental hygiene advisory board, six focus areas were identified as essential to bring about positive change for the dental

hygiene profession as well as the health care delivery system.

- **Research**
- **Education**
- **Practice and Technology**
- **Licensure and Regulation**
- **Public Health**
- **Government**

Dental hygiene leaders from around the country were asked to serve on subcommittees related to each area of the report. These groups began to articulate a desired future for each focus area. They developed goals and recommendations to define what must occur over the course of the next decade and beyond to realize the future for dental hygiene. The following pages summarize multiple goals and recommendations developed for the six focus areas.

As each subcommittee developed its draft report, several themes emerged: dental hygienists must develop professional socialization skills, there must be greater networking among dental hygienists and increased collaboration within and across career specialties, and there must be increased collaboration with policy makers and the public to ensure that dental hygienists' concerns are heard and that the oral health needs of the public are met.

Research

It is widely recognized that dental hygiene practice must be based on sound research and scientific information. To promote research and advance the scientific base of dental hygiene practice, a research infrastructure is required. Such an infrastructure will support research efforts and enable the systematic and purposeful building of a rigorous body of knowledge. The five essential elements of a research infrastructure are derived from a model published in the dental hygiene literature.¹³

A research infrastructure suggests a level of coordination and integration of activities that extends beyond any one organization, institution or center, and requires considerable commitment, communication and effort on the part of the dental hygiene community at large.

A cadre of professionals trained and actively participating in research will support the dental hygiene research infrastructure. Ideally, researchers in the profession should be prepared through doctoral education. Faculty and students need to be socialized to the importance and benefits of research and graduate education. Further, educational programs

must actively promote research as a career path. Mechanisms for supporting advanced education and mentoring systems are required to enable new researchers to engage in the research process effectively.

Integrating research throughout all facets of the profession requires significant dedication on the part of all dental hygienists. The professional community must commit to using the NDHRA to guide research, enhance patient-centered care and foster other professional efforts. All dental hygienists, regardless of their practice settings and professional interests, must take ownership of the NDHRA. Achieving national health objectives should be an inherent part of their professional activities, both inside and outside of the research arena. This is especially important for practitioners, who provide the greatest representation of the profession to the public. The decisions that they make every day must be firmly grounded in knowledge that is obtained from research and clinical experience, to improve their professional judgment and ultimately, to improve the quality of services provided.

Integrating research throughout all facets of the profession requires significant dedication on the part of all dental hygienists.

Aim One

Create a research infrastructure and support the dental hygiene body of knowledge through coordinated research initiatives.

Recommendations

1. Critical Mass of Researchers/Scientists:

- Increase the number of dental hygienists with doctoral degrees in order to enhance funding opportunities.
- Increase the number of dental hygienists with doctoral degrees, with degrees in dental hygiene or other disciplines, including the basic and applied sciences, epidemiology, public health, health policy, education, and other professional degrees.
- Increase the number of dental hygienists serving as primary investigators in research, as well as the number of dental hygienists who are qualified to participate in research.

2. Identify Research Priorities:

- Commit to using the ADHA NDHRA to guide research and other professional efforts.
- Target research priorities related to health services, access to care/underserved populations, and

health promotion/disease prevention to meet national health objectives.

- Encourage dental hygiene researchers to utilize interdisciplinary models of collaboration in research endeavors.
- Identify the status of current research endeavors.
- Identify the need for studies that replicate and validate existing bodies of work.
- Identify the need for conducting additional studies to expand upon what has already been learned.
- Utilize graduate dental hygiene programs as “centers” for investigation, with concentrated research efforts focused on particular fields of study. Using the NDHRA as a guide, these schools could serve as regional sites for multi-center research studies to conduct large-scale investigations that add to the body of knowledge.

3. Communication Systems to Promote Linkages:

- Create a uniform taxonomy that is used to define the language of the dental hygiene profession so that the literature can be indexed accurately in national databases such as, but not limited to, MEDLINE, PubMed, CINAHL, and HealthSTAR.

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- Develop a consistent and reliable system to monitor the progress and outcomes of dental hygiene research.
- Develop a comprehensive database for information management that is utilized uniformly across the profession, and that reflects the scope of dental hygiene's body of knowledge.
- Complete the application process for the *Journal of Dental Hygiene* to be included in the Science Citation Index so that the authors and university employers can document the impact of their publications.
- Encourage all dental hygienists to apply the basic research skills of problem solving, critical thinking, and decision making to all professional activities.
- Create forums for dental hygiene researchers to present their work, share information, and exchange ideas for future projects with their research colleagues and other dental hygienists.

Aim Two

Increase the number and quality of dental hygiene researchers.

4. *Funding for Research:*

- Raise and provide funding for research projects that address specific priorities identified by the NDHRA.
- Sponsor training programs for dental hygiene investigators.

5. *Valuing Research:*

- Encourage all dental hygiene programs to adopt an educational philosophy that reinforces the importance of research in documenting the efficacy of practice, so that an appreciation and basic understanding for the process becomes an inherent part of the value system of each dental hygienist.

Recommendations

- Utilize articulation agreements that allow dental hygiene students to complete baccalaureate degrees and to facilitate their entrance into graduate schools.
- Educate dental hygienists to evaluate the scope, quality, merit, and utility of research used to guide evidence-based practice.
- Prepare dental hygienists to develop the skills necessary to apply an evidence-based methodology, including:
 - converting information needs into clinical questions so that they can be answered

Limited availability of research resources necessitates careful examination of and consensus as to the next steps for advancing professionalization.

- conducting a computerized literature search with maximum efficiency for finding the best external evidence with which to answer the question
 - critically appraising the evidence for its validity and usefulness
 - applying the results of the appraisal or evidence in practice
 - evaluating their performance in applying an evidence-based methodology.
- Encourage dental hygienists, researchers, journal editors, journal reviewers, and educators to utilize and comply with the Consolidated Standards of Reporting Trials (CONSORT), international standards now being adopted by medical and dental journals, to improve the quality of the conduct and reporting of research studies.
 - Create opportunities for dental hygiene educators to share effective strategies for teaching and mentoring research.
 - Develop and implement ADHA-sponsored research development training workshops on topics such as the use of technology, information resources, library skills, and evidence-based teaching methodologies, offering these workshops online and/or as a component of professional meetings.
- Establish research as a career path in existing dental hygiene education programs at the master's degree and doctoral levels.

Aim Three

Integrate research in all facets of the profession.

Recommendations

- Utilize the NDHRA as the driving force behind the work efforts of the ADHA councils and the strategic plan of the association.
- Charge each ADHA council with identifying research needs, goals, and objectives related to their specific areas of interest from the NDHRA.
- Charge the Council on Research and the ADHA Institute for Oral Health Research Grant Review Committee with systematically managing the funded research conducted under their auspices in order to improve accountability in the tracking of research progress.
- Work collaboratively with the National Center for Dental Hygiene Research to maximize resources and work effort.
- Educate all dental hygienists in the scientific method so that they are

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competent in searching and evaluating the literature and adopt an evidence-based philosophy.

- Advocate for increased dental hygiene research initiatives through federal agencies and other public and private funding sources.

Summary

Dental hygiene has an emerging research infrastructure that must be purposefully advanced and supported. To expedite the development of this infrastructure, the initial focus and funding of research efforts should be on the priorities identified from the NDHRA. Building an infrastructure is particularly critical for dental hygiene in today's health care environment. Limited availability of research resources necessitates careful examination of and consensus as to the next steps for advancing professionalization. However, achieving excellence in practice, the cornerstone of professionalization, is intricately tied to and dependent upon putting into place a viable structure for conducting research.

With the many national calls for changing the oral health care delivery system and education of oral health professionals, it is important to revise the dental hygiene educational curriculum to prepare future dental hygienists to deliver quality oral health care to all segments of the U.S. population and to be responsive to an evolving health care delivery system.

Education

Historically, the dental hygiene education curriculum was predicated on the delivery of oral health care through the private practice dental delivery system. Currently, significant segments of the U.S. population do not receive any oral health care through this traditional system. With the many national calls for changing the oral health care delivery system and education of oral health professionals, it is important to revise the dental hygiene educational curriculum to prepare future dental hygienists to deliver quality oral health care to all segments of the U.S. population and to be responsive to an evolving health care delivery system.

As the population ages and becomes more culturally diverse, overall health and oral health needs will become more complex, requiring health care practitioners to have a broad-based education. Health promotion and prevention of oral diseases, rather than the current focus on treatment of existing disease, also must receive considerable attention within the dental hygiene educational system.

Entry-level dental hygiene programs are currently offered in a variety of education settings such as schools of allied health, dental schools, community

or junior colleges, and technical colleges and universities. Since 1990, there have been 95 new programs established, of which only two offer a baccalaureate degree.¹⁴ Programs in educational settings that limit their length struggle to incorporate new content and techniques to enhance oral health care. As a result, curricula are overcrowded.

Workshops held throughout the 1990s and early 2000s addressed the need for a dental hygienist who is broadly prepared and has the necessary skills to cope with an accelerating pace of change. Conferences have identified the need to move toward the baccalaureate degree as the entry point for the profession with a universal core curriculum that integrates oral health with interdisciplinary studies.^{15,16} The failure to standardize entry level at the baccalaureate level has had an adverse impact on the pace of development of advanced dental hygiene programs and the continued development of the dental hygiene body of knowledge. Given that some other professions and allied health professions have already moved beyond the baccalaureate degree as the entry to practice, dental hygiene must plan for the advanced degree as the entry to practice in the future.

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A challenge facing dental hygiene is that accreditation standards for dental hygiene education are not established by the profession. Currently, dental hygiene education programs fall under the accrediting authority of the American Dental Association's Commission on Dental Accreditation (ADA CDA). ADA CDA consists of 30 individuals, with only one appointee made by organized dental hygiene. Other health professions and allied health professions control their own accreditation processes and standards through independent agencies recognized by the U.S. Department of Education.

Dental hygiene scholars are needed to lead the development of theory and knowledge unique to the discipline of dental hygiene. Currently, there is a shortage of dental hygiene faculty that is expected to increase as a result of program closures in university and dental school settings.¹⁷ Doctoral preparation of dental hygienists is essential for building the dental hygiene knowledge base for advancing the professionalization process.

Aim One

Redesign dental hygiene curricula based on the increasingly complex oral health needs of the public.

Recommendations

- Evaluate the dental hygiene curriculum and create new models for entry level programs that address
 - oral health needs
 - training programs in community-based, underserved areas
 - community health and disease management
 - cultural competence
 - needs of special groups
 - health services research
 - public policy development
 - evidence-based research methodology and practice
 - collaborative practice models.
- Collaborate with appropriate professional organizations to advance awareness of faculty and dental hygiene education program leaders to embrace the need for curricular changes that reflect the oral health needs of the public.
- Conduct education workshops that focus on curricular advancements.
- Collaborate with appropriate organizations to design dental hygiene curricula that better reflect public health needs and the corresponding role of the dental hygienist.

Dental hygiene scholars are needed to lead the development of theory and knowledge unique to the discipline of dental hygiene.

Aim Two

Advance the educational preparation necessary for entering the dental hygiene profession.

Recommendations

- Implement the baccalaureate degree as the entry point for dental hygiene practice within five years.
- Create articulation agreements, degree completion programs, and distance learning technology as mechanisms for achieving the goal of implementing dental hygiene entry at the baccalaureate level so that the resources of associate programs continue to be fully maximized.
- Once the baccalaureate entry-level system has been established, create a 10-year plan for initiating the master's degree as the entry to practice.
- Conduct educators' workshops designed to address implementation issues for baccalaureate and master's degree programs.

Aim Three

Create an independent dental hygiene accrediting agency.

Recommendations

- Establish an independent third party to accredit dental hygiene education, recognized by the U.S. Department of Education, beginning with baccalaureate degree-completion programs and moving to accrediting master's degree programs. Over time, the agency would accredit all dental hygiene education programs.

Aim Four

Create a doctoral degree program in dental hygiene.

Recommendations

- Develop curricular models for both professional (doctor of science in dental hygiene) and academic (doctor of philosophy) doctoral programs in dental hygiene.
- Conduct educators' workshops at professional meetings to promote the development of doctoral programs in dental hygiene.
- Publish curricular models for doctoral programs in dental hygiene professional journals.

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At this point in time, our education programs have not begun to address the research, public health, public policy, cultural, leadership, and funding challenges presented in the Surgeon General's Report. The current entry-level dental hygiene education model is limited by a curriculum that is narrowly defined with respect to content and length. As dental hygiene advances and the educational preparation for entry into the profession evolves, the dental hygiene curriculum must be redesigned to reflect those changes.

Dental hygiene must keep pace with professions such as teaching, occupational therapy, and physical therapy that have recognized the importance of advanced education as the entry to practice. As health care delivery systems change and the relationship between systemic disease and oral health becomes more defined, the demands for advanced-level practitioners will increase. The knowledge and skills of dental hygienists will need to expand. Curriculum modifications will need to be made to reflect these changes. Expanding the curriculum accordingly will allow dental hygienists to further develop the scientific basis for dental hygiene practice.

Ensuring high standards and quality education at all levels of dental hygiene education by the profession will afford dental hygiene the autonomy to adapt curricular changes as needed to meet the future health care needs of the public and the profession.

Developing curricular models for doctoral programs in dental hygiene will assist dental hygiene educators in creating quality programs that meet the needs of students, the profession, and the missions of colleges and universities. Providing advanced education specific to the discipline of dental hygiene will allow greater opportunities for advancing the art and science of the profession.

The creation of an advanced dental hygiene practitioner (ADHP) will require dental hygienists and dentists to work together in new ways in order to reach out to underserved populations.

Practice and Technology

Unmet oral health care needs have historically been a problem in the U.S. and will likely continue to be in the future. The primary factor in controlling oral diseases, including dental caries and periodontal disease, is the prevention of the disease. Often the lack of funding by state and federal governments to provide oral health services is cited as a continuing reason for the growing unmet oral health needs of the public. This trend will likely continue as our nation struggles to find a means to provide oral health services in an economically viable way.

In addition to the economic problems related to oral health care delivery, the lack of availability of oral health care providers is troubling. As previously noted in this report, the number of dentists is predicted to grow at a much slower rate (4 percent) compared to the projected growth of dental hygienists (43 percent).¹¹ This is expected to create a shortage in the number of practicing dentists. Dental hygienists' roles must continue to expand as the number of graduating dental hygienists increases and the number of graduating dentists decreases.

The dental hygiene profession has recognized the need to expand the traditional roles of dental hygienists

through the creation of an advanced dental hygiene practitioner as a means to increase the public's access to preventive and therapeutic oral health services. Many areas of the country that lack the availability of dentists to provide restorative dental services could be better served by an advanced dental hygiene practitioner (ADHP) with the authority to provide not only preventive services, but also minor restorative services and refer patients with more advanced restorative needs on to a dentist. The creation of an advanced dental hygiene practitioner will require dental hygienists and dentists to work together in new ways in order to reach out to underserved populations. In addition, changes in state practice acts and educational programs will be required to assure that the public's diverse oral health care needs are met. Should these changes not occur, other professionals such as physicians and nurses will assume this role.

Meeting the demand for dental hygiene services is currently restricted due to limitations on the settings in which dental hygienists are legally allowed to practice and lack of direct reimbursement for dental hygiene services. To date, not all states allow for direct reimbursement to dental hygienists for services they

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perform under the Medicaid program. Fiscal solvency is an important consideration for all oral health professionals as they attempt to reach out into the community to provide oral health care services. In order for dental hygienists to work as primary care providers, they must be able to receive direct reimbursement for services rendered.

The aging of the population, as well as the diverse cultural background of our society, will change the manner in which all health care professionals deliver services. The U.S. Bureau of the Census projects the number of Americans over the age of 65 will grow 17 percent by 2010 and 76 percent between 2010 and 2030.¹⁸ Also, according to the Census Bureau, the Asian population is expected to more than triple to 33 million by 2050 and the African-American population will rise 71 percent to more than 61 million, but Hispanics will see the most dramatic increases, projected to grow by 188 percent, or to 102 million, or more than one-quarter of the American population.¹⁹ In addition, consumers today are more technologically savvy, better educated, and demand a high return on their health care investments. Dental hygienists need to be better prepared to address the multi-faceted needs of our diverse population, especially the ever-growing segment of the elderly. Evidence-

based, patient-centered care requires being more aware of the desires and needs of consumers, and possessing the ability to communicate effectively with all groups.

Information technology has transformed society and dental hygiene practice over the last 20 years. The Internet, mobile technology, and advances in medical diagnostic and therapeutic agents and devices have changed the way we live and the manner in which health care providers deliver services. In dental hygiene, lasers, digital radiography, caries diagnostic equipment, cordless handpieces, a variety of probes, and other innovations have changed the landscape of clinical practice.

As more technological advances occur, dental hygienists must use an evidence-based approach in evaluation. Dental professionals also have seen the direct application of knowledge gained from what is perhaps the greatest technological advance of our time: the Human Genome Project (HGP). Begun in 1990, the HGP aims to identify all the genes in human DNA, determine the sequences of the three billion chemical base pairs that make up human DNA, store the information in databases, improve tools for data analysis, transfer related technologies to the private sector, and address the ethical, legal, and social issues that may arise from the project.

Dental professionals also have seen the direct application of knowledge gained from what is perhaps the greatest technological advance of our time: the Human Genome Project.

As much as technological advances have affected the profession, genomics are positioned to revolutionize it.

Aim One

Create multiple levels of clinical dental hygiene practitioners with representative titles and appropriate levels of education and degrees.

Recommendations

- Change the title “dental hygienist” to reflect the expanding roles and responsibilities of the profession.
- Create a licensed advanced dental hygiene practitioner (ADHP) with advanced education and training to provide a wider range of services including, but not limited to, diagnostic, preventive, restorative and therapeutic services directly to the public.
- Create collaborative practice models for dental hygiene that include, but are not limited to, the following:
 - dental hygiene professionals working with medical teams, such as:
 - contracting with hospitals and private practices for in- and outpatient programs
 - primary care, ob/gyn, pediatric, and geriatric medical programs
 - transplant patient pre- and post-care
 - kidney dialysis support
 - pre- and post-cardiac care support
 - pre- and post-care oncology support
 - preventive and therapeutic care for physically and mentally disabled patients.
 - providing preventive and triage services in-house or on-site for businesses/corporations
 - working as administrators of oral health clinics with hygienists performing clinical procedures and supervising licensed and certified dental assistants
 - working in school-based/school-linked and college settings performing preventive services, routine examinations, and simple restorative procedures
 - working with portable equipment or in mobile dental vans performing preventive services, such as routine examinations, and simple restorative procedures
 - working in hospitals, chronic care facilities, and residential facilities performing preventive services, routine examinations, and simple restorative procedures

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- serving as visiting dental hygiene professionals, and owning and operating home oral health agencies that provide dental hygiene services similar to “visiting nurses.”
- Create curriculum models and competency certification systems for specialty areas, which include but are not limited to, the following:
 - pediatrics
 - geriatrics
 - periodontics
 - oncology
 - anesthesiology
 - public health
 - forensics
 - developmentally disabled
 - hospital dental hygiene.

Aim Two

Promote direct reimbursement to dental hygienists for services they provide.

Recommendations

- Advocate with third party payers—medical and dental—for direct reimbursement for dental hygienists.
- Work with state Medicaid directors to recognize dental hygienists as Medicaid providers.
- Develop insurance codes that appropriately reflect the dental hygiene process of care.

Aim Three

Develop a dental hygiene workforce that is able to meet the changing demographic and cultural challenges that will occur as a result of America’s evolving population.

Recommendations

- Educate dental hygienists to meet the multiple care needs of the geriatric population.
- Develop education, techniques, and messages that are more consumer-focused in keeping with a client-centered approach to care.
- Increase the cultural diversity of dental hygiene professionals.
- Ensure that all dental hygiene professionals are culturally competent and able to communicate and deliver health care that is culturally sensitive.

Aim Four

Develop a dental hygiene labor force that keeps pace with the genetic revolution and other technological advances.

Recommendations

- Incorporate new technology in the curriculum of dental hygiene

Dental hygiene must move from a mechanically based occupation to an evidence-based health profession.

education programs and professional continuing education.

- Educate dental hygienists about technological advances and their application to dental hygiene practice.
- Provide continuing education opportunities for learning and applying new technology for practicing dental hygienists.
- Activate the ADHA Task Force on Genetics to evaluate the innovations in genetics and their applications to the dental hygiene profession.
- Develop ethical and policy statements that address genetics.
- Develop tools to assist dental hygienists in understanding and addressing genetic issues.
- Develop innovative technologies to enhance health and wellness.
- Use an evidence-based approach to evaluate the efficacy of new technology for dental hygiene practice and its impact on health outcomes.

Summary

As our nation addresses the unmet oral health needs of our citizens, it has become

imperative for health professions to re-examine their roles and responsibilities in providing services to the public. The traditional method of providing dental hygiene services through private dental practices is inadequate to meet the oral health needs of the country, and must be expanded. The clinical practice of dental hygiene also must evolve as there are advancements in technology and science. Dental hygiene must move from a mechanically based occupation to an evidence-based health profession. New roles and responsibilities will develop for dental hygienists as technological advances, practice settings, and dental hygiene education and regulatory requirements evolve. The creation and implementation of an advanced dental hygiene practitioner (ADHP) is one method of increasing the public's access to preventive and therapeutic services provided by dental hygienists.

As new models of dental hygiene practice are developed, in addition to the traditional private practice model, dental hygienists will be able to meet the preventive and therapeutic needs of clients in a variety of settings. As primary care providers, they should receive direct reimbursement for the services they deliver.

The challenge of educating health care professionals to deliver evidence-based

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care that is culturally sensitive will become increasingly more important as America's population becomes more diverse. In addition, as America's population ages, dental hygienists will have to adapt their practices to address this trend. Moreover, dental hygienists must be aware of consumerism's impact on their profession, including direct-to-consumer marketing, information technology, cost-competition in the health care marketplace, and client expectation of affordable, quality care.

The clinical practice of dental hygiene must evolve as advancements occur in technology and science. Dental hygiene must move from a mechanically based occupation to an evidence-based health profession. New roles and responsibilities will be created for dental hygienists as technological advances, practice settings, and dental hygiene education requirements evolve. Future decades will see technological advancements that will change and shape our society more quickly than ever before, as new information about human health and disease is discovered via the HGP. Dental hygienists must learn how to translate this new knowledge into clinical applications. The development of tools, ethical guidelines, and policies will assist dental hygienists in incorporating technological advances in all settings.

Licensure and Regulation

Professional regulation refers to the supervision of licensure and practice standards of professions by state government to ensure the health and safety of the public. Recognizing the purpose of regulatory boards, it is appropriate for the public to play a greater role in professional regulation. The wave of the future appears to be increasing the number of consumers participating in this process.

Today, dental boards are overwhelmingly composed of dentists who regulate both their own profession and dental hygiene. In most states, consumers and dental hygienists hold only a minority of seats on the board. Dental boards often make decisions based on the practice issues and economics of private dental offices and frequently tend to ignore dental hygiene concerns. Given the conflict of interest that occurs when employer dentists regulate their own employees, dental boards make frequent decisions that limit access to dental hygiene services.

Currently, a number of states have dental hygiene committees or varying degrees of self-regulation, but they exist in a largely advisory capacity. Given the situation, it is imperative that new regulatory models be developed whose primary focus is dental

hygiene. A dental hygiene board would eliminate the conflicts of interest that exist today and foster greater emphasis on providing a delivery system that affords expanded access to dental hygiene services and oral health care.

In order to assure the public's health and safety and access to quality dental hygiene services now and in the future, it is critical that dental hygiene professionals have the authority to regulate themselves by determining educational requirements, practice standards, and competency assurance.

The urgency of expanding access to care is highlighted by the Surgeon General's Report, which indicates that a "silent epidemic of oral diseases is affecting our most vulnerable citizens—poor children, the elderly, and many members of racial and ethnic minority groups."⁸ This disparity is exacerbated by dental workforce data that projects an oncoming shortage of dental practitioners. Concomitant to the numerical decline of dental practitioners, there is a progressive increase in the number of dental hygiene schools and their graduates. With accredited education, licensure, and a regulatory system already in place, dental hygienists are the logical

It is imperative that new regulatory models be developed whose primary focus is dental hygiene.

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manpower resource to play a key role in addressing access to care. However, access to oral health care continues to be hindered in many states by restrictive supervisory requirements and the scope of practice limits.

Dental hygienists have created new models of regulation and care delivery that are safe, effective and allow for the continued referral of patients to dentists for further treatment. It is time to create further pathways for these competent practitioners to meet the oral health needs of American society. As these new regulatory models are created, one of the *future* issues that they will have to address is the assurance of competence for dental hygiene practitioners throughout their practice lifetimes.

Although existing state boards have focused substantial resources on assessment of entry-level competence, *continued* competence has been addressed only indirectly, primarily by mandatory continuing education requirements, which were in effect in all but three states in 2002. There is growing public interest in continued competence as evidenced in a 1998 report from the PEW Foundation that recommended:

“States should require that their regulated health care practitioners demonstrate their competence in

the knowledge, judgment, technical skills and interpersonal skills relevant to their jobs throughout their careers.”²⁰

The greatest barrier to broad-scale implementation of such requirements is an efficient, readily available mechanism to assess all practitioners periodically and screen out those who need closer scrutiny. It is generally recognized that state boards of dentistry have neither the resources nor the manpower to periodically reassess the competence of all practitioners using the traditional clinical assessment mechanisms.

Dental hygienists should be actively involved in both the development and administration of a continued competence mechanism for dental hygiene. Being well prepared for the implementation of continued competence will be an important factor in the realization of self-regulation for dental hygiene.

Aim One

Implement a dental hygiene regulatory environment governed by a majority of dental hygienists with consumer representation that ensures the health and safety of the public, and enhances access to care.

Dental hygienists should be actively involved in both the development and administration of a continued competence mechanism for dental hygiene.

Recommendations

- Achieve self-regulation in all states.
- Publish examples of models of dental hygiene self-regulation, with analysis of what has been learned and how these models have benefited the oral health of the public.
- Enhance the ability of dental hygienists to interpret and enforce the statutes and rules, setting requirements for licensure, re-licensure, and specialty certification.
- Advocate for dental hygienists to interpret and maintain standards of practice and determine the assessment of professional competence.
- Require graduation from a formal, accredited, post-secondary dental hygiene program as a prerequisite for licensure in all states.
- Establish the dental hygiene license as the prerequisite for providing those services requiring the professional skills, judgment, and education of a dental hygienist.

Aim Two

Implement a practice environment for dental hygienists that expands scope of practice, practice settings, and licensure mobility, and eliminates supervision requirements.

Recommendations

- Achieve greater mobility to move from state to state without interruption in the ability to practice.
- Remove restrictive supervision laws that prevent dental hygienists from providing oral health care services.
- Create uniformity in the scope of practice from state to state.
- Educate dental hygiene students to function in all practice settings.
- Collaborate with organized dental groups, dental public health, and/or public health agencies to create new models for the delivery of care that demonstrate dental hygienists can safely and effectively provide competent care in unsupervised settings.

Aim Three

Develop assessment methodologies to determine initial and continued competence of dental hygienists in the knowledge, judgment, technical skills, and interpersonal skills relevant to their jobs.

Recommendations

- Develop and promote innovative assessment methodologies to assure that applicants for dental hygiene

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licensure have fulfilled standards of competency for entry into the profession of dental hygiene.

- Develop and administer a system to certify dental hygienists with advanced and/or specialized skills, and document that they have fulfilled standards of competency to provide those services.
- Develop policy recommendations and methodologies for a system of continued competence that is relevant and appropriate for dental hygienists. As the public and/or legislative demand for continued competence grows, dental hygienists should be prepared to provide guidance to dental hygiene regulatory agencies.

Summary

In most states, the board of dentistry is an arm of state government, is accountable to the legislature, and has as its sole purpose the protection of the public. However, the distinction between protecting the public and protecting the profession is often poorly understood by the practicing profession. The scope of practice for dentists is fairly uniform across the country, but the scope of practice for dental hygienists varies greatly from state to state.

Self-regulation would eliminate the conflict of interest that exists today when employer dentists regulate their own employees and allow for greater emphasis on providing a delivery system that affords expanded access to dental hygiene services and oral health care.

Dental hygiene as a profession should take the lead in bringing together oral health stakeholders including practitioners, educators, researchers, regulators, third-party payers, health policymakers, and consumers who possess the expertise to create new pathways for competent practitioners to meet the oral health needs of society.

There is growing public interest in continued competence for health professionals and some professions are beginning to address methodologies for assuring continued competence. Dental hygienists should be actively involved in both the development and administration of a continued competence mechanism for dental hygiene.

Poor children experience twice as much dental disease than their more affluent peers and are more likely to suffer severe consequences due to lack of treatment services.

Public Health

Much has been written about the current state of the dental public health workforce in the U.S. and what actions are needed to enhance its capacity and capability to address the significant oral health problems facing the entire nation. With growing attention to and concern for the future of the dental public health workforce, policy makers will be faced with difficult challenges related to gaps in oral health care and the expanding role of public health dental hygienists in the future.

Dental disease continues to exist in America with profound disparities among our nation's most vulnerable groups. Dental disease experience is disproportionate. Minority, low-income, certain special care (e.g., elderly, disabled) and medically underserved populations, as well as many who live in rural communities, suffer from oral pain and disease due to an inability to access oral health care services in a timely manner. Poor children experience twice as much dental disease than their more affluent peers and are more likely to suffer severe consequences due to lack of treatment services. Between the ages 6-8, 26 percent of white children have untreated dental disease compared to 36 percent of African Americans and 43 percent of Hispanics. Low-income

children suffer nearly 12 times more restricted-activity or lost days from school than children from higher-income families. For adults over age 65, nearly one-third has untreated cavities and 13-39 percent is edentulous.

The Surgeon General's Report speaks to a number of public health interventions that have served to improve the oral health of Americans over the last half century. Among them are community water fluoridation and school-based and school linked dental sealant programs. Both programs are generally administered through state Offices of Oral Health and are aimed at preventing dental disease at the state and local levels. Dental hygienists participate in these programs by coordinating efforts, managing programs and by providing education and technical assistance. These preventive efforts have historically received federal support. In recent years, however, public funds have become less available and states have been forced to downsize oral health programs, reducing capacity and limiting full-time professional leadership and adequate staff to implement programs.

The *National Call to Action to Promote Oral Health (Call)* provided the impetus for the re-birth of state programs to develop

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state oral health plans that will move the national agenda forward. The *Call* has identified five action steps: Remove Barriers; Change Perceptions; Build Infrastructure; Expand the Science Base; and Build Partnerships. It is estimated that implementation of these steps on the national, state, and community levels will serve to promote and enhance the oral health of all Americans.

The dental hygiene profession as an organization of health care providers needs to recognize and interface with the national agenda. As state oral health plans unfold, it will be critical for both the profession as a whole and dental hygienists as individuals to position themselves at the forefront to provide direction and leadership. The opportunity for progress is here and potential for growth and development is bountiful. With oral health change at hand, hygienists may now maximize their opportunities to provide technical expertise and skills to meet the demands of the nation's poor.

Aim One

Increase the number of dental hygienists with training in public health and those with graduate degrees in public health.

Recommendations

- Promote and improve public health competency in education, research, and practice.
- Train dental hygienists to use appropriate, standardized methodologies to document and evaluate the efficacy of public health interventions in addressing oral care needs (e.g. cost:benefit analysis of dental hygiene services rendered).
- Establish cultural competency as an educational priority for dental hygienists as they seek to promote and improve oral health for minority populations.
- Recruit and support more students from diverse backgrounds, including the underserved. Establish financial incentives for minority dental hygiene students.
- Expand state-supported scholarship and loan forgiveness incentive programs to include dental hygienists at all levels of dental hygiene practice.
- Expand community service models to provide students with adequate experience in community-based health settings serving diverse

With oral health change at hand, hygienists may now maximize their opportunities to provide technical expertise and skills to meet the demands of the nation's poor.

populations, including low-income groups.

- Establish a standardized core public health curriculum for dental hygiene programs that includes use of competencies and outcome measures.
- Establish the master's in public health as the credential for employment in public health leadership/government positions.

Aim Two

Increase the number of dental hygienists working in leadership positions and policy settings.

Recommendations

- Partner with the larger health care community to establish an ongoing multidisciplinary leadership collaborative that addresses population-based public health issues and reinforces the public dental health workforce.
- Encourage hygienists to assume leadership roles in developing and directing community-based oral health education and oral health initiatives.

Aim Three

Increase access to oral health care services by expanding the dental hygiene public health workforce.

Recommendations

- Advocate for the inclusion of an advanced dental hygiene practitioner as an integral member of the dental hygiene public health workforce.
- Promote reciprocity of dental hygiene credentials by all licensing boards so that dental hygienists may relocate more readily to underserved areas.
- Acquire Medicaid dental provider status for dental hygienists.
- Guide the expansion of model stationary and mobile public dental clinics operating in underserved communities.
- Develop and utilize the case-management approach to assure access. Contracted dental hygienists should collaborate with school nurses; Head Start representatives; health services managers; Women, Infants, and Children nutritionists; School-Based Health Center nurse practitioners; and others to identify children at risk, those in need of

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care, and to provide the appropriate referral.

Summary

The persistent lack of access to basic oral health care by many sectors of the population demonstrates the failure of the dental profession to assure oral health for all Americans. The shortage of public health dentists and hygienists is growing and the cultural makeup of the dental workforce is generally not reflective of diversity in the population.

A marked decline in the supply of dentists in recent years, and a projected decline in dental school graduates, raises major concerns about the adequacy of the dentist workforce to address unmet oral health care needs. The increasing supply of dental hygienists and their contribution to increased productivity in dental practices suggest that their role in both private and public dental care is significant and warrants greater attention, as well as increased professional and public support. We must work to encourage more of these hygienists to work in public health settings.

As the oral health needs of the nation increase, dental hygienists will need to become more knowledgeable and skilled to help to meet the demand for services.

Dental public health curriculum and community service components in dental hygiene school programs will need to be more fully developed to adequately prepare students to work in public health settings.

As the future unfolds, hygienists will be leading the way in oral health care providing guidance to non-dental health providers and other non-traditional partners.

In addition, funds at the state and federal level, which are currently inadequate for education, public oral health care services and for the provision of services to low-income populations, will need to be increased and more readily available to hygienists for the provision of oral health care services.

Finally, state and federal policy changes addressing oral health care services for Medicaid, low-income and other special population groups will need to be implemented, so that the American public may fully access those oral health care services to which they are entitled.

The contributions of dental hygienists within government agencies may be made as clinicians, administrators, researchers, and community-based educators or change agents.

Government

Dental hygienists should take advantage of opportunities to serve at all levels of government to administer programs that provide access to care for the public, impact and interpret the laws that regulate the profession, and improve the oral health of the nation. The contributions of dental hygienists within government agencies may be made as clinicians, administrators, researchers, and community-based educators or change agents. In many of these positions, dental hygienists use the public health principle of ensuring the “greatest good for the greatest number” and often use population-based approaches rather than relying on the private practice model of individualized patient care.

Aim One

Increase the number of dental hygienists employed at all levels of government—federal, state, and local—who are able to influence policies and programs, and provide leadership to improve the oral health and general health of the public.

Recommendations

- Increase the number of dental hygienists serving at all levels of government in all branches as follows:

- Increase the number of dental hygienists with graduate degrees working in government settings.
- Increase the number of dental hygienists participating as providers in state or local publicly- or government-funded programs such as Medicaid and the State Children’s Health Insurance Program.
- Increase the number of dental hygienists serving in the armed forces as clinicians and administrators.
- Increase the number of dental hygienists serving as elected and appointed officials.
- Encourage dental hygienists to pursue master’s and doctoral degrees in disciplines, such as public health, public administration, business, health policy, and research, so they are well trained to attain roles in government. Promote distance- and Web-based courses as a way of pursuing higher education.
- Develop a public policy focus in undergraduate dental hygiene programs, including standardized curriculum with competencies.
- Increase opportunities for dental hygiene students and dental hygienists to participate in

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internships and practicums that can be conducted at all levels of government.

- Develop a recruitment plan integrating strategies that are comprehensive and responsive to diversity to encourage more dental hygienists to pursue employment in federal, state, and local government.
- Expand loan repayment and tax incentive programs for hygienists serving in state and federal programs.
- Seek changes in state practice acts to increase access to preventive dental hygiene services for underserved populations by removing restrictive supervision barriers and expanding scopes of practice.
- Influence legislation that allows dental hygienists to be Medicaid providers, in order to increase access for underserved populations.
- Encourage and support dental hygienists to run for United States Senate, Congress, state legislatures, and other elected offices.
- Encourage government funding agencies to support research studies that assess the costs, benefits, and outcomes (health services research) of dental hygiene services in addressing public oral health care needs.
- Train dental hygienists to apply for funding to conduct research studies that utilize appropriate, standardized methodologies to document and evaluate the costs, benefits,

and outcomes of dental hygiene services rendered to the public.

Summary

Dental hygienists have a significant opportunity to have an impact at all levels of government in order to improve the oral health of the public. Two common characteristics that the varied government-related positions share is a focus on programs that are population-based, and the need to use research data, both for program planning and for evaluation. As government systems require accountability for the use of public funds, any decision-making must be supported by current relevant data. Government programs must present evaluation data that demonstrate the appropriateness and efficacy of chosen strategies, and document that allocated resources have been used most judiciously. As most governmental programs do not have enough resources to treat all diseases that occur, they must focus on reducing disease through primary prevention and on changing norms through health promotion, disease prevention, and policy initiatives, which are the most cost-effective approaches.

Dental hygienists are the logical oral health care providers to play a key role in responding to the oral health care challenges facing the nation.

Conclusion

Americans face an epidemic of oral diseases. Dental caries and periodontal disease, respectively, continue to be the major cause of tooth loss in children and adults, while more than 27,000 cases of oral and pharyngeal cancer are diagnosed each year.

In addition, many research studies have demonstrated that periodontal disease is a potential risk factor for a number of diseases and conditions—heart and lung disease, diabetes, and pre-mature and low birth-weight babies—making poor oral health an element in life-threatening health problems responsible for the deaths of millions of Americans each year.

Despite this critical situation, almost half of Americans do not receive regular oral health care.

Add to this an increasingly serious oral health care manpower crisis and a lack of access to oral health care for certain segments of the population reaching crisis proportions, and it is obvious that something has to be done. Given the current disparities in access to oral health care and the expected worsening shortage of dentists, it is easy to see that maximizing the services dental

hygienists are educated to perform—promoting expanded practice settings and removing restrictive supervision requirements—is essential to the current and future health of the nation.

With accredited education, licensure, growing numbers of dental hygienists, and a regulatory system already in place, dental hygienists are the logical oral health care providers to play a key role in responding to the oral health care challenges facing the nation.

It is clear that in order to promote total health, the public needs comprehensive preventive oral health care. Dental hygienists are the health care professionals with the knowledge and skills best suited to meet these needs. Legislators, state regulators, and other health entities must capitalize on the opportunities dental hygienists offer and utilize them more effectively.

In addition, the profession itself must embrace change, focus on growth and development, and plan for its future as well as the future oral health needs of the public.

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